UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

Human Resources Management and Training

Compilation of good practices in statistical offices

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Compilation of Good Practices in Statistical Offices

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NOTE

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PREFACE

In an era of technological, social and economic change, statistical offices are facing several challenges to further develop their key role as provider of high-quality information on economic, social and environmental phenomena. These include the need to meet both current and future demands of the users of statistics and to develop production processes that increase efficiency of work and reduce costs.

New technologies and new organisational arrangements are fundamental in this respect. This is why the High-Level Group on Modernisation of Statistical Production and Services, established under the auspices of the Conference of European Statisticians, is developing an integrated approach to update production processes and statistical outputs.

In this context, human resources are the most important asset of statistical offices. Appropriate and skilled human resources are essential to ensure the production of high quality statistics and to implement more efficient and effective production processes based on new technologies. Proactive human resources management is essential to achieve the abovementioned change and to allow statistical offices to meet the challenges today and in future.

This volume includes 24 papers highlighting good practices in human resources management and training in statistical offices. The papers cover a range of issues from recruitment and retaining of qualified staff and setting up training programmes, to competence mapping and management development. These papers have been presented at seminars and workshops on human resources management and training from 2006 to 2012, organised on the initiative of the Conference of European Statisticians.

It is my hope that the Compilation will be useful for the work on human resources in statistical offices in their transition to more efficient and effective working methods.

Mr. Enrico Giovannini
Chairman of the Conference of European Statisticians

CONTENTS

Human Resources Menagement

ACKNOWLEDGEMENTS

In 2010, the Bureau of the Conference of European Statisticians (CES) agreed that a workshop on Human Resources Management and Training (HRMT) in statistical offices should be organised to take place in 2012. The aim of this workshop was to discuss current and upcoming issues for HRMT in statistical offices, and follow-up on issues discussed at previous CES workshops on HRMT. Leading on from this, it was requested by the Bureau that concrete outputs directed towards the creation of a compilation of good practices in HRMT.

At the HRMT workshop in Budapest in September 2012, the participants supported the initiative to produce a compilation of good practices and agreed it should be based on selected papers from the HRMT seminar at the CES plenary session in 2006 and the following HRMT workshops in 2008 (Skopje), 2010 (Geneva) and 2012 (Budapest). The selected papers should be of general relevance and address current and future challenges in both human resources management and in training.

The final selection of 24 papers for the compilation was made by the co-chairs of the 2012 HRMT workshop, Statistics Netherlands and the Central Statistical Office of Poland on basis of the proposals of the participants of the workshop. After the selection of the papers, the authors were contacted and asked to review and update their papers where necessary. The papers have been grouped in three sections in the compilation: cross cutting issues, training, and human resources management, according to the main theme of the papers.

The following authors have provided papers for the compilation:

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1. FUTURE CHALLENGES IN HUMAN RESOURCES MANAGEMENT AND TRAINING IN NATIONAL STATISTICAL OFFICES

Wouter Jan van Muiswinkel Statistics Netherlands

INTRODUCTION

The Conference of European Statisticians (CES) at its plenary session in 2006 conducted a seminar on human resources and training in statistical offices. The seminar concluded that human resources and training are crucial elements for the successful fulfilment of the mission of the offices and that there was a need to continue the exchange of experience in the area of human resources and training. Hence, as a follow-up to the CES seminar, workshops on human resources management and training (HRMT) were organised in 2008, 2010 and 2012 where a number of issues in HRMT were discussed.

This paper takes a forward looking approach and provides an outline of the future challenges in the area of HRMT for statistical offices. The paper draws on the discussions at the HRMT workshop in 2012 and incorporates issues that were raised by countries during the workshop. The paper also draws on information collected through a survey to CES member countries on their practices and plans in HRMT.[1]

Section 2 provides a brief overview of the strategic directions for HRMT, including also the challenges raised by the High-level Group on Modernization of Statistical Production and Services. Section 3 lists a number of key challenges to the statistical offices and, on this basis, a number of areas in HRMT that will be particular important in the future. Section 4 groups the main elements of HRMT according to whether they are primarily operational, tactical or strategic. This grouping can be used to assess current HRMT activities and may also be used for planning of future developments in HRMT. Annex 1 provides a summary table of the results of the 2012 survey on HRMT to CES member countries.

STRATEGIC DIRECTION FOR HRMT

The economic, technical and social changes in society pose challenges and possibilities for national statistical offices (NSOs). With the development of the information society the amount of (electronic) information that is available has increased dramatically. The way in which information can be accessed and exchanged has also changed and become much more global. There is no evidence that these developments and changes will not continue in future, and NSOs will need to be active in developing their ways of production to take advantage of new technologies and data sources.

The demand for statistical products and services is also changing, and users are asking for more, better and more timely statistics. The NSOs also need to respond to this demand and develop statistics that meets future needs. While in the past NSOs had a special role as the main provider of official statistics and often in practice had a monopoly on the provision of statistics, this role is challenged by the growing availability of information available, and NSOs may have to compete with other providers of statistics. At the same time many NSO are faced with budget restrictions and requested to increase efficiency and 'do more with less'.

The modernisation of the statistical production and services is not only of organisational and technical nature but relies also on the development of human resources and the skills and attitudes of staff members at all levels. Human resources management and training is crucial for the modernisation of

[1] The paper is a revised and updated version of the paper Contemporary issues on HRM and Training in National Statistical Institutes that was presented at the HRMT workshop in September 2012 in Budapest, Hungary. Dr.Nicole Njaa, Headwave, Norway, and UNECE have provided comments and suggestions for the update.

national statistical offices where labour costs typically represent 70% to 80% of the total budget. The development of human resources and change management is part of and has to go along with the modernisation of the statistical production and services, it cannot be implemented afterwards.

In order to successfully implement the changes that official statistics are confronted with, it is important that human resources not only adapt passively, but actively participate and contribute to the process of modernisation. In many countries this calls for a change, where HRMT needs to have an active role in the corporate strategy and planning.

The High-level Group on Modernization of Statistical Production and Services (HLG)[2] has highlighted the need to develop the production methods and the statistical output to meet future challenges and ensure that official statistics stay relevant to the world of tomorrow. The HLG defines two directions in its vision and strategy:

(a) Statistical output: New and better products and services which are more tuned to the way the world is operating today, and created from a global perspective.
(b) Production methods: Different and better processes and methods tuned to delivering the products and services at minimal cost with greater flexibility and in cooperation between institutions.

The development of technologies and communication facilities has sprung up and are reforming the landscape in which statistics is being produced. The challenge for statistical offices is to take advantage of these changes and be sufficiently flexible and agile to provide statistics according to future user needs at acceptable cost. The HLG underlines the need to develop a culture of change within statistical offices, encouraging innovation in terms of sources, processes and products and the need to change the way that organisations and their employees work. It also recognises that this should be reflected in changing staff profiles and reallocation of resources.

CHALLENGES TO NSOS AND TO HRMT

National statistical offices are met with a number of challenges that directly or indirectly will affect the role and priorities of HRMT. The participants in the workshop on HRMT in September 2012 in Budapest identified a number of main challenges that statistical offices will face in the coming years. These included:

- Meeting future user demands of statistical products and services
- Responding to increasing competition from other providers of statistics
- Budget restrictions and the need to develop more efficient organisation of work processes
- Modernisation of statistical production and services
- The transition from production to knowledge working
- Attracting the right candidates

In the preparation of the 2012 HRMT workshop, the Organising Committee conducted a survey to statistical offices to identify the main current and future challenges of HRMT. The survey covered four areas: current challenges in HRMT; tools which are currently used for HRMT purposes; the main future challenges in HRMT; and tools to use or develop to meet future needs of HRMT. Twenty-four countries replied to the survey. The survey provided very useful information about the future challenges and priorities of HRMT from the viewpoint of the countries. Annex 1 provides a summary table of the results of the survey.

[2] The HLG was set up by the Bureau of the Conference of European Statisticians in 2010 to oversee and coordinate international work relating to the development of enterprise architectures within statistical organisations. It was originally named the High-Level Group for Strategic Developments in Business Architecture in Statistics.

On the basis of the results of the survey and the discussions at the 2012 HRMT workshop, the following areas of HRMT that will be particular important in helping statistical offices to respond to the future challenges can be identified:

- Motivation
- Change management
- Knowledge management
- Work environment and mobility
- Training and skills development
- Management development
- Attracting and retaining people

In all of these areas there are different experiences and practices among countries. Some are advanced in, for example, knowledge management or in using E-learning, while other countries may have very little or no experiences in these fields. Countries can therefore benefit from exchanging experiences and good practices.

Motivation

Motivation is a multifaceted phenomenon. It is difficult to define (Vinke, 1996, p. 218) and through the years many theories about motivation have been developed.

Motivating employees is a complex task. It requires the understanding of the dynamics of people and the ability to create an environment that fosters motivation. Motivation and competencies are critical in managing people: Competencies and skills ensure that people can commit to the organisation: motivation that they also want to.

Motivation is also considered as an "engine for change". It will be necessary to look at new ways to motivate staff – mainly by supportive leadership, flexibility and other benefits. Managers are in the position to create motivating conditions for their employees. To make this happen, a whole range of tools need to be employed – mainly communication, surveys and teambuilding. Performance review or staff appraisal interviews may also be used as motivating tools. The lack of the possibility to provide incentives may be a major challenge.

Change Management

Change management is much about the question of how individuals and organisations can change or can be changed (Caluwé and Vermaak, 2006). While it may not be possible or difficult to change the attitudes or readiness for change of staff, it is important to create an environment that supports changes and innovations. Establishing such a culture for change will be a major challenge. Contributions are wide in scope – from focus and leadership to efficiency and engagement. This will require time and focus, and that HRM needs to act as a partner to business. Top management commitment and assessments are positive drivers, whilst lack of skills or lacking access of HRM to top management represents a possible barrier.

Implementation of change management will be important for a successful modernisation of statistical production and services. To support modernisation HRMT should be integrated in the coporate strategy and planning and play an active role in the process. Important steps in the change process are communicating the need for change; working towards a shared vision; ensuring resources and capacity for the change process and taking the first steps in the direction of the shared vision.

Knowledge Management

Knowledge management is needed to ensure that important knowledge is kept and maintained within the NSO. The objective is to ensure that knowledge is distributed and accessible at the right place, at the right moment to the right people (e.g. whenever people move to new areas of work or for introducing newly recruited staff). This requires exchange of knowledge and training and careful management. Activities towards this goal are flexible and low cost mapping and monitoring of competencies, cooperation and exchange of knowledge. Lack of motivation, communication and resources are possible barriers.

Work environment and mobility

The work environment includes the physical and social environment in the workplace. New technological developments increase the possibilities to organise *flexible work* arrangements, less restricted by time and place. Remote work, working from home arrangements and working at flexible hours becomes possible and more common. It may no longer be necessary to come to office every day, but to work from home – or somewhere else. A good and healthy work environment is an important 'job-satisfier'. This means that it is an important factor for attracting and retaining staff. These developments in work environment also bring new challenges, for instance for the manager, but also concerning working conditions and implementation of proper technologies.

Mobility of employees has a number of benefits. Firstly, it is a good motivation factor for people to give the opportunity of career paths. Secondly, mobility helps to ensure the flexibility of staff – employees will be better prepared to occupy different positions. This is an important prerequisite to react to a changing environment and supports better problem solving. This is especially important when statistical production methods change, or if NSOs are forced to reduce staff. Mobility may also help to create networks across units of the NSO and give employees a better understanding of overall issues of the NSO. To improve mobility, top management commitment and less bureaucracy is required together with delegation of tasks and responsibilities. Increasing mobility requires a clear strategy and rewards. Increased work load and cultural opposition are possible barriers.

Training and skills development

Training and skills development comprises a broad range of activities and arrangements, including formal and informal training, job-rotation, traditional class-room courses, internal vs external training, cooperation with e.g. universities, competence mapping, (personal) training plans (development plans), special (introductory) training for newly recruited people, mentoring and the use of new organisations or technologies in training, such as E-learning. One other important issue is the question of the cost/benefits of training and how to measure and evaluate the outcome of training activities.

The importance of training is stressed by a growing gap between existing competences and skills and those competences and skills that are required to meet future challenges and ensure a successful modernisation of official statistics. A framework of skills/capabilities begins with a gap analysis and a description of how to close the gap. Lack of resources is a major barrier.

To stay updated competences of employees need to be assessed and trained regularly. This is sometimes referred to as *competence management*, other times as *development plans*. The key issue is that the management regularly assess the skills and knowledge of the employees in a systematic way and follow-up on this.

E-Learning offers possibilities of training that are less restricted by space and time and which can be used for both general training or more specific purposes or for specific groups of staff, for training in

regional offices. It also has potential for use across countries since the same E-learning course could be offered to different countries and hence be available for much more people than would be possible in a traditional class room training. E-learning can be developed at relative low costs compared to traditional training, but there is also evidence that it may be less efficient and that it should be followed up closely or complemented with face-to-face activities.

Management Development

Management development plays a vital role in preparing an organisation for the next generation of leadership. While some employees may seem potential candidates for management positions, their knowledge and skills must be carefully evaluated. Success in one area of management does not necessarily mean success as a manager which requires training and guidance. A good management development plan, however, will bring to light any deficiencies and provide concrete opportunities for the manager to improve.

The overall success of the NSOs is closely linked to the effectiveness of management. By taking the time to invest in good management development, the benefit to the organisation can be increased.

It would be valuable to investigate and compare management development programmes across countries (how managers are selected and trained, etc.) share experiences and learn more from good practices implemented in other offices.

Attracting and retaining people

Attracting and retaining people is a key success factor. Attracting and retaining the best candidates is a major objective of HRMT. To achieve this "an attractive package" needs to be created, including positive work place atmosphere, flexible working time, quality training, diversity, etc. The organisation needs to commit fully to make this happen – top management support, open communication and incorporation in policies and appraisal systems. Most important barrier is the competition with other government institutions and the private sector.

A specific challenge concerns the attraction of good candidates of the new generation, sometimes reffered to as the *Y-generation* or the *Digital generation*. Because of demographic shifts in many countries less young persons will enter the labour market in the coming years, which will increase the competition among employers to attract the best candidates.

The young generation is more sophisticated in using social networks and new technologies. Statistical offices should consider how to utilize such competencies. The young generation may also have different expectations for a job and career than in the past. There is therefore a need to create stimulating, flexible and innovating working environment to attract the new generation. It will also be necessary for NSOs to consider their image in the public as this is influencing the possibility to attract candidates.

TYPES OF HRMT ACTIVITIES

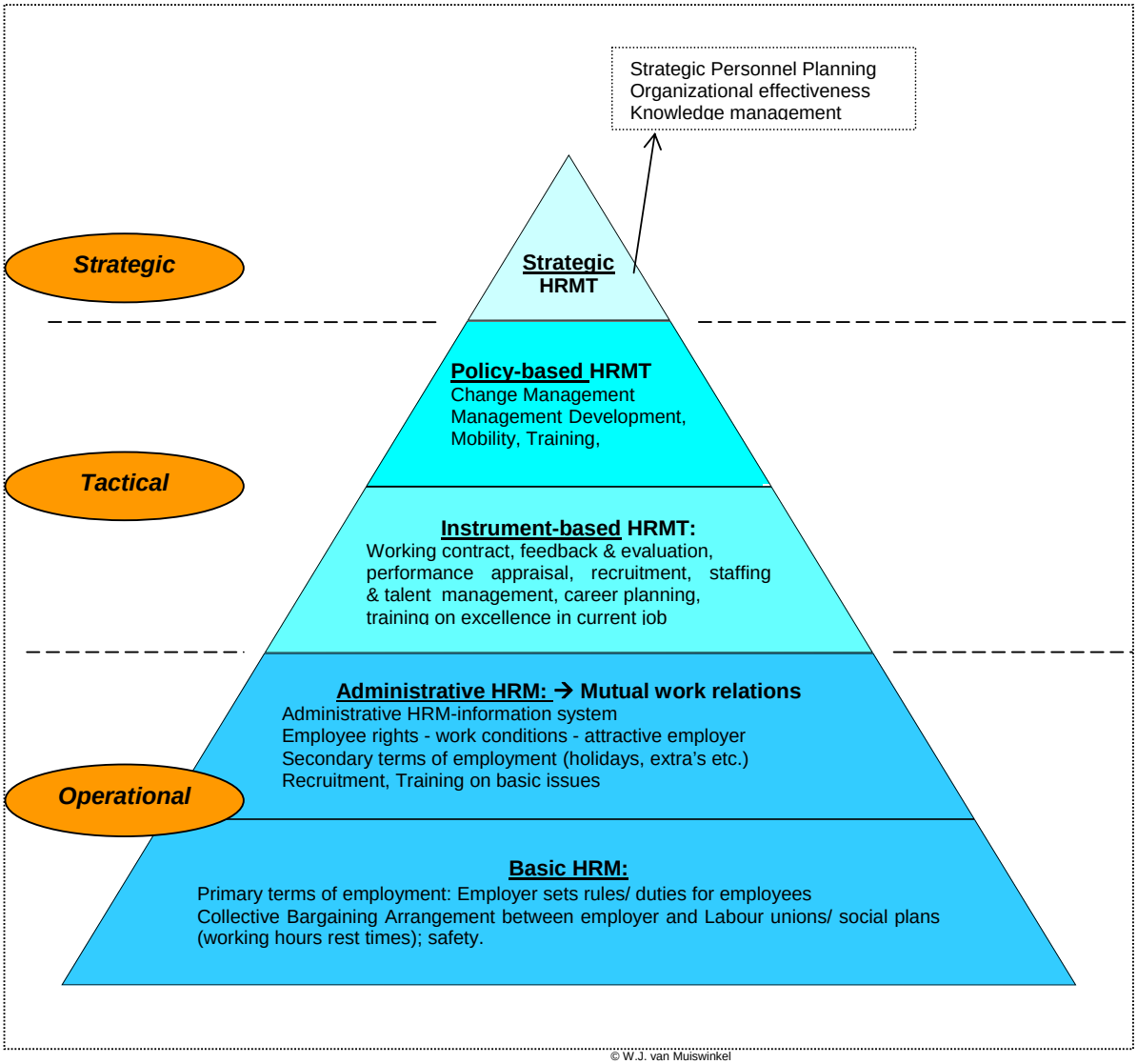
Looking at the challenges ahead, the question is not if statistical offices will need to change their organisation and working processes, but how radical these changes will be and in what way and in what time frame they can be implemented. It will not be sufficient to be reactive on these processes or just do business as usual. It is important that HRMT is integrated in the changing process and plays an active role to facilitate and support modernisation.

The statistical offices are operating under different economic and institutional conditions across countries, and the development of the statistical systems differs. HRMT practices also differ widely

between countries. The HRMT challenges therefore are also different may be dealt with differently in different countries.

HRMT activities can be divided into five types of activities: Basic HRMT; administrative HRMT; instrument-based HRMT; policy-based HRMT; and strategic HRMT, which are illustrated in Figure 1.

FIGURE 1: TYPES OF HRMT ACTIVITIES



The five types of HRMT activities can be characterised as listed below:

Basic HRM

The key elements of basic HRMT include primary working conditions (wages, working hours- and rest times) and bargaining arrangements between the employer and the unions. The key elements in basic HRM are also called "hygiene factors". This means that if these elements are done perfectly they are not noticed, but if not they may attract attention (Vosburgh 2007).

Administrative HRMT

Administrative HRMT aims to structure and organise the procedures concerning HRMT. This may be supported by a staff information system. In many cases such a system includes the automated and computer software for personnel data, often with a view to managing staff. The level of administrative HRMT also includes arrangement on secondary terms of employment (such as holidays and holiday bonus, the pension scheme and the arrangements of the sickness benefit, childcare, and other benefits like training facilities) that may be used in attracting and retaining employees.

Instrument-based HRMT

Instrumental HRMT is characterised by the use of HRMT tools used to standardize procedures which tends to reduce subjectivity in HRMT. Examples are protocols for recruitment, staffing and talent management and career planning. In this respect the yearly 'management cycle' is an important instrument, starting by articulating the working contract between manager and employee (expected output), half-way the year followed by giving feedback, and finally at the end of the year to evaluate the outcome. This instrument will help to articulate points of improvement in the current job. Specific training can be offered to improve work performance.

Policy-based HRMT

In policy-based HRMT the activities are directed by an articulated policy within which HRMT instruments are put in place (Vosburgh, 2007), usually with a time horizon of one or two years. Key elements are mobility-policy for employees, a management development programme and training. Implementation of change management is also an example of policy-based HRMT.

Strategic HRMT

The focus of strategic HRMT is to support the overall objectives of the organisation with focus on long-term development of business processes and personnel. Two strategic instruments are strategic personnel planning and knowledge management (to ensure the level of knowledge, taking into account the (external) mobility of personnel).

The first two types of activities, basic and administrative HRMT, can be characterised by the term Operational HRMT, because the main focus of the activities is to secure basic operational issues. The activities involved are mainly re-active in the sense that they are reacting on circumstances. Instrument-based and policy-based HRMT can be characterised by the term Tactical HRMT and require an active role of the HRMT department. These activities focus on ad-hoc demands of the moment and activities with short-term focus, one or two years ahead. Finally, Strategic HRMT plays a pro-active role in the organisation in setting and reaching future goals of the organisation. This means that HRMT activities are aimed to plan and develop resources for their most efficient and effective use.

The pyramid can be used to assess the development of HRMT activities in the statistical office, and it also gives an indication of what may be required in order to develop and implement new HRMT activities. If, for example, in one NSO all HRMT activities are focused on primary terms of employment and in setting the rules and duties for employees, this would correspond to the basic HRMT activities of the pyramid, which are mainly operational and often reactive on emerging issues. To implement administrative HRMT activities, an administrative HRM-system needs to be developed focussing on secondary terms of employment and basic statistical training programmes.

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APPENDIX 1: RESULTS OF THE SHORT QUESTIONNAIRE: MAIN TOPICS

Current challenges	Current Tools	2016: Biggest challenges	Ideal situation
General		***General***	
Budget constraints (do more with less resources; increasing efficiency)		Doing more with less (less resources and staff), efficient production, Business process redesign	
Training	***Training***		***Training***
Training (operational and strategic, specific)	In-house and external trainings (specialised, exclusive, etc.), ESTP, Civil service training Master and doctoral degree, home and abroad		Investing in knowledge and training of employees; Further development of the ESTP; To develop degree in official statistics
E-learning	E-learning system		E-learning
Leadership & Management Development	Training for the middle and top management		
Job shadowing, training on the job, short training sessions etc.			International exchange, study visits, secondment
Knowledge management			
Training of trainers			
HRM	***HRM***	***HRM***	***HRM***
Development and implementation of the HR concept	HR management system (database)	To develop analytical skills to meet increased demand for the administrative data Identifying, developing and using competencies of employees	HR metrics and analytics
Mobility (internal-)	Yearly interviews about training&development skills		
Recruitment, Attracting and retaining young and qualified staff	Web portal for recruitment and selection, High quality recruitment; Mentoring of new staff, Induction programmeme/training for new recruits	Retaining qualified staff Recruitment of well qualified staff (demographic shift), Use of new staff selection methods	Recruitment and training new staff
Personnel performance evaluation Incentive for high performance/staff motivation	Staff appraisal interviews, performance review/evaluation		
Competences Management	Competence database (competencies and skills)		
Staff opinion survey	Staff opinion survey	Staff motivation (low wages, learning, development, etc)	Performance linked payment; To develop non-financial incentive,
Flexible working times, modern work solutions, work from home			Smart working tools for smart working environment (flexi-time, remote work)
Healthy work environment	Upward feedback	Better use of modern technologies, to adapt to the new process of survey production; Innovative work culture, smart working tools,	
Quality Management			Better working conditions (permanent posts, adequate renewal); Broader use of new technologies; etc.)

2. STRATEGIC PERSONNEL PLANNING

Wouter Jan van Muiswinkel Statistics Netherlands

This paper outlines how Statistics Netherlands drafted its first Strategic Personnel Planning (SPP) in 2006 and updated it in 2009. The reasons for drafting an SPP at Statistics Netherlands are described, as well as the applied method, the results of the working process, the conclusions and the projects that have emerged from it. Finally, the added value of an SPP is examined.

INTRODUCTION

Statistics Netherlands is a central statistical bureau with two offices of comparable size in The Hague and Heerlen). As a result of consecutive budget cuts, the workforce has decreased by about 30% in the last ten years with no corresponding reduction in the statistical programmeme (from 2650 Full Time Equivalents (FTEs) in 2003 to 1850 FTE on 1 January 2013). The budgetary compensation received for fulfilling our new EU duties will bring the net decrease in this period to about 20%.

Statistics Netherlands has a comprehensive HRM-policy and associated HRM-instruments. Continuing to meet the public demand for more, better and faster statistics, the workforce will require selective recruitment, and investment in education and training. To support the management in implementing our HRM-policy, we make use of a computerized personnel information system, from which monthly HR management information is generated. The distribution of employees at Statistics Netherlands is 70% male and 30% female, approximately 70% of the employees work part-time and around 70% of all employees have a degree from higher education (Bsc, Msc or Phd).

An external research Bureau performed a general risk analysis at Statistics Netherlands in the time frame of 2005-2006. One of the great strategic risks was the availability of personnel and management. We had a problem in our personnel supply, demonstrated by the fact that part of the vacancies could not be filled. Furthermore, consecutive budget cuts in the past decade led to little in-flow of new personnel. Statistics Netherlands was facing progressive ageing of personnel. This meant that a large part of the staff would retire in the coming years.

Statistics Netherlands was obliged to take measures in order to have access to sufficient, qualitatively good and motivated employees for 2006 and the years to come. In order to master and manage the personnel requirement issue, Statistics Netherlands started a project to conduct a Strategic Personnel Planning (SPP) for 2006-2012.

In this paper we outline how we carried out this project and what follow-up actions were taken. Since our first SPP in 2006, we conducted an update of the SPP in 2009 because of changes in the labour market. At this moment in time (2012) we are working on a second update of the SPP, mainly because of severe budget cuts in the period 2012-2016.

WHAT IS STRATEGIC PERSONNEL PLANNING?

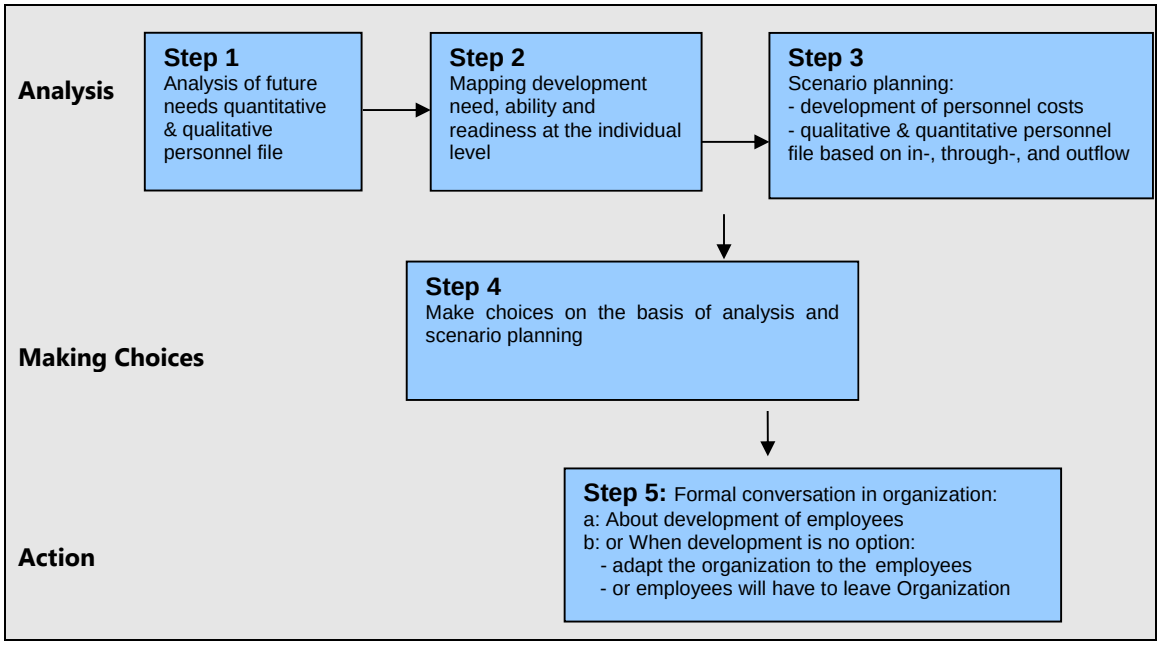
The aim of Strategic Personnel Planning is to gain insight in the number and type of personnel needed in the short and long term, taking into account developments in the labour market. Strategic Personnel Planning helps to translate policy developments into HR-policy issues concerning the in- through- and outflow of personnel.

Drafting a Strategic Personnel Planning requires comprehensive data about the workforce. To that end, a computerized personnel information system should be filled with up-to-date data. Secondly, it

requires a strategic vision of the organization, so the organization goals and ambitions can be translated in HRM and training policy (and HR-instruments).

The activities of this project are placed within the perspective of a general approach in five steps to conduct a Strategic Personnel Planning (developed by KPMG consultancy):

FIGURE 1: FIVE STEPS TO CONDUCT STRATEGIC PERSONNEL PLANNING



KPMG Business Advisory Services B.V.

METHOD

Statistics Netherlands used the following method to draft the SPP in 2006: A trend estimate regarding the need for human capital inflows in the period 2006-2012 based on an analysis of the historical in- and outflow of staff in the period 2000-2005, the flow (as expressed in obtaining function scale increases by employees) and the development in the age distribution of the employees.

A qualitative analysis about future developments in the statistical processes, and the needed knowledge and skills in the coming five years. More specifically:

- What level, function scale, requirements and competences are required in the near future?
- The match or mismatch between the available and the required quality of the employees. How does the actual level of training of the employees relate to the level of training required for the functions?
- The actual functioning of the employees. What part of the employees function well or very well and how many employees' functioning is insufficient?

An inventory of the labour market developments was made by performing a literature study. The expected future situation on the labour market was mapped by combining several studies (among others the Dutch Research Centre for Education and Labour market (ROA), Dutch Council for Government Staff, the Dutch Council for Work and Income).

Representatives from other organisations (comparable in size and properties of Statistics Netherlands) were interviewed to learn from their experiences and insights. Finally, after processing all the

information, a programmeme of concrete HR-projects was formulated. This programme consists of solutions for addressing the issue of staffing needs.

In the 2009 update of Strategic Personnel Planning, the main focus was on competency requirements as a result of statistical process redesign, the threat of new budget cuts, retaining young talents and changes in the labour-market. In the current update Strategic Personnel Planning (2012) the main focus will be on coping with the budget cuts in 2012-2016.

RESULTS

In this paragraph we give a short summary of the results of the quantitative analysis 2000-2005. To this end we describe the developments in the formation and staffing of the core personnel in 2000 to 2005, the in-and outflow in this period, the scale increases by employees and the development in the age distribution.

FIGURE 2: NUMBER OF FULL TIME EQUIVALENTS (FTE'S) PER FUNCTION SCALE IN FORMATION AND OCCUPATION CATEGORY CBS TOTAL (SCALE 3-8 AND 9-19), 2000-2005

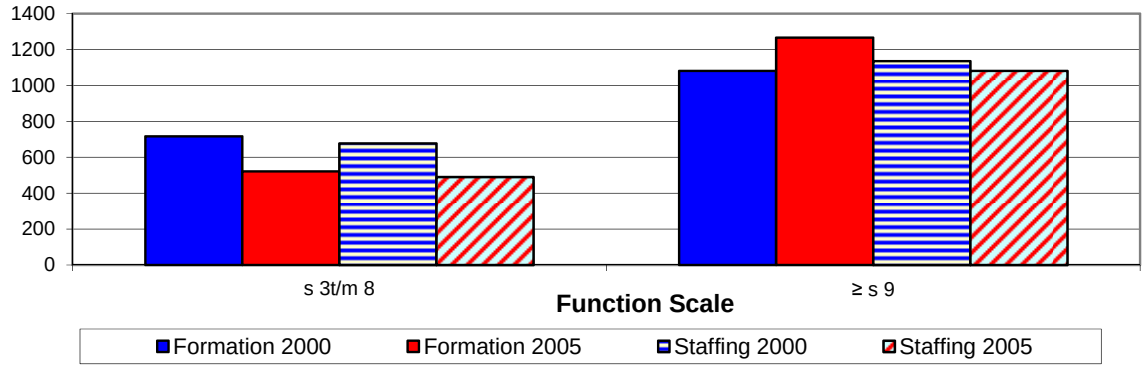


Figure 2 shows:

- A clear decrease of the formation in the scales 3-8 and an increase in the scale 9 and higher.
- A decline of staffing in 2000-2005 and that the scale of formation and staffing was in balance in 2000.

However, in 2005 the staffing in the scale category 9-19 was 190 FTE behind the allowable formation. In the lower scale category, there was a limited understaffing in comparison to the formation.

FIGURE 3: PERCENTAGE DISTRIBUTION FUNCTION SCALES TO SCALE CATEGORY IN 2000 AND 2005

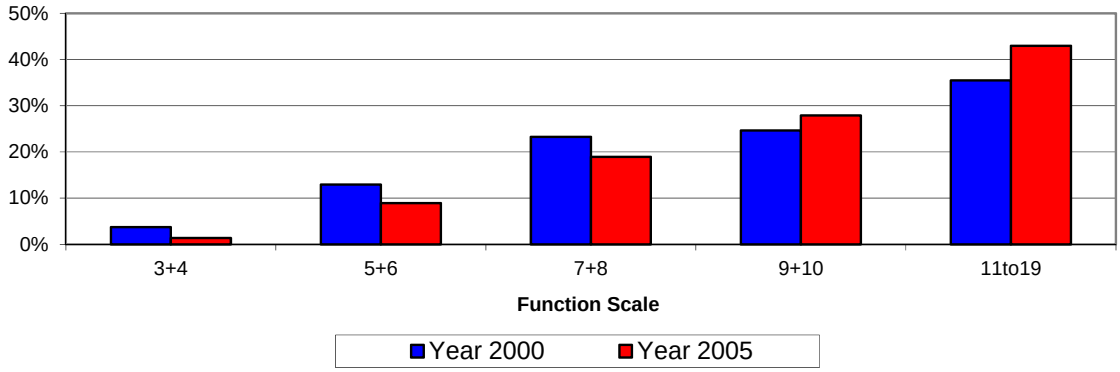


Figure 3 shows an observed increase in the Function scales 9 and higher (for scales 9-10 and for scale 11-19). There was a relative decrease in the three scale categories within 3 to 8.

One key aspect in the context of determining the staffing needs in the period 2006-2012 was the expected in-and outflow of staff. When analysing the outflow, a distinction was made between 'normal' outflow because of changing jobs, and outflow based on special (financial) departure arrangements. This distinction was relevant, because of extensive regulations, such departure arrangements were not allowed anymore after 2006.

FIGURE 4: INFLOW VERSUS OUTFLOW OF EMPLOYEES, FUNCTION SCALES 9 TO 19, 2000-2005

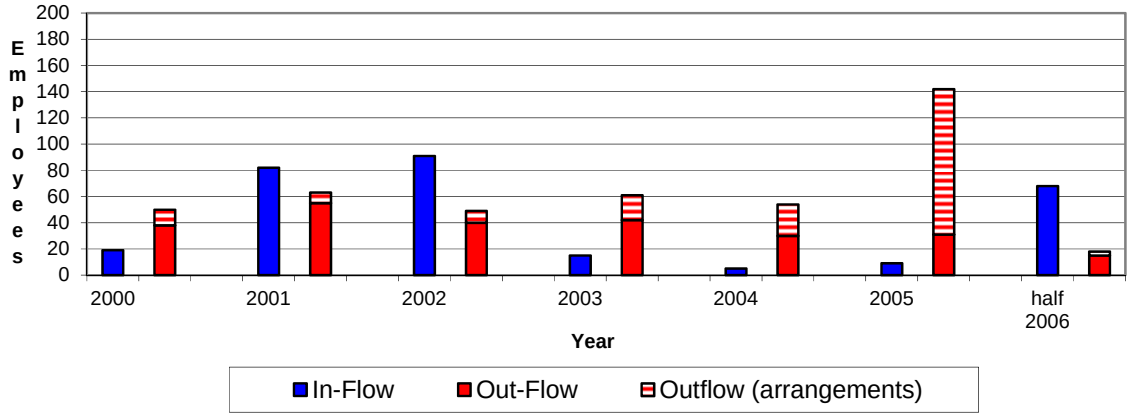


Figure 4 shows that the inflow of staff into the function scales 9-19 was particularly high in 2001 and 2002. The same also applies for the first half of 2006. The influence of the increased recruitment efforts in these periods is clearly noticeable. The ' normal ' outflow of staff in scales 9-19 has an annual average of about 30 to 50 employees. The influence of special departure arrangements is substantial, especially in 2005 (and partly in 2004).

Table 1 gives information on the outflow by scale category and length of employment.

TABLE 1: OUT-FLOW PER YEAR BY CATEGORY AND FUNCTION SCALE (%)

	Function Scale			
Length of employment (yrs)	1-8	9-11	12-19	**Total**
0-5	13 (5%)	78 (6%)	18 (6%)	**109 (6%)**
6-10	1 (1%)	12 (4%)	6 (3%)	**19 (3%)**
11-20	9 (1%)	15 (1%)	14 (2%)	**38 (1%)**
21+	11 (0%)	10 (0%)	6 (1%)	**27 (0%)**
Total	**35 (1%)**	**115 (2%)**	**44 (2%)**	**193 (2%)**

Table 1 shows that 56% (109 out of 193) of employees left Statistics Netherlands in the first five years of their hire in 2001 to 2005). Conversely, the 'normal' outflow of employees (excluding retirement, departure arrangements or death) after a ten-year employment is negligible. This is true for all scale categories. The next key factor in determining the future staffing requirements concerns the development in the age distribution. This development gives an indication of what to expect of the future outflow.

FIGURE 5: AGE DISTRIBUTION STATISTICS NETHERLANDS 2000-2005, FUNCTION SCALES 9-19

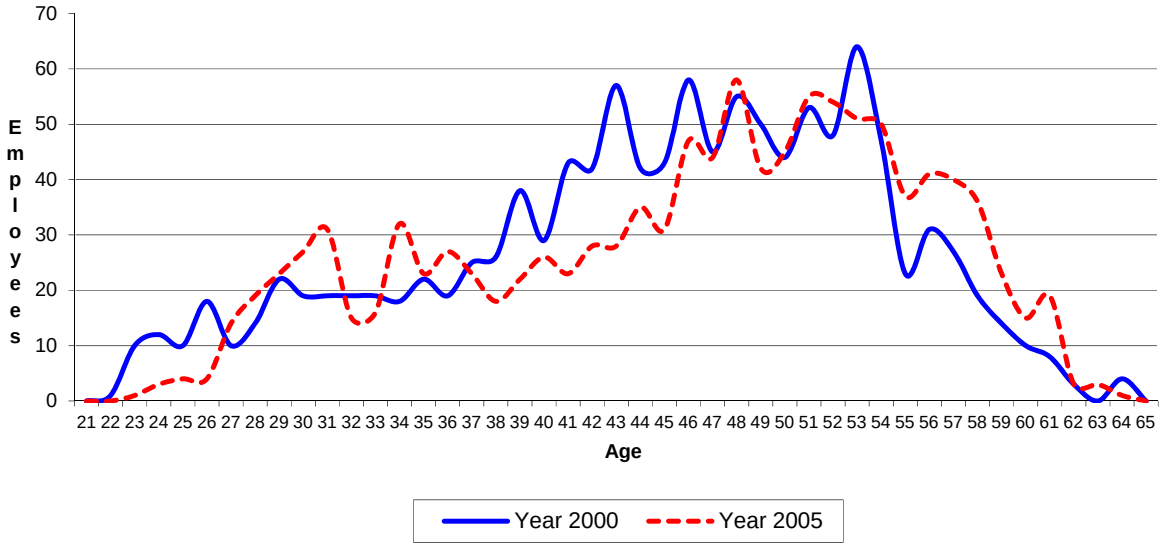


Figure 5 shows the shift in the age distribution with a five year interval (2000 and 2005). The share of employees in their thirties had increased slightly in 2005 because of inflow of staff. The policy to attract young employees with a trainee pool clearly influenced the age distribution among the employees in the scales 9 and higher.

TREND ESTIMATE OF THE IN- AND OUTFLOW 2006-2012

Inflow: Statistics Netherlands developed a calculation model in Microsoft Access based on the outcomes of the analysis over 2000-2005 as outlined in paragraph 4.1, and on the consequences of budgets cuts on the number of staff. We calculated the statistical probability of in- and outflow of employees based on historical data. In this way a prognosis was made of the workforce in the future. We determined the personnel shortfall or surplus per function scale by taking formative developments in the years 2006-2012 into account, including the budget cuts by function scale.

According to the calculation model, 521 employees would leave Statistics Netherlands (483 FTE) in 2006-2012. Taking into account the formative developments, we need an inflow of about 460 full-time staff: approximately 75 a year (evenly divided over the entire period). Based on historic figures, 76 of the 460 newly hired staff will leave the organisation again in this period.

The Hague: About 250 vacancies are foreseen in The Hague in scales 9, 10, 11 and later 12 and higher (*see figure 5*).

Heerlen: About 210 vacancies are foreseen, with an emphasis on scale 11 and to a lesser extent scales 9, 10, 12 and higher.

There will be some vacancies in scales 7 and 8 in The Hague, and very few in Heerlen.

FIGURE 6: EXPECTED NUMBER OF VACANCIES (IN FTE'S) IN THE HAGUE 2006-2012 BROKEN DOWN BY FUNCTION SCALE

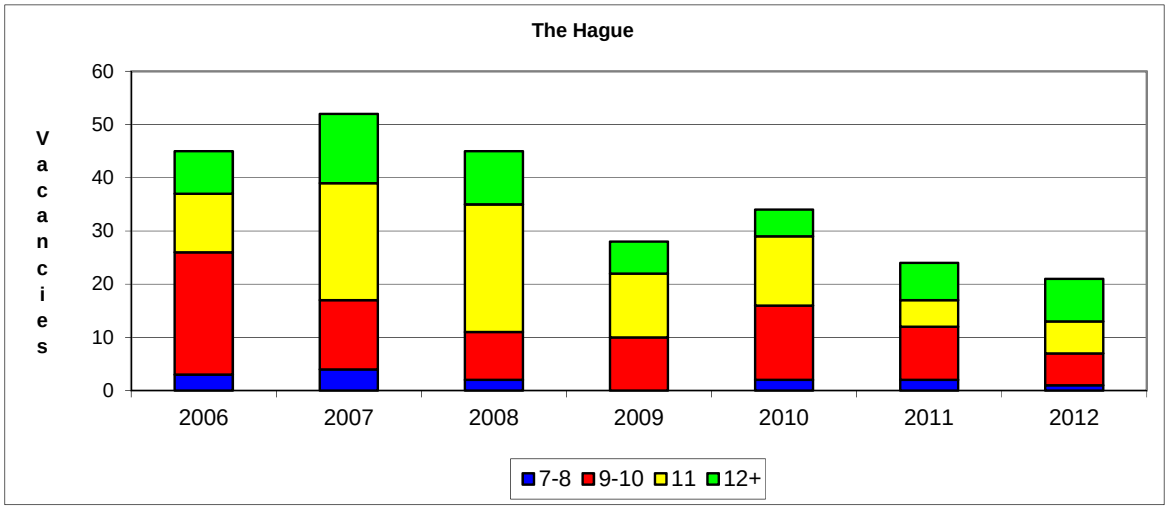


Figure 6 shows that the expected number of vacancies was 45 in 2006, and 52 in 2007. The colours in the bars indicate in which scales the vacancies are expected.

Outflow: In addition to the inflow there is some need for outflow in scales 3-6 in location Heerlen.

Management: To estimate the future need for new managers, this group was mapped separately. Based on the calculation model, the assumption was made that 20 managers would leave in 2007-2012. This expectation is supported by the outflow of managers in 2000-2005: 18 of the 41 executives from the target group left Statistics Netherlands because of retirement or departure arrangements (44%). The remaining 23 managers left for other reasons. We expected a great need for replacement influx of new managers in the period until 2012.

DEVELOPMENTS ON THE LABOUR MARKET 2006-2012

How the labour market will develop in the years ahead depends on economic developments, political choices about social security, market forces and practices of the public administration itself. The sources we studied in this SPP were largely based on macro-economic developments in 2006 and 2007, and the studies of the Dutch economy by the Central Economic Plan of the Netherlands Bureau for Economic Policy Analysis (CPB), and its long term exploration to 2040. It distinguishes four scenarios. It goes too far to elaborate these scenarios here, but both used mainly the so-called TM-ROA as Ecorys scenario (Transatlantic Market), that is considered the most realistic.

The labour market forecast is determined by many factors, including the increase or reduction in demand for workers, the replacement demand, and the supply of school leavers. A mismatch between demand and supply in a particular profession leads to bottlenecks in staffing or in bottlenecks on the labour market perspective. Given the economic growth expected for 2006-2012, increasing employment and declining unemployment, there is generally a shortage of staff and an increase in the number of vacancies that are difficult to fill. The Netherlands faces an ageing population, so the working population will decrease in the years to come. Statistics Netherlands has a relatively old workforce (average age in 2011 is 49.7) and needs highly qualified staff. The problems that are outlined in the field of educational attainment, educational background mathematics, natural and computer sciences among others and ageing are also applicable to Statistics Netherlands.

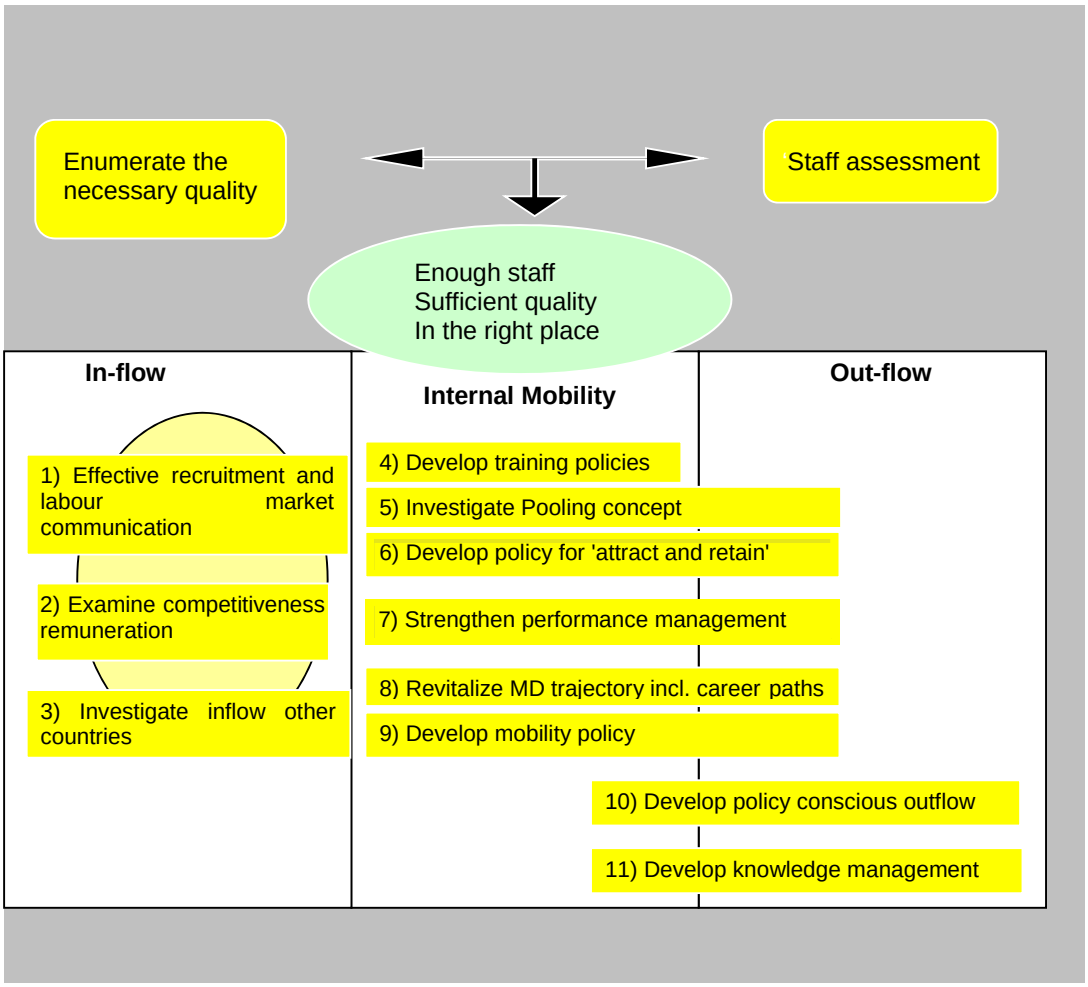
QUALITATIVE ANALYSIS

A key source for our qualitative analysis was to interview managers and directors about the renewal of the statistical production process and how this innovation is to be realized. A conference was held on this topic in 2006. The main question was what skills and competences were needed to face future challenges. Would it be possible to develop these skills and competences by training of current staff? If not, we need additional inflow of new, qualified staff on top of the outcomes from the quantitative analysis.

However, during the working conference it was difficult to draw specific conclusions about (groups of) employees because competence management was not widely implemented.

ACTION PLAN

FIGURE 7. AS A RESULT OF THE SPP, THE FOLLOWING ACTION PLAN WAS PRESENTED TO THE EXECUTIVE BOARD:



The Executive Board of Statistics Netherlands asked the HR Department to tackle the identified problem in close cooperation with the line organisation. To this end, we designed a programme structure.

THE PROGRAMME STRUCTURE FOCUSED ON THE FOLLOWING THEMES:

The revitalisation of the Management Development programme including career paths for managers. Enumeration of the necessary quality: mapping the future way of statistical production (with the necessary competences linked). Assessment of the staff: the collective and individual level mapping of competences and development potential of current employees; on this basis, the preparation of targeted training plans. Effective recruitment and labour market communication, including an active stage policy and campus recruitment. Benchmark working conditions for some features:

- Researching:
  - inflow possibilities from other countries / EU Member States;
  - pooling concepts/career paths.
- Developing and implementing:
  - robust training policies;
  - flow policies;
  - a policy for outflow;
  - a policy for actively ' buoys and bind ' of employees.
- Strengthening performance management.
- Knowledge Management: in case of outflow of experienced staff to prevent drainage of critical knowledge)
- General image campaign to reinforce this process

OUTCOME

The outcome of the programme in 2006-2007 produced the following results:

Inflow

- Recruitment-& image campaigns
- Professionalization of recruitment selection & new Statistics Netherlands recruitment website Analysing the outcome of Exit interviews and compare the outcome with other organizations
- Results research inflow EU countries

Internal mobility

- Upgrading pathways (secondary vocational training → Bsc)
- Employer research (how to effectively attract & retain employees)
- Pilots 'Life stage aware HR policy'
- Revitalization Management Development (incl. Project management)
- Introducing Staff assessments (Team level)
- Strategic Training plans (Division level)
- Development career paths

Outflow

- Matching consultation; monthly meeting in which all vacancies are discussed by all divisions
- (Decentralised) mobility managers, central re-employment managers
- External partners for implementation
- Internal mobility actions/information weeks
- Centre for staff provision

UPDATES OF THE SPP

Update SPP 2009
The SPP of 2006 was updated in 2009. The reasons for updating were to recalibrate the expected out-flow of staff due to expected budget cuts. Moreover, the aim was to determine the impact of new competence requirements as a result of process innovation, emphasis on knowledge management, keeping young talent in the organisation, and changes in the labour market.

Most important outcomes of the update:
In the update of the SPP, it turned out that the budget cuts 2010-2012 would lead to an outflow problem of 340 jobs in the function scales 3-8. By using the SPP and taking into account the expected natural outflow, this would lead to the redundancy of 127 employees.

The progressive ageing of staff led to the conclusions that despite the redundancy in scales 3-8, Statistics Netherlands still needed an inflow of some 65 FTE in highly educated employees a year. The importance of knowledge management in order to preserve crucial knowledge was again underlined. We plotted the number of employees reaching the retirement age of 65 in 2009-2012. Table 2 shows that in 2009-2016 a total of 370 FTE will retire (of which 73% in scales 9-19).

TABLE 2: RETIREMENTS IN THE PERIOD 2009-2016 BY FUNCTION SCALE

	Function Scale		
Year of outflow	**3-8**	**9-19**	**Total**
2009 - 2012	23.4	79.2	102.6
2013 - 2016	76.8	190.4	267.2
Total	**100.2**	**269.6**	**369.8**

Update SPP 2012
In 2012 Statistics Netherlands is facing new budget cuts for 2012-2016. As a result of the economic crisis, the labour market has changed dramatically. This is why the SPP is calibrated again to give direction to the most suitable HRM and training policy.

DISCUSSION & CONCLUSIONS

Creating an SPP is a labour-intensive job. It is therefore important to consider in advance whether there are substantial grounds for such a plan. Also is important to sharply state the problem and formulate the research questions in advance.

It is important to put together a project team with adequate knowledge and skills in the field of HRM and Training, labour market, and dealing with Access/Excel and basic knowledge to identify statistic probabilities.

It is essential for drafting the SPP to have high quality, proven data from an automated employee-management system. The quality of the data on which the SPP is based, largely determines the quality of the outcome. So this needs critical care. The collection and editing of historical data at Statistics Netherlands was difficult because the organizational structure was changed between 2000 and 2005. As a consequence data on the 'old' divisions needed to be translation into the newly formed division structure.

Another difficulty was the qualitative analysis and forecast for the staff in the coming years. A conference and interviews with directors and managers showed that it was difficult to translate the strategy and vision of the business process redesign, to the necessary extent, knowledge, skills and

competences of employees in the years to come. That's why it was impossible to make a gap analysis between the quality of the current workforce and the desired situation in a few years' time.

The reality is that the SPP must be updated every few years. The SPP update in 2009 took Statistics Netherlands far less time than drafting the SPP in 2006. This is because there were no substantial developments in 2006-2009. However, drafting the SPP 2012-2016 will cost more energy because of profound changes in the ageing staff, and the economic crisis with its consequences for budget cuts and its effects on the labour market.

The SPP 2006 and 2009 were both well received by the Executive Board of Statistics Netherlands. In particular the numerical and visual displays of HRM issues were helpful to focus on considerations and bottlenecks. Also the practical recommendations based on the results of the SPP, to start a programme with eleven HR and Training projects were well received. The HR-programme proved to be a practical guideline for the strategic direction of HRM and Training policy of Statistics Netherlands. In this way Strategic Personnel Planning provide added value.

3. STRATEGY BASED HR MANAGEMENT IN PRACTICE - EXPERIENCE OF STATISTICS FINLAND

Hanna Bärlund, Heli Jeskanen-Sundström
and Anna-Leena Reinikainen Statistics Finland

INTRODUCTION

The areas of emphasis in Statistics Finland's strategy[1] are reliability of statistics, usability of data, good service to researchers, stable budget development, improvement of profitability, standardisation of processes, quality commitment, skilled personnel, renewing modes of work and procedures, and a healthy work community. The goals are translated into actions in the context of annual planning. The targets for the coming year and the measures describing their attainment are decided in annual performance agreements between the Director General and the statistics departments. At the same time, agreements are made about the resources that the departments will have available.

The scope of performance management also extends to matters concerning personnel. Directors of the statistics departments are responsible for the maintenance and development of the competence and well-being of the personnel of their own departments in line with the agency's policy. A centralised personnel unit is responsible for the development and uniformity of processes related to human resources management throughout the agency, and for personnel development programmes and information systems. All employees of Statistics Finland have performance discussions with their own superior. The discussions, of which there are three, can be carried out separately or at once. It is essential that both the supervisor and the employee know what the objectives of each discussions are.

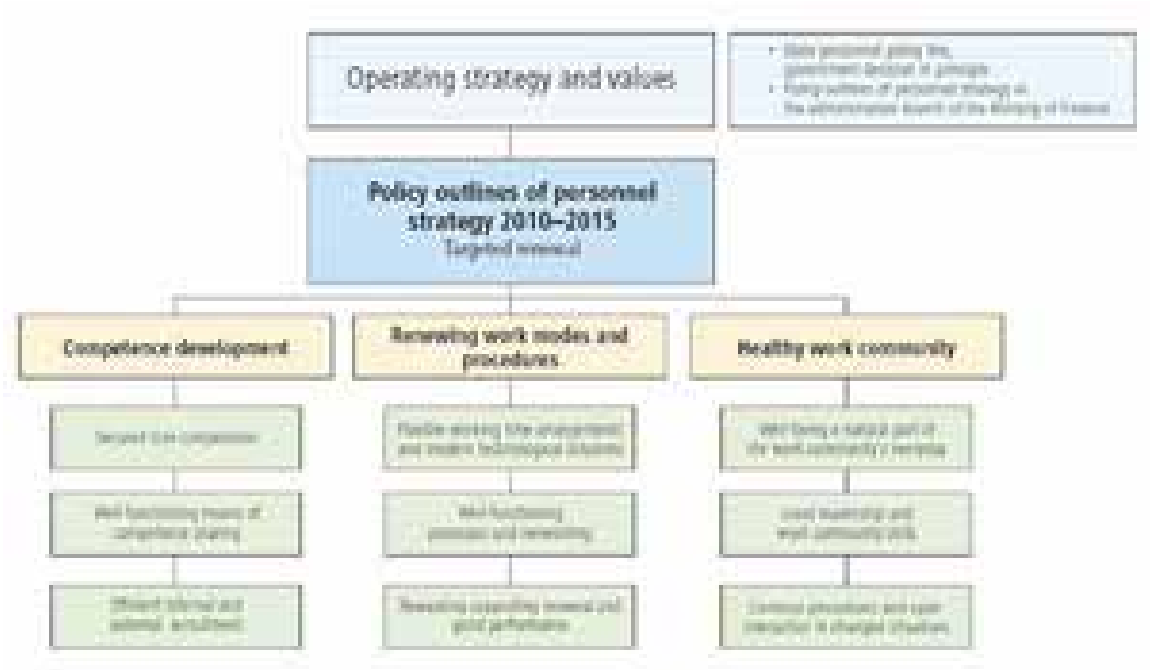
The two first discussions are target and development discussions and take place in the latter half of the year. The third one is an appraisal discussion, which takes place at the beginning of the year. The target and development discussions focus on setting goals and drawing personal development plans for the coming year. In the appraisal discussion, the focus is on the assessment of work performance during the past year. This procedure has a major bearing on the planning of personnel development measures and analyses of achievements.

Besides by continuous development, improvements to Statistics Finland's activities are also sought through special projects and strategic development programmes, as well as projects spanning the whole organisation. An example of these is "Policy outlines of personnel strategy 2010-2015" (personnel strategy) which is based on the former Personnel 2010 programme and strategic plan of Statistics Finland. The personnel strategy sets out the lines and points of emphasis for Statistics Finland's personnel policy for the immediate future years.

The main elements of this programme relate to competence development, renewing work modes and procedures and healthy work community. The paper describes these goals in detail and explains how these targets are brought into practice by management and leadership and what kinds of monitoring and follow-up mechanisms are in use. The strategic plan of Statistics Finland has been updated in 2007 and 2012. Therefore a project for updating the Personnel strategy will be started next year.

[1] Statistics Finland's Operational Strategy for 2012-2015 was approved in March 2012.

FIGURE 1: POLICY OUTLINES OF PERSONNEL STRATEGY 2010-2015



COMPETENCE DEVELOPMENT - AIMING TOWARDS RENEWAL AND SAFEGUARDING OF SKILLS

Renewal and safeguarding of skills in areas that are strategically important to Statistics Finland is one of the targets set in the operating strategy. Statistics Finland must ensure that its core competences are up-to-date and developed by means of goal-oriented training, challenging job tasks, internal mobility, recruitment of new talent and special expertise, and by supporting the personnel's voluntary pursuits of further training. In addition, Statistics Finland must safeguard knowledge transfer and develop methods to serve this purpose.

The agency's activities are developed as a learning organisation that is capable of managing its processes of knowledge and know-how, that is, generation and processing of knowledge, sharing of innovations and best practices, and learning. Skills requirements vary by task or personnel group.

CORE COMPETENCES AND DEVELOPMENT OF PERSONNEL

Statistics Finland's objective is that human resources are used appropriately and flexibly from the point of view of the whole organisation. This can be achieved by proactive planning of the quantity and quality of human resources and by procuring from outside such competence and services that are not expedient to be provided in-house.

Statistics Finland manages and develops its competence in line with its competence strategy that was compiled in 2008. The strategy defines the organisation's core competences and the competence required in statistical work in accordance with an appropriate model. It further specifies the points of emphasis arising from the organisation's operational strategy and environment for human resources development.

The core competences comprise special skills that are necessary for a national statistical service to be able to produce statistical descriptions of ever more complex social and economic phenomena, and produce information services for the needs of society. Apart from methodological knowledge, the

compilation of statistics also requires knowledge of the social phenomena they are intended to describe. Statistics Finland's core competences include:

- Statistical skills - methodological and institutional know-how
- Familiarity with described topic
- Knowledge of statistical methods and official statistics
- Knowledge of the demand for statistical data
- Knowledge of presentation of statistical data.

The core competences, or competences supporting them, can be found in all personnel groups. Different kinds of skills are required in the diverse tasks of Statistics Finland and these are described with competence models. The models describe the skills and knowledge that are required in statistical work, and in information service, information technology, management and administrative tasks. The models are used to support development and career planning.

Statistics Finland aims to integrate its competence management with its planning and monitoring system. In 2007, 2008 and 2010 personnel planning rounds were conducted with a proactive human resources planning model according to which the statistics departments make an annual assessment of the present status quo of their competence, the kind of competence they will need in future, and their out-coming areas of competence deficiency. Basing on these assessments, a framework personnel plan was drawn up for the whole organisation containing plans for recruitment from both the qualitative and the quantitative perspectives, and for course-format personnel training and other methods for competence development, such as job familiarisation, job rotation, civil servant exchange, mentoring, and group, team and pair working (learning opportunities). According to the policy outlines of the personnel strategy proactive personnel planning continues in the departments where agreed policy lines steer the planning of activities for the next year. The plans are then executed at the individual level in the target and development discussions where individual development and career plans are devised. The competence models are applied to diverse task entities at department, unit and individual levels. A new procedure for proactive human resources planning will be designed after the Competence mapping pilot project in 2013.

Goal-oriented personnel training focuses on statistical skills, leadership skills, skills relating to international tasks, information technology and network know-how, customer management, and quality and project work skills. The personnel may also participate in customer training courses. Web-based methods are exploited in Statistics Finland's personnel training, whether it is multi-form training or voluntary self-studies.

The personnel participate quite widely in formal training. During 2008-2011, the average attendance in training was 7-8 working days per staff year. Exclusive of pay during training, expenditure on training has decreased over the past few years from 2.1 per cent to 1.3 per cent of remuneration costs. The majority of the training input belongs to Statistics Finland's internal Training Programme in Statistical Skills[2], where the instructors are mainly from the agency's personnel and the training takes place in the agency's main building, which is in its part visible in the falling training expenditure.

By nature, the compilation and development of statistics is group or project work. Co-operative capacity and interactive and communication skills are elements of professional competence. The work community is a learning environment that offers everybody the opportunity to increase their knowledge and develop their working and co-operative skills. Doing things together is the most important means of transferring knowledge, for knowledge multiplies through sharing. This becomes concretised not only in the statistics departments, units and teams but also in working groups and development

[2] For more details, see "Training Programme in Statistical Skills - towards top statistical know-how and solid professional identity" by Riikka Mäkinen, Statistics Finland, CES Workshop on HRMT 14-16 September 2010.

projects. Learning and knowledge transfer are also given due consideration when members are selected to working groups and projects. Projects are set up, planned and implemented, as well as monitored and steered according to models given in the Project management databank. Courses on basic skills in project work and on project leadership, including steering group work, are provided as personnel training. Knowledge and best practices are also shared in internal networks, such as those of co-ordinators of official statistics, research liaison persons, website updaters, intranet editors, customer segment teams, quality management network, project management network, and developers of well-being and health and safety at work.

Voluntary studying for e.g. a professional qualification or an academic degree can be supported with flexible arrangements of working hours and by granting paid or unpaid leaves of absence for studies. The scope and type of support granted for studying depends on the extent to which the studies concerned advance professional skills and improve performance in job tasks, and promote exploitation of Statistics Finland's data files or methodological development. Over the 1994-2012 period, support for further studies was granted to 52 staff members of Statistics Finland.

The acquisition of new skills and knowledge is also sustained by close co-operation between Statistics Finland and universities. University researchers and professors act as scientific advisers and consultants in many methodologically demanding development projects. This kind of co-operation also encourages young statistical professionals to pursue careers in research and further university studies.

Likewise, development of the personnel's competence is supported by granting leaves of absence or study leaves for the purpose of acquiring work experience at home and abroad. Statistics Finland's experts have participated in the Nordic civil servant exchange programme and in other international personnel exchange and traineeship programmes.

Learning through work and sharing of knowledge are also fostered by offering challenging job tasks and encouraging internal mobility. For instance, to support career planning, a career path model[3] is devised, depicting supervisory and expert career paths and the skills they require. The career path model is intended to enable provision of equal benefits and rewards to those in expert and supervisory positions and promote internal mobility, both horizontally and vertically.

RECRUITMENT SYSTEM[4]

According to several seniority studies made by Statistics Finland, an increasing proportion of the personnel will be retiring in the next few years. These include statistical experts, IT professionals, supervisors and directors. Sufficiency of skilled personnel has been secured by the human resources plans, by the recruitment process, by improving of the agency's image as employer, by collaborating with universities and other educational institutes, and by career planning and competence development.

At Statistics Finland, the internal labour market is used to fulfil recruitment needs in the first place, but focusing only on the internal mobility of the personnel has not met the growing need for competence. Recruitment is a transparent process based on the agency's recruitment policy and general legislation on civil servants. All posts (including posts of Directors) are filled by an open application procedure. The most qualified and suitable applicants on the basis of received written applications are invited to an interview with identical contents for all interviewees. The interviews are conducted by at least two persons from the recruiting department, who represent the sought for key competences. The selection process is documented as a written memorandum containing a brief description of the applicants, the

[3] For more details, see "Recruiting and retaining qualified staff at Statistics Finland" by Elina Pääkkö et al., Statistics Finland, CES Workshop on HRMT 5-7 September 2012.
[4] See previous reference.

grounds for his/her selection and the decision on appointment. The application documents and the appointment memoranda are public documents, except where an application contains information that may not be disclosed by virtue of law. All nomination decisions (including those of Directors) are made by Statistics Finland.

In 2007-2008, Statistics Finland adopted the central government's electronic recruitment system which aims to standardise the application procedure in order to serve government agencies and applicants better than before. The system makes the work of supervisors and human resources experts easier by cutting down on recruitment routines. The adoption of the system has changed the recruitment process of Statistics Finland, but not its recruitment policy nor the selection process.

Open posts at Statistics Finland have always attracted sufficient applicants. When needed, adequate good skills have been found from outside and Statistics Finland is viewed as an attractive employer. The average number of applications received to any given open post has been about 20 in recent years.

Trainees, of whom Statistics Finland accommodates 40-50 or so per year, represent an important recruitment potential. These trainees are often at the final stage of their university studies and are given the opportunity to combine their theoretical knowledge with practical statistical work. In turn, Statistics Finland gains new talent in statistical skills and methodology, maintains good relationships with educational institutes and sustains its image as a good employer. As a rule, traineeships are arranged through the trainee programmes of universities.

Statistics Finland has separate agreements with a couple of universities whose study programmes include statistical science and methodology. Statistics Finland also sponsors professorships of Helsinki University in statistics and macroeconomics. Students preparing their thesis at these universities are employed for a fixed period, usually five months. The subjects of their thesis are agreed so as to benefit the development of statistics and the activities of the agency. Many of these students have subsequently become permanent employees of Statistics Finland. Statistics Finland also participates in recruitment fairs organised by universities and trade unions where it gives presentations of the diverse and challenging tasks and career opportunities that exist in the field of statistics.

Internal mobility, in which members of staff switch (permanently or for a fixed time period) between units or departments, creates career advancement opportunities and is an efficient means of transferring knowledge and sharing best practices. Possibilities offered by internal mobility are also studied when recruitment needs are analysed. Targets set on internal mobility are monitored against scorecards. Internal mobility has increased in the past five years.

Internal mobility is also boosted by career planning where the central objective is to give the personnel the opportunity to systematically develop and goal-orientate their expertise at Statistics Finland in the long term. The career planning helps the employee to retain his/her labour market eligibility throughout his/her career at Statistics Finland. This is also reflected in job satisfaction and commitment to the employer. Statistics Finland wants to offer its personnel challenging and wide-ranging task entities. Career opportunities are offered to all personnel groups, i.e. professionals, experts and supervisors. The agency is currently running a special project focusing on the careers of experts. Career planning is a means of developing competence systematically also from the employer's perspective. It is a practical instrument for competence development and human resources planning.

ORIENTATION SYSTEM OF NEWCOMERS

New recruits are introduced thoroughly to their job tasks and to the agency's activity. Statistics Finland's job orientation system is comprised of general orientation and introduction of the employing statistics department. General orientation is provided during a "Welcome to Statistics Finland" day and through material available in Statistics Finland's intranet and during special training days arranged for newcomers. A job orientation event is also arranged for trainees both by Statistics Finland and state administration.

In the introduction of the employing department, new recruits are familiarised with the organisation, activities of their specific department and with their own job tasks. Those responsible for this part of orientation are the new recruit's supervisor. The trainer's work is supported with intranet pages on job orientation. The new recruit's participation in his/her own familiarisation is encouraged with a familiarisation plan which the newcomer draws up together with his/her supervisor.

Besides job orientation, as of 2006, all new recruits will participate in the training programme in statistical skills[5] within six months of their recruitment. This training programme covers the essential areas of statistical work and is divided into a compulsory basic part (2 months) and an optional advanced part (2 years), which can be completed at any stage of the working career.

The training programme contains introduction to Statistics Finland's organisation and statistics, the production process of statistics and the principles that steer statistical work. The training includes classroom teaching and e-learning, applied exercises, group work and visits. The exercises support learning by working and their central aim is to imprint quality thinking into statistical work.

The trainers include best experts from Statistics Finland and lecturers from outside the agency. The aims are transfer of knowledge from experienced employees to their juniors, increase cross-statistical co-operation and internal mobility within the agency, and learning by doing.

REWARDING - AIMING TOWARDS ENCOURAGEMENT AND FAIRNESS

Fair and encouraging rewarding forms part of the agency's management policy. It is based on the State's general personnel and pay policy and on Statistics Finland's own operative targets. Rewarding is both material (pay, pay supplements, one-off bonuses) and immaterial (non-monetary awards and acknowledgements). Rewarding is linked with the giving and receiving of feedback for productive work. Feedback is also given as part of the daily work and activity of the work community. Overall feedback on the activity of the previous period is given in the annual appraisal discussions.

The current pay system of Statistics Finland was introduced in 1998. Pay is scaled according to the competence requirements of work, which are determined by the demands imposed by it on its performer and its relative value compared to other job tasks and results from activity (fairness). Pay is also dependent on the work performance and qualifications of an individual (encouragement). A better performance at the same competence requirement level must result in higher remuneration.

The principles governing the application of the remuneration system have been specified and are openly available to everybody in the Handbook on compensation of employees. Managers and supervisors are responsible for ensuring that the remuneration system is applied and functions efficiently. The competence requirements of a task are assessed when a new task is being defined or when essential changes are being made to an existing one. Competence requirement assessments are made by directors with the consultation of a working group comprised of representatives of the agency

[5] For more details, see "Training Programme in Statistical Skills - towards top statistical know-how and solid professional identity" by Riikka Mäkinen, Statistics Finland, CES Workshop on HRMT 14-16 September 2010.

and the trade unions of its employees, which also monitors Statistics Finland's pay system and pay policy. Personal work performances are assessed annually in the appraisal discussions between supervisors and subordinates.

WELL-BEING: AIMING TOWARDS GOOD WORK CAPACITY AND EFFECTIVE WORK COMMUNITIES

Statistics Finland's model for occupational well-being contains descriptions of the related targets, actions, actors and measures. The model has links to the agency's operational strategy, operational and personnel strategies and Action Plan on health and safety at work. Occupational well-being comes from well performed and managed work, so it has connections with the planning and monitoring of activities. Model includes targets for physical, mental and social well-being.

Supervisory work is decisive to the productiveness of activities and to balanced development of the personnel's well-being. The management and supervisors are responsible for building the preconditions and structures for activities. Their task is to create working conditions which maintain and nurture the physical and mental work capacity of people. Today, managers and supervisors have been offered in-house training courses on how to address challenging and troubled work situations.

Approximately 96 per cent of Statistics Finland's personnel (including interviewers) have permanent employment contracts. Security of employment now and in future helps in reconciling work and family life, and thereby maintains and promotes coping and well-being at work. Work can be organised through flexible hours, remote work and leaves of absence. The personnel are committed to their work, for the exit turnover has stayed low. The average number of years of service in 2008 was 17.8 and in 2011 18.1 years, so abundant experience-based knowledge has accumulated through the years.

Efficient measures on health and safety at work require co-operation. The responsibility for their implementation is dispersed among all members of the work community, but with varying contents. Statistics Finland has a two-year Action plan on health and safety at work, which is a general plan compliant with the Finnish Occupational Safety and Health Act for the management of health and safety matters at work. The Action plan is put into practice by an annually drawn up implementation plan, which comprises action plans for occupational safety, occupational health care, and performance agreements.

Statistics Finland gives strong support to the maintenance of the physical well-being of its personnel by providing physical exercise services co-ordinated by an exercise instructor, such as exercises during breaks from work, lunch-time exercise groups, gym instruction, personal training, and compilation of fitness programmes and monitoring of progress in them. Projects on well-being are prepared by diverse working groups, such as those on well-being at work and on rehabilitation and ergonomics. Physical exercise and leisure activities are also co-ordinated by the personnel's own cultural and sports club.

The personnel are entitled to preventive occupational health care and medical care for an illness paid for by the employer and offered by an external provider of occupational health care services. Apart from medical care, occupational health care also includes workplace inspections, health check-ups of departments (in 2009-2013 targeted unit-specific health examinations conducted in all ten departments) and new recruits, and recommendations for rehabilitation and physical exercise for diverse employee groups according to their special needs. Statistics Finland's early support model compiled in 2008 and updated in 2012, summarises methods for managing work capacity, monitoring sickness absences and implementation of early support in cooperation with the agency and occupational health care, and the responsibilities of different actors.

LEADERSHIP - AIMING TOWARDS CO-OPERATION AND PROFESSIONALISM

Since the turn of the millennium, Statistics Finland has been systematically developing leadership and supervisory work towards co-operation and professionalism. In 2003, the Director General launched a project on the development of leadership and supervisory work, which defined the tasks, roles, responsibilities and mandates relative to supervisory work, and its competence model. Basing on made proposals, measures aimed at improvement of leadership and supervisory work were initiated in 2005. Based on the organisational development and change measures planned for 2013-2014, a new development project to support leadership and supervisory work is being planned.

The focus in the development has been on people management, especially supervisory work within a work unit and improvement of preconditions for it. The following measures were implemented in 2005:

- Organisation of departments into units was reviewed to better match the requirements of professional supervisory work and two departments were reorganised completely;
- The document "Management policy at Statistics Finland – Together towards a common goal", supporting uniform management culture was ratified;
- Responsibilities of supervisors were clarified and their power of decision in personnel matters was increased in the rules of procedure;
- Criteria and guidelines were specified for evaluating supervisors' personal work performances;
- Supervisors' skills were evaluated with 360° analyses;
- Supervisors attended personal sparring events;
- Practice of joint meetings of managers and supervisors was started;
- Coaching programme for supervisory work was started in 2005.

The first version of a manual on supervisory work was published on the intranet in March 2006 to support supervisors in their work and consolidate uniform practices. Evaluations of supervisory work will be made from time to time with 360° analyses and with the annual Personnel Surveys[6]. Achieved progress was assessed during spring 2008, and the 360° analyses, the Personnel Survey and an inquiry conducted among supervisors support the notion that leadership has been developing in the right direction. An electronic inquiry for feedback on supervisory work replaced the 360° analyses in 2009.

Managing at the agency is co-operative. The personnel are given the opportunity to use their expertise to develop their work in line with set goals. Managing also entails giving the personnel the possibility to access public information and participate in public debate on work, working conditions and management. For this reason, separate goals have been set for interaction, information flow and communication: regular meetings must be held at the department and unit levels to discuss matters relating to co-operation, work contents and development. Additionally, all units are to perform annual self-evaluations to maintain and improve the quality of their activity and processes.

In 2007, Statistics Finland was awarded as year's best developer of the work community among Finnish State offices and institutions. The award was granted in recognition of sustained and fruitful work on improving occupational well-being, human resources management and especially the system of leadership and supervisory work.

MONITORING OF THE PERSONNEL PROGRAMMES AND STRATEGIES

A scorecard of personnel strategy has been drawn up to support monitoring of the Policy outlines of personnel strategy for the years 2010 to 2015 (= Personnel Strategy). Its objectives are based on Statistics Finland's operational strategy, competence strategy and management policy. Its main theme is

[6] For more details, see "Statistics Finland's Personnel Survey" by Anne Lahdenperä-Seunavaara, Statistics Finland, CES Workshop on HRMT, 14-16 September 2010.

"Target-oriented renewal". The three complementary and supportive development areas in the outlines are competence development, renewing modes of work and procedures, and healthy work community. The Personnel strategy was approved in autumn 2010 after the preceding Personnel 2010 programme ended. The personnel strategy contains the key 18 actual and predictive measures together with their target levels, and time series describing development. The target levels are set by the agency's Management Group, which also makes regular analyses of development and decisions about measures.

The agency's annual report contains a summary about personnel matters. A Personnel Balance Sheet is annexed to the annual report and describes activities in the reviewed year with abundant quantitative measures and qualitative accounts by the areas of emphasis set in the Personnel strategy. The source data derive from the personnel management's extensive information systems. The personnel's job satisfaction and views are measured with a web-based Personnel Survey, which has been conducted annually since 1998. The survey contains questions from the common job satisfaction barometer of central government agencies, and supplementary questions compiled at Statistics Finland. Besides Statistics Finland, the barometer is also utilised by other organisations within the State Administration, so it generates useful comparison data on development in central government in general. The results from the Personnel Survey are analysed extensively both at the level of the whole agency and in its departments. The results are utilised in the development of activities and setting of new targets.

Based on strategic indicators and parameters on the effectiveness of the Personnel 2010 programme that preceded the Personnel strategy, it was found that the measures included in and carried out under the programme had a positive impact on the well-being of Statistics Finland's personnel and on personnel management. Starting from 2011, the departments describe their activity and development related to competence, work and procedures and healthy work community in their result monitoring. The first monitoring of the Personnel Strategy was included in the agency's Personnel Balance Sheet 2011.

IN CONCLUSION

The former Personnel 2010 programme and the current Personnel Strategy with its areas of emphasis has proven to function well as a strategic policy outline for Statistics Finland's human resources management. The programme and strategy outlines have been used systematically as a basis in the planning and implementation of diverse measures concerning the personnel. Information obtained through monitoring and the performance measures with their target levels have also shown to be good solutions for evaluation and further development of human resources management.

The timeliness and efficiency of the strategy basis has been scrutinised continuously. Revisions will be made to it to make it capable of responding to new contextual and structural challenges arising from Statistics Finland's revised organisation structure, operational strategy, the State Administration's productivity programme and the ever changing operating environment.

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4. STATISTICAL EXCELLENCE THROUGH CAPABILITY DEVELOPMENT AND PLANNING

Chris Libreri Australian Bureau of Statistics

INTRODUCTION

The Australian Bureau of Statistics (ABS) strategic business and planning framework is being refreshed to position the organisation to meet and anticipate future challenges and to ensure sustainability. In particular, the ABS is moving towards closer linkages between business, planning and workforce strategies.

These strategic directions entail implementation of new initiatives, since the presentation of the paper 'Statistical Excellence through capability development and planning – ABS Organisational People and Learning System' ECE/CES/2006/22 at the June 2006 conference.

This paper introduces these initiatives and reflects on experiences to date on achieving sustained organisational performance and accountability through the development of a capable workforce.

HUMAN RESOURCE DEVELOPMENT AND BUILDING CAPABILITY

The ABS Corporate Plan sets out a vision for the organisation and articulates objectives and strategies to achieve this vision. One of the key objectives in the Corporate Plan is a commitment by the ABS to build the capability of its people. ABS Strategic Directions which relate directly to building capability, include:

Building and maintaining an adequate resource base to support our core work program; and developing a set of scenarios with regard to the office structure of the ABS, including: a work design; how best to secure our future workforce; and the implications of supporting and expanding the national statistical service.

In order to make this happen, the ABS has examined the demand and supply side issues of workforce planning. The gaps between the current and desired workforce form the basis of the ABS Workforce Plan. The Workforce Plan sets the direction for developing future people management capability and is designed to guide workforce attraction, engagement and retention policy and planning over a four year period.

It is our vision that:
"By 2012, the ABS will have developed a better understanding of its workforce profile and will be actively using this information to guide decision-making. Workforce planning will be aligned with the organisation's strategic planning activities."

Human resource efforts will be directed towards three priority goals, underpinned by a number of strategies. The ABS will focus on a small number of high-level strategies, some of which are new and others that build on existing initiatives. Details of the objectives the ABS are aiming to achieve are in section V of this paper. The three ABS workforce goals are:

Goal 1: Ensure the ABS workforce remains skilled and competent
Deploying a highly skilled and staffed workforce plays an essential role in ensuring the ABS has the capability to meet current and future demands. In order to staff the right number of people in the right

places at the right time, the ABS must firstly, understand and secondly, become responsive to changes in its staffing profile.

Goal 2: Align workforce planning with other ABS planning activities
Link workforce planning activities with the agencies financial and business planning activities at different levels within the ABS to ensure it has the capacity to more effectively understand and project its business requirements. The ABS requires access to replicable and reliable data for effective analysis of its workforce.

Goal 3: Realign ABS systems and processes.
Support for the realignment of some operational HR functions will require considerable investment by the ABS. The ABS must focus on bringing its current systems into closer alignment with its business priorities and/or continue to look for efficiencies in improved operations.

REFLECTIONS FROM EXPERIENCES TO DATE

The ABS informed the 2006 Conference of initiatives in developing an organisational capability framework, tools to bring the framework to life as well as formal and informal learning activities linked to developing capability. This section reflects on key experiences with some of these initiatives.

ABS CAPABILITY FRAMEWORK

The ABS has developed and implemented a capability framework that defines the skills, capabilities and knowledge required of employees to achieve the organisations' work program. The Organisational People and Learning System (OPALS) allows individuals to link their development needs with learning opportunities. The system has been designed to encourage employees and their managers to gain a shared understanding and agreement on critical learning areas. It also enables career planning by allowing employees to explore capability requirements for roles other than their own.

Core capabilities identified in the ABS are:

a) People and Communication
b) Achieving Results
c) Thinking
d) Understanding the Business of Statistics
e) Understanding the ABS Environment

a) People and Communication
This capability details the required level of knowledge, skills and abilities associated with such concepts as interpersonal communication, negotiation, written communication, leadership, teamwork, people management, employee development, professionalism and development of internal and external client relationships.

b) Achieving Results
This capability includes project management, corporate governance, meeting deadlines, adjusting to change, task prioritisation and completion, time management, appropriate meeting behaviours, sharing planning between strategic and operational tasks.

c) Thinking
This capability groups a wide range of thinking skills and behaviour including conceptual thinking, analytical thinking, strategic thinking, research ability, decision making skills, professional judgement, problem solving and application of theory to practice.

d) Understanding the Business of Statistics

Behaviours associated with this capability would include basic statistical cycle knowledge, general awareness of ABS statistical business and knowledge of basic statistical principles, tools and methods.

e) Understanding the ABS Environment

Behaviours associated with this capability would include corporate knowledge and awareness, ability to operate effectively within the ABS technical environment and alignment of work behaviours with APS and ABS values.

Job-specific capabilities identified in ABS, which align with the statistical cycle, are:

a) Stakeholder Engagement
b) Statistical Planning
c) Methodology
d) Collection Development
e) Data Collection
f) Processing
g) Data Analysis
h) Dissemination
i) Decision Support
j) Managing Quality and Processes

a) Stakeholder Engagement

This capability relates to identifying information needs and understanding the broad context in which information is required.

b) Statistical Planning

This capability relates to assessing information needs, how these needs can be addressed and how decisions made at different parts of the process flow through.

c) Methodology

This capability relates to using information and decisions made during Statistical Planning to finalise a collection. Where appropriate, this includes assessing methodological parameters, designing and allocating a sample, and non-sampling considerations such as frames, editing and imputation.

d) Collection Development

This is the link between methodology and the implementation of samples, collections and forms.

e) Data Collection

This is the process of bringing data into the ABS. It includes collecting information as well as accessing administrative data sources.

f) Processing

This involves getting the data into a more useable form. This includes estimation, editing, imputation, sample maintenance and frame maintenance.

g) Data Analysis

This includes analytical techniques such as summarising, exploring and identifying issues; reconciliation/validation with other sources; interpretation of concepts, data sources and methods; and where appropriate using analytical techniques which require application of theory, such as modelling, time series and demographic techniques.

h) Dissemination

This involves turning the data into information, which may include: tables, graphs and publications; providing a framework in which data is collected; or application of time series.

i) Decision Support

This involves evaluating statistical collections and outputs to determine if they have met information needs.

j) Managing Quality and Processes

This relates to managing those processes which impact throughout every stage of the statistical cycle and ensuring objectives are met, including data management and application of the data quality framework.

This framework has been important to the ABS starting to understand its capability at an organisational and individual level, in providing a common language with which to discuss workforce capability and in linking staff to appropriate training. Like any new framework or system, there are issues and gaps identified over time. Since implementation of the ABS Capability Framework, the Australian Public Service Commission has updated its leadership capabilities (Integrated Leadership System) to include behaviours associated with each capability. The ABS expects to review and update its capability framework in 2009-10 to align with these changes. The ABS has recognised a need for a more structured approach to identifying, developing and managing future leaders. It is problematic to identify future leaders using the core and job-specific capabilities in the current framework. A Framework for Future Leaders has been scoped and it is expected that implementation of this initiative will commence in early 2009-10.

ABS PERFORMANCE AGREEMENTS

Improved organisational capability is linked to improved organisational performance. Recognising this, the ABS' performance agreement templates have been revised quite radically. The emphasis is on 'how' individuals deliver and what 'value-add' they bring to their work and place in their team, rather than on 'what' each person does. A section articulating each person's career plans and development requirements is also included.

Over time, it is anticipated that increased clarity on individual development requirements will result in improved understanding of organisational training and development needs.

INFORMATION GAPS

Development of the Workforce Plan and use of the current systems that support Human Resources have highlighted a need for improved and aligned reporting facilities. Most importantly, the integration of business, workforce, financial and service planning, must be improved to facilitate the development of a more holistic model. Better quality and more easily accessed HR and financial information will better inform ABS decision-making into the future.

In the context of reporting on organisational capabilities, what is missing is a clear reporting link between the demand for specific training and the related capabilities/skills. Users of the support systems can readily access a capability and then link to the relevant training. However, reverse access is not currently possible. Broad capability requirements can be assessed, but specific skills are not necessarily articulated or linked to training, so gaps are not easily measured. This issue is expected to feed into the review of the capability framework.

CONCLUSION

In summary, establishing the connection between traditional people-related metrics and broader business drivers is fundamental to any workforce plan. Much of the ABS' future success in understanding the impact business decisions have on workforce compositions will rest with its ability to mesh current and future people needs and costs. This data is currently held in disparate, unconnected systems. Linking business planning, finance and people metrics should provide the ABS with a much better understanding of its workforce composition, related costing and future requirements.

The preliminary workforce planning initiatives have highlighted some significant challenges facing the ABS. These include, acquiring staff with the right skills, capabilities and experience consistent with its current and future workforce needs. To meet this requirement beyond 2008, the ABS must develop a better understanding of its current skill/capability mix, along with the ability to forecast (through identified performance indicators) future workplace needs. Key priority areas include:

- Taking a strategic view of the future of our nine offices;
- Understanding our workforce composition and leveraging off this to consider how to work differently in the future;
- Accessing workforce information that is accurate and reliable;
- Further developing activities/strategies to ensure the ABS maintains its "employer of choice" position with employee groups that meet its skill profile;
- Developing a workforce planning "tool kit" and education programme designed to assist cost centres/branches with the concept of workforce planning;
- Implementing a succession planning framework to manage "critical positions" with the agency; and
- Identifying, developing and managing future ABS leaders.

The refreshed strategic business and planning framework is expected to drive productivity improvements over the next few years. Current and new initiatives outlined in this paper are expected to build individual capability and improve ABS understanding and harnessing of its organisational capability.

ACHIEVING OUR OBJECTIVES

Goal 1: Ensuring the ABS remains skilled and competent

Priority Area	Strategies	Deliverables
Understanding our workforce composition	Identify the ABS skill base.	Identification and agreement on ABS job families.
	Use job families to guide ongoing attraction activities within the agency.	An approach for matching people with positions to meet the ABS current and future demand.
	Expand Business Process Mapping activities to identify productivity gains.	Guidelines for the redesign of identified positions within the agency.
Attracting talented people	Explore alternative employment markets (both nationally and internationally).	Expansion of current recruitment activities to aid in the attraction of a wider pool of talented people.
	Develop approaches to target diverse employee groups	A paper to management on the success of different approaches in attraction.
	Work with Corporate Communications to enhance the reputation of the ABS externally.	A paper to management on marketing strategies that will enhance the reputation of the ABS externally.
	Develop a framework to ensure remuneration is competitive.	Assist in attracting and retaining high-quality employees.
Retaining and engaging high performing staff	Develop strategies to promote existing, flexible work practices.	Encourages valuable employees to remain with the ABS.
	Promote the link between performance and employee development.	Performance agreements and discussions are linked to learning and development.
	Develop a national reward and recognition programme that recognises employee performance in reaching ABS goals.	Implementation of a consistent approach to reward and recognition throughout the ABS.
	Develop a robust and flexible workplace induction/orientation programme that informs and engages staff on ABS goals/behaviours.	An induction model that engages people with the goals and behaviours of the ABS.
Succession planning for the future	Use ABS age profile and senior management consultation to identify 'critical' positions within the agency.	Implement formal succession plans for critical positions throughout the agency.
Developing talent – ABS future leaders	Prepare strategies on talent development within the ABS from paper the *Framework for Leader development.*	Implementation of programmes/activities designed to identify/foster talented people within the ABS.

Goal 2: Align workforce planning with other ABS planning activities

Priority Area	Strategies	Deliverables
Using HR indicators to guide decision-making	Identify and report on high-level HR indicators.	Regular HR reports against key indicators which can be used to guide people management decisions and attraction strategies with the ABS.
	Identify and report on recruitment targets – assessing the ABS' market position and value for money in advertising.	Regular HR reports against key 'vacancy' indicators which can be used to guide people management decisions and attraction strategies with the ABS.
Align workforce planning with corporate planning activities.	Liaise with finance and business planning to ensure people indicators are included in the ABS' future Integrated Business Planning model.	Workforce planning steps included in corporate governance activities. A workforce planning model that links people, financial and business planning activities.
Devolving workforce planning to cost centre/branch levels	Engage stakeholders in the development of localised workforce planning frameworks to ensure understanding of their people needs.	A workforce planning model that links people, financial and business planning activities. Will assist with regional/branch planning activities and will lead to a better inform corporate planning process.
	Develop and implement a workforce planning toolkit.	A co-ordinated approach to workforce planning in the ABS.

Goal 3: Realign ABS systems and processes

Priority Area	Strategies	Deliverables
Re-engineering recruitment operational activities	Implement e-Recruitment technology.	Minimisation of manual processing and human error.
	Engage stakeholders around consistent recruitment principles.	Co-ordinated approach to recruitment activities to minimise gaps and duplication.
Ensuring ABS has the correct infrastructure in place to manage for the future	Develop end to end system to cover the ABS business process.	Realignment of ABS systems, people and processes.

5. MANAGING HUMAN RESOURCES IN A SMALL STATISTICAL OFFICE

Blagica Novkovska State Statistical Office of the Republic of Macedonia

The issue of human resources is a complex issue and every organization that aims at efficient and productive operation should dedicate special attention to it. Within the current context of European integration, stabilization and association and the process of globalization, it is a high priority to adopt appropriate Human Resources Management policies and strategies in National Statistical Institutions (NSI).

In the case of the State Statistical Office of the Republic of Macedonia (SSO), as a small statistical office from a less developed country, human resources management requires complex approaches and continuous transition of the Human Resources Management policy.

The State Statistical Office of the Republic of Macedonia, in the management process, puts particular emphasis on rationalizing the use of the available resources, both financial and human. Indeed, statistical offices in small countries, in general, have lower budget resources to perform the same activities.

Bearing in mind the scarce financial resources that directly influence the high flow of skilled labour force and, in that direction, especially the efforts made to retain young people to work in the Office, the State Statistical Office of the Republic of Macedonia is putting special emphasis on human resources development and creating strong policy for recruitment, induction, training and development, and promotion. This would be in close relation with establishing a culture of quality, integrity and professionalism.

The State Statistical Office of the Republic of Macedonia, as a small office facing the challenges of increasing demands for statistics that are reliable, timely, internationally comparable and comprehensive, recognized the benefit of constant training of its employees in order to respond to these challenges. Developing the key competencies that allow individuals in the organization to perform current and future jobs through planned learning activities, and ensuring a match between the individual and organizational needs, is essentially a strategic process and is closely connected with several practices like management development, professional skills training, mentoring, customer service training, organizational-development consultations, environment, etc.

Practical steps are already taken for streamlining the State Statistical Office of the Republic of Macedonia, like the new training plan based on best practices, the mentoring system, the Code of Ethics, the Cost Efficiency System, etc. Together with encouraging and promoting professionalism, human resources will be the real gear in coping with globalization and information technology.

This paper has three main objectives: first, to review the process of the country's transition when NSO's changes were very complex and specific, second, to review the significant progress within the human resources structure till nowadays, and third, to provide an overview of the current human resources development policy of the State Statistical Office in the context of managing human resources in an efficient and effective manner.

SYSTEMIC CHANGES

After the independence of the Republic of Macedonia in 1991, according to the new position of the Office as a State Statistical Office in the area of statistics and the new challenges in front of it, radical changes were made to the educational and the age structure of the employees.

In the period from 1991 to 1997, the main activities of the State Statistical Office were directed towards the realization of the programmes, establishment of new surveys, training of the employees through participation in international events, learning foreign languages, etc. However, all these activities were made without having a systematic approach, and certainly without human resources management policy. Besides, although significant organizational changes were made, the existing typical administrative culture dominating the behavior of the staff limited the progress in achieving substantially better performance. Substantial changes in this culture are necessary, particularly since the limited resources require much bigger flexibility to the rapidly changing needs.

As it was mentioned, in this indeed difficult period, priority was given to the realization of the annual programme with the available limited resources, driven by the needs of the external factors. In addition, a significant step forward was made in 1997, when the Law on State Statistics was adopted. The Law regulated the official statistics and it strengthened the position of the Office as a coordinator of the statistical system in the Republic of Macedonia. Furthermore, the State Statistical Office started with the programming of its work for five (5) years, and the first Five Year Statistical Programme was prepared in 1998. All these improvements contributed to the strengthening of the State Statistical Office and to the beginning of its capacity building, including the human resources management. However, a lot of time was needed before we started with the systematic approach to human resources development. Namely, the preparations for the first plan for human resources development were initiated in 2007 and finalized in 2008.

SIGNIFICANT PROGRESS WITHIN THE HUMAN RESOURCES STRUCTURE

Regarding the staff sufficiency, in the period between 1991-2012, the staff number was significantly increased, which contributed to the reorganization of the Statistical Office into a modern and effective state institution oriented towards providing quality statistical data for the Government and the state officials, as well as for the users from the wider public.

CURRENT SITUATION

The State Statistical Office, currently employs a total of 297 persons, of which 204 work in the central office in Skopje and 93 are distributed throughout the 8 Regional Departments. The gender structure is 65% female and 35% male. The average age of employees is 45 years. 75 % of the employees have a faculty education, and the average working experience is 14 years which represents high loyalty towards the institution.

The main characteristic of the transformation of the Office regarding the educational structure of the employees, is the significant increase in the number of employees with a faculty education. This is a consequence of the increase of the educational structure in the whole country, as well as because of the need for application of the scientific methods in the realization of the statistical activities, the realization of the international cooperation and the application of modern IT equipment by the employees in the Office.

In accordance with the analyses of the available staff structure and the needs for optimizing the work processes, the State Statistical Office plans to increase the number of employees with faculty education, especially with economic and IT background, and to reduce the number of the employees with higher and upper secondary education.

FIGURE 1: EMPLOYEES BY EDUCATION LEVEL IN THE PERIOD 1991-2012

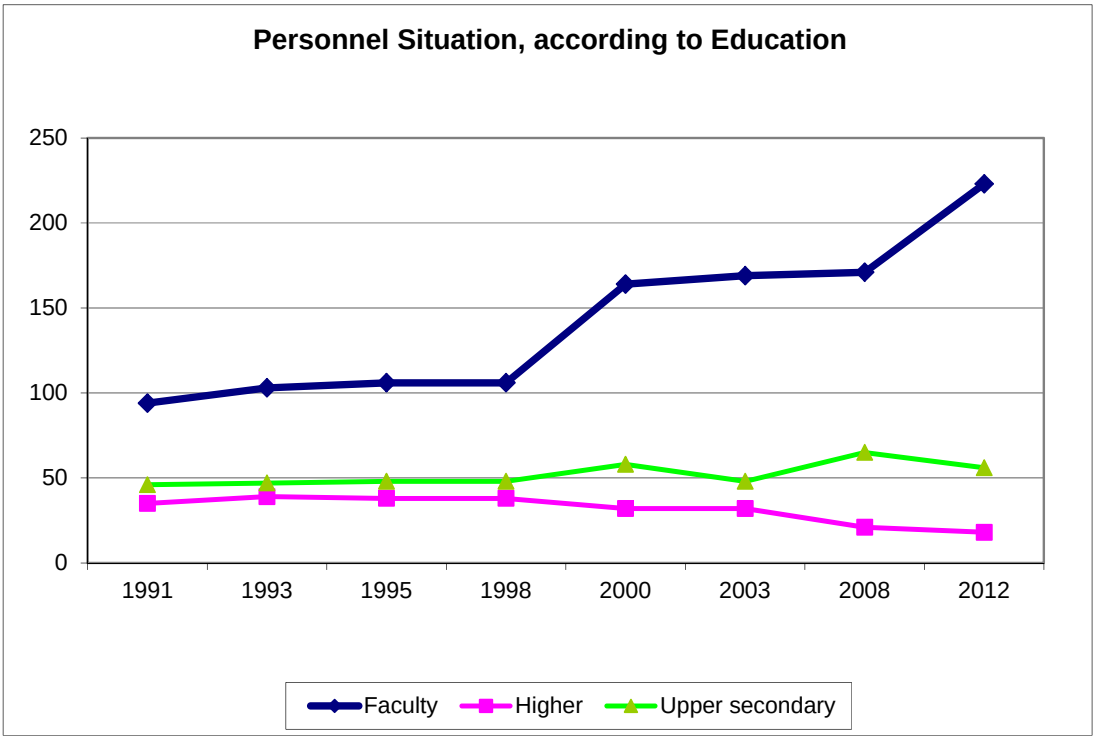
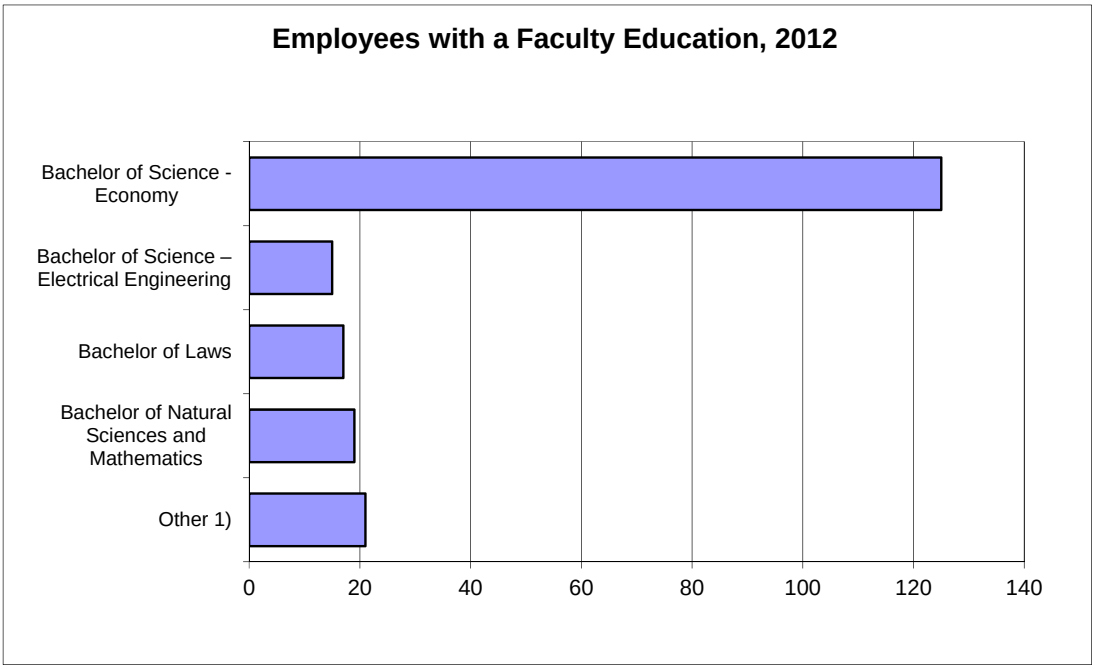


FIGURE 2: EMPLOYEES BY TYPE OF UNIVERSITY DEGREE, 2012



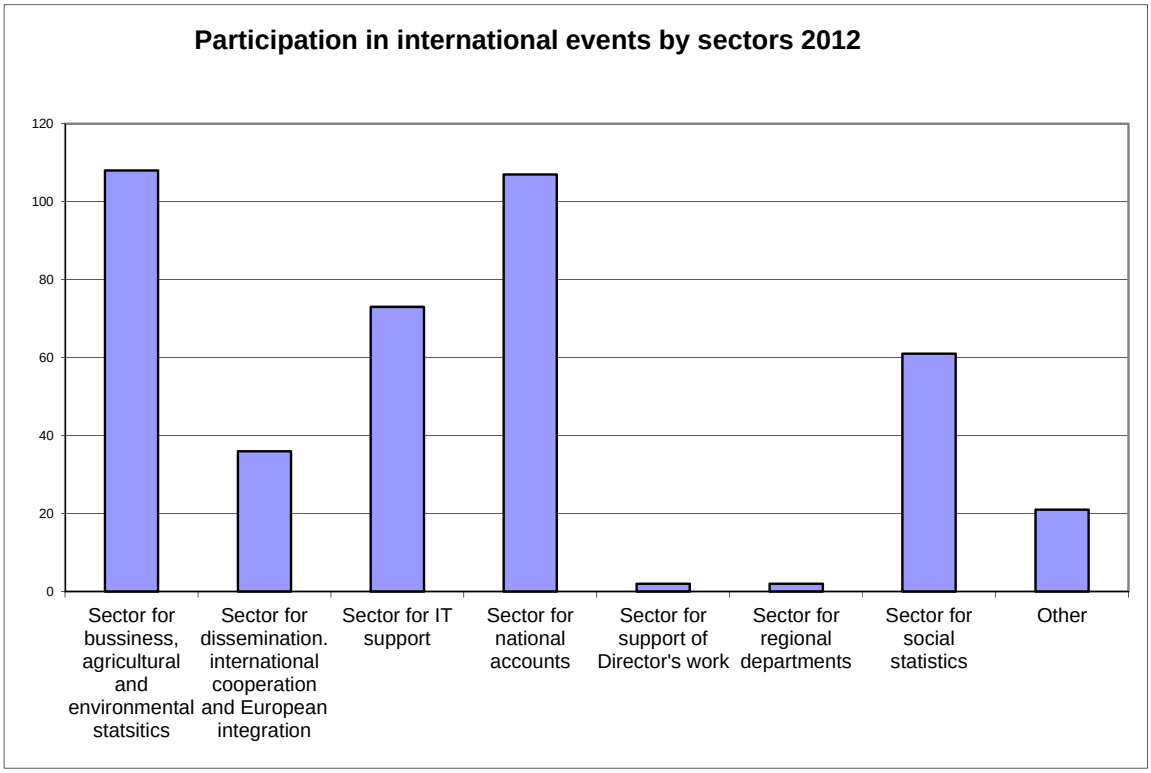
1) Other includes: Bachelors of Science- Geography, Chemistry, Forestry, Mechanical Engineering, Agriculture, Architecture, Construction, Technology and Geodesy; Bachelor of Art - Sociology, Philosophy and Bachelor of Literature - Philology

The new Act for Systematization and Organization of 2010, foresees 392 working posts, which are planned to be fulfilled in the next three years. It is characteristic that for all working posts with faculty education preconditions are the knowledge of at least one foreign language and working with PC.

The Office invested a lot in the learning of English language. Since 1993, the State Statistical Office from its budget started to finance massive language learning. Later, in the school years 2004-2005, and 2005-2006, approximately 25 % of the employees attended English language courses. The above contributed to the fact that of the persons with faculty education, 80 % speak one of the world languages.

The staff from the State Statistical Office is well trained. For illustration, during 2012 , the employees participated in 132 international events and 69 expert missions. In total, 410 persons had a possibility to be trained (some employees participated in more events or trainings). 26 % out of the total individual trainings belong to the national accounts and another 26% to the bussiness, agricultural and environmental statistics. The improvement of national accounts statistics is a very high priority in all current projects in the State Statistical Office. Through this process it is easy to identify gaps in other statistics. Actually, the developments of business statistics and social statistics are going on at the same time.

FIGURE 3: PARTICIPATION IN INTERNATIONAL EVENTS BY SECTORS, 2012



The State Statistical Office, in the process of development of the HRDP and its redesigning according to the new challenges, puts specific emphasis on in-house training as a good policy to rationalize the use of the available resources, both financial and human.

In the last five years many changes have happened in the human resources structure and the available budget for performing of planned tasks. In this situation, the State Statistical Office developed in–house training as a way of internal exchange of knowledge. In-house training deals with the main methodological issues identified by employees as a priority.

In-house training has been developed and used as a tool for:

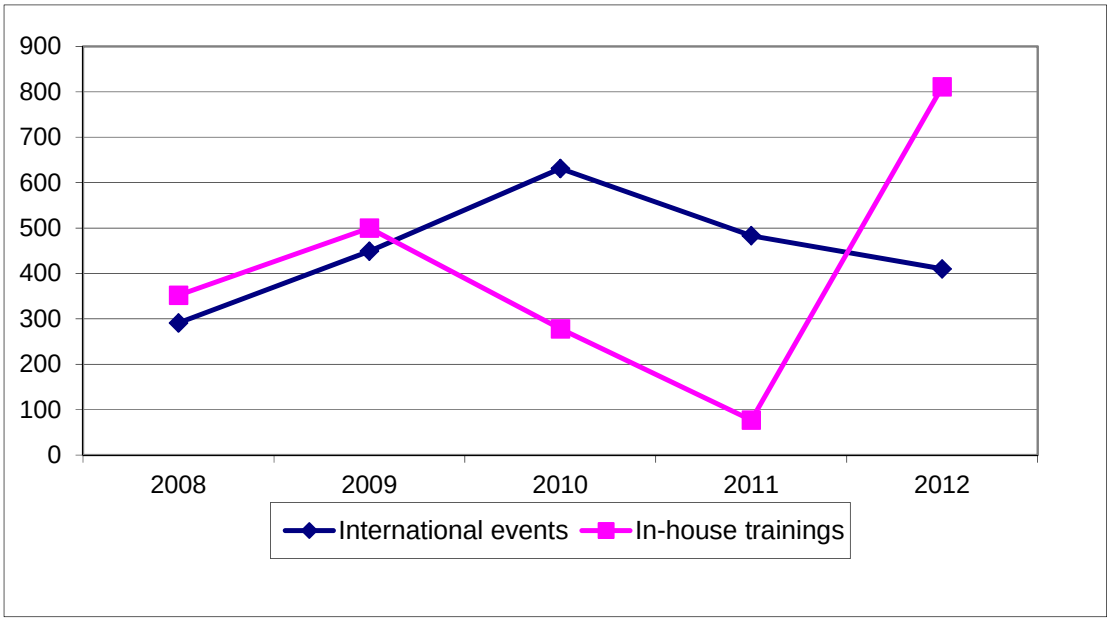
- Training of staff in the areas that are not well covered by external trainings;
- Increase in knowledge of new topics that are covered by external training programmes, but could be visited by limited number of employees from the Office. Participants in external trainings are obliged to organize lectures for their colleagues in a short period of time after their participation in different programmes outside of the Office;
- Training in the areas of weaknesses that are targeted by some departments in the Office;
- Closer internal co-operation;
- Sharing of training materials and
- Filling the knowledge gaps in some areas;

The in-house training programme consists of regular courses and ad-hoc courses and it is administrated by the Human Resources Department.

The lectures could be attended by representatives of different divisions and departments who are interested in the topics announced some time in advance. The lectures treated different topics and could be divided as: cross-cutting topics, macroeconomic topics, socio-economic topics, dissemination and methodological issues.

In the last two years, after analyzing the SSO's current human and financial resources situation, the planned achievements and training needs of employees, the in–house training programme was identified as an effective support to obtain the knowledge needed for smooth running of the statistical production.

FIGURE 4: PARTICIPATION IN INTERNATIONAL EVENTS AND IN-HOUSE TRAININGS, 2008-2012



STATUS OF THE EMPLOYEES

In 2000 the Law on Civil Servants was adopted. In accordance with the Law, all employees in the State Statistical Office have a status of civil servants.

The State Statistical Office, as part of the state administration, has to respect completely the Law on Civil Servants. However, due to the specificities of the work domain of the Office, certain stipulations in the Law are actually limiting regarding the adequate advancement in the career, promotion and development of the human resources that are at disposal of the Office. Due to all these factors, the State Statistical Office prepared its plan for human resources development and implements many activities for education and development of the human resources in accordance with the particular needs of the Office.

The intensive activities for creating an appropriate human resources policy are one of the reasons for the decrease in the fluctuations of the human resources.

In the period 2001-2004, the highest fluctuation of employees was registered. 35 persons left the Institution, due to retirement, establishment of analytical/statistical departments in many banks and hiring of statisticians for much higher wages than in the state administration. However, this fluctuation decreased due to the harmonization of the wages among the civil servants (before this the salaries in the SSO were the lowest among the public administration) and to the new human resources development plan, which is an important support to the strengthening of the State Statistical Office.

MILESTONES IN THE HUMAN RESOURCES STRUCTURE

The first significant change within the staff structure was made in 1991, by increasing the number of high-qualified staff and retiring of 45 persons with lower educational level.

Starting from 1993, the State Statistical Office begins with a systematical approach towards learning of foreign languages, application of the modern statistical methods and using of the modern informatics equipment that was being supplied permanently.

The second significant change within the staff structure came after the Law on State Statistics was brought and after intensive involving of the Office in the international statistical cooperation. Consequently, in the period from 1999 to 2000, 65 persons with faculty education were employed, mostly with Faculty of Economics and Faculty of Information Technologies.

The Stabilisation and Association Agreement (SAA) between the Republic of Macedonia and the European Union (signed in April 2001 and entered into force in April 2004) and the granted status of a candidate country to the Republic of Macedonia (December 2005) contributed to the increased level of integration of the National Statistical System with the European Statistical System.

The upgrading and strengthening of the State Statistical Office, related to the improvement of the availability, quality, comparability and timeliness of statistical data towards their aligning with the statistical acquis, require a lot of human resources.

The third significant change took place in the period from 2006 to2012. Namely, in the frame of the realization of the National Programme for Adoption of the Acquis and other programmes of the Government, the staff was reinforced with 94 new persons.

HUMAN RESOURCES DEVELOPMENT POLICY

In a very fast changing environment, as there has been a huge increase in policies, which resulted in a huge expansion in the field of statistics, a main issue is raised - how does one cope with such an increase when resources have not followed?

In order to answer this question and to learn more about itself and to improve the performances of its work, in the second half of 2006, the State Statistical Office made a self-assessment using the Common Assessment Framework (CAF). CAF is recognised as an easy–to–use tool to assist public sector organisations across Europe to use quality management techniques to improve performance. The CAF provides a self-assessment framework that is conceptually similar to the major TQM models, EFQM in particular, but is specially conceived for the public sector organisations, taking into account their differences. SSO carried out three self-assessments using CAF, until 2012.

In this paper we will refer only to two of the four areas that the State Statistical Office has selected and prioritized based on the CAF results in which, for the beginning, improvement activities will be realized in the direction to managing with human resources. They are the following:

- The organization shall plan, manage and promote the human resources in line with the strategic planning
- The organization shall manage the finances

The organization shall plan, manage and promote the human resources in line with the strategic planning. The State Statistical Office concluded that it did not have enough developed system of human resources management, and therefore a Plan for Human Resources Development was developed in 2008, which follows largely the European experiences and knowledge.

The main objective of this plan is that the Office should change its current situation, and that attention should be given to the developing of the human resources. Currently, the Human Resources Development Policy (HRDP) lies on five (5) pillars:

1. Providing the State Statistical Office with human resources through coordination of the quantitative and qualitative work requirements in the Office with the candidates' competences and potentials;
2. Human resources development
3. Motivation
4. Maintaining of the human resources
5. Human resources unit's scope of work

Providing the State Statistical Office with human resources through coordination of the quantitative and qualitative work requirements in the Office with the candidates' competences and potentials is planned to be done through the following activities

- New organizational structure,
- Prioritization of the staff needed
- Defining the real needs of the State Statistical Office
- Defining the additional competences of the candidates

Human resources development could be reached through the following activities, which started in 2008.

INTRODUCING OF THE MENTORING SYSTEM

Mentoring system means that to each newly employed person a mentor is determined who does not necessarily have to come from the organizational form the employee is in. The mentor's basic task is to give support to the newly employed person in the process of his/her socialization in the Office, by giving him/her support and advice in the process of his/her work involvement, delivering his/her requests and positions to the senior managers, but also mediating in solving conflict situations. The period of holding the meetings between the mentor and the employee can be set in accordance with the employee's needs, but not less than 4-5 times a year. The meetings can be held in the Office or outside the institution. Socialisation is the process of including the new staff in the formal and informal

organisational structure in the Office and gaining the working and other culture which is dominant in the State Statistical Office.

PREPARING OF THE ANNUAL TRAINING PLAN

Staff training is one of the most important segments of the human resources management, besides the employment of new staff, the management and organization and sources for the financial means and salaries. In this direction, for the State Statistical Office it is a challenge to have employees that are trained with skills, capabilities and experience to respond to the quality requests, which jointly lead towards confidence building in the institution.

Every employee has the right and duty to professionally improve oneself. Therefore, the Office prepared the Annual Training Plan, and determined that each employee should have at least three (3) days of training once a year.

Introducing the in-house training

The State Statistical Office started with the internal training programme as a main training programme especially in the period of serious budget cuts. In-house training is evaluated as very important tool for managing of knowledge sustainability obtained by different sources.

The big number of new employees without working experience and with limited knowledge of the process of statistical data production opened the need to establish special in-house training programme for the young SSO employees. The content of this programme covers topics from macroeconomic, business and social statistics. Lecturers are the persons directly responsible for production of the statistics that are subject of the lectures, because the basic objective of this programme is to provide the new employees with knowledge of statistics produced by SSO in terms of: methodological bases, data sources, data collection methods, international standards, recommendations and regulations applied, etc. The participation in this training programme shall mean their preparation for participation in external trainings and in-house general programme. In 2012, 18 lectures with average participation of 25 young statisticians per training were completed.

In-house trainings completed till now confirmed that the in-house training programme secures sustainability of the knowledge obtained through other forms of trainings which could be visited by a limited number of employees.

Motivation **-** Usually motivation is connected with staff salaries, but taking into consideration that this question is regulated by the Law on Civil Servants, the Office dedicates its attention to the other components. The staff motivation will be increased by providing better working conditions, rotating the State Statistical Office staff every 3 or 5 years and allowing the new staff to pass on part of their working experience in the Regional Departments. In addition, higher motivation of the staff can be provided if the employees' autonomy and responsibility, and team working are stressed.

Maintaining of the human resources - As it was previously mentioned, the State Statistical Office has staff that is well trained and educated. Therefore, special attention is given to the maintaining of the human resources. Nowadays, the salaries of the civil servants have significantly increased and so it can be stated that one of the main factors for employees leaving the Office is overcome. For the State Statistical Office it is a challenge to have employees that are trained with skills, capabilities and experience to respond to the quality requests, which jointly lead towards confidence building in the institution, especially in difficult economic times.

Human resources unit's scope of work - With the new organisational structure, the scope of work of this unit has radically changed. Its main objectives are:

- to conduct the information system for human resources, relation between employees, training and development, motivation and staffing process in the Office;
- to participate in the Office's organisational-development process related to human resources;
- to prepare different legal Acts, and to support the internal training system in the Office.

THE ORGANIZATION SHALL MANAGE THE FINANCES

The working process requires a lot of resources which are not completely available with the budget of the State Statistical Office. Therefore, in order to continue this process in the best possible manner, the Office has to increase the efficiency of its work. This is only possible if the information on resources, costs and outputs is fully available.

As a result of the analysis of the strengths, and the context and areas for improvements in this field, in general, it was summarized that:

- The existing accounting system at the State Statistical Office cannot provide precise information about the separate expenses of every statistical survey;
- Significant resources coming from donations are not included. In the case of the State Statistical Office, significant resources that cannot be neglected are coming from donations, especially for improving knowledge (through trainings, workshops, conferences, expert missions, etc.)

Therefore, the top management made a decision to build a cost calculation system, with the following main objectives:

- to determine all expenses/costs and to attribute them to the individual statistics;
- to optimize the work processes

As a next step, an Action Plan for developing the Concept for the cost calculation system was provided in October 2007. The plan foresees realization of the following activities in the period 2008-2009 and to become operational in 2010.

REVISION OF THE EXISTING CATALOGUE OF ACTIVITIES

"Activities" in the Office, are those typical sessions that determine the workflow of a cost unit. The main objective of the Catalogue of Activities (working) is to enable the Office to determine the burdening of the working posts and through analysis it will be possible to conclude whether the working posts are: overburdened, adequately burdened or not burdened. This should enable the Office to make an analysis of the staff availability.

Furthermore, this will contribute to calculate the expenditures for employees that directly influence the budget. This will lead towards fulfilling the objectives of the organization in an efficient and effective manner, because it should help to estimate the exact number of employees - neither more nor less than the number needed – that perform the necessary tasks.

The first version of the catalogue was prepared for other purpose - to register the time used on certain activity. Therefore this catalogue was too detailed and comprised approximately 300 activities. However, keeping in mind the final purpose of the catalogue, i.e. the analyses to be conducted using the cost-calculation method, and the practicability i.e. the reporting burden on the staff of using the catalogue, it was reduced and now it consists of around 80 activities grouped in 23 groups of activities.

DEFINING THE COSTS SOURCES

Basically, data should be collected at the source and double data entry should be avoided, where possible. Not all available data from the administrative accounting system at the State Statistical Office can be used directly as a cost source. Cost sources are in:

- Electronic form (data already entered) in a dialogue mode
- Electronic form of existing data in the Office (working hours in the Office)
- Number of paper forms (most of them have to be established) that will be filled in periodically and will contain detailed description of the workflow concerning data collecting

PREPARATION OF THE CATALOGUE OF COST-UNITS

The Catalogue of Cost-Units is used to identify the tasks that need human resources. So, a task is considered as a "cost-unit" if it can be separated from other tasks, but due to the same parameters it may be grouped with other, similar tasks. A cost-unit can be a professional subject matter or an administrative task. A cost-unit element in the Office is typically a statistical survey, a development project, a data supply, a yearbook, financial tasks etc. These catalogue elements are grouped into a two (2) level catalogue hierarchy to form aggregated groups of cost-units. The Catalogue of Cost-Units is consisted of 330 costs-units grouped in 51 groups of cost-units.
It covers the following groups of cost-units:

a) Annual Statistical Programme;
b) Cabinet of the Director;
c) Departments for Finances, Legal and General Affairs, International Cooperation and European Integration;
d) Internal Audit;
e) Public Procurement Commission;

There is a possibility the data on cost-unit to be aggregated on the level of organisational units, according to the belonging of the employees to the organisational units.

CATALOGUE OF TYPES OF COSTS

In general, costs are divided as personnel and material costs. Personnel costs include the salary, transport, food and training costs. In addition, the catalogue of material costs comprises:

- Traveling costs and per diem for trips that are not categorized as training
- Communication and transport costs
- Contractual services and other services
- Capital costs
- Interventions and regular maintenance
- Office materials
- Insurance
- Membership fees, office representation

IDENTIFICATION OF THE MODULES OF THE COST CALCULATION SYSTEM

The Cost Calculation System comprises data from several modules

- Module for work time reporting for calculation of personnel hours per cost
- Module for staff training for calculation of training expenses per cost unit
- Modules for calculation of other material costs

DESIGN AND IMPLEMENTATION OF IT SYSTEM FOR REGISTER OF EMPLOYEES

A Register of Employees is developed, where history of basic identification information and job-related data are kept.

IMPLEMENTATION OF THE IT SYSTEM FOR REGISTRATION OF THE MONTHLY PERSONNEL HOURS

A database is designed and an application for registration of the monthly personnel hours is available for registration for all State Statistical Office's employees.

ESTABLISHING OF UNIT FOR INTERNAL CONTROL AND DEFINITION OF THE PROCEDURE OF DATA CONTROL

To perform all the tasks of the Cost Calculation System a control unit is established. This control unit is responsible for checking the correctness of the data, compared with the presence evidence. In addition, it is responsible for distribution of the costs by formula, for calculation of personnel costs and for integration of the data obtained from the cost calculation system. These activities require close cooperation with the Department for Human Resources.

DESIGN AND IMPLEMENTATION OF AN IT SYSTEM FOR PERSONNEL ELECTRONIC FILE

The personnel electronic file is in the process of development and will contain basic information about employees (from the Register of Employees), information about promotions, demotions, changing department, planned and realized training activities, money invested (module for training evidence) and other things (from additionally developed modules).

CALCULATING THE COSTS FOR GOODS, SERVICES AND CAPITAL EXPENSES

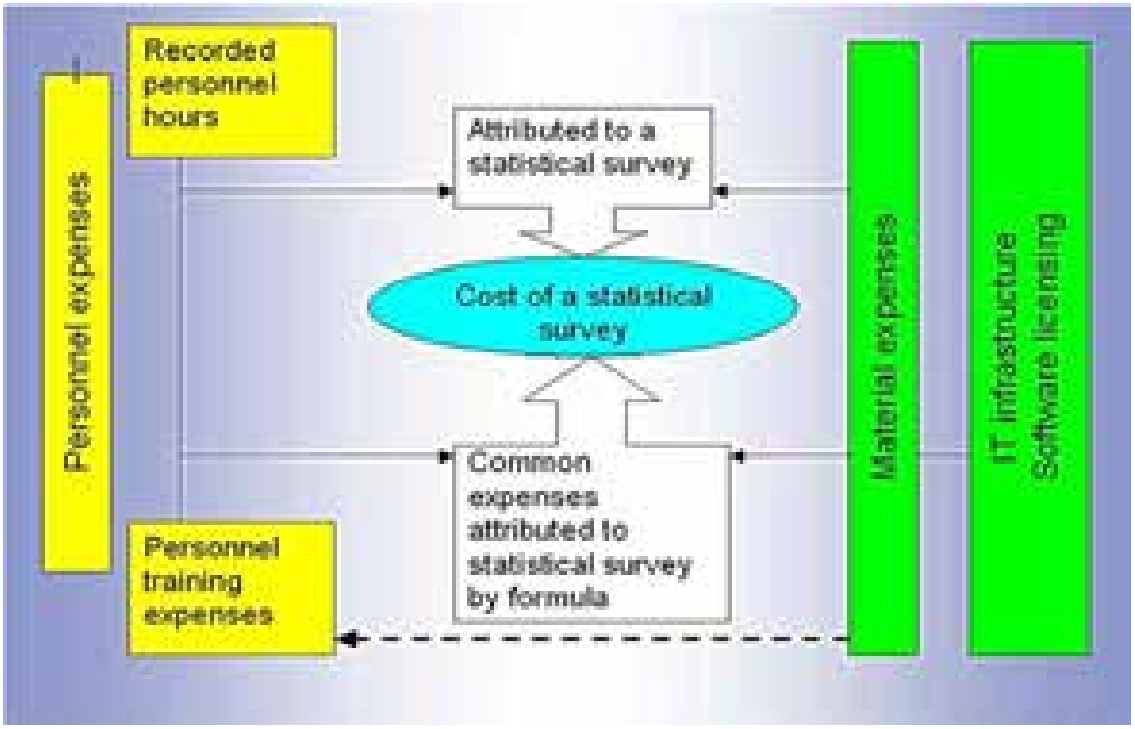
In general, different methods for calculating the costs are planned. According to the analysis of the type of material costs and cost evidence sources, the State Statistical Office made:

- Some material costs that could be attributed to certain statistics directly (trainings, expert fees, copying, printing, costs for the interviewers);
- Some of the material costs that could not be attributed to a statistical survey can be attributed to a cost centre (traveling expenses, public utilities, office material, mail and telephone)
- Most of the material costs are attributed to the individual sets of statistics by formula (equipment and licenses, internet, fuel, papers and magazines, office rent, translations, membership fee in international organizations, purchase of furniture, cars)

INTEGRATION OF DATA FROM ALL COST SOURCES IN ONE COST CALCULATION SYSTEM

The following chart presents information flow for calculating the cost of a statistical survey. For some parts of the system, IT modules are already designed and further development of the complete system is under consideration. As soon as the detailed specification of all the functionalities, the complete data flow and workflow are clarified the missing parts will be completed. Personnel training costs are part of the material costs, but, through the personnel electronic file, they are logically attributed to the personnel costs.

FIGURE 5: INFORMATION FLOW FOR CALCULATING THE COST OF A STATISTICAL SURVEY



DEFINITION OF ALL THE OUTPUTS (REPORTS) FROM THE COST CALCULATION SYSTEM

Collected data are used for preparation of monthly/annual evaluations. Monthly evaluations are made for the directly allocated costs, and for all the rest (attributed by formula) they are done annually. That means that the exact costs for a statistical survey are available on a yearly base.

The following monthly/annual reports are planned to be prepared:

- Reports by cost units
- Reports by activities
- Reports by organisational units

The results will be used for further data analysis and recommendations.

DEFINING THE RECOMMENDATIONS (GUIDELINES) FROM THE DATA ANALYSIS

The last, but not least, activity is the defining of the recommendations from the data analysis. The top and the senior managers of the State Statistical Office, based on the data analyses, should make recommendations about cost units. They can recommend certain cost unit to:

- continue to exist;
- examine the possibilities to reduce the costs;
- be increased;
- be integrated in other cost unit;
- include new cost unit;
- be excluded.

This analysis is expected to optimise the work processes and male more effective human resources management policy.

CONCLUSIONS

In this paper, firstly, is reviewed the process of the country's transition when the State Statistical Office changes were very complex and specific; secondly, the significant progress within the human resources structure till nowadays was reviewed; and thirdly, an overview is provided of the current human resources development policy of the State Statistical Office of the Republic of Macedonia in the context of managing the human resources in an efficient and effective manner.

It is demonstrated that a small office can properly function only with well established human resources management policy. This policy has to be accepted by both the top management and the employees. It has to lead to well educated, loyal and enthusiastic persons that are ready to cope with the challenges. Therefore, the State Statistical Office of the Republic of Macedonia is on the right track to respond efficiently to the requirements and the challenges.

6. E-LEARNING SYSTEM IN STI, STATISTICS KOREA: ACHIEVEMENTS AND CHALLENGES

Kyung ae Park Statistics Korea

The Statistical Training Institute (STI) started E-learning in 2005 with two courses and 378 certified trainees. It continues to grow resulting in 33 E-learning courses and 14353 certified trainees in 2011. E-learning courses can be divided into three types: (1) Statistics for the staff of Statistics Korea (KOSTAT); (2) Survey Manuals for enumerators of KOSTAT, and (3) Statistics for the General Public. Despite the rapid growth of E-learning, STI faces various new challenges with the development of ICT. These challenges include confidentiality, the development of user-friendly content development, competing with other training institutes in attracting trainees, new demands placed on smart learning, the request for more productivity but less manpower, and working with a limited budget. Under these circumstances, STI will provide U-learning services this fall. In preparation of this, the following introduces SWOT analysis and the major strategies implemented by STI for E-learning. Furthermore, this paper evaluates the past experiences of E-learning, examines some of the recent challenges and responses to it, and provides a brief introduction to the framework of U-learning.

OUTLINE OF E-LEARNING

Developments in internet and multimedia technologies are the basic enabler of E-learning. E-learning is utilized by many higher education and/or life-long institutions, both for profit and non-profit. In Korea, E-learning has been widely used by various companies to inform and educate both their employees and customers since the 1990s, and now has been adopted in many government training institutions. Furthermore, cyber universities that offer degrees and certificates are also growing very rapidly. Thus, E-learning stands to become the predominant form of education in the near future.

In a broad sense, E-learning is the computer and network-enabled transfer of skills and knowledge. E-learning applications and processes include IBT (Internet-Based Training) or WBT (Web-based training), CBT (computer-based training), virtual education opportunities, and digital collaboration. The Content of E-learning is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM. It can be self-paced or instructor-led and includes media in the form of text, image, animation, streaming video and audio. Today many technologies are used in E-learning, for instance, blogs, e-Portfolios, and virtual classrooms. Most E-learning situations use a combination of these techniques.

E-learning in a narrow sense, however, indicates internet-based learning or web-based learning. In cases where mobile technologies are used, the term “M-learning” has become more common. “S-learning” is preferred when smart-phone is used. The term “U-learning” (ubiquitous learning) is used wherever and whenever learning is possible, regardless of the various digital devices being employed. Therefore, E-learning progresses from wired Internet-based learning to U-learning through M-learning and S-learning as presented in Figure 1.

E-learning proffers certain conveniences to learners and cost-effectiveness to providers. However, some weaknesses have been observed in creating and managing the content. On the top of this, following new ICT technology can be quite burdensome. Therefore, strategies of STI aim at providing introductory and repetitive courses, on-line services of off-line lectures, and learning materials to anyone, at anytime without any limitations as shown in Figure 2.

FIGURE 1: PROGRESS OF E-LEARNING

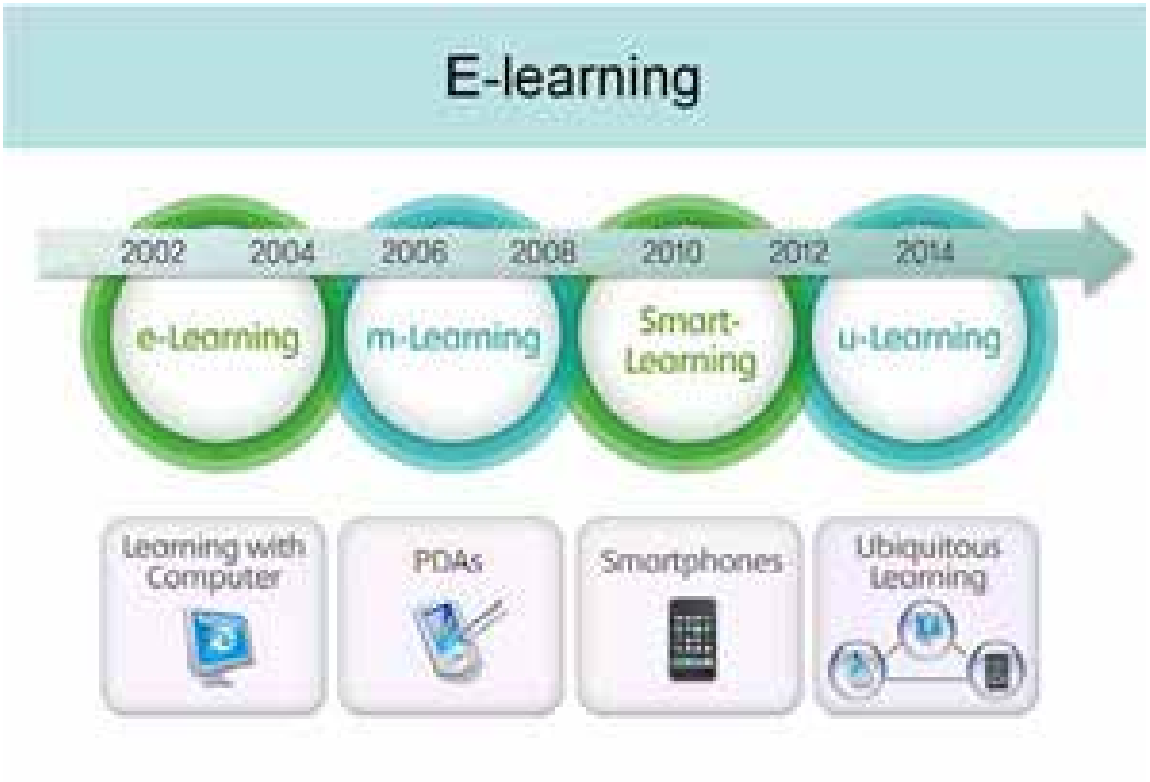


FIGURE 2: SWOT ANALYSIS AND STRATEGY OF STI FOR E-LEARNING

STRENGTH • Low Learning cost • Learner-driven learning • Accessibility • Easy learning management • Just in time • Good for shy learners	WEAKNESS • Limited interaction • Difficulty in developing content • Difficulty in evaluation • Limitation of technology • Effective to limited areas • Less effective in learning
OPPORTUNITY • To secure many customers • Provision of diverse learning opportunities using different ICT • Sharing information and resources with other institutions	THREAT • Cost to develop system: Server, LMS, Content • Difficulty of standardisation due to changes in ICT: Diffusion of new digital devices
⇩	
Providing diverse content focusing on introductory and repetitive learning Providing on-line service of good quality off-line lectures Providing learning materials to anyone, anytime without any limitations	

WEB-BASED TRAINING

Currently, E-learning in STI is WBT. WBTs provide learning stimulus beyond the traditional learning methodology such as printed textbook and classroom-based instruction. WBTs offer user-friendly solutions for satisfying continuing education requirements. Instead of limiting trainees to attending courses or reading printed manuals, trainees are able to acquire knowledge and skills through methods that are much more conducive to individual learning preferences. WBTs offer visual learning benefits through animation or videos with PPT as shown in Figure 3.

FIGURE 3: MAKING CONTENT: ANIMATION AND VIDEOS WITH PPT

WBT can be a good alternative to printed learning materials since rich media, including videos or animations, can easily be embedded to enhance the learning. Another advantage to WBT is that they can be easily distributed to a wide audience at a relatively low cost once the initial development is completed. However, the creation of effective WBT requires enormous resources. For instance, developing software like FLASH for WBT is often more complex than an expert of the actual subject matter is able to use. So, STI relies on out-sourcing for technological assistance. In addition, the lack of human interaction where something like animation is concerned can limit both the type of content that can be presented as well as the type of assessment that can be performed. Therefore, recent content is more concentrated on videos taken at the studio of STI.

Our early observations on the use of video in E-learning is preliminary but nevertheless shows an increased retention among students, along with better overall results when video is used in a lesson. Creating a systematic video development method holds promise for creating video models that positively impact student learning. Furthermore, the timelessness of the content provided is possible by constructing content at the video studio at anytime.

Table 1 shows the details of E-learning courses currently offered by the Statistical Training Institute. Courses are always open so that anyone who wishes to take them can do so simply by accessing the internet homepage. The E-learning (http://elearn.nso.go.kr) offers not only E-learning courses at the corner MY E-LEARNING but also offers videos of actual classroom lectures at the corner OPEN STUDY. Moreover, various PPTs and e-books at the corner of HELP LEARNING are also available. As summarized in <Table 1>, the HELP LEARNING corner has 67 course materials in the form of text, EXCEL, and PPT as well as 43 e-books in pdf format. The OPEN STUDY corner has 34 animation courses and 9 videos with PPT. In My E-Learning corner, 31 courses are currently being managed for certification.

LEARNING MANAGEMENT SYSTEM

Learning Management System (LMS) is software used for delivering, tracking and managing training. LMS allows for instructors and administrators to track attendance, time spent on tasks, and student progress. Trainees also log on to the LMS to submit homework, access the course syllabus and lessons, track grades and print completion records in the form of certificates.

All E-learning programmes in STI use the LMS, and proceeds from the course application to the confirmation of the list of trainees, course taking, evaluation and completion. Completion is determined by applying a 60% progress and to a 40% evaluation ratio. A trainee who has failed to complete a course is prohibited from taking another E-learning course for the next 3 months. In order to encourage the completion of each course, STI adopts the "Seven Touch" principle, which requires at least 7 introductions and encouragements through e-mail messages and SMS, beginning even before the formal training begins, and continuing until final completion. This method substantially raises the completion ratio, as the training operator shows persistent interests in the course and its overall progress.

Assessing learning in a WBT usually comes in the form of multiple choice questions, or other assessments that can be easily scored by a computer such as drag-and-drop, radio button, simulation or other interactive means. In STI, we assess trainees by open questions as well as by multiple choice questions. The number of essay type homework assigned is determined based on the principle of one essay per 10 hours, and the instructor gives and grades the presented essays to evaluate and check the study progress. With this system, feedback can be geared towards a student's specific mistakes. Also, to enhance the study efficiency, the number of study sessions a trainee can take is limited to 4, and a trainee may take only 1 topic a month.

TABLE 1: E-LEARNING COURSES OF STATISTICAL TRAINING INSTITUTE

CATERGORY	COURSE OR MATERIAL NAME	ELIGABILITY	METHOD OF EVALUATION	FORMAT
Courses on basic statistics (4)	• Statistical Way of Thinking (17h) • Basic Survey Methods (10h) • Statistics Act (4h – no evaluation) • Statistical Analysis using SPSS (30h) • Statistical Analysis using Excel (14h) • Time series data analysis and practice (16h)	ALL	Multiple Choice-based random question Essay-based Task Evaluation	Animation
Courses on Statistics Speciality (9)	• Understanding the recursive analysis (20h) • Basic Sample Theory (14h) • SAS through Examples (20h) • Understanding the financial statements (20h)* • Preparation for Social Survey Analysis (19h)*	ALL	*Multiple Choice	Animation
Courses on Statistical Survey Guidelines (17)	• Mining and manufacturing Trends : production, shipment, inventory (10h) • Mining and manufacturing trends: Production capability, operation rate (6h) • Current Service Industry Survey (10h) • Consumer Price Survey (9h) • Current Household Survey (9h) • Economic Activity Population Survey (6h) • Current population survey (6h) • Farm Household Economy Survey (19h) • Crop production survey (8h) • Fishery household economy survey (19h) • Cultivated Area Statistics Survey (7h) • Current fishery production trends 87h) Farm household sales and purchase price survey (6h)	KOSTAT Survey Staff	Multiple choice based Random Questions	Animation
Basic Course (1)	• Price of rice survey (5h) • Current fish farming survey (6h) • Cost of livestock production survey (8h) • Integrity (15h)	ALL	Multiple choice based Random Questions	Animation
Open Study (43)	Most Survey Guidelines Academy for Middle School Students etc	ALL	None	Animation, Video+, PPT
HELP LEARNING (110)	Excel, Population, Micro-data, Economic Statistics, Social Statistics	ALL	None	Text, Video+, PPT, pdf, Excel

NUMBER OF TRAINEES BY LEARNING TYPE

The Statistical Training Institute (STI), an affiliate of Statistics Korea (KOSTAT), is the only government organization that performs the statistical education in Korea. The mission of STI is to cultivate statistical professionals and to promote the awareness of statistics. In order to achieve this mission, our primary strategy is to cultivate statistical professionals who can produce high-quality official statistics. They do so by providing a variety of educational content through the E-learning programs so that trainees may study at anytime, anywhere, encouraging voluntary and self-motivated study among trainees.

As presented in Figure 3, E-learning trainees have outnumbered classroom trainees since 2008. Considering that the E-learning programme began in 2005 with only two courses and 378 certified trainees, and then expanded into 33 courses and 14533 certified trainees in 2011, it is evident that E-learning will eventually be the dominant learning methods of learning in the near future.

FIGURE 5: NUMBER OF TRAINEES BY LEARNING TYPE AT STI, 2005-2011

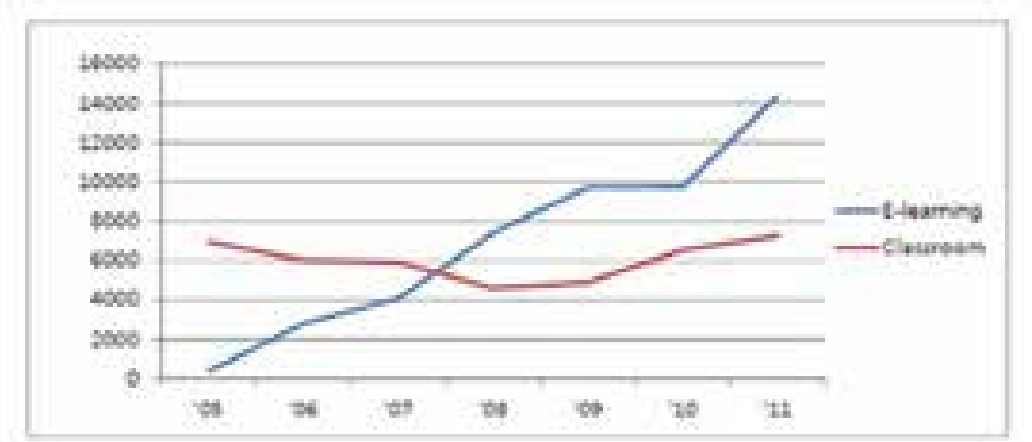


Table 2 summarizes the demographic background of a certified trainee of E-learning at the Statistical Training Institute during 2011. E-learning made up two thirds of all trainees. Most notably, enumerators of local offices of KOSTAT are the major customer of e-training of STI. E-learning is also popular among busy government officials who cannot easily leave their office for classroom learning, for once again, E-learning offers the opportunity for students to learn anytime, anywhere.

TABLE 2: NUMBER OF TRAINEES BY LEARNING TYPE AT THE STATISTICAL TRAINING INSTITUTE, 2011

Category	Statistics Korea		Other Government		General Public	Total
	Headquarter	Local	Central	Local		
Classroom	1387 (82.3%)	3315 (29.5%)	716 (45.4%)	520 (10.6%)	1347 (60.3%)	3339 (33.6%)
E-learning	300 (17.7%)	7930 (70.5%)	861 (54.6%)	4366 (89.4%)	887 (39.7%)	14353 (66.4%)
Total	1687 (100%)	11245 (100%)	1577 (100%)	4886 (100%)	2234 (100%	21629 (100%)

COST OF TRAINING PER TRAINEE

E-learning is used extensively in the business sector where it generally refers to cost-effective online training. As presented in Table 3, total expenditure spent by the STI in 2011 is more than five times greater for classroom learning than E-learning. As the number of E-learning trainees is 1.8 times more than classroom learners, the expenditure per trainee is 9.2 times higher for classroom learning than E-learning. Among total educational expenditures, the proportion of lecturer fees showed the greatest difference: 20% for an E-learning lecturer and 61% for a classroom lecturer. In other words, 80% of expenditures were utilized for the development of new content and an advanced E-learning system, while only 10% was used for content development of the classroom lecture. Even though it is very hard to measure the effects of education from the ROI (return on investment) perspective, E-learning is cost-effective from the monetary input perspective.

TABLE 3: COST OF TRAINING PER TRAINEE, 2011

	Total Trainees (Person)	Total Expenditure (KRW)	Expenditure for lecturer (KRW)	Expenditure per capita (KRW)
Total	21,629	1,150,581,150	626,597,770	53,196
Classroom	7,726	962,420,260*	588,467,770***	124,569
E-learning	13,903	188,160,890**	38,130,000	13,534

* Includes fees for lecturer, text purchasing and development, management outsourcing Purchasing, PC and SW for classroom, other management fees

** Includes fee for lecturer, text development, system development, other management fees

*** Excludes payments for in-house lecturer

SATISFACTION OF TRAINING

After finishing courses, all trainees are subject to finish an evaluation survey for each class. As summarized in Table 4, E-learning trainees show less satisfaction than classroom trainees in all items of the satisfaction questionnaire. The major reasons of lower satisfaction may be related to the structure of the lecture itself: (a) It is easier to give a lower evaluation score to a faceless lecturer of an online class than to a face-to-face lecturer in a classroom setting; (2) The respondent of an on-line questionnaire is more difficult to identify than that of an off-line paper and pencil questionnaire. Therefore, an online questionnaire may more accurately reflect reality, while an off-line questionnaire may reflect over-satisfactory responses for all items; (3) E-learning courses include a variety of trainees, while classroom lectures restrict trainees in number, check their background as well as pre-test scores, and engage in discussions and various other participatory tests. Thus, E-learning courses actually cannot satisfy all kinds of trainees. Courses may be boring for some students, but they may also prove too difficult for others. In a classroom lecture, the difficulty level can be more easily controlled than in an E-learning setting.

Above all, E-learning courses are taken largely for the fulfilment of the obligatory learning time requirement (100 hours per year). Therefore, learners often have no intention to learn something new. Sometimes they listen to the same courses repeatedly and group registration for a particular course seems related to the evaluation system of public officials in the Korean Government. Classroom learners, on the other hand, tend to participate in the courses to acquire some knowledge. Such differences in the motivation of learners seem to make huge differences in the satisfaction scores of lectures. Therefore, attention to the motivation and success or failure of the students in regards to E-learning should be kept in context and considered with other educational efforts in mind. Information about motivational tendencies found among students can help educators develop certain pedagogical insights, with the end result of helping students perform better.

TABLE 4: RESULTS OF TRAINING SATISFACTION SURVEY BY LEARNING TYPE, 2011

	Overall	Contribution to the job	Curriculum	Management of training	Teaching Skill	Average
Average	4.16	4.18	4.07	4.27	4.21	4.21
Classroom	4.30	4.31	4.16	4.50	4.43	4.40
E-learning	4.00	4.05	3.98	4.02	3.96	4.00

CHALLENGES AND RESPONSES: BLENDED LEARNING

STI has addressed E-learning to supplement classroom instruction by using the same LMS. This approach is well suited to compliance-focused training. However, current LMS is limited in its ability to reach today's learners. Their learning styles and their expectations for professional development demand much greater interaction with the material, with the instructors, and with each other. In particular, a wide range of multimedia content facilitates continuous and social learning, which further heightens learner engagement. For as is well known in the field of education, the greater the engagement of the learner, the better the chance that he or she will succeed in his or her studies. Communication technologies are generally categorized as "asynchronous" or "synchronous." Asynchronous activities use technologies such as blogs, emails, cafés, and discussion boards.

In asynchronous activities, participants may engage in the exchange of information without the dependency of other participants' simultaneous involvement. Asynchronous learning also gives trainees the ability to work at their own pace. This is particularly beneficial for trainees who suffer from health problems or who are disadvantaged by language barriers, and/or have child care responsibilities. These students have the opportunity to complete their work in a low stress environment and within a more flexible timeframe. If shy students need to listen to a lecture a second time, or think about a question for awhile, they may do so without fearing that they will hold back the rest of the class. Through asynchronous online courses, older-students can earn their diplomas more quickly, or repeat failed courses without the embarrassment of being in a class with younger students.

On the other hand, synchronous activities involve the exchange of information with one or more participants during the same period of time. In an E-learning environment, an example of synchronous communications would be a Skype conversation, or a conversation in a chat room, where everyone is online and working collaboratively at the same time. Synchronous activities occur with all participants joining in at once, as with an online chat session or a virtual classroom or meeting.

Following the new development of ICTs, even though learners can fulfil learning needs through asynchronous activities, diverse customers demand more from their education. From our experiences, trainees did not utilize the cafés of the E-learning Centre. But, it is our hope that our new U-learning system will encourage SNS for better communication among students.

As instructional interactivity is an important design focus in E-learning, STI has continued to supplement the E-learning through something called "Blended-Learning". Research from Bersin and Association has shown that the greater the sensory involvement, the more content learners retain: hearing (5%); reading (10%), discussion and interaction as in blended learning (50%); and on-the-job experience (75%). As such, Blended Learning seems better than E-learning. Furthermore, among the E-learning material, audio-visual is better than only audio or only visual material.

CREATING COMPELLING CONTENT

Content is a core component of E-learning and includes pedagogical issues. When beginning to create E-learning content, the pedagogical approaches need to be evaluated. Simple pedagogical approaches make it easy to create content, but lack flexibility, richness and downstream functionality. On the other hand, complex pedagogical approaches can be difficult to set up and slow to develop, though they have the potential to provide more engaging learning experiences for students. Somewhere between two extremes is an ideal pedagogy that allows a particular educator to effectively create educational material while simultaneously providing the most engaging educational experiences for trainees.

Operators of the E-learning always face the task of selecting topics fit to E-learning environment and creating well designed programs and content. Regular courses are usually developed through outsourcing, and it normally takes 3 - 6 months to develop a course.

Content is developed in light of education engineering considerations, content delivery and user interests and attention. Moreover, content specialists invest huge amounts of time for this development. Indeed, developing new courses for E-learning is not easy, compared with the development of classroom courses which can be arranged within several hours if lecturers are available. Recently, the quality control of the content has become one of the major issues where E-learning is concerned: How can we assure that content is error-free through the entire course of content creation, modification and changes? As content offered by other organizations is shared and adopted to reduce the budget, more effort is needed to control the quality of the content.

In creating content, context is conveyed in the first few seconds of exposure and very quickly determines the learner's attitude toward the learning that will proceed. The learner decides if a lesson is going to be boring or interesting based on immediate impressions, and he or she quits the lesson anytime if these impressions do not appear appealing or useful. In a survey conducted in November, 2011, KOSTAT staff wanted content constructed by human instructors with text most (37%), followed by human instructors with PPT (29%), animation (28%), and finally audio lectures with text (4%). Furthermore, the most desired content was Basic Statistics, Information Skills, Survey Methods, Preparation for Social Survey Analysts, etc. Therefore, STI tries to find good authors and lecturers to create compelling context in these areas. While there is an art to creating good context, it is not particularly difficult.

LEARNER-CENTERED APPROACH

The feedback that indicates that E-learning is boring is in truth more indicative of the lack of a challenge than some intrinsic boring quality of the content. Learners need to know what they do actually matters. If there is no chance for the learner to fail, then failure or success is a matter of indifference to them. And if the performance required of the learner seems irrelevant, there will be little motivation to work toward the end. Thus, designing a set of challenges is a critical skill when it comes to creating instructional interactivity in the ELearning environment. For example, we try to enhance the level and efficiency of evaluation through problem solving-type essays that require trainees to solve different problems on the same subject topic. This enhances the effect of learning, because the trainees must solve the problems for themselves personally before presenting the results.

Many E-learning designers think that their job is mainly to deliver content. The content centred design approach focuses almost entirely on ways to divide up content. However, the best sort of E-learning is created with a learner-centred focus, wherein primary attention is given to creating the learning experience. That is, letting the content flow through the activity and its consequences. Learner-centred design puts challenges in front of the learner as an initial step in teaching. Then, based on how the student performs, the instructional content is provided to each learner through feedback based on a demonstrable need. This tends to make the instruction more relevant and much more motivating for the learner.

A commonly held design principle is that immediate feedback is a great benefit of E-learning. When the subject matter is a body of facts to be memorized, it is probably correct to give immediate judgment. However, once learning objectives begin to require a type of learning based on conceptual, procedural, or problem solving skills, much can be gained by delaying feedback. With multi-step, higher order skills, immediate judgment after every step can trivialize what would otherwise be an interesting challenge. A better approach is to give the learner the necessary information through instructions, or through demonstration via animations of the entire step or process, and then to let the learner try it for

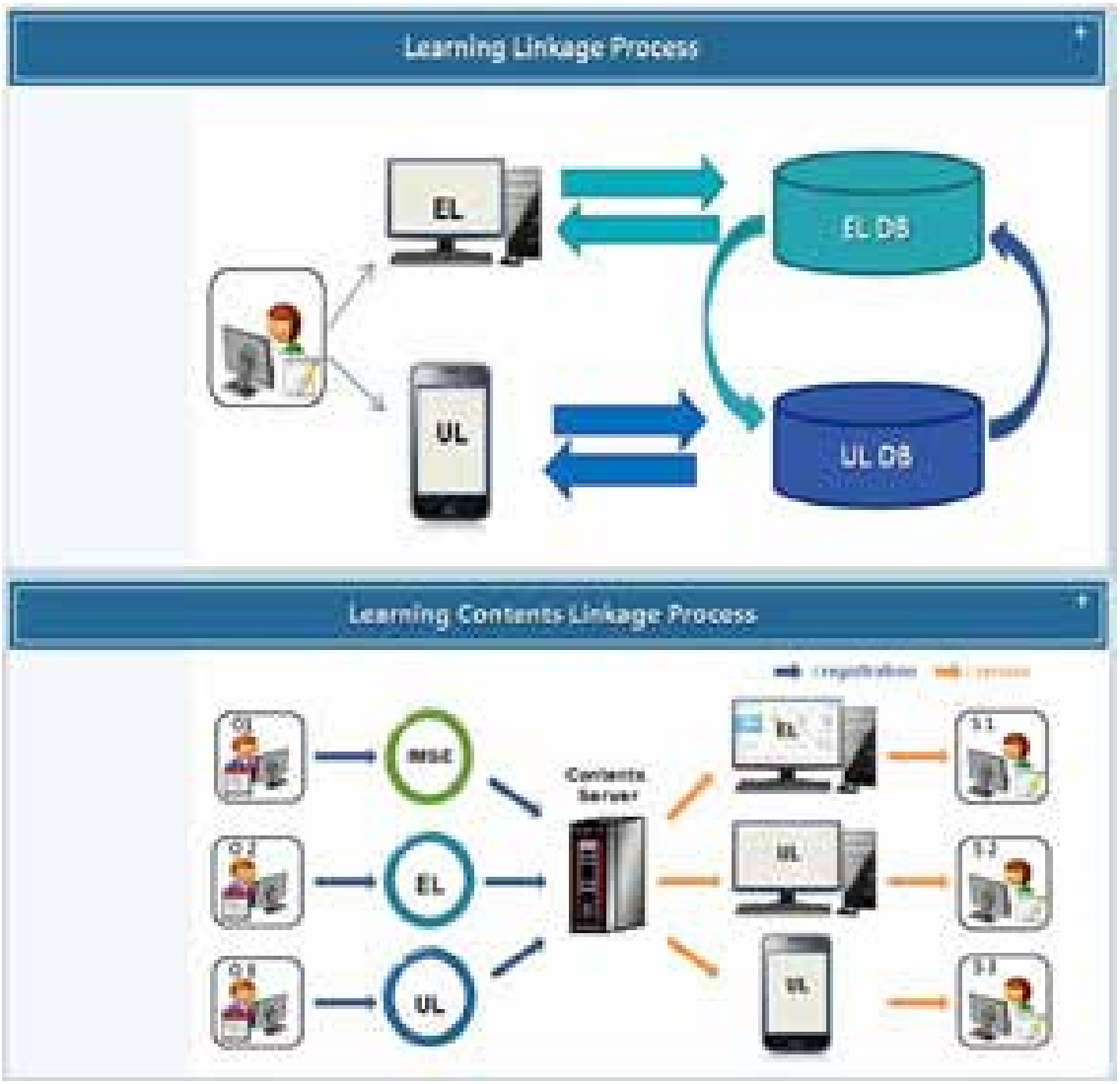
themselves, all the while chaining together the steps, but withholding judgment until a significant milestone has been reached. This puts the responsibility on the learner to self-assess his or her success before the lesson itself stops all critical thinking by delivering an immediate judgment.

U-LEARNING SYSTEM

As one of the responses to the new challenges due to ICT developments, STI will begin new U-learning services in November, 2012. Major characteristics of U-learning can be briefly outlined in Figure 6, and are summarized as follows:

- Learners can access U-learning service anywhere, anytime on, any device.
- Simultaneous interactivity can be increased through U-learning and SNS
- E-learning using PC or mobile can be incorporated into one U- learning System
- Content will be developed based on a two-tier system: Basic statistics for the general public and practical survey guidelines for the enumerators of KOSTAT local offices.

FIGURE 6: FRAMEWORK OF U-LEARNING SERVICE



CONCLUDING REMARKS

E-learning is naturally suited to distance learning and flexible learning, but can also be used in conjunction with face-to-face teaching, in which case the term Blended Learning (BL) is commonly used. The increasing tendency is to create a virtual learning environment in which all aspects of a course are handled through a consistent user interface standard throughout the institution. A growing number of physical universities, as well as newer online-only cyber universities, offer academic degrees and certificate programs via the Internet at a wide range of levels and in a wide range of disciplines. Thus, E-learning can be fully utilized for the acquisition of a Master of Science in International Official Statistics. E-learning can be efficient and effective, if learners of official statistics are highly motivated and if the content is applicable across the board to fulfil international standards. Once the content is created, it can be easily distributed to create further knowledge.

The E-learning programmes also offer a great degree of convenience for the students. In order to enhance the operational efficiency of the E-learning programmes, we have automated all of the steps in the courses, such as the introduction, participation, question and answers and evaluation within the system. Nonetheless, these courses also pose some problems, such as providing less control, the low level of their completion, the difficulty of ensuring fair evaluations, and the low level of educational

efficacy. At STI of KOSTAT, we have tried to overcome such shortcomings through the following efforts: increasing synchronous interactivity of learning communities by implementing Blended Learning and U-learning services, creating compelling content, incorporating a learner-centred approach and by offering certificates and possible degrees in the future. Finally, E-learning progresses through M-learning and S-leaning to U-learning.

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7. SETTING UP IN-HOUSE TRAINING: SOME ISSUES TO CONSIDER

Dag Roll-Hansen Statistics Norway

The quality of a National Statistical Institute (NSI) to a large degree depends on the performance of the employees. Hence, making sure the staff has adequate skills is crucial. Training can improve the performance and productivity of the staff and ensure that they have the relevant skills.

The skills needed in a NSI are a mixture of practical and theoretical knowledge. This is rarely found at universities. Hence, educating staff by in-house training is often cost-effective. This paper will point to some issues to consider when planning in-house training. The paper will end by suggesting some main training programs[1].

THE CHALLENGE

Expenditure on staff accounts for a dominant fraction of the budget in a statistical agency. In a sample of offices representing a broad array of sizes and stages of development, salaries accounted for approximately 70 per cent or more of the total budget[2]. Therefore, training employees to meet their maximum potential is important.

Training must do two things. First, it must move your attitude. Second, the skills you gain can only be seen in your work. If work has not changed, then training has done nothing. And remember, the knowledge you gain is not yours. You have to pass it on to others.

Mr. Isaiah Chol Aruai, Chairman of SSCCSE, Southern Sudan

Having the necessary competence is crucial to any NSI. It can be built trough various kinds of training. The need for training must be identified based on existing competence within the NSI. To work in a statistical institute you need a combination of practical and theoretical skills that you most often can not learn through formal education. Training staff to have the right skills hence often is a challenge. This is why NSIs often turn to in-house training to give their staff the training needed. Effective training may be particularly important when hiring new employees or when the tasks or the technology at hand are changing. In-house training is often a cost effective way of organising training. There are several reasons for this:

- training can be scheduled at your convenience
- training is more focused, consistent and relevant to your needs
- travelling and accommodation costs are reduced

Training courses may be designed and carried out by the NSI's own employees, national experts or foreign experts. Internet-based training courses should also be considered.

The need for training must be identified based on existing competence in the NSI. An important aspect in building the right competence is to find out what the different employees are good at and like doing that is important for the NSI. Then they should do more of this and learn to do it even better.

[1] The paper mainly reflects experiences from international development cooperation. Hence, it does not necessarily reflect the situation in Statistics Norway.
[2] Handbook of Statistical Organisation, Third Edition: The Operation and Organisation of a Statistical Agency; http://unstats.un.org/unsd/publication/SeriesF/SeriesF_88E.pdf

The difference between what competences you have and what you need is what you ought to focus on achieving. To find out what is needed, gap-analysis and competence mapping by surveys may be conducted. Standardising the production process also will make it easier to identify what competence is needed.

The course organisation consists of several elements. Trainers must be identified, as well as training facilities and last but not least: the course participants. It is important to find a way to motivate the trainers, find out when in the work-cycle to do the training and how to make sure that new skills can be used immediately.

The management must be an integrated part of the process. Without management ownership of the training process, it is not likely to succeed. The management also has an understanding of both the existing competence in the organisation and of what the needs of tomorrow will be.

A training centre is a crosscutting task, and may be best administered under the Department of Administration. The directors of the different departments may give input on what courses they need. The management should prioritise the suggestions for building competence according to plans and budget limitations.

The gain of successful training can be found on two levels, both on the personal and the organisational. For the individual more competence may give increased responsibility, more interesting work, higher salary and a future career. The organisation will be less vulnerable, have increased efficiency and higher productivity. When the staff has the right skills, it will be easier to get the job done. We will suggest four training programs to cover important areas in NSIs: Training new employees, training of statisticians (intermediate level), training and certification of senior statisticians and training of users.

IDENTIFYING TRAINING NEEDS

An analysis of training needs will identify any gap between the skills the organisation needs and the skills the employees already have. It involves gathering information to identify areas where the employees could improve their performance. Further it is important to define the kind of knowledge to look for when taking on new employees. To collect this information employee surveys, management observations, user comments, meetings, inspections and tests can be used. An analysis of training needs can help clarify the objectives in training the staff. This is invaluable for ensuring that money is spent on training that will help the NSI to achieve its objectives. The IT systems used in the organisation will influence the training needed. The choice of systems to be used ought to be based on an analysis of what tools are accessible and which will serve the organisation the best.

To carry out an analysis of training needs, we need to[3]:

1. analyse our organisation's goals and the skills and tools required to meet these goals
2. determine what information or training employees will need to be effective in their job
3. evaluate who should be trained and how best to motivate them for training
4. establish how employees will best accept and integrate training and how they learn the best
5. evaluate the training in place and decide what your NSI can and can not provide in the way of in-house training, funding and time
6. assess which trainers or consultants can fill in these gaps
7. take a decision on which training best fits the needs of the organisation

[3] Based on www.businesslink.gov.uk

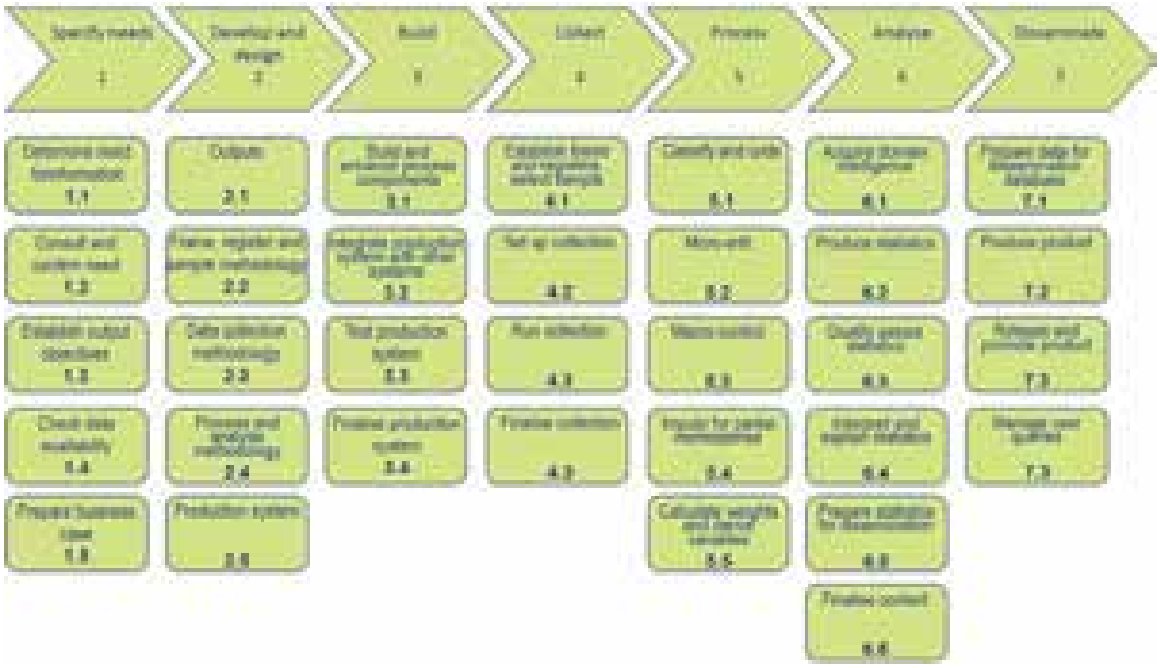
It is important to assess lack of skills at all levels of the organisation, including all levels of management. This will send a signal to the organisation that everyone may need to improve; and that admitting that you need to develop your competence is not a problem. The choice of training will also depend on what the employees need to learn and the number of employees that to be trained. For example, seminars are a useful way of giving a lot of information to a large audience, while smaller workshops allow people e.g. to practise problem solving. The training needs identified ought to be made public in a course catalogue. The main purpose of it is to enable both leaders and staff to plan and prioritise their training needs. Making a list and a schedule requires an administrative effort the first time it is done, but the next time it will be easier.

The course catalogue may be made short and it may be long. Making an extensive catalogue, including a wide range of courses may be a bottle-neck. Striving to make the catalogue complete may take attention away from starting courses. Seen in this light, a possibility is to see an extensive catalogue as a menu to choose from, rather than an actual overview of courses to be conducted in the near future. Now we will look into three tools to identify training needs: Standardising the production process, gap analysis and mapping competence with a survey. These tool may be used separately or in combination.

STANDARDISING THE STATISTICAL PRODUCTION PROCESS

Many NSIs are now working to standardise their production procedures. The main goal of doing this, is to implement standardised systems and working procedures throughout the organisation. If everyone uses the same tools and techniques it will be easier to maintain the technical systems, train staff and it will help reduce the cost of software. Statistics New Zealand has done influential work in this context, but the approach is also used by several other NSIs, among them Statistics Netherlands, Statistics Sweden and Statistics Norway. The below diagram is pointing to the main areas of a statistical production process and areas it can be subdivided in. This figure may be a useful starting point when evaluating what competence is needed in a NSI[4].

FIGURE 1: STATISTICS NORWAY'S BUSINESS PROCESS MODEL



[4] http://www.ssb.no/english/subjects/00/90/doc_200817_en/doc_200817_en.pdf

In addition to the tasks identified in figure 1, three issues concerning all parts of the production process will have to be addressed:

- Development of the architecture within methodology and IT
- Quality Management
- Project Management

Important areas in the statistical production process at your NSI ought to feed into the analysis of training needs described earlier. These are the areas were you must secure sufficient competence.

GAP-ANALYSIS

Plans are made for which activities an organisation is to engage in. Which financial resources are available is decided in the budget process. A plan should also be made for having people with the right skills at the right time. Here we present a way to identify competence needs, trough identifying the gap between what the employees know and what they ought to know in different fields. The fields must be identified based on the statistical production process in the NSI and the major tasks to be done, taken from the Master plan or another document outlining the major achievements to be made. The major tasks must be divided into smaller tasks that can be assigned to a single person or a team.

Tasks	What kind of knowledge do we need?	What do we have?	How can we get what we lack?	Who?	When?
1 ..... 2 ..... 3	1 ..... 2 ..... 3	1 ..... 2 ..... 3	1 ..... 2 ..... 3	1 ..... 2 ..... 3	1 ..... 2 ..... 3 .....

The main idea of a gap-analysis is to fill inn information on what competence we have, what we need and how we can get what we lack in different areas. It is also open for names and time frames. A sustainable approach on administering this form may be to have them filled in by the executing line organisation. Keep in mind that this comes in addition to ordinary planning of activities and budgeting.

A major task may be to conduct a survey. The tasks that are to be considered when planning for human resources must however be more specific. They must include making a questionnaire, design a sample and plan for field work. And so on.

Identify the main activities of the part of the NSI you manage

The major tasks to be done are usually given in the Master plan, or on a lower level – is derived form the plan. We should identify the tasks to be done within a period. It may e.g. be to prepare new computers for use, set them up in a network, and keep them operational and virus-free. The reference period should be either the financial year or a major event that will take place, e.g. a survey or a project.

What knowledge do we need?

The first point is to identify what kind of knowledge and skills does a group need to solve its tasks. It may be need for e.g. subject matter, IT, administrative, social and language skills. In addition, also include the need for back-up-systems, descriptions of routines and tasks, organisation of work, project groups etc.

What do we have?

Here existing competence today should be identified, including all kinds of relevant skills. The difference between what we need and what we have shows us the competence we lack, our competence gap. If we e.g. need to set up new computers but have no one that can do it, this is our competence gap. This is the basic idea behind a gap analysis.

How can we get what we need?
Here the idea is to find ways to fill the gap. In addition to give courses it may be relevant to organise work in a way that leads to sharing of knowledge (e.g. job rotation), organising internal or external courses or workshops, recruiting new employees with the needed skills and establishing and documenting standardised work procedures. Other possibilities that can be considered are to change to a tool or work mode that is known in the organisation or buying a service form outside.

Who?
Then it is time to start thinking of whom to fill the gap and make a plan to fill it. If training is the appropriate way to fill the gap, we must find out where the needed training is available, when it ought to be done and make a proposition for whom to take part in training.

When?
As far as possible training should be given close to the time the new skills are to be used. The management must prioritise the suggestions for training according to plans, priorities and budget constraints.

MAPPING COMPETENCE WITH A SURVEY

A survey mapping the existing competence in the institution may be implemented as part of a baseline study. This ought to be aimed at identifying existing competence, need for competence development and maybe also potential teachers. A questionnaire developed at the Southern Sudan Centre for Census, Surveys and Evaluation (SSCCSE) is mapping competence at the level of the individual employee is given as an appendix to this paper. It identifies the formal education of the employees, as well as asking them to evaluate their own skills and needs for further training. Evaluation of organisational competence may also be based on the PARIS21 Statistical Capacity Building Indicators[5].

A mapping of existing competence and skills and need for additional training is important for three reasons: First it will make it possible to establish a baseline of existing competence. What is the knowledge base at the NSI today? Secondly it will be useful for identifying and prioritising courses to be given. In what areas do we lack competence and which should be prioritised? Thirdly it may be used to identify potential trainers.

But be aware: Initiating a competence mapping creates expectations. Do not have your staff participate in such an exercise if you do not have the resources to or for other reasons do not intend to train them. Broken expectations may in many cases be worse than having no expectations at all.

The areas prioritised by the management, the needs identified by the gap analysis and the results of the competence survey should all be part of the decision process when planning in-house training. This both applies for making the list of courses to be conducted and planning for when they should be given. Now we have looked into different tools to identify training needs. Now it is time to look at how to organise the training.

ORGANISING TRAINING

Organisation of training is related to the trainers, the trainees and the training itself. It e.g. discusses the length of training, resources for in-house training and strategic choices regarding the organisational setup.

[5]Statistical Capacity Building Indicators, PARIS21 Task Team, http://paris21.org/documents/1084.pdf

THE TRAINERS

It is important to draw on existing skills in the NSI when developing a training programme. If we have competent people to teach Microsoft programmes or statistical packages in one part of the organisation, their competence ought to be spread to other parts of the NSI. We should also consider if different kinds of related knowledge can be combined into one course. It might e.g. be useful to combine aspects of analysis of data and dissemination of results in a course on report writing.

For in-house training to be effective, the best is to have the appropriate expertise within the organisation. When possible, internal trainers ought to be used: It will strengthen the learning potential of the organisation and build confidence among the trainers. If no one has the expertise, it must be brought in from outside the organisation. This can be done by having an external consultant first conduct the course with the help from an internal assistant teacher. If help it is brought form outside it is important to have a plan to build competence in your own organisation, to have someone to teach the course when it is to be repeated. Hence, it is important to have one of the employees cooperate with the external teacher in preparing the course and to be acting as an assistant teacher. When the course is repeated, the assistant teacher will take responsibility for the course. When the assistant becomes the main teacher, he or she takes on a new assistant.

When choosing which employees will teach the course, make sure that they both have the ability to teach effectively and are interested in doing so. An advantage using an existing employee to become a trainer is that he or she already has experience in the field and knowledge of the work of your statistical agency.

An in-house trainer may need guidance in[6]:

- presentation and speaking skills
- creating interest
- dealing with difficult students
- teaching techniques
- course and session design/planning skills
- evaluation, monitoring and feedback skills
- measuring the effectiveness of training
- setting up support for employees after training
- conducting training needs analyses

The in-house trainer ought to be a specialist in his or her area. It may be a good idea for management to sit down with the trainer and identify what content should be included in the course. One should be motivated to act as a teacher, in order to encourage the employees to acquire skills and pass them on to their colleagues.

THE TRAINING AND THE TRAINEES

The need for training will vary between the employees, but some needs are more general than others. Training in basic analysis in statistical packages like SPSS, SAS and Stata, and computer programs like the Microsoft Office-programs are examples courses that are often useful for a producer of statistics. Even though many employees have a thorough theoretical education, it is often a challenge to apply the theoretical knowledge in their day-to-day work.

[6] Based on www.businesslink.gov.uk

It is also necessary to make the employees use the newly acquired skills at once they return form the course. Otherwise the knowledge will be forgotten and the training will be wasted. Conducting the courses in-house will facilitate the timing of the courses in relation to tasks to be solved.

THE LENGTH OF THE TRAINING: SHORT, MEDIUM AND LONG TERM

It is important to educate the staff to the right level. This implies capacity building of short, medium and long term. Short term courses are often aimed at supplying additional competence in a limited field. Giving the staff insight in practical approaches to solve tasks is often best done by having them attend relatively short courses related to their tasks. The knowledge needed is often based on sharing experience on practical production of statistics and working routines.

Courses or workshops focusing on training of trainers, were people form the local statistical offices go to the NSI headquarter to learn later to teach their colleagues, have often proven to be effective. How many employees that need to be trained, the complexity of the issue and the prior education of the employees ought to be taken into account when considering to decentralise training this way. Study trips often give inspiration and ideas and may make it easier to discover own weaknesses.

To develop and produce statistics, specialists are needed. Competence building of medium and long term must be initiated to build specialists. This is appropriate when the needed competence is viewed as particularly important, or may be seen as an investment in particularly valued colleagues.

The costs of scholarships, fees, travel and accommodation is a challenge for most NSIs, particularly related to long term training. An additional challenge is that long term training takes an employee out of production for a substantial amount of time. A plan must be made to fill the gap of the employee in training. After the education is completed the employee will often be more attractive for other organisations to employ. Long term training often is given in exchange for a commitment to work in the organisation for a given period of time. The length of a training period should be based on an assessment of all the above mentioned aspects.

DISTANCE LEARNING

Organisations that do not have the necessary skills in-house may find that distance learning courses are more suitable to fit their needs. There are different types of distance learning methods including correspondence courses and e-learning courses.
Distance learning courses:

- allow employees to complete training while remaining in employment
- can be completed at a time to suit the organisation and the employees
- are cheaper than externally provided courses
- are available for a wide range of topics
- offer recognised qualifications from entry level diplomas and certificates to post-graduate degrees

A major advantage using e-learning is that it allows people to enhance their qualifications without taking time off or even leaving the workplace. Employees can study part-time using courses delivered online and achieve recognised university qualifications. Note that providers of new machines and systems often offer free or cheap training on how to use them.

TRAINING THE "UNTRAINABLES"

No one is un-trainable. It will always be possible to make a person function better in his or her job trough training or other human resource development measures.

Some will always be better qualified, smarter, more motivated or more creative than others. In most cases it will be easier to train these, in the sense that they will be more receptive to new knowledge. Never the less, most skills and employee characteristics can be modified and improved by training. Some employee characteristics are however difficult to change. Most personality traits are generally difficult to change. This also goes for intelligence and attitudes. The best way of ensuring these qualities is through recruitment. They may be difficult to develop at a later stage. The most important of these characteristics is probably the inner motivation of a person to do a good job. The other skills and characteristics we need for an NSI can be build or improved by training, on the job training or having autonomy and responsibility.

Our aim with training should be to bring everyone to a higher level than they were before the training started. It is always important to adjust the training to the prerequisites of your employees, and not only educate the employees that already have the most education and that we assume are the ones easiest to train. No one is un-trainable.

ON THE JOB TRAINING

Training on the job generally is the most efficient and cost-effective type of training. Efforts ought to be made to increase knowledge sharing between senior and junior staff, and a better foundation shall be created for knowledge sharing between various areas within the organisation. Learning for most employees comes from this kind of training.

In our department everyone must rotate. Everyone should know what everyone is doing. There is a lot of cooperation in the economic department. What happens in one section, everyone knows. People know more or less what everyone is doing.

James Lemi, Acting Deputy Director of Department of Economic Statistics

More formalised on the job training often include:

Job shadowing involves one person showing another all the aspects of a particular job and can cover a lot of topics. It is suitable e.g. for training new employees as part of the introduction process.

Coaching involves regular reviews of an employee's progress. It is typically carried out by line leaders who advise employees on how to improve their performance. It provides employees with feedback and can be used to introduce new tasks or responsibilities.

Mentoring is typically used for employees at senior management and chief executive level and is a personal way to coach and advise senior staff. The role is best carried out by someone other than a line manager, possibly someone from outside of the organisation, who has the skills and experience to guide the employee and suggest practical solutions.

Passing on training involves one employee participating in external training and returning to pass on their knowledge to other employees. It helps to keep costs down but is more suitable for more general skills such as IT.

Knowledge banks, e.g. a reference book or CD-Rom library, intranet and handbooks are an effective way of providing basic information that employees can access at their convenience. They are a way of holding information on office procedures and how to do basic tasks.

RESOURCES FOR IN-HOUSE TRAINING

For in-house training to be effective, it is necessary to ensure that the appropriate expertise and resources exists in-house or can be recruited from outside. We will have to dedicate the necessary resources to the training programme. These include management time, an experienced trainer, the administrational effort, training or course materials, computers, a room to do the training and maybe also travelling, accommodation and refreshments. Training will also require employees to be away from their posts while they learn. Doing training may also rewarded with extra pay. This may motivate the employees to acquire skills and pass them on to their colleagues.

EVALUATING TRAINING

Evaluating the effectiveness of training gives us an opportunity to improve future training. Below we will look at some ways to find out if training has worked.

Ask employees whether the training was relevant and appropriate. Relevant questions may be if the training was relevant to their job and their level of expertise, how they will put their learning into action. They can also be asked to give feedback on the training method, like what worked and what could be improved. Training assessment or evaluation forms may prove useful here.

Tests can be given to course participants to evaluate what they have learned from the course. Consider testing the participants before and after the training to get a picture of the improvement of skills from taking the course. An alternative approach is to evaluate a product that is made during the course, e.g. an analysis or a report.

Monitor improvements in the performance of the statistical production process, or other organisational targets to be improved by the training. Try to measure indicators like the number of finalised publications, hits on the internet, number of errors, production costs, user complaints, absenteeism, staff turnover and quality improvements. Assess whether or not improvements can be contributed to the training.

Performance appraisals and development talks between the employee and his immediate supervisor can be used to review the impact of the training on the employee's performance. To be able make an employee perform good, the employer have to know his abilities, what knowledge he needs and what motivates him to do a good job. The employee needs to now what is expected of him and to be assisted in achieving the goals that are set.

It is often difficult to have high validity in training evaluations. To make a good evaluation we ought to collect comparable data both prior to the training and after the training. We also have to be able to make an argument that changes are related to the training given.

In evaluation terms the observations of the pre- and post-training data would be given by an O. The intervention – in this case the training – is denoted by an X. If we measure before training, do the training and then measure again after training, the evaluation design could be described as:

O	X	O

This design will give us a reasonably good impression of whether or not the training has had any effect. The basic idea is to measure if the observations before and after the training has occurred, are significantly different. Adding and measuring more observations or interventions will make the validity of our evaluation design stronger.

ORGANISATIONAL SETUP AND TASKS

The in-house training can be organised in several ways. We will mention three alternative approaches to the organisational setup:

- Constitute a special unit within the NSI.
- Give the responsibility to a couple of persons within a supporting section, for example in a Human Resource unit, who is working part time with training and part time with other tasks.
- Constitute a cross-division committee, with one person, placed in a supporting section like documentation and dissemination, responsible for leading and maintaining the committee. The committee should include persons with responsibility for employees.

There are advantages and disadvantages with all alternatives. The first will assure manpower dedicated to the task, but may have a challenge in becoming sufficiently integrated with the rest of the NSI. For the second it may initially be easier to find the resources, but the staff may not be able to prioritise the in-house training over other tasks. The third may secure that all parts of the NSI are represented, but may lead to dilution of responsibility.

The responsibilities and task of the in-house training organisation would be:

- Identify training needs. This should be done both for the needs of the NSI and the individual employees.
- Prioritise the training needs and develop a training plan.
- Inform all the employees of training possibilities well ahead of time.
- Develop routines for selecting participants for obligatory training.
- Develop routines for applying to voluntary training, as well as routines for selecting among the applicants.
- Identify the right person or institution to conduct the training.
- Organise the training.
- Evaluate the training.

In-house training is a powerful way to systemise Human Resource Development (HRD) issues, and to provide a good and stable way of ensuring the continued competence of the NSI staff.

It may be useful to concentrate courses to a time that is normally relatively quiet. If such a time period, at e.g. two months can be identified, it will make it easier for the staff to set aside time for training, without conflicting with other tasks of the NSI. It is also important for the management to allow employees to spend time for training.

Giving the staff insight in practical approaches to solve tasks is often best done by having them attend relatively short courses related to their tasks. The knowledge needed is often based on sharing experience on practical production of statistics and working routines. Such training could be given by a training centre. The centre could do training both in the headquarters and in regional offices if such exists. Hence, portable equipment may be an advantage. At first, the main priority of the centre should be to give internal training. Gradually it may take on other tasks like supplying training for other institutions and library services.

COURSE FREQUENCY

Competence is not static. Using it keeps it vital and develops it. Often refreshing it is necessary to be updated on new developments in a field, to be reminded of what you already know or as a way of motivating or rewarding employees.

The golden rule for how often a course ought to be given is this: The course must be repeated before the number of people competent in the area is becoming critically low. This is of course often difficult to predict, in particular for NSIs with a high staff turnover. Other events are easier to plan for, like what surveys are to be done in the near future. When deciding on frequency it should also be considered that new employees should have the possibility to start working effectively as soon as possible.

SUGGESTIONS FOR COURSES

The most important issue when planning an in-house training centre is making the list of courses. It should be made available well in advance and distributed widely. This enables both managers and potential participants to plan and prioritise their training needs. Making such a schedule requires an administrative effort the first time it is done, but following years the work load will be reduced considerably.

The kind of training that ought to be prioritised will wary between different NSIs, and the topics that needs to be addressed ought to be identified before setting up a training plan. As the tasks to be performed by a NSI are more or less the same across the world, we have identified some topics that usually will be relevant. These are specified in the reminder of the document.

The suggested curriculum is based on the in-house training conducted in Statistics Norway, the United Nations Statistical Institute for Asia and the Pacific[7] (UNSIAP), the SADC[8] Training Package, experiences from SSCCSE[9] in Southern Sudan, NSO in Malawi[10] and other experiences with training as part of development cooperation in Statistics Norway[11]. Statistics Norway can be of assistance in providing material for the suggested training programs.

A GOOD PLACE TO START: THE SADC PACKAGE

The Southern Africa Development Community (SADC) package[12]on statistical training contains training material on most courses suggested in the following. It gives different entry points for students on different levels; basic, intermediate and high. The package can be used both for self-training and training courses using teaching material from the package. To make the employees able to focus on course content rather than use of the package, they ought to be introduced to the following features of the package:

- Background of the SADC package
- Structure of the SADC package
- Material for trainers
- Navigation in the package
- Video lectures and demonstrations
- How to copy documents/ change view format

Basic knowledge of MS-Word, Excel and PowerPoint is also necessary to use the SADC-package. Here we have discussed organisation of training. This has been related to the trainers, the trainees and different aspects of the training itself.

[7] www.unsiap.or.jp
[8] http://www.reading.ac.uk/SSC/media/sadc-training-pack/
[9] www.ssccse.org
[10] www.nso.malawi.net
[11] www.ssb.no/en/int/
[12] http://www.reading.ac.uk/ssc/media/sadc-training-pack/index.htm The material is developed by the University of Reading, UK, for the Southern Africa Development Community Secretariat with support from European Union.

TRAINING PROGRAMMES

In this paragraph we will suggest four training programs that embrace the core training needed in National Statistical Institutes. Each of them ought to be given as an integrated set of courses at regular intervals.

The elements these programs consist of will be elaborated below. The first program is for receiving new employees. The aim is to give them the knowledge they need to bring them up to speed as fast as possible. The second is to develop and specialise staff further. The courses needed depend on the competence level of staff and their field of work. The third program aims to develop and certify senior statisticians, professionals at an advanced level. The aim is to develop competent colleagues to become leading professionals within their fields of official statistics. The fourth training program is aimed towards the users. It has two goals: First, it aims to train users in identifying what data is useful for evidence based planning. This guides the NSI in statistics to collect. Second, it aims at training users in how to utilize statistics, regarding both limitations and possibilities for evidence based planning.

PROGRAM FOR NEW EMPLOYEES: BASIC LEVEL

Objective: It is important to receive new employees in a way that makes them understand the organisation, the statistical process, their tasks and that integrates them socially as fast as possible. The suggested program for new employees should be a course informing newly requited staff how the different parts of organisation works and learn them some basic concepts and key tasks in making statistics. This also helps people to get to know each other and facilitates a rapid integration of new employees in the organisation.

All employees of a National Statistical Institute also ought to know the principles of the statistical system; the role of the NSI and its relation to other producers and users of statistics. To safeguard the reputation of a NSI and to build a cooperate identity; all employees should know the concept of confidentiality and basics of statistical laws and regulations.

Core topics

- Organisational issues
- Presentation of the NSI – an overview of the organisation and the National Statistical System
- Confidentiality and data security: The concepts, rules and routines
- The business model: Presentation of the statistical production process
- Systematic quality improvements, total quality management
- The NSI team spirit

Statistics, methods, data collection and dissemination

- Introduction to social and economic statistics
- Introduction to statistical methodology
- Introduction to survey

Collecting data from administrative sources

- Strengths and weaknesses in data from different sources
- Introduction to dissemination

Basic skills

- Introduction to administrative routines
- Introduction to IT-tools
- Introduction to tabulation, analysis and report writing

The relation to others

- User orientation, user requests and user needs
- International cooperation
- The relation to respondents and other suppliers of data

Courses aimed more specifically aimed at improving skills that are not relevant for all new employees, ought to be given as part of the ordinary in-house training programme.

TRAINING OF STATISTICIANS: INTERMEDIATE LEVEL

The staff in a NSI needs a mixture of theoretical and practical skills. The needed skills may be quite specialised and vary depending on the statistics in question. Hence, the courses needed depend both on the competence level of staff and their area of work. The main training elements for intermediate level training of statisticians are oriented towards:

- The statistical production process
- Planning and design of surveys
- Questionnaire design and testing
- Data collection
- Cartography, GPS and GIS I-II
- Basic statistical theory and Sampling methods
- Data processing
- Statistical analysis
- Report writing and dissemination

Training in economic statistics

- Gross domestic product and National accounts
- Economic indices
- Business register
- Foreign trade statistics

Training in demography and social statistics

- Demography statistics: Concepts and methods
- Social statistics: Concepts and methods

General topics

- Language courses
- Project management
- IT literacy: File management, Windows and Microsoft Office
- Use of statistical packages, interpretation and analysis
- IT-support, development and infrastructure
- Administrative support
- Search and find on the Internet
- Use of Internet – virus protection and control of junk mail at individual computers
- Quality and management

With some additional working experience, training at this level should enable the participants to work relatively independently.

TRAINING AND CERTIFICATION OF SENIOR STATISTICIANS: HIGH LEVEL

Objective: Developing professionalism
It is important for an NSI to encourage competent colleagues to develop. It is important to encourage staff to become leading professionals within their fields of official statistics. Hence, it is important to reward development of professionalism, the same way becoming a leader is rewarded.

The overall aim of training Senior statisticians is to improve the quality of statistics produced by building on colleagues with a thorough knowledge of:

- The statistical system; the legal ground, statistical methodology, standards, data security and user needs.
- The statistical production process; data gathering, data processing, analysis and dissemination.

In addition to focus on strengthening these competencies within the NSI, developing Senior statistician training builds a career path for professionals in the field. Training can either be given in-house, or in cooperation with a university, either nearby or trough distance learning courses. To develop highly skilled professionals, both are probably needed. Professional experience is also an important part of being a Senior statistician. To be considered for being upgraded to a Senior statistician, an employee should have at least five years of experience form the NSI.

Relevant training must be supplied by the NSI, either through in-house training or training organised by training centres or universities. Distance training may be an advantage in order to keep the employee in work while he or she is educated.

Colleagues who consider themselves to have the sufficient skills should have the possibility to apply for becoming a Senior statistician.

The certification system
A system for certification of Senior statisticians can be established in the following way: Colleagues may apply for being upgraded to Senior statisticians. The applicants will supply the following information:

- An application pointing out why the applicant should be upgraded.
- A resume (curriculum vitae), describing present and past tasks.
- Reports, articles and other work the applicant have produced either alone or in cooperation with others. If more people have been involved, the applicant ought to describe the division of labour.

The qualifications of the applicant should be evaluated by a committee, consisting of people with relevant qualifications. The committee may be appointed by the Director General. At least one of the committee members should come from outside the NSI. The committee should evaluate all applicants individually and give each of them a justification for its decision. The committee may gather additional information about the applicants if needed. In addition to the documents mentioned above, the immediate supervisor is asked by the committee to give a statement about the applicant.

The responsibility for certifying Senior statisticians also may rest with the Ministry in charge of the NSI. This may make it easier to upgrade the position and salary of the Senior statistician. The responsibility for certification also may rest entirely or be done in cooperation with a university. This emphasises the scientific aspect of the certification, also making it possible to include a certificate or a diploma as part of the system.

The required competencies…

In general, formal education on lower grade university level ought to be required. Further a part of this has to be within relevant fields of statistical methodology (e.g. half a years study). In addition skills and experience in using different methods must be documented. This applies both for statistical methods and other methods relevant for developing statistics. Methods for production and analysis of official statistics ought to be emphasised. The following competences in using statistical methods ought to be considered as relevant.

…in methods for:

- Planning of surveys or other kinds of data gathering
- Questionnaire design
- Use of administrative registers
- Planning and development of statistical systems
- Evaluating data quality, uncertainty and errors related to sampling and problems associated with registers (if applicable)
- Evaluating different sources of errors
- Measuring uncertainty, e.g. trough standard errors and confidence intervals
- Statistical methods in statistical analysis
- Documentation, metadata, dissemination and confidentiality

…in official statistics. Skills and experience in:

- Planning and production of statistics
- Analysis and dissemination of statistics
- The fundamentals of official statistics, including the legal framework, standards, confidentiality and systematic quality improvements
- Project work
- In more than one area, including international cooperation

The applicant must have thorough knowledge of the relevant methods in their field. Further, interpersonal skills like contributing to team work and assisting colleagues should be rewarded. The same is the case for efficiency, accuracy and innovation in statistics.

Acknowledging the Senior statistician
Being certified as a Senior statistician should be seen as a title of honour. It is however crucial that the reward is not only a title, but that it also shows that the NSI values the colleague and his or her contribution through an increased salary and an upgraded position. Hence, the Senior statistician certification system must be liked to the system of grades and salary used in the NSI.

USER SEMINARS

Objective: We do not make statistics for ourselves. To be used, it must be perceived as useful. Measures should be taken to ensure that statistics are usable for making policy based on evidence.

The orientation towards users has two main elements: First, it relates to cooperation with users in identifying what information to collect and how to process it. The aim is to cooperate on collecting data that are relevant for policy making, in regard to the choice of topic, definitions used and when the statistics are made public. We want the topics we choose to be relevant for the diction makers in the sense that it enables them to formulate an evidence based policy. We want to use definitions that are applicable for targeted policy interventions and that are comparable over time and internationally.

Finally we want the statistics to be made accessible to policy makers and the general public at a point in time when it can have the best impact. This e.g. means that policy makers should have as new data as possible in front of the annual planning process.

Second, it aims at training users in understanding and making the best use of statistics. This includes illuminating both the limitations and the possibilities in statistics used for evidence based planning. The overall focus of statistical dissemination should be user-friendliness, meaning that statistics should be easy to find, easy to use and easy to understand. This is not always easy to achieve. Hence, it is often a need to educate representatives from important user groups in how to find, interpret and use statistics. It may be useful to train government officials in finding policy relevant information and using it and to train journalists in finding and using statistics.

Identifying data to collect: Core topics

- What statistics is needed for evidence based policy?
- Definitions and questions
- Identifying change over time
- Making international comparisons possible

Making use of statistics: Core topics

- Where do I find the statistics?
- What does it mean?
- Comparing numbers
- Uncertainty
- Figures, tables and graphs

Summing up: It is useful to conduct two types of user seminars. First the users ought to be included in defining the questions we are trying to answer by statistics. Second, users should be given the opportunity to learn about the interpretation and use of statistics, including its limitations.

AD HOC TRAINING

In addition to the programs specified above, additional training probably will be needed. Urgent needs may arise, that necessitates specific training in different fields. These needs may be caused by new technological developments or strategic choices by the management. An example of this can be need for training arising from introducing a new analytic tool or introducing new ways to present data on through the Internet. Training needs may also be caused by upcoming problems, like when work is hindered by severe virus attacks. When planning for training, one should set aside resources for training needs that we do not yet know.

FUTURE CHALLENGES

This paper has addressed some issues related to in-house training; identifying training needs, organisation of training and suggesting four core training programs. It will end by mentioning three challenges that ought to receive more attention in the future.

Building commitment

The better we train staff, the more attractive they get to other organisations and the more possibilities they have for alternative employment. At the same time employees that feel that their organisation give them something – like training, interesting tasks or a higher salary – are likely to be loyal to their organisation. They not only feel obliged to work hard, but they also *want* to give something back to the organisation. This commitment is a potential not realised in most national statistical institutes.

Training material

A lot of training material is available. The Southern Africa Development Community (SADC) package[13] on statistical training contains a substantial amount of training material. The African Group on Statistical Training and Human Resources (*AGROST*) is also planned to be a source of training material. Statistics Norway can supply materiel on several of the topics described above. Still a lot of training material seems to be under-utilized. Training material ought to be shared as a common good, not loosing value when being used by others.

Motivation to teach

Sharing knowledge is in some cultures not considered to be a good strategy for success in an organisation. If you give away your knowledge, someone else may be wiser than you and may reach further than you. This is counterproductive from an organisational point of view. In order to make competent staff train their colleagues, they must see it as a good thing to do. Some important motivators for teaching are commitment and obligation to the organisation, status and financial incentives. These are tools we must use.

[13] http://www.reading.ac.uk/ssc/media/sadc-training-pack/index.htm .

APPENDIX: COMPETENCE MAPPING FORM FROM SCCSE IN SOUTHERN SUDAN

SSCCSE Staff Human Resource Development

Assessment of available capacity and needs for additional training

SECTION A: ID and general personal characteristics

Item	
Surname(s) / Family name(s)	
First name	
Sex	☐ Male ☐ Female
Age group (in completed years)	☐ -19 ☐ 20-24 ☐ 25-29 ☐ 0-34 ☐ 5-39 ☐ 0-44 ☐ 5-49 ☐ 0+
Highest level of formal education completed (single response)	☐ Primary 8 ☐ Secondary 5 ☐ Master degree ☐ Junior 3 ☐ Secondary 6 ☐ PhD degree ☐ Junior 4 ☐ Post sec. diploma ☐ Other specify ☐ Secondary 3 ☐ University first degree ☐ Secondary 4 ☐ Post graduate diploma .....
If highest level of education is secondary 6 or above, please specify within which main subject matter area did you specialise (single response)	☐ Stat./demogrph ☐ Public adm Polit science ☐ Economics Comptr.science ☐ Math ☐ Business adm. ☐ Other specify: .....
Currently working ***mainly*** in which SSCCSE Division? (single response)	☐ Finance &Administration ☐ Monitoring & Evaluation ☐ Social statistics ☐ Economic statistics ☐ Census and Services ☐ GIS ☐ IT ☐ State Statistics office - Specify state: .....
Current ***main*** position/function within the SSCCSE division. (single response)	☐ Director, deputy director ☐ Subject matter officer, IT officer, other technical/statistical officer etc + ☐ Administrative staff, accountant, secretaries etc ☐ Interviewer/Fieldworker

Section B. Need for training on short and medium term

Describe your current **own skills** and your **own needs for further training <u>given your current area of work</u>** for each of the listed soft wares and subject matter theories etc on a scale from 1 to 6 (1=low knowledge/low need for training, 6=high competence/high need for training)

code	topic	Is this topic relevant for your current area of work? **<u>If no, skip to next line</u>** **<u>If yes, check the rest of this line</u>**	Current own skills (tick only one box) low skill -----> high skill	Own need for more training (tick only one box) low priority---->high priority	If high own need for training (priority 5-6) specify further on topics for training (in writing/key words)
Soft ware					
01	Word	☐ No ↓ ☐ Yes →	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐	
02	Power Point	☐ No ↓ ☐ Yes →	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐	
03	Excel	☐ No ↓ ☐ Yes →	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐	
04	Access	☐ No ↓ ☐ Yes →	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐	
05	CsPro	☐ No ↓ ☐ Yes →	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐	

06	SPSS	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
07	ArcGIS.	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
08	Software specify:	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	

Section B. Continued

code	topic	Is this topic relevant for your current area of work? **If no, skip to next line** **If yes, check the rest of this line**	Current own skills: low skill -----> high skill	Own need for more training: low priority----->high priority	If high need for training (priority 5-6) specify further on topics for training (in writing/key words)
Subject matter					
09	Statistical theory	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
10	Sampling theory	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
11	Demography	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
12	Economic statistics	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
13	Social statistics	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
14	Accounting & Budgeting	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
15	Management & Planning	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
16	IT (technical)	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
17	Survey planning	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
18	Questionnaire & Manual design	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
19	Data entry	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
20	Data cleaning	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
21	Data base/data storage	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
22	Data tabulation	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
23	Report writing & dissemination	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
24	Web site dissemination	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
25	Advanced data analysis	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
26	Formal English Language	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
27	Formal Arabic language	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
28	Other specify:	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	
29	Other specify:	No ☐ ↓ Yes ☐ →	1 2 3 4 5 6	1 2 3 4 5 6	

Section C. Resource persons for training courses +

Provided that internal training courses will be arranged, please list codes (see section B) for topics that you find that you could contribute as a lecturer alone or together with a team with the purpose to train SSCCSE colleagues and possibly also invited external staff

topic	Code from B	Comments, ideas, for further discussion, training course design etc.

8. TRAINING PROGRAMME IN STATISTICAL SKILLS

Riikka Mäkinen Statistics Finland

To sustain the professional competence of its personnel, Statistics Finland has designed a training programme in statistical skills. The programme consists of basic studies and advanced studies. The basic studies are intended for the whole personnel and form part of the job orientation system of new employees who attend it within six months of their recruitment. The advanced studies are supplementary education for statistical experts with more years of service. The studies take two years and are intended for personnel who need to deepen and broaden their professional mastery in statistics.

The contents of the training programme are derived from the description of the competences required in statistical work at Statistics Finland. The programme contains introductions to Statistics Finland's organisation and statistics, the production process of statistics and the principles that steer statistical work. From the employer's perspective the training aims to ensure a high standard of statistical skills of the personnel, solidify coherent procedures and support competence sharing between statistical experts. From the employees' point the training diversifies statistical knowledge, strengthens professional identity and increases collegial interaction between co-workers. The training provides not only different abilities needed in statistical work but also tools for understanding the substance of professionalism in statistics and of being an employee of Statistics Finland.

The training programme contains both classroom lessons and distance learning. The classroom lessons make extensive use of group work and dialogue between students and trainers. The exercises included in the studies support learning while working and their central aim is to embed quality thinking into statistical work. The training programme is being evaluated continuously. The evaluations examine both the students' satisfaction with their studies and accomplishment of the learning objectives set for the programme. The efficiency of the training is evaluated by means of the students' self-assessments of the experienced benefits from the training programme approximately one year after its completion. Over 450 employees of Statistics Finland had participated in the training programme by 2012. It has become one of the most important and essential ways of sustaining the personnel's professional competence at Statistics Finland.[1]

INTRODUCTION

One key means of competence development is systematic and target-oriented personnel training. Since the year 2005, the **Training Programme in Statistical Skills (TPSS)** has played a central role in the personnel development efforts of Statistics Finland. This training programme ensures the practical implementation of many strategic goals of Statistics Finland, which are relevant to the competence of Statistics Finland personnel on one hand, and the quality of statistical work on the other. TPSS is not only about learning knowledge and skills required in statistical work, but also about applying these in practice. Learning coherent practices and internalising statistical ethics and norms as part of one's statistical professionalism are the foundation of high-standard and quality statistics. This is the goal to which the Training Programme in Statistical Skills aims to contribute.

[1] This document is a revised version of the paper presented at the seminar of the ECE CES in September 2010.

OBJECTIVES OF THE TRAINING PROGRAMME IN STATISTICAL SKILLS

The objective of the Training Programme in Statistical Skills is to develop the professional competence of Statistics Finland experts and to ensure a high standard of core skills at Statistics Finland. The objectives of the training programme are associated with developing professional skills on one hand, and organisational skills on the other (Figure 1).

FIGURE 1. OBJECTIVES OF THE TRAINING PROGRAMME IN STATISTICAL SKILLS

Statistical work and professionalism have many aspects, in which you can only become skilled by means of on-the-job learning or specific training provided by the statistics sector. For this reason, personnel training is of key importance to statistical institutes. Professional skills in statistical work include know-how associated with producing statistics (for example methodology), knowledge of the phenomena on which statistics are compiled, as well as competence relevant to needs for and presentation of statistical information. These aspects comprise the central learning objects of the Training Programme in Statistical Skills.

In addition to professional skills, organisational skills are needed, or knowledge of the statistical agency not only as a producer of statistics but also a state agency, customer service organisation and work community. Organisational skills also include an understanding of one's own department, unit and work assignments as part of the shared basic task of the organisation.

In expert work, socialisation and networking in a collegial community is vital. This includes getting to know other departments and co-workers, making new contacts, exchanges of experience and collegial discussions between the students and with the trainers. Students taking part in TPSS consider the opportunities for networking one of the most important benefits offered by the training.

From the perspective of the organisation, an important objective of the Training Programme in Statistical Skills is supporting internal mobility of the personnel. Besides improving the competence of the individual and his or her capacities of mastering new tasks, TPSS also enhances interest and motivation to expand the scope of one's tasks.

TPSS also supports Statistics Finland's objective of promoting the sharing and transfer of knowledge. This takes place in two ways: 1) good practices in the organisation are highlighted through sample cases in the training programme and 2) in-house experts of Statistics Finland are used as trainers in the programme. The trainers have a solid competence in statistical work and expertise in the learning objects of the training. Some of the trainers also have a long working career at Statistics Finland and their stories about different stages of the organisation bring to light Statistics Finland's history. This is important for understanding the organisational culture of Statistics Finland and the long tradition of

statistical work and for adopting the operating modes considered collectively important. For a summary of the objectives of the Training Programme in Statistical Skills from the perspective of the organisation and the statistical expert, see Table 1.

TABLE 1. OBJECTIVES OF THE TRAINING PROGRAMME IN STATISTICAL SKILLS FROM THE PERSPECTIVE OF STATISTICS FINLAND AND A STATISTICAL EXPERT

Objectives of training from the perspective of SF:	Objectives of training from the perspective of the expert:
• ensuring a high standard of statistical skills of the personnel	• diversifying expertise in the statistical process and its various phases
• harmonising statistical thinking and enhancing shared operating methods in statistical work	• increasing knowledge of the various statistics produced by Statistics Finland
• encouraging peer learning and cross-statistical co-operation	• increasing knowledge of the social phenomena that statistics describe
• support competence sharing between statistical experts	• increasing collegial interaction and widening the professional network
• create conditions for internal mobility of the personnel	• facilitating the development of statistical expertise and professional identity

STRUCTURE AND LEARNING OBJECTS OF THE TRAINING PROGRAMME IN STATISTICAL SKILLS

The training programme consists of two modules: TPSS basic studies and TPSS advanced studies. Basic studies are part of the job orientation of new employees, and they are intended for the entire personnel. Employees take part in these studies within six months of their recruitment, and their extent is 45 hours. Basic studies are organised twice a year, in spring and autumn. Advanced studies comprise further training for statistical experts that complements their professional skills. The duration of the studies is two academic years, and their extent 300-440 hours. A new class starts once a year.

The learning objects of TPSS basic and advanced studies are based on the competence model of statistical work[2,] which describes statistical skills that are relevant for Statistics Finland. Even if the studies are similar in their content, there are differences in the focus. Basic studies prioritise organisational skills and basic capacities for statistical work, while advanced studies focus on examining the process of statistics compilation and the phenomena described by statistics.

In the following chapters, we will take a closer look at the contents of TPSS studies and the implementation of the training programme. We will first discuss TPSS basic studies, and then the advanced studies in a closer detail.

TPSS BASIC STUDIES

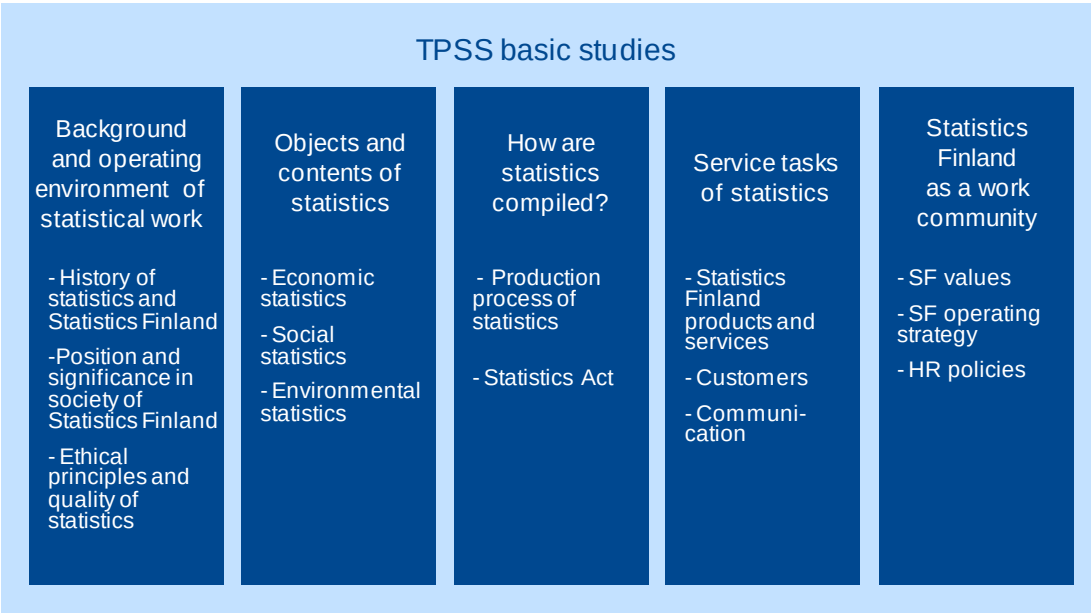
The basic studies in the Training Programme in Statistical Skills are primarily intended for new recruits at Statistics Finland with an employment contract of at least one year. The contents of the basic studies are suitable for new employees entering all departments and various tasks. The aim is to impart to the entire personnel the basic capacities for working at Statistics Finland. The idea is that all employees must be familiar with the basic task of Statistics Finland, whether they are involved in implementing it (statistical units) or supporting it (support units).

[2] For the competence model of statistical work, see Appendix 1.

In addition to newcomers, personnel having worked with the agency for a more extended period may also take part in the basic studies. For example, the programme is suitable as revision after a long leave of absence, or for updating one's skills concerning changing practices or new themes on which statistics are produced. The extent of the basic studies is 45 hours, and they are run over a two-month period. The studies consist of five days of lectures (35 hrs) as well as distance studies (10 hrs). Distance studies include individual assignments associated with the student's own work and small group meetings. In course of the studies, the students also visit the Survey Laboratory and the Library of Statistics.

As a final assignment of their basic studies, the students write an analysis of how they can in they own work influence the implementation of Statistics Finland's operating strategy and contribute to achieving the targets of their own department. For the learning objects of the Training Programme in Statistical Skills basic studies, see Figure 2.

FIGURE 2. TRAINING PROGRAMME IN STATISTICAL SKILLS, BASIC STUDIES LEARNING OBJECTS



TPSS basic studies have been organised since 2005, and more than 200 employees of Statistics Finland have completed them. Two out of three of these were newcomers. The number of those having dropped out is rather low, or as little as five per cent. The total number of trainers in TPSS basic studies is 25 people, all of whom are employed by Statistics Finland. In addition, there is a basic studies leader, who also acts as a tutor for the students.

Since 2005, regular feedback on the training programme[3] has been collected as regards the basic studies. TPSS was found useful by 91 per cent of the participants, and 74 per cent would also recommend TPSS to their colleagues. Some comments extracted from participant feedback:

"The training gave me knowledge that opened up a new perspective to the activities and aims of Statistics Finland. It also gave me a general idea of the various topics of statistics and their essential characteristics. Previously I may not have had a very clear idea of what happens in the other units. Now I can also better understand the significance of my own unit and team at Statistics Finland."

[3] See Appendix 2 for the training programme feedback form.

"We had fairly good opportunities for personal participation during the training. What I liked best was unquestionably the group work and the discussions with the senior statisticians. The assignments forced us to use our own brains, which was sometimes challenging."

"After all these years, I finally had to think about what kind of actor Statistics Finland is in our society, what its role is, and all the uses to which the information collected by Statistics Finland can be or has been put. I am embarrassed to confess that so far, I have short-sightedly worked in my cubicle at my tasks and have never thought more closely about the meaning of Statistics Finland's or my own activity or any wider social connections."

TPSS ADVANCED STUDIES

The aim of the advanced studies in the Training Programme in Statistical Skills is to provide the personnel with more in-depth and extensive statistical professional skills. The duration of the advanced studies is two academic years and the minimum extent 300 hours. In addition to compulsory studies, the students can take optional courses. The maximum extent of the studies is 440 hours. The pilot course of TPSS advanced studies was organised in 2007-2009. In November 2012, the training was started for the fourth time. 15-20 students at a time start in this two-year training programme.

TARGET GROUP

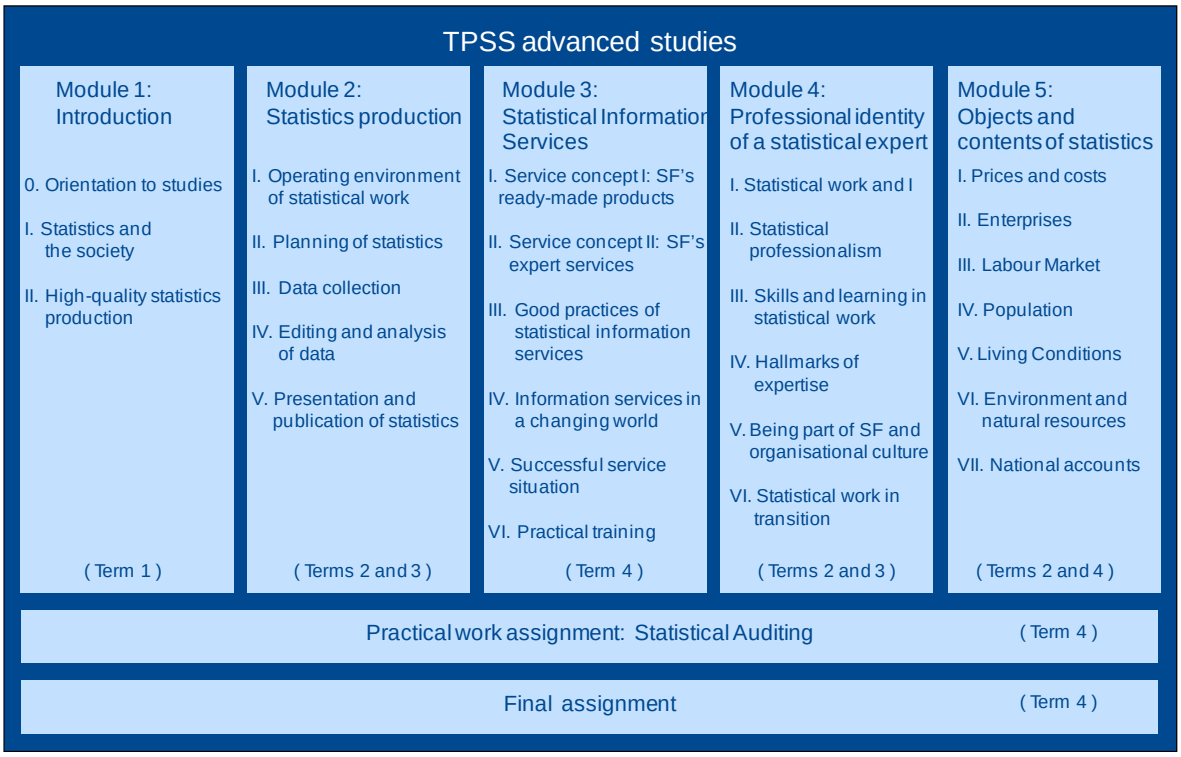
The target group for TPSS advanced studies is experts working in the statistical units. The criterion for starting the studies is that the student's current tasks require skills in statistics production and that his or her short-term professional development needs involve more in-depth and extensive skills in statistical work. Another requirement for taking part in the training is a minimum work experience of two years at Statistics Finland. An additional requirement is having mastered at least the following subject matters: 1) TPSS basic studies or similar knowledge, 2) basics of statistical science, 3) basics of the SAS information system, and 4) proficiency in English.

Every year, 15-20 students are selected for the advanced studies. Each Statistics Finland's department has two to three places for training available to them. Decisions on who will take part in training are made by the director of the department together with supervisors. Applications are submitted on a form that details the reasons for applying for the training and the links of the studies with the applicant's current and future tasks. The application procedure is an effort to ensure a responsible attitude and commitment to a long study programme. In connection with the application process, it is important to show that the training has concrete objectives which require a joint commitment by both the employee and the employer.

LEARNING OBJECTS

The advanced studies in TPSS comprise five modules, which consist of individual courses. In addition, the studies include a practical work assignment and a final assignment. For the contents of the advanced studies in the Training Programme in Statistical Skills, see Figure 3.

FIGURE 3. TRAINING PROGRAMME IN STATISTICAL SKILLS, ADVANCED STUDIES LEARNING OBJECTS



For an advanced studies course list and the relevant workload in hours, see Appendix 3. Because the training programme is rather extensive and as a whole only targets part of the personnel, it is also possible to participate in advanced studies without completing the entire training programme. For instance, the module of Statistical information services can be completed as a separate whole. There are also so-called open TPSS courses for which there are no separate application or selection criteria. Around 250 Statistics Finland employees have taken part in the open courses. The open TPSS courses are also listed in Appendix 3.

IMPLEMENTATION OF THE TRAINING

The advanced study courses consist of contact and remote learning. The days of classroom study include lectures and activation teaching, such as discussions led by the trainers and group work assignments to be completed during the training day. Distance studies consist of studying literature, group meetings and individual exercises. The purpose of the exercises is to support on-the-job learning, and they require personal consideration of the issues to be learnt and application to statistical work of the studies. The distance learning partly takes place in the e-learning environment of Statistics Finland.

Each student taking part in the training programme prepares a personal study plan (PSP) to support his or her TPSS studies. The PSP defines the student's personal learning objectives in TPSS and the schedule of completing the studies. The PSP also helps the student to examine the link of the TPSS studies with his or her own tasks and career plans at Statistics Finland.

As a course book, the students study the handbook Quality Guidelines for Official Statistics throughout their advanced studies. As a practical work assignment, students carry out statistical auditing, which is part of the quality assessment and development of statistical work made inside Statistics Finland. In the statistical auditing process, the production process of an individual set of statistics is examined, as well

as the criteria set on the statistics and the fulfilment of these criteria. The practical work assignment includes participation in assessing the quality of the statistics and writing an evaluation report.

The final assignment of the studies is to write an essay on the student's own TPSS studies: how the objectives set for the training were achieved, what benefits the student has derived from the training so far and how he or she would like to, or intends to, make use of the TPSS studies in the future.

RESOURCES

Implementing the advanced studies of TPSS is a major investment for Statistics Finland. Majority of the TPSS trainers are in-house experts of Statistics Finland. In addition, visiting lecturers are also invited from other agencies, universities and research institutes. Currently, there are 20 main trainers involved in the advanced studies, who are responsible for leading the courses and planning the training together with the Chief Training Officer. In addition, some 80 lecturers take part in the training provision. Administration of the training is the duty of the Chief Training Officer and Training Secretary from HR.

For the costs of the studies for one yearly course (two academic years), see Table 2. Majority of the costs are incurred as the working time spent on training by the students, trainers and organisers. A study programme of two academic years takes up 2.2-3.2 person-months per each TPSS students depending on the number of optional courses. One lecturer spends app. 7 hrs/course on teaching and preparing learning materials. The time spent by a main trainer is app. 5 person-days/course. Training administration accounts for 6 person-months, including the working time of the Chief Training Officer and Training Secretary. Additionally, other training maintenance costs are incurred: fees of visiting lecturers, annual trainer coaching and the maintenance costs of the e-learning environment.

TABLE 2. THE COSTS OF ADVANCED STUDIES FOR TWO ACADEMIC YEARS

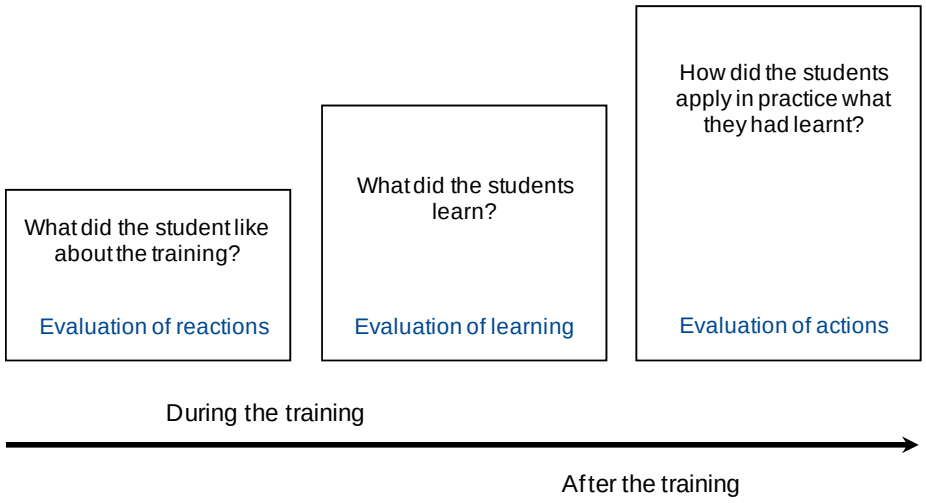
	Person-months	Payroll costs, € *)
1) Total working time requirement of TPSS students (1 person)	2.2 - 3.2	(20 persons) 296.000
2) Total working time requirement of main trainers (20 persons), á 5 person-days	5.0	25.700
3) Total working time requirement of lecturers (80 persons), á 7 hours	4.0	20.600
4) Administration of TPSS (Chief Training Officer and Training Secretary)	6.0	27.700
5) Coaching of TPSS trainers, an outsourced service		3.000
6) Fees of outside lecturers		5.000
7) E-learning environment maintenance costs		2.000
		Total 380.000

*) Calculation of payroll cost based on average basic salary of the group (including overheads).

EVALUATION OF THE TRAINING

As TPSS is a major investment for Statistics Finland, it is important to assess the benefits it provides both for the individual and the organisation. The TPSS training is evaluated at three levels (Figure 4). On one hand, the studies can be evaluated while they are in progress, and on the other, benefits derived from the training may only be recognised over the longer term after the studies have been completed.

FIGURE 4. THE LEVELS OF TRAINING EFFICIENCY



The most common way of assessing the success of training is to evaluate participant satisfaction. Feedback requested immediately after training or an individual course provides information on participant satisfaction with such as the learning objects, teaching methods and general arrangements of the training. In the TPSS training, student satisfaction with the training is gauged numerically by means of a feedback form (Appendix 2), based on which feedback summaries for each course are produced for trainers and training organisers. This feedback is used for planning the training, mainly as regards development of content and implementation.

A good level of satisfaction with the training promotes learning. Training that has been evaluated as successful (for example, a lecture experienced as interesting) does not, however, necessarily provide information on whether the training objectives have been reached, on learning or on efficiency of the training. What is significant in personnel training is the application of the knowledge and skills learnt in practice and utilising what has been learnt in new situations, such as new tasks. Learning and achievement of learning targets are monitored while the training is still in progress, for example through exercises assigned to students. Doing the exercises is part of the learning process, and they promote the practical application of what has been learnt. Exercises completed by the students also help the trainer to assess how well the students have understood the entity to be learnt. Table 3 gives some examples of TPSS exercises.

TABLE 3. LEARNING OBJECTIVES AND EXAMPLES OF TPSS EXERCISES.

Building of knowledge, memorising of knowledge	"What are the criteria for OSF?"
Mastering and application of knowledge	"How can I contribute to the implementation of the SF strategy in my own work?"
Resolving real-life situations and practical challenges	"Evaluate the requirements of statistics legislation and possible risks in your own statistics. How could you influence the risks?"
Development of working methods and renewal of operating methods	Practical work assignments: Statistical auditing

The assessment of learning also includes a self-assessment of learning by the students. In feedback collected after an individual course, the students are asked to evaluate the course in terms of their own learning (Appendix 2, Question 4). It is difficult, however, to evaluate the usefulness and efficiency over the long term immediately after the training.

When assessing the efficiency of personnel training, what is particularly interesting is establishing if the participants apply in their work what they have learnt as desired, or how the learning has been translated into actions. To enable a reliable assessment of the long-term impacts of learning, an adequate time period has to pass. It has been suggested that the long-term impacts of training could only be assessed at the earliest 6-12 months from completion of the training. As regards TPSS advanced studies, one of the objectives is to promote the internal mobility of experts. The career paths of those having completed TPSS training can be followed, but this alone will not be sufficient to gauge the efficiency of the training; it is difficult to prove that a certain type of a career path is specifically due to TPSS training, as the development of competence and the career paths are influenced not only by training but also many other simultaneous factors.

In 2010, the first evaluations were obtained on the effectiveness of the advanced studies for the piloting students (2007 to 2009). An inquiry (Appendix 4) was made based on the qualitative data obtained from the pilot to analyse the benefits gained by the TPSS studies as self-evaluations by the students. The inquiry is responded to one year after the studies end.

The inquiry asks about the utilisation of TPSS studies in one's own tasks and in competence sharing, the effect of studies on career development and on the structure of professional identity and perceived competence. The inquiry has 22 statements that the TPSS students evaluate on a scale of 1 to 5 (5=fully agree, 1=fully disagree). The inquiry aims to gain an understanding of the benefits of TPSS studies for both the units and Statistics Finland as an organisation. In addition, the inquiry produces a quantitative indicator for the effectiveness of TPSS studies (a so-called effectiveness index) formed by six key variables of the inquiry. Table 4 shows the variables of the TPSS effectiveness index with their averages and Table 5 presents the variables that received the highest averages in the inquiry.

TABLE 4. VARIABLES OF THE TPSS EFFECTIVENESS INDEX

A1. I learnt in the TPSS things that I have been able to utilise in my tasks.	3.83
A2. I learnt in the TPSS things that I have been able to utilise in developing my statistics.	3.42
A3. I learnt in the TPSS things that I have "passed on to others".	3.92
B4. I feel that on account of TPSS studies my possibilities to change tasks have improved.	3.67
C5. TPSS studies had a positive effect on my work motivation.	4.17
C8. I am committed to using my competence especially for the benefit of Statistics Finland.	4.25
TPSS effectiveness index	**3.88**

TABLE 5. VARIABLES RECEIVING THE HIGHEST AVERAGE IN THE TPSS EFFECTIVENESS INQUIRY

C7. I want to continue my development as a statistical expert.	4.50
C8. I am committed to using my competence especially for the benefit of Statistics Finland.	4.25
C5. TPSS studies had a positive effect on my work motivation.	4.17
C6. On account of TPSS studies my confidence as a statistical expert has grown.	4.00
A7. I have told about TPSS studying (what it is and what it is like) to my co-workers.	4.00

The results of the inquiry can be summed up by stating that TPSS meets its objectives well. The most significant result is manifested by the statements showing strengthening of professional identity

(development willingness, work motivation, commitment and professional confidence). This indicates the comprehensive effect of temporally long training that supplements professional competence.

In future, it is important that in addition to self-evaluation, supervisors of TPSS students will also take part in evaluating the effectiveness of training. Supervisors should evaluate the effectiveness of TPSS training with respect to their employees' command of profession (e.g. multi-talentedness), results of work (e.g. quality of results) and other development (e.g. new tasks, career plans).

CREATION OF TPSS - WHAT HAVE WE LEARNED?

The Training Programme in Statistical Skills was planned in course of a two-year project. Statistical experts from all Statistics Finland departments took part in the project work; from the beginning, the contents of the courses were planned in close co-operation with the future TPSS trainers. The participation of all departments in planning the training was a prerequisite for the project's success; TPSS became a joint project of the entire organisation with a shared commitment to its implementation. The commitment of management and supervisors to the project and their support for the training programme, also in its implementation phase, similarly played a major role. Sustaining and developing personnel skills are considered important at Statistics Finland, and this is reflected as appreciation for TPSS.

In terms of the success of TPSS, however, the most important factor is likely to be the TPSS trainers, whose expertise and enthusiasm translates as an outstanding training programme. The TPSS trainers collectively assume responsibility for developing the personnel of Statistics Finland, and they wish to be involved in sharing their own knowledge with their colleagues. TPSS students appreciate this as well.

As much as possible, TPSS strives for dialogic learning. This means a great deal of discussions and interaction between the students and trainers in the learning situation. Dialogic learning differs from learning by conventional lecturing in that the trainer is a co-learner of the students and an equal participant in discussions in the training situation. Dialogue takes place on reflective questions, and the students gather around for discussions in which different perspectives are encouraged. An attempt is made to personalise the subject, to make it significant for each student. A number of TPSS courses include dialogic sections; such as the "Professional identity of a statistical expert" course is completely based on this method.

Dialogic learning requires a new way of thinking as regards training. An aim for good practices and their assimilation is one of the training programme's objectives. What is equally important, however, is highlighting the problems of the organisation and a critical look at the organisation's operating methods. Collegial reflection of various needs for change in the organisation and looking for solutions are learning in its best form. This way of thinking also encourages trainers to open learning together, when it is possible to raise partly incomplete matters or questions without answers.

TPSS is a major investment both for the student and the employer. Taking part in the training is a psychological agreement showing that the employer is willing to invest in their employees and, on the other hand, that the employee is willing to invest in his or her competence at Statistics Finland. Even if TPSS does not automatically guarantee a certain type of career development at Statistics Finland for the student, it nevertheless helps to orientate the employee's own skills and interests in the future. From the employer's point of view, completing the studies is an indication of the employee's skill potential and capacities to master certain themes. TPSS is also an indication of the employee's interest in developing his or her professional competence and motivation to learn.

The impacts of a long training programme that enhances professional skills on the student often are comprehensive. The impacts of the training may emerge as new tasks and even career advancement, but the students' subjective experiences of developing their own competence and enhancing their expertise and professional identity are equally important. The following summary of how TPSS students felt about the programme at the end of their advanced studies aptly describes the strengths of the training:

"I applied for the training programme so that some time in the future, I could call myself a professional of statistics. During the programme, I realised how useful it is to take an in-depth look at the activities of Statistics Finland, various stages of statistics production and, in particular, different statistics. My understanding of a uniform Statistics Finland and the importance of joint operating methods is considerably clearer."

"During the lectures, it was a pleasure to realise how skilled, competent and expert personnel we have here working with statistics. My appreciation for the expert work performed at Statistics Finland increased considerably during the training."

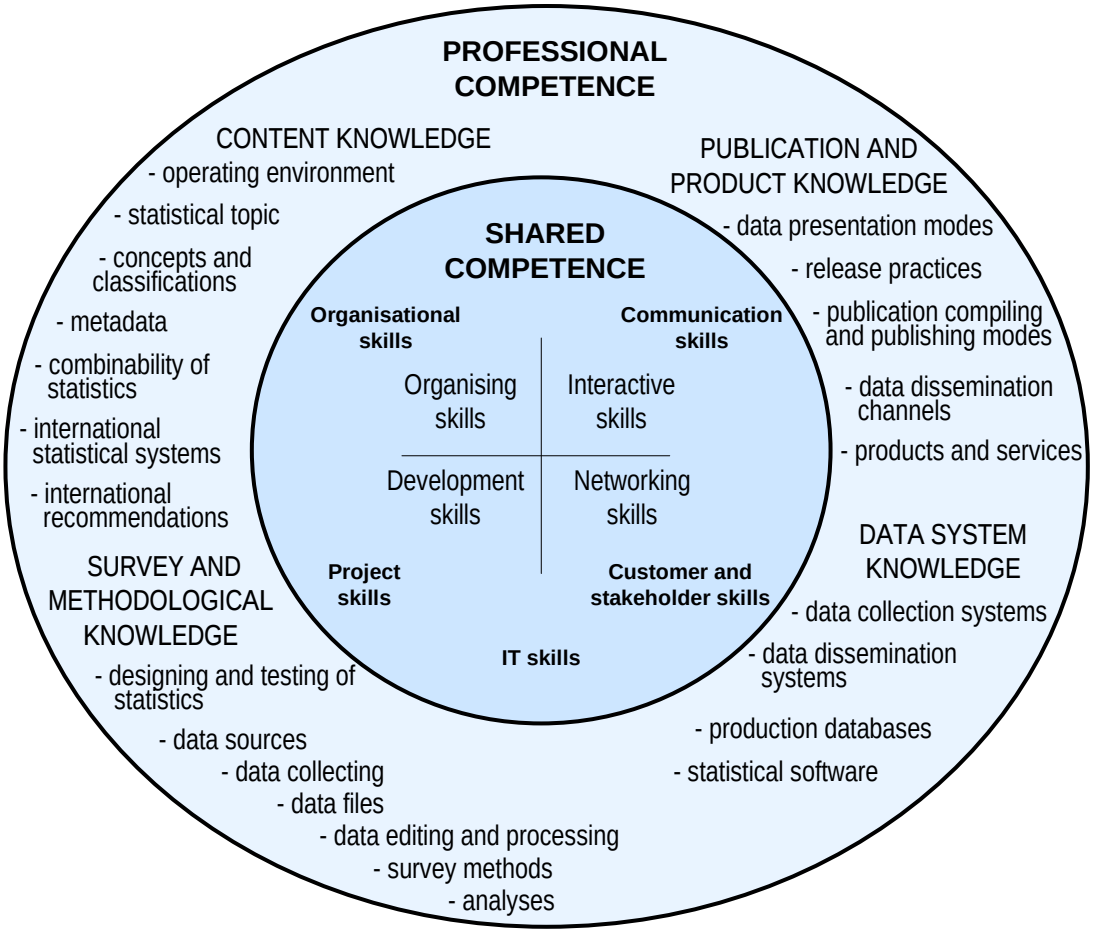
"It was a joy to see how many good and inspiring trainers we have in the agency. Both experts that were already known to me and enthusiastic young talents were involved. I particularly value those who took up problems and objects for development. Indeed, the best part of the training was discussions, which sometimes were critical, and lecturers who dared also talk about problems."

"In addition to expert lectures, group work has been the best part of the training programme. We have made successful group work and had fruitful discussions. It is good that we got the chance to express our opinions and talk with the trainers. We worked openly and everybody had the courage to present their own views."

"I feel my work motivation has grown and studying has made me feel good. I think TPSS studies have improved my self-esteem as well: I feel that I am still able to learn things and I think more positively about myself than before. It feels easier to move on to new tasks and I dare to take on new challenges."

"Surprisingly often, I find myself quoting one of the TPSS students or lecturers in discussion at work, and I am proud to have information that is new to many others. I can warmly recommend the training programme to all experts of statistics."

APPENDIX 1. COMPETENCE MODEL OF STATISTICAL WORK



APPENDIX 2. FEEDBACK FORM

TPSS/Course feedback

Please give your evaluation of the TPSS course xx below.
Your feedback is vital to enable us to improve our TPSS training.
Please fill in the form during the course day and return to the organisers.

1. Your department _____

2. Your evaluation of various aspects of the course

	Excellent 5	4	3	2	Poor 1
a) your level of interest in the contents of the course	☐	☐	☐	☐	☐
b) the way the learning objects were dealt with	☐	☐	☐	☐	☐
c) the training providers' expertise in their subject	☐	☐	☐	☐	☐
d) course schedule	☐	☐	☐	☐	☐

3. Feedback on the course in general and its individual days:

_____

_____

_____

_____

_____

4. Please give us below your evaluation of the course in terms of your personal learning. On a scale of 1 to 5, indicate to what extent you agree with the following statements.

	Fully agree 5	4	3	2	Fully disagree 1
a) I find the information the course provided useful.	☐	☐	☐	☐	☐
b) I learnt a sufficient amount of new things on the course.	☐	☐	☐	☐	☐
c) The course was in right proportion to my earlier skills.	☐	☐	☐	☐	☐
d) I can apply what I learnt on the course in my work.	☐	☐	☐	☐	☐
e) I would recommend the course to my colleagues.	☐	☐	☐	☐	☐

5. What was the best aspect of the course?

_____

_____

_____

Thank you for your feedback!

Personnel and legal services

APPENDIX 3. ADVANCED STUDIES COURSE LIST

Module / Course	Extent	Statistical work	Information service work	Participants
1. Introduction	15 h			
0. Orientation to studies	**5 h**	**Compulsory**		
I. Statistics and society	**5 h**	**Compulsory**	**Compulsory**	Open
II. High-quality statistics production	**5 h**	**Compulsory**	**Compulsory**	Open
2. Statistics production	130 - 180 h			
I. Operating environment of statistical work	(10 h + 10 h)			
Ia. Statistics in a changing world	**10 h**	**Compulsory**	**Compulsory**	
Ib. Software and hardware environment of statistics compilation	10 h	Optional		Open
II. Planning of statistics	(20 h)			
IIa. Statistics as an aim	**10 h**	**Compulsory**		
IIb. System work and information technology	**10 h**	**Compulsory**		
III. Data collection	(40 h + 10 h)			
IIIa. Means, technologies and challenges of data collection	**30 h**	**Compulsory**		Open
IIIb. Sample and estimation I	**10 h**	**Compulsory**		Open
IIIc. Sample and estimation II	10 h	Optional		Open
IV. Editing and analysis of data	(40 h + 20 h)			
IVa. Statistical thinking	**10 h**	**Compulsory**		
IVb. Editing and imputation	10 h	Optional		
IVc. Descriptive data analysis	**10 h**	**Compulsory**		Open
IVd. Time series and adjustment for seasonal variation	**10 h**	**Compulsory**		Open
IVe. Time series and adjustment for seasonal variation II	10 h	Optional		Open
IVf. Statistical data protection	**10 h**	**Compulsory**	Optional	Open
V. Presentation and publication of statistics	(30 h)			
Va. Numbers and stories	**20 h**	**Compulsory**	Optional	
Vb. Statistical graphics	**10 h**	**Compulsory**	Optional	Open
3. Statistical information services	10 - 60 h			
0. Orientation to studies	3 h	Optional	**Compulsory**	
I. Getting to know the service concept:				
Statistics Finland's ready-made products	**10 h**	**Compulsory**	**Compulsory**	
II. Getting to know the service concept:				
Statistics Finland's assignment and expert services	10 h	Optional	**Compulsory**	
III. Good practices of statistical information services	10 h	Optional	**Compulsory**	
IV. Information services in a changing world	10 h	Optional	**Compulsory**	
V. Successful service situation	10 h	Optional	**Compulsory**	
VI. Practical training	7 h	Optional	**Compulsory**	
4. Professional identity of a statistical expert	15 h			
I. Statistical work and I	**2,5 h**	**Compulsory**		
II. Statistical professionalism	**2,5 h**	**Compulsory**		
III. Skills and learning in statistical work	**2,5 h**	**Compulsory**		
IV. Hallmarks of expertise	**2,5 h**	**Compulsory**		
V. Being part of SF and organisational culture	**2,5 h**	**Compulsory**		
VI. Statistical work in transition	**2,5 h**	**Compulsory**		
5. Objects and contents of statistics	80 - 120 h			
Prices and costs	16 h	**Compulsory**	Optional	Open
Enterprises	16 h	**at least**	Optional	Open
Labour market	16 h	**five courses**	Optional	Open
Population	16 h		Optional	Open
Living conditions	16 h		Optional	Open
Environment and natural resources	16 h		Optional	Open
National accounts	24 h		Optional	Open
6. Practical work assignment	35 h	**Compulsory**		
7. Final assignment	15 h	**Compulsory**		

APPENDIX 4. INQUIRY OF TPSS ADVANCED STUDIES

Self-evaluation of TPSS advanced studies

Your TPSS studies ended almost one year ago and now it is time evaluate how you have been able to make use of your studies.

The questions below seek to establish the long-term effects of TPSS studies, mainly those that cannot be evaluated right at the end of the studies.

Your response is important because students' self-evaluation of the benefits of training is one key indicator in evaluating the effectiveness of TPSS training. These evaluations are also used when preparing the TPSS curriculum.

A. On a scale of 1 to 5, indicate to what extent you agree with the following statements.

	Fully agree 5	4	3	2	Fully disagree 1
1. I learnt in the TPSS things that I have been able to utilise in my tasks.	☐	☐	☐	☐	☐
2. I learnt in the TPSS things that I have been able to utilise in developing my statistics.	☐	☐	☐	☐	☐
3. I learnt in the TPSS things that I have "passed on to others".	☐	☐	☐	☐	☐
4. I have told about the things I have learnt in the TPSS to my supervisor.	☐	☐	☐	☐	☐
5. I have told about the things I have learnt in the TPSS to my co-workers.	☐	☐	☐	☐	☐
6. I have told about TPSS studying (what it is and what it is like) to my supervisor.	☐	☐	☐	☐	☐
7. I have told about TPSS studying (what it is and what it is like) to my co-workers.	☐	☐	☐	☐	☐
8. I have made use of the TPSS study materials after studies ended.	☐	☐	☐	☐	☐
9. I have made use of the social network created through the TPSS.	☐	☐	☐	☐	☐

A.1. If you gave the value 4 or 5 to statements 1 and/or 2, please specify your response. In what ways have you been able to utilise your TPSS studies in your tasks and/or in developing your statistics?

To be continued overleaf

B. On a scale of 1 to 5, indicate to what extent you agree with the following statements.

	Fully agree 5	4	3	2	Fully disagree 1
1. TPSS studies influenced my wishes about my future tasks.	☐	☐	☐	☐	☐
2. I feel that on account of TPSS studies I have obtained new tasks.	☐	☐	☐	☐	☐
3. I feel that on account of TPSS studies I have obtained more demanding tasks.	☐	☐	☐	☐	☐
4. I feel that on account of TPSS studies my possibilities to change tasks have improved.	☐	☐	☐	☐	☐
5. I feel that on account of TPSS studies my possibilities to move on to more demanding tasks (to a higher competence requirement group) have improved.	☐	☐	☐	☐	☐

C. On a scale of 1 to 5, indicate to what extent you agree with the following statements.

	Fully agree 5	4	3	2	Fully disagree 1
1. On account of TPSS studies I have developed professionally.	☐	☐	☐	☐	☐
2. After TPSS studies I appreciate my work more.	☐	☐	☐	☐	☐
3. On account of TPSS studies I gained a better understanding of my own competence.	☐	☐	☐	☐	☐
4. After TPSS studies others value my competence more.	☐	☐	☐	☐	☐
5. TPSS studies had a positive effect on my work motivation.	☐	☐	☐	☐	☐
6. On account of TPSS studies my confidence as a statistical expert has grown.	☐	☐	☐	☐	☐
7. I want to continue my development as a statistical expert.	☐	☐	☐	☐	☐
8. I am committed to using my competence especially for the benefit of Statistics Finland.	☐	☐	☐	☐	☐

9. THEORY AND PRACTICE IN THE COMPREHENSIVE TRAINING PROGRAMME

Imre Dobossy, Eszter Viragh and Gabor Apati Hungarian Central Statistical Office

The mission of the Hungarian Central Statistical Office (HCSO) formulated that the presence and the continuous development of up-to-date professional knowledge is one of the most important resources of the office. In this sense a new training strategy and its representing institution, the "HCSO-School" was elaborated in 2005. The aim of the project was to communicate the general statistical culture and to ensure the presence of special skills, knowledge and expertise necessary to carry out the various tasks of the statistical office on a high level. These skills cannot be acquired in the present Hungarian school system due to a lack of relevant specializations in the tertiary university level education. Some facts and figures that are demonstrated in this paper characterize the 8-years history of the HCSO-School highlighting the importance of the internal training institution.

We also outline how the needs for theoretical and practical training are determined, starting with the exploration of priorities on office-management level, followed by collecting expectations and training needs of the staff, up to the evaluation and feedback by participants and trainers of courses. Based on the results it became evident that the main measure of value of a training is its utility for work, which is in line with the mission of the HCSO-School. We demonstrate in this paper which methods are used to find a balance between theory and practice oriented training and to fulfil the sometime very different requirements of all actors. Based on experiences so far and feedback from participants and trainers, we also show which steps should be taken in the future, which aim to satisfy user's needs that generally focus on strengthening the practical side of the courses.

PRELIMINARIES

In order to fulfil the mission of the Hungarian Central Statistical Office set up for the new millennium, as well as to ensure the quality of process and product of statistical data-collection, strict professional criteria have to be implemented. Therefore we deem the presence and the continuous development of up-to-date professional knowledge as our most important resource. The guarantee for this is a complex, efficient internal training system, which can accommodate a large number of staff. Learning and training are a part of the operative human support of the performances of our office, and one of the main guarantees of the principle of *„the right person to the right job".* In the spirit of the above, a new training strategy was elaborated in 2005 based on the needs and suggestions that have surfaced.

The objectives of the new strategy were the followings:

- To organise training into a unified system;
- To put professional training into the spotlight instead of the mandatory and administrative training courses;
- To focus training on the actual work carried out in the office, emphasising practical skills to complete theoretical knowledge;
- To keep in mind the current priorities;
- To satisfy quality requirements in training, regarding its content as well as in all other considerations.

THE BIRTH AND DEVELOPMENT OF HCSO-SCHOOL

The objectives outlined above implied the need for a self-developed internal training programme and an institution to operate it. The aim of the project was to communicate the general statistical culture, and to ensure the presence of special skills, knowledge and expertise necessary to carry out the various tasks of the statistical office on a high level. These skills cannot be acquired in the present Hungarian school system due to a lack of relevant specializations in the tertiary university level education. Therefore the mission of the new in-house institution for education called "HCSO-School" is the classification, supplementation, maintenance and development of skills. The implementation plan of the new, comprehensive training system was finished in September 2005, and by the end of the same year the announced training courses have already started.

The training system consists of two main fields:

- statistical skills and
- other background skills.

The two main fields branch out to include subcategories in the following way:

I. Statistical skills

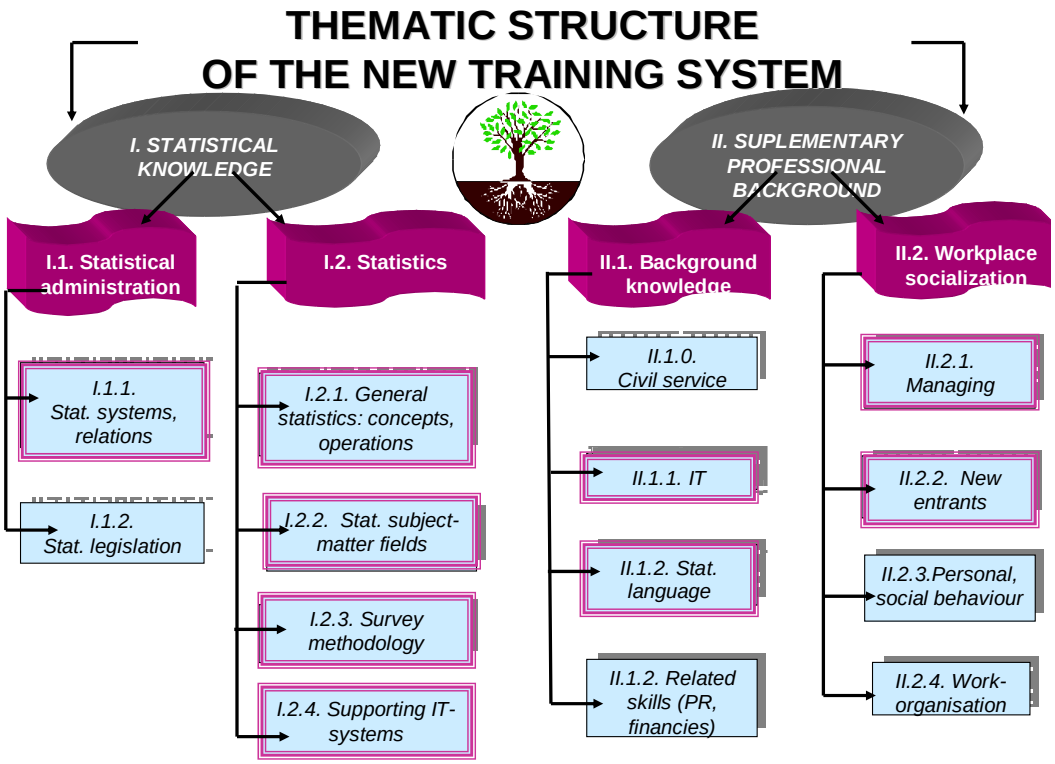
- I.1. Statistical administration
  - I.1.1. Statistical systems, relations
  - I.1.2. Statistical legislations
- I.2. Statistical professional skills
  - I.2.1. General statistics
  - I.2.2. Statistical subject-matter fields
  - I.2.3. Methodology of the statistical processes
  - I.2.4. IT systems supporting the statistical processes

II. Other professional and background skills

- II.1. Background knowledge
  - II.1.1. IT
  - II.1.2. Professional foreign language
  - II.1.3. Related skills
- II.2. Workplace socialization
  - II.2.1. Manager training
  - II.2.2. Training of new recruits
  - II.2.3. Behaviour, work culture
  - II.2.4. Organisation of work

There are certain programmes and courses associated to each subcategory.

FIGURE 1. THEMATIC STRUCTURE OF THE NEW TRAINING SYSTEM



The planning and implementation of training programmes is the responsibility of the Section of Human Resources and Training, while the realisation falls to the department in charge of the given specific topic.

Colleagues can indicate their personal interest for the courses selected from the Training Schedule published at the end of each year. The participation is then accepted or rejected by the directors of the department. Attendance can be prescribed as an obligation in the framework of the yearly performance target setting. Since 2006, the attended courses are registered in the personal HR database.

Besides the courses published at the beginning of each year, the HCSO-School is ready to conduct unexpected, ad-hoc training courses if the need arises during the year, reacting in a flexible way to the new and urgent professional development needs.

Some facts and figures characterizing the 8-years history of the HCSO-School highlight the importance of the internal training institution. The number of courses is about 30-50 every year. However, some extra figures have to be explained: the starting year 2005 provided only 3 courses held in the last 2 month of the year; 2006 was the year of the regional reconstruction strongly increasing the (re)training needs for hundreds of colleagues assigned by new scope of work; in 2011 the number of courses slumped because it was the year of census which the main part of the office staff was busy with.

The number of participants varied between 700 and 1300: it means that – compared to the total staff number of about 1300 people – in some years almost everybody or at least every second colleague attended internal training courses, in average 1,8 courses per year.

FIGURE 2. THE NUMBER OF COURSES OF THE HCSO-SCHOOL, 2005-2012

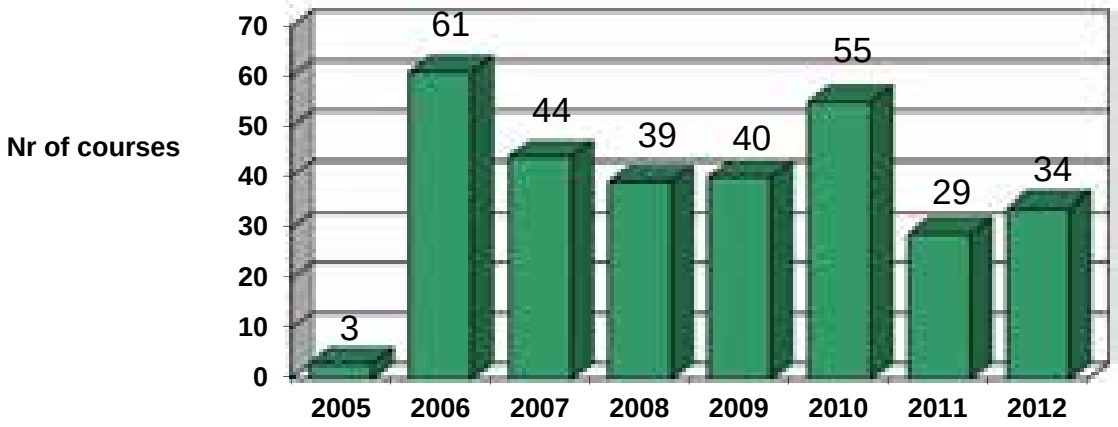


FIGURE 3. THE NUMBER OF PARTICIPANTS OF THE HCSO-SCHOOL, 2005-2012

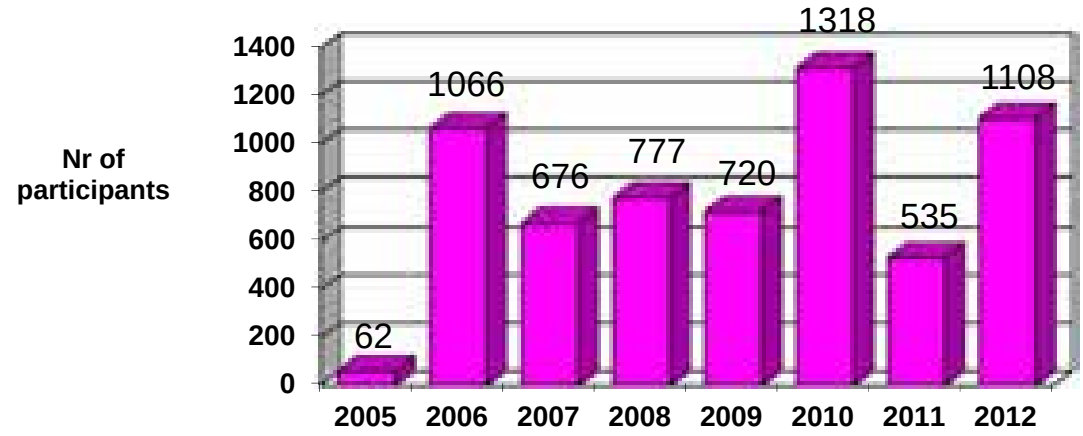
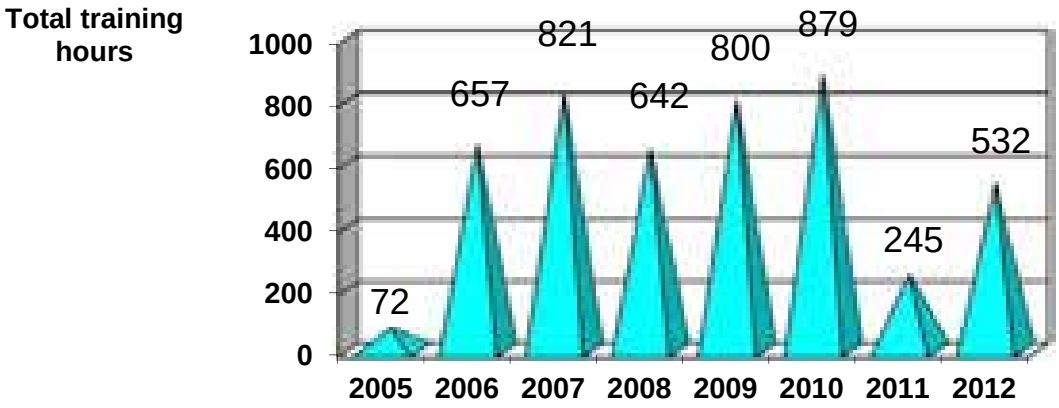


FIGURE 4. THE NUMBER OF TOTAL TRAINING HOURS OF THE HCSO-SCHOOL, 2005-2012



CONSIDERING PRIORITIES

The curriculum of the actual yearly training programme is defined every time by the current international priorities and the priorities in the HCSO management level, as well as the needs communicated by the organisational units of the office (e.g. in the year 2008 there was a great emphasis on the preparation of the NACE revision). The programme often serves to train or retrain the staff in the practical aspects of work. For example at the time of centralizing the county directorates and setting up the regional competence centres with changing profile, the regional staff had to adapt to previously unknown, new professional tasks. This is why the number of courses shot up in 2006 and the retraining courses dominated the programme of the year: besides the 31 courses for the central units, 30 courses were held for about 500 people especially for the regional units, mainly in subject-matter statistics and IT assisting the new day-today work of the staff.

COLLECTING EXPECTATIONS, TRAINING NEEDS

Besides the obvious priorities, every year the expectations related to the training programme are determined through different approaches in the form of consultations, questionnaires before and after the course and feedback analysis, in order to place the proper emphasis within the structure of the courses. Prior to the courses the exact expectations, needs and level of knowledge related to the training are surveyed in the form of a preliminary questionnaire, which helps the trainer compile the theoretical and practical components of the subject-matter. Several questions in the questionnaire aim to discover certain areas where the knowledge of the participants is lacking, and where emphasis should be put during the course. Most common among the stated expectations of participants is the learning of the practical use of different methods and theories.

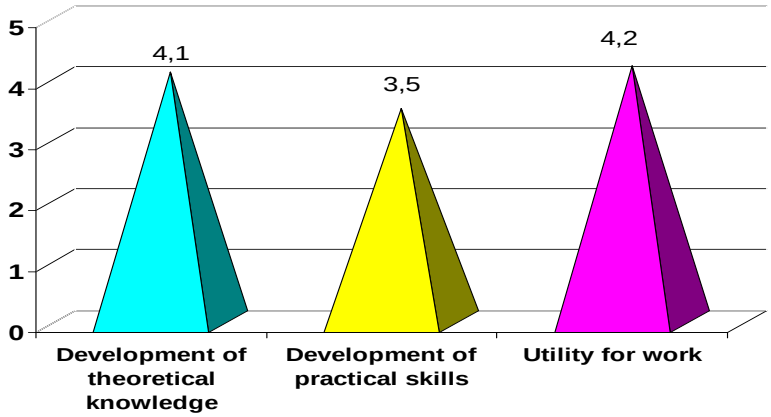
The trainers of each new course undertake a preparatory consultation, where the organisers of the training share with them the consequences drawn from the results of the preliminary questionnaire and also some experience from previous courses. Thus the trainers can begin their preparation with useful advices, which make it possible for them to elaborate the balance between theory and practice, or for example focus on interactive teaching instead of frontal, one-way education method.

EVALUATION, FEEDBACK BY PARTICIPANTS

Participants also are requested after each course to provide feedback in the form of evaluation questionnaires, which is especially important for the development of further training programmes. It is worth mentioning that according to the feedback, practice oriented courses are much more popular: these courses better satisfy the aims set out and the expectations of the participants than the pure theory oriented or mixed courses containing a number of theoretical components. In the curriculum the practice-oriented courses make up the slight majority of the programme: courses on IT skills, usage of certain software necessary to everyday work, language courses and also manager training. In other courses, e.g. statistical administration, subject matter statistics, methodology, our intention is to have a balance between theoretical and practical components.

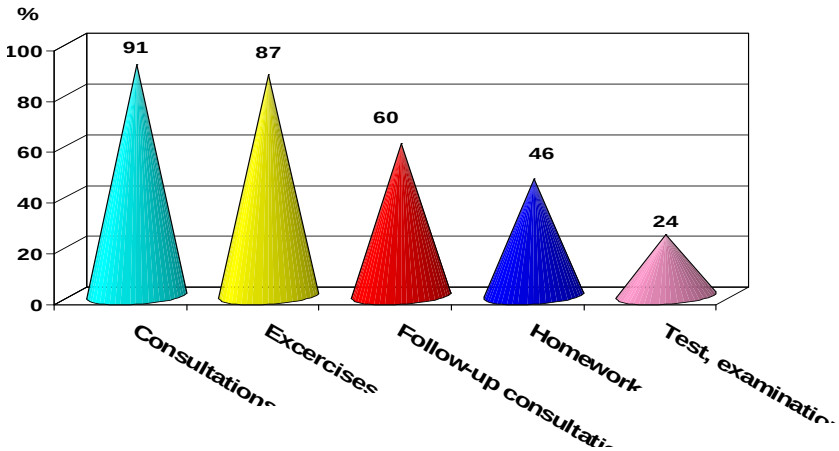
Based on the evaluation of feedback results it became evident that the main measure of value of training is its utility for work, which is in line with the mission of the HCSO-School. Generally the courses that helped the participants learn skills associated with their day-to-day work received more favourable opinions. (Thus, the especially positive feedback on IT and language courses is no coincidence.) According to the feedback received from the participants of professional statistical courses, the theoretical part is more extensive than the practical part, and that is why participants usually suggest an increase in the ratio of practical components. Those courses where trainers could find a balance between the two fields by introducing exercises and homework, proved to be more successful – such as the ones on methodology, e.g. sampling and questionnaire design.

FIGURE 5. TOTAL SATISFACTION INDICES: „HOW MUCH DO YOU THINK YOUR SKILLS HAVE BEEN DEVELOPED BY THE COURSE? HOW MUCH CAN YOU USE THE ATTAINED SKILLS TO YOUR WORK?" (AVERAGE OF 1-5 RATING SCALE)



The participants highly prioritise the programme components related to exercising and practising (e.g. real-life cases, examples from different fields of statistics, solving exercises). However, opinions on homework – where participants may face the degree to which they could understand the subject and how well they can apply it in practise – vary greatly. In the case of several courses, the participants themselves suggested more homework, at the same time in other cases they refuse the extra burden it puts on them, which can lead to the conclusion that in general, the interactive, consultative lesson in the presence of the trainer is a better way to get the required skills. The final exam at the end of the course is definitely less popular among the staff. At the same time, the general good performances in the exams prove that the learning process is in most cases successful and the students make the necessary effort to learn the subject-matter.

FIGURE 6. EXPECTATIONS TOWARDS PRACTICAL ELEMENTS: „DO YOU THINK IT IS IMPORTANT IN THE COURSE OR NOT?" (% OF RESPONDS "YES")

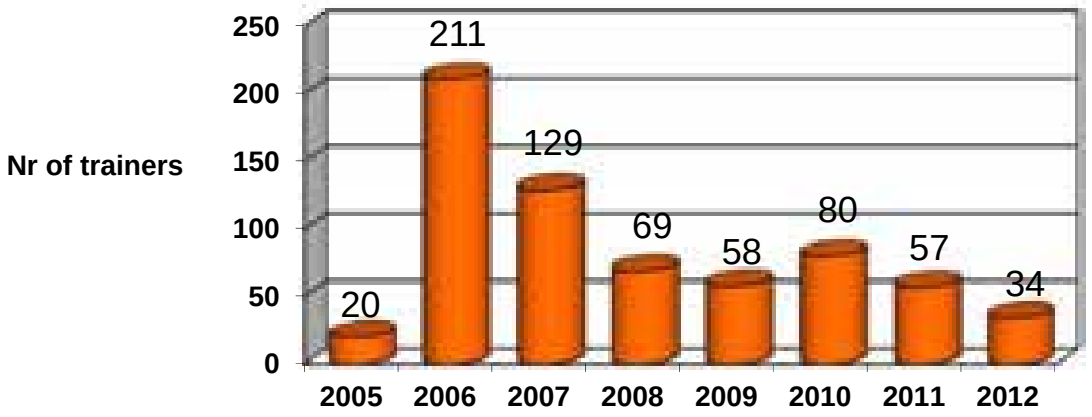


EVALUATION, FEEDBACK BY TRAINERS

Another approach to collect expectations and feedback opinions on training programmes is a consultative workshop held at the end of each year where trainers and participants can express their views and suggestions in order to help develop the training programme. The focus of these structured consultations was, in every year, how to put more emphasis on the practical side of the courses. Because this is a major difficulty for the trainers: beyond the simple teaching of the subject-matter, improving the participants' skills to utilise the information gained, and to increase the efficiency of learning.

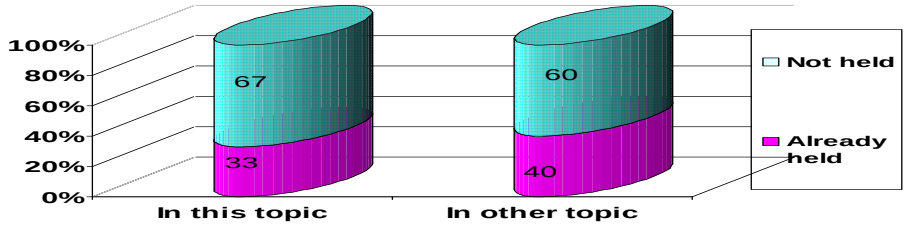
In the course of the 8-years history of the HCSO-School a core trainer's staff – exclusively from the office's manpower – has been formed of about 30-50 trainers teaching in average 4-14 hours the most needed topics every year (statistics, IT-applications of statistics, methodology). However, the yearly number of trainers shows a big variety from about 40-120 depending on the programme's content (some comprehensive courses involve many subtopics and many lecturers, e.g. quality-assurance in statistics, statistical nomenclatures, statistical administration).

FIGURE 7. THE NUMBER OF TRAINERS OF THE HCSO-SCHOOL, 2005-2012



The answers in the questionnaire that the trainers are asked to fill after the course, partly about the actual course, and partly about their general experience as trainers, show that they are not experienced teachers, but rather well educated professionals, who have little experience in passing on the knowledge, in applying effective methods of instruction or in increasing participants' motivation.

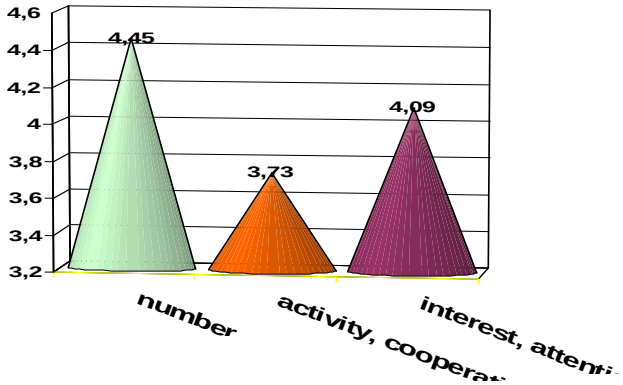
FIGURE 8. TRAINER'S EXPERIENCE: „HAVE YOU EVER HELD A LECTURE BEFORE?" (%)



From a trainer's point of view, reaching active participation of students is the biggest challenge, and one of the hardest parts of practical training. It is apparent from the trainers' questionnaires that they

experience a great level of participant's interest, but they are not satisfied with the level of active participation and cooperation. Experienced trainers admit that it is their own fault: it is up to them, to what degree they can use their skills of didactics and training technique to raise the interest of the participants.

FIGURE 9. TRAINER'S SATISFACTION WITH PARTICIPANTS: "HOW SATISFIED ARE YOU WITH PARTICIPANTS?"(AVERAGE OF 1-5 RATING SCALE)



STRENGTHENING THE PRACTICAL SIDE OF TRAINING

Based on experiences so far and feedback from participants and trainers, we are taking several steps in the HCSO-School, which aim to satisfy user's needs that generally focus on strengthening the practical side of the courses. The expectation to expand the practical methods of training and increase the practical skills of the trainers appears to be evident. Great professional knowledge is of no use without efficient instruction skills! Therefore in 2008 we introduced a new 3-day course called "Trainer's training", which besides dealing with the theory and methods of adult-education (andragogy), helps the practical work of the trainers by focusing on improving the educational, didactical skills, with the help of examples and exercises.

Some courses based on self-instructed e-learning method are also part of the HCSO-School: e.g. a language course and a typewriting course. However, there are some arguments for and against the efficiency of this practice-oriented individual learning method. Our experiences show that also e-learning participants need personal contact and assistance by trainers, and they have to be regularly controlled in their learning process. Naturally, new ways and methods of training appear on the agenda in order to improve the practical side of learning. In our days we face the challenge how to meet the staff's needs to develop their knowledge and skills necessary to everyday work and, at the same time, how to save time and cost resources in the period of budget cuts and staff-reduction. New learning styles – like mobile-learning, smart-learning, online (video, internet) distance conference, "telepresence" – as modern attractive tools of training should be experienced in the near future. We have to put the question whether technical tools are able to undertake the teacher's practical role, do these equipment's have rather complementary or total replacing function?

10. TOWARDS A EUROPEAN MASTER IN OFFICIAL STATISTICS

Anne Kofoed, Marius Suciu and Marcus Zwick EUROSTAT

After several years of discussions and consultations on the need for and the opportunity to create a European Master in Official Statistics (EMOS), the main stakeholders interested (NSI, Eurostat, universities and national schools in statistics) have decided to undertake concrete actions in order to make the creation of a European Network of the Master programmes in official statistics possible.

The paper describes the discussion and the current status of EMOS. Furthermore, the article shows the next concrete steps needed to reach the position of starting the project in autumn 2014 and see the first generation of European Master Degree in Official Statistics awarded by the universities members of the Network in summer 2016.

INTRODUCTION

Statistical literacy is one of the main topics for National Statistical Institutes (NSI) around the world. Statistical agencies deal with highly complex information and the data producer business model is based on statistical and mathematical knowledge.[1] It is important that data producers have a high level of statistical literacy in order to generate high quality data for evidence-based decisions. For the data consumer, knowledge of statistics and data producing process is also essential. One of the tasks of the data producer - especially for NSI – is to create solutions that enable data users to access the data and meta data in an easy and intelligible way; the user has to be able to draw the right conclusions from the data and it is essential therefore that each data user also has a sufficient level of statistical literacy.

Education and advanced training for staff members has played a prominent role within the statistical offices and, in the last decades, statistical training has become more and more relevant, reaching even beyond NSI offices. Statistical education starts consequently in schools. As positive examples, we can notice the Kid' zone from Statistic Canada[2] or the international project 'CensusAtSchool'[3]. Part of the learning content is much more than probability theory; one of the main aims is the understanding of the data producing process and the associated boundaries in interpreting these data.

At university level, statistics is an element in different fields of study. Social science, economy and medicine all have statistics inside their curriculum. Often it is a problem for a single statistical office to establish collaboration with a university. On the one hand, it is a matter of resources for the NSI and, on the other, the number of students who are interested in official statistics. Programs in English and French have the advantage that they can often recruit students from abroad; this is not possible for all European countries. For several years, various NSI and Universities have been discussing a European-wide solution to this situation.[4] An on-going and important point of this discussion is to find a workable link between advanced training and university degrees and Eurostat shows its intention to play an active part in a solution for (and working with) the European Statistical System (ESS).

THE STATISTICAL AGENCY AS EDUCATOR

Eurostat has a long tradition with internal training. For any employer, it is necessary to provide a system of vocational training and especially for a knowledge-intensive organization in a period with drastic changes in information technology. Eurostat also plays the role of coordinator in the field of training

[1] For knowledge intensive official organisation and their legitimation and social responsibility see Helenius (2011), p. 138.
[2] http://www.statcan.gc.ca/edu/zone/edu02a_0000-eng.htm.
[3] http://www.censusatschool.com/.
[4] For the discussion see http://www.cros-portal.eu/page/emos-initiative

and development. For high quality European data, it is necessary that staff in all member states have an adequate level of statistical knowledge. To reach this goal, a coordinate training system is essential. The current European Statistical Training Program (ESTP) guarantees this task inside the ESS. This is only one part of statistical education.

In the last 20 years, most NSI have realized that their responsibilities are numerous and do not end up producing up-to-date data. The results of (official) statistics are often complex. "In addition to producing reliable, relevant, coherent, timely and understandable statistical information, we should pay special attention to user support, statistical awareness and statistical literacy"[5].

This topic is of such relevance for statistical agencies that the International Association for Official Statistics (IAOS) has dedicated a full edition of its Journal, with various articles on statistical literacy to this subject.[6] Furthermore, the International Association for Statistical Education (IASE), a section of the International Statistical Institute (ISI), has established the International Statistical Literacy Project (ISLP), following the ISI World Numeracy Program from 1994, to contribute to statistical literacy across the world.

If statistical agencies create user support for a better understanding of the data producing process and the results of official statistics, it is helpful to segment the different user groups. Teachers require different information to their pupils; journalists need different information to researchers. Some NSI meet the various needs of their users with different information offers. For examples see the internet pages of Statistic Canada or Australian Bureau of Statistics.[7] Likewise, different European NSI offer specific information for different categories of statistic consumers.

Universities as a user group are different in their approach to other groups. First, universities supply statistical knowledge for various academic disciplines. In the context of statistical literacy, it is important for the NSI that this is more than probability theory. In the situation where statistics are offered as a minor study area (by way of example, to support a major in geography) it is also recommended that official statistics are also offered as part of this course.

One of the various effects of the Bologna process is the European Credit Transfer and Accumulation System (ECTS).[8] The ECTS is the ticket for the NSI to be part in minor fields of study. But for this purpose, it is essential to have regular offers in official statistics within the universities. If statistics is the major subject in studies of social science, economics or mathematical statistics, the NSI must take a substantial interest and be part of the curricula. These groups of students become the next generation of stakeholders or professionals in the field of statistics. But in most European countries, university programs offer trainings mainly on descriptive and inference statistics. In Master degrees, we can find additional multivariate statistics and in the field of economy the econometrics as applied statistics.

Essential elements of the data production process, respectively survey methodology are frequently not part of this field of studies. Data producers, like NSI, have a very clear interest for official statistics to be included in the qualification of the young researchers. First of all, data producers are employers. As employers the NSI are looking for young postgraduates in sociology or economics with skills in data production and analyses. Furthermore NSI are in competition with other (private) organisations for the 'best brains'. If the NSI are active in the qualification of students then they will have direct access to these human resources. This is the supply side. On the demand side, the NSI needs professionals in

[5] Helenius, R, (2011) S. 95.
[6] Statistical Journal of the IAOS 27 (2011); inside see among other Forbes, S. et al (Statistics New Zealand and University of Auckland) and Townsend, M. (Statistics Canada) for views from outside Europe.
[7] http://www.statcan.gc.ca and http://www.abs.gov.au/
[8] For information about the Bologna process and ECTS see http://ec.europa.eu/education/higher-education/bologna_en.htm .

universities, research institutes and as policy advisers with sufficient skills to understand statistical outputs.

These are the reasons why statistical offices are more and more interested to be part of the university education system in statistics. The past has shown that often it is not enough to be a passive partner. If the NSI are interested for official aspects of statistics to become part of the university programs, they have to play an active role in the design of the courses and the degrees as well as Master or PhD programs. A positive example is the Master degree in official statistics in Southampton, collaboration between the University of Southampton and the Office for National Statistics in Great Britain.[9] Another positive example for an active part in statistical education by a statistical office is the 'École Nationale de la Statistique et de l'Administration Économique (ENSAE)' in France.[10]

THE STEPS TOWARDS A EUROPEAN MASTER IN OFFICIAL STATISTICS

Inside the European Statistical System (ESS), the idea of a Master in Official Statistic was launched for the first time in 2008. The idea of creating a training capacity was explicitly mentioned in the "Communication from the Commission to the European Parliament and the Council on the production methods of EU statistics: a vision for the next decade"[11] which was adopted in August 2009.

After this first discussion, EMOS was topic in several meetings during 2009. In bilateral visits, the NSI of France, Germany and Poland discussed postgraduate degrees in official statistics. During the 2009 edition of NTTS[12] Conference in Brussels, the main stakeholders of the ESS expressed their interest for a project that contributes to the creation of a post-graduate degree in European Official Statistics by labelling existing programmes and by setting up a network of these programmes at European level.

THE WORKSHOP ON EUROPEAN MASTERS IN OFFICIAL STATISTICS IN SOUTHAMPTON

The next step forward in the discussion on a European Masters in Official Statistics was a workshop hosted by the University of Southampton and sponsored by Eurostat in June 2010. Over two days, Universities and NSI from more than 20 European countries discussed the common structure for a Master.
The aims of the workshop were: [13]

- To discuss interests of different stakeholders, define potential steps and an action plan for the creation of European degree programmes in official statistics.
- To build partnerships between European Academic Institutions and NSI in the implementation of the “knowledge triangle” linking research, education and innovation as key elements for a knowledge-based society.
- To ensure that European Academic Institutions have a pivotal role in interactions with NSI through knowledge transfer, dissemination and direct partnerships for research.

The discussions were thought-provoking and different points of view were put forward. The main questions presented were as follows:

- Should NSI be funding general statistics Master courses in an attempt to have universities deliver better-qualified graduates, a selection who would work in NSI?
- Should NSI work with universities to develop industry-specific masters programmes which meet the needs primarily of staff at NSI to further improve their technical skills in the form of continuous professional development?

[9] See http://www.southampton.ac.uk/demography/postgraduate/taught_courses/msc_official_statistics.page
[10] See http://www.ensae.fr
[11] COM (2009) 404 final.
[12] New Techniques and Technologies for Statistics.
[13] For full paper, slides and minutes of the conference see http://www.s3ri.soton.ac.uk/courses/european-masters/

It was a common view that first these two fundamental questions need to be addressed before the concept of a European Master in Official Statistics can progress. The view of many of the NSI present at the workshop was that they were primarily looking at support for a programme based around the continuous professional development for their staff. They could not afford to contribute funding to an academic programme which did not deliver specific return on their investment.

EMOS - A VISION INFRASTRUCTURE PROJECT

The various stakeholders – both inside and outside the ESS - came up with concrete proposals to take the next steps towards EMOS. A voluntary group, made up of representatives from some NSI and universities was created at the end of 2010. This group was chaired by ISTAT and had the task of streamlining existing positions within NSI and the academia, clarifying scope, existing practice and proposals for establishing a European Master in Official Statistics, based on the close cooperation of NSI and the academia. This group presented results to ESS in the end of 2011.

Thereafter, Eurostat organised a special meeting during the NTTS 2011 conference. This meeting underlined the clear interest of various NSI and universities to cooperate and work together to develop a European Masters in Official Statistics.[14] Moreover, there was a clear interest on behalf of the NSI for Eurostat to play an active role and Eurostat confirmed its view related to EMOS: "The main goal of this project is to establish a quality label for university 'European Official Statistics' programmes that meet agreed standards in education. University programmes that are benchmarked to these standards become members of the 'European Official Statistics' network."[15]

The possible objectives were set out:

- Establish a network of EMOS course providers;
- Diffuse European culture and knowledge in official statistics;
- Create a repository of young statisticians having a sound knowledge in statistics but also in other fields related to official statistics (e.g. IT, social sciences, economics);
- Improve cooperation between universities and NSI; allowing the provision of scientifically sound solution to problems related to official statistics;
- Create a platform for NSI staff members training in Universities and students in NSI.

A series of preparatory activities related to the EMOS project were carried out within Eurostat; the two main ones were as follows: Technical specifications prepared for a study in 2012. The aim of this study is to provide an in-depth and comparative analysis concerning the postgraduate degree programmes in statistics in the ESS member states, in order to identify existing or potential programmes in official statistics, to assess the interest among potential providers (organisations) to join and participate in the EMOS Network; to evaluate the implication regarding the labelling mechanism to be put in place. Procedures to recruit a Seconded National Expert launched on August 2011 in order to consolidate the Eurostat project team.

[14] For the minutes of the meeting see http://www.cros-portal.eu/page/emos-initiative.
[15] Ex-Ante Evaluation Document for VIP projects, May 2011.

THE WORKING PAPER "PROSPECTS FOR A EUROPEAN MASTER IN OFFICIAL STATISTICS"

In autumn 2011, the voluntary group, chaired by ISTAT, presented a draft paper entitled *'Towards the establishment of a Master in European Statistics'*. NSI and universities of twelve European countries worked on this. The initial document presented a set of ideas and a few key questions in order to stimulate the exchange of views among the stakeholders interested. The issues raised in this document were linked to the name of the programme, the involvement of other international organisations at this stage of the project; the scope, the objectives and the results; the target groups; the possibility to promote in parallel two categories of master (professional and academic), training staff and students profile, competencies profile; European accreditation (within ECTS).

EMOS – THE CURRENT STATUS

In spring 2012, Eurostat launched the Call for Tender for the feasibility study 'Towards a European Master in Official Statistics'. The purpose of this study is to contribute to the creation of a European Master in Official Statistics and to create a network of programmes dealing with Masters in Official Statistics at European level.

The study will provide the main stakeholders, interested in the EMOS project (National Statistic Institutes, universities, Eurostat), with the information needed to take appropriate decisions with regard to establishing a European Master in Official Statistics, setting up a European Network of providers for such programmes and labelling these programmes at European level. The main objectives of the study are the following:

- To provide an inventory of the Master programmes in statistics and their providers in the countries selected for analysis;
- To analyse the existing and potential Master programmes in official statistics, and identify whether they are suitable for joining a future European network of Masters in official statistics;
- To assess the interest of the providers and their capacity to join the EMOS Network (including their vision for the future network) and the administrative and technical barriers; on the basis of a questionnaire;
- To assess the interest of the NSI to participate in and to support the development of a European network of the Master programmes in Official Statistics;
- To analyse the advantages/disadvantages, the cost-benefits and technicalities of having labelling mechanisms and the role and implication of this on the NSI and Eurostat;
- To list and analyse potential funding facilities to get sufficient recourses for EMOS in the middle and long run;
- To propose a road map for the EMOS project.

The feasibility study will start in autumn 2012 and will draw to a close twelve months later with a final technical report. Assuming that the universities and relevant stakeholders remain interested and the systems of education across Europe are not too different, it is expected that the first courses of EMOS will start in the winter semester of 2014.

In order to achieve this objective, it is necessary that the curriculum and the labelling rules are developed in 2013. The process of coordination between all participating groups and the administrative implementation in different countries, with different systems of education, will be time consuming.

In the long run, permanent bodies will be required to support EMOS. The European Master's in Translation (EMT) could be used as a workable example.[16]: a permanent group of stakeholders accompanied EMT as Member Board and this group elected an EMT Board for regular support. The Board is responsible for the curriculum, labelling and the rules to participate in the Member Board. On

[16] http://ec.europa.eu/dgs/translation/programmes/emt/index_en.htm

the European Union side, the Commission's Directorate-General for Translation (DGT) is responsible. DGT provides EMT with a permanent office for the administrative tasks. [17]

CONCLUSIONS

Knowledge is the main resource for future innovation, productivity and growth; the wealth of European countries is based more and more on a high level of education and information, both of which are essential elements in the main field of official statistics. On the one hand, the process of producing reliable statistics as a base for decision-making is the core business of the NSI. On the other hand, the NSI have understood that in order to generate knowledge, it is also necessary that data users have an adequate level of statistical education. This topic is discussed under the label 'statistical literacy'.

EMOS is a joint project of different stakeholders (NSI, Eurostat, universities and national schools in statistics) with the aim of reaching a higher level of knowledge in various ways:

- Firstly, statistical producers could benefit from young and well-qualified researchers in official statistics.
- Secondly, other organisations with a link to statistics (ministries, central banks, research institutes, consulters etc.) could acquire better qualified staff in statistics on the labour market.
- A third point is that NSI and Universities stand to learn a great deal from each other through having this project in common. Staff members of the Universities could get a clear insight into the outside world of official statistics; working statisticians could learn more about the academic questions surrounding official data. In the long term, NSI experts could participate directly in drawing up the curriculum of EMOS and the different courses could be part of the advanced vocational training programmes.

Another point is that EMOS has an additional aim of supporting international higher education. Having a common EMOS programme in various universities will promote the mobility of young students across Europe; this could be supported by various actions of the Erasmus Programme. Indeed, EMOS seems suited to the basic architecture of the future 'Erasmus for all' project, foreseen to start in 2014 and this support may well be necessary as funding for the EMOS project presents the greatest challenge in the long-term.

The short and the medium-term prospects of EMOS are promising: certainly for the implantation phase, Eurostat has committed the necessary human and financial resources. Different NSI and Universities have also confirmed their interest to play an active role in EMOS and the Call for Tender was positive.

It now seems possible to have the first young researcher with a Degree in a 'European Master in Official Statistics' by summer 2016.

[17] Beside EMT exists different European Master inside the Erasmus Mundus Master Courses as possible examples for EMOS, for more information see:
http://eacea.ec.europa.eu/erasmus_mundus/results_compendia/selected_projects_action_1_master_courses_en.php/

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11. MOVING FROM INTRODUCTION TOWARDS INTEGRATION OF NEW EMPLOYEES – OBJECTIVES AND METHODS

Ingvild Maanum Möller Statistics Norway

The professional integration of new employees is very important for several reasons and has several dimensions. This paper intends to describe different factors related to the integration of new employees. Experiences from Statistics Norway recent reform of an introductory course program will be discussed; both the intentions and the layout of the program and an evaluation of the program and how it could be improved. Statistics Norway has about 1000 employees in two locations, and employs between 50 and 100 people annually.

INTRODUCTION

An employee's first few months in an organisation are important in several ways. To be effective the newly recruited needs an understanding of (among other things) the products and services of the organisation, and the objectives to be reached both as individual, section and organisation. New colleagues have to be acquainted, and the organisational culture familiarized. This is no easy task at hand. Also, it is in these first few months that the groundwork for both the organization's and the employee's satisfaction is laid, and ultimately the choice of continued employment.

Statistics Norway employs between 50 and 100 people annually. Currently the situation is that all new employments are put on hold, but we believe this situation to be temporary. Regardless the number of new employees, it is important to give them the support they need, to integrate new them, orient their job and enable them to quickly adapt to new environment. Statistics Norway has in previous years spent considerable time and resources on an introductory training course. It has been run at least twice a year for many years, covering altogether 8 days of which 3 days were allocated to statistical methods. Although the course received a pretty good evaluation, a further inquiry (group interviews) showed that very little of the topics presented were remembered afterwards, and that little of what was taught was used in their daily work. The new employees stated in interviews that they wanted to know more about SSB at a strategic level, what the overall goals were and how they could be targeted and met. They also wanted practical information on Human Resource issues, and IT systems and tools. Other topics sought after were individual career development, and possibilities for working abroad. Considering the length of the course and resources spent on it, it was decided a revision was needed.

After lengthy discussions, the new course was designed with our main strategy as a template. The strategy sets the direction for Statistics Norway's development in the years ahead. It is built around a few brief primary strategies: *Statistics portray society, Research of high quality, Satisfied users and motivated respondents, Cooperation to improve statistics and Quality in every process.* By using these same topics as a way of organizing the course, we have a pedagogical framework for organizing the course as well as ensuring that our strategy and main goals are made clear. But this also means that the schedule is relatively tight, and some topics from previous programme are no longer relevant. The new programme was executed for the first time in autumn 2009.

When designing an introduction course it is necessary to consider who these new employees are, which skills, behaviours, and attitudes are needed to perform their roles effectively. What specific competencies are needed? What training do they already have? The programme is intended for all the new employees within the first several months of their employment. Newly recruited have diverse backgrounds, and their job specific tasks will be numerous. We believe that the more practical statistical skills employees need to perform their job are individual and best taught in the work setting, by colleagues. Thus, it was decided that the topics presented in the course would be of a more general

character. For example, the extensive training on statistical methods and standards was taken out of the course.

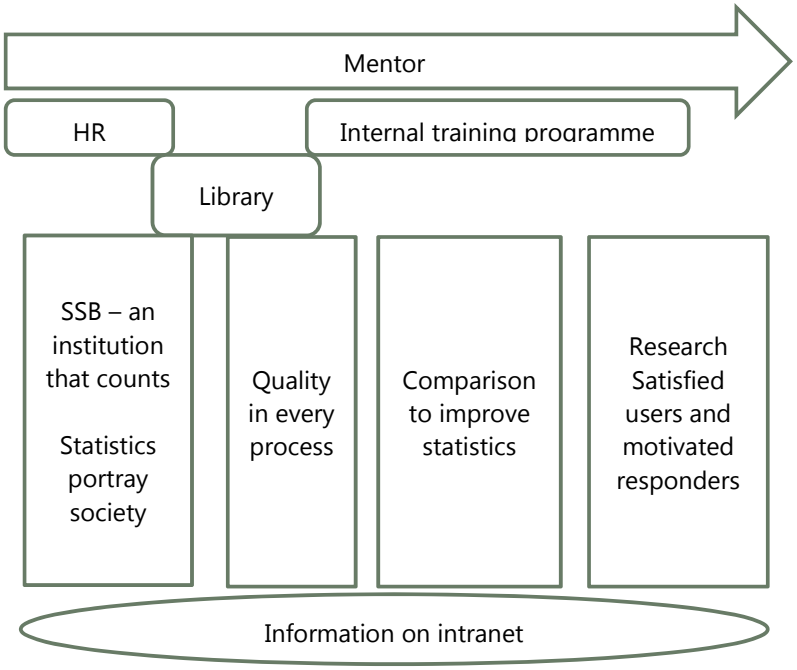
The aim of the program is stated as:

- Contribute to creating a positive start for new employees
- Create a better understanding of Statistics Norway as an institution and Statistics Norway's responsibility for society
- Give an overall understanding of statistical activities, and what describes good statistics.
- Contribute to creating professional and social contacts across departments

STRUCTURE AND CONTENT OF THE COURSE

The content of the introductory course is derived from the Statistics Norway *Strategy 2007* and is formed to provide an overview of the organization as a whole. The structure and content is presented below.

FIGURE 1. STRUCTURE OF THE INTRODUCTION COURSE FOLLOWING STATISTICS NORWAY STRATEGY 2007



Day 1
The topics presented during the first day refer to the statements from Statistics Norway *Strategy 2007* "Statistics Norway – an institution that counts" and "Statistics portray society".
- Statistics Norway's strategy;
- Statistics Norway's social mission, history and culture;
- Statistics Norway's safety procedures;
- The totality and the individual elements of the statistical production.

Day 2
The topics presented during the second day refer to the statement from Statistics Norway *Strategy 2007* "Quality in every process".
- Quality work in Statistics Norway;
- The importance of good questionnaire in quality work;

- What is metadata and its importance of Statistics Norway;
- Why do we need statistical methods in Statistics Norway;
- Quality work - presentation and dissemination.

Day 3
The topics presented during the third day refer to the statement from Statistics Norway *Strategy 2007* "Cooperation to improve statistics".
- Statistics Norway 's national contacts and partners;
- Relations with suppliers of administrative data;
- International cooperation;
- International collaboration – some practical experience;
- How we work and cooperate within Statistics Norway.

Day 4
The topics presented during the fourth day refer to the statements from Statistics Norway *Strategy 2007* "Research of high quality" and "Satisfied users and motivated respondents".
- Statistics Norway *'s* establishment in Kongsvinger;
- Dissemination of statistics and analysis;
- Data collection;
- Data collection and dissemination of the consumer price index;
- Statistics Norway's research activities.

The programme consists of different presentations made by internal presenters as well as practical cases and group works. Consumer price index (CPI) was used as an example throughout the programme, to make some of the more theoretical topics more accessible to the participants, as well as understanding CPI. There was a course leader present at all lectures, who introduced speakers, summed up discussions and tied topics together. We want to point to the significance of this course leader, who is central in the planning and implementation of the course. This function is responsible for the professional totality of the course. Although the presenters are responsible for their individual topics, it is the course leader who makes sure that the course in total succeeds and that all topics contribute to the aim of the programme and complements each other, instead of overlap. The ownership of the course lies with this function – not with the statistical experts.

The course is organized in both offices of Statistics Norway (Oslo and Kongsvinger) to enable employees to get familiar with both work locations and different departments. Two of the days are spent outside the office, which gives a possibility to new members to get to know each other better in the outside of the office environment. The programme is followed by the evaluation scheme which provides guidelines for further improvements of the course.

EVALUATION

A comprehensive evaluation of the introduction course has been made. The main conclusion is that the course was perceived as informative, it gave general knowledge and feeling of belonging to Statistics Norway as well as it created overall positive impressions. Participants were very positive to being able to meet top leaders in the course and get to know other employees. In addition, the course was well structured and thoughtful providing opportunity for new employees to visit both of the offices. The course increased the participants feeling of belonging to the company and provided general knowledge about Statistics Norway. In addition, participants thought that Statistics Norway would benefit by providing the course since new employees would gain higher motivation and dedication to their work after they complete the course.

When looking at the detailed purpose of the course, as described above, we can see that the goal was mostly met.

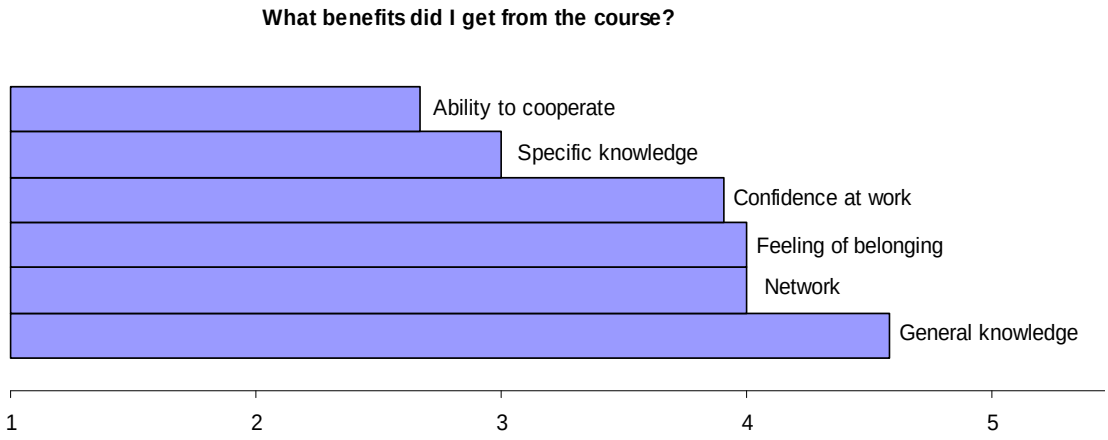
TABLE 1 - RESULTS OF THE EVALUATION OF THE INTRODUCTION COURSE

Aim	Result
Contribute to creating a postivie start for new employees.	Met. *"The course gave positive impressions".*
Create a better understanding of Statistics Norway as an institution and Statistics Norway's responsibility for society.	Met. *"The course was informative and provided general knowledge about the company."*
Give an overall understanding of statistical activities, and what describes good statistics.	Partly met. *"Gave an overall understanding. The course could provide more specific knowledge."*
Contribute to creating professional and social contacts across departments.	Met. *"This is a great opportunity to meet leaders and get to know other employees."*

Evaluation drafted by Rita Braziunaite (trainee Statistics Norway September 2009 – April 2010).

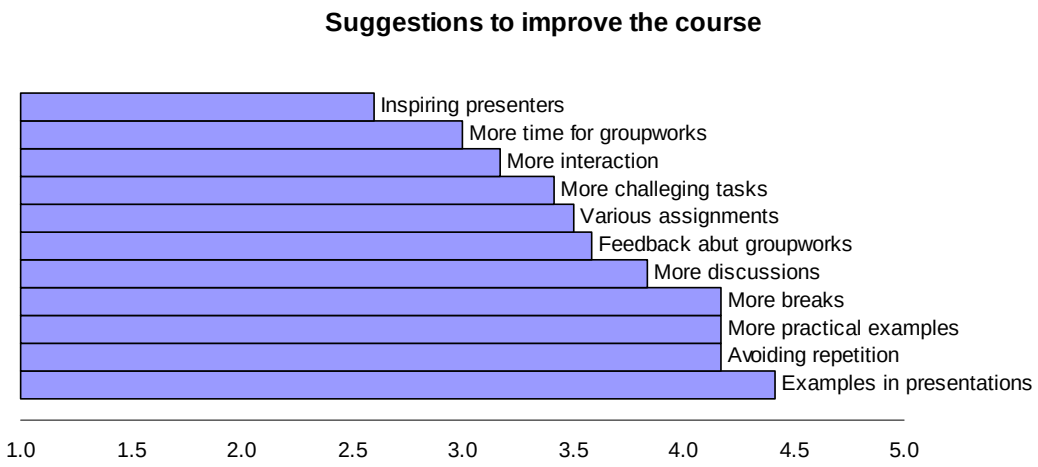
The evaluation uncovered several areas for improvement, as seen in the figures below. These evaluations were made on the 5-point scale (1-strongly disagree while 5-strongly agree).

FIGURE 2 WHAT BENEFITS DID I GET FROM THE COURSE?



Participants claimed that they gained general knowledge about the company, more specifically this means that they learned about the organization's structure and strategies used at Statistics Norway. They also stated that they got contacts with people from different departments and got a feeling of belonging to Statistics Norway. However, they believe that they did not gain enough specific knowledge that is relevant to their job. Also, they do not think that this course taught them how to cooperate with other employees.

FIGURE 3 SUGGESTIONS TO IMPROVE THE COURSE



Some of these suggestions are easier to resolve than others, for example more time for group works. Others, as will be shown in the next section, call for a discussion of a more principal character.

THOUGHTS FOR FUTURE PLANNING

When planning a course like this, there are many considerations to take; many parties are involved. Our experience is that management and other employees are passionate about this programme and have strong opinions. Many topics are considered important, yet a selection has to be made. There is also a political element, as all the different departments should be represented in the programme. To make the appropriate adjustments for the next course, some matters will have to be discussed. In the following we highlight some of these.

GENERAL VS. JOB SPECIFIC KNOWLEDGE

As mentioned above, the introductory course has been shortened from eight to four days, and topics are of a more general character. The introductory training is a basic course and it is the same to all employees. However, we see that it can be a challenge that the topics are perceived as *too* general, so they lose their relevance for the individual participants. To give everyone specific job knowledge is difficult, as there are many different jobs within the organisation. Our plan is to complement this course with more specialized and advanced courses that are formed according to specific competences and needs of the employees. Nevertheless, we acknowledge the difficulties of targeting each individual in such a diverse group new employees are. If the information is perceived as not relevant for the job, it is easily forgotten, and this is of course a problem.

MANY BRIEF VS. A FEW THOROUGH TOPICS

There is a lot of new information for the participants to take in, and the timeframe is short. So how does one go about preventing 'information overload'? We tried to keep the presentations short, and not too thorough. Evaluations showed that this was perhaps not the optimal solution. Although participants did not think that course was too repetitive, which means that participants found every topic bringing them new information, they asked for more examples in the presentations, more practical tasks, more discussions, and more feedback on group works. (Various were evaluated between 3,5 and 4,5 which indicates that they agree that employing more practicality in the course would improve its quality). It

seems the participants felt that a short presentation on a topic is not enough. The challenge with a more practical approach is that these things take more time, which means some topics must be cut. As many topics are seen as equally important, it is difficult to see which ones can be taken out.

INSPIRING PRESENTERS

Related to this is the lack of inspiring presenters. Participants did not think that all lectures were very motivating, and some were too theoretical. Although most of the presenters are experts within their field, and clearly passionate about their subject, not all succeeded in engaging their audiences. The communication was often one way, and PowerPoint with a lot of text was the preferred medium. Presenters were given a summary of the evaluation. We gave clear instructions to the presenters on the main purpose of the topic, and encouraged interactivity. One can speculate on whether the timeframe was too tight, and that the presenters felt they had too much to say in too little time, and therefore focused more on presenting the material than interacting with the group. Bearing in mind that the presenters are first and foremost statisticians, perhaps we need to coach and train them extensively beforehand.

STATISTICAL VS. NON-STATISTICAL COMPETENCE

Statistics Norway is currently working on a framework for competence[2]. The framework distinguishes between three main types of competences: "basic competences", "core competences" and "job specific competences". Basic skills and competences in Statistics Norway are defined as those competences required of all employees in the organisation, regardless of role or business unit. Core competences are linked to the primary task of statistics production. Job-specific or specialist competences are applied to specific roles, job groups and functions, especially within the field of methodological, ICT or administrative support, but might also be the case for specific tasks within the statistical production process. Although some of these are clearly present in today's programme, it seems natural to integrate this into the programme in a more systematic way.

It is interesting also to note that the formal academic training is not the most prominent feature in this framework. This does not mean that academic background is unimportant, rather it is a prerequisite. Thus the important issue is in what area our training can complement the formal education of our staff. We believe there to be less stability in future, regarding staff, technology and internal production processes. We see a future organization with many cross-cutting projects and tasks and moving in the direction of process orientation. This organisation will require staff with strong abilities in team work and project/process management combined with innovative and analytical capacities, in addition to the more statistical subjects. Perhaps this is the area where focus should lie?

TOWARDS AN INTEGRATION PROGRAM

For the new employees, this is a period when much is to be learned. Not just professional tasks and responsibilities, but also culture and codes, relationships to colleagues, where to find information, routines, identification of key players, organisational structures and so on. These are topics that can not be taught in the classroom. Newcomers learn through active participation in a social practice, and as a result of interaction between newcomers and established members. Nevertheless, new employees need structure and support to find their way. Therefore, to complement the more traditional introductory programme, other supporting processes will be looked at in parallel. We want to move from an introductory programme to an integration programme.

We are currently also working on the following measures:

- The role of the mentor, more assistance and clearer definition of responsibility
- Review information given by HR department at arrival and after some months
- Assess (and possibly add) courses offered at our internal training to this target group, make some mandatory for some groups
- Update and supplement information at our intranet
- Individual career planning offered after 12 months on the job
- E-learning on certain topics. This means training can be offered at a more targeted time, e.g. 2 weeks after employment begun.

We hope that together with our improved introductory course this way of organizing will give the new employees the knowledge and support-system they need to fulfil their potential.

12. MANAGEMENT DEVELOPMENT

Martin Lagerström Statistics Sweden

SUMMARY

Statistics Sweden´s Director General made a decision in 2008 to use EFQM as the supporting framework in our organisation's management- and total quality management system.

Statistics Sweden´s TQM system provides the managers in our organisation with an excellent framework that is used to systematically evaluate and continuously improve our operations. It offers a structure for how our organisation should transform its operational plan in order to maximise value for its stakeholders. It also offers a common basis for communication.

In short our TQM system states that Statistics Sweden´s ability to consistently deliver high quality statistics (the right content, the right quality, just in time and without errors) aligned to our stakeholders' needs, demands and requirements depends on:

- the techniques, methodologies and tools we use for every single part of our statistical production process
- the techniques, methodologies and tools we use to work with our leaders, employees, operational plan, partnership and our other processes

This presentation highlights what has been done so far, and what Statistics Sweden needs to focus on in the future to initiate a tradition of continuous improvement. For example, what are the major problems for successful implementation? What needs to be done? Why do we need to do it? What results can Statistics Sweden expect as a whole? What do we need to achieve in more concrete terms? How do we achieve this?

Our presentation emphasises that two very important and crucial factors for success is leadership and culture. This paper is an updated version of the paper presented at at the latest Workshop on HRMT, that took place in Budapest 5-7 September 2012. Participants agreed that it would be useful to produce a compilation of good practices in HRMT in national statistical offices. The purpose of the Compilation will be to provide guidance and good practices that can be of use to statistical offices. The papers of the compilation should address a broad variety of issues in HRM and Training and focus on current and future challenges of interest to statistical offices. In addition to this the Compilation also aims to highlight the importance and potential of HRMT in official statistics in general and serve as an input for future work on HRMT. The publication will include around 30 papers selected on basis of proposals by the participants of the HRMT Workshop in Budapest and after discussion of the co-chairs of the Workshop, Statistics Netherlands and the Central Statistical Office of Poland.

This paper was selected to be included in this compilation.

The updated version of the report includes the specific strategies related to both management- and leadership education and training that Statistics Sweden will carry out during 2013.

Statistics Sweden launches four different extensive management-and leadership programs during 2013. All educations, training, management coaching and other support in the different programs are tailor-made to support our managers and leaders to go from actions to words when it comes to executing Statistics Swedens worldclass vision, strategic goals, yearly targets etc.in our operational plan aligned

with the demands, requirements in our management- and total quality management system and the related leadership profile for managers.

BACKGROUND

Since the statistical transformation of Sweden´s statistical system in 1995, statistical institutes noticed a tremendous increase in demands, requirements and needs from different users, customers and other stakeholders with respect to the production and usage of statistics. Another important reason was to increase the efficiency because the number of systems, working methods and tools lead to high costs, quality deterioration, perceived stress among leaders and staff and difficulties in management improvements.

A total transformation of Statistics Sweden´s organisation was therefore highly needed in order to meet these demands, requirements and needs. This transformation involved moving from a traditional organisation (inflexible organisation structure, lack-of holistic perspective, unclear visions, mission statements, targets, unclear expectations on leaders, etc) towards a value and objective based organisation.

In order for Statistics Sweden to work systematically towards these demands and its world-class vision, top-management decided that the organisation needed to adopt an excellent management and total quality management system. This system should provide practical working processes, methods and tools that can be used to systematically evaluate and improve Statistics Sweden's operations. Before 2008 Statistics Sweden did not have such a system.

On behalf of Statistics Sweden´s Director General, a strategic project team[1] was formed in 2007 to fulfil this task. The project team was composed of people with in-depth knowledge, skills, experience and achievements with respect to leadership, management and total quality management. The purpose was to recommend an optimal management- and total quality management system for our entire organisation, and also an action-plan for its implementation. The project team conducted intense studies of other organisations, companies, literature and discussions with various groups and stakeholders both within and outside Statistics Sweden.

The outcome of our project was an extensive report and subsequent decision of our Director General in 2008 to follow our recommendations to use the European Framework for Quality Management (EFQM), Six Sigma and Brinks Modern Auditing as the three supporting pillars in our future work.

Based on these systems, our organisation has a solid basis to start working on continuous improvement in all areas and therefore also our support processes. Statistics Sweden´s future work regarding continuous and never-ending improvements will then be systematic, structural and much easier. The author of this report dares to say that in order to advance to excellent levels, the work must been done in a systematic, efficient and customer-oriented manner. Excellent leadership is mandatory, where leaders and staff work in perfect harmony towards the organisation's goals that are crucial in order to succeed.

According to all the external and internal evaluations that have been made of Statistics Sweden´s the last years, we have a great potential for improvement in terms of our management process at all levels. It is important that we understand the need to improve our leadership. Awareness is low among our managers about Statistics Sweden´s leadership profile for managers. It is currently unclear what our managers are evaluated on in more concrete terms. The first step is therefore to raise the awareness of our profile and what it means in more definite terms for our leaders.

[1] Martin Lagerström, Prof. Lars Lyberg et al.

WHAT IS A MANAGEMENT AND TQM SYSTEM?

To obtain quality, customer expectations must be met. But the requirements and expectations of Statistics Sweden´s operations also come from the Ministry of Finance, the public, respondents, partners and employees. Modern management- and total quality management is therefore about operational development with a holistic approach. To bring about such a development driven vision and mission statements and requires some form of cohesive management and total quality management system. It is common to see the quality management system as consisting of three parts: a framework for the description of the activity, a method for improvement and a method for monitoring and evaluation. If all three elements are in place, quality work is systematic.

WHY DOES STATISTICS SWEDEN NEED A MANAGEMENT AND TQM SYSTEM?

Statistics Sweden´s vision is to be world class on refining data to statistical information tailored to different users and customer needs, demands and requirements. The management and total quality management system must then include practical working processes, methods and tools in order to systematically describe and improve the organisation's quality from different perspectives.

Statistics Sweden needs to establish a common methodology, working processes and tools to systematically:

- prioritise development and other projects from a holistic perspective
- engage in continuous improvement of products, processes and tools
- recruit, retain and develop skills
- work with goal-based management and business planning
- provide a basis for evidence-based decisions
- communicate actively and proactively with customers, developing strategic alliances
- use resources efficiently and productively

Other reasons to implement a management- and total quality management system are various external requirements. For instance, Statistics Sweden has lost assignments/contracts because we have not been able to describe to customers and users how we work with quality issues in concrete terms. Other companies and organisations have been able to describe this in a much more detailed manner. It is thus not sufficient to systematically work with quality issues. This work must be documented in a structured manner. It has also occurred that Statistics Sweden has not lived up to the expectations of our customers due to quality defects of various kinds.

Some examples of what that means according to Statistics Sweden’s vision:

- There is a real culture of quality and a clear customer and process orientation throughout the organisation.
- The organisation is characterised by a well-developed, customer-oriented and systematic approach, which is well integrated into the business and applied in all significant processes at all levels.
- Cooperation is excellent between the various parts of the organisation.
- Our competitiveness is strong and managers and staff´s approach is focused on continuous and never-ending improvement
- Organisational culture is characterised by continuous improvement in all processes, methods and tools.

The operations produce sustainable and excellent results for the stakeholders, and positive trends according to world class standards are noticed in many areas.

In order to go from words to accomplished deeds when it comes from Statistics Sweden´s world-class vision, high standards in quality in particular are needed when it comes to how we work with:

- Leadership
- Operational/Business planning
- Customer contacts
- Subject expertise
- Methodology expertise
- Competence
- Processes
- Products
- Statistical quality

A world class position requires major changes in knowledge, skills, abilities, attitudes and practices, especially when it comes to our leadership at all levels. To achieve our Director General's intentions, Statistics Sweden´s management and quality work need to change from being conducted in fragmentary ways to be organised and conducted in accordance with an established management and total quality management system.

WHAT HAS BEEN DONE SINCE 2008?

Since Statistics Sweden´s adoption of management- and TQM system 2008, and transformation to a customer –and process-based organisation, the following activities have been made :

- Description for external evaluation according to the EFQM framework was submitted in August 2009;
- A detailed definition of Statistics Sweden´s core process – the statistical production process with related standardised working processes, methods and tools;
- Management Model (FMOD) , Test Model (TMOD) and system for documentation & secured IT systems (IT controls);
- Intensive work in order to be certified according to ISO 20252 (part of the Processes in EFQM box);
- The regulation on internal governance and control (part of several EFQM boxes);
- Working processes, methods and tools for conducting risk management & risk analysis (part of several EFQM boxes) have been adopted and carried out;
- A number of external and internal reviews and evaluations have been conducted by different independent management consultants, consultants and other agencies of our operations. One major theme for further improvement according to these evaluations is highly connected to management, leadership, people and culture.

MISSION STATEMENT MANAGEMENT AND TQM SYSTEM

A successful implementation of a management and total quality management system would have an impact on Statistics Sweden's whole organisation, our users, customers, employees and other stakeholders. The immediate effect is that the products and services we produce are of substantially higher quality, just-in-time and contain fewer errors. The effect of this, in turn, is partly that it frees up resources when we spend less time with corrections and revisions and can focus our energy on giving better service in both quantity and quality to our users, customers and staff. This in turn leads to significant increases in the level of satisfaction.

For example, the resources released by a more efficient production could be used to increase the salaries at Statistics Sweden, and the development of products and services. More time may also be

spent on analytical work, as requested by both staff and customers. Statistics Sweden must be able to offer a higher degree of customer orientation to achieve an increased competitiveness in the market so that we become the preferred choice for all users and customers.

A further effect is that Statistics Sweden´s work will be guided more by our vision, mission, approach and our goals than is the case today. This conversion from a so called ”decision control organisation” to a ”value-and objective-based organisation” leads to more stimulating work and an organisation that is more educational, customer-oriented and goal-based than it is today. The differences between a decision-driven and a value-and objective-based driven organisation are numerous and are specified in more detail in e.g. Fiskerud and Segerfeldt (2005).

PURPOSE AND OBJECTIVES OF THIS REPORT

The purpose of this paper is to describe a short background to the why, what, how and expected results behind Statistics Sweden´s decision to chose a management and total quality management system, what has been done up to this date, and especially its relationship to management and leadership.

The objectives are to show that our leaders' knowledge, skills, attitudes and motivation are crucial factors for success in order to execute our management and total quality management system, and to Statistics Sweden´s ability to consistently deliver high quality statistics (the right content, the right quality, just-in-time and without errors) aligned to our stakeholders' needs, demands and requirements.

In practice that ability depends on two important things:

- the techniques, methodologies and tools we use for every single part of our statistical production process
- the techniques, methodologies and tools we use to work with our leaders, employees, operational plan, partnership and our other processes

STATISTICS SWEDEN´S MANAGEMENT- AND TOTAL QUALITY MANAGEMENT SYSTEM

In short, Statistics Sweden´s management and total quality management system consists of three components:

1. EFQM as framework,
2. Working processes, methods and tools for continuous improvement, as e.g. Six Sigma, Lean and other tools.
3. Monitoring and evaluation as e.g. Brinks.

The EFQM framework describes Statistics Sweden's whole operation from different perspectives. Our working processes, methods and tools for continuous improvements serves as a toolbox for our work with continuous improvements in all areas of the framework. This improvement is mainly in the form of projects. Monitoring and evaluation are in the field of audit activities. All components fulfil their function and are interdependent.

This report and the accompanying presentations will only focus on the EFQM framework and its relationship to leadership, staff and the quality of our statistics.

EFQM

A short presentation of the EFQM framework is given here for the reader who is not familiar with the framework.

EFQM was created in the late 1980s by several directors of some prominent European organisations. It now includes over 700 organisations with over 20 000 employees in most countries and industries in Europe. EFQM is a foundation whose members consist of companies that are interested in quality and business development as well as various methods for improvement. EFQM has instituted an annual European label ("the EFQM Excellence Award"). The main activity is the development and management of the EFQM framework, through which companies and organisations ¬ can evaluate themselves.

The EFQM model is recommended by Eurostat to be used in the statistical offices. ”Excellence" is, according to the EFQM defined as successful approaches that lead to good results. The model is suited to all types of businesses, regardless of sector or size.

Five reasons why Statistics Sweden should use a quality framework as EFQM are:

1. Statistics Sweden´s leaders and staff should understand the culture and the values that often lead to success in any organisation;

2. Statistics Sweden´s management should understand which areas are in the "Excellence" category(world class);

3. Statistics Sweden´s management will receive support to develop a management system and to select an approach in operations;

4. Statistics Sweden needs to have support in the self-assessment – this is the basis for a systematic improvement;

5. It allows Statistics Sweden to apply for quality awards.

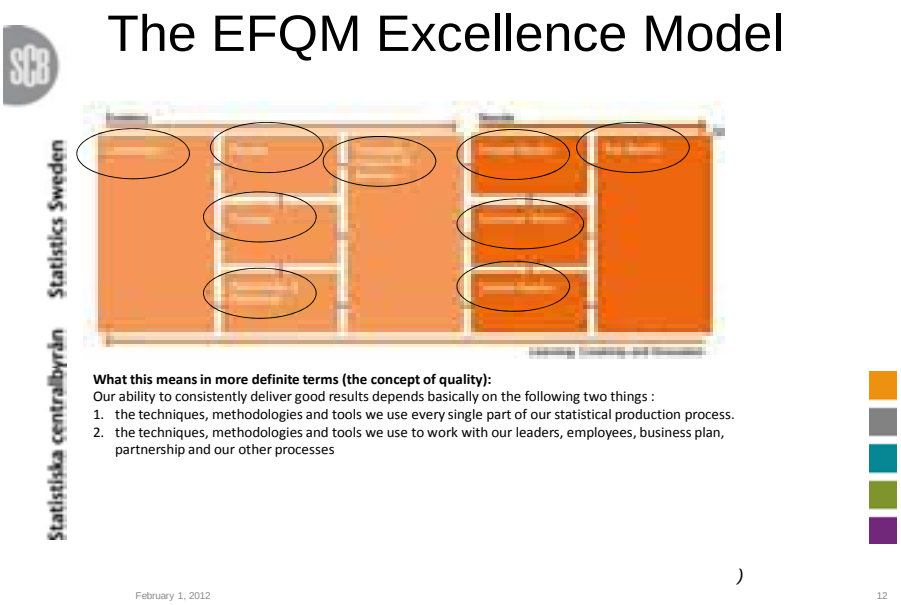
The EFQM model is based on eight core values: results orientation, customer focus, leadership and coherent action, management of processes and facts, people development and commitment, continuous learning, innovation and improvement, partnership development and social responsibility.

The EFQM model consists of nine criteria for which an organisation can assess its development towards world- class status. Each criterion includes a number of sub criteria. The organisation's work and achievements under each sub criterion, is assessed and scored by an evaluation. Each criterion has a weight corresponding to its importance in the overall picture. The maximum score for an evaluation is 1 000.

EFQM/SIQ has estimated Statistics Sweden´s current score at 250 points. This means that we have a considerable amount of improvement work ahead of us.

The nine main criteria are shown in the figure below.

FIGURE 1. THE EFQM EXCELLENCE MODEL



On the left side of the EFQM model are the "Enablers" (Leadership, People, Operational Planning/Strategy, Partnership and Processes). The value or results for the right side of the model, "Results" (People Results, Customer Results, Society Results and Key Results) depend on how well the "Enablers perform their tasks.

In short, EFQM states that Statistics Sweden´s ability to consistently deliver high quality products and services (statistics and related services with the right content, the right quality, just-in-time and without errors) aligned to our stakeholders' needs, demands and requirements depends on:

- the techniques, methodologies and tools we use for every single part of our core production process – statistical production process
- the techniques, methodologies and tools we use to work with our leaders, employees, operational plan, partnership and the organisation´s other processes

EFQM AND MANAGEMENT/LEADERSHIP

In theory (as e.g. EFQM model) and in practice the most crucial success factors towards a culture of continuous and never-ending improvement are management, leadership, staff and culture. Therefore this section will focus on the Leadership box in the EFQM framework.

Let us consider one of the criteria in more detail, namely leadership. The mission statement for this criterion is:

"Excellent leaders develop and facilitate the realization of the organisation´s vision, mission statement, targets, business idea and values. They develop the values and the systems needed for long-term success and implement these through appropriate measures and their own behaviour. During periods of change they look to maintain the long-term direction that has been laid down. If required, these leaders also have the ability to change the direction and inspire others to follow. "

To operationalise a criterion of this kind required specifications. The EFQM model leadership criterion is divided into five sub criteria:

a) How leaders develop a mission statement, vision, values, and ethics, and the role models of a culture that strives towards excellence.
b) How leaders are personally involved in ensuring that the organisation's management application is developed and continuously improved.
c) How leaders interact with customers, partners and community representatives.
d) How leaders create and reinforce a culture of business development among the organisation's employees.
e) How leaders identify areas of improvement and support improvement work.

In each of these sub criteria there should be a number of approaches, methods and tools. For the organisation to get a high score the approaches applied throughout the organisation are evaluated regularly.

Examples of areas in the sub criterion 1 a) (how leaders develop effective vision, targets, values, and ethics, and are role models of a culture that strives to world-class) where the approach may be needed are:

- develop the organisation's mission, vision and culture;
- develop and operate as role-models with respect to values, ethics and corporate culture that support our operation plan and TQM system;
- evaluate and improve their own personal way to exercise leadership, i.e. how to become a model;
- evaluate and improve the effectiveness of individual leadership behaviour;
- actively be involved in improvement activities;
- stimulate and encourage responsibility and authority, creativity and innovation among staff by changing the organisational structure, providing resources for learning and improvement activities;
- encourage, support and act on the ideas that emerge through learning, i.e. encourage skills development;
- stimulate and encourage collaboration within the organisation;
- prioritise improvement activities.

Section 8 in the extensive project report shows several well-proven practical working processes, methods and tools which managers, leaders and group leaders could use together with their employees to work specifically with these issues in everyday life. To a large extent, it is about the study of how leaders of successful organisations work on these issues.

Therefore Statistics Sweden has developed a leadership profile derived from EFQM in order to clarify our expectations of our managers.

STATISTICS SWEDEN´S LEADERSHIP PROFILE FOR MANAGERS

Statistics Sweden´s leadership profile for managers is derived from EFQM and other excellent leadership, management and TQM sources. Statistics Sweden´s leadership profile for managers is presented in appendix 1.

Our leadership profile for managers states that managers at all levels within the organisation use excellent, recognised and proven techniques, methodologies and practical working processes in management. That means our leaders need to use the best practical working processes in order to lead, manage, develop, monitor and continually improve our operations according to our leadership profile for managers, and our definitions of operational-oriented, customer- and user oriented, improvement-oriented, employee-oriented and results-oriented.

"The person who is not a master of him or herself can never be master of others"

MISSION STATEMENT STATISTICS SWEDEN'S LEADERSHIP PROFILE FOR MANAGERS

The long term mission for our leadership is presented below:

"Our managers are now working from Statistics Sweden´s operational plan and management system in excellent ways that are recognised, proven, and excellent management processes used at all levels of Statistics Sweden.

This means that our managers have moved from words to action when it comes to leading, managing, developing, monitoring and continually improving our operations according to Statistics Sweden´s operational plan and management system(transformed by Statistics Sweden´s leadership profile)

This means that our managers are now using recognised and proven techniques, methodologies and practical working processes to operate business-oriented, customer-and user-oriented, improvement-oriented, employee-oriented and results-oriented

Statistics Sweden now maximises the value to our users and customers by constantly providing statistics aligned with our users' needs, requirements and demands with the right quality, the right content at the right time and without errors"

The targets are not presented in this paper. What Statistics Sweden needs to achieve each year to achieve the mission statement above is specified in a few performance and process goals. These objectives should be taken up by top management each year in Statistics Sweden´s operational/strategy plan. A few stakeholder-based goals that are specific, measurable, achievable, relevant and time-based should be established each year for each part of Statistics Sweden's leadership profile for managers.

In other words, the practical working process for the future work follows the structure for excellent vision, mission statements, and goal setting. In short, the long term mission statement above is then broken down into a series of long term-, medium term goals and short term goals (not presented here). Moreover, all our leadership training, workshops etc. are now (August 2012) under total transformation so that each single part of Statistics Sweden´s training is directed towards this mission statement.

A great deal of work still remains to be done by managers at all levels in clarifying what our leadership profile for managers means in concrete terms. Our general strategy for how we are going to achieve this mission statement is presented below.

HOW WE WILL ACHIEVE OUR MISSION

The table below presents the overall strategy and the activities needed to achieve the mission statements and goals for Statistics Sweden´s managers and leaders. The arrow indicates the direction of the strategy "from what to how and why / results" indicate what and in what order and how this should be done gradually. All the knowledge, skills and abilities that our managers and leaders need to develop to achieve the target image in practice are highlighted in general terms in figure below. A detailed presentation of training etc. is available in an internal working document at the Personnel Department.

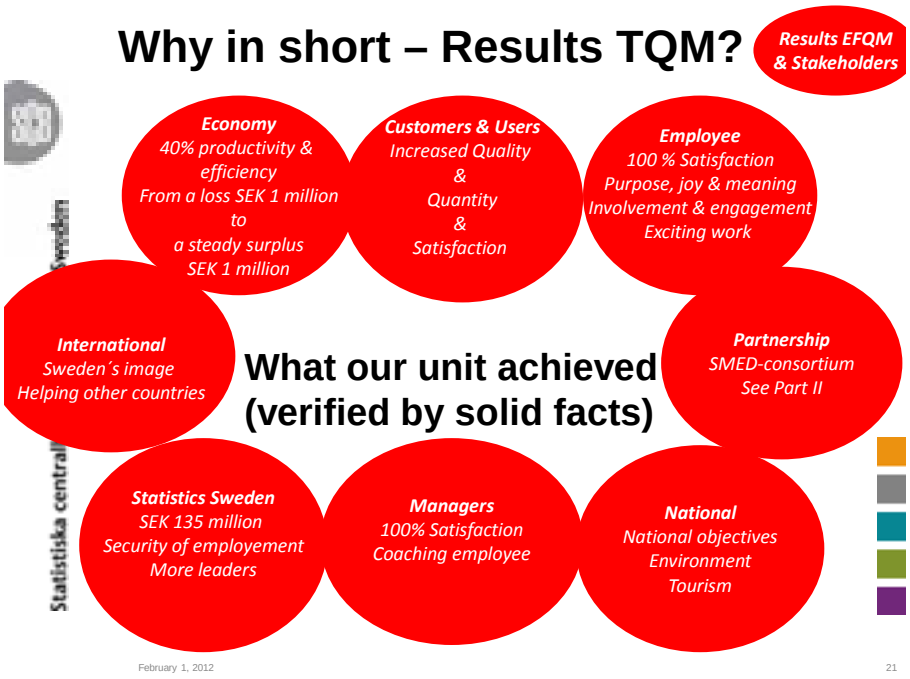
It is important to understand that one unit within Statistics Sweden has well-proven and well-functioning practical working processes, techniques, methodologies and tools. Managers and staff have used well proven practical working processes, methods and techniques that could be described in detail to e.g. EFQM-revisons, and also the results that have been achieved by these in definite terms for

different stakeholders such as customers, staff, economy and other stakeholders. This unit has already achieved the mission statement and can verify the results in definite economic terms for different stakeholders such as customers, users, staff, etc.

WHAT RESULTS CAN WE EXPECT?

The figure below summarises some sample of results that the Environment and Tourism Unit achieved during the period 2002 to 2011 by adopting working processes, methods and tools for most part of the EFQM framework, and boxes. A detailed presentation of achieved results with solid facts is available at Personnel Department.

FIGURE 2. RESULTS ACHIEVED



To transform the whole leadership according to Statistics Sweden's management and TQM system and operational plan is far from a "quick fix" and can be summarised by the sentence:

"Small doses of daily learning and improvement – over time – lead to a tsunami of excellent results"

Similar effects are anticipated for the rest of Statistics Sweden in the future when the leadership has been transformed according to the EFQM´s leadership box and related "enabler" boxes.

HOW WE ARE GOING TO ACHIEVE THIS

Our strategy in general terms for going from what to how to achieve all this in practice is presented below. The presentation is brief and aims only to give the reader a general overview of our strategy. A detailed plan exists at the Personnel Department. This paper only attempts to present it in very general terms and only the first single and important step is presented briefly in sections Mission Statement Statistics Sweden's Leadership Profile for Managers and How We Will Achieve our Mission.

In April 2012 our Director General gave his 100 percent commitment to prioritise this work for the next several years. Most of our department managers also give their full support. This is an important and crucial success factor to move from words to action.

FIGURE 3.STRATEGY

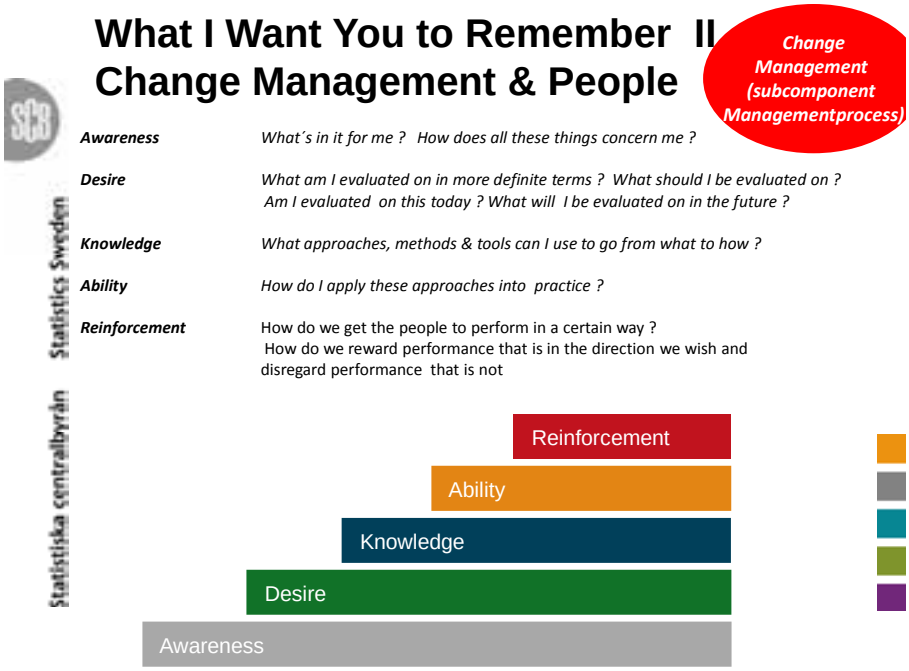
Statistics Sweden´s strategy and the activities needed to achieve the above mission statement for our leaders is illustrated schematically in the table above.

First, we need to increase awareness among management at all levels with respect to Statistics Sweden´s leadership profile for managers and what it means in definite terms. In the first stage, the aim is that all managers at the department level intensify their work together with their unit managers to define the meaning of business-oriented, customer-and user-oriented. To facilitate this approach, competence, templates, practical examples etc., are given by the Personnel Department. Moreover our leadership training has been totally transformed in order to give other kinds of support for knowledge, skills and abilities, see 4.2 below.

FIRST STEPS

The first important step concerns change management according to the ADKAR model. This means that we need to raise the awareness *(A*) of Statistics Sweden´s leadership profile for managers among top management, department managers and unit managers. The next step is to raise the desire *(D)* among managers (external and internal motivation) by presenting the mission statement for our leaders in general and specific terms, the general and detailed strategy for how we are going to work with it, our Director General's commitment, etc. The third step is to present required knowledge, skills and abilities that are related to the mission statement for our leaders *(K A),* and that our organisation will be evaluated on in the future (*R).*

FIGURE 4. FIRST STEPS



During 2012 our Director General transformed the top-management team. This transformation was completed at the beginning of 2013. The new managers for the different departments are now responsible for achieveing the mission statement for our managers by executing the strategy.

KNOWLEDGE, SKILLS, ABILITIES, ATTITUDES AND MOTIVATION

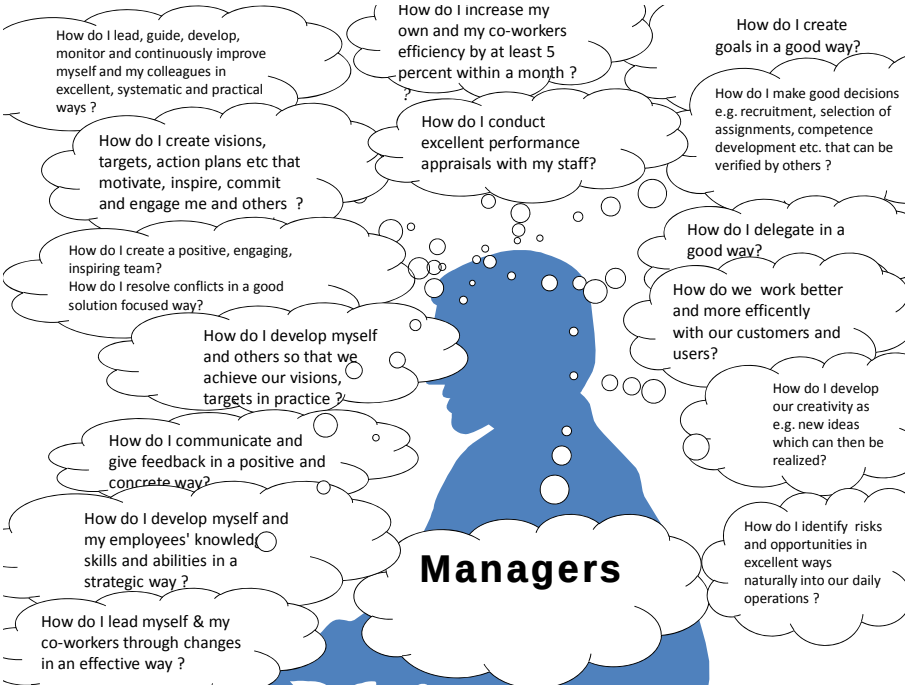
The mission statement for Statistics Sweden´s managers and leaders is thus the basis for the knowledge, skills, abilities, attitudes and motivation that our managers / leaders need to develop. To go from words to accomplished deeds concerning our training, workshops, etc., we need a transformation that is directed towards this mission statement.

The competence that Statistics Sweden´s managers need to do this well in practice consists of many different parts, such as:

- good management processes based on a business plan and management, management by objectives;
- framework for strategic development, quality management, change management;
- "business development", risk management, risk analysis;
- personal- and group development teamwork, solution focused approach, skills analysis,
- service / product development, decision tools / decision management;
- project management;
- Six Sigma, Lean;
- tools for creativity, performance, communication;
- personal effectiveness;
- learn how to learn.

Examples of what kinds of knowledge, skills and abilities that are important are summarised in the figure below:

FIGURE 5. KNOWLEDGE, SKILLS AND ABILITIES



A detailed description of the above set of skills is available in an internal working paper at the Personnel Department.

During 2013, Statistics Sweden launches four different extensive management-and leadership programmes. All educations, training, management coaching and other support in the different programmes mentioned below are tailor-made to support our managers and leaders to go from actions to words when it comes to our management- and total quality management system and related leadership profile for managers.

- Management and leadership programme for aspiring managers. This programme is 20 days in total. Besides a new content, the demands and requirements have been raised significantly before, during and after the different eduations with a focus on "learning by doing" - active learning techniques from cognivtive psychology;
- Management and leadership programme for new managers. This programme is 20 days in total and is tailor-made for new managers at Statistics Sweden. Besides a new content the demands and requirements have been raised significantly before, during and after the different eduations - active learning techniques from cognivtive psychology;
- Management and leadership programmes for experienced managers. These programmes are offered continuously from March 2013 on demand. They contain many educations and trainings from the above programmes complemented with advanced and postgraduate levels. They also include professional executive business and leadership coaching and other support;
- Management and leadership programme for department managers with a focus on coaching leadership. This programme is for 10 days in total.

Advanced e-learning techniques will also be used in the different training programmes above in order to support the transition from knowledge to skills and later abilities. During the writing of this updated version an extensive e-learning material is under development for the different management and

leadership programmes. In order to work efficiently with these techniques, our organization needs to invest in a learning management system.

CONCLUSIONS AND RECOMMENDATIONS

The purpose of this paper was to describe a short background to the why, what, how, etc. behind Statistics Sweden´s decision to chose a management and total quality management system, and what has been done up to now.

The objectives were to show that our leaders' knowledge, skills, abilities, attitudes and motivation are crucial factors for success to carry out our management and total quality management system. These factors are also crucial for Statistics Sweden´s ability to consistently deliver high quality statistics (the right content, the right quality, just-in-time and without errors) aligned to our stakeholders' needs, demands and requirements.

Our conclusions are the same as those made by other organisations and companies decades ago. The most crucial success factors are good leadership, staff and culture, and these factors should not be underestimated. To begin with, it is crucial for an organisation to work systematically with practical tools in change management so that both leaders and staff know exactly why a change is needed, what should be done, how it should be done and how all this concerns them. Thereafter it is crucial to offer a goal-oriented support for the managers at all levels when it comes to required competence, i.e. excellent educations, training and other support with respect to both management and leadership skills.

Up to now we have not taken enough time to communicate what the change really means with respect to these issues. It starts now, it will take time and willingness from our leaders to work persistently towards the goal. Then we will succeed in going from words to action when it comes to "a culture of continuous and never-ending improvements".

Since the first writing of this paper, the Personal Department at Statistics Sweden has undertaken a lot of action that will increase the probability of success in going from words to action when it comes to "a culture of continuous and never-ending improvement" that are aligned with Statistics Sweden´s management- and total quality management system and leadership profile for managers.

Statistics Sweden will follow-up all programmes and continiously evaluate and improve them. During the writing of this report cost-benefit calculations based on statistical multivariate methods are under development in order to measure the benefits in relation to the costs of carrying out these programmes. The intention is to measure the "right" benefits (often intangibles) of the programmes. For example, not measuring the easy measurable ones such as the number of educations or programmes during a year, but to measure the effects on these programmes in quantitative terms. That is highly related to interesting methodological and measurement issues that should be well suited for a statistical agency.

13. FROM COMPETENCES TO AWARENESS: MANAGEMENT DEVELOPMENT

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INTRODUCTION

The Public Administration Reform in Italy aims to increase productivity, ability and quality in a period of reductions in resources and involves a change in management policies. In the reform process, management has been asked to lead decision processes, promote innovations and make changes to the management in order to meet the current and future challenges.

The managers, hence, become the drivers of change and are evaluated not only on productivity gains and cost reductions reached but also on the way they react to obstacles that endanger the objectives of the organization. The success of an administration does not only depend on the strategic directions or the availability of appropriate resources, but also on the capacity of managers to anticipate possible critical issues of the production process.

In the Italian National Institute of Statistics (Istat), the events organized over the past three years for the development of organizational behavior have involved many and different structures of the organization, in particular those dedicated to professional training and management innovation. The aim of this paper is to describe the main initiatives which have contributed to the growth of the managerial culture, i.e. training programme addressed to Istat management, self-assessment through the "360° feedback" method, and risk management system implementation.

WHICH TRAINING FOR MANAGERS?[1]

Managers have to be the drivers of change in a context characterized by lack of resources, uncertainty, new policies, new rules and innovation of available technologies. How can managers drive changes, which competences do they need and what kind of training is needed?

Managers are required to have sound professional know-how: knowledge of their "core business"; knowledge of the steps of the production process; knowledge of what happens outside their own organization. Having sound professional know-how is a pre-requisite to being recognized as a leader.

However, this is not enough: moving from the traditional bureaucratic organization to what is called post-bureaucracy, managers have to be able to transform that professional know-how into the development of new products and services, using their skills in changing processes and rules, pursuing innovation, motivating their employees and enhancing the learning process throughout the organization.

On the managers' side, the challenge is to integrate the growing of their professional know-how with the development of their managerial competences. On the training side, the challenge is to balance training programmes addressed to professional updating with personal development paths aiming at the development of the skills managers. This is why training has to be viewed as a global approach, focusing on mutual interrelations between the human and the technical environment, aiming at developing both individual and organizational capabilities.

In order to support both integration and development of people and the change of the organization, working processes, products and services and continuous training are needed. Within this framework of

[1]Authors: Antonio Ottaiano and Federica Navarra.

"continuity", the training for managers becomes more and more modular: training sessions, alternated along a period of time with different activities (project work, coaching sessions, etc.). It is not only a matter of costs; it is also a matter of (lack of) time: managers cannot stay too much time away from work. A "work centered" continuous training is the only way training fits the requirements and needs of knowledge workers.

Such an approach affects the didactic methods to choose. Methods have to be closely connected to the working context, while at the same time involving participants and making them the main actors of the training and enhancing exchange of experiences and cooperative learning. Project works and laboratories; case studies; storytelling; action learning and coaching are the didactic tools which turn out to be the most effective ones in "work centered" learning. External training appears too expensive, and – above all – too far from the actual work, while e-learning packages creates room for advanced technology based environments such as communities and social networks.

Work centered learning seems to be the most effective way to meet managers expectations: they don't want to waste time nor spend time listening to theoretical frameworks they can find elsewhere: they want to talk to each other about their work, share experiences, learn from best practices and avoid repeating mistakes.

Managers have to feel their training is useful. This is why they have to be involved from the design phase of the training, by actively collaborating with the training staff to draw learning solutions suitable to their requirements and needs. More and more often they are also involved (and required by their peers) as trainers and coaches; more than experts from outside. Managers seem to be trustworthy in spreading knowledge and conveying patterns, values and behavior consistent with the organizational culture. From this point of view, it is also crucial with a strong, explicit and visible commitment from top management towards the training activities. The message to be given is that top management wants managers in the organization to develop their competences and trusts that the training activities to be carried out as well as the money invested in these activities will be beneficial.

In conclusion, training addressed to management requires the following elements:

- interrelations between the human and the technical environment
- continuity
- modularity
- involvement of managers in planning and in training
- top management commitment

THE COMPETENCE DEVELOPMENT OF ISTAT'S MANAGEMENT

In order to enhance the development of Istat's management, since 2010 activities were carried out to increase competences supporting on-going innovation processes and organizational changes.

Such actions followed two axes:

- training addressed to Istat's management;
- self-assessment through the "360° feedback analysis".

TRAINING ACTIVITIES FOR ISTAT'S MANAGEMENT

The training path was planned and developed aiming at:

- supporting management in connecting Istat's strategic objectives with their own operational objectives, also with regard to the on-going performance assessment process;
- providing management with tools in order to effectively share with their employees objectives, values and commitment;

- raising managers' awareness of organizational wellness issues in order to improve the working atmosphere within their units;
- increasing the attention towards safety-at-work issues and towards management's duties in taking care of their employees' health.

In 2010, the training programme was designed to strengthen the training for managers (a strategic objective of Istat) and was planned with the purpose of support management in the innovation of institutional and organizational structures. The aim was to update Istat's management on issues related to evolution of ICT in the field of organization of knowledge (web 2.0, social networking and process re-engineering within Public Administration) and to draw attention to mobbing and sexual harassment issues. Moreover, courses were delivered on risk management and on uneasiness at work. Training was delivered step-by-step: in a first step, topics were dealt with in short modules; in a second step, topics were deepened in longer modules according to specific requests made by participants.

In 2011, the general objective of training was to strengthen management's competences in planning and programming their activities, with the aim of providing participants with tools to manage their own work and improve the communication of their objectives to the employees, also with respect to the new performance assessment system.

In order to achieve this goal, the learning path was based on the development of competences connected to:

- definition and sharing of the objectives of the organization;
- planning of activities;
- effective communication of objectives to the employees;
- assessment of organizational behaviors.

The training was based on the principle of the "learning path", carried out through project work activities and support through a blog dedicated to managerial training.

The project was developed along two phases, the first being a pilot addressed to a small group of managers (10). The didactic program was focused on the following issues:

- definition of objectives and performance indicators;
- assessment of employees' organizational behaviors.

The issues were tackled in 6 half-days, during which managers reflected on their planning activity. Supported by the trainer (a consultant from a company), managers analyzed their planning tools and focused on their weaknesses and strengths. In particular, the discussion about the assessment process was so rich and relevant that the conclusions were taken to the attention of the Conference of managers held after the course. A report on the main critical issues raised during the course was then presented to the top management of the organization; a grid to support the assessment process was produced as well and made available to all interested.

After the pilot phase, three other versions of the course – based on a 2-day programme – were carried out at the beginning of 2012, involving another 60 managers of Istat.

For 2012 and 2013, the training activities for the management have been planned along two axes:

- the role of the manager at Istat after the re-organization which took place from the last months of 2011 to the early months of 2012;
- the development of the competences related to the areas of improvement highlighted by the 360° feedback analysis on organizational behavior (see below).

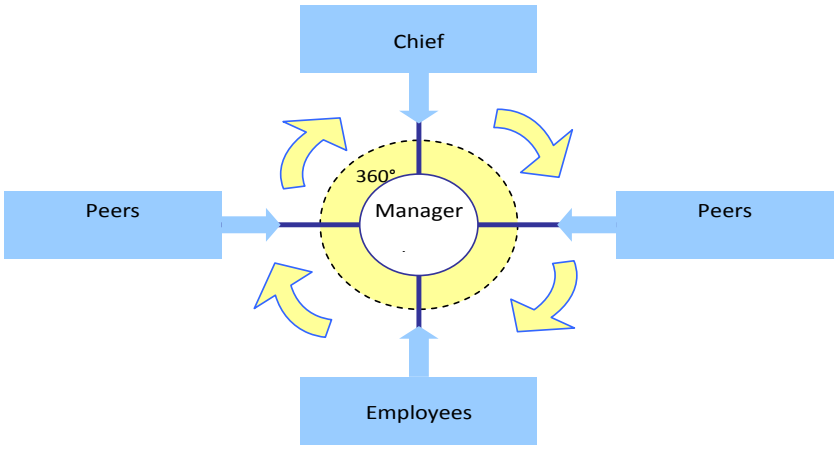
The programme includes topics going from the role of a manager in the Civil Administration to human resources management, from leadership to the organizational wellness, from process re-engineering to the code of digital administration.

These topics will be dealt with in a variety of learning settings: brief seminars (3 hours), base and advanced course (10- 20 hours), on the job training (20 hours) activated on demand from participants.

THE 360° FEEDBACK ANALYSIS

Together with the training activities mentioned above, sessions of self-assessment on organizational behavior were held in 2010 and 2011, involving 64 people (top and middle management). The project, which stemmed from a strategic objective of the Institute, aimed at supporting managers in reflecting on their own individual effectiveness by use of the "360° feedback" assessment, which compares feedback from the managers chief, peers, and employees with a self-assessment of the manager. This provides the manager with a picture of his/her features, strengths and weaknesses, and of the actions required to improve his/her way of acting within the organization.

FIGURE 1. THE 360° FEEDBACK ANALYSIS



The 360° feedback analysis was carried out in two steps, the first being a pilot phase involving 13 volunteer managers.

The entire process was based on the filling of a questionnaire of 42 questions about the competences assumed relevant for managers: for example, strategic vision, attitude to changes, attitude to quality, innovation and decision making. The competences were taken from the competence system of the organization. The feedback provider had to answer how often (seldom, sometimes, often, always) the manager acted in a given way. The questionnaire was filled in on-line and anonymously.

The choice of the feedback providers was a crucial step of the process: all managers had to choose their feedback providers among people with which they had had work relations in the past. This was not always easy, in particular the minimum number of 15 employees was difficult to meet. A minimum of 7 peers was proposed.

Communication was decisive for the success of the process: informative sessions on the project were organized involving managers, their peers and their employees, which was also an opportunity to explain the actual aim of the 360° feedback (not an "evaluation", but a tool to improve one's managerial competences) and the way the process worked (the answers given anonymously, and in aggregated

form). Initially, many were skeptical but changed their attitude after these meetings. At the end, 1,537 feedbacks out of 1,726 (89%) were received.

At the end of the process, each participant received a gap analysis report, in order to compare his/her self-assessment with the assessments of the feedback providers. The report was deepened at an individual stage with an external consultant, in order to focus on the improvement areas.

The Institute received a final report, in which the feedbacks were described in an aggregated way, giving a picture of the management in the areas of competences development and improvement.

The results of the project were remarkable from two points of view:

- from the perspective of individuals, since managers had the opportunity to become aware of their weaknesses and strengths, through a comparison of their self-perception with the perception of other people in the organization. In addition, managers appreciated the opportunity to discuss with a "third part" (the external consultant) their personal effectiveness;
- for the organization, the final result was to have a map of areas of improvement of its management and of the training needs on which to work to organize competences development paths. The first part of the development plan was to improve the organizational culture of risk management.

FROM PROBLEM SOLVING TO THE ORGANIZATIONAL RISK MANAGEMENT[2]

Managers should have the skills, expertise and professional knowledge to manage and should demonstrate the ability to address and resolve organizational or technical critical situations as well as the ability to decide what action to take to achieve a desired objective under given conditions and resources. In this sense, problem solving can be interpreted as the set of processes for analyzing, addressing and resolving critical situations.

Instinctively, the approach to problem solving tends to develop in a pattern that starts from the intuitive perception of a problem, to get a more precise definition, until the analysis and division into sub-problems, the formulation and testing of hypotheses for solutions, and concluding with an assessment of the possible choices and the application of the best solution..

This is especially true in the case of stable market and environmental conditions. However, experience shows that the causes of a problem are hardly repeated in an identical and repetitive sequence, much less in the current climate, full of political, economic and social turmoil, which require public and private organizations to adapt quickly.

To search for better solutions in critical situations, the development of problem solving ability can mean the difference between a winning and loosing organization: it becomes an added value that the company can draw upon in deciding under uncertainty.

[2] Authoress: Cecilia Colasanti.

HOW RISK MANAGEMENT CAN ENHANCE THE ORGANIZATION

The general climate of uncertainty which pervades the scenario in which the Local and Central Public Administration work forces the institutions to maintain a dynamic organization, high quality of services and outstanding productivity, even under scarcity of resources.

In this context it is crucial that: (i) the top management be aware of the incidence of critical or harmful events on the production processes; (ii) there is a clear policy concerning the treatment and acceptance of risks; (iii) transparency is encouraged, with respect to both the most significant business risks and the responsibility for the risk management function.

The awareness of the need for formal frameworks for risk management is boosted by several factors, including:

- The ease of access to data and applications and the expansion of relations with stakeholders (customers and suppliers), combined with the speed of economic change, make the risks intersected of each other in a complex and difficult way to manage;
- The exponential increase of regulations: on the one hand, the PA must meet a series of obligations, often complex, contained in legal regulations. On the other hand, the responsibility of business leaders has become direct and personal;
- The increasing "globalization", which requires government organizations to take account of international regulations or guidelines (consider, for example, Istat and Eurostat), which implies the need to manage risks beyond the boundaries of the country;
- The increased visibility to the citizens who increasingly exposes PA to reputational damage because of the ease of disseminating news and the multiplicity of information sources.

The Internal Control - Integrated Framework, prepared by the Committee of Sponsoring Organizations of the Treadway Commission (Co.SO.), published in 1992 and updated in 2004, represents the most widespread international standard for enterprise risk management (ERM).

This framework, applied in some public institutions in Italy, defines the risk management business as "a process put in place by the board of directors, by management and others in the corporate structure used for the formulation of strategies throughout the organization, designed to identify potential events that may affect the company, to manage the risk into the limits of acceptable risk and to provide reasonable assurance regarding the achievement of corporate objectives."

A summary of the contents of the ERM system is shown in the figure below along the 3 dimensions of the cube:

1. The interactions among the strategic, operational, reporting (i.e. reliability of the information and how they are represented) objectives and compliance with legislative and regulatory provisions;
2. The system has 8 components:

   i. The internal environment, i.e. style of the organization, risk perception by staff, philosophy of risk management, integrity and ethical values;

   ii. The objective setting, that comes from a process of choice by top management, in line with the mission and philosophy of business risk;

   iii. The critical event identification, i.e. the internal and external events that threaten the achievement of objectives;

Co.SO. ERM IC-IF, 1992/2004

   iv. The risk assessment, according to the probability of occurrence and the impact, distinguishing between inherent risk (structural and inevitable) and residual risk (what is left after actions taken and mitigation);

   v. The treatment of risk within the limits tolerated by the organization, depending on how the management decides to respond to risk (avoiding, accepting, reducing or transferring);

   vi. The procedures for verifying the effective implementation of risk response actions;

   vii. The dissemination and communication of information that can help staff in taking responsibility;

   viii. Monitoring of ERM changes implementation.

3. The different levels of the organization and actions, controls and components of the framework which must be known to all personnel.

THINKING ABOUT RISK PERCEPTION

Conventionally, in most theoretical models of risk management, all types of organizational issues are associated with risk, although the nature and potential impact of different risk factors may be very different. Critical events may be distinguished in (i) "risk events" whose occurrence is met by preventive actions, and (ii) "events critical to the organization", which depends on a situation of inefficiency that should be solved through improvements of administrative processes.

In this perspective, the ERM aims to support policy making, both from the methodological and operational point of view, in order to steer the organization in high quality performance and define priority actions for the risk response to be included into strategic and annual planning. According to the ERM adopted by some Italian government bodies, including Istat, the first stage of the process provides the analysis of the control environment in which the model is to be implemented.

The internal environment is the foundation of all other components of the ERM because it affects the rules and structure, it exerts a profound influence on how the strategies and goals are established, the activities are set and risks are identified, evaluated and managed.

The environment is influenced by the history and culture that pervades it and by many contextual elements, including: ethical values, expertise and dynamism of staff, delegation of responsibilities and risk management philosophy. The latter, understood as a set of values and behaviors that characterize the company's attitude towards risk, address the control activities, information systems and communication and monitoring activities, from the formulation and implementation of strategies to the current operating activities, up to the way in which organizational risks are identified and managed.

With a developed philosophy of risk management, understood and shared by all staff, the company is in a better position to assume and manage risk effectively; otherwise it could lead only to heterogeneous and incoherent application of ERM. Actually, even when the attitude to risk is advanced, there may be cultural differences between departments of the organization that could give rise to uneven application of the ERM (for example, the managers of some facilities may be inclined to take more risks, while others may be overly conservative). If all departments were operating according to a common philosophy of risk management, it would prevent inappropriate and harmful behavior for the company.

The ERM influences the actions of individuals and brings them to a collective vision. To deal with and effectively manage risks, the willingness of top management to define the maximum level of acceptance of risk, compatible with the pursuit of the institutional mission, must be combined with the ability of individual managers to evaluate the uncertainty as a threat or opportunity.

This ability depends on the willingness of the executive staff to take risks (risk appetite) within the limits of the tolerance threshold that an organization decides to accept (risk tolerance) to safeguard its strategic objectives, enabling the necessary checks on critical processes to maintain the level of risk exposure within the accepted range.

The magnitude of risk appetite depends on external factors (stakeholders involved, type of business, competitive landscape, etc.) and internal factors (company policies, risks specific to the kind of activity, etc.). The measurement of these factors can vary from simple qualitative models, based on the assessment of subjective elements (reputational factors, environmental compliance, perceptions of risk, etc.), to the development of complex quantitative systems based on the economic exploitation of both the costs of taking risks and the countermeasures to be adopted.

As an illustration, the survey of risk perception by managers conducted in Istat is explained in the second part of this paper.

ASSESSMENT OF THE RISK PERCEPTION IN ISTAT

As part of the strategic objectives of Istat, the Institute has implemented a project for the introduction of a Risk Management System, aimed at identifying, cataloging and assessing of risks to the organization. The experimental phase of this project was completed in 2012 and in 2013 the Risk Management will form an integral part of the strategic and operating planning of the Institute. In line with the adopted ERM model the first stage of introduction of the risk management system has focused on the analysis of the organization and its control system in which it is to be implemented.

The analysis of the environmental context represents the development phase to determine the attitude and ability to manage critical events by management (Risk Profile), and the level of risk considered to be compatible with the nature and objectives of the institution, as defined by the apex bodies (Risk Appetite); any deviation resulting from the comparison between the two levels of risk defines the "Risk

Tolerance", i.e. the margin within which the level of accepted risks does not compromise the strategic directions.

In this connection, Istat has decided to launch a survey for the top management on the perception of the dynamics and severity of risk factors that may affect activities.

Among the possible methodological solutions evaluated for the topographic analysis of risk perception in Istat, a questionnaire was selected, derived from the recognized internationally standard (ISO 31000:2009, AS / NZS 4360:1999, A & O) and modeled on the definitions shared in the EU framework (PD ISO / IEC Guide 73:2002 and standards FERMA - Federation of European Risk Management Associations).

The Survey has been implemented with the primary objective to inquire about:

1. the level of attention given to risk management in preparing and monitoring the main activities of the Directorates and the Institute;
2. the consistency between the current programming and control environment and the risk management system that will be implemented;
3. identifying the main factors that may cause risk of injury on work structures, divided into:
    a. outside the analyzed structure and the Institute;
    b. inside the analyzed structure: compliance, organization, technology and security systems, ethics of behavior;
    c. cross-sectional among the different Directorates of Istat.

The respondents have been identified in higher organizational positions (Directors and Heads of staff office), which were given the task and responsibility of compiling the questionnaire distributed through a web application. The questionnaire includes a variety of response possibilities to allow respondents to indicate their assessments and perceptions.

The questionnaire focused on the qualitative aspects of risk assessment, showing the importance that managers attach to risk in the exercise of their functions and in the interaction with the rest of the Institute. The individual perception, however, is itself a particularly difficult phenomenon, because it depends on environmental trends that affect the individuals field of competence. Given the variability and subjectivity of risk perception, the results of the analyses of the responses showed a tendency in the behavior and do not establish a psychological profile or aptitude of the manager.

The survey on risk perception has been initiated in order to develop an overall profile of the Institute which can be compared with the degree of acceptance of risk considered compatible with the corporate strategy. The top management, including the General Director and Heads of Department, has defined the level of acceptable risks. The questions included in the questionnaire have been formulated so that answers can adequately express the propensity of taking and managing risks by the interviewed managers, representing all sectors of activities of the Institute.

The information obtained was processed to highlight the incidence of risk factors on planning and organizing the activities of each single unit and of the Institute's goals.

For this purpose, four dimensions, which are most representative of the attitude of managers with respect to critical events, were selected:

1. the perception of risk referring to the manager activities, or the consideration of risk as a critical success factor for achieving the objectives of the unit;
2. the perception of risk for the Institute, namely the consideration of risk as a critical success factor for achieving the organization's strategic objectives;

3. the development of the control environment of the coordinated units, i.e. the ability of the units to implement and support a risk assessment system;
4. the development of the control environment of the Institute, which reflects the organization's ability to implement and support a risk assessment system.

Each of these dimensions corresponds to an aggregate set of answers, not necessarily placed in sequence, aimed at highlighting the character and the criteria used by the Manager in converting their perception of risk in organizational behavior.

The detail of these dimensions is illustrated in the second part of the document which describes the experience gained in Istat.

RISK MANAGEMENT IN PROSPECT

Only recently, within Istat and the Italian Public Administration, risk management and the effects that it can produce has become a topic of great interest. This trend is also dictated by the need to improve the efficiency of the organization, reduce public spending and enhance available assets.

The systematic and structured management of organizational risk fosters the spread of a culture of public administration that evolves through learning from its mistakes and protecting its intellectual and tangible capital whose value must be associated with the sense of responsibility and belonging of its personnel.

Two years ago, Istat set up a structured process of risk management, putting the Technical Committee (Risk Committee) in charge of the project .The Committee consisted of managers and scientists, until the establishment of a Risk Management System, derived from Co.SO. ERM, which must be integrated with planning tools and operational/strategic control tools.

The first "dividend" earned from the investment in this project was the growth of organizational culture at all levels, which was reached also thanks to seminars, training courses and workshops, as well as the introduction of the risk management web site http://risk.istat.it. Gradually people became aware that critical organizational events which may occur must be treated considering managers' perception of the risk during the "event identification" phase.

In this context, the importance of risk management is hard to overestimate. The managers should be given both the responsibility to identify risks as part of their own competence and the task to formulate appropriate response actions through the human resources management.

However, in order to complete a "qualitative cultural leap", one will need a major turnaround that overturns the position of the current players (owners of the Risk Management function) with that of the passive players (the structures required to apply the system).

This means a deep review of approach to organizational problems (problem solving) for which an uncertain event shall not necessarily be considered a threat, but also a possible opportunity.

CASE STUDY: THE SURVEY ON THE RISK PERCEPTION IN ISTAT[1]
THE QUESTIONNAIRE

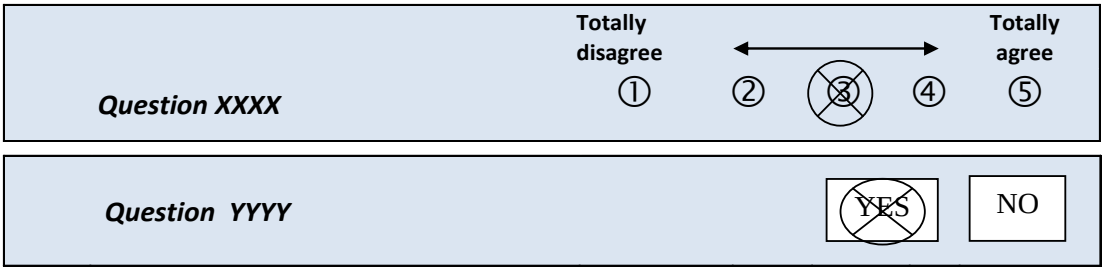
The questionnaire consists of more than 60 questions and is divided into the following sections:

a. **Internal control environment** and **organizational culture** examining the organizational context and analyzing the sensitivity to the internal control of employees;
b. **Objectives of the organization** and risk management system. The organization must identify, analyze and communicate its own risks to face and overcome potential obstacles to achieving its objectives;
c. **Identification and classification of risk factors**, i.e. facts or events affecting the development of strategies or the achievement of objectives. They can have a positive impact (opportunities) or negative (threats), or both; their nomenclature (open) represents the link between identification and classification of risk, allowing the definition of a system in which all components are integrated with each other;
d. "**Cataloguing"** risks, based on the previous classification, so that it is possible to build a catalog of critical events to evaluate, according to the method of the Control & Risk Self Assessment (C & RSA), in terms of severity and probability of its occurrence.

Thirty completed questionnaires were submitted for analysis. About 10 per cent of personnel has been involved in the analysis of production processes.

There were four different types of questions in the survey.

1. ***Questions about*** one's personal assessment of the complex reality or individual:



2. ***Multiple choice questions***

[1] Author: Fabrizio Rotundi.

3. Questions that express the priority that one wants to assign to the statement by a number:

Question JJJ:	**Indicates the answers in order of priority**		
• Answer XXX	①	②	③
• Answer YYY	①	②	③

or by the distribution of a number of points conventionally defined between the included statements or statements suggested by respondent:

Question KKK:	***Distribute 100 p.p.***	***Impact on risk***
• Answer XXX	30	
• Answer YYY	70	X

4. Open-ended questions.

The questionnaire explores the four dimensions of managers' organizational behavior when critical events occur. There are four themes in the survey:

1. the perception of risk compared to the activities of the manager;
2. the perception of risk compared to the Institute;
3. the maturity of the control environment headed by the respondent;
4. the maturity of the control environment of the Institute.

"Perception of risk in relation to its activities" (Size A) is measured by the content of those responses that determine whether and how much the risk affects the planning and management. The aspects that explore this theme are:

a. consideration of risk as an opportunity or threat for its own activities;
b. importance attributed to the systematic management of risks to achieving the objectives of its structure;
c. ability to use risk management to improve the performance of the managed structure;
d. weight assigned to possession of technical skills required for effective risk management in carrying out its activities.

"Perception of risk compared to the Institute as a whole" (Size B) is related to the correlation between the existence of risk and the achievement of strategic objectives of an Institute. Hallmarks of this theme are:

a. consistency between the strategic centralized system of planning and control and the need for programming and monitoring of the structure headed by a respondent;
b. ability of the current system to support a risk management system;
c. level of risk perceived by the organization.

"Maturity of the control environment headed by the respondent" (Size C) measures the ability to apply the risk management system adopted by the Institute. This theme takes into account:

a. planning measures to contain organizational risks taking into account the link between operational objectives and risk management goals ;
b. sharing objectives between managers and staff assigned to the structure;
c. level of standardization of processes within the structure;
d. the ability of a single structure to organize work encouraging achievement of objectives and to take controlled risks;
e. systematic identification of factors that may affect the achievement of objectives.

"***Maturity of the control environment of the Institute"*** (Size D) measures the ability of the Institute to implement and support a system of risk assessment. The following elements were considered:

a. existence of an effective interaction between the Institute's governing bodies and the analyzed single structure, when planning the operational activities that help reach strategic objectives ;
b. influence of strategic objectives, organizational environment and risk management outputs when planning risk treatments;
c. inclusion of experts in the initiatives related to risk management.

RESULTS IN PICTURES
THE RISK AND CONTROL ENVIRONMENT PERCEPTION

To facilitate understanding and interpretation of data, the dimensions described in the previous paragraph have been represented using a "Radar" graph model in which the value placed on each vertex is the average of the values declared by the manager in the set of questions that express the meaning of the relative dimension. Depending on the risk profile to be analyzed, the results of the survey can be differently interpreted.

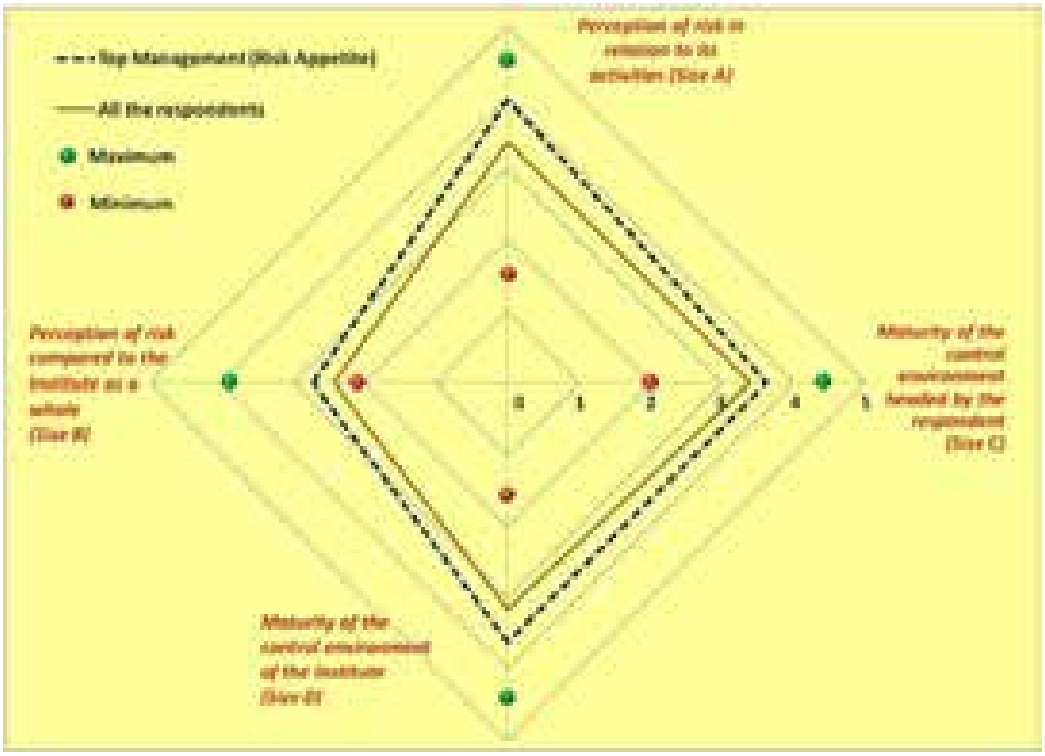
Three situations were examined:

I. The risk perception by management - highlighting the outliers;
II. The risk perception by management - by level of responsibility;
III. The risk perception by management - by area of activity (technical and administrative).

THE RISK PERCEPTION BY MANAGEMENT, HIGHLIGHTING THE OUTLIERS

Figure 2 compares the average rating given by all the executives involved in the survey (brown line) with the profile of the top management (dashed blue line), including General Director and Chief of Department, who, in the current theoretical framework, is the level of acceptance of risk consistent with corporate strategies (risk appetite). Furthermore, we show the outliers - i.e. the maximum values (green bubbles) and minimum (red bubbles) - recorded for each dimension.

FIGURE 2. REPRESENTATION OF THE AVERAGE OF MANAGEMENT PROFILE



The graph shows that the risk perception is perceived as an important component for its own activities planning (Size A) both by the top management and the total number of respondents. However, there is a more favorable approach by apical managers (value of 4 to a maximum of 5) compared to all respondents (value of approximately 3.5).

Also, both parties show a moderate mistrust in considering the risks an essential planning element to achieve the strategic objectives of the Institute (Size B). It should be noted, however, that top managers were more inclined to consider the risk as an important factor for the Institute's activities, although the gap between the two values is not so large as in the case of A. In addition, for this dimension, even the maximum value recorded (bubble green equal to 3.8 points) is by far divergent from the average.

We note a positive general opinion on the maturity level of the control environment, both the single structure of belonging and for the Institute (Dimensions C and D: values slightly higher 3 out of a possible 5), which allows a positive development of the risk management system based on the current organizational configuration.

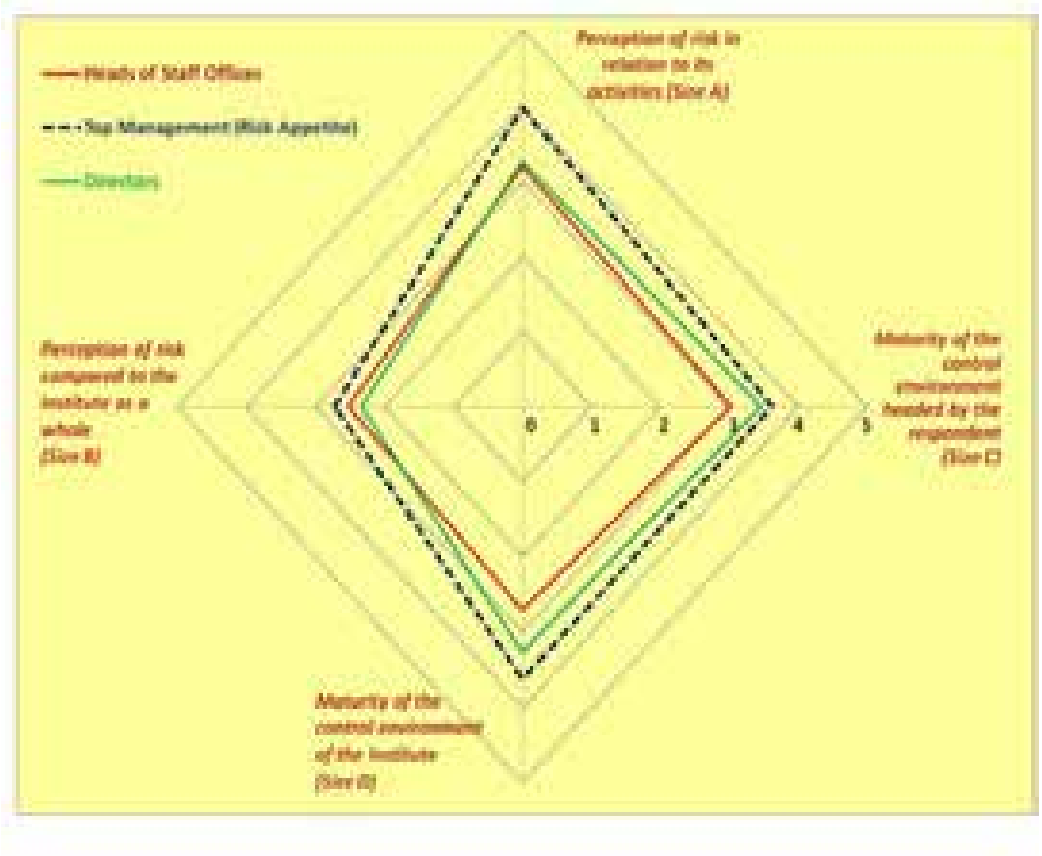
Even for these two dimensions, the orientation of the apical Leadership is demonstrated more favorable than that of all the respondents, although the gap between the two values is more pronounced about the overall vision of the Institute (Size D).

THE RISK PERCEPTION BY MANAGEMENT, BY LEVEL OF RESPONSIBILITY

Figure 3 shows the average profiles of senior management divided by level of responsibility. It includes Top Management, i.e. General Director and Chiefs of Department, (blue dotted line), Directors (green line) and Heads of Staff Office (red line) in order to highlight 'how' and 'how much' they manage the organizational risk according to their level of responsibility.

The average rating of top management, considered the highest level of tolerance permitted, shows that a particular attention is given to considering the risk as the base element for the activities planning. In fact, the value assigned by top management to A and B dimensions is the highest among the three levels of responsibility with values, equal to about 4 and more than 2.7 respectively on a scale of values ranging from 1 to 5. Moreover, these values are also higher than the average shown in Fig.1. The maturity assessment of the control environment for C and D sizes is higher than that expressed by the management in other categories (average value equal to more than 3.6).

FIGURE 3. MEAN PROFILE FOR SENIOR MANAGEMENT BY LEVEL OF RESPONSIBILITY



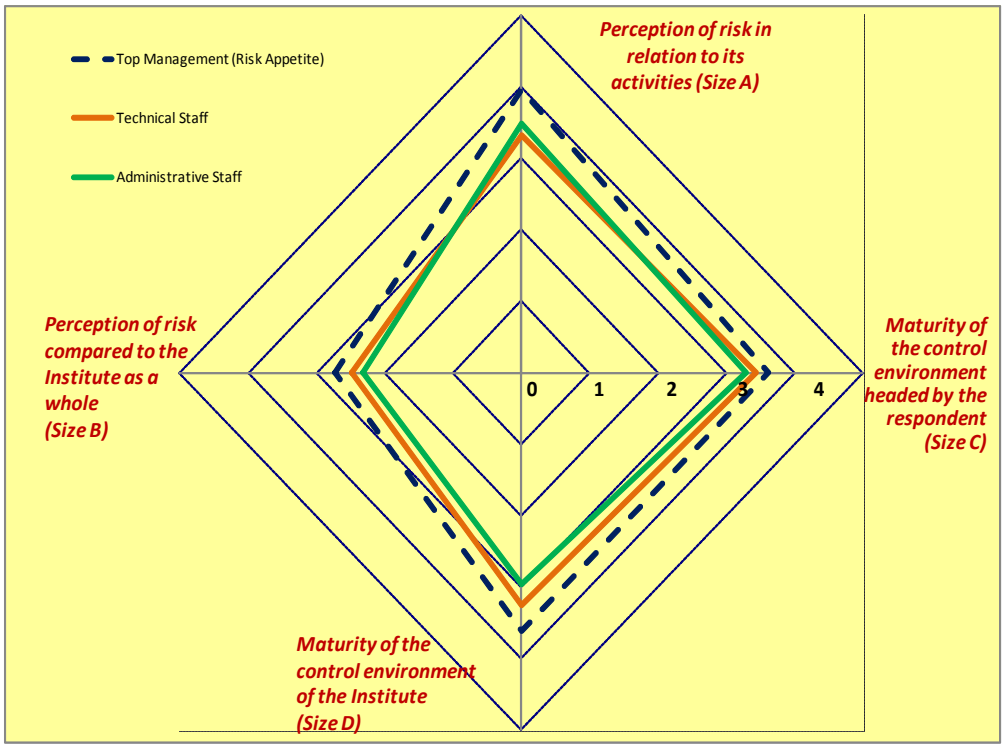
Comparing the Directors' profile (green line) with the top management's risk appetite (dashed blue line), two fairly homogeneous approaches are observed in assessing Size C, whereas there is much less regularity in the evaluation of the other three dimensions (A, B and D).

The Heads of Staff Offices (red line) show a more moderate assessment of criticality as part of their activities planning. In fact, they assign a lower value to the control environment's maturity where the Risk Management System is implemented (Size D) than other classes of senior management. Instead, risk management is considered an important component for activities planning (size A, average 3.2 points).

THE RISK PERCEPTION BY MANAGEMENT, BY TECHNICAL AND ADMINISTRATIVE SECTORS

Figure 4 shows the average profiles of the legal-administrative structures (green line) and of the technical structures (orange line) compared with that of top management (blue dotted line).

FIGURE 4. TECHNICAL AND ADMINISTRATIVE MANAGEMENT PROFILE



Analyzing the technical and administrative senior management's average profiles, all four dimensions converge into values lower than the top management (representative of the Institute of Risk Appetite). The legal and administrative structures, on the one hand, pay attention to the risks identified within the structure of belonging (Size A, mean value greater than 3.5 points on a scale 0 to 5), on the other hand, are less positive with risks related to the activities of the Institute as a whole (Size B, average value of about 2.5 points on a scale from 0 to 5). Also, with regard to the control environment maturity (C and D sizes), legal and administrative structures are more confident in the approach of their structure than in that of the organization as a whole (Size C, value close to 3.5; Size D, value equal to about 3 points, on a scale of 0 to 5).

The technical structures reveal the same level of attention to the risks identified by the statistical production Directorates and by the Institute as a whole for all the dimension A, B, C, D - the average is around 3.5 percentage points.

The comparison between the administrative and technical-scientific profile shows a more favorable attitude to making the risk management an essential factor in their job (size B, C and D). Finally, the risk management is more important for the administrative top management in terms of planning and monitoring activities.

THE RISK FACTORS

Risk factors are events (voluntary or involuntary) originated from internal or external sources affecting positively or negatively the development strategies or the achievement of objectives.

The manager must be able to identify these factors and to assess whether these represent opportunities or risks; the factors with negative impact demand prompt and effective responses, while those with positive impact represent opportunities for the development and growth.

In the scheme of the questionnaire, these factors have been divided among:

a. External to the operational processes;
b. Internal to the operating processes, but distinct in:
    i. regulatory compliance;
    ii. organization;
    iii. technology and information management;
    iv. integrity and ethical behavior.
c. Cross-structures with reference to decision-making processes.

In addition to this classification (consistent with the proposal from the European Commission and the Framework "ERM - Co.SO. Report" adopted by ISTAT), in the same section of the questionnaire, managers were asked to assign a priority to the risk factors by distributing 100 points within each question group based on the greater or lower impact. This way, it was possible to represent graphically, for each category of risk factors, the danger of perceived risk taking into account the variables "priority of perceived risk" and "number of occurrences."

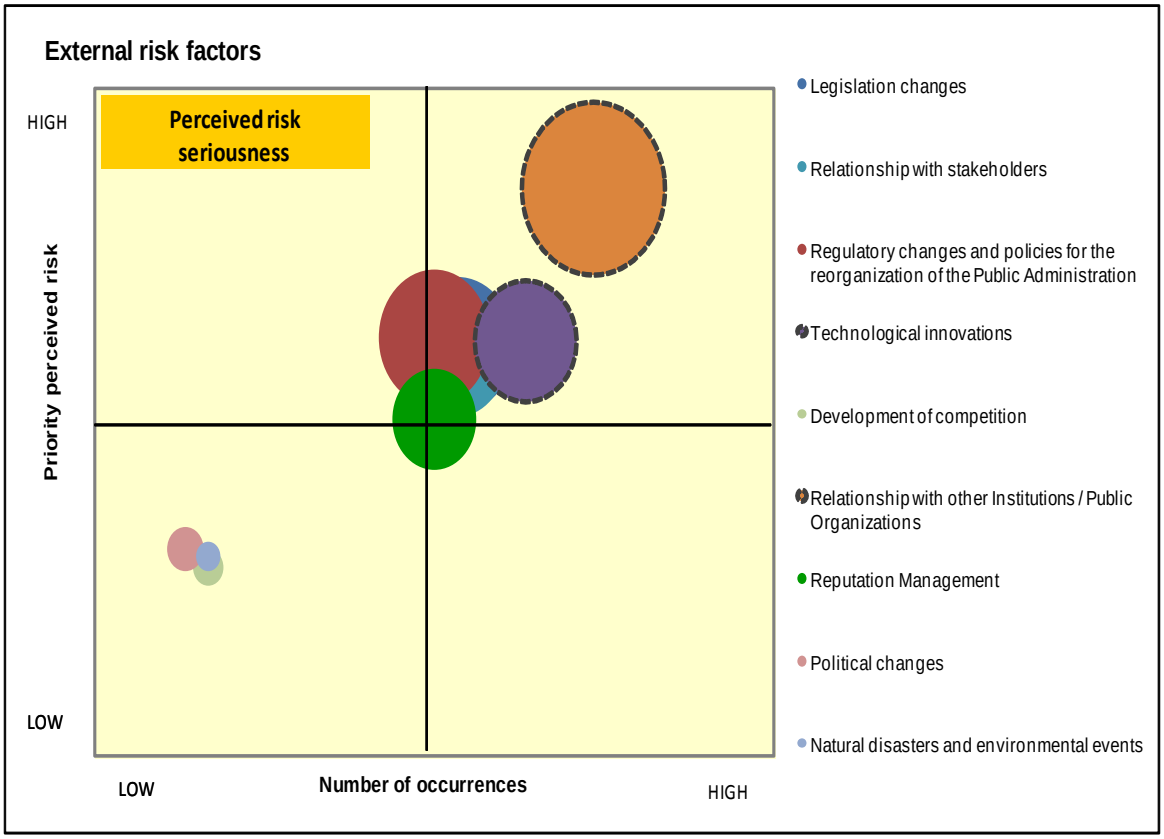
In the "bubble charts" shown below, the risk factors are located on the X-axis with reference to "number of occurrences" and on the Y-axis with reference to "priority of perceived risk". The "bubbles size" is a function of the value relating to each category of risk. The tables below show the results of the analysis of risk factors for each category indicated.

EXTERNAL FACTORS

The most managers belive that the main risk factorsfall within the following:

- relations with other institutions/organizations (orange bubble);
- technological innovations (purple bubble).

FIGURE 5 – EXTERNAL RISK FACTORS



INTERNAL FACTORS

Since the internal factors directly affect the operational actions of the organization, this category is divided into 4 sub-categories. Each sub-category represents the risk factors considered to be of greater impact:

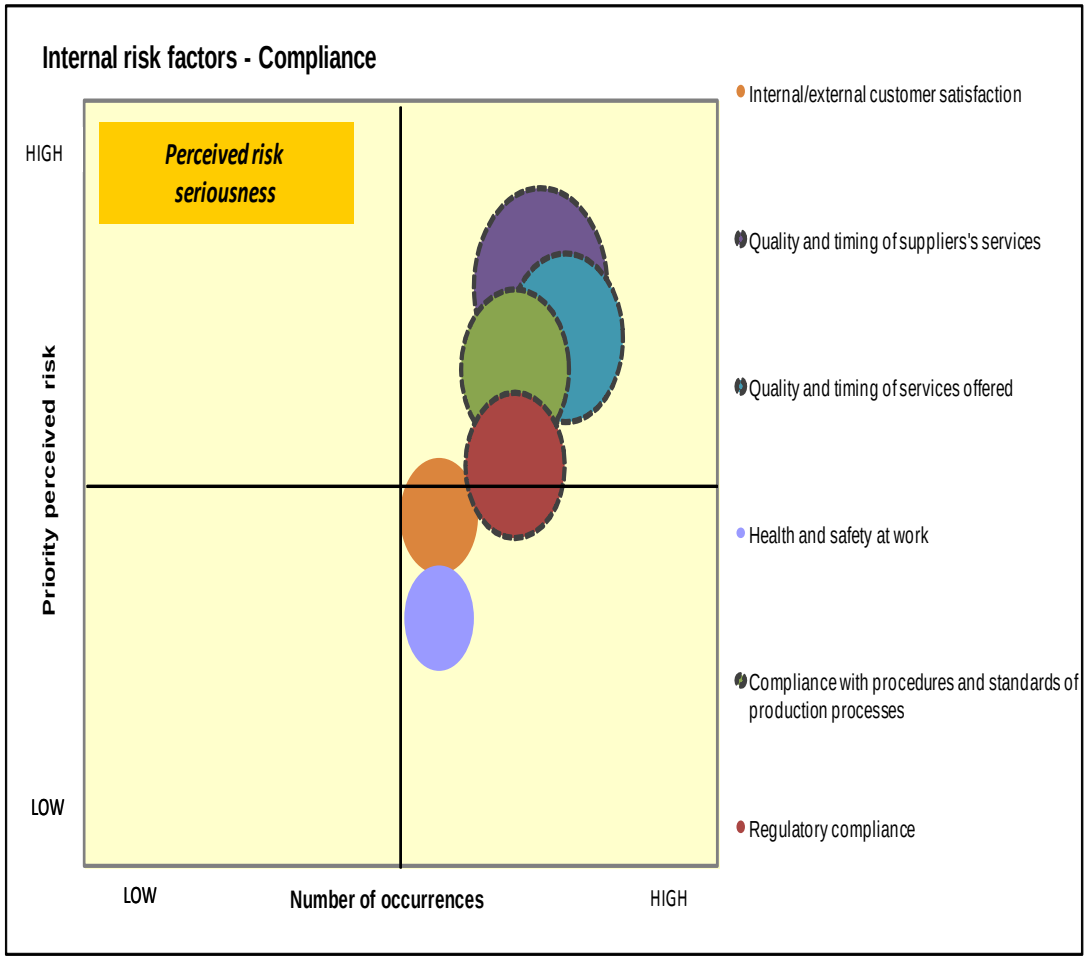
I. regulatory compliance;
II. organization;
III. technology and information management;
IV. Integrity and ethical behavior.

REGULATORY COMPLIANCE

Among the risk factors from which could result regulatory non-compliance for its own activities, the managers of the Institute have selected:

- Quality and times of supplied services (purple bubble) focusing on the possibility of contractual non-fulfillment by suppliers;
- Respect for the laws and regulations and compliance with procedures and standards of production processes reported by over half of executives among the most worrisome causes of critical events.

FIGURE 6 – INTERNAL RISK FACTORS – REGULATORY COMPLIANCE

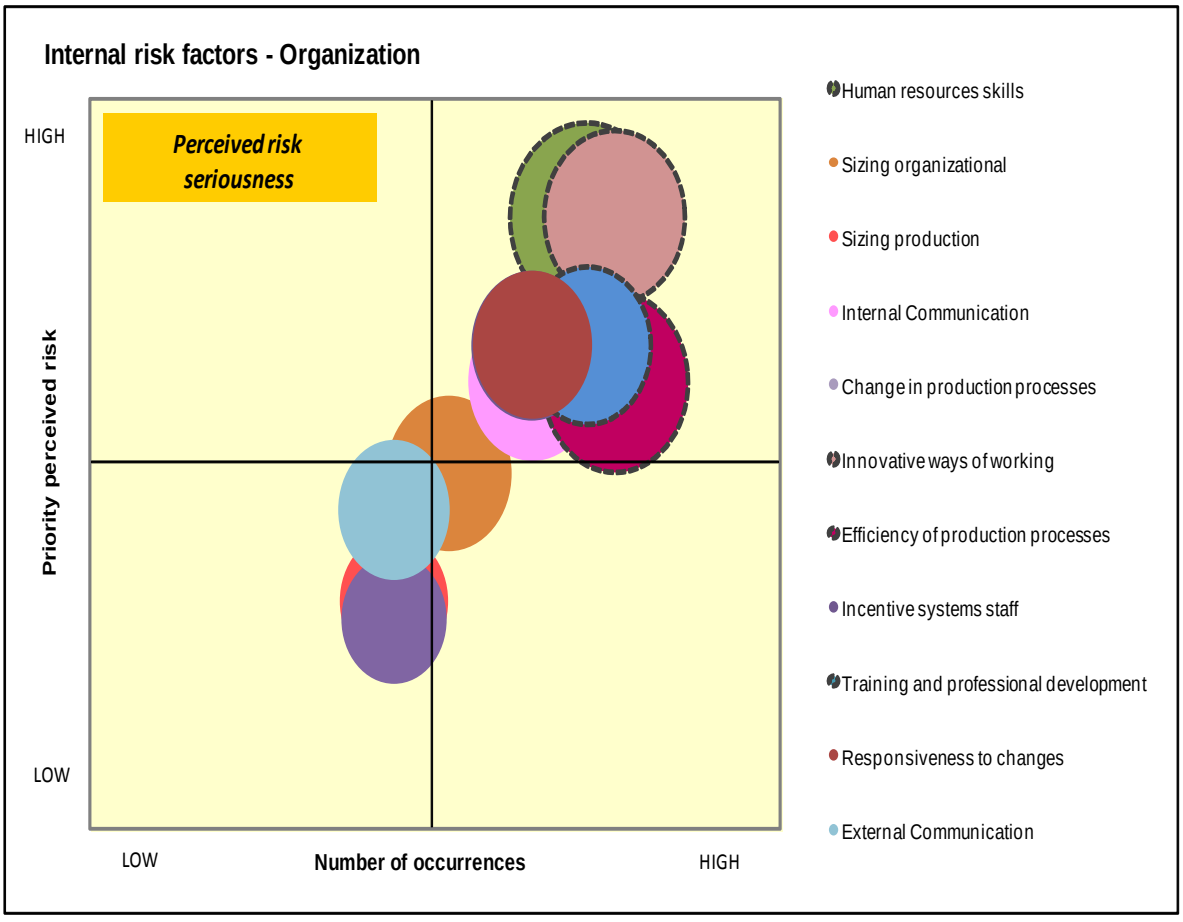


THE ORGANIZATION

The management's attention to the qualitative aspect of the resources is shown with the interest towards the best organization of work:

- the majority of respondents identify the inadequacy of the skill of resources (green bubble) the main indication of a challenge that could undermine organizational expectations and results. It is expected that an appropriate personnel selection policy is present aiming at placing the "right person to the right place";
- a training and people development policy - unsatisfactory or inconsistent with respect of the needs - worries more than half of the managers interviewed;
- among the major factors that can affect the quality of the organization are the efficiency of production processes and innovation of the work style. The two aspects are closely related and dependent.

FIGURE 7 – INTERNAL RISK FACTORS - ORGANIZATION

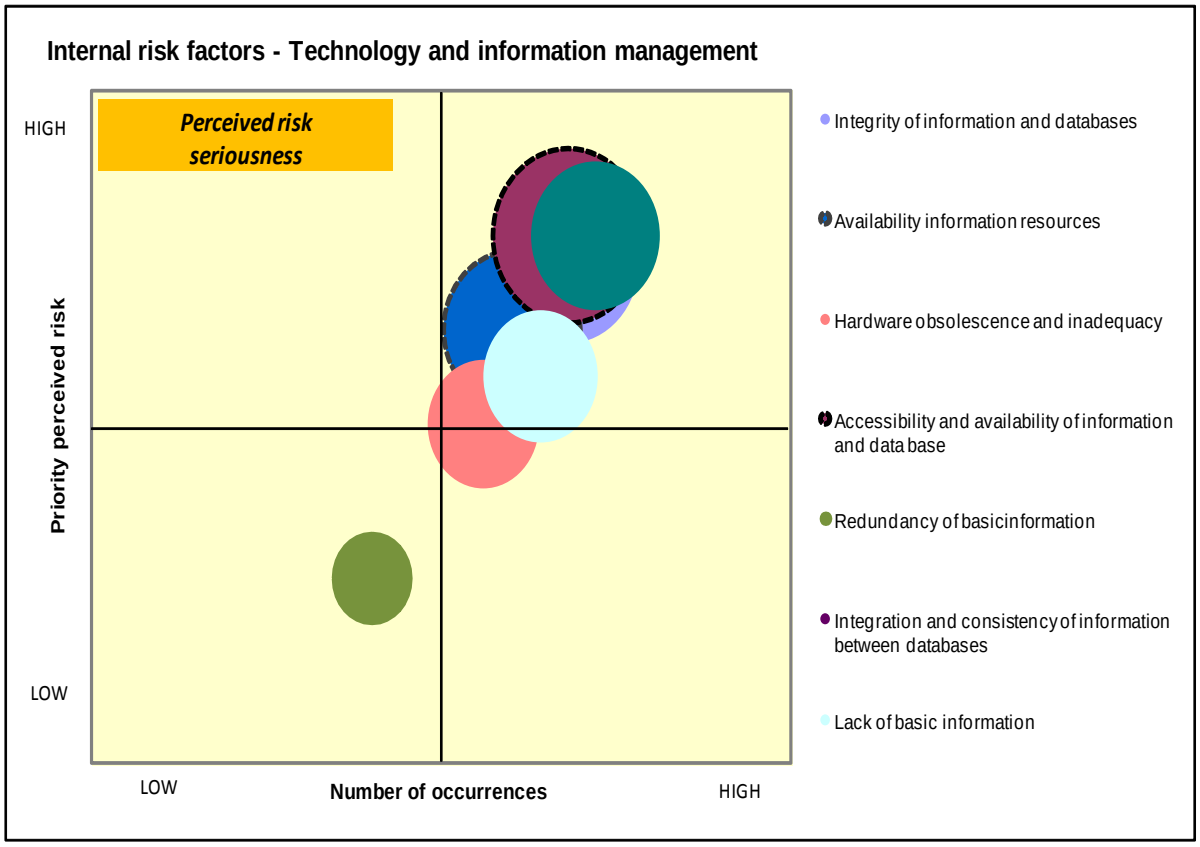


THE TECHNOLOGY AND INFORMATION MANAGEMENT

Due to a methodological choice, ICT questions were excluded from the survey and the managers focused their attention on the following:

- availability of information resources necessary to support the official statistics production; the survey reveals a widespread fear about possible IT malfunctions due to obsolescence or unpredictable events that could have a disruptive impact on the Istat outcome with obvious implications for the loss of reputation;
- accessibility and availability of information and data base on which depends the continuity in providing production and dissemination services, and the correct utilization of information by users.

FIGURE 8 – INTERNAL RISK FACTORS INDICATED BY RESPONDENTS – TECHNOLOGY AND INFORMATION MANAGEMENT



INTEGRITY AND ETHICAL BEHAVIOR

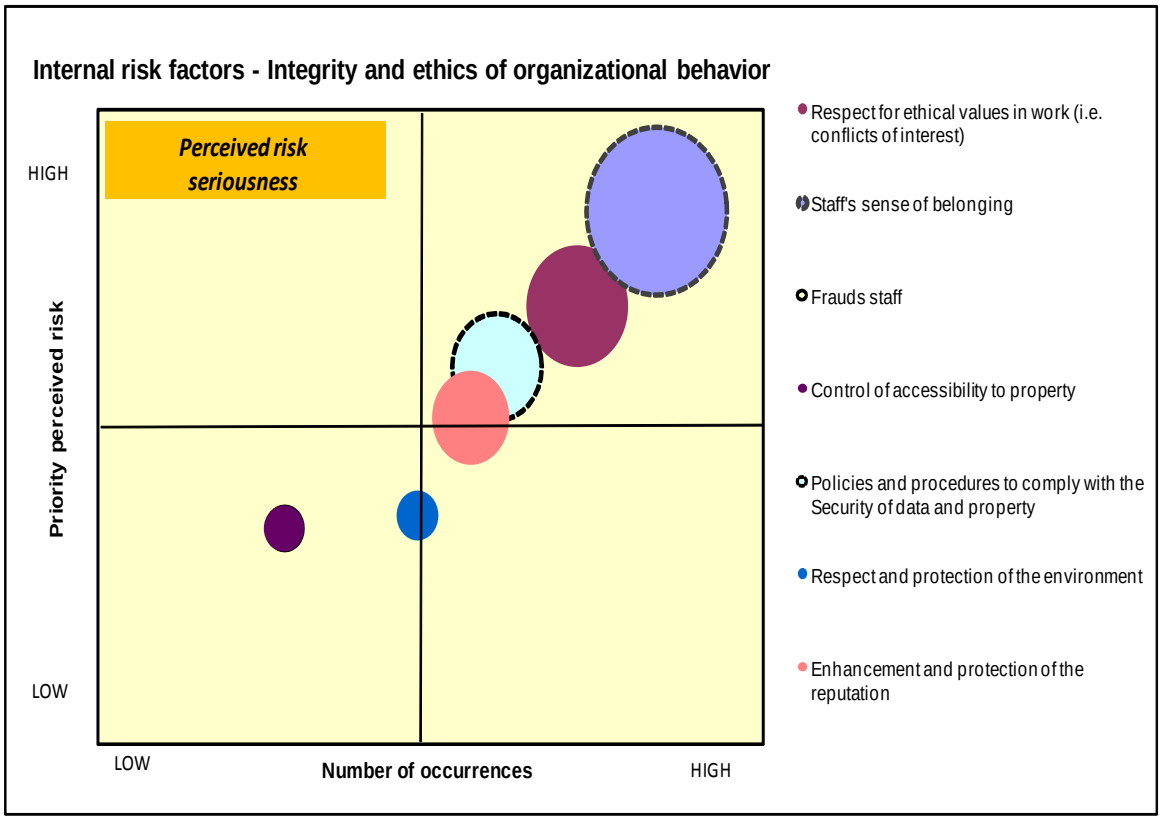
An efficient organization is based on the collaboration and hard work of people regardless of the roles played and hierarchical level. This principle emphasizes the importance of harmony in working environment and management's attention to the dimensions that could be compromised by a careless management for organizational well-being.

The following topics have been identified:

- Sense of belonging of personnel: the recognition and sharing of corporate values by all staff;
- Attention and protection of policies and procedures to comply with the security of data and assets:, aspects closely linked to respect for privacy legislation and data security.

The marginal level of concern about the possibility of the personnel damaging the Institute assets (represented by the factor Fraud staff) is a clear sign of confidence towards employee behavior.

FIGURE 9 – INTERNAL RISK FACTORS – INTEGRITY AND ETHICAL BEHAVIOR

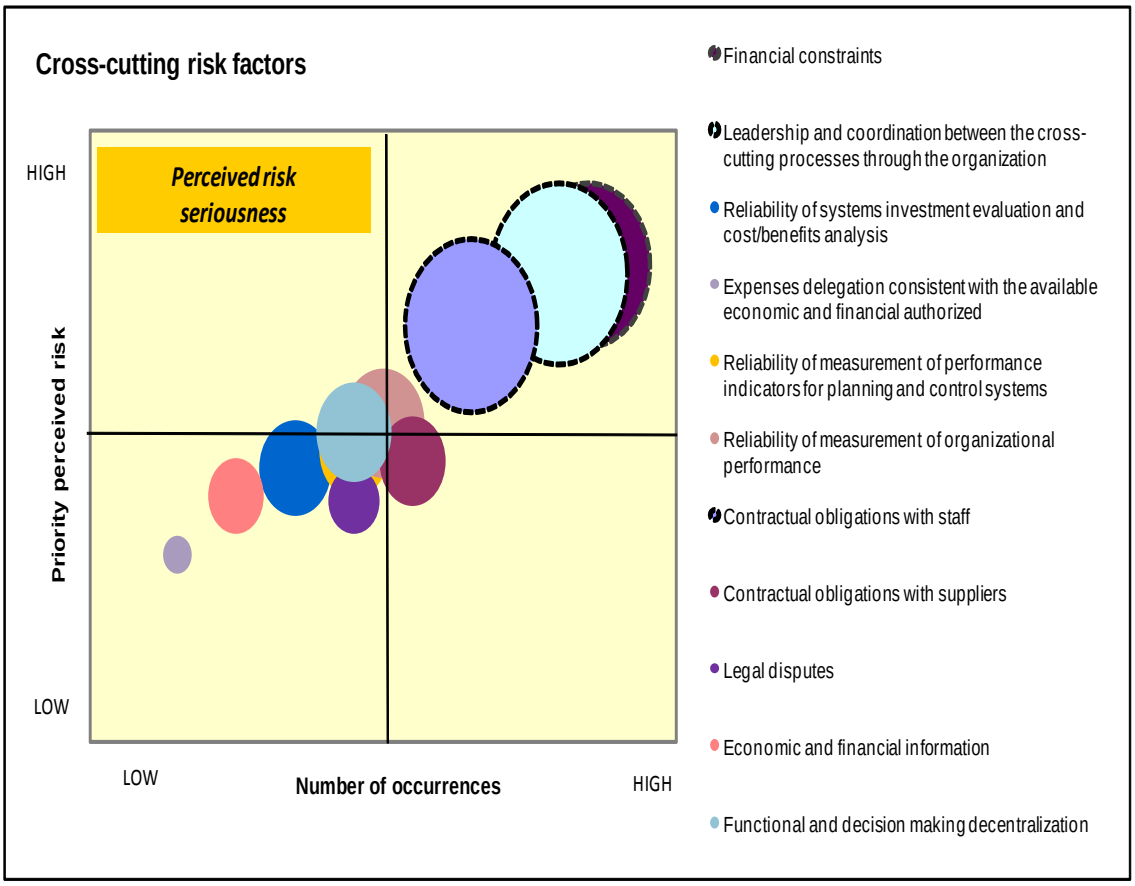


CROSS-CUTTING FACTORS

According to Istat top management, the outcome of production processes across the organization which require cooperation and participation of stakeholders can be put in jeopardy by factors that affect:

a) Leadership and coordination between the cross-cutting processes in the internal structures, concerning the identification of the activities-owner that involve more structures from which the conflicts of competence "positive" or "negative" may arise;
b) Contractual constraints for personnel for recruited staff on flexible contracts on which depends the continuity of delivery services;
c) Financial constraints affecting the compatibility between strategic and operational objectives and the availability of resources.

FIGURE 10 – CROSS-CUTTING RISK FACTORS



14. ABS LEADERSHIP AND MANAGEMENT CHARTER AND THE SENIOR EXECUTIVE PROGRAMME

Chris Libreri Australian Bureau of Statistics

The Leadership and Management Development Charter is a comprehensive and inclusive capability development strategy, designed to provide greater transparency and structure to the development of ABS leaders and managers. This charter outlines the development programmes and resources available to aspiring or future leaders, managers and Executive staff from 2011-2012 and beyond.

VISION

To maximise the leadership and management capability of all staff and to recognise and nurture high potentials, building a high performing agency and ensuring long-term organisational sustainability.

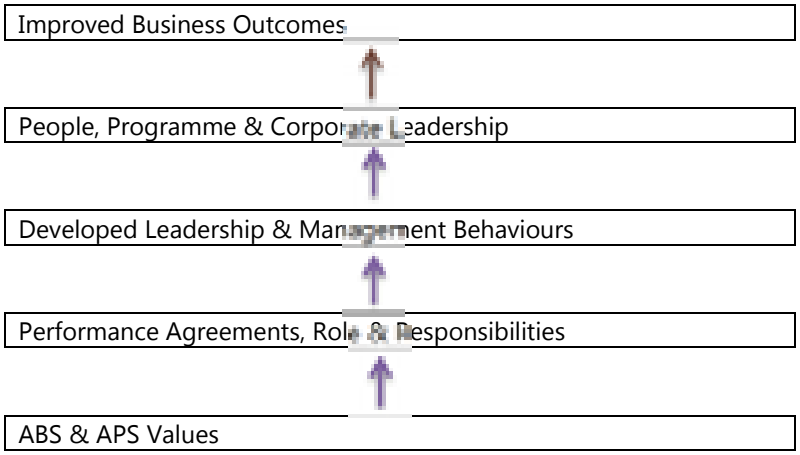
PRINCIPLES

- Leadership & management at all levels
- Strong people, program and corporate leadership
- Manager commitment to and investment in building the capability of others
- Mutual commitment to learning
- Accountability for continuous development

VALUES & LEADERSHIP

Fundamental to good leadership is the competence to uphold and promote ABS and APS values. Leaders display a visible commitment to the values they espouse. Values based behaviour is about individuals at all levels accepting responsibility and accountability for their programme outcomes, their behaviours and actions, and the impact they have on others.

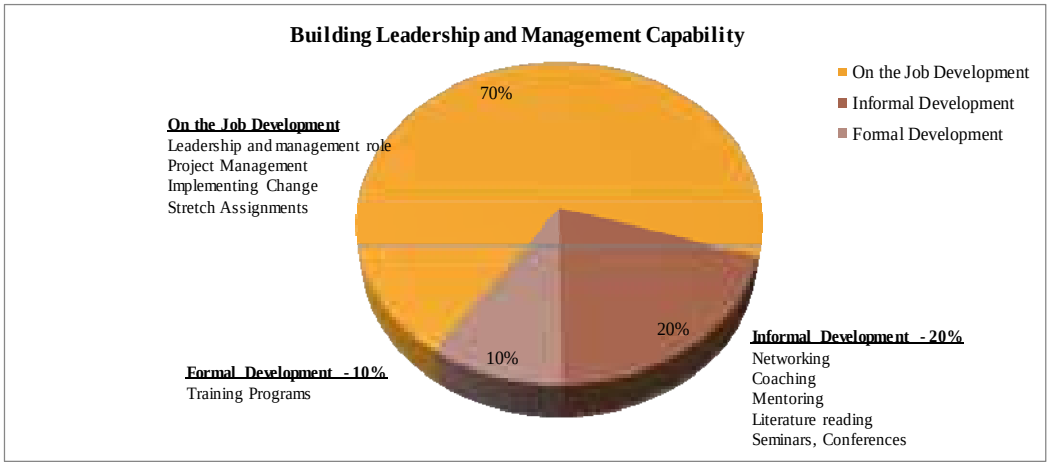
Leaders and managers play a key role in upholding values, in developing their people and in setting clear expectations in the workplace. Through this they contribute to meeting ABS Corporate Objectives and Strategic Directions and deliver improved business outcomes.



STRATEGY

This charter outlines the organisational approach to building leadership and management capability at all levels. Leadership and management capability is integral to meeting business outcomes, encouraging innovation and high performance, and in building a sustainable future. Individuals with leadership aspirations need to build this capability and be responsible for their own learning.

FIGURE 1. LEADERSHIP AND MANAGEMENT CAPABILITY



The majority of learning occurs on the job and this is where it is essential that staff and their managers have a meaningful conversation about development opportunities and how they are to be implemented. To achieve optimal results in building leadership and management capability, development should occur across three areas:

On the job - 70% of developmental needs are met by on the job activities (leadership and management roles, stretch assignments, project roles, implementing change, leading innovation, acting on performance feedback, rotations).
Informal - 20% of development needs are met through exposure with other relationships like networking, mentoring and coaching, or by self-help options like reading management literature or participating in seminars or conferences.
Formal training – 10% of developmental needs are met through formal training programmes. The ABS Leadership and Management Pathway highlights the range of formal and informal development opportunities that are available.

Senior executive and line managers have a major responsibility to develop the capability of their staff, on behalf of the ABS, as a normal part of the way they do business.

EXECUTIVE LEADERSHIP AND MANAGEMENT (EL1 – EL2)
GOVERNANCE

The Executive Leadership Group (EL2) and ABS Management Group (EL1) have an active role in maximising the value and contribution of the EL leadership group, and in recognising and identifying high potentials to ensure good succession planning for the ABS. The process will be transparent and it will rely on information from EL2s and SES. The discussions will be constructive and may identify capability gaps across each group. ELG & SMG will identify high potentials and match these with organisational opportunities like placements, rotations, project work or high end training opportunities (like ABSLP). Twice yearly ELG and SMG meetings will be held to discuss the executive groups.

ABS LEADERSHIP ATTRIBUTES

SHAPES STRATEGIC THINKING

- personally contributes to shape and champion ABS vision and goals
- decisive and effective under pressure and in ambiguous environments
- draws on information from a variety of sources, makes connections and seizes opportunities

ACHIEVES RESULTS

- demonstrates strong capability in people, program and corporate leadership
- drives a culture of achievement and success
- delegates and builds capability in others
- guides, mentors and motivates
- delivers quality business outcomes and manages for performance

CULTIVATES PRODUCTIVE WORKING RELATIONSHIPS

- collaborates well, identifies shared interests and establishes networks
- purposeful stakeholder engagement
- works and achieves results through others
- builds sustainable high performing teams

EXEMPLIFIES PERSONAL DRIVE AND INTEGRITY

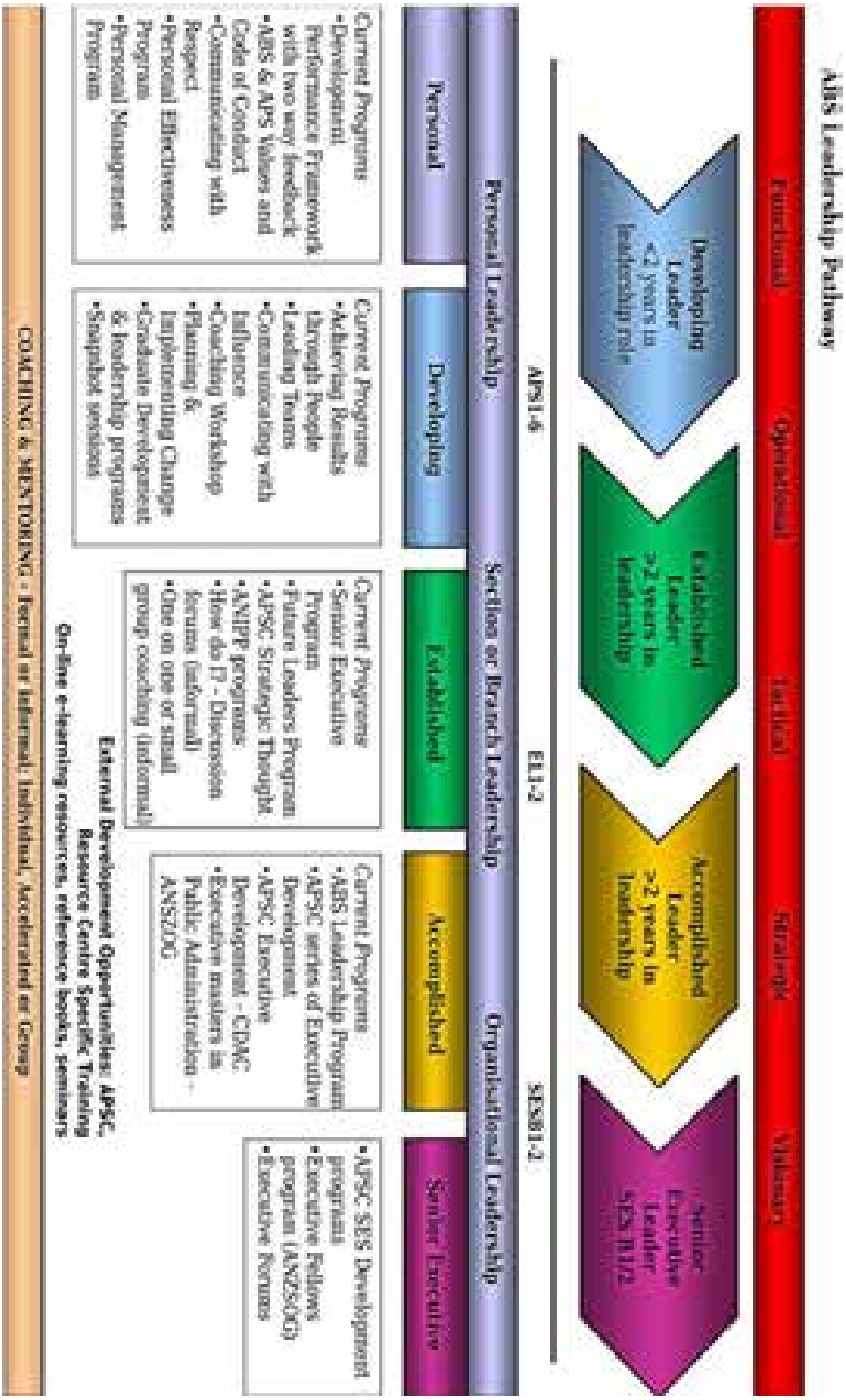
- personally aligned with, and lives ABS & APS values
- gives their all to meet challenging goals, demonstrates personal fortitude
- willing to and encourages other to take managed risks
- resilient, capacity to handle pressure and stress

COMMUNICATES WITH INFLUENCE

- influencer and challenger, negotiates persuasively
- credibility with staff, clients and management
- engages strongly and is outcomes oriented
- persuasive and influential, understands the environment

PROFESSIONAL LEADERSHIP

- demonstrates professional leadership in their field of expertise
- highly competent, demonstrates business acumen
- ability to apply logic, analytical and conceptual thought
- displays and encourages innovative thinking


ABS Leadership Pathway
Functional
Operational
Tactical
Strategic
Visionary
Developing Leader <2 years in leadership role
Established Leader >2 years in leadership
Accomplished Leader >2 years in leadership
Senior Executive Leader SES 1/2
APS1-6
EL1-2
SES1-2
Personal Leadership
Section or Branch Leadership
Organisational Leadership
Personal
Developing
Established
Accomplished
Senior Executive
Current Programs
•Development Performance Framework with two way feedback
•ABS & APS Values and Code of Conduct
•Communicating with Respect
•Personal Effectiveness Program
•Personal Management Program
Current Programs
•Achieving Results Through People
•Leading Teams
•Communicating with Influence
•Coaching Workshop
•Planning & Implementing Change
•Graduate Development & leadership programs
•Snapshot sessions
Current Programs
•Senior Executive Program
•Future Leaders Program
•APSC Strategic Thought
•ANZSOG programs
•How do I? - Discussion forums (informal)
•One on one or small group coaching (informal)
Current Programs
•ABS Leadership Program
•APSC series of Executive Development
•APSC Executive Development - CDMC
•Executive masters in Public Administration - ANZSOG
•APSC SES Development programs
•Executive Fellows program (ANZSOG)
•Executive Forums
External Development Opportunities: APSC Resource Centre Specific Training
On-line e-learning resources, reference books, seminars
COACHING & MENTORING - Formal or Informal; Individual, Accelerated or Group

SELECTION

The range of formal programmes now covers Executive levels. Each programme will have a recommended nomination approach dependant on programme criterion, not on divisional or regional quotas. Attendance at high end programmes will be competitive and based on the outcomes of ELG and SMG discussion.

SES ROLE

Divisional Leadership and Management programmes will attract Divisional sponsors/mentors. Sponsors should expect a pre-programme briefing to explore the concepts being delivered. Sponsors or mentors should attend the programme in full, and be available in a mentoring capacity during and after. It is expected that sponsors will be at least 1 level above the highest level attending, however two levels above may be more appropriate depending on the programme.

MANAGER ROLE

Managers will be required to contribute effort and time in the development of the participant. Managers will be responsible to sign off on the nomination and agree to support the usefulness of the programme to the applicant's current role, to provide active support, feedback, time and coaching to the participant and to be involved during and after the provision of the programme, as well as in the evaluation phase.

MEASUREMENT AND EVALUATION

The value returned to the business from the investment in programmes will be measured. All programmes will be evaluated to assess the value to the ABS. For high end programmes a mix of formal self and manager assessments will be made at least 3 months after the formal programmes. This will measure the changes in behaviours, transfer of skills learnt back into work performance, and the tangible business outcomes achieved as a result of attendance.

INVESTMENT IN LEADERSHIP DEVELOPMENT

All Executive have access to an Integrated Learning System (ILS) self-assessment programme on the APSC website. The ABS Role, Responsibility and Capability Statements clearly articulate expectations at level.

Each Executive and their manager are responsible to discuss leadership development and agree on how to improve capabilities through access to a range of on the job learning, informal opportunities, self-learning and formal training.

Organisational investment in high end training programmes is based on a structured competitive process. Other programmes like personal leadership, developing managers and leaders, e-learning, library reference materials, mentoring and attendance at in-house seminars are available to all. Divisions or Resource Centres may access programmes on demand, on a needs and user pays basis.

LEADERSHIP & MANAGEMENT FOR APS LEVELS

Running alongside this pathway sits a further curriculum to support capability development. Specifically, formal courses that relate to the direct development of manager or leadership capability are outlined below.

FIGURE 2. LEADERSHIP & MANAGEMENT FOR APS LEVELS

Personal Effectiveness	Managing People and Teams
Development & Performance Framework with two way feedback ABS & APS Values and Code of Conduct Communicating with Respect Personal Effectiveness Program Snapshot modular sessions	Achieving Results through People Leading Teams Emotional Intelligence for Managers Communicating with Influence Coaching Workshop Planning & Implementing Change Selection Panel Training

All staff have the opportunity to nominate for these programmes. Achieving Results through People (APS6 & APS5) requires nomination by line managers or supervisors.

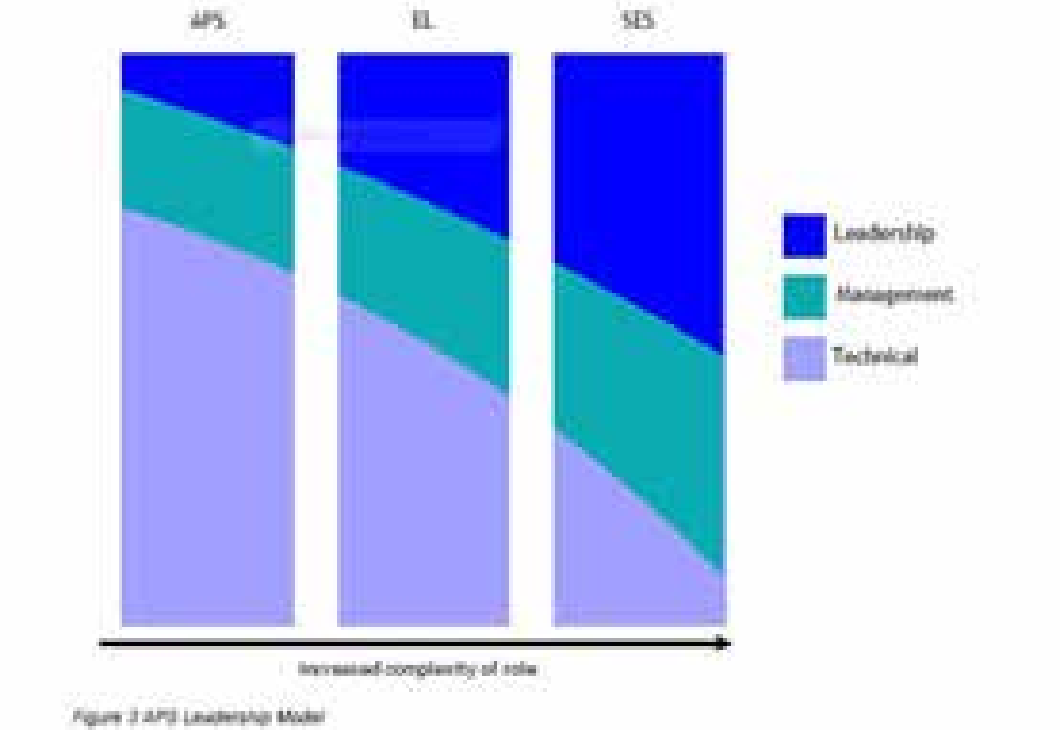
CULTURE

The value and importance placed on building leadership and management capability will be lifted by organisational recognition of those skills. By clearly recognising and rewarding organisational leadership in delivering on key business outcomes and people leadership, the link between the two and the value in improving leadership capability will be enhanced.

APSC LEADERSHIP MODEL

This model displays the shift in the mix of leadership, management and technical (or professional) skills you require as an ABS leader as you progress through the APS, Executive and SES levels.

FIGURE 3.APSC LEADERSHIP MODEL



15. RECRUITING AND RETAINING QUALIFIED STAFF AT STATISTICS FINLAND

Elina Pääkkö Statistics Finland

Competence management at Statistics Finland aims to identify and anticipate changes in competence needs, ensure sufficient core competence and correctly direct competence to the core processes and their supporting activities. Recruitment and internal mobility partly safeguard the core competence. The needs for recruiting have grown in recent years due to retirement, reorganisation of tasks and other competence attrition. At Statistics Finland, the internal labour market is used to fulfil recruitment needs in the first place, but focusing only on the internal mobility of the personnel has not met the growing need for competence. Other forms of staff recruitment and competence building are needed.

One of the new tools is the centralised recruiting of experts - group recruiting, which was introduced in 2010. The objectives set for the group recruiting relate to the quality and efficiency of the recruitment process, and maintenance and creation of a good employer image. In group recruiting, several (5-12) junior experts are sought at the same time with one advertisement. The new experts will be placed in different statistics departments but the competence needs of the whole organisation are emphasised. The competence needs are especially linked with the stages of the production process of statistics (production and development of statistics or auxiliary activities to the process) rather than with a certain substance area. The posts applied for in the group recruiting are basic level expert positions, or junior positions, for which work experience in the area of statistics is not necessary.

Besides group recruiting, Statistics Finland has developed also another policy concerning competence management in recent years. The aim of career planning is to improve the opportunities of the personnel to broaden and deepen their expertise. During the career planning process the employee draws up his or her career plan and the supervisor supports him or her. The management defines the objectives for career planning, which are in accordance with operational and competence strategies and other policy outlines. The key issue in career planning is that the employee and the supervisor coordinate together the employee's and Statistics Finland's skills, needs and goals. For the employee, career planning is a way to develop his or her duties. For the supervisor it is a tool for competence management.

The target of the paper is to discuss the implementation of the new tools and analyse their impact on the competence development of the staff.

INTRODUCTION

Statistics Finland is an expert organisation employing some 1,000 persons whose average age is 48.9 years and average length of working career 15.9 years. Altogether 64.8 per cent of the personnel hold at least lowest level tertiary educational qualifications. Statistics Finland recruits annually around 100 persons from outside, mobility on the internal labour market is some 130 persons per year. [1]

Competence management at Statistics Finland aims to identify and anticipate changes in competence needs, ensure sufficient core competence and correctly direct competence to the core processes and their supporting activities. Recruitment and internal mobility partly safeguard the core competence. The needs for recruiting and retaining competence have grown in recent years due to retirement, reorganisation of tasks and other competence attrition. Other forms of staff recruitment and competence building are needed - new tools for these are group recruiting and career planning.

In group recruiting, several junior experts are sought at the same time. The new experts will be placed in different statistics departments but the competence needs of the whole organisation are emphasised.

The aim in career planning is to develop the employees' careers so that both the employee's own career hopes and the employer's needs are meet. During the career planning process, the employee draws up his or her career plan and the supervisor supports him or her.

The article describes group recruiting and career planning as new tools for the development of competence at Statistics Finland, as well as examines the efficiency of these tools.

GROUP RECRUITING - CENTRALISED RECRUITMENT PROCESS FOR RETAINING AND ENHANCING COMPETENCE

WHAT IS GROUP RECRUITING?

The needs for recruiting have grown in recent years due to retirement, reorganisation of tasks and other competence attrition. At Statistics Finland, the internal labour market is used to fulfil recruitment needs in the first place, but focusing only on the internal mobility of the personnel has not met the growing need for competence. Lacking competence has been acquired with recruitment from outside. The first centralised recruiting of experts, i.e. group recruiting, was carried out in 2010.

In group recruiting, several (5-12) junior experts are sought at the same time with one advertisement. The new experts will be placed in different statistics departments but the competence needs of the whole organisation are emphasised. The competence needs are especially linked with the stages of the production process of statistics (production and development of statistics or auxiliary activities to the process) rather than with a certain substance area. The group recruiting is mainly centralised into the personnel and legal services unit, and is performed in co-operation with the statistics departments.

The posts applied for in the group recruiting are basic level expert positions, or junior positions, for which work experience in the area of statistics is not necessary. The demands of the posts should be quite similar in order that experts for them can be sought by group recruiting. Group recruiting is not necessarily suitable for filling more demanding posts because these often require more specific competence than the generally needed skills.

Group recruiting suits situations in which the competence needs are congruent and the required levels of competence can be estimated to be similar. The tasks must also be sufficiently uniform in nature. In the case of Statistics Finland, the statistical production process - either the production and development of statistics or functions supporting the process (e.g. expertise in sampling) - is the uniting factor.

The target group for group recruiting are persons with suitable upper level tertiary qualifications, preferably some experience of statistical work or similar and good IT skills. Willingness to learn new things and develop along with tasks are also essential. Statistical work is done in an international environment, so good interactive and language skills are requisites for succeeding in the tasks. In general, curiosity and interest in social subjects are expected of the persons.

The majority of basic level statistical expert vacancies were filled with group recruiting in 2010 and 2011. Twenty-one of the 37 persons Statistics Finland recruited with group recruiting were women. In total, 50 per cent of statistical experts were recruited by means of group recruiting in 2011.

OBJECTIVES OF GROUP RECRUITING

The objective in group recruiting is to efficiently secure Statistics Finland's core competence. The objectives set for group recruiting relate to the quality and efficiency of the recruitment process, and maintenance and creation of a good employer image.

Centralised recruiting emphasises competence needs at the level of the entire organisation. It also enables equal and wide comparison of the applicants. Thus, the recruited resources can also be widely exploited throughout the organisation.

The centralisation of the principal responsibility for recruiting to the personnel and legal services unit allows the statistics departments to focus on their core functions. The applicants also see the process as efficient and do not usually have time to become employed elsewhere during the process.

The candidates only attend one interview instead of having to apply separately to each post, which contributes to the creation of a good employer image. The aim in the interview is to draw to the applicant a picture of Statistics Finland as an expert organisation that wants to develop its personnel and its well-being at work, and offers interesting tasks at a vantage point in the production of information about society. In group recruiting, the tasks are also marketed consistently. The aim is to create a convincingly professional recruiting process.

Statistics Finland is one of the 120 employer units recruiting employees within the state administration. The recruiting, including that of Statistics Finland, is implemented with a shared electronic recruitment system and vacancies are applied to on shared web pages (www.valtiolle.fi). The centralised recruiting draws an image of the state administration as a versatile employer and the shared recruitment system makes the recruiting efficient.

GROUP RECRUITING IN PRACTICE

The process of group recruiting can be divided into four stages: survey of needs, definition of selection criteria and the application process, interviews, and decision on the selection.

TABLE 1. STAGES OF GROUP RECRUITING

Task	Contents
Survey of needs	Inquiry among management: anticipation of exit to retirement and other staff turnover, acute staff changes and needs arising from them Tasks suited for group recruiting and related competence needs
Definition of selection criteria, compilation of job advertisement	Definition of desired competence and educational background based on survey of needs Open vacancies are not itemised in job advertisement, applicant does not apply for a certain post but the task of a statistical expert in general
Interviews	Same interviewers (two statistics directors, one recruitment specialist throughout the whole process) Around four interviews per one open post
Selection	Based on criteria defined in job advertisement Selected persons are placed in departments according to suitability

SURVEY OF DEPARTMENTS' RECRUITMENT NEEDS

Statistics Finland's recruitment process aims to be systematic and anticipate future competence needs. For this reason the management services department has introduced a systematic survey for establishing future recruitment needs, which is sent to department directors around twice a year. The survey inquires about future recruitment needs suitable for group recruiting and other vacancies that are due to become open.

In respect of group recruiting, the survey asks the departments whether they have vacancies in statistics production or statistical information service that need filling in the near future and are suitable for applying to through centralised recruiting. The statistics departments are asked to assess whether the vacancies would entail project work, development tasks, or training and consulting.

The survey of needs establishes the kinds of skills that the experts sought through group recruiting should possess in addition to general working life skills. What kinds of IT skills (e.g. SAS, E Language, Stata) and statistical methodological skills does the performance of each task require? In addition, the departments are asked about the suitable educational background for the open vacancy. (Appendix 1: Survey of needs questionnaire)

Management services produce a summary of the results of the survey, which is then discussed by the agency's management. The number of vacancies to be filled through group recruiting is agreed by anticipating possible changes during the recruitment process and some vacancies are also usually identified as the process progresses.

DEFINITION OF SELECTION CRITERIA AND COMPILATION OF JOB ADVERTISEMENT

Based on the survey of needs, general selection criteria (i.e. desired competencies) are decided for the open vacancies. The most commonly desired competences are:

- Suitable university degree preferably comprising studies in economics or social sciences and statistics;
- Versatile IT skills, such as knowledge of SAS software or other corresponding statistical data processing programme;
- Willingness to learn new things and develop along with tasks;
- Fluent oral and written skills;
- Good interactive skills;
- Knowledge of the field of statistics and statistics;
- Fluent English language skills;
- Applicants must have excellent written and oral Finnish language skills and satisfactory Swedish language skills.

Based on the survey of needs and the defined selection criteria a job advertisement (Appendix 2: an example of job advertisement for group recruiting) is compiled bearing in mind the sought target group. Open vacancies are not itemised in the job advertisement, the applicant does not apply for a certain post but the task of a statistical expert in general. The advertisement refers to the topics in general terms by giving the area of statistics where the vacancies are located (e.g. economic statistics, business statistics, energy statistics).

The advertisement describes the tasks at a general level: "The tasks entail compilation of statistics and analysing of results, process planning and steering, project work and development of statistics." The tasks are described as dynamic: "The field and contents of the tasks may vary according to your skills and interests."

An example of a job description in the job advertisement:

We are looking for competent people with university degree for interesting and diversified tasks in the production and development of statistics. The tasks entail compilation of statistics and analysing of results, process planning and steering, project work and development of statistics.
As an expert in our organisation, you will be working in the area of economic, business or population statistics. The field and contents of the tasks may vary according to your skills and interests.

The advertisement also describes the sought for competence (looking for diversified IT skills, knowledge of statistical data processing programs, fluent communication skills, good interactive skills, good English language skills) and the suitable educational background (e.g. applicable university degree comprising studies in economics and statistical science).

The advertising channels are chosen keeping the target groups in mind. Apart from newspapers and postings on the web, the used channels have included the social media and diverse networks.

Preliminary selection from the applications is made by management services based on the selection criteria and the applicants who best meet the criteria are invited to an interview. The applications are studied daily as the application period advances. Efforts are made already at this state to evaluate the applicants as a whole and take into consideration their potentiality as statistical experts. The applications of the interview candidates are studied jointly with the managers participating in the recruiting.

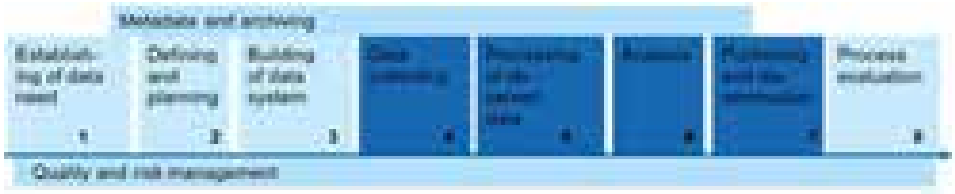
THE INTERVIEWS

Efforts are made to arrange the interviews as soon as possible after the end of the application period. About four-fold number relative to the number of open vacancies are invited to the interviews (e.g. 40 interviews were conducted for 12 open vacancies). Two recruiting directors and a recruiting expert from management services are usually at the interviews. To make the comparing and selecting easier the aim is that the same persons conduct all interviews.

During the interview, the applicant is given a description of Statistics Finland as a producer of information and as an organisation. Apart from the presentation of key figures on the personnel, the operating environment, stakeholders and the organisational structure, the interviewee is told about Statistics Finland's values comprising strong statistical ethics and reliability.

The tasks are described with the help of the statistical production process. The applicant is told that the tasks may locate in one or more stages of the statistical production process.

FIGURE 1. STATISTICAL PRODUCTION PROCESS



The operating environment of a statistical expert is described to the applicant in general terms. An expert is responsible for the routine production of statistics and the maintenance of the related data system. He/she operates as member of a group comprised of other experts and statisticians, which is supported by a supervisor. The competence of the sought for experts is described as a combination of

knowledge about the phenomenon on which the statistics are compiled, statistical science and management of a data system.

The interviews are conducted according to a frame tailored for group recruiting. The applicant's view of the open vacancy and of Statistics Finland as an organisation is established during the interview. Questions concerning the applicant's view of the open vacancy, motivation, education, work experience and personality each form a separate module of the interview. Around 90 minutes are reserved for each interview. The interviewers evaluate the applicants according to the selection criteria immediately after the interview and then again as the interviewing process progresses.

The interviews take into consideration the applicants' development potential. The applicants do not need to be statistical experts yet, but based on their backgrounds and on facts having emerged during the interviews, the interviews endeavour to evaluate the applicants' readiness for development and motivation to develop into a statistical expert. For instance, a potential experts does not yet necessarily master SAS programs, but the interview and background information serve as a basis for assessing his/her capacity to quickly learn these programs. The aim of the interview is also to make sure that the person is suited to the work community by observing his/her interactive and teamwork skills.

THE SELECTION

The interviewers evaluate the interviewees and make a centralised proposal about the selection of new experts. The selected persons are placed according to their suitability to the different departments according to the needs the departments have expressed and the tasks they have described in the survey of needs. A few persons are additionally proposed as reserves. Management services compile one appointment memorandum of the appointments in which all the interviewed applicants are evaluated in a comparison table. The Director General approves the overall appointment proposal. The departments and the unit supervisors agree about the starting dates and the remuneration.

CASE:

Third round of group recruiting was carried out in autumn 2011. It covered 12 open vacancies for junior experts in different statistics departments and in the statistical methods unit. The vacancies were located in the production and development of statistics and in diverse projects. Additionally, there were two vacancies in support functions to statistics production.

There were 218 applicants of whom 40 were interviewed. The interviews were attended by two statistics directors and a recruitment expert from management services. The interviews paid wide attention to the present competence background of the applicants, and to their potential and motivation to develop into an expert. Based on the interviews, selection proposals were made for the recruitment of 12 new experts. The recruitment process lasted about two months in all, of which the interviews took three weeks.

EXPERIENCES FROM GROUP RECRUITING

Group recruiting has now been carried out four times. It has proven to be an efficient process: several experts can be recruited for similar tasks in the course of about two months. The number of applications per vacancy has varied between 18 and 44. The standard of the applicants has been high in each round.

TABLE 2. EXPERIENCE FROM GROUP RECRUITING

Point in time	Number of applications	Number of open vacancies	Applications/ vacancy
Autumn 2010	354	12	30
Spring 2011	252	8	31
Autumn 2011	217	12	18
Spring 2012	219	5	44

The thorough interviews help to form a picture of the competence of the interviewees, which facilitates its wide utilisation in different tasks. Knowledge about the competence of the recruits also makes it possible to assess staff training needs. Group recruiting is an excellent way to form a picture of the supply of competence and competence potential on the labour market as well as of the competence that is difficult to find outside the organisation (e.g. SAS software skills).

According to Statistics Finland's policy outlines of personnel strategy, both specialists and multi-skilled persons are needed in versatile and changing statistical work. Group recruiting highlights the development potential of the applicants because the open vacancies are junior expert tasks. The focus in Statistics Finland's other recruiting from outside has been on the professional competence of the applicants, for instance in the recruitment of an expert on a certain phenomenon, or an IT professional.

A limited number of posts are open in group recruiting and good applicants are often left unselected. A so-called pool of disposable competence has been formed of these applicants, which can be resorted to in acute staff change situations to fill fixed-term post, such as deputies. This way the applicants gain work experience that may be useful in becoming recruited to permanent posts. Centralised recruiting releases resources from the statistics departments for their core activities but, on the other hand, ties up HR resources. Recruitment needs should be anticipated better so that sufficient HR resources could be guaranteed.

A need may arise in future to recruit personnel simultaneously, much like in group recruiting, for different posts but for different competence requirement levels. Besides challenges arising from legislation, this would also challenge the marketing of vacancies, reaching of the right target group and the comparing of applicants. The competence required for high competence requirement levels is often difficult to find even from outside the organisation. There are also plans to apply the group recruiting model to the recruitment of undergraduate trainees. So far, group recruiting has only been used in the recruiting of persons for permanent civil service posts.

Several hundreds of applications are received all at once in group recruiting. Reaching the right target group in the job advertising would make the initial selection of candidates easier. The advertising channels should be carefully chosen so that it will reach exactly the right target group. The process could also be made lighter by making the initial selection of interview candidates by means of a video interview.

Getting the recruited persons committed to Statistics Finland is one challenge. Supervisors and the management are encouraged to draw up a career plan for the recruits together with them. The idea has been that the persons would change tasks in around three years' time. By changing tasks, the experts would not only learn new things themselves but would also bring their competence and a fresh perspective to different statistics. In group recruiting the career development of the recruited persons (changing of tasks, level of competence required in tasks, development of pay) will be tracked systematically at intervals of a couple of years.

CAREER PLANNING OF EXPERTS AS A TOOL FOR DEVELOPING STATISTICAL COMPETENCE

The purpose of career planning is to develop the employees' careers based on prior experience and existing competences, striving to match both the employee's career ambitions and the employer's needs. An employee's career is an accumulation of all the various tasks that he or she has performed during his or her active working life. Traditionally, a career was seen as a "privilege" of the supervisors, while today all employees are considered to have a career. The career is examined as a cyclical development that sometimes levels out and sometimes has more active phases. Career changes are characterised by looking for new tasks or challenges and succeeding in them.

For supervisors, career planning and management is part of managing employees and competences. Active career management of employees also develops labour force competences and creates flexibility in terms of internal mobility for the employees.

In the career planning efforts of Statistics Finland, an employee works on his/her personal career plan, while the supervisor supports and guides him/her in line with the strategic goals. At Statistics Finland, employees can draw up their career plans either while taking part in coaching or independently aided by online instructions and material. The employee collects in the career plan practical measures that help to achieve the targets. A career plan is drawn up to cover several years and revised in annual personal appraisal discussions or as required.

In a nutshell, career planning at Statistics Finland is about looking at the development of competences and tasks over an extended time span, increasing competence and expertise, matching tasks and employees, work motivation and working together.

CAREER PLANNING IS A TOOL FOR COMPETENCE MANAGEMENT

Career planning is a tool for competence management that indirectly also supports the achievement of the organisation's strategic [2] goals. Career planning is an attempt to improve the quality and development of the organisation's competence capital, smooth functioning of processes and projects, and employee well-being and productivity.

TABLE 3. CAREER PLANNING

Objectives	Projected impacts of career planning
Promoting HR planning. In particular, qualitative or competence related long-term planning	Career planning builds bridges between the individual and organisational level competence targets. For supervisors and managers, career planning is one tool for systematically examining the overall competences of a unit/department.
Promoting process management and process-like operation	Increased engagement in career planning supports examining competences across the boundaries of departments. Drawing up a career plan helps an employee to consider his/her personal development at the level of the entire organisation. Career planning creates channels for internal mobility and networking.
Project resource allocation	Career plans make the employees' competences and their development targets visible to the supervisor and further to the director, making it possible to draw on them when allocating resources to projects (talent management perspective).
Retaining and developing competent staff	Career planning makes competence development more systematic at the individual level, gives employees an outlook to the future and thus supports long-term commitment.
Evolving as a learning organisation	Career plans and career planning coaching support peer learning and the sharing of learning at the individual level.
Support for staff well-being and professional and interactive management	A career plan is likely to facilitate the matching of tasks and competences, to improve motivation and, consequently, to promote well-being at work. Career training supports the supervisor's HR and competence management skills.
Increasing productivity	A working career planning system supports a correct allocation of competences and appropriate use of resources. The fact that well-being at work improves productivity has been incontestably proven by research. A working career system is a means for increasing staff mobility.

CAREER PATHS AND EXPERT CAREERS AT STATISTICS FINLAND

In 2007, a preliminary study related to career paths and planning was conducted by the HR unit of Statistics Finland. This was followed by three HR led projects to develop career thinking and tools for career planning as well as to plan career coaching. During the coaching, career plans were drawn up, new tools for career planning were developed and learning materials were produced. In terms of career thinking, Statistics Finland can be seen as having three career paths, or a management career, an expert career and a professional career.

It is part of the principles of career thinking that the employees can freely move from one career to another, or between tasks. The tasks at Statistics Finland are categorised into statistical work, information services, information technology, administration and management tasks. Openness is a key

value that directs the activities of Statistics Finland. For this reason, career planning focuses on various obstacles to career progress, their identification and their elimination.

An expert's career at Statistics Finland is described as having four steps. This model and frame of reference can be used for planning an expert career. The key idea of the model is that employees will progress in their careers as their expertise is deepened and broadened by developing their set of tasks. The set of tasks consists of basic tasks (for example, statistical work) and development, networking, teaching and studying tasks.

FIGURE 2. EXPERT CAREERS

The description of career steps has been translated into more concrete terms by associating the steps with examples of job titles, competence requirement levels, and the nature and orientation of an expert's work. In the contents and orientation of a leading expert's work, for example, networks, creativity and the future are stressed, while for an expert, the focus of the work is on statistical processes and mastering the basic tasks.

An expert career is an entity comprised of various tasks. Career ambitions find expression in a career plan. The career plan is goal-oriented and describes the tasks and competences through which the expert wishes to deepen and/or broaden his/her expertise in the future. Following the Policy Outlines of Personnel Strategy of Statistics Finland [3], tasks should be rotated every 3–5 years. This improves flexibility and supports preparedness for change both at the individual and the organisational level.

PRACTICAL IMPLEMENTATION OF CAREER PLANNING

Before putting career planning into practice, its processes and tools had to be formulated and its target group identified. In this work, the operating culture of the organisation and its management, planning and monitoring processes were taken into account.

TARGET GROUP FOR CAREER PLANNING

The principles determining who should primarily be drawing up career plans were defined by Statistics Finland. Preparing a career plan takes up time and resources, both on the part of the employee and his/her supervisor.

The following should prepare a career plan:

- Persons who, because of their critical competences and/or tasks , play such a key role in the activity of Statistics Finland that focusing on their retention by creating a career horizon for the future is particularly important (key tasks and employees performing them);
- Persons whose motivation to develop it is, for one reason or another, particularly vital to support;
- Persons who are under pressure to share their competence, for example because of approaching retirement or to safeguard deputising arrangements;
- Persons in whose tasks extensive changes and/or cutbacks are expected over the next few years and who need to find a new direction;
- Persons who themselves are willing to systematically look at their development and to draw up a career plan.

CAREER PLANNING TOOLS

Creating the following tools and making the personnel aware of them was a precondition for putting together the career planning process of Statistics Finland. Career planning tools include:

TABLE 4. CAREER PLANNING TOOLS

Tool	Purpose and use
Career planning process description	Describes the steps and tasks on which a career plan can be based.
Career planning template	Describes the contents and schedule of the plan.
Competence models	Help to determine what types of competence are required.
Appreciative listening method	Describes the principles and operating method of discussions between supervisors and subordinates. Focuses attention on genuine dialogue that is vital in careers management.
Coaching and other support material for career planning	Put career planning into practice under the guidance of the HR unit (coaching) or independently (material).

CAREER PLANNING PROCESS

The career planning process consists of three steps: drawing up a career plan, the completed plan and its implementation. The career planning process can be described as follows:

FIGURE 3. CAREER PLANNING PROCESS

Drawing up a career plan (1) is a process that proceeds through certain steps. The end result is a completed career plan (2), into which development targets and the means for reaching the targets according to an agreed schedule are collected. Implementation of the career plan (3) comprises completing the agreed steps, monitoring and elaboration, for example in connection with appraisal discussions.

The process of drawing up a career plan (1) has four steps. In step 1, the employee considers his/her current status, or his/her current career, competences and interests. In step 2, he/she thinks about the future, or the targets associated with the work/development, and their relation to the organisation's targets. In step 3, the employee looks at the options and means offered by the organisation for achieving the targets, and in step 4, he/she puts these ideas together into a concrete career plan. Drawing up a career plan takes a few months. The employee should work on the plan together with his/her supervisor.

CAREER PLAN TEMPLATE

The career plan template helps the employee put together the ideas he/she comes up with when drawing up the plan into a concrete career plan (contents, schedule, monitoring). The implementation of the career plan is monitored up and the plan is elaborated on as necessary.

COMPETENCE MODELS

The competence models of Statistics Finland concern statistical, information technology, information service, management and administration work. The models make visible the competences needed in various tasks. Competence models are used in career planning to think about the future and the competence challenges associated with various tasks and changes/transitions; for example, the competence challenges faced by an employee wishing to move from statistical work to information service work or a management career. Competence models are also used to identify the competence that is required. The competence model for statistical work, for example, helps to analyse and identify various elements of statistical competence.

APPRECIATIVE LISTENING METHOD

Drawing up a career plan is a process in which dialogue with oneself and others is crucial. During this process, the employee should regularly discuss the targets of the career plan and means of development with his/her supervisor. These discussions aim for a dialogical approach. In career discussions, the supervisor's role is that of a facilitator. His/her tasks include listening, considering possibilities and building visions of future. Key principles of appreciative listening include listening, a dialogical approach, appreciation and honesty. The supervisor's task is to support the subordinate in the various steps of completing a career plan, not to offer ready-made solutions to questions that come up.

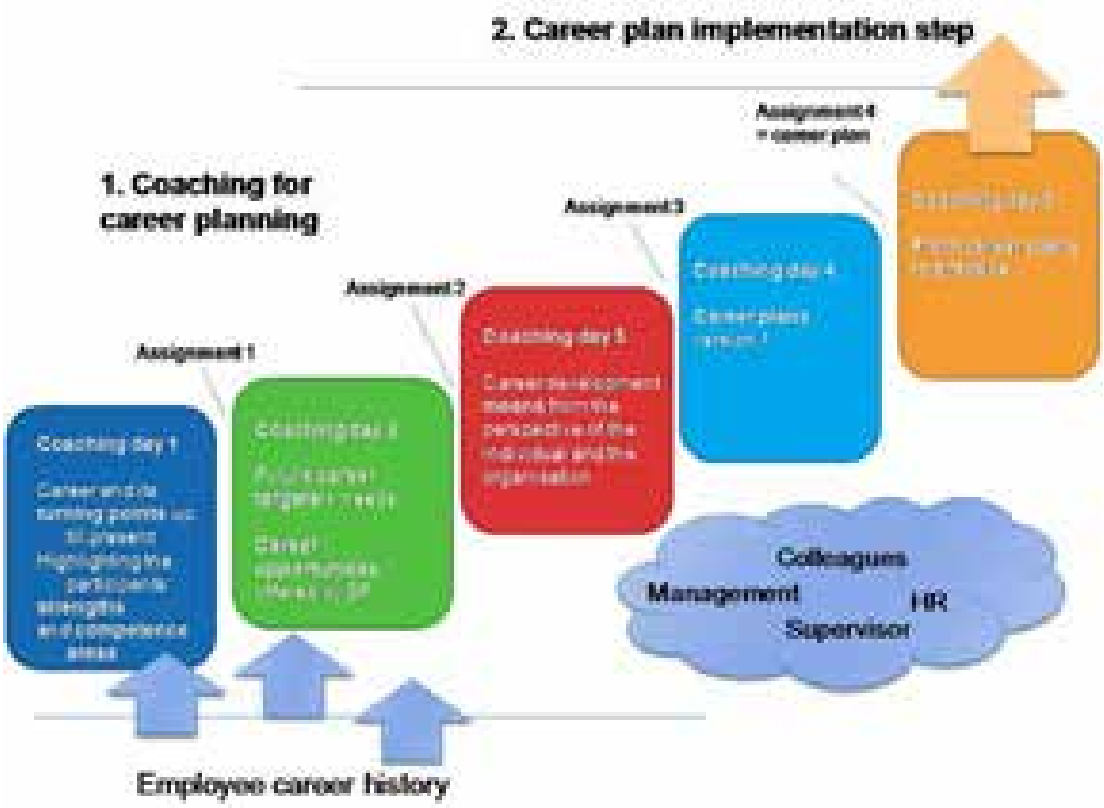
COACHING AND MATERIAL TO SUPPORT CAREER PLANNING

During the career coaching programme in 2009–2010, the HR unit produced practices and tools for career planning and drawing up career plans together with the participants. The participants in this coaching were experts and their supervisors. During the coaching, the experts completed career plans for themselves. The training for supervisors focused on how the supervisors could support their subordinates' career planning.

The career coaching consisted of five days, four of which were spent putting together the career plans, while on the final day the participants presented their plans to the others. In between the coaching days, the employees worked on their career plans through assignments and discussions with their supervisors. As necessary, the director of the department was also invited to take part in these discussions.

The career coaching consisted of the following contents:

FIGURE 4. CONTENT OF THE CAREER COACHING



The career coaching material was posted on the careers pages of the intranet. The pages were built to guide employees in independently drawing up their career plans using the template and materials provided. The pages naturally also play a role in communications.

The pages consist of a front page and the following sections:

- How to draw up a career plan: the steps in drawing up a career plan
- For the supervisor: the supervisor's role in supporting the drawing up of career plans
- Training: content descriptions of career coaching for supervisors and subordinates
- Material: a list of career planning materials and tools.

Materials and tools used for career planning include articles on career thinking, strategy documents of the organisation, tools for identifying, sharing, evaluating and developing competences including competence models, statistical work as information work, recognizing tacit knowledge and the CV. An employee's career was analysed based on his/her life course and the composition of his/her professional identity as well as through peer discussions and dialogue. The dialogical approach in discussions between supervisors and subordinates was rehearsed using the methods of appreciative listening and facilitating supervisory work.

EXPERIENCES GAINED FROM CAREER PLANNING

Based on feedback received on the coaching and discussions, we can say that at the individual level, the coaching succeeded in increasing the participants' awareness of their own competences, careers and future career opportunities. The participants also received support in planning their careers and finding career options and means for development. At the level of the organisation, the project succeeded in increasing the supervisors' and the management's awareness of the means for career planning and development.

The results of the Personnel Survey [4] indicated that the coaching had significantly advanced career thinking at Statistics Finland. Those who had participated in the coaching played a key role in passing on the message. Statistics Finland's career planning monitoring model makes it possible to track the individual and organisational level impacts of career planning. In addition to developing competences, the model also includes monitoring of the impacts that career planning has on well-being at work. The model has not yet been systematically introduced.

The career planning process and materials were developed together with the experts and supervisors who took part in the coaching. This helped to introduce the elements of curiosity and creativity and a dialogical approach to the coaching.

NEW CHALLENGES TO CAREER PLANNING

Statistics Finland will utilise career planning in the introduction of its new business information system in 2013–2014. This reform will directly concern some 100 people and two statistics departments. In the new information system, the entire statistical production process will be renewed from the collection of data to their editing and dissemination. At the same time, shared applications, methods and functions will be introduced. The objectives and operating mode of the information system are described as a vision that will come into a sharper focus as the project progresses.

The new process will also create a challenge for developing and partially reorganising activities surrounding it. Developing shared rules of process management and evaluating the impacts of the changes on future tasks and statistical competences play a key role.

Career planning is seen as a good tool for managing future competences, identifying training needs and planning training. Career planning is a tool for change management through which the objectives of the individual, the organisation and the activity can effectively be reconciled. Career planning will support the management of the introduction phase in a situation where the individual and the organisation are making the transition from the old procedure to the new one.

GROUP RECRUITING AND CAREER PLANNING AS NEW TOOLS FOR COMPETENCE MANAGEMENT - SUMMARY

Group recruiting is a flexible way to direct competence acquired from outside to the core processes and the activities supporting them. The recruiting highlights the competence needs of Statistics Finland that are expressly connected with the different work stages of the statistical production process.

Career planning helps to identify and anticipate changes in competence needs. It enables the directing of Statistics Finland's existing competence to the core processes, and functions as a means of sharing competence. With career planning, the goals of the individual, the organisation and the activities can be efficiently reconciled. For the employee, career planning is a way to develop his or her duties. For the supervisor it is a tool for competence management.

Statistics Finland aims to retain its competitiveness on the labour market. The competition for competence will toughen in the coming years, which makes a positive employer image important. Group recruiting and career planning support the building of employer image. It is important think of the employees, both fresh recruits and those with longer service records, as messengers: the image as employer is built by what is said about the organisation outside it. Meaningful job tasks, career planning and internal mobility are examples of the characteristics of a good employer. It is important to convey a message about them to the outside world. The aim is to make career planning part of the job orientation of new recruits. Career planning and the transparency of the recruitment process also correlate with job satisfaction and motivation.

In Statistics Finland's work on the building of its image as an employer, career thinking is linked to the renewal of its website pages on recruitment. The web pages on recruitment, in turn, function as the marketing channel to the target group that is interested in Statistics Finland as an employer and possibly possess the right kind of competence. They convey a message about different career paths, career opportunities and systematic career development. Employer communication is being developed continuously at Statistics Finland together with other employers in the state administration.

Competence development measures, such as career planning and group recruiting, are used to enhance the capacity of the personnel to cope with the challenges of work, which especially arise from the personnel's turnover, fast IT development, high quality requirements in the field of statistics and international activities. Group recruiting and career planning function as new competence development tools that support the personnel's flexibility and renewal capacity. Future challenges to the development of competence will arise from, for instance, the new personnel information system KIEKU, and competence audit.

REFERENCES

[1] Personnel Balance Sheet of Statistics Finland 2011
[2] Operating Strategy of Statistics Finland for 2012– 2015
[3] Policy Outlines of Personnel Strategy of Statistics Finland 2010–2015
[4] Personnel Survey of Statistics Finland 2011

APPENDIX 1. RECRUITING NEEDS SURVEY

Inquiry among departments

This inquiry aims to ascertain your department's needs to give permanency to your fixed-term employees and for recruitment of new employees. In respect of new recruiting, the inquiry aims to identify the recruitment needs that are suitable for group recruiting, as well as your other known recruitment needs.

1. Your department's needs for conversion to permanency

Report here the fixed-term employees with an immediate need for permanency. To start the measures necessary for conversion to permanency, also justify the need for the conversion to permanency and provide other background information (open vacancy exists/need to establish a vacancy, possible reorganisation of vacancies, application procedure/possible direct appointment, planned timing). The prerequisite to conversion to permanency is that the department has the necessary appropriations for remuneration.

2. Group recruiting

Next group recruiting of statistical experts has been planned to start in spring 2012. In group recruiting, statistical experts are recruited with view to the needs of the whole of Statistics Finland for such tasks in which the new experts have the opportunity to improve their statistical competence and learn new things. The tasks in group recruiting locate in competence requirement group 10 of Statistics Finland's remuneration system. Describe the tasks for which your department would have recruitment needs in the next group recruiting.

a) What kinds of tasks related to statistics production do your recruitment needs concern?

b) What kinds of tasks related to statistical information service do your recruitment needs concern?

c) Do the tasks involve project working, development tasks, training or consulting tasks? What kinds?

d) Apart from general working life skills (e.g. language skills, interaction skills, willingness to learn and develop), other skills that are essential from the point of Statistics Finland are also expected of new experts. Which IT skills (e.g. SAS, R language, C language) and methodological statistical skills are essential from the viewpoint of your department in the group recruiting?

e) Which basic degrees (major subject, minor subject) are essential from the viewpoint of your department in the group recruiting?

3. Other recruitment needs of your department

In order to allocate resources for the recruitment services of Management Services, we also need information about your department's other known recruitment needs. What kinds of other,specific recruitment needs besides group recruiting does you department have towards the end of 2011 and in early 2012? When?

4. How many persons would you estimate your department's recruitment need to be?
Report separately needs for group recruiting and other, specific recruitment needs.

APPENDIX 2: AN EXAMPLE OF JOB ADVERTISEMENT FOR GROUP RECRUITING

Statistics Finland produces diversified information on society and is an active member of the international statistical community. We employ over 900 experts in a variety of fields at our head office in Helsinki and in our regional services centres, and as interviewers throughout the country. To respond to changing tasks and challenges we need reinforcements to our group of experts.

Come and work as an expert with us! (300-183-12)
We are looking for competent people with a university degree for interesting and diversified tasks in the production and development of statistics. The tasks entail compilation of statistics and analysing of results, process planning and steering, project work and development of statistics.
As an expert in our organisation you will be working in the areas of economic, business or population statistics. The field and contents of the tasks may vary according to your skills and interests.
We offer:

- Work at a vantage point in the production of information on society
- An international operating environment
- Challenging and diversified tasks in a continuously developing, respected expert organisation
- Good career development opportunities
- Pleasant work community and co-workers

From you, we are looking for:

- Suitable university degree preferably comprising studies in economics or social sciences and statistics
- Versatile IT skills, such as knowledge of SAS software or other corresponding statistical data processing program
- Willingness to learn new things and develop along with tasks
- Fluent oral and written communication skills
- Good interactive skills

Knowledge of the field of statistics and statistics would be an advantage. The management of the tasks involved requires excellent written and oral skills in the Finnish language and satisfactory skills in the Swedish language, as well as fluency in the English language.

The open posts are placed throughout Statistics Finland and their remuneration is determined by Statistics Finland's remuneration system. The gross starting salary will range from EUR xxxx to EUR yyyy per month depending on the competence and experience of the person selected to the post. You may also submit your own pay request.

Further information on the posts is available from Statistics Managers NN and MM and from HR Planning Officer SS, tel. +3598 9 17341
The application period closes at 3 pm on xx Month xxxx.

The posts can be applied to via the HELI electronic recruitment system at: www.valtiolle.fi.
Written applications should be addressed to Statistics Finland, Registrar's Office, FI-00022 Statistics Finland (street address: Työpajankatu 13, Helsinki) Applications should be marked with the name of the task and the job code. Applications will not be returned.
Annonsen på svenska: www.stat.fi/arbetsplatser.

16. MOBILITY AND KNOWLEDGE SHARING

Marleen Verbruggen and Adrie Ykema Statistics Netherlands

Several trends in society require an appropriate response from the statistical institutes. For instance, the political pressure to reduce the administrative burden, less willingness to respond to time-consuming questionnaires, the volatility of information, the increasing need for rapid, to-the-point and easily accessible information, the shift to mobile devices, and finally, the increasing importance of social media. The challenge for the statistical institutes is how to fully use their know-how, innovative power and creativity in preparing for the future.

This paper describes how Statistics Netherlands has developed its Knowledge and Innovation programme. The knowledge part of the programme has three goals: (i) to preserve knowledge during the expected retirement wave (ii) to develop and share knowledge in order to be prepared for the future, and (iii) to provide adequate tools for knowledge sharing.

The mobility of employees is a key vehicle for sharing knowledge. Besides job rotation there are other instruments that can be used to create more flexibility in the organisation and stimulate knowledge sharing. This paper presents the first experiences of Statistics Netherlands with working in flexible, multidisciplinary teams and internal network communities.

INTRODUCTION

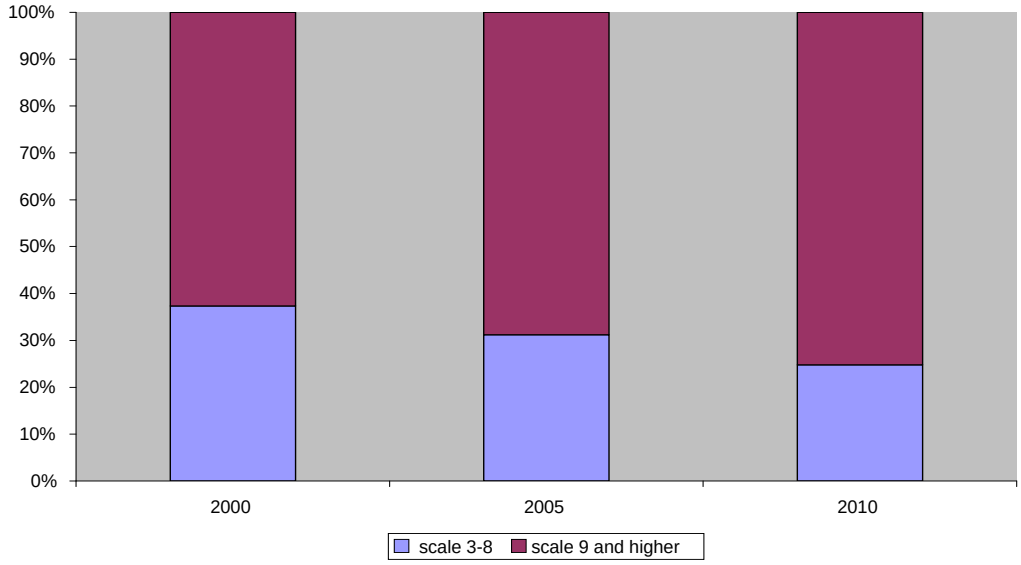
Several trends in society require an appropriate response from our statistical offices. For instance there is the political pressure to reduce the administrative burden; households and companies are less willing to respond to time-consuming questionnaires; information is highly volatile and the need for rapid, to-the-point and easy accessible information is increasing; there is the shift to mobile devices and social media are becoming increasingly important. The challenge for statistical offices is to maximise the use of their knowledge and innovation power to remain able to perform pro-actively and creatively to these developments.

In addition to trends that influence the content the statistical work programme, there are several factors that have an impact on the workforce. At Statistics Netherlands we face the following issues:

- *Budget cuts:* Statistics Netherlands has faced several budget cuts over the years. In the period 2003 – 2012 the workforce shrank from 2,630 to 1,850 FTE. Instead of a reduction in the statistical programme we faced an even higher demand for output.

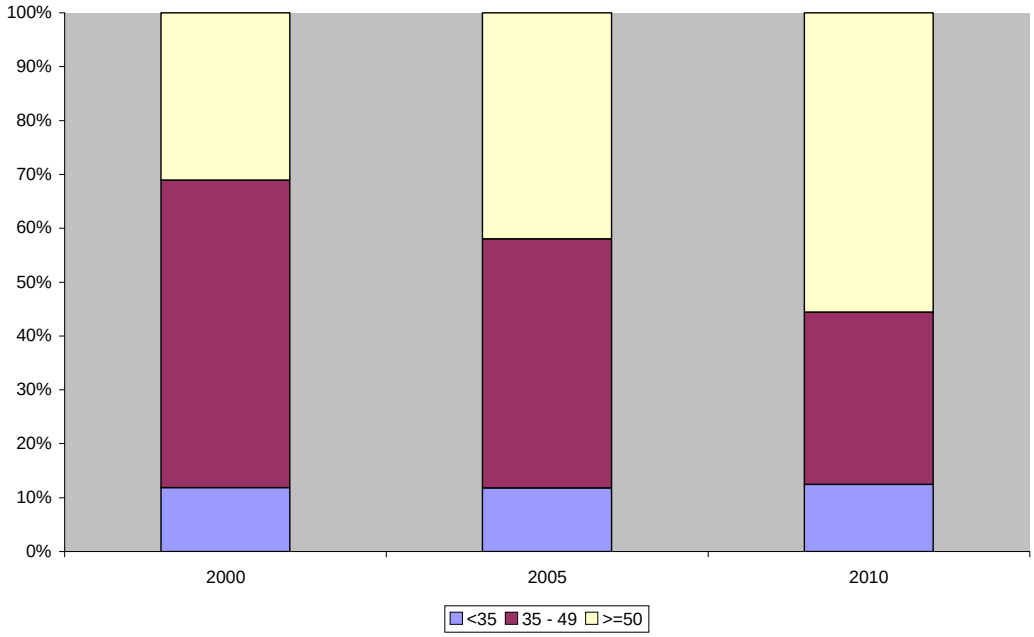
- *Changing skill needs:* the budget cuts over the past years were realised by an increase in efficiency. This was achieved by streamlining the process and introducing smart IT solutions. Furthermore some statistics switched from primary to secondary data collection, such as the use of fiscal data for production statistics. These changes meant that there was considerably less demand for staff in low and medium skilled jobs, while the number of staff in highly skilled jobs showed a moderate increase (Fig. 1).

FIGURE 1 – RATIO BETWEEN LOW AND MEDIUM (SCALE 3-8) AND HIGH SKILLED JOBS (SCALE 9 AND ABOVE) IN 2000, 2005 AND 2010



Ageing: the average age at Statistics Netherlands is about 50 years, which is much higher than in other Dutch government organisations. It has increased considerably in the last decade (Fig. 2).

FIGURE 2 – AGE DISTRIBUTION STATISTICS NETHERLANDS IN 2000, 2005 AND 2010



Retirement: about 270 people will retire within the next 4 years, which is more than twice as many as in the last 4 years (Table 1). The number will increase even more in the 4 year period after 2016 (assuming no change in the retirement age of 65). These data illustrate the importance of an adequate knowledge management programme to preserve crucial knowledge.

TABLE 1 – RETIREMENT IN FTE IN THE PERIOD 2009 – 2020

Year	Low and medium skilled staff (3 - 8)	High skilled staff (> 9)	Total
2009 – 2012	23	79	102
2013 – 2016	77	190	267
2017 - 2020	101	246	347
Total	201	415	716

Offering an inspiring working environment: as there will be very limited possibilities to recruit and dismiss in the coming years, flexibility at the "internal labour market" is needed. In addition, the question how to motivate and retain the workforce will become more important.

Employability, mobility and knowledge management are key words in this regard. The Strategic Personnel Plan 2006–2012 (CBS, 2006) addressed mobility in the sense of recruitment, internal and external mobility. In 2008, the vision and action plan "Transition Statistics Netherlands" (Muiswinkel, W.J. van, 2008) was published. It focussed entirely on mobility at Statistics Netherlands. In 2009 the Strategic Personnel Plan was updated, taking into account the additional budget cuts, the impact of changing competence requirements and the ageing issue. The importance of employability, mobility and knowledge management were reconfirmed.

In this paper we will elaborate first on the interaction between mobility, employability and knowledge sharing in section 2. Section 3 deals with the actors and activities to achieve these goals. Section 4 describes the recently started Knowledge and Innovation Programme. Section 5 summarises our experiences and the last section provides some concluding remarks and questions.

INTERACTION BETWEEN MOBILITY, EMPLOYABILITY AND KNOWLEDGE SHARING

From an organisational point of view, we would like to achieve two key goals with internal mobility: flexibility in the organisation, and sharing knowledge and best practices.

Statistics Netherlands needs flexibility because the content of the statistical work is changing and the possibilities to recruit and dismiss people are limited. This means that the work now and in the near future has to be done by the current workforce.

The second key goal of mobility is sharing knowledge and best practices. The lower the level of internal mobility, the higher the risk that knowledge sharing stays limited because knowledge is likely to remain within the organisational borders of a statistical process. Greater mobility means that people will increase their network, and their understanding of the goals and processes of other organisational units and of the organisation as a whole. So they will be better able to share knowledge and to work with other experts within or outside the organisation. An active exchange of best practices within the organisation will improve processes and speed up learning processes, so that the organisation is better able to deal with external changes.

We can also identify two key goals from the workforce perspective:

- Increased employability
- An interesting and challenging working environment

Increased employability is not only beneficial to employers, but also to employees who improve their chances of finding an attractive job if the present job ceases to exist. A very low level of mobility also increases the risk of "pigeon holing" (Weggeman, 2003). Pigeon holing may occur when tasks and

responsibilities become very familiar. The expert builds up routine and starts relying on it to a point where the known solutions are applied to all situations: "if you have a hammer every problem becomes a nail". Eventually the expertise becomes outdated and employability considerably reduced.

Keeping an interesting and challenging environment speaks for itself. Most people are better motivated to stay with an organisation if their work offers enough variety and challenge.

TABLE 2 – AVERAGE UPWARD MOBILITY AT CBS (YEAR % CHANCE)

Scale	< 35 years	35 – 49 years	> 50 years
3 to 5	14.0	6.4	1.5
6 to 7	18.0	8.5	2.1
8	12.3	5.5	1.3
9	19.0	9.1	2.2
10	19.2	9.3	2.2
11	10.0	4.4	1.1
12	12.1	5.4	1.3
13	22.5	11.1	2.7

Summarising, internal mobility offers important benefits to employers and employees. However, at Statistics Netherlands there are also a few constraints that limit internal mobility considerably:

- A very high level of mobility increases the risk of discontinuity in the knowledge of working processes.
- The benefits of internal job mobility are visible in the long term (e.g. increased employability) while the costs manifest themselves in the short term (e.g. learning time).
- With an increasing age, employees seem less eager to change jobs and upward mobility slows down (Table 2).

ACTORS AND THEIR MAIN RESPONSIBILITIES

Several actors at Statistics Netherlands stimulate mobility, employability and knowledge sharing. The main actors are:

The manager of a statistical unit: who is responsible for encouraging personal development and employability. The manager discusses suggestions for education, training, learning on the job, mobility etc. When someone leaves the unit, the manager is responsible for timely recruitment and the transfer of crucial knowledge to the successor/unit.

The employee: who is responsible for personal development and personal employability, and identifies e.g. training needs. These are discussed with the manager.

The human resources manager: who advises and assists the manager of a statistical unit with suggestions for training, mobility and recruitment. Every statistical unit has its own human resources manager.

The mobility manager: who has a central advisory and coordinating role with regard to recruitment, internal and external mobility. He chairs the Matching Consultation, a regular meeting with representatives from the statistical units aiming to fill vacancies with in-house candidates. He also coordinates the external mobility programme (external networking, special mobility assistance for employees, etc.).

Knowledge and Innovation programme: stimulates knowledge sharing and innovation at Statistics Netherlands (Braaksma et al, 2012). In order to strengthen the impact of the measurements introduced by the Strategic Personnel Plan, Statistics Netherlands has started a Knowledge and Innovation Programme in 2012 to give an extra impulse to mobility and knowledge sharing.

THE START OF THE KNOWLEDGE AND INNOVATION PROGRAMME

At the end of 2011, when the plans for the Knowledge and Innovation Programme were prepared, the choice was to focus on three goals (i) preserve knowledge during the expected retirement wave (ii) to develop and share knowledge in order to be prepared for the future, and (iii) to provide adequate tools for knowledge sharing.

It is considered crucial to focus on the knowledge needed for innovation and, as a statistical office, on being prepared for the future. The initial literature study showed that there are many instruments that can be used to achieve the knowledge goals. However, it also became very clear that not all instruments are equally successful in all organisations. Therefore, we visited eight other, profit as well as non-profit, organisations and asked them about their best practices. This yielded many good ideas and, even more importantly, useful lessons. These organisations had a surprisingly different focus on knowledge programmes and preferred instruments. Some focussed entirely on structure/process instruments, others focussed on developing their staff, or even on tooling.

Statistics Netherlands decided to organise the Knowledge programme on the basis of the literature and the suggestions of external and internal advice and use the following eight instruments:

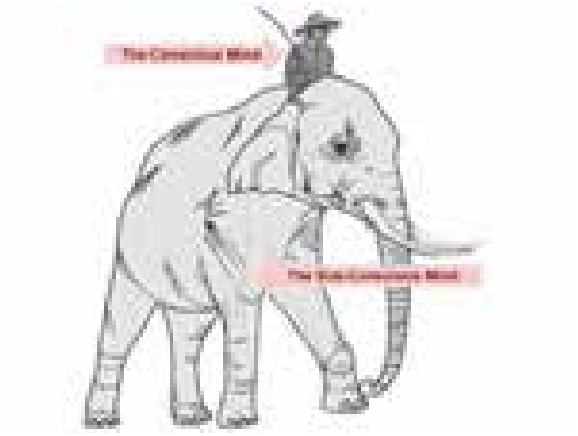
- *Preserve knowledge*: (1) Expert - apprentice collaboration and (2) Organising interviews/debriefing experts leaving the office (retirement).
- *Share and develop knowledge*: (3) Organising a general introduction and familiarisation programme (4) Organising dedicated theme meetings, brain storming sessions, presentations and workshops. (5) Stimulating multidisciplinary collaboration, expert collaboration across organisational boundaries (networking, communities) (6) Stimulating collaboration with universities and private companies.
- *Tools for knowledge sharing*: (7) Improved accessibility of internal documents (e.g. papers) and (8) Effective use of internal means of communication (e.g. Intranet, SharePoint, Yammer, wiki's).

As Statistics Netherlands has very little internal mobility, which appears very hard to increase, we introduced the term "virtual mobility", i.e. other instruments besides internal job rotation, that encourage flexibility and/or sharing knowledge. This includes initiating small and bigger collaboration projects between the statistical units and the personnel unit to attain the mobility goals without the physical job changes. In this manner we are able to learn what kinds of approach are best suited for Statistics Netherlands.

ACTIVITIES INITIATED TO STIMULATE KNOWLEDGE SHARING AND 'VIRTUAL MOBILITY'.

In this section we will briefly describe several activities initiated by the Knowledge and Innovation programme. But first a short interlude on the elephant and the rider:

FIGURE 3. ELEPHANT AND THE RIDER



The psychologist Jonathan Haidt says in his book "The Happiness Hypothesis" that our emotional side is an elephant and our rational side is its rider. Perched atop the elephant, the rider holds the reins and seems to be the leader. But the rider's control is precarious because the rider is so small relative to the elephant. Anytime the six-ton elephant and the rider disagree about which direction to go, the rider is going to lose.

Most of us are all too familiar with situations in which our elephant overpowers our rider. We have experienced this if we have at times slept-in late, overeaten, tried to quit smoking and failed, or gotten angry and said something we have regretted. The elephant's hunger for instant gratification is the opposite of the rider's strength, which is the ability to think long-term, to plan, to think beyond the moment. But what is surprising is that the elephant also has enormous strengths and that the rider has crippling weaknesses. The elephant isn't always the bad guy. Emotion is the elephant's turf—love and compassion and sympathy and loyalty. That fierce instinct one has to protect ones own children against harm—that's the elephant. That spine-stiffening you feel when you need to stand up for yourself—that's the elephant.

And even more important if you are contemplating a change, the elephant is the one who gets things done. To make progress toward a goal, whether it's noble or crass, requires the energy and drive of the elephant. And this strength is the mirror image of the rider's great weakness: spinning his wheels. The rider tends to overanalyze and overthink things. If you want to change things, you must appeal to both. The rider provides the planning and direction, and the elephant provides the energy. When elephants and riders move together, change can become easier by:

- Directing the rider. What looks like resistance is often a lack of clarity. So provide crystal-clear direction;
- Motivating the elephant. What looks like laziness is often exhaustion. The rider can't get his way by force for very long. So it's critical that you engage people's emotional side—get their elephants on the path and get them cooperative;
- Shape the path. What looks like a people problem is often a situation problem. When you shape the path, you are more likely to make change, no matter what's happening with the rider and elephant.

Source: Switch - *How to Change Things When Change is Hard,* by Chip and Dan Heath (2010)

The metaphor of the elephant and the rider nicely illustrate the approach chosen for knowledge management. In the past, several initiatives were started, some more successful than others, while in general "knowledge management" and "knowledge sharing" are perceived as difficult subjects. The Programme has started several small initiatives – new or building on best practices – that will hopefully motivate the elephant, direct the rider and shape the path. At this time we do not exactly know what initiatives will be best suited, but we will discover them along the way. The challenge is to treasure the initiatives that perform well and quickly stop the initiatives that are not appealing.

THE INNOVATION LAB

The Innovation Lab is a physical space (a room in The Hague and a room in Heerlen connected by video conferencing facilities) that encourages collaboration and quick elaboration and testing of innovative ideas.

FIGURE 4. THE INNOVATION LAB IN THE HAGUE

Many ideas need the so called sand box environment to grow. The Innovation Lab offers this facility. In the Innovation Lab statisticians can work on laptops with fewer restrictions to test new methods, software or simulate statistical processes. It can also be used as a collaboration space. Every piece of furniture is on wheels, which makes it very flexible. This makes it a suitable environment for brainstorming sessions, workshops, informal presentations and open coffee sessions, etc.

The Innovation Lab is not a goal in itself but it provides the means to stimulate creativity, brainstorming, collaboration and focus. Due to its flexibility, alternative methods and processes can easily be simulated and tested. The Innovation Lab stimulates collaboration between different fields of expertise. It is an inviting and inspiring environment. The Innovation Lab was officially opened by the Director General and Deputy Director General in May 2012.

The first experiences with the Innovation Lab are very positive. Almost 20 workshops were organised there within the first month! The (technical) facilities and informal ambiance are much appreciated. The Innovation Lab is also used to work on several innovative ideas.

ORGANISATION OF WORKSHOPS, EVENTS AND OPEN COFFEE SESSIONS

Statistics Netherlands has a pool of facilitators, trained to organise and facilitate workshops. They are very experienced in formulating the aim of a workshop, the issues to be solved, designing the workshop programme and work methods, and chairing the meeting. The Knowledge and Innovation programme works in close collaboration with these facilitators e.g. by organising workshops around the special priority themes of the Innovation programme.

FIGURE 5. WORKSHOP OUTPUT INNOVATION

At Statistics Netherlands, workshops have already proved to be powerful tools for brainstorming and focusing at the start of a project, and for reaching a breakthrough at a difficult stage of a project or for exchanging experiences between different projects / or on a specific field of interest.

Events, like "markets", lunch meetings, presentations and open coffee sessions are also easily accessible means to stimulate sharing of knowledge between different fields of expertise.

THE R- AND SPSS-COMMUNITY

Statistics Netherlands has a very successful R-Community. R is a statistical software package used for statistical production and analyses. Statisticians can only get an R-licence if they have attained (internal) R-training and join the R-Community. The R-Community is very successful because issues encountered during programming are solved more quickly with the assistance of R-expert colleagues and when the standards developed by the R-community are followed, which assures that software code can be reviewed by colleagues (better quality of programming) and maintained in an production environment (knowledge sharing). Experts contribute to the community and in their experience they get something of at least equal value in return. The coordinator of the community is an R-expert who has built the community bottom-up through his enthusiasm, readiness to help, communication and persuasive powers. He and the other experts help colleagues with questions and code reviews, he organises meetings and is moderator of the R-wiki. This approach works very well.

This approach is being copied for SPSS. SPSS is a statistical tool that is used on a daily basis by about half the workforce. "Code reviews and standardisation (conventions in coding) will also be a big help

here. For instance, if people claim they don't need to write comments and if they are bombarded with questions in a review then they will have to start writing comments anyway. Especially if peers say: 'What are you trying to do in this piece of code?' According an expert: "If they don't, at least their manager will have the ammunition to make them do it".

The model is also copied to other areas of expertise, outside IT development, like the community of project managers, facilitators and users of mind mapping. They have slightly adapted the approach by selecting the most appropriate means for their communities e.g. building wiki's, organising peer coaching etc.

The benefits of communities are:

- Sharing of knowledge. By offering assistance and help, the quality of e.g. the software code improves;
- The work can be done more efficiently, because an expert doesn't need to find all the solutions, but can re-use solutions found by other experts;
- The process leads to more standardisation / agreeing on conventions and a higher quality of the software code or the services provided (e.g. in project management, facilitation of workshops) and best practices will spread in the organisation;
- It stimulates the use of state-of-the-art solutions, commitment and motivation;
- The organisation will be less dependent on individual internal or external experts.

THE 50+ PROJECT

The 50+ project was the result of a workshop organised in 2008 for employees aged over 50. The topic of the workshop was age specific human resource policy or how to keep an inspiring and motivating work environment. The group concluded that 50+ employees tend to stay at the same job for a long time for several reasons. When applying for in-house vacancies they seem less successful, and they are more reluctant to give up security. They are often satisfied with their familiar present job and are less motivated to try a new job. Performing different tasks on a temporary project basis can be part of the solution.

The 50+ project is managed by a project group, all over 50, and supported by a group of managers from statistical units. The project offers two possibilities: a temporary change of job or participation in a project outside the usual work environment. In both cases the participant will return to the "old" job. When two participants switch jobs and have a positive evaluation, the change of jobs can be made permanent. The 50+ project functions as a kind of market place. Managers offer projects and temporary jobs, statisticians apply for these projects and temporary jobs.

The 50+ project started as a pilot in one statistical division. As it proved successful, the scope of the project was gradually extended to other statistical divisions. Since the start of the project more than 20 people have found other work on a temporary basis.

CONCLUDING REMARKS AND DISCUSSION

Several trends in society require an appropriate response from our statistical offices. It is the challenge for us to use our knowledge and innovation power to deal pro-actively and creatively with these developments. In addition to trends that influence the content the statistical work programme, there are several factors that have an impact on the workforce, such as budget cuts and the ageing of the workforce.

Employability, mobility and sharing knowledge have become important topics and will remain so in the future. Job rotation is a powerful tool in this regard, but it has its limitations e.g. the trade-off between

short-term investments (learning costs) and long-term benefits (increased flexibility and employability). This creates resistance among management and staff. Initiatives in the past were not very successful, and internal mobility is still very low. Therefore Statistics Netherlands has added "virtual mobility" measures to increase flexibility and employability, such as stimulating ad-hoc multi-disciplinary teams, the 50+-project, and virtual communities.

The first results of the Knowledge and Innovation Programme are promising. The Innovation lab turns out to be a stimulating place for meetings and workshops. Many workshops were held there in the last couple of months. So far, these have been very successful: in a short time, mostly half a day, in multidisciplinary teams, a shared idea is created and/or developed. Discussions appear to be very fruitful and lead to new insights. Most workshops focussed on innovation, some on knowledge-sharing issues. Two workshops about the latter were especially interesting: one aiming at strengthening cooperation with Dutch universities has resulted in a shared action plan. In the second workshop seven "owners" of tools (share point, wiki, intranet, library etc) developed a shared view on the tooling landscape.

The R- and SPSS communities started and generate a lot of positive energy. However, it will take a while to find out if this way of working will be sustainable in the long term.

Concluding: although the programme is still very young and the results are premature, we noticed two important things:

1) Successful activities within Statistics Netherlands have to be "informal and interactive" and
2) "Virtual mobility" seems promising in our organisation in addition to "physical mobility" (job rotation) programmes

DISCUSSION:

- What experiences do other statistical offices have with similar programmes / projects?
- What would be a suitable way to exchange experiences and best practices between statistical offices and develop our *next practices*?

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17. BECOMING AN ATTRACTIVE EMPLOYER FOR FUTURE EMPLOYEES: SOME EXPERIENCES FROM STATISTICS NORWAY

Rita Braziunaite, Heidi Torstensen and Jan Byfuglien Statistics Norway

In the current labour market there are good opportunities for recruiting skilled professionals and technical workers. However, to attract 'the right' people is a critical challenge for Statistics Norway as the communication channels used by the company should be more adapted to the needs of the 'digital society'. This paper aims to discuss how Statistics Norway is branding itself, how the company is perceived in the eyes of the students and what are the most attractive communication channels that enable to reach prospective employees with the skills and behaviours that are necessary for organisation to succeed. Particularly, experiences from building the new website of Statistics Norway will be emphasized as well as other channels such as career fairs and company presentations on campuses will be overviewed, which believed are necessary tools in strengthening employer brand.

INTRODUCTION

For the moment there is a relatively good supply of potential candidates with relevant competences for recruiting. However, to be visible and to attract 'the right' people is a critical challenge Statistics Norway is facing. In the relatively near future this challenge may be even more important as there may be stronger competition for candidates with relevant competences and background. In addition, due to age structure of the present work force, Statistics Norway will have to recruit and train more staff due to retirement of a significant number of knowledgeable and experienced employees. Currently, around 40 per cent of the employees in Statistics Norway are more than 50 years old, whereas situation in the Kongsvinger office is even more critical and has around 54 per cent employees in this age group. In 10-15 years' time there will be a noticeable number of employees who will retire. Many of those employees were working in Statistics Norway for almost all their lives and are competent in running various operations in different areas. The challenge is not only finding competent people to fill the vacant positions, but also attracting the right candidates who are willing to stay with the organisation for some time. At present, the turnover of employees in Statistics Norway accounts around 6.5% (2009), however higher among the newly recruited (with less than five years length of service). This affects the stability of competences and production capacity in some areas[1].

Statistics Norway is continuously investing in student research, profiling, employer branding, and definition of the competences that are needed in the organisation. All these initiatives contribute to make the organisation a more attractive employer and in creating interest in the field of statistics as well as ensuring recruitment including mathematicians, statisticians, economists, engineers and others.

Statistics Norway is aware of the changing surroundings and the challenges and opportunities employing a new generation. "The digital society" is a unique group of people born after 1980 and who are emerging in the workforce rapidly. They have grown up with technology like no any other generation, particularly communication technology and the Internet. They constitute the majority of Statistics Norway's new employees and in the near future they will be a major part of the entire organisation. There is a challenge finding effective communication channels to reach them, to recruit them and to integrate them in the current working environment.

[1] Re-engineering the statistical production process and the changing needs for human resources – some experiences from Norway. UN Forum on Human resources management and training. 3 - 5 Sept. 2008.

This paper aims to discuss the necessary tools to recruit future staff with relevant competences and different ways to become an attractive employer. It will also discuss how the company is currently perceived in the eyes of the students and what are the most attractive communication channels that enable to reach prospective employees with the skills and behaviours that are necessary for the organisation to succeed.

THE STRATEGY FOR BECOMING AN ATTRACTIVE EMPLOYER

In 2007, Statistics Norway decided upon a strategy for human resources as a sub strategy of the overall strategy document "Strategy 2007". One of the main headlines of this strategy highlighted the importance of becoming an attractive employer. Statistics Norway believes that it is essential to meet growing competition for qualified personnel by projecting the organisation as an attractive employer.

This strategy is being implemented through various actions in the annual work programmes and is a background for our work. Statistics Norway's Activity Plan for 2009 emphasized that skilled staff with an ability to adapt to change is a prerequisite for realising the plans that have been adopted. Targeted and systematic efforts are therefore being made to develop the right skill-set among employees to meet the requirements from a changing environment with new user requirements. Statistics Norway meets the competition for labour by promoting the organisation as an attractive place to work in relevant specialist domains at universities and colleges. Its presence at universities and other higher education institutions makes Statistics Norway more visible to future employees.

In addition, the Strategy for Human Resources 2007 emphasizes that Statistics Norway shall focus on recruiting and retaining well-qualified staff. Statistics Norway must offer competitive salaries, particularly compared to other public bodies. Opportunities for professional development shall be emphasised. In addition, flexible working hours and the opportunities for international contacts and to work abroad will be actively promoted in the marketing.

Moreover, continuously enhancing satisfaction of current employees and encouraging them to share their positive experience with potential candidates would contribute strengthening employer brand and increasing the attractiveness of the organisation. Statistics Norway's HR strategy underlines the importance of management and emphasizes what to expect from the leaders.

A leader in Statistics Norway:

- Implements the strategy
- Stimulates innovation and improvement
- Takes responsibility for the whole
- Develops expertise
- Treats employees as a whole

A management programme has been developed, deeply rooted in the organization's strategy and written principles for management. During the last two years, four major themes have been lectured, and each leader has carried out a 360 degree evaluation. It is more likely that qualified leaders are able to improve conditions for their employees by stimulating innovation and developing expertise. Satisfied employees are good ambassadors on behalf of the organization.

THE IMPORTANCE OF EMPLOYER BRANDING

Being an attractive employer requires a good strategy with targeted interventions and systematic work. Employer branding is a tool to position the organization as an attractive employer to selected audiences. Employer branding is a long-term work based on a deliberate plan. The common branding practice shows that brands cannot be built over night, they are built over time. The purpose of employer branding is to build a strong, attractive, true and consistent picture of the employer that will succeed in attracting and retaining key talent.

Statistics Norway is continuously working on improving the organization's brand as an employer. For two years Statistic Norway has engaged external consultants for advising and implementing a method for employer branding. At the same time Statistics Norway has continued its work on improving the image as a producer and as employer for existing staff.

The consultants suggested five steps to be followed to ensure efficient employer branding:

Step 1: Research
Step 2: Employer Value Proposition
Step 3: Communication Plan
Step 4: Communication Material
Step 5: Action

RESEARCH

The first step refers to the research that an organization should perform to acquire knowledge of the current position of the employer brand. Both external and internal researches are vital for creating a sufficient starting point of the employer branding strategy. Statistics Norway is regularly conducting both internal and external research which helps to create an understanding of internal and external target groups, to find out their perception of the organization and their needs. All this contributes to creating a useful base for decision-making in later stages of the employer branding process.

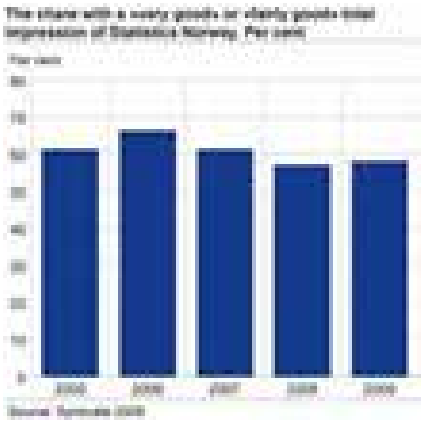
EXTERNAL RESEARCH

In 2008, Statistics Norway participated in a survey concerning students' career preferences, their employer preferences, the rankings of other employers, and the preferable communication. The survey made visible potential applicants who are attracted to Statistics Norway and how Statistics Norway is perceived amongst them.

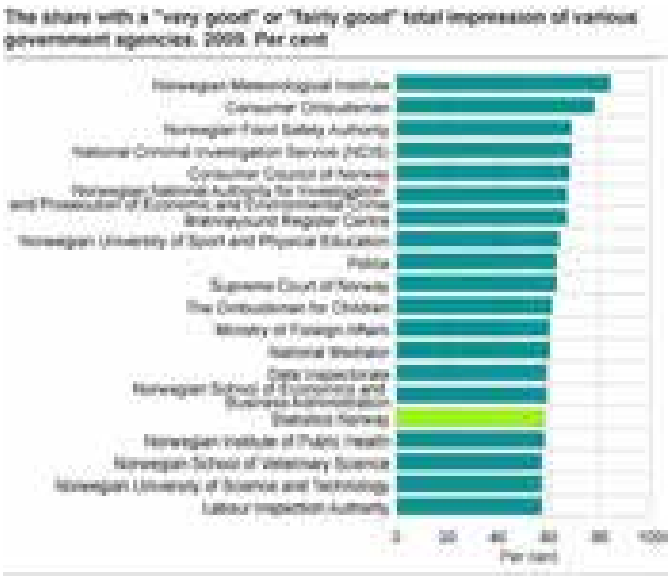
The results of the Universum Student Survey (2008) shows that Statistics Norway scores highly on the employer reputation and image (4.14 on the 5-point scale) while the most attractive employers in Norway also obtain similar results or even lower results on this dimension (for example Statoil, Norges Bank and the Ministry of Finance score 4.29, 4.24 and 3.93 respectively on the 5-point scale). The employer reputation and image is one of the four main drivers which are critical for employer attractiveness. The results also show that Statistics Norway scores lower on the remuneration and advancement opportunities. This employer attractiveness driver includes dimensions such as prospects for high future earnings, competitive benefits etc. The top findings of the main drivers of employer attractiveness for Statistics Norway are presented in the figure below.

FIGURE 1. EMPLOYER ATTRACTIVENESS – STATISTICS NORWAY. UNIVERSUM STUDENT SURVEY 2008

Statistics Norway is aware that there is a need for improvements in the remuneration and advancement opportunities. As previously mentioned under the Strategy for Human Resources 2007, Statistics Norway is planning to offer competitive salaries, opportunities for career development and benefits such as international work challenges and further career development. Statistics Norway is working on the implementation of the strategy and hopefully these possibilities offered to our employees will contribute to strengthen attractiveness of Statistics Norway as an employer in the eyes of current and future employees.



Another external survey in 2009 shows that a total of 58 per cent of the population report an overall good impression of Statistics Norway. This is very much the same result as for preceding years.



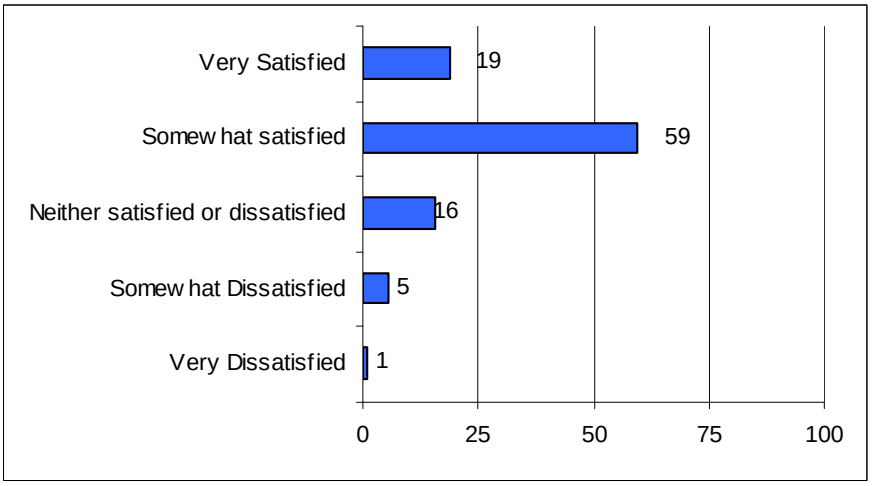
Statistics Norway is number sixteen in the rankings for overall impression in 2009. Ahead of Statistics Norway are, among others, the Norwegian Meteorological Institute, Consumer Ombudsman, National Criminal Investigation Service, Norwegian Food Safety Authority and Consumer Council of Norway. Only 3 per cent say they have a "slightly or very poor" impression of Statistics Norway and 39 per cent of the respondents have no opinion on Statistics Norway. With regard to information and transparency, Statistics Norway holds eighth place.

INTERNAL RESEARCH

In addition to the external professional survey Statistics Norway has an internal employee job satisfaction survey. The purpose of this survey is to provide an indication of the employee's perception of the work environment in the organization. The employee job satisfaction survey provides the basis for implementing measures to improve the working environment in Statistics Norway.

The results of the job satisfaction survey 2010 shows that overall employee satisfaction is 78 per cent (this includes both very satisfied and somewhat satisfied employees). There is a slight improvement when comparing with the previous years, where overall satisfaction in 2007 was 76 per cent.

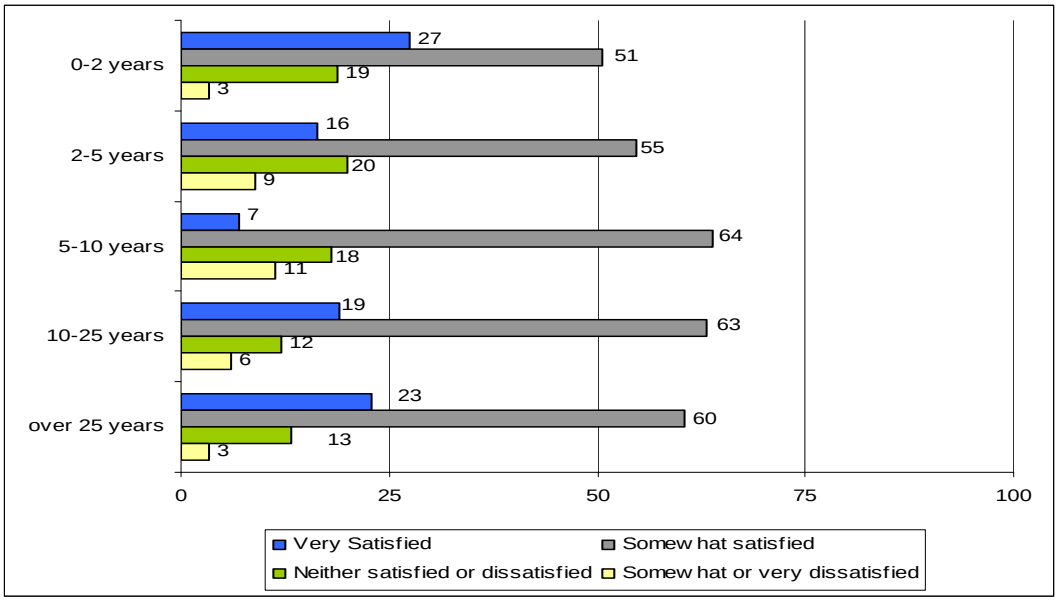
FIGURE 2. OVERALL JOB SATISFACTION AT STATISTICS NORWAY 2010



When looking at the results by seniority (number of years worked at Statistics Norway), it is interesting to note that the highest number of very satisfied employees lay among the newly started employees, who mostly belong to the age group of people under 35 years. Overall satisfaction is highest among those that are staying with organization the longest, above 10 years (82 – 83 per cent), and the less

satisfied are employees who are working in the organization between 2 – 10 years (71 per cent). The results about the overall job satisfaction in Statistics Norway by seniority are presented in the graph 2.

FIGURE 3. OVERALL JOB SATISFACTIONS AT STATISTICS NORWAY BY SENIORITY 2010



The deeper analyses of the survey show that employees are satisfied because they are working in an academic environment (84 per cent) as well as they feel that the work tasks are useful.

Statistics Norway is also facing some challenges as there are a quite significant number of people (37 per cent) who plan to seek other work outside Statistics Norway. This is one of the major retention challenges which refer to a desire of better wages, career development and new challenges. As mentioned previously, Statistics Norway is employing new strategies for human resources and working on meeting these challenges.

Statistics Norway is planning to conduct a job satisfaction survey every two years. The survey is a barometer and is intended to give an idea of what main challenges Statistics Norway is facing in terms of employee satisfaction.

EMPLOYEE VALUE PROPOSITION

Following the strategy suggested by the consultants the second step to be taken when working with employer branding is employee value proposition. The objective of this stage is to define a set of values, associations and offerings that characterize the company as an employer. The set must support the business strategy of the company and fit into the employer brand.

Statistics Norway Personnel Policy 2001 decided on values, goals and principles. This document sets out goals and direction for further development and practice of human resource policy measures. Personnel policy defined values that are fundamental for Statistics Norway to function as a knowledge organization, and to be perceived as an attractive workplace.

Statistics Norway believes that employees should take responsibility for their own and the organization's development and that they should contribute in creating a good working environment. Statistics Norway demonstrates trust in people by giving them individual responsibility, support and

freedom in their work. Employee competences and commitment are considered as most important resource in Statistics Norway. It is therefore essential that all employees are given development opportunities. Both academic and social skills are valued at Statistics Norway.

Statistics Norway expects that employees updates themselves about Statistics Norway operations, engage themselves in the work and participate actively in the restructuring process, so that Statistics Norway is well prepared to meet new demands and challenges from the environment.

The goal of the personnel policy 2001 is that all employees are familiar and deliver on Statistics Norway values:

- Reliability
- Equality
- Cooperation
- Openness
- Loyalty

Statistics Norway decided on values nearly a decade ago. However, it should be better communicated to both external and internal audiences, as not all current and prospect employees can easily recall them. Statistics Norway believes that in order to become an attractive employer one of the critical steps is to clearly communicate about who we are, what values are important in the organization and what opportunities we offer to our employees.

COMMUNICATION PLAN

A communication plan is the third step to be followed when working with employer branding as suggested by the consultants. The employer value proposition needs to be communicated in a planned way in order to affect the candidates we are looking for at Statistics Norway. The Student Universum Survey 2008 found out how the students prefer to gather information about their potential future employers and how the students who are attracted to Statistics Norway have gathered information about the organization. The results from the survey about the communication channels are presented below:

Top 5 - Preferred communication channels in Norway:

- Company Presentations on Campus
- Company Websites
- Career Fairs
- Acquaintances employed by the company
- Career Websites/Internet Job Boards

Top 5 - How the students attracted to Statistics Norway have learned about us:

- Articles in newspapers and magazines
- Career Fairs
- Company Websites
- Advertisement in print media
- Don't know

Statistics Norway is using a variety of channels to reach the prospective candidates. The organization is actively participating in different career events such as company presentations on campus, career fairs at the universities and other events related to recruitment. Once a year Statistics Norway is visiting

different Universities such as Oslo University, NTNU in Trondheim, Bergen University, Norwegian University of Life Sciences in Ås, NHH in Bergen and Karlstad University in Sweden.

Statistics Norway is actively providing presentations for various primary, secondary and high schools to make pupils familiar with the organization from their early age. Through collaboration with schools, we may help giving teachers and students an insight into the value statistics is creating, strengthen students' educational development and provide advices and guidance on their education choices.

COMMUNICATION MATERIAL

Communications material is the fourth step to be developed when working with employer branding, as suggested. In this section we will present what communication material we are planning to use in our new career website.

In addition to the company presentations on campus and career fairs, company websites are considered to be as one of the most preferred communication channels among students. Corporate career websites is no longer a competitive advantage, but instead the primary source searching information about the work. Nowadays, Internet penetration is very high (88 per cent in 2007 in Norway). This has changed the way employers focus their communication towards potential employees. Statistics Norway is currently taking initiative to become better on promoting the organization online. At present, Statistics Norway is building a new career website and if this proves to be successful it will deliver the message to prospective audiences about the different opportunities in Statistics Norway, trainings and developments, the possible career paths, the values of the organization and other important information that is useful to know for prospective candidates.

ACTION

Following the strategy suggested, the last steps to be taken when working with employer branding, is action, evaluation and adjustments. These steps brings together all the previous steps and helps to evaluate and adjust all activities continuously. Employer branding needs specific measures in order to be successful.

The development of our brand will be evaluated by following measures:

- Attractiveness among specific target groups
- Number of applications with right profile received per position
- Percentage of satisfied employees
- Employee turnover
- The image of the organization as a producer of statistics

Statistics Norway, looking at these measures, should set the targets on a realistic level and attach a time scale to each of them

CONCLUSIONS

To conclude, there are many actions that Statistics Norway is taking to become an attractive employer. According to annual surveys, a very popular source of information for graduates and professionals is 'acquaintances employed by the company'. Satisfied and proud employees communicate positive experiences to external contacts, and the awareness and attractiveness towards Statistics Norway will be noticeable.

Statistics Norway has a high profile in media as the source for official statistics in Norway. Delivering statistical information relevant for actual political issues gives the organization a lot of "free publicity".
One aspect to take into consideration, compared to other NSIs, is that Statistics Norway also includes a relatively large research department providing substantive research in the fields of economic and social statistics. For some students this department is especially attractive. At the same time many students get knowledge about Statistics Norway by using statistical information in their studies. This provides a broad audience with wide knowledge of the organization and its products. Statistics Norway benefits from this publicity as an employer. Thus for future recruitment it is important to maintain the image as a producer of high quality products and at the same time continue to improve the information channels concerning our products and our organization.

18. LEARNING AND DEVELOPMENT IN CHALLENGING TIMES

Anne Kofoed and Mats Olsson EUROSTAT

Eurostat's 2012 Learning and Development Framework clearly sets out Eurostat's ambition to become a learning organization. This discussion paper proposes that, in times of economic uncertainty, reorganizations and staff reductions, it is possible to "do more with less" in areas of learning and development, by explaining and incorporating informal and non-formal training opportunities.

Eurostat's 2012 Learning and Development Framework strongly supports the development of good practice in the adult learning world, through thematic working groups, conferences and peer learning activities.

Unleashing the potential of individuals within an organization under tight budgetary restrictions requires that internal training schemes reach beyond traditional methods of learning. This paper presents a pragmatic long-term approach; however, the theoretical framework is ripe but the practical implementations remain, as yet, largely unexplored.

This discussion paper should not, therefore, be viewed as a suggestion for fundamental change but, rather more, as a starting point for the evolution of Eurostat's profession as adult learning providers.

INTRODUCTION

Eurostat has a proven track record for the delivery and execution of statistical training in Europe. In particular, Eurostat has supported the development of the European Statistical System and the high quality harmonized statistics produced by the statistical offices of the Member States. Recent priorities in training have evolved through the implementation of Eurostat's Vision, with additional support given to the priority policy objectives of Eurostat. Eurostat's main objectives currently focus on the three following priorities:

a) Vision-related statistical training

Eurostat's vision-related training activities cover a wide range of introductory, advanced and more specific courses. These activities address 12 priority areas of statistical training, with around 25 courses every year carried out by contractors. Around 50 in-house training courses are also on offer and Eurostat staff members are also eligible to attend the Eurostat Statistical Training Programme (ESTP) courses. Another initiative, now underway, is the work on the EMOS project, which sets out to establish a European Masters in Statistics.

b) Management development

Leadership and change management skills are essential for the European project; regulation, law-making and efficient cooperation remain the core task of the DG. It is for these reasons that the Commission and Eurostat offer an extensive training package to managers.

c) Making Eurostat a learning organization

With the overall objective of moving away from standard training delivery and moving more towards new approaches to learning, full use can be made of modern learning and development tools, such as

informal learning, e-learning, job shadowing, and on-the-job training. In this context, it is essential to support these tools and to capture, develop and ensure an ongoing transfer of knowledge between peers.

CHALLENGES AHEAD

The current economic climate in Europe presents many challenges for the European Commission; efficiency gains and savings need to be made in administrative expenditure and it is clear that the Institutions and their staff are not immune to developments in Member State public administrations.

Eurostat will almost certainly be affected by budgetary restrictions; in particular, areas of learning, training and development are likely to be targeted more than traditional statistical production units. This being the case, new ways of implementing training and methods of pooling resources are essential in order to maintain the service levels currently provided and to maintain support to both Member States and Eurostat employees. Less emphasis would be placed on the content of trainings and more on the methods of delivery.

METHODS OF LEARNING

Traditionally, statistical training comes in the form of lectures and presentations made to an audience who has formally applied for a course covering a specific topic. Sometimes, practical exercises are used to illustrate and support the theoretical framework. Formal and non-formal training methods are still very much the 'norm' and are delivered either by in-house resources or via external contractors. Formal and non-formal training methods are efficient in that the sessions are dedicated to a specific topic and focused on teaching, however, it is sometimes assumed (and incorrectly so) that for every ounce of teaching there is an ounce of learning by those who are taught.

In actual fact, most of what we learn before, during and following classroom-style training is absorbed without it actually being taught to us. By way of example, a child learns fundamental things such as how to walk, talk, eat and dress, without actually being taught these things. In the same way, adults learn most of what they use at work or for leisure purposes whilst being at work or indulging in leisure activities. In contrast, much of what is taught in a classroom setting is forgotten - and what is remembered is often irrelevant.

ADULT LEARNING THEORY

Adult learning, as a concept, differs significantly from that of training children or young adults. Primarily adult learning is problem-driven; adults seek educational solutions in order to take them from where they are in life to where they want to be. Secondly, adult learning is results-oriented; the adult learner has specific results and objectives in mind and will drop out if the education process does not lead to those results. The adult learner is both self-driven and critical; the design of an internal training system therefore needs to take these factors into account and since adult training is not automated, coaching and facilitating techniques are preferred over and above more traditional methods.

The competencies and knowledge gained need to be quickly put into use by the adult learner and in their own work context; otherwise the quality of the training will suffer. Similarly, *'learning by doing'* is an essential element in establishing newcomers in a relatively quick and successful way.

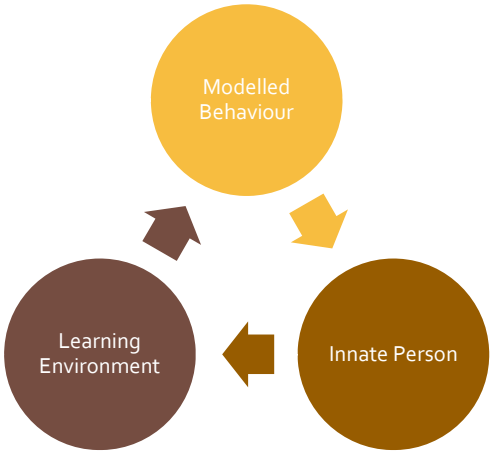
SOCIAL LEARNING THEORY

One factor influencing adult learning is the social environment where learning takes place. Adults generally learn by observing others and their respective outcomes. As a consequence, cognitive

modelling techniques need to be applied to enhance learning, either in the form of active learning methodologies or other traditional teacher/student learning.

Another factor seldom addressed in relation to social learning is self-efficacy. Social learning depends on group dynamics and how individuals either succeed or fail through dynamic interaction. Social learning promotes the development of individual emotional and practical skills, individual competencies and limitations, as well as the perception of oneself and the acceptance of others. Self-efficacy levels reflect a persons' understanding of what skills they can offer in a group setting. It considers that people learn from one another; observational learning, imitation and modelling. A holistic overview of social learning theory is illustrated below:

FIGURE 1: SOCIAL LEARNING THEORY



The learning environment and modelling has a clear and crucial impact on the effectiveness and outcome of trainings; training systems therefore need to be tailored accordingly.

LEARNING ORGANIZATION – A PRIORITY FOR EUROSTAT

The most common idea behind a learning organization is that it is developed from a body called *'systems thinking';* this is to be taken into account as Eurostat develops its own learning organization.

Firstly, there is the issue of personal mastery: the commitment of an individual to the process of learning. There is a competitive advantage for an organization whose workforce can learn more quickly than the workforce in other organizations.

Individual learning is acquired through staff training and development; however an individual must be willing and receptive. Research shows that most learning in the workplace is incidental, rather than the product of formal training; therefore, it is important to develop a culture where personal mastery is promoted and practiced on a daily basis.

Secondly, assumptions held by individuals and organizations (*mental models)* play a large part in the relative success of a learning experience. To become a learning organization, these models must be challenged; individuals have a tendency to "marry" theories (i.e. what they intend to follow) with theories-in-use i.e. (what they actually do). Similarly, organizations tend to preserve certain behaviours, standards and values. In creating a learning environment, it is important to encourage an open culture that promotes inquiry and trust.

Another important tool in motivating staff members to learn is a shared vision; this creates a common identity and generates focus and energy.

Finally, there are benefits in team (or shared) learning; staff members develop more quickly and the problem-solving capacity of the organization is improved through better access to knowledge and expertise. Team learning requires individuals to engage in dialogue and discussion; the result is open communication, common purpose and mutual understanding.

IMPLICATIONS FOR EUROSTAT 2013-2017

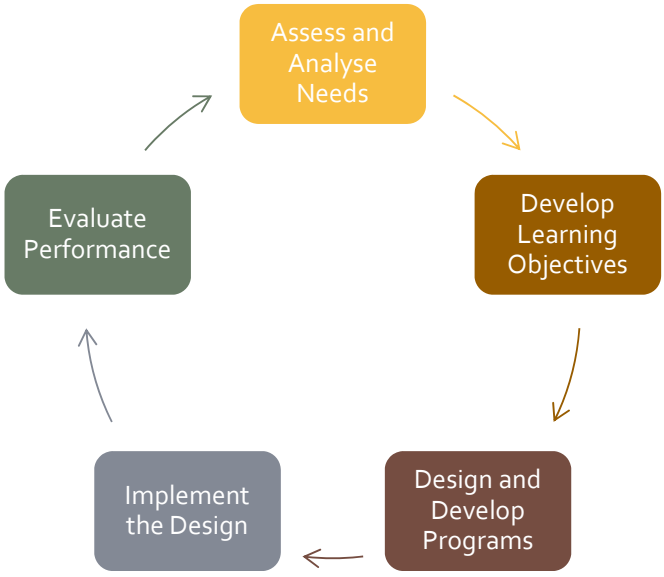
In order for Eurostat to provide an ongoing, efficient support system in training through challenging times and with limited financial resources, existing traditions and frameworks need to be reviewed, adjusted and even dismantled, where necessary. Moreover, efficiency and productivity is not limited to the training system itself; for the system to be successful, staff members need to embrace change and learn to work with it. The process of change into unchartered territories has to be participatory and continuous. Stakeholders need to be consulted and channels for essential discussion need to be opened and maintained in order to achieve good results. This process will take time: at least five years of implementation should be foreseen before results can be expected.

PROCESS ORIENTATION VS. GOAL ORIENTATION

The text book definition of process orientation is described as an organization that emphasizes process as opposed to hierarchies; a process-oriented way of thinking, outcomes and customers.

In the context of human resource management and training, the instructional design of training systems needs to be considered carefully.

FIGURE 2: INSTRUCTIONAL DESIGN



This illustration shows the current work structure in Eurostat. It is a sound and effective way of delivering training and should be kept for long-term progress work. All the same, improvements and efficiency gains can be made in the needs analysis and in the design of the training system.

NEEDS ANALYSIS

Eurostat employs a common system of needs analysis that can be best described as a top-down approach. The main stakeholders are managers and the central guidelines stem from the Commissions global priorities. Whilst the input from stakeholders is generally forthcoming, a major drawback of this top-down approach is that there is little input from those receiving the training courses. Therefore, priority must be given to strengthening the needs assessment system by including elements of a bottom-up approach.

DESIGN OF THE TRAINING SYSTEM

The framework objective and main challenge of the design is to incorporate structures of non-formal and informal learning mechanisms. This would initially be done in three areas, as follows:

- Strengthening mentoring for newcomers;
- Development of internal training;
- Informal study groups.

STRENGTHENING MENTORING OF NEWCOMERS

The most natural starting point is to strengthen the role of mentors for newcomers. At present, the mentoring experience of newcomers can vary considerably: a mentor is appointed to show the ropes to a newcomer and, typically, the mentor has to manage this responsibility in addition to his/her normal workload.

There are some training courses on offer to prepare mentors for their role, but these are not obligatory. Moreover, the current mentoring arrangement does not provide a wider corporate understanding and vision.

The learning and development framework of 2013-2017 allows for improvements in this area: the role of mentors will be professionalized and ongoing support will be provided to those involved.

DEVELOPMENT OF INTERNAL TRAINING

Although this paper mainly focuses on informal and non-formal learning in Eurostat, more formal approaches still have their place, especially as far as statistical training is concerned; these are achieved either by tendering work to external contractors or by using in-house resources.

The advantage with external contracting is that the quality of training courses can, to a certain degree be guaranteed. That said, contractors are not always familiar with Eurostat and its training needs and external contracting can also be expensive.

The development phase for statistical training using in-house resources spans more than one year and even though it is cheaper in monetary terms, this arrangement can stretch human resources.

In conclusion, a combination of both external contracting and internal resources for statistical courses in Eurostat makes the most sense, both in budgetary terms as well as making good use of the human resources available.

Basic statistical training should rely upon in-house resources; and external contractors would be required to provide targeted, advanced and more specific statistical courses.

INFORMAL STUDY GROUPS

Eurostat also intends to develop non-formal study groups and individual sessions.

Experience indicates that willingness to share knowledge and the ability to do so does not necessarily mean that colleagues are comfortable enough to give formal trainings.

However, many colleagues would perhaps be more open to share their expertise in an informal session, involving one or two participants. This would likely be the case for staff involved in administrative support systems - the rules and obligations that govern our daily work - key staff members would need to be identified and a general plan drawn up by the end of this year.

A longer-term goal would be to develop informal study groups where like-minded colleagues have the opportunity to share and drive their knowledge forward. Such informal networks need to be promoted but cannot be realistically implemented until further experience has been gained in this area.

IMPLEMENTING A LEARNING ORGANIZATION

Implementing a learning organization is an issue that goes beyond the current policy of the Training Section and requires good practices to be established and changes to be made.

The practical implementation of informal and non-formal learning will give food for thought for developing personal mastery. This is also true for team learning where structures are being developed through the new proposals. Establishing new working patterns and working differently will reflect on the current tasks of the Training Section. Administrative and more routine work will remain vital elements of everyday work and other skills will become increasingly important.

The challenge for Eurostat in this context is to develop competences in its staff in areas of moderation and facilitation; it also implies a high increase in the coordination of working groups.

For staff members involved in the daily work of organizing training activities, much emphasis will be placed on more specific measures in 2013: the concept of *training the trainers* is already well-established and from now on, the aim is to *train the course organizer* in moderation and facilitation techniques as well.

This approach will require formal training courses, with staff members learning from external contributors, and internal coaching methods.

The objective is to implement and sustain informal and non-formal training initiatives in a coherent framework and these skills need to be developed in staff members rapidly, ideally by the end of 2012, implying an intense learning curve for the last quarter of 2012.

CONCLUSIONS

The changing climate in Eurostat and budgetary restraints can be viewed as an opportunity to improve upon and enhance the training system and to maintain a high level of excellence by doing things differently.

Undoubtedly, the period of 2013-2017 will be a transitional phase, a period of trial and error, and a learning curve in terms of the practical implementations of revising the training system.
It is essential to make sure that all staff members are on board and willing to dedicate their expertise to the work at hand.

ANNEX 1: RELEVANT LITERATURE

"Eurostat's Learning and Development Framework 2012" (*internal*).

"The Adult Learner: the definitive classic in adult education and human resource development" (6th ed.). *Malcolm Knowles*, *E. F. Holton, III, R. A. Swanson* (2005). Burlington, MA: Elsevier.

"The Fifth Discipline", *Peter M. Senge,* Doubleday/Currency (1990).

"Social Learning Theory", *A. Bandura* (1977). Englewood Cliffs, NJ: Prentice Hall.

"Training as a tool to improve motivation and efficiency in Nuclear Safeguards", *Mats Olsson, Richard Clarke*, Nestet 2008

19. A COMPETENCE PROFILE FOR STAFF SUPPORTING THE EUROPEAN STATISTICAL SYSTEM

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INTRODUCTION

European statistics have become increasingly important for the development, implementation, monitoring and evaluation of European Union (EU) policies. European statistics, therefore, make an essential contribution to building the information capacity needed to sustain the EU's strategic objectives and its underlying policies and supporting instruments.

European statistics are developed, produced, and disseminated on the basis of uniform standards and harmonised methods. The National Statistical Institutes (NSIs) of the Member States collect and produce harmonised data that are compiled by Eurostat, the Statistical Office of the European Communities, to construct statistics at EU level.

The European Statistics Code of Practice[1] aims to ensure public trust in European statistics by establishing how European statistics are to be developed, produced and disseminated to conform with its statistical principles.

In early 2007, a task force was commissioned by Eurostat's Human Resource Management/European Statistical Training Programme (HRM/ESTP) Working Group and European Statistical System (ESS) Committee to develop a sustainable long-term strategy on learning and development in the ESS.

The new Regulation on statistics[2] is also helping to drive the development of new sustainable strategies to modernise the ESS statistical production system.

A sustainable long-term strategy on learning and development in the ESS

At its first meeting, the task force, facilitated by Eurostat, agreed to broaden the scope of activities beyond the provision of traditional training courses, by moving from the existing 'European Statistical Training Programme' (ESTP) towards the development of a 'European Statistical System – Learning and Development Framework' (ESS-LDF).

The ESS-LDF aims to help raise the overall quality of European statistics according to the principles stated in the European Statistics Code of Practice, and the new Regulation on statistics, and includes a variety of learning tools and activities, such as: the development of 'core' statistical competences; the development of a tool to assess the impact of learning of ESTP courses once back in the work place; the

[1] The European Statistics Code of Practice is based on 15 principles that apply to statistical authorities in the European Union. These principles cover the institutional environment, statistical processes and outputs. The full text of the Code of Practice is available in 29 languages together with other background documents relating to its implementation. http://epp.eurostat.ec.europe.eu/portal/page/portal/quality/documents/code_practice.pdf

[2] Regulation (EC) No 223/2009 of the European Parliament and the Council of 11 March 2009 on European Statistics

organisation of study visits for ESS junior statisticians at Eurostat; the development of a ESS-LDF portal; E-learning products and a process for mentoring opportunities.

The activities emerging from the new ESS-LDF will be implemented in 2011.

Core competences at the ESS level

One of the tools developed by the task force for the new ESS-LDF is the European Statistical System Competence Profile (ESSCP).

In developing the ESSCP, it was recognised that working in statistics within the European environment, at home or abroad, requires a different set of 'core' statistical competences (knowledge and skills) to those required at the national level.

This paper explains how the ESSCP was developed and tested, and how the ESS-LDF task force hopes it will add value across the ESS in the future.

BACKGROUND

A framework for Eurostat – sowing the seeds

In April 2001, during a meeting of the Training of European Statisticians (TES) Working Group at Eurostat, the United Kingdom and Italy talked about their learning and development systems. Some good practice was shared, particularly around the benefits of using a competence-oriented approach to develop staff. Other NSI representatives found this good practice innovative and inspiring, and many saw the value of developing that approach within their own organisations.

Two years later, in 2003, as a result of a general re-think about Eurostat's approach to its own learning and development, a pilot group, set up by Eurostat's task force on 'Human Resources' set about developing a new strategy to support Continuing Professional Development (CPD), with particular focus on developing a statistical competence framework. It was agreed that the initial scope of the pilot group work would be limited to the 'core business' of the Member Institutes, namely the competences required for job/functions involving statistical work within Eurostat.

The pilot group met for the first time in May 2003 in Rome. At this meeting the group defined the initial scope and content of the project and identified the stakeholders to involve in the consultation. The group focused its attention on compiling a first 'grid' of functions (with sub-functions) and competences central to the development, production and dissemination of statistics. The competence frameworks managed in Finland, Italy and The Netherlands helped to influence the development of this first grid. A reflection on a shared framework of values to be related to the competence grid was also undertaken.

This experience helped to pave the way for the next phase of the journey, towards the development of a 'ESS Competence Profile for all staff supporting the European Statistical System' (ESS), from either their NSI base, or from within Eurostat.

A Competence Profile for all staff supporting the ESS

In 2008, the ESS-LDF task force began the work on the development of the European Statistical System Competence Profile (ESSCP). The ESSCP is a key component of the ESS-LDF and it will help to underpin the other learning tools and activities being developed.

In designing the ESSCP, the task force felt that any 'European' competences identified should complement, and not duplicate, those developed at the national level.

Scope of the ESSCP

The ESSCP has mainly been developed to:

- raise awareness and provide guidance to individuals and their managers about the 'core' areas of knowledge and skills considered important for people working in, and supporting the ESS from their parent organisations (this includes analytical professions, ICT experts, administrative staff, HR staff etc);
- serve as a useful reference point when developing the specific ESS needs of a job and its requirements. They will link to the various learning activities and tools included in the ESS-LDF, and help to promote common values and standards across the ESS.

The range of statistical posts across the ESS makes it impossible to produce competences detailed enough to cover every eventuality. As the team did not want the list of competences to be too exhaustive, it was kept deliberately short and focused only on core competences appropriate to a 'EU-statistical' framework.

As a result, other competence areas such as language skills, management development, IT, team working, and communication skills should be managed at the national level, and supported by national competence frameworks.

Developing the competences – the approach

In order to investigate the different experiences in the field of competence profiles at the national level, Eurostat invited Member States to share relevant information. Documents[3] from 13 countries were received, which included frameworks that already existed in Germany, Hungary, Italy, Lithuania, Sweden, and the United Kingdom. Preparatory work was also underway in Bulgaria, Demark, Finland, Netherlands, Norway, Portugal and Spain.

A smaller ESSCP project team, which included Eurostat, Italy, Netherlands, Spain, Romania, and United Kingdom, then identified the various steps to support the development of the ESSCP. These were as follows:

Step 1 – Define the aim, content, generic 'core' European competences, types of competences, main fields of application and target audience.

Step 2 – Set up a glossary of terms for the key terms used.

Step 3 – Establish the levels of professional experience for different groups of staff and areas of competences.

Step 4 – Identify the competences for each level; keep simple and practical, so that implementation is easy.

Step 5 – Launch a pilot exercise to test the first draft of competences.
Step 6 – Review the pilot, update ESSCP and develop guidelines for using it.

[3] An inventory of information on competence frameworks in Eurostat and EU Member States is available under 'Staff Matters' on the ESS website 'INSite' managed by Eurostat http://epp.eurostat.ec.europa.eu/portal/page/portal/pgp_insite/pge_estat/tab_staff.

WHAT DOES THE ESS COMPETENCE PROFILE (ESSCP) LOOK LIKE?

The structure

The 'ESSCP' includes two levels of 'core' experience:

1. **Fundamental level** - (at least two year's experience in post).

2. **Advanced level** - (at least four year's experience in post, and/or team management responsibilities).

It is assumed that people operating at the 'Advanced' level will have already mastered the competences necessary to perform at the 'Fundamental' level.

People operating at a higher level may wish to develop other competences specific to their own personal ESS development needs.

In some cases people might be exposed to ESS-related work earlier in their career, so should also find the ESSCP useful.

Knowledge and Skills

The competences are linked to two key attributes at the European level:

1. **Knowledge** – the outcome of the collection and assimilation of information through learning and development activities.

2. **Skills** – the ability to apply knowledge and use know-how to carry out managerial or technical tasks and solve problems.

Specific **Attitudes** and **Behaviours** to support the competences are also included.

Competence descriptions

The competence descriptions are steered by the following important 'core' European statistical areas:

- Role and functions of the ESS (legal basis)
- European Statistics Code of Practice and the new Regulation on Statistics
- Quality declaration of the ESS
- European Commission rules and procedures
- European level networking, including the effective transfer of expertise
- European data harmonisation (legislation and methodology)
- European classifications
- European customer requirements

Annex A provides more information, and also explains how the ESSCP can be used.

THE PILOT STUDY

To ensure that the 'ESSCP' was fit for purpose, a pilot study was carried out in February 2010. Five countries took part in the pilot: Italy, Netherlands, Romania, Spain and the United Kingdom. Each country consulted a mix of junior and senior grades from different statistical fields within their statistical organisations, including home workers.

People taking part in the pilot were asked to:

- Comment on the competences of most importance to them and their team members;
- Identify gaps in the list of competences;
- Share any general observations.

The ESSCP project team found the pilot opportunity very worthwhile and the information shared about specific competences has helped to improve the first draft model.

The latest version of the ESSCP, a two page document which includes an explanatory note, is found in Annex A. This version has been improved by the comments made during and after the pilot.

Annex B shows how the competences can be mapped to different learning activities. This tool will also be useful when line managers and individuals discuss together the different options that might be available to fill a ESSCP related learning gap.

A selection of general comments made by those taking part in the pilot follow:

- "I consider this profile a useful tool for identifying what knowledge, skills, and attitudes are needed at the European level. I intend to use this profile as a reference point in order to improve my professional competence. This is a timely exercise and will help to pinpoint learning and development needs. I would be happy to cascade this approach to my colleagues. The tools can be easily integrated into our performance management system."

- "I found the content of the profile useful, but I felt the presentation made it difficult to use."

- "I think it will be useful if it manages to successfully differentiate competences related to national statistical work from those required at the EU level."

- "I mainly supply data to Eurostat via the eDAMIS[4] system, so most of these competences do not apply to me."

- "I find it useful to have one profile for the European domain. However, it is difficult to share and use it. Based on what grounds do you measure a person? Are the 'Advanced' categories based on your experience, knowledge and skills, or because you have been in your position for four years?

SUMMARY OF TASK FORCE'S OBSERVATIONS FROM THE PILOT

A summary of the project team's observations from the pilot, with recommendations, as a result of the comments made, follow:

[4] eDAMIS is a is a modern communications management system allowing easier and more accurate transfer of data between various national, EU institutions and Eurostat. For more information see: http://ec.europa.eu/idabc/en/document/3537/5644#what.

1. The ranking of competences exercise was very subjective and 'one size does not fill all'. There is no need to rank, just to make sure that the competences are 'core' and relevant to the ESS. It is also important to include competences for people to aspire to in the future (for example they may wish to prepare for a future job/promotion that requires a certain competence).

2. The purpose is to set a sustainable European standard for people to compare themselves with (a good practice reference point). People are not being compared with each other as learning needs will be different, at different stages of an individual's career, therefore some people may need to pick and mix from the list. On the other hand, as part of their continuing professional development, individuals may want to be fully competent at the standard being recommended, and will want to develop in all the core areas – this is particularly relevant in the competence areas of knowledge.

3. The comments and suggestions made by individuals, especially areas where there may be gaps, were very useful and have helped to make improvements. It was good to see that a number of people found the ESSCP a useful tool and say they and will use it.

4. It needs to be kept simple and not over complicated.

5. We need to encourage people to consider their future learning needs too, if they are not currently involved in some of the competence areas. Also it may help someone who might be working on a specific ESS area to think more widely (eg develop an awareness), so that they have a broader understanding of international issues which might relate to their current area of work.

CHANGES MADE AFTER THE PILOT

The Task Force met on 29-30 June 2010 to share progress and agree on the next steps in the development of this work. The following was agreed:

1. Link ESSCP to the new high level vision in support of a more efficient ESS, and map competences against the requirements for a more efficient ESS to see if there are any gaps that need to be included in the list of competences. (This has been done and the current version at Annex A reflects these changes).

2. Add a new 'skill' to support the effective transfer of expertise into another environment, eg the process of 'twinning'. (This has been done and the current version at Annex A reflects this – see 'SA7').

HOW MIGHT YOU OR YOUR TEAMS USE THE ESSCP

The ESSCP is now ready to use. If you or your team members are involved/planning to be involved in European international activity, for example by:

- Fundamental data to Eurostat
- attending international meetings
- leading an international team
- working in a HR area and may need to consider international competences for performance management policies
- building international knowledge for a future role
- mapping international competences to a job description
- plotting an international learning path for staff

then you may find the ESSCP useful to assess your current level of knowledge and skills, and behaviours.

EUROPEAN MASTERS IN OFFICIAL STATISTICS

The development of a European Masters in Official Statistics (EMOS) was the natural progression of this work. The ESSCP work helped to identify areas where staff should be competent at the European level. The EMOS will help to provide a framework for developing knowledge, skills and attitudes in these areas.

ANNEX A

ESS Competence Profile (ESSCP) - *for NSI staff supporting the European Statistical System*

The aim - this competence profile aims to improve consistency of approach across the European Statistical System (ESS). It will allow managers to set the requirements of a post in a ESS context and to judge when people are suitable to meet these requirements. It provides a common 'good practice' reference point to individuals and their managers about the 'core' ESS competences they should develop to be effective at two different levels.

The content - the wide range of statistical support to the ESS makes it impossible to produce competences detailed enough to cover every eventuality. Instead, this profile shows the 'core' areas of knowledge and skills that are considered important to performing effectively within the ESS, from your parent department or at Eurostat. It has been designed as a flexible reference tool and has been kept deliberately short and simple.

What the ESSCP does not cover - the ESSCP does not cover non-statistical competences such as language skills, IT skills, team working, management skills, communication skills or consultancy skills as these should be managed at the national level. The ESSCP can, however, be used in tandem with any national competence frameworks.

The levels - the ESSCP shows the knowledge and skills that are useful for people working in a ESS context at two levels:

> **Level 1 (Fundamental)** applies to people with at least two year's experience in post;
> and
> **Level 2 (Advanced)** applies to people with at least four year's experience in post, and/or team management responsibilities.

How can it be used?

- To compare with your job description if it has a ESS aspect;
- To design a new job which needs ESS content;
- To include in a job advertisement with ESS content;
- To identify and develop suitable learning activities or tools to support the development of ESS competences;
- To identify and develop core ESS competences in advance, if you want to prepare for a future role;
- To gauge an organisation's ESS capability with regard to core knowledge, skills, behaviours.

ANNEX A (continued)

ESS Competence Profile (ESSCP) - *for NSI staff supporting the European Statistical System*

Knowledge	**Competence**	
Level 1 (Fundamental)	KF1	is aware of the technologies, tools and standards for European data collection and transmission,
	KF2	Is aware of the methodologies and tools used for European statistical analysis
	KF3	is aware of European legislation and methodologies, including data harmonisation
	KF4	Is aware of the ESS quality reporting requirements, linked with the more general TQM/EFQM framework
	KF5	Is aware of the European Classifications and Nomenclatures
	KF6	Is aware of the mandates and working modalities of relevant committees in Eurostat, including EU working groups, task forces, leadership groups, sponsorship groups, Essnet groups etc of the Commission and the Council
	KF7	Is aware of the European Statistics Code of Practice and peer review process
	KF8	Is aware of Eurostat's mission and its operational structures and activities
	KF9	Is aware of the administrative procedures applicable in the Commission and at Eurostat
	KF10	Is aware of the history of the EU and the interests of it institutions
	KF11	Is aware of and uses key EU communication tools, eg CIRCA, Eur-lex
	KF12	Understands the tasks and modes of operation for the EU institutions
	KF13	Is aware of the statistical modernisation agenda (of the production methods of EU statistics?) and its associated strategies
Level 2 (Advanced)	KA1	Understands ESS norms, regulations and laws relating to contracts, calls for tender, grants
	KA2	Understands which EU policies support the ESS and how they are applied
	KA3	Understands the relationships between the ESS and third parties, eg ESCB, IMF, OECD, UN, EU Council etc
	KA4	Understands ESS administrative rules and procedures related to budget requirements, location, monitoring and reporting
	KA5	Understands the main peculiarities of a country partner (or groups of countries) in order to improve relationship building
	KA6	Understands the impact that statistical modernisation will have on the ESS
Skills	**Competence**	
Level 1 (Fundamental)	SF1	Applies tools and standards for he European statistical production cycle
	SF2	Presents quality information to the users in the statistical framework
Level 2 (Advanced)	SA1	Coordinates the national participation in ESS meetings, EU policies and institutions
	SA2	Applies methodologies related to harmonisation and comparability of data
	SA3	Uses the appropriate tools for European statistical analysis and relevant statistical methods (calculation, aggregation, time-series, interpretative and comparative analysis)
	SA4	Implements the European classification systems
	SA5	Uses European dissemination methods and elaborate dissemination strategies
	SA6	Responsibly defends/expresses the national interests/opinions at EU forums, balancing with the EU-vision

	SA7	Effectively transmits expertise into another environment, to promote European standards with developing countries through twinning etc

The following **Attitudes** and **Behaviours** will also help to be effective when operating at the ESS level:

- integrate effectively within the ESS' organisational culture and build effective relationships with colleagues from across the multicultural environment to ensure effective ESS-networking, sharing of good practice and linking;
- support international activities in a proactive way;
- influence the development of key European strategies;
- take a responsible attitude towards complying with EU rules and regulations;
- promote and strengthen the ESS without compromising national integrity – a balanced approach;
- reflect an attitude of empathy when communicating with international colleagues, and mindful of the needs of interpreters and those working in a non-native language;
- an appreciation for other cultures.

Note:
Level 1 – generally applies to people with at least two year's experience in post.
Level 2 – generally applies to people with at least four year's experience in post, and/or team management responsibilities.
It is assumed that people operating at Level 2 will have already mastered the competences necessary to perform at Level 1.
It is recognised that people operating at a higher level may wish to develop other ESS competences specific to their own development needs.
In some cases people might be exposed to ESS-related work earlier in their career, so will also find the ESSCP useful.

ANNEX B

Mapping the competences to a variety of learning opportunities (template example)

Knowledge	Competence		Learning in the classroom	Learning by surfing the web	Learning by sharing and exchange of good practice	Learning by mentoring
Level 1 (Fundamental)	KF1	is aware of the technologies, tools and standards for European data collection and transmission	1. Course A 2. Course B 3. …	Link to A: Document on… B: e-learning issue… C: website… eg UNECE website http://www1.unece.org/stat/platform/display/TRAINSTATS/Welcome+to+the+library+of+training+materials+on+statistics	Consult portals and websites where information is stored Attend conferences	For further more in-depth info & analysis, contact …@... Phone…
	KF2	is aware of the methodologies and tools used for European statistical analysis	1. Course A 2. Course B 3. …	Link to A: Document on… B: e-learning issue… C: website… eg UNECE website http://www1.unece.org/stat/platform/display/TRAINSTATS/Welcome+to+the+library+of+training+materials+on+statistics	Consult portals and websites where information is stored eg UNECE website Attend conferences	For further more in-depth info & analysis, contact …@... Phone…
	KF3	is aware of European legislation and methodologies, including data harmonisation (European Classifications and Nomenclatures)	1. Course A 2. Course B 3. …	Link to A: Document on… B: e-learning issue… C: website… http://www1.unece.org/stat/platform/display/TRAINSTATS/Welcome+to+the+library+of+training+materials+on+statistics	Consult portals and websites where information is stored eg UNECE website Attend conferences	For further more in-depth info & analysis, contact …@... Phone…
	KF4	Is aware of the ESS quality reporting requirements, linked with the more general TQM/EFQM framework	1. Course A 2. Course B 3. …	Link to A: Document on… B e-learning issue… C: website… eg UNECE website http://www1.unece.org/stat/platform/display/TRAINSTATS/Welcome+to+the+library+of+training+materials+on+statistics	Consult portals and websites where information is stored eg UNECE website Attend conferences	For further more in-depth info& analysis, contact …@... Phone…
	…	…	…	…	…	…
Level 2 (Advanced)	…	…	…	…	…	…
					…	

20. WHY AND HOW TO IMPROVE COMPETENCE DESCRIPTIONS AND EVALUATIONS IN A STATISTICAL INSTITUTE?

Jan Byfuglien and Beate Johnsen Statistics Norway

The production of official statistics is based on a diversity of skills and competences ranging from technical and practical skills to specialised skills in IT or mathematical statistics. However, we have not always been identifying and describing these competences in a systematic way. In a situation where we are facing both internal and external challenges we need to address this issue in order to ensure that we recruit the right people and that we provide targeted training. On the internal side we are facing new requirements linked to changing technology and working methods combined with a loss of experienced staff due to retirement in the coming years. The external challenges are linked to a situation where the persons we recruit have more diversified background and we are not sure that numeric skills always are at a sufficient level. We will also need to better specify the training and competences we expect from those recruited in order to handle the day to day operations of data collection, control, editing, documentation and dissemination. The paper will describe how Statistics Norway has been working on a framework for competence description, closely related to the present business model. Some experiences from competence mapping in practice will also be explained, and how training needs better can be identified.

INTRODUCTION

In today's rapidly changing world, it is difficult to predict what may happen next year, let alone several years in the future. But we must try to anticipate new developments and develop the strategies necessary to succeed. In 2007, Statistics Norway decided upon a strategy for human resources as a sub strategy of the overall strategy document "Strategy 2007". The main headlines of this strategy are:

- Forward-looking and transparent management
- Sharing knowledge
- High-quality on-the-job training
- An attractive employer
- Expertise development – a joint responsibility

This strategy is being implemented through different concrete actions in the annual work programmes, and is a backdrop for our work. In the next segment we will outline some of the challenges Statistics Norway is facing in the field of human resource management.

Demographic changes, particularly the aging of the workforce, present significant challenges. Recruiting, developing and retaining the best employees are a challenge for us. We also have to take into consideration changing and more efficient work processes and technology, influencing the need for training and staff development. The role of management is closely linked to all this, and also their changing competencies and need for development must be taken into account when trying to prepare for the future.

FUTURE COMPETENCES

Above we have mentioned some future challenges for our organisation. Whenever these topics are discussed the question of what competences will be needed in the future arises, and that is not an easy question to answer. How do we define the skills, behaviours and attitudes which workers need to perform their roles effectively?

It is crucial for the future development of our offices that these issues be discussed and that the development and recruitment supports the development in statistical production. One also needs systems and processes to back up these new changes. To be able to do this, it is important to know what we already have. A framework for competence description is – we believe – a useful tool both at present and in the future.

When talking about competences it is important to underline that we consider this to be more than formal training and can comprise the following:

- Knowledge (What you know, both tacit and explicit)
- Skills (How you do something)
- Abilities (Talent)
- Attitudes (Values)

Thus it is both technical, formal knowledge and ability for problem solving and social skills.

TOWARDS A FRAMEWORK FOR COMPETENCE DESCRIPTION

A framework for competence description defines the knowledge, skills and attributes needed within an organisation. Within Statistics Norway we established a project in autumn 2007 with the aim of examining how we would benefit from implementing a systematic approach for describing competences. The project looked at both internal challenges and experiences other organisations and countries had on the topic (among others Statistics Denmark and Statistics Sweden). Based on external experiences and an internal review, the project concluded that we should develop a solution for mapping competences within Statistics Norway. The project also suggested a method for carrying out this mapping.

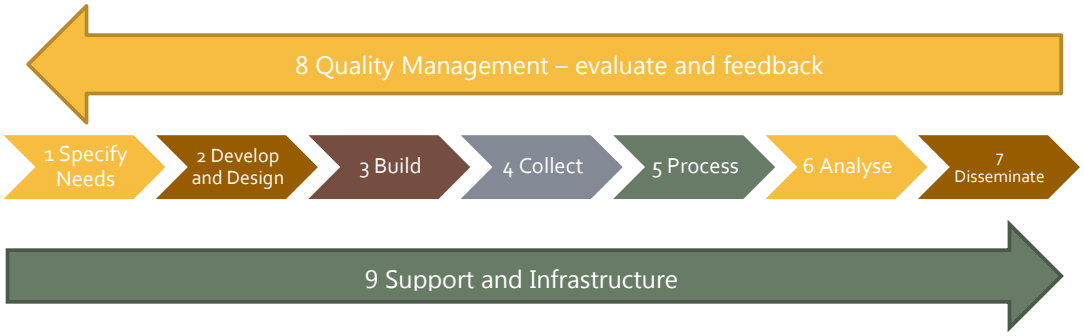
This conclusion was supported by internal discussions with the middle and top management that underlined that we need to have a more systematic overview of existing and needed skills and qualifications. However, it was necessary to develop the approach more in detail.

On the basis of brainstorming sessions and examples from other countries we drafted an overall framework as well as some main categories.

The framework distinguishes between three main types of competences: "basic competences", "core competences" and "job specific competences". The figure below shows how this links to Statistics Norway business model[1].

[1] Statistics Norway started in early 2008 a programme for improvement and standardisation of the statistical production system ('FOSS'). A key deliverable of this programme has been to specify, based on similar approaches in some other countries (such as Statistics New Zealand and Statistics Sweden), a detailed business process model. The model consists of 7 phases of the statistical business process and 2 over-arching processes. It describes the business processes in the statistical production on three levels. This model is intended to provide a basis for assessing the possibilities and the need for standardisation and improvement of processes within Statistics Norway.

FIGURE 1: RELATIONSHIP BETWEEN COMPETENCE FRAMEWORK AND BUSINESS MODEL



Basic skills and competences are defined as those competences required of all employees in the organisation, regardless of role or business unit.
Some major categories are:

- Basic ICT skills (use of windows tools, internal administrative tools, internet;)
- Statistics Norway and its role in society (legal basis, strategy, management and planning, business model, international cooperation);
- Communication (communication skills, good oral and written communication, oral and written ability to pass on information, language skills);
- Teamwork and sharing knowledge (be able and willing to work together and share knowledge, ability to work independently);
- Creativity and result-orientation (innovation skills, delivering results on time).

Core competences are linked to the primary task of statistics production and the major categories are:

- Knowledge of statistical principles and methods;
- Numeric and analytical skills;
- Understanding for the production process, routines and quality requirements;
- Orientation about social issues and the statistical needs of the society;
- Abilities in using the relevant tools for treating statistical data.

Job-specific or specialist competences are applied to specific roles, job groups and functions, especially within the field of methodological, ICT or administrative support, but might also be the case for specific tasks within the statistical production process. Although standardisation of the statistical process is something we are working for, there is still a need for job-specific or specialist competences.

In our framework we use a scale to measure competence levels. The benefit of such a scale is that it 'forces' those involved to perform an evaluation of level of competence and it is easier to aggregate and summarise information. On the other hand, it can be somewhat arbitrary and should be used with discretion, especially on an individual level. Our suggestion is a four level scale ranging from 1 (very low competence) to 4 (very high competence).

Implementation of the framework in practice

The framework can be used on different levels: from the individual level to the section level and perhaps even for the organisation as a whole. But the starting point is on the individual/group/section level.

It is important to emphasize that firstly, the framework is a tool and basis for discussing and evaluating competences in a systematic way. The process itself in the groups/sections is very important. It can help in providing a common language when talking about competences in their section/group, and identify concrete actions. The process will also need follow up and be repeated, when necessary.

By implementing this framework we hope the sections/groups achieve the following objectives:

- To discuss competences in a more systematic way;
- To identify concrete requirements for further competence development;
- For the section as a whole, for the group or for each staff member;
- To make an action plan for competence development and implement training measures;
- To raise awareness among the employees concerning their own competences.

Furthermore, we recommend the following practical implementation process:

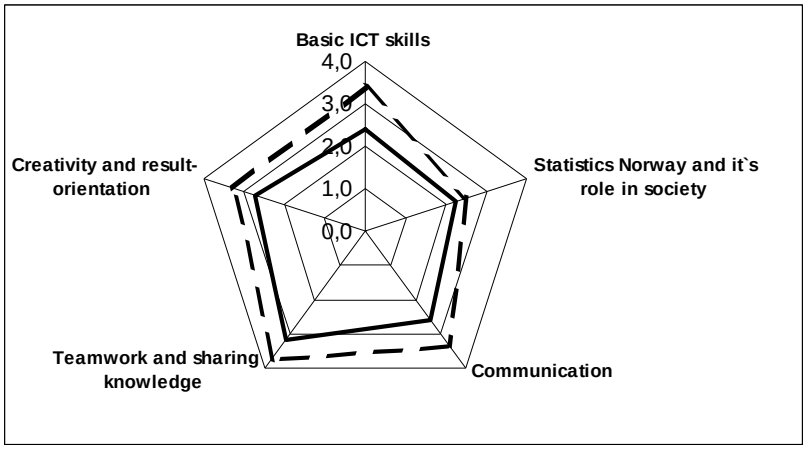
- Start the process with a discussion of the sections/groups future goals and challenges;
- Have a discussion of current competences for the section/group (try to come to a consensus around maximum 18-20 areas in all);
- Perform an individual self-assessment (anonymous) of target and present level in relation basic and possibly, core, competences. This self-assessment is registered and summarized as an input to the later discussion;
- Based on the sections/groups prospective goals, perform a group discussion of status of the group in relation to core and basic competences as well as identifying relevant specialist competences, and assess target and present status for all these according the mentioned scale;
- Based on this process; identify the major gaps between target level and present level and discuss priorities. This should also result in an action plan on how to bridge the identified gaps.

In autumn 2009, we tested the drafted framework within two sections of Statistics Norway. The processes in these two sections were quite different. One section had a long and extensive process, with several gatherings over two-three months. The other section had a two-day seminar. Despite the differences in process, the framework worked well in both sections.

To help in the process we have prepared an excel-file where sections/groups register the results and get a summary in the form of a spider's web diagram. This will give them a good visual summary and be of great help to better see were they are having competence gaps.

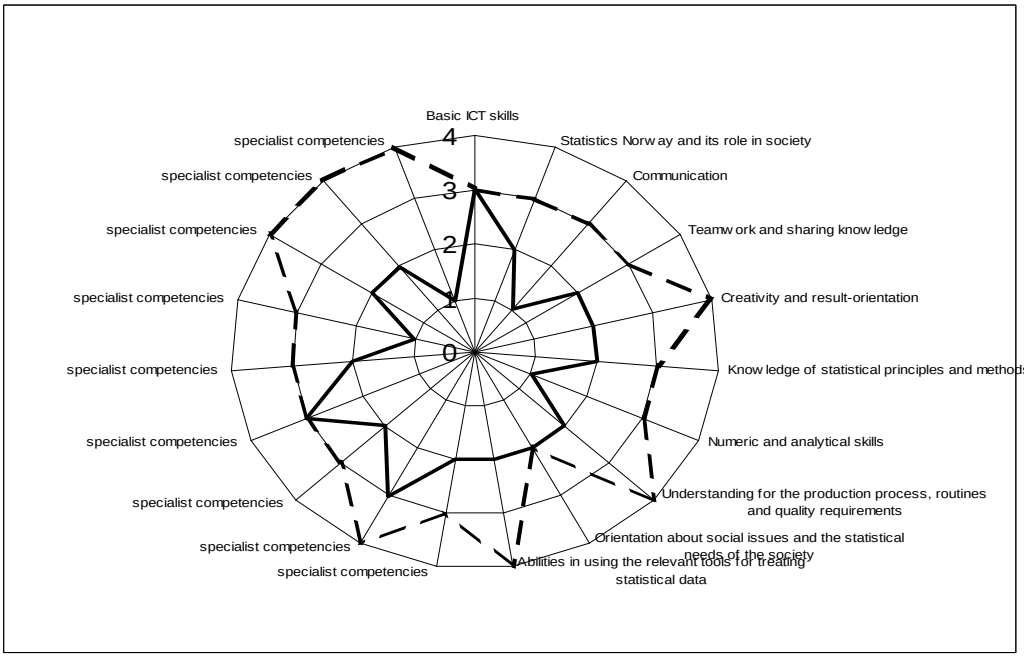
An example is provided in figure 2 which gives the average of individual assessments within one section concerning basic competences. Already this simple summary can give input to some reflection and possibly some actions; it is obvious that ICT skills should be improved and this was followed up by more detailed mapping and workshops. It was also an interesting discussion whether the target concerning the knowledge of Statistics Norway and its role in society was too modest, which lead to a modification of the target in group discussions.

FIGURE 2: AVERAGE OF INDIVIDUAL ASSESSMENTS OF BASIC COMPETENCES WITHIN A SECTION, SOLID LINE PRESENT LEVEL AND DOTTED LINE TARGET LEVEL



A much more complex example is given in figure 3 which shows the results of an evaluation of a group within a section. This example also includes a slightly modified version of the core competences as well as number of specialist competences which are not named in this example. This example shows rather big gaps for some specialist competences but also some challenges related to some basic and core competences. This has been followed up through different actions.

FIGURE 3: ASSESSMENT OF PRESENT AND TARGET COMPETENCE LEVEL WITHIN A SUBJECT-MATTER GROUP WITHIN A SECTION, SOLID LINE PRESENT LEVEL AND DOTTED LINE TARGET LEVEL



After the pilots some small adjustments were made and then we presented our final framework for competence description to the top management. It was approved and we could begin the process of providing this as a tool for all units, sections and employees. Our goal was for more or less all units in the organisation to have been through the process by the end of 2011.

EXPERIENCES SO FAR

Presently, nine sections have been through the process. Some have "finished" and others have just started. Our experience so far is that the framework works very well as a tool and basis for discussing and evaluating competences. We have learned that it is important when planning the process with the section leader that we take into consideration their special needs. Therefore the processes have been quite different from section to section. Some groups (or even individuals) might want to focus the discussion on the details of the different categories of competences. We allow some flexibility and adaptations, also related to core competences, but try to avoid too sophisticated discussions on this classification issue. We also underline that it is possible to make a more detailed mapping of the different categories, which also in practice has been done, for instance of the different tools within the field of ICT skills.

When the sections/groups are at the end of the process and are discussing their training needs, we ask them to consider different methods beyond traditional courses, for instance job-rotation, internal workshops etc. Our experiences so far are generally quite good and there has been positive feedback from both leaders and employees.

A general observation is that the process appears to provide a better basis for follow up in appraisal interviews and the next step might be to introduce the framework in a more systematic way in the forms used for this interview. During the process we also hope to get more concrete input to the central training programme, where the input is sometimes missing.

SOME CONCLUDING REMARKS

The production of official statistics has a long tradition based on well-established practices and methods. Thus one might assume that future competence needs are more or less the same as in preceding years. And to some extent this is true; there are some basic numeric and analytical skills that will be prerequisites for the production of high-quality statistics also in the future.

There are a number of internal challenges such as staff turnover, changing technology and production routines. External challenges related to the recruitment of staff, relationship with external stakeholders and users, international cooperation etc. These challenges require a more conscious approach to competence requirements and competence development.

This situation requires a clear management strategy and a human resource function closely interacting with all parts of the organisation, ensuring that everybody has a high degree of consciousness about required and available skills and capacities. Also it is necessary to have tools to identify needs and gaps and mechanisms to fill the gaps. A mechanism to fill competence gaps is to benefit from international training and exchange of best practices – and staff.

The framework for competence evaluation presented seems to work quite well so far in Statistics Norway. Nevertheless, it needs to be adapted to different needs in different parts of the organisation. It is necessary to see the discussion on competences in the production of statistics as a continuous process and much remains to be learned from international cooperation.

21. BEYOND VOCATIONAL TRAINING - COMPETENCE MANAGEMENT AT STATISTICS SWEDEN

Crister Haglund Statistics Sweden

Traditional training is undoubtedly very important for the competence development at Statistics Sweden. Nevertheless, probably more than 90 percent of all professional learning takes place in daily work situations. In consequence, Statistics Sweden has launched a competence strategy with different measures for improving everyday learning in focus and becoming a learning organisation.

BACKGROUND

Statistic Sweden is a decentralized organisation with twelve relatively independent departments. It is a flat organisation with comparatively few hierarchies and managers, where employees are expected to take responsibility for their own work to a large extent. Commitment and involvement are keywords in this philosophy. Statistics Sweden is not a unique organisation in that respect in Sweden where the process with empowerment of employees and flattening the hierarchic structure started in the late 70s.

Within ten years almost 50 per cent of Statistics Sweden's current staff will have resigned, mainly because of age. At the same time requirements and challenges in Statistics Sweden are increasing: staff are to be available 24 hours a day, more timely statistics should be produced, staff will face increased competition and its unique position will no longer be clear and obvious.

For Statistics Sweden to continue as a competitive organization in the future, efforts at different levels and in different areas are required. In our Competence Development Policy we state:

"We shall all contribute to creating a favourable learning environment since this is the basis for competence development. The largest part of competence development occurs during the daily work."

Statistics Sweden has a staff with high qualifications. The share with a university degree or equivalent is almost 60 per cent. Applicants for more advanced positions should have a university degree including at least 40 points of statistics (40 points is equivalent to a full year of studies). In every organisational unit involved in statistical production there are methodologists available with no less than 60 points of statistics. They have an important role to assure the product quality and to implement quality thinking in the production processes.

STATISTICS SWEDEN AS A LEARNING ORGANISATION

In his book "The Fifth Discipline", Peter Senge writes that the basic meaning of a learning organisation is that it is continually expanding its capacity to create its own future - a future with the results it truly desires. Another central feature of a learning organisation is that managers and co-workers within it have the time and awareness to facilitate, encourage and support each other's learning. Managers have a key role to play here.

"Evaluation discussions between manager and employee play a central role in the annual planning cycle. The discussion should result in an individual plan for development. The employee has a responsibility for seeing that the plan is carried out while the manager should provide time for competence development and should follow up the plans".
(Extract from Statistics Sweden's Competence Development Policy)

Statistics Sweden tries to enable individuals to learn but they themselves should also have to take responsibility for their own learning. A prerequisite for learning is that employees may affect how their work tasks are performed to a large degree. Managers are encouraged to give their co-workers room for new ways of thinking and to take responsibility for planning their own work. An annual staff survey is carried out in order to provide basis for improvements in the field of working environment. Important aspects of this are the employee's satisfaction with their influence on their own working situation and the possibilities for training and development. The results from the survey are discussed within the units and action plans are formed.

The learning organisation is based on an open climate where exchanges of experiences and communication between organisational units occur without hindrance. Operations are organised for both learning and performance.

A determining factor in meeting Statistics Sweden's requirements for the sound competence management supply is the building of a learning organisation. In addition to specific requirements and efforts, substantial involvement and commitment on behalf of all co-workers is required. It is very much the initiatives of the individual employees which will drive the process forward step by step.
Building a learning organisation involves among other things:

- To organise operations for learning as well as for performance purposes;
- To inventory and strengthen the desired and necessary know-how;
- To improve each employee's ability to resolve and perform their work tasks - to do the right things in the right way;
- To create meaningful opportunities for the transfer of know-how while carrying out the daily work;
- To make everyone aware about competence development in the daily work situation.

AGENTS FOR CHANGE

One step in competence management was taken in 2001 when 15 "agents for change" from Statistics Sweden took a university course on Learning Processes. These agents established a network with the task of piloting Statistics Sweden toward continuous learning. The intention is that they should work in a non-bureaucratic way and inspire others to act.

The studies provided important knowledge for the continuing implementation of learning organisations at Statistics Sweden. The resulting research papers have been presented at Management Seminars. The practical work involved in building a learning organisation was also initiated at these Seminars.

COMMITMENT, INVOLVEMENT AND COLLABORATION

Collaboration also involves managers acting as leaders and demonstrating the ability to encourage and strengthen their co-workers capacity to be actively involved in the development of operations. Relations and the capacity to support become more important than going forth and showing the way. We must learn how to learn.

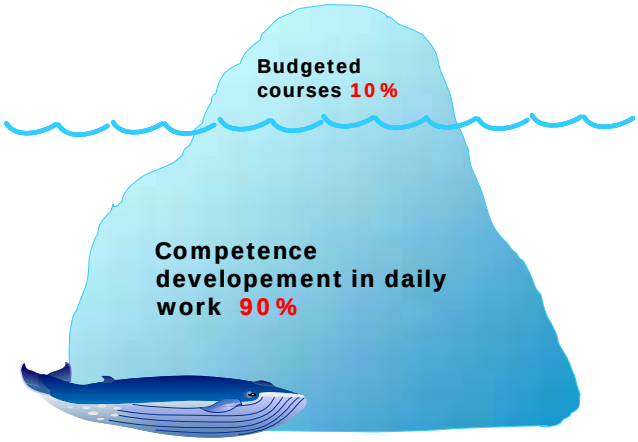
Quickly changeable requirements from the surrounding world also affect learning. The majority of all learning involves improving and refining our ways of performing different tasks within the bounds of current understanding. There is all the more often reason to seek completely new ways which may involve abandoning ingrained patterns of thinking. This requires another way of learning - something that we must also learn. Managers are therefore systematically trained to use a "Solution focused leadership", which helps us to avoid obstacles and to easier realize new ideas.

CREATING LEARNING OPPORTUNITIES

In a learning organisation, a steady transfer of knowledge occurs between co-workers through dialogue and the exchange of experiences. Therefore we strive to have at least one inexperienced employee in every project and that all those given new tasks are also assigned a coach. Other efforts involve assessing what is needed in each recruiting effort rather than simply setting, unnecessarily high requirements for formal education out of habit.

EVERYDAY LEARNING

Courses and training are without doubt important for our competence development. It is easy, however, to forget that the greatest part of our professional role is learnt by carrying out the daily work. We should therefore improve our ability to consciously exploit the learning situations we encounter in the course of doing our job. It is about learning to learn.



We often associate the concept of competence development with courses and training. It is easy to overlook that we are actually continually learning – not least of all at work.

In order to learn from our everyday work, we must take the time to stand and reflect over what has happened. It is not always easy to discover what has been learnt since learning often occurs in small, barely noticeable steps. It is only when we are involved in some dramatic event that a clear trace memory is created. We can nevertheless establish that these small steps gradually bring us a good ways toward a new and deeper level of understanding. This is the learning that we need to strengthen and become aware of.

We must exercise our ability to understand what and how learning occurs beyond the usual venue of a course. This requires time for reflection and consideration: What did I do? How did it go?

Several units at Statistics Sweden have developed their way of communication with weekly staff meetings. Recently it has become more common for one employee to explain his/her current assignment in greater detail. In this way, such meetings have become more learning intensive.

Everyday learning occurs in networks, via mentors and coaches, in projects or with work rotation and training programmes. Learning also takes place during daily discussions with the users of statistics and the survey respondents.

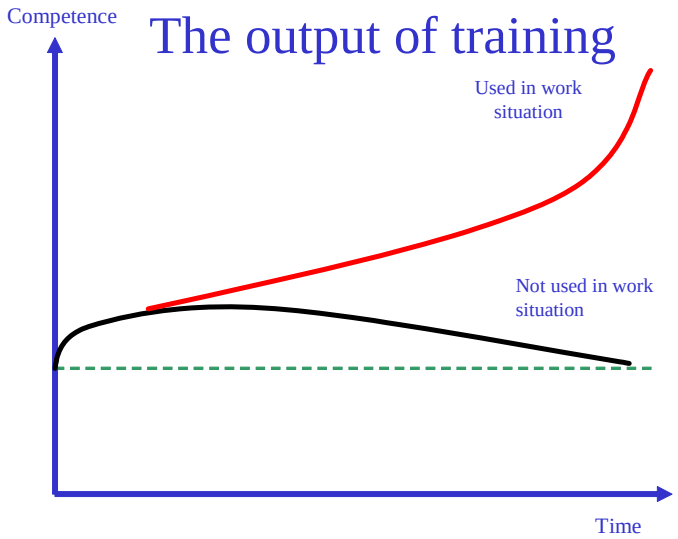
When it comes to statistical skills one of the most important way of learning at Statistics Sweden is the transfer of knowledge from more experienced specialists to younger employees. The supply of in-house

training courses in this field is deliberately quite limited although seminars on statistical methodology are quite frequently arranged

Much knowledge and information is more or less readily available in our systems and databases. We get more and smarter solutions through systems that eliminate the need for (unnecessary) human competence. This provides us with more time for learning and development work.

SHOULD WE DISCARD COURSES?

No, courses are required in several situations in order to get started with the development of new capabilities. However, courses in themselves seldom increase competence dramatically. It is not until we apply newly gained knowledge to our work when the actual growth in competence occurs. This means that we must ensure that conditions in the workplace are ripe for the application of new knowledge to the usual work. There are many good examples of how this is applied at Statistics Sweden in the IT-area.



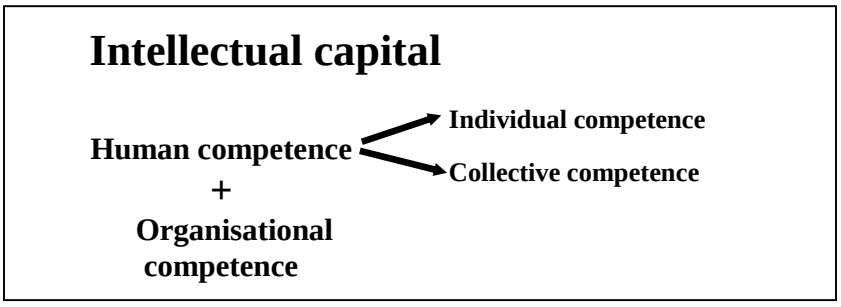
We tend to forget what we have learned in a course unless we have the opportunity to transform the knowledge into reality. It is the combination of courses with the application of the new knowledge in the performance of the daily work what makes the biggest difference to competence development.

THE COMPETENCE CONCEPT

Statistics Sweden defines competence as the capability to perform of work tasks in a desirable way. Important building blocks related to this capability are knowledge, skills, experience and networking abilities. Competence emerges only when the volition and desire to use it are present. Therefore Statistics Sweden has tried to create the preconditions, such as rewarding systems, which encourage and support this volition.

HUMAN AND ORGANISATIONAL COMPETENCE

Every organisation needs access to know-how as well as money and other resources. Know-how consists of both human and organisational competence. Human competence consists of individual skills and collective skills where the latter represent our capacity to solve problems together with colleagues or customers. Organisational competence consists of the knowledge found within the systems, equipment, software, network, culture, etc.



The sum of human and organisational competence - the intellectual capital, is the potential competence of the organisation. Lack of human competence may be compensated by organisational competence and vice versa.

IT TAKES HUMAN BRAIN WORK TO FILL ORGANISATIONAL COMPETENCE

It is through building up organisational competence, among other things, that we can facilitate the transfer of competence to new employees. In addition, it is by creating user-friendly systems which eliminate the need for unnecessary competence that we can create room for learning and development.

MORE AND BETTER DOCUMENTATION

One way to accomplish this is to document processes and work methods so that they are available to all. Statistics Sweden is continually improving documentation, tools and methods of working. In this way, our competence and know-how is converted into organisational and lasting competence - a means of ensuring quality in the processes. Well documented processes simplify the induction of new employees and diminish the vulnerability of the organisation by enabling more people to perform critical tasks. Up till now, about a third of the statistical processes and products are thoroughly documented, not always without some difficulties due to situations with scarce resources.

The documentation in itself may occur in different forms. At Statistics Sweden we have started producing web distributed information with the help of authoring tools for multimedia purposes. This information comes with moving pictures as well as sound, which in most cases makes it much more easy to understand compared to just a text.

INTANGIBLE/TACIT KNOWLEDGE

A great deal of our competence and skill is not so easy to document or describe. We usually refer to intangible, implicit or tacit competence - that competence which is built up of accumulated experiences over long periods of time. To describe the ways in which a skilled professional differs from a middling one can be difficult. It is, in other words, through observation and study of the experienced ones' ways of working that we can attain tacit knowledge.

The transfer of tacit knowledge requires that we actively consider involving new colleagues when such work as customer visits are carried out. Also in the field of international consulting work we find good opportunities to practice these principles of learning. Statistics Sweden strives to create opportunities for junior staff to absorb our ways of working, methods and culture. This is something that is stressed in the management training programme.

COMPETENCE ANALYSIS

In 2002, Statistics Sweden implemented a thorough competence analysis process including mapping of the existing competence as well as making forecasts of the expected future needs. The work occurs at the different units and all employees take part in the process. This way of working was experienced as dynamic and creative and yielded much in the way of new thinking and reflection on both the personal and collective planes. The work was led by specially trained moderators.

THE MAPPING PROCESS

The work itself begins with managers presenting their views of coming needs, development and the future. Then, all members of the group work further through the following steps:

SWOT-analysis of operations. With the managers' vision for the future as a starting point, a closer look is taken at the unit's existing Strengths (S), Weaknesses (W), Opportunities (O) and Threats (T). This is the first step in competence mapping required in order to identify the prerequisites for coming work assignments.

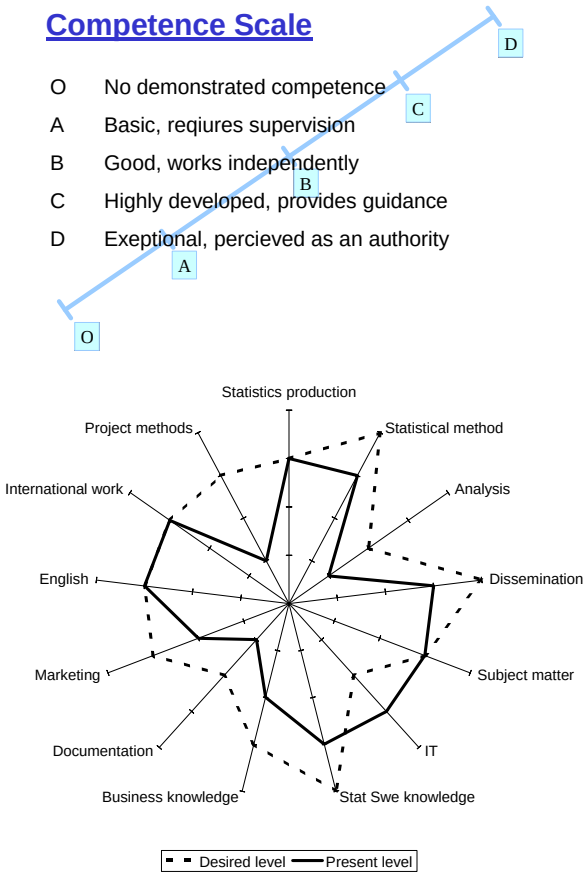
Our desired position in 3 to 5 years. What will distinguish us then? What measures has to be taken to achieve our goals?

Inventory of work assignments. This is a brainstorming phase during which participants with similar work assignments work together to list all the tasks that they can think of without any value judgment.

Identification of competence areas. Work tasks are sorted into different competence areas which are important to operations, for example statistics, subject matter, IT, language skills, etc.

Estimation of desirable and existing competence levels. In order to indicate how much know-how is required for a certain work task, a five point scale is used. Future required competences are estimated as well as the present competence situation. In this way, competence profiles can be created for both organisational units and individuals. Competence gaps, the difference between desired and existing competence, are visualised using polar diagrams.

AN EXAMPLE OF A GAP ANALYSIS MADE AT ONE OF THE UNITS



ANALYSIS AND ACTION PLAN.

The competence gap is analysed from the organisational as well as from the individual's perspective. The unit has a foundation for an action plan including competence development plans. The gap analysis also provides a basis for further discussions during appraisal/development interviews**.**

By 2004, almost all organisational units had gone through these steps. They had also started to fill the gaps by attending courses, working in other parts of Statistics Sweden, studies of user work and so on.

COMPETENCE DATABASE

All employees are encouraged to register their competence in a web based competence database system. There are mainly four good reasons for having such a register:

- Statistics for strategic decisions
- Finding specific competences i.e. for projects
- Individual competence- and career planning
- Finding unused competences

The intention is that everyone should register their education, training and job experiences but and in addition to this language skills and other competences that may be valuable in different job situations. A limited number of persons can search the whole database for a specific competence profile. All

managers have access to information about their own staff members. Individuals can only see their own record.

FUTURE PERSPECTIVE

The rapid generation change will affect Statistics Sweden in different ways and we will face considerable risks of loosing advanced and important core competences. On the other hand there is a golden opportunity for improvements if the organisation is ready to handle necessary transfer of knowledge in a clever way. One aspect of this is to really choose which competences to transfer. Not all knowledge is good knowledge and it is not worthwhile to transfer bad habits. It is a matter of forming an organisational culture where coordination and standardisation can live hand in hand with possibilities for creativity and individual initiatives in the daily work situation.

22. STATISTICS FINLAND'S PERSONNEL SURVEY

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Statistics Finland's policy on human resources development is laid out in its Operational Strategy and Policy outlines of personnel strategy. The Personnel Survey is both a strategic measure and a tool that Statistics Finland has been using since 1998. The Survey itself and the exploitation of its results have been developed in long-term co-operation between the agency's management, human resources management and trade unions. The electronic inquiry is comprised of a section of questions (from the Ministry of Finance Barometer Survey) which facilitates comparisons with other central government organisations, and a section of Statistics Finland's own questions. The annually conducted Survey can be supplemented with topical, thematic questions. The theme studied in 2012 was securing competence in change situations. As a strategic measure the job satisfaction index describes the personnel's satisfaction with leadership, contents and challenges of work, remuneration, development opportunities, work atmosphere and co-operation, working conditions, flow of information and employer image.

The response rate of the Personnel Survey has usually been high at around 75 to 80 per cent. The diversified questions and background variables help in drawing a good picture of the structure of the personnel's satisfaction. The systematic way the Survey is conducted and the obtained results applied into practical actions form part of the agency's planning and monitoring mechanism. Based on the Survey, Statistics Finland's management outlines points of emphasis at the level of the whole organisation. In 2009, for instance, these were management of change, development of co-operation and the group of employees with 11-20 years of service, and in 2012 securing competence in change situations and developing management in difficult personnel conflicts. In co-operation with management teams, the departmental working groups on occupational well-being implement practical measures in their departments.

The Personnel Survey has inspired the launching of major development projects, such as those on the development of leadership and supervisory work (2003 - 2005), and the agency's intranet. Recently the focus has been on the exploitation of the results in the development of activities. In the past, the analysing of the results was mainly assigned to an outside consultant but the departments are today supported in assuming more responsibility for the interpretation of the results. This is done through a so-called occupational well-being network, which provides a practical framework for learning from others and for adhering to agreed actions.

INTRODUCTION

This paper describes briefly the background to the Personnel Survey, the Survey itself and its implementation process. Before moving on to practical examples of the usage of the Personnel Survey, we give an overview of the trends observed in the development of the Survey results over a few years. Statistics Finland's policy on human resources development is laid out in its Operational Strategy and Policy Outlines of Personnel Strategy. The Personnel Survey is both a strategic measure and a tool for directing practical development work that has been used at Statistics Finland since 1998.

The Personnel Survey has been developed in long-term co-operation between the agency's management, human resources management and trade unions. Its roots go back to the general policies for the development of human resources management in the Finnish state administration in the 1990s. At that time, the Ministry of Finance launched projects aimed at improving the quality and cost-effectiveness of work communities in state administration. In the mid-1990s, Statistics Finland also participated in these development projects and made measurements of the functionality of its work

community. In 1996 and 1998 Statistics Finland participated in a study on the effectiveness of early rehabilitation which also comprised an element measuring the functionality of the work community. Systematic monitoring of the functionality of the work community was entered as a goal in the 1998 Occupational Health and Safety Action Plan. Statistics Finland built its own Personnel Survey basing on the aforementioned paths of development.

JOB SATISFACTION IS A STRATEGIC MEASURE

High-quality statistics and good customer service are born from the actions of workers. In an organisation built on expertise, job satisfaction, renewal and motivation of the employees are highly important. As a strategic measure the job satisfaction index provides information about the personnel's satisfaction with leadership, contents and challenges of work, remuneration, development opportunities, work atmosphere and co-operation, working conditions, flow of information and employer image. Statistics Finland's score cards monitor job satisfaction and management indices annually.

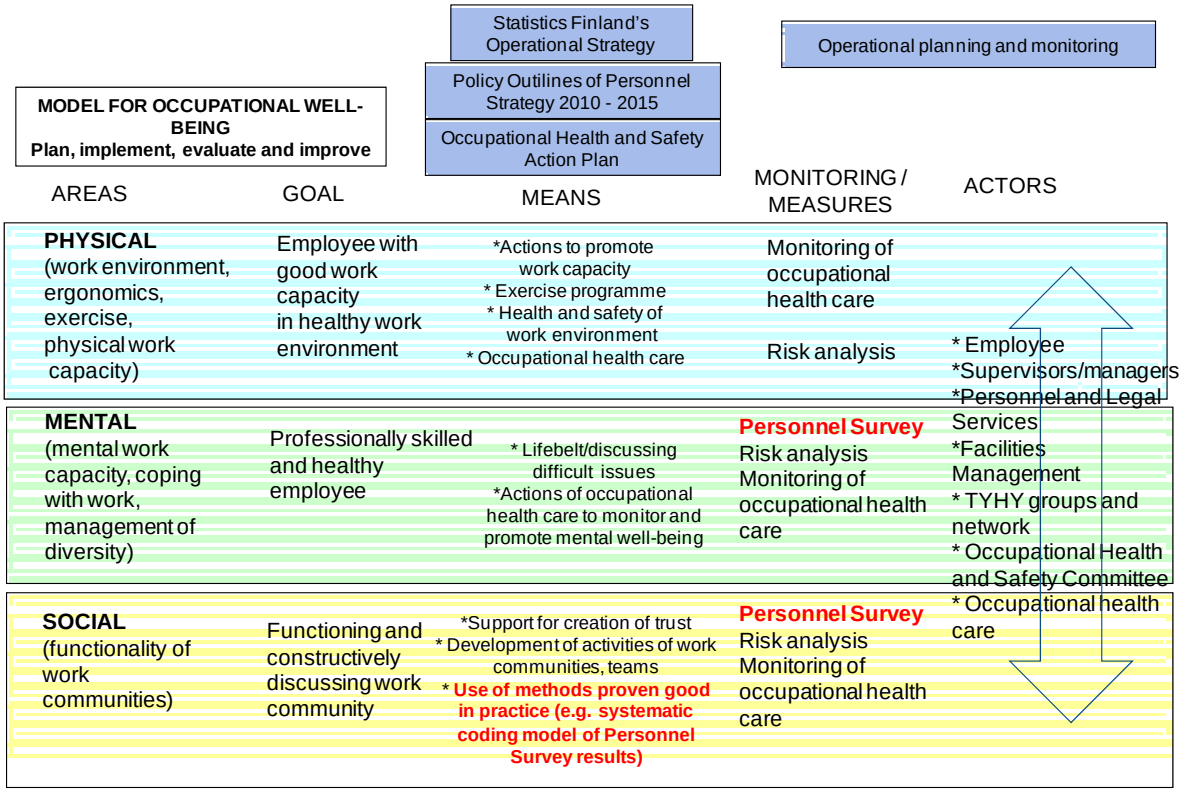
It is essential that the themes affecting job satisfaction are monitored and developed systematically. One of Statistics Finland's strategic objectives is a healthy work community.

FIGURE 1. STATISTICS FINLAND'S STRATEGIC OBJECTIVES 2011

PERSONNEL SURVEY TOUCHES ON EVERYDAY WORK OF EMPLOYEES

Since the late 1990s, the perspective of occupational well-being has received strong emphasis especially in the development co-ordinated by human resources management. In the model for occupational well-being, activities are divided into physical, mental and social areas. The model gathers together the goals, means, monitoring and actors of occupational well-being. The Personnel Survey is a practical tool for the directing and monitoring of development work. The Survey examines the employees' job satisfaction, readiness for renewal, experiences of the functionality of internal co-operation, views about the realisation and clarity of strategic policies, and about the activities of the management and supervisors.

FIGURE 2. MODEL FOR OCCUPATIONAL WELL-BEING



CONTENTS OF THE PERSONNEL SURVEY

The electronically conducted Personnel Survey comprises questions of the Job Satisfaction Barometer survey of the Ministry of Finance (from hereon VMBaro) and Statistics Finland's own questions, in other words 69 questions in all. The VMBaro is also widely used by other state agencies to monitor and analyse job satisfaction. The background variables can be studied diversely by age, gender, length of service, type of employment contract, department, level of education and supervisory responsibilities.

In the VMBaro the themes of the questions fall under eight categories (precise questions are in Appendix 1):

- Leadership
- Content and challenges of work

- Remuneration
- Support to development
- Work atmosphere and co-operation
- Working conditions
- Information flow
- Employer image.

In addition to these, the survey studies willingness for job rotation and intentions to change jobs. In 2010, questions regarding recommendations, renewal and innovativeness of the workplace, occupational well-being and continuing of one's working career were added to the Survey. At that time the total number of VMBaro's questions increased from 29 to 36. The VMBaro is especially useful as it offers the possibility for comparisons between state agencies. In addition to the afore-mentioned VMBaro questions, the Personnel Survey includes a battery of Statistics Finland's own questions for exploring the themes even more closely. There are altogether 33 such questions. In the project which was concluded in 2008 to review the inquiry, the questionnaire was tested at Statistics Finland's Survey Laboratory. The inquiry also includes an open question and the possibility to respond to a so-called ad hoc section for asking how a topical theme, such as change, impact of the economic situation or the Ministry of Finance's current study on further rationalisation or decentralisation of the national statistical service affects work.

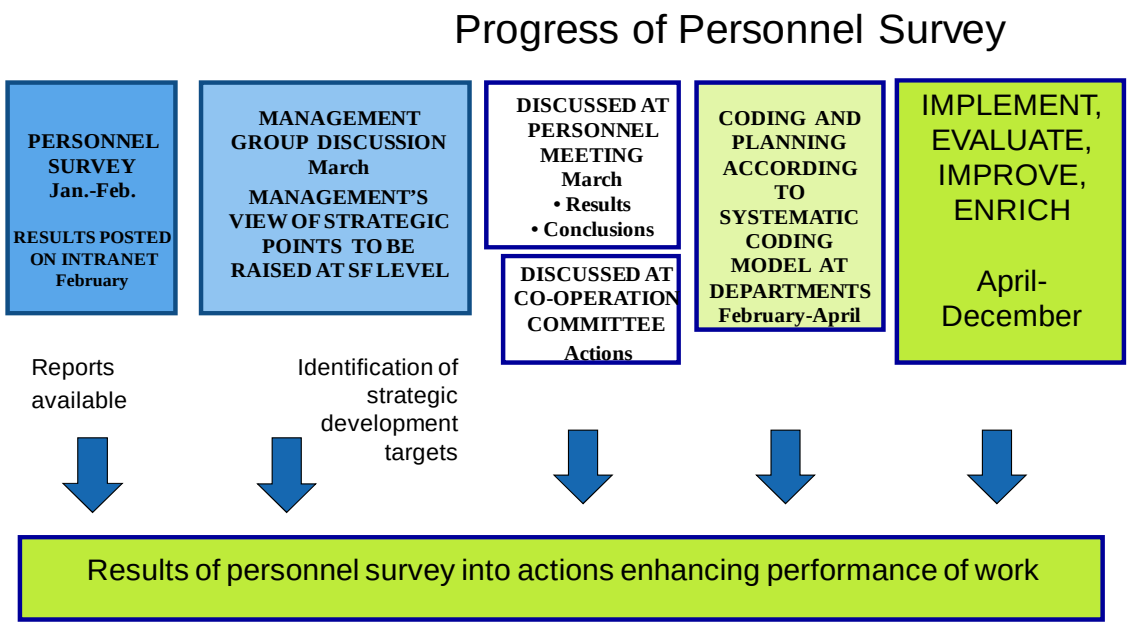
For the VMBaro part, the scale of reply alternatives is 1 to 5 (very dissatisfied, dissatisfied, neither dissatisfied or satisfied, satisfied and very satisfied). The scale of reply alternatives in Statistics Finland's own battery of questions is also 1 to 5, in other words, totally disagree, somewhat disagree, neither agree or disagree, somewhat agree and totally agree. The reply alternative 'Don't know' is also available.

FROM ANSWERS TO MEANS

The Personnel Survey is conducted annually in the early part of the year. In 2009, the process was made lighter by deciding that only the VMBaro would be conducted every other year. The agency's Administration department is responsible for the practical arrangements of the inquiry. The inquiry is located on an external server and it can be answered for a fortnight. The response rate has been good ranging from 73 to 80 per cent. Apart from for the whole organisation results from the Survey are also produced by each department. VMBaro time series, indices by background variables, and distributions and indices by individual question are produced for the *whole agency*. The VMBaro enables internal comparisons within the state administration so comparing is made with the whole of the state administration, the administrative sector of the Ministry of Finance, and with state agencies engaged in research activity. Separate summaries are made of the open answers and of the possible ad hoc section.

Indices and distributions are produced for the *departments*. To retain confidentiality, data by the background variables are not produced by department. The results are utilised as the basis for the development of activities at the level of both the whole organisation and the departments. The process progresses as follows:

FIGURE 3. PROGRESS OF PERSONNEL SURVEY



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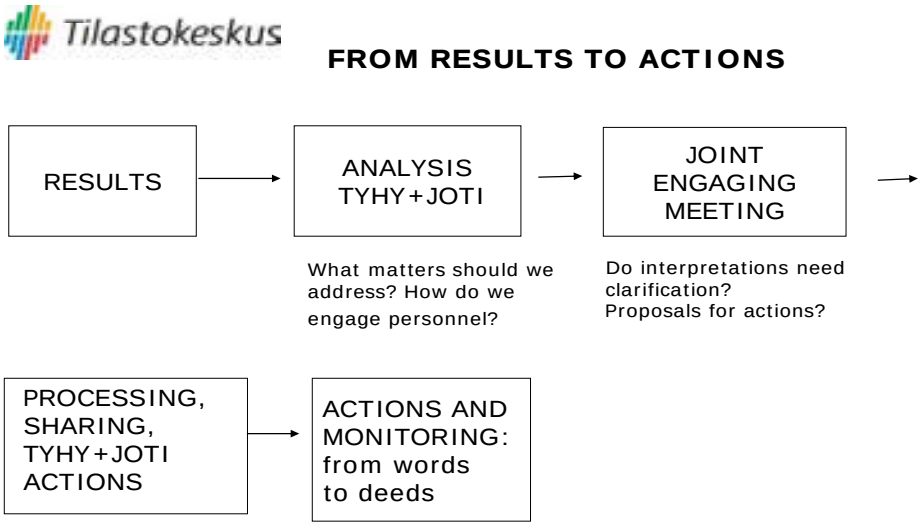
PROGRESS OF THE PERSONNEL SURVEY

Over the years diverse alternatives have been tested in producing and analysing of the results. The responsibility for the various stages of the inquiry has been increasing assumed in-house instead of employing an external consultant. At the moment the Administration department co-ordinates the inquiry process, i.e. its implementation, preliminary analysis of results for the whole agency, and supports the other departments in exploiting the results to benefit their activities. The results are discussed by both the Management Group and the Co-operation Committee, i.e. a composition which includes representatives of both the employer and the employees. The development trend which concerns the whole organisation is discussed at a meeting open to all personnel. The consideration of each department's own results is the responsibility of its occupational well-being group (TYHY group) and management team (JOTI team). The TYHY groups were originally set up for the analysis of the results of the Personnel Survey. However, it was noted quite soon that there was need for systematic co-operation between these groups and the JOTI teams. Analysis of the results is still the most important task of the TYHY groups but the procedure has been developed towards a more collaborative and involving direction aimed at producing practical recommendations for actions.

To make the Personnel Survey process fluent and efficient, the TYHY groups jointly developed a so-called systematic coding model in 2008. Up to then each department had proceeded independently in processing the results. In practice the systematic coding model is a workbook guiding the assessment of the success of the measures that have been taken to improve occupational well-being. It steers the departments in comparing their own results with those for the whole of Statistics Finland and with their own earlier results. The inquiry serves as a basis for seeking strengths and successes as well as areas for development. The recommendation is to select 1-3 areas for development and then focus on practical improvements to them. Benchmarking is recommended both within Statistics Finland and with other state agencies. Each TYHY group should make a plan for progressing. All activity is based on participation and good co-operation. The measures that are due to be taken are centrally monitored by the Administration department and the Occupational Health and Safety Committee.

FIGURE 4. CO-OPERATION BETWEEN TYHY GROUP[1] AND JOTI TEAM[2] IS IN KEY POSITION IN A DEPARTMENT



TAKING CARE OF CO-OPERATION AND PARTICIPATION

RESULTS AND ACTIONS

When the results from the Personnel Survey over the 2006-2012 period are examined in the light of the VMBaro, we can observe that the index figure rises for all sections right up to the year 2008, after which a small drop was seen in 2009 and 2010. After this, the index starts rising again. In remuneration the positive trend continues but as Table 1 shows remuneration is the only section for which the index point figure remains below 3. The overall index figure is 3.48, which can be viewed as a good achievement. Statistics Finland's results are slightly better than the average for the state administration on the whole.

[1] TYHY = occupational well-being group
[2] JOTI = management team

TABLE 1. DEVELOPMENT OF JOB SATISFACTION INDICES AT STATISTICS FINLAND IN 2006-2012 (COMPARISON BETWEEN 195 STATE ORGANISATIONS)

	2006	2007	2008	2009	2010	2011	2012
Management *(State)*	3.25 (3.28)	3.40 (3.26)	3.48 (3.29)	3.39 (3.33)	3.39 (3.37)	3.40 (3.35)	3.47 (3.40)
Contents and challenges of work *(State)*	3.62 (3.65)	3.72 (3.65)	3.72 (3.66)	3.65 (3.66)	3.68 (3.69)	3.69 (3.64)	3.69 (3.66)
Remuneration *(State)*	2.72 (2.68)	2.82 (2.68)	2.85 (2.67)	2.92 (2.76)	2.92 (2.83)	2.91 (2.80)	2.99 (2.85)
Support to development *(State)*	3.24 (3.22)	3.30 (3.19)	3.33 (3.20)	3.27 (3.21)	3.23 (3.24)	3.22 (3.16)	3.26 (3.17)
Work atmosphere and co-operation *(State)*	3.58 (3.59)	3.67 (3.59)	3.68 (3.62)	3.62 (3.64)	3.65 (3.70)	3.71 (3.69)	3.74 (3.72)
Working conditions *(State)*	3.72 (3.51)	3.78 (3.46)	3.85 (3.46)	3.68 (3.46)	3.69 (3.50)	3.78 (3.54)	3.77 (3.57)
Communication *(State)*	3.05 (3.04)	3.15 (2.99)	3.23 (3.01)	3.11 (3.06)	3.10 (3.07)	3.19 (3.02)	3.24 (3.10)
Statistics Finland as an employer *(State)*	3.45 (3.18)	3.47 (3.12)	3.51 (3.12)	3.44 (3.15)	3.37 (3.19)	3.48 (3.19)	3.54 (3.23)
Overall grade *(State)*	3.35 (3.30)	3.44 (3.28)	3.48 (3.29)	3.41 (3.32)	3.41 (3.36)	3.44 (3.34)	3.48 (3.37)

In accordance with the systematic coding model, basing on the results of the Personnel Survey, the Management Group outlined two areas for focused consideration in 2012: securing competence in change situations and developing management in difficult personnel conflicts. The Personnel Survey contained an additional section on securing competence in change situations. The section contained three statements that the personnel evaluated: 1. Competence sharing of retiring employees is safeguarded in my unit in a systematic manner, 2. My unit has a functioning substitute system, and 3. My unit's documentation is up-to-date. The average for these statements was below the average of the other sections. Therefore, competence sharing was selected as the annual theme of the occupational well-being network. The departments' occupational well-being groups have sought the best practices for competence sharing and implemented means of competence sharing in their work communities during 2012. In addition, the early support guidelines have been updated and the occupational well-being network has actively raised awareness of the theme among the personnel. Supervisors will receive early support training in 2013.

The Personnel Survey is of course not the only measuring instrument but just one among many others. However, it produces valuable signals about the employees' motivation and experiences. As topics the afore-mentioned challenges are wide and their advancement has been taken into consideration in e.g. preparation of strategic HR measures, diverse procedures (for internal mobility, internal labour market, discussing difficult issues/expressing early concern) projects and development work (career path project, development of leadership and supervisory work, process and quality work) and in coaching and training (kick-starting of expert careers, training programme in statistical skills, project work, mentoring, work supervision, networks).

At least three dimensions can be identified in the exploitation of the Personnel Survey: it can serve as a basis for setting up development projects (Cases 1 and 2 below as examples), it can help in supporting everyday activities (Case 3) or it can renew modes of operating (Case 4).

CASE 1: SETTING UP OF THE PROJECT FOR THE DEVELOPMENT OF LEADERSHIP AND SUPERVISORY WORK

The Personnel Survey has been an inspiration in the launching of major development projects, such as those on the development of leadership and supervisory work (2003 - 2005). The Director General instigated the project for the purpose of improving leadership and supervisory work. Thus the primary impulse for the project came from the Personnel Survey result indicating that leadership and supervisory work had clearly deteriorated from earlier years. Naturally, in the background was also a need that had already risen over a longer time period to develop competence for leadership and supervisory work. The work generated many kinds of renewals which are still valid. For example, the agency's management policy was defined, the division into units within departments was reviewed, supervisors' tasks, responsibilities and mandates were defined and a description was drawn up of competence requirements for supervisory work. The decision to develop supervisory work in the professional direction was a major advancement in leadership. Supervisors' important tasks are to lead people and enable statistical experts to perform their work well. The project described above is proof of sustained development in which the results of the Personnel Survey could be put to efficient use.

CASE 2: DEVELOPMENT OF COMMUNICATION WITH INTRANET

In the area of communication, the development of the agency's intranet can also be regarded as a major and strong signal. The results of past Personnel Surveys had indicated a need for improving internal communication.

CASE 3: SUPPORTING THE PROCEDURE FOR DISCUSSING DIFFICULT ISSUES

The procedure for raising and discussing difficult issues is an example of a procedure that has been clarified in the area of management. For leaders and supervisors, tasks relating to early intervention and raising and discussing difficult issues are some of the challenging duties in the area of people management. The Personnel Survey has helped to raise the subject up for discussion. Demanding situations requiring intervention and discussion relate to absences, state of health or difficulty in coping with work. Written instructions have been drawn up for the procedure of discussing difficult issues, which provide guiding outlines for behaviour in these situations. However, the instructions alone are not enough because highly sensitive interactive situations are concerned. Therefore, supervisors are supported with coaching and consultations, and by intensifying co-operation with occupational health care. The objective is to address early enough any possible difficulties in the work place because they reflect on all members of the work community.

CASE 4: DEVELOPMENT OF ACTIVITY

Recently, the focus has been on the exploitation of the results in the development of activity. The question then is not of a large project but rather of gradual development in small steps. In the past the analysing of the results was mainly assigned to an outside consultant but the departments are today supported in assuming more responsibility for the interpretation of the results. This is done through the activities of the so-called occupational well-being network, whereby learning from others and commitment to agreed measures become concretised.

The themes raised in the departments include general organisation of work in the work community, sharing of competence, development of project work, information flow and openness. Because the themes are broad it has been recommended that just a few matters should be concentrated on and real progress made in them.

CONCLUSIONS

The Personnel Survey is used as a strategic measure and development tool at Statistics Finland. The Personnel Survey produces information for the agency' human resources management and other management about the employees' views and experiences concerning the internal employer image. When the management invests in measures for the development of the work community which improve job satisfaction these can influence the employees' job motivation and commitment. This is important to bear in mind with respect to the retention of the availability of labour force in a situation where the supply of labour force is diminishing and exit from the labour force is growing.

It is good that the inquiry offers the possibility for comparison with the whole state administration at the time when the state administration is increasingly being thought of as a group of companies. We are not only comparing ourselves with our own past results but also with other state agencies.

As from 2013, the first long-term change monitoring will begin with the help of an additional section in the Personnel Survey: the effects of the reorganisation that starts in 2013 on the personnel level will be monitored for three years. In future it would be pertinent to examine closely the relationship between major development projects and smaller development actions that take place alongside routine work. With a co-ordinated and systematic network-like approach to work the Personnel Survey can be extensively utilised.

Thus, the development of the inquiry itself has been a learning process which has been followed by learning how to genuinely exploit its results. The network-like activity of the TYHY groups and the exchange of experiences in the use of the systematic coding model have been creative activity supporting a new kind of discourse culture. It has brought the exploitation of the Personnel Survey down to the level of everyday activity. The systematic activity of the TYHY groups and the use of the systematic coding model have served development.

APPENDIX 1

Personnel Survey 2009 complemented with the new questions of 2010

Background variables
Gender
Age
Length of service
Service/employment contract
Department
Level of education
Supervisory position or not (team leader/unit head/director or department)

Questions:
Questions 1 to 10 are from the Ministry of Finance Barometer Survey (may not be edited)
Questions 11 to 17 are Statistics Finland's own questions

Please answer the following questions according to your own opinion. Assess the situation during the past 12 months.

1 Leadership

How satisfied are you with?

1.1 The support your immediate superior provides in matters related to your work and in creating preconditions for it
1.2 The general organisation or work in your work community
1.3 Your supervisor's feedback on your work performance, command of professional skills and development in your work
1.4 The fairness of the way you are treated by your supervisor
1.5 The operation of management as examples and direction indicators

2 Content and challenges of work

How satisfied are you with?

2.1 The clarity of the targets set on your performance and work in general
2.2 The independence of your work and your ability to influence the contents of your work
2.3 The amount of challenges your work offers
2.4 The stimulation your work offers and the enjoyment you get from your work

3 Remuneration

How satisfied are you with?

3.1 The clarity and intelligibility of the basis on which you are paid
3.2 Your pay relative to the demands of your work
3.2 Changes made to your pay if your work performance changes
3.4 The fairness of your pay

4 Support of development

How satisfied are you with?

4.1 Your progress in your career and support for it in your work community
4.2 Your opportunities to participate in workplace training and other concrete measures offered by your work community for the development of your competence
4.3 The functionality of target and development appraisal discussions as tools for the development of your competence

5 Work atmosphere and co-operation

How satisfied are you with?

5.1 The internal co-operation and work atmosphere of your work community
5.2 The fairness and humanity of the way you are treated by your co-workers
5.3 The appreciation of your competence and work input in your work community
5.4 The realisation of gender equality in your work community

6 Working conditions

How satisfied are you with?

6.1 Your possibilities to reconcile your work and private life
6.2 The certainty of your job now and in the future
6.3 Your coping ability and energy
6.4 Your workspace and your working tools

7 Flow of information

How satisfied are you with?

7.1 The internal communication and flow of information in your work community
7.2 The openness of your work community in the preparation of matters and in decision-making

8 Employer image

How satisfied are you with?

8.1 The public image of your employer as a good employer
8.2 The clarity and intelligibility of your employer's values
8.3 The materialisation of the values in practice

9 Job rotation

9.1 Are you willing to embark on a job rotation?

10 Change of jobs

11 Leadership

11.1 Difficult conflicts among personnel are tackled promptly at my department
11.2 Changes are implemented in a systematic manner at Statistics Finland
11.3 Management is skilled at Statistics Finland
11.4 Management is interactive at Statistics Finland
11.5 Projects are well managed at Statistics Finland
11.6 Systematic and proactive activities are based on a well-functioning planning and monitoring system at Statistics Finland
11.7 The role of a unit head is clear
11.8 The role of a team leader is clear

12 Content and challenges of work

12.1 I can use my own abilities diversely in my work
12.2 I know how my own work is connected with the goals of Statistics Finland and my department
12.3 I feel I can influence the activities of my work community
12.4 The processes that are essential in my work function well
12.5 Project work is of high quality and productive at Statistics Finland
12.6 My department has clear goals
12.7 My department has a clear plan for achieving the goals

13 Support of development

13.1 My professional competence is up-to-date and developing
13.2 I co-operate with parties from outside Statistics Finland that are important for my work.

13.3 At my department problems related to job tasks are seen as challenges that can be learned from
13.4 Sharing of knowledge related to job tasks and competence is typical of Statistics Finland's activity

14 Work atmosphere and co-operation

14.1 I give support and encouragement to my co-workers and supervisor
14.2 I can freely express different and deviating opinions in my work community
14.3 I trust in the support of my work community
14.4. Co-operation between departments functions well

15 Working conditions

15.1 I can usually manage my work within normal working hours

16 Employer image

16.1 The principles of statistical ethics are respected at Statistics Finland
16.2 Statistics Finland is service-oriented
16.3 Activity is continuously being improved at Statistics Finland
16.4 Statistics Finland is innovative
16.5 My department reacts adequately to changes in society and the development needs that arise from them
16.6 Statistics Finland has clear goals
16.7 Statistics Finland has a clear plan for achieving the goals
16.8 The activity of Statistics Finland is efficient and productive
16.9 I do work that is meaningful

23. THE IMPROVEMENT OF HR MANAGEMENT BY USING LEAN

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A major challenge for all organizations is to improve efficiency and to ensure continuous improvement. For the HR department this is a double challenge as the HR department itself should meet the requirements of the organizations it serves in an efficient way, and the HR department should be an active partner in promoting and training improvement actions in relation to the main tasks of the organization. Thus the HR department of Statistics Norway for some time has tried to profit from some principles and methods based on Lean in order to improve its own operations.

Lean is a methodology focussing i.e. on what is creating value for the clients or customers, on how operations can run smoothly with the identification of bottlenecks and operations with little value and creating a culture for continuous improvement. Lean implies a bottom-up approach; it requires empowerment and involvement of all employees and a new type of leadership. As Statistics Norway now has decided to launch the use of Lean on a broader scale, the HR department will also have an important role to support this process, especially by providing relevant training and by coaching some improvement projects. This paper will discuss some experiences gained so far and present some potentials of this approach. One concrete result has for instance been the redesign of management of course planning in order to ensure better response to new needs, more efficient use of training resources and more robust management of courses.

INTRODUCTION

For all organizations it is always important to perform its tasks and services in the most efficient way and to adapt continuously to new and increasing needs and requirements. Thus this is also an obligation for all units and all staff of the organization. Public organizations, such as National Statistical Institutes, will have the same requirement, especially in a situation where budgets might be limited or even decreasing. The challenge is to be able to produce statistics with the best quality meeting user needs – even with limited resources.

The HR unit in an organization will have to play an active role in this improvement process, both in order to be as efficient as possible regarding its own services and in order to support the process in the organization as a whole.

Thus the HR unit of Statistics Norway, in autumn 2010, initiated a development process through a seminar on development of communication and management, based on Lean methodology. The process continued through several actions and also gradually spread in the form of workshops and pilots to other parts of Statistics Norway. On the basis of several positive experiences, also within other public organizations, the management of Statistics Norway in February 2012 decided to start a program for the introduction of continuous improvement, based on Lean.

Some of the issues that were identified as drivers of using Lean within the HR unit were:

- The need to improve efficiency of different operations;
- The need to improve responsiveness in relation to the needs to the organization;
- The need to improve internal and external communication;
- The need to develop a more robust management of different tasks - less risk when people are absent;
- The need to align tasks and activities with overall strategies for Statistics Norway.

The objective of this paper is to summarise some of the experiences from the process of implementing lean in the HR unit and to describe the role of the HR unit in the overall implementation of Lean within Statistics Norway. As an introduction we will give some information on what Lean is.

WHAT IS LEAN?

The overall objective of Lean is to create a culture for continuous improvement based on strong involvement of all employees involved. The core idea of Lean is to maximize customer value while minimizing waste. Thus, lean means creating more value for customers with fewer resources, and has a strong focus on the processes for creating the results and the need to be systematic and to measure and report on results of improvement. Within a Lean organization managers should play the role as facilitators in a learning organization, with clear delegation and open communication. Lean is a bottom-approach: this means that those doing the practical work have to be involved in the improvement process and that ideas and actions have to be the ownership of those involved and will have to implement the actions.

The Lean approach builds on a long history of methods for process control and quality management (Womack et al, 2010) dating back to around 1900 with the Henry Ford and the development of the assembly line and including Total Quality Management around 1990 and later on the European Foundation for Quality Management (EFQM), International Organization for Standardization (ISO), Six Sigma, Common Assessment Framework (CAF), Just in Time (JIT) and Quality Assessment Framework (QAF () as developed within the European Statistical System (Eurostat, 2011). Important contributions to this development have been made by Mr. W. Edvards Deming, Mr. Joseph Duran and Mr. Kaoru Ishikawa. Experiences of the Toyota Production System (TPS) is also an element in development of Lean. Even if Lean mainly was developed for use in the industrial production sector, it has to an increasing degree found its application in the service sector and the public sector, for instance for improving the efficiency of insurance companies or hospitals.

The reason for this is that Lean is based on some rather simple principles and practical methodologies that can be adapted to analysing and solving different tasks.

The five basic principles in Lean are:

- Value: What creates value for your customer?
- Value stream – avoid waste: Identify those activities that create waste
- Flow: Create flows that runs as smoothly as possible – few stops
- According to needs
- Actions/flows are created based on the needs of your customers (external and internal)
- Your customer = next process
- Continuous improvement
- Create a culture where all contributes to continuous improvement
- Continuous improvement to be systemized

Reduction of waste is essential in Lean and thus it is also necessary to identify what waste can mean:

- Waiting
- Inefficient movements
- Resources not fully used
- Unused creativity
- Unnecessary transport
- Corrections with low importance and value
- Too large stocks
- Over production - not meeting demand

A simple starting point might thus be to analyse these points in relation to own work, own unit and own organization; What unnecessary work do we do? Is the creativity of our staff used fully? And then to try to imagine a dream situation; how could we think work to be performed in a future, idealistic situation?

WHY AND HOW TO IMPLEMENT A PROCESS FOR CONTINUED IMPROVEMENT?

When implementing Lean a starting point is to identify customers or users of the services provided and analysing the process for providing services of value to the users. The objective of this analysis should be a plan to increase the value of the service provided, which might mean to increase the quality of the service, expressed for instance as reduced time lag or reduced resources spent.

Thus external consultants have supported the HR Division to understand Lean, to analyse the present situation and to develop some improvement actions.

Starting point: Who are the users of the services of HR, what are the key issues at present and how to improve?

Who are the customers of HR? Obviously the main customers of the HR unit are the top management, the middle management and in principle all employees of the organization. It might also be external customers; potential future employees and users of statistics.

Thus, in order to structure the tasks and the activities of the HR unit according to lean, one has to reflect on the 'value' provided by the HR unit, that for instance can be described as:

- Provide expertise in relation to organisational development
- Provide staff policy guidelines and strategies
- Provide services and expertise in recruitment procedures
- Ensure the proper updating of a staff information system
- Ensure proper wage management
- Understand needs for competence development and provide proper training
- Handle agreements and negotiations with staff representatives/labour unions
- Provide expertise in field of health, environment and security

AREAS REVIEWED:

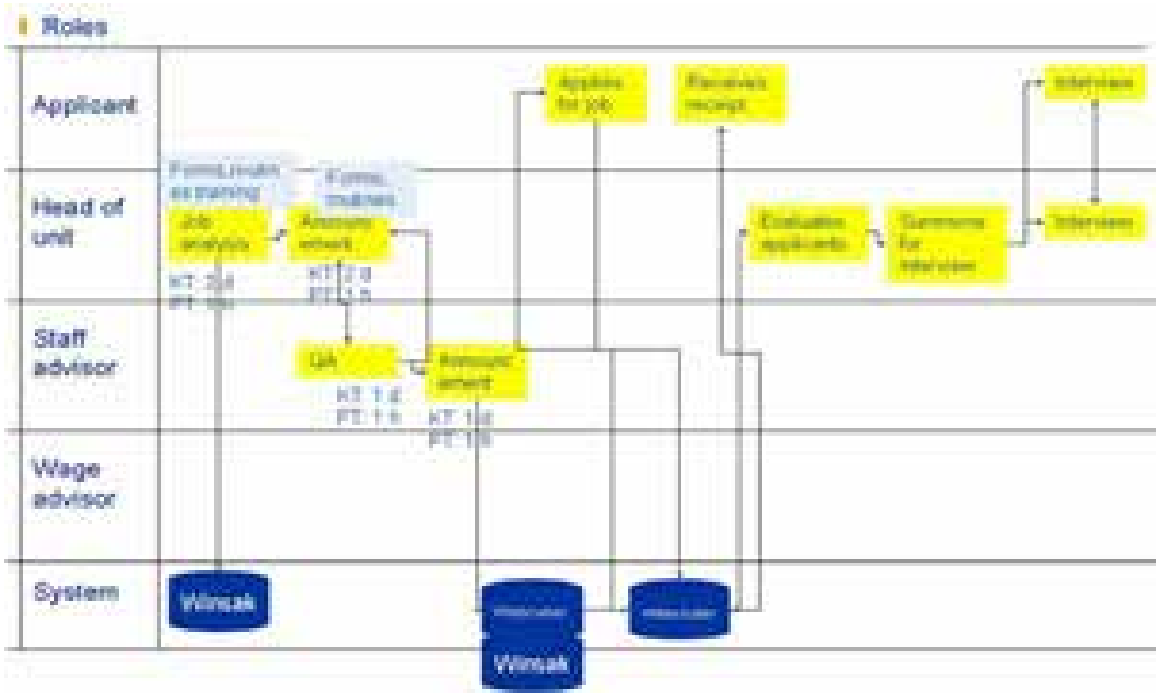
After an introduction to Lean and reflection on priorities, the following areas were chosen as candidates for improvement with the HR unit of Statistics Norway:

- Recruitment
- Training course management
- Wage management
- Employees' management participation
- Improved internal organization of HR unit

RECRUITMENT:

The starting point was a description of the present recruitment process where it was important to identify actors/roles, how the process flowed, and last but not least how much time it took (KT) measured in days, and how much work it actually required (PT) measured in hours:

FIGURE 1. DESCRIPTION OF THE RECRUITMENT PROCESS



This overview showed that the process sometimes took too long time, considering the limited amount of work involved. There was also some lack of communication between the HR unit and the subject matter divisions during parts of the process, and there were some challenges in relation to the lack of integration of IT tools.

Thus some conclusions of this review were:

- The HR division should get more involved in the process when analysing needs for recruitment
- The HR division should participate in the interview process
- Electronic procedures for handling recruitment should be better integrated

WAGE MANAGEMENT:

A similar review was made by the staff involved in wage management and the most important improvement actions identified were:

- The need to centralise some functions
- To develop more targeted and efficient control procedures
- To ensure better coordination between wage and staff management
- To update documentation of procedures connected to wage management

EMPLOYEES' MANAGEMENT PARTICIPATION:

Within Statistics Norway there has been a regular and formalised communication between the management and representatives from the trade unions. Given two geographical locations and four trade unions, these meetings have become more and more demanding. Thus a review was made and it was proposed to clarify the targets and the structure of the meetings between employee representatives and the top management by some improvements:

- To reduce the number of participants
- Stronger follow up of rules concerning deadlines
- Provide more visibility of results

TRAINING COURSE MANAGEMENT

Statistics Norway has for many years had a rather ambitious training programme. In 2008 there were, for instance, 130 planned courses and in 2009 11 courses. One major problem was however, that a relatively large number of courses were cancelled or had few participants. Thus in 2008 and 2009 around 1/3 of planned courses were cancelled and the average participation per course was less than 11 (Table 1).

TABLE 1. STATISTICS NORWAY INTERNAL TRAINING COURSES. 2008-2011

	2008	2009	2010	2011
Total number of courses performed	84	70	52	58
Total number of participants	886	754	498	761
Average per course	10,5	10,8	9,6	13,1
Employees participated in one or more courses	432	378	303	356
Number of courses cancelled	46	41	16	3
Employees cancelled participation	71	72	122	100

When starting the lean process within the HR unit in the autumn 2010, it was thus considered as important to ensure a better adaptation of courses in relation to demand to get rid of considerable 'waste' linked to the planning of courses never performed. Thus in 2011 only those courses were fixed in advance where it was considered that there was a documented and continuous need, for instance related to IT tools or statistical methods. In addition, there were a number of courses on demand that were only fixed and implemented when a sufficient number of employees had announced their interest (by e-mail to a functional e-mail address), normally around 8 -10.

In addition the course management was organised more as a team with coordinated tasks and responsibilities in order to ensure back-up and proper follow-up.

The effect of this change has been:

- Fewer cancelled courses (only 3 in 2011)
- Higher average participation per course (13 in 2011)
- More interaction on courses and training needs with units and employees
- Courses more adapted to emerging needs

REVISED ORGANISATION OF HR UNIT:

The HR unit has around 17 employees with quite diverse tasks. Thus it has been quite demanding for the head of unit to ensure proper planning, coordination and follow up. One way to solve this was considered to be organising the unit in groups. In addition to improved planning and coordination this should also stimulate teamwork and sharing of tasks and responsibilities, which is the core idea of lean.

After a review process, also supported by external adviser, the present groups are the following:

- Staff counselling and recruitment (staff policy, wage policy..) (3 employees)
- Staff management (update staff data, travel bills, wage etc) (6 employees)

- Health, environment and security (3 employees)
- HR and organizational development (5 employees)

Each group has a coordinator and a work programme, which is updated continuously, setting targets, clarifying responsibilities and resources. The group meets quite regular for sharing of experiences and setting priorities.

Group leaders have a joint meeting with head of division every week and should ensure communication between the group and the head of unit.

The whole unit still has a joint meeting about every month. These meetings should focus more on major issues for discussion and exchange of experiences across the groups.

Experiences so far are quite promising, even if it takes time to develop a new structure and new routines. Hopefully this new structure should lead to more continuous development of work processes, competence development and thus better use of available resources.

THE ROLE OF THE HR UNIT IN IMPLEMENTING LEAN IN THE ORGANIZATION

Partly based on the experiences of the HR unit, the idea of implementing Lean on a broader basis within Statistics Norway emerged and was decided by the top management early in 2012, after several limited pilots in different units.

This has resulted in a pilot phase lasting until the end of 2013.

This pilot phase is supported by an internal programme coordination group and external consultants. Important elements of the programme are; internal training of managers, recruitment and training of lean facilitators, training/seminars for other employees and not least; performance of several lean pilots for the improvement of specific processes/tasks.

The HR unit is heavily involved in this work by:

- Participation in programme coordination group
- Support recruitment and training of lean facilitators
- Involvement in other training and information activities related to lean

This illustrates the point that the HR should have a role to play in organisational development in general, including for instance, change of working methods, change in management style and change in organisational culture.

The involvement of an HR unit in lean and continuous improvement requires that the unit has enough resources and the right competences to play an active role, and that this role is accepted by the organization. This is partly the case within Statistics Norway, even if there is also a need for continuous improvement, also of the HR function.

SOME CONCLUSIONS

Some points for summing up:

- Lean is based on some simple and easily understandable principles and tools that can give quick results
- Requires openness, creativity and willingness to change among participants
- Requires (as usual) good management and follow up

- The introduction of lean/continuous improvement requires the heavy involvement of the HR unit together with other internal and external experts

However, there are also some challenges for implementing continuous improvement/Lean:

- Does the management understand of framework and philosophy, ensure proper backing and act according to Lean thinking?
- Is the process well-coordinated and implemented, giving understandable and accepted targets and the putting in place proper mechanisms for implementation?
- Is the message understood by the employees as something of value that can make a difference in daily work?

It has to underlined that introduction of lean might mean a new kind of leadership and a change in organisational culture. These are rather heavy challenges requiring sustained focus and major investments in training, evaluation and follow up. It remains to be seen whether Statistics Norway will succeed in this effort, and that we will be able to report on measurable improvements in future, because lean also has a strong focus on setting measureable targets and to measure improvements.

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24. METHODS AND MAIN RESULTS OF STAFF MIGRATION MOTIVATION RESEARCH

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An indispensable condition of the effective long-term human resource management is to create and retain high quality manpower. Considering the fact that in Hungary there is no such comprehensive tertiary education providing the complex knowledge necessary for the work in the statistical office, it is a crucial task to keep the best staff and prevent workforce migration. The following study presents three pilot programmes and some main results of migration motivation research analysing the reasons and types of fluctuation in the Hungarian Central Statistical Office (HCSO).

Different approaches of the investigation in the period between 2005 and 2010 are demonstrated in this paper: results of exit interviews with colleagues leaving the office; outcomes of a programme exploring the new entrant's expectations; and some results from the satisfaction survey of the whole staff focusing on factors of commitment aiming at the prevention of migration.

The results indicate that the staff – also new entrants – has definite ideas about a "good workplace" and the frustration of their job quality expectations plays the main role in leaving the office. The most important factors of the commitment for the workplace are the interesting, challenging everyday duties, financial and moral appreciation of performance and an adequate, broad chance of career.

INTRODUCTION

The main effort of the human resources development policy of the HCSO is to establish and maintain the workforce able to adapt flexibly to the increasing external expectations towards the HCSO. One of the most important resources of the office is the available professional technical knowledge which undergoes continuous improvement so that it could meet the various challenges it faces. As at present there is no comprehensive tertiary (university) education of statistics in Hungary which could ensure the complex scope of knowledge necessary for the special works at the HCSO, the office needs significant training investments and has to ensure long-term possibilities for gaining work-experience. Just for this reason it is essential for the effective long-term human resources policy of the office to retain and motivate the staff and to promote the recovery of professional and material expenditure. In this respect it is a task of primary importance to get to know the motivation of withdrawals or resignation, to analyse the reasons and types of fluctuation, and based on the results, to elaborate measures which aim at the prevention of workforce migration. This study presents the experimental methods and some main results of this motivation research in the HCSO.

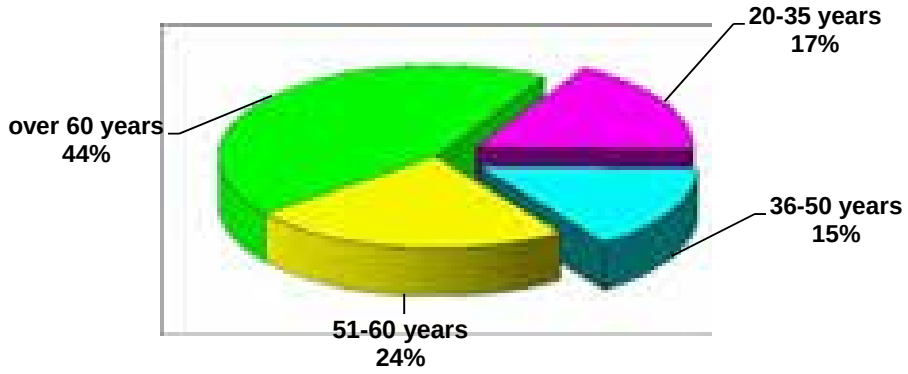
PRELIMINARIES: FIGURES OF STAFF FLUCTUATION

In the reference period of the investigation, between 2005-2010, nearly twice as many employees (722 persons) left the office as many were newly employed (357 persons), and almost each year the number of employees leaving the HCSO was higher than the one of new entrants. In this, the establishment of regional offices (centralization of the former county directorates into competence centres) completed in 2004 also played a significant role. The fluctuation (rate of leaving employees to the total staff number) of the 5 years was 9% on the average (*table 1.*).

The average age of new entrants was 38 in the referred 5 years, and most of them (55%) were under 35 years. Withdrawing employees have spent 15 years on the average at the HCSO and their average age was 54 years: most of them left the office at retirement or near retirement age (18% of the leaving employees at the age 56–60 and 44% at the age over 60 years).

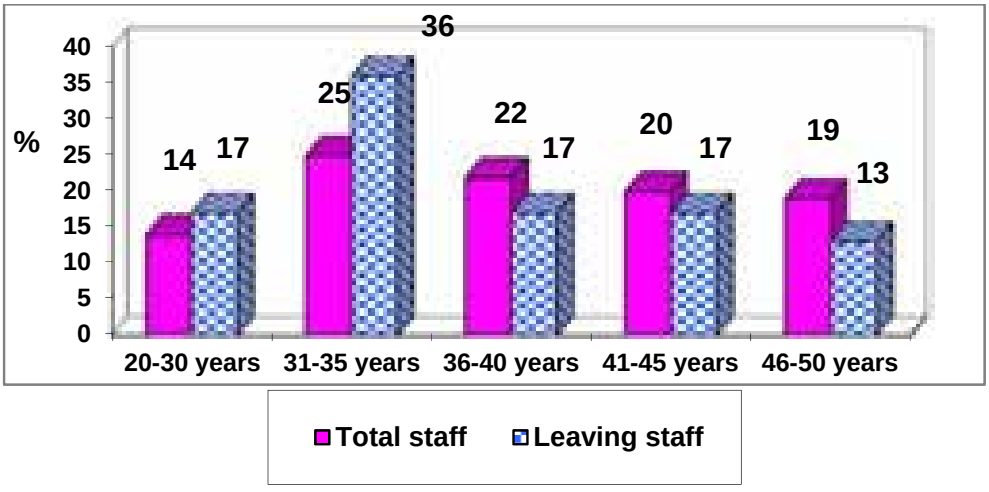
At the same time, among leaving employees, the high proportion of young people under 35 years of age (17%) and also middle-aged people between 36 and 50 years (15%), who did not leave the office due to their near retirement age, is remarkable. The target population of our motivation survey is essentially this one third of all withdrawing employees, altogether 232 persons. Their fluctuation amounted to 3% totally on the average of the 5 years.

FIGURE 1. THE AGE DISTRIBUTION IN THE TARGET GROUP OF OUTGOING EMPLOYEES (IN THE PERIOD OF 2005-2010, IN %)



To highlight the dominance of young age in the leaving staff, we compared the age distribution of the full office staff and the targeted leaving staff involving only people below the retirement age. While the leaving staff – compared to the total staff – shows a higher proportion in younger age-groups (among 20-30 and 31-35 years old), they significantly are less in older age-groups.

FIGURE 2. THE AGE DISTRIBUTION OF THE TOTAL STAFF AND THE LEAVING STAFF IN THE HCSO (BELOW THE RETIREMENT AGE, IN %)



OBJECTIVES AND METHODS OF THE RESEARCH

As far as the reasons for fluctuation are concerned, information provided until now is only on the basis of official categories in personnel records (see categories in *table 1*). However, the categories in this database do not clearly show, in several cases, who the withdrawal initiated and what the real reason was. The objective of our motivation survey is mainly to explore these reasons and background information of fluctuation.

Our research aims also at the prevention of fluctuation applying multiple approaches: by means of exit interviews it contacts directly the employees leaving the office on the one hand and, on the other hand, it analyses indirectly the results of internal programmes which explore the expectations and conditions of commitment of the staff. So the results may point out the possibilities of the prevention of fluctuation in advance. We have elaborated experimental methods for these approaches, and based on some realized programmes, we have also collected some initial experience:

In case of leaving employees we analyse partly the personal data which may be hypothetically in the background of leaving the office, and partly we conduct exit interviews with them in order to get more profound information on their reasons. The target population is formed basically by those leaving the office with mutual consent, dismissal or resignation. Those leaving the office due to old-age retirement or early retirement do not belong to the observed population.

For the young (under 35 years of age) employees of the office, we organized a programme consisting of a questionnaire survey and workshops in order to get information on the motivations of commitment to the office with the aim of preventing the problem of migration. The results namely point out how to make young workforce interested in the long run and how to retain them.

In the framework of exit motivation research, we can also mention the (voluntary) staff satisfaction survey conducted as an experiment a few years earlier. Its objective was to get to know the components of general feeling and satisfaction in the office as well as the expectations towards the work at the office and the problems. The results also throw light on those factors the lack of which may cause the migration of the workforce.

EXIT MOTIVATION RESEARCH BY CONTACTING OUTGOING EMPLOYEES DIRECTLY

In the first approach of the investigation only leaving staff was involved and only colleagues participated whose reason for leaving the office was not retirement. On the one hand, we analyzed information on them derived from the personnel records with the retroactive effect as from several years, and, on the other hand, we conducted deep interviews with the colleagues leaving the office in a given year.

ANALYSIS FROM THE PERSONNEL RECORDS

From the personnel records we selected specific information about the fluctuation of staff and tried to find tendencies explaining the background of migration. We analysed the following:

The way and reason of leaving the office: whether it is unilateral or by mutual consent, by dismissal or resignation? On the basis of the personnel database, we can obtain only formal answers *(*see *table 1)*, the deeper reasons can be shown only by the interviews. The majority of young and middle-aged colleagues of our target group left the office with mutual consent (some of them changed only their place of work or organizational unit due to the regional centralization). In every tenth case, the employer did not extend the fixed-term contract after its expiry (e.g. replacement of mothers on child

care leave), but employees with permanent contracts used the possibility of resignation with the same frequency as well.

Are there typical withdrawing age-groups among young and middle-aged colleagues? The data indicate that, while within the target population most (36%) of the leaving employees are 31–35 year-old, their proportion in the total staff number of the office is only 15%. So, we can say that the intention to exit is more characteristic of this specific age-group than of the others (see *table 2*).

How long did the leaving employees work at the HCSO? And, based on the number of former workplaces and the duration of work there, are the "job-hoppers" of the labour market who leave the office soon and easily or rather those who need stability? The results show that employees stay at the HCSO for a longer time: while the members of our target group spent hardly more than 3 years at the 4 former workplaces (on the average), the middle-aged outgoing colleagues had spent nearly 8.5 years and the young ones had spent 3 years on the average at the HCSO before they left. (We remark that – considering the total staff –, the number of years spent at the HCSO is 15 on the average and nearly 20 in case of elder colleagues!)

One of the important issues of the motivation research is where the colleagues in the "hierarchy ladder" are when they leave. Still low down or at a higher level? Are there people in leading positions or having specialist's title among outgoing employees? Does specialist's promotion or career result in a greater commitment of employees? While considering the total staff of the office, the proportion of employees in leading position and those having specialist's titles is 10–10 per cent, out of the 123 young outgoing employees only 3 per cent were head of section and no one had specialist's title, while among the 109 middle-aged ones 4 per cent were head of section and 4 per cent had specialist's title (see *table 3*). This low number indicates that the lack of promotion could also play a significant role in leaving the office! (The results of interviews confirmed the conclusion drawn from the fact data!)

What kind of knowledge do the outgoing employees have? Do college or rather university graduates leave the office; are they experts in humanities or rather in sciences; do they have one or more diplomas; how many foreign languages do they speak? According to the data, our target group can be considered slightly more qualified than the total staff of the office (see *table 4*), mainly due to the young generation's higher qualification in general. More than two thirds of them obtained college or university degree, and at least every second young or middle-aged outgoing employee has mostly fair English and/or German knowledge certified by state examinations. Among them, qualifications in sciences as economist, mathematician, engineer, etc. were more characteristic than in humanities.

What types of field of work or scope of duties do employees leave: most of all statistical fields (within this economic or social statistics) or rather sections fulfilling functional tasks? And are there divisions where fluctuation is significantly more frequent? In the last 5 years, nearly half (47%) of the withdrawing young and middle-aged employees worked in statistical–specialised fields and one tenth in functional divisions (this proportion corresponds to that of the total staff). At the same time, due to the establishment of regions instead of the county directorate system in 2004–2005 and then, the establishment of competence centres, the staff of regional directorates changed the most compared to their headcount number. At that time, 43 per cent of employees at the directorates were transferred from the counties to the regional centres or were dismissed finally, mostly with mutual consent (see *table 5*).

Which quality level did the leaving target group present based on the regular personal performance evaluation? Were their leaders satisfied with their work or not? Data suggest that, based on the unfavourable performance evaluation, the withdrawal from a job can be predicted. Half of the leaving employees (whose work was evaluated by their leaders) stand on the appraisal level "*average*" and only one third were qualified as "*over the average*" and even less (12%) as "*excellent*". (Evaluations, however,

were bound by the system of compulsory quota-distribution prescribing how many perbcent of employees can be classified in each category).

How far does money, i.e. the fact that the earnings of civil servants are lower than that of employees in private sector, play a role in migration? The earnings of civil servants are relatively stipulated, i.e. they rise along with the age and in connection with the official promotion in the classification of civil servants. At the same time, earnings may fluctuate between 80% and 130%, however it is limited so that the total wage level mustn't overstep 100% on the level of divisions. In case of the observed target group, we can say that as mostly young people are included, they have of course lower earnings than their older colleagues. Nevertheless, their wage divergence is 98% on the average which corresponds roughly to the average in the office. So, this factor in itself only slightly explains fluctuation.

How much did the office spend on training, further training of leaving employees? How many and what kind of courses did they complete, what kind of knowledge applicable also in other fields did they obtain here? One third of the young and middle-aged outgoing employees participated in courses provided by the office, in 4 courses on the average, which number is significantly higher than the one experienced in the total staff. This shows that withdrawing employees are in most cases ambitious colleagues who took often the opportunity to improve their knowledge and who obtained convertible (professional) knowledge over their shorter or longer work at the office.

EXIT INTERVIEWS

Although the analysis of official data and statistics about the colleagues provides many kinds of information and also enables to draw conclusions in respect to the possible tendencies, we deemed necessary to explore more authentically the reasons for migration with the help of personal, direct interviews as well. By making capital of the particular methodological possibilities of deep interviews, we can get to know the course of life in depth and examine the specific features which lead to leave the office, and in many cases, less realized elements may be brought to light as well. We examined the following issues:

One of the key issues of the interview is to explore spontaneously those factors which can influence the general feeling at the workplace (workplace-climate), which are deemed generally important by the leaving employees in respect to a good workplace. Here the respondent may formulate what motivates him/her to stay at a workplace for a long time. So far, the most often mentioned factor in the interviews was *"good work"* which of course means "*easy*" and "*little*" work for some colleagues, while "*difficult*" and "*much tasks*" for the others, "*theoretical challenges*" for some of them and "*practical ones*" for the others, some of them need for their work to fit their qualification and preliminary competence, while others, on the contrary, prefer tasks which encourage them to obtain new knowledge. We can say generally that employees do not "escape" from work; in fact they rather need burden, the content of work is important for them and it is important too to fulfil clear and useful tasks. In any case, the interview answers indicate that leaders have to get to know properly what their colleagues mean by *"good work*" in order to be able to retain the appropriate workforce in the long run. Among spontaneous answers, the second most important factor is usually earning, as well as other allowances and bonuses supplementing earning.

We ask withdrawing employees about preliminaries, their direct or indirect reasons for leaving the office. What has given grounds for their decision? It is true that people often do not formulate even for themselves the direct or indirect reasons for their decisions, they rather look for some pretexts as explanation. Thus, it is worth taking the direct reasons into account only after deeper investigations. However, the interviews showed so far that direct reasons meet more or less the lack of the most important factors: colleagues mention generally as the reason for leaving the office the boring,

uninteresting tasks which are free from challenges and do not meet their demands. More rarely, but as a strong reason, money, low earnings and the lack of possibilities for wage supplements are mentioned. We also try to explore where the history and characteristics of earlier and internal professional career indicate problems that led to leave the office. Was the promotion of the colleagues unbroken or it failed progress? Were their greater performances directly appreciated, rewarded by a progress in the hierarchy (e.g. accelerated progress, specialist's title or managerial appointment)? Could they possibly feel that they had not received any appreciation? We could suspect when analysing fact data that one of the most crucial factors of leaving the office was the lack of promotion and recognition which was confirmed by the in-depth interviews with colleagues. Feedback, recognition of work and, connected to this, ensuring professional opportunities is very important to the colleagues. Many of them explained their decision to leave the office because, as the civil servant career progress is very slow and bound to age, they do not have proper career perspectives, therefore they leave in the hope of a more rapid progress depending directly on performance.

Out of the human factors and psychical motivations for leaving the office, we examine among others the relation between the leaving employees with their supervisors. Did they receive enough information and support for performing their work effectively? Did they get any feedback on their work? In case of any problem, could they sit down with their supervisor, did they gain a hearing or was their relation cool and impersonal? The interviews suggest that the relation with the chief as well as his/her personality, professional acknowledgement influence largely whether someone stays at the office or leaves. Among some of the motivations for leaving are: an unpleasant personality, exaggerated authority, nervousness or simply the low prestige based on improper professional knowledge of the chiefs. In some cases, the bad relation with the chief and not accepting him/her was directly linked to the reason for leaving.

Professional and personal contacts with the direct colleagues and with the colleagues working at other sections of the office may also have influence on fluctuation. We set out from the assumption that the pleasant everyday general feeling at the office, the sincere, confidence-based co-operation, mutual assistance increase the engagement to the work and office, while the tense, bad atmosphere caused by intriguing, envy, career-fight, concern for job and distrust may decrease the pleasure in work. However, based on the interviews so far, we found that the colleagues were usually satisfied with their direct personal–professional relations, so this motivation only had played a slight role in leaving the HCSO.

Former staff survey outcomes (see *paragraph 5*.) indicated that satisfaction with work conditions is a determinant factor of everyday general feeling that may influence fluctuation indirectly. Therefore, we examined in the course of exit interviews how much the colleagues were satisfied with these factors, whether all material, technical conditions for well-being and for performing the work effectively, such as furniture, equipment, placement, lighting, silence, etc. were available. It turned out from the answers that this factor had been important only where infrastructure had been very poor, if it had made work impossible. Where the provision was at least of medium quality, this factor was almost imperceptible and had nothing to do with migration. Though it was not mentioned among spontaneous motivations of leaving the office, it was confirmed through direct questioning that, especially among young colleagues, everyday general feeling was influenced very unfavourably by the fix working hours, the obligation to start work early and they would rather search for workplaces with not so strict working time.

Also the role of the prestige and recognition of the workplace was investigated as factor of engagement in the exit interviews. Respondents could tell what kind of workplace they liked, what they expected from an ideal workplace, how they judged the HCSO in this respect and what they expected at the newly chosen (or to be chosen) workplace. Based on the opinion of the colleagues, they like working at workplaces which have a great prestige outside as well, its social acceptance and favourable judgement, which is attractive and can be appreciated and respected also by the colleagues. They would be reluctant to leave a workplace, where the "rules of the game" are acceptable, measures are correct and

real, processes are transparent, competences and responsibilities and also the responsible people are identifiable, where theories are followed by actions and quality has greater priority than practical or material aspects.

SURVEY OF EXPECTATIONS OF YOUNG NEW ENTRANTS

Another source of information in the staff migration motivation research is an experimental programme for the new entrants under 30 years, launched in 2004 and the results can contribute to the understanding of the reasons why especially young colleagues leave the office. The goal of the programme was to get to know the opinion of newcomers about their work and workplace, their expectations on the future professional career opportunities and to explore the conditions of effective work in the office, with the help of collective thinking. The results of the programme aimed at serving towards the increase in the engagement of young colleagues and the prevention of migration. The programme consisted of 3 elements:

- a questionnaire survey,
- a workshop and finally
- a conversation with the president of the HCSO.

To summarize the main results of the 3 approaches relevant to our investigation on staff fluctuation, a picture of an office was drawn up, where young people would work with pleasure in the future, even for a long time. Young colleagues deemed comprehensively the followings important in terms of an attractive workplace:

- always new, exciting tasks,
- good relation between a head and his/her staff,
- consistent, democratic management and information about the background of decisions,
- effective organization of work avoiding parallelism and hectic work and ensuring enough time for high-quality work,
- proper information flow necessary for performing work,
- opportunities for horizontal communication among professional sections replacing bureaucratic–hierarchic administration,
- real, flexible working hours adjusted to actual tasks,
- effective training programmes,
- moral–financial recognition that motivates above-average performance,
- regular evaluation of work, stimulating promotions opportunities,
- correct selection system both for the heads and the staff,
- proper material–technical conditions for performing work,
- clean, civilized circumstances,
- extension of social-type allowances,
- stable, predictable, quiet atmosphere with few reorganizations.

STAFF SATISFACTION SURVEY

The third element of the staff migration motivation research at the HCSO is presented by a (voluntary) survey among the full staff of the office, launched as a first experiment in 2001 with the aim of getting information about the workplace climate, the general feeling of the colleagues at the workplace and about the factors influencing it. The survey was conducted with the help of a questionnaire. We attribute great importance to the results in respect of outlining the reasons leading to leaving the office and predicting the motivations of migration. Altogether 335 respondents (about 25 percent of the staff) took the opportunity to respond to the questions.

Out of 16 investigated workplace-climate factors, most of the respondents were satisfied with the material–technical conditions of the office, but deemed career opportunities and utilization of the

abilities of the colleagues less adequate. In respect of work efficiency, they criticized the heaviness of information flow necessary for work and the organization of work. Hereunder the three "highest" and the three "lowest" rated working conditions:

TABLE 1. EVALUATION OF FACTORS OF WORKPLACE CLIMATE, IN THE STAFF SATISFACTION SURVEY (RATING SCALE: 1=LOW SATISFACTION, 5=HIGH SATISFACTION

Highest satisfaction factors	Average (1-5)	Lowest satisfaction factors	Average (1-5)
the size, the dimensions of working room	4,22	promotion and career possibilities	3,34
the willingness of colleagues to cooperate and the support from them	4,20	good use of the competencies of the staff	3,26
interesting tasks	4,08	flow of internal information necessary to implement work	3,25

The selection system of applicants can be determinative in the attractiveness of a workplace. Besides the approval of the selection criteria (specific technical education, experience in work), a considerable part of responding colleagues would think necessary to check some personal abilities and skills, such as tolerance, creativity, as well as good cooperation skills as part of the selection procedure.

Also a noticable need for "teamwork" came out from the inquiry. As far as inner regulations are concerned, most colleagues accepted the determination of general rules concerning behaviour but rejected the enforcement of standards concerning the opinion and value system of people.

The questionnaire focussed also on some (13) requirements which are basically essential to provide a high level of professional work. While their necessity and importance was acknowledged by each respondent, the opinions were less positive in the sense as to what extent those issues are realized at the HCSO. The conditions considered as the most realized and less realized are as shown in the following table:

TABLE 2. EVALUATION OF CONDITIONS NECESSARY TO HIGH LEVEL WORK, IN THE STAFF SATISFACTION SURVEY (RATING SCALE: 1=LOW SATISFACTION, 5=HIGH SATISFACTION

Most realized, typical at HCSO	Average (1-5)	Less realized, not typical at HCSO	Average (1-5)
impartiality	4,4	professional and human relationships	3,2
respect for the professional past and personalities/experts of the office	4,0	efficient training system	3,2
professional statistical information	3,9	Internal information flow	3,1
conformity with international requirements	3,9	minimising the burden of data providers	3,0

There was a general consensus in the survey population that money, financial and moral recognition, as well as high-level, interesting work were the best tools to increase the attractiveness of the office and to prevent staff migration.

TABLE 3: DISTRIBUTION OF YOUNG AND MIDDLE-AGED OUTGOING EMPLOYEES BY THE WAY OF LEAVING THE OFFICE; AND DEGREE OF FLUCTUATION, 2005-2010 (PERSONS)

Way of leaving the office	2005	2006	2007	2008	2009	2010/ 1st half year	Total (persons)	Total %
I. Termination of civil servant's employment:								
With immediate effect during probation time(both parties, without explanation)		2	3	4	1	1	11	5
Fixed term contract expired		11	8	2		2	23	10
Dismissal 17 § 1/c (due to re-organization)	1	2			1		4	2
Dismissal 17 § 2/c (withdrawal of appointment as leader)			1				1	0
Dismissal due to disciplinary offence					1		1	0
With mutual consent (but sometimes due to re-organization or staff number reduction as well)	71	26	30	12	4	5	148	64
Resignation 15 § 2/c (with 2-month notice)	1	3	7	10	1		22	9
Death of the civil servant		1			1	1	3	1
Transfer in public administration (to fields of public administration or public services)		2	1	5			8	3
II. Termination of employee legal relationship (manual workers):								
Dismissal of employee (e.g. re-organization, outsourcing)		3					3	1
Termination of employment with mutual consent (sometimes due to re-organization)		3	4				7	3
No registered reason	1						1	0
Number of young and middle-aged outgoing employees in a given year (persons)	74	53	54	33	9	9	232	100
Fluctuation of the target group % (out going employees / annual staff number)	5	4	4	3	1	1		3
Total fluctuation in the office %	14	9	14	7	4	3		9

TABLE 4: AGE DISTRIBUTION OF THE OUTGOING EMPLOYEES AND THE FULL STAFF (%)

Age-groups of outgoing employees:	2005	2006	2007	2008	2009	2010	Outgoing employees, total	Outgoing target group (20-50 years)	HCSO full staff, 2010
Age: 20-30 years	2	7	7	9	4	9	5	17	9
Age: 31-35 years	12	14	12	15	6	2	12	36	15
Age: 36-40 years	7	3	6	5	4	4	5	17	13
Age: 41-45 years	5	12	4	3	0	4	5	17	12
Age: 46-50 years	7	5	2	3	4	0	4	13	11
Age: 51-55 years	10	5	4	4	2	4	6	xxxxxx	18
Age: 56-60 years	10	6	18	47	14	40	18	xxxxxx	19
Age: over 60 years	48	48	48	12	66	36	44	xxxxxx	4
TOTAL:	100	100	100	100	100	100	100	100	100

Source: Nexon personnel database.

TABLE 5: LEADING POSITIONS AND PROFESSIONAL TITLES IN THE TARGET GROUP OF YOUNG AND MIDDLE-AGED OUTGOING EMPLOYEES, 2005-2010 (PERSONS)

Age-groups	Head of Section	Professional title (adviser)	Target group, total (persons)
Age: under 25 years	0	0	1
Age: 26-30 years	0	0	38
Age: 31-35 years	4	0	84
Age: 36-40 years	4	1	39
Age: 41-45 years	0	0	39
Age: 46-50 years	0	2	31
Total	8	3	232

Source: Nexon personnel database.

TABLE 6: EDUCATIONAL ATTAINMENT OF THE YOUNG AND MIDDLE-AGED OUTGOING EMPLOYEES AND FULL STAFF (%)

Educational attainment	Target group, 2005-10	HCSO full staff, 2010
University (MA/MSc)	33,6	30,3
College (BA/BSc)	30,6	39,5
Secondary Grammar School	7,8	8,8
Secondary Vocational School with GCSE	22,4	16,1
Apprentice School	0,9	0,4
Secondary Vocational School without GCSE	3,4	1,0
Technical School	0,9	1,6
8 grades of Primary school	0,4	2,3
TOTAL	100,0	100,0

Source: Nexon personnel database.

TABLE 7: DISTRIBUTION OF YOUNG AND MIDDLE-AGED OUTGOING EMPLOYEES BY ORGANIZATIONAL UNITS, 2005-2010 (%)

Organizational unit	%
Directorate in Győr	9,5
Directorate in Miskolc	8,2
Directorate in Szeged	8,2
Directorate in Pécs	7,3
Dissemination Department	7,3
IT Department	6,5
Directorate in Debrecen	5,6
Directorate in Veszprém	5,6
Business Statistics Department	4,3
Financial Management Department	3,4
Agriculture and Environment Statistics Department	3,4
Foreign Trade Statistics Department	3,0
Administration and International Department	2,6
Statistical Research and Methodology Department	2,6
Social Statistics Department	2,6
Sector Accounts Department	2,2
Services Statistics Department	2,2
Data collection	1,7
Living Standard and Human Resources Statistics Department	1,7
Living Standard and Labour Statistics Department	1,7
National Accounts Department	1,7
Population Statistics Department	1,3
Social Services Statistics Department	1,3
Price Statistics Department	0,9
International Audit Section	0,9
Population, Health and Social Statistics Department	0,9
Census Department	0,9
European Coordination and International Department	0,4
Administration and Planning Department	0,4
Central staff	0,4
Technical and System Monitoring Department	0,4
Statistical Research and Education Department	0,4
Planning Department	0,4
TOTAL:	100,0

Source: Nexon personnel database.