

## Integrating Tools for Managing Modernization of Statistical Production in Poland - acquiring new skills & competences

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### Section I - Total Quality Management - background

Is TQM is a methodology created by statisticians for statisticians? William Edwards Deming, contemporary American statistician (1900-1993), the creator of the Total Quality Management doctrine, having failed to plant his ideas in the postwar America, gained authority in Japan, helping Gen. McArthur to organize the first postwar census (1947). In Japan, where the work culture and the philosophy of life and society suited his views on quality management, Deming achieved much of audience. He devoted his further career to expanding the knowledge on statistical steering of business processes and on statistical methodology of providing quality. Eventually recognized in America and in Europe in the 80., W.E. Deming wrote his classical piece " *Out of the Crisis*" (1986) in which he set out 14 points, i.e. principles recommended for providing quality performance within business entities.

These principles are:

1. Create and communicate to all employees a statement of the aims and purposes of the company.
2. Adapt to the new philosophy of the day; industries and economics are always changing.
3. Build quality into a product throughout production.
4. End the practice of awarding business on the basis of price tag alone; instead, try a long-term relationship based on established loyalty and trust.
5. Work to constantly improve quality and productivity.
6. Institute on-the-job training.
7. Teach and institute leadership to improve all job functions.
8. Drive out fear; create trust.
9. Strive to reduce intradepartmental conflicts.
10. Eliminate exhortations for the work force; instead, focus on the system and morale.
  - (a) Eliminate work standard quotas for production. Substitute leadership methods for improvement.
  - (b) Eliminate MBO. Avoid numerical goals. Alternatively, learn the capabilities of processes, and how to improve them.
11. Remove barriers that rob people of pride of workmanship
12. Educate with self-improvement programs.
13. Include everyone in the company to accomplish the transformation.

In Europe the TQM methodology of improving business performance via improving business quality was promoted by the European Foundation for Quality

Management (1988) and by the International Organization for Standardization launching its consecutive ISO standards: ISO 9001 (2008) and ISO 9004 (2009). Despite many differences, they were both introduced as two consistent sets of governing rules for providing quality management. The former focusing on serving the needs of the organization, its goals and on certification process as well as on contract rules; the latter containing recommendations for sustained quality management, focusing on achieving benefits for all the stakeholders. ISO 9004 is considered to be a guidebook for the ambitious and the striving for perfection.

There exists one more quality management system with purely statistical origin. Six Sigma is a management philosophy developed by Bill Smith at Motorola in 1986 that utilizes statistical tools and techniques to improve business performance. This system uses data and analytical work results in order to reduce defects in products and services. The Six Sigma quality system measures how far a given process deviates from perfection. By means of estimating the number of "defects" in a given production process, one can eliminate them and approach "zero defects" effect.

In Poland TQM has been popularized by W.E. Deming's follower, Professor Andrzej Blikle, the author of *"The Quality Doctrine – about Effective Management"*. He shares both the theoretical views and the business approach with Deming and gives the exquisite definition: *"TQM is a kind of philosophy of management, which by applying appropriate strategy, processes, training, motivation, engagement, tools and means leads a business entity to success, with reference to the customers' comfort and satisfaction. It is a kind of quality oriented system with the participation of all of the staff via teamwork and with managerial leadership"* (2014).

Prof. Blikle underlines that the way to quality leads through focusing on chains of processes. By using TQM techniques of management, the statistical quality controls shifts to statistical process steering.

## **Section II - TQM in Statistics - origins**

The European efforts towards implementing quality doctrine directly into statistical production go back to the end of XX century. In fact, one must notice that the process of formally introducing the issue of quality, *expressis verbis*, into statistics began much earlier, at least with the ISI *"Declaration on Professional Ethics"* adopted at the organization's gathering in 1985. Its 2010 version reads: "We strive to collect and analyze data of the highest quality possible. We are responsible for the fitness of data and of methods for the purpose at hand". In 1992 UNECE adopted the *"Resolution on Fundamental Principles of Public Statistics"* stating, *inter alia*, that: "Statistical agencies are to choose the source with regard to quality, timeliness, costs and the burden on respondents." Work culture, work ethics is of fundamental value for TQM, so these efforts may be considered a cornerstone to the process of introducing TQM into official statistics. Eurostat in its turn approached TQM in several steps, beginning from 2002 with the activities of

Leader Expert Group (LEG) on Quality, working under the auspices of Sweden. Its report and its recommendations were acknowledged, discussed, implemented and eventually the ESS manuals on statistical quality have been published in 2007, 2009 and 2013. The adoption of the European Statistics Code of Practice (2005) meant a significant step forward from theoretical principles to the evaluation of statistical institutions' performance. With its 15 key principles for the production and dissemination of European official statistics and the institutional environment, offering also a set of indicators of good practice for each of the 15 principles, the European Statistics Code of Practice makes a sound ground for the Peer Review benchmarking exercise held in the area of quality management and development of statistical institutions.

### **Section III - TQM and NPM**

New Public Management (NPM) is a management system, popularized in the 90., that is based on the idea that solutions used in the private sector may be successfully and directly transplanted into the public sector. NPM aims at modernizing public sector and creating modern public policies. New Public Management focuses at finding the most efficient, competitive ways of achieving a given results, public goods, services etc. The relation between the administration and the citizen can be referred to as public manager and customer relation. NPM also wants to redefine the relationship between civil service and the political class. NPM focuses on customer satisfaction, entrepreneurial spirit, and **quality**. TQM ideology of management is in conformity with NPM ideology therefore they usually get along well. Any modernization process in the public zone takes TQM and NPM as the reference models of managing public affairs and the best practices derived from both systems as benchmarks.

### **Section IV - TQM in CSO**

#### **Vision & mission of the official statistics**

*"Development Directions of Polish Official Statistics until 2017"*, the strategic document of Polish official statistics adopted in 2013, gives the clear statement of the mission and vision at the threshold of Polish official statistics' modernization. The document induces and encourages the implementation of the elements of TQM methodology beginning from strengthening the institutional self-identification and self-awareness, necessary to set forth with the strategic and operational objectives.

According to the document: "The mission of official statistics is to provide plausible, reliable, independent, and **high quality** statistical information about the state and about the ongoing changes in the society, in its economy, and in its natural environment which meet the needs of domestic and international users."

Further on, the quality declaration appear in the vision statement: “The actions of official statistics will be implemented by taking into account the principles of the amended European Statistics Code of Practice, in order to enhance confidence in the independence, reliability, and responsibility of both Polish official statistics and Eurostat, as well as in the plausibility and **quality of the statistics** which these produce and disseminate”.

Under the above mission and vision, six strategic objectives for Polish statistics until 2017 made a sustainable reference for the strategic decisions and marked the starting point for any modernizing enterprises onwards. Three of the strategic areas refer directly to the TQM application in the modernization process:

Strategic area 3: Modernization of statistical surveys. “Implementation of objectives within this area will be connected with acquiring a greater ability to recognize users’ information needs, and to respond flexibly to their needs with regard to survey themes. The development of statistical surveys, supported by the necessary methodological work, is therefore intended to include new phenomena, as well as to include changes in the social and economic sphere in statistical observation. Additionally, it will take into account the survey priorities formulated in the European statistical program for 2013-2017. This will allow it to ensure information security for domestic and international recipients, also with regard to data for creating, monitoring, developing, and assessing the effects of national and European policy.’

Strategic area 4: Collecting, processing, and analyzing statistical data. “Development actions within this area will be aimed towards facilitating and improving the process of statistical production (implementing a new organization of survey process based on the Integrated Model for Conducting Statistical Surveys, building and enhancing the current statistical metadata system, as well as improving data collection methods), reducing respondent burden (widening the use of administrative data, integrating and simplifying reporting, searching, and evaluating new sources of data), and improving the quality of statistical information (implementing a statistics quality management system). What is more, the intention is to increase the analytical use of statistical data (implementing a support system for analysis, widening the scope of socio-economic analyses, strengthening macroeconomic studies and improving the analytical cooperation of research groups from the CSO, Statistical Offices and academic communities).”

Strategic area 6: Managing the resources of official statistics. “Development actions within this area will be focused on initiating, bringing forth and implementing a new concept for managing the organization and its resources, taking into account developing a rational policy for human resources management, ensuring appropriate division of tasks and competence among organization units, increasing the independence and decision-making responsibility of official statistics services and improving cooperation between them. In addition, actions within this sphere are

intended to develop and implement an integrated IT system for official statistics which will be adapted to the needs resulting from the new organization of surveys and which is to take into account experience related with the censuses. What is more, all IT issues will be reflected in a separate document which discusses development directions of information technology in the CSO and which is consistent with official statistics development directions for 2013-2017.”

According to the “*Development Directions (...) until 2017*” the biggest challenges the official statistics in Poland faces at present are:

- Increasing the user’s satisfaction by improving the quality of data and responding directly the user’s needs;
- Answering the ever growing demand and expectations of users esp. for metadata and metadata on quality;
- Growing stress on quality cooperation and communication – both external and internal;
- Growing need for data collecting in more efficient way (lessening the burden on respondents);
- Pressure on institutional efficiency;
- Providing quality environment friendly for change (organizational, technological, IT, legal).

### **Annual and Multiannual Program of Statistical Surveys of Official Statistics**

The main statutory duty of the President of CSO focuses on performing and/or coordinating the surveys that are carried out on the basis of the annual Statistical Surveys Program of Official Statistics (PBSSP – *Polish abbreviation*).

The PBSSP is a catalogue that enumerates the full scope of statistical surveys of official statistics and the basic source of empowerments for getting data. Statistical survey program of official statistics is annually determined by the Council of Ministers, in way of a regulation, derived from the art. 18 of the Act on Public Statistics.

The PBSSP contains over 200 surveys divided into 30 subject groups, carried out independently by official statistics units or by other central offices as well as in the cooperation of the CSO with relevant governmental entities. Surveys are carried out both on the base of primary or secondary source of data and on information acquired from administrative sources. In order to safeguard the high-quality statistics and compliance with the fundamental principles of the European Statistical System, the systematic evaluation and continuous improvement of the statistical processes is necessary, which is structured in accordance with the idea of Total Quality Management.

The President of CSO prepares also a draft multiannual public statistics statistical research program in order to achieve a long term perspective for the

issues and goals important for the long term development of public statistics surveys, bearing in mind the quality aspects.

### **Finance and cost accounting**

*“The Guidelines for the calculation of costs of statistical surveys and other work by the organizational units of official statistics services”* entered into force in November 2014 by means of the ordinance of the President of the Central Statistical Office. The obligation of cost planning by the organizational units of official statistics services was introduced in order to: ensure the implementation of statutory regulations on publishing the costs of statistical surveys, increase the transparency and effectiveness of spending public funds; support the process of managing public funds in the units of official statistics services; optimize the allocation of funds for particular types of projects, especially for statistical surveys. The Guidelines are applied to both cost calculation of statistical activities and other costs - extra statutory duties - of statistical services units. It encourages the flexible allocation of public funds and strengthens the accountability and transparency. The system is entirely harmonized with the activity-based-budget implemented in Poland. Abiding by the rules and provisions of the act on public finance and acting on our own experience, dating back long before the formal introduction in 2014, official statistics in Poland has had implemented the criteria and measures for efficient spending, and to verify internally the quality of budget planning and executing taking into account the requirement of public tendering system. The system allows us to allocate proper resources for statistical surveys and other related or assigned works. The system is fully transparent and so are the costs of statistical surveys published annually along with the Council of Ministers' Resolution on The Program of Statistical Surveys of Official Statistics.

A dedicated electronic tool for integrated resources management called Platform for Resources Management is under construction at the moment which will strengthen the efficient management of the resources.

### **Human Resources Management**

According to the art. 15 item 2 and 3 of the act on civil service, the Head of Civil Service in Poland shall create and submit to the Council of Ministers a draft strategy of the Civil Service human resources management that contains diagnosis of the Civil Service, definition of strategic aims, implementation system and financial framework. The Council of Ministers shall adopt the strategy of the Civil Service human resources management by means of a resolution. Having fulfilled this duty the Head of Civil Service predetermined the standards of HR management for the Polish civil service which the employees of official statistics in Poland make a part of. As a result, acting on the basis of the CSO President's recommendations, all statistical units' directors have been obliged to prepare and implement their programs for Human Resources management for the years 2013-2016.

In his recommendations of 30<sup>th</sup> November 2013 the President of CSO obliged directors of all statistical units to prepare the said diagnosis and to set priorities as well as to introduce the model of competence based HR management which seemed extremely suitable for statistical services, bearing in mind high professional demands and requirements.

President of CSO predetermined in his recommendations the scope of profile content and its application. According to the applied definition "competence profile" is a complete set of competences required from an employee at a given post, along with the required level of its command. The following elements were enlisted to make for a properly built profile: general characteristics of posts adequate for a given profile with the description of main area of activity; naming groups of posts adequate for a given profile; tasks assigned to the given posts; indispensable knowledge and specialist skills; competences required from an employee at the occupied post; required level of command.

The properly defined profiles can be used as a basis the following HR processes: internal recruitment, open recruitment, creation of career paths, directing to training.

Each existing post within the official statistics services must be equipped with its corresponding competence profile. The profiles must be updated at least biannually or on actual demand. Each year a competence balance sheet is being prepared for each employee by way of comparing the requirements set in the competence profile with an employee actual performance with regard to fulfilling competence requirements. The competence balance sheet goes along with an obligatory evaluation provided for all civil service employees on biannual basis or it may as well be completed year by year to evaluate the competences gaps and surpluses in order to counteract them/use them by tailoring adequate individual development programs. Integration of an evaluation process with the competence balance sheet is encouraged to upgrade the effectiveness and efficacy of statistical services.

The competence driven HR management integrated with the regular tools of civil service HR management make a unique blend strengthening the role of the individual programs of professional development obligatory under the auspices of the civil service act as a result of an evaluation process. Combining those two systems, we achieve the results that help us react timely for the needs (especially new demands) of our statistical work and also to the needs and offers of our employees by directing/redirecting their career in a satisfactory way.

The update of the diagnosis in the area of HR management is prepared and submitted each year to the higher management, giving it a proper feedback as to the employment structure and fluctuation, remuneration and motivation system, recruitment and evaluation results, training and supporting developmental needs,



and, finally, highlighting HR management development as a part of official statistics institutional development.

### **Risk Management System**

With the ordinance of the President of CSO issued on 18<sup>th</sup> May 2015 the systemic approach to risk management in all the official statistics units was introduced, respecting the auxiliary rule, i.e. setting the minimal requirements for all units along with the reporting schemes but leaving the regional managers autonomy as to the ways and particularities of Risk Management System local implementation.

The basic (minimal) risk matrix was recommended as well as the basic risk areas - to be elaborated in details at the regional level.

The President of CSO as the highest management rank sets and supports the Risk Management System, indicates unacceptable risks, approves of the risk treatment plans and monitors the regional Risk Management Systems. The President provides resources necessary to implement risk treatment plans.

The President is being supported by the Risk Team - an advisory body consisting of the deputy presidents, the civil service director, the chief risk officer (called: risk coordinator), directors of departments responsible for internal audit and control and finance & accountancy. The Risk Team provides for the consistency of the Risk Management standards, evaluates and updates the principles of the Risk Management System recommending the amendments to the said ordinance if necessary. It evaluates the risk registers received from the risk owners and recommends to the President the index of unacceptable risks along with the risk treatment plans with the measures of mitigation proposed therein. The Risk Team also take into consideration the issue of risk awareness and its enhancement among the staff.

The Chief Risk officer – acting also as the head of the internal control division – undertakes all actions necessary to make Risk Management System function efficiently. He cooperates directly with the President and the Risk Team on one side and with the Risk Owners – departments and units directors – on the other side. He evaluates their risk registers, and risk treatment plans, monitors all stages of risk treatment. Along with his task force of 2 (!) people, he prepares feedback information to the management on the current state-of-play with regard to the Risk Management System. The Chief Risk Officer with his task force, prepares tailored trainings and workshops answering the needs of risk owners.

The main principle of the Risk Management System implemented in CSO and other official statistics unit is to make all staff members participate in the system, give their input as the whistleblowers, have their voices heard. The spirit of participation is a core element of the system and its biggest advantage. It provides for the system's efficiency in the area of the risk identification and evaluation, and



also it safeguards the proper implementation of assigned means of risk mitigation. The quality of the Risk Management System lies in its consistency, in the proper balance between obligation and autonomy and in the sense of ownership and participation by the employees.

### **Processes - Objectives – Competences Management – pilot exercise in the area of integrated management**

Between December 2014 and June 2015 the pilot project aimed at introducing the elements of process management was carried both in the CSO and other units of official statistics. The exercise was a part of the national effort to upgrade the quality of public administration performance in the area of integrated management. 169 state offices took part in the pilot project, 64 of them – central offices. The elements of process management, management by objectives and competence management were to be introduced during the seminars, followed by the audit of existing and functioning systems, leading to the diagnosis of the maturity of the systems and evaluating the level of integration up to designing the actions adequate to the findings and responding to the organization's needs. Mapping (of 10) and optimizing (of 5) chosen processes were performed as an exercise and the results were submitted to the highest management.

### **Concluding remarks**

The above descriptive sections were devoted to separate samples of implementing quality management in the Polish official statistics, representing the efforts undertaken in Poland to keep up with the demands of a contemporary statistical products' user and – not in the least- requirements for a modern public institution. They also show the strive and the determination to improve the overall institutional performance. On the path of quality modernization we are seeking new ways for optimizing our vast (intellectual) and scarce (material) resources. We have decided to invest in our better, more efficient performance not only by using the obligatory means (activity-based-budget, quality measures, management controls) also by trying new ways (competence-based- HR management, introducing elements of process management, building the integrated platform for resources management). We have been enriched in those last years, because we have gained the capacity for change. That's a lot because – as Jim Welsh said- only those who change will survive! What used to be a memento for business companies, now it is a tip for public institutions. The appetite for change and the appetite for risk go together, redefining the capacity of our organization. And its human capital – process oriented, competent and goal aware – is the biggest asset on this path of development. We are consequently implementing the Total Quality Management ways of doing statistics into the Polish official statistics system.