

UNECE Workshop on Implementing Efficiencies and Quality of Output

Topic 4: Quality Management /

Management frameworks and approaches in client- and quality-oriented organisations;
Integration of risk and quality management in statistical processes;
Strengths and weaknesses in product and/or process quality management among the NSOs' different practices

EUROSTAT'S QUALITY ASSURANCE AND QUALITY MANAGEMENT FRAMEWORK – OUR WAY TOWARDS EXCELLENCE

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The paper describes how Eurostat implements and monitors the common quality framework of the European Statistical System (ESS) in its own operation, explaining the various quality assurance methods and tools used like e.g. the continuous communication and promotion of quality, the issuance of advice and opinions on quality issues, the error management procedure, the different quality reporting activities, the management of Eurostat's Impartiality Protocol or the quality reviews exercise.

With regard to this latter, the paper will elaborate on the way how the quality and risk management approaches have been integrated for the prioritisation part of the exercise and will explain how quality reviews contribute to the continuous improvement of statistical processes and products through the identification of action plans in reply to the possible areas for improvements and their respective follow-up.

Finally, the paper will explain how all these quality assurance activities have been integrated in the overarching quality management framework of the European Foundation for Quality Management (EFQM) through which Eurostat had started its official journey towards excellence – what all has been achieved on this road by now and what perspectives might lie ahead.

Key words:

quality; quality in statistics; quality framework; quality assurance; continuous improvement; quality management; risk management; excellence;

1. The common quality framework of the ESS

The common quality framework of the European Statistical System (ESS) is built around the European Statistics Code of Practice⁽¹⁾ (ES CoP) – it is complemented by the Quality Assurance Framework of the European Statistical System⁽²⁾ (QAF) and general quality management principles, such as continuous interaction with users, commitment of leadership, partnership, staff satisfaction, continuous improvement, integration and harmonisation.

This self-regulatory common quality framework complements the extensive legal framework of the European Statistical System which is based on the Regulation (EC) No 223/2009 on European statistics⁽³⁾ and the sectoral legislation (secondary law), having the Treaty on the Functioning of the European Union⁽⁴⁾ as the primary law (Article 338). High-quality European statistics and services are therefore developed, produced and disseminated in this very robust legal and quality framework.

Quality of statistics is defined along three lines in the ESS: institutional environment, statistical processes and statistical products and services. These three aspects are defined in terms of quality principles and their underlying indicators that compose the European Statistics Code of Practice.

The Code of Practice sets the standards for developing, producing and disseminating European statistics and aims at improving trust and confidence in the independence, integrity and accountability of the statistical authorities as well as in the credibility and overall quality of the official statistics they develop, produce and disseminate. Through the 15 principles and their 82 indicators the Code of Practice defines the first and second levels of quality assurance of the European statistics.

The Code of Practice is a self-regulatory instrument to which all producers of European statistics (statistical authorities, i.e. Eurostat, the National Statistical Institutes as well as other national authorities of the Member States which produce European statistics) are committed. The implementation of the Code of Practice is monitored through ESS-wide peer reviews⁽⁵⁾⁽⁶⁾ in which producers of European statistics complete a self-assessment questionnaire which is then analysed by a group of independent experts.

Following this, an official peer review visit is organised in each Member State and EFTA country during which the main stakeholders, together with staff of the National Statistical Institute and some other national authorities, are interviewed. At the end of the exercise a peer review report is issued by the experts with recommendations for improvement which can be commented by the National Statistical Institute reviewed. The National Statistical Institute then identifies the corresponding improvement actions, which are then monitored and reported upon on an annual basis by Eurostat to the ESS Committee.

The Quality Assurance Framework of the European Statistical System assists the implementation of the Code of Practice by identifying possible activities, methods and tools for the operationalisation of the different indicators as well as links to relevant reference documentation. Therefore, it can be regarded as the supporting document of the Code of Practice – it provides clear guidance to compliance assessors and was used for the elaboration of the self-assessment questionnaires used in the above-mentioned peer reviews. Through the various quality assurance methods and tools it defines the third level of quality assurance of the European statistics.

In addition, statistical sectors often develop their own, sector-specific quality assurance methods and tools, aspects of which (minimum quality threshold, methodological standards, quality reporting provisions, etc) are sometimes embedded in the sectoral legislation. These sector-specific, tailor-made methods and tools constitute the fourth level of quality assurance of European statistics.

Quality is, however, a much broader concept and covers all activities and the overall functioning of a statistical authority. In addition to assuring the quality of the core business (development, production and dissemination of statistics), statistical authorities also manage quality in their organisation as a whole. If the Code of Practice, the QAF and the sectoral quality assurance is illustrated by a pyramid with four layers, quality management would then be a larger circle, embedding the pyramid, which would include the supporting activities of the statistical authority, in addition to the core business: human and financial resources, IT management, etc.

Eurostat is the statistical office of the European Union⁽⁷⁾. The present paper aims at introducing the scope and structure of Eurostat's horizontal quality work, in the light of the common quality framework of the ESS. It will highlight certain aspects of this work, as proposed by the programme of the Workshop, such as "integration of risk and quality management in statistical processes"; "strengths and weaknesses in product and/or process quality management among the NSOs' different practices" and "management frameworks and approaches in client- and quality-oriented organisations" – the paper does not, however, claim to be extensive in this regard.

2. The Quality function of the ESS

a. Set-up, governance

The Quality function of the ESS is composed of Eurostat's horizontal Quality team and the Quality managers of the ESS members who form the 'Working Group on Quality in Statistics'. This body has regular meetings (once or twice per year), steers and discusses all quality issues that are of relevance to the ESS. The Quality function is chaired by the Eurostat Director responsible for Quality and its work is assisted by Eurostat's horizontal body called 'Coordination Group Quality' regrouping all Directorates.

b. Role of Eurostat's Quality team

In accordance with the set up of the common quality framework, quality is managed at two levels in Eurostat: centrally in the Quality team and de-centralised in the various statistical production teams (sector-specific quality assurance). In the sense of the construction of the common quality framework, this means that the Quality team is responsible for the first three levels of quality assurance, while the statistical production teams are responsible for the fourth one.

In my view one of the key success factors of the efficient operation of a central Quality team in a statistical authority is how well and clearly the link between the third and fourth levels are established and explained – in order for everybody to understand what the 'abstract' quality framework is there for, what it means and how it is implemented in the daily statistical production work.

Several initiatives have been launched in this regard in Eurostat in the past few years which are described below, in the last paragraphs of this point b. In addition to the regular advisory and coordination work of the Coordination Group Quality (whose members are senior and middle managers) and the frequent presentations and training courses on quality, the practice of 'unit visits' has been established. These visits give the opportunity to the Quality team to meet with colleagues working in statistical production and inform them of the horizontal work on quality, how it contributes to the daily work of developing, producing and disseminating high-quality European statistics and how exactly the link between the third and fourth levels can be established in that particular statistical sector.

In addition, the Eurostat Quality team is in regular contact with the statistical production teams with regard to quality reporting issues and provides frequently advice on various quality matters, often in

the form of technical expertise on specific questions on quality reporting (e.g. calculation of quality indicators, interpretation of the general standards in the particular statistical sector) or in the form of interpretation of the wording of the Code of Practice and the underlying legal framework, in close collaboration with Eurostat's legal services. An informal Quality network was also recently established to allow colleagues to discuss quality issues in the various statistical sectors using the 'eConnected' platform, provided by the European Commission.

Recently Eurostat launched the second round of its screening exercise in which all statistical production processes are evaluated against the standards of the Code of Practice and the QAF – this is the quality reviews exercise which is described more in depth in chapter four below. In accordance with the standards set out in principle six of the Code of Practice, Eurostat also launched its error management procedure⁽⁸⁾ in which all errors detected internally or externally must be followed up and reported upon. Reports are then submitted on a regular basis for information and analysis of the senior and middle management: first the Coordination Group on Quality, then Eurostat's board called Directors' Meeting.

c. Vision and Mission of the ESS Quality function

Inspired by the Quality key area of the ESS Vision 2020⁽⁹⁾ (which is the long-term strategy of the ESS), the Vision of the ESS Quality function reads as follows: *“To confirm the ESS as the statistical conscience of the knowledge-driven society and to keep and strengthen quality as our key asset and competitive advantage”*.

And the Mission statement underpinning the Vision reads as follows: *“To that end, we*

- *Modernise continuously the common quality framework and the quality management system of the ESS, we set quality standards, we advise on quality issues, and we manage quality for the institutions as a whole – level 1-3 quality assurance;*
- *Implement and monitor the common quality framework and the quality management system of the ESS – level 4 quality assurance;*
- *Coordinate quality and assure stakeholders' relations;*
- *Promote the common quality framework and the quality management system of the ESS – communication, cooperation activities.”*

3. The Work Programme of Eurostat's Quality team, based on the Mission of Quality function

The present chapter describes how the work programme of the Quality team has been constructed in order to mirror the set-up of the common quality framework of the ESS and to translate into concrete activities and initiatives the ambitious Vision and Mission statement of the ESS Quality function described above.

The work of the team is organised along four processes and two self-standing projects: the projects of the EFQM initiatives⁽¹⁰⁾ (described more in depth in chapter five below) and of the QUAL supporting framework that corresponds to the implementation of the Quality key area of the ESS Vision 2020. The components of the four processes are described in points a. to d. below.

a. Setting the quality management system, standards, providing advice (levels 1-3)

The process of the first three levels of quality assurance includes the set-up and continuous modernisation of the ESS quality standards and rules such as the Code of Practice, the QAF, the Quality Declaration of the ESS⁽¹¹⁾, the quality reporting standard called Single Integrated Metadata Structure⁽¹²⁾ its Technical Manual⁽¹³⁾ and accompanying Handbook⁽¹⁴⁾ as well as the Quality

Glossary⁽¹⁵⁾. In addition, the process includes the advising activities on quality and quality reporting as well as the work on quality management which aims at enriching the common quality framework with the concept and approach of quality for the institutions as a whole – which corresponds to the EFQM initiatives in the case of Eurostat.

It should be also noted here that a High-level Group on Quality, composed of 10 Heads of National Statistical Institutes, was established by the ESS Committee in 2016 to discuss strategic issues on quality and issue recommendations, as appropriate. The Group members are currently discussing the revision of the Code of Practice and the Group's Mandate also covers issues like the future monitoring of the Code's implementation in the ESS, quality for the institutions as a whole, interaction with stakeholders, or strengths and weaknesses, possible improvements of European statistics within the various quality dimensions. The Group is co-chaired by the Head of a National Statistical Institute and the Head of Eurostat, and the Group's Secretariat is provided by Eurostat.

b. Implementing and monitoring the quality management system (level 4)

The 4th level of quality assurance covers all activities of the Quality team which are directly linked to the work of the statistical sectors. They are the monitoring of the Code of Practice's implementation (ESS peer reviews and the follow-up of the improvement actions identified), Eurostat's Quality reviews' exercise, the error management procedure, managing Eurostat's Impartiality Protocol⁽¹⁶⁾ and quality reporting activities (legal questions, harmonisation issues, monitoring the implementation of quality reporting standards in the various statistical sectors).

c. Coordinating the Quality function, stakeholders' relations

This process includes all activities which help to coordinate and steer the quality work both within Eurostat (through the Coordination Group Quality and the informal Quality network) and the ESS (through the Working Group on Quality in Statistics and its parental body, the Directors of Methodology Group). In addition, it covers the work on maintaining relations with both key and non-key stakeholders of the Quality function, in accordance with the priorities identified.

d. Promoting the quality management system (communication, cooperation)

Following the set-up, implementation and monitoring of the quality management system, the system has to be promoted as well. This process includes the series of biennial Quality conferences⁽¹⁷⁾, various training courses provided on quality, international cooperation activities, internal and external communication and exchanges of views as well as any further supporting, administrative activities of the team's work.

4. Eurostat's Quality reviews

In September 2016 Eurostat launched its second quality screening exercise through which all statistical production processes and supporting statistical activities (to the extent they contribute to the development, production and dissemination of European statistics) are reviewed in the light of the quality standards set by the common quality framework of the ESS, in a period of 4-5 years. The first round of quality assessments took place between 2008 and 2012 and the methodology of the second round was prepared by duly taking into account the experiences and lessons learned of the first round.

The main objective of the quality reviews is to monitor the implementation of the common quality framework of the ESS at process level, and therefore, to contribute to the high quality of European statistics through continuous process improvement, while bringing independent and objective re-

assurance on the functioning of the statistical processes under Eurostat's newly developed Process Management Framework (PMF).

Similarly to the first round of quality assessments, a self-assessment questionnaire is the basic tool of the quality reviews – the checklist has been elaborated based on the ES Code of Practice's principles and indicators as well as the methods and tools of the Quality Assurance Framework. In order to decrease the burden, the questionnaire has been significantly shortened as compared to the previous exercise, leaving room for a more in-depth research in the subsequent stages of the procedure. In addition, it is pre-filled by the colleagues of the Quality team and the production teams are then just invited to complete the list of questions with the remaining information.

The macro-process of the Quality reviews is composed of 4 sub-processes:

- 1.) Risk assessment and planning;
- 2.) Quality reviews at process level;
- 3.) Follow-up and reporting;
- 4.) Process improvement on an annual basis and presentations/training courses.

The workflows of the 4 sub-processes have also been prepared with the clear identification of the various stages and roles and responsibilities, using the Visio tool.

What is new in this new round of quality reviews, is the risk assessment and planning part of the procedure. The quality reviews follow a planning that is submitted and approved by Eurostat's Directors' Meeting on a yearly basis. The planning is done on the basis of a prioritisation exercise during which all processes are scored in order to be classified in priority classes (high, medium and low) using the scoring criteria as follows:

- Year of the last quality assessment;
- Process audited in the past 5 years;
- Risks present in the Eurostat risk register.

For the first round of planning, the following selection criteria were then applied:

- In the high priority class, the highest priority is chosen (within the same Directorate); if there are equal total scores, random selection is then applied while distributing the workload in line with the weights between units;
- To prioritise processes with end year T in at least (if not earlier) T-1 planning cycle (disregarding priority class);
- To exclude processes prioritised / piloted for the PMF exercise or for which audits are planned within the current planning cycle.

The planning resulting from this prioritisation exercise was then further discussed and finalised in close collaboration with the Eurostat Directorates.

Following the analysis of the checklist and any further requests for information, meetings are organised with the production teams to discuss the areas where further improvements can be made in the statistical process and what actions could be identified. The Quality team drafts the quality review report and discusses the horizontal / systemic issues with the horizontal services, as appropriate. As a last step, the report is finalised by adding the respective priorities and timelines to the different actions identified and the actions are encoded in Eurostat's corporate reporting tool for the annual, evidence-based follow-up part of the quality review exercise.

5. Quality for the institutions as a whole – Eurostat’s EFQM experience

Quality is a broad, horizontal concept which concerns all activities and areas of a statistical authority. In addition to assuring quality for the core activities of developing, producing and disseminating statistics, statistical authorities might also decide to consider quality for the institution as a whole – and this would mean engaging in quality management work, as part of the institution's overall management framework.

In the current common quality framework of the ESS, the part on 'general quality management principles' covers the aspects of quality management. In order to investigate if a more extensive and coherent quality management system could be established for the ESS, related research and analytical work has been started under Action 3 of the QUAL supporting framework which is the 'operationalisation' of the Quality key area of the ESS Vision 2020. The first results are expected for the first quarter of 2018.

In 2015 Eurostat also decided to launch or re-launch its work on quality management and started its journey towards excellence by using the EFQM Model and its possibilities.

The EFQM Excellence Model is a practical, non-prescriptive framework

- Enabling organisations to understand their key strengths and potential areas of improvement to achieve their vision and mission;
- Providing a common vocabulary and way of thinking about the organisation, facilitating communication;
- Integrating existing and planned activities, removing duplications and identifying gaps;
- Providing a basic infrastructure for the organisation's management system that can be used by both the private and public sectors.

First, a one day workshop on the EFQM Excellence Model was organised with the participation of Eurostat's senior managers in April 2015. The aim of the workshop was to learn about the EFQM Excellence Model, to make a first self-assessment of Eurostat at strategic level using the EFQM Quick Check Tool, and, finally, to determine its suitability as the strategic management tool for Eurostat.

At the end of the day, discussion focussed on how to take forward the implementation of EFQM in Eurostat. It was thought that an external EFQM assessment (first at the level of "Committed to Excellence") could be organised in 2016. This would allow Eurostat enough time to progress with the identified improvement areas. In addition, external recognition would add value to Eurostat as an organisation and could support the branding of European statistics.

In this workshop, the Directors' Meeting also agreed that the EFQM Excellence Model would constitute a framework to provide a basis for structured strategic reflection but they felt that it should remain at this stage a tool for management. Although the level of commitment to the EFQM Excellence Model was still to be decided, it was in any case considered to be useful in the promotion of the core values of Eurostat – trust, innovation and excellence, and the latter in particular.

In September 2015, the Directors' Meeting mandated the Quality Team to develop a project to support the implementation of the EFQM Excellence Model in Eurostat including carrying out an external assessment with a view to gaining the "Committed to Excellence" recognition.

The preparation of the external assessment consisted of two main tasks:

- The drafting of the submission document and
- The practical organisation of the assessment itself.

The submission document covered the six themes as follows.

- Facts and figures
- History of the organisation and past achievements
- Challenges and strategy of the organisation
- Markets, offerings and customers
- Operations, partner and suppliers
- Management structure and activities.

The submission document also included an Enabler map (describing the key approaches and processes, within the context of the 5 Enablers of the EFQM Model), and a SWOT analysis. The organisation chart of Eurostat was also included in the documentation.

The one-day assessment was carried out by two external assessors in October 2016 and followed a standard schedule. A total of six themed sessions and a closing meeting took place.

As a result of the procedure, Eurostat was awarded the "Committed to excellence" 2 Star Certificate in November 2016. Currently, the Quality team is working on the follow-up of the recommendations issued in the EFQM assessment's Final report and on identifying a possible action plan for their implementation, in close collaboration with the services concerned.

It has to be underlined that the implementation of the EFQM Excellence Model led to many successes apart from the 2-star "Committed to Excellence" award. In addition to the added value of the assessment itself (bringing colleagues together and uniting them towards a common goal, spreading knowledge and enthusiasm about Eurostat, etc) and its underlying documents (Submission document with a detailed overview of the institution, given from an 'unusual' point of view, Enabler Map, etc), it also provided a strategic management tool for reflection at the Directors' Meeting level, it helped identify and support projects such as the ESS.VIP.DIGICOM, the Process Management Framework and Quality reviews, and it encouraged all staff to participate in the definition of a mission, vision (still on-going) and values for Eurostat.

It has to be also mentioned that the EFQM model is about the continual striving for excellence where "Committed to Excellence" is the first step along the path. The next step is "Recognised for Excellence" which entails a much more comprehensive assessment of the organisation. The final step is the EFQM Excellence Award. Organisations which have achieved this level of excellence include global enterprises such as Siemens, Bosch or BMW, as well as public administrations, universities and hospitals.

6. Conclusions

The paper presented the common quality framework of the ESS and how the Quality function of the ESS and the work programme of Eurostat's Quality team have been set up in order to mirror the framework in the daily quality operations.

Eurostat's Quality reviews were then explained more in detail in order to demonstrate how the identification of strength, weaknesses and the corresponding action plans can contribute to continuous

process and product improvements – and how risk and quality management approaches have been aligned in the process' prioritisation and planning part.

Finally, the paper described Eurostat's first steps on its journey towards excellence with the help of the EFQM Model. The ultimate question, however, remains to be seen if this journey will continue, and if yes, how far Eurostat will go on this road. The answer to this question might very much depend on the results of the cost-benefit analysis that the Quality team plans to do in the coming months.

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