ESS approach to quality –

The revised Code of Practice, the new Quality Assurance Framework and Eurostat's practices

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- The Quality Assurance Framework of the ESS
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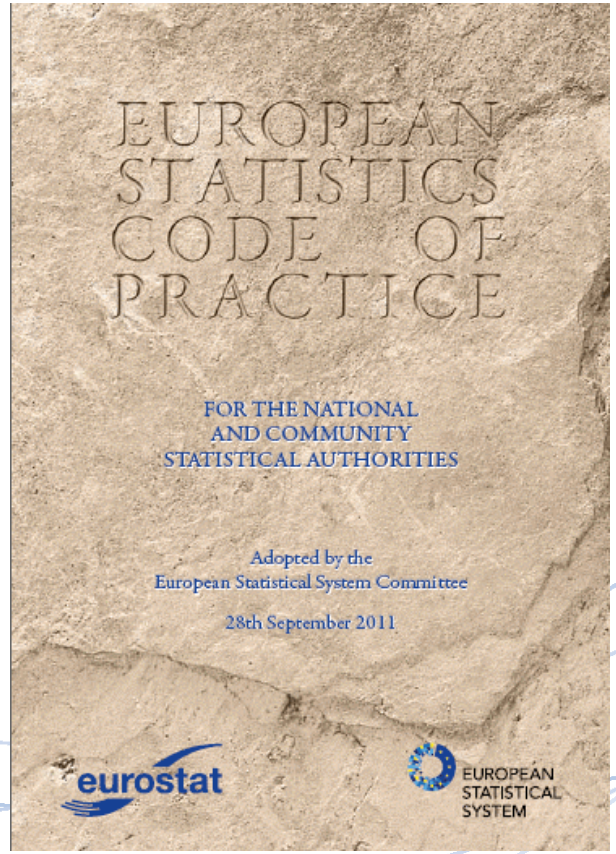
European Statistics Code of Practice

- Aim
- Recent changes
- New indicators



Code of Practice – the aim

- Sets the standards for developing, producing and publishing European statistics
- Self-regulatory
- Applies to Eurostat and to EU national statistical offices
- 15 Principles cover the standards applicable to
  - Institutional environment
  - Statistical processes
  - Statistical outputs
- For each Principle, there are Indicators showing how compliance can be demonstrated

Code of Practice – recent changes

- Reinforced references in the Code to quality management, professional independence and administrative data
- 2001 Quality Declaration as a Preamble with the Vision and Mission of the ESS
- Alignment with Statistical Law and the ECB Statistical Quality Framework
- Some editorial changes
- Nine new indicators

Code of Practice – new indicators

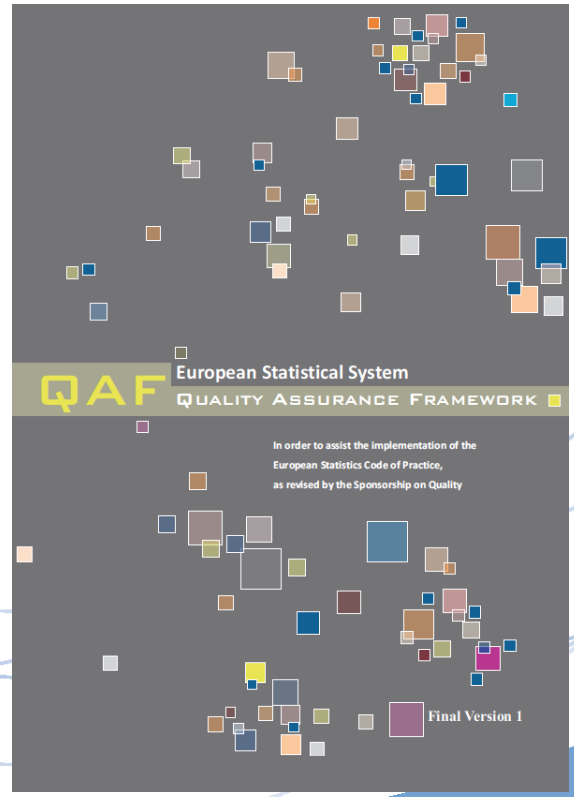
- Rules for appointing and dismissing the head of an NSI (1.8)
- Quality policy and quality management (4.1)
- Advance notice of major revisions (6.6)
- Use of administrative data sources (8.7, 8.8, 8.9)
- Linking data (9.6)
- Standardisation (10.4)
- Indicator 15.6 split into 2 (15.6, 15.7)

Quality Assurance Framework – a third level

Level 1 = Principles (standards)

Level 2 = Indicators (how the standards can be demonstrated)

Level 3 = Quality Assurance Framework (what methods and tools can be used)



Quality Assurance Framework - example

Principle 8

Appropriate statistical procedures, implemented from data collection to data validation, underpin quality statistics

Indicator 8.6

Revisions follow standard, well-established and transparent procedures

- Quality indicators on revisions are calculated and published

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Appropriate statistical procedures, implemented from data collection to data validation, underpin quality statistics

Indicator 8.6

Revisions follow standard, well-established and transparent procedures

Methods of implementation

- Guidelines on revision of published statistics exist, are applied and made known to users
- Revisions accompanied by explanations made available to users
- Quality indicators on revisions are calculated and published

Quality Assurance Framework - across all statistical domains

- Developed by the ESSC Task Force “Sponsorship on Quality”
- Focused on CoP Principles 4 and 7-15 but not part of the CoP
- Provides methods and tools at an institutional and process level
- Provides links to relevant reference documentation
- Provides guidance to compliance assessors
- Draft version, to be refined further by the Working Group on Quality
- Does not address process-specific issues…

Process-specific Quality Assurance – the fourth level

Level 1 = Principles (standards)

Level 2 = Indicators (how the standards can be demonstrated)

Level 3 = Quality Assurance Framework (what methods and tools can be used)

Level 4 = Process-specific quality assurance, adapted to the needs of the process (e.g. certification)

Process-specific Quality Assurance – the fourth level

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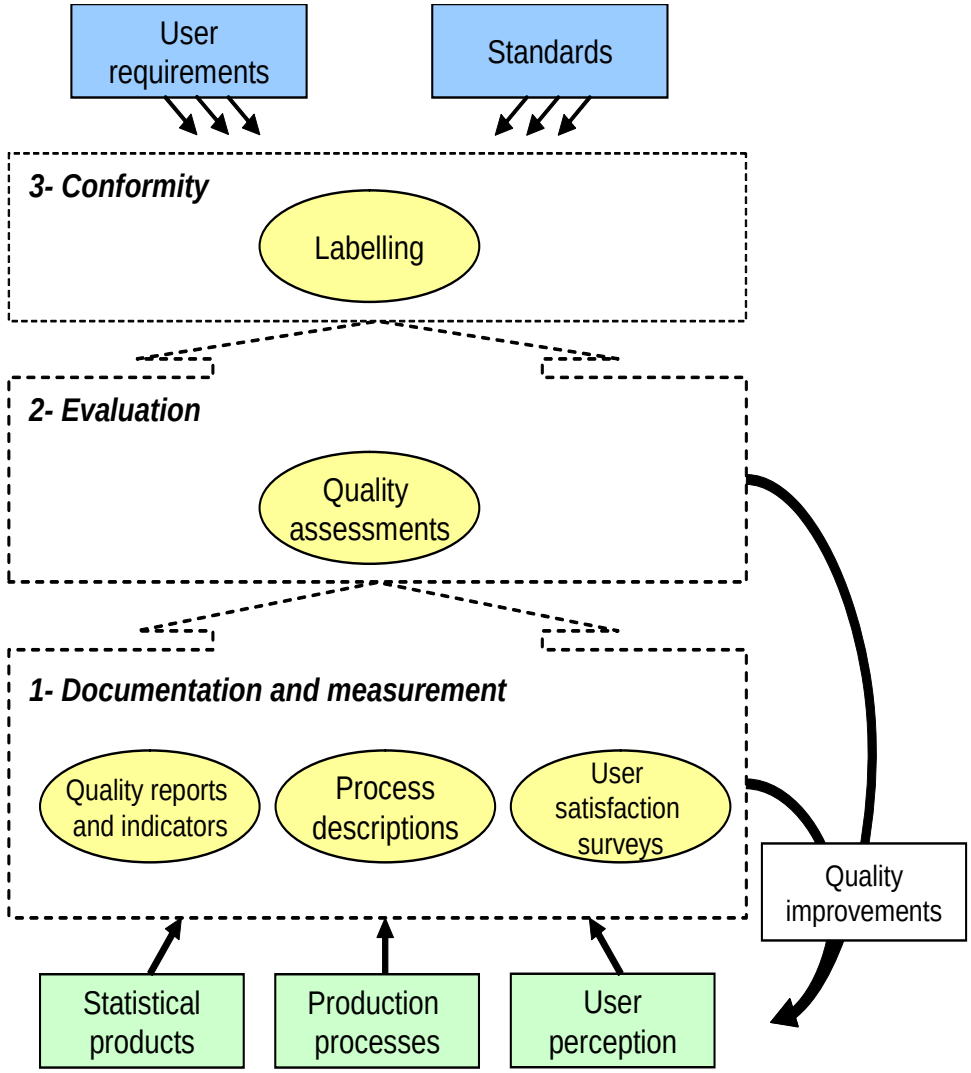
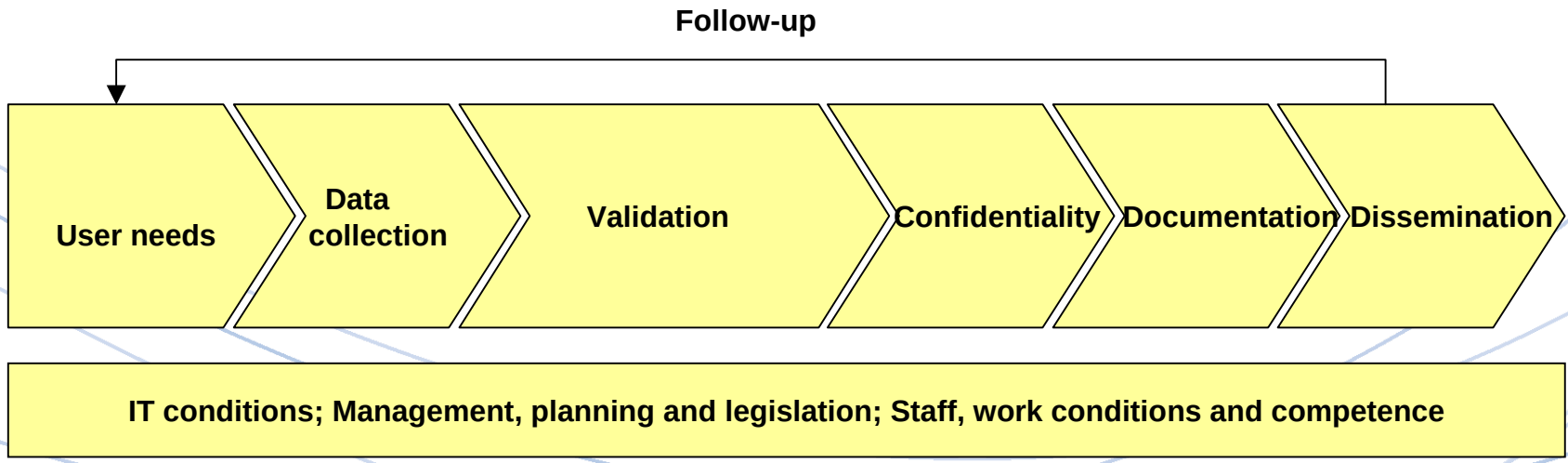
Quality assurance in Eurostat



What is a quality assessment?

A systematic review and evaluation of all stages of a statistical process with the use of a standard Assessment Checklist



Benefits of the quality assessments

For the production teams:

- An opportunity for a chronological analysis of the production process
- Identify and prioritise improvement actions
- Spread and benefit from the Good Practice

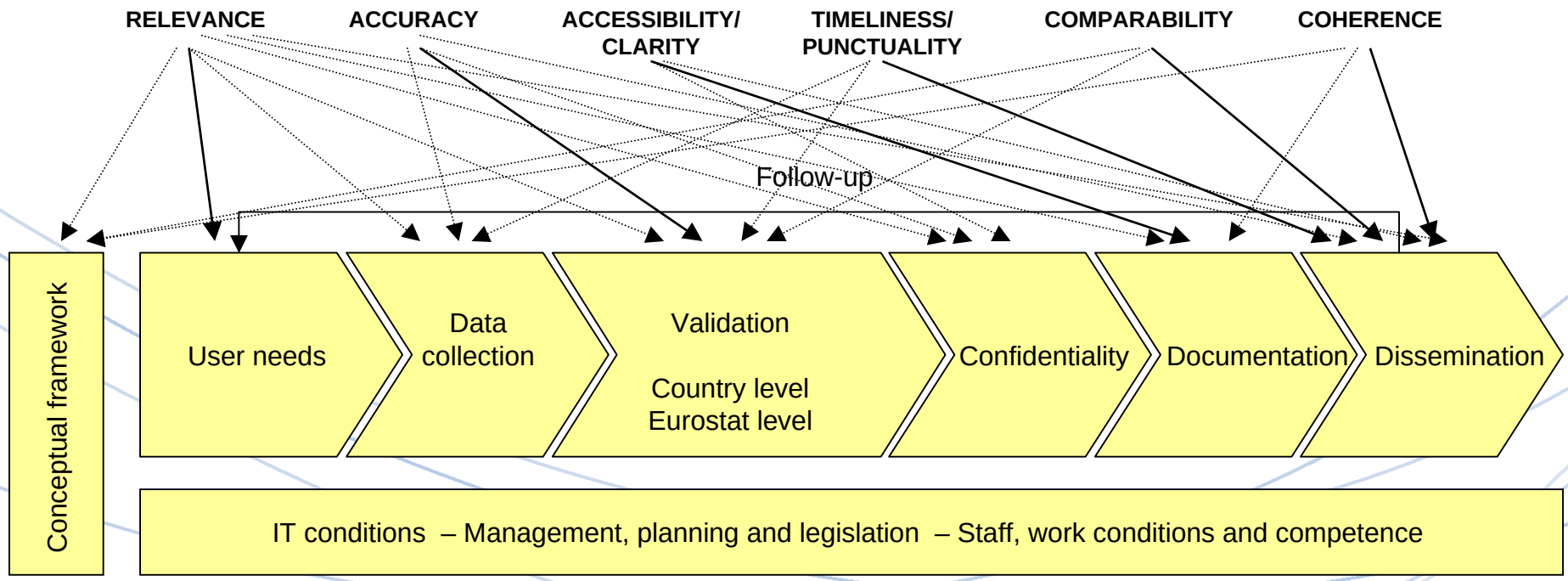
For Eurostat:

- Identify horizontal problematic issues
- Foster standardisation of statistical processes
- Support resource allocation, planning and programming
- Show quality commitment

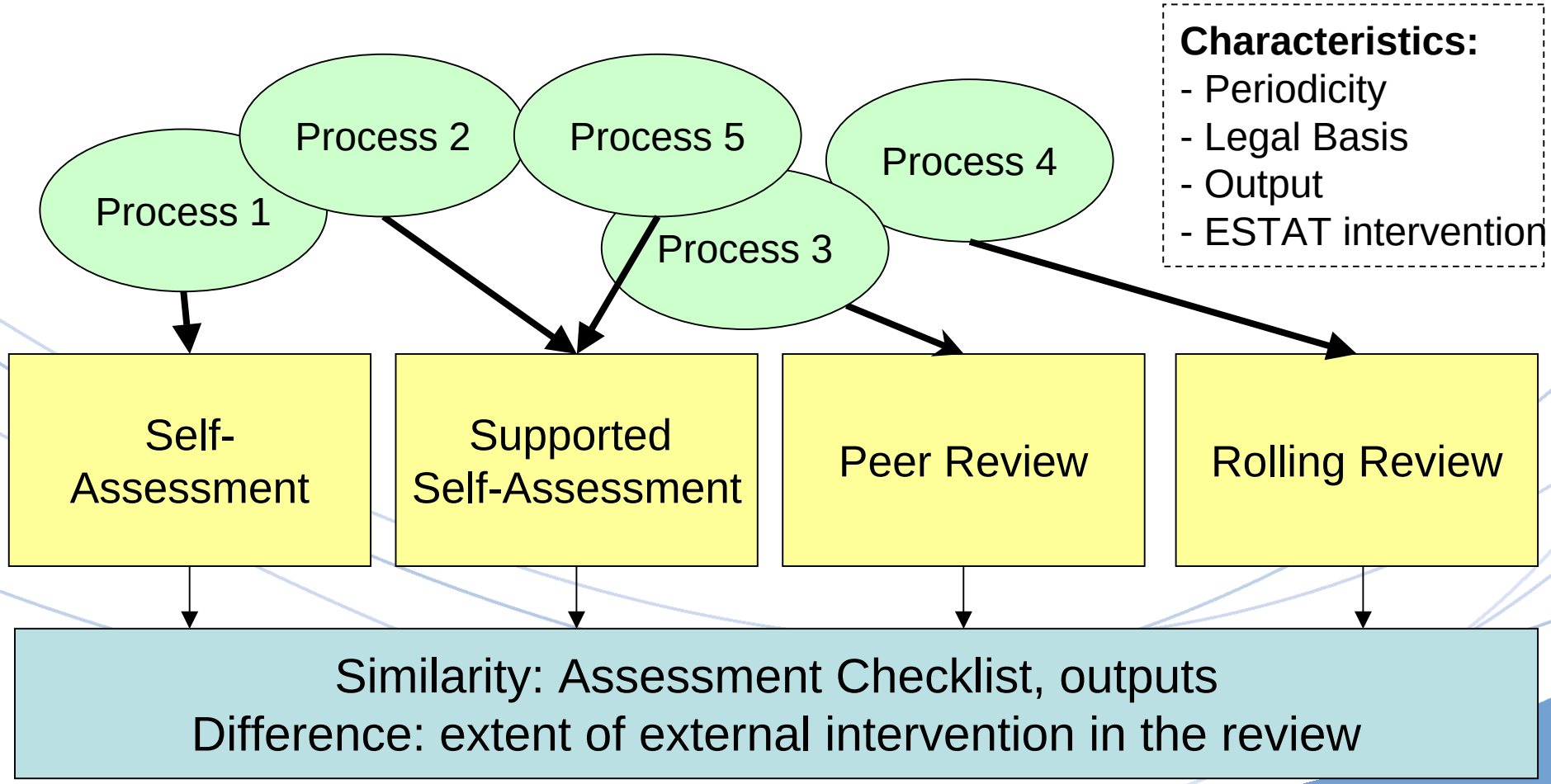
Why do we look at the processes?

- The product quality is the quality of the output
  - Six quality dimensions: relevance, accuracy, timeliness and punctuality, accessibility and clarity, comparability, and coherence
- However, output quality is generated by the underlying process
  - Improving process quality is key

Relationship between process and output quality



Categories of Eurostat assessments



Quality assessments methodology

- **Self-Assessment**
  - Production unit: fills in the Checklist and produces outputs
  - Quality unit: provides support on demand
- **Supported Self-Assessment**
  - Production unit: fills in the Checklist
  - Quality unit: helps with filling in the Checklist, drafts the outputs
- **Peer Review**
  - Same as Supported Self-Assessment but includes one or more peers (internal or external) taking part in all steps and providing expertise
- **Rolling Review**
  - A comprehensive review based on the same Checklist but implemented by an external contractor
  - Involves partner and user surveys; at the end a list of recommendations is produced which combines the outcomes of the 3 inputs

Implementation Principles

- **Minimising the burden for the units**
  - Test of the approach in advance
  - Support from the Quality unit
  - Flexibility
- **Building on existing information**
  - Quality reports
  - Process analysis, all related documentation
- **Integration of the quality assessments with other horizontal activities**

The Assessment Checklist

3.8 **Please assess the key users' overall satisfaction with the statistics produced (indicate below how the users' satisfaction was assessed):**

- [5] Very good ☐
- [4] Good ☐
- [3] Satisfactory ☐
- [2] Poor ☐
- [1] Very poor ☐
- [0] Not assessed ☐
- Not relevant ☐

Arguments for scoring:

3.9 **Do you have information about the satisfaction of other than key users?**

- Yes ☐
- Partly ☐
- No ☐

Comments:

3.10 **What are the main problems experienced in relation to users/customers?**

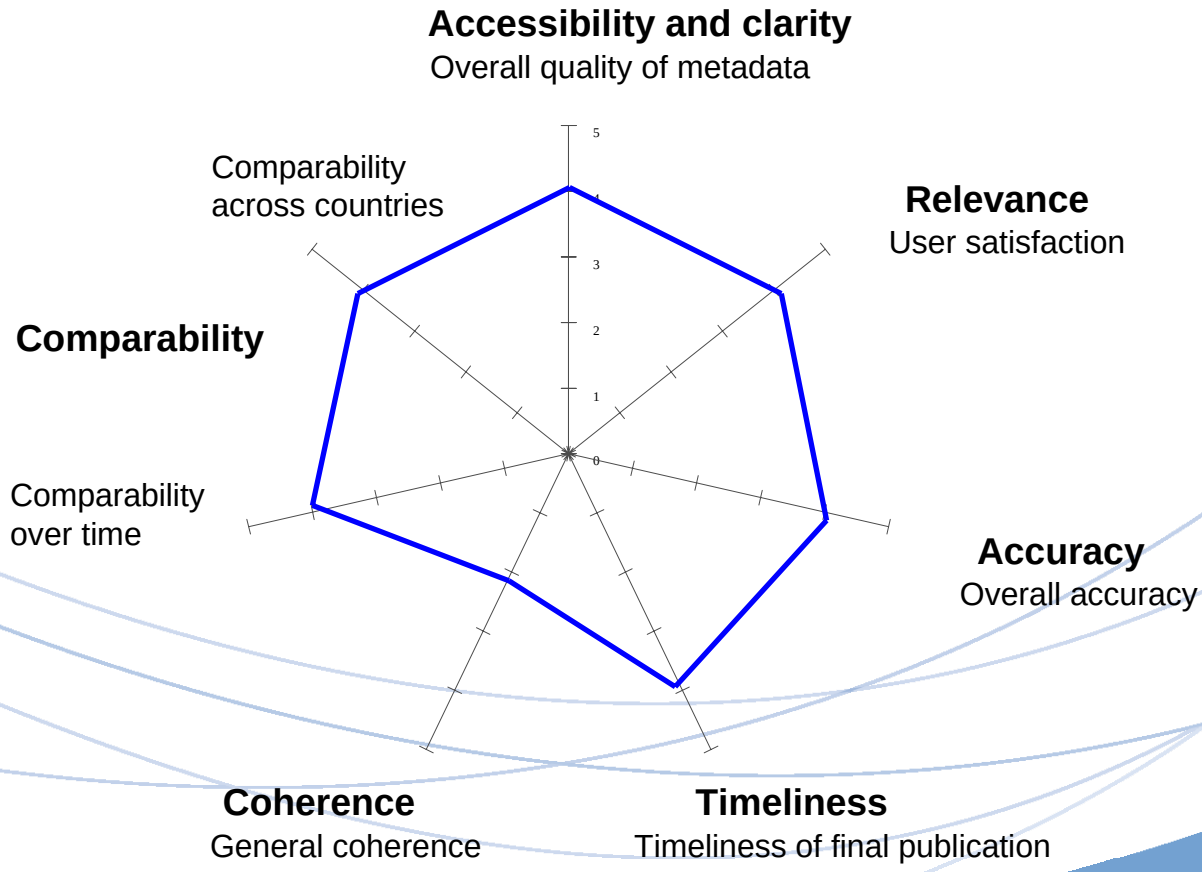
Assessment Outputs (1)

Summary Assessment Report

	Principal strengths	Principal weaknesses	Recommendations regarding improvement			
			Action	Ownership	Timeline[1]	Status[2]
Validation (country level)	▪ High completeness of data and metadata received from the countries (regular quality reports including information on the levels of non-response, imputations, cvs, etc) ▪ Regularly updated ESTAT methodological guidelines for the data collection	▪ Varying level of information provided by the countries in quality reports ▪ Medium and high level of non-response	▪ Improve the completeness of country quality reports	▪ Unit F.3	▪ Medium-term	
			▪ Promote the countries' actions towards achieving the effective sample sizes	▪ Unit F.3	▪ Medium-term	
Validation (ESTAT level)	▪ Comprehensive data validation system. Very-well developed and user-friendly SAS applications (also shared with the countries for data treatment on their level) *(good practice)* ▪ Continuous development of innovative methods of data analysis (i.e. outlier detection, indicator validation, etc) *(good practice)* ▪ Good overall accuracy of the published statistics (acceptable level of the coefficients of variation	▪ Limited evaluation of the imputation method used for the EU aggregates ▪ No assessment of the potential imputation bias	▪ Establish an imputation procedure for EU aggregates	▪ Unit F.3	▪ Short-term	
			▪ Obtain the indication of the potential imputation bias	▪ Unit F.3	▪ Medium-term	

Assessment Outputs (2)

Assessment Diagram



Assessment Outputs (3)

Highlight of good practices across the organisation

Overview of the exercise, current issues

- Follow-up meetings take place two years after the assessments
- Continuous monitoring of the implementation of improvement actions, identified both at process and organisational level
- Horizontal issues addressed at institutional level
- Around 90% of the 130 statistical processes of Eurostat has been assessed
- The evaluation report of the 4-year exercise is being drafted and approved

Conclusions

- The Code of Practice has been revised and is now in force
- The ESS Quality Assurance Framework will soon provide practical guidance on the implementation of the Code
- Both are applicable across the statistical authority
- Process-specific quality management approaches can be considered as a further level of quality assurance
- Quality assessments are monitoring tools that contribute to the quality improvement of statistical processes and outputs

Thank You