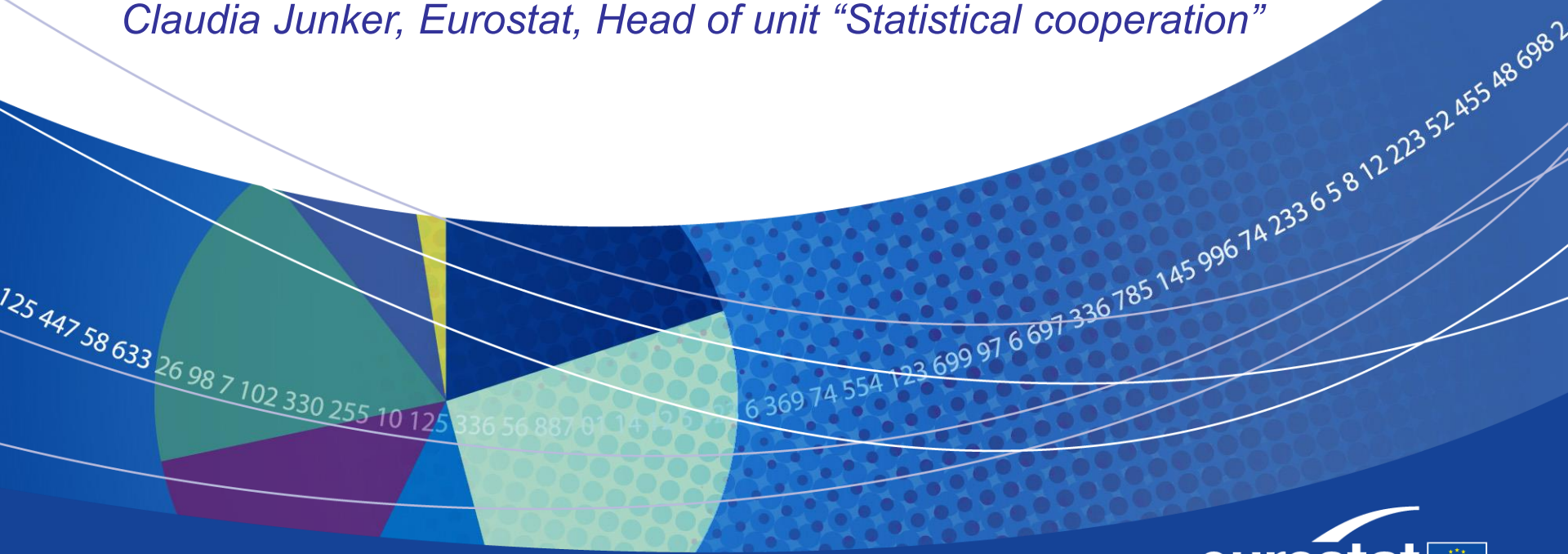# High level seminar "Global assessments for the development of national statistical systems"

Quality Assurance Frameworks for official statistics

Claudia Junker, Eurostat, Head of unit "Statistical cooperation"

Content

- **European Statistics Code of Practice**

- **Link to the Quality Assurance Framework**

- **Quality assurance framework**

- **Quality assessments in Eurostat**

- **Conclusions**

European Statistics Code of Practice

Vision and mission of the ESS

ESCoP

Level 1 = Principles (standards)

   15 principles

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

   82 indicators

Quality Assurance Framework

Level 3 = Quality Assurance Framework (general guidance)

➢ For P4 (quality) and P7-P15 (statistical processes and output) only

➢ Activities, methods and tools that can be used to implement the CoP standards at an institutional level

➢ Activities, methods and tools that can be used to implement the CoP standards at an product/survey level

➢ Reference documentation

Example 1

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

Example 1bis

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

Methods at institutional level

- Guidelines and principles related to revisions exist
- Regular activities undertaken to promote methodological improvements

Methods at product/survey level

- Explanations and publication of revisions
- Quality indicators on revisions are published

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Example 2

Principle 11

European statistics meet the needs of users

Indicator 11.1

Processes are in place to consult users, monitor the relevance and utility of existing statistics in meeting their needs, and consider their emerging needs and priorities

Example 2bis

Principle 11

European statistics meet the needs of users

Indicator 11.1

Processes are in place to consult users, monitor the relevance and utility of existing statistics in meeting their needs, and consider their emerging needs and priorities

<u>Methods at institutional level</u>

- Legal obligation to consult users
- Regular and structured consultation procedures
- Analysis of the use of statistics

<u>Methods at product/survey level</u>

- Register of key users
- Quality indicators on relevance

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Principle 4 – Commitment to quality

P4: Statistical authorities are committed to quality. They systematically and regularly identify strengths and weaknesses to continuously improve process and product quality.

Indicator 4.1: Quality policy is defined and made available to the public. An organisational structure and tools are in place to deal with quality management.

Methods at institutional level

1. a quality commitment statement
2. an organisational structure for managing quality
3. definition of quality guidelines
4. availability of quality guidelines
5. an infrastructure for documentation
6. training courses

Principle 4 – Commitment to quality

P4: Statistical authorities are committed to quality. They systematically and regularly identify strengths and weaknesses to continuously improve process and product quality.

Indicator 4.2:Procedures are in place to plan and monitor the quality of the statistical production processes.

Methods at institutional level

1. methodological and technical support and general tools

Methods at product/survey level

2. procedures to monitor process quality

3. a quality assurance plan

Principle 4 – Commitment to quality

P4: Statistical authorities are committed to quality. They systematically and regularly identify strengths and weaknesses to continuously improve process and product quality.

Indicator 4.3: Product quality is regularly monitored, assessed with regard to possible trade-offs, and reported according to the quality criteria for European statistics.

Methods at institutional level

1. procedures to monitor product quality

2. user satisfaction survey

Methods at product/survey level

3. user oriented quality reports

4. producer oriented quality reports

5. product quality monitoring
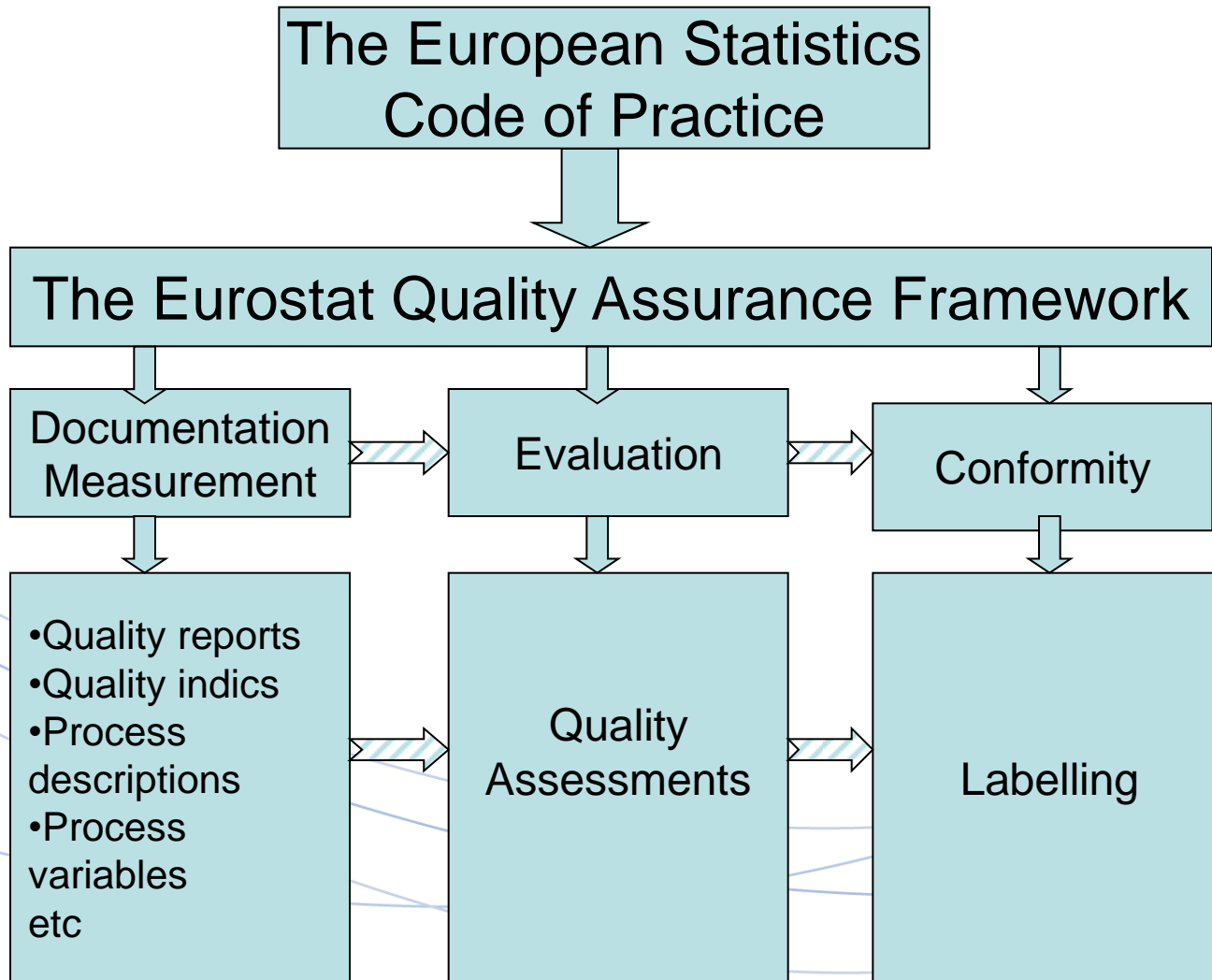
Principle 4 – Commitment to quality

P4: Statistical authorities are committed to quality. They systematically and regularly identify strengths and weaknesses to continuously improve process and product quality.

Indicator 4.4: There is a regular and thorough review of the key statistical outputs using also external experts where appropriate.
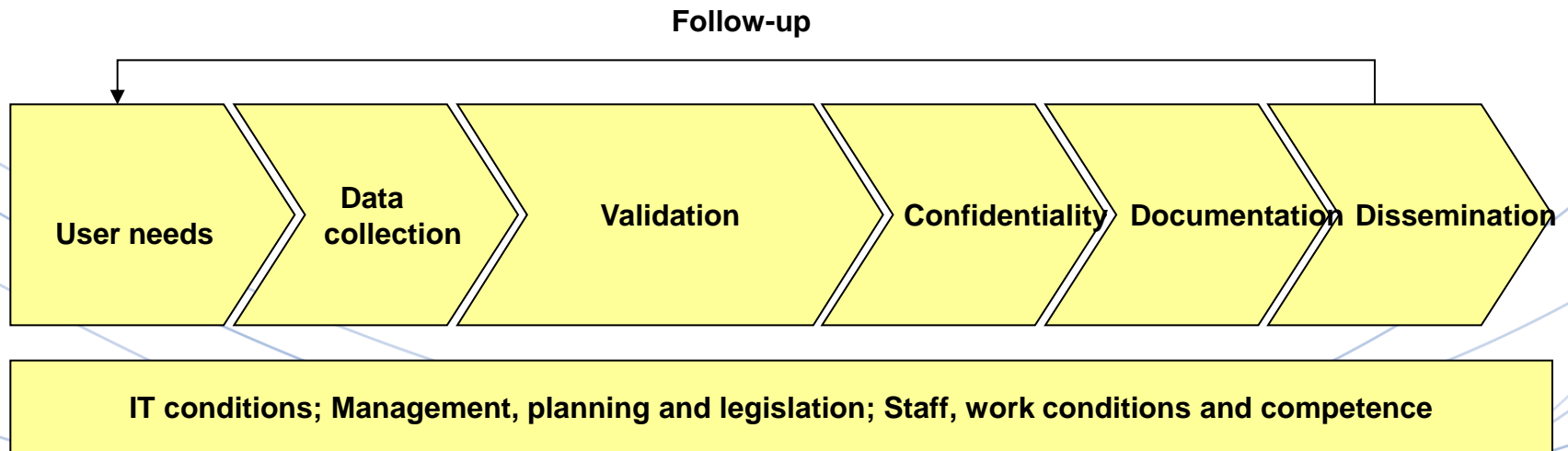
Methods at institutional level

1. a plan for implementing quality reviews

2. a structure for quality reviews

3. training of internal auditors

4. reference documentation

5. action plans

6. feedback from users

7. deployment of outside experts

8. benchmarking

Context QAF – quality assessments

The European Statistics
Code of Practice

↓

The Eurostat Quality Assurance Framework

Documentation Measurement	→	Evaluation	→	Conformity

↓ ↓ ↓

•Quality reports •Quality indics •Process descriptions •Process variables etc	→	Quality Assessments	→	Labelling

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What is Eurostat Quality Assessment?

A systematic review and evaluation of all stages of the statistical production process with the use of the DESAP-based Checklist
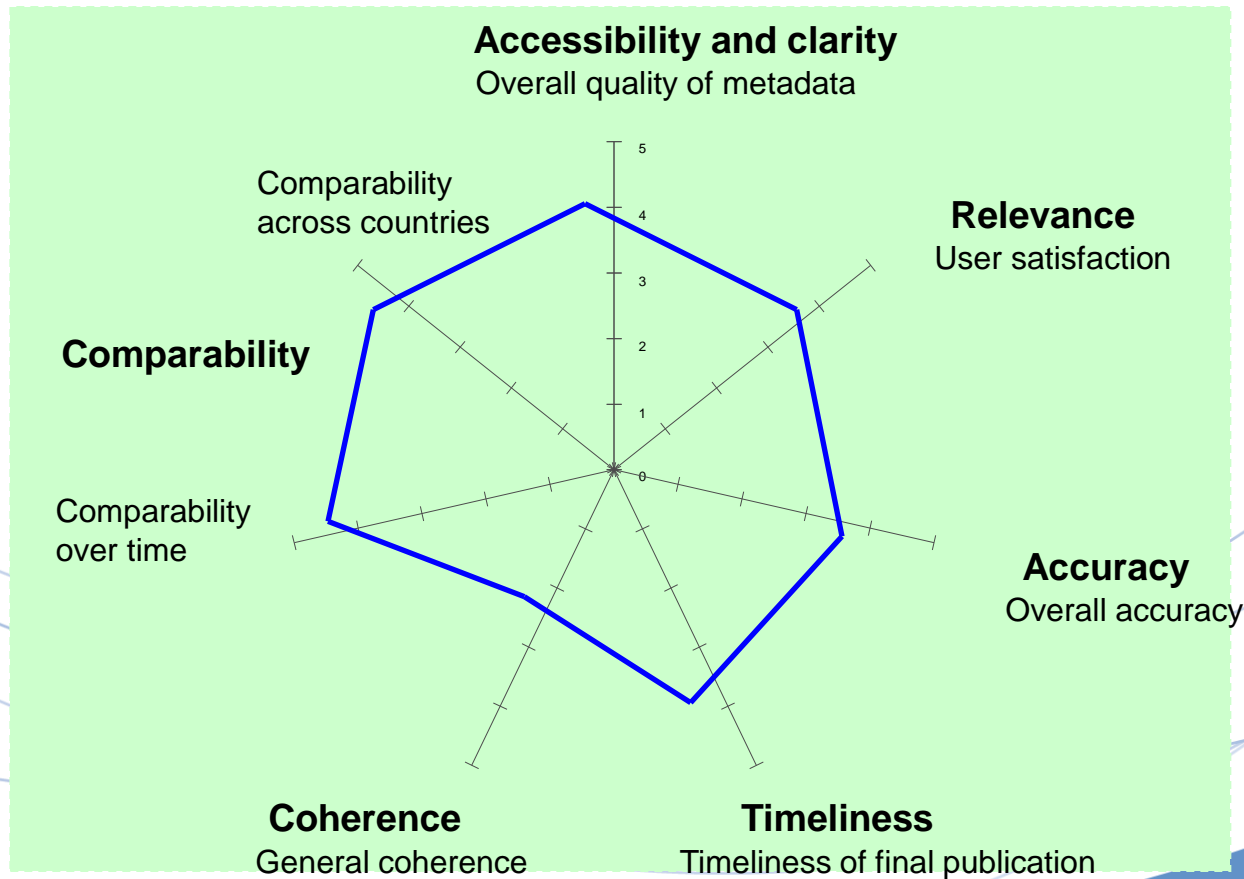
Follow-up

| User needs | Data collection | Validation | Confidentiality | Documentation | Dissemination |

IT conditions; Management, planning and legislation; Staff, work conditions and competence

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Assessment Outputs (1)

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 ESTAI 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 STAT 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	

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Assessment Outputs (2)

Assessment Diagram

Accessibility and clarity
Overall quality of metadata

Relevance
User satisfaction

Accuracy
Overall accuracy

Timeliness
Timeliness of final publication

Coherence
General coherence

Comparability
over time

Comparability

Comparability
across countries

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Assessment Outputs (3)

Highlight of good practice

Categories of Eurostat assessments

Process 1

Process 2

Process 5

Process 3

Process 4

Characteristics:
- Periodicity
- Legal Basis
- Output
- ESTAT intervention

Self-Assessment

Supported Self-Assessment

Peer Review

Rolling Review

Similiarity: DESAP-based Checklist, outputs
Difference: extent of external intervention in a review
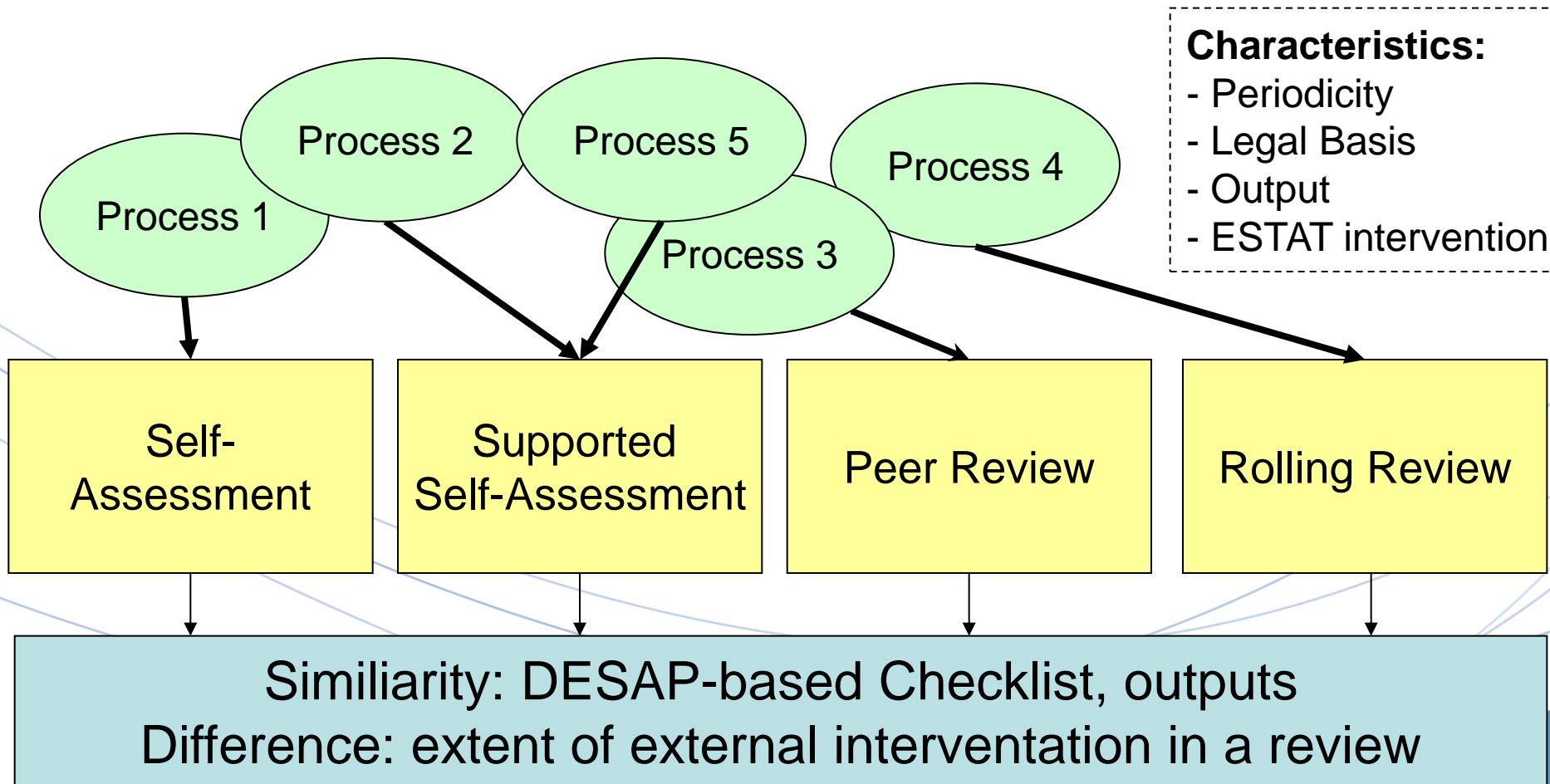
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Conclusions

- ➤ CoP is the start (peer review, global assessment, monitoring of improvement actions)

- ➤ QAF is the next step (quality procedures)

- ➤ Quality assessments – basis for quality assurance

- ➤ Tools need to be adapted to local situation

- ➤ Eurostat is ready to provide advice, exchange experience, provide templates, etc.

Thank you for your attention

Contact points:

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