

Managing quality in Statistics Denmark

Component A: Quality Management of Official Statistics
Activity A.7: Integrating the elements for quality
management in the ICBS

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Modernisation framework



- UNECE High-Level Group for the Modernisation of Official Statistics (HLG-MOS)
 - Created by the Conference of European Statisticians (CES) in 2010
 - Ireland, Australia, Canada, Italy, Netherlands, New Zealand, Korea, Slovenia, Eurostat, OECD, UNECE
 - To promote common standards, models, tools and methods to support modernisation of official statistics
 - To drive new developments in the production, organisation and products
 - To ensure that there is a maximum of convergence and coordination within the statistical “industry”



Modernisation framework (2)

- Conference of European Statisticians
 - More than 60 countries come together at the CES to drive statistical work in the UNECE region and beyond
 - Key outputs:
 - Guidelines and recommendations – by national and international statistical experts
 - Standards for statistical production – by UNECE HLG-MOS
 - In depth reviews – to identify gaps or duplication of international statistical work and address emerging issues
 - UNECE wikis and knowledge bases
 - Global assessment of national statistical systems – an in depth analysis of countries' capacity to produce official statistics in line with international standards
 - Library of training materials – generic training materials on a number of statistical topics

Modernisation of official statistics

Challenges for official statistics

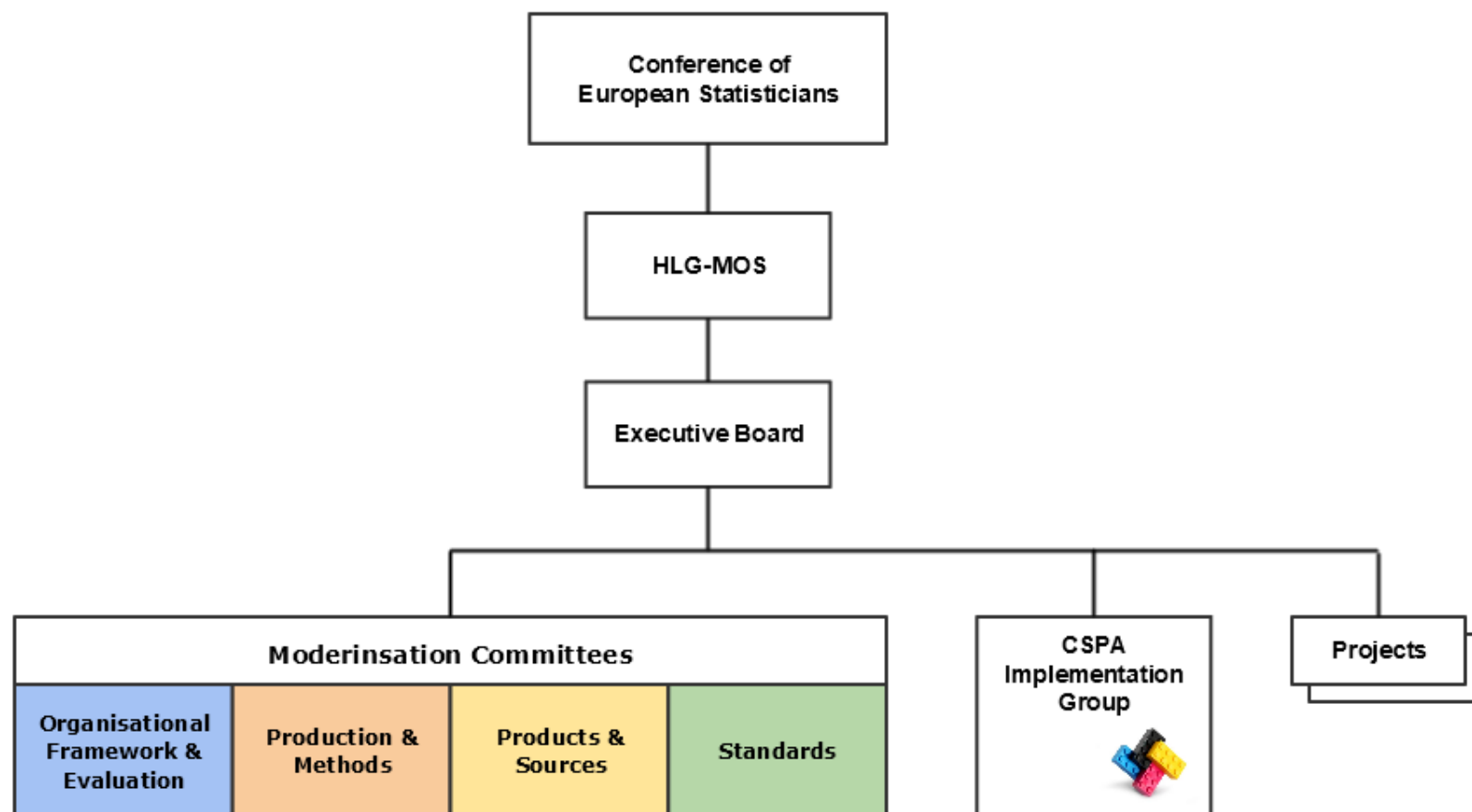
- New competitors producing statistics
- New data sources available
- Increased costs and quality problems to collect data
- Reduced budgets for official statistics
- Emerging information needs

More
with
less

Modernisation

- Join efforts
- Increased and low-cost cooperation
- Sharing of skilled resources
- Sharing tools, methods and standards
- Adopting common solution

MOS – Organisation of work



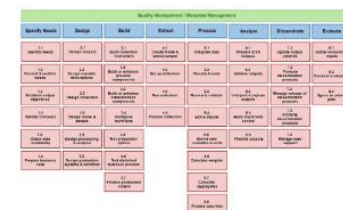
Modernisation Committee on standards

- Topics identified so far:
- Metadata glossary
- Roadmap for implementing standards (GSBPM, GSIM, GAMSO, CSPA) in the context of a modernisation maturity model
- Quality indicators
- Further development of GSIM concepts/variables (harmonisation of variables)
- Logical Information model (if work on this is not continued under CSPA)

Main standards



- **GSIM – Generic Statistical Information model**
 - Version 1.1, Dec. 2013
 - Reference framework for information objects – sets out definitions, attributes and relationships regarding information objects
- **GSBPM – Generic Statistical Business Process Model**
 - Version 5.0, Dec. 2013
 - An international standard that can be used to document any kind of official statistics business process.
- **GAMSO – Generic Activity Model for Statistical Organisations**
 - Describes and defines activities that take place within organisation. It extends and complements the GSBPM adding additional activities needed to support statistical production.



Interrelation between the standards



GSIM

The information flow

Supporting activities

GAMSO



Input

Production process

Output

GSBPM

Quality Management/Workforce Management							
Specify Needs	Design	Build	Collect	Process	Adapt	Streamline	Evaluate
01. Identify needs	02. Develop concepts	03. Develop concepts & create content	04. Develop plans & create content	05. Develop plans & create content	06. Develop plans & create content	07. Develop plans & create content	08. Develop plans & create content
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Common purposes of the standard

- Improve communication by introducing a common language
- Gain efficiency (rationalise processes, information, flow, assign responsibilities etc.)
- Support industrialisation process (re-use of methodologies, tool, software, sharing of solutions etc.)
- Build staff competences around standards (enhance capabilities)

Experiences from Denmark

Topics from ToR:

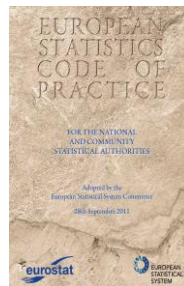
- Policy and overall framework
- Organisational structure
- Decision making
- Monitoring
- Driving forces for commitment
- Training of staff
- Benefit and challenges



Policy and overall framework

- European frame

- ESS CoP and ESS QAF
- Peer Reviews

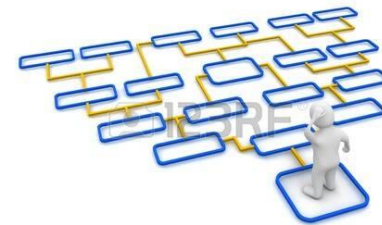


- Local frame – Quality policy

- Quality awareness in dissemination of statistics
 - Dissemination of press releases and other publications
 - Documentation of statistics
 - Other metadata
 - User involvement
- Quality awareness in production of statistics
 - EU-cooperation
 - Guidance from the methods division
 - Quality audits
 - Extensive use of administrative registers



Organisational structure



- Before (Sept.) 2014
- Steering Committee Quality
 - Members: 5 directors, head of management office, cgief adviser management office, metadata expert.
- No organisational structure beneath
- ...no link between the steering committee and the statistics producing organisation
- Motivation for change: Peer Review 2014 and compliance with Principle 4 of the ESS CoP



....CoP Principle 4

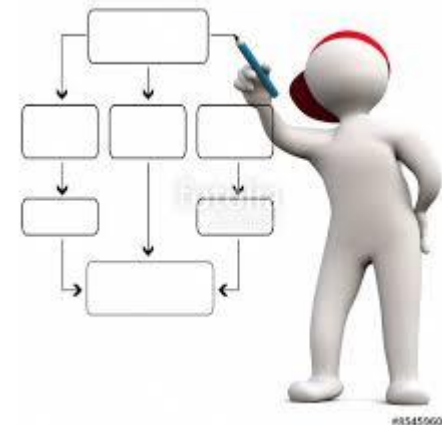


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- **Principle 4: Commitment to quality**

- 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 organizational structure and tools are in place to deal with quality management.**
- **Indicator 4.2:** **Procedures are in place to plan and monitor the quality of the statistical production process.**
- **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.
- **Indicator 4.4:** **There is a regular and thorough review of the key statistical outputs** using also external experts where appropriate.
- <http://dst.dk/en/OmDS/strategi-og-kvalitet/kvalitetspolitik>

Organisational structure (2)



- After (Sept. 2014)
- Quality coordinator to liaise between the steering committee and the statistics producing organisation
- Project in 2014:
 - Implementing a new metadata structure
 - New documentation based on SIMS
 - Introducing a new tool: Colectica
- Reorganising in 2015 replacing the steering committee with a Directors group on quality, metadata and statistical methods and connecting working group with representatives of middle management



Organisational structure (3)

- Members of the directors group:
 - 5 directors, heads of division of IT and Methods and Analysis, Quality Coordinator, a Metadata expert, Methods expert
- Working group on quality
 - Headed by the quality coordinator with one member (heads or deputy heads of division) from each of the 5 departments
- Working group on metadata
 - Headed by the metadata expert with one member (heads or deputy heads of division) from each of the 5 departments
- Working group on statistical methods
 - Headed by a methods expert with one member (heads or deputy heads of division) from each of the 5 departments

Decision making



Directors Committee for Quality, Metadata and Statistical Methods

- Strategy
- Principles
- Decided plans

WG on Quality

- [Quality coordinator](#)
- Guidelines
- Tools
- Help and advise
- Quality control of DS
- Quality audits

WG on Metadata

- Guidelines
- Tools
- Courses
- Help and advise

WG on Methods

- Guidelines
- Tools
- Courses
- Help and advise

Subject matter departments

- Responsible for process and output
- Follow guidelines and advise



Monitoring



- The EU-system has different compliance monitoring processes
- News releases
 - Dissemination unit ensures the quality
 - The top management reviews the disseminated releases in their weekly meeting
- Documentation of statistics follows every release
 - Goes through a quality assurance process
- Quality audits
 - ESS CoP compliance
 - All dissemination, user needs, user contact
 - Production processes, documentation



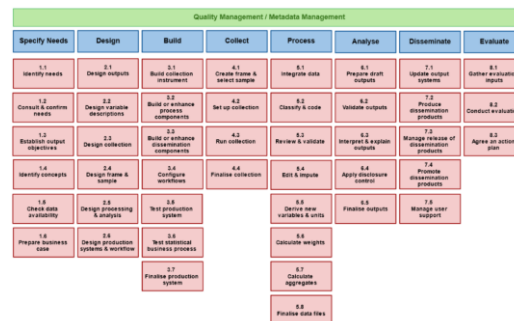
Driving forces for commitment

- Challenges:
 - Reduces budgets
 - Emerging information needs
- Modernisation
 - Sharing tools, methods and standards
 - Joint efforts
 - Increase cooperation
 - Sharing of skilled resources
 - Adopting common solutions
 - Overcome stove-pipes



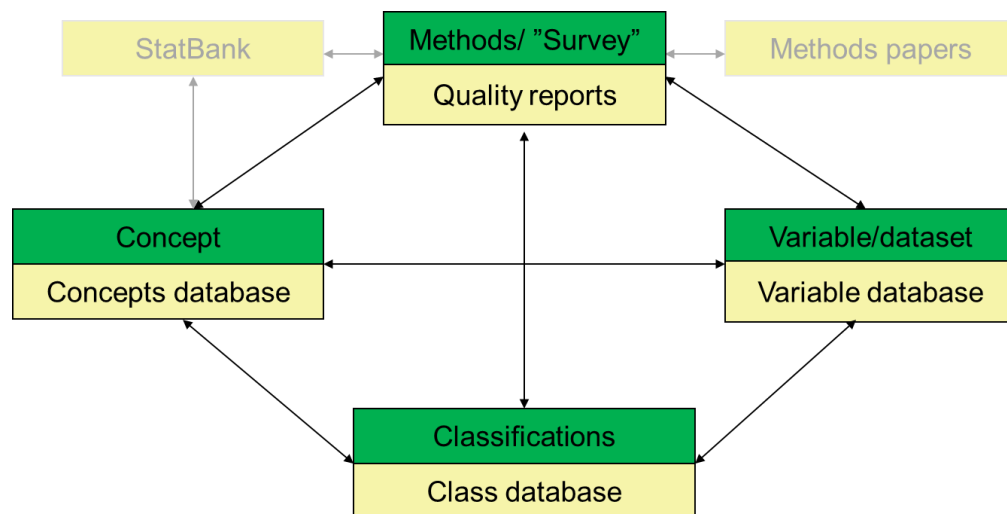
Driving forces for commitment (2)

- METIS → GSBPM
 - Introduces in Statistics Denmark in 2009
 - Pilots on 10 statistical products
 - Some divisions adapted – nothing common
- CoP – introduced in 2005
- Peer reviews
 - First in 2005/2006
 - Some changes made
 - Second in 2014/2015
 - More changes made – more commitment



Driving forces for commitment (3)

- Introducing a metadata vision in 2009
- Quality policy introduced in 2014
- Implementing the first steps in 2015
 - Documentation of statistics renewed
 - Colectica - DDI
 - GSIM
 - SIMS
- Second step just finished
 - Classifications in Colectica
 - Variables for 5 products

[illegible]

Driving forces for commitment (4)

- Contracts – on division or department level
 - Updating of documentation of statistics
 - Quality audits
 - Documentation of processes
 - Etc.
- Involvement from management
 - Monthly statistics to directors on compliance with updating documentation of statistics
 - Reviewing documentation of statistics
 - Etc.
- Quality assurance process for documentation of statistics – continuous process
- Quality audits



Training of staff

- Courses

- Statistical methods, documentation of statistics
- Planning course on GSBPM – implementation and documentation

- Workshops

- Documentation of statistics
- GSBPM

- Coaching/training (peer-to-peer)

- Documentation of statistics
- GSBPM

- Introductory sessions

- Introduction to GSBPM and planning of production for new statistical products



Benefit and challenges

- Awareness is rising
- Through the continuous focus on documentation of statistics questions are raised regarding e.g.:
 - Content of statistics
 - Statistical processing
 - Accuracy and reliability
 - Comparison and coherence
- Audits
 - Fresh eyes – old habits can be broken – documentation can be changed from private to something others can benefit from etc.
 - Introduction to standards



Benefits and challenges (2)

- It takes time to raise the awareness
- The need for documentation can be hard to understand
- Making changes in habits is hard
- Resources are felt to be scarce and focus is on producing statistical figures



