QUALITY REPORTING: THE INTRODUCTION OF QUALITY INPUT PAPERS IN A NATIONAL FEDERAL STATISTICAL SYSTEM

European Conference on Quality in Official Statistics (Q2014) in Vienna, Austria on 3-5 June 2014

Peter Schmidt, Federal Statistical Office Germany (Destatis)
Sabine Quaiser, State Statistical Institute Berlin-Brandenburg
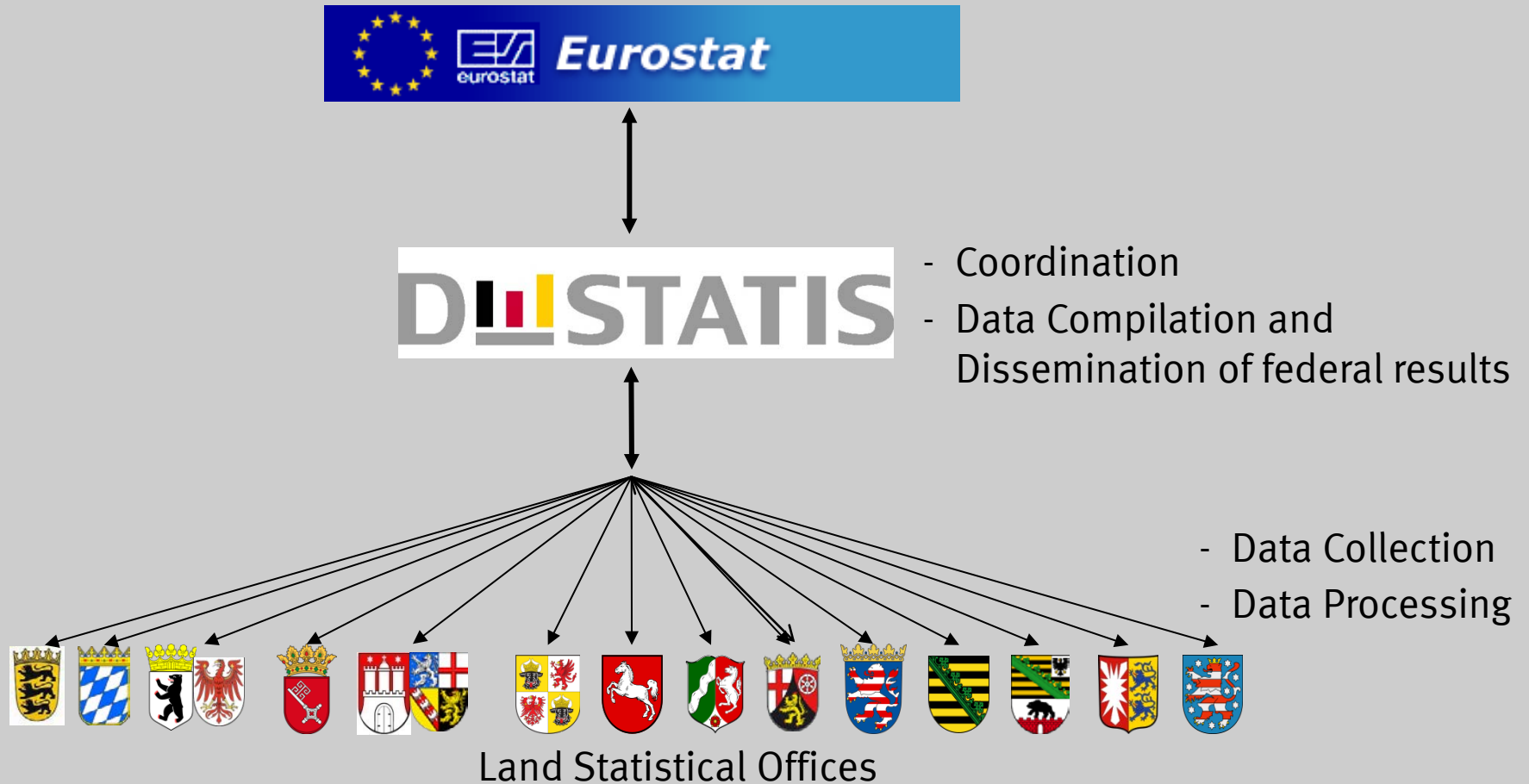
Outline

Part A: Framework and theoretical concept

1. Quality management in the federal statistical system of Germany
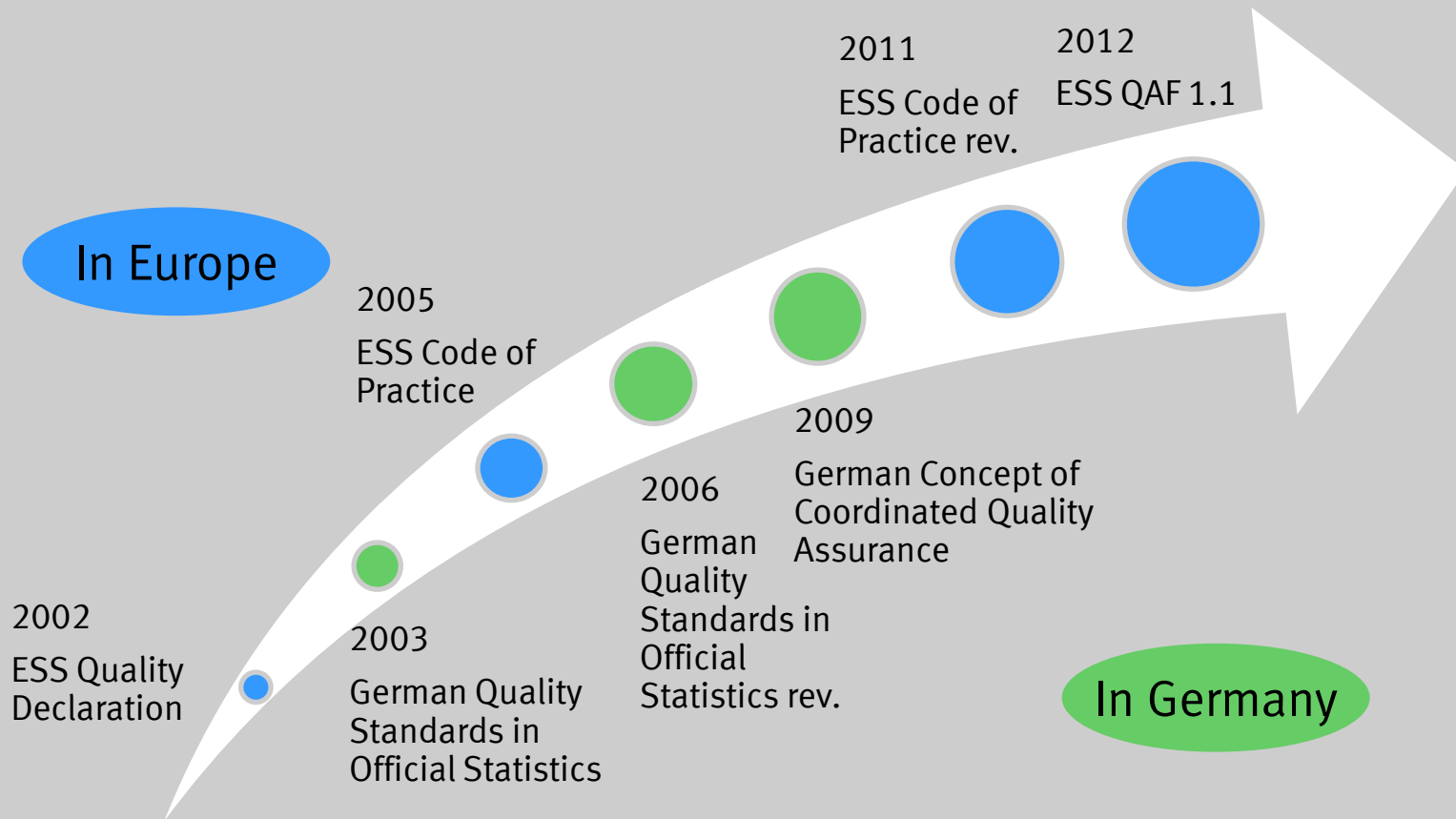2. Theoretical concept for quality input papers

Part B: Procedure and application

3. Structure of the QIP
4. Standardized procedures and strategy for IT support for QIP
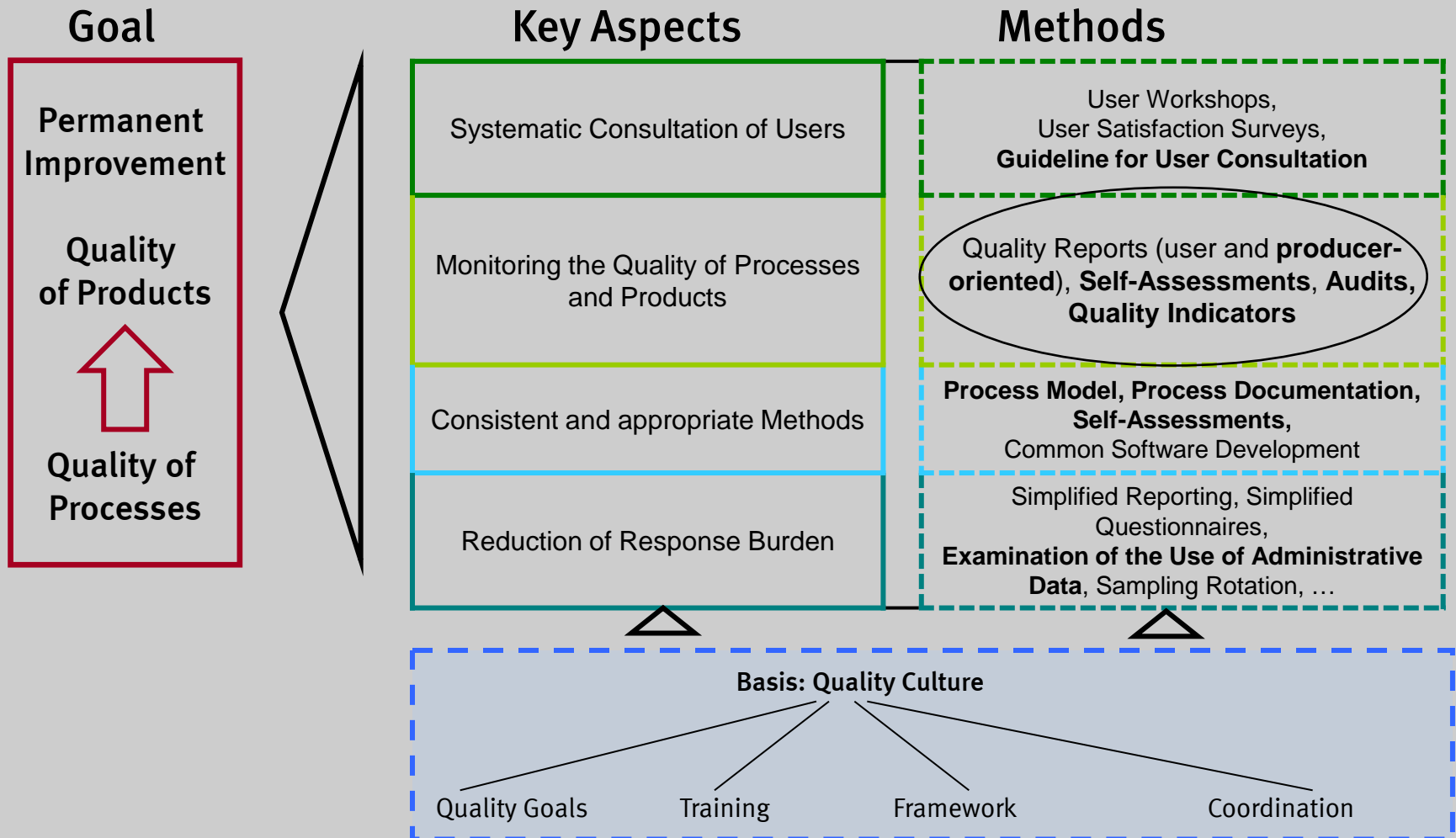5. Test and implementation of the QIP

The System of Official Statistics

Eurostat

DESTATIS
- Coordination
- Data Compilation and Dissemination of federal results

- Data Collection
- Data Processing

Land Statistical Offices

The Progress of Quality Guidelines

In Europe

In Germany

2002
ESS Quality Declaration

2003
German Quality Standards in Official Statistics

2005
ESS Code of Practice

2006
German Quality Standards in Official Statistics rev.

2009
German Concept of Coordinated Quality Assurance

2011
ESS Code of Practice rev.

2012
ESS QAF 1.1

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The Concept of Coordinated Quality Assurance

Goal

Permanent Improvement

Quality of Products

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Quality of Processes

Key Aspects

Systematic Consultation of Users

Monitoring the Quality of Processes and Products

Consistent and appropriate Methods

Reduction of Response Burden

Methods

User Workshops, User Satisfaction Surveys, **Guideline for User Consultation**

Quality Reports (user and **producer-oriented**), **Self-Assessments**, **Audits, Quality Indicators**

Process Model, Process Documentation, Self-Assessments, Common Software Development

Simplified Reporting, Simplified Questionnaires, **Examination of the Use of Administrative Data**, Sampling Rotation, …

Basis: Quality Culture

Quality Goals   Training   Framework   Coordination

Goals and Concept for Quality Input Papers

- **Goals**

  - Support of national quality reports
  - Identification of good practices
  - Contribute to fulfilment of quality standards

- **Conceptual Ideas**

  - Exchange in parallel to statistical data
  - Application for all statistical domains
  - Generic content

Key Aspects

Key aspects	Upstream processes	Downstream processes
Over-coverage, under-coverage	• Updating the survey frame • Measures to improve the quality of the survey frame	• Treatment of over- and under-coverage
Common units	• Similar to over- and under-corverage	• Similar to over- and under-corverage
Unit non-response	• Preparation of data collection • Way of data collection • Reminder mechanism, return control	• Treatment of late responses, corrections • Imputations
Item non-response, plausibility checks	• Data entry	• Imputations • Macro-plausibility checks
Imputations	• Non-response • Plausibility checks	• Analysis of preliminary results

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Quality Input Papers

one way of determination current quality indicators

Sabine Quaiser   - Quality Management

Quality Input Papers

Structure:

- ➢ Structure of the QIP

- ➢ Adaptation concept of QIP

- ➢ Standardised methods for the QIP

- ➢ Strategy for IT support

- ➢ Pilot project "QIP in financial statistics"

- ➢ Introduction phase

➢ Structure of the QIP

QIP consists of two parts:

1. Master data Sheet
    - contains basic information
    - only every 3 years to fill
    - low effort

2. Production data sheet
    - many quantitative information
    - with each survey cycle to create
    - Focus on machine-computable information such as (weighted) number of cases

Quality Input Papers

➢ Adaptation concept of QIP

- constructed generic and used for all statistics with microdata
- For use in the individual statistics of contents must be adapted to the circumstances of this statistic
- Pilot project "QIP in financial statistics"
- Development of an implementation concept
- Strategy for IT support
- introduction phase

Quality Input Papers

➢ Standardised methods for the QIP

- ■ Standardization of information that are necessary for determination of the quality indicators
- ■ Standardization of processes is a prerequisite for support of IT-tools
- ■ to specific information, there can be only specific support provided by advanced IT tools

➢ Strategy for IT support

  ▪ Standardized IT tools support creation of the QIP

    ▪ Input systems,

    ▪ statistical data editing systems,

    ▪ Interfaces to other systems

  ▪ IT tools to support

    ▪ the Transmission between federal and state

    ▪ Analyse of the Transmission

    ▪ Calculation and analysis of quotas for Germany

  ▪ Uniform adoption of IT tools to identify quality indicators in the statistics

➢ Pilot project "QIP in financial statistics"
  ▪ Test of the QIP in a pilot project for a municipal financial statistics
  ▪ Adaptation of the generic QIP to the peculiarities of statistics
  ▪ Test for four survey periods
  ▪ Result of the test
    ▪ basically for the determination of quality indicators suitable
    ▪ Effort is not feasible for manual filling
    ▪ Adaptation to the individual surveys means a very great effort
    ▪ Application can only be done in an automated fashion with IT support
    ▪ suitable tool for continuity of quality assurance

Quality Input Papers

➢ Introduction phase

- gradual introduction of QIP
- The objective is the determination of quality indicators for precision in the quality reports (national and Eurostat)
- The programming and implementation of appropriate IT tools for automated calculation of quality indicators is possible in close collaboration with the IT departments
- The scope and benefits of the QIP must be recognized and represented by statisticians of the departments

Thank you for your attention

Sabine Quaiser
Head of Quality Management
State Statistical Institute Berlin-Brandenburg
sabine.quaiser@statistik-bbb.de
http://www.statistik-berlin-brandenburg.de

Peter Schmidt
Head of Institute for Research and Development
Destatis
peter.schmidt@destatis.de