



A systematic approach to Quality: The development and implementation of a Quality Management Framework

Q2016 Madrid
Session 9 1/6/2016



Overview

- Origins of QMF in CSO
- Additional drivers
- Priorities
- Pilot example: Crime statistics
- Challenges
- Conclusion



Origins of QMF

- Change programme Launched in 2013 (CSO2020)
 - Focus on continuous improvement
 - Quality Management Framework as subproject
 - Design quality via good planning
 - Control for quality: standard key metrics, documentation and data management
 - Develop continuous improvement programme
 - Common link for standardisation: GSBPM



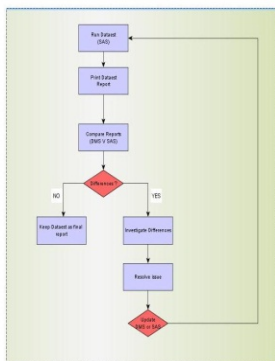
CSO 2020: QMF Overview

- Process mapping and output metrics project
- Documentation and metadata project
- Data management and storage project
- Staff time recording project
- Internal peer review system for statistical auditing project

All of these project produced a set of recommendations for the future

4.4.1 Process Map

The Process Map of Aggregation Survey (M4-Release)
Section: Agriculture Surveys
Version: 1.1
Date updated: 21/09/2015
Updated by: Barry O'Reilly



4.4.2 Process Metrics

GSBPM Metrics User Guide with CSO examples - e.g. :

Sign-off criteria:

Achieved target response rate >= 70%
Data collection closed down
DCU file available for RAP

4.4.3 Codebook

Codebook for disseminate-stage microdata [insert link](#)

Excel-based codebook for RMF datasets with CSO examples

GSBPM Survey Manual

Section: Business Expenditure on Research and Development

Division: Structural Business Statistics and Business Register

Statistician: Kevin Phelan

Senior Statistician: Keith McSweeney

Current staffing: RAP: 1 Stat, 1 HEO, 5 x EO, DCU: 1 x AP, 1 x HEO, 2 x EO, 10 x CO (shared with other surveys)

History of the survey:

The Business Expenditure on Research and Development (BERD) Survey is a survey of the research and development expenditure and human resources of enterprises with the primary objective of gathering detailed information on research and development activities in Ireland. The survey is also used to collect other related research and development topics.

Legislative basis

European Legislation: The BERD Survey is carried out under Commission Regulation (EC) No 995/2012 implementing Decision No 1608/2003/EC ([insert link](#))

Irish Legislation: The BERD 2013/2014 survey was conducted under the Statistics (Business Expenditure on Research and Development Survey) Order 2014 (S.I. No. 169 of 2014) made under the Statistics Act, 1993 ([insert link](#))

Contact details:

Section email address: sbs_rap@cs.ie

Location of relevant section databases on LN: [LN/ CSO Homepage/Divisional Databases/Business Statistics/Annual Surveys/STI/R&D](#)

Main outputs produced by BERD:

Databank Tables:

Size of Enterprise: [insert link](#)

Sector of Activity: [insert link](#)

Region: [insert link](#)

Quality Report:

Survey Data Management:

Example of GSBPM phase

4. Collect phase

4.1 Create frame and select sample

4.2 Set up collection

4.3 Run collection

4.4 Finalise collection

4.4.1 Process map reference: Map 5

4.4.2 Process Metrics reference:

4.4.3 Codebook:

(included here as example but properly belongs in GSBPM Stage 7 – Dissemination)

4.4.4 Metadata Handler Tool link:

4.4.5 Typical time of the year performed: Depending on response rates, but typically Jan t+1

4.4.6 Outcome of this process: Data collection is ceased – Data available for RAP analysis.

<http://www.cso.ie/en/surveysandmethodology/standardreportsonmethodsquality/>

Standard Report on Methods and Quality for BUSINESS EXPENDITURE ON RESEARCH AND DEVELOPMENT (BERD) SURVEY

Reporting period: 2013- 2014

Last edited: 3rd June 2015

CENTRAL STATISTICS OFFICE

Skehard Road, Cork

021 4535000

www.cso.ie

Data Management

Description	Location 1	Location 2	Owner	Category	Retention
4 Collect					
4 Create Frame and Select Sample	SAS/G4	(see job processing/production/berd)	Kevin Phelan	Category 4 - All Confidential statistical microdata (3 years)	
4 Set up collection	DNIS				
4 Run collection	DNIS				
4 Finalise collection	DNIS				
7 Disseminate					
7 Update output systems	SAS/G4	(see job processing/berd/output/berd-release)	Kevin Phelan	Category C - Dissemination data	Forever
7 Produce dissemination products	SAS/G4				

4.4.4 Eurostat Metadata Handler

ESSMH: ESS Metadata Handler:
[insert link to Eurostat website](#)

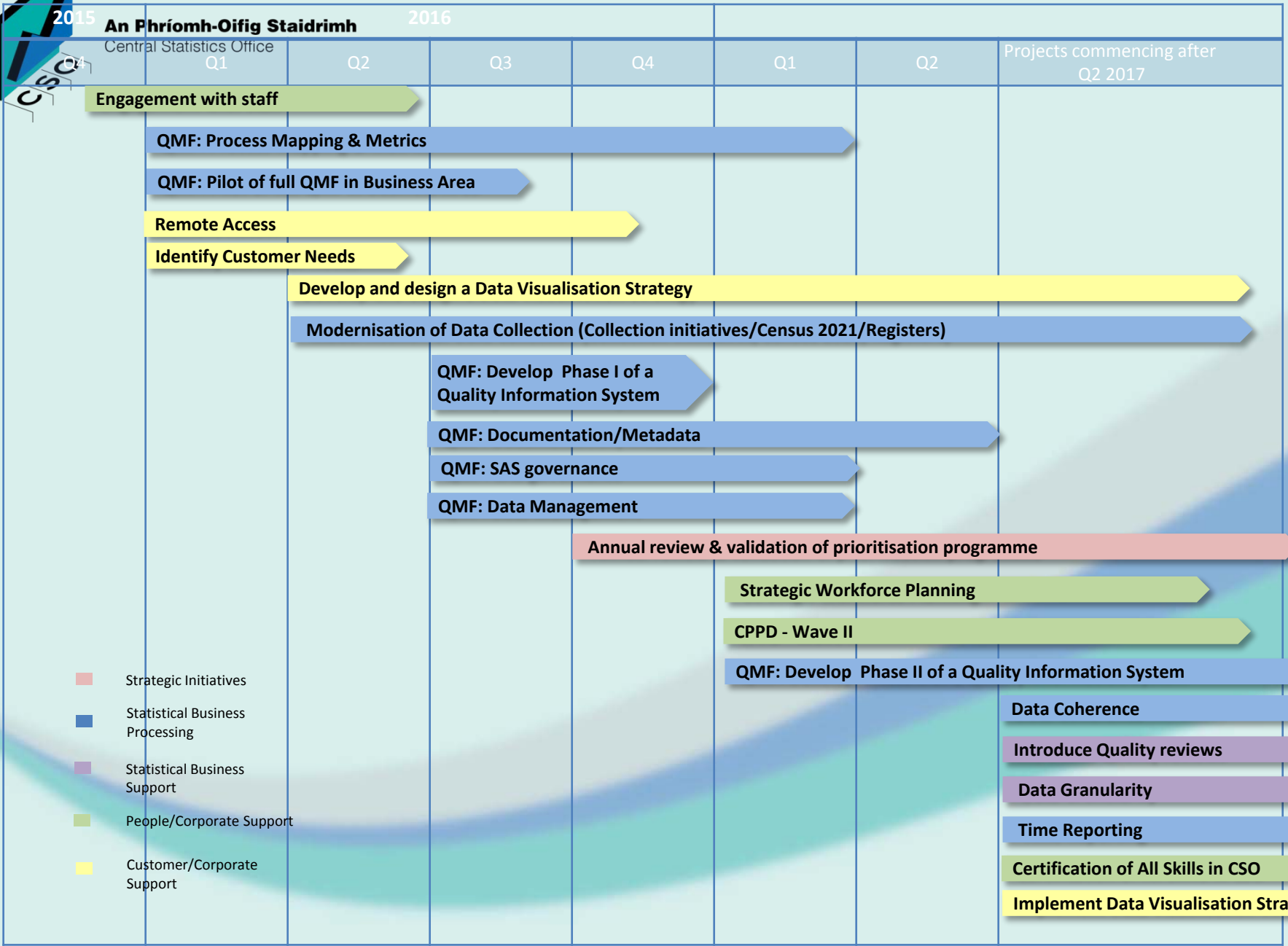
CSO/Section metadata store: [insert link to network storage location](#)



Additional Drivers

- 2015 Peer Review report recommendations
- Regulation (EU) 2015/759 on European statistics
- National Statistics Board Statement of Strategy

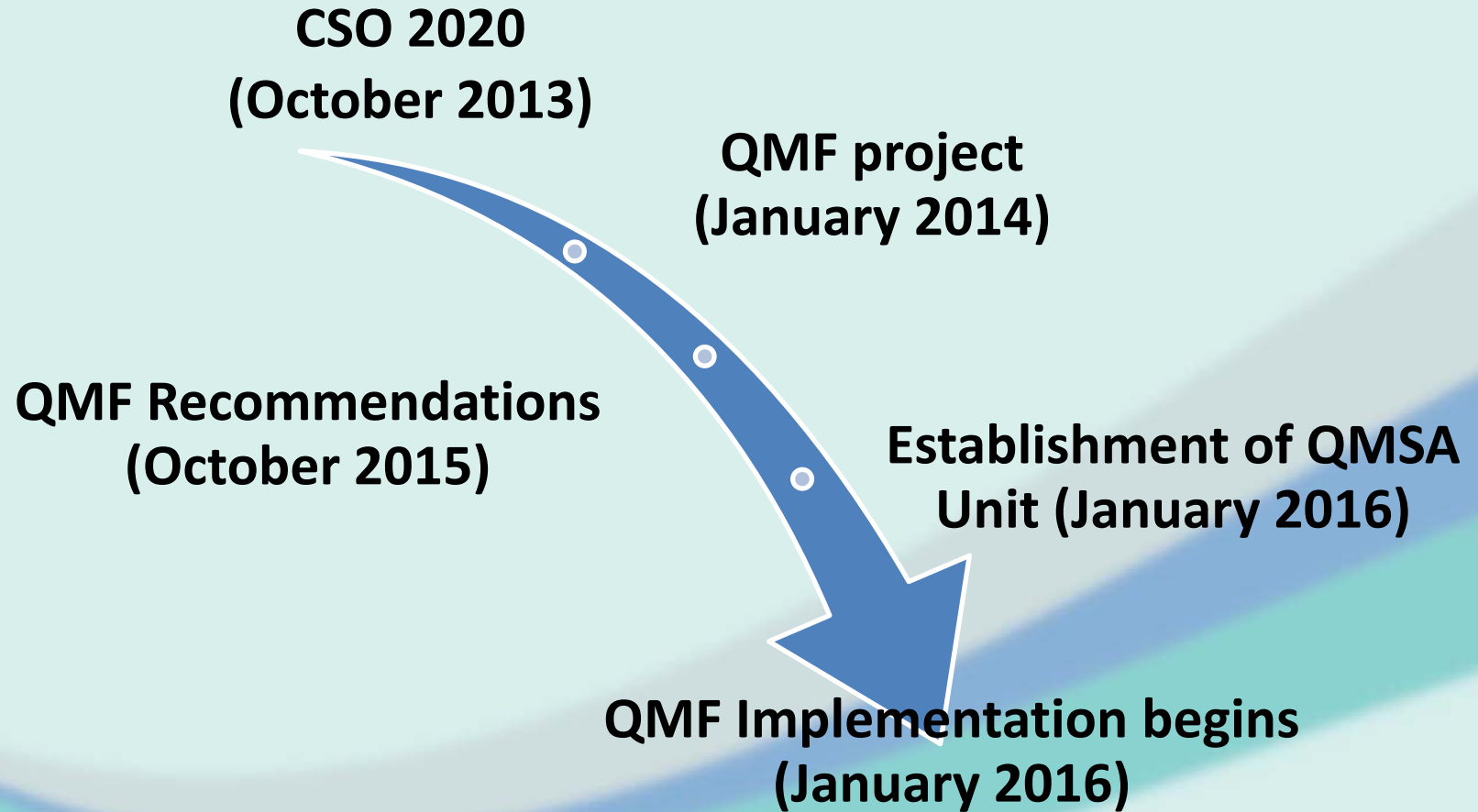
Prioritised activities, by commencement date from Q4 2015



- Strategic Initiatives
- Statistical Business Processing
- Statistical Business Support
- People/Corporate Support
- Customer/Corporate Support



Lifecycle recap





Initial role of QMSA

QMF Projects – from planning to live following Prioritisation exercise

- QMF Pilot in Crime Statistics:
 - Process Mapping, Metrics,
 - Survey Documentation,
 - Data Management
 - Metadata



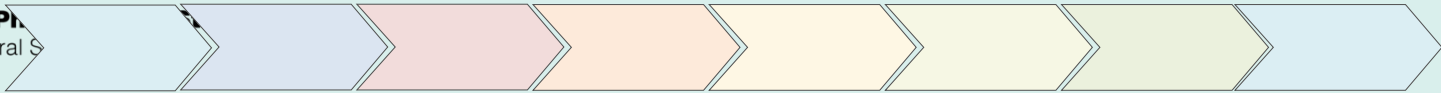
QMF Pilot in Crime Statistics

Why Pilot and why Crime statistics?

- Proof of concept of how to link each project
- No experience of working with personal data
- How to apply GSBPM standard to process maps, documentation etc.
- How to plan for next QMF projects - Data Management, Metadata Management and Phase 1 of Quality Information System



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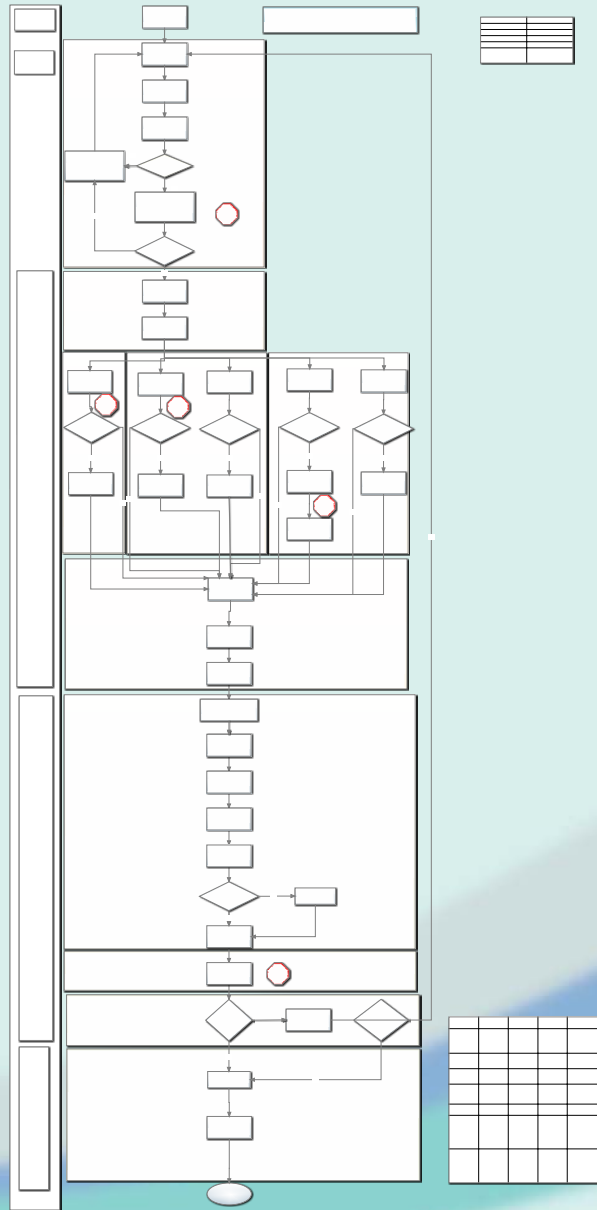


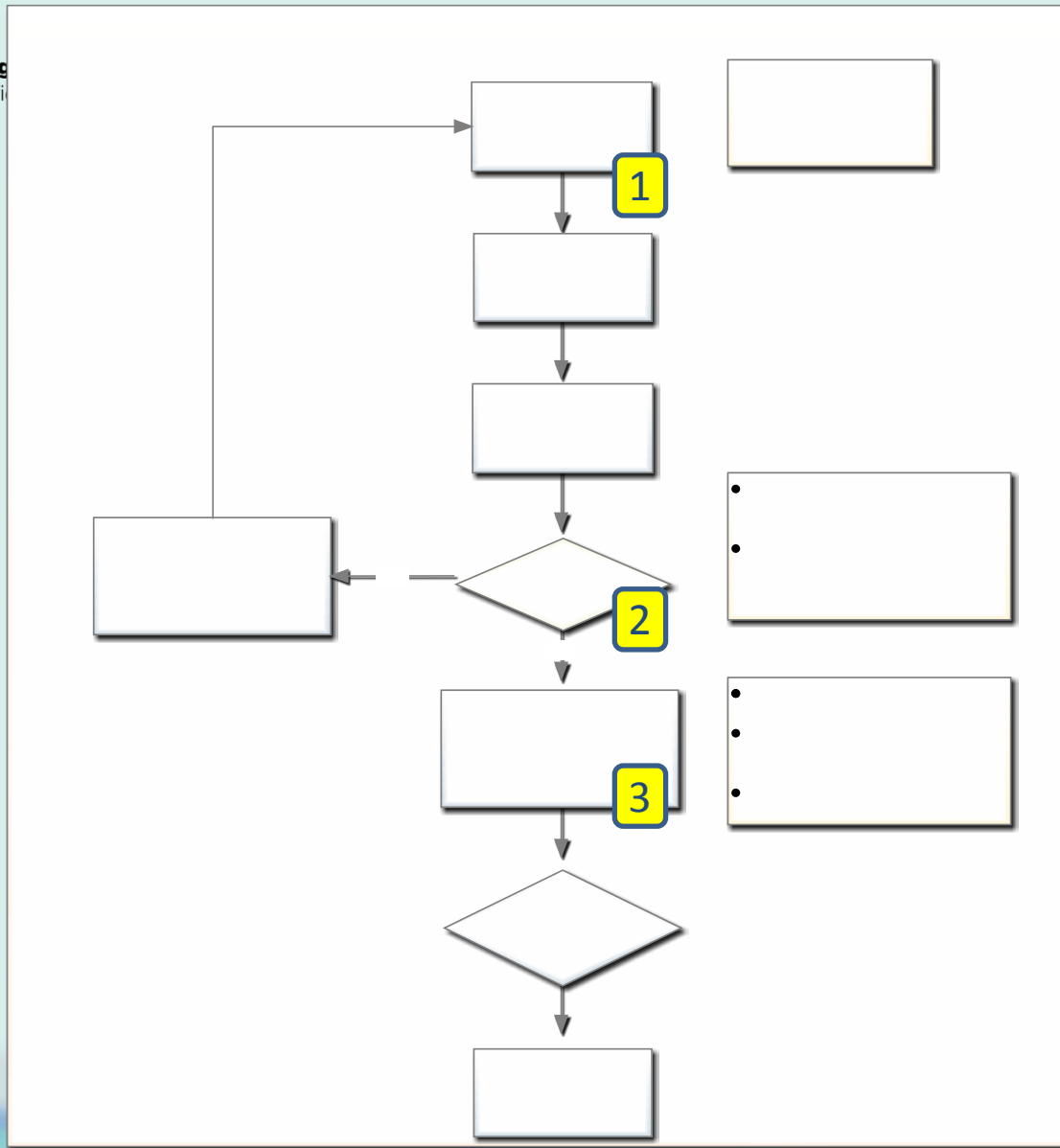
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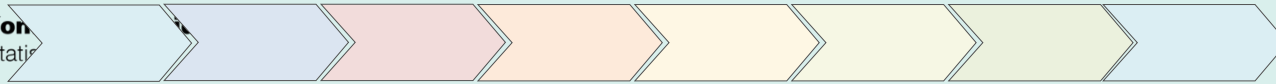
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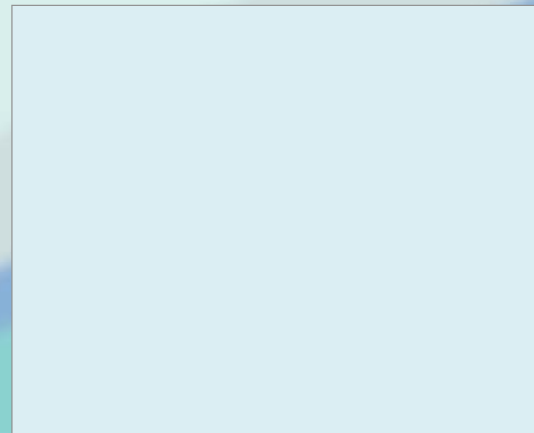


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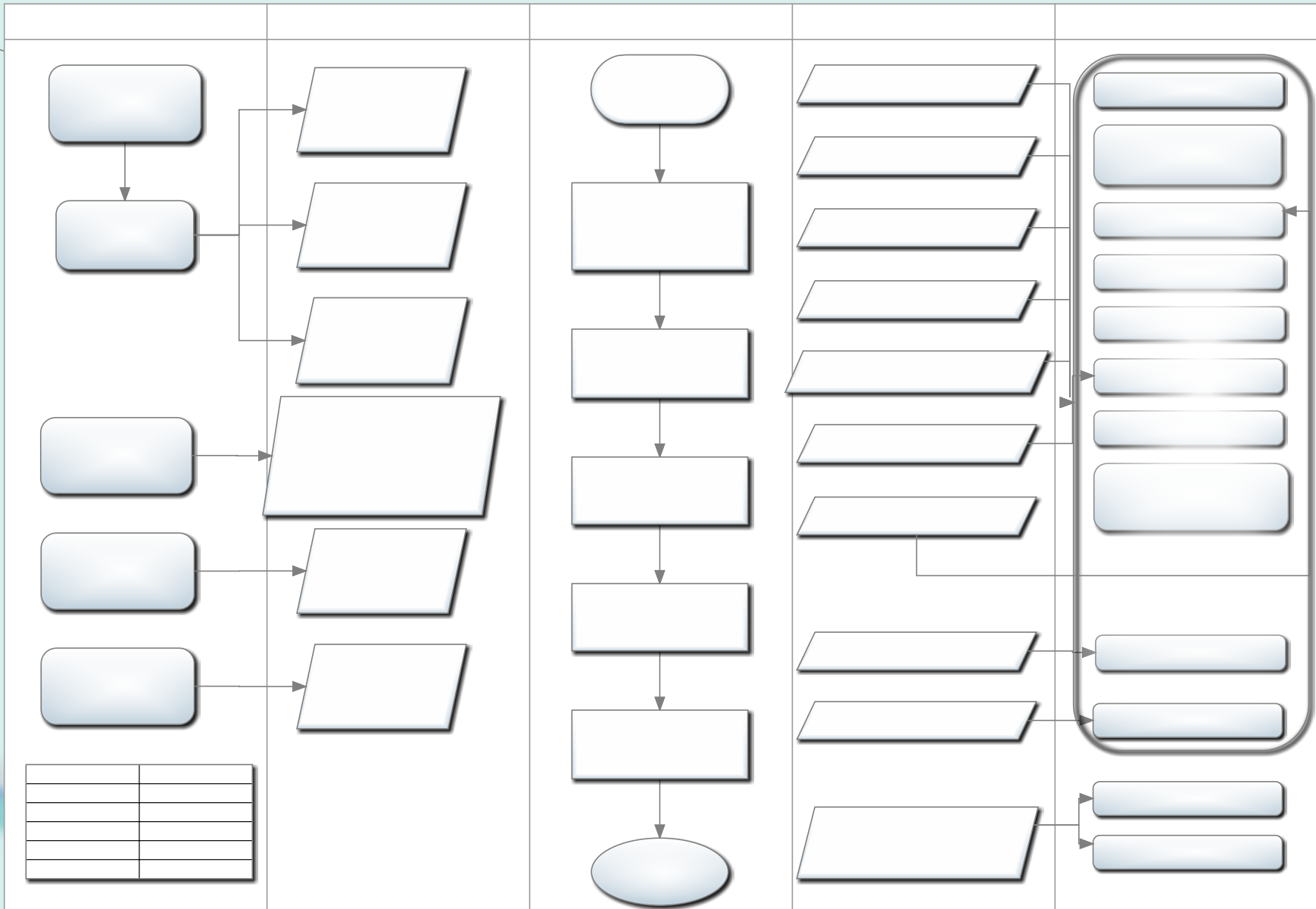
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Next Steps (1)

- Development of a Quality Information System as a central repository for:
 - Survey documentation
 - Metadata
 - Process maps
 - Metrics
 - Data holdings
 - Codebook
- Visible and accessible to users, survey owners and staff



Next Steps (2)

- Quality guidelines & training
- System of QA reviews
- Survey Risk Management
- Survey planning group
- System of process reviews/Lean Six Sigma



Challenges

- Gaining trust and cooperation from management and staff
- Change management: practice, behaviours and culture
- System that supports change and innovation
- Balancing burden while introducing appropriate governance
- Rolling out to the wider Irish Statistical System



QUESTIONS?

Susana Portillo

Quality Management,
Support and Assurance
Central Statistics Office
Cork

+353 21 4535319

Susana.portillo@cso.ie

Ken Moore

Quality Management,
Support and Assurance
Central Statistics Office
Cork

+353 21 4535227

Ken.moore@cso.ie