



EUROPEAN CONFERENCE ON QUALITY IN OFFICIAL STATISTICS 2024 ESTORIL - PORTUGAL





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Consistent Quality Reporting while reducing reporting burden: a case study for SIMS implementation

Susana Portillo Cruz

Central Statistics Office - Ireland



eurostat 

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financed by the European Union





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Consistent Quality Reporting while reducing reporting burden: a case study for SIMS implementation

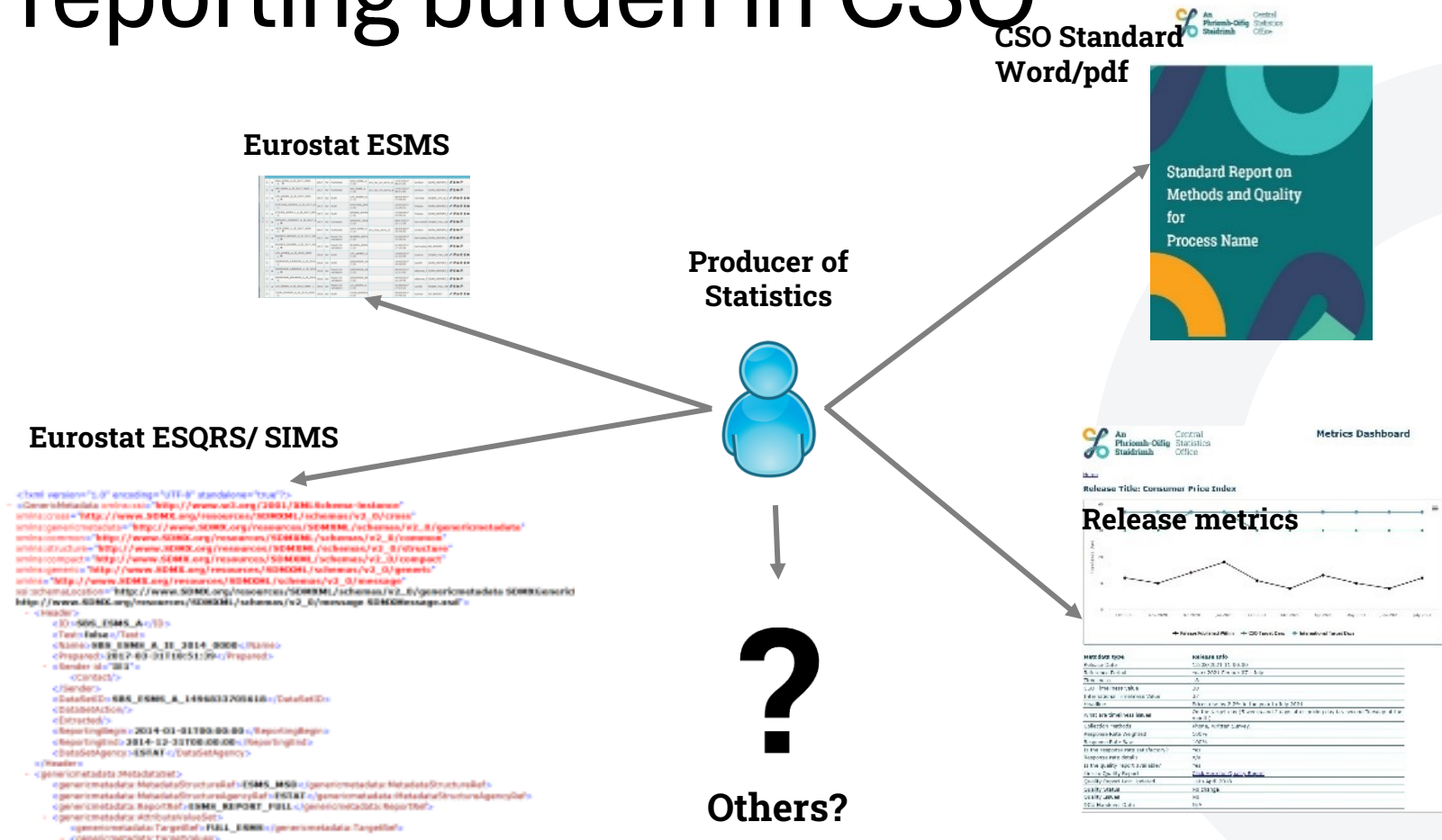
Susana Portillo Cruz

Central Statistics Office - Ireland





The reporting burden in CSO



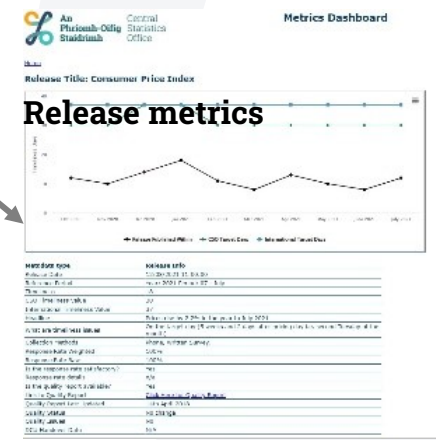
Eurostat ESMS

| Code | Country | Year | Value | Unit | Frequency | Source | Method | Quality |
|------|---------|------|-------|------|-----------|--------|--------|---------|
| ... | ... | ... | ... | ... | ... | ... | ... | ... |

```

<?xml version="1.0" encoding="UTF-8" standalone="true"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" xml:base="http://www.esri.com" >
  <head>
    <title>ESQRS</title>
    <meta content="ESQRS" name="description" />
    <meta content="ESQRS" name="keywords" />
    <meta content="ESQRS" name="robots" />
    <meta content="ESQRS" name="viewport" />
    <meta content="ESQRS" name="generator" />
    <meta content="ESQRS" name="author" />
    <meta content="ESQRS" name="copyright" />
    <meta content="ESQRS" name="date" />
    <meta content="ESQRS" name="language" />
    <meta content="ESQRS" name="publisher" />
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    <meta content="ESQRS" name="visibility" />
    <meta content="ESQRS" name="access" />
    <meta content="ESQRS" name="usage" />
    <meta content="ESQRS" name="license" />
    <meta content="ESQRS" name="terms" />
    <meta content="ESQRS" name="conditions" />
    <meta content="ESQRS" name="restrictions" />
    <meta content="ESQRS" name="permissions" />
    <meta content="ESQRS" name="prohibitions" />
    <meta content="ESQRS" name="exceptions" />
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    <meta content="ESQRS" name="privacy" />
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    <meta content="ESQRS" name="transparency" />
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    <meta content="ESQRS" name="responsibility" />
    <meta content="ESQRS" name="ethics" />
    <meta content="ESQRS" name="values" />
    <meta content="ESQRS" name="principles" />
    <meta content="ESQRS" name="standards" />
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    <meta content="ESQRS" name="models" />
    <meta content="ESQRS" name="tools" />
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    <meta content="ESQRS" name="platforms" />
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    <meta content="ESQRS" name="ecosystems" />
    <meta content="ESQRS" name="ecosystems" />
    <meta content="ESQRS" name="ecosystems" />
  </head>
  <body>
    <div data-bbox="145 650 395 925" data-label="Code-Block">
      <pre>
<?xml version="1.0" encoding="UTF-8" standalone="true"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" xml:base="http://www.esri.com" >
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    <meta content="ESQRS" name="generator" />
    <meta content="ESQRS" name="author" />
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    <meta content="ESQRS" name="ecosystems" />
    <meta content="ESQRS" name="ecosystems" />
    <meta content="ESQRS" name="ecosystems" />
  </head>
  <body>
    <div data-bbox="145 650 395 925" data-label="Code-Block">
      <pre>

```





Ideal solution?

Producer of
Statistics



Reporting concepts
collection interface



Eurostat ESMS

| Code | Year | Value | Unit | Frequency | Country | Process |
|------|------|-------|------|-----------|---------|---------|
| ... | ... | ... | ... | ... | ... | ... |

Eurostat ESQRS/ SIMS

```

<?xml version="1.0" encoding="UTF-8" standalone="true"?>
<GenericMetadata xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:cdm="http://www.SDMX.org/infrastructure/schemas/v2_0/CDM"
xmlns:genericmetadata="http://www.SDMX.org/infrastructure/schemas/v2_0/genericmetadata"
xmlns:common="http://www.SDMX.org/infrastructure/schemas/v2_0/common"
xmlns:sdmx="http://www.SDMX.org/infrastructure/schemas/v2_0/sdmx"
xmlns:concept="http://www.SDMX.org/infrastructure/schemas/v2_0/concept"
xmlns="http://www.SDMX.org/infrastructure/schemas/v2_0/message"
sdx:schemaLocation="http://www.SDMX.org/infrastructure/schemas/v2_0/genericmetadata SDMXGenericM
http://www.SDMX.org/infrastructure/schemas/v2_0/message SDMXMessage.xsd" />
<header>
  <ID>ESMS_A_13</ID>
  <Type>ESMS</Type>
  <Name>ESMS_A_13_2014_0000</Name>
  <Prepared>2014-03-01T10:51:09</Prepared>
  <Sender>ESMS</Sender>
  <Contacts>
  </Contacts>
  <SenderID>ESMS_A_144633209418</SenderID>
  <DataSetID/>
  <DataSetID/>
  <ReportingBegin>2014-01-01T00:00:00</ReportingBegin>
  <ReportingEnd>2014-12-31T00:00:00</ReportingEnd>
  <DataSetAgency>ESMS</DataSetAgency>
</header>
<genericmetadata:MetadataSet>
  <genericmetadata:MetadataSetRef>ESMS_M00</genericmetadata:MetadataSetRef>
  <genericmetadata:MetadataSetRef>ESMS_M01</genericmetadata:MetadataSetRef>
  <genericmetadata:ReportOf>ESMS_REPORT_FULL</genericmetadata:ReportOf>
  <genericmetadata:StructureCode/>
  <genericmetadata:TargetOf>FULL_ESMS</genericmetadata:TargetOf>
  </genericmetadata:MetadataSet>

```





Step 1. Harmonisation

- Create Base set of reporting concepts
 - SIMS vs National report alignment
 - 90% overlap
 - Added any missing SIMS concepts
 - Extended SIMS with extra national concepts –
 - Extra national were part of Eurostat's explanations on what to add under a concept





Example of SIMS extension

| CONCEPT_NAME | SIMS ID | ESQRSID | ESMSID | CSO SIMS ID | usage (SIMS/ Domain specific) | parent | NCEPT |
|-----------------------------|----------|---------|--------|-------------|-------------------------------|--------------------|-------|
| DATA_REV_AVGSIZE | S.17.2.1 | 6.6.1 | - | 19.2.1 | SIMS | REV_PRACTICE | |
| STAT_PROCESS | S.18 | 3 | 18 | 20 | SIMS | N/A | |
| SOURCE_TYPE | S.18.1 | 3.1 | 18.1 | 20.1 | SIMS | STAT_PROCESS | |
| POP_FRAME | | | | | CSO SIMS | SOURCE_TYPE | |
| SAMP_DESIGN | | | | | CSO SIMS | SOURCE_TYPE | |
| SURVEY_SIZE | | | | | CSO SIMS | SOURCE_TYPE | |
| SURVEY_TECHNIQUE | | | | | CSO SIMS | SOURCE_TYPE | |
| FREQ_COLL | S.18.2 | 3.2 | 18.2 | 20.2 | SIMS | STAT_PROCESS | |
| COLL_METHOD | S.18.3 | 3.3 | 18.3 | 20.3 | SIMS | STAT_PROCESS | |
| SURVEY_TYPE | | | | | CSO SIMS | COLL_METHOD | |
| QUESTIONNAIRE | | | | | CSO SIMS | COLL_METHOD | |
| SURVEY_PARTICIPATION | | | | | CSO SIMS | COLL_METHOD | |
| DATA_CAPTURE | | | | | CSO SIMS | COLL_METHOD | |
| DATA_VALIDATION | S.18.4 | 3.4 | 18.4 | 20.4 | SIMS | STAT_PROCESS | |
| DATA_COMP | S.18.5 | 3.5 | 18.5 | 20.5 | SIMS | STAT_PROCESS | |
| IMPUTATION | | | | | CSO SIMS | DATA_COMP | |
| IMPUTATION_RATE | S.18.5.1 | 6.3.4.1 | - | 20.5.1 | SIMS | DATA_COMP | |
| GROSS_WEIGHT | | | | | CSO SIMS | DATA_COMP | |
| ADJUSTMENT | S.18.6 | 3.6 | 18.6 | 20.6 | SIMS | STAT_PROCESS | |
| SEASONAL_ADJ | S.18.6.1 | 6.4 | - | 20.6.1 | SIMS | ADJUSTMENT | |
| COMMENT_DSET | S.19 | 12 | 19 | 21 | SIMS | N/A | |





Step 2 -Migration

- Dedicated team:
 - Compile information from different sources
 - ESMS/ESQRS/SIMS
 - CSO Standard
 - Background notes
 - Other sources
 - Complete a CSO SIMS word template with the content
 - Liaise with subject matter in finalising the migration to new structure





Step 3 – The software solution

- Web based
- Built on existing CSO tools: DPS/Colectica
- Audience specific text: different text for Eurostat/national
- Mandatory concepts
- Rollover report between iterations
- Compare with previous
- Extract pdf and SDMX files for dissemination
- Approval workflow functionality





Step 3 – The software solution

The screenshot shows a web application interface for metadata management. At the top, there are navigation tabs: ADMINISTRATION, QUALITY STATEMENTS, and EXPORT. Below these, a filter bar contains buttons for 'All', 'Specify needs', 'Collection & Processing', 'Analysis', and 'Dissemination', with a red circle '1' next to 'Dissemination'. Below the filter bar, there are two progress indicators: '0 / 94 required items' with a red circle '2' and '0 / 118 total items'. On the left side, there is a sidebar menu with various categories, each with a blue arrow icon. A red circle '3' is next to the 'ISSN' category. The 'Metadata update' category is expanded, showing sub-items: 'Metadata last certified', 'Metadata last posted', and 'Metadata last update', each with a red arrow icon. The 'Metadata last update' item is highlighted. On the right side, the main content area is titled 'Metadata last update' and contains a description: 'Date of last update of the content of the metadata. ESS Guidelines: The date when any metadata were last updated should be provided (manually, or automatically by the metadata system)'. Below the description, there are two buttons: 'EDIT' and 'PREVIEW', with a red circle '4' next to 'PREVIEW'. At the bottom of the main content area, there is a blue bar with a 'SAVE' button.





Difficulties

- Complex structures: what report covers which products
- Change management: less flexibility for producers, more quality control
- Knowledge: what content goes under which concept
- Resources: too busy generating outputs to focus on quality reports
- Technical: software built upon complex model and needs to integrate with existing system.





Benefits

- Governance of quality reports: regularly updated
- Consistent reporting on concepts: same concept = same information
- Quality controls in place for dissemination
- Consistent look and feel – trust the source!





Future phases

- Integrate further with existing systems
- Expand the number of reports created
- QPI based Quality dashboard for management of statistical processes





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Thank you.

Questions?



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