



Unleash the power of data

Prepared by:
Titus PURDEA
IRM Eurostat

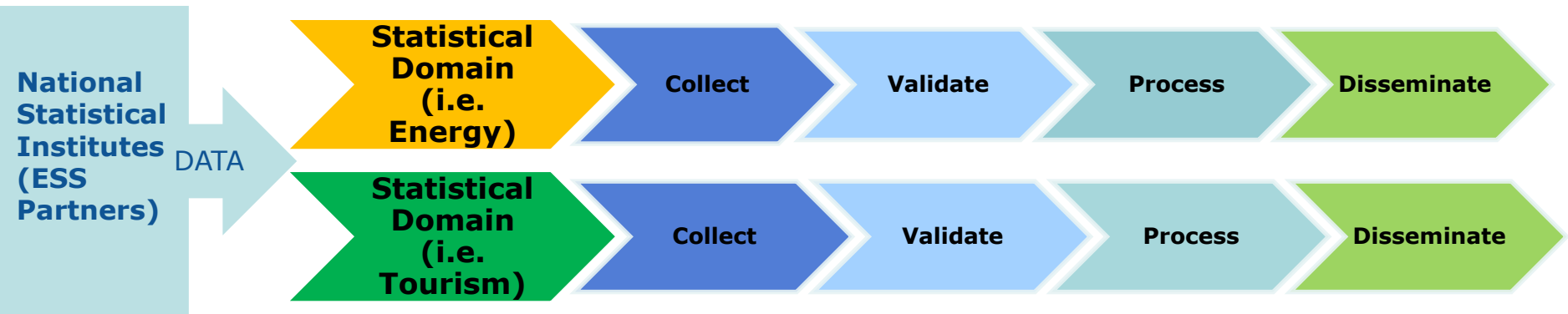
Date: 13 – 06 - 2017

Content

- *CURRENT SITUATION*
- *DRIVERS FOR IT ARCHITECTURE CHANGES*
- *ENVISAGED IT ARCHITECTURE*
- *ONGOING IMPLEMENTATION INITIATIVES*

“Eurostat is the statistical office of the European Union situated in Luxembourg. Its mission is to provide high quality statistics for Europe”

Current situation in Eurostat



- **IT, Methodology, algorithms are specific per statistical domain**
- **Cumbersome aggregation and cross-domain statistics**
- **Long lead time to enable new data sources**
- **Minimal data-exchange programs**

WHY Changing?

European Commission set out a corporate strategy focusing on maximising the use of data for evidence-based policy-making



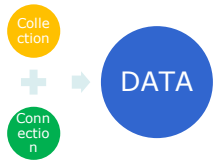
Broad range of data available outside existing official data-sources, with a lot of potential value

Increasing demand for ad-hoc statistics



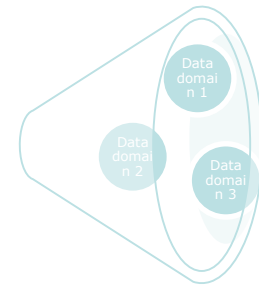
Increasing demand for releasing data towards partners and research community

WHAT shall we do?



Enable Data Connection next to Data Collection

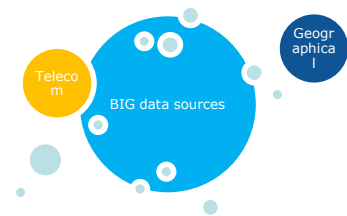
Enable a Data Warehousing concept



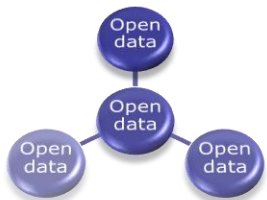
Enable a Data analytics platform



Establish links with Big Data farms



Establish a partnership network for data links



Potential IT Architecture



European Commission

Eurostat domain

Public domain

External Researcher

ESS members

External users

Data scientist

Statistician

Domain manager

Data Scientist

Decision maker



Data analytics workbench

Reporting/visualisation

ESS statistical services

APIs

Self-service

Dashboards

Algorithms

Process

Process metadata

Descriptive metadata

Metadata Management

Structural metadata

Data Virtualisation

Cache

Logical Data Warehouse

Data Mart

Data Mart

Production DWH

Non-production data

Files

Copy of production data

Data Mart

External

Disclosure control

Dissemination DWH

Logging and data governance

NSI Data

Ad-hoc data

Partner data

NSI data

Big data farms

Data Staging

Data Brokering

ETL & Jobs Scheduling

Data processing

Data loading

Partners domain

= New building block to be defined

In-Flight Eurostat activities

- *Data4Policy:*
 - Promote cooperation with respect to use and exchange of data for policy making
 - Enable the skill, tools and infrastructure to support a data analytics capability
- *Experimental statistics*
 - Enable new indicators based on aggregated data
- *Big Data experiments*
 - Explore the options to exploit big data sources for smart statistics
- *Enable Linked Open Data partnership*
- *Implement a Data Virtualisation technology as foundation for enabling analytics*
- *Enable Data as a Service*



Thank You