

CSPA

Introduction*

* an ESS point of view

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Eurostat

Objectives of the presentation

- Review achievements of CSPA
- Current challenges and opportunities
- Reflect and open discussion on future challenge and opportunities

Background

- Eurostat engaged in promoting the development of CSPA since the beginning as an extension of the seminal work of ESSnets CORA / CORE
- CSPA was deeply rooted in the ESS vision 2020, an ambitious programme aiming at the modernisation of the production and dissemination of EU statistics involving actively Eurostat and 28 EU NSIs
- The SERV project and the two supporting ESSnets (Sharing Common Functionalities and Implementing Shared Statistical Services) aimed to develop shared services for the ESS
- The ESS EA Reference Framework and the ESS SPRA built on CSPA (specialisation in the context of the ESS Vision 2020)

What is CSPA?

- CSPA provides a **template architecture** for official statistics, describing:
 - **What** the official statistical industry wants **to achieve**
 - **How** the industry can achieve this, i.e. principles that guide how statistics are produced
 - **What** the industry will have **to do**, adhering to the CSPA standard

Business Architecture

Quality Management / Metadata Management									
1. Specify Needs	2. Design	3. Build	4. Collect	5. Process	6. Analyse	7. Disseminate	8. Archive	9. Evaluate	
1.1 Determine needs for data	2.1 Design outputs	3.1 Build data collection system	4.1 Select sample	5.1 Integrate data	6.1 Prepare data outputs	7.1 Prepare data outputs	8.1 Define archive rules	9.1 Gather evaluation inputs	
1.2 Determine needs for metadata	2.2 Design metadata outputs	3.2 Build metadata collection system	4.2 Select sample	5.2 Integrate metadata	6.2 Prepare metadata outputs	7.2 Prepare metadata outputs	8.2 Define archive rules	9.2 Gather evaluation inputs	
1.3 Consult & coordinate needs	2.3 Design data collection methodology	3.3 Build or enhance data collection system	4.3 Select sample	5.3 Integrate data	6.3 Prepare data outputs	7.3 Prepare data outputs	8.3 Define archive rules	9.3 Gather evaluation inputs	
1.4 Establish initial objectives	2.4 Design system & metadata methodology	3.4 Test production system	4.4 Establish collection	5.4 Integrate data	6.4 Prepare data outputs	7.4 Prepare data outputs	8.4 Define archive rules	9.4 Gather evaluation inputs	
1.5 Check data requirements	2.5 Design metadata processing methodology	3.5 Test statistical system	4.5 Establish collection	5.5 Integrate data	6.5 Prepare data outputs	7.5 Prepare data outputs	8.5 Define archive rules	9.5 Gather evaluation inputs	
1.6 Prepare business case	2.6 Prepare production system & metadata methodology	3.6 Prepare production system	4.6 Establish collection	5.6 Integrate data	6.6 Prepare data outputs	7.6 Prepare data outputs	8.6 Define archive rules	9.6 Gather evaluation inputs	

Information Architecture



Application Architecture

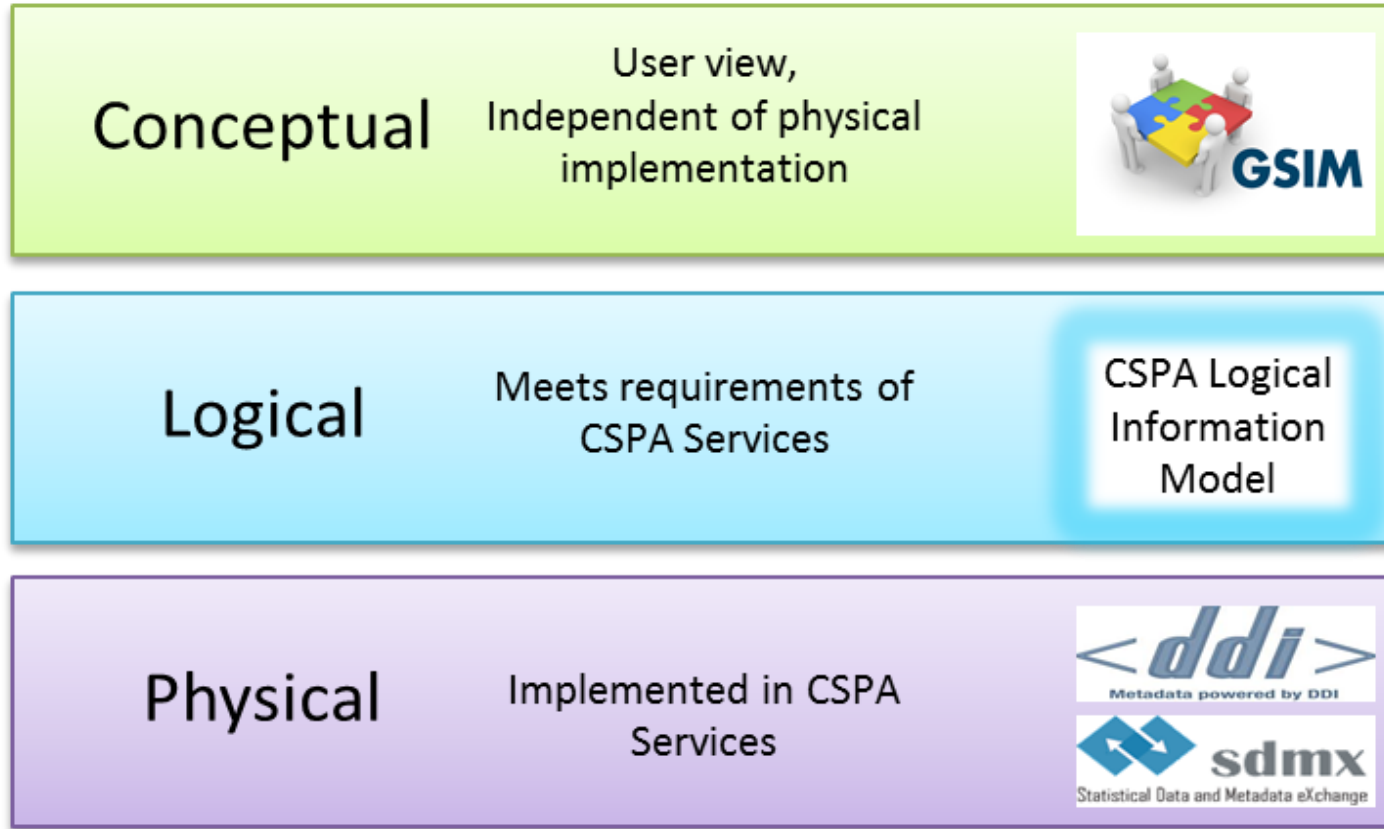


Technology Architecture



Curse toward implementation

Level of
Detail



Human Oriented

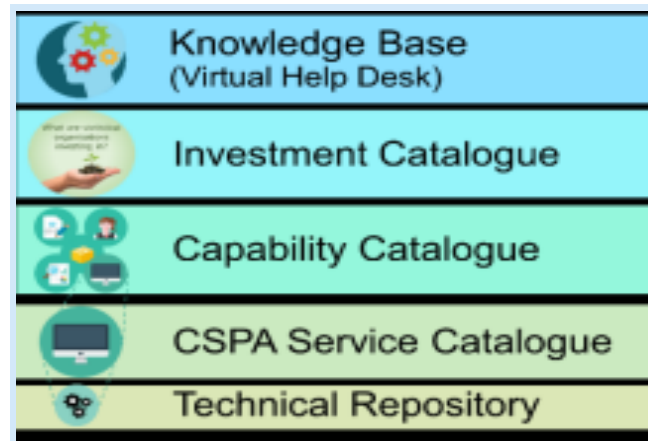


Computer Oriented

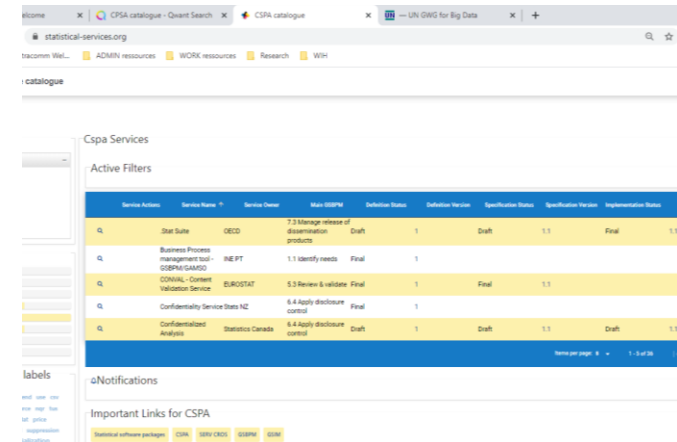
CSPA Assets



collaboration and sharing
Global, open and inclusive



CSPA catalogues
Communication
Common semantic



<https://www.statistical-services.org/>

My Intracomm Welcome | CPSA catalogue - Qwant Search | CPSA catalogue | UN G

statistical-services.org

Apps | My Intracomm Wel... | ADMIN ressources | WORK ressources | Research | WIH

CSPA Service catalogue

Filter By

catalogue

- Owner
- CSPA Compatability
- Status
- Type of Document
- Licence Type
- GSBPM Phases
- GSBPM Sub-processes

Progress Graph

Specify Needs

Design

Build

Collect

Process

Analyse

Disseminate

Evaluate

Search by labels

metadata data trend use csv
converter sdmx source nqr tus
dissemination dat price
Classification record suppression
SDMX confidentialization

Cspa Services

Active Filters

Service Actions	Service Name	Service Owner	Main GSBPM	Definition Status	
Q	.Stat Suite	OECD	7.3 Manage release of dissemination products	Draft	1
Q	Business Process management tool - GSBPM/GAMSO	INE PT	1.1 Identify needs	Final	1
Q	CONVAL - Content Validation Service	EUROSTAT	5.3 Review & validate	Final	1
Q	Confidentiality Service Stats NZ		6.4 Apply disclosure control	Final	1
Q	Confidentialized Analysis	Statistics Canada	6.4 Apply disclosure control	Draft	1

Notifications

Important Links for CSPA

Statistical software packages | CPSA | SERV CROS | GSBPM | GSIM

CSPA Service Catalogue

- Contains 35 services in different states of completion
- Landing page => opportunity for collaboration
- Recent update
 - RobotTool / NL / automated web scraping tool
 - Confidentiality Service / NZ / confidentialising microdata analysis
 - PXWeb / SE / Dissemination
 - BPM tool – GSBPM/GAMSO / IL / (to be verified)
 - Reclin / IT / Record linkage
 - Pogues / FR / Data Collection questionnaire designer
 - java-vtl / NO / VTL 1.1 engine



Services delivered by SERV

Design	Build	Process	Analyse	Disseminate
2.1 Design outputs	3.1 Web questionnaire visualisation	SDMX transformation	Record Linking	Geospatial visualisation
Questionnaire generator	3.2 Build or enhance process components	SDMX registry	Imputations	SDMX RI Reusable Dissemination
2.3 Design collection	3.3 Build or enhance dissemination components	STRUVAL CONVAL	Outlier detection	PX Web (OSS)
2.4 Design frame & sample	3.4 Configure workflows	Error Correction	Disclosure control	Metadata Dissemination
2.5 Design processing & analysis	3.5 Test production system	Seasonal Adjustment WS	Microdata access	7.5 Manage user support

Delivered in Phase 2
Priority for Phase 3
Selected by ESSnet I3S

ARC software (ADMIN data)

CSPA strengths and weaknesses

Drivers

- Modernisation
- Efficiency / reuse (plug and play)
- Collaboration

Strengths

- Comprehensive
- Strong coherence (GSBPM, GSIM, CSDA)
- Consensus based
- Light governance

Weaknesses

- Few business realization
- Time to Market $><$ pace of change
- Lead by IT/tech roles
- Sourcing

CSPA opportunities

Drivers

- Modernisation
- Efficiency / reuse (plug and play)
- Collaboration

Opportunities

- Infrastructure as a code – infrastructure (cloud) services
- Container Technology
- Cloud Native Computing Foundation – Mesh architecture (API mediation)
- Core business logic / adaptors paradigm

ESS continued effort

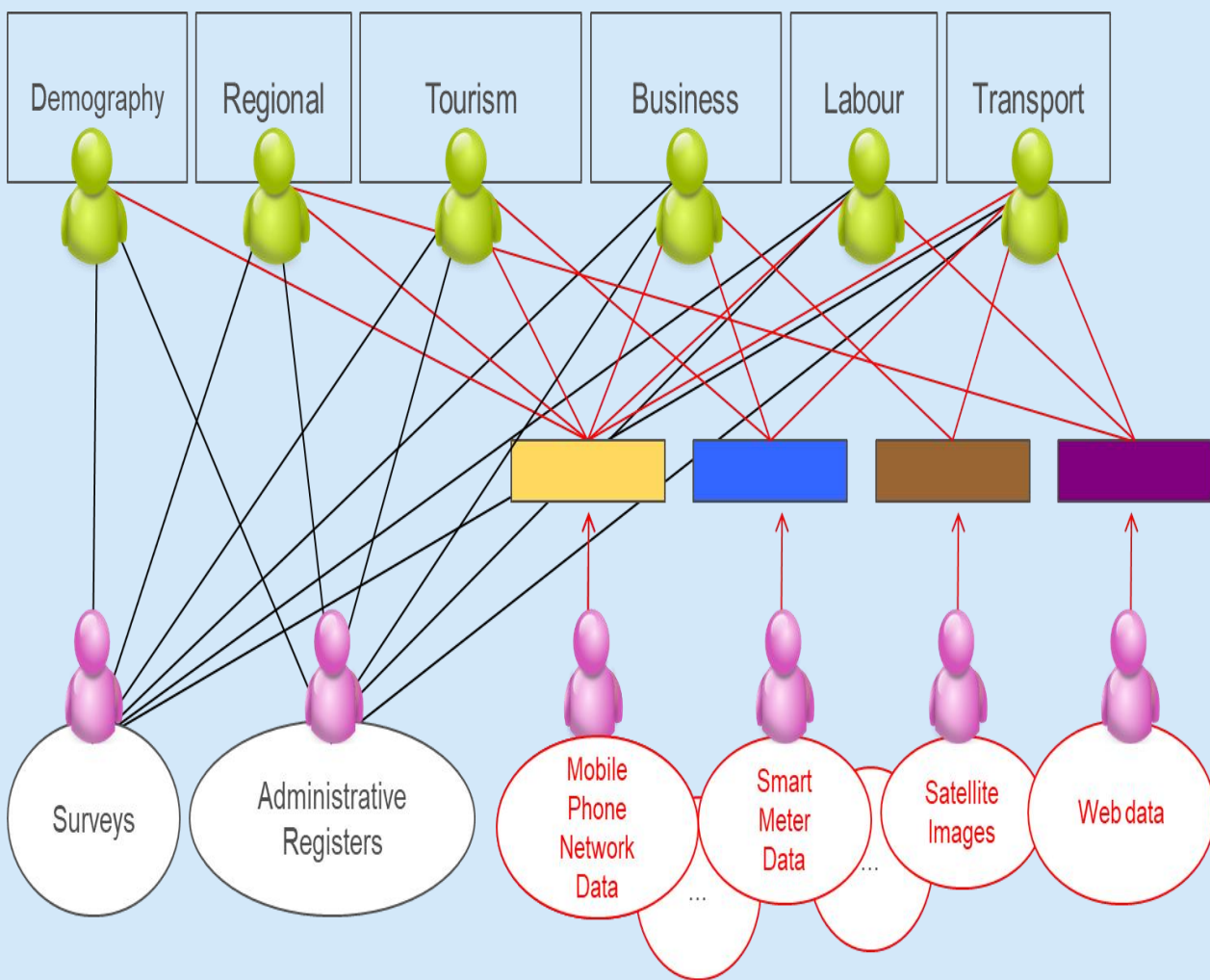
Expected Outcomes of the **ESSnet I3S**

- **Implement new services - Feed/populate the CSPA Service Catalogue**
- **Reality check of the guidelines with respect to implementation -> cook book**
- **Realize co-development and reuse**

Keep fostering collaboration and the community in the ESS by:

- **Continued use of the CSPA Service Catalogue as a convergence point**
- **Set up an ESS Expert Group on sharing tools**

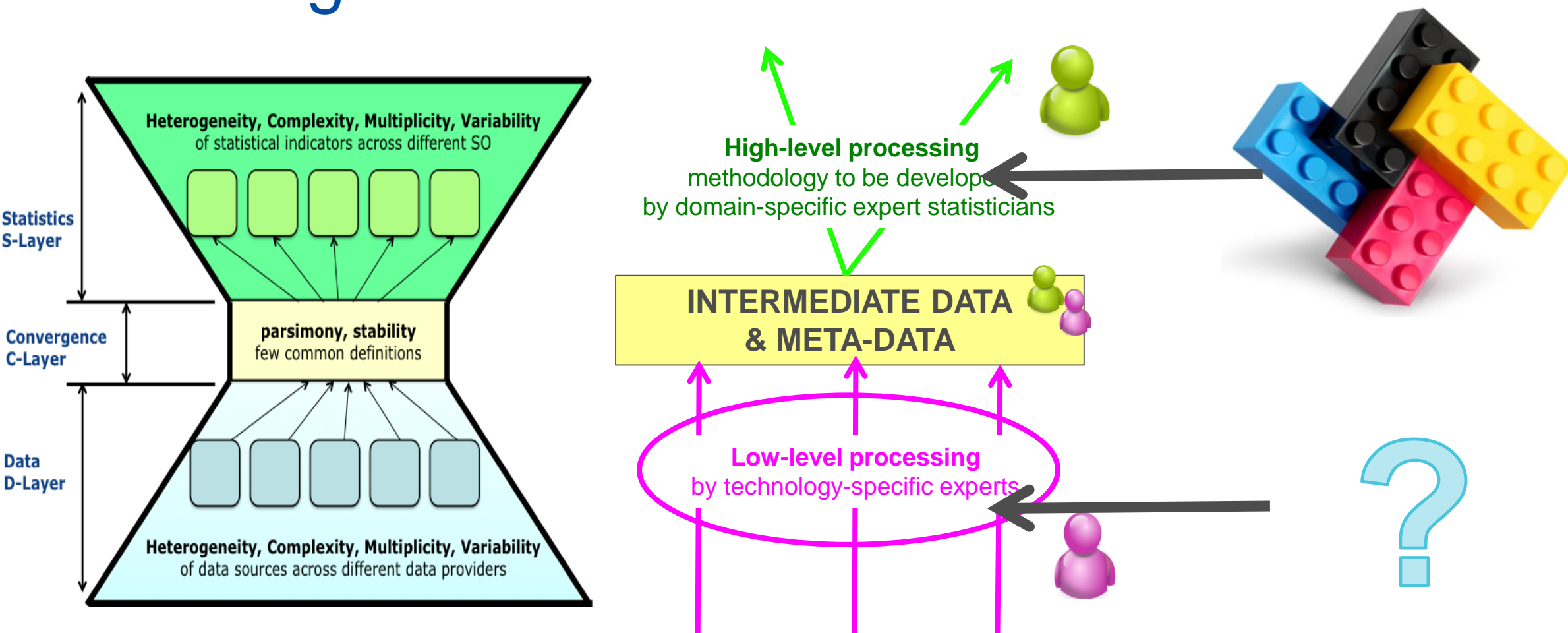
Future challenges



Trusted Smart Statistics

- Need for agility – adapt to the change in data ecosystem
- Transparency and reproducibility
- Technology disrupting the data gathering phase
- New methodological paradigm
- Interdisciplinary

Hourglass model



Current trends

Distributed computing

- Pushing computation out (at the edge)
- Security and privacy preserving paradigm
- Micro services and CI/CD

Development of shared platform

- ESS web intelligence HUB
- UN Global Platform

Thank you



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Slide 4-7: source: UNECE ;