



Statistical Data Governance Framework to Achieve Data Interoperability (DAFI)

Report of Advances

Workshop on the Modernisation of Official Statistics
22-23 November 2022



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INEGI/BSTN/SSG

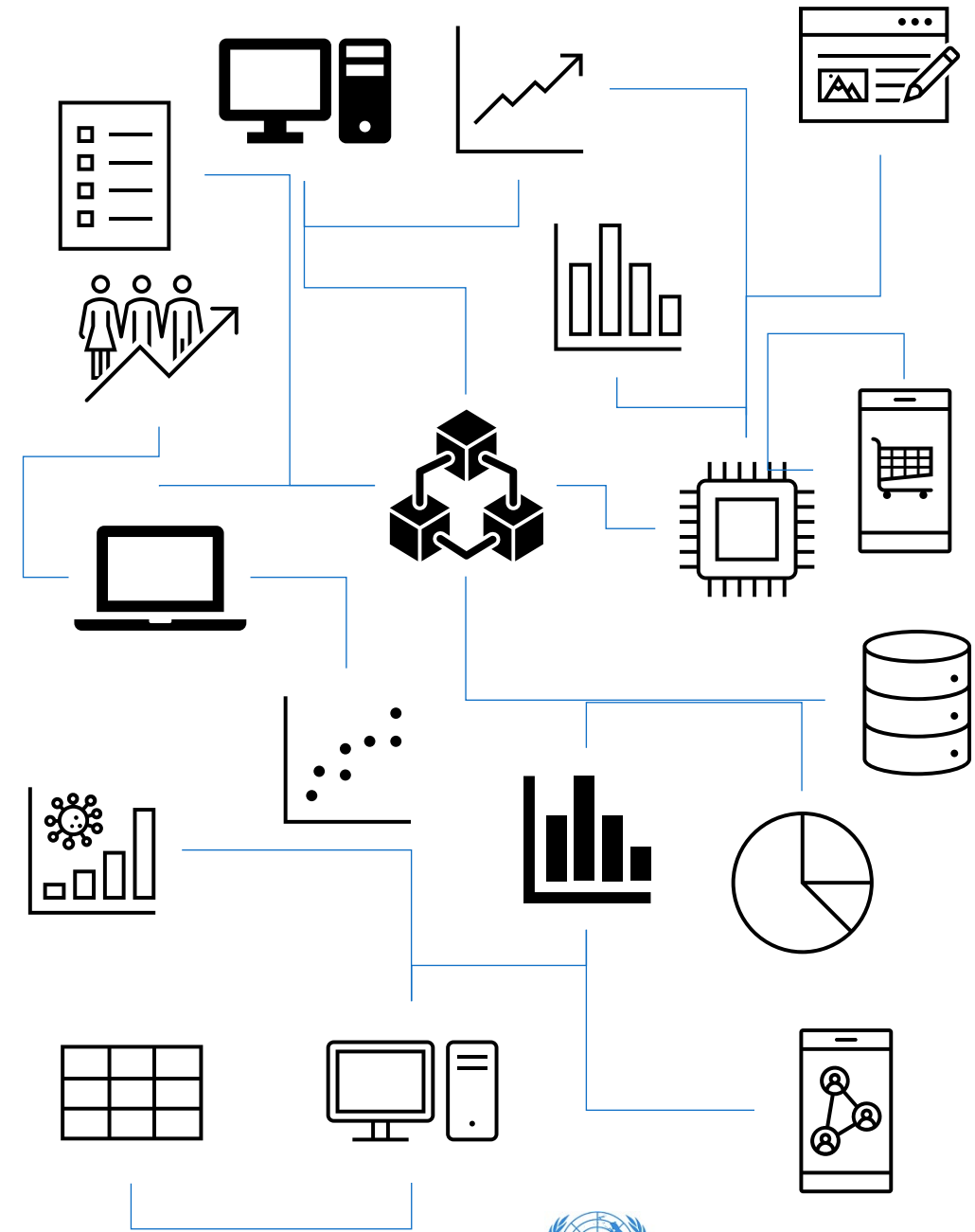


Contents

- Problem Statement for Interoperability
- Data Governance
- Expected Outputs from the Project
- Advances
- Time for feedback and comments

Interoperability

- The ability of systems or services to exchange and make use of the information without prior communication.
- Institutions whose core business is the production and dissemination of official statistical information must deal with data and metadata coming from different sources and domains.



Types of Interoperability

Semantic
(data context)

Technical

Organisational

Structural
(data
architecture)

Syntactic
(data
language)

Systems
(data
presentation)

Legal

Levels of Statistical Interoperability

Downing Process							
Specify needs	Design	Build	Control	Process	Release	Disseminate	Evaluate
1.1 Identify needs	1.2 Design solution	1.3 Build solution	1.4 Control solution	1.5 Process solution	1.6 Release solution	1.7 Disseminate solution	1.8 Evaluate solution
1.1.1 Identify needs	1.1.2 Design solution	1.1.3 Build solution	1.1.4 Control solution	1.1.5 Process solution	1.1.6 Release solution	1.1.7 Disseminate solution	1.1.8 Evaluate solution
1.2 Identify needs	1.2.1 Design solution	1.2.2 Build solution	1.2.3 Control solution	1.2.4 Process solution	1.2.5 Release solution	1.2.6 Disseminate solution	1.2.7 Evaluate solution
1.3 Identify needs	1.3.1 Design solution	1.3.2 Build solution	1.3.3 Control solution	1.3.4 Process solution	1.3.5 Release solution	1.3.6 Disseminate solution	1.3.7 Evaluate solution
1.4 Identify needs	1.4.1 Design solution	1.4.2 Build solution	1.4.3 Control solution	1.4.4 Process solution	1.4.5 Release solution	1.4.6 Disseminate solution	1.4.7 Evaluate solution
1.5 Identify needs	1.5.1 Design solution	1.5.2 Build solution	1.5.3 Control solution	1.5.4 Process solution	1.5.5 Release solution	1.5.6 Disseminate solution	1.5.7 Evaluate solution
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Internal to the Information Production Process

Between programs in the Same Domain

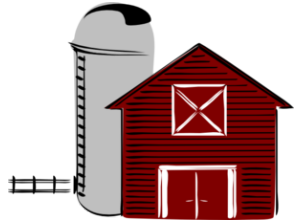
Between Statistical Domains



Conceptual, Temporary, and Geographical



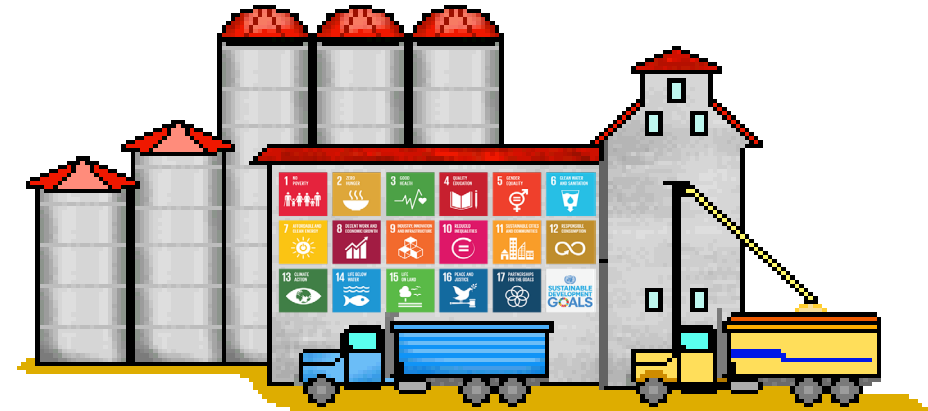
The Root of the Interoperability Problem



Labour statistics



Human settlements and housing statistics



Sustainable development



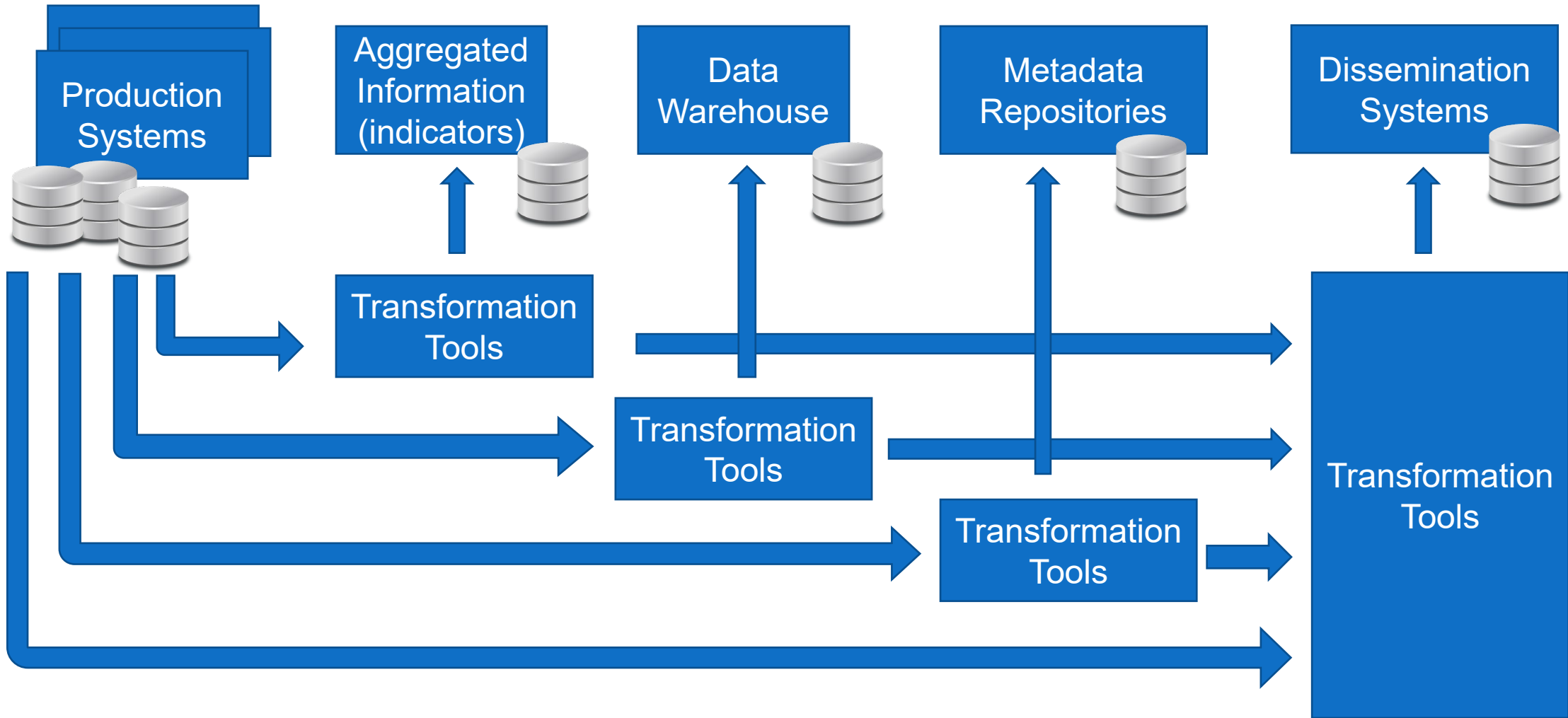
Regional and small area statistics

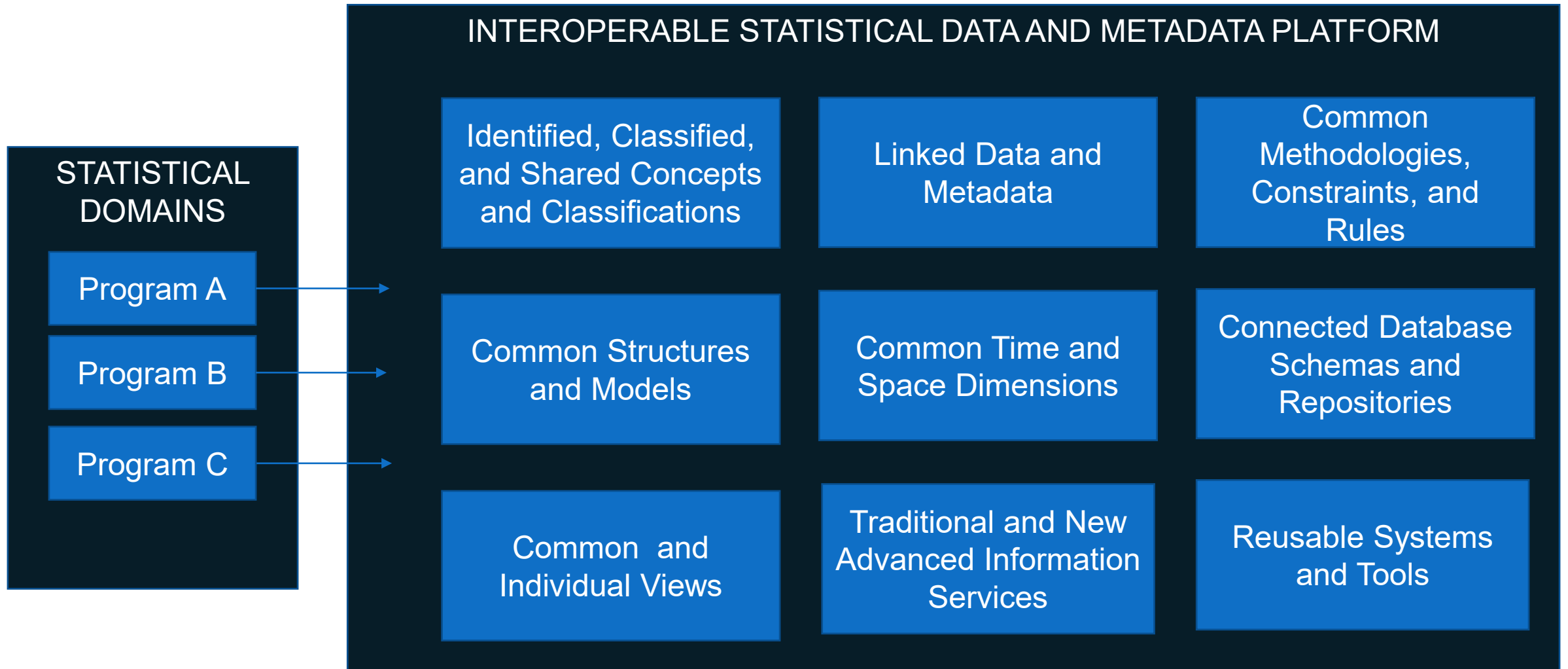


Macroeconomic statistics



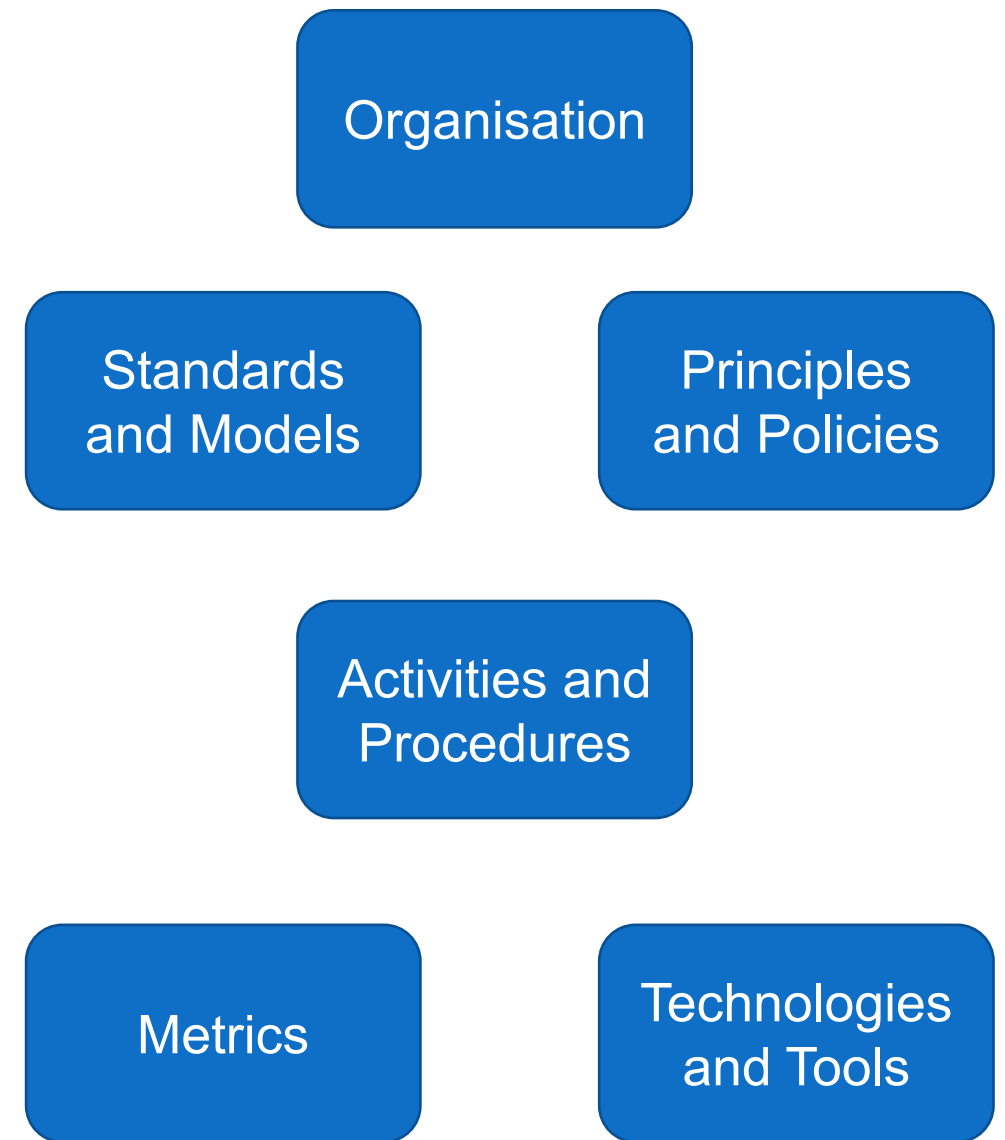
- Differences in definitions of concepts between programs /domains (sometimes, even between program cycles)
- Unstandardized classifications
- Heterogeneous formats





Data Governance

The organization and implementation of policies, procedures, structure, roles, and responsibilities which outline and enforce rules of engagement, decision rights, and accountabilities for the effective management of information assets



Benefits of the Data Governance focused on Interoperability

Streamlines the information production process

Increases the value of the statistical outputs

Improves quality and transparency of information

Eases data and metadata management

Improves the potential in the reuse of tools

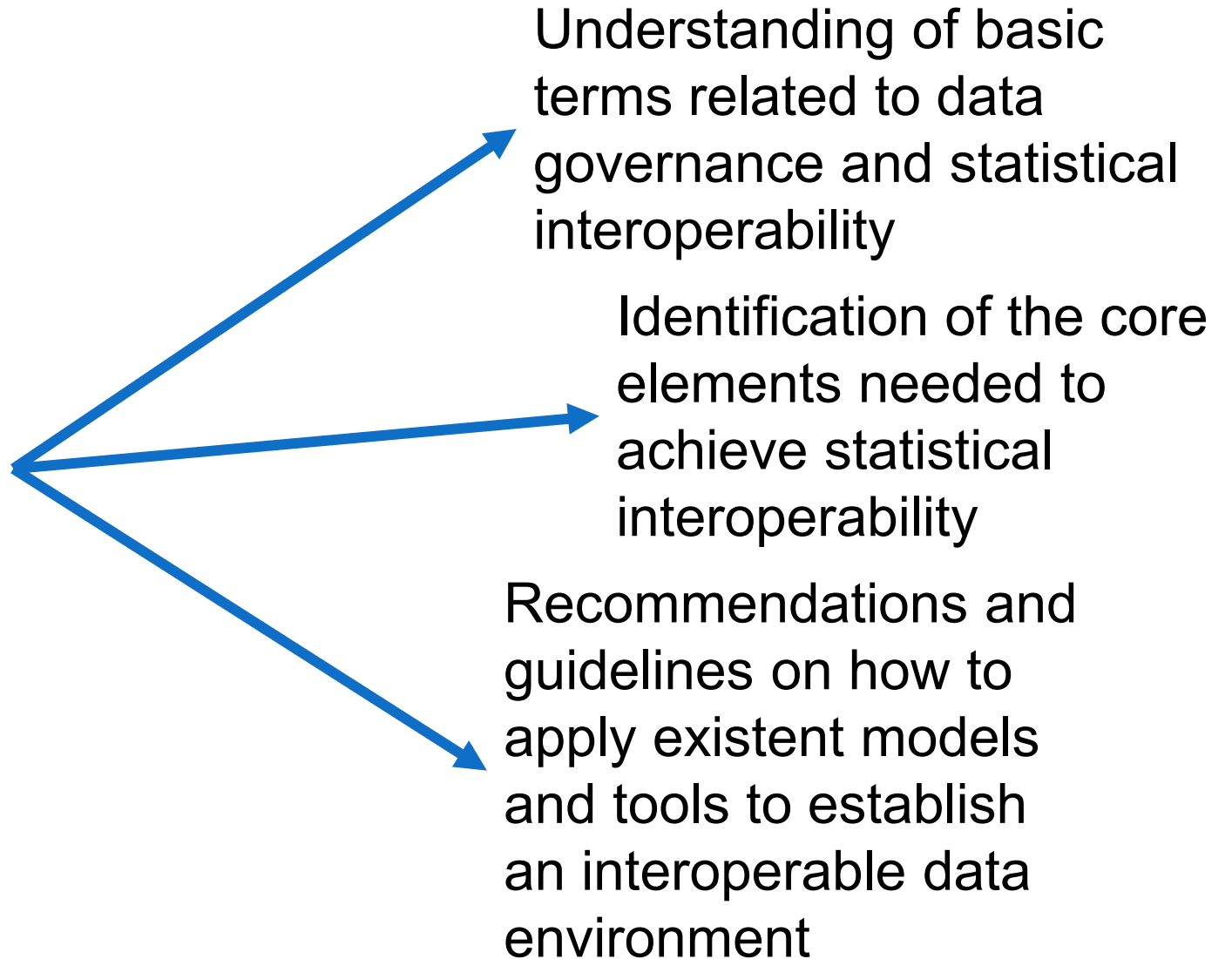
Enables the creation of new services to solve emergent and complex requirements

Data Governance Framework for Interoperability (DAFI)

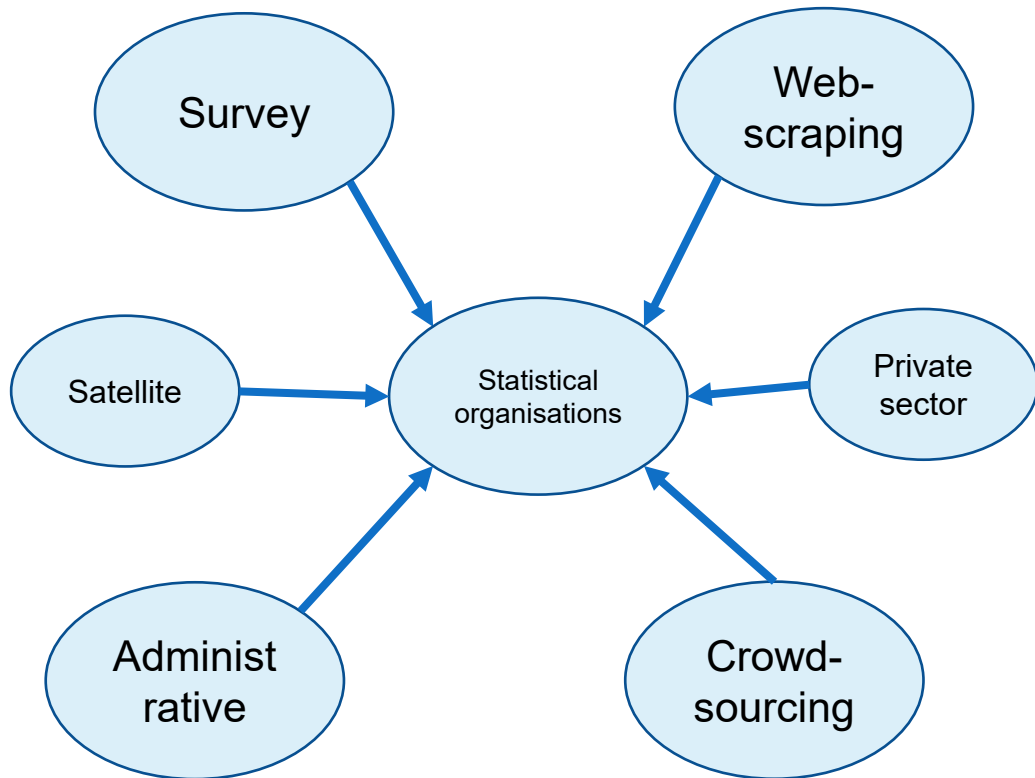
- A framework is a system of rules, ideas, or beliefs that are used to plan or decide something. It simplifies things to make them easier to understand
- A Data Governance Framework is an instrument that is useful to have a holistic view of the data governance elements required to be in control of the information assets of the organisation.
- DAFI will help to align efforts, unify concepts and organize the core elements that are needed to establish and manage an interoperable platform of data, metadata and systems

Outputs of the Project

A document describing a reference framework containing the main elements to achieve data interoperability.



Summary...



- Increasingly, statistical organisations work with diverse data
- Great opportunity to meet the complex information needs through data integration
- However, data managed in silos making them non-interoperable (e.g., semantics, syntactic) creating a **big challenge for data integration**
- Data should be governed with interoperability in mind

DAFI Team

- The Project raised interest from many institutions.
- The team is conformed by experts from: Canada, Egypt, France, Hungary, Israel, Italy, Kyrgyzstan, Mexico, Saudi Arabia, USA, ILO, OECD, and UNECE
- Very rich set of backgrounds, knowledge and experience

It was a challenge to unify our visions for the project

What we have been advancing so far...

- We started by reviewing use cases and relevant efforts made by different organizations
- Then, most of the initial work was about getting agreements on:
 - The scope of the Project to get an alignment of the efforts
 - The relevant concepts about the main topic of the Project, and their definitions to get a common language
 - The contents that would fit in the document
 - The initial structure for the document
- What we are working on now:
 - Generation of contents for the project
 - Improving the structure to make it more meaningful for the reader, answering questions like: Why we do this? What do we want to achieve? How can we make it?

The Document Structure So Far

- The document structure follows the logic of:
 - Why do we need a Framework for Interoperability (Introduction)?
 - Background
 - Problem Statement
 - Scope and Purpose
 - Core Terms
 - What do we want to achieve (Statistical Interoperability)?
 - Review of Statistical Interoperability
 - Benefits
 - Types of Interoperability
 - How we will achieve our goals (DAFI Framework)?
 - DAFI Structure and Components
 - Related Standards and Models
 - Guidelines on How to Build an Interoperable Statistical Platform
 - Recommendations on How to Achieve Interoperability

Thank You

Comments, Questions, Any Feedback

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