



# INTERSTATE STATISTICAL COMMITTEE OF THE COMMONWEALTH OF INDEPENDENT STATES

WELCOME TO THE STATISTICS OF THE COMMONWEALTH OF INDEPENDENT STATES

## CISStat Linked Open Statistics: The Approach to Semantic Transformation of SDMX

Konstantin Laykam

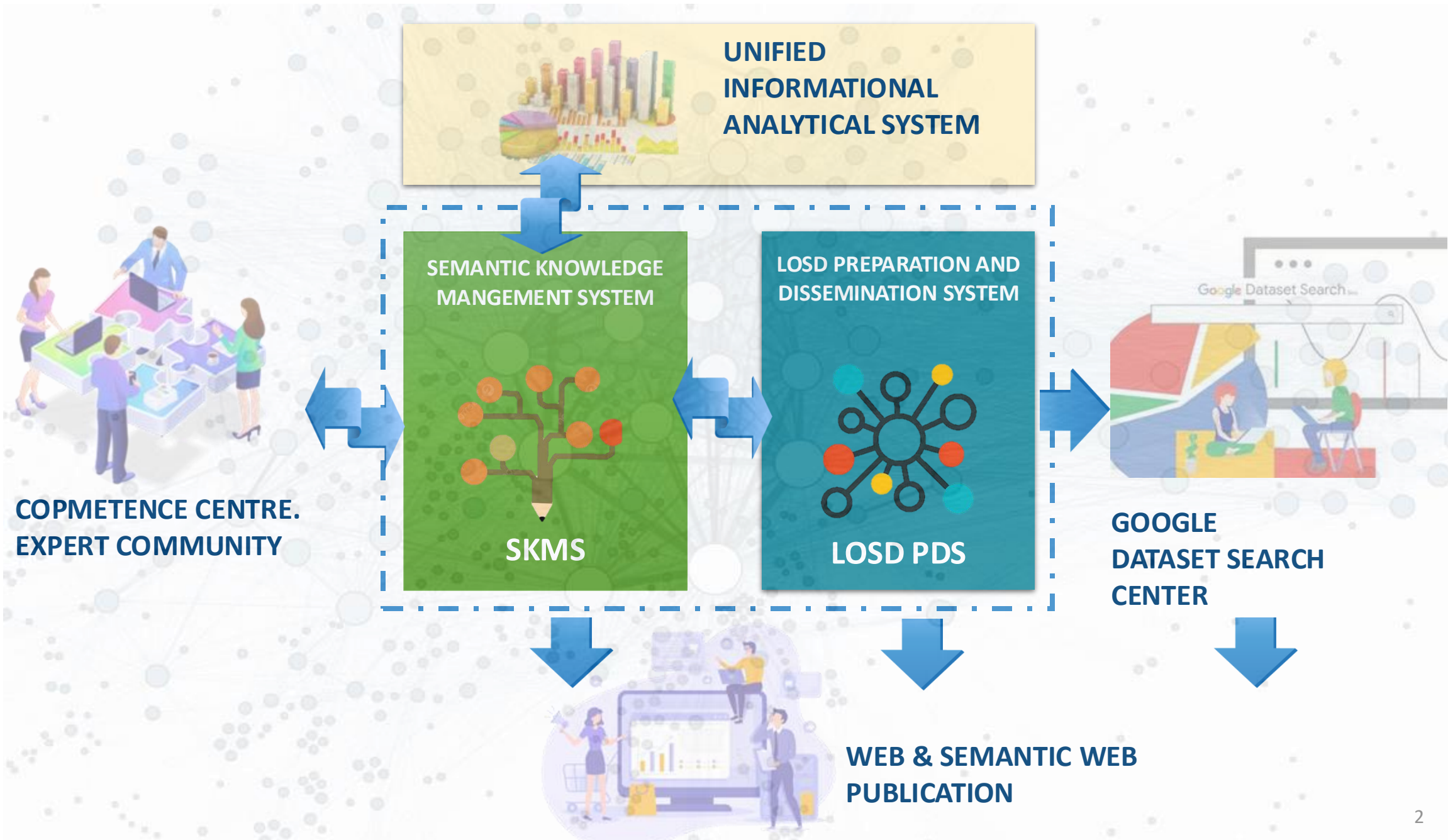
Chairman of  
CIS Statistical Committee

Yury Akatkin

Interoperability Basis  
Slovenia



# SEMANTIC KNOWLEDGE MANAGEMENT AND LOSD IN CISSTAT DATAHUB





# CISSTAT LINKED OPEN STATISTICS

## SEMANTICALLY RICH INTERPRETATION ENVIRONMENT



IMPROVE THE QUALITY OF  
STATISTICAL DATA AND  
METADATA

HARMONIZE STATISTICAL  
TERMINOLOGY AND ALIGN  
METHODOLOGY

COMPLY WITH  
FAIR PRINCIPLES

PROVIDE SEMANTIC  
INTEROPERABILITY

FACILITATE (META)DATA  
RELEVANT INTERPRETATION



**SEMANTIC  
MODELS**



**SMART  
METADATA**

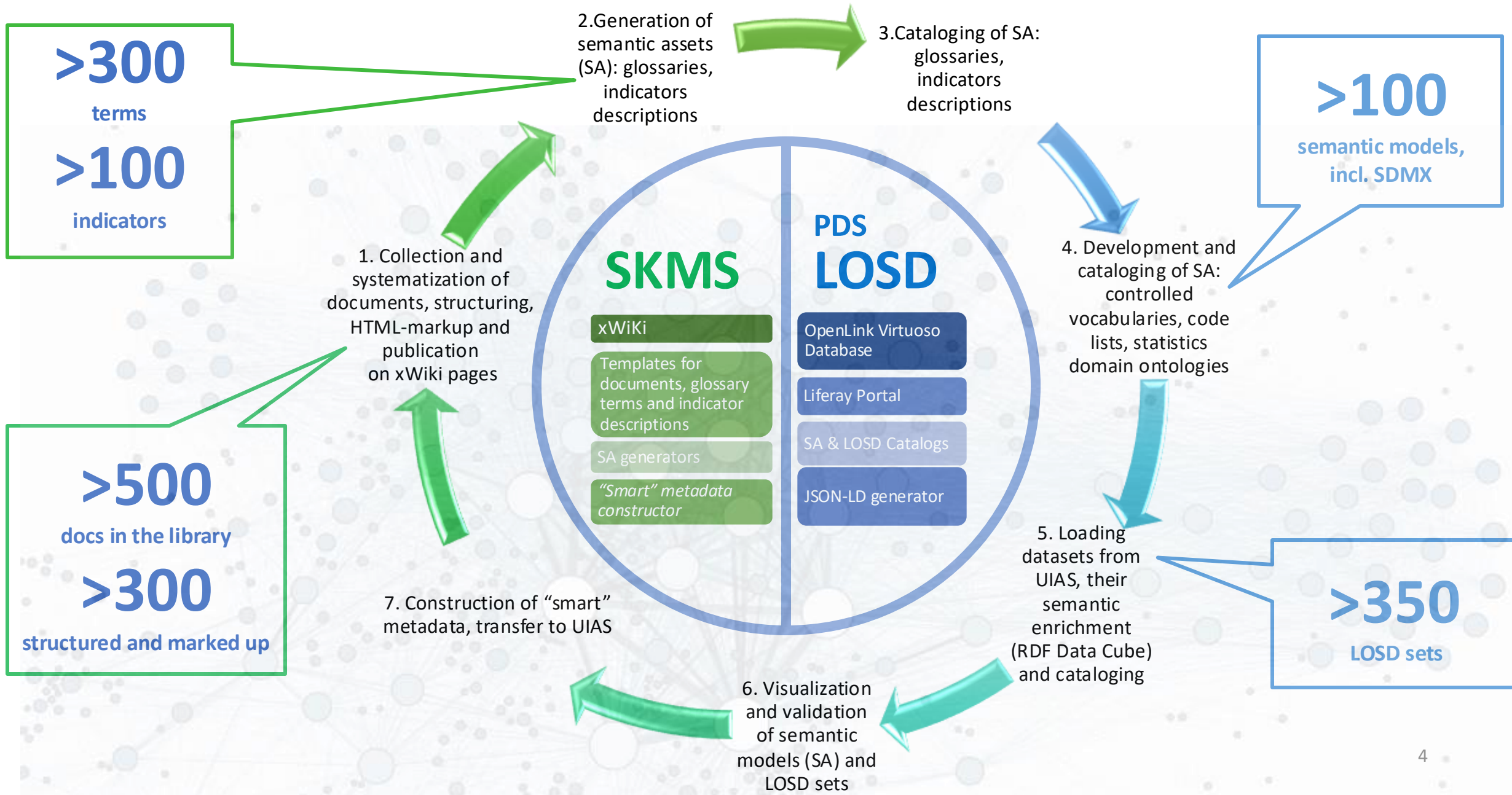


**SEMANTICALLY  
RICH LOD**



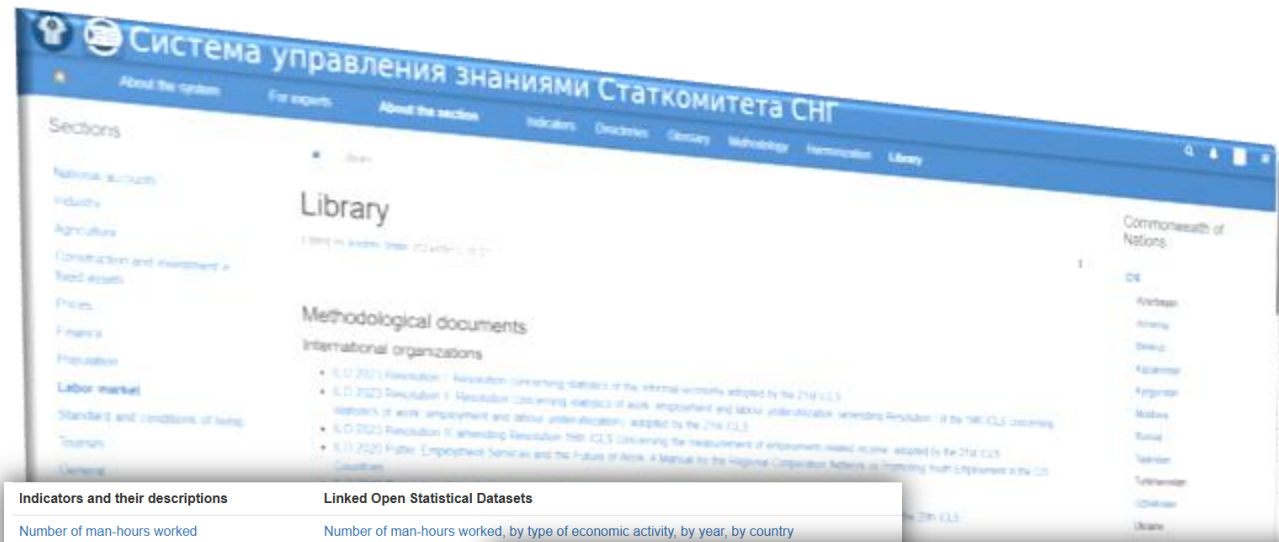
**VISUALISATION FOR  
EXPERT VALIDATION**

# CISSTAT. TOWARDS 15 STATISTICAL DOMAINS





# CISSTAT SEMANTIC KNOWLEDGE MANAGEMENT SYSTEM



Indicators and their descriptions	Linked Open Statistical Datasets
Number of man-hours worked	Number of man-hours worked, by type of economic activity, by year, by country Number of man-hours worked
Unemployment rate	Unemployment rate, total, by age Unemployment rate, by age Unemployment rate, by gender
Employment rate of the population	Employment rate of the population Employment rate of the population Employment rate of the population
Labor force participation rate/economic activity rate	Labor force participation/economic activity rate Labor force participation/economic activity rate Labor force participation/economic activity rate
Number of employed people in the informal sector	Number of employed people in the informal sector
Number of employed population	Number of employed population Number of employed population, by age, by year Number of employed population, by age, by year Number of employed population, by age, by year Number of employed population, by age, by year
Number of young people who are not working (unemployed or not in employment) and not studying aged 15-24	Number of young people who are not working (unemployed or not in employment) and not studying aged 15-24
Labor force/economically active population	Labor force/economically active population Labor force/economically active population Labor force/economically active population

## DESCRIPTION

The module contains reference books prepared by experts based on the analysis of the applied classifiers and data collection

## Organizational structures

Organizational structure of the CIS Statistical Committee

## SDMX Code Lists

SDMX Codes

List of Codes "Unit of Measure"

List of Codes "Value per Period"

List of Codes "Multiplier"

List of Codes "Time Series Transformation"

List of Codes "Frequency"

## Section directories

Economic activities (NACE Rev. 1)

Economic activities (NACE Rev. 2)

Units of measurement

Period value

Multiplier

Reporting period

Frequency of collection/dissemination

Gender

CIS countries

Methods of time series transformation

## Methodology

Edited by Andrey Shilin 2024/12/28 17:48

The section contains methodological materials "Standard and conditions of life" in a structured

## Methodological documents

### International organizations

- ILO 2003. Report II. Household Income and Expenditure Statistics. 17th International Conference of Labor Statisticians
- ILO 2003. Resolution concerning statistics of household income and expenditure adopted by the 17th International Conference of Labor Statisticians
- CIS 2023. Methodological explanations for filling out questionnaire No. 15 CIS on household income and expenditure
- CIS 2021. Development of a system of poverty indicators for monitoring the achievement of Sustainable Development Goals
- UN 2010. Sample Designs for Household Surveys: Practical Guidelines (Excerpts)
- UNECE 2017. Guidelines on Measuring Poverty (extracts)

### Belarus

- RB 2022. Methodological provisions on statistics of household income and consumption
- RB 2022. Methodological provisions on housing stock statistics
- RB 2014. Methodology for calculating statistical indicators of the standard of living of the population

### Russia

- RF 2019. Methodological provisions for the formation of aggregated indicators of household income and participation in social programs, approved by the order of Rosstat dated May 30, 2021 No. 455
- RF 2017. Methodological provisions for the formation of aggregate indicators of income, household budgets
- RF 2011. Housing stock and public utilities (methodological provisions)

## Glossary

Edited by Mikhail Beach 2025/06/15 15:34

### IRI

<http://purl.cisstat.org/StandardsOfLiving/Glossary/>

### DESCRIPTION

*Glossary of the section "Standard and conditions of life"*

The glossary is a dictionary of highly specialized terms of the section and is formed on the basis of the analysis of methodological documents, explanatory encyclopedias in the field of statistics of the level and conditions of life. The glossary is implemented as a set of concepts that have an interpretation (with support for multilingualism, comments and examples, as well as semantic relations between concepts).

### EXPLANATION

In developing the glossary, the results of the analysis of documents and materials, external sources, dictionaries and encyclopedias on the section, as well as the harmonization of concepts were used.

### SOURCES

The glossary is based on the following sources:

- Harmonization
- Brief glossary of statistical terms
- Methodological provisions on housing stock statistics
- Methodological explanations for filling out questionnaire No. 15 of the CIS on household statistics
- Methodological explanations for filling out questionnaire No. 18 of the CIS on statistics of housing conditions of the population
- Resolution concerning statistics of household income and expenditure
- Resolution concerning statistics of household income and expenditure
- Handbook of Poverty Measurement
- Encyclopedia of statistical terms

Glossary in RDF format [Download](#)

Glossary contents:

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#)

## Harmonization

Edited by Administrator 2024/08/14 20:53

Harmonization is mutual agreement, systemization, unification, coordination, ordering, ensuring mutual compliance.

## Harmonization of terms

Harmonization of the concept of "Balance of Labor Resources"

Harmonization of the concept of "Unemployment"

"

Harmonization of the concept of "Employed Persons" Harmonization of the concept of "Persons not included in the labor force"

"

Harmonization of the concept of "Median Wage" Harmonization of the concept of "Minimum Wage"

Harmonization of the concept of "Part-Time Employee" Harmonization of the concept

of "Labor Force" Harmonization of

the concept of "Real Wages"

Harmonization of the concept of "Vacancies"

Harmonization of the concept of "Wage Rate Earnings"

Harmonization of the concept of "Working Age"

Harmonization of the concept of "Actually Worked Time"

Harmonization of the concept of "Economically Active Population"

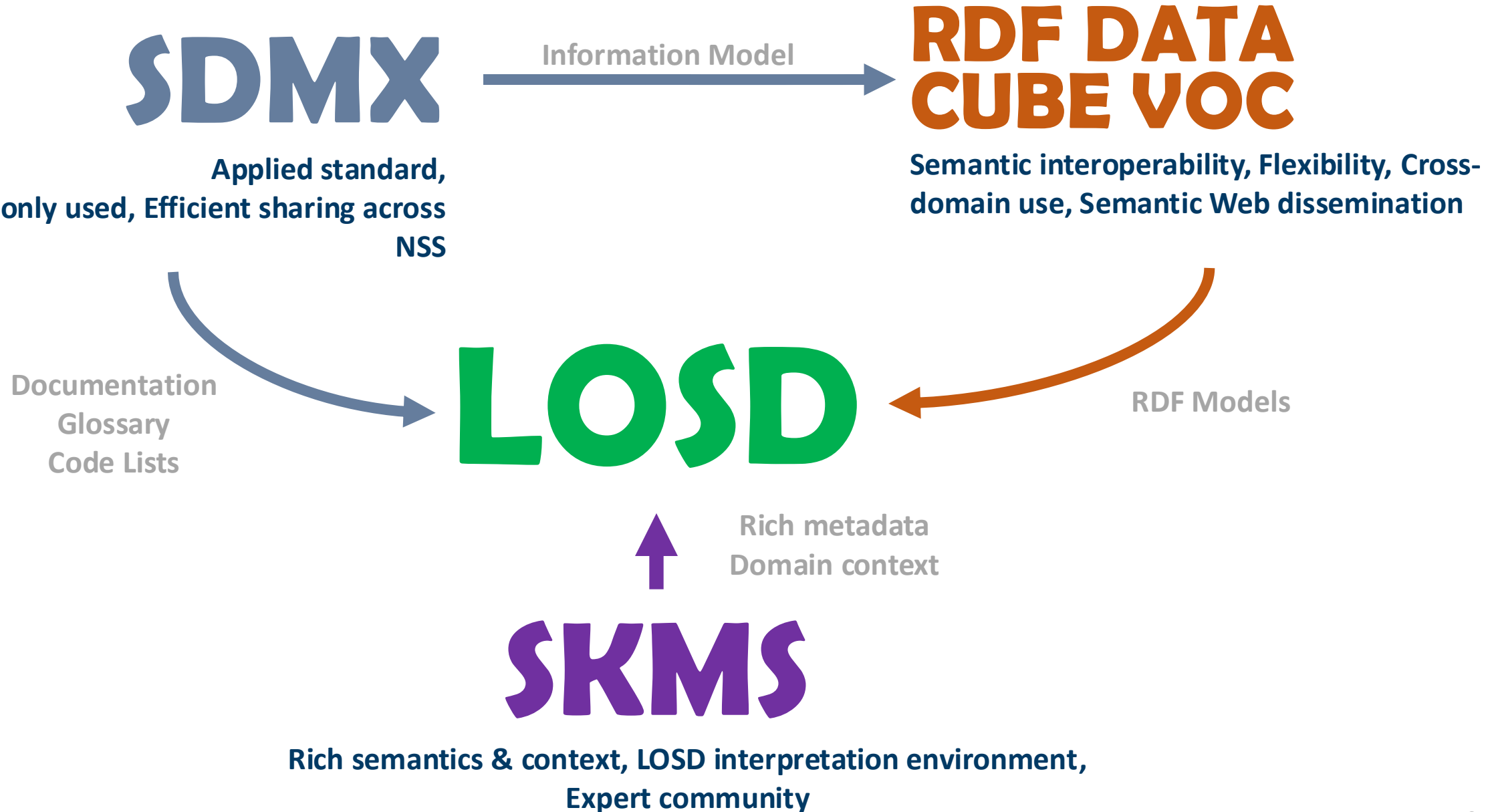
## Harmonization of classifiers and reference books

Harmonization of the reference book "Duration of job search"

Harmonization of the reference book "Methods of job search for the unemployed"

[suz.cisstat.org](http://suz.cisstat.org)

# THE ROLE OF SDMX IN LOSD



# CHALLENGES OF SDMX IMPLEMENTATION FOR LOSD

## RDF DATA CUBE VOCABULARY

Based on an earlier, now **outdated version** of the **SDMX Information Model**  
(specification published in 2009)

**No namespace maintenance** since 2013 and no alignment with best practices of **URI persistence** promoted by interoperability experts (e.g., in EU ISA<sup>2</sup>)

**Limited set of semantic models**, not supporting the full range of classifications required for LOSD development (only 9 code lists and 75 codes)

# INTEROPERABILITY BASIS

Open, non-profit initiative aimed at overcoming technological and organizational barriers that hinder the effective exchange and dissemination of Linked Data

## GOAL

To integrate existing data exchange standards, classifications, and reference systems into the Semantic Web environment to achieve **sustainable semantic interoperability** across a wide range of user scenarios

## IoBP

**Interoperability Basis Platform (IoBP)** supports **semantic alignment, enrichment**, and publication of existing standards using a knowledge management system, modeling tools, **namespace control**, and **persistent URI infrastructure**



INTEROPERABILITY BASIS PLATFORM

[basis.semanticip.org](https://basis.semanticip.org)

Log-in



SDMX

Agencies

Code Lists

Glossary

Documents

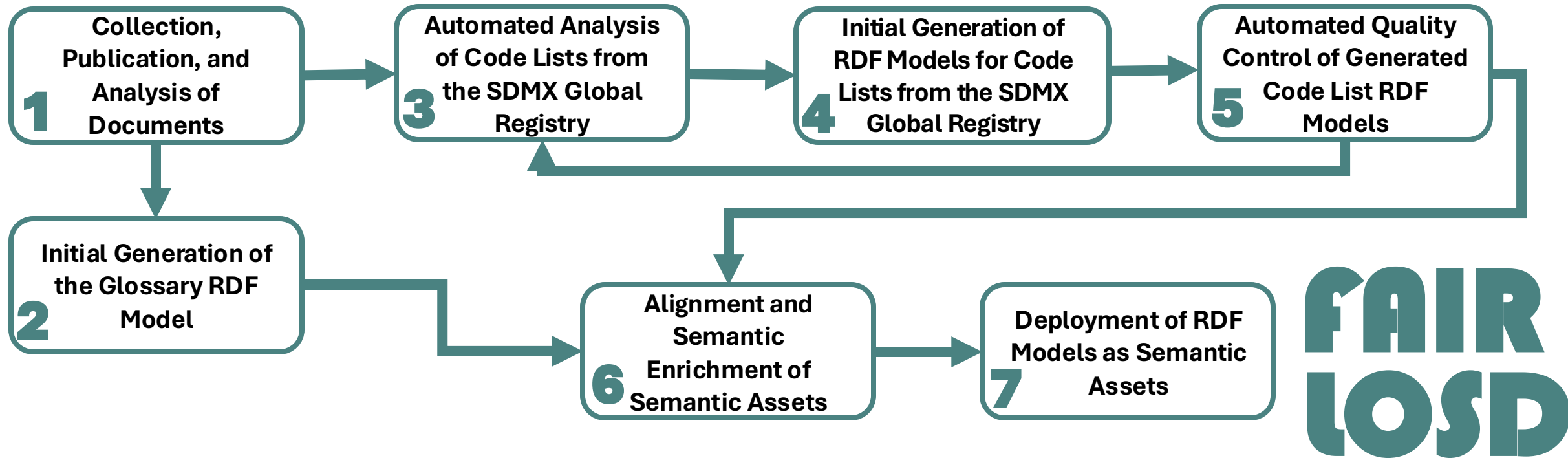
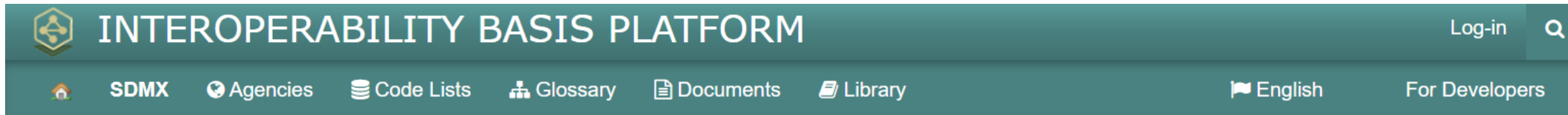
Library

English

For Developers



# SEMANTIC TRANSFORMATION PIPELINE. SDMX DOMAIN



**FAIR  
LOSD**

# BENEFITS OF USING IoBP IN CISSTAT

SDMX context navigation; interactive discovery and exploration; linked elements and backlink analysis

## SDMX 3.1 Standards. Section 1. Summary of Major Changes and New Functionality

Last modified by [Artur](#) on 2025/09/13 19:12

[Document card](#)  
[Download document](#)

- Contents
- 1. Overview
  - 2. Summary of Breaking Changes in 3.1
    - 2.1 Removal of Advanced Release Calendar
    - 2.2 Removal of Version on Categorisation
  - 3. Information Model
    - 3.1 Horizontally Complex Data Structure Definitions
    - 3.2 Constraint Cohesion

### 1. Overview

SDMX 3.1 is a minor revision to the SDMX 3.0 Standard which introduces a limited set of changes, which cover the following:

#### Information Model

- Support for [Dataflows](#) to reference a subset of [Dimensions](#) from a [Data Structure Definition](#)
- Simplification to Data [Constraints](#)
- Addition of Availability [Constraints](#)

#### Documentation

Registering [Reference Metadata](#) removed from d

#### Breaking Changes

- Remove [version](#) property on Categorisation
- Removal of Advanced [Release Calendar](#)

#### Content of the Document

The remainder of this document contains a summary of the changes. More detailed information can be found in the [SDMX 3.1 Technical Specifications](#), in particular:

#### Data structure definition

Set of structural metadata associated to a data set, which includes information about how concepts are associated with the measures, dimensions, and attributes of a data cube, along with information about the representation of data and related descriptive metadata.

#### ALTERNATIVE NAME

DSD

#### DEFINITION

Set of [structural metadata](#) associated to a [data set](#), which includes information about how [concepts](#) are associated with the [measures](#), [dimensions](#), and [attributes](#) of a data cube, along with information about the [representation](#) of data and related descriptive metadata.

#### COMMENT

A [DSD](#) defines the structure of an organised collection of data ([Data Set](#)) by means of [concepts](#) with specific roles, and their [representation](#). In order to exchange or disseminate statistical information, an institution needs to specify which statistical [concepts](#) are necessary for identifying the series (and for use as [dimensions](#)) and which statistical [concepts](#) are to be used as [attributes](#) and [measures](#). These definitions form the *data structure definition*. In a data collection scenario the specification of the *data structure definition* is often a collaborative venture between the collecting institution and its partners. There are three types of construct in the [DSD](#): [Dimension](#), [Attribute](#), and [Measure](#). Each of these combines a [Concept](#) with its [representation](#) (this can be either a reference to a [Code list](#) or a non-coded data type such as "integer", "string", "date/time"). The roles of the three types of construct ([Dimension](#), [Attribute](#), and [Measure](#)) are as follows: A [Dimension](#) is an identifying [component](#), sometimes referred to as a "classificatory variable". When a value is given to each of the [Dimensions](#) in a [data set](#) (this is often called a "key" or a "series") the resulting key, when combined with a time value, uniquely identifies an observation. For instance, country, indicator, measurement unit, frequency, and time [dimensions](#) together identify the cells in a cross-country time series with multiple indicators (for example, gross domestic product, gross domestic debt) measured in different units (for example, various [currencies](#), percent changes) and at different frequencies (for example, annual, quarterly). The cells in such a multi-dimensional table contain the [observation values](#). The [DSD](#) construct that specifies the [Concept](#) and expected [representation](#) of an observation is called a [Measure](#). The semantics of the [measure](#) are derived from the [Dimensions](#) or a sub set of them and, if not specified in a [Dimension](#), an [Attribute](#) indicating the measurement unit e.g. indicator and [measure](#) unit (gross domestic product percentage change). Additional metadata that are useful for understanding or processing the observed value or the context of [data set](#) or series are called an [Attribute](#) in the [DSD](#). Examples of an [attribute](#) are a note on the observation, a [confidentiality status](#), or the [unit of measure](#) used, or the [Title](#) of a series.

#### BROADER

[Data set](#)

#### NOTATION

[urn:sdmx.org:sdmx.infomodel:conceptscheme:Concept=SDMX:CROSS\\_DOMAIN\\_CONCEPTS\(2.0\):DSD](#)

#### RELATED

[Attribute](#), [Dimension](#), [Measure](#)

Used in the following terms: [Attachment level](#), [Attribute relationship](#), [Code list](#), [Comment](#), [Component](#)

[More \(14\)](#)

Backlinks: [1 Introduction](#), [1 Introduction](#), [1 Introduction](#), [1 Introduction](#), [1 Purpose and Structure](#)

[More \(93\)](#)

[1 Purpose and Structure](#), [1 Purpose and Structure](#), [10 Community Management](#), [10 Constraints](#), [10 Constraints](#), [10 Constraints](#), [10 Validation and Transformation Language \(VTL\)](#), [11 Annex 1 – Content Oriented Guidelines \(COG\)](#), [11 Transforming between versions of SDMX](#), [11 Transforming between versions of SDMX](#), [12 Annex 2 – SDMX Business Process Model](#), [12 Constraints](#), [12 Constraints](#), [12 Validation and Transformation Language \(VTL\)](#), [12 Validation and Transformation Language \(VTL\)](#), [13 Annex 3 – Data and Metadata Samples](#), [13 Structure Mapping](#), [13 Structure Mapping](#), [13 Validation and Transformation Language](#), [14 Annex 4 – Data Reader and Data Writer Functions](#), [15 Validation and Transformation Language](#), [15 Validation and Transformation Language](#), [16 Annex 6: Worked Use Case](#), [2 Actors and Use Cases](#), [2 Actors and Use Cases](#), [2 Actors and Use Cases](#), [2 General Notes on This Document](#), [2 General Notes on This Document](#), [2 General Notes on This Document](#), [3 Guide for SDMX Format Standards](#), [3 Guide for SDMX Format Standards](#), [3 Guide for SDMX Format Standards](#), [3 SDMX Base Package](#), [3 SDMX Base Package](#), [3 SDMX Base Package](#), [3 Use Cases\\_Scenario](#), and [Example](#), [4 Data and Metadata Creation and Reporting](#), [4 General Notes for Implementers](#), [4 General Notes for Implementers](#), [4 General Notes for Implementers](#), [4 Specific Item Schemes](#), [4 Specific Item Schemes](#), [4 Specific Item Schemes](#), [5](#)

# BENEFITS OF USING IoBP IN CISSTAT

Semantic SDMX Glossary with human-readable views; exploring relationships, context and usage across SDMX versions

### Accounting conventions

Last modified by [Artur](#) on 2025/08/04 16:06

STATUS

Upload

URI

[https://purl.semanticip.org/linked-data/sdmx/concept/ACC\\_CONV](https://purl.semanticip.org/linked-data/sdmx/concept/ACC_CONV)

TTL

ACC\_CONV

INTERNATIONAL NAME

Accounting conventions

DEFINITION

Practical procedures, standards and other aspects used when compiling data

COMMENT

This metadata element refers to descriptions of the types of prices used to value flows and stocks, or other units of measurements used for recording the phenomena being observed; the time of recording of the flows and stocks or the time of recording of other phenomena being observed; including the reference period employed; and the grossing/netting procedures that are used. Accounting conventions may refer to whether the data are recorded on a cash/accrual or mixed accounting basis, the time of their recording and the reference period (fiscal or calendar year) employed. The description could also include how consistent the practices used are with internationally accepted standards - such as the Balance of Payments Manual or SNA (System of National Accounts) - or good practices.

BROADER

[Unit of measure](#), [Reference period](#)

NOTATION

[urn:sdmx:org.sdmx.infomodel.conceptscheme.Concept=SDMX:CROSS\\_DOMAIN\\_CONCEPTS\(2.0\).ACC\\_CONV](#)

NOTE

Recommended representation: String

Used in the following terms: -

Backlinks: -

Tags: Accounting conventions

Comments (0)

History

Information

### Glossary terms in the table

Last modified by [Artur](#) on 2025/07/14 10:16

Name	URI	Alternative name	Definition	Comment	Broader	Interchangeable (skos:exactMatch)	Number of mentions of the term
<a href="#">Accounting conventions</a>	<a href="https://purl.semanticip.org/linked-data/sdmx/concept/ACC_CONV">https://purl.semanticip.org/linked-data/sdmx/concept/ACC_CONV</a>		Practical procedures, standards and other aspects used when compiling data from diverse sources under a common methodological framework.	This metadata element refers to descriptions of the types of prices used to value flows and stocks, or other units of measurements used for recording the phenomena being observed; the time of recording of the flows and stocks or the time of recording of other phenomena that are measured, including the reference period employed; and the grossing/netting procedures that are used. Accounting conventions may refer to whether the data are recorded on a cash/accrual or mixed accounting basis, the time of their recording and the reference period (fiscal or calendar year) employed. The description could also include how consistent the practices used are with internationally accepted standards - such as the Balance of Payments Manual or SNA (System of National Accounts) - or good practices.	<a href="#">Unit of measure</a> , <a href="#">Reference period</a>		0
<a href="#">Accuracy</a>	<a href="https://purl.semanticip.org/linked-data/sdmx/concept/ACCURACY">https://purl.semanticip.org/linked-data/sdmx/concept/ACCURACY</a>		Closeness of computations or estimates to the unknown exact or true values that the statistics were intended to measure.	The accuracy of statistical information is the degree to which the information correctly describes the phenomena. It is a measure of the variance (random errors) of accuracy (numerical data) or qualitative assessment (non-response, etc.) of the data, which is determined by the subsequent estimated	<a href="#">Component</a> , <a href="#">Measure</a>	<a href="http://purl.org/linked-data/sdmx/concept/ACCURACY">http://purl.org/linked-data/sdmx/concept/ACCURACY</a>	8































## Frequency of terms mentioned in the table

Last modified by [Artur](#) on 2025/07/14 10:16

Term	Number of articles mentioning the term
<a href="#">Statistical data and metadata exchange</a>	157
<a href="#">Data set</a>	120
<a href="#">Data structure definition</a>	117
<a href="#">Attribute</a>	113
<a href="#">Dimension</a>	108
<a href="#">Code list</a>	106
<a href="#">Code</a>	98
<a href="#">Component</a>	95
<a href="#">Artefact</a>	89
<a href="#">Dataflow</a>	87
<a href="#">Reference metadata</a>	76
<a href="#">Structural metadata</a>	74
<a href="#">Measure</a>	72

# BENEFITS OF USING IoBP IN CISSTAT







Interactive visualization, navigation and filtering of SDMX codes in code lists

Code List Label	URI	Total codes
<a href="#">Accounting entry code list</a>	<a href="https://purl.semanticip.org/linked-data/sdmx/code/accountEntry">https://purl.semanticip.org/linked-data/sdmx/code/accountEntry</a>   TTL	31
<a href="#">Adjustment indicator code list</a>	<a href="https://purl.semanticip.org/linked-data/sdmx/code/seasonalAdjust">https://purl.semanticip.org/linked-data/sdmx/code/seasonalAdjust</a>   TTL	197
<a href="#">Administered prices indicator code list</a>	<a href="https://purl.semanticip.org/linked-data/sdmx/code/adminPriceInd">https://purl.semanticip.org/linked-data/sdmx/code/adminPriceInd</a>   TTL	8
<a href="#">Age code list</a>	<a href="https://purl.semanticip.org/linked-data/sdmx/code/age">https://purl.semanticip.org/linked-data/sdmx/code/age</a>   TTL	212
<a href="#">Age unit code list</a>	<a href="https://purl.semanticip.org/linked-data/sdmx/code/ageUnit">https://purl.semanticip.org/linked-data/sdmx/code/ageUnit</a>   TTL	5
<a href="#">Air pollutants and greenhouse gasses code list</a>	<a href="https://purl.semanticip.org/linked-data/sdmx/code/airPol">https://purl.semanticip.org/linked-data/sdmx/code/airPol</a>   TTL	26
<a href="#">Breakdown group code list</a>	<a href="https://purl.semanticip.org/linked-data/sdmx/code/breakdownGroup">https://purl.semanticip.org/linked-data/sdmx/code/breakdownGroup</a>   TTL	14
<a href="#">Bridging items code list</a>	<a href="https://purl.semanticip.org/linked-data/sdmx/code/bridgingItems">https://purl.semanticip.org/linked-data/sdmx/code/bridgingItems</a>   TTL	
<a href="#">Civil (or Marital) Status code list</a>	<a href="https://purl.semanticip.org/linked-data/sdmx/code/civilStatus">https://purl.semanticip.org/linked-data/sdmx/code/civilStatus</a>   TTL	
<a href="#">Classification of the Functions of Government code list</a>	<a href="https://purl.semanticip.org/linked-data/sdmx/code/classificationOfFunctionsOfGovernment">https://purl.semanticip.org/linked-data/sdmx/code/classificationOfFunctionsOfGovernment</a>   TTL	
<a href="#">Classification of the Purposes of Non-Profit Institutions Serving Households code list</a>	<a href="https://purl.semanticip.org/linked-data/sdmx/code/classificationOfPurposesOfNonProfitInstitutionsServingHouseholds">https://purl.semanticip.org/linked-data/sdmx/code/classificationOfPurposesOfNonProfitInstitutionsServingHouseholds</a>   TTL	
<a href="#">Code list for concept "Frequency"</a>	<a href="https://purl.semanticip.org/linked-data/sdmx/code/frequency">https://purl.semanticip.org/linked-data/sdmx/code/frequency</a>   TTL	
<a href="#">Code list for degree of urbanisation</a>	<a href="https://purl.semanticip.org/linked-data/sdmx/code/degreeOfUrbanisation">https://purl.semanticip.org/linked-data/sdmx/code/degreeOfUrbanisation</a>   TTL	
<a href="#">COICOP code list</a>	<a href="https://purl.semanticip.org/linked-data/sdmx/code/coicop">https://purl.semanticip.org/linked-data/sdmx/code/coicop</a>   TTL	
<a href="#">Commodity code list</a>	<a href="https://purl.semanticip.org/linked-data/sdmx/code/commodity">https://purl.semanticip.org/linked-data/sdmx/code/commodity</a>   TTL	

## Filtered Codes

Last modified by [Artur](#) on 2025/09/11 17:36

[Back to Code List](#)

URI	Label	Notation	Labels from agencies
<a href="https://purl.semanticip.org/linked-data/sdmx/code/age-Y15T65">https://purl.semanticip.org/linked-data/sdmx/code/age-Y15T65</a>   TTL	15 to 65 years old	Y15T65	IAEG-SDGs: 15 to 65 years old
<a href="https://purl.semanticip.org/linked-data/sdmx/code/age-Y15T64">https://purl.semanticip.org/linked-data/sdmx/code/age-Y15T64</a>   TTL	15 to 64 years old	Y15T64	IAEG-SDGs: 15 to 64 years old
<a href="https://purl.semanticip.org/linked-data/sdmx/code/age-Y15T60">https://purl.semanticip.org/linked-data/sdmx/code/age-Y15T60</a>   TTL	15 to 60 years old	Y15T60	IAEG-SDGs: 15 to 60 years old

### List of elements

Show / Hide filter

Contains in Label:

to 6

Contains in Notation:

15

Filter



# BENEFITS OF USING IoBP IN CISSTAT

Dereferencing and one-click access to a machine-readable model of the code (TTL)

List of elements

Show / Hide filter

Contains in Label:

Contains in Notation:

Filter

Total items: 212

URI	Label	Notation	Labels from agencies
<a href="https://purl.semanticip.org/linked-data/sdmx/code/age-Y12">https://purl.semanticip.org/linked-data/sdmx/code/age-Y12</a>	age-Y12		
<a href="https://purl.semanticip.org/linked-data/sdmx/code/age-M24T59">https://purl.semanticip.org/linked-data/sdmx/code/age-M24T59</a>			
<a href="https://purl.semanticip.org/linked-data/sdmx/code/age-Y17">https://purl.semanticip.org/linked-data/sdmx/code/age-Y17</a>			
<a href="https://purl.semanticip.org/linked-data/sdmx/code/age-Y32">https://purl.semanticip.org/linked-data/sdmx/code/age-Y32</a>			
<a href="https://purl.semanticip.org/linked-data/sdmx/code/age-Y1T4">https://purl.semanticip.org/linked-data/sdmx/code/age-Y1T4</a>			
<a href="https://purl.semanticip.org/linked-data/sdmx/code/age-Y41">https://purl.semanticip.org/linked-data/sdmx/code/age-Y41</a>			
<a href="https://purl.semanticip.org/linked-data/sdmx/code/age-Y15T44">https://purl.semanticip.org/linked-data/sdmx/code/age-Y15T44</a>			
<a href="https://purl.semanticip.org/linked-data/sdmx/code/age-Y_GE18">https://purl.semanticip.org/linked-data/sdmx/code/age-Y_GE18</a>			
<a href="https://purl.semanticip.org/linked-data/sdmx/code/age-Y30">https://purl.semanticip.org/linked-data/sdmx/code/age-Y30</a>			
<a href="https://purl.semanticip.org/linked-data/sdmx/code/age-Y_GE46">https://purl.semanticip.org/linked-data/sdmx/code/age-Y_GE46</a>			

age-Y12

@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .  
@prefix sip-sdmx: <https://purl.semanticip.org/linked-data/sdmx/> .  
@prefix sip-sdmx-agency: <https://purl.semanticip.org/linked-data/sdmx/agency/> .  
@prefix sip-sdmx-code: <https://purl.semanticip.org/linked-data/sdmx/code/> .  
@prefix skos: <http://www.w3.org/2004/02/skos/core#> .  
  
sip-sdmx-code:age-Y12 a skos:Concept,  
    sip-sdmx-code:Age ;  
    rdfs:label "12 years" ;  
    skos:inScheme sip-sdmx-code:age ;  
    skos:notation "Y12"@en ;  
    skos:prefLabel "12 years" ;  
    skos:topConceptOf sip-sdmx-code:age ;  
    sip-sdmx:hasAgencyLabel [ rdfs:label "12 years" ;  
        sip-sdmx-agency:agenciesID sip-sdmx-agency:UIS ] .

# APPLICATION OF SEMANTIC SDMX IN CISSTAT LOSD

## Number of employed population

### INTERNATIONAL NAME

Number of employed

### SUBSECTIONS

[Labor resources](#)

### DESCRIPTION OF THE INDICATOR

The indicator characterizes the number of employed people (aged 15 years and older), established for measuring the labor force.

According to the document [Methodological Explanations for Completing Questionnaire No. 14](#), the employed population includes all sectors of the economy. Thus, the number of employed should include persons working in state enterprises and organizations (peasant) households, as well as those engaged in individual labor activity, in personal subsidiary farming and for individual households.

### LINKS TO REGULATORY DOCUMENTS

- [Resolution I of the 19th ICLS on statistics of work, employment and labour underutilization](#)
- [Methodological explanations for filling out questionnaire No. 14](#)

### DATA SOURCES

Form [Table 14.1b. Distribution of the employed population by type of economic activity on average per year \(persons\)](#)

Form [Table 14.10. Economic activity of the population/labor force \(people\)](#)

### DATA COLLECTION METHODOLOGY

The labour force survey is conducted according to the methodology of the International Labour Organization (ILO) in accordance with the [ILO Recommendations on the Measurement of the Labour Force](#).

The data are collected using forms [Table 14.10](#) and [Table 14.1b](#), which are completed based on data from the Labor Force Survey.

Recommendations for filling out are presented in the document [Methodological explanations for filling out questionnaire No. 14](#).

### VALUES FOR THE PERIOD

[Average for the period](#)

### UNITS OF MEASUREMENT

Humans

### PERIODICITY (FREQUENCY) OF DISTRIBUTION

[Annually](#)

### FREQUENCY OF COLLECTION

[Annually](#)

### THE SYSTEM OF CLASSIFIERS

1. Reporting period
2. Types of economic activities (NACE Rev. 2)
3. Floor
4. CIS countries
5. Level of education
6. Age group
7. Employment status

## CIS countries

### Description

#### URI

<http://purl.cisstat.org/Common/vocabs/country/1.0>

#### SOURCE

The CIS Country Directory (hereinafter the Directory) is prepared on the basis of the [Classifier of Countries of the World](#) (hereinafter, the CIS CCM). The Directory is linked to the elements of the [SDG reference area code list \(SDMX\)](#), using the [Interoperability Basis Platform](#). Links have been established with the elements of [DBpedia](#), [EU Vocabularies](#), [GeoNames](#), [OASIS GeoLang TC](#).

#### PURPOSE

The reference book is used in statistical data sets that contain data across the CIS countries.

#### STRUCTURE

The directory structurally consists of a list of elements, each of which includes blocks: identification, description and URI.

Identification includes a three-digit numeric code, two-letter and three-letter ISO codes, and the URI of the element. Description includes the names of the countries that are part of the CIS. URI includes related external URIs.

The Handbook also shows the composition of the CIS.

The list of countries presented in the Directory includes countries (territories, regions) from Table 1 of the CIS CSM.

#### DESIGNATION

C

Directory in RDF format

## COMMONWEALTH OF INDEPENDENT STATES

URI : <http://purl.cisstat.org/Common/vocabs/country/1.0#CIS>

Digital code : 172

Equivalents :

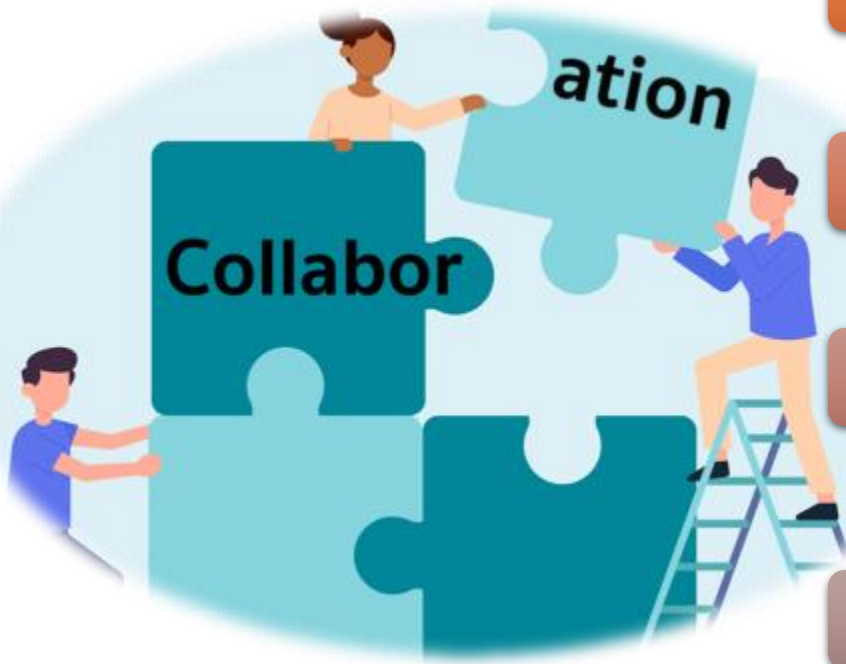
[https://dbpedia.org/page/Commonwealth\\_of\\_Independent\\_States](https://dbpedia.org/page/Commonwealth_of_Independent_States),

<https://purl.semanticip.org/linked-data/sdmx/code/area-172>,

<https://purl.semanticip.org/linked-data/sdmx/code/area-R14>

# DISCUSSION. SDMX SEMANTIC GAPS

# SDMX



# IoBP

## Missing links between related code lists

- Code lists from different agencies (e.g., CL\_AREA from IMF, ESTAT, UNSD, SDMX, UIS, IAEG-SDGs) are not semantically connected, despite overlaps

## Lack of descriptions, purposes, and sources for code lists

- Code lists lack description, purpose, and source. Users cannot interpret code semantics without additional references

## Limited glossary semantics

- XML-version of glossary only uses RELATED\_TERMS, which does not reflect full relationships between terms

## Inconsistent source references

- In the XML version of the SDMX Glossary, most concepts are linked to sdmx.org as the only source. In contrast, its HTML version points to concrete sources, including SDMX, SIMS, and DQAF (IMF) documents. It prevents correct RDF mapping without expert involvement

## Semantic “loops” in concept definitions

- Some concepts are defined through other concepts, requiring expert correction to resolve circular references

## Unused glossary terms

- 83 of 229 glossary terms do not appear in any published SDMX documentation (v2.1, 3.0, 3.1)

# IoBP FOR SDMX SEMANTIC TRANSFORMATION

## SDMX



## IoBP

**Our proposal:** enhancement and semantic transformation of SDMX in collaboration with SDMX developers for making SDMX AI-ready

**Bridging semantic gaps** — jointly transforming SDMX components into the Semantic Web environment, consolidating the efforts of international initiatives (EU SDMX Registry, ShowVoc, IoBP and others)

**Alignment and enrichment** — Expert collaboration to refine and enrich glossaries, code lists, and semantic links across agencies

**Advancing glossary and code lists** — enhancing definitions, applicability, and linking for practical use in LOSD

**Iterative review of semantics** — jointly assessing and improving RDF models to deliver reusable semantic assets

**Automating generation and publishing** of unified code lists, enriched glossary terms, and RDF/TTL assets with increasing semantic quality



## ANY QUESTIONS?

We are open for  
cooperation

[cisstat@cisstat.org](mailto:cisstat@cisstat.org)

[info@semanticip.org](mailto:info@semanticip.org)



**INTERSTATE STATISTICAL COMMITTEE OF THE  
COMMONWEALTH OF INDEPENDENT STATES**

**WELCOME TO THE STATISTICS OF THE COMMONWEALTH OF INDEPENDENT STATES**