TurkStat's Modernization Studies on Official Statistics Production: Implementation of Standards and Models for Metadata and Statistical Production Management

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AGENDA

Metadata and Production Systems Management in TurkStat

TurkStat's Goals for the New Digital Age

Modernization in TurkStat's Perspective

Production Management System of TurkStat

Metadata Driven Design – How to?

ModernStat Models and Their Utilization

Key Remarks & Conclusion

Metadata and Production Systems Management Team of TurkStat

➢ To design metadata management systems,

➢ To determine the reference and structural metadata structures for data collection and dissemination tools used in statistical production processes,

➢ To establish and manage the statistical product management system,

➢ To design the organization's process management system,

➢ To carry out modernization studies in statistical production processes,

➢ To determine and implement the standards and/or information models to be used in the formation of national registry systems and metadata systems.

Going Beyond Usual

The role of Turkstat goes beyond conducting usual production of statistics: Governmental Data Space, National Data Dictionary, Official Standard for National Registry Systems and related and required legislation are on the table.

New business environments, agile production systems and adoptable and compatible architectures.

Modernization

TurkStat's philosophy on Modernization:

Centrally managing the production environment that is separated into well structured sub-modules, in which all inputs and outputs are identified and controlled, processes are transparent, well-defined and monitored, and the system is managed by means of metadata pieces that are re-useable and the overall production is maintained by transferring metadata information across sub-modules. The environment is at all times open to continuous improvement without distracting the production processes, so that production can be separated from design.

TurkStat's Pursuit

To establish a metadata-driven production architecture

To make metadata an «eligible» element of the Institute's culture.

TurkStat's Undergoing Industrialization Project

TurkStat's Industrialization Project: Product Management System ProMa(01.01.2021 -)

Background: Prior to ProMa, there was no central management system for production and metadata. Metadata were scattered at different data environments that were not able to communicate and sometimes out of standards.

With this project some modules were created for the first time and some of them have been replaced.

Related GSBPM activities are being migrated to the system as submodules.
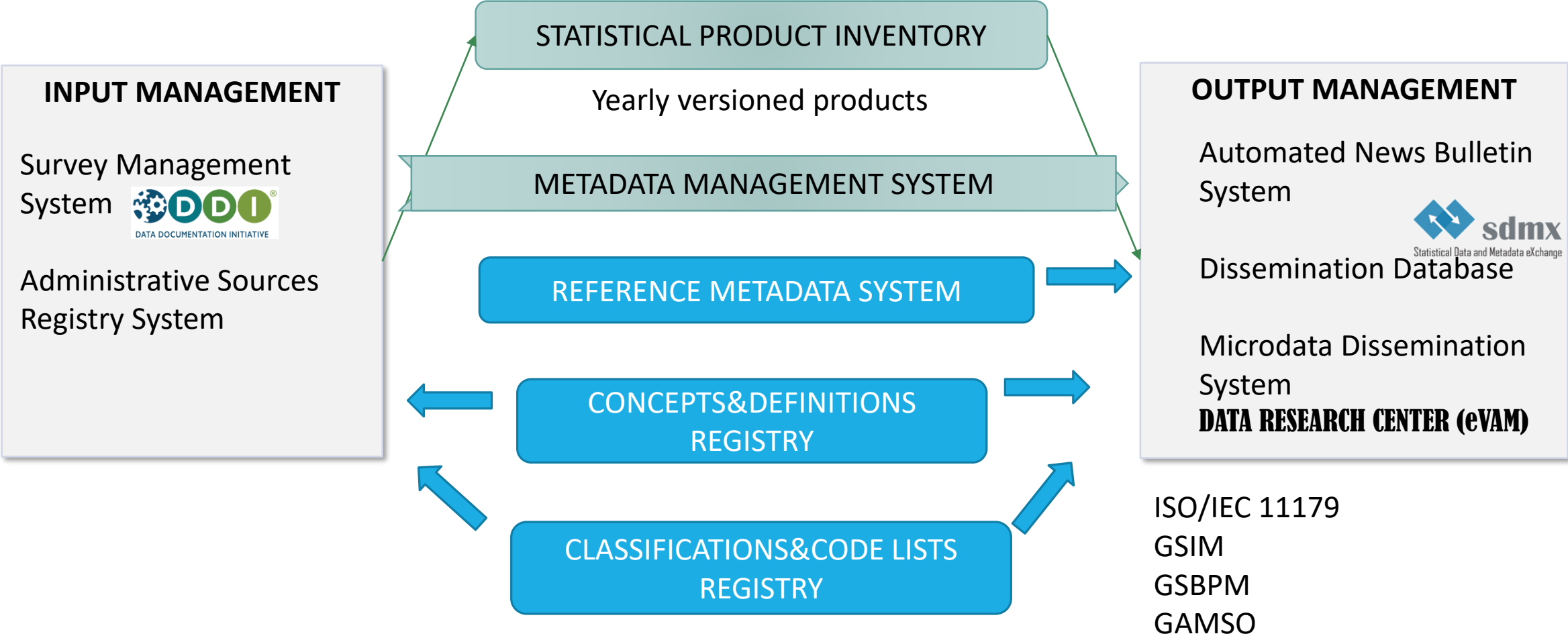
Implementing ModernStats in TurkStat

Metadata team designs new metadata related systems or contributes to integration and communication between sub-systems

In TurkStat live metadata information is used to provide and enhance communication between processes and sub systems.

While doing this, we always examine and prioritize the usage and utilization of international standards and models.

TURKSTAT PRODUCTION MANAGEMENT SYSTEM

STATISTICAL PRODUCT INVENTORY

Yearly versioned products

INPUT MANAGEMENT

Survey Management System

Administrative Sources Registry System

METADATA MANAGEMENT SYSTEM

REFERENCE METADATA SYSTEM

CONCEPTS&DEFINITIONS REGISTRY

CLASSIFICATIONS&CODE LISTS REGISTRY

OUTPUT MANAGEMENT

Automated News Bulletin System

Dissemination Database

Microdata Dissemination System

DATA RESEARCH CENTER (eVAM)

ISO/IEC 11179
GSIM
GSBPM
GAMSO

PROCESS MANAGEMENT SYSTEM

Metadata Driven Design – How to?

Live metadata is the key to drive the system.

Artifacts being kept identifiable, maintainable and versionable are preserved in reusable format in the systems.
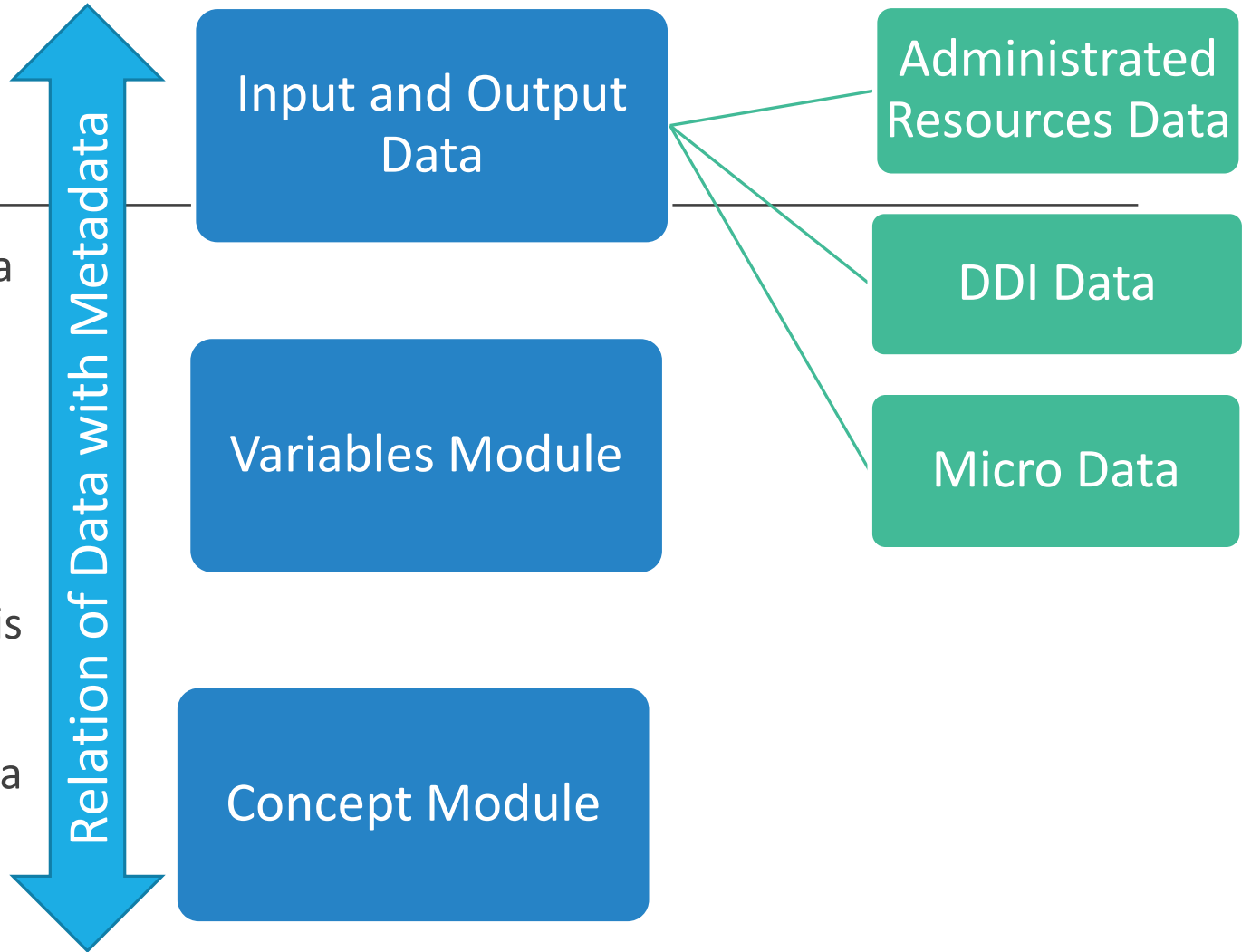
GSIM Utilization

GSIM is mainly used for structural metadata formation.

Unit type, population, variable, concept, represented variable and instance variable of GSIM.

A total of 15000 definitions according to this GSIM structure are documented.

The phase of integrating this module to data management module is going on.

Relation of Data with Metadata

Input and Output Data

Variables Module

Concept Module

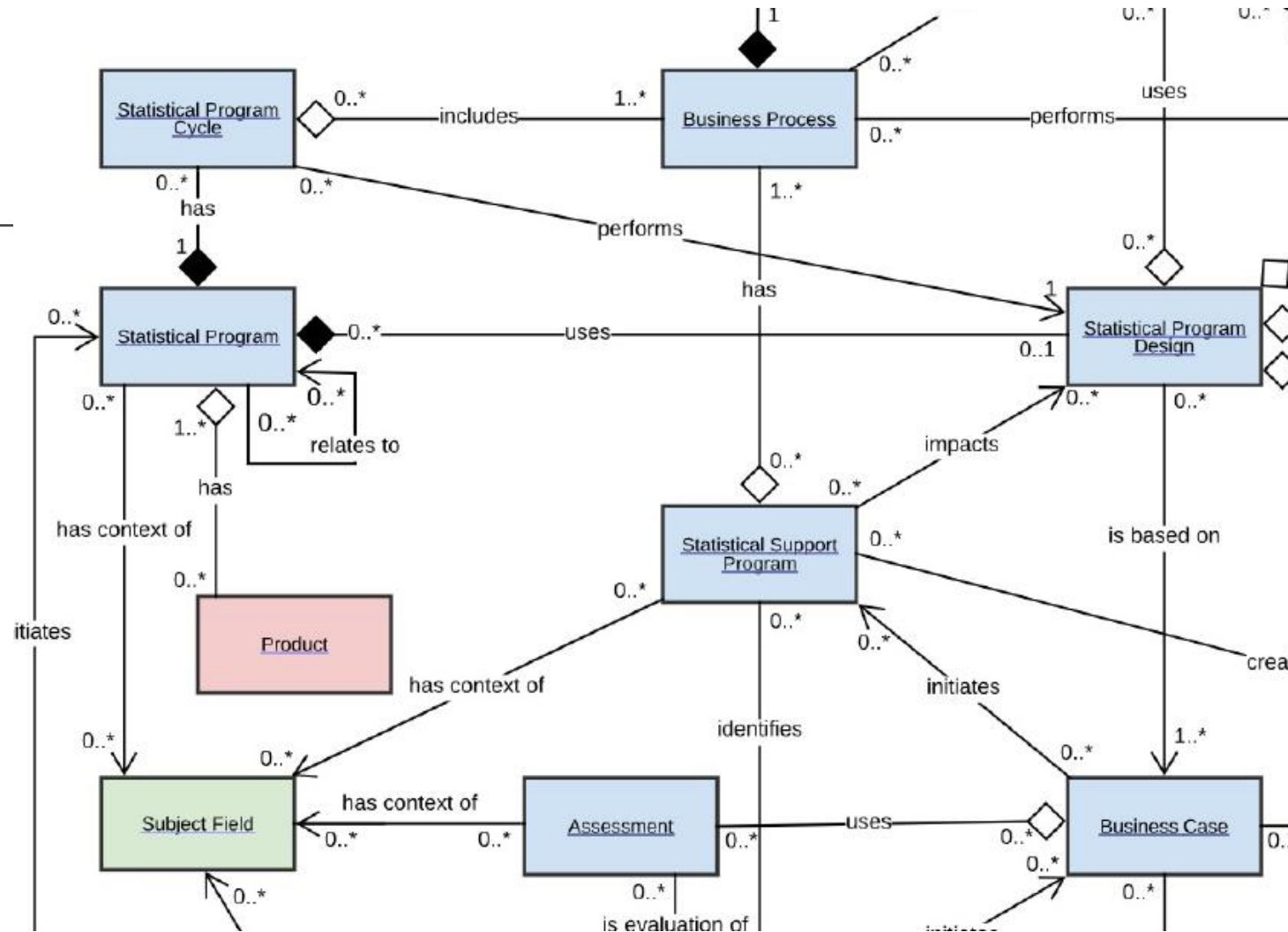**Administrated Resources Data**

DDI Data

Micro Data

GSIM Utilization

For process management side, the terminology that is used has been converted to GSIM language.

The yearly calendar module uses GSIM terminology.

Statistical Program, Product and Statistical Program Cycle are some of the important objects that are used.

GSBPM Utilization

Establishment of a systematic process management work is being carried out for about 8 years in Turkstat.

GSBPM is always used as a guide. Mappings of the system to GSBPM has always been carried out.

The idea is constructing a live process management system aligned with GSBPM: monitor the ongoing production, in which performance and quality indicators are integrated and examined.

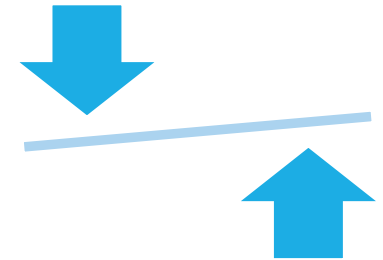ISO 9001 Project, GSBPM for managing PDCA cycles all over the production phases.

KEY REMARKS

As TurkSat, we believe in the importance of international standards and models.

Modernization is a never ending journey and ModernStats models may serve as a basis.

Emphasize must be on the real practical use.

Online easily accessible platforms used to share real life implementation experiences would be useful.

Thank you for your attention.

Metadata and Production Systems Group Head

TurkStat

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