TWINNING CONTRACT

JO/13/ENP/ST/23

Strengthening the capabilities of the Department of Statistics in Jordan

MISSION REPORT

on

Activity: Activity 3.7: Metadata strategy – I

Mission carried out by
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24-28 August 2014

Version: Final

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List of Abbreviations

DoS	Department of Statistics of Jordan
ToR	Terms of Reference
BPM	Business Process Management
DDI	Data Documentation Initiative
SDMX	Statistical Data and Metadata Exchange
SIMS	Single Integrated Metadata Structure
SMS	Statistical Metadata System

Executive Summary

In general there is a need for initiatives on all aspects of metadata including clear definition of metadata, what are metadata used for, what metadata should be included in the coming metadata system, how to move forward with existing scattered systems. Metadata should not be seen in isolation. Before deciding on roadmap for the work forward it is important both to investigate the current situation ("as-is") and discuss and prepare input on where DoS want to go ("to-be"). In addition it is important the strategy on metadata is aligned with other strategies. The recommendations below all focus on how to get input to the strategy before deciding on the roadmap.

Recommendation:
- The work should follow the Business Process Management methodology as the overall methodology. This work on the metadata strategy should be split into a) development of strategy b) implementation of the strategy. The development of the strategy will take place as part of the Twinning Project. The result of the work comprises among other things of an overall analysis of the current situations in terms of processes, existing metadata, standards, existing it-infrastructure.
- Complete documentation on Agriculture and 2-3 other selected survey. The purpose of this activity is to get an overview of processes in order to get input to the strategy. Extend template with a) regulations and guidelines and b) short description of IT - which software, how the software works from a technical point of view. The description of IT must include both metadata and non-metadata applications. Document prepared: templates for GSBPM process-descriptions, variables and code-lists. The templates on variables should be completed with variable name, label description and reference to code-list-name. A list of variables should be provided for each main dataset (raw data and clean data). The templates on code-lists should be completed with code, name, description etc. The names of the code-lists are referred to in variables code-lists. See details on content in the excel spreadsheet.
- Prepare overall IT infrastructure diagram

Elements in the strategy/roadmap

A document with suggested elements in the strategy was prepared including a separate template with guidelines for processes. It is recommended that DoS elaborates on this before the next mission. It is suggested to establish long-term objectives covering five year and to divide the implementation into 5 periods of one year. The implementation should be evaluated each year and based on the evaluation the plan should be aligned for the following years.

1. Introduction and current situation
Recommendation: Complete suggested text

2. Background including definitions and standards
Recommendation:
- Elaborate on content and introduce needed details.
- Conduct introductory training sessions on GSBPM, GSIM, DDI, SDMX before mission. The participant should be the member of process, quality and metadata high level group.

3. Objectives

Recommendation: Elaborate on suggested objectives content and introduce expected results based on user needs. Note that the strategy will only contain overall user-needs based on preliminary investigations.

4. Initiatives

Recommendation: Elaborate on suggested initiatives. Please note that these initiatives do not cover the work to be done as part of the development of the strategy. Please note that this part later will be turned into a roadmap.

5. Organisation

Recommendation: Appoint members of the Process, Quality and Metadata high level group. Discuss and elaborate on tasks. This group should be established now and be responsible the development of the strategy. After approval of the strategy this group should be responsible for the management of implementation of the strategy. The development of the roadmap for the implementation the strategy will include details on how to organize projects decided upon.

Annex 1: Guidelines for work-processes including metadata

Recommendation: Discuss and make preliminary changes on suggested descriptions using the suggested template. Extend template with a) regulations guidelines and b) IT solution. Please note that this is for the future. Content, form and use of these guidelines should be discussed at the next mission.

Annex 2: IT solution

Recommendation:

1. In the short run use a simple excel- or word-based architecture (one Excel workbook per survey). The content of the templates prepared contains elements that can later be imported into DDI software (Colectica). Translation to Arabic done by DoS and Colectica. Introduction to Colectica and other tools will take places at the next mission. Note this solution should be used both in the strategy development phase and the first parts of the strategy implementation.
2. Based on descriptions of existing IT-infrastructure a future overall IT-infrastructure should be prepared. This infrastructure should cover both metadata and non-metadata systems. Note that this work must be aligned with parallel activities on IT-strategy, organisation of IT-activities, decision on workflow.

1. General comments

This mission report was prepared within the Twinning Project "Strengthening the capabilities of the Department of Statistics in Jordan". It was the sixth mission to be devoted to Quality and Metadata within Component three of the project.

The purposes of the mission were:

- Assessment on current use of metadata systems incl. IT
- Presentation of different metadata systems
- Discussion on options for Jordan
- Discussion of the content of a metadata strategy

The consultant would like to express his/her thanks to all officials and individuals met for the kind support and valuable information which he/she received during the stay in Jordan and which highly facilitated the work of the consultant.
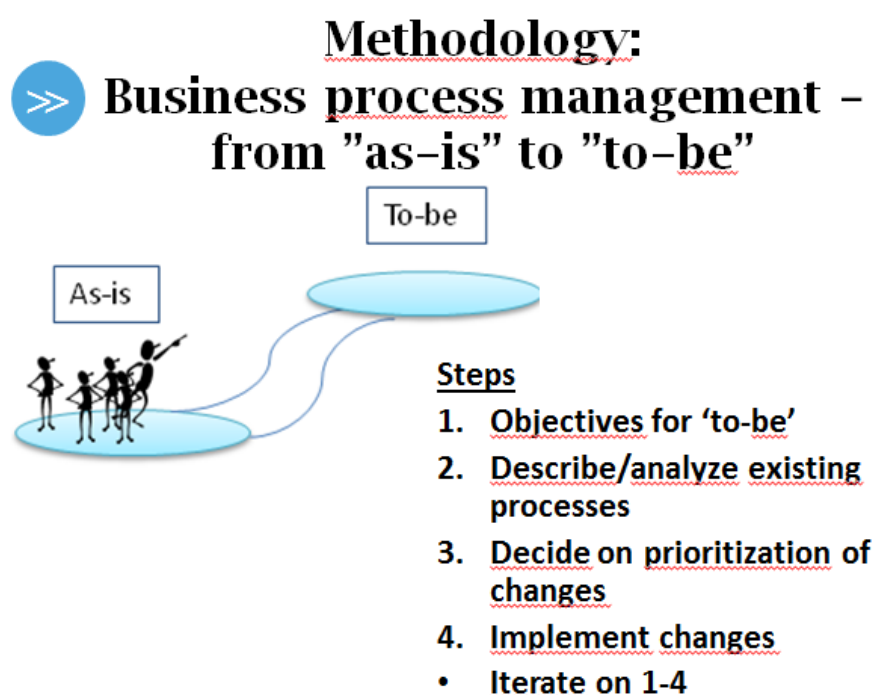
This views and observations stated in this report are those of the consultant and do not necessarily correspond to the views of EU, DoS or Statistics Denmark.

2. Assessment and results

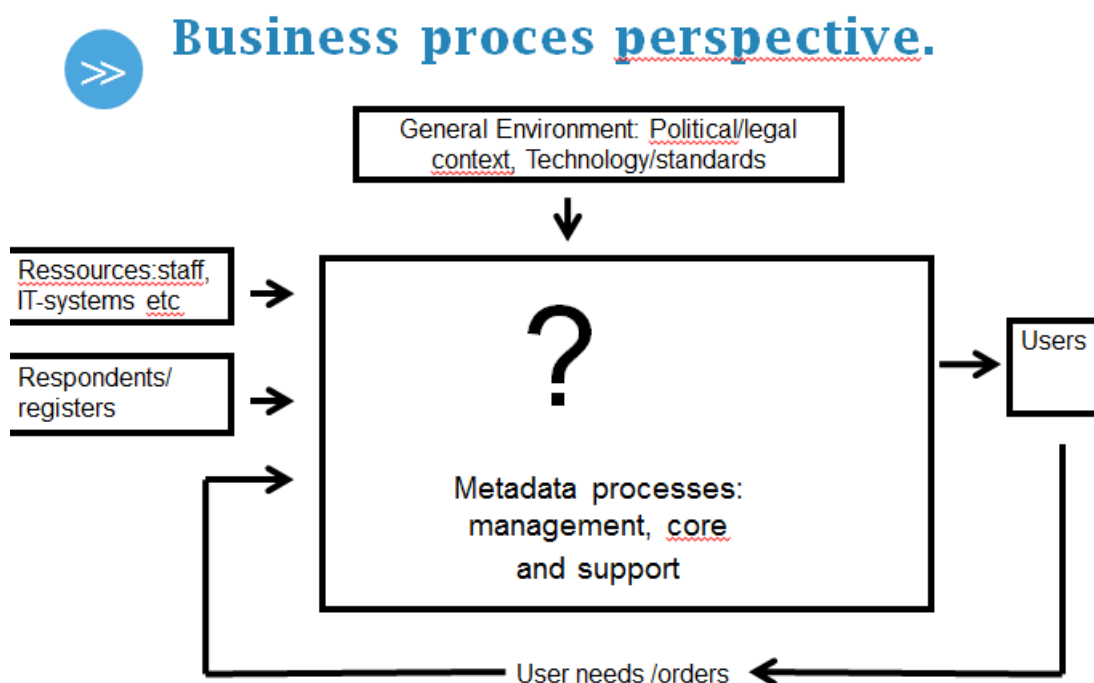*Starting point is the list of activities mentioned in the ToR.*

2.1 Presentation and methodology for the analysis at the mission

The overall approach is Business Process Management focusing on the "as-is" and "to-be" states.
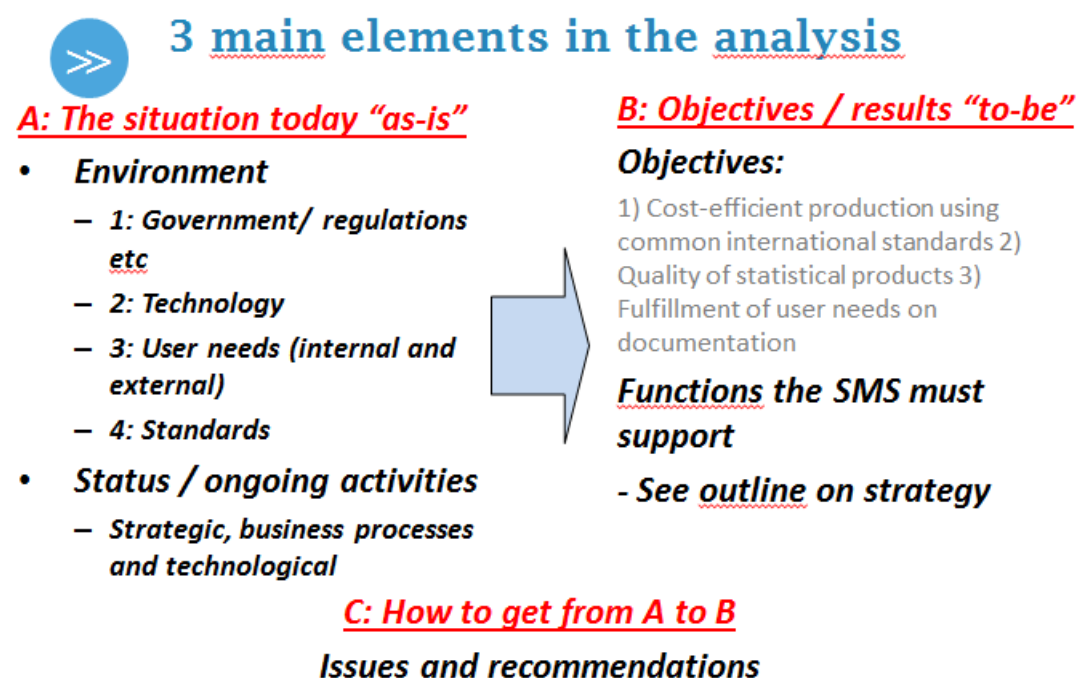

Figure 1. *Methodology: Business Process Management*

The business process perspective implies that focus is on end-to-end processes, following the ideas on theory on the value-chain. Each sub-process must contribute to the value of the product delivered to the user/customer. The production-processes, including processes on metadata, must be designed to fulfil goals for the organisation – including goals on cost-effectiveness.

Business proces perspective.

General Environment: Political/legal context, Technology/standards

Ressources:staff, IT-systems etc

Respondents/ registers

?

Metadata processes: management, core and support

Users

User needs /orders

Figure 2. *Business process perspective with environment elements.*

Figure 3 below depicts the three elements in the analysis undertaken during the mission.

3 main elements in the analysis

A: The situation today "as-is"

- **Environment**
  - **1: Government/ regulations etc**
  - **2: Technology**
  - **3: User needs (internal and external)**
  - **4: Standards**
- **Status / ongoing activities**
  - **Strategic, business processes and technological**

B: Objectives / results "to-be"

Objectives:

1) Cost-efficient production using common international standards 2) Quality of statistical products 3) Fulfillment of user needs on documentation

Functions the SMS must support

- See outline on strategy

C: How to get from A to B

Issues and recommendations

Figure 3. *The main elements in the analysis. Note that the text in grey has been inserted based on conclusion during the mission.*

2.2 Currrent situation at DoS

The following issues from assessment missions was discussed

1. Parallel projects focusing on different aspects of metadata with no clear direction
2. No integration with the dissemination platform
3. Metadata inside local applications
4. NADA – an initiative on a common system
5. Different perceptions about what metadata is
6. Different perceptions on which metadata is needed

In general there is a need for initiatives on all aspects of metadata – including clear definition of metadata, what are metadata used for, what metadata should be included in the coming metadata system, how to move forward with existing scattered systems. In addition to applications above the use of for creating of dynamic web-pages was introduced.

Regarding the use of NADA and other metadata-systems DoS expressed a wish to move towards a common integrated system with on stand-alone metadata-systems.

2.3 Current use of metadata systems in Statistics Denmark

The development in Statistics was presented. It was stressed that the situation in Denmark and many other countries is characterized by scattered systems. The link below gives and impression on the work initiated in 2009.

The adoption of METIS GSBPM in Statistics Denmark

2.4 Content of a metadata strategy

The starting point was the following outline:
1. Introduction, including situation today
2. Background, including standards, UN approach
3. Objectives and results (what)
4. Tasks and time-table (how and when)
5. Organisation (who)

Annex 1. Guidelines for production and use of metadata
Annex 2. IT-solution
1. High level architecture
2. Applications and databases

Deciding on objectives took its starting point in "Part A - Statistical Metadata in a Corporate Context". The following principles were stressed: a) Reuse metadata where possible for statistical integration as well as efficiency reasons (we don't want metadata graveyards in stand-alone systems);   b) manage metadata as an integrated part of GSBPM; c) make

metadata active to the greatest extent possible, active metadata being metadata that drive other processes and actions.

The 15 functions for a SMS were discussed. Out of the 15 functions, that the SMS should support, 12 were selected and organised into the three areas:
- A. Cost efficient production using international standards
    - a) The statistical metadata system must support
    - b) Planning, designing, implementing and evaluating statistical production processes including
    - c) Standardizing of workflows and processes.
    - d) Documenting data collection, storage, evaluation and dissemination.
    - e) Knowledge base on the processes of statistical information systems, to share knowledge among staff
    - f) Improving administration of statistical information systems

B. Improvement of quality
- a) Improving the quality of statistical data and transparency of methodologies.
- b) Managing methodological activities, standardizing and documenting concept definitions and classifications.

C. Fulfillment of user needs for documentation
- a) Managing communication with end-users of statistical outputs and gathering of user feedback.
- b) Improving discovery and exchange of data between the statistical organization and its users
- c) Improving integration of statistical information systems with other national information systems and
- d) Disseminating statistical information to end users – including assistance for post-processing of statistical data and
- e) Improving integration between national and international organizations, including harmonization of content

As part the work at the mission the following documents were prepared

- "As is" documentation on agriculture
- Document with input to strategy / roadmap
- Template in excel on variables and code-lists
- Template for guidelines following GSBPM (this template could be included in the excel sheet)

2.5 Options for DoS

The following options for DoS were discussed.
1. Full DDI / SDMX solution (suggested tool: Coletica). It is recommended to be used as it is comprehensive software for indicators and surveys metadata.
2. Colectica Express
3. Excel solutions (short run) import into Colectica or other DDI software (long run)

The challenge on introducing new software and new approaches were discussed. Firstly important to find ways forward so that „the old and the new can coexist". Secondly the

solution must take the organisational capabilities or maturity into account. These capabilities include ability and ressources to build the needed project organisation including managament, knowledge on IT, knowledge on standards etc. Part of this assessment has been carried out at an earlier mission.

3. Conclusions and recommendations

See executive summary.

Actions needed for moving forward as well as for preparing the next mission –add rows as needed.

Action	Deadline	Responsible person
1. Prepare templates (Arabic and English) and complete templates on selected surveys	Next mission	Mr Mohammad Khalaf
2. Training on GSBPM, DDI, SIMS and SDMX, including process documentation on selected surveys	Next mission	Mr Mohammad Khalaf
3. Elaborate strategy	Next mission	Mr Mohammad Khalaf

Annex 1. Terms of Reference

Terms of Reference

EU Twinning Project JO/13/ENP/ST/23

24 -28 August 2014

Component 3: Quality and metadata

Activity 3.7: Metadata strategy – I

0. Mandatory results and benchmarks for the component
- Statistics published by DoS are quality assured and documentation is improved (Apr 2015)
- Assessment report on current situation (Jan 2014)
- The consequences of applying the European Statistics Code of Practice in DoS are discussed (Apr 2014)
- Develop a standard format for a quality declaration (Jul 2014)
- A quality declaration for the national accounts is completed and published on the DoS website (Jan 2015)
- Develop a metadata strategy (Jan 2015)
- Design and test a quality audit (Apr 2015)

1. Purpose of the activity
- Assessment on current use of metadata systems incl. IT
- Presentation of different metadata systems
- Discussion on options for Jordan
- Discussion of the content of a metadata strategy

2. Expected output of the activity
- Knowledge gained on current metadata system
- Recommendations prepared for a metadata strategy based on international standards
- Transfer of the Danish and in general the European Union, experience in metadata systems
- To decide upon the preferred timing of the next activity (3.8, Suggestion 2. November – 6. November 2014?)
- A lining up of work programme for the next activity (3.8)

3. Participants

<u>DoS</u>
Mr Mohammad Khalaf, Head of Quality Division (*Component Leader*)
Mr Duraid Al-Shawawreh, Quality Division

<u>Quality team:</u>

Mr Bassam Al-Zain, Agricultural Survey Directorate
Mr Basem Shannek, Development & Strategic Planning Unit
Mr Mohammad Damrah, Economic Survey Directorate

<u>MS experts</u>
Mr Mogens Grosen Nielsen, Chief Adviser, Research Services, Statistics Denmark
Mr Flemming Dannevang, Senior Adviser, Research Services, Statistics Denmark

Programme for the mission

Time		Place	Event	Purpose / detail
Sunday, morning	08.30 – 10.00	Hotel /DoS	Meeting with RTA	To discuss the programme of the week
Sunday, morning	10.00 – 12.00	DoS	Meeting with BC Component Leader and BC Experts	Discussions of the week's programme Presentation by DoS on the current use of metadata systems, including IT, in DoS.
	12.00 – 01.00		Break / Preparations / Report writing	Break / Preparations / Report writing
Sunday, afternoon	01.00 – 03.30	DoS	Meeting with BC Component Leader and BC Experts	Presentation by experts on the current use of metadata systems, including IT in Statistics Denmark and in Europe in general.
	03.30 – 04.00		Preparations / Report writing	Preparations / Report writing
Monday, morning	08.30 – 09.00	DoS	Preparations / Report writing	Preparations / Report writing
	09.00 – 12.00		Meeting with BC Component Leader and BC Experts	Presentation by experts of different metadata systems.
	12.00 – 01.00		Break / Preparations / Report writing	Break / Preparations / Report writing
Monday, afternoon	01.00 – 03.30	DoS	Meeting with BC Component Leader and BC Experts	Continued.
	03.30 – 04.00		Preparations / Report writing	Preparations / Report writing
Tuesday, morning	08.30 – 10.00	DoS	Preparations / Report writing	Preparations / Report writing
	10.00 – 12.00		Meeting with BC Component Leader and BC Experts	Discussions of options regarding metadata in DoS.
	12.00 – 01.00		Break / Preparations / Report writing	Break / Preparations / Report writing
Tuesday, afternoon	01.00 – 03.30	DoS	Meeting with BC Component Leader and BC Experts	Continued.
	03.30 – 04.00		Preparations / Report writing	Preparations / Report writing

Wednesday, morning	08.30 – 09.00	DoS	Preparations / Report writing	Preparations / Report writing
	09.00 – 12.00		Meeting with BC Component Leader and BC Experts	Discussions of the content of a metadata strategy.
	12.00 – 01.00		Break / Preparations / Report writing	Break / Preparations / Report writing
Wednesday, afternoon	01.00 – 03.30	DoS	Meeting with BC Component Leader and BC Experts	Continued.
	03.30 – 04.00		Preparations / Report writing	Preparations / Report writing
Thursday, morning	08.30 – 09.00	DoS	Preparations / Report writing	Preparations / Report writing
	09.00 – 11.30		Meeting with BC Component Leader and BC Experts	Discussion of an outline for a metadata strategy.
			Ad-hoc meetings	Discussions of work programme until and for the next mission.
				Final clarifications with BC Experts, preparation of report and presentation for BC Project Leader
Thursday, morning	11.30 – 12.30	DoS	Meeting with BC Component Leader	Presentation for BC Project Leader
Thursday, noon	12.30 – 01.00	DoS	Debriefing with BC Project Leader	Conclusions and decisions and their consequences for the next activity and the implied work programme for BC Experts

Annex 2. Persons met

<u>DoS:</u>

1. Mr Mohammad Khalaf, Head of Quality Division (*Component Leader*)
2. Mr Duraid Al-Shawasreh, Quality Division
3. Abdul Nasser K.N Tahat, Quality Division
4. Mr Bassam Al-Zain, Agricultural Survey Directorate, member of Quality Team
5. Mr Basem Shannek, Development & Strategic Planning Unit, member of Quality Team
6. Mr Mohammad Damrah, Economic Survey Directorate, member of Quality Team
7. Mr Mohammad Abdel Razzaq, Head of Price Division
8. Mr. Washi Alali, Price division
9. Mr. Kafa Nori Alrabee, Economic Survey Division
10. Mr. Manar Hassan Aljokh, Population Division
11. Ms. Manal Khuffash, Web developer /IT
12. Mr., Tamam Jamil Yassin, Directorate of Agricultural Statistics

<u>External stakeholders:</u>

<u>RTA Team:</u>
Thomas Olsen, RTA