TWINNING CONTRACT

JO 21 ENI ST 01 22

Strengthening the capacity of Jordan's Department of Statistics in terms of compilation, analysis and reporting of statistical data in line with International and European best practices

MISSION REPORT

on

Component 1

To develop a plan for an integrated administrative data system in Jordan, undertake pilot projects on the establishment of the Statistics Business Register (SBR) and strengthen population statistics

Activity 1.0.B

Assessment of current situation and development of the first rolling work plan for data flow

Mission carried out by

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October 13, 2022

Version:1.1

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List of Abbreviations

- BC – Beneficiary Country
- CoP – General Population and Housing Census 2015
- DoS – Department of Statistics
- MS – Member State
- PL – Project Leader
- RTA – Resident Twinning Advisor
- SBR – Statistical Business Register
- STE – Short-Term Expert

1. General comments

This mission report was prepared within the Twinning Project "Strengthening the capacity of Jordan's Department of Statistics in terms of compilation, analysis and reporting of statistical data in line with International and European best practices". This was the second planning activity in component 1 and the actions planned for this activity were carried out as scheduled.

The purposes of the planning mission were:

- Assessing the current situation for using administrative data in Jordan with particular focus on:
    - Dataflow between the DoS and counterpart institutions
    - IT
    - Data security
    - Training

- Defining Indicators for the Mandatory Results mentioned in MR 1.4

- Drafting the first rolling work plan for an integrated administrative data system in Jordan with focus on MR 1.4. This activity is a continuation of activity 1.0.A.

Background:

Mandatory Result 1.4: Develop strategy for ensuring flows of data between the DoS and counterpart institutions are established on an ongoing basis for the pilot projects above

The integration of new administrative data sources by the DoS must be established on a long-term sustainable basis. This requires the adoption of international standards in terms of statistical concepts, classifications and methodologies, and the use of common identifiers by the government departments providing the source data.

In addition, the necessary technical infrastructure needs to be developed to facilitate data transfers on an ongoing basis. This sub-component will investigate the harmonisation of statistical classifications and identifiers for the datasets used in the pilot projects, and the technical requirements needed for the sharing of data between the DoS and the partner institutions on an ongoing and sustainable basis.

It will also review the internal flows of these data within the DoS, and make recommendations, as appropriate.

The consultants would like to express their sincere thanks to all officials and individuals met for the kind support and valuable information which they received during the stay in Jordan and which highly facilitated their work. The views and observations stated in this report are those of the consultants and do not necessarily correspond to the views of EU or Statistics Denmark.

2. Assessment and results

The experts' assessment of the situation and the prerequisites for obtaining the wanted results will follow the logic and course of the visit which was divided into three days with specific programmes on each day.

3 annexes are submitted together with this report. There are 2 presentations named "IT From order taker to powerful business partner October 2022" and "DST dataflow and systems in one slide". The 3rd annex is an excel spread sheet with the title "Template for business case and assessment of service provider".

Day one programme:

- Introduction to component 1 and an introduction to DoS and the National Statistical System in Jordan: The situation at DoS as presented by staff at DoS.
- Overview of IT infrastructure and data flow – status, needs and challenges. Keypoints:
- Infrastructure and network, information security, data collection, data storage, dilemmas, metadata, hybrid census in 2025.
- First draft of suggested missions and study visits.

The experts were introduced the situation by the staff at DoS and noted that:

The staff of DoS presented the current situation at DoS regarding IT-infrastructure and information security. The following observations were made.

The network at DoS is separated into two networks, the DoS network and the Census Network.

Overall, the DoS network and infrastructure connected to it needs modernization in the near future. A network diagram and list of server equipment was shown during the visit.

Funding is very much needed for this project.

This includes passive infrastructure, such as cabling and active infrastructure, such as firewall, switches and servers.

Technical IT-security needs improvement. Only a firewall and antivirus protection are the technical security measures currently implemented.

Logical information security such as access management needs to be standardized and formalized. There is no formal organization regarding the information security and no security officer.

Awareness training of staff is not implemented.

Data collection from other government bodies in Jordan must go through a government secure network operated by the Ministry of Digital Economy and Entrepreneurship (MoDEE). Two types of communications can be allowed: MQ messaging and database-to-database connections.

As of today, early work with receiving data from administrative sources is either Excel sheets transmitted by MQ and via csv files, which are stored in a staging database in a Postgres database. Or a database connection is used to receive data into an ETL tool. Apache Airflow is used for designing data pipelines.

MoDEE also operates a country wide Microsoft Active Directory, where government resources including users are managed. In addition, MoDEE also provides a private cloud with a number of services (including Microsoft SQL Server and Oracle Database) and storage facilities. Some of the services are free to use for government bodies such as DoS. Others need payment.

DoS will need to decide if they want to base the future resource procurement on services from the MoDEE private cloud or from in-house hosted equipment or a combination of the two. This is a dilemma for DoS which is also addressed later in this report.

DoS has a goal of conducting a hybrid census in 2025 i.e. a census carried out as an analogue census combined with digital reporting.

Almost all data collected today are through surveys. A section of employees in IT in DoS work with implementing surveys using Microsoft .NET Technology.

DoS is considering the use of more Open Source tools, such as the Postgres database and Python. In this consideration, it has been identified important to assess advantages/drawbacks of using open source software in comparison with proprietary tools. This is a another dilemma for DoS which is also (briefly) addressed later in this report.

The Oracle database is being used and is running on an Oracle Solaris Platform. The virtualization/partitioning features of Oracle Solaris is being used to limit Oracle hardware usage to the licensed amount of CPU's.

The experts were given a tour of the DoS server room, during which the use of most important hardware boxes were explained. The security perimeter of the server room was explained.

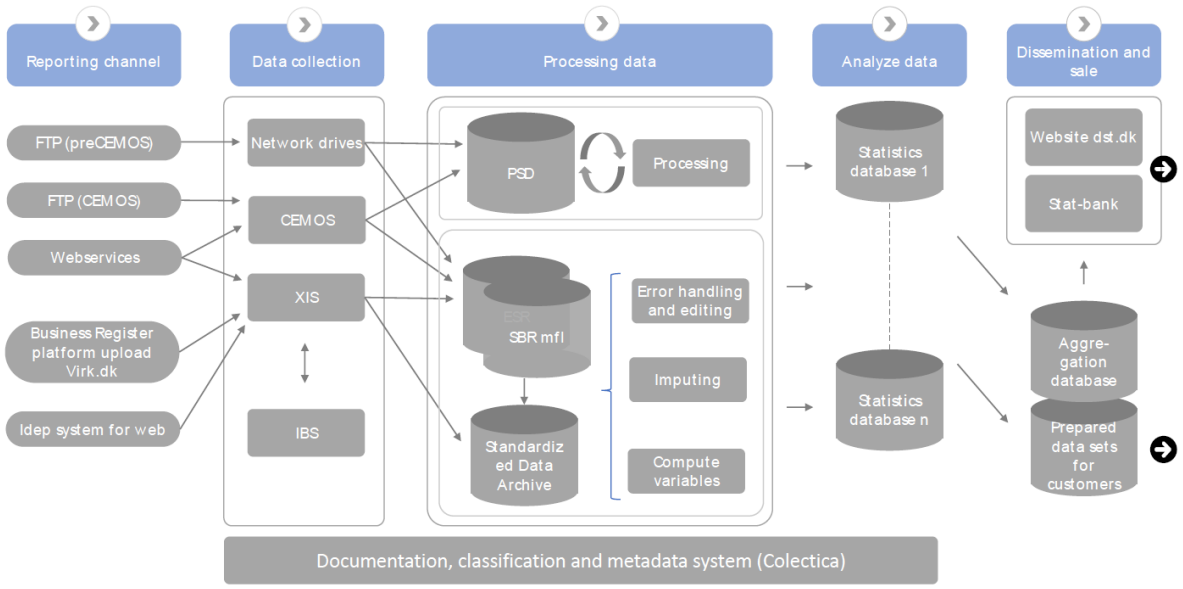
Day two programme

- Defining indicators
- Drafting the first rolling work plan with refinement of suggested missions and study visits.
- Overall enterprise architecture, example from DS
- Presentations: the overall enterprise architecture at DS and "IT - From order taker to powerful business partner"

The experts and the staff at DoS went through a recap of the previous day in order to summarize key points and observations needed for defining indicators and the first draft of a work plan.
In addition to this, the experts gave a presentation of the overall enterprise architecture at DS which gave rise to a lengthy and fruitful discussion.

The diagram below shows the logical set up of the elements that constitute the whole statistical production process at DS beginning with data collection and data reporting in the left hand side of the diagram through the data processing and analysing processes in the middle and on to the dissemination and publishing steps in the right hand side of the diagram.

Data flows and systems at Statistices Denmark – architectural overview



The Generic Statistical Business Process Model (GSBPM) logic and structure is a helpful tool. It identifies the possible steps in the statistical business process, and in the figure above you can clearly see the work processes "Collect - Analyse - Process – Disseminate"

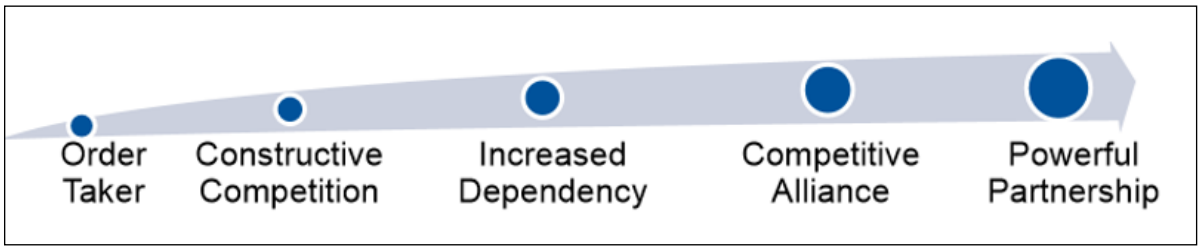
GSBPM is used with success by statistical organisations as a framework for developing IT systems for statistical production. This concords with the stated purpose of the GSBPM, which is to provide a basis for statistical organisations to agree on standard terminology to aid their discussions on developing statistical metadata systems and processes.

There was, as mentioned, a discussion about the structure and elements represented in the diagram that also include specific IT systems, data containers and applications for statistical data handling.

After this, the experts gave a presentation with a very specific angle: "IT - From order taker to powerful business partner".

The presentation took its starting point in an analysis carried out by Gartner Inc. Gartner is the world's leading information technology research and advisory company. Gartner has identified some traits concerning the relationship between IT departments and the business side / subject matter units. These traits are related to the maturity level of the relationship between and the perception of IT as a support unit for the business side.

At the lowest maturity level, IT is considered merely as a service provider – an order taker that should not interfere with the work of the business units but merely take orders. At the highest maturity level, IT is acknowledged as a powerful partner that is a facilitator and enabler of digitalization of business processes. See the figure below, and please note that this is not a characterization of IT alone – it is a description of the maturity level of an organisation where there is a relationship between IT and business side / subject matter units.



Not all organisations are alike. In order to take steps up on the maturity scale, organisations could put emphasis on different aspects to aid the development and evolution to a higher maturity level.
In a joint work between IT and the business side / subject matter units, the work could be carried out in different ways.These steps could be:

- Create together the set of IT service delivery principles and make sure that the service level agreements (SLA's) are mutually agreed upon, known and accepted.
- Agree upon the organisations need for IT operations, IT development and technical support.
- Be aware of norms and demands with regard to IT-security and set standards in a joint work.
- Make a plan for 'IT out of the engine room' and seek to design formal dialogue supporting frameworks that all parties must follow.

Also, it is advisable to have a clear overview over the skill sets in the IT personnel. It is important that the IT employees understand the connection between roles, skill sets and the degree of service orientation. A paraphrase of this would look like this: "When you have this role in IT, you must have these skills and this way of treating customers and business partners"

An example of a skill matrix could look like this:

	Security skill #1	Security skill #2	Operational skill #2	Operational skill #2	Development skill#1	Development skill#2
André	x	x				
Charlie			x	x		
Gabriel	x	x	x	x		
Raphaël				x	x	x
Élise	x		x			x
Léo	x					
Louis	x	x				
Lucas		x	x	x		
Jeanne				x	x	
Adam				x	x	
Gabriella				x		x
Arthur					x	x

By having a systematic matrix or overview of the skill sets, it also becomes clear when a certain skill is needed or if a role is vacant. This could be very relevant if some of the roles in the IT organization are considered strategic – which could be the case with e.g. an information security officer or a firewall administrator.

Day three programme

- Drafting the first rolling work plan activities to support MR 1.4 including input from DoS continued and finalised
- Presentation of the outcome and the suggested work plan with suggested missions and study visits for Twinning Team
- An agenda item related to a dilemma between outsourcing or in-house hosting was postponed due to time constraints.

The experts and DoS drafted a work plan together to support MR 1.4. A list of missions was developed and a common understanding of the background and details was reached.
The list of suggested missions is presented below with key words.
Please note that mission 1 through 3 are pure IT missions while mission 4-7 are joint missions with involvement of IT as well as subject matter units.

1. IT strategy with activity tracks
    a) Presentation of a standard model and method for building an IT strategy
    b) Activity tracks could be hardware, software, security, census-2025, staff ***as well as*** the business processes: data flows, data processing etc. and the corresponding IT platforms for this
    c) The mission could include further work on some dilemmas that were presented by DoS, based on a standard for evaluation (which is presented in this report). The dilemmas are about outsourcing/inhouse hosting as well as open source software/proprietary licensed software.
    d) The mission could include infrastructure to a certain extent (se also bullet 3 below)

    Deliverable from this mission: A draft IT strategy supporting the goals of MR 1.4 with regard to data flows between the DoS and counterpart institutions.

2. Information security with a view to the desired end goal for this, based on DoS current situation containing topics from the 4 areas: technical and logical security, the security standard ISO 27001 and Awareness.
    a) The mission includes assessment of DoS website and first discussions, incl. Word Press recommendations, PX-Web course, and visualization

    Deliverable from this mission: A draft plan for IT security and the website at the DoS.

3. Technical setup and end goal, incl. details from the technical break out session that was postponed in the current mission – and this should start with an assessment of the technical situation.

    Deliverable from this mission: A set of best practice standards and a document describing the design.

4. The hybrid census (analogue/digital solution and capacity needs). According to the wishes of DoS, it should be carried out as soon as possible please (with Germany and / or Lithuania). A practical approach is needed: how do you perform the census in a mixed mode and how do you react to e.g. missing data and columns.

    Deliverable from this mission: A design document.

5. Metadata. This mission should include topics and problems with time lines, classifications etc.

    Deliverable from this mission: a proof of concept of a tool & international standards

6. SBR, Statistical Business Register (with IT structure and IT platform)
    a) Including a Data warehouse = roadmap for building this incl. Capacity building

    Deliverable from this mission: To be discussed

7. From data collection through data processing to dissemination (survey + administrative data) . What are the mechanisms and how to deal with missing data
    a) including website

    Deliverable from this mission: To be discussed.

8. Follow-up missions

The proposed plan for these coming missions was developed in a joint effort between DoS and the experts from DS. The proposed mission plan was then presented to Mr. Mohammad Khalaf, Director of Sustainable Development Unit, Department of Statistics, the RTA Counterpart.

Tech discussion and Business case & assessment
A couple of specific agenda items were postponed due to time constraints. One was a technical break out session the expert Niels Jespersen where some technical questions were posed. The issues may be dealt with in a coming mission.

Another theme was postponed. It concerns a risk assessment and business case concerning the dilemma of using either a private cloud government solution for hosting or an inhouse solution for server capacity and data storage. This agenda item was very much wanted by the IT staff at DoS and therefore the experts have devised a model and method for DoS to carry out a business case and assessment on its own before the next mission and visit.

This method is attached as an annex in the form of a separate excel spread sheet with the name "Template for business case and assessment of service provider". An overview of the method is presented below and the experts recommend that DoS carry out this assessment. Instructions for use are found inside the excel spread sheet.
See example below.

2	**Business case and assessment**		
3	**Inhouse hosting or cloud based service provider?**		
4			
5	**Feature**	**Provider A**	**Provider B**
6	**Pricing**		
7	Short term vs Long term		
8	Entrance fee vs exit cost		
9	Price stability and forecast		
10	Mandate in approval of cost (where, who)		
11	**Security**		
12	Data confidentiality		
13	Reliability of service and backup set up (contigency plans and continuation of service)		
14	Roles and access control		
15	Image		
16	Deletion of data		
17	Exit plan		
18	**Service Offering**		
19	Choice of technology and features		
20	Software		
21	Hardware		
22	APIs and possibility for automation		
23	Possibility for transfer of projects and data to alternative providers		

3. Conclusions and recommendations

Recommendations:
The experts have some recommendations for further assessments and actions. The recommendations are not tightly connected to specific mission, actions and initiatives but are in general considered necessary for the positive, constructive and sustainable outcome in the long perspective.

Infrastructure:
Perform a thorough assessment of the current infrastructure set up, the network, security devices, servers and other hardware. Based on the as-is description, develop the design of the future and sustainable infrastructure. Follow up with a list of needed purchases, upgrades and updates and the estimated costs for this.
It is imperative that one or more funding partners for the future infrastructure be identified.

Communication between subject matter units and IT:
As shown by Gartner, cross-business unit initiatives have a high success rate **only** when a deliberately designed dialogue framework for communication between the business side and IT exists.
The experts recommends that a model is devised for frequent and reliable meetings on relevant issues between the business side, i.e. the subject matter units at DoS, and IT.

Information security:
Construct a formal organisation for managing information security. The experts wish to emphasize that this area is very broad as it also covers privacy and GDPR topics. At least, there should be a formal role for an information security officer. This officer should preferably refer not to the head of IT / IT director, but to a top or senior manager in the organisation.

Dataflow standardization:
A standardized way to collect data and to move data in stages from raw input form to publication-ready data should be designed. It should focus on standardization and on providing a secure way to handle data. Standard privilege sets and standard procedures for assigning privileges to end users should be part of this effort.

Technology/capability/skills map:
Technologies used for operating the IT-platform in DoS should be enumerated and competencies/skills in each technology should be assessed for the employees. See an example of a talent matrix elsewhere in this report. The list of technologies should also be assessed with a focus on identifying technologies/products that may be phased out.

Action	Deadline	Responsible person
DoS examines the developed model and method (Excel spreadsheet) for performing an initial business case and assessment of the question of outsourcing/insourcing. DoS is advised to perform the analysis before the next mission and visit.	To be carried out as preparation before next IT mission. There will be a joint discussion of the method used and the results obtained using this method during the mission.	Ms. Ahlam Al-Rosan, Director of Electronic Transformation and Information Technology (IT).

Annex 1. Terms of Reference

EU Twinning Project JO 21 ENI ST 01 22

Component 1:
Roadmap for the development of an integrated administrative data system in Jordan
with pilots on Statistical Business registers (SBR) and population statistics

Activity 1.0 – Part B:
Assessment of current situation and development of indicators and first rolling work plan

Dates: 10 -12 October 2022

0. Objective and Mandatory results for the component

Objective:
To prepare a roadmap for the development of an integrated administrative data system for Jordan, and conduct pilot projects on creating an SBR and strengthening population statistics.

Mandatory results (MR):

- **MR 1.1**: Compile an inventory of administrative data on businesses and households and an indicative roadmap for inclusion in an integrated administrative data system
- **MR 1.2:** Undertake a pilot project to develop a strategy for integrating administrative data sources for the purposes of creating an SBR for Jordan
- **MR 1.3:** Undertake a pilot project on how available administrative records can be used to strengthen population statistics and inform the framing of the CoP 2025 questionnaire.
- **MR 1.4:** Develop strategy for ensuring flows of data between the DoS and counterpart institutions are established on an ongoing basis for the pilot projects
- **MR 1.5:** Implement training programs and develop training materials both within DoS and with partner institutions on the use of administrative records for statistical purposes

1. Purpose of the activity

- Assessing the current situation for using administrative data in Jordan particular focus on:
    - Dataflow between the DoS and counterpart institutions
    - IT
    - Data security
    - Training
- Defining Indicators
- Drafting the first rolling work plan for an integrated administrative data system in Jordan with focus on MR 1.4. This activity is a continuation of activity 1.0.A.

Background:

Mandatory Result 1.4: Develop strategy for ensuring flows of data between the DoS and counterpart institutions are established on an ongoing basis for the pilot projects above
The integration of new administrative data sources by the DoS must be established on a long-term sustainable basis. This requires the adoption of international standards in terms of statistical concepts, classifications and methodologies, and the use of common identifiers by the government departments providing the source data.

In addition, the necessary technical infrastructure needs to be developed to facilitate data transfers on an ongoing basis. This sub-component will investigate the harmonisation of statistical classifications and identifiers for the datasets used in the pilot projects, and the technical requirements needed for the sharing of data between the DoS and the partner institutions on an ongoing and sustainable basis.

It will also review the internal flows of these data within the DoS, and make recommendations, as appropriate.

2. Expected output of the activity

Common overview of the current situation for using administrative data in Jordan:

- The Twinning team, MS experts and DoS experts has obtained a common understanding of current situation, vision and challenges in relation to development of an integrated administrative data system for Jordan with particular focus on dataflow, IT and security.

- The level of compliance with relevant EU regulations and other international standards assessed.

Defining Indicators:

- Indicators for MR 3.4 drafted.

In order to monitor the project implementation, each MR will be broken down into a number of steps with associated Indicators. The indicators will follow the SMART principle (Specific, Measurable, Attainable, Relevant and Time bound).

The indicators will allow DoS, the Twinning Team and the Project Steering Committee (SC) to monitor and follow the progress in the project.

Drafting the first rolling work plan for the project:

- Headlines and brief descriptions to all planned activities
  Expect number of activities in component 1: *26 Short Terms Expert Mission; 5 Study visits over two years*

- Sequence and timing of activities for the first six month of the project

- Draft detailed description of activities for the first six months, in accordance with EU requirement using the template in table 1.

Table 1: Template for describing activities

Activity number	Title
Subject	
Methods	
Resources	
Duration	
Output	
Time schedule	

3. Resources

Translation and interpretation will be provide throughout the activity

4. Overall agenda

- Day 1: Current status in Jordan – needs and challenges related to the component
- Day 2: Defining indicators to monitor achievement of MR 3.4 and drafting the first rolling work plan of activities in Jordan and study visits
- Day 3: Summary and conclusions

5. Background information from the Fiche

Background and justification

The demand for good statistics in the Hashemite Kingdom of Jordan has increased in line with economic and social developments in recent years. In addition to social changes and the impact of digitalisation, globalisation and other innovations, Jordan has seen a major influx of refugees reflecting political instability in the wider region.

Good statistics are at the core of evidence based policy-making and the DoS is committed to providing its users with the high-quality data required to inform decision-making, and to co-ordinate activities across the Jordanian statistical system, in line with the best international standards.

The DoS has made huge advances in recent years in enhancing its data collection procedures and adopting new technologies and statistical methodologies. All stages of the General Population and Housing Census 2015 (CoP) were conducted electronically, making the DoS a leader in applying new technologies in this area.

Despite the successes in transforming its operations, DoS faces significant challenges in delivering the goals of the NSDS. The lack of adequate resources has weakened its development capacity, particularly its ability to attract and maintain staff with the desired competencies. In particular, high levels of staff turnover have created difficulties in sustaining progress already made, and ensuring that expertise is not lost. The benefits of previous donor projects, have not been fully realised in all cases, due to high staff turnover levels. Support is therefore required to enable the DoS to meet the increasing demand for statistics, and to implement the necessary changes on a sustainable basis. The twinning project has been designed to focus on some of the key challenges currently facing the DoS in a resource-efficient manner.

In this regard, the incorporation of administrative data within DoS statistics represents a much more efficient approach compared to introducing new data collection systems. Administrative data are collected primarily for non-statistical purposes, but provide key source information for official statistics. Access by statistical offices to administrative data has been greatly enhanced by technological developments in the field of data collection, storage, retrieval, data editing and cleaning and the establishment of linked computer architecture to facilitate data transfers. The NSDS for Jordan clearly identifies the expanded use of administrative records as a key goal in delivering its strategic objectives:

Providing statistical data through the management of administrative data is a requirement to develop public sector performance and public administration in Jordan.

As part of the NSDS, the DoS is committed to:

Develop the work in the administrative records to obtain statistical information in cooperation and coordination with partner institutions for utilizing these records in obtaining accurate data, saving time and effort and to enhance statistical analysis.

Enhanced access to and integration of administrative data sources can, therefore, contribute to expanding statistical outputs in the DoS, and to improving data quality across a range of statistical domains, including agriculture, population and business statistics. Administrative data also provides an opportunity for the DoS to deliver efficiencies by replacing some current data collection and by creating new statistical products. This can only be achieved, however, through the development of an integrated administrative data system based on the harmonisation of databases, concepts and identifiers and the adoption of international standards and classifications.

However, a comprehensive programme to integrate available administrative records within the Jordanian statistical system and particularly within the DoS is a major exercise, which can only be implemented on a step-by-step basis over a significant time period The development of a fully integrated administrative data system for Jordan is, therefore, beyond the scope of this project.

The twinning project can, however, undertake pilot projects to provide a first step in addressing the longer-term objective of developing an integrated system. The focus will be on administrative records which can be used by the DoS for enhancing business and household statistics. Work undertaken as part of these pilot projects can provide a template for the wider incorporation of administrative data within the Jordanian statistical system. In addition to the pilot projects on business and population statistics, the twinning project will compile an inventory of administrative data, and an assessment of their potential for inclusion in DoS statistical processes. An indicative roadmap for the inclusion of these data in an integrated system can then be recommended. Much of the information on the key administrative data sources and stakeholders has already been identified in the NSDS.

Components and results per component

Component 1: To prepare a roadmap for the development of an integrated administrative data system for Jordan, and conduct pilot projects on creating an SBR and strengthening population statistics.

As the development of a fully integrated administrative data system is a longer-term project, the focus of the twinning project will be on specific pilot projects where the use of administrative records can address key challenges currently faced by the DoS. These pilot projects will constitute the first steps in rolling out a roadmap for the Jordanian statistical system by providing a template for expanding the use of administrative data across the wider statistical system over time. Specifically, the pilots for the twinning project will focus on the development of an SBR and improving the quality of population estimates. It is understood that key source data for an SBR reside with the Companies Controller Department and the Ministry of Industry and Trade, while data holdings within the Civil Status and Passports Department can strengthen population estimates - however, other data sources may also be considered as part of the project. The institutions referenced are part of the wider statistical system and were stakeholders in developing the NSDS.

In addition to improving population estimates, administrative data can also contribute to refining the scope of the 2025 General Population and Housing Census (COP) questionnaire, thereby

freeing up resources in the DoS. Similarly, the existence of an SBR can enhance statistical outputs on business, while also delivering efficiencies in the DoS.

In summary, Component 1 will provide an inventory and roadmap for the inclusion of administrative data on business and households within DoS statistics and undertake two specific pilot projects on SBRs and population estimates.

Component 1 is sub-divided in five sub-components with mandatory results applicable to each sub-component:

- ***Mandatory Result 1.1: Compile an inventory of administrative data on businesses and households and an indicative roadmap for inclusion in an integrated administrative data system***

Compiling an inventory of administrative data sources on business and households is the first step in developing and integrating these data with DoS statistics. The inventory needs to include the various data variables collected in ministries with detailed metadata on each – definitions, concepts, identifiers, periodicity etc. A mapping exercise is then required to assess how this information can be linked to DoS data, and whether the variables collected in ministries can be converted to statistical concepts and definitions. A process for linking identifiers is critical – this may be particularly difficult for business data as the concept of a statistical business unit can differ from administrative identifiers based on legal or accounting structures.

Based on the inventory and mapping exercise, an indicative roadmap can then be drawn up for integrating other administrative data sources within a coherent and structured framework. This roadmap will propose a timeframe for the integration of different administrative data sources and define the role of the parties involved. It will also reinforce DoS's co-ordination role in the Jordanian statistical system in line with its statutory mandate. The pilot projects listed below will build on the work undertaken in this sub-component.

- ***Mandatory Result 1.2: Undertake a pilot project to develop a strategy for integrating administrative data sources for the purposes of creating an SBR for Jordan***

For business statistics, the development of a statistical business register (SBR) is essential to integrating different data sources, and providing additional analysis without increasing costs. It is also the main source of business demography indicators. The lack of an SBR has also been identified as an impediment to improving DoS statistics.

SBRs are an essential component in supporting the coherence, consistency and quality of statistics produced. As well as providing data on the population of business units, the SBR provides a basis for selecting and monitoring samples, integrating administrative and other data sources and providing a framework for deriving business demographics. The lack of a comprehensive business register was identified as an obstacle to future improvements of DoS statistics back in the 2015 twinning project led by Statistics Denmark[1]. This gap still remains - developing and maintaining an SBR for Jordan would, therefore, greatly enhance the ability of the DoS to monitor and analyse developments in a rapidly changing business environment. The pilot project will examine available administrative data sources on business entities, primarily in the Companies Controller Department and Ministry of Industry and Trade. Based on the mapping exercise in 1.1 above, a strategy for linking these data with DoS information, primarily from the Census of Establishments (CoE), will be drawn up. While specific administrative source data have been identified for the pilot, other information can also be considered.

[1] Twinning Contract JO-13-ENP-ST-23

- ***Mandatory Result 1.3: Undertake a pilot project on how available administrative records can be used to strengthen population statistics and inform the framing of the CoP 2025 questionnaire.***

  Providing reliable population estimates has become very complicated in Jordan, due to difficulties in monitoring population movements, arising from the volatile political situation in neighbouring countries. The problem is particularly acute at regional level, as reliable data do not exist within the DoS to track population movements across the Kingdom. This sub-component will examine how administrative records can provide new source data to better monitor population inflows and movements across governates and municipalities. A pilot project will assess how administrative data (e.g., from the Civil Status and Passports Department) can be combined with DoS data such as the CoP to strengthen population statistics. The twinning project may wish to explore data sources other than administrative data – for instance, Cities and Villages Development Bank (CVDB) compiles data at small area level on population movements.

  Administrative data on population attributes may also help in replacing data currently collected in CoPs. This sub-component will assess how administrative data can help in framing the questionnaire for the 2025 Census, with particular focus on the potential to free up resources in the DoS.

- ***Mandatory Result 1.4: Develop strategy for ensuring flows of data between the DoS and counterpart institutions are established on an ongoing basis for the pilot projects above***

  The integration of new administrative data sources by the DoS must be established on a long-term sustainable basis. This requires the adoption of international standards in terms of statistical concepts, classifications and methodologies, and the use of common identifiers by the government departments providing the source data. In addition, the necessary technical infrastructure needs to be developed to facilitate data transfers on an ongoing basis. This sub-component will investigate the harmonisation of statistical classifications and identifiers for the datasets used in the pilot projects, and the technical requirements needed for the sharing of data between the DoS and the partner institutions on an ongoing and sustainable basis. It will also review the internal flows of these data within the DoS, and make recommendations, as appropriate.

- ***Mandatory Result 1.5: Implement training programmes and develop training materials both within DoS and with partner institutions on the use of administrative records for statistical purposes***

  Harmonising databases between the DoS and counterpart institutions requires intensive training for staff within the DoS and in the counterpart institutions. Given its statutory leadership role in the Jordanian statistical system, the twinning project will assist the DoS in developing the requisite training programmes and providing the necessary training materials, workshops and supports. Appropriate training and supporting materials are required not only for DoS staff but for staff in the statistical units of other government institutions who comprise the wider Jordanian statistical system. Training programmes and action plans need to be developed for the two pilot projects based on the methodology adopted for each. The Jordanian Statistical Training Center (JSTC) will work closely with project experts in the development of the requisite programmes.

Annex 2: Programme for the mission

Date	Topic
Monday – 10 Oct. **09:30 – 13:00**	Welcoming, acquaintance, program of the week (Mohammad Khalaf and Charlotte Nielsen)
Ad hoc meetings **13:30 – 15:30**	**DoS:** Introduction to component 1 – including introduction to DoS and the National Statistical System in Jordan
	DoS: Overview of IT infrastructure and data flow – status, needs and challenges. The overview will be given as demonstration of current practices
	Ad hoc meetings
	Discussion, questions and remarks
Tuesday - 11 Oct. **09:30 – 13:00**	**MS:** Summary and conclusion from day 1
	MS: Introduction to relevant EU best practice
Ad hoc meetings **13:30 – 15:30**	Defining indicators
	Drafting the first rolling work plan
	Ad hoc meetings
	Discussion, questions and remarks
Wednesday - 12 Oct. **09:30 – 13:00**	**MS:** Summary and conclusion from day 2
	Drafting the first rolling work plan continued
Ad hoc meetings **13:30 – 15:30**	Presentation of the outcome
	Final remarks and thanks

Abbreviations:
***BC** = Beneficiary Country (Jordan);*
***MS** = EU Member State (Denmark, Germany, Italy, Lithuania, Finland);*
***DoS** = Department of Statistics, Jordan*

Annex 3. Persons met

MS Short Term Experts (STE's):

- **Ms. Annie Stahel,** Head of IT-division, Statistics Denmark
  Ms. Stahel has more than 20 year of IT, security, strategy, leadership, management, digital processes.
  E-mail: ast@dst.dk
- **Mr. Niels Jespersen,** Chief Adviser, Strategy, Architecture, Governance and IT Security.

DoS experts:

Mr. Jaffaar Ababneh, Director of data management Directory, DoS (Component Leader)
E-Mail: Jafaar.Ababneh@DOS.GOV.JO

Mr. Abdalwahed ALharaizeh, Statistical Business Register Division SBR

Ms. Ahlam Al-Rosan, Director of Electronic Transformation and Information Technology (IT)

Mr. Hussam Abu Shukur, Head of Electronic Dissemination

Mr. Mohammad Omari, Administrative Data Division

Mr. Mohammad Sakhrieh, Network Engineer

Mr. Mohammad Shatnawi, Programmer

Mr. Mostafa Hiyari, Programmer

Ms. Rania AbuDhaim, Head of Programming and Analysis Division

Mr. Safwat Radaideh, Head of Administrative Data Department - Poverty

Mr. Yasir Nasrallah, Head of Technical Support Division

Twinning team:

- **Eng. Mohammad Khalaf**, Director of Sustainable Development Unit, Department of Statistics, Jordan (RTA Counterpart)
- **Ms. Charlotte Nielsen** (RTA)
- **Ms. Zaina Amireh** (Language Assistant)