



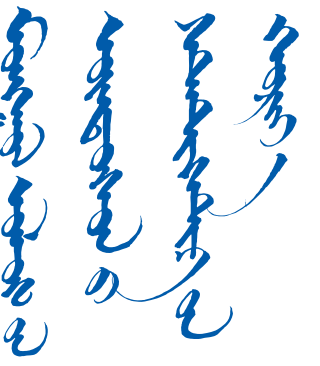
**NATIONAL  
STATISTICS  
OFFICE**

# **HUMAN RESOURCE MANAGEMENT IN SUPPORT OF DATA INTEGRATION AND ENHANCED UPTAKE OF NEW DATA SOURCES**

1 December 2021



# CONTENT



- **Overview of a Government Integrated Data Project**
  - **Building a team and developing required skills**
- **Enhancing the capacity of staff in the NSS**
- **Actions toward building human resource capacity**

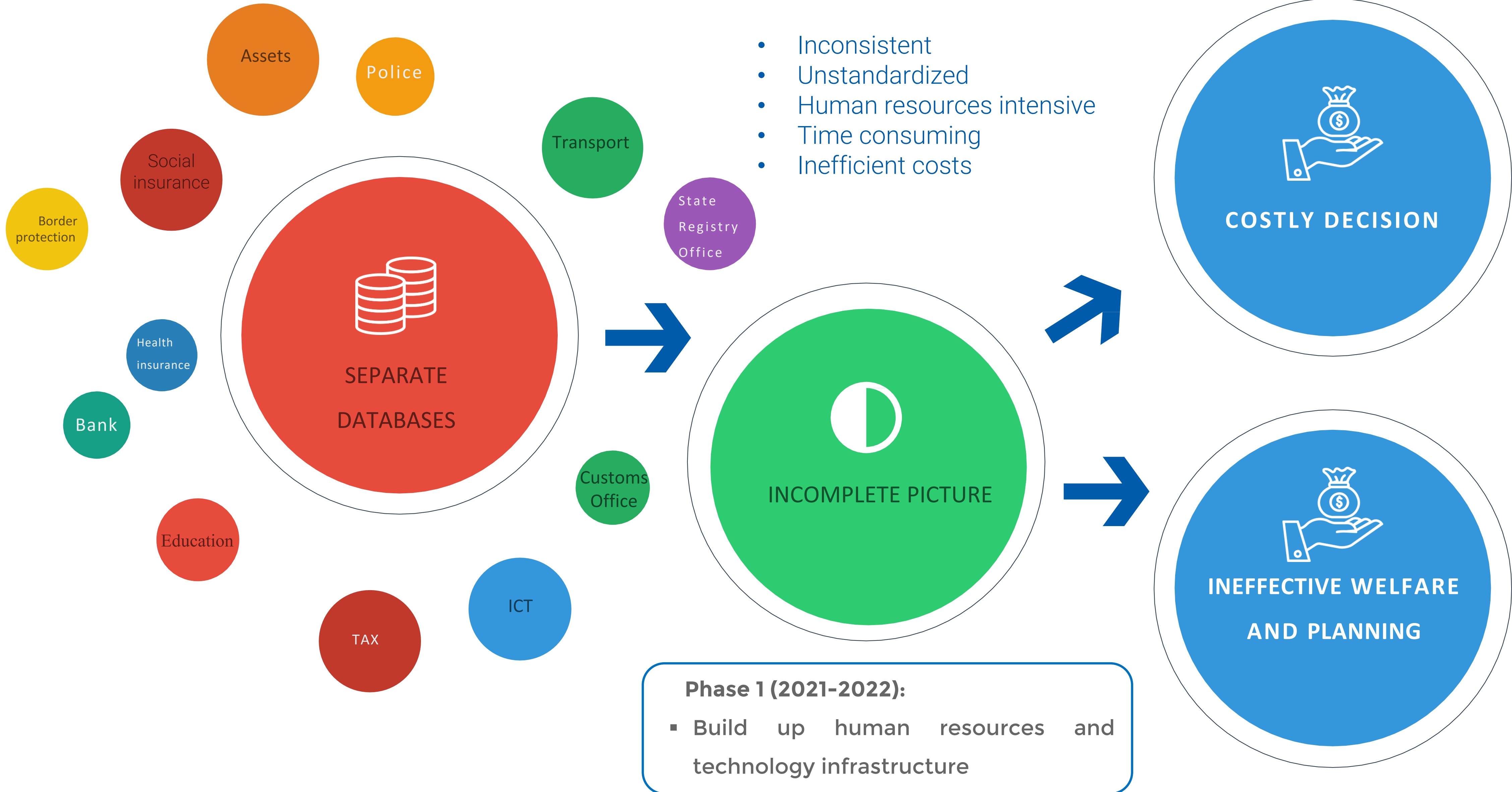


# OVERVIEW OF GOVERNMENT INTEGRATED DATA PROJECT

مخطط  
التكامل  
البيانات  
الحكومية

## CURRENT SEPARATE DATABASES

- Inconsistent
- Unstandardized
- Human resources intensive
- Time consuming
- Inefficient costs



### Phase 1 (2021-2022):

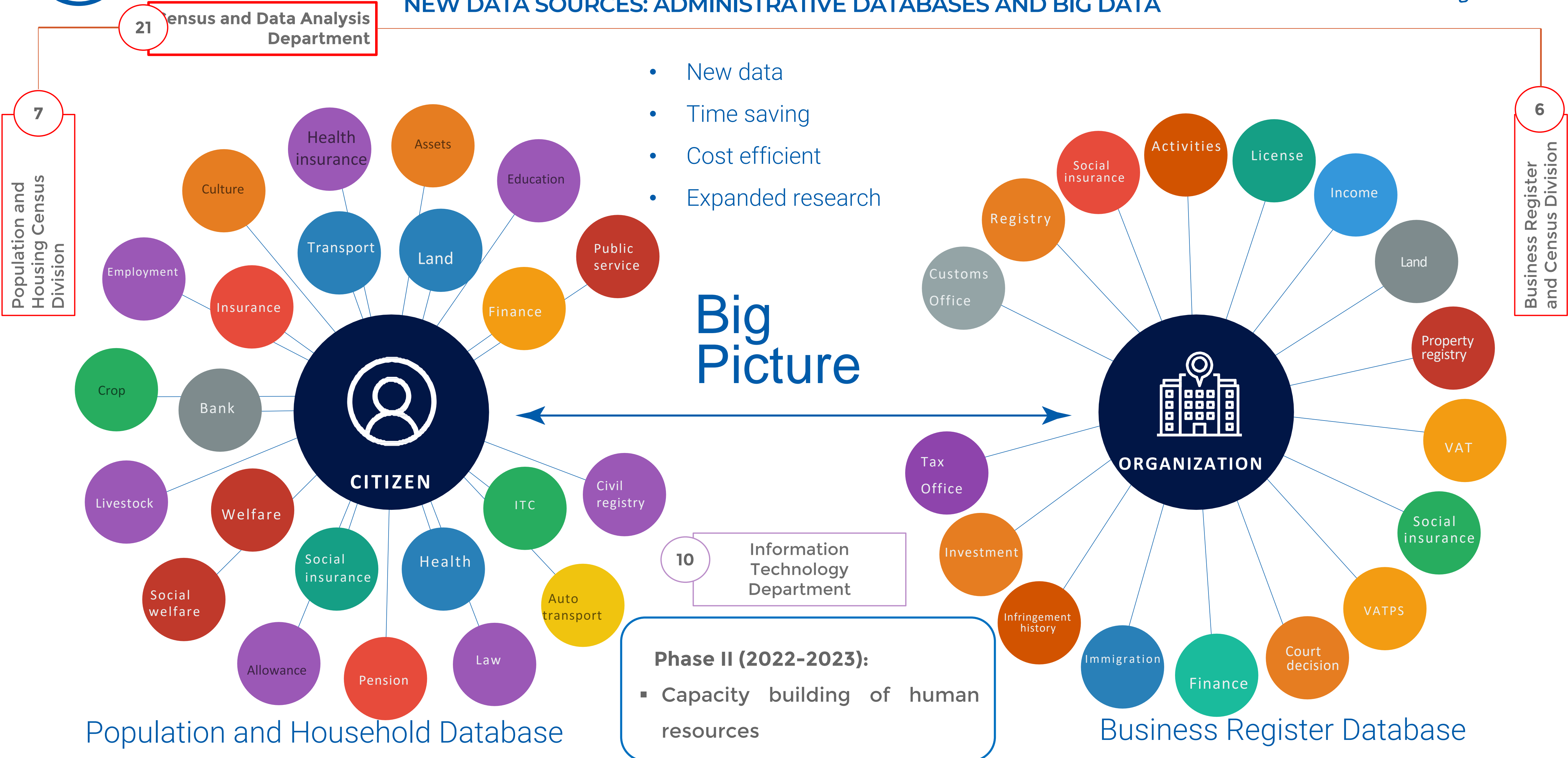
- Build up human resources and technology infrastructure



# OVERVIEW OF GOVERNMENT INTEGRATED DATA PROJECT

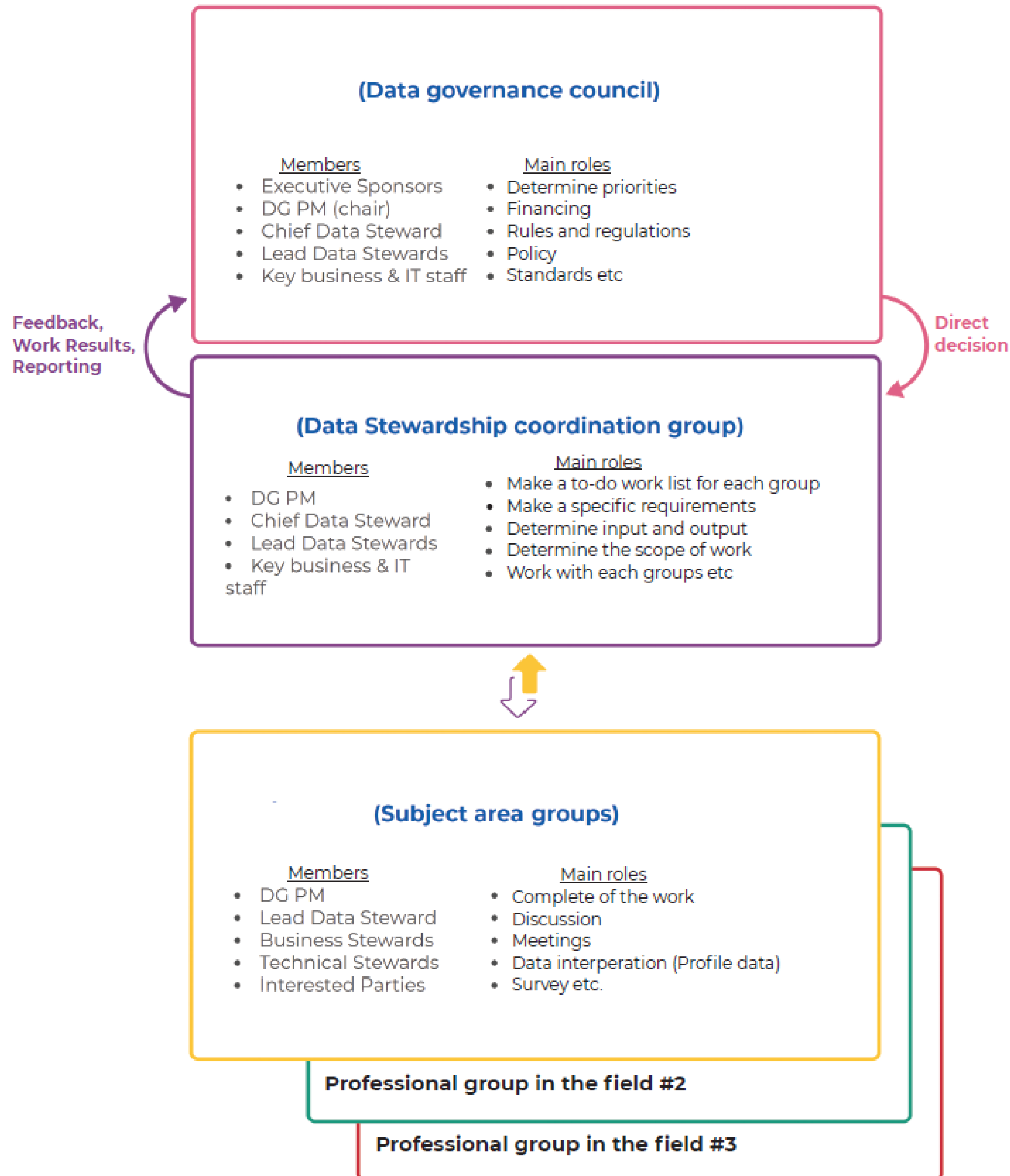
الجمهورية العربية السورية  
سنة 2022

## NEW DATA SOURCES: ADMINISTRATIVE DATABASES AND BIG DATA



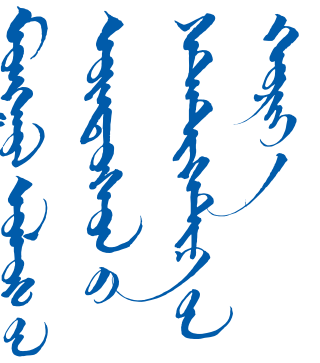


## STRUCTURE OF THE BIG DATA TEAM AFTER THE PROJECT



## MATRIX OF REQUIRED SKILLS FOR THE PROJECT IMPLEMENTATION

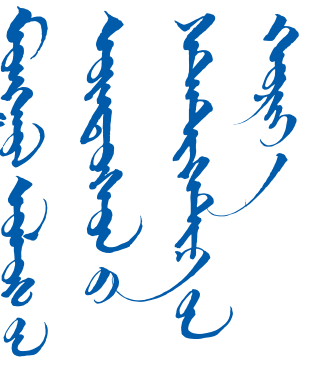
| OCCUPATION     | ROLES   | SKILLS  |
|----------------|---|---|
| DATA ENGINEER  | <ul style="list-style-type: none"> <li>- Organize structure of big data</li> <li>- Store and process data - Copy and convert data into an integrated database</li> </ul>  | <p><b>Database tools</b></p> <ul style="list-style-type: none"> <li>- Hadoop, HBase, SQL,noSQL, Python</li> <li>- ETL tools(Talend)</li> <li>- Data warehousing tools</li> </ul> <p><b>Graph database tool(Neo4j)</b></p>   |
| DATA ANALYST   | <ul style="list-style-type: none"> <li>Deliver key findings that are comprehensible to users in various ways by handling a large amount of data</li> </ul>  | <ul style="list-style-type: none"> <li>- Ability to work with BI (Tableau, Neo4j Bloom)</li> <li>- Work with a large amount of data and grasp and provide the big picture</li> <li>- Communication skills</li> <li>- Critical thinking skills: look at numbers and trends and find new results</li> </ul> |
| DATA SCIENTIST | <ul style="list-style-type: none"> <li>- Solve business problems using machine learning and data mining techniques</li> <li>- Work with a lot of structured and unstructured databases</li> </ul>   | <ul style="list-style-type: none"> <li>- Python, R, C++, Java</li> <li>- SQL, Spark</li> <li>- Data cleaning, preparation</li> <li>- Data exploration</li> <li>- Statistics / Math</li> <li>- Data modeling</li> <li>- Data mining</li> </ul>   |
| DATA STEWARD   | <ul style="list-style-type: none"> <li>- Create and manage of main metadata</li> <li>- Document rules and standards</li> <li>- Manage data quality issues</li> <li>- Implement data governance activities</li> <li>- Setting guidelines, document and manage</li> </ul> | <ul style="list-style-type: none"> <li>- Good command of large dataset management</li> <li>- Information modeling</li> <li>- Technical writing skills - Practicality</li> <li>- Visionary</li> </ul>  |
| DATA CUSTODIAN | <ul style="list-style-type: none"> <li>- Authorize user access to information as determined and approved by the appropriate data controllers</li> <li>- Follow Data Stewards regulations for data processing and protection</li> </ul>                                  | <ul style="list-style-type: none"> <li>- Good command of large dataset management</li> <li>- Information modeling</li> <li>- Ability to work on data quality</li> </ul> <p>• Database tools</p> <p>• Hadoop, HBase, SQL,noSQL, Python</p> <p>• ETL tools(Talend)</p>                                      |







# ENHANCING THE CAPACITY OF STAFF IN THE NSS



**Training to be organized between 2022-2025.**

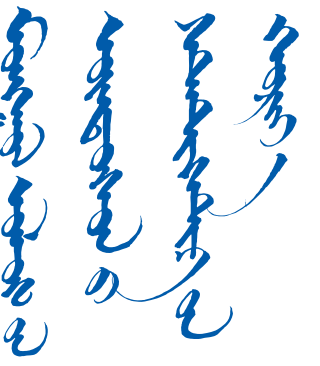
- 1) 2 types of orientation training courses;
- 2) 4 types of general skills training courses;
- 3) 4 types of specialized skills training courses;
- 4) 3-tier training for staff members in the national statistical system; and
- 5) Special training for IT staffs.

**A tableau team has been formed at the NSO.**

- a) Promotion of wider use of the Tableau across the organization;
- b) Preparation of staff in the area of data integration;
- c) Enhancing capability of staff to visualize data; and
- d) Training of staff for creation of various dashboards.



# ACTIONS TOWARD BUILDING HUMAN RESOURCE CAPACITY



- Evaluation of human resources (training needs and talent attraction)
  - Assessment of the current status and formulation of human resources policy.
- Evaluation of legal, technology and human resources aspects of the government databases before the implementation of the Government Integrated Data Project
  - Conduct of a situation analysis and identification of measures to be taken.
- Establishment of a unit entrusted with handling government data and big data
  - The unit composed of 15-20 persons whose knowledge will be transferred.



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**THANK YOU FOR YOUR  
ATTENTION**

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