

Data Inventory for Selected Institutions

Data Inventory Report Findings

4th February 2025



Topics Covered

- Introduction
- Methodology
- Inventory of Data Findings
- Detailed Data Analysis
- Recommendations
- Conclusion



Introduction

- **Background:** The Data Inventory for Selected Institutions is a World Bank funded consultancy under the Public Administration Modernization Project (PAMP). The phase I assignment is limited to 3 key ministries; MoBSE, MoH and MoHERST.
- **Objectives:**
 - Inventory and Assess data assets.
 - Develop a Data Governance Framework.
 - Recommend Civic Technology Tools.
 - Skills Transfer.
- **Scope:** Focuses on three ministries, covers various data types, employs mixed-methods data collection, and assesses data storage, security, and public access practices.

Methodology

- **Definition of a Dataset:** Primary data collected or housed at the ministry, in a raw unprocessed form.
- **Stakeholder Engagement:**
 - Introductory workshop to update and gather feedback from stakeholders.
 - Initial consultations to gather preliminary insights.
 - Skills transfer involving ministry staff in the data inventory process.
- **Data Collection Methods:**
 - Key Informant Interviews (KII) with 34 key personnel.
 - Structured surveys to inventory 46 unique datasets and 11 systems.

Methodology

- **Data Analysis Approach:**

- Data validation and categorization.
- Descriptive analysis and gap/redundancy analysis.

- **Challenges:**

- Time constraints due to holidays (e.g. 2 Eids and May-day).
- Difficulty in scheduling interviews with ministry staff.
- Limited effectiveness of support letters.
- Time constraints affecting data quality assessment.

Data Inventory Findings

- **Inventory Process:**
 - Three stages: introductory meetings, KIIs, and structured interviews.
 - Final tally: 46 datasets and 11 systems confirmed after validation.
- **Data Quality Assessments:**
 - Data verified for existence but not thoroughly tested for error rates and completeness due to time constraints.
 - Administrative data generally up-to-date but issues at the individual level.
 - Lack of standardized data formats and consistency checks.



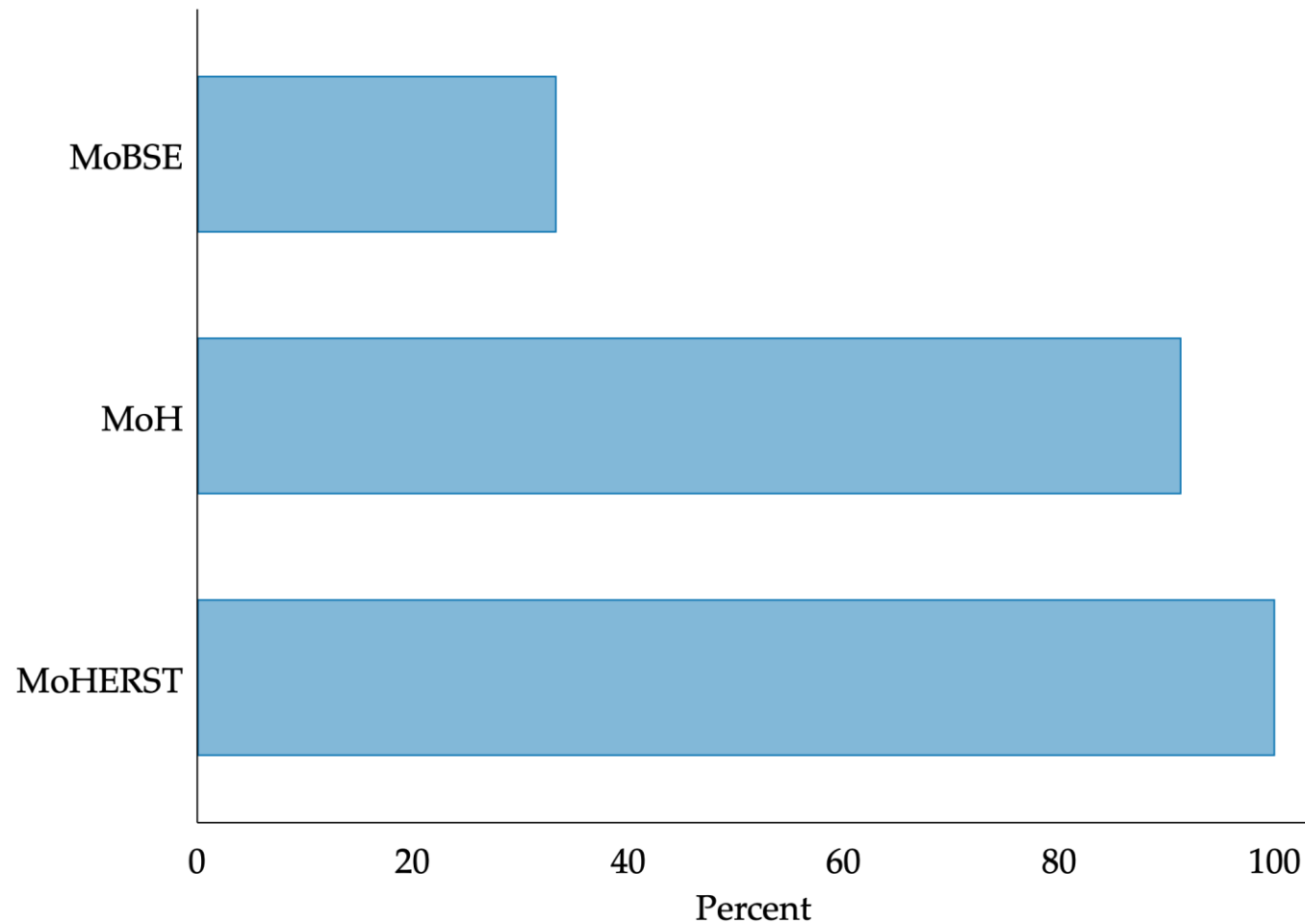
Data Inventory Findings

- **Data Gaps and Redundancies:**
 - Significant gaps in individual tracking across systems.
 - Minimal redundancies due to centralized data management and financial constraints.

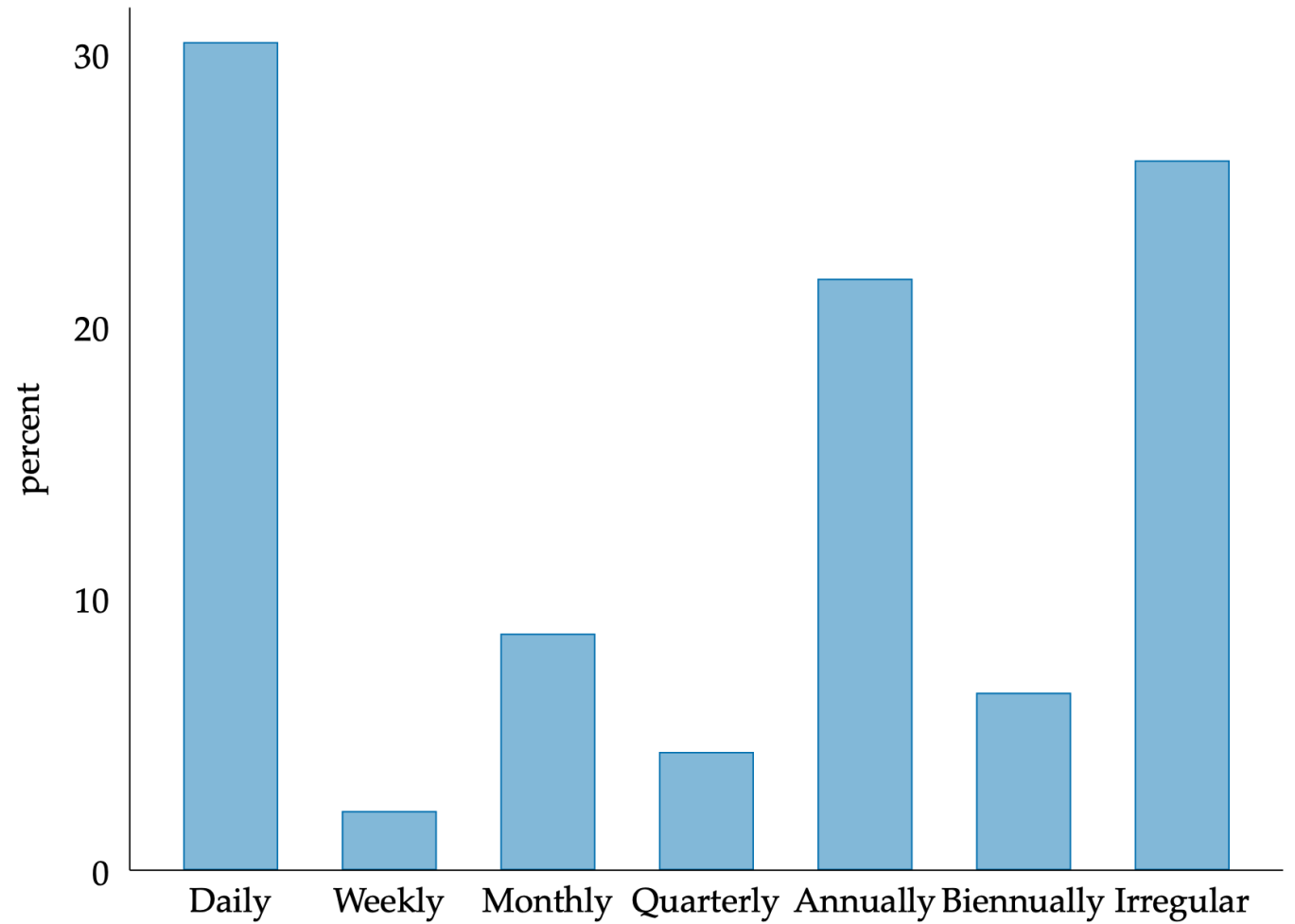
Detailed Data Analysis (Systems Summary)

Questions	Value
Who built the system?	
<i>In House</i>	1
<i>Local Partner</i>	1
<i>International Partner</i>	9
Maintenance and support contract?	55%
System documented?	100%
System open source?	64%
System API enabled?	91%
Integrated with any existing system?	55%

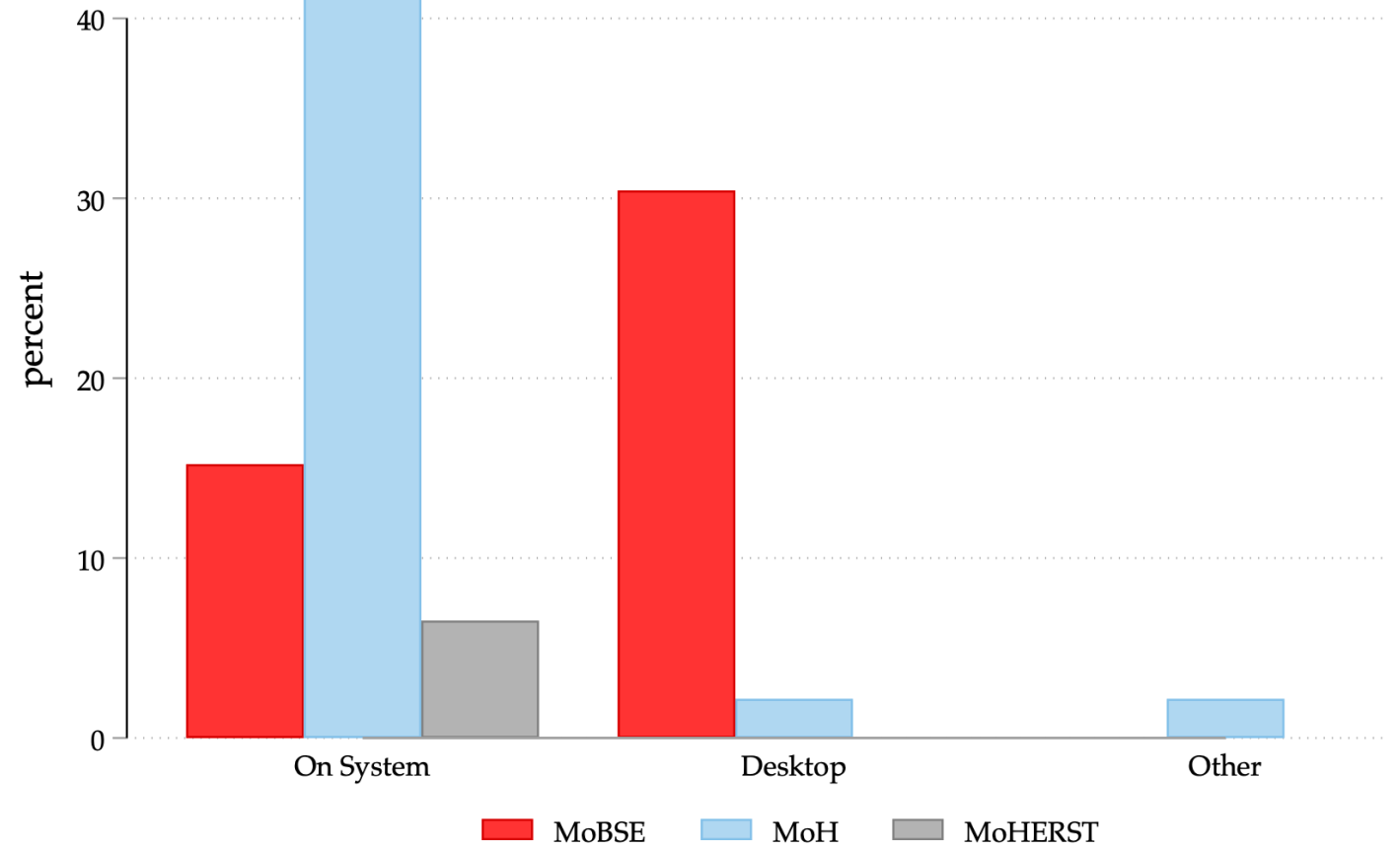
**Detailed
Data
Analysis:
Data in
Systems**



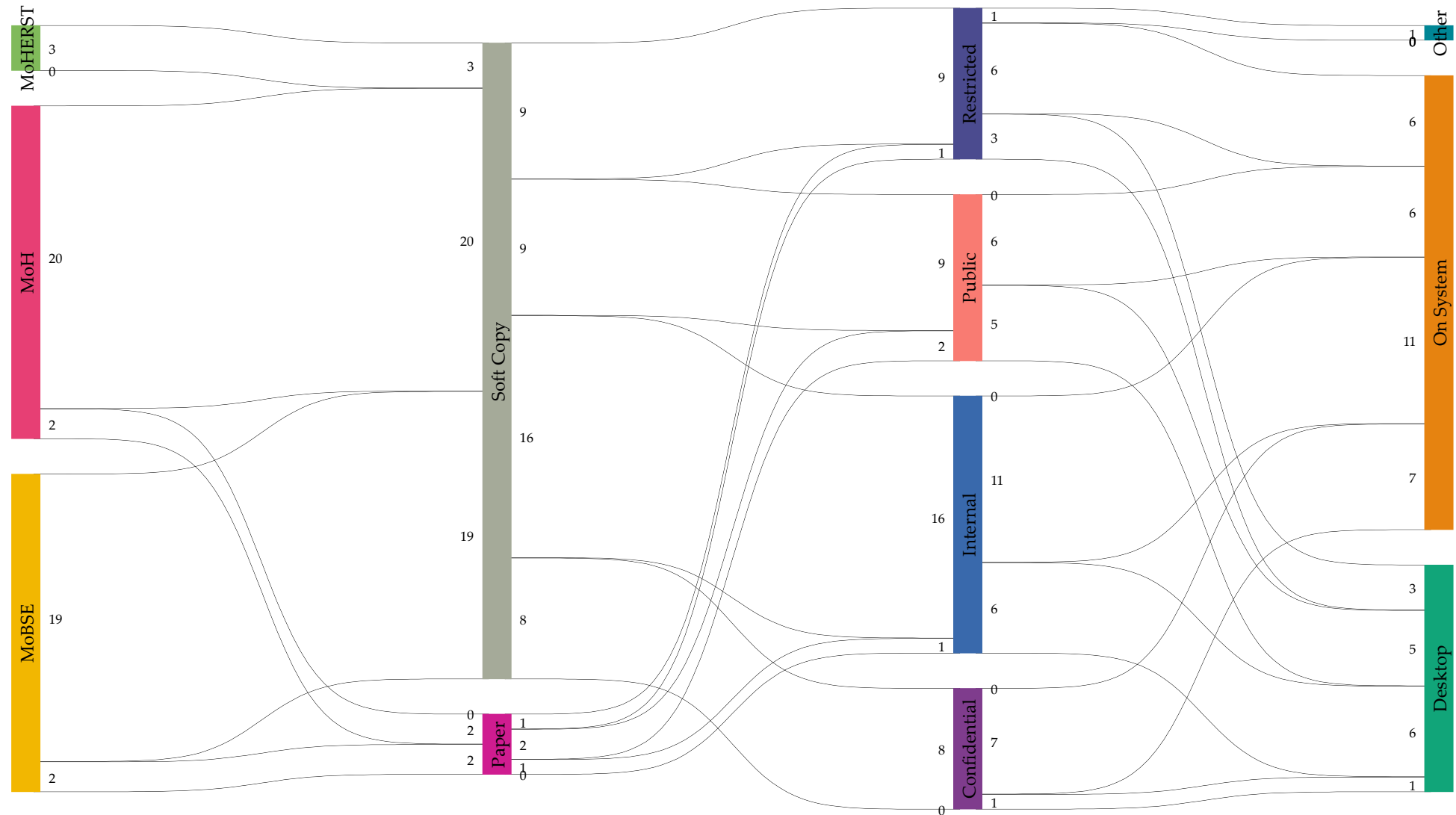
DDA: Frequency of Data Collection



DDA: Location of Data



DDA: Flow of Data Characteristics



Recommendations

- **Standardize Data Collection and Documentation:**
 - Implement unified tools and comprehensive documentation practices.
 - Provide training on documentation standards.
- **Enhance Data Quality Management:**
 - Conduct regular audits and establish validation protocols.
 - Monitor key data quality metrics.
- **Strengthen Data Security and Privacy:**
 - Implement role-based access controls, encryption, and secure backup solutions.
 - Conduct privacy impact assessments for new projects.

Recommendations

- **Improve Data Integration and Interoperability:**
 - Enable API integration and develop data sharing agreements.
 - Establish a centralized data catalogue.
- **Invest in Training and Capacity Building:**
 - Develop regular training programs and leverage external expertise.
 - Promote the use of advanced data analysis tools.
- **Strengthen Partnerships and Collaboration:**
 - Foster internal and external collaborations to support data initiatives.

Conclusion

- **Summary of Key Findings:**
 - Comprehensive data cataloguing and quality assessment.
 - Identification of significant data gaps and minimal redundancies.
 - Effective stakeholder engagement and skills transfer.
 - Urgent need for improved data governance frameworks and security measures.
- **Recommendations:** Emphasize standardization, data quality, security, integration, training, and collaboration.
- **Future Direction:** Continued commitment to implementing recommendations to enhance public service efficiency, transparency, and responsiveness.

Data Governance Model



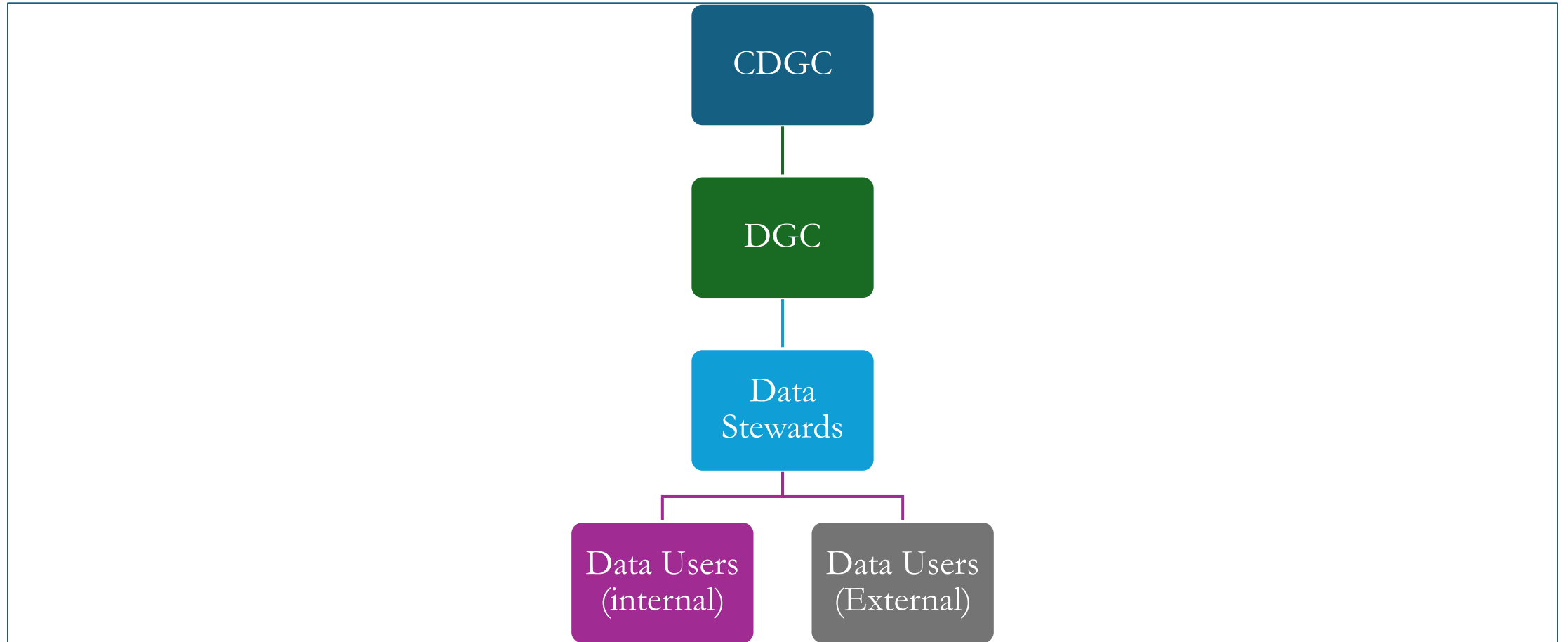
Contents

- Introduction
- Data Governance Structure
- Key Data Policies
- Data Management Processes
- Data Lifecycle Management
- Training, Capacity Building
- Continuous Improvement

Introduction

- **Purpose:** Establish a framework for managing data assets ensuring accuracy, consistency, security, and effective utilization.
- **Scope:** Covers all data management activities within selected institutions, applying to all types of data and personnel.
- **Objectives:**
 - Establish clear data ownership and accountability.
 - Ensure data quality and integrity.
 - Enhance data security and privacy.
 - Facilitate data accessibility and usability.
 - Support regulatory compliance.
 - Promote a data-driven culture.

Data Governance Structure



Data Governance Structure

- **Central Data Governance Committee:**
 - Provides strategic direction and oversight.
 - Sets policies and resolves issues.
 - Fosters a data-driven culture.
- **Ministry-Level Data Governance Committee:**
 - Oversees implementation and management of policies.
 - Maintains data inventories and enforces data quality.
 - Monitors compliance.
- **Data Stewards:**
 - Manage specific data domains, ensuring quality, metadata management, access control, and compliance.
- **Data Users:**
 - Use data in compliance with policies, report issues, and ensure secure handling.

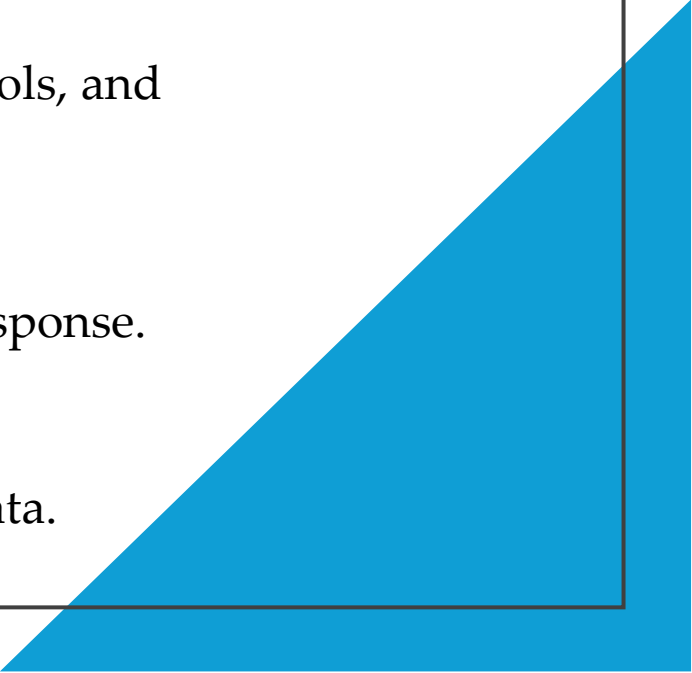
Key Data Policies

- **Data Access Policy:**
 - Controls access based on least privilege.
 - Formal request and approval processes.
 - Regular access reviews and secure authentication.
- **Data Usage Policy:**
 - Define acceptable use and ensure compliance with ethical standards and legal requirements.
- **Data Integrity and Integration Policy:**
 - Ensure data validation, consistency, quality management, and standardization.


Key Data Policies

- **Data Security and Privacy Policy:**
 - Protect data confidentiality, integrity, and availability.
 - Implement encryption, access controls, and incident response procedures.
- **Data Documentation and Metadata Policy:**
 - Ensure comprehensive documentation and **Metadata Management**.


Data Management Processes

- **Data Collection:**
 - Standardize methods, provides training, validate data at entry, and document procedures.
 - **Data Storage:**
 - Utilize centralized storage, backup and recovery plans, access controls, and encryption.
 - **Data Security:**
 - Implement access controls, encryption, monitoring, and incident response.
 - **Data Quality Management:**
 - Profile and clean data, conduct quality audits, and maintain metadata.
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Data Lifecycle Management

- **Data Creation:**
 - Implement standardized entry protocols and validation, generates metadata.
 - **Data Maintenance:**
 - Regular updates, cleansing, and quality monitoring.
 - **Data Archiving:**
 - Define archiving criteria, ensures secure storage, maintain metadata.
 - **Data Disposal:**
 - Establish secure deletion methods and audit trails for disposal activities.
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Capacity Building & Continuous Improvement

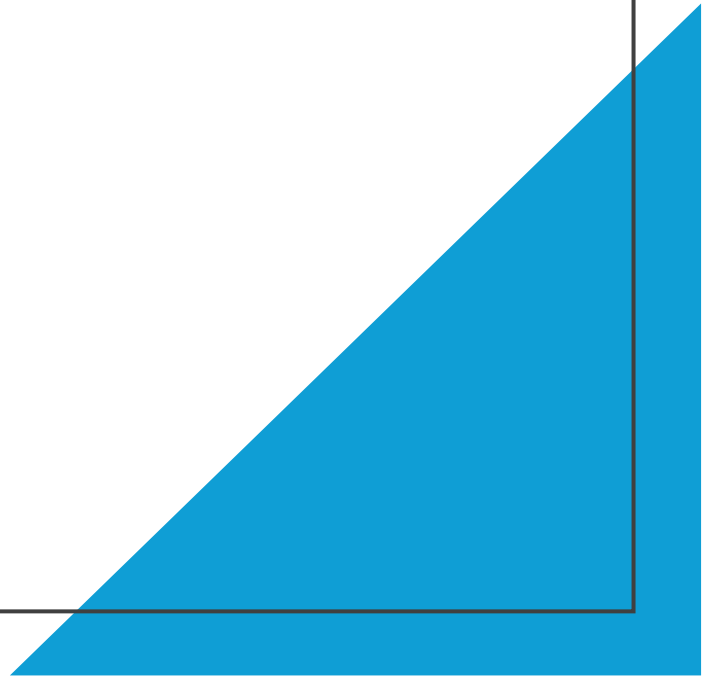
- **Training Programs:**
 - Comprehensive training on governance, management practices, security, analysis, and system use.
 - **Capacity Building Initiatives:**
 - Seek technical assistance, mentorship programs, knowledge sharing, infrastructure investment, and professional development.
 - **Continuous Improvement:**
 - Regular reviews, stakeholder feedback, performance evaluation, best practices, and innovations.
 - Training programs, innovation labs, advisory committees, real-time monitoring, and reporting.
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Scaling-up Data Inventory – Phase II

- Ministry of Public Service Administrative Reform & Policy Coordination and Delivery

Data collection done and analyzing the findings

- Ministry of Fisheries and Water Resources
- Ministry of Tourism and Culture
- Ministry of Gender, Children ,and Social Welfare





Thank You