Dubai Open and Shared Data Framework
25 February 2016
AGENDA

1. DUBAI DATA MANAGEMENT FRAMEWORK & REQUIREMENTS
2. DUBAI OPEN & SHARED FRAMEWORK
   1. Data Management Organization
   2. Data Inventory
   3. Data Classification
   4. Final Preparation
3. APPENDIX
   1. Job Descriptions
   2. RACI Data Management
DUBAI DATA MANAGEMENT FRAMEWORK & REQUIREMENTS
EVERYONE BENEFITS FROM DUBAI DATA

DUBAI DATA
THE WORLD’S MOST COMPREHENSIVE AND AMBITIOUS DATA INITIATIVE

“Our aim is not to have the most data, but to unleash the greatest value from data, creating new opportunities and improved experiences for all.”

His Highness Sheikh Mohammed bin Rashid Al Maktoum
On the announcement of the Dubai Data Law (October 7th, 2015)

DEFINING DUBAI DATA 
KEY TERMS

DATA
Any organized or non-organized set of inputs, facts, concepts, instructions, observations or measurements, that can be interpreted, exchanged, processed.

BIG DATA
Extremely large amounts of data that may be analysed to reveal patterns, trends, and associations. Typically answers "what?" questions.

RICH DATA
What Big Data turns into after being subject to deeper, often qualitative analyses, extracting insights. Typically answers "why?" questions.

ALL DATA

BIG DATA

SHARED DATA

OPEN DATA

RICH DATA

Source: neXgen analysis
Confidential
Dubai Data Law Signed Oct. 16, 2015

Contents
1. Introduction
2. The Purpose of This Document - Outlining a Framework for "Dubai Data"
3. What is Open Data?
4. Proposed Dubai Data Framework
5. Data Sharing and Publication
6. Data Use and Reuse
7. Privacy, Confidential Information, Intellectual Property
8. Data Categorisation Framework
9. Data Standards and Compliance
10. Governance
11. Glossary
Dubai Data Law Contents

9 Specific Obligations of Dubai Government Departments:

1. Classify/categorize the entity’s data
2. Develop a plan for sharing of data
3. Modify the entity’s infrastructure to publish and share data
4. Take all necessary actions to publish and share data
5. Identify obstacles for review by Concerned Body
6. Ensure quality and updating of entity’s data
7. Handle data from other providers in compliance with Concerned Body
8. Report on data publication and sharing as requested by Concerned Body
9. Adhere to policies and requirements adopted by the Concerned Body
Dubai Data Law Contents

Protects Confidentiality, Privacy and Intellectual Property:

• “Data providers must, in the course of the data publication and sharing process, take all necessary actions to safeguard the confidentiality and privacy of users’ data that are legally protected.”

• “Comply with the data privacy rules and safeguard intellectual property rights.”
Dubai Data Law Contents

Provides guidelines in Dubai Data Manual (incl. Classification & Standards)

Dubai data shall be classified as:
1) Open data (available to public)
2) Shared data (with restrictions)

Dubai data classification is carried out in line with the Dubai Data Manual and Data Classification Framework that is adopted by the Concerned Body in consultation with DESC.
Dubai Data Management Framework
Overall Department Requirements

Data Management Framework

Implement
- Data Lifecycle Standards
- Data Management Organization
- Data Quality Monitoring
- Data Strategy Roadmap

Assess
- Business Profile
- Data Management Business Process
- Data Management Organization
- Data Architecture
- Data Quality

Identify

Define
- Data Inventory & Registry Alignment
- Data Classification
- Data Quality Remediation
- Data Syndication/Ingestion Methodology

- Data Management Organization
- Data Lifecycle Standards
- Data Exchange Specifications
- Data Modelling Standards
- Data Quality & Lifecycle Standards

Source: neXgen analysis  Confidential
DUBAI OPEN & SHARED DATA FRAMEWORK
Dubai Open and Shared Data Framework

Department activities needed to release data to the Dubai Smart City Platform and in compliance with Dubai Data Law

Data Management Framework

1. Define Data Management Organization
2. Identify Data Inventory/Assets and Align with Primary Registry
3. Classify Data Sets
4. Prepare Final Submission

Source: neXgen analysis
Overview Timeline

Government Department Responsibilities

Smart Dubai Office Responsibilities

Source: neXgen analysis
Confidential
1. Define Data Management Organization
2. Identify Data Inventory/Assets and Align with Primary Registry
3. Classify Data Sets
4. Prepare Final Submission
1.0 Define a Data Management Organization

1.1 Setup Data Management Organization

   1.1.1 Identify Key Personnel
   1.1.2 Establish Organization Structure
   1.1.3 Define Roles & Responsibilities
   1.1.4 Identify Skills & Competencies
1.1.1 Identify Key Personnel

New DGHR Positions

• Chief Data Officer
• Data Management Administrator
• Data Expert

Current Staff (Virtual Roles)

• Data Steward(s)
• Data Specialist(s)
1.1.2 Establish Organization Structure

New Positions as per DG HR

Roles for existing Department Staff

Source: neXgen analysis
Confidential
1.1.3 Define Roles & Responsibilities
New Positions in DGHR to be hired by the Department

<table>
<thead>
<tr>
<th>Role &amp; Brief</th>
<th>Leadership</th>
<th>Governance</th>
<th>Compliance</th>
</tr>
</thead>
</table>
| **Chief Data Officer**  
- Senior ‘champion’ for implementation of Dubai Data regulations. Role must be fulfilled by a senior employee, to have the necessary influence and power within the department to be effective in the role.  
- Main point of contact between the department and SDO.  
- **CORE RESPONSIBILITIES**  
  - Overseeing the development of the department’s Implementation Plan for Dubai Data.  
  - Ensuring that the benefits of open and shared data are maximised, through high levels of adoption and utilisation of the data to improve services and decision-making |  
- Putting in place the necessary roles (with the appropriate skills) within their Department, as outlined in the Dubai Data Manual  
- Providing regular reports and compliance information as requested by the Department or SDO |  
- Identifying and enabling the delivery of data sets to the Dubai Data Platform for both Open and Shared Data publication, and appropriately applying the Data Classification Framework to their Data |
| **Data Management Administrator**  
- Responsible for data quality and data processes for a dataset or multiple datasets. Support CDO to implement the Dubai Data Policy. Support compliance and audit of data for Dubai Data Law and other regulatory requirements |  
- Providing support and advice to the Data Stewards within their Department when classifying data within the scope of their management and assessment of risks associated with disclosure or exchange  
- Supporting the Chief Data Officer to ensure that the benefits of open and shared data are maximised. |  
- Determining priorities with respect to Open Data publication or Shared Data exchange  
- Co-ordinating the work of the Department as it prepares its open and shared data for publication and exchange though the Dubai Data Portal. |  
- Preparing regular reports and compliance information as requested to the Open Data Committee  
- Administering the process of inventorying and classifying the Department’s Data.  
- Cascading knowledge about classification principles and procedures to required roles within their Department. |
| **Data Expert**  
- Responsible for advising and supporting the leadership role of the CDO as a champion for data regulations implementation. |  
- Guide oversight of the development of the Department’s Implementation Plan for Dubai Data.  
- Advise the CDO on how to ensure that the benefits of open and shared data are maximised, through high levels of adoption and utilisation of the data to improve services and decision-making |  
- Support CDO in identifying the right skills and establishing the necessary roles within their Department, as outlined in the Dubai Data Manual  
- Craft reports and compliance information as requested by the Department or SDO |  
- Support CDO in Identifying and enabling the delivery of data sets to the Dubai Data Platform for both Open and Shared Data publication, and appropriately applying the Data Classification Framework to their Data |

Source: neXgen analysis
Confidential
Job Descriptions in Appendix 17
## 1.1.3 Define Roles & Responsibilities

**Existing Department Staff**

<table>
<thead>
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</table>
| **Data Steward** | • The management of the assigned data and the associated Data Experts;  
• Recommending changes to data management policy and procedures, data quality and the implementation of Data Management Standards and procedures.  
• Understanding and promotion of the value of data for Dubai-wide purposes and facilitation of data sharing and integration. | • Ensuring the quality, completeness and update of Data under his/her supervision  
• Working in collaboration with the Data Management Administrator to determine priorities and associated risks of making data accessible by third parties  
• Engaging with the external developer community to determine how enhancements to the data set could facilitate greater levels of re-use. | • The collection and updating of the assigned data;  
• Management of any third party use of the data in accordance with Dubai policies and processes;  
• Advising and Reporting on data management issues.  
• Suggesting the terms and conditions upon which the Shared Data should be made available. |
| **Data Specialist** | • Assists with the resolution of Data integration issues as requested by the Data Steward  
• Assists the Data Steward in the definition of Data requirements and Data rules  
• Supports projects and initiatives in development and refinement of data processes and metrics in accordance as requested by Data Steward | • Supports definition, approval and execution of the Data Quality Program  
• Understands the Information Technology Landscape and has the ability to identify what data is stored in what systems.  
• Supports efforts to provide data awareness education for senior and upper management  
• Works with the Data Steward in the identification of root causes of major data problems and the supporting the implementation of sustainable solutions  
• Resolves routine data problems | • Assists the Business Data Steward with data problem resolution when requested  
• Reviews data deletion and archiving requests for data in their span of responsibility and forwards to approver with appropriate recommendations  
• Ensures users in their Department are kept informed of changes in data standards and processes which impact the users  
• Complies with data security requirements and educates/assists others in their organization on data security |

- Role within Business Unit (data generator)
- Primary “custodianship” of the data within the department: that is, they have a business responsibility (not a technical or a legal one) for ensuring that the data is used effectively to meet both the business needs of the department and the wider goals of the Dubai Data.
- Does not need to be the creator or the primary user of the asset, but they must understand its value to the organisation.

- Role within IT, DBA, etc.
- Technical Resource that is a facilitator between IT and business teams.
- Provides support to the business for cross-business definition of data standards, rules, and hierarchy.
- Ensures the alignment of the Business Data requirements with the IS systems.
- Provides support to projects and initiatives in development and refinement of data processes in accordance with defined standards.

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*Source: neXgen analysis*
# 1.1.4 Identify Skills & Competencies

<table>
<thead>
<tr>
<th>Chief Data Officer</th>
<th>Data Management Administrator</th>
<th>Data Expert</th>
</tr>
</thead>
</table>
| • Ability to collaborate and network with subject matter experts, organizations, and individuals to provide effective enterprise data management  
• Maintains competency with multiple business Process Scenarios  
• Proven ability to lead cross-functional teams at all organizational levels in dealing with complex issues | • Ability to collaborate with senior management of Business Units, functional organizations and individuals to provide effective enterprise data management  
• Ability to provide data object domain insight and direction to Data Stewards and Data Experts  
• Displays understanding of all business processes dependent on data in their object domain  
• Proven ability to create presentations and effectively present to management | • Proven international competency and experience with best practice open and shared data principles.  
• Established consultant with strong management, data and advisory capabilities.  
• Proven leadership ability in cross cultural contexts and teams at all organizational levels in dealing with complex issues |

Source: neXgen analysis

Confidential
### 1.1.4 Identify Skills & Competencies

| Data Steward                                                                 |
|                                                                            |
| • Collaboration skills within the business and Data Management Administrator to help provide effective solutions to data issues and problems |
| • Displays mastery of the portions of business processes executed by their business area |
| • Proficiency with MS Office, basic and some more advanced data analysis and process control methods/techniques |
| • Understands the fundamentals of databases and data structures (tables, hierarchical structures, flat files, etc.) |
| • Demonstrates understanding of all the functions performed by their business area |
| • Displays familiarity with systems used within/by their business area         |

| Data Specialist(s)                                                          |
|                                                                            |
| • Displays mastery of fundamentals of problem solving and basic data quality analysis |
| • Displays understanding of the portions of business processes executed by their business area |
| • Strong understanding of the Systems Development Life Cycle and methodologies, and familiarity with process improvement frameworks. |
| • Proficiency with MS Office, basic data analysis and process control methods/techniques |
| • Proven ability to work well and contribute to cross-functional teams       |
| • Proven ability to present to peers and supervisors                        |
| • Displays familiarity with systems used within/by their organization        |
| • Displays familiarity with functions performed by their business area       |
1.0 Complete

Define Data Management Organization

Organization Setup complete

Identify Key Personnel
Establish Organization Structure
Define Roles & Responsibilities
Identify Skills & Competencies

Identify Data Inventory/Assets and align with Primary Registry

Classify Data Sets

Prepare Final Submission
Define Data Management Organization

Identify Data Inventory and Align with Primary Registry

Classify Data Sets

Prepare Final Submission
2.0 Identify Data Inventory & Align with Primary Registry

2.1 Prepare Draft Data Inventory
2.1.1 Identify all datasets
2.2 Update Inventory Datasets
  2.2.1 Update dataset with Metadata information
  2.2.2 Categorize dataset per IPSV
  2.2.3 Update dataset with Data Publishing/Sharing details
2.3 Deliver Inventory for Review
  2.3.1 Review Dataset for completeness
  2.3.2 Identify possible Primary Registries
2.4 Align with Primary Registry
  2.4.1 Prioritize Dataset(s)
2.0 Overview of Inventory Process Alignment between Department and Smart Dubai Office

Department

2.1 Prepare Draft Data Inventory
- Identify all datasets

2.2 Update Inventory Datasets
- Update with Metadata Information
- Categorize dataset per IPSV
- Update dataset with Data Publishing / Sharing details

2.3 Deliver Inventory for Review
- Review Datasets for completeness
- Identify possible Primary Registries

2.4 Align with Primary Registry
- Prioritize Datasets

Smart Dubai Office
2.1 – Prepare Draft Data Inventory

2.1.1 – Identify all Datasets

What to include as a Dataset:

- **Master Data**: Basic business data used across all systems, applications, and processes for the entire department.
- **Conditional (or Child of Master) Data**: Master Data that is based on certain categories or specialization.
- **Transactional Data**: Data that is created as part of the Department carrying out the business. This can be financial, logistical, or work-related.
- **Aggregate Data**: Data combined from several transactions reporting purposes.

What not to include as a Dataset:

- **Reference data**: Reference data is a special subset of master data that’s used for classification throughout your entire department: e.g. cost centers, financial hierarchies etc. The data could be externally mandated or internally authored.
- **Reporting Data**: Dashboard or balanced scorecard data that is used for analysis.
### 2.1.1 Department Responsibilities & Steps to Prepare Draft Inventory

<table>
<thead>
<tr>
<th>Role/Role Title</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department, Director General</td>
<td>Step 1: Start Data Inventory Process</td>
</tr>
<tr>
<td>Department, Chief Data Officer</td>
<td>Step 2: Request Department Dataset Inventory</td>
</tr>
<tr>
<td>Data Management Administrator</td>
<td>Step 3: Transmit Department Dataset Inventory</td>
</tr>
<tr>
<td>Data Steward</td>
<td>Step 4: Review Data Inventory Submission</td>
</tr>
<tr>
<td></td>
<td>Step 5: Approval of Data Inventory</td>
</tr>
<tr>
<td></td>
<td>Step 6: Finalize Draft Data Inventory</td>
</tr>
</tbody>
</table>

- **Step 1**: Start Data Inventory Process
- **Step 2**: Request Department Dataset Inventory
- **Step 3**: Transmit Department Dataset Inventory
- **Step 4**: Review Data Inventory Submission
- **Step 5**: Approval of Data Inventory
- **Step 6**: Finalize Draft Data Inventory
2.2 – Update Inventory Datasets

Identifies:
• Names the dataset
• Describes the dataset
• Responsibility for dataset
• Location
• Format

Information captured per the Dublin Core Metadata Initiative

Identifies:
• Subject Area of Dataset

Information captured per the IPSV

Identifies:
• If Data is already published or shared
• If shared, where the data is published and/or with whom it is shared.
2.2.1 Update Dataset with Metadata Information

Step 1 - Identify Basic Information
- Type
- Identifier
- Title
- Description
- Subject
- Coverage
- Frequency

Step 2 - Describe Accountability
- Contributor
- Creator
- Publisher
- Steward

Step 3 – Identify Technical Information
- Source
- Format
- Language

Information that identifies and describes the dataset
Information that explains responsibility for the dataset
Information that identifies location and format of data
2.2.2 Categorize Dataset per IPSV

Determine the data set categorization according to the Integrated Public Services Vocabulary (IPSV)

IPSV is an encoding scheme for populating the subject element of metadata. It is fully compliant with ISO 2788 and BS 8723

Categorization requires identifying:
- Subject Level 1
- Subject Level 2
- Subject Level 3
2.2.3 Update Dataset with Data Publishing/Sharing Details

Record on the inventory spreadsheet if:

- the data published by the department and is accessible to citizens/residents electronically?
- the data available for Private business entities?
- the data shared with other entities?
2.3 Deliver Inventory for Review

Steps to be taken by Smart Dubai Office:

Step 1: Review Dataset for completeness of information

Step 2: Identify possible Primary Registries
Step 2.4 – Align with Primary Registry

Steps to be taken by Department:

Record on the Data Inventory if:

• The dataset is a primary reference to multiple government services
• The dataset has significant impact on entities business

If YES

• The dataset is part of the Primary Registry
2.0 Complete

Define Data Management Organization

Identify Data Inventory and align with Primary Registry

Classify Datasets

Prepare Final Submission

Prepare Draft Data Inventory Complete

Update Dataset Complete

Deliver Inventory for Review Complete

Align with Primary Registry Complete

Identify all datasets

Update dataset with Metadata information

Categorize data per IPSV

Update dataset with Data Publishing/Sharing details

Review Dataset for completeness

Identify possible Primary Registries

Prioritize Dataset(s)
1. Define Data Management Organization
2. Identify Data Inventory/Assets and align with Primary Registry
3. Classify Datasets
4. Prepare Final Submission
3.0 Classify Datasets

3.1 Dataset Identification

3.1.1 Identify priority datasets for classification

3.2 Dataset Classification

3.2.1 Classify the attributes
3.2.2 Split dataset based on attribute classification
3.2.3 Identify attributes causing a Secret, Sensitive, or Confidential scoring in order to arrive at open classification

3.3 Classification Review & Approval

3.3.1 Review classification by Smart Dubai Office
3.3.2 Review and agree on final classification by Smart Dubai and Department
3.1 – Dataset Identification

3.1.1 Identify priority datasets for classification:

Do any of the following apply to the Dataset:
- Part of Primary Registry
- Strategic alignment with Smart Dubai priorities (in particular Smart Economy and Smart Living)
- User demand for the data
- Government efficiency benefits
- Service improvement benefits
- Economic growth benefits
- Transparency/accountability benefits

Yes => Priority Dataset
No => Regular Dataset
3.2 – Dataset Classification
Types of Classification

- **Open Data**: Openly Disclosed to everyone
- **Shared Data**: Owned by entities is made available for sharing and re-use by other entities
- **Confidential**: Shareable across entities according to professional responsibilities
- **Sensitive**: Shareable within certain groups subject to strict controls
- **Secret**: Shareable in a limited way between certain individuals under strict controls

Source: neXgen analysis
3.2 Classification Workflow

Understanding the decision making process

- **Input Department Dataset**
- **Disclosure affects National Security**
  - Yes
  - **No**
- **Disclosure violates existing law**
  - Yes
  - **Impact found**
  - **Open Data**
  - **Review Dataset**
    - **Limited**
    - **Confidential Data**
  - **Significant**
    - **Sensitive Data**
  - **High**
    - **Secret Data**
  - **No impact**
  - 3.2.2
- **No**
  - **Yes**
  - **Shared Data**
    - Profile risk to determine damage level in order to classify
  - **3.2.1**
    - Classify the attributes
    - **3.2.3**
      - **38**

Source: neXgen analysis
Confidential
## 3.2 Classification Assistant

Smart Dubai provided tool to aid data classification

Use the classification assistant to help determine the dataset classification through a series of questions:

<table>
<thead>
<tr>
<th>Question</th>
<th>Impact level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does data disclosure affect the national security?</td>
<td>No</td>
</tr>
<tr>
<td>To which level, data disclosure will negatively impact on ...</td>
<td></td>
</tr>
<tr>
<td>Violation of any of the existing legislations or laws?</td>
<td></td>
</tr>
<tr>
<td>The ability of the agency to conduct its tasks?</td>
<td></td>
</tr>
<tr>
<td>Individuals’ privacies?</td>
<td></td>
</tr>
<tr>
<td>Competitiveness and continuity of companies/institutions?</td>
<td></td>
</tr>
<tr>
<td>The course of justice and security processes?</td>
<td></td>
</tr>
<tr>
<td>Public health and safety?</td>
<td></td>
</tr>
<tr>
<td><strong>Classification</strong></td>
<td>Open</td>
</tr>
</tbody>
</table>

Source: neXgen analysis

Confidential
3.2.3 – Process for Disagreement with Classification from the Assistant Tool

If classification is different from the Classification Assistant suggestion

Determine the classification based on the Department’s understanding

Then provide explanation to support the revised classification

Source: neXgen analysis
Confidential
3.3 Classification Review & Approval Process

Smart Dubai Office Review

3.3.1 Agree with the Classification from the department

Yes

Smart Dubai Office reviews classification

Dataset Classification Approved

No

Joint Review between Smart Dubai and Department

3.3.2 Smart Dubai and Department review and agree on final classification
3.0 Complete

- Define Data Management Organization
- Identify Data Inventory/Assets and Align with Primary Registry
- Classify Datasets
- Prepare Final Submission

Dataset Identification complete
Dataset Classification complete
Dataset Review & Approval complete

- Identify Priority dataset for classification
- Classify the attributes
- Split dataset based on attribute classification
- Identify attributes causing a Secret, Sensitive, or Confidential scoring in order to arrive at open classification

Review classification by Smart Dubai Office
Review and agree on final classification by Smart Dubai and Department
1. Define Data Management Organization
2. Identify Data Inventory/Assets and Align with Primary Registry
3. Classify Datasets
4. Prepare Final Submission
4.0 Prepare Final Submission

4.1 Determine Data Ingestion Methodology

4.1.1 Preferred Syndication/Ingestion Method
4.1.2 Alternative Syndication/Ingestion Method
4.0 Determine Data Ingestion Methodology

Is the Dataset available for access on the Government Information Network?

Yes

Provide Access Details and connectivity information

No

Identify the most time efficient, technically appropriate and cost effective ingestion method according to the department’s environment (note Smart Dubai preferences)
Entities should publish their data in structured, machine-readable, open formats.

- APIs: Publish data via APIs as the first choice – particularly when publishing data that is regularly updated, of potentially broad application for re-use, and where Data Users may wish to process the data programmatically.
- CSV: When not publishing via APIs, use CSV or a similar non-proprietary ‘structured data’ format (consider TSV, JSON and XML)
- Excel: Consider also publishing data in proprietary structured formats that are widely adopted by Data Users (such as Microsoft Excel)
- Do not publish structured data in unstructured formats such as PDF.

Note on APIs:

- The Smart City Platform will support a generic API that will permit access to all published data sets in a similar manner. Details are expected to become available during Quarter 3 2016.
- As a minimum, Entities must ensure that Primary Registries for which they are Primary Registry Controller are accessible via APIs.
4.1.2 Alternative Data Syndication/Ingestion Methods

Alternative ingestion options available for Departments to share information with the Smart City Platform

<table>
<thead>
<tr>
<th>Ingestion Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat Files</td>
<td>• Data shared in text or csv files via http or https or FTP or pushed into the SCP file landing zone.</td>
</tr>
<tr>
<td>RDBMS</td>
<td>• Provide Direct SQL access or export data to Hadoop Distributed Files System native file formats or access to a database</td>
</tr>
<tr>
<td>Data Warehouse</td>
<td>• Provide aggregated data via SQL exports or report exports</td>
</tr>
<tr>
<td>Hadoop Distributed File System</td>
<td>• If HDFS already exists within the department then utilize Open Source or Proprietary Tools or Node Synchronization to transmit data.</td>
</tr>
<tr>
<td>Semi or Unstructured</td>
<td>• Data that is not in a structured form which is in the form of log files or social media captures</td>
</tr>
<tr>
<td>Data Virtualization</td>
<td>• Provide access by allowing permanent virtual access visibility to the data from the Smart City Platform</td>
</tr>
<tr>
<td>Application Programming Interfaces</td>
<td>• Web APIs are the defined interfaces which are a set of Hypertext Transfer Protocol (HTTP) request messages, along with a definition of the structure of response messages, which is usually in an Extensible Markup Language (XML) or JavaScript Object Notation (JSON) format.</td>
</tr>
<tr>
<td>Government Service Bus</td>
<td>• Already shared data or functionality via the Government Service Bus</td>
</tr>
</tbody>
</table>

Please note that a Dubai Data Policy will published once finalized which will detail out the preferred method of Ingestion
4.0 Complete

- Define Data Management Organization
- Identify Data Inventory/Assets and Align with Primary Registry
- Classify Datasets
- Prepare Final Submission
Job Description - Chief Data Officer

- The Chief Data Officer is the senior ‘champion’ for the implementation of the Dubai Data regulations. This role must be fulfilled by a senior employee, either at board level within the Department or reporting directly to a board member, so that the individual has the necessary influence and power within their Department to be effective in the role.
- The Chief Data Officer is the main point of contact between the Department and the Concerned Body, responsible for communications, coordination and escalation to the Concerned Body.

**Leadership:**

- Overseeing the development of the department’s Implementation Plan for Dubai Data.
- Ensuring that the benefits of open and shared data are maximised, through high levels of adoption and utilisation of the data to improve services and decision-making.

**Governance:**

- Putting in place the necessary roles (with the appropriate skills) within their Department, as outlined in the Dubai Data Manual
- Providing regular reports and compliance information as requested to the Open Data Committee

**Compliance:**

- Identifying and enabling the delivery of data sets to the Dubai Data Platform for both Open and Shared Data publication, and appropriately applying the Data Classification Framework to their Data.
Job Description - Data Management Administrator

The Data Management Administrator is responsible for data quality and data processes for a dataset or multiple datasets. The Data Management Administrator provides support to the Chief Data Officer to implement the Dubai Data Policy, and support compliance and audit of data for Dubai Data Law and other regulatory requirements within their datasets.

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| • Providing support and advice to the Data Stewards within their Department when classifying data within the scope of their management and assessment of risks associated with disclosure or exchange | • Determining priorities with respect to Open Data publication or Shared Data exchange  
• Co-ordinating the work of the Department as it prepares its open and shared data for publication and exchange though the Dubai Data Portal. | • Preparing regular reports and compliance information as requested to the Open Data Committee  
• Administering the process of inventorying and classifying the Department’s Data.  
• Cascading knowledge about classification principles and procedures to required roles within their Department. |
Job Description - Data Steward

- The Data Steward is the person who has “custodianship” of the data within the Department: that is, they have a business responsibility (not a technical or a legal one) for ensuring that the data is used effectively to meet both the business needs of the Department and the wider goals of the Dubai Data strategy.
- The Data Steward does not need to be the creator or the primary user of the asset, but they must understand its value to the organisation.

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<td>The management of</td>
<td>Ensuring the quality, completeness and update of Data under his/her</td>
<td>The collection and updating of the assigned data;</td>
</tr>
<tr>
<td>the assigned data</td>
<td>supervision</td>
<td>Management of any third party use of the data in accordance with</td>
</tr>
<tr>
<td>and the associated</td>
<td>• Working in collaboration with the Data Management Administrator to</td>
<td>Dubai policies and processes;</td>
</tr>
<tr>
<td>Data Experts;</td>
<td>determine priorities and associated risks of making data accessible by</td>
<td>• Advising and Reporting on data management issues.</td>
</tr>
<tr>
<td>Recommending changes</td>
<td>third parties</td>
<td>• Suggesting the terms and conditions upon which the Shared Data should</td>
</tr>
<tr>
<td>to data management</td>
<td>• Engaging with the external developer community to determine how</td>
<td>be made available.</td>
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<tr>
<td>policy and procedures, data quality and the</td>
<td>enhancements to the data set could facilitate greater levels of re-use.</td>
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<tr>
<td>implementation of</td>
<td></td>
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<tr>
<td>Data Management</td>
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<tr>
<td>Standards and</td>
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<tr>
<td>procedures.</td>
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<tr>
<td>Understanding and promotion of the value of</td>
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<tr>
<td>data for Dubai-wide</td>
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<tr>
<td>purposes and</td>
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<tr>
<td>facilitation of</td>
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<tr>
<td>data sharing and</td>
<td></td>
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<tr>
<td>integration.</td>
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</tbody>
</table>
# Dublin Core Metadata Terms

<table>
<thead>
<tr>
<th>Label</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contributor</td>
<td>An entity responsible for making contributions to the resource.</td>
</tr>
<tr>
<td>Coverage</td>
<td>The spatial or temporal topic of the resource, the spatial applicability of the resource, or the jurisdiction under which the resource is relevant.</td>
</tr>
<tr>
<td>Creator</td>
<td>An entity primarily responsible for making the resource.</td>
</tr>
<tr>
<td>Date</td>
<td>A point or period of time associated with an event in the lifecycle of the resource.</td>
</tr>
<tr>
<td>Description</td>
<td>An account of the resource.</td>
</tr>
<tr>
<td>Format</td>
<td>The file format, physical medium, or dimensions of the resource.</td>
</tr>
<tr>
<td>Identifier</td>
<td>An unambiguous reference to the resource within a given context.</td>
</tr>
<tr>
<td>Language</td>
<td>A language of the resource.</td>
</tr>
<tr>
<td>Publisher</td>
<td>An entity responsible for making the resource available.</td>
</tr>
<tr>
<td>Relation</td>
<td>A related resource.</td>
</tr>
<tr>
<td>Rights</td>
<td>Information about rights held in and over the resource.</td>
</tr>
<tr>
<td>Source</td>
<td>A related resource from which the described resource is derived.</td>
</tr>
<tr>
<td>Subject</td>
<td>The topic of the resource.</td>
</tr>
<tr>
<td>Title</td>
<td>A name given to the resource.</td>
</tr>
<tr>
<td>Type</td>
<td>The nature or genre of the resource.</td>
</tr>
</tbody>
</table>

More details can be found at [http://dublincore.org/specifications/](http://dublincore.org/specifications/)
The Integrated Public Sector Vocabulary (IPSV) is an encoding scheme for populating the e-GMS Subject element of metadata. It is fully compliant with ISO 2788 and BS 8723, the International and British Standards for monolingual thesauri. The vocabulary was developed with the backing of the ODPM (Office of the Deputy Prime Minister) and the eGU (Cabinet Office e-Government Unit).

More information can be found at [http://standards.esd.org.uk/?uri=list%2Fsubjects&tab=details](http://standards.esd.org.uk/?uri=list%2Fsubjects&tab=details)
Primary Registries

Primary Registries are essential Data Sets that must be made Open to the general public or Shared among Government and Government Related Entities.

A Primary Registry will act as the source of record for the data which it contains.

The Primary Registry Controller is the single Custodian of the Registry data and the only Department allowed to gather this information.

All other Government Entities must use Primary Registry data sourced from the Controller.

Source: http://urbanopus.net/
Enterprise Representation of Data

- Enterprise is Government of Dubai or the Smart Dubai Office
- Work Process is the Government Department
- Line of Business/Function is within the Government Department
- External Party is the anyone outside the Government (citizens, Expats, Private entities)

**Local** – Data that is self-contained within the Line of Business– not shared.

**Line of Business / Function** – Data that is shared/exchanged across more than one application within one LOB, Function or Work Process

**Enterprise** – Data that is shared/exchanged internally within the Enterprise, across more than one Work Process

**Federated** – Data that is shared/exchanged between the Enterprise and any external party
**Objective**

Create an initial roadmap for your Department’s Data work

Assess capabilities and prepare Department for meeting Dubai Data requirements

**BU Role**

Evaluate how to meet the data requirements for the Department

**Strategy Role**

Align data requirements with Dept goals and commitments

**IT Role**

Set processes, infrastructure, governance, data integrity, lifecycle management needed for data compliance

**HR Role**

Determine personnel needs: skills, roles, training

Source: neXgen analysis
Plan Evaluation – measurement mechanism; at what intervals; who is the responsible body; and how results will be incorporated?

- Strengths (i.e. leadership support, resources, skill set, data maturity, etc.)
- Weaknesses (i.e. Process; Infrastructure; Resources (retrain, long term or temp hire, reassignment); Budget; Timeline for action)
- Technology Capacity – systems and process sophistication
Step 2 – Assemble Plan

Objective
- Why the Plan exists and what it’s trying to achieve
- Required behaviors/actions that need to be taken

Governance
- Model
- Workflow Process
- Approval Process

Approach
- Deliverables
- Activities
- Resources

GANTT
- Dates
- Dependencies
- Milestones

Risks
- Potential risks
- impact
- Remedial Actions

Measurement
- How will success be measured and when
- What will success look like
- How will learnings be incorporated

Source: neXgen analysis
Confidential
QUESTIONS