Data Management Maturity Assessment

SAMPLE QUESTIONS

INTRODUCTION

Supplementing the Data Maturity Advice Note and Step-by-Step Guide, OGCIO has developed a set of sample questions that can be utilised by PSBs when undertaking their own self assessments. These questions are designed to be generic and applicable to individuals at different grades within a PSB and with varying levels of knowledge and experience about Data Management. They are suitable for use in a range of different approaches and formats from interviews to questionnaires and workshops.

PSBs are free to use these questions for their own assessment, however, it is recommended that PSBs use these sample questions as a guide to designing their own set of questions. The questions below are divided into sections, as per DAMA-DMBoK knowledge areas.

BENCHMARKING

Questions are provided for each the 11 DAMA-DMBoK knowledge areas. These questions are a mix of open-ended questions for qualitative feedback, and sentiment questions for quantitative feedback.

- Sentiment questions are used to get a sense of a PSB's performance in a given area by asking to what extent participants agree with a given statement. Possible answers to a sentiment questions should scale from 1-5 from strongly disagree to strongly agree. There should also be an option for individuals to answers that they don't know.

1	2	3	4	5	NA
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Don't Know

- Open-ended questions and comment boxes attached to sentiment questions identify common issues, gaps, opportunities, strengths and weaknesses that exist around data in a given area. Most importantly, they provide valuable insight and allow the identification of improvements and recommendations to processes and procedures in data management in a given area.

BACKGROUND QUESTIONS

A PSB should ask background questions as part of its assessment in order to better to contextualise and inform itself around the responses it receives from participants in the assessment. A PSB should decide on these questions based on its needs and the level of anonymity desired for participants. Some useful questions could be regarding the role of the individual responding and their level of engagement with data.

1 – DATA GOVERNANCE

Data Governance is the exercise of authority and control (planning, monitoring, and enforcement) over the management of data assets. The Data Governance function guides all data management functions and ensures data is managed properly, according to your organisations' policies and best practices.

Data Management is the development, execution and supervision of planning, policies, programs and practices that deliver, control, protect and enhance the value of data throughout their lifecycles.

How do you rate performance in regards to Data Governance or Data Management?	Do you have a data governance strategy or programme that address the governance of data?	Is there is a culture of documenting how data is structured, collected, controlled, protected and enhanced over its lifecycle?
Are data policies and procedures strictly enforced?	Do specific roles exist for data management activities, e.g. Data Steward, Data Owner, Business Owner etc?	Is training provided to staff in terms of data management and governance?

2 – DATA ARCHITECTURE

Data architecture is composed of models, policies, rules or standards that govern what data is collected, how it is stored, arranged, integrated, and put to use in systems and policies in line with business needs.

An organisation's data architecture is described by an integrated collection of master design documents of varying levels of detail, including standards that govern how data is collected, stored, arranged, used and removed. It also should describe the data flows through the organisation.

Is there knowledge and expertise around the concept of Data Architecture?	Do you have documentation that governs the how data is collected, stored and processed across data systems?	Does data align and serve its organisational and business needs?
Do you employ or utilise any data standards? If so, what standards?	Is there consistency in relation to data collection, storage, processing and documentation?	Is Data Architecture considered when developing or undertaking new projects?

3 – DATA MODELLING & DESIGN

Data Modelling – *Process of discovering, analysing, representing, and communicating data requirements in a precise form called the data model. The process is iterative and may include a conceptual, logical and physical model. Data models depict and enable an organisation to understand its data assets.*

Data Modelling and design is a critical component of data management. It enables an organisation to discover and document how its data fits together. The model will cover the relationships and data flows between different data elements, both within an organisation and external to it. Models also document the way data is stored and retrieved.

Is data modelling frequently undertaken on data projects?

Are there data models in place that depict and help the understanding of data assets?

Is there a data catalogue or a data map that documents your data assets?

Is the data lifecycle mapped or documented for systems and services?

Is training provided around data modelling and how to model data at a conceptual, logical and physical level?

4 – DATA STORAGE & OPERATIONS

Data Storage - *Includes the design, implementation of data storage in order to maximise the value of data. It focusses on storage activities related to the data lifecycle, from initial implementation of a database environment, through obtaining, backing up and disposal of data. It also includes monitoring and operations in relation to data storage and ensuring databases perform as intended.*

Does the manner in which data is stored and managed maximise its value?

Is there consistency around data storage?

Is there a data storage strategy or roadmap in place that lays out the improvements and developments that should take place around storage?

Is there a data retention policy in place?

Are there a documented processes, procedures in place for the operation/storage and archival of data?

Is data regularly monitored and backed up, with checks on backups to ensure that they are operational?

5 – DATA SECURITY

Data Security - Planning, development, and execution of security policies and procedures to provide proper authentication, authorisation, access, and auditing of data and information assets. It seeks to ensure that data privacy and confidentiality are maintained, that data is not breached, and that data is accessed appropriately.

Are there data security policies, guidelines and standards in place?	Is there a strong enough focus on data security with adequate security resources and policies in place?	Is data security regularly reviewed within with security reviews and audits taking place?
Is there secure authentication and authorisation systems (login) in place for accessing data?	Is data access by staff logged and audited on a regular basis?	Are data management issues and risks recorded in auditable logs and/or risk registers?

6 – DATA INTEGRATION & INTEROPERABILITY

Processes related to the movement and consolidation of data within and between data stores and applications.

Data Integration consolidating and combining data residing in different sources into consistent forms, unified views, systems, processes - either physical or virtual.

Data Interoperability is the ability for multiple systems to communicate. These systems may be both internal and external to the organization.

Is data available for reuse both internally and externally (other PSBs)?	What methods are used for sharing data both within and outside of the organisation (HTTPS, APIs, Batch File Transfer, SFTP, email, etc.)?	Are their opportunities to reuse data internally for better outcomes?
Are there technical and non-technical policies and procedures in place to provide access to data (and govern such access)?	Is metadata, where appropriate, made appropriate available via the Public Service Catalogue?	Is data, where appropriate, made publicly available as Open Data?

7 – DOCUMENT & CONTENT MANAGEMENT

Document and Content Management - *Entails controlling the capture, storage, access, and use of data and information stored outside relational databases. Its focus is on maintaining the integrity of and enabling access to documents and other unstructured or semi-structured information such as word documents, spreadsheets, videos, PDFs, images and the like. It also encompasses facilitating and enabling the sharing and transfer of knowledge across the organisation.*

Do you apply document and content management consistently to documents (PDF, Word, Excel docs)?	Do you have a standard way of storing and retrieving documents?
Is there policies in place for the classification, retention and archival/deletion of documents?	Is there aqequate knowledge transfer amongst staff through its document and content management?

8 – DATA WAREHOUSING & BUSINESS INTELLIGENCE

Data Warehouse - *Large store of data accumulated from a wide range of sources within an organisation - used to guide management decisions. Data warehousing is a technology that aggregates structured data from one or more sources so that it can be compared and analysed for greater business insight.*

Business Intelligence – *Type of data analysis aimed at understanding organisational activities and opportunities. Such analysis is then used to make informed decisions and make improvements to business operations. To undertake business intelligence, there is a toolset of technologies that enable querying, data mining, statistical analysis, reporting, scenario modelling, data visualisation and dashboarding.*

To what extent Is business intelligence and analytics applied?	Are there opportunities to employ business intelligence more broadly?	Is data shared internally with other units or divisions for data warehousing or business intelligence?
Which areas, divisions within your organisation would benefit from the creation of a Data Warehouses?	Do you make use of dashboarding to present up-to-date information to business owners and decision makers?	

9 – METADATA

Metadata – *Information that describes data. It includes information about technical and business processes, data rules and constraints, and logical and physical data structures. It describes the data itself (e.g., databases, data elements, data models), the concepts the data represents (e.g., business processes, application systems, software code, technology infrastructure), and the connections (relationships) between the data and concepts. Simple examples of Metadata include: the label on a can or jar; a library catalogue card with details of a book and in many cases metadata might include a description, attributes, associated dates, allowed values etc.*

What types of metadata are stored and what is their primary purpose?

Do you have a defined processes or standards by which metadata is stored?

Does you use metadata to produce reports on data holdings and business operations?

Is there a data catalogue which records data held? Is it documented, and if so, where is this documentation stored?

Is there awareness and access across units in the organisation to metadata held by individual teams?

10 – DATA QUALITY

Data Quality – *Data quality is critical to effective data management, enabling an organisation to use its data to achieve strategic goals and for that data's potential reuse in future. Key to these data operations is that the data itself is reliable and trustworthy. Data Quality includes the planning and implementation of quality management techniques to measure, assess, and improve the fitness of data for use within an organisation - to assure it is fit for consumption and meets the needs of data consumers.*

Do you ensure data quality through consistent processes and standards for data collection and storage?

How are data quality issues identified, tracked, resolved?

Is there a programme in place to improve data quality?

Is there a clear understanding of the acceptable level of quality for data?

Are reports produced outlining the level of data quality?

Are the 6 dimesions of data quality considered (Complete, Accuracate, Consistent, Valid, Unique, Integrity)?

11 – REFERENCE & MASTER DATA

Reference & Master Data – *ongoing reconciliation and maintenance of core critical shared data to enable consistent use across systems of the most accurate, timely, and relevant version of truth about essential business entities. Examples include a master hub with Customer, Employee or Supplier data – for use in multiple systems*

To what extent is Master Data Management (MDM) undertaken?

Is there opportunities for MDM?

Do you collect the data directly or indirectly from another PSB or internal division?

Is there collaboration around the gathering of the same data by different sections or with other PSBs?

END