# **C4IR Open Data Charter 2023**

# Reimagining and Reinventing Open Data Policy within Local Government environment

Centre for the Fourth Industrial Revolution South Africa (C4IR South Africa)

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#### 1. Introduction

This charter emanates from the research conducted during the first phase of the "Reimagining and Reinventing Open Data Policy within Local Government environment" open data project. It is one of the deliverables of the project.

It is a combination of ODC.org charter on open data and the WEF Open Data Policy Guideline. The objectives of this charter is to provide a list of open data principles that is applicable to South African municipalities and to provide a guideline and recommendation of what an open data policy constitutes.

The Charter starts by listing the six key open data principles and how the WEF guideline should be used in conjunction with it. The second part of the charter provides an open data template with the recommended clauses that should be present.

The key stakeholders in the process were the City of Cape Town and the Western Cape Government (WCG) since they have already implemented open data policies in their city and province. The principles for both policies were investigated and matched with the ODC.org list. Other municipalities with existing data policy documents that were also investigated were the eThekwini Open Data Portal policy, the City of Tshwane Enterprise Data Framework draft Policy, and the city of Joburg Data Strategy document.

The draft open data policy with the recommended principles were completed and merged with the above existing policy documents.

# 2. Background and Benefits of Open Data

- 2.1 South Africa and the world is experiencing a significant shift in transformation due to data generated from digitilization and the advent of the new 4IR technologies such as IoT, AI, blockchain, VR and AR, etc. At the centre of all this is the data that is being generated and analysed. This transformation has the potential for governments to be more transparent to citizens.
- Open data has been an important key requirement for smart city implementation. Many smart city technologies like IoT and IIoT, for example, depend on data to be open to provide efficient and rapid services. The open data empowers governments and cities to perform rapid data-based decision making.
- Open data therefore also provides more transparency to citizens and hold governments more accountable for project and service delivery.
- Open data also allows new technologies like AI, blockchain, VR and AR to be effectively applied.
  Many of the new technologies today are heavily dependent on the integrity and accuracy of open data. The data analysis tools can only function and work effectively if the data is open.
- Open data also and new technologies also provides access to new markets that did not exist before.

  This is critical for new market and business development and
- To participate in the new world technologies and markets, it is imperative for governments and cities to develop an open data policy.
- 2.7 Open data will therefore also empower city employees and citizens to identify new opportunities and markets.

# 3. The Open Data City Team

The city must develop a "City Data Team". In many cases these roles already exist in the city structures. All data sets originate from various departments on the city. The following roles are necessary as part of the CDT:

Data Champion/Steward a person within the relevant City departments, and designated by the same City

department, from where data is sourced to be the responsible person for managing

certain datasets;

Data Custodian a person or department designated by the City departments to be responsible for the

technical infrastructure that ensures mass collecting, mass storage & security and making the information datasets available to internal users and citizens at large;

Data Owner a person(s) designated by the City departments to be responsible for the source of

collection and ownership of the integrity of the data in terms of its content; - data

registry

# 4. Open Data Six Principles Defined

The six open data principles from the ODC.org is listed below with the amendments and recommended through the project. The following recommendations are made regarding open data principles:

- 1. Cities should develop an open data policy that integrates and enhances existing policies.
- 2. Cities should take each of the principles and define it for their purposes.
- 3. Below is just a general description of the principles.

Open Data Charter (ODC)		WEF Open Data Policy	
<ol> <li>Accessible</li> <li>Compara</li> <li>For Impresentation</li> </ol>	nd Comprehensive le and Usable lble and Interoperable oved Governance & Citizen lent sive Development and	9. 10. 11. 12.	Policy The fundamentals of open data Relationship to wider city policy, strategy and initiatives Governance and process for accountability and compliance Ecosystem engagement for trust and value creation Relationships with principal data stakeholders Technical measures to underpin open data practice Platform and data infrastructure

Table 1: Key International Policy Principles for Open Data

#### 4.1 Principle One: Data must be Open By Default

- 1. Government data needs to be open by default because of its value to society.
- 2. If data sets are not open then the reasons for the closed data need to be specified.
- 3. Open data should have free access via a data portal
- 4. Open data should not compromise citizen's right to privacy.
- 5. Develop a culture of openness in the city structures, awareness campaigns and training
- Ensure that the leadership and management have full buy-in on open data, and that staff is incentivised for having open data.
- 7. It is also important to note that open data follows the PAIA where all citizens has a right of access to information. However, in accordance with privacy (POPI ACT), anonymize data prior to publication to ensure that personalised and personally identifiable information is removed.

#### 4.2 Principle Two: Timely and Comprehensive

- It is important to note that it takes time for data to be collected and structured into a format that is readable.
- 2. It also takes time to consult the relevant stakeholders to collect the data to ensure integrity
- 3. However, having said this, it is also important to release data in its raw format in the case of emergencies in order for citizens to respond appropriately.
- 4. The release of high-quality data should therefore be released in a timely manner
- 5. Where possible, release data in its original form that is unmodified and link it to proper descriptions and documentation.
- 6. Public data should therefore be created, maintained and stored in a readable format and date-stamped

- 7. Hence, apply consistent information data management life cycle practices with historical sets of data preserved and date-stamped, analyses conducted, etc.
- 8. Consult data users regularly and allow for timeous feedback.

#### 8.1 Principle Three: Accessible and Usable

- 1. Ensure that there is sufficient broadband infrastructure within the city (via public wifi or fixed line fiber) for all citizens. In South Africa, ensure that all government buildings (municipal offices, schools, hospitals and clinics, DLTCs, museums, parks, etc.) have sufficient broadband access.
- 2. When open data is released, it should be easily discoverable and accessible.
- 3. Data should be open and easily accessible by government and civil society to make better decisions.
- 4. Hence publish data on an open data portal which is easily accessible.
- 5. Ensure that there is technical infrastructure and technical measures that underpins open data is in place. From a technical perspective, an open data portal should be designed and implemented or for those already in existence, a migration strategy should be built so that it is harmonized with the city's overall data infrastructure.
- 6. A data portal that automatically creates and presents the information products (files and APIs)
- 7. Release the data free and without mandatory registration.
- 8. Ensure data can be accessed and used effectively by the widest range of users. Categorize data into general citizens data, academia and student data, tourist data, staff of health facility data, staff of education facilities, etc. all have different requirements and needs. Ensure that these different categories have the different levels of access required.

#### 8.2 Principle Four: Comparable and Interoperable

- 1. For data to be most effective and useful by end users, data should be easy to compare within and between sectors, across geographic locations, and over time.
- 2. Data should be presented in a standard format that is easily readable by different system and comparable to other data sets.
- 3. Data must be made available in human and machine-readable format.
- 4. Data is fully described with supporting documentation that is easily readable and understandable. The data owners that generate the data must be trained to provide this information together with the data sets.
- 5. Data owners must also ensure the integrity and correctness of the data. The relationship with principle data stakeholders is therefore very important.
- 6. Map the local identifiers to internationally agreed standards.
- 7. A range of standardized data formats can be applied to increase the ease of reading of open data by software applications. In general, these formats should be non-unique and non-proprietary. The following formats are examples for structured data of different types should be used:
  - I. Tabular data should be published as CSV.
  - II. Geospatial data should be published as GeoJSON or KML.
  - III. Other structured non-tabular data should be published in an open standard where available (e.g. JSON, XML, RDF, GTFS).
  - Real-time data or data being used in real-time services should be made available via a welldocumented API.

# 8.3 Principle Five: For Improved Governance & Citizen Engagement

- 1. The release of open data strengthens the governance of and trust in our public institutions, reinforces governments' obligation to respect the rule of law.
- 2. Open data encourages better development, implementation, and assessment of programs and policies to meet the needs of our citizens, and enables civic participation and better informed engagement between governments and citizens.
- 3. Engagement and consultation with citizens and civil society and private sector organizations can help governments understand which types of data are in high demand, and, in turn, can lead to improved data prioritization, release, and standardization practices.
- 4. Cities need to formalize engagement platforms with civil society and obtain structured feedback and input from citizens on open data.
- 5. Cities need to provide training programs, tools, and guidelines designed to ensure government employees are capable of using open data effectively in policy development processes;
- 6. Engage with citizens and civil society and private sector representatives to determine what data they need to effectively hold governments accountable. Relationships with local city NGO organizations are key to this process.
- 7. Develop innovative, evidence-based policy solutions that benefit all members of society, as well as empower marginalized communities.

#### 8.4 Principle Six: For Inclusive Development and Innovation

- 1. The more governments, citizens, and civil society and private sector organizations use open data, the greater the social and economic benefits that will be generated.
- 2. Open data can help to identify social and economic challenges, and monitor and deliver sustainable development programs.
- 3. Open data is, by its nature, an equitable resource that empowers all people by allowing them to access data regardless of who they are or where they live. It is important to note the digital divide in terms of access to broadband is also a reality, hence the need to focus on citizen broadband connectivity as mentioned in principle three.
- 4. Encourage citizens, civil society and private sector organizations, and multilateral institutions to open up data created and collected by them in order to move toward a richer open data ecosystem with multiple sources of open data.
- 5. Create or explore potential partnerships between governments and with civil society and private sector organizations and multilateral institutions to support the release of open data and maximize the impact of data through effective use.
- 6. Create or support programs and initiatives that foster the development or co-creation of datasets, visualizations, applications, and other tools based on open data.
- 7. Engage with schools and post-secondary education institutions to support increased open data research and to incorporate data literacy into educational curricula.

# 5 Recommended Guideline to implement Open Data

- 1. **Leadership and Commitment:** Strong leadership and commitment from municipal authorities are crucial to drive the open data initiative and prioritize data transparency. This is an important step as it will establish initial buy-in from key stakeholders.
- 2. **Data Inventory and Assessment:** Conducting a comprehensive inventory of existing data sources and assessing the quality, relevance, and potential value of each dataset. This will include other departments within the city from where data sets will be sourced.
- 3. **Data Governance Framework:** Developing a data governance framework to establish policies, procedures, and guidelines for data collection, storage, sharing, and usage.
- 4. **Data Standards and Formats:** Adopting commonly accepted data standards and formats to ensure data consistency and interoperability.
- 5. **Data Infrastructure:** Develop the necessary infrastructure to manage and publish data, including data management systems, storage solutions, and data portals. This includes a special focus on broadband connectivity infrastructure. The data architecture for warehousing (i.e. Extract, Translate and Load) is critical to adopt and implement by IT.
- 6. **Data Privacy and Security:** Implementing measures to safeguard sensitive information and ensure compliance with data protection regulations.
- 7. **Data Publishing Platform**: Setting up a data portal or platform to publish open data to the public in a user-friendly and accessible manner.
- 8. **Engaging Stakeholders:** Involving various stakeholders, including citizens, businesses, and community organizations, to identify data needs and use cases.
- 9. **Capacity Building:** Providing training and support to staff members and data stewards to ensure they understand open data principles and their roles in data governance. This includes data champions within other organisations and departments where data will be sourced from.
- 10. **Data Quality Assurance:** Implementing processes for data validation, cleansing, and maintenance to ensure data accuracy and reliability.
- 11. **Monitoring and Evaluation:** Establishing mechanisms to monitor the usage and impact of open data and evaluate the success of the open data policies.
- 12. **Legal and Regulatory Considerations:** Understanding and complying with relevant laws, regulations, and licensing requirements related to data sharing and open data.
- 13. **Community Engagement:** Engaging with the community to raise awareness about open data initiatives and gathering feedback to improve data offerings.

# 6 Annexure A: Open Data Policy Template

# City Name Metropolitan Municipality

Open Data Policy

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#### **DEFINITIONS AND ABBREVIATIONS**

'City' the City of ..... established by the Establishment notice

employee of the City acting in terms of delegated authority;

Chief Data Officer the executive management team member who was appointed by Council

to be accountable for aligning information technology and business strategies, and planning, resourcing and managing the delivery of information technology services and information as well as for the

deployment of associated human resources;

Council the Municipal Council of CoJ;

Data Coordinating Committee (DCC) a Committee that was established and approved by the Executive

Management Team to provide governance, structure and oversight of the City's data governance and data strategy as per the open data policy;

IDP Integrated Development Plan

IDM Information and Data Management Department

IS&T Information Systems and Technology Department

API Application Programmable Interface

'Big Data' data that is high-volume, high-velocity and/or high variety information

assets;

City Data data generated, collected or curated by the City;

Confidential Data data, including personal information which the City is required to protect

from unauthorized access due to legal or contractual obligations;

Datasets a collection of related sets of information that is composed of separate

elements but can be manipulated as a unit by a computer;

Open data data that can be freely used, shared and built-on by anyone, anywhere, for

any purpose;

ODP - Open Data Portal ("Portal") Application on the CoJ website for publication of City data.

Open format open standards which are publicly and freely available to store and

transmit documents, information;

Machine Readable data published in a standard computer language and structured in such a

way that can be understood by a computer;

Personal information information relating to an identifiable, living, natural person, and where it

is applicable, an identifiable, existing juristic person, as defined in section 1 of the Protection of Personal Information Act, 2013 (Act No.4 of 2013)

Data Champion/Steward a person within the relevant City departments, and designated by the

same City department, from where data is sourced to be the responsible  $% \left( \frac{1}{2}\right) =\frac{1}{2}\left( \frac{1}{2}\right)$ 

person for managing certain datasets;

Data Custodian a person or department designated by the City departments to be

responsible for the technical infrastructure that ensures *mass collecting, mass storage & security* and making the information datasets available to

internal users and citizens at large;

Data Owner a person(s) designated by the City departments to be responsible for the

source of  $\emph{collection}$  and  $\emph{ownership}$  of the integrity of the data in terms of

its content; - data registry

#### 1. PROBLEM STATEMENT

- 1.1. The role played by data in the economy and society is changing. The growth of the internet and the rise of big data mean that access to large data sources in a usable form is an increasingly important feature in open and competitive economies.
- 1.2. The City generates a significant amount of data that is useful to citizens. However, this information is often hidden from view in line department archives or is difficult to access. The public has been experiencing difficulties when navigating the website to find the data as well as finding the relevant line departments when searching for data.
- 1.3 The City therefore requires data sets to be easily accessible and in the correct format by the public as well as municipal staff, city officers, call centre agents, etc. for timeous decision-making.
- 1.4. The City therefore needs to establish an open data portal and align open data governance processes and structures to the City's broader data management and data governance processes and structures.
- 1.6 The City therefore requires the current data sets to align to best practices of Open data principles.

#### 2. PURPOSE

The purpose of this document is to establish an open data policy that aligns with best practice Open Data Principles

The policy will also align with existing City policies, frameworks and Data Strategies.

The Open Data policy with the open data principles will set the policy framework to alleviate the challenges listed above in the problem statement.

### 3. DESIRED OUTCOME

- 2.1. The objective of this policy is to strengthen open data in the City and the dissemination of data through an Open Data Portal as:
- 2.1.1. Open Data supports the constitutional imperative of Section 32(1)(a) of the Constitution of the Republic of South Africa, 1996 that everyone has the right of access to any information held by the state.
- 2.1.2. Open data will assist citizen engagement with the City by making it easier for members of the public to access data. Enhancing transparency will empower citizens to hold the City to account.
- 2.1.3 Open data will assist municipal staff by providing quick and easy access to high integrity data for accurate reporting that will enhance rapid decision-making.
- 2.1.3. Making data available to the market can drive the creation of new services with the effective use of new 4IR technologies such as machine learning, Virtual Reality and Augmented Reality, Artificial Intelligence, etc.
- 2.1.3. City data can also be used by citizens, business, academia and non-governmental organisations for broader social and economic development.
- 2.1.4. Making datasets available to academia enables research on urban challenges that has the potential to create public goods and improve services.

2.1.5. Making data available in an effective methodology for the City and it's citizens that encompasses best practice open data principles.

#### 4. OPEN DATA POLICY PRINCIPLES

The Open Data Policy is aligned to a set of six principles that will be the foundation for access to data and for the release, use and re-use of data<sup>1</sup>. These principles are outlined below:

#### 4.1 Open by Default

Data should be open by default and protected where required. CoJ recognizes that:

- free access to via the open data portal, and subsequent use of government data is of significant value to society and the economy, and that government data should therefore be open by default,
- there are legitimate reasons why certain data cannot be released as open data,
- open data provides value when citizens are confident that open data will not compromise their right to privacy, and
- citizens have the right to have their personal data processed in accordance with the Protection of Personal Information Act 4 of 2013 (POPIA), the conditions of lawful processing of personal information as referred to in Chapter 3 of the POPIA.

#### 4.2 Timely2 and Comprehensive

- The data should be timely and comprehensive, and the processes that generate it clearly documented: open data is relevant only if it adds value and is legible to the information user.
- it may require time, human and technical resources to identify data for release or publication,
- consulting with data users, including citizens, other governments, civil society, and private sector organisations is important to identify which data to prioritise for release and/or improve the quality thereof, and
- to be valuable to governments, citizens, civil society, and private sector organisations; data must be comprehensive, accurate and of high quality.

Furthermore, the following will be adhered to:

- data will be released and collected at the source, with a high level of granularity, disaggregated to the lowest levels of administration, including disaggregation by gender, age, income, and other categories; however
- subject to safeguarding confidentiality or personal data, where necessary, data will also be released in an aggregated or staggered manner to protect confidentiality or privacy.
- datasets with significant value either in a financial, economic, social or other sense will be prioritized for release, in line with demand from the public, research community and industry, as a result of stakeholder consultation, or where the release of the datasets will contribute to better service delivery.
- allow users to provide feedback, and continue to make revisions to ensure data quality is improved as necessary.

<sup>&</sup>lt;sup>1</sup> This includes both the Open Data Charter and the WEF Open Data Model Policy. The principles were developed in 2015 by governments, civil society, and experts around the world to represent a globally agreed set of aspirational norms for how to publish data. International Open Data Charter available at https://opendatacharter.net/principles/.

<sup>&</sup>lt;sup>2</sup> Timely means that data is relevant and useful to City stakeholders; made available or released to coincide with important planning, budgeting, engagement and training cycles during the financial year. Timeous also refers to making data available during emergency procedures

#### 4.3 Accessible and Useable

- Opening data enables governments, citizens, and civil society and private sector organizations to make better informed decisions.
- When open data is released, it should be easily discoverable and accessible, and made available without bureaucratic or administrative barriers, which can deter people from accessing the data.

Furthermore, the City will adhere to the following:

- Publish data on a central open data portal and dashboard, so that open data is easily discoverable and accessible in one place;
- Release data in open formats to ensure that the data is available to the widest range of users to find, access, and use. In many cases, this will include providing data in multiple, standardized formats, so that it can be processed by computers and used by people;
- Release data, under an open and unrestrictive license and disclaimer;
- Ensure data can be accessed and used effectively by the widest range of users. The City will create initiatives to raise awareness of open data, promote data literacy, build capacity for effective use of open data, and ensure citizen, community, and civil society and private sector representatives have the tools and resources they need to effectively understand how public resources are used.

#### 4.4 Inter-operable and Comparable

- To be most effective and useful, data should be easy to compare within and between departments, sectors, across geographic locations, and over time.
- data should be presented in structured and standardized formats to support interoperability, traceability, and
  effective reuse.

Furthermore the City will adhere to the following:

- Implement consistent, open standards related to data formats, interoperability, structure, and common identifiers when collecting and publishing data;
- Ensure that open datasets include consistent core metadata and are made available in human- and machine-readable formats (e.g. Excel, CSV, .shp, and for geographic data kml, etc. see 3.4.1.2).
- Ensure that data is fully described, that all documentation accompanying data understand the source, strengths, weaknesses, and analytical limitations of the data;
- Engage with domestic and international standards bodies and other standard setting initiatives to encourage
  increased interoperability between existing international standards, support the creation of common, global
  data standards where they do not already exist, and ensure that any new data standards we create are, to the
  greatest extent possible, interoperable with existing standards; and
- Map local standards and identifiers to emerging globally agreed standards and share the results publicly.
- 4.4.1 For the above two principles of Accessible & Useable and Inter-operable & Comparable, the technical and data maturity will vary between the City and the various departments within the city. The City will therefore undertake periodic assessments of *data availability, quality, interoperability and discoverability* as part of its open data plan.
  - 3.4.1.1 For data quality assessment, the City will consider a data quality matrix as follows for each data set:
    - Ownership and authority: that there is a custodian (Data Owner) responsible for overall quality of the original data to be made available for reuse.
    - Accessibility: that metadata is supplied and machine-readable formats are used.
    - Accuracy: common data fields (e.g. dates, times, location) are used, and limitations and gaps in the data are explained.
    - Completeness: the data makes sense as a complete data set and should not require other data to make sense of it.

- Descriptiveness: accompanying metadata should describe how reliable data is and say how the data was created and processed.
- 3.4.1.2 For data interoperability, there is a range of standardized data formats that can be applied to increase the machine-readability of open data by software applications. In general, these formats should not be unique and proprietary. The following formats for structured data of different types should be used:
  - Tabular data should be published as CSV.
  - Geospatial data should be published as GeoJSON or KML.
  - Other structured non-tabular data should be published in an open standard where available (e.g. JSON, XML, RDF, GTFS).
  - Real-time data or data being used in real-time services should be made available via a well-documented API. This is particularly relevant during emergencies and for IoT data.
- 3.4.1.3 For discoverability, the metadata attached to open datasets should include:
  - Title, description of the data set, name of the publishing entity, (the open) classification, a link or copy of the open data license under which the data can be used, as well as a format description and timestamp.

#### 4.5 For improved Governance and Citizen Engagement

The City recognizes that the release of open data:

- strengthens the governance of and trust in our public institutions, reinforces governments' obligation to respect the rule of law, and provides a transparent and accountable foundation to improve decision-making and enhance the provision of public services.
- open data encourages better development, implementation, and assessment of programmes and policies to meet the needs of our citizens,
- open data enables civic participation and better-informed engagement between governments and citizens, and
- engagement and consultation with citizens, civil society and private sector organisations can help governments understand which types of data are in high demand, and in turn can lead to improved data prioritisation, release, and standardisation practices.

Furthermore the City will implement the following:

• Establish citizen engagement methodologies such as social media, via the ODP and/or formal engagement to allow users to provide feedback and to assess the requirements of citizens (civil society, academia, private sector, entrepreneurs, innovators, etc)

## 4.6 For Inclusive Development and Innovation

The City believes that:

- open data can help to potentially identify social and economic challenges and monitor and deliver sustainable development programmes,
- open data can help to potentially meet global challenges such as pandemics, poverty, hunger, climate change and inequality,
- open data, by its nature and through digitalisation, stimulates innovation and creates opportunities that allow people to access and engage data for their intended purpose, and
- its role in promoting innovation and sustainable development does not end with the release of open data.

• the importance of physical broadband connectivity through either mobile, WiFi of fixed-line is a primary necessity for inclusivity to open data.

Furthermore the City will implement the following:

 Establish citizen engagement for Development and Awareness Programmes through social media, via the ODP on the Strat HUB and/or formal engagement with Civil Society from Rural Areas (city citizens, academia, private sector, SMMEs & entrepreneurs, innovators think tanks, schools, etc)

# 5. EXCLUSIONS

The following data will not be made available by the City as open data:

- Data that the City is not legally permitted to disclose,
- Confidential data,
- Data owned by a third party other than the City, unless such party requests the City to host it and/or provides permission to do so,
- Third-party data that is not licensed to the City, restricted by copyright, or where the third-party owner has prohibited the City from publishing the data,
- Data that discloses private information or in any way infringes on the privacy of individual citizens,
- Data that exposes the City to unacceptable risk, and
- Any other content that is determined to be inappropriate by the DCC.
- The Policy complements existing data-sharing agreements, current practices, and legislative and regulatory obligations. If a conflict arises between the application of the Policy and data-sharing agreements, practices or legislative obligations, the data-sharing agreement, practice, or legislation will take precedence. The Policy will not encroach on any legislative mandate assigned to Accounting Officers of the respective City departments.

# 6. ROLES AND RESPONSIBILITIES

The City will allocate a "City Data Team (CDT)" consisting of the data steward, data custodian, data champion and data owner as described in the definitions:

Each department to allocate a data champion from within that department to ensure that all the data that leaves that department, as well as data received from users, conforms to the data formats as outlined in this open data policy principles. Each department may also allocate a Data Owner. This is the person that is responsible for the exact source of the data. The accuracy and the integrity of the data content resides with this person. The data owner and data champion can be one person for smaller city departments.

Each department in the city is responsible to ensure data governance is integral to their business operations and that datasets are treated with sound data practices as per the data governance practice notes to be issued in line with the Policy.

The data will be stored centrally and this is where the data custodian reside. This person is responsible for the data platform where mass collation, mass storage and security of the data is conducted. The data custodian in conjunction with other technical staff is also responsible for the maintenance of the data platform and the open data portal.

#### 6.1 Data Office

The Data Office is the central office for all open data policies and data governance. They are the custodian of the open data policy, and responsible for amendments and changes to the policy where required. The policy should be reviewed regularly to keep abreast with the current changes in data technology.

The Data Office coordinates the Data Coordinating Committee and also appoints a data steward that is responsible for the collation and checking of data standards from all the departments.

The DCC also approves new data sets that need to be added to the open data portal. This includes both internal municipal data and external inter-departmental, inter-governmental data and external data from citizens. This is also based on the exclusion clause as described in 4.

The data custodian is the person responsible for the mass collation and mass storage within the data platform. The custodian is also responsible for the platform maintenance, data security and the open data portal maintenance.

#### 7. MONITORING AND EVALUATION

The Data Coordinating Committee (or Data Steering Committee) will meet monthly (or bimonthly) and will provide the following to all Data Champions, Stewards and Custodians regarding:-

- Progress on the roll-out of the Open Data Portal and data platforms amongst the various departments;
- Engage with internal stewards and data champions from different departments to resolve and data issues between departments.
- Provide regular statistical report information as follows:
  - The number of visitors to the site;
  - An analysis of the open data downloaded.
  - Any recommendations and feedback from Users of open data; and
  - The queries that Departments have received directly from both internal and external users
- Co-ordinate the formal engagement and input from civil society with the relevant departments.

#### 7.1 Data Maturity Assessments

• The Data Office also will undertake periodic (e.g. every 6 months) assessments of data maturity in terms of availability, quality, interoperability and discoverability as part of its open data plan. This could be done at departmental level first, and over time for systems of interest to the public.