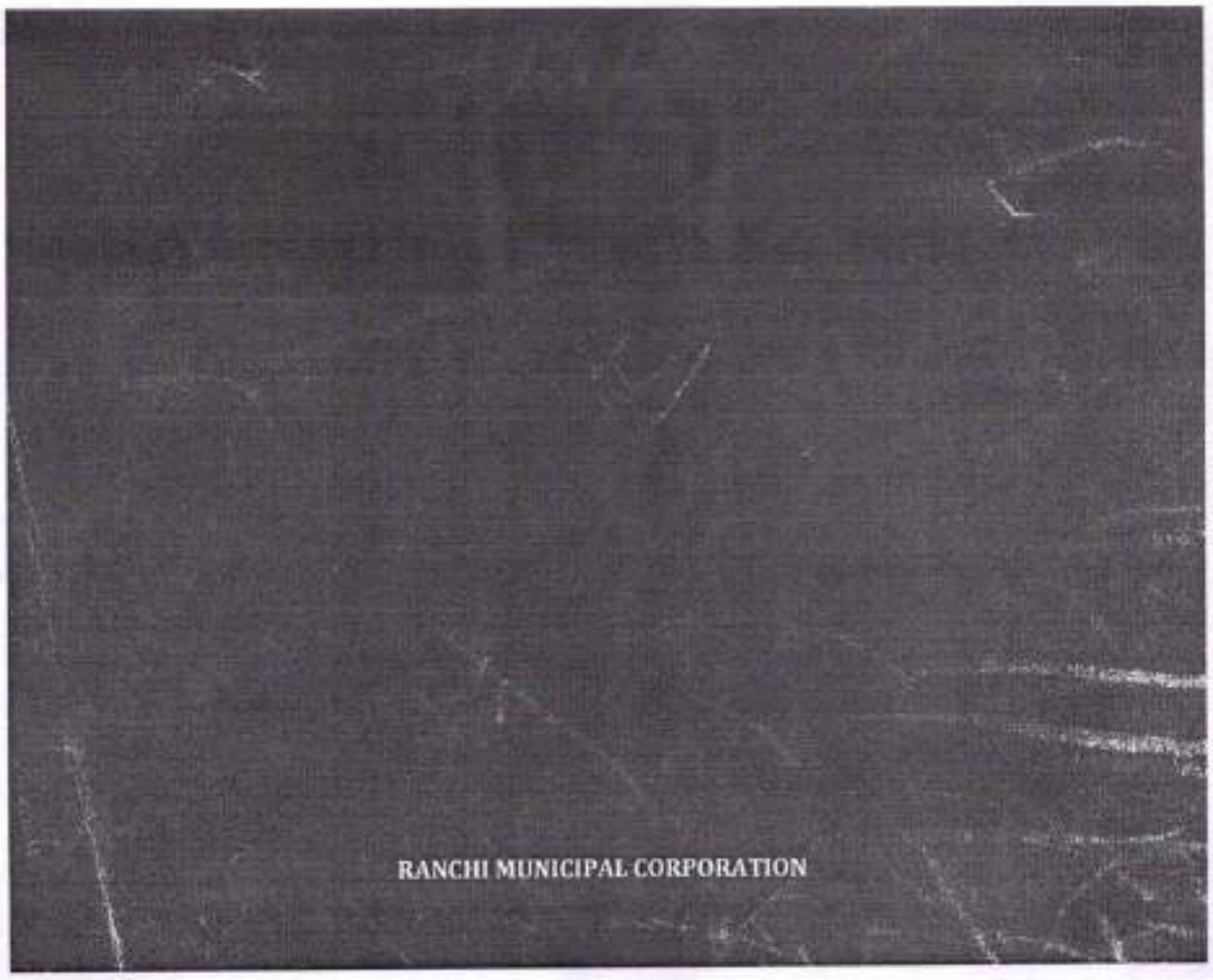
Municipal Commissioner
Ranchi Municipal Corporation
Ranchi

RANCHI CITY DATA POLICY 2020



Message from the Desk of Mayor

Smart city development is fraught with challenges. To make a city that is genuinely resource-efficient and liveable for people, urban planners require data from different sources. They require geospatial data, malefaction statistics, traffic data, foot traffic on different streets and the number of registered conveyances. But how can one make sense of data from disparate sources? That's what data analytics is built for. Utilizing technology, like AI and machine learning, analytics can analyse data utilizing involute algorithms to draw connections across disparate sources to reveal utilizable information for city planners.

City Data Plan of Ranchi City, a data governance policy instrument intended to connect the engenderment and utilization of urban data in a comprehensive and evaluative long-term strategy aligned with city development goals. The concept of the City Data Plan had been elaborated by taking into account current issues cognate to privacy and manipulation of data in as smart city. The methodological approach adopted in this policy will define the nature of a City Data Plan which is grounded on the conceptual and empirical parallelism with corporate data governance plans and general urban plans, respectively aimed to regulate decision-making powers and actions on data in enterprise contexts, and the fascinates of local stakeholders in the access and utilization of urban resources.

The result of this analytic process is the formulation of the outline of a City Data Plan as a data governance policy instrument to fortify the iterative negotiation between the instances of data engenderers and data users for instantiating shared perspicacious city visions. The conceptualisation of the City Data Plan includes a description of the multi-stakeholder organisational structures for the city data governance, cooperation protocols and decision areas, responsibilities assignments, components of the orchestration and its implementation mechanisms

Smt. Asha Lakra
Mayor
Ranchi Municipal Corporation

Message from the Desk of Deputy Mayor

Smart city orchestrating is not just about orchestrating for the present, it is withal about the future. City orchestrating for the present population amends living standards, but an influx of people can put a strain on resources and disrupt the quality of life. Urban planners need to account for the future when recommending policies and programs for more perspicacious city management. What data analytics can do is anticipate the future with predictive analytics algorithms. Utilizing analytics algorithms, urban planners can get a pretty precise picture of the number of people coming into the city, and plan accordingly.

This City Data Policy as a design concept aimed to envision the management of the engenderment and utilization of city data by local stakeholders in compliance with negotiated goals and vision of the city. These goals are expressed in the form of an orchestration including rules and actions concerning the utilization of available data, the engenderment of data for enabling future actions, and the cooperative mechanisms for the generation of public value from city data.

The concept of the City Data Policy had been drafted by integrating the analysis of the logics and measures characterising urban plans (fixated on data as city assets) with the analysis of the structures and protocols characterising data governance plans in enterprise context.

Consequently, the City Data Policy results from the hybridisation of two instruments, urban plans and corporate data governance plans.

Shri Sanjeev Vijayvergia
Deputy Mayor
Ranchi Municipal Corporation

Message from the Desk of Municipal Commissioner

With the emergence of Smart Cities and data-driven innovation hubs across the country, the potential of data has become undisputed. Recognizing that timely and consistent access to data is an essential component of an open, transparent, collaborative and effective government, the Ranchi City has decided to implement a City Data Policy (CDP) for the effective communication and coordination between citizens and government.

The main aim for designing this policy is to ensure data and information is utilised to its maximum potential. This policy will provide a framework for easier and effective data sharing among stakeholders and it is within the legal and legislative framework defined by the Ranchi city. It is expected to trigger a higher quotient of trust towards governments, increase collaboration and engagement with citizens, public and private entities, lead to innovation-driven problem-solving, and eventually a higher quality of life for citizens. For this to happen, it is of paramount importance to have a set of guidelines with necessary conditions built in to avoid misuse, while also generating awareness among various stakeholders and the steps and processes that need to be put in place to enhance impact of data.

For the effective and timely implementation of this policy, I urge the city and all the stakeholders to treat this policy document as a call for participation in our joint effort towards creating a robust open governance and innovation ecosystem for a more liveable urban future.

Shri Mukesh Kumar, IAS
Municipal Commissioner
Ranchi Municipal Corporation

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Abbreviations

RMC	Ranchi Municipal Corporation
RSCL	Ranchi Smart City Limited
SPV	Special Purpose Vehicle
ICCC	Integrated City Command and Control Centre
ITMS	Intelligent Traffic Management System
OGD	Open Government Data
CDP	City Data Policy
CDO	City Data Officer
SCDA	Smart City Data Alliance
DC's	Data Champions
DCO's	Data Coordinators
CSV	Comma – Separated Values
XLS	Excel Spreadsheet
ODS	Open Document Formats for Spreadsheets
G2G	Government-to-Government
G2C	Government-to-Citizen
API	Application Programming Interface
OGD	Open Government Data
SSL	Secure Sockets Layer
SCADA	Supervisory Control and Data Acquisition
NDSAP	National Data Sharing and Accessibility Policy
NIC	National Informatics Centre
GOI	Government of India

Introduction

Data is essential for organizations that are looking to maintain a competitive edge enabling them to pinpoint potentially profitable areas that they may have been missing for a long time: to drive down costs, and to make decisions based on fact and not the fallibility of gut instinct. Data democratization allows the average end users to be in a position to assess the data in a digital format without requiring help from the outside. It is a source of decisive competitive advantage in any organization. The importance of data democratization and open data in a world where data is touted as the new oil, is unparalleled. Open Government Data refers to a set of policies which facilitates availability of Government datasets (administrative, transactional and service delivery) in the public sphere to enhance transparency and accountability in the ecosystem. It is expected to trigger a higher quotient of trust towards governments, increases collaboration and engagement with citizens, civic and private entities; and lead to innovation driven problem solving and eventually a higher quality of life for citizens.

For this to happen, it is of paramount important to have a set of guidelines with necessary condition built in to avoid misuse, while also generating awareness among various stakeholders about the steps and process that need to be put in place to enhance impact. RMC strives to make the data it generates and collects openly available to the public for the purposes of increasing the quality of life for our residents; increasing transparency, accountability and comparability; promoting economic development and research; and improving internal performance management. This Data Policy defines the principles governing City Data and describes the expectations for department participation and governance of the City Data Program for Ranchi.

The proposed Data Guidelines are intended as a resource for city administrators such as Municipal Commissioner and Smart City CEO, other officials such as City Data Officer, Heads of various government departments, data coordinators and data champions; and external agencies parastatal, civic, private) interested in partnering with the data initiatives for the City.

1. Definitions

Data- Data means a representation of information, numerical compilations and observation documents, facts, maps, images, charts, tables and figures, concepts in digital and/or analog forms.

Open Data - Specific Datasets that are made available for the public of the city.

Data Archive - Data archiving is the process of moving data that is no longer actively used to a separate storage device for long-term retention. Archive data consists of older data that remains important to the organization or must be retained for future reference or regulatory compliance reasons. Data archives are indexed and have search capabilities, so files can be located and retrieved.

Data Generation -Data generation refers to the theory and methods used to create data from sampled data source in a qualitative manner. Data sources Include human participants, documents, organizations, electronic media, etc.

Data set - A collection of related sets of information that is composed of separate elements but can be manipulated as a unit by a computer

Meta Data- Data about data. The information that describes the data source, and the time, place, and conditions under which the data were created. Metadata informs the users of who, when, what and where data were generated. Metadata allows the data to be traced to a known origin and known quality.

Open Government - Open government is the governing doctrine which holds that citizens have the right to access the documents and proceedings of the government to allow for effective public oversight.

Geospatial Data: All data which is geographically referenced.

Non-sharable data - Data which are confidential and non-sharable as declared by the departments / organizations.

Sensitive data - Sensitive data as defined in various Acts and rules of the Government of India.

Sharable data - Data which are easily access to public and not covered under any restriction.

Restricted Data - Data which are accessible only through a prescribed process of registration and authorization by respective departments / organizations.

Negative List: List of prohibitive datasets/feeds, deemed non-shareable by the departments/organisations.

2. Need of Data Policy for Ranchi

City Governments deal with large number of issues like mobility, management of water, waste water and solid waste, safety and security services, energy, housing, education and health amongst many others. These issues are highly complex in nature and require integrated approaches to resolve. Functions of city governments are organized into multiple departments, agencies and networks. These departments, agencies, networks, work in vertically integrated structures and are each responsible for performance of some functions integral to the working of the city. Besides the departments of governments, private sector organizations, corporates, community organizations, research and academic institutions also play a large role in the functioning of cities, through provision of infrastructure, services, research, co-creation and valuable feedback. All government/ non-government organizations/ individuals are custodians of different types of datasets that is generated through their operations. Since these organizations work as vertically integrated structures, a lot of the data so produced remains in silos within their organizations. In order to solve the myriad complex issues faced by cities, it is vital that data locked in such silos be unlocked and shared amongst these entities.

The current regime of data management does not enable open sharing of Government owned data with other arms of the government nor does it expect proactive disclosure of sharable data available with data owners. Such regimes could lead to duplication of efforts and loss of efficiency of planning of activities focused on development Hence, City Data Policy of Ranchi Municipal Corporation aims to provide an enabling provision and platform for providing proactive and open access to the data generated through public funds & public revenue available with various departments of RMC/RSCL, other government

3. Ranchi Data Policy and Scope

This Policy will apply to all data and information created, generated, collected and archived by RMC.

This policy applies to any person/user, organization, administrators, contractors etc who intends to access information through open data portal of RMC/RSCL. Specifically, the Data Policy applies to the following information assets of RMC/RSCL:

1. Data /Information that collected, captured, aggregated, processed and shared by RMC and RSCL
2. Citizens Data / Information
3. Personal Data/ Information relating to employees of RMC / RSCL

3.1 Purpose

Even if the city government and its stakeholders realize the value of data and want to unlock the power of this valuable resource, there is often a lack of clarity on data policy which restricts them from doing so. A data policy is essential to understand the contours of data sharing, privacy, security and ownership in the context of the city. Certain types of data (eg an individual's tax payments) are clearly private and should not be shared. On the other hand, certain types of data (e.g. air quality sensor readings) are for unrestricted public consumption. Vast amounts of data are in the "grey zone" where clear policies are required that balance privacy, legal and public benefit considerations. Data policy is thus needed to define the contours of collaboration between various governmental/ non-governmental entities on sharing and access of data. The data policy helps to lay out the roadmap of the city in terms of milestones in the adoption of open data, data exchange platforms. Data policy will help answer critical questions regarding data ownership and safety. Another purpose of data policy is to encourage Ranchi city to adopt data driven decision making.

3.2 Data Policy Goals

Following are the Open Data Policy Goals for the City of Ranchi

a) Increased Transparency and Accountability thus fostering greater trust on government

b) Increased public participation in government data analysis and deliver solutions or idea for betterment of city governance
c) Improved resource or asset visibility, social audit and open government
d) Better decision making thereby leading to more efficient and cost-effective solutions.
e) Deepen open innovation and co-creation.
f) Foster data driven decisions by diverse players in urban economic ecosystem
g) Foster advanced research in academic and research institution
h) Helps cities develop new business models
i) Empowers communities through sharing of data
j) Promotes development of emerging technologies like AI, ML and Blockchain
k) Enhanced Government to Government (G2G), Government to Business (G2B) & Government to Academia (G2A) collaboration

4. Data Lifecycle Management

This section, explains the proposed open data life cycle model based. All the processes in the life cycle need to be covered, thus stakeholders can follow the standard process. The six stakeholders involved in this life cycle are top management such as Municipal Commissioner, Additional Municipal Commissioner, Deputy Municipal Commissioner, Asst. Municipal Commissioner, Information Manager such as Computer Programmer, City Data Officer, MIS Specialist, Legal Advisor such as law expert and RTI Expert at ULB Level, community manager such as president of civil societies, President of Chamber of Commerce, President of Developer Association, Mayor, Deputy Mayor, Ward Councillors etc, data owner such as Ranchi Municipal Corporation, Ranchi Smart City Corporation, Government and Non-Government Departments, PSUs, and potential users such as businesses and enterprises, citizens, civil society, developers, and researchers.

4.1 Data Standards

Data standards are the rules that help keep the publishing and organization of open orderly and efficient. Open Data sets should adhere to standards in order for it to comparable, allow analysis, derive insights and interoperable to make it more inclusive. Some data standards should be followed:

- **Principles and policy standards**

RMC retain ownership over the data sets that they submit. All data and data sets remain the property of the originating RMC and public users acquire no ownership rights to RMC data or data sets. Data can be treated as information and vice versa. This data or datasets under this policy never supersede RTI Act at any point of time in any circumstances.

- **The Open Definition**

We recognize that the term "government data" includes, but is not limited to, data held by national, regional, local, and city governments, international governmental bodies, and other types of institutions in the wider public sector. The term government data could also apply to data created for governments by external organizations, and data of significant benefit to the public that is held by external organizations and related to government programs and services

- **File formats for data**

As mentioned in 4.3 (f)

- **Domain specific policy standards**

The open data or datasets available in ODP can be modified at any point of time when it is found that there is a typographical error in the data or in formula to arrive that data, to ensure the accuracy and purity of the records.

Data Volumes are large and will grow by year on year. The department may define the retention and archiving procedure time to time through an office order also.

- **Generic technical standards**

It means the common and repeated use of rules, conditions, guidelines or characteristics for data or related processes and publish methods, and related management systems practices. The department may prepare and publish a technical standards manual for the publishing of public data sets in raw or unprocessed form.

- **Domain specific technical standards**

Some datasets containing only "active" records that are updated frequently should have a complementary dataset for records that become "inactive," which includes the date on which the records are archived.

Some datasets refer to a roughly fixed set of data points (e.g., restaurants in the City) for which updated data is routinely collected. As new data is collected, new records should be added alongside existing records and include their date of creation.

When geospatial files are updated, the most recent copy must be moved to an archive folder and indexed according to date of archive. The archive folder will be accessible through the upto-date dataset.

4.2 Data Categorization

Data will be categorized into two broad categories:

a) **Personal Data:** Personal data means data consisting of information which is related to a living individual who can be identified from that information (or from that and other information in the possession of the data users), including any expression of opinion about the individual but not any indication of the intention of the data user in respect to that individual "Data is defined as information recorded in a form in which it can be processed by equipment operating economically in response to instructions given for that purposes,

Note: Personal Identifiable Information cannot be published by City on Data Platform under any data sets. Data sets must be anonymized before publishing.

b) **Non-Personal Data**: Non-personal data also refers to anonymous information/data, namely information which does not relate to an identified or identifiable natural person, or personal data rendered anonymous in such a manner that the data subject is not or no longer identifiable. In other word, anonymization means excluding any personal identifiers from data sets,

4.3 Data Classification

Different types of datasets generated both in geospatial and non-spatial form by different departments/organizations are to be classified as shareable data and non-shareable data. The types of data produced by a statistical system consist of derived statistics like national accounts statistics, indicators like price index, data bases from census and surveys. The geospatial data however, consists primarily of satellite data, maps, etc. In such a system, it becomes important to maintain standards in respect of metadata, data layout and data access policy. RMC/RSCL will prepare the negative list of data which will be periodically reviewed by the oversight committee.

Data will be broadly classified into following categories

Class	Definition
Public	Data available for public consumption and use.
Internal Use	Information which could only be disclosed RMC/RSCL employees for managing operations or delivery of public services on day to day basis.
Sensitive	Sensitive data as defined in various Acts and rules of the Government of India & only disclosed to Municipal Commissioner.
Protected	Data which needs to be protected for e.g. Identity of citizens and disclosure notification needs to be issued by RMC/RSCL in case of any breach or loss of data.
Restricted	Data which could lead to threat to life or loss of public assets or critical infrastructure & only disclosed to Municipal Commissioner.

(Table 1)

Basic Classification of Data Sets

a) **Open by Default**: Data sets are considered to be open by default unless classified as internal, sensitive, protected or restricted.

b) **Meta Data:** Data sets and feeds must be published with proper metadata. Information about the datasets being published using common data taxonomy/structure is needed as it helps in providing easy access through Data Platform.

c) **Data Catalogue**: As per NDSAP metadata elements for data sets or feeds is defined as follows:

- ***Title (Required):*** A unique name for the catalogue (group of resources) viz. Current Population Survey, Consumer Price Index, Variety-wise Daily Market Prices Data, State-wise Construction of Deep Tube wells over the years, etc.

- ***Description (Required):*** Provide a detailed description of the catalogue e.g an abstract determining the nature and purpose of the catalogue.

- **Keywords (Required):** It is a list of terms, separated by commas, describing and indicating at the content of the catalogue. Example: rainfall, weather, monthly statistics.
- **Group Name:** This is an optional field to provide a Group Name to multiple catalogues in order to show that they may be presented as a group or a set.
- **Sector & Sub-Sector (Required):** Choose the sectors(s)/sub-sector(s) those most closely apply (i.e.) to your catalogue.
- **Asset Jurisdiction (Required):** This is a required field to identify the exact location or area to which the Catalogue and Resources (dataset/apps) caters to viz. entire country, state/province, district, city, etc.

d) Open data: Data Sets and feeds should be published in formats as per guidelines of NDSAP i.e. Open format. Data should be provided in freely available formats which can be accessed without the need for a software license.

e) Machine Readable: Data Sets and Feeds should be machine readable.

f) Data Types & File Formats

Data can mean many different things, and there are many ways to classify it. Two of the more common are:

Primary and Secondary: Primary data is data that you collect or generate. Secondary data is created by other researchers, and could be their primary data, or the data resulting from their research.

Qualitative and Quantitative: Qualitative refers to text, images, video, sound recordings, observations, etc. Quantitative refers to numerical data.

There are typically five main categories that it can be sorted into for management purposes. The category that you choose will then have an effect upon the choices that you make throughout the rest of your data management plan.

Observational

- Captured in real-time
- Cannot be reproduced or recaptured. Sometimes called 'unique data'.
- Examples include sensor readings, telemetry, survey results, images, and human observation.

Experimental

- Data from lab equipment and under controlled conditions
- Often reproducible, but can be expensive to do so
- Examples include gene sequences, chromatograms, magnetic field readings, and spectroscopy.

Simulation

- Data generated from test models studying actual or theoretical systems
- Models and metadata where the input more important than the output data
- Examples include climate models, economic models, and systems engineering.

Derived or compiled

- The results of data analysis, or aggregated from multiple sources
- Reproducible (but very expensive)
- Examples include text and data mining, compiled database, and 3D models

Reference or canonical

- Fixed or organic collection datasets, usually peer-reviewed, and often published and curated
- Examples include gene sequence databanks, census data, and chemical structures.

File Formats should be chosen to ensure sharing, long-term access and preservation of your data. Choose open standards and formats that are easy to reuse.

Remember to retain your original unedited raw data in its native formats as your source data. Do not alter or edit it. Document the tools, instruments, or software used in its creation. Make a copy of it prior to any analysis or data manipulations.

Following data formats to be published:

- **CSV (Comma separated values)**
- **XLS (Spread sheet - Excel)**
- **ODS (Open Document Formats for Spreadsheets)**
- **XML (Extensive Mark-up Language)**
- **RDF (Resources Description Framework)**
- **KML (Keyhole Mark-up Language used for Maps)**
- **GML (Geography Mark-up Language)**
- **RSS/ATOM (Fast changing data e.g. hourly/daily)**
- **JSONS**

g) Maintenance of Data Sets/ Feeds: CDO will ensure that published data sets and feeds are up to date and relevant.

h) Support: CDO will provide required technical and non-technical support over the queries/inputs/suggestion received from users through email, portal or through social media platforms like Facebook, Twitter.

i) Ownership: All data sets/ feeds remain property of RMC/RSCL. The CDO will endorse government open data license to ensure that published data is not misused or misinterpreted by its users.

4.4 Data Archival and Retention

CDO set up process for archiving process. Every data set/feeds catalogue contains archiving information for specific file type (geo-spatial files), recent copy will be made available to users through Data Platform.

E-Files/records will be digitized by the following categories:

a) **Category-I** (e-Files/records to preserved permanently which are of historical importance) - For 5 years, it will be kept in the Department's sever and thereafter transferred to Data cloud storage.

b) **Category - II** (e-Files/records of secondary importance and have a reference value for a limited period) - 5 years on the Department's server_ In exceptional cases, if the record is required to be retained beyond 5 years It will be upgraded to category-I.

Data will be stored in the main database for 12 Months in a live Mate so that whenever a report needs to be generated, the data will be extracted from main database_ Data older than 12 months will be archived. If report duration extends beyond 12 months, the data will be retrieved from archival to generate the report.

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4.5 Data Security and Privacy

Data Security and Privacy will be managed by RMC/ RSCL under the purview of the Data Policy.

a) Physical Security

- The premises will be physically secured, access control devices should be available for accessing the premises, entry and exit should be monitored.

b) Network Security

- Appropriate firewalls, IPS, SSL devices etc. should be used to ensure Network security.
- The solution should support encryption mechanism for transferring data across network and between client and server.

c) System Security

- Adequate access control procedures should be followed to secure the entire IT system, physically and logically.
- The access controls procedures should cover all stages in the life-cycle of user access, from the initial registration of new users to the final de-registration of users who no longer require access to information systems and services.
- .The system should have 2 factor authentication mechanisms either through One Time Password (OTP) or soft token-based technologies for access control and user authentication.

d) Application Security

- The solution should have appropriate authentication mechanisms.
- Application user authentication & authentication related transactions should be encrypted.
- Operating system should be hardened on which the application is installed.
- A web application firewall shall be deployed to secure the web layer.

e) Audit Trails & Logs

- Event logging should create an accurate record of user activity such as which users accessed which system, and for how long.
- The solution should log all types of events especially those related to security.

f) Data Protection

- The solution should support SSL encryption mechanism for transferring data across network.
- The data transferred across network should be encrypted using (PKI) Public. Key Infrastructure.
- Access to all system resources including data files, devices, processes and audit files should be provided to the intended users only.
- All mobile applications should be designed and developed in a way that it ensures security of the application and data on the device.
- Ensure to protect documents by assigning security parameters and criteria in order to provide more effective protection for an electronic document in order to maintain Confidentiality, Authorization, Accountability, Integrity, Authenticity and Non-repudiation.

g) Session Management

- The system should limit to only one session per user or process ID.
- The system should put a limit on the maximum time length of an idle session, which should ensure that automatic session termination takes place after expiry of the specific time length.
- Mandatory password change after predefined time period.

h) Data Warehouse Security

- Users must not have access to the data warehouse prompt of the application Access to the data warehouse prompt must be restricted only to the database administrator

- "Super user" rights for the data warehouse must only be given to the administrator and activities of these accounts must be properly logged.

i) Application Deployment

- All unused ports should be blocked at server machines,
- The application server should be segregated from Internet zone through firewall or other filtering

j) Information Security Governance

- The employees working on the project should be made aware of his or her responsibilities with respect to Information Privacy and Information Security.
- Employees working on the project shall undergo security awareness training during training.

k) Compliance to Security Standards

- Software/Hardware system should be in compliance with ISO/IEC 27001:2015.

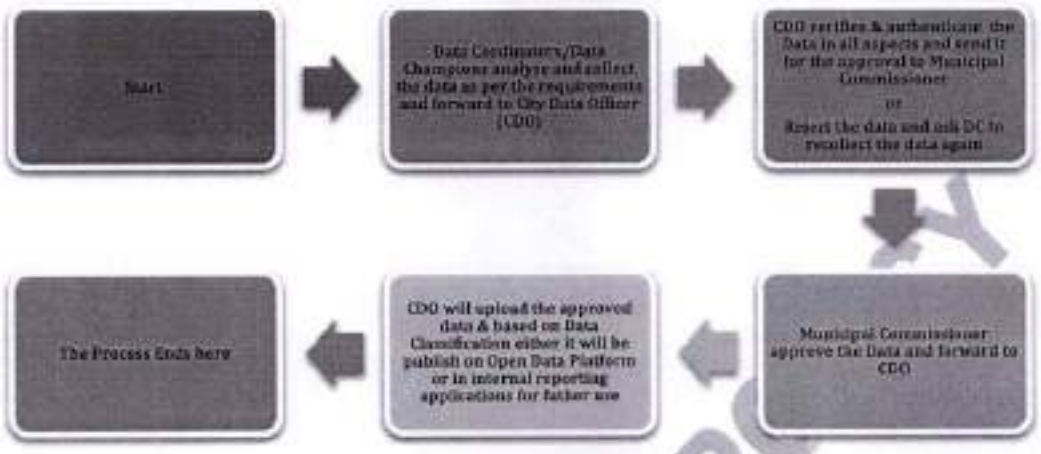
l) Security Information and Event Management System (SIEM)

- SIEM should be available for Real-time analysis of security alerts generated by applications and infrastructure.

m) Database Activity Monitoring (DAM)

- DAM should be available to monitor all database.

4.6 Data Flow Chart / Approval Framework



(Diagram 1)

5. Data Provisioning and Identifying Datasets

Fixate on identifying high value datasets that would have direct impact on citizens welfare will (in terms of city infrastructure and services) and the overall wellbeing of citizens. Predicated on the utility of these data sets, RMC/RSCL could substantiate cased for garnering supplemental technical support and funding from state and central government.

This set can accommodate two purposes -as a primary set of datasets to commence the initiative (rudimental datasets), or as a reference set of datasets which RMC/RSCL should consider to keep integrating datasets (Intermediate or Advanced datasets) to the Open Data portal.

a) Demand of Public Data Sets -

Like any other product or accommodation offering, ordinant dictation of the data set should be one of the key drivers while deciding about making it public. Key focus groups influencing this ordinant dictation should be identified and engaged with during at an early stage for their inputs on.

a. particular datasets and the priority with which it is required. In some cases, RMC/RSCL could present a list of datasets that can ask the focus group on data that would meet public need.

b) Social Impact - Datasets which potentially could create a positive social impact, irrespective of the economic value generated, should be included. Such positive impacts can include generation of employment, boosting equality and equal opportunities among citizens, address social issues like improving female student enrolment in primary and secondary schools, and empowerment of the socially backward or oppressed classes etc.

c) Economic Value Generation - Publishing certain datasets can boost innovation, encourage entrepreneurship eventually resulting in generation of economic value. Greater economic value could have a far-reaching impact - including generation of employment, boosting per capita income, and bringing overall prosperity for the city and the nation. RMC/RSCL should identifying and prioritizes Open list datasets (datasets which are not part of 'Negative list'ı) into high value' datasets and 'non-high' values datasets on basis of dataset's potential to generate economic value.

d) Legal and Compliance requirement - There can be legal and compliance requirements for mandatory disclosure of a certain dataset to the public. RMC/RSCL should proactively identify datasets, publishing which would help reduce volume of RTI queries significantly, and could result lowered burden on RMC/RSCL and other government bodies in the city).

e) Minimal Resistance - Opening up data sets can have huge implications politically as it could potentially unearth issues and problems that could take a political angle once the data is made public. RMC/RSCL need to be conscious on how data represented and made accessible, so it can be utilized by various parties.

6. Stakeholders and Collaboration

The City Data Alliance (CDA) will provide a collaborative framework to create and define use cases to solve critical city problems through the use of data, catalyse the right set of collaborations and networks to make available such data and undertake continuous dialogue between various stakeholders in the city.

Following Stakeholders should come together to set up City Data Alliance to assess strategize, plan, implement and review the City Data Policy

a) Government Agencies

Government Agencies operating with dedicated administrative structure in city namely Traffic Police, City Police, Central/State Government Departments, Government Autonomous Bodies etc.

b) **Funding Agencies**
Funding agencies which regularly works with city administration in different domain. e.g World Bank etc

c) **Industry**
Key flagship manufacturing/ service industry promoters/ players in the city/state

d) **Academia**
Representative from leading Universities/Colleges/Schools in the city

e) **Policy Advocacy Groups & NGOs**
Policy advocacy groups & NGOs working in different domains/areas like slums, health, education, environment, participatory governance, mobility etc.

f) **Start-ups & Incubators**
Representative from start-ups & incubators in the city/state

g) **City Businesses**
Representatives from business communities

h) **Citizens & Communities**
Representative from communities and citizen interest groups to further the interest of citizens/communities towards data driven policy governance and service delivery.

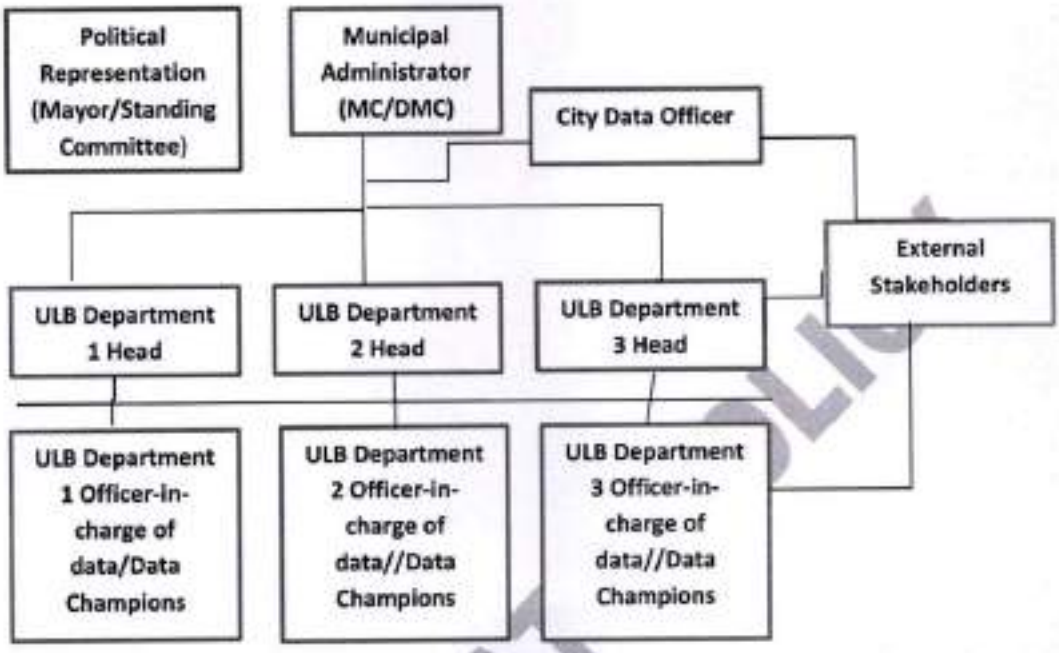
i) **Local Elected Representative**
Representatives from local elected representatives to further the interest of citizens/communities towards data driven policy governance and policy formulation.

j) **Professional Representatives**
Representatives from various professional bodies like Doctors, CA and Engineers etc.

7. Data Management and Team Structure

City Data Committee should be formed to engage participation and secure buy-in from both internal and external stakeholders on key decisions. Further, sufficient empowering this committee can help navigate through complicated hurdles (e.g bureaucratic, political etc.) and to take prompt decisions and actions pertaining to collection, segregation and release of open data.

Diagram 2



8. Roles & Responsibilities

8.1 City Data Officer

The CDO will act as custodian and driver of City Data Policy (CDP) and a flag bearer of open government initiative in respective city. CDO's major responsibility is to put data to its right use i.e. for generating insights, using data for effective service delivery or infrastructure delivery, improving civic operations by making real time decision making etc. City data officer will work with city leadership to assess and tap the potential of data and set up data culture across the organization and outside the organization. City Data officer will report directly to Municipal Commissioner.

The Key responsibilities of CDO is as follows:

1. The CDO will form City Data Policy (CDP) which will be reviewed every year to keep it contextual to the need of the times. The CDA would act as advisory body for the review of CDP from time to time.

2. Coordination with MDO (Mission Data Officer) to align with mission data strategy and priorities with respect to Open government initiatives and policies.

3. Organise regular meetings of CDA (City Data Alliance)

4. Coordinate with officers of various other government departments/agencies within the city for the effective implementation of City Data Policy.

5. Publish Data Catalogues and Data Sets/Feeds on OGD portal: CDO will publish data Catalogues and Data Sets/Feeds on OGD Portal and will ensure that such data sets are updated at regular time intervals as needed and create mechanisms for continuous feedback from citizens and stakeholders on type of data sets to be published.

8.2 Data Champions:

Active participation from data agencies will be key to successful data collaboration within the city. Data champions will be senior functionaries, not below the rank of a Head of Department or equivalent, who would champion the implementation of the CDP in their respective departments/ organizations. They would be the flag bearers of the policy in their departments/ organizations and would work to align their teams to imbibe the principles of data driven decision making in their day to day functioning. They would also make their respective teams aligned to the value of collaborative work on data, as siloed approach to data ownership and use will not foster the development of integrated approaches to resolution of potential use cases within the context of each city.

1. Data Champions (DCs) in respective departments/government agencies shall identify the data sets/feeds, derived information, intelligence or data challenge with respect to day to day operations of the department.

2. DCs will actively publish/ enable to publish data sets/feeds identified as relevant to the resolution of critical use cases for the city. They will work closely with the CDO for active implementation of the City Data Policy.

3. DCs will be assisted by the Data Coordinators (DCos) within the department to streamline processes of data reporting, collection and analysis etc. Data Champions will be responsible for data quality.

4. DCs will undertake activities to engage with their stakeholders and evolve their department's strategy on data in line with the deliberations.

DCs needs to act as trainers and lead the team of data coordinators at the department level It is critical for appropriate senior functionaries to be designated as DCs in each department by the respective city heads. The DC will the nodal point for implementation of the CDP within the department and will function to supervise the team of data coordinators on day to day basis. DC will be first touch point of CDO in different organizations in the city and must undertake continuous capacity building programs for their DCOs and other staff.

8.3 Data Coordinators:

a. Data Coordinators will assist Data Champions at the department/government agency level as reporting staff.

b. Data Coordinators will also aggregate the data demand from various channels.

c. Data Coordinators will also be responsible for sensitizing the department employees over the importance of data quality etc.

d. Data Coordinators shall perform collection, interpretation and recording of data in accordance with City Data Policy standards and CDO guidelines.

e. Data Coordinators shall perform data validation and storage of various project documents.

f. Data Coordinators shall review required data and documents & make necessary revisions to the same.

g. Data Coordinators shall Sort and organize the data; both hard copy and electronics versions.

h. Transmit data report to RMC/RSCL or CDO via Internet.

i. Update RMC/RSCL website or Ranchi Open Data Portal with latest data records.

j. Data Coordinators shall maintain the completed hard copy and electronic files project records.

k. Data Coordinators shall assist department staff in data entry when required.

l. Data Coordinators shall provide data management updates in all internal and external meetings as required.

m. Data Coordinators shall analyse data for quality improvement purposes.

n. Data Coordinators shall prepare data for reporting, meeting and presentations for their department and RMC / RSCL at large.

o. Data Coordinators will ensure data management procedures comply with City Date policy.

p. Provide statistical analysis and longitudinal analysis of data.

q. Prepare and submit data required for audits.

8.4 City Data Alliance (CDA):

CDA for the city is envisaged to be network of government departments, agencies, private sector companies, community organizations, city policy makers, domain & legal experts, research, academic institutions, incubators, entrepreneurs, etc, within the city who come together voluntarily us a collective to diagnose city problems which need resolution, act as an advocacy group for the formulation of the city data policy (CDP) which defines the collective approach of the city on issues related to data.

The key roles for setting up City Data Alliance (CDA) are as follows:

a) To act as an advisory group to the city leadership on the City Data Policy.
b) To promote data driven governance and policy formulation.
c) To design and implement solutions and analysis using city data.
d) To support industry to design solutions using emerging technologies like AI, ML and Block chain.
e) To assess and design use cases critical to the citizens of the city.
f) To generate awareness in various stakeholders towards open government initiatives.
g) To facilitate data for co-creation and collaboration over civic issues.
h) To provide critical feedback to the city over the quality and relevance of data provided by City.
i) To deliver 4 Research paper annually using City Data on Civic Problems in the City.
j) To design and develop two prototype/ solutions annually on Civic Problems the City.
k) To organize a data, challenge every half yearly on complex civic problems.
l) To organize a Hackathon annually and support shortlisted solutions at city level.
m) Prioritize the Data Sets/Feeds for publishing on Data Platform:
n) To sensitize ecosystem partners to share the data for leveraging data for solving civic challenges.
o) To support, engage and encourage network/groups/members of data enthusiasts in the city.
p) To improve city capacity over data driven governance and policy formulation.
q) To support CDO by extending resources (like interns, researchers, technology experts), funds (program sponsorship etc.) and technology (solutions etc.)
r) To share data available with partners Data Platform to promote City Data Alliance.

9. City Data Policy Implementation Plan

1. Ranchi Municipal Corporation will form a Data Governance Board (DGB) under the chairmanship of Municipal Commissioner (which act as an external facilitator and monitoring unit.) and other technical team from RMC and district administration for the successful implementation of this policy and its provisions. DGB will only be suggestive body and has no interference in the process flows and SOPs. The decision of Municipal Commissioner will be final during the implementation of this policy.

2. For open data platforms following steps will be taken by RMC.

- **Metadata** - Resources (Datasets/Apps) shall be published along with standard metadata along with controlled vocabularies on government sectors, jurisdictions, dataset types, access mode etc. Besides facilitating easy access to datasets, this shall be extremely useful in the future for federation/integration of data catalogs.
- **Social Media Connect** - To support wider reach and dissemination of datasets, anyone can share the information about any dataset published on the platform with his/her social media pages.
- **Citizen Engagement** - The Platform has also a strong component of Citizen Engagement. Citizens can express their views as well as rate the datasets w.r.t three aspects (Quality, Accessibility and Usability) on the scale of 5. They can also embed the Resources (Datasets/Apps) in their blogs or web sites. Facility to contact the City Data Officers is also available on the Platform.
- **Community Collaboration** - Citizens with specific interest can build communities and discuss online. OGD Platform facilitates the communities to open up online forums, blogs and discussions around various datasets, apps available on the platform. It also provides a platform to express and discuss the kind of Datasets, APPs & APIs they would like to have. It shall also give input to departments as what kind of datasets is more useful an accordingly prioritize the release of the datasets.

10. Data Policy Budget Allocations

The implementation of City Data Policy is expected to entail expenditures for both data owner and data managers for analog to digital conversion, data refinement, data storage, quality up gradation etc. Budgetary provisions and appropriate support for

data management for each department/organization by Government of India and Government of Chhattisgarh would be necessary,

10.1 Change Management and Capacity Building for data initiatives

- **Capacity Building**

Post identification of tools and formulation of processes, users at all stages will require training on how to collect data and using the analytics tools. After the technology intervention and processes have been identified, focus on capacity building, technical training will happen. At times the resources deployed at the last mile may not understand the value of meticulous and focused data collection and may need to be trained not only on the tools but also on the importance of collecting data properly.

- **Resource Building**

In order to handle the complexities of the data, it is important that the right resources be deployed at critical points in the data life cycle. These resources can serve to guide the teams at these critical points in the data life cycle so as to avoid spill overs, incorrect data entry, cleansing techniques etc. These data scientists/data champions will be instrumental in generating useful insights and deliver value to the senior stakeholders. RMC/RSCL will deploy human resource for management of database.

10. 2 Overall City Budget

To setup and maintain the IT infrastructure for data collection, database management; it is estimated to require INR 1 crore as an investment to be incorporated in municipal budget every year. This includes the human resource required for operation of the IT infrastructure.

Proposed budget to be allocated under following heads:

A	**Data Cell Formulation**
A.1	Capacity Building of data champions of various departments involved through conducting training sessions and workshops including hiring of resources.
A.2	Innovation Hackathon events/Co-creation Challenges/Hiring of resources
B	**IT Infrastructure**
B.1	Development of IT Infrastructure and Security Systems, Buying of proprietary software etc
B.2	Operation and Maintenance of IT infrastructure and Security Systems
B.3	Development of web data portal and periodic updation and maintenance
B.4	Development of Data collection infrastructure with equipment like sensors, SCADA system, etc.
C	**Citizen Connect**

C.1	Periodic publication of city data, Data stories, white paper publish and innovation as newsletter, Case Studies
C.2	Seeking public feedback and citizen engagement in data collection and utilization
C.3	Engaging educational institutions, professional bodies, NGOs for innovation and effective utilization of available data.
C.4	Data Challenges for Academia and Students

5. Life-Cycle of Data: Explained

5. 1. Data Collection

a) Field Data: RMC/RSCL should deploy various IoT sensors, actuators, devices, cameras and solutions to capture the data from the field directly

b) Operations Data: RMC/RSCL should deployed various system under various government departments to manage city core operations like Water Supply, Surveillance, Traffic Electricity, Street Lights, Water and Sewerage Treatment, Health, Education, Fire Department, Disaster Response and License permits etc. The data Generated by these systems in different formats should provide critical information and intelligence to officers to manage critical services and Infrastructure of the city. There should be arrangements to collect, store, analyze and generate meaningful insights from this data

c) Third Party Platform and Mobile Apps: Arrangements to be made to avail services from private businesses like radio taxi, food delivery, hospitals and labs etc. which could provide various insights and patterns which could be instrumental in policy formulation and city planning.

d) Internet: Various platforms engages citizens and communities which captures general sentiments which could provide Insights mood or opinion of citizens and communities towards specific issue. There should be arrangements to collect, store, analyze and generate meaningful insights from this data.

5.2. Data Integration

Data from different systems using different technologies comes in different size, shape and format. In order to derive meaningful information from structured and unstructured data it is required to make data compatible for consumption. Various data types and formats generated from various systems are as follows:

a) Field Sensors and Devices:

- Hierarchical files (JSON, XML, YAML, etc.)
- Real-time stream
- Objects
- Videos

- Images
- Locational Data

b) Operations Systems:

- Relational Data Structures
- Blocks of raw data
- Flat text files
- Documents (xls.pdf, ppt, etc.)
- Log files • Financial Data
- Location Data

c) Internet and Social Media Content:

- Blogs
- Video
- Music
- Sentiments
- Images

Under City Data Policy arrangements should be made to build a data warehouse and integrate data with it. Extract, Transform and Load (ETL) is the common methodology used for data integration. It is a three-step process which used for data integration to blend data from multiple sources. During this process, data is taken (extracted) from a source system, converted (transformed) into a format that can be analyzed, and stored (loaded) into a data warehouse or other system.

5.3. Data Analysis

Analytics is an encompassing and multidimensional field that uses mathematics, statistics, predictive modelling and machine learning techniques to find meaningful patterns and knowledge in recorded data. Applying intelligent techniques to uncover insight from the relevant data. RMC/RSCL to set up Analytics division to accomplish Data Analysis insights from the Data sourced and integrated.

Various examples not narrowing down to the same can be sited as follows:

a) Slice and dice to drill down the data till lowest entity

b) Trend analysis and pattern identification on time series (days, weeks, months, quarter or seasonal, etc.).

c) Trend analysis and patter identification using various dimensions: Cost, Budget, domain specific parameters etc.

d) Comparison between various parameters in different geographies etc. e) Visualization to view the trends and patterns for decision making. Converting the data into a more comprehensible and user-friendly format.

5.4. Data Intelligence

It is final stage of the journey from being informed to actionable insights and finally to actions using following techniques:

The Analytics team of RMC/RSCL under the leadership of CDO shall perform (not limited to) following basic analytical tasks

- Descriptive Analytics: It helps in answering "What is happening?" For Example: Using past financial performance to predict a customer's likely financial performance, Descriptive analytics can be useful in the sales cycle, for example, to categorize customers by their likely product preferences and sales cycle.

- Diagnostic Analytics: It helps in answering "Why did it happen?" For Example: For a social media marketing campaign, you can use descriptive analytics to assess the number of posts, mentions, followers, fans, page views, reviews, pins, etc. There can be thousands of online mentions that can be distilled into a single view to see what worked in your past campaigns and what didn't.

- Predictive Analytics: It helps in answering "What is likely to happen?" For Example: Some companies are using predictive analytics for sales lead scoring. Some companies have gone one step further use predictive analytics for the entire sales process, analyzing lead source, number of communications, types of communications, social media, documents, CRM data, etc. Properly tuned predictive analytics can be used to support sales, marketing, or for other types of complex forecasts.

- Prescriptive Analytics: It helps in answering "What should I do about it?" For Example: In the health care industry, you can better manage the patient population by using prescriptive analytics to measure the number of patients who are clinically obese, then add filters for factors like diabetes and LDL cholesterol levels to determine where to focus treatment. The same prescriptive model can be applied to almost any industry target group or problem

11. Standard Operating Procedures (SOPs)

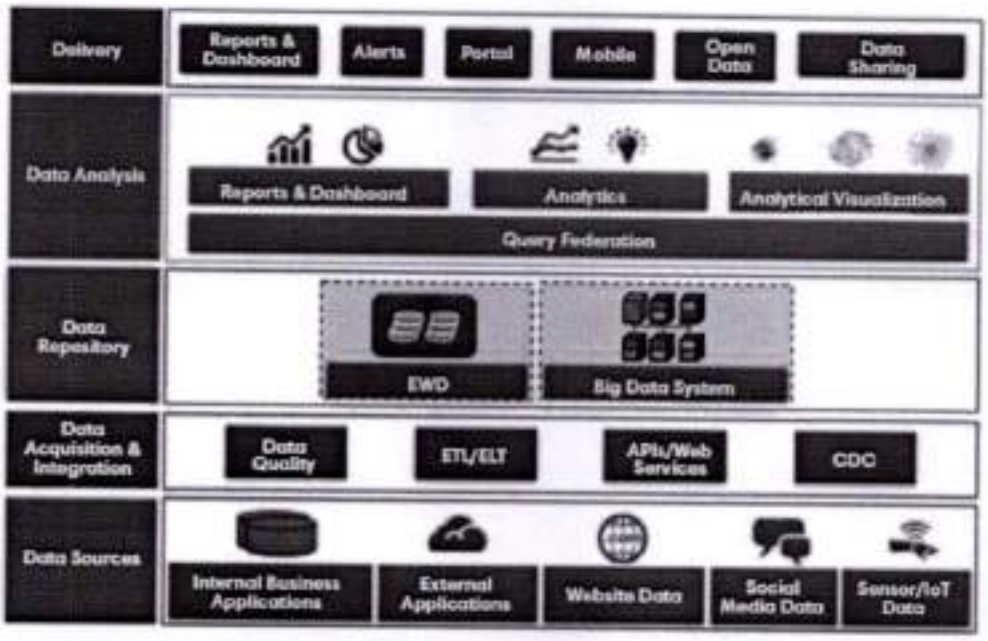
11.1 SoP for Manual Data Collection

1. The request received can be directed to the Data Coordinator of the concerned department.
2. The Data coordinator of the concerned departments checks the requested data. If data is available with the department, DC shall instruct the concerned personnel to gather the data in the requested format.
3. If fresh data is needed to be captured /acquired, the Data Coordinator (DC) in Consultation with City Data Officer shall take appropriate actions.

11.2. SoP for Electronic Data Collection

1. The data should be collected in consent with the end-user who may be a citizen or RMC/RSCL employee.
2. Data which is not going to be used for any kind of analysis or will not be used for any communication purpose should not be collected at all.
3. Data Security measures mentioned in "Data security" section of the Policy, shall be followed to maintain confidentiality and security of data.
4. For Data Collection and Integration with IOT systems / Sensors, the following Data Architecture shall be followed by (RMC) / (RSCL).

The City reference data architecture is explained below:



A. Data Sources: This ecosystem comprises of various technology solutions ranging from Sensors, IoT, SCADA, Electronic camera, GIS, payments system etc. which generates loads of structured data every second on different dimensions. RMC/RSCL ecosystem could leverage various unstructured data emerging from different sources and third-party systems like social media, internet, websites, videos, images etc. (Refer Data Collection in point 5 i.e. Lifecycle of Data.)

B. Data Collection and Acquisition: Data Collection and Acquisition Layer acts as an interface between data sources and Intelligent Platform (Command and Control Platform, Analytics Platform) which comprises of engines and solutions to customize and prepare the data collected through various sources and formats i.e. structured and unstructured for analysis purpose. (Refer Data Integration in point 5 Le. Lifecycle of Data.)

C. Enterprise Data Repository: Processed Structured and Unstructured Data is stored in Enterprise Data Warehouse from where it could be used by various users and applications for decision making.

D. Data Analysis Layer: Comprises of engines to process the structured and unstructured data on various dimensions for various purpose. Data Analysis Layer engine helps user to derive information, intelligence and knowledge out of processed data stored in Enterprise Data Repository for analysis or decision-making purpose. (Refer Data Analysis in point 5 i.e. Lifecycle of Data.)

E Service Delivery Layer: Service Delivery layer comprises of various applications and systems which could be used to deliver information, intelligence and knowledge to end user.

11.3. SoP for Data Processing and cleaning

1. While collecting the electronic data, the IT applications/ IT systems should be developed in such a way that under any circumstances these applications/systems should not accept any wrong data/null data.
2. If there is existing data, identify discrepancies which may come from different sources.
3. The collected data shall be properly processed and cleaned before performing any kind of analysis.
4. If needed commercial software available in the market can be used with prior approvals of concern authority.
5. The Technical Experts of RMC/RSCCL will responsible for the data processing and cleaning task.

11.4. SoP for Data for Quality Assessment and Data Sets

1. Under the leadership of Municipal commissioner (RMC), three-member committee will be formed comprised of Additional Commissioner (RMC). Assistant Commissioner(S), Chief Accounts Officer.
2. City Data Officer (CDO) and Data Coordinators shall submit sensitive, protected & public data to the committee for Data quality assessment
3. Routine data for internal use on day to day basis will be directly handled by City Data Officer.

11.5. SoP for Data Publishing as per Open Data Norms

Ranchi City Data Policy endorses National Data Sharing and Access Policy which defines following standards for publishing data sets and feeds.

1. Only data which has been approved by Assessment Committee and Municipal Commissioner shall be uploaded on Open Data Portal.
2. Data sets which are considered to be open by default unless classified as Internal, sensitive, protected or restricted shall be uploaded on the Open Data Portal.
3. Data sets and feeds must be published with proper metadata. Information about the datasets being published using common data taxonomy/structure shall be uploaded as it helps in providing easy access through Data Platform.
4. A Data Sets and feeds should be published in formats specified under NDSAP open format. Data should be provided in freely available formats which can be accessed without the need for a software license.
5. Data Sets and Feeds should be machine readable.

6. Following data formats can be used for uploading data on Open Data Portal
   a. CSV Comma separated values)
   b. XLS (Spread sheet - Excel)
   c. ODS (Open Document Formats for Spreadsheets)
   d. XML (Extensive Markup Language)
   e. RDF (Resources Description Framework)
   f. KML (Keyhole Markup Language used for Maps)
   g. GML (Geography Markup Language)
   h. RSS/ATOM (fast changing data e.g. howdy/daily)

11.6 SoP for Engaging Stakeholders to Assess the Data Needs

Data sharing between all stakeholders is the only way which can catalyse collaborative problem solving. Various ways of collaboration around data sharing to drive open innovation shall comprise of the following

1. API: Stakeholders (Internal / External / citizens / Public or Private limited entities/ Registered NGOS) should strive to automate the extraction of data and illustrate trends easily and quickly with APIS.
2. Data Pooling: Data is provided by various data producers from across the city governance. RMC/RSCL can take this data and organizes it on its website by category, thus helping Site visitors to see the history of data available, compare two set of data, or view data by source.
3. Intelligence Product: Data to be made readily available to researchers and external agencies, who can use existing data to create predictive models and machine learning techniques to guide data-driven services for RMC/RSCL
4. Prizes and Challenges: Public data will be used for the challenge and available through some data platform, Participants will also be encouraged to include data from their own organizations and add this data to the Data Registry.
5. Research Partnerships: RMC/RSCL to establish research partnership with researchers through a secured protocol to avoid any data leakage or misuse.

Trusted Intermediary: RMC/RSCL can buy data from trusted Intermediary (e.g. Google, Facebook, LinkedIn, Social Media, etc) for better decision making and city governance.

11.7 SoP for Data Collection, Processing and analysis for on field survey

Depending on requirement of data, competent agency can be employed to perform field survey. Going forward, all the e-governance IT applications/ Systems shall be designed in such a way that manual processes get replaced by automated process without much intervention of humans. As most of process would be automated and handled by an e mode, data will be available for further analysis.

11.8 SoP for Data Monetization

A committee comprising of representatives from various departments of RMC/RSCL, Traffic Police, Jharkhand Environment Conservation Board, Ranchi Police, city educational institutions and market experts would be formed to be City Data Committee In the context of Right to Information act, this committee would decide the data which can be monetized, fix the price, and review it from time to time. The data can be differentially priced for academic research and commercial used.

RMC will create data monetizing platform, it will form revenue sources that would be the data ecosystem to become self-sustainable. It will allow RMC to broker third party data and benefit from this brokerage.

12. Top Priority Areas for City Data Policy Implementation

- The IT Department of RMC would be serving the nodal functions of coordination and monitoring of policy through close collaboration with all Central Ministries and the Department of Information Technology by creating the web portal.
- All sharable data as decided by the City Data committee will be made available on as-is where-is' basis.
- The IT Department of RMC will make sure the implementation is in compliance with detailed implementation guidelines including the technology and standards for data and metadata to be brought out by Department of Information Technology, Government of India.
- All the data users who are accessing/using the data shall acknowledge the some department in all forms of publications.
- All RMC Departments will upload at least 5 high value datasets decided by the City Data Committee on the existing RMC Web Portal and Smart City Open Data Portal within three months of the notification of the policy Uploading of all remaining datasets should be completed within one year by all the relevant departments.
- Ranchi Data Portal itself will have both data and metadata which could be accessed from the portals of the RMC departments.
- All metadata will follow standards and will minimally contain adequate information in proper citation, access, contact information, and discovery. Complete information including methods, structure, semantics, and quality control/assurance will be follow for most datasets.
- RMC will design and position a suitable budgetary incentive system for data owners for increasing open access to the sharable data under guidance of the Government of Chhattisgarh.
- An oversight committee will be constituted for facilitating the implementation of the policy and its provisions thereof.
- The IT department of RMC will constitute a coordination committee for facilitating the implementation of the policy and its provisions thereof.

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13. Amendments to Policy

Technology and database ecosystem are a highly dynamic field. Its needs and challenges keep on evolving with time to keep this data policy relevant and appropriate with time, every year the City Data Committee would review the policy in consultation with subject matter experts and would be empowered to amend the policy

Annexure: 1

Resource / Dataset Title Nomenclature

Resource / Dataset	Catalog / Resource Name for Open Data Portal
Dataset 1	Demographic Profile :< Your City Name>
Dataset 2	Unemployment Rate:<Your City Name>
Dataset 3	Household Profile :< Your City name>
Dataset 4	Air Quality S02, PM2.5, PM10, NO2, 03 :< Your City Name>
Dataset 5	Public Amenities :< Your City Name>
Dataset 6	Community Facilities:<Your City Name>
Dataset 7	Citizen Facilitation Center:<Your City Name>
Dataset 8	Health Infrastructure Catalog:<Your City Name>
Dataset 9	Mortality Rate:<Your City Name>
Dataset 10	Water Revenue Data :<Your City Name>
Dataset 11	Public Toilets Data: <Your City Name>
Dataset 12	D2D Collection Coverage: <Your City Name>
Dataset 13	Solid Waste Generated, Collected, Processed Data <Your City name>
Dataset 14	Solid Waste Ward wise Segregation Data: <Your City Name>
Dataset 15	Solid Waste Collection Revenue Data: <Your City name>
Dataset 16	Bins and Community Bins Ward Wise Data:

	<Your City Name>
Dataset 17	Waste Collection Vehicle Data: <Your CityName>
Dataset 18	Solid Waste Processing Data: <You City Name>
Dataset 19	Solid Waste Disposal Data: < Your < Your City Name>
Dataset 20	Waste Management Revenue Expenditure Data :<Your City name>
Dataset 21	Property Tax Data: <Your City Name>
Dataset 22	Education Data:<Your City names>
Dataset 23	Condition of Roads:<Your City name>
Dataset 24	Street Lights:<Your City name>
Dataset 25	Slum Housing and Population data: <Your City name>
Dataset 26	Housing & Basic Infrastructure data: <Your City name>
Dataset 27	Circle Rate:<Your City name>
Dataset 28	Infrastructure Distribution: <Your City names>
Dataset 29	Open Spaces:<Your City name>
Dataset 30	Natural Landscape:<Your City names>
Dataset 31	Cultural Heritage:<Your City name>
Dataset 32	Children Facilities Provision: <Your City names>

Dataset 33	Area Bifurcation Data:<Your City name>
Dataset 34	Budget for Open spaces development: <Your City name>
Dataset 35	Signalized Intersections <Your City name>
Dataset 36	No. of Buses:<Your City name>
Dataset 37	Earnings from Bus trips: <Your City name>
Dataset 38	Public Transport Access:<Your City name>
Dataset 39	Public Transport Mode Share: <Your City Ranchi>
Dataset 40	Vehicle Registrations Data: :< Your City name>
Dataset 41	Injuries & Fatalities: <Your City name>
Dataset 42	Water Consumption : <Your City name>
Dataset 43	City Consumption: Your City names>
Dataset 44	Registered Voters: <Your City name>
Dataset 45	Digital Access: <Your City name>
Dataset 46	Diseases: <Your City name>
Dataset 47	Crimes :<Your City name>
Dataset 48	VAT&GST Collection :<Your City name>
Dataset 49	Financial Health: <Your City name>
Dataset 50	Digital Payments : <Your City name>

Apart from above mentioned dataset, the city needs to create new catalog & add new dataset.