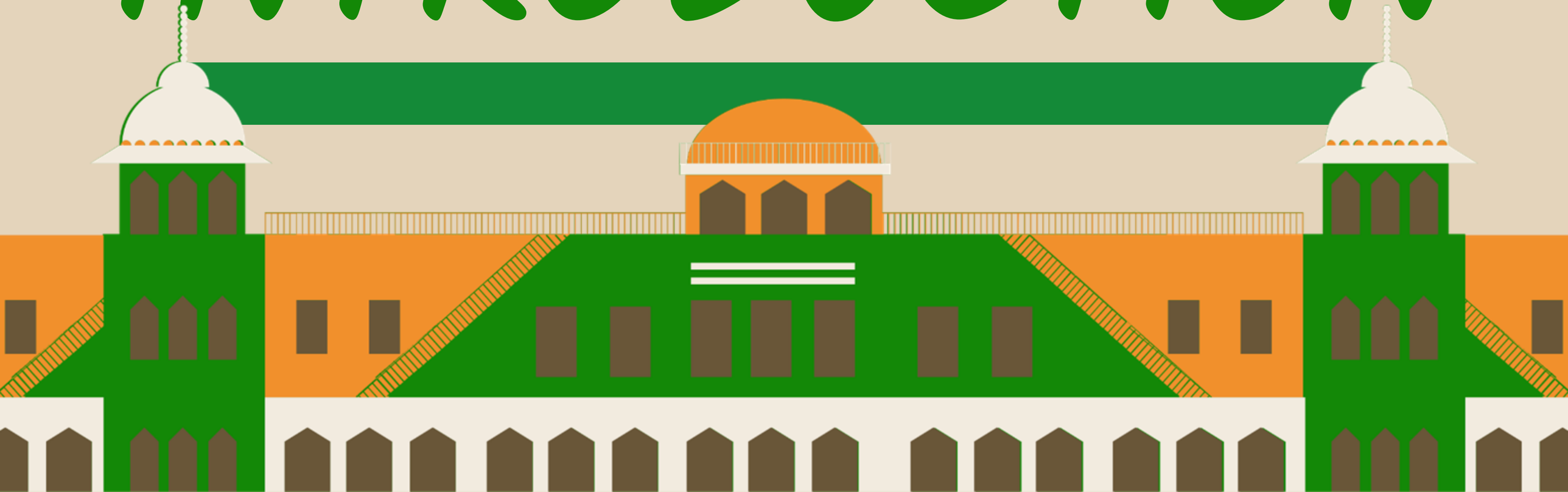
India's Open Government Data

A Critique and Evaluation of India's Open Data Initiatives

CONTENTS

01

INTRODUCTION



INTRODUCTION

- **Data as a Power Determinant**: In the modern economy, data's value is crucial for political, social, cultural, and economic influence (Buchholtz, Bukowski, and Sniegocki, 2014).
- **Role of Government Data:**

✓ Extensive reach and comprehensive coverage.

✓ Authority as a primary information source.

✓ Generated through activities like pensions, tax collection, traffic monitoring, and issuing official documents.

INTRODUCTION

- **Open Data Definition**: Information available for free use, reuse, and redistribution.
- Requires proper citation and republishing.

- **Potential and Benefits of Open Data**:

1. Fosters transparency.
2. Drives innovation.
3. Stimulates economic growth.
4. Empowers citizens.
5. Enhances public services.
6. Promotes civic engagement.

INTRODUCTION

Key Challenges:

1. **Accessibility**: Ensuring open data portals are user-friendly with searchable catalogs and API access.
2. **Quality and Description**: Data must be high-quality and clearly described for effective use.
3. **Usability Issues**: Unstructured formats limit usability, making data as ineffective as non-open data.
4. **Institutional Barriers**: Data quality, accuracy, privacy, and politics hinder effective deployment.

HISTORICAL CONTEXT

1969

Indian Council for Social Science Research established

Data collection mainly by central and state governments (e.g., Census of India, NSSO).

1975

Adoption of computers by the central government

Establishment of National Informatics Centre (NIC)

ECONOMIC REFORMS & THE RTI MOVEMENT

2005

RTI Movement led by marginalized groups demanding government accountability.

Culminated in the Right to Information Act in 2005.
RTI Act influenced India’s open data policies.

2012

Establishment of National Data Sharing and Accessibility Policy

Creation of Open Government Data Platform India (data.gov.in).

HISTORICAL CONTEXT

2015

Launch of Digital India aims to ensure that people could access government services online

followed by establishment of Development Monitoring and Evaluation Office (DMEO)

2017

Policy Update of NDSAP

Revised NDSAP emphasizing machine-readable formats and non-discriminatory access.

CHALLENGES & COMMUNITY EFFORTS

Policy Provisions:

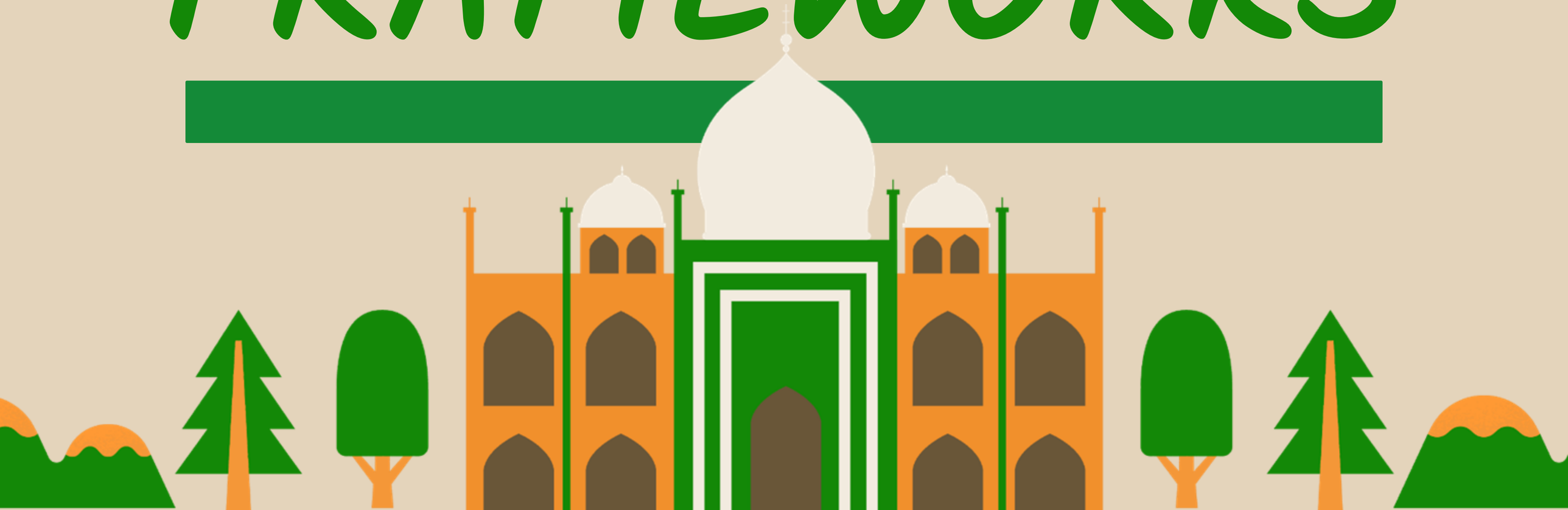
- Government departments decide data shareability.
- Data access may require registration.
- Government ownership and pricing of datasets.

Community Initiatives:

- NGOs and groups like DataMeet, WikiData, and OpenStreetMap fill gaps.
- COVID-19 pandemic highlighted community-led data efforts.
- Challenges include lack of contributions, inaccessible formats, and inconsistent updates.

02

FRAMEWORKS



DATA GOVERNANCE AND MANAGEMENT

1 Business Drivers

2 Goals and Principles

3 Data Governance Operating Model

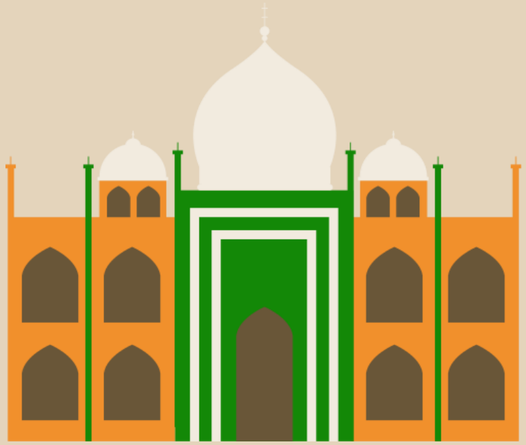
4 Data Stewardship

5 Data Policies

6 Data Architecture

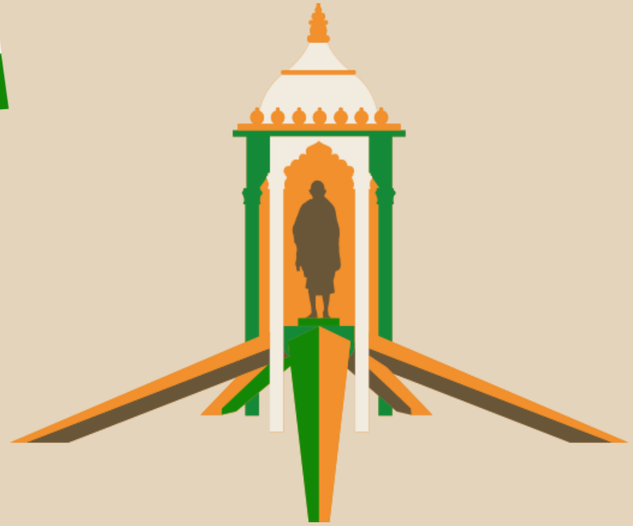
BUSINESS DRIVERS

Accountability



India’s open data policies emerged in a context of heightened public demand for government accountability, influenced by the right to information (RTI) movement.

Innovation



The goal was to increase transparency, promote innovation and economic growth, and empower citizens to make informed decisions.

GOALS & PRINCIPLES

VISION

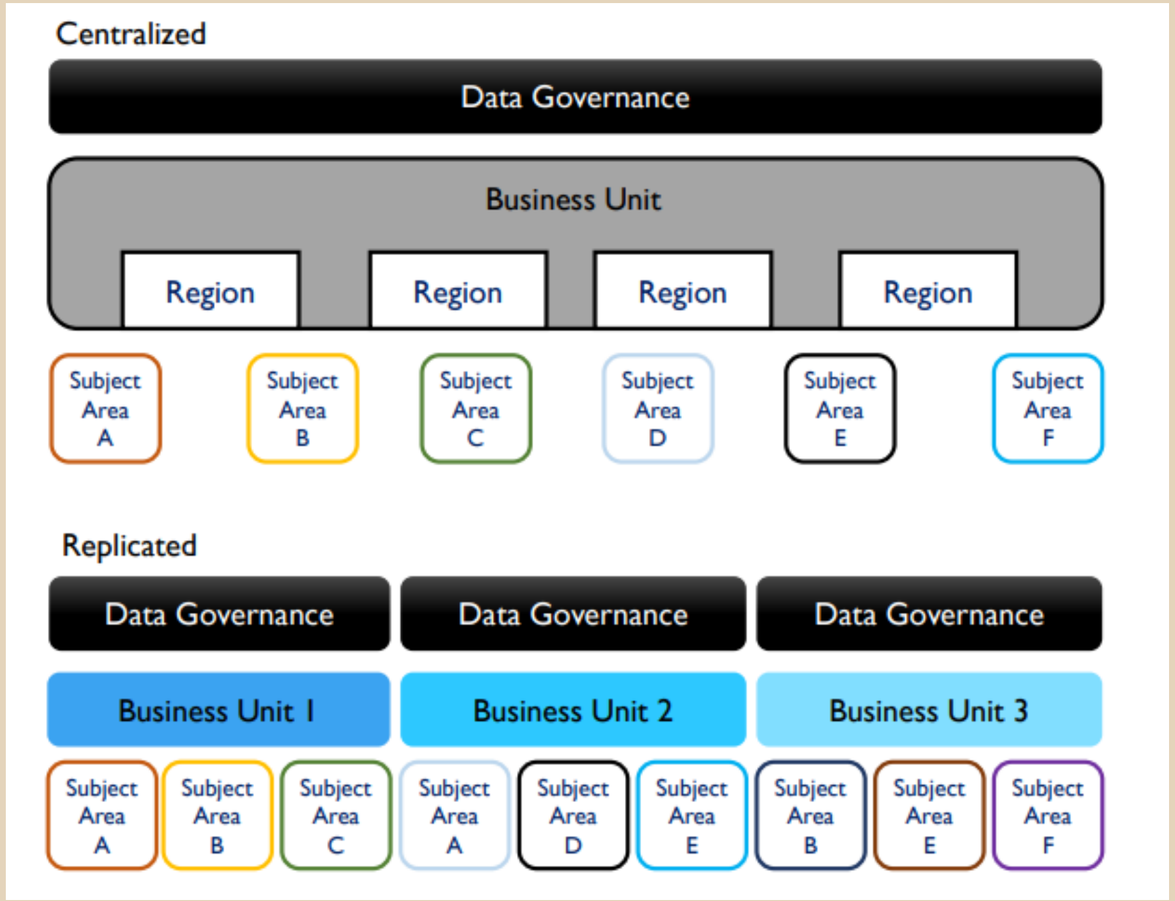
To foster a transparent and inclusive data environment where government-held data is freely accessible to all stakeholders. It aims to promote innovation and economic growth by enabling the use of government data in diverse applications while ensuring robust privacy protections. Enhancing data transparency and accessibility will empower citizens, researchers, businesses, and policymakers with reliable information for informed decision-making. It envisions a data-driven governance approach that improves efficiency within government operations and strengthens public trust through accountable data management practices.

GOALS & PRINCIPLES

MISSION

India's open data initiatives aim to enhance access to shareable data and information owned by the Government of India in both human-readable and machine-readable formats. It seeks to proactively and periodically update this information, ensuring it aligns with existing policies, acts, and rules of the Government of India. This approach facilitates broader accessibility and utilization of public data and information across the country. This mission is underpinned by the belief that open data can drive socio-economic development, improve public service delivery, and support evidence-based policymaking.

DATA GOVERNANCE OPERATING MODEL



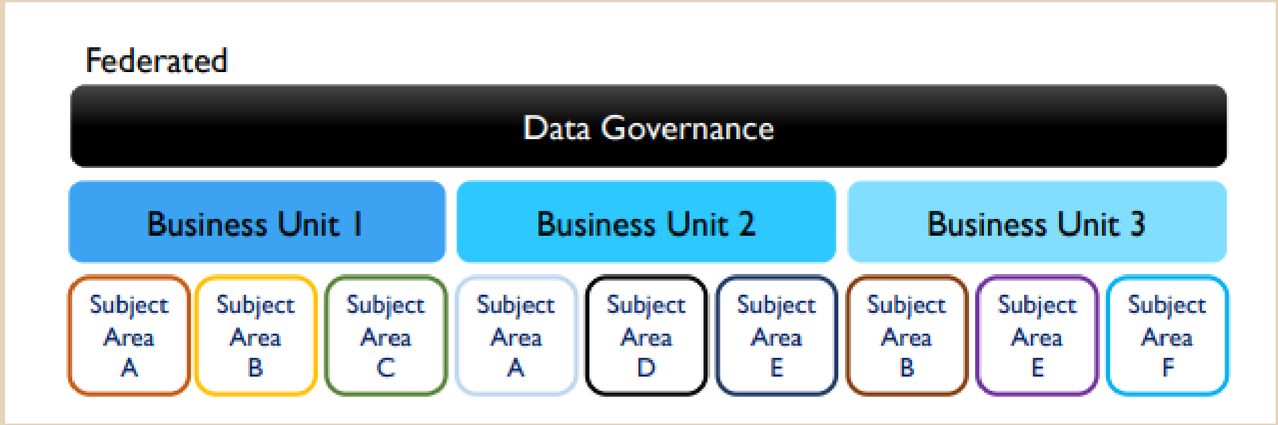


Figure. DAMA DMBOK DG Operating Framework

https://www.dama.org/cpages/body-of-knowledge

DATA GOVERNANCE OPERATING MODEL

Companies in banking / finance, telecom, Internet-enabled services, transportation, consumer goods, travel, universities, private research labs, non-government organisations etc. may be classified as 'Data Businesses' based on a certain threshold of data collected / processed that will be defined by the regulatory authority.

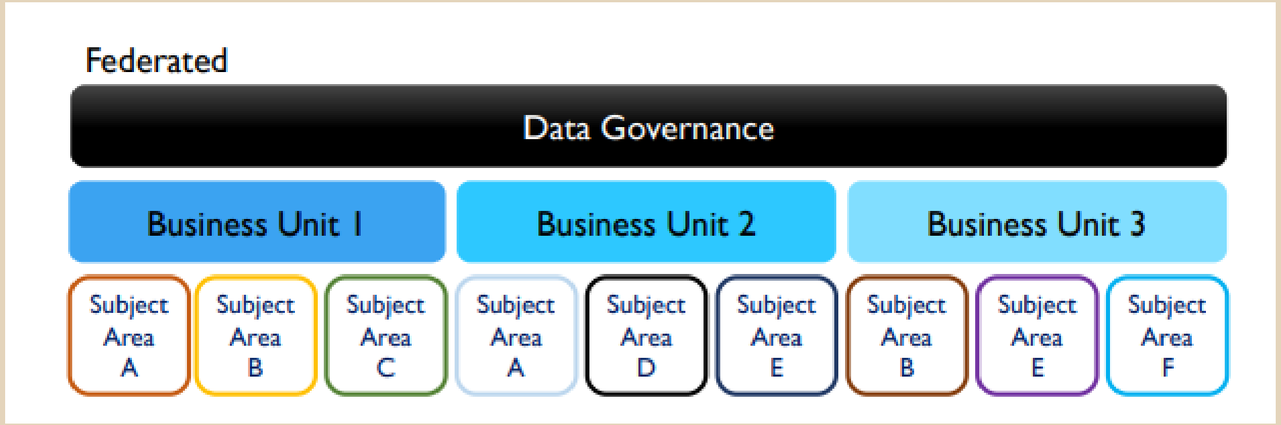


Figure. DAMA DMBOK Federated Model

DATA STEWARDSHIP

Data Principal

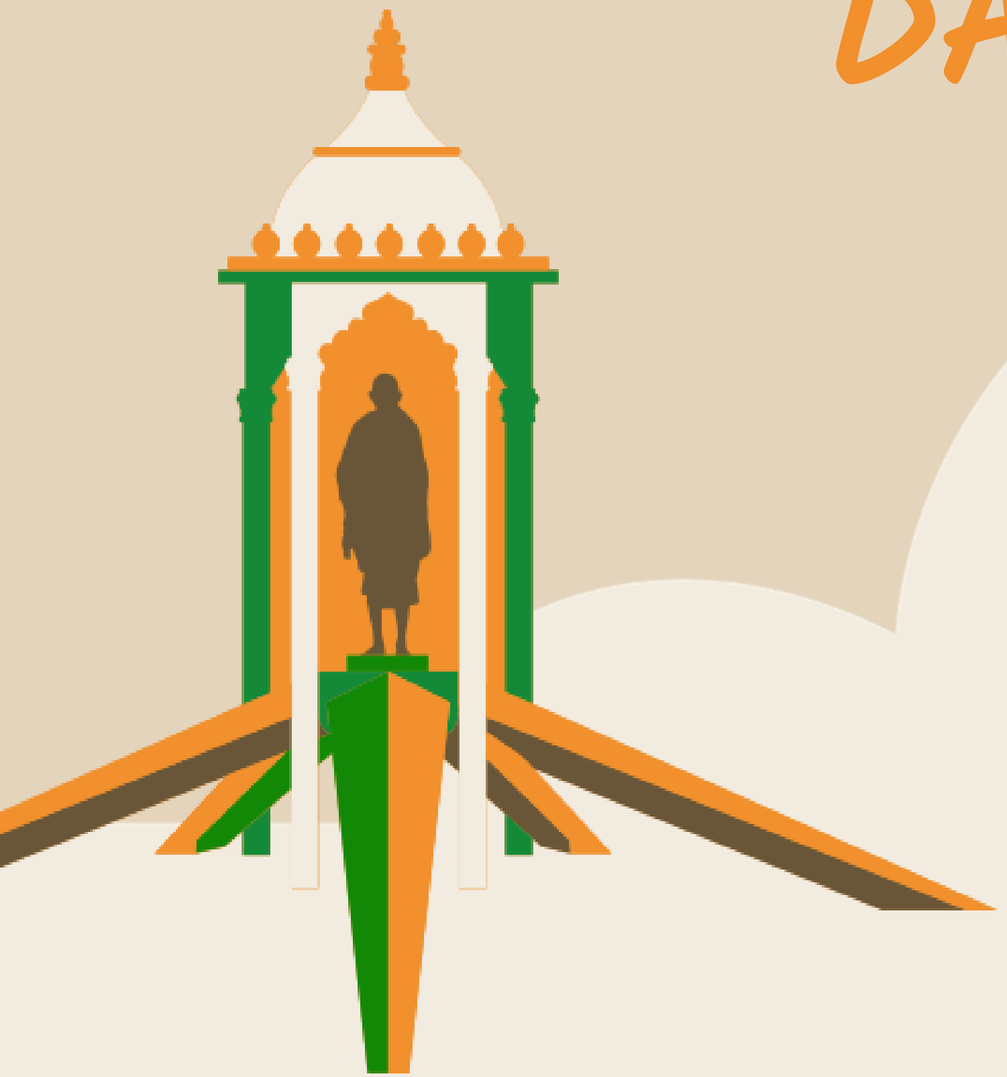
Data Custodian

Data Trustees

Non-Personal Data Authority

Data Trusts

DATA STEWARDSHIP



DAMA DMBOK:

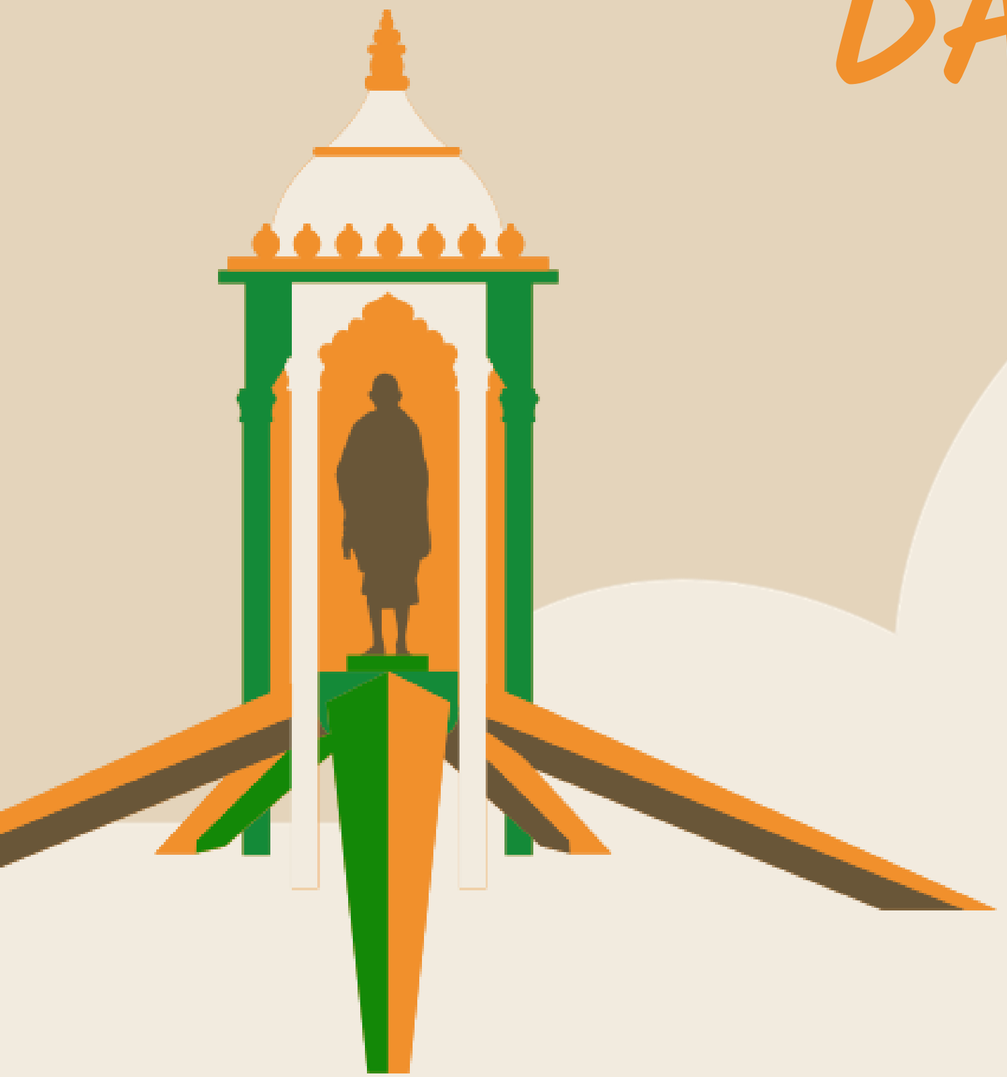
DATA OWNER

Holds authority for decisions within their domain

INDIA DG:

DATA PRINCIPAL

Natural person to whom data relates



DATA STEWARDSHIP

DAMA DMBOK:

COORDINATING DATA STEWARDS

Act as a representative of the business domains from which data is produced.

INDIA DG:

DATA TRUSTEES

Exercise data rights on behalf of the community

DATA STEWARDSHIP

DAMA DMBOK:

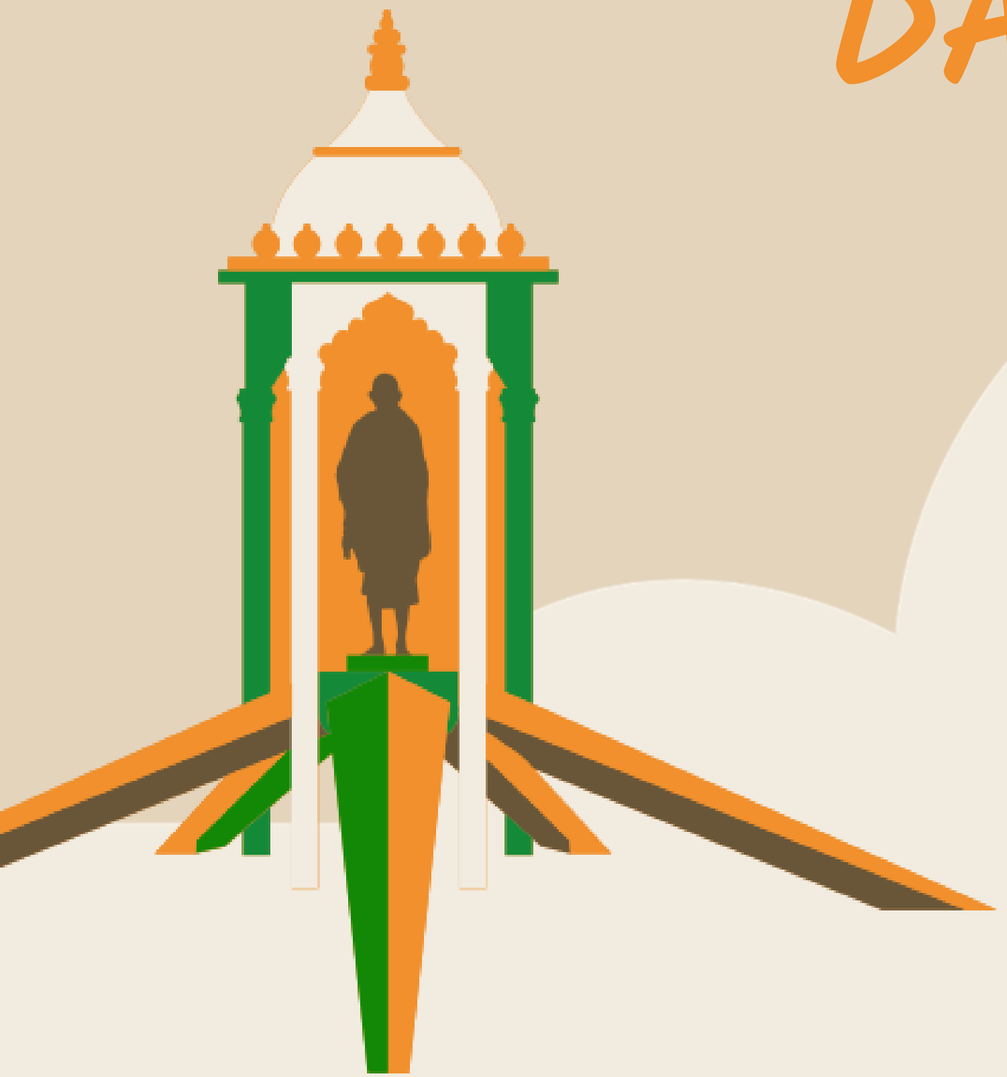
BUSINESS DATA STEWARDS

Defines and controls the data produced by data owners

INDIA DG:

DATA CUSTODIAN

Undertakes collection, storage, processing, and use of data



DATA STEWARDSHIP

DAMA DMBOK:

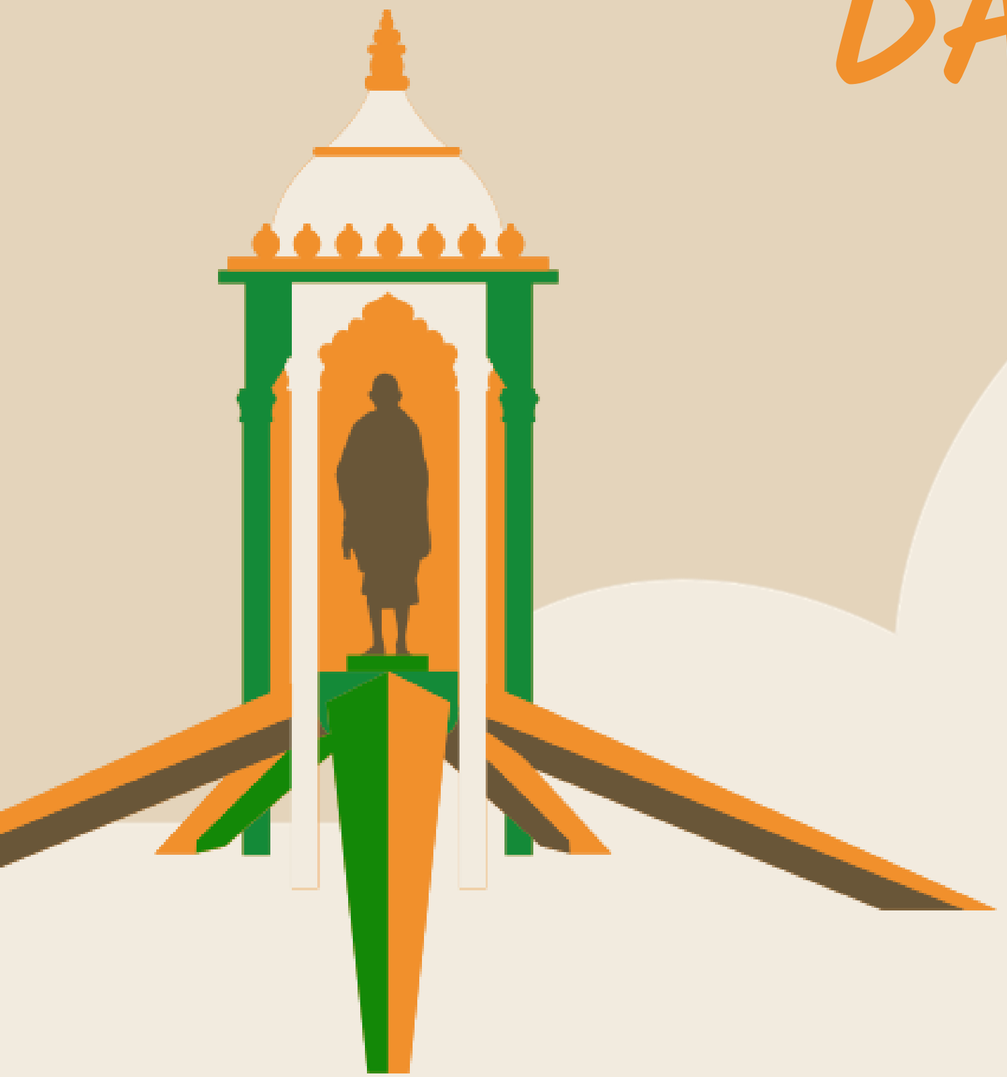
ENTERPRISE DATA STEWARDS

Oversees the overall governance of data across business functions

INDIA DG:

DATA TRUSTS

Define rules and protocols for containing and sharing data



DATA STEWARDSHIP

DAMA DMBOK:

CHIEF DATA STEWARDS

Supervises the entire data governance structure within an enterprise

INDIA DG:

NON-PERSONAL DATA AUTHORITY

Governs all data roles and regulations

DATA POLICIES

NON-PERSONAL DATA DEFINITIONS

Non-personal data can be categorized into public, community, and private data. Public non-personal data includes information collected by the government, such as land records and public health data. Community non-personal data refers to data produced by a collective of individuals, such as data from municipal corporations or private entities like telecom companies. Private non-personal data is generated by individuals and is not personally identifiable or comes from an entity's private efforts.

DATA POLICIES

RIGHTS OF DATA PRINCIPALS

Regardless of how non-personal data is collected, data principals have the ultimate right over how their data is used and consumed. For example, in government-conducted censuses, the policy in India grants full data rights to the individuals to whom the data pertains, even if collected by the government. Similarly, for community data, the producers, or specific organizations responsible for collecting the data, retain ultimate rights over their data.

DATA POLICIES

REQUIREMENTS FOR DATA BUSINESSES

Organizations identified as data businesses are required to disclose the data they collect, store, and process. Metadata should be made publicly available, provided it does not raise data privacy concerns. This policy aims to foster the integration of multiple datasets from various industries and sectors to stimulate innovative products through data interaction. Compliance requirements for data businesses are mandated to be fulfilled entirely through digital means and are compulsory by law.

DATA POLICIES

DATA SHARING POLICIES

Data businesses may be required to share data for several reasons, categorized into sovereign purposes, public interests, and economic purposes. For sovereign purposes, such as national security, disease mapping, and law enforcement, companies are required to share data like geospatial and telecommunications data. For public interests, companies must disclose data related to infrastructure, public services, and some high-value datasets like agriculture and education. Under economic purposes, companies may be required to provide data, such as road data from transportation companies, to better address public transport demand.

DATA ARCHITECTURE

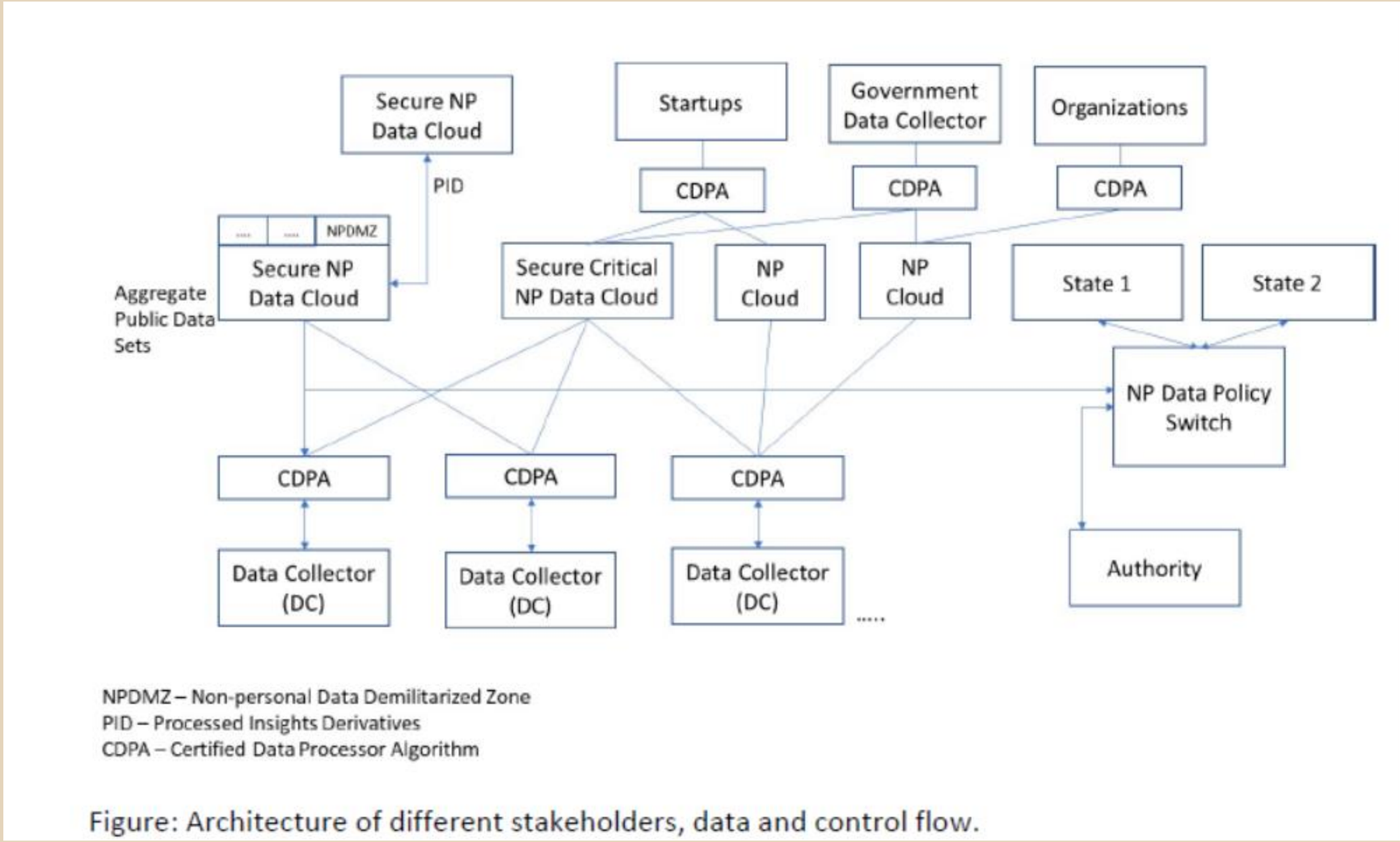
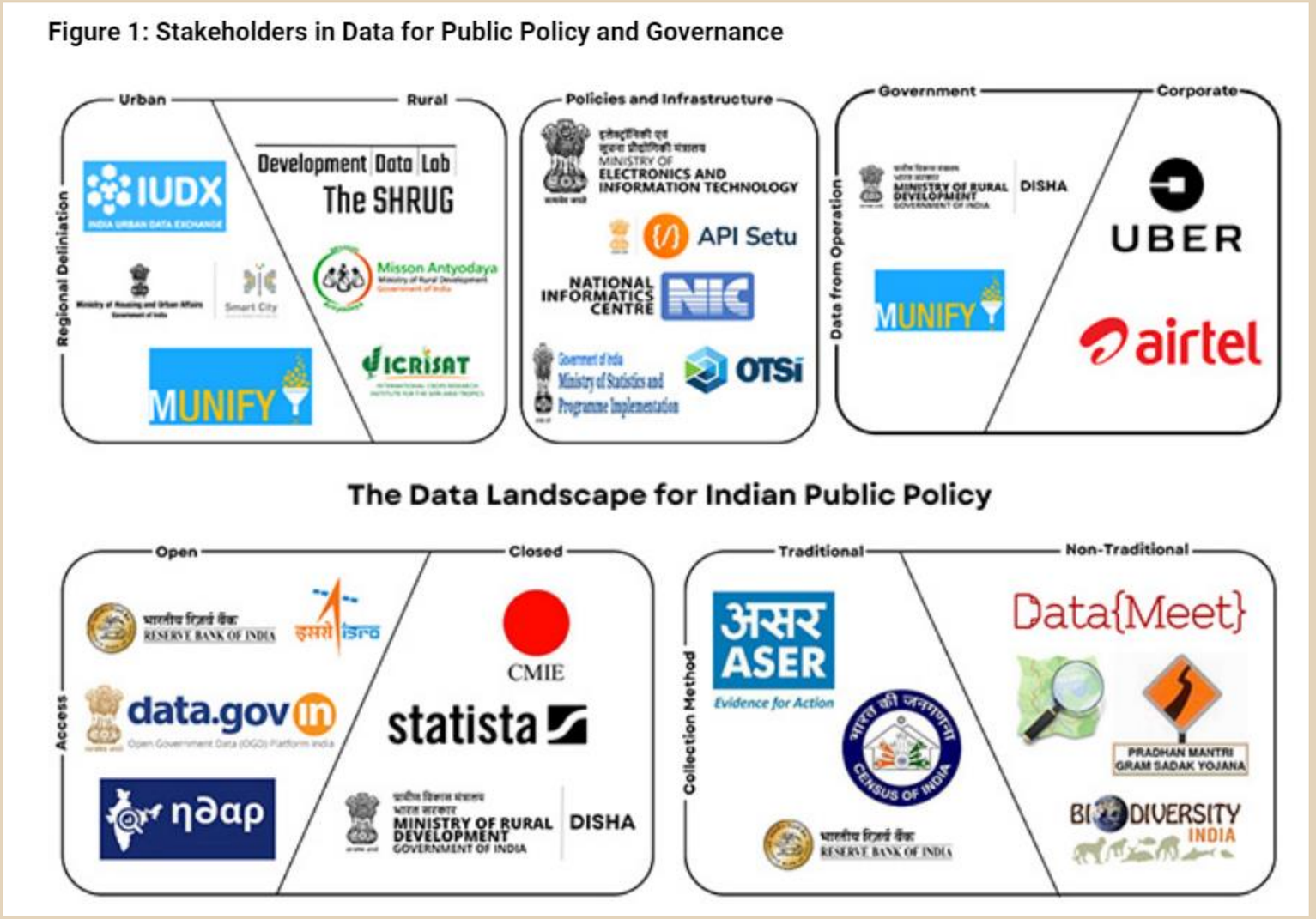


Figure: Architecture of different stakeholders, data and control flow.

https://ourgovdotin.wordpress.com/wp-content/uploads/2020/07/kris-gopalakrishnan-committee-report-on-non-personal-data-governance-framework.pdf

DATA ARCHITECTURE

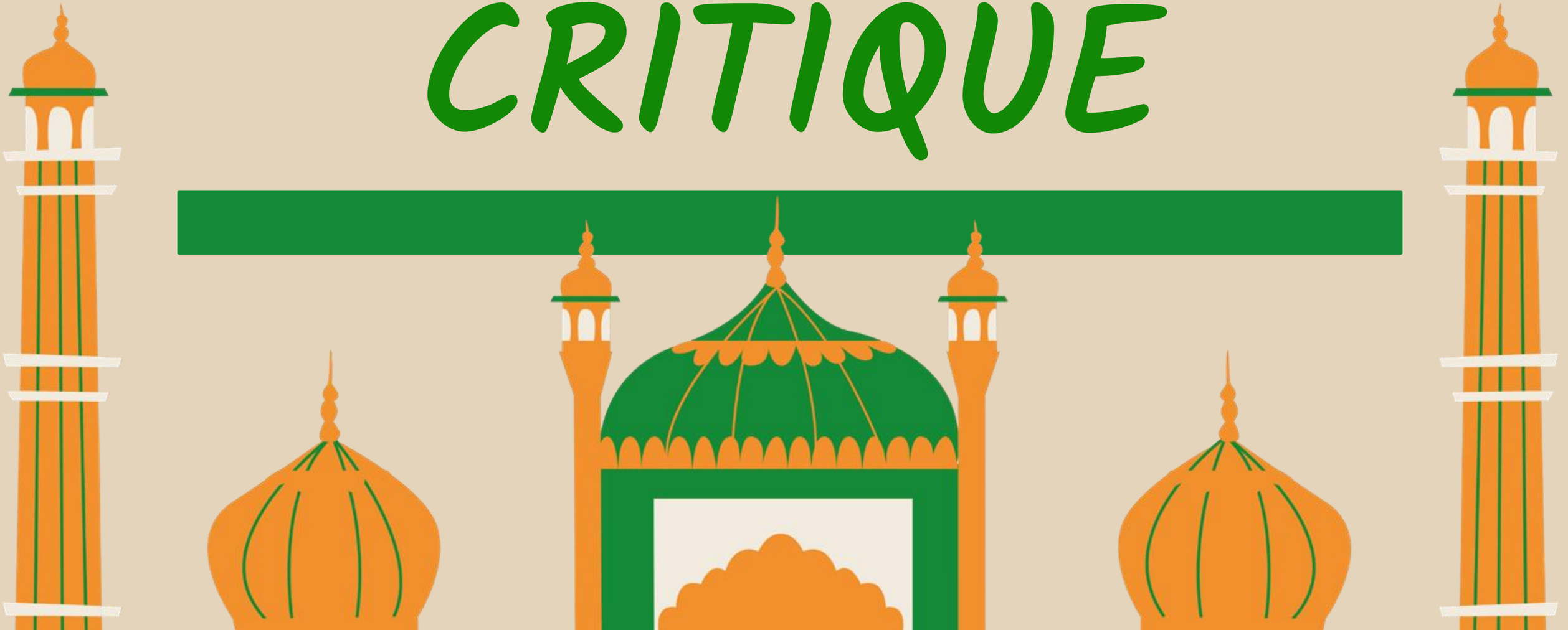
Figure 1: Stakeholders in Data for Public Policy and Governance



https://www.orfonline.org/research/towards-evidence-based-policymaking-indias-open-data-initiatives

03

CRITIQUE



Attributes to be discussed

User Interface

- Navigation Features
- Feedback forms and User Experience
- Data Visualizations

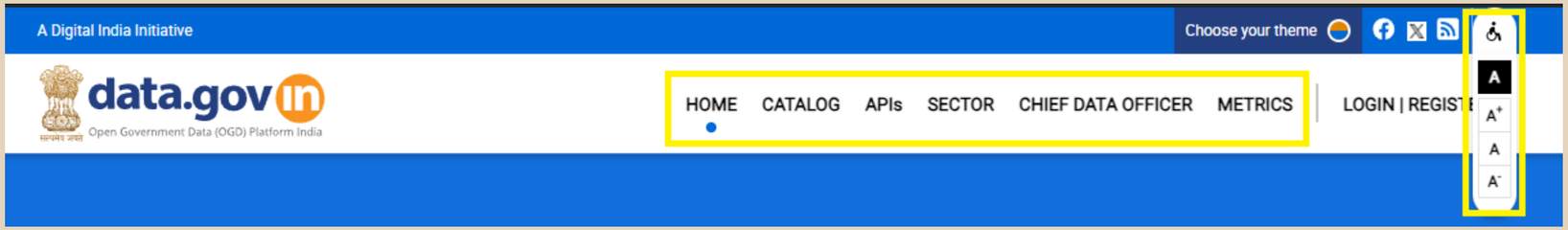
Datasets

- Number of Datasets and categories
- API and Metadata availability
- Data Quality

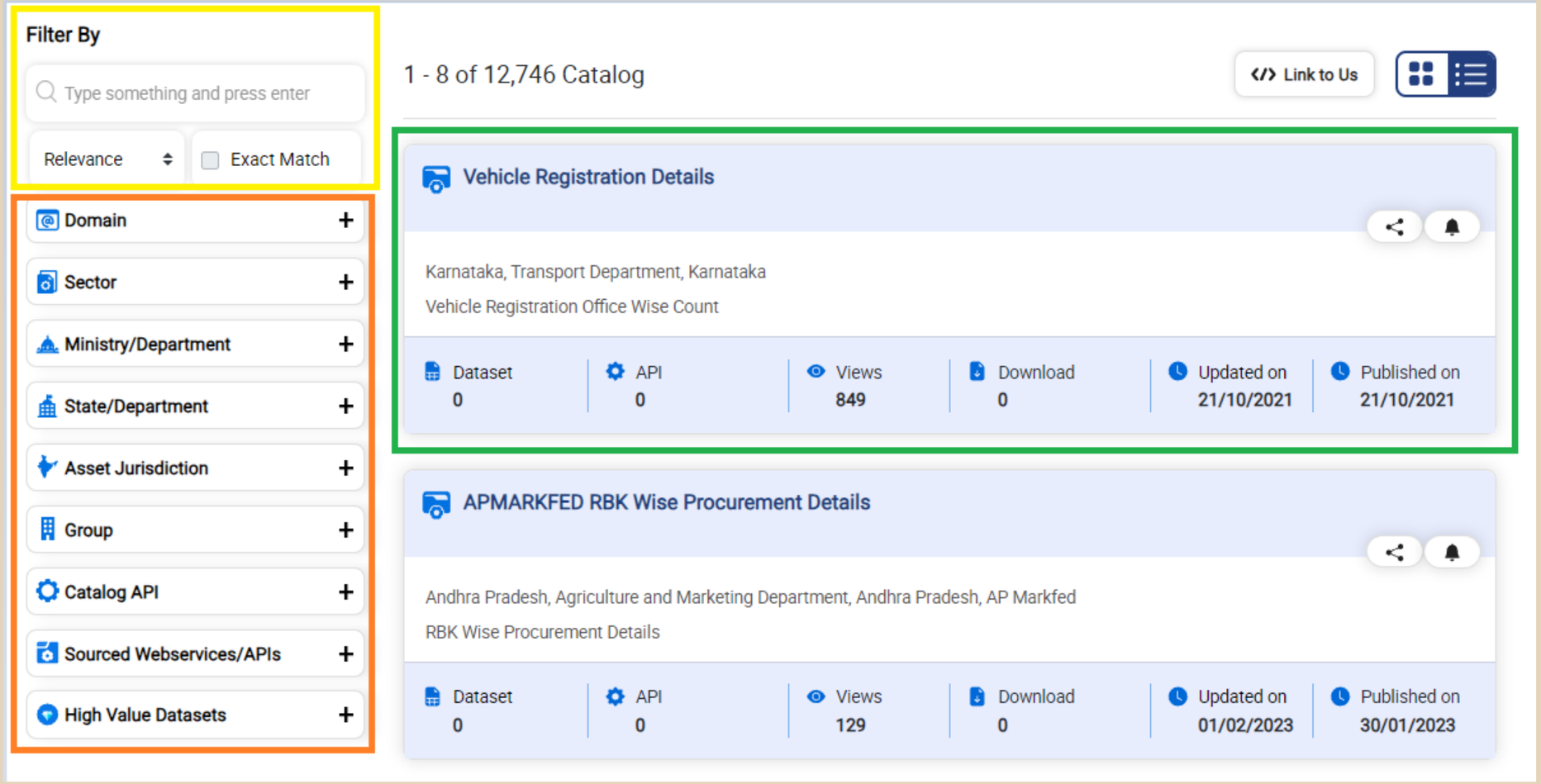
Availability of Navigation tools

Navigation tools available in the "Home page" of Indian OGD Portal

- Home
- Catalog
- API
- Sector
- Chief Data Officer
- Metrics
- Font Selection



Catalog Selection



Improvement through Forms

Get in Touch

Web Information Manager
Ms. Usha Saxena
Web Information Manager, 6th Floor, National Informatics Centre A-Block, CGO Complex, Lodhi Road,
New Delhi - 110003
ndsap [at] gov [dot] in
011-24305940

Project Management Unit (PMU)
Project Management Unit (PMU)
Open Government Data (OGD) Platform India 3rd Floor, National Informatics Centre A-Block, CGO Complex, Lodhi Road, New Delhi - 110003
ndsap [at] gov [dot] in
011-24305381, 011-24305940

Give your Feedback

Name
Name

E-mail Address*
E-mail Address*

Category
Category
Category
This Portal

Which code is in this image?

Enter the Characters shown in the image

Feedback*
Feedback

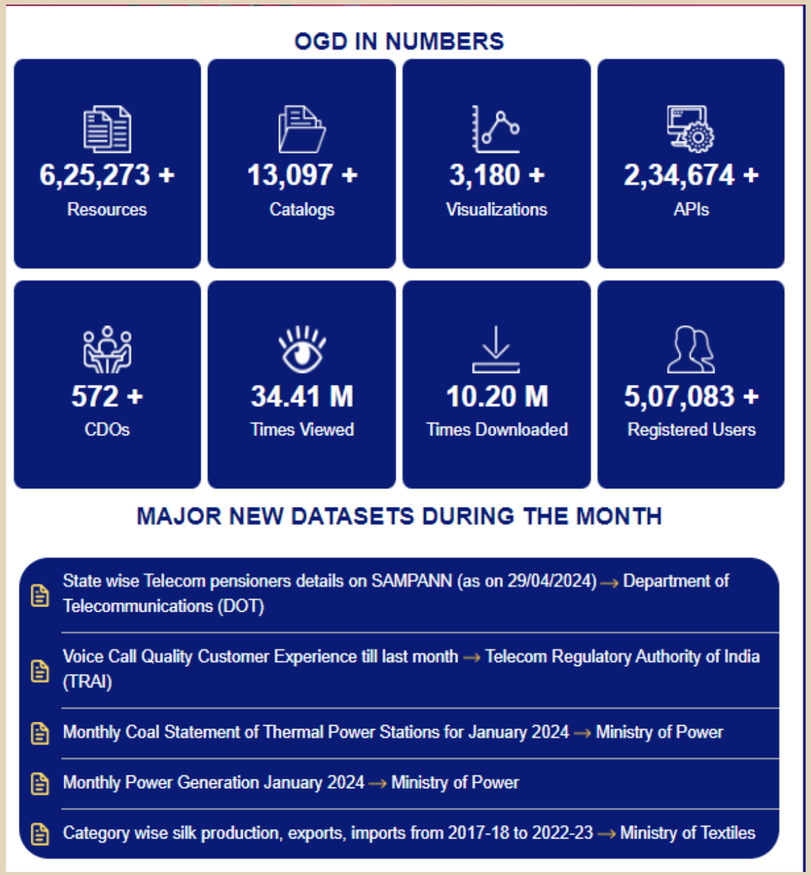
Maximum of 1000 and Minimum 5 characters allowed on Feedback & 1000 characters remaining

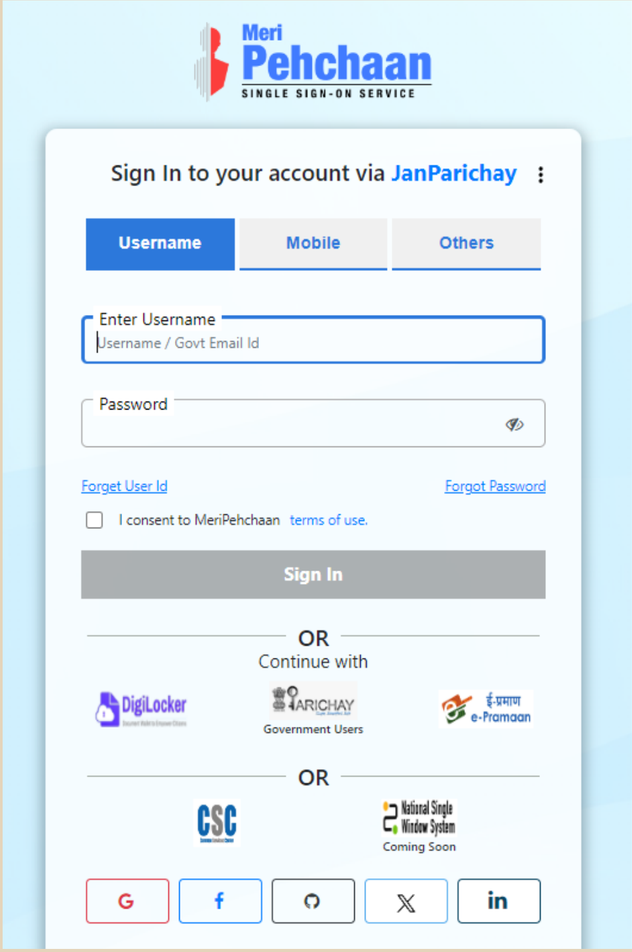
The fields marked with * are mandatory

Reset
Submit

Notification from Email Alerts

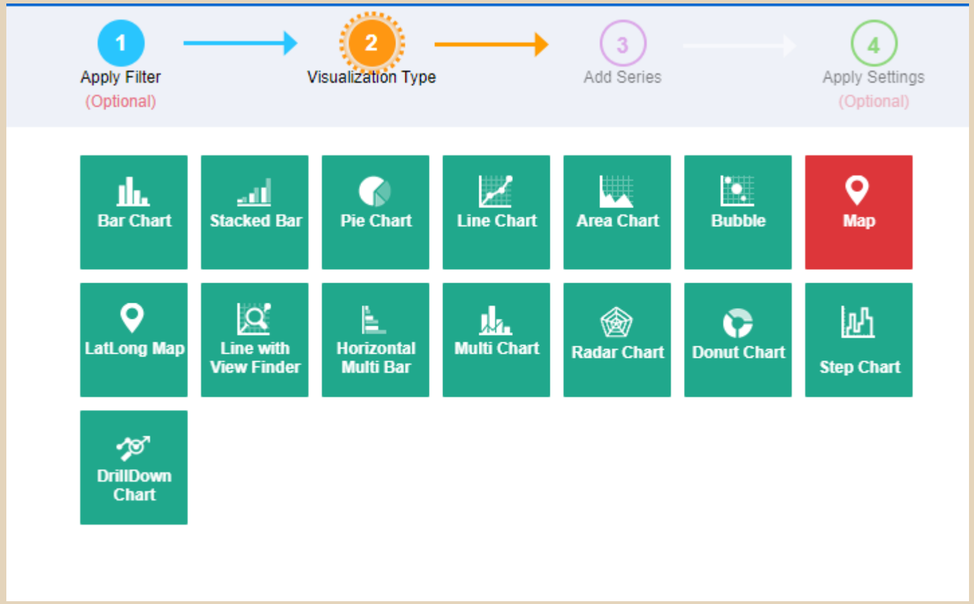
- Email Alerts
- Account Creation
- Newsletters



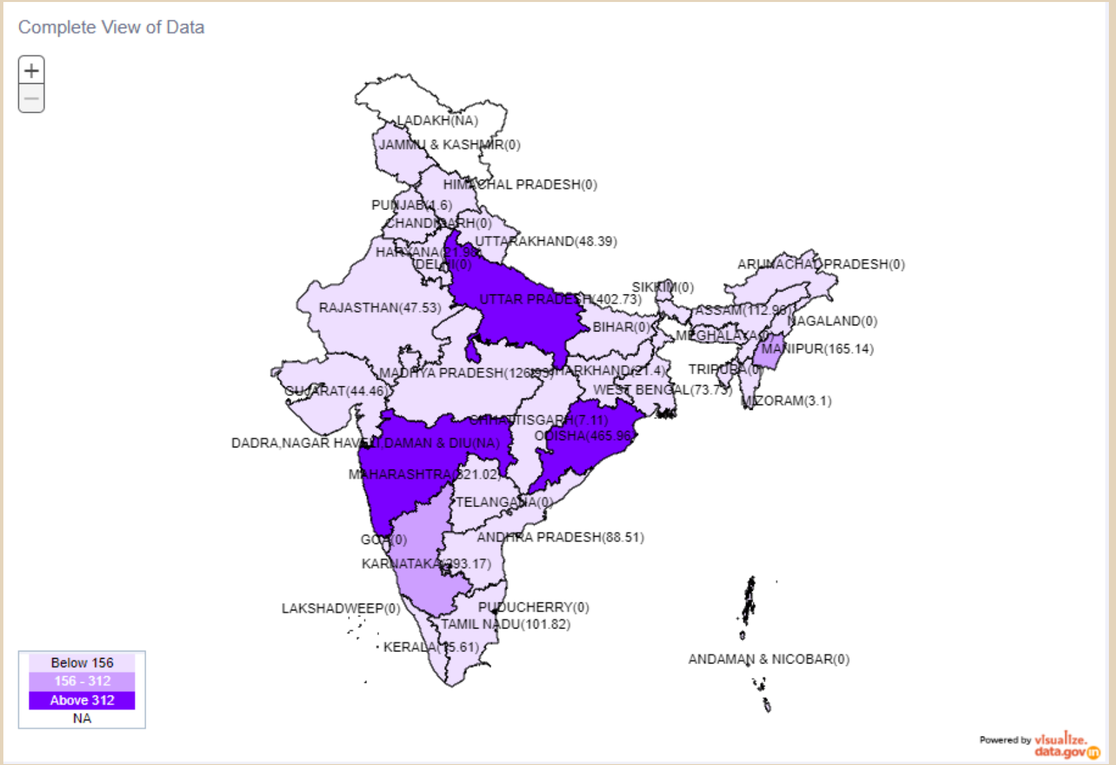


Data Viz Helper tool

Helper tool



Sample Data Viz

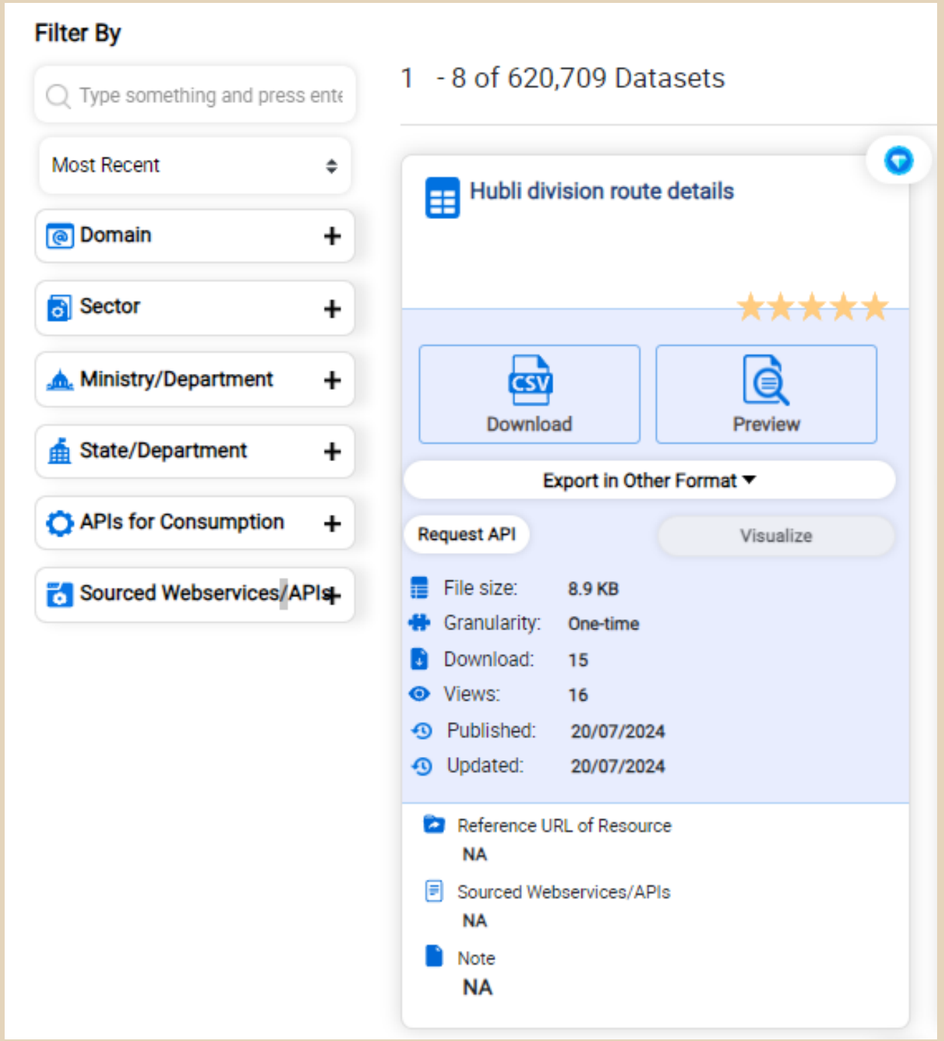


Extensive Dataset

620,700 Data sets

Multiple file formats availability

Metadata availability

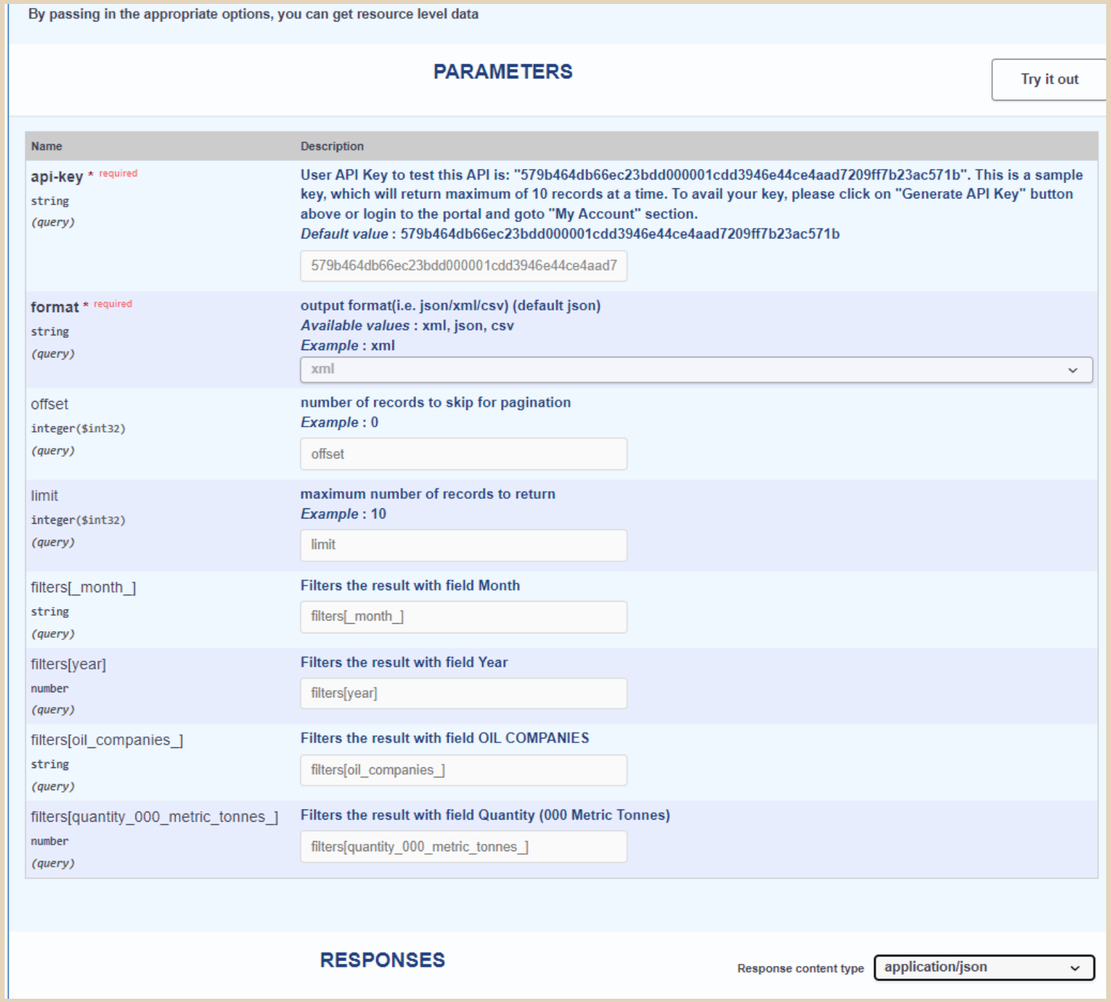


API Ready

API UI

File format availability

Configurable Parameters



Quality Data

Timeliness of Data

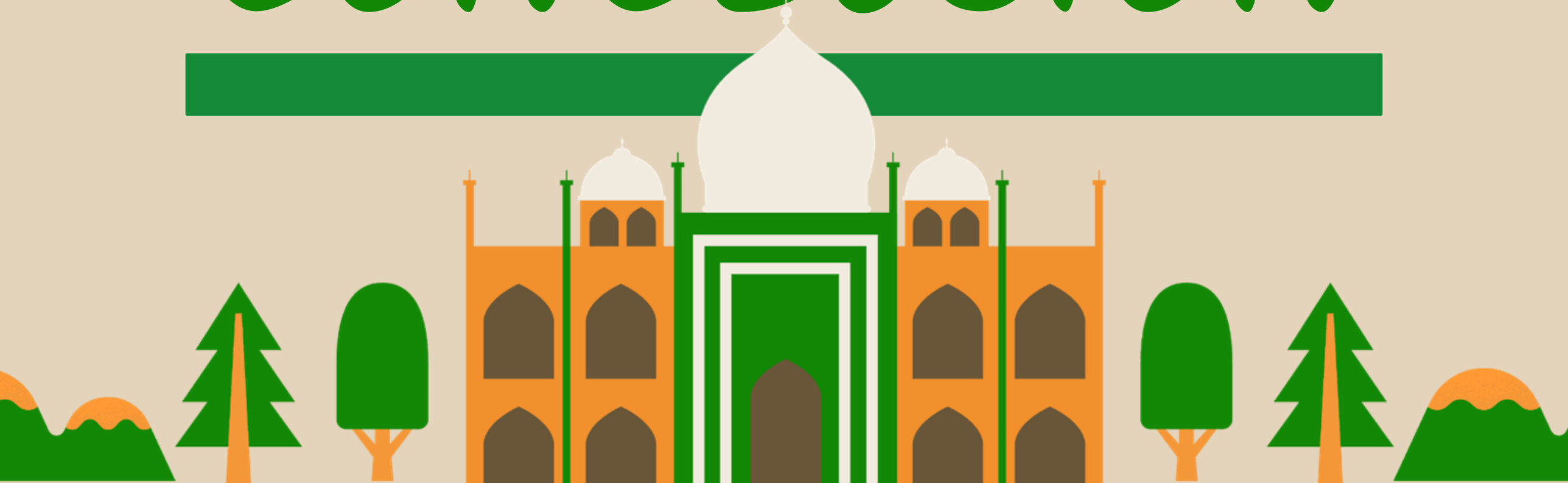
Month	Year	OIL COMPANIES	Quantity (000 Metric Tonnes)
January	2024	IOCL-BARAUNI,BIHAR	517.57
January	2024	IOCL-KOYALI, GUJARAT	1191.57
January	2024	IOCL-GUWAHATI,ASSAM	95.74
January	2024	BPCL-TOTAL	3476.48
January	2024	MRPL-MANGALORE,KARNATAKA	1527.48
February	2024	IOCL-KOYALI, GUJARAT	1249.94
February	2024	IOCL-PANIPAT, HARYANA	693.25
February	2024	IOCL-GUWAHATI,ASSAM	99.02
February	2024	BPCL-TOTAL	3174.59

Completeness

Month	Year	OIL COMPANIES	Quantity (000 Metric Tonnes)
March	2024	CPCL-MANALI, TAMILNADU	1072.31
January	2024	IOCL-PARADIP,ODISHA	1363.85
January	2024	CPCL-MANALI, TAMILNADU	1001.24
February	2024	CPCL-TOTAL	1013.93
February	2024	CPCL-MANALI, TAMILNADU	1013.93
January	2024	CPCL-TOTAL	1001.24
March	2024	CPCL-TOTAL	1072.31

04

CONCLUSION

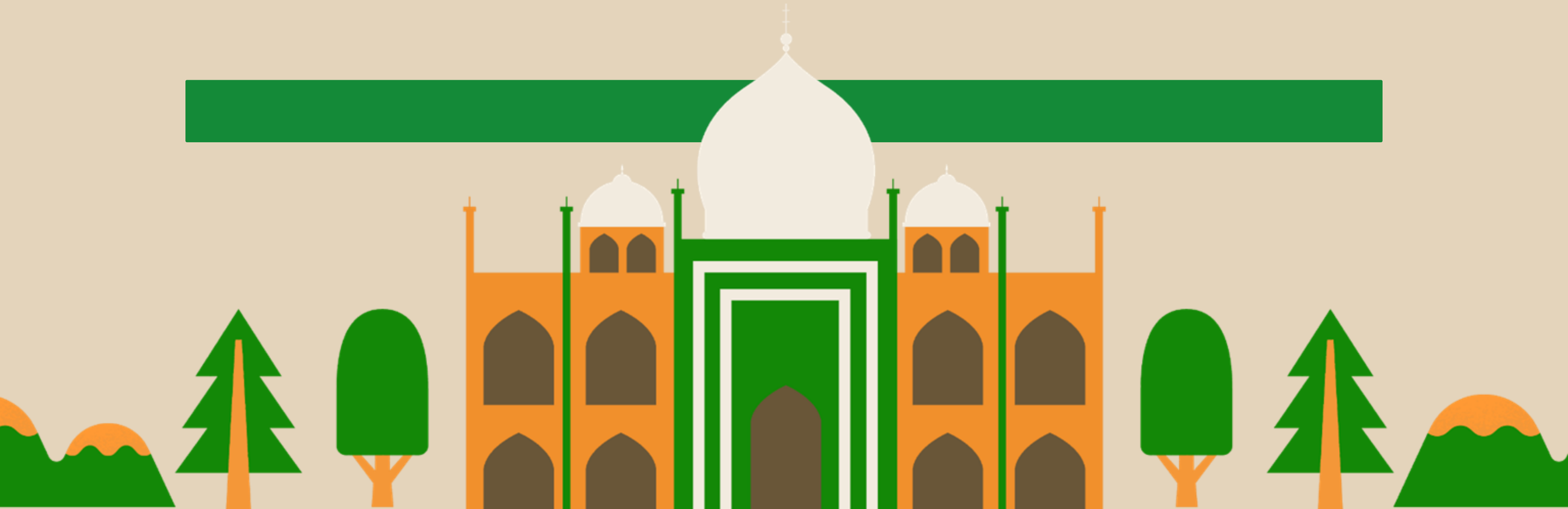


Review of Paper

India’s Open Government Data represents a prime example of an effectively implemented open data initiative, promoting transparency and driving innovation through its extensive datasets and user-centric design. An evaluation using the DAMA-DMBOK framework reveals that India employs a federated data governance model, supported by critical roles that enhance the data governance framework. The portal’s user-friendly features and high data quality align with India’s objective of advancing societal progress through technological engagement, enabling citizens to derive value from interoperable data.

05

RECOMMENDATIONS



Comprehensive Tutorial

Objective: Empower users by providing detailed guidance on using the portal

- Navigating the portal’s user interfaces.
- Retrieving and analyzing data.
- Data visualization techniques.

Formats: Video or Documentation.

Language Availability

Objective: Increase accessibility and engagement by supporting diverse languages.

- Languages
- Survey
- UI

Framework: Multilingual Support

THANK YOU!

Cesar Malenab

Emmanuel Pedernal