



Ministry of Electronics &
Information Technology,
Government of India

सत्यमेव जयते



API Setu

Driving Digital Transformation

OpenAPI in a nutshell

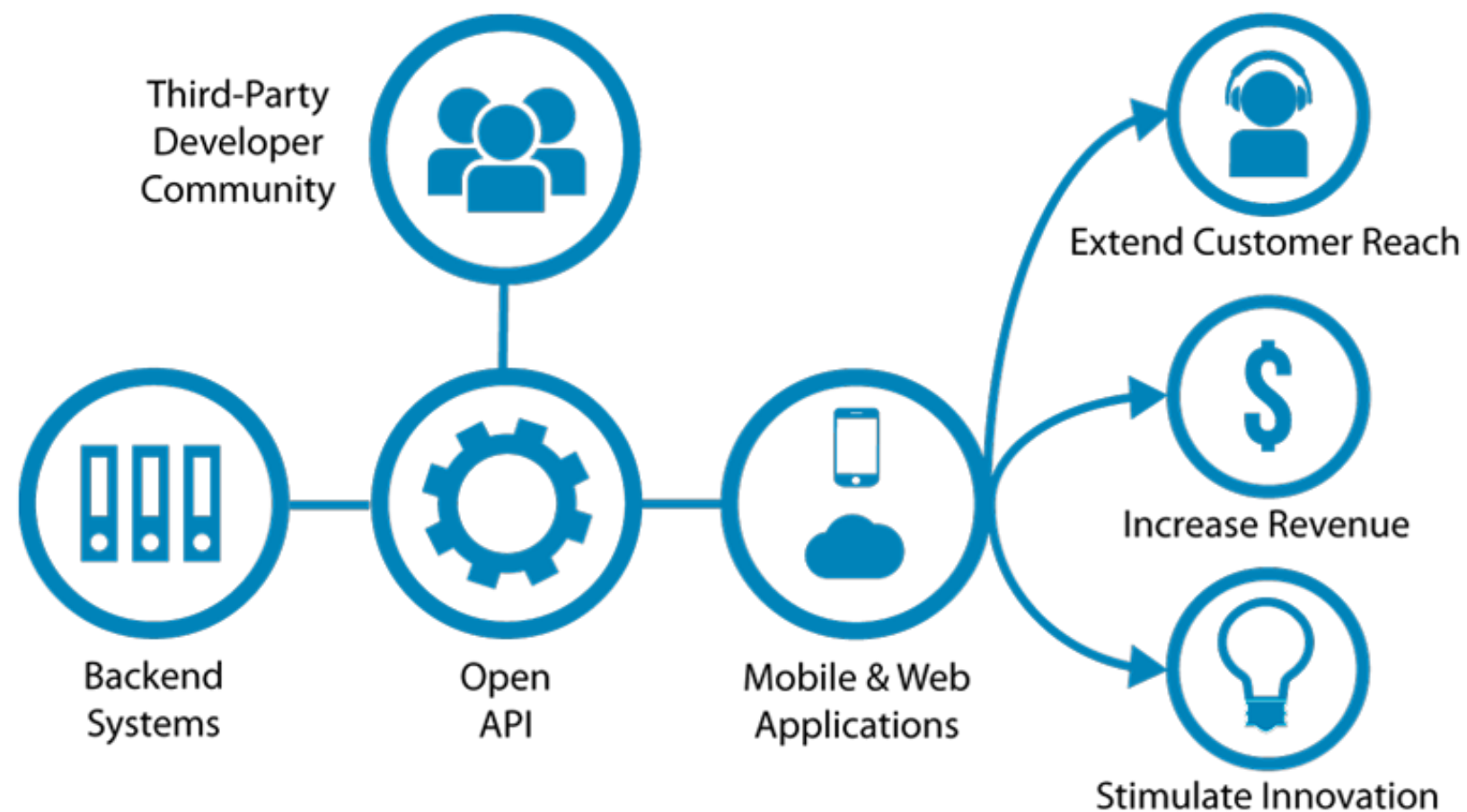


Image Source: https://en.wikipedia.org/wiki/Open_API

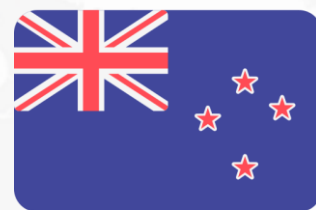
The **OpenAPI Specification (OAS)**, is a technical specification that describes REST APIs.

It is a standard interface description for REST APIs that is **programming language agnostic**.

This **enables both computers and human users to identify and understand service capabilities without requiring additional documentation, accessing source code, or inspecting network traffic**.

APIs in Government

New Zealand



Achieved **Rank 1** in [Ease of Doing Business](#)

Estonia



Saved **820 Man-Years** of time annually with their X-Road API gateway

United States
of America



The US government currently **offers a catalog** of open APIs ([open APIs here online](#)).

INDIA



Notified its **OpenAPI Policy** and building products for fast tracking its enablement

APIs Transforming India



Aadhaar



PAN



UPI



UMANG



DigiLocker



Co-win



Bharat Billpay



APIs Setu Open API Platform

- Facilitate implementation of **Open API Policy** notified in July 2015
- To **build open and interoperable digital platform** to enable **seamless service delivery** across **government silos**
- To **enable quick and transparent software integration** with other e-Governance applications and systems.
- To promote **'API first'** approach, enabling an ecosystem of micro-services and related cost savings



Benefits Open API Platform

Minimises Implementation Logic

Consumers can interact with and understand remote services easily

Automation

**Documentation generation tools, testing tools,
Code generation tools that generate clients and servers in various programming languages, and others**

Single Point of truth - Quality and Security

**Following industry standards
Reduces misalignment between the back-end-offered API and the client-consumed API**

Overall efficiency and reduction in Costs

All the benefits translate in to cost reduction

Challenges

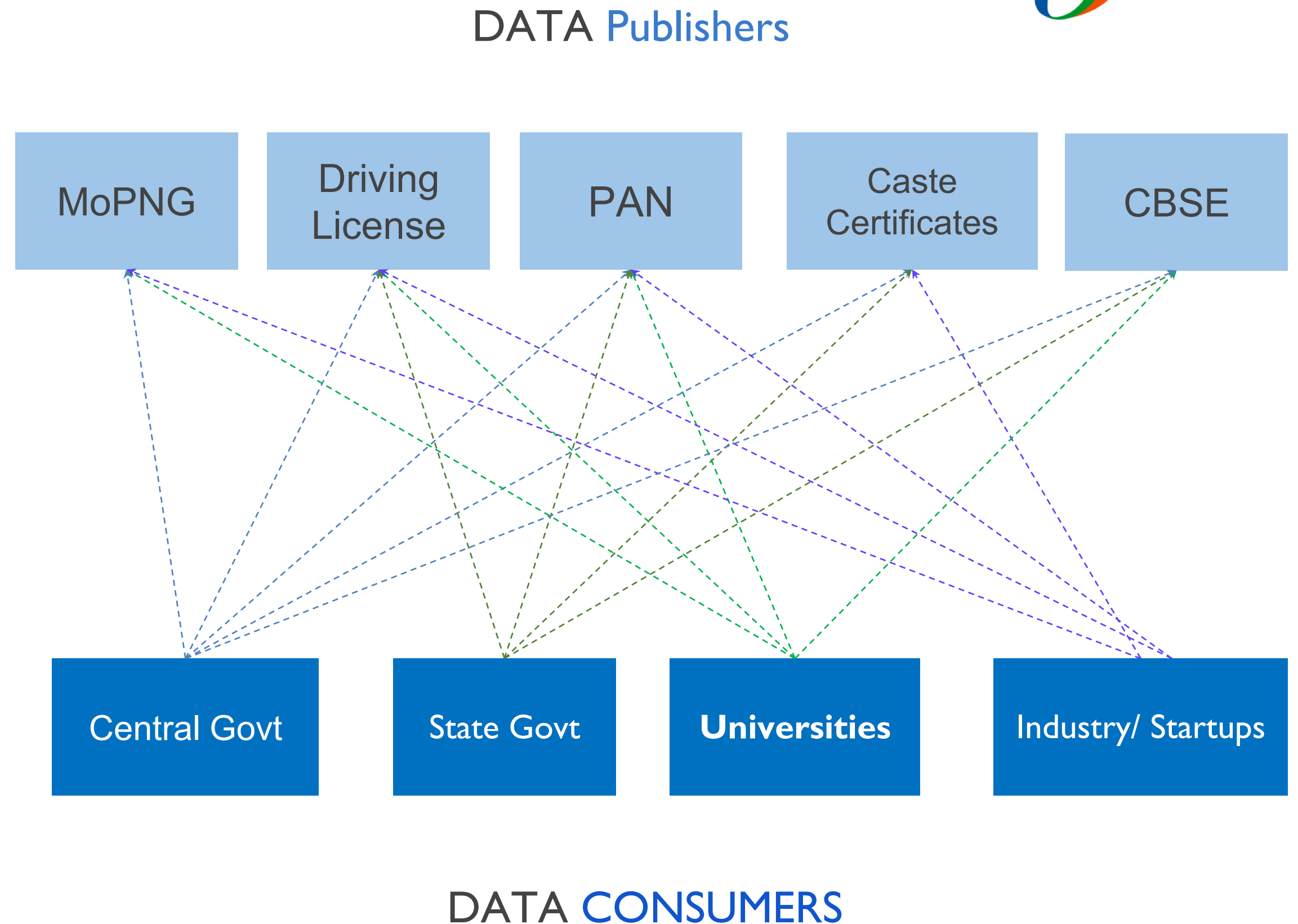
Lack of API **availability**

Proprietary **standards and protocols**

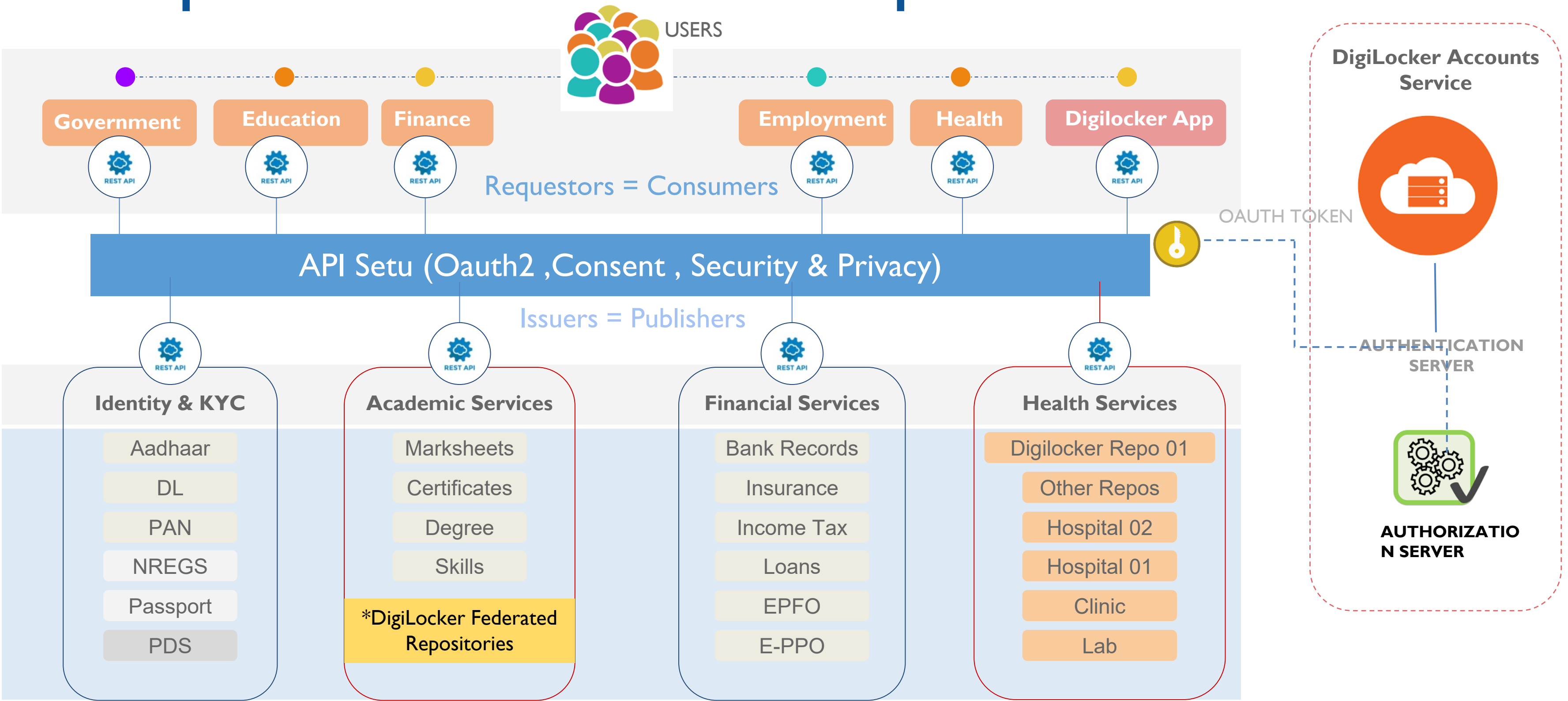
Absence of **common data standards**

N to N connections for access

Lack of **central governance, common policy, control, accounting and monitoring**



Proposed API Landscape



API Setu – Features

Single platform to publish and discover APIs

One-stop platform for publishers and consumers

Common policy and governance structure

Industry standard protocols

Standardization of data exchange

API Setu Features

- **Provides the features for API management:**
 - configure, test, publish, discover
 - logging & monitoring,
 - rate limiting and throttling,
 - API authentication and authorization (client id, client secret, API key and OAuth 2.0)
 - caching
- **Transformation and Standardization**
 - **Transforms data** in machine readable format
 - Maintains and enforces **data standards - metadata** and **schemas** for information sharing
- **Consent based data access**

Present Status

APIs Published
253 |

Publishers
1098

Consumers
369

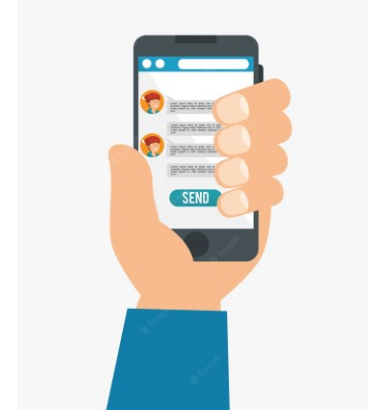
Over **6 crore monthly** transactions

API Setu How It Works



As Publisher

- Manage API Clients
- Control the API Quotas
- Monitor usage and performance of APIs



As Consumer

- Easily discover APIs
- Test and Deploy to perform data exchange



API Development in accordance with Industry standards

- Open APIs
- Open API Specifications: Doesn't not require rewriting existing APIs
- RestFul APIS

<https://apisetu.gov.in/home/resource>

Thank You

www.apisetu.gov.in