جهـــاز التخطيـــط والإحصـــاء
Planning and Statistics Authority
State of Qatar • دولـــة قطـــر

Regional Workshop on the Changing Role of Official Statistics in the State of Qatar: Why Data Culture Matters

21st -22nd September 2022, Doha, Qatar
Pullman Hotel, Al Thuraya Ballroom - West Bay

ورشـة العمل الإقليمية حول الـدور المتغير للإحصاءات الرسـمية فـي دولة قطر: ثقافة البيانات مهمة

٢١-٢٢ سبتمبر ٢٠٢٢، الدوحة، قطر
فندق بولمان الدوحة، قاعة الثريا - الخليج الغربي

BUILDING MODERN DATA ECOSYSTEMS

THE CASE OF THE NEW ESCWA DATA ECOSYSTEM

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THE CHANGING DATA LANDSCAPE: DATA PRODUCTION AND DATA USE

STRUCTURED DATA **UNSTRUCTURED DATA**

TYPES OF DATA BEING PRODUCED

STATISTICAL DATA | **ADMIN DATA** | **TRANSACTIONAL DATA** | **TEXT & DOCUMENTS** | **MOBILITY DATA** | **IMAGES & MEDIA**

CHANGING LANDSCAPE OF DATA USE

IDENTIFY OPPORTUNITIES to provide services and programs with real-time data

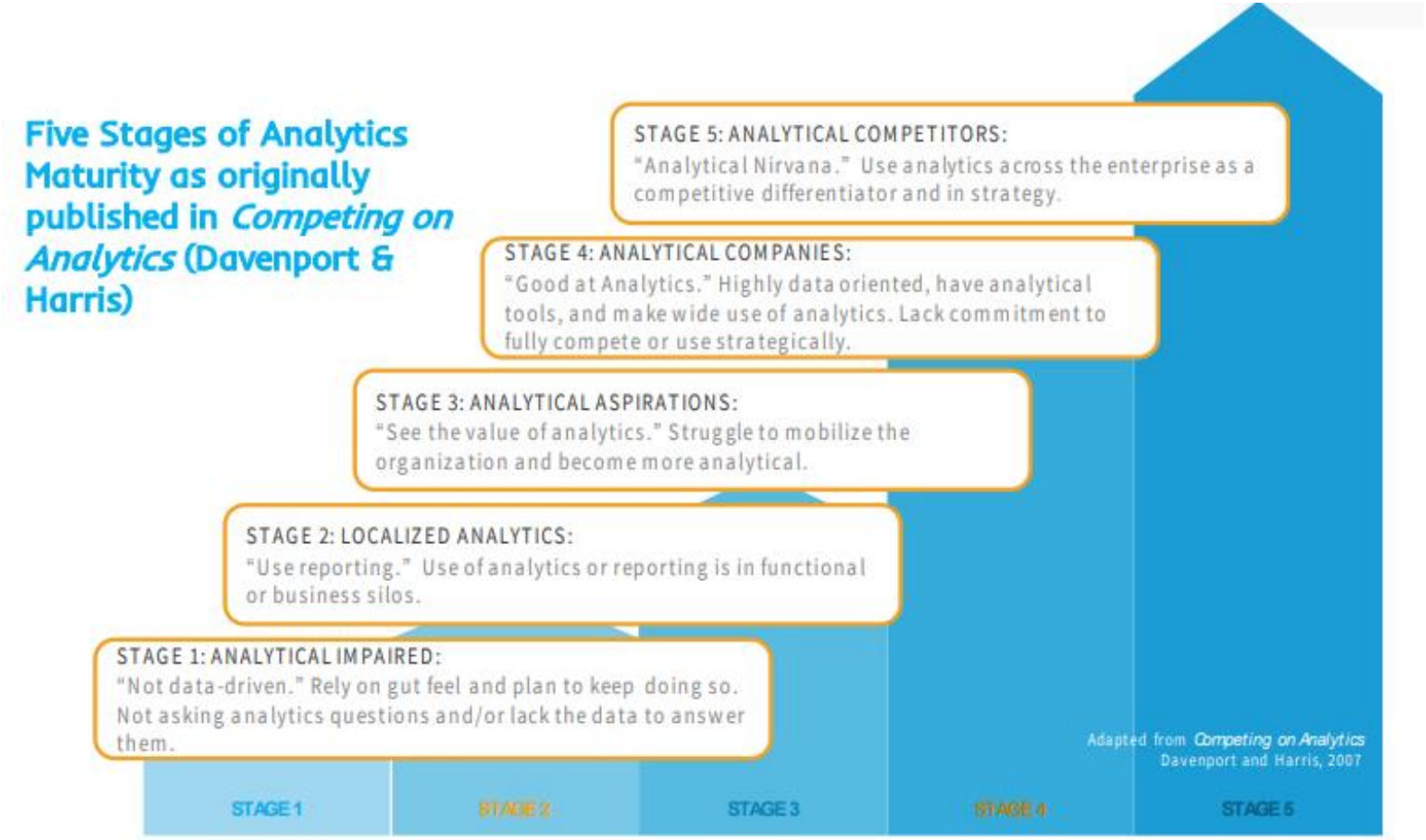
ADDRESS NEEDS for increased transparency and accountability

INFORM POLICIES to ensure efficiency and efficacy of development efforts

MONTOR AND EVALUATE to identify and understand impacts

FACILITATE REPORTING to reduce the burden of sharing critical data

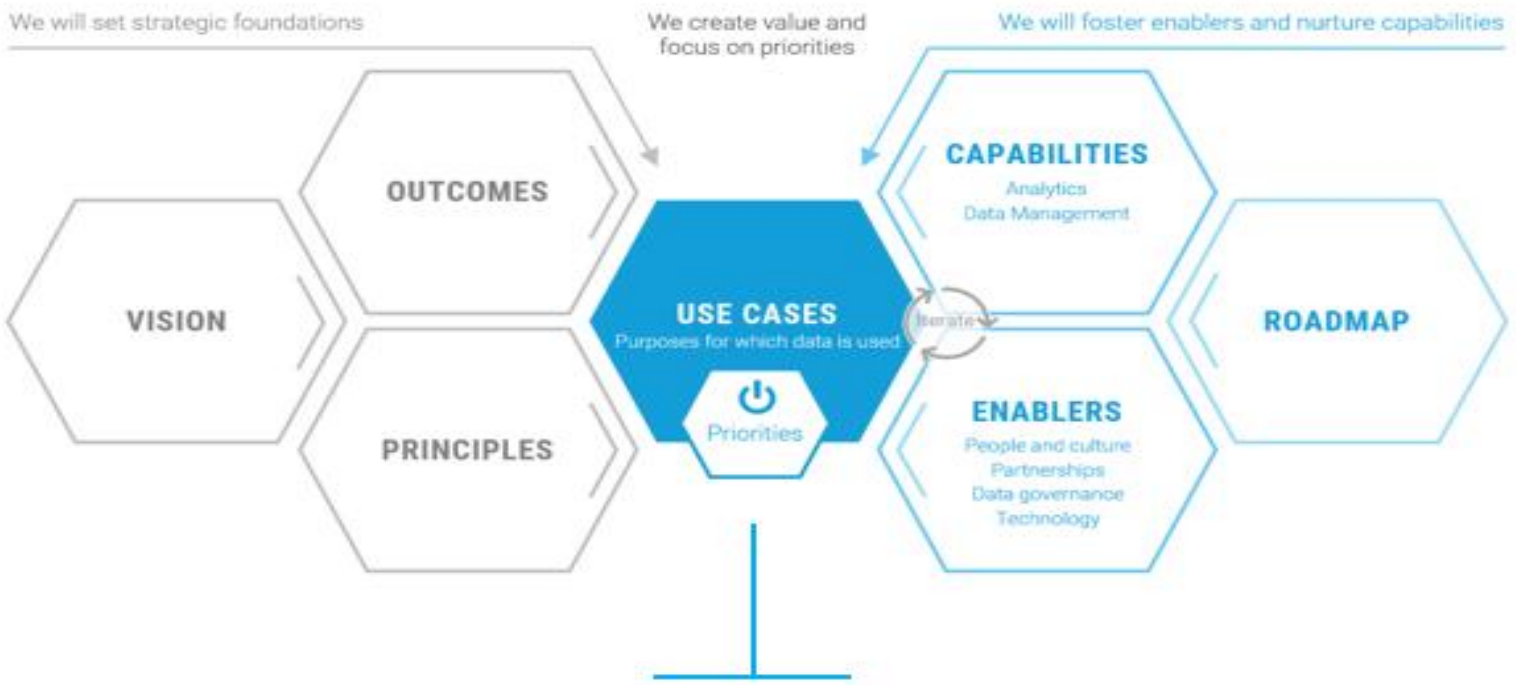
DATA MATURITY LEVELS



FIRST THINGS FIRST – KEY ISSUES TO ADDRESS

APPROACHING DATA ECOSYSTEMS

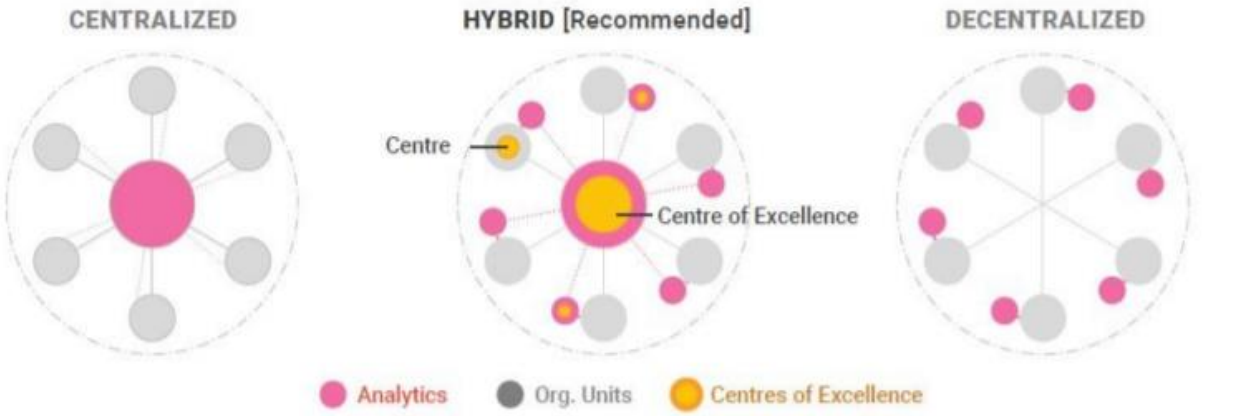
A problem-driven approach to building enablers and capabilities



The strategy orients the strategic foundation and enabling environment to focus on use cases and priorities that add value for stakeholders.

ORGANIZATIONAL STRUCTURE CONSIDERATIONS

NURTURE CENTRES OF EXCELLENCE WITH HYBRID MODELS



One centralized data and analytics team services all mgm't, policy, programme & operations needs.

Disconnected from subject-expertise

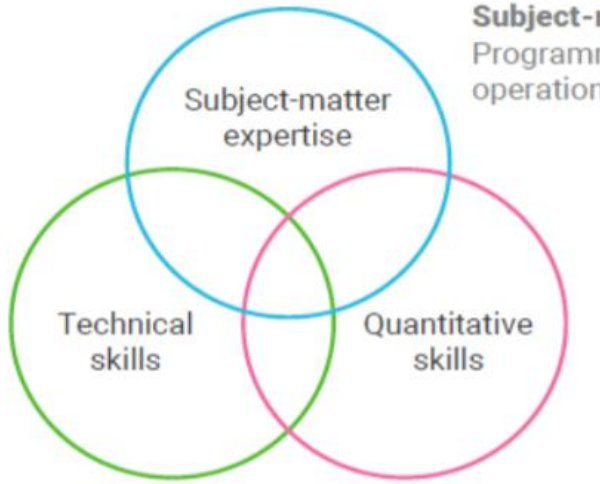
Hybrid of centralized and distributed collaboration; Centres of excellence promotes best practice.

Scoped & scaled for excellence

Decentralized activities within each unit, with uneven quality and ad-hoc governance.

Siloes of best or poor practice

FORM CROSS-FUNCTIONAL TEAMS



Subject-matter expertise
Programme, policy and operations know-how

Technical skills
Data engineering skills for managing data pipelines

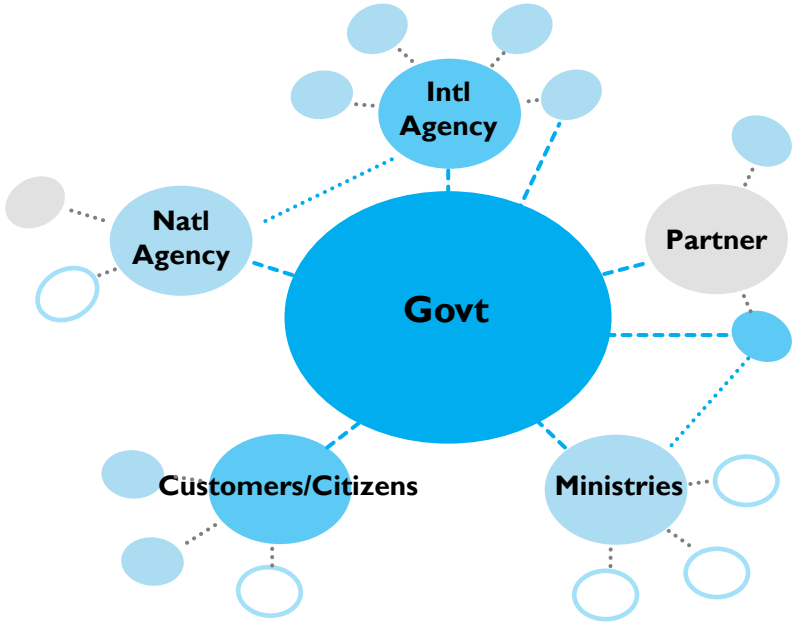
Quantitative skills
Data analytics and science skills for insight and impact

MODERN DATA INTEGRATION ARCHITECTURES

A broad spectrum of data integration approaches exist in the current data landscape.

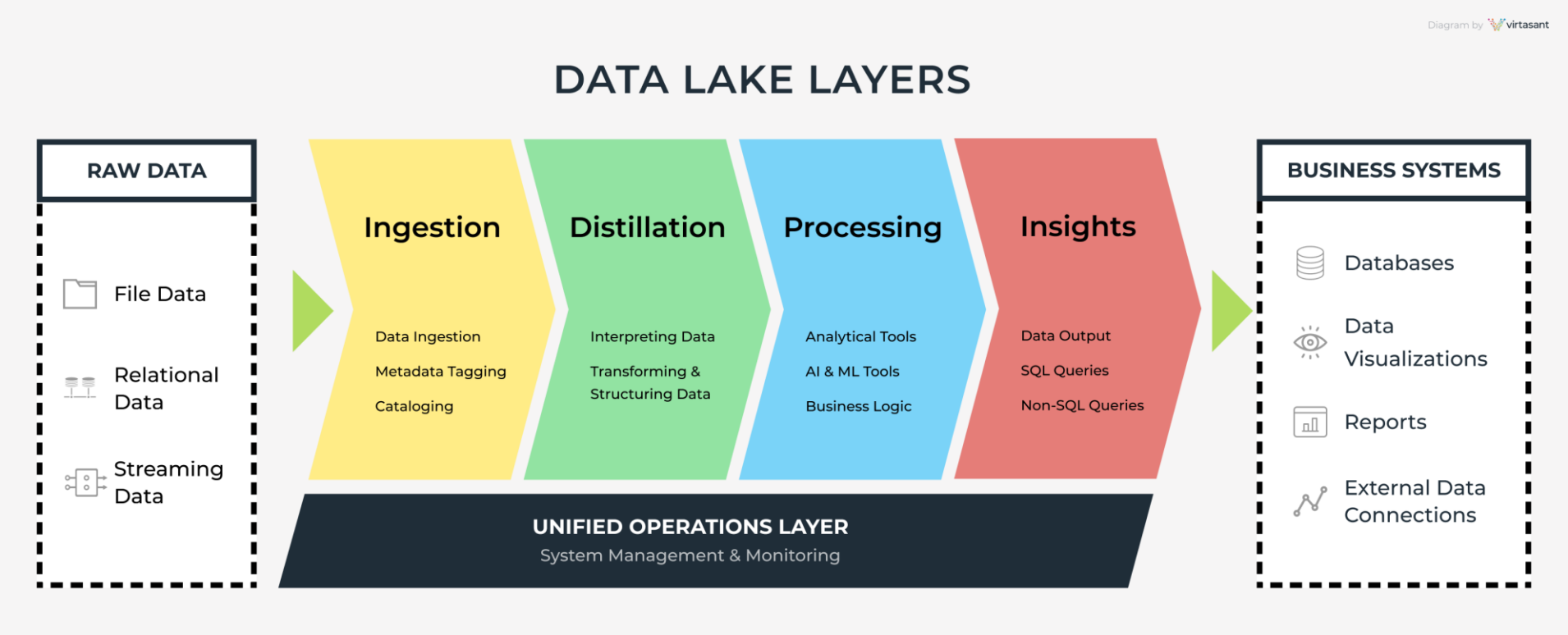
To achieve a holistic and integrated approach to the use of the great volume of data required in by Governments today, **modern data architectures must be explored.**

Given the interconnected nature of all our institutions and organizations today, a federated architecture can be used to enhance and support the mission and utility of data in Government operations and activities and lead to more successful adoption of big data technologies.

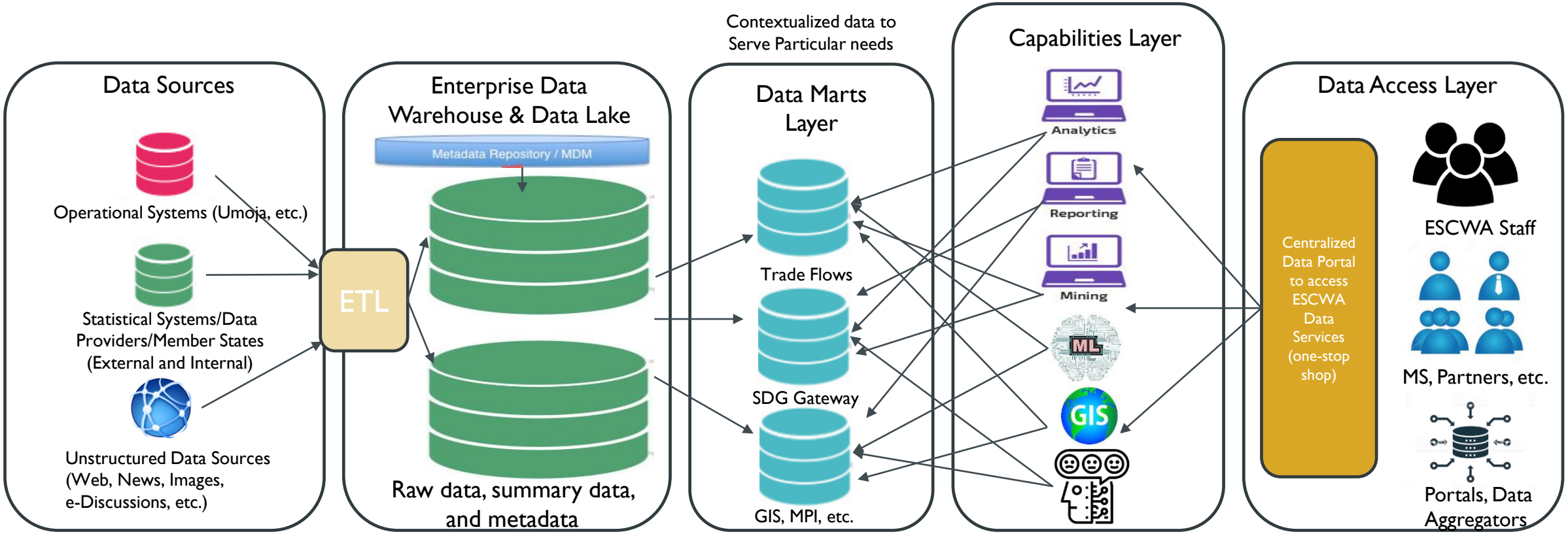


- **A Federated Architecture**
  - **Facilitates the coordinated sharing** and interchange of information among multiple data hubs.
  - **Provides visibility** to all participating national, regional, and international organizations.
  - **Allows different entities to link their data hubs** and share their data more easily with relevant parties.

HIGH-LEVEL DATA OPERATIONS

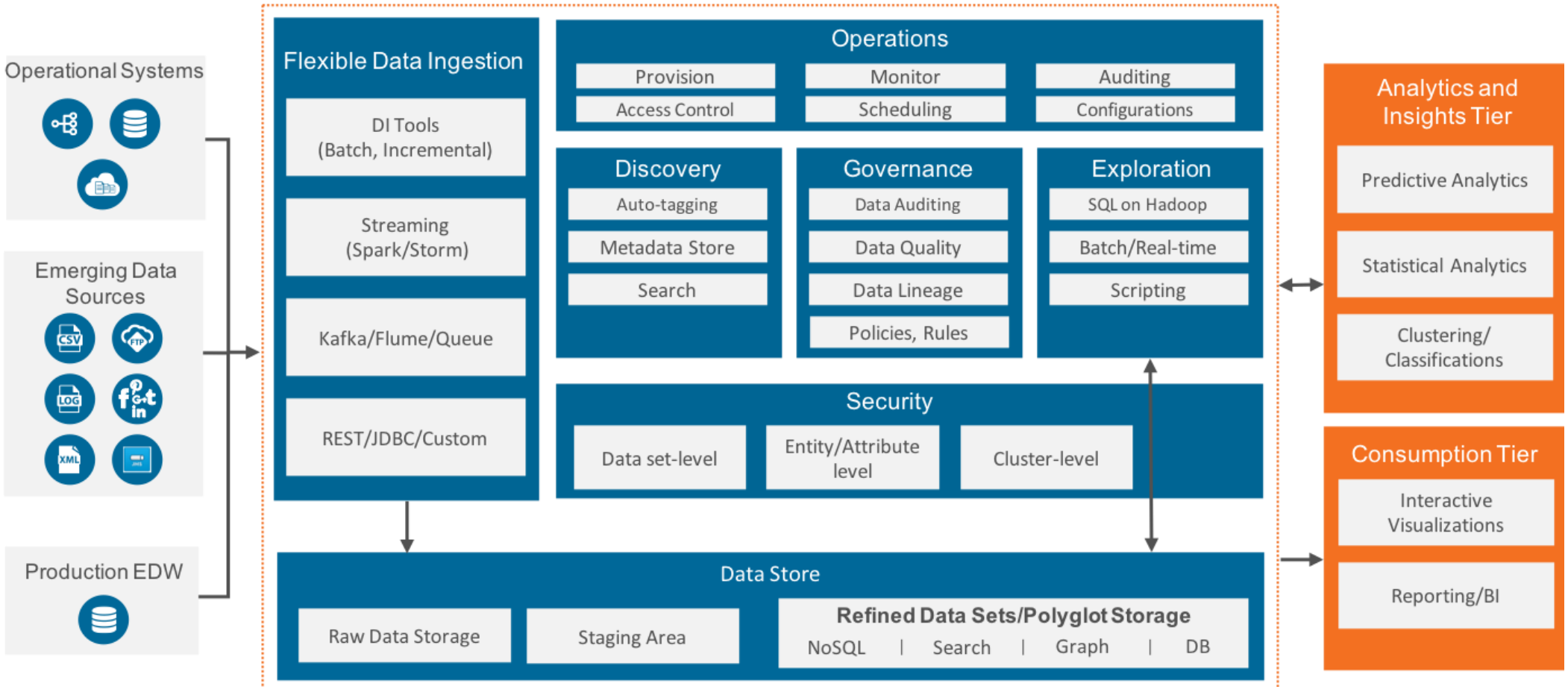


HIGH-LEVEL REFERENCE ARCHITECTURE OF THE ESCWA DATA ECOSYSTEM

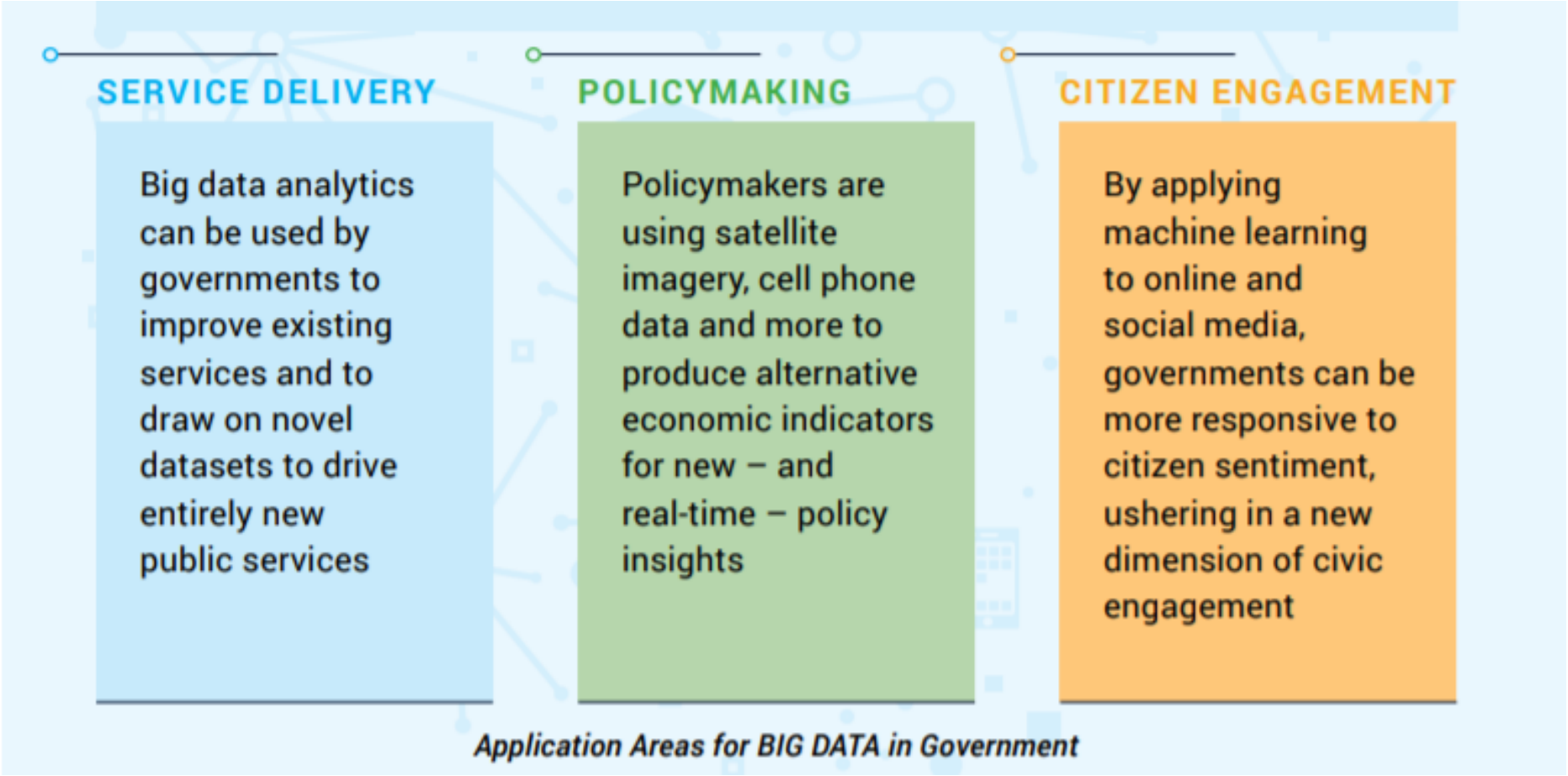


Data Governance Layer

TECHNOLOGY STACK

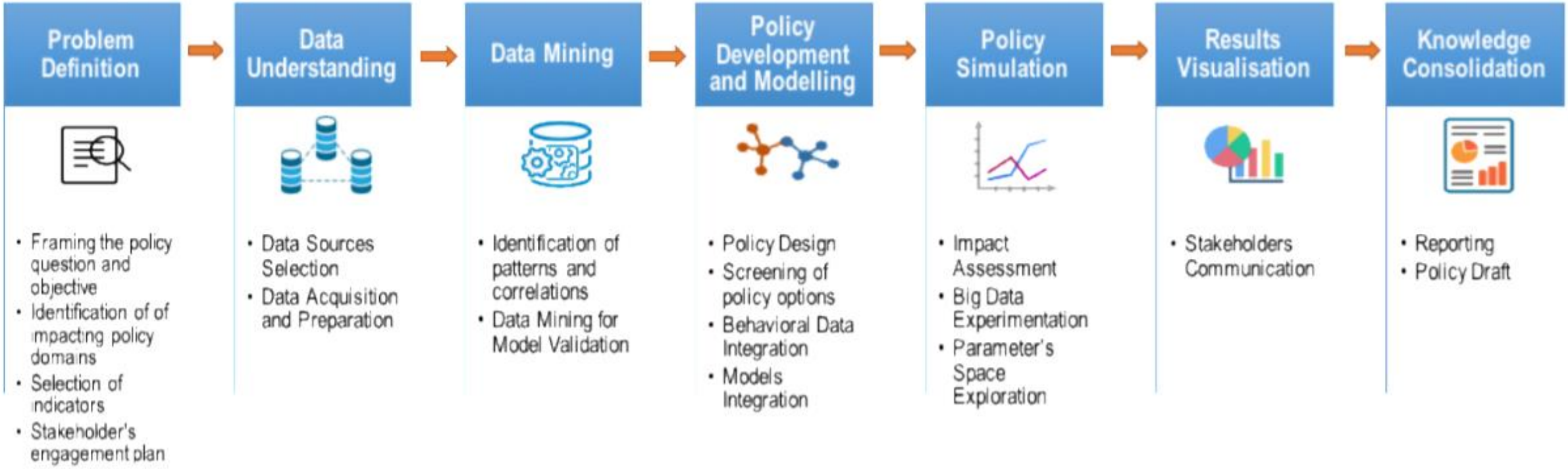


LEVERAGING DATA ECOSYSTEMS



Application Areas for BIG DATA in Government

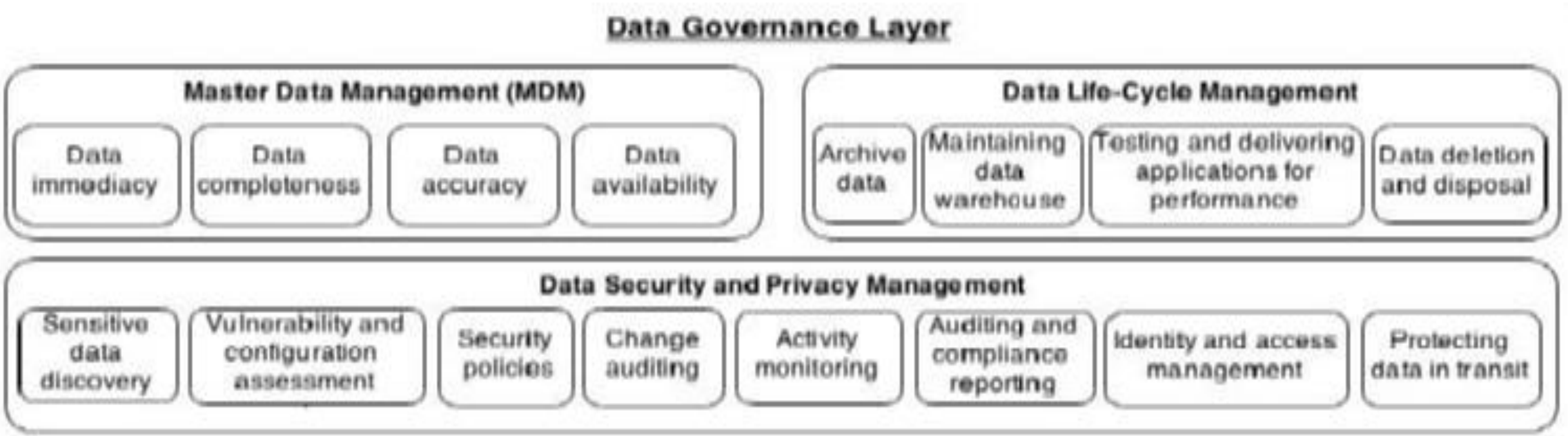
SAMPLE OF PRACTICAL APPLICATION OF DATA DRIVEN POLICY MAKING FRAMEWORK



LIVE DEMO

The ESCWA Data Ecosystem Portal

DATA GOVERNANCE ISSUES



CRITICAL SUCCESS FACTORS

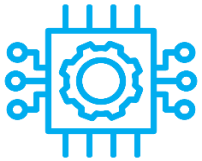
Governments are challenged to leverage and process large amounts of data to provide better services, improve efficiencies and effectiveness of their operations and provide interactive user experiences targeted at different audiences. To do this, any big data framework must:

RESPOND TO CLIENTS/CITIZENS NEEDS

to serve as the main entry point to authoritative business/government data/services, and the corresponding metadata, from the organization itself and other relevant organizations/suppliers/partners required for the effective delivery of services

PROVIDE A MODERN ARCHITECTURE AND TOOLS

for the integration, presentation, analysis, visualization, communication, use and re-use of data.



BE BASED ON A TECHNOLOGY THAT SERVES BOTH USERS' AND PRODUCERS' NEEDS

through modern architecture and tools for the integration, presentation, analysis, visualization communication, use and reuse of data, and metadata.

ENSURE THE COMMON USE OF STANDARDS

For data exchange including metadata standards, concepts, and classifications to facilitate interoperability, traceability, integration, and usability.

QUESTIONS?

WAY FORWARD

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