

●●●● Problem Statement

Today, governments and societies in developed and developing countries face many challenges created by the rapid changes in the sociopolitical environment that adversely affect the well-being of the constituents of these societies.

In the face of these acute challenges and lacking the sufficient funds, governments and societies can afford nothing but to collaboratively innovate

Governments suffer from fat public debt and hence impose severe austerity measures to control these debts.

In dealing with these challenges we need an integrated and inter-government response that departs from the wisdom of the individual government agency to collective wisdom.

Defining Innovation

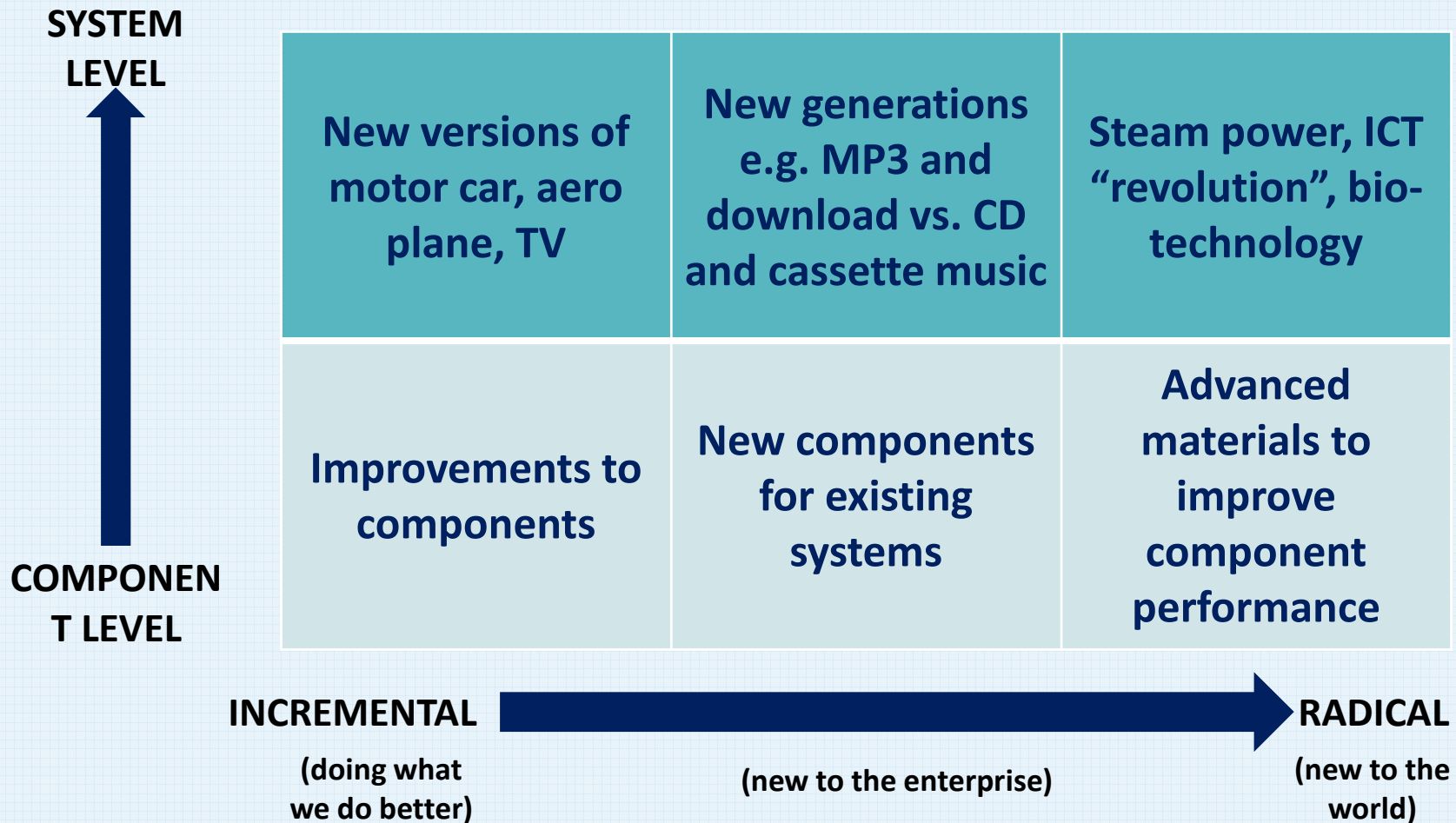
Innovation is defined as the disruptive exploitation of a new idea, is the way forward to address the societal challenges and the associated adverse effects

Innovation entails novelty. This novelty is realized through new product or service, new market or client type, new production process, new source of supply, new organizational structure, new policy and also new technology for societal control aiming at self-regulating the behavior.

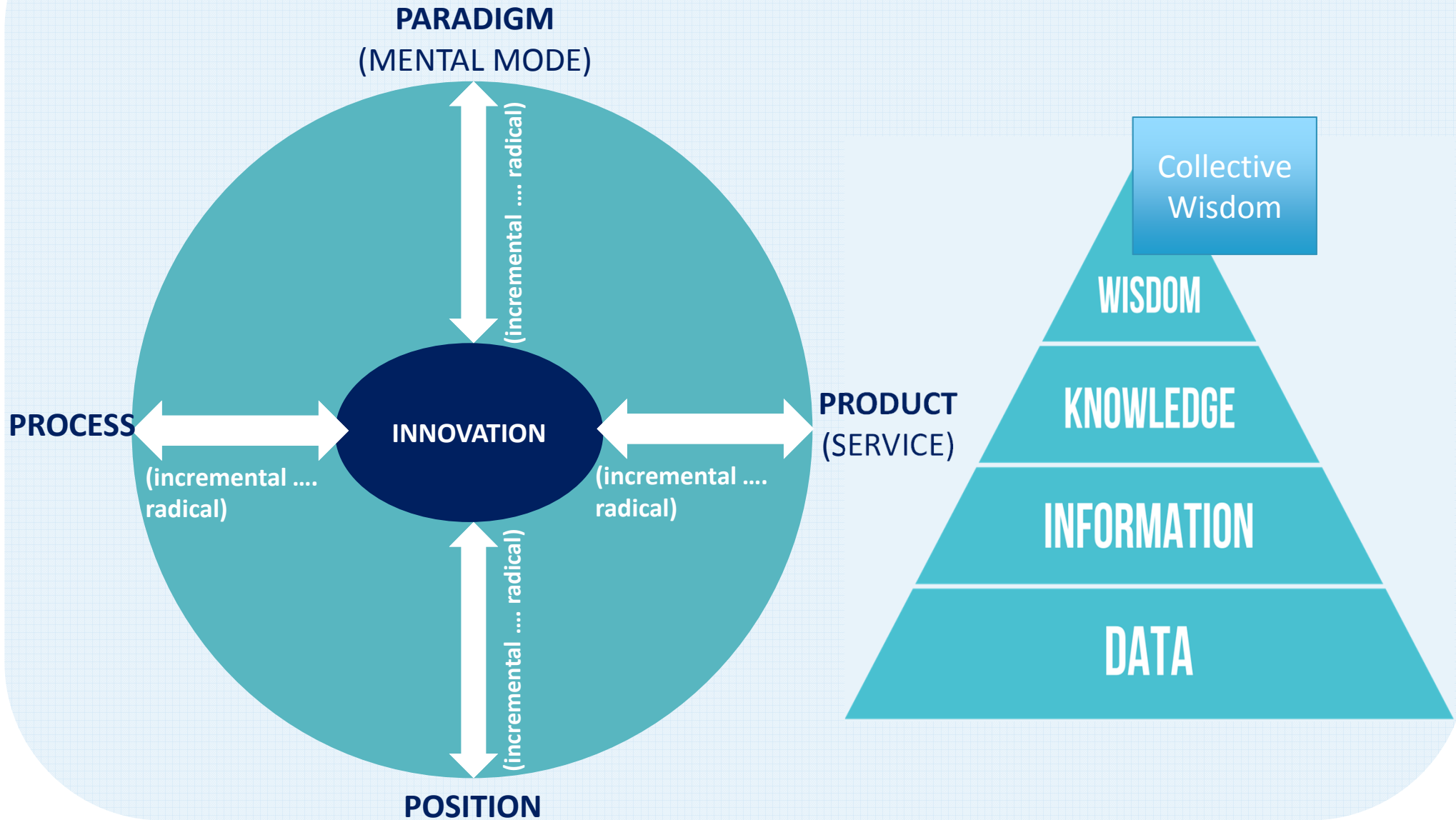
Innovation is classified as outcome or process.

Innovation is critical for economic growth, social development, environment preservation, and organizational efficiency and effectiveness. This simply means that when innovation levels in the society are improved, the overall capacity to address societal problems and challenges is raised.

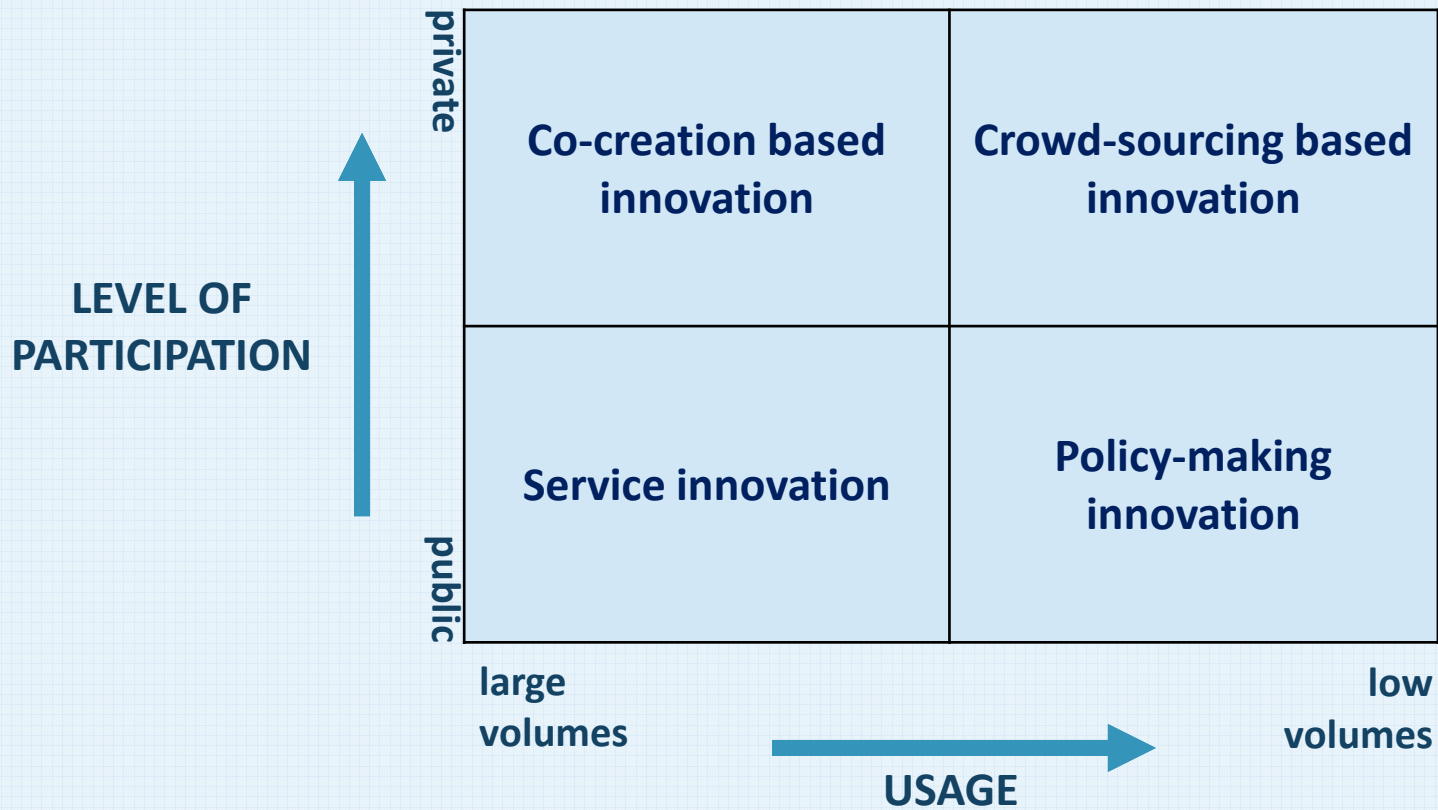
Dimensions of Innovation



●●●● Innovation Space



Overview of Data-Driven Innovation Types



●●●● Rothwell's Five Generations of Innovation Models

<i>Generation</i>	<i>Key Features</i>
First and second	Simple linear models – need pull, technology push
Third	Coupling model, recognizing interaction between different elements and feedback loops between them
Fourth	Parallel model, integration within the firm, upstream with key suppliers and downstream with demanding and active customers, emphasis on linkages and alliances
Fifth	Systems integration and extensive networking, flexible and customized response, continuous innovation

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●●● Big Data in Government

1. Big data in Public management is defined as the measurement, collection, analysis, and reporting of data about **citizens** and their **interactions** with the government, and the **contexts** of these interactions.
2. The effective use of these Big Data outcomes holds the promise for understanding the underlying environments, optimizing **learning**, and hence providing effective mechanisms for steering public administration change, in particular, and societal change in general.
3. Big Data, as an IT artifact, has the potential to transform the government and society itself.

●●●● Big Data Promise

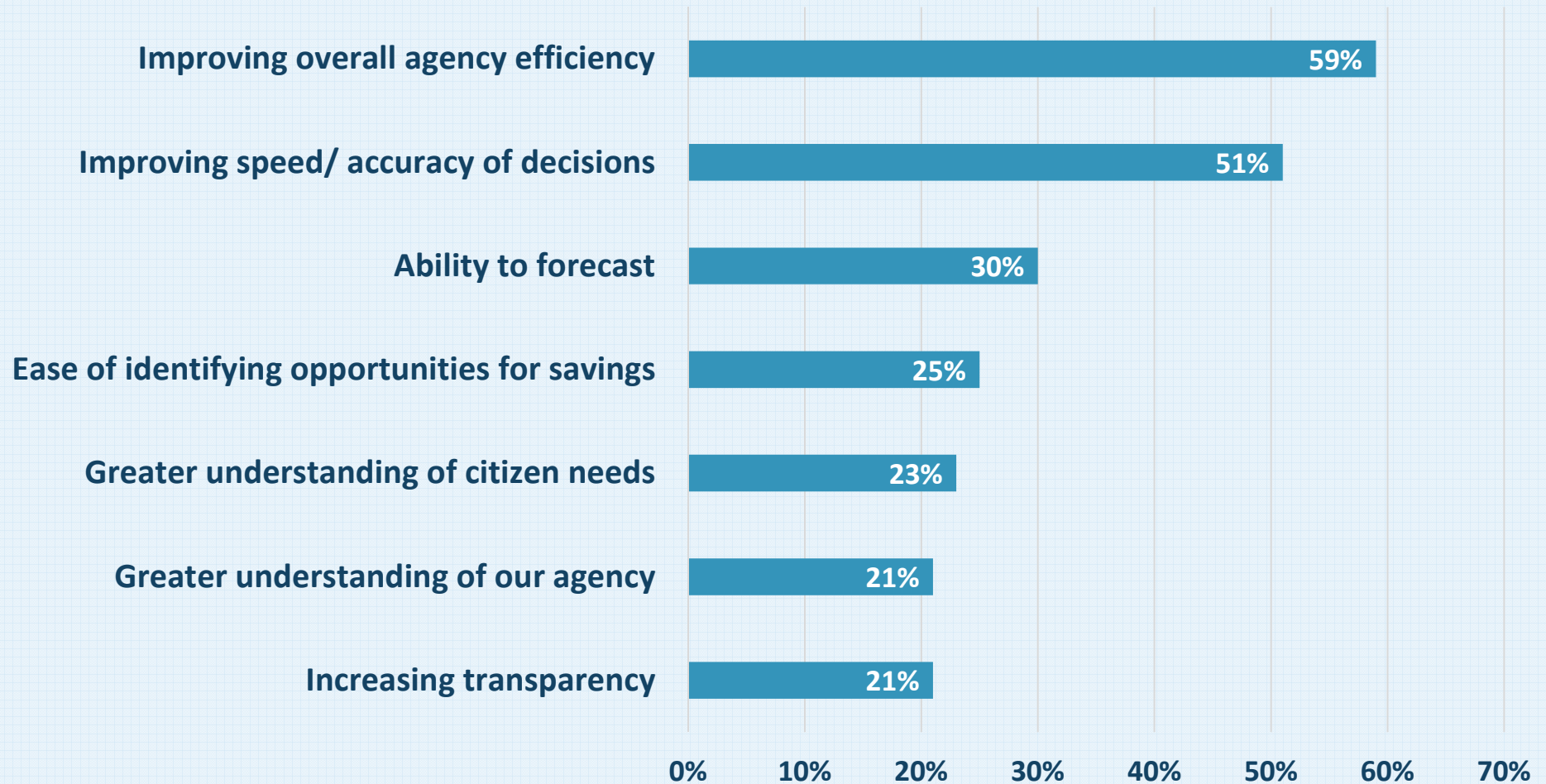
4. Hidden in the immense volume, variety and velocity of data that is produced today is new information, facts, relationships, indicators and pointers, that either could not be practically discovered in the past, or simply did not exist before.
5. This new IT artifact, if properly designed, implemented, and diffused will enhance profoundly the innovation capacity of the government institutions and individuals leading to higher levels of efficiency and effectiveness of these government institutions.

●●● Societal Challenges and Innovation

- The ownership of these problems has changed from the bureaucratic individual organization to the network of organizations to deal with wicked problems and societal challenges.
- The process of establishing collaborative inter-agency environment is complex due to the fact that agencies come with inconsistent and contradictory principles, values, and structures.
- To address the issues of compartmentalization, fragmentation, contradictions, and conflicts, we need an iterative innovation process to **pilot, experiment,** and **triangulate** different policy initiatives.

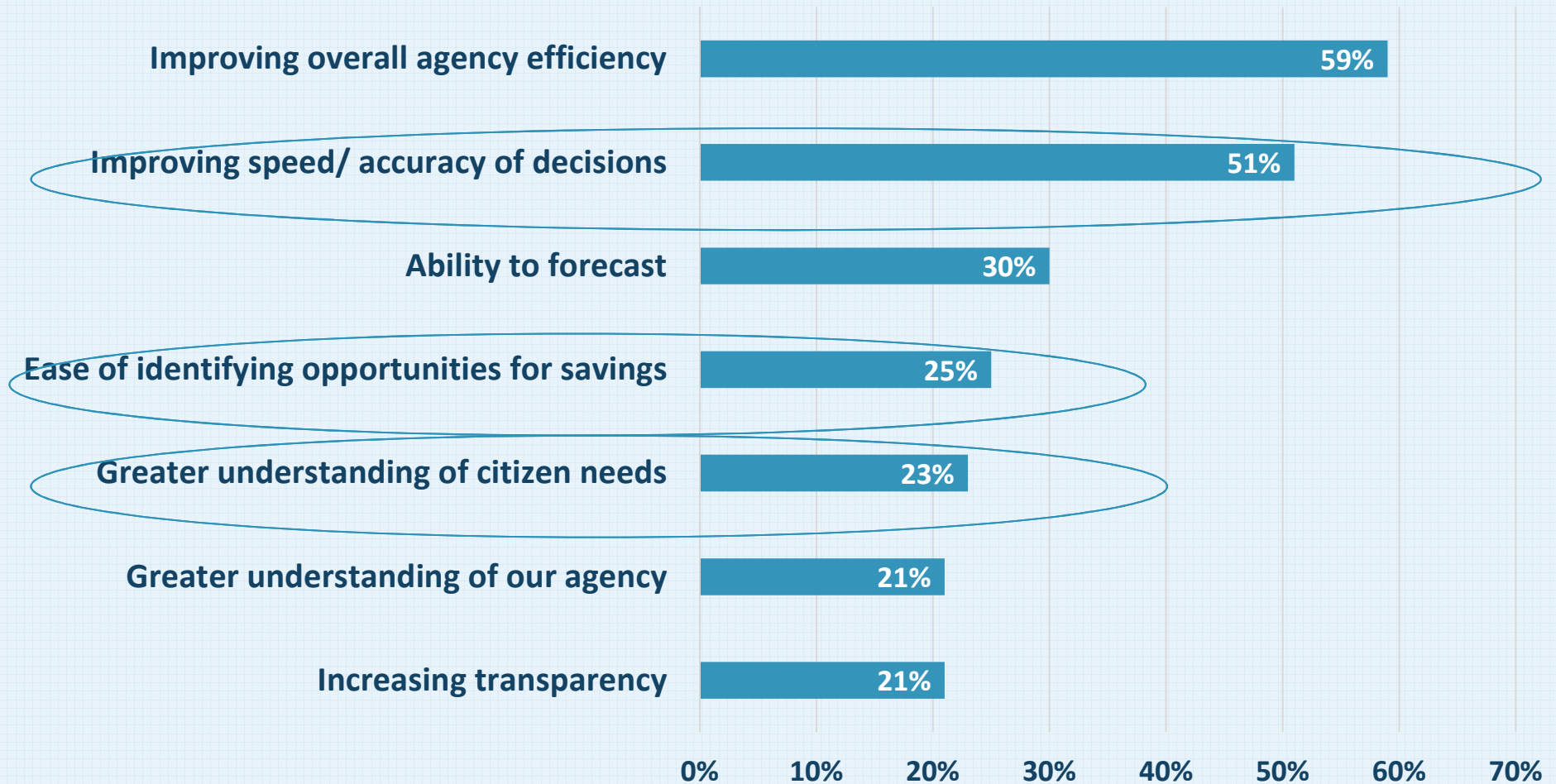
●●●● Big Data Gap

What are the top advantages to successfully managing Big Data?



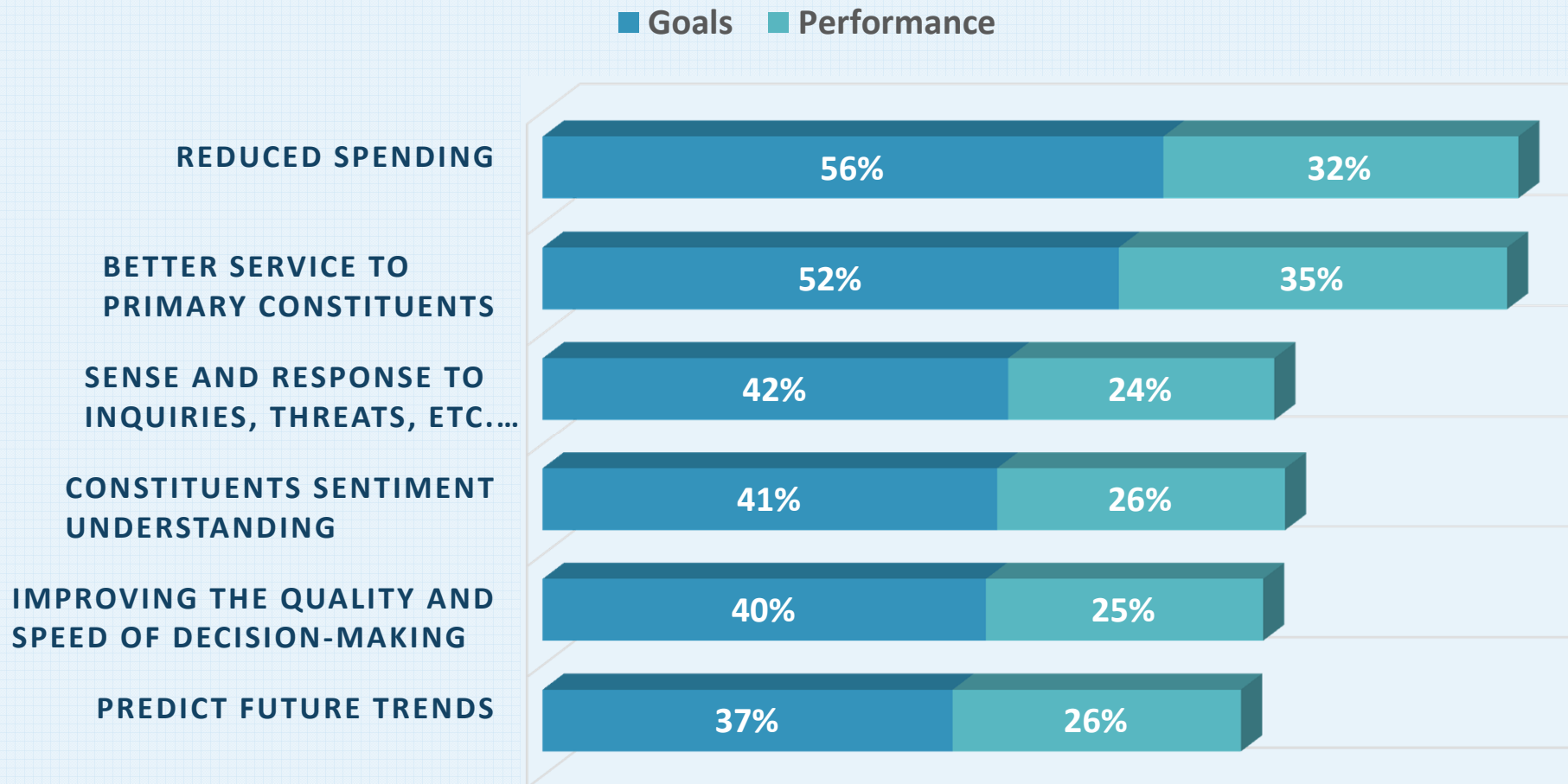
Big Data Gap

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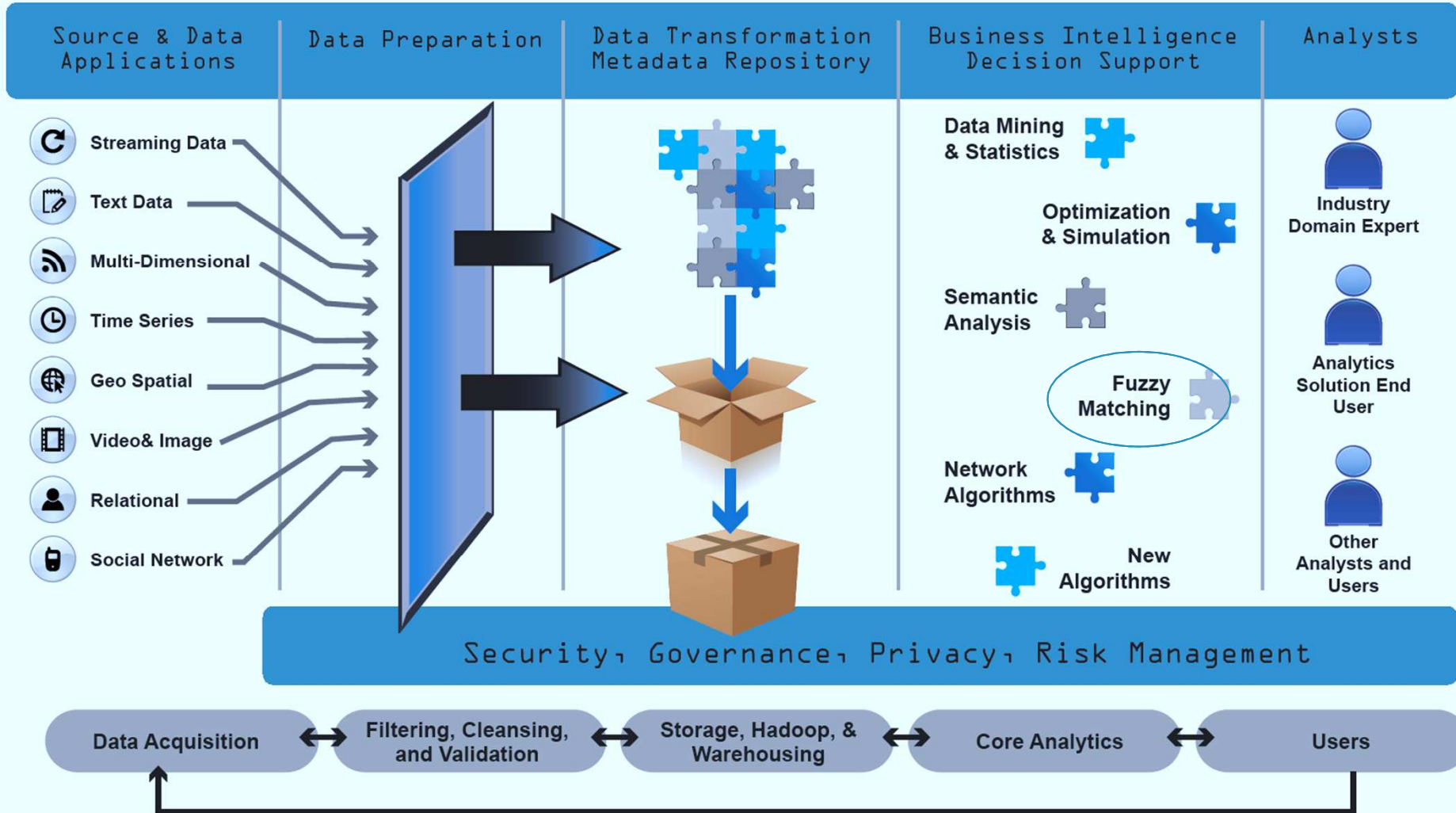


●●●● Big Data Performance Gap / Reality

The difference between what agencies hope to achieve with big data and how grade their performance today is striking (percent of respondents indicating goal was “very important” and performance was “very well”)



Big Data Lifecycle



●●●● Objectives

- In order to become a country with an evidence-based government, the following goals have been agreed upon that are as well consistent with the Sustainable Development Goals:

1

- Social equity and improved targeting policies

2

- Optimal planning of country's resources to increase these resources

3

- Improved quality of government services and fair distribution of services

4

- Financial and Economic Inclusion

The Vision

A fully integrated framework that enables the provision quality Service for all social constituents through linked integrated evidence-based policies & paperless & cashless government agencies. These services are cross-sectorial requiring the collaboration of old fashioned bureaucratic and fragmented government agencies, private sector, and the social sector.

Paperless government

Provision of e-services that are accessible anytime and anywhere



Government



Citizen

Digital Monitoring and Governance

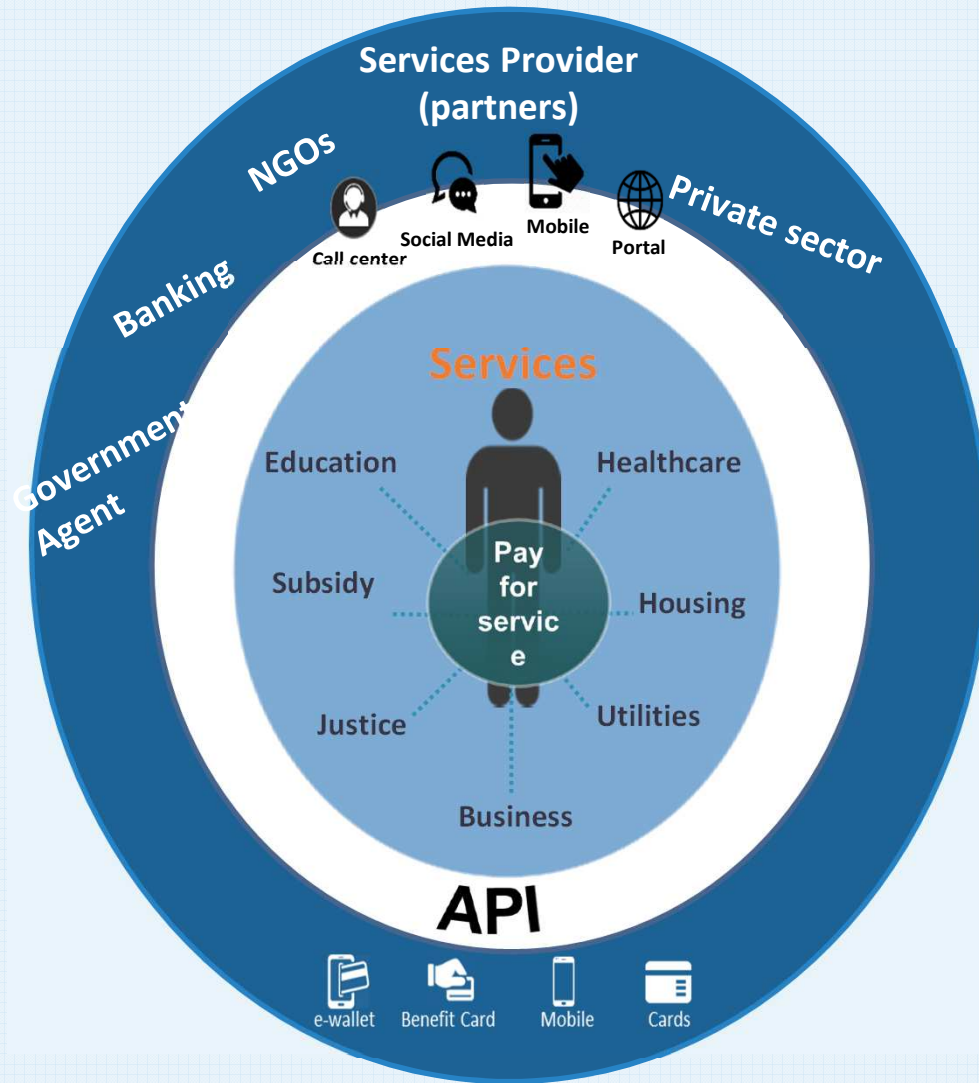
E-connected Government

Provision of according to eligibility & dynamisms

Citizen satisfaction and positive participation in the evaluation of services

Government as a Platform

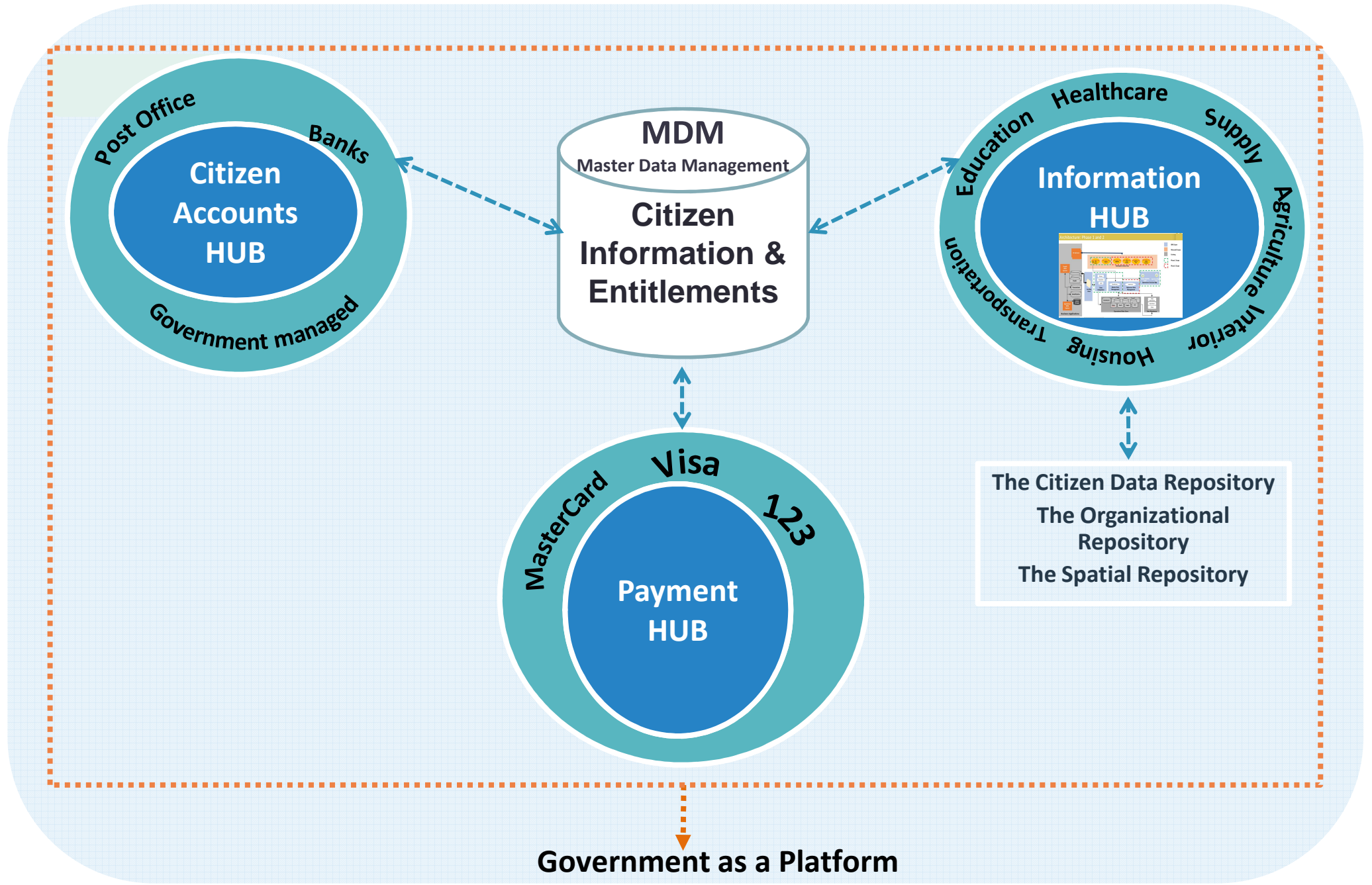
- Monitoring
- Content
- Connectivity
- Security
- Capacity



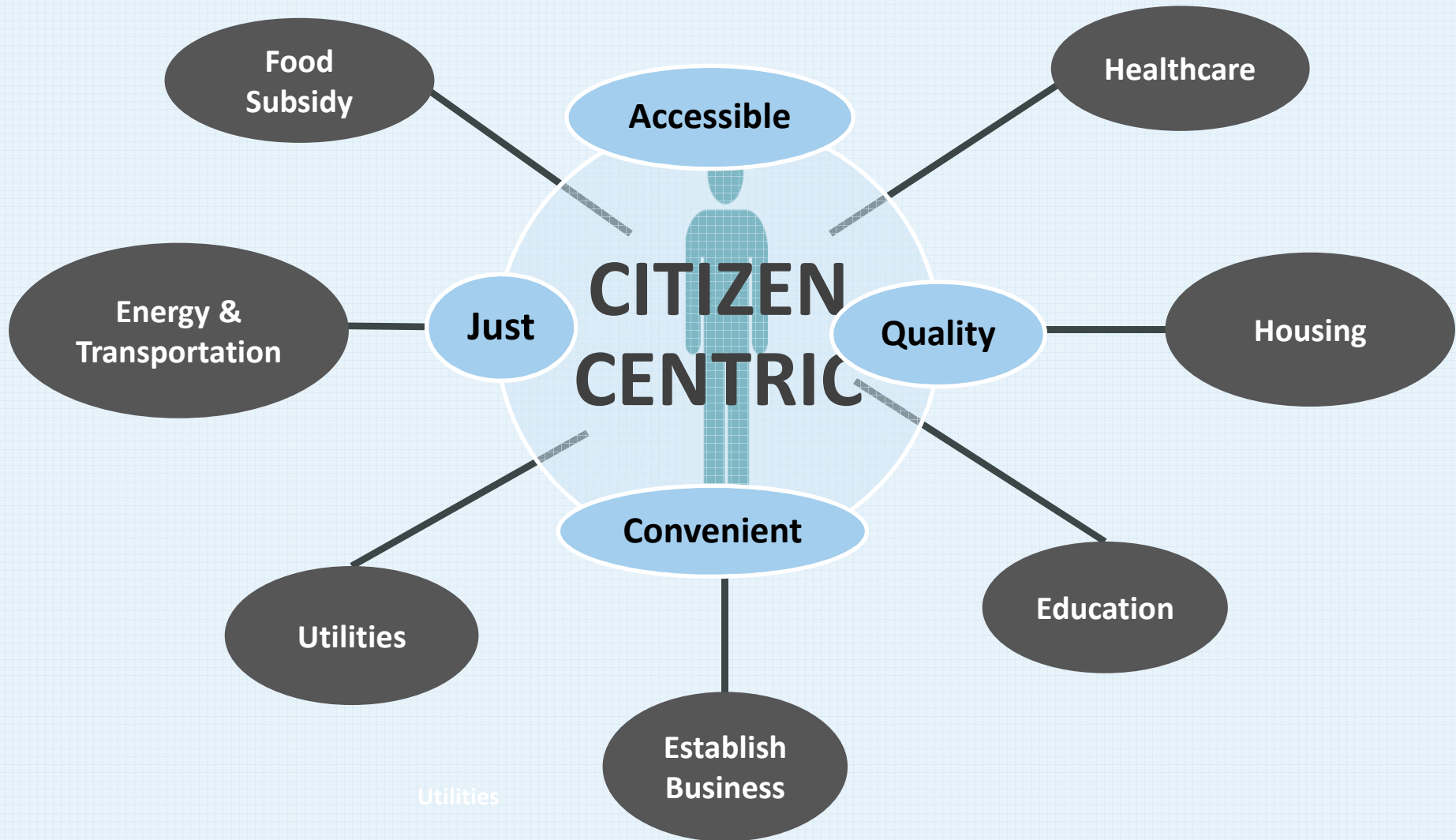
E-Governance

Citizen Centricity

Efficient and Effective Government



Government Services and Citizen Experience

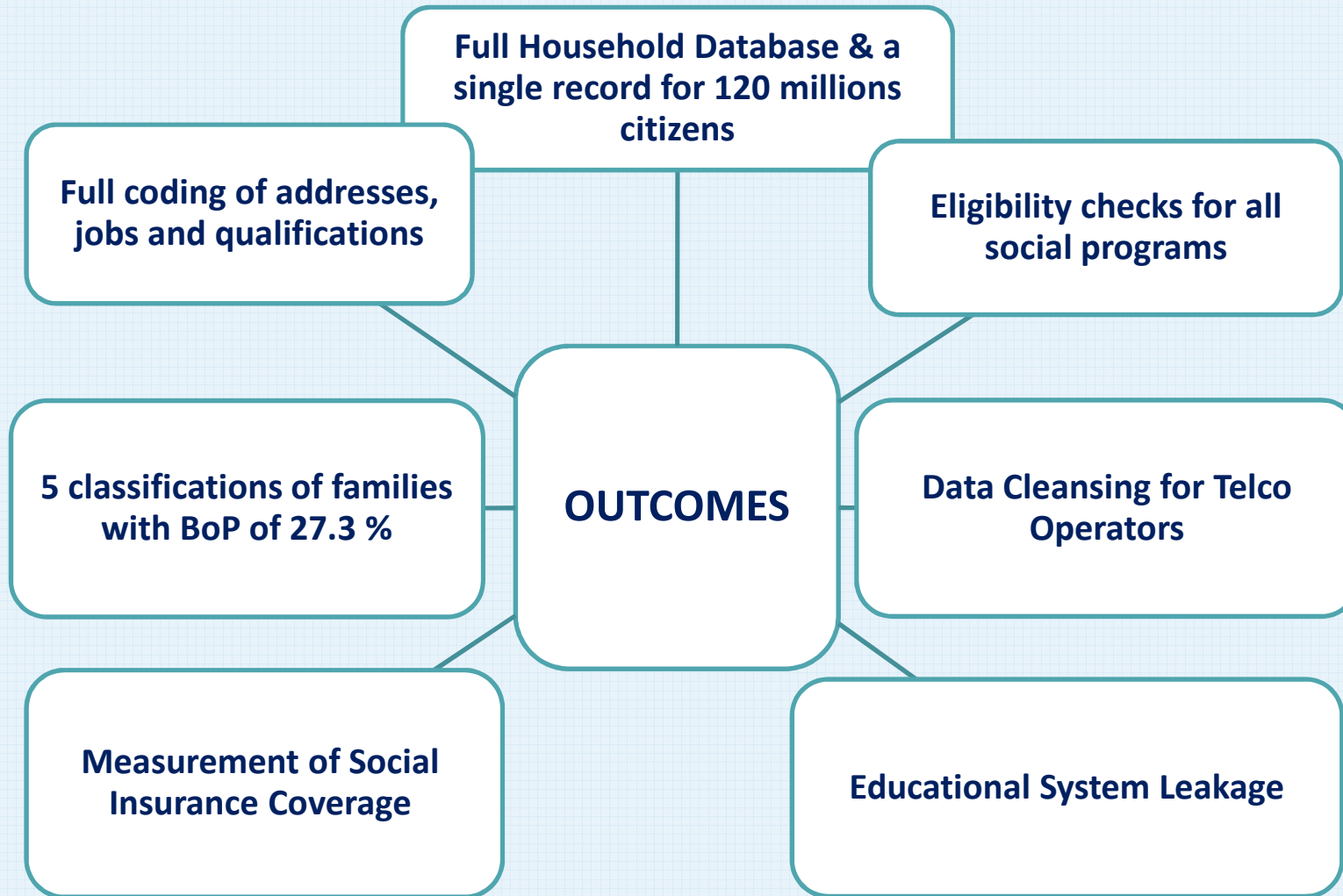


Linking on Census 2017 with the National Database

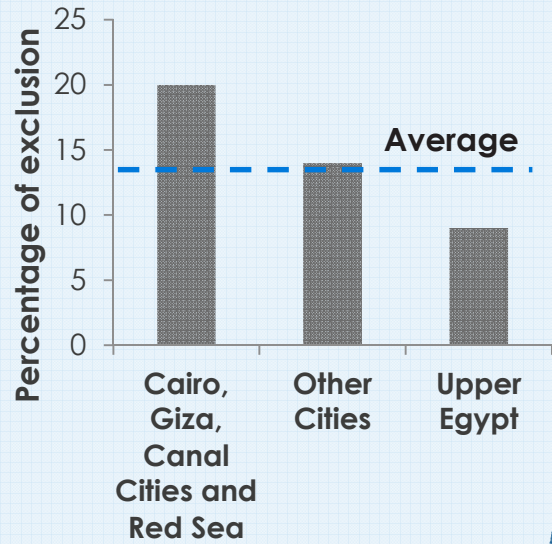
Monitoring Screen

The screenshot displays a web application interface for monitoring census data. At the top, there is a navigation bar with the title 'تعداد سكان' (Population Count) and several menu items: 'الادارة', 'التجهيز', 'المتابعة', 'غرفة العمليات', 'التائج', 'الخرائط', 'مراقبة الجودة', 'معاودة الاتصال', 'التدريب', 'الاصول', 'الازمير', 'مركز الاتصال', 'الرقم المكالني', and 'العد الخاتي للأسرة'. Below the navigation bar, there is a search bar and a date filter set to '22/2016'. The main area features a map with numbered blocks (1-16) and red lines indicating connections or paths. The right sidebar contains a list of reports and actions: 'تعديل الخريطة', 'تقرير التعديلات', 'تقرير معاودة الاتصال', 'تقرير مقارنة الإطارات الفعلي (اتس بالهاتفي)', 'جودة البيانات', 'الجودة الميدانية', 'تقرير الإنجاز', 'تقرير التسجيل الإلكتروني', 'تعديل الحدود', 'حالة البيان', 'التتبع اللحظي', and 'تتبع المسار'. The bottom status bar shows the time as 9:09 AM on 10/24/2016.

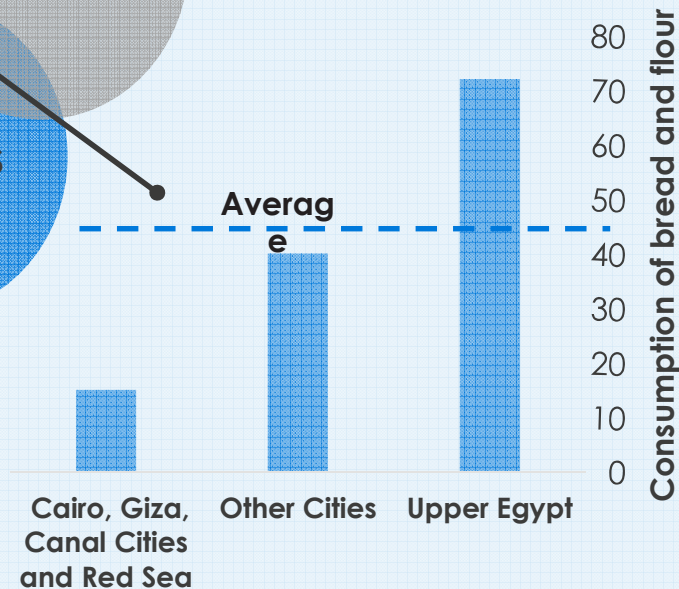
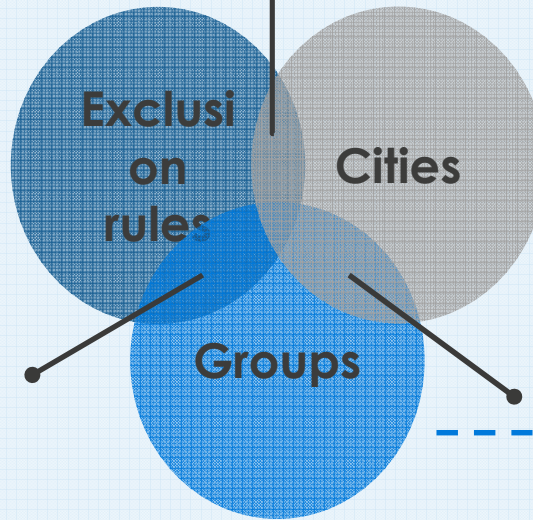
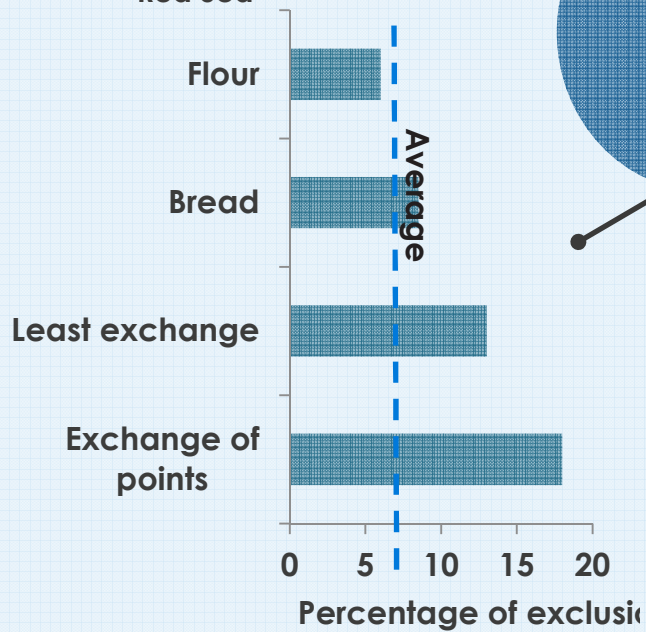
●●●● Outcomes – Phase One



Analysis of Food Subsidy Transactions

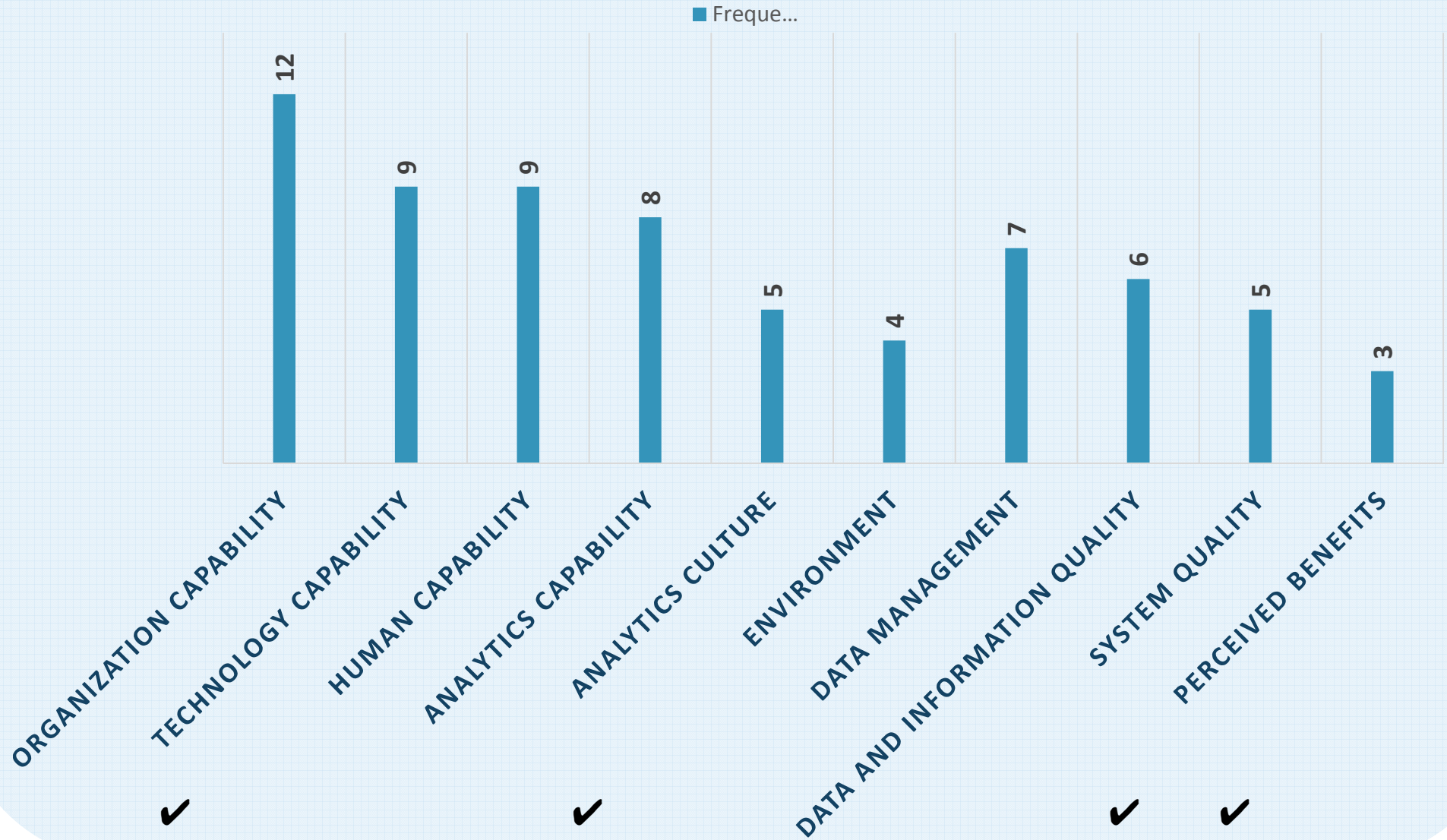


- Cairo, Giza, Canal Cities and Red Sea have the highest percentage of exclusion yet the lowest consumption of bread and flour
- Upper Egypt has the lowest percentage of exclusion yet the highest consumption of bread and flour
- The higher the consumption of bread and flour in a selected city, the lower the percentage of exclusion

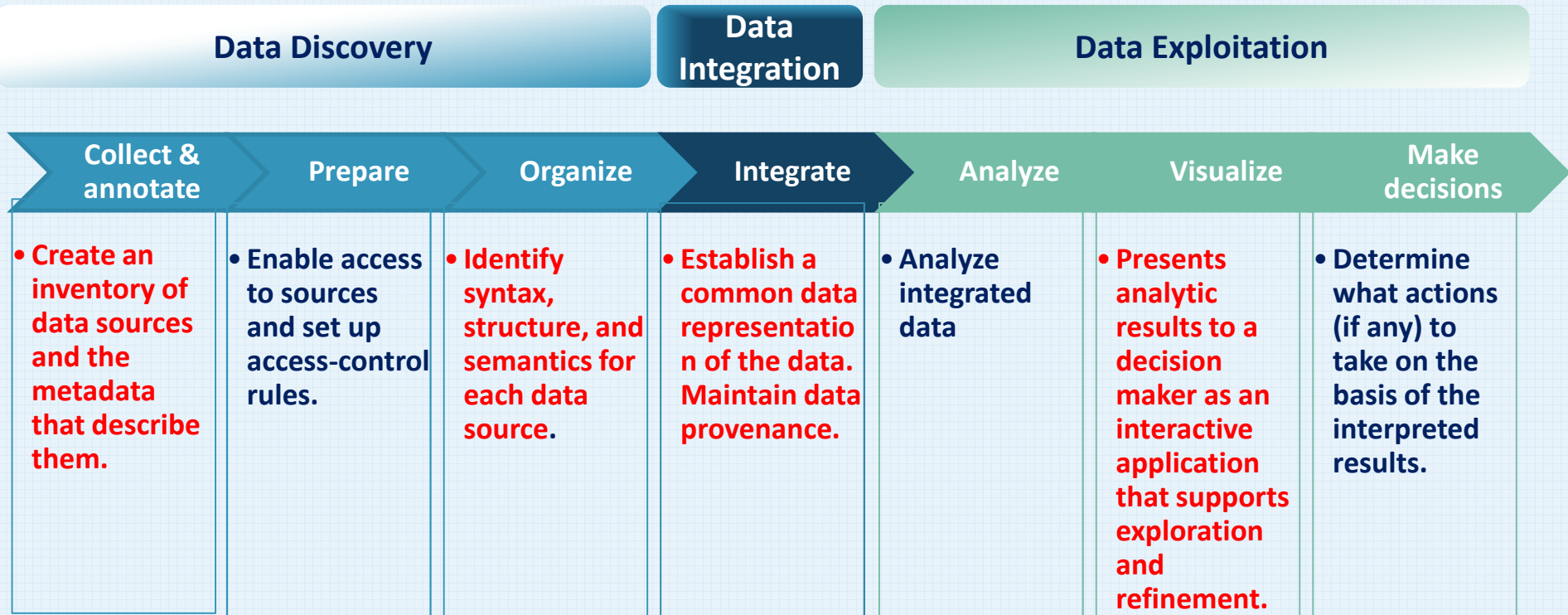


Citizen Segmentation Process

Factors Impacting BDA Implementation Success



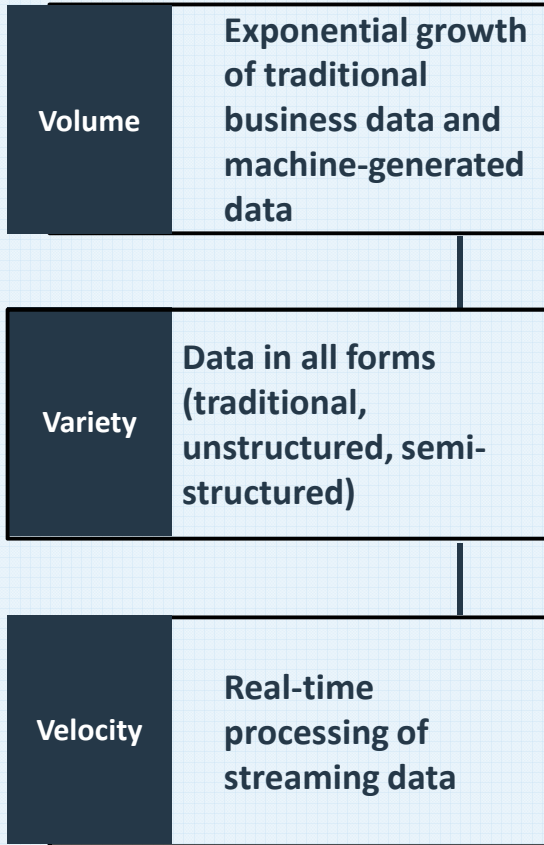
●●● The Data Value Chain and the Egyptian Experience



The chain provides a framework with which to examine how to bring disparate data together in an organized fashion and create valuable information that can inform decision making at the enterprise level.

Business and Government Datasheet Attributes Compared

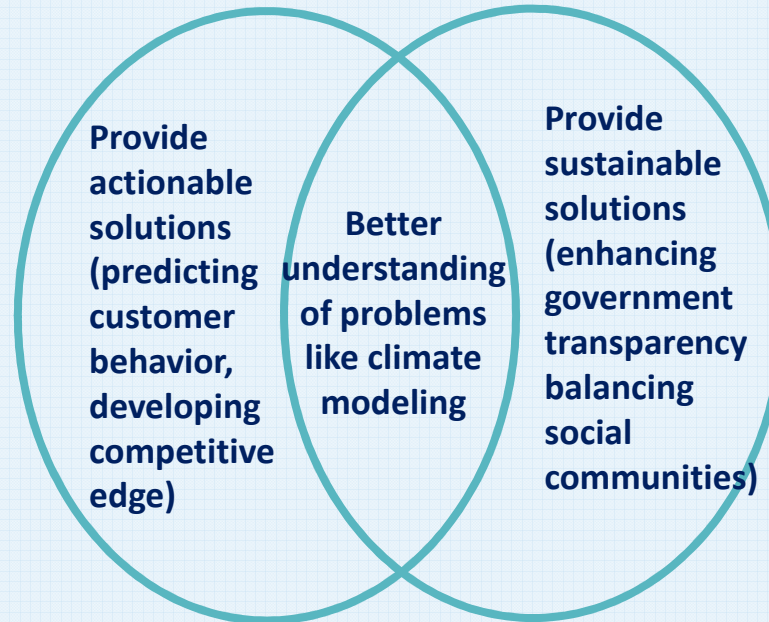
Business



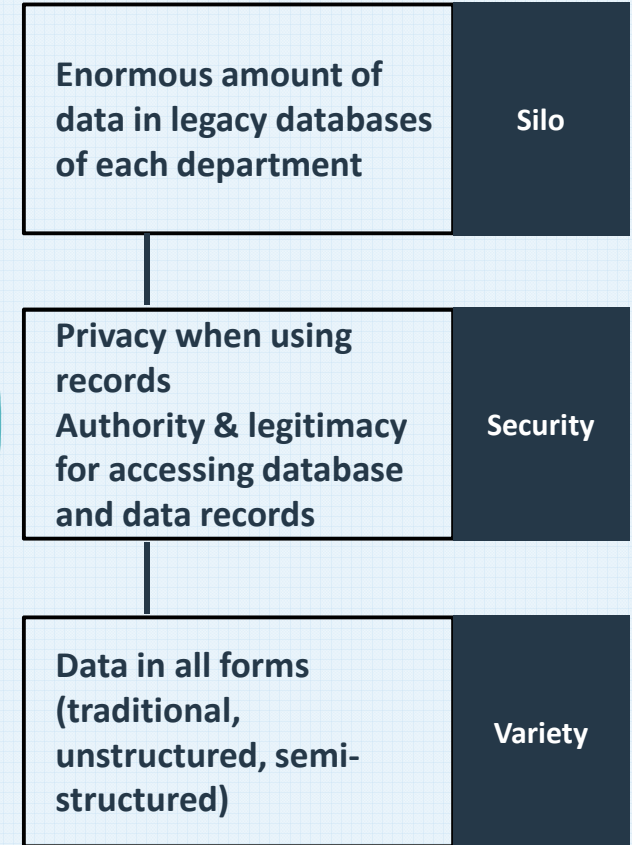
Challenges

Data scientists (analysts, statisticians)
Data mining (storing, interlinking, processing)

Value



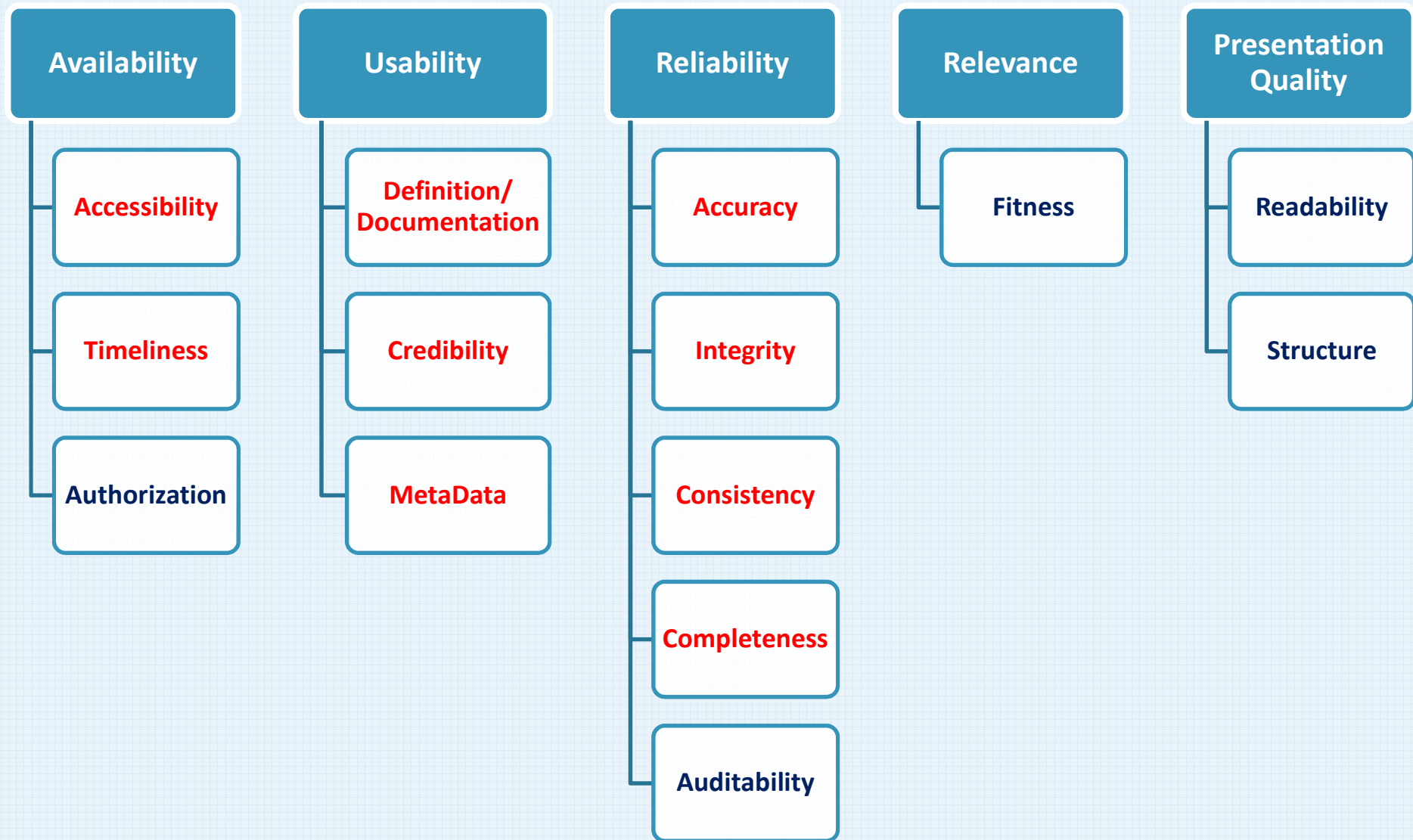
Government



Challenges

Breaking silos - Control tower
Regulation and technologies
Privacy – Security - Data Quality

A Universal, Two-layer Big Data Quality Standard for Assessment



●●●● Data Quality Issues

The diversity of data sources brings abundant data types **and complex data structures** and increases the difficulty of data integration.

Data volume is **tremendous**, and it is difficult to judge data quality within a reasonable amount of time.

Data change very fast and the **“timeliness”** of data is very short, which necessitates higher requirements for processing technology.

No unified and approved **data quality standards** have been formed in China and abroad, and research on the data quality of big data has just begun.



Thank you