Enterprise Information Architecture

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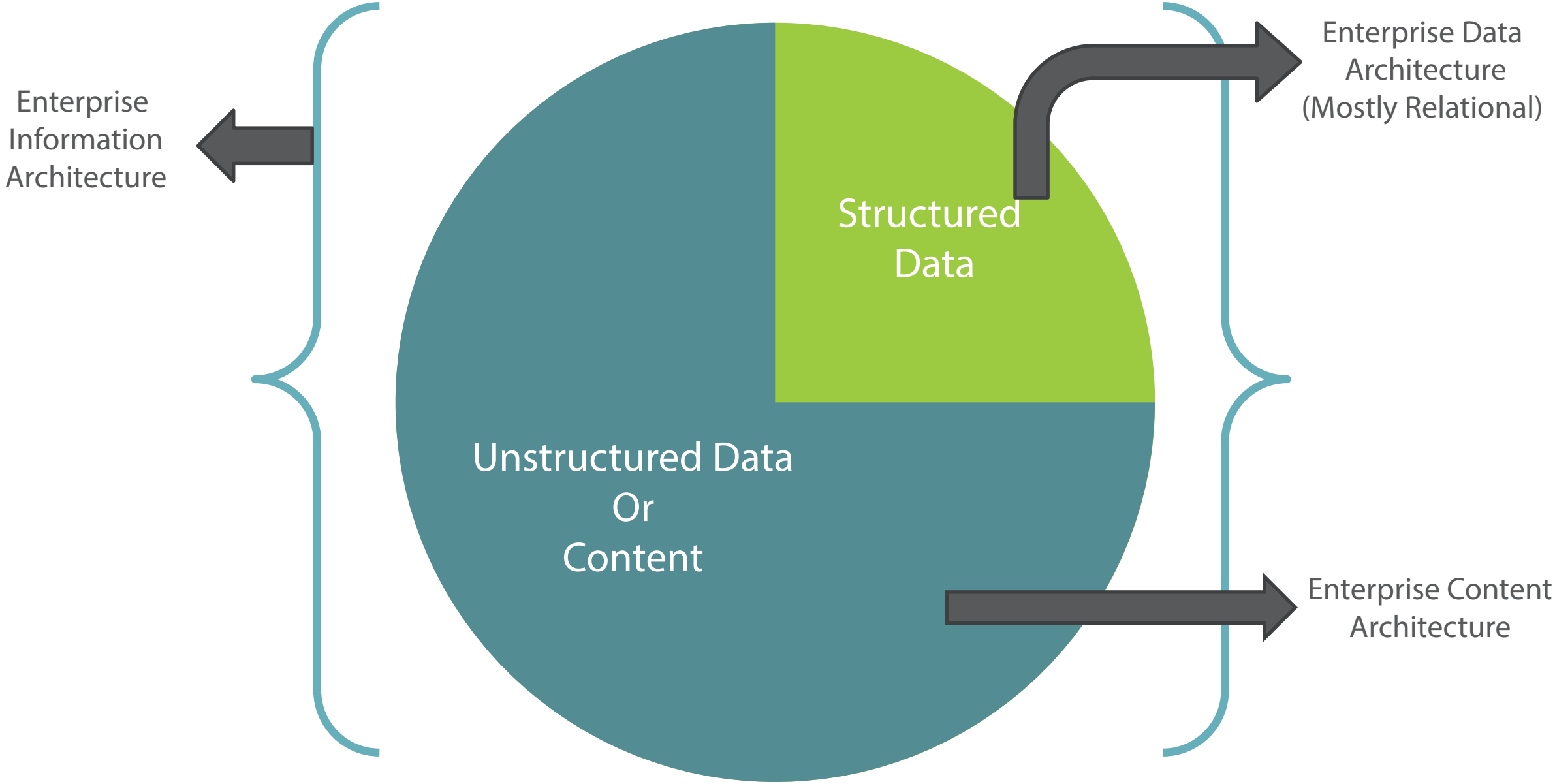


Wrong decisions and misjudgements are very expensive and visible

Organizations require effective decision support capability at all levels

They require reports constructed from historical data

They also need the capability to unearth hidden insights, trends, and predictive forecasts

Information Architecture Challenges

Information environment in most enterprises are built bottom-up without central planning or vision

Data is scattered across multitudes of data repositories

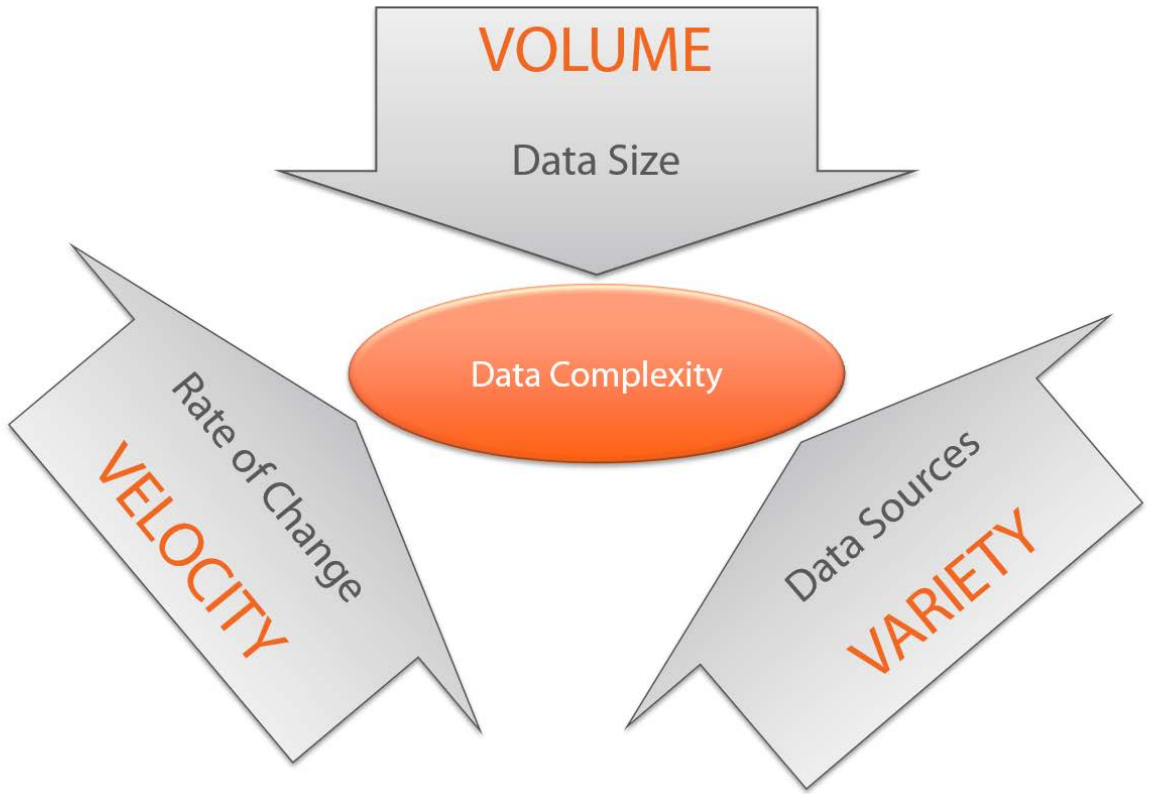
Data and technology capabilities are redundant across business silos, leading to high total cost of ownership

Lack of enterprise-wide governance

Inability to leverage and connect information across multiple systems

Overall data quality and timeliness issues

Data Complexity Is Increasing



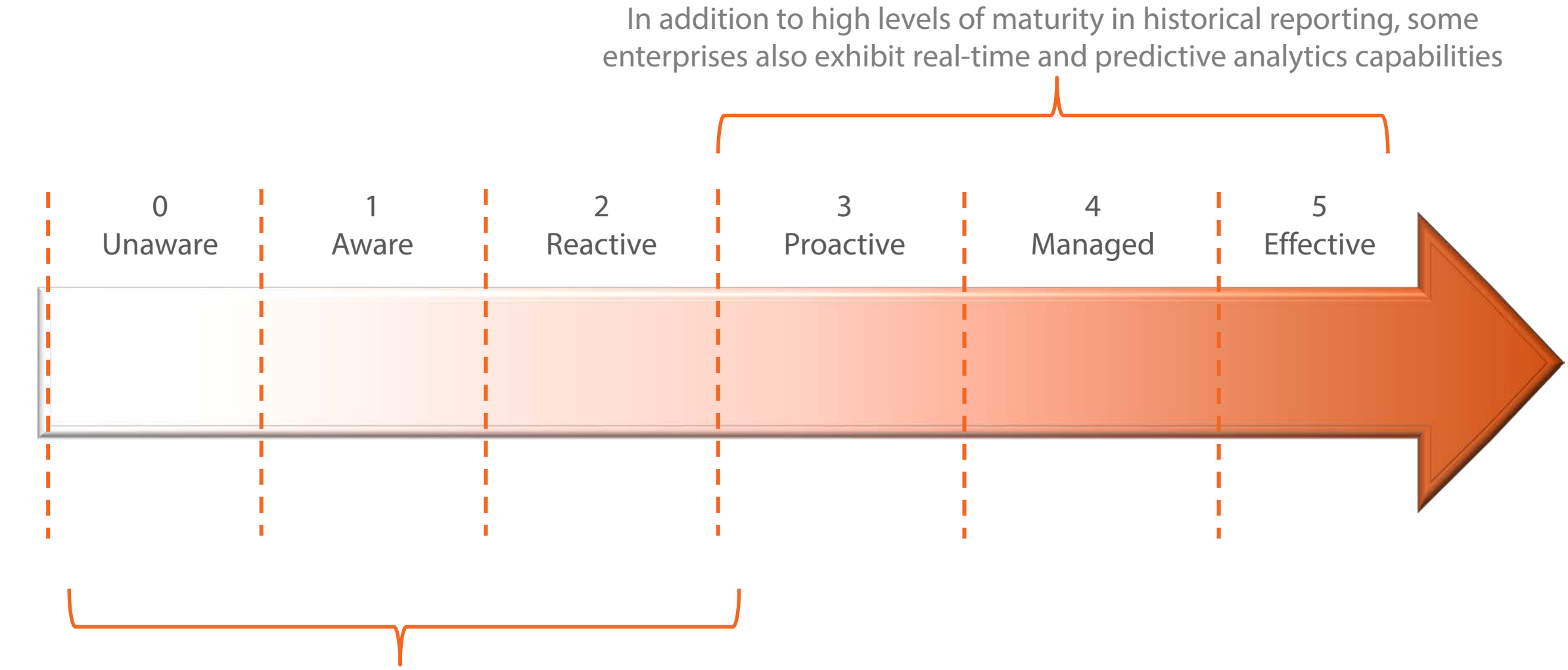
Businesses demand capturing data from a variety of sources such as,

Electronic sensors
RFID tags
Application logs
Social media posts, Emails
Videos, Images and so forth

Not only the sources, but the volume and velocity of data has increased

Enterprises are competing to mine insights from this data to be more agile, innovate and differentiate in marketplace

Information Maturity Model



Goals of Information Architecture

To take a strategic approach to organizing the enterprise's information and evolve it in the direction of increasing maturity

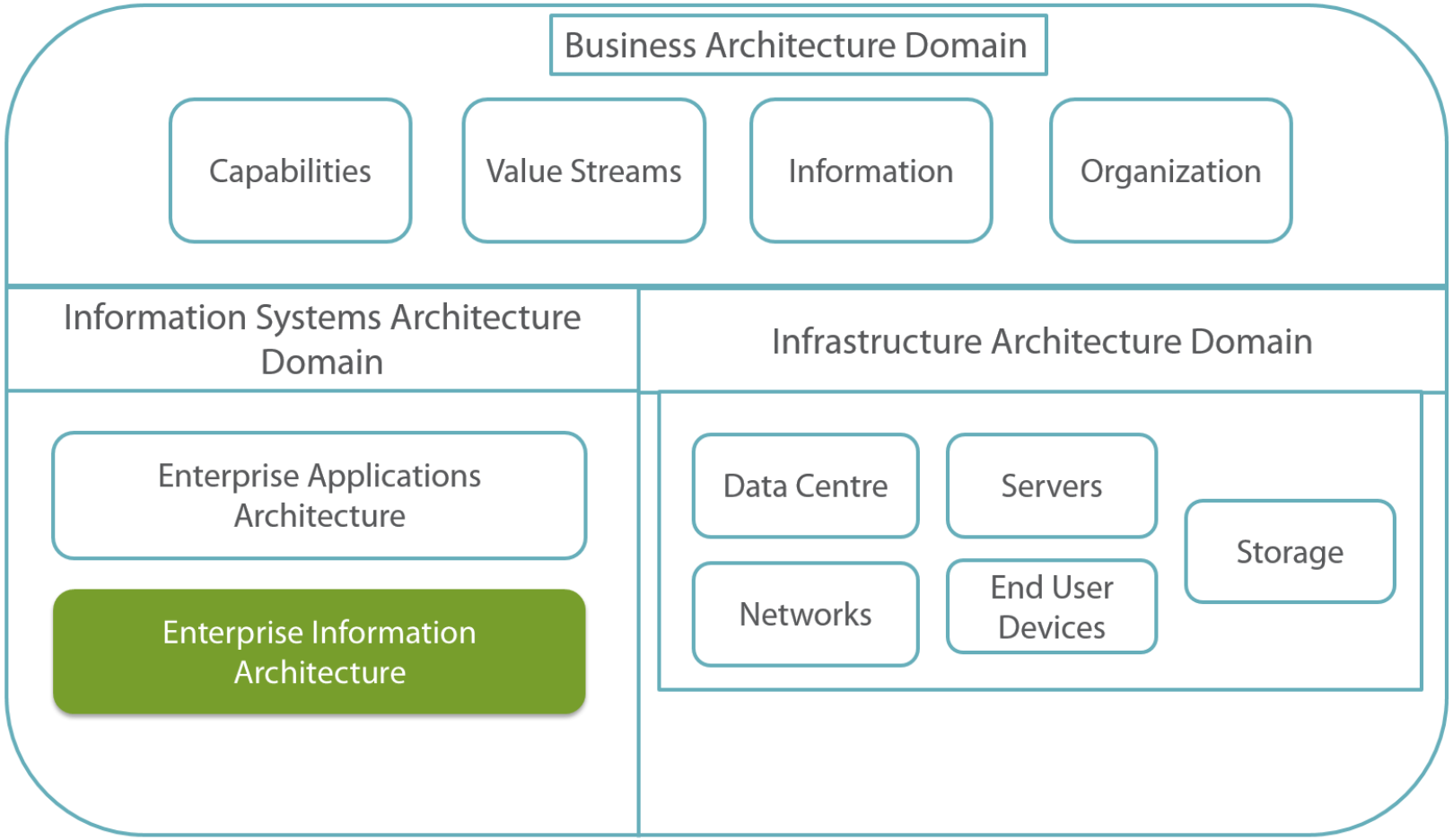
Enable information to be treated as an enterprise asset

Making information agile and easily interoperable across
Applications
Business units
Organization boundaries

Delivery high quality structured and unstructured data in formats that enable them to be integrated and analyzed in new ways

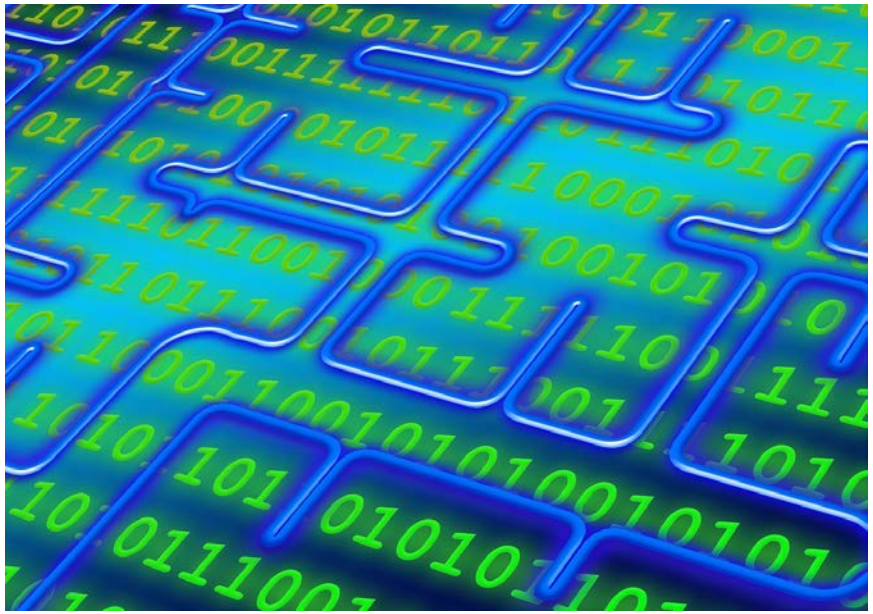
Defining Enterprise Information Architecture (EIA)

Enterprise Information Architecture



EIA is a domain of enterprise architecture that focuses on developing information-centric and technically compatible systems

It does so by providing a consistent approach to information structure and by enabling sharing of information



Enterprise-wide principles for organizing information

Enterprise wide information-centric
Architecture models
Standards
Processes

It does so in alignment with organization's strategic business objectives and architectural vision

Liberate information

Remove inhibitors that prevent information sharing

Elevate information to an enterprise class asset

Defining the technical and infrastructure capabilities and processes required to manage data and information over its lifetime

Transform and deliver information reliably and consistently and in the form that enables enterprise-wide reuse

Ensuring enterprise-wide compliance and regulatory requirements are met

Enabling information governance across structured and un-structured data

Aligning information to strategic needs of the business and thereby driving agility and responsiveness of the whole organization

Profile of Enterprises With Good EIA Practices

They enjoy greater transparency

Greater compliance

They have identified trusted source of truth for most information assets

They enjoy greater accuracy and reliability of information

They consistently define and enforce information SLAs

Information assets are shared

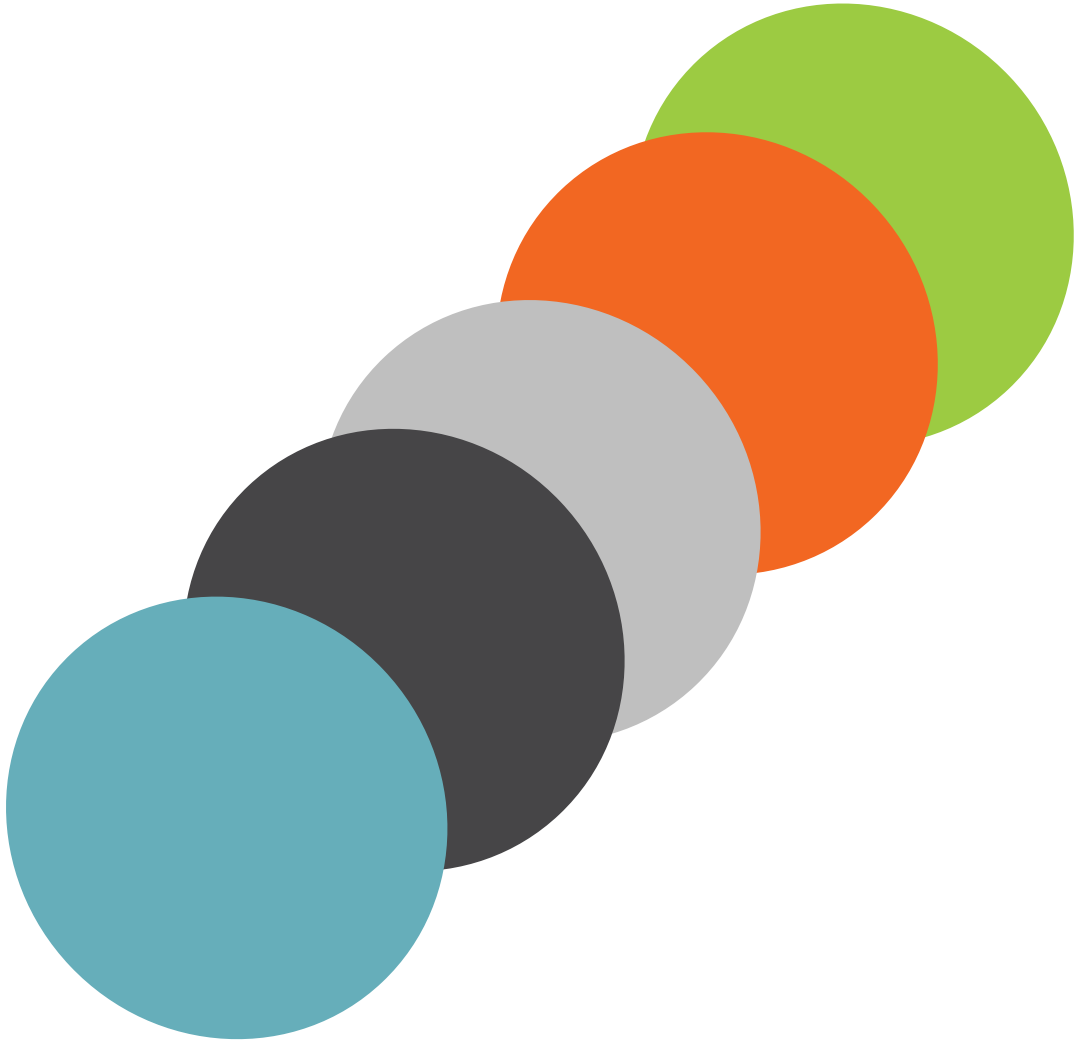
Redundancies minimized or even eliminated

Reliable and timely information

Data warehousing capability and real-time analytics enable superior insights

Building Blocks of Enterprise Information Architecture

Data Domains

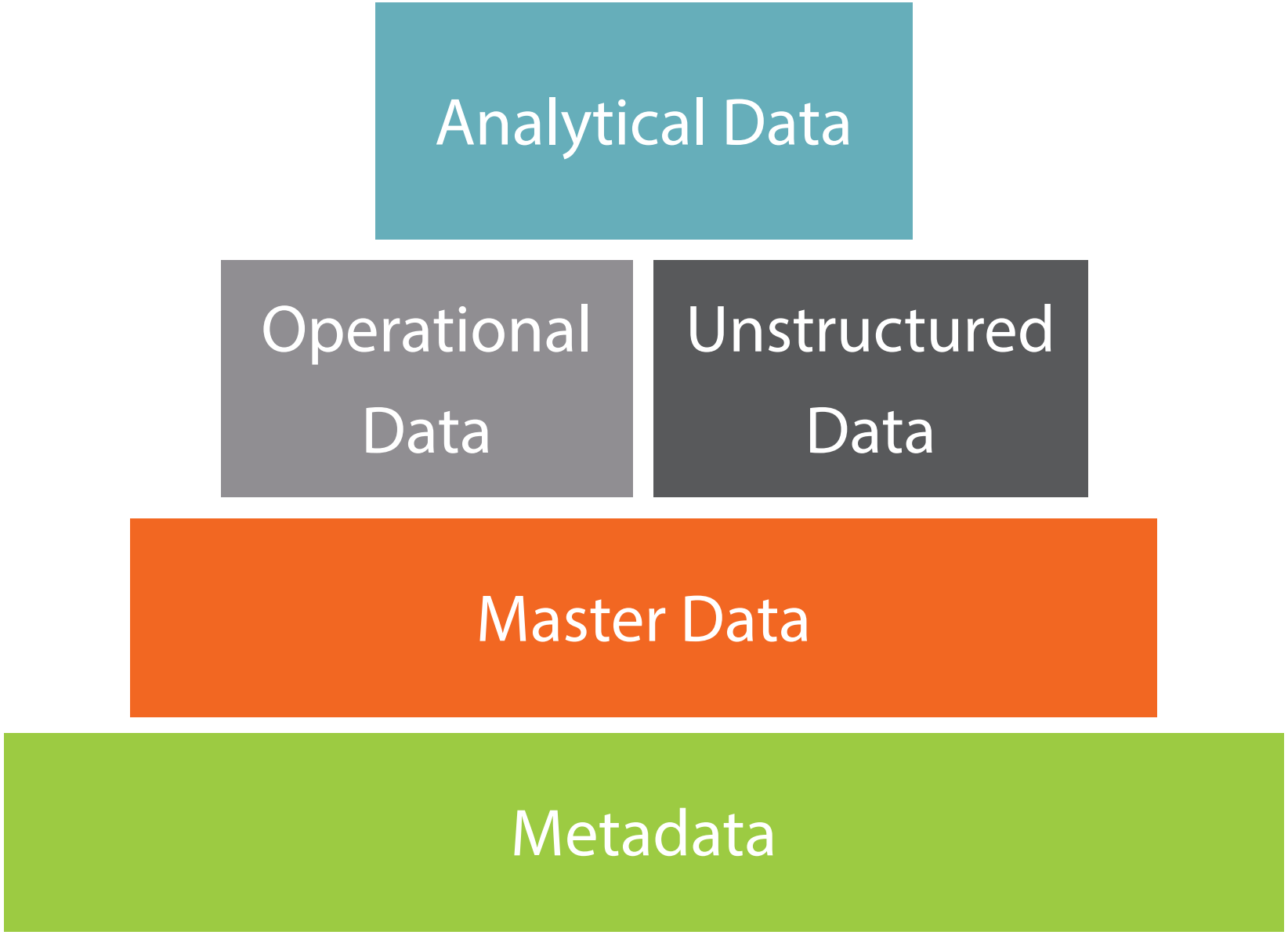


Data domains are a classification of enterprise information based on their type and purpose

There are five of them and are usually referred to as the five pillars of enterprise information reference model

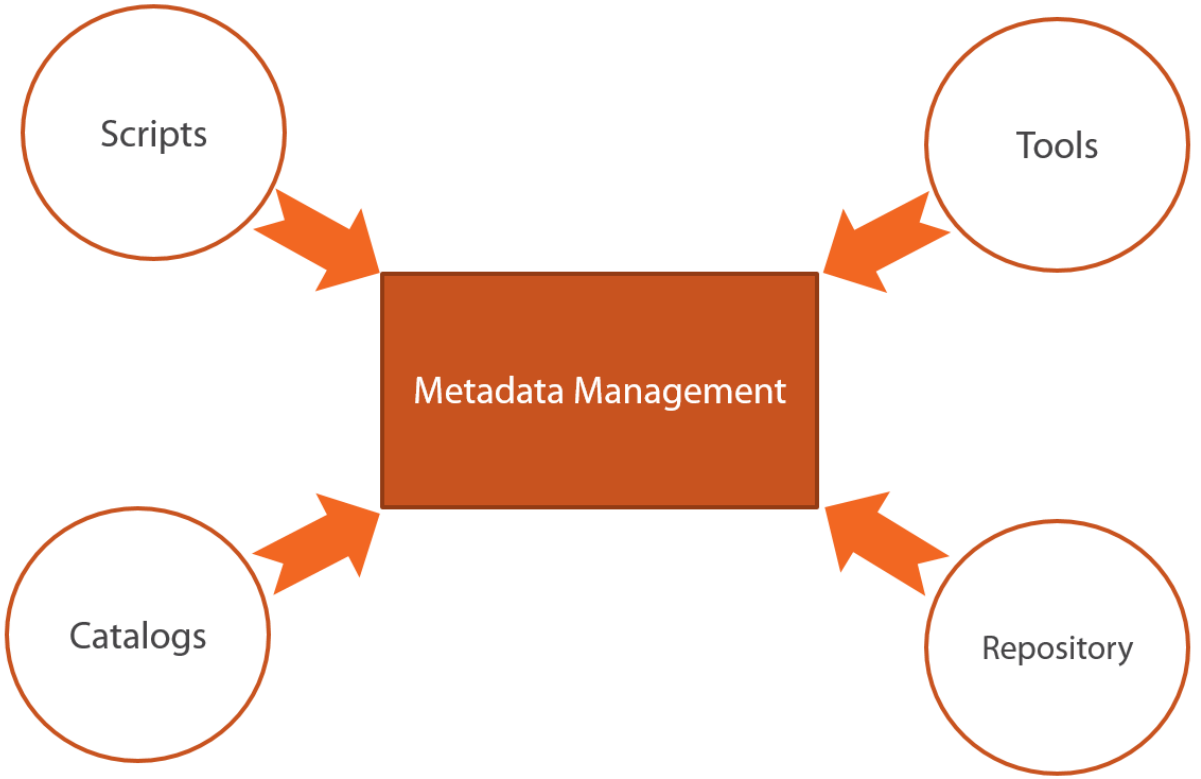
Information Reference Model is a domain specific ontology that defines the concepts pertaining to information architecture

Data Domains Overview



Core Building Blocks Are Based on Data Domains

Metadata Management – Building Block

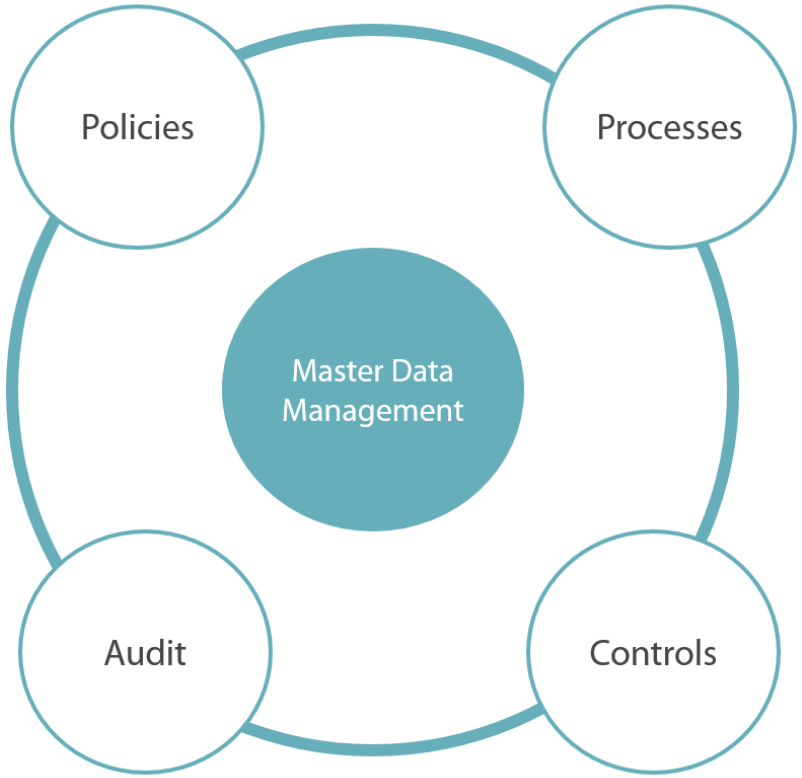


Primarily focused on establishing an enterprise business glossary in order to correlate business and technical terms

Forms the basis for effective information governance

Enables the deployment of information as a strategic enterprise asset

Master Data Management – Building Block



Creates an authoritative source of Master Data

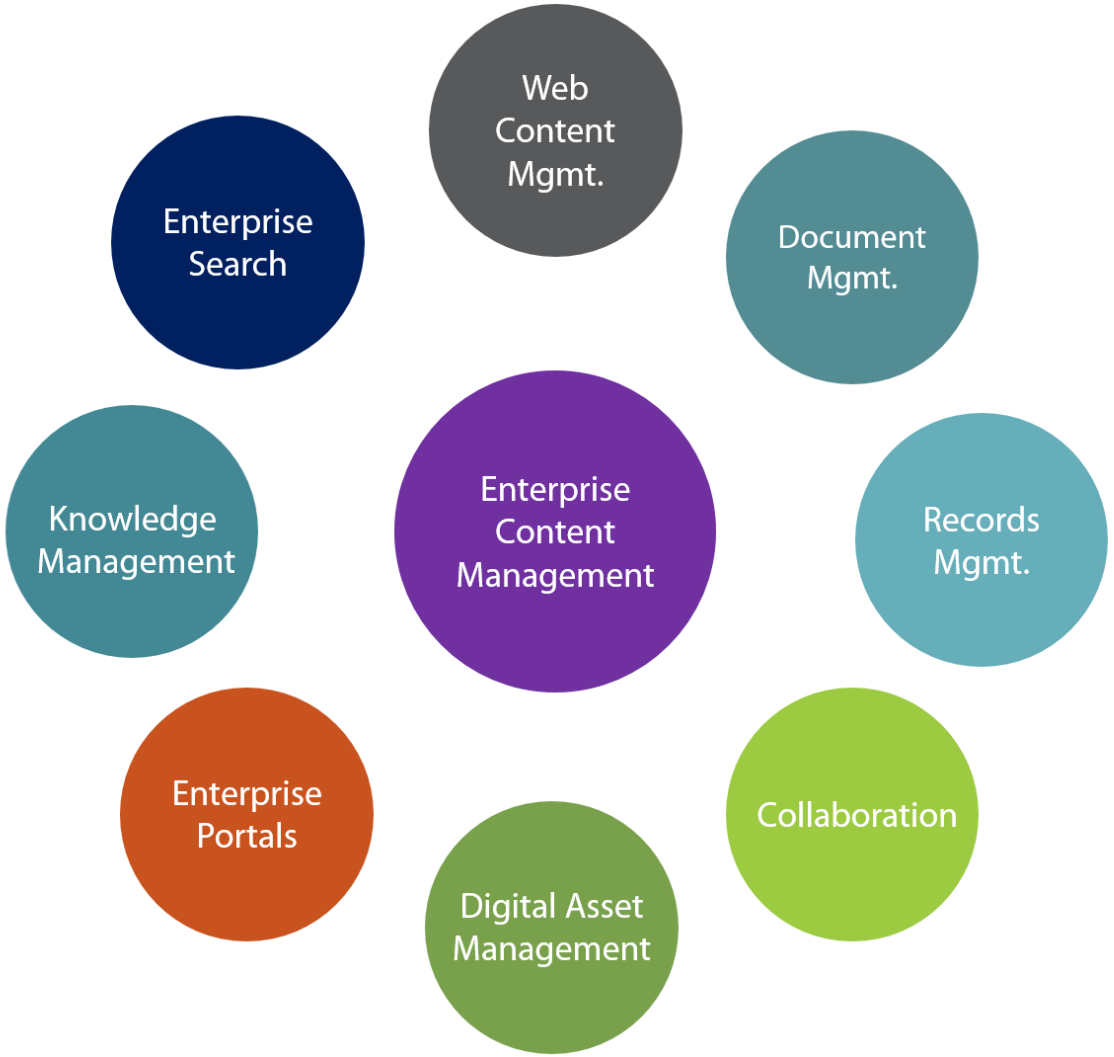
Lays the foundation to establish guidelines for lifecycle management of Master Data

Enables centralized quality control, and enforcement of business rules, access privileges

Data Management – Building Block

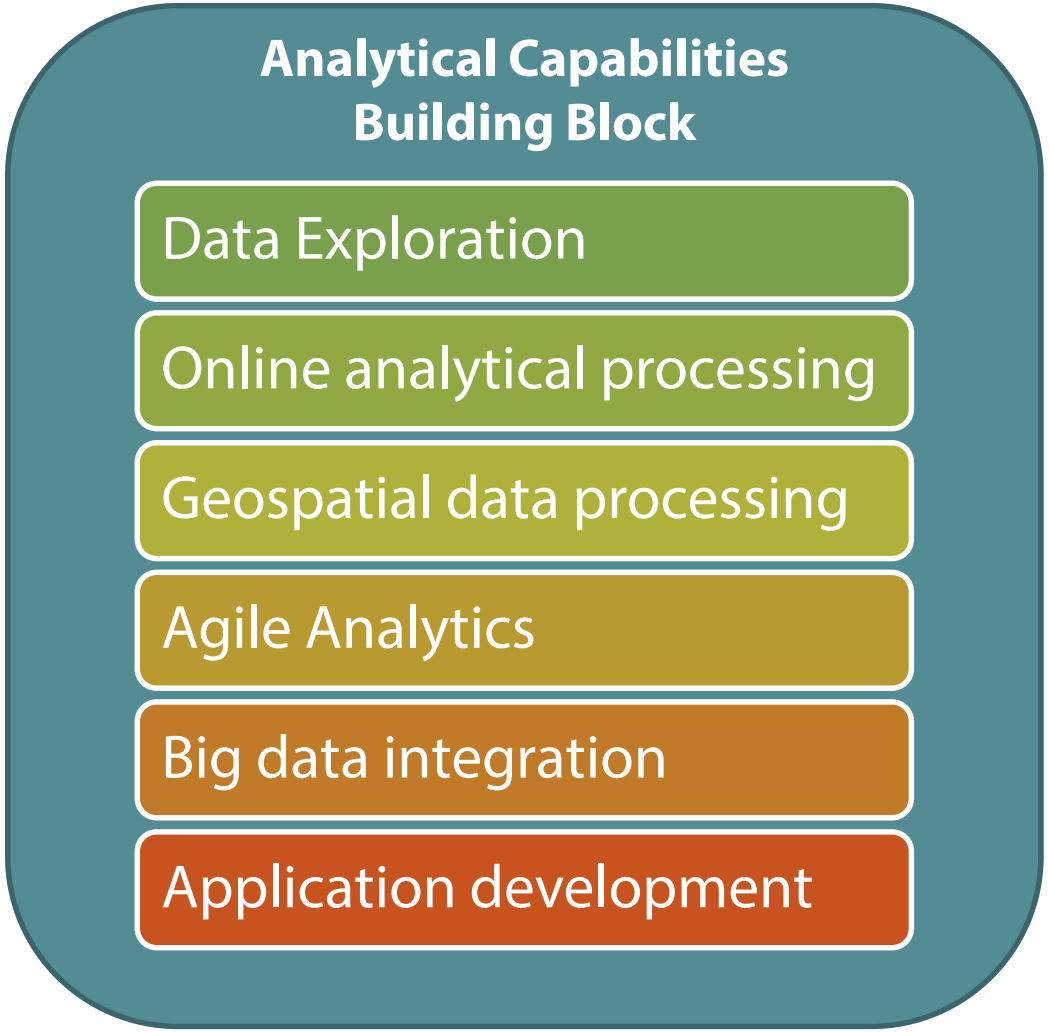
The data management capability provides all functions needed by transactional systems to manage structured operational data across its lifecycle

Enterprise Content Management – Building Block



This building block enables end-to-end management of unstructured data

Analytical Applications – Building Block



This building block enables both data-warehousing, historical and analytical reporting on transactional data

It also supports near real-time delivery of analytical insights based on analysis of large volumes of data flowing in near real time

Predictive analytics to forecast future trends, events etc.

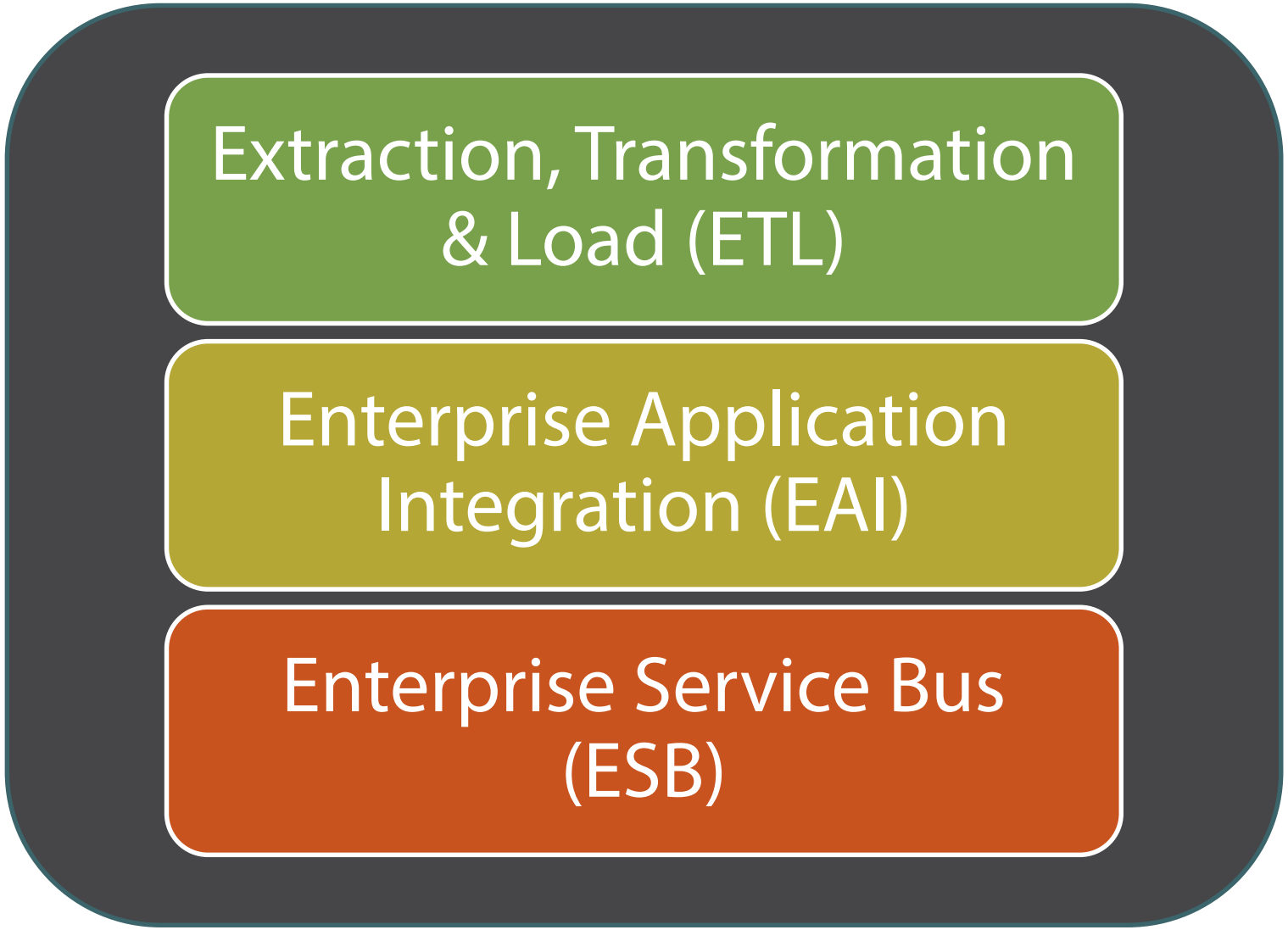
Other Significant Building Blocks of EIA

Enterprise Information Integration

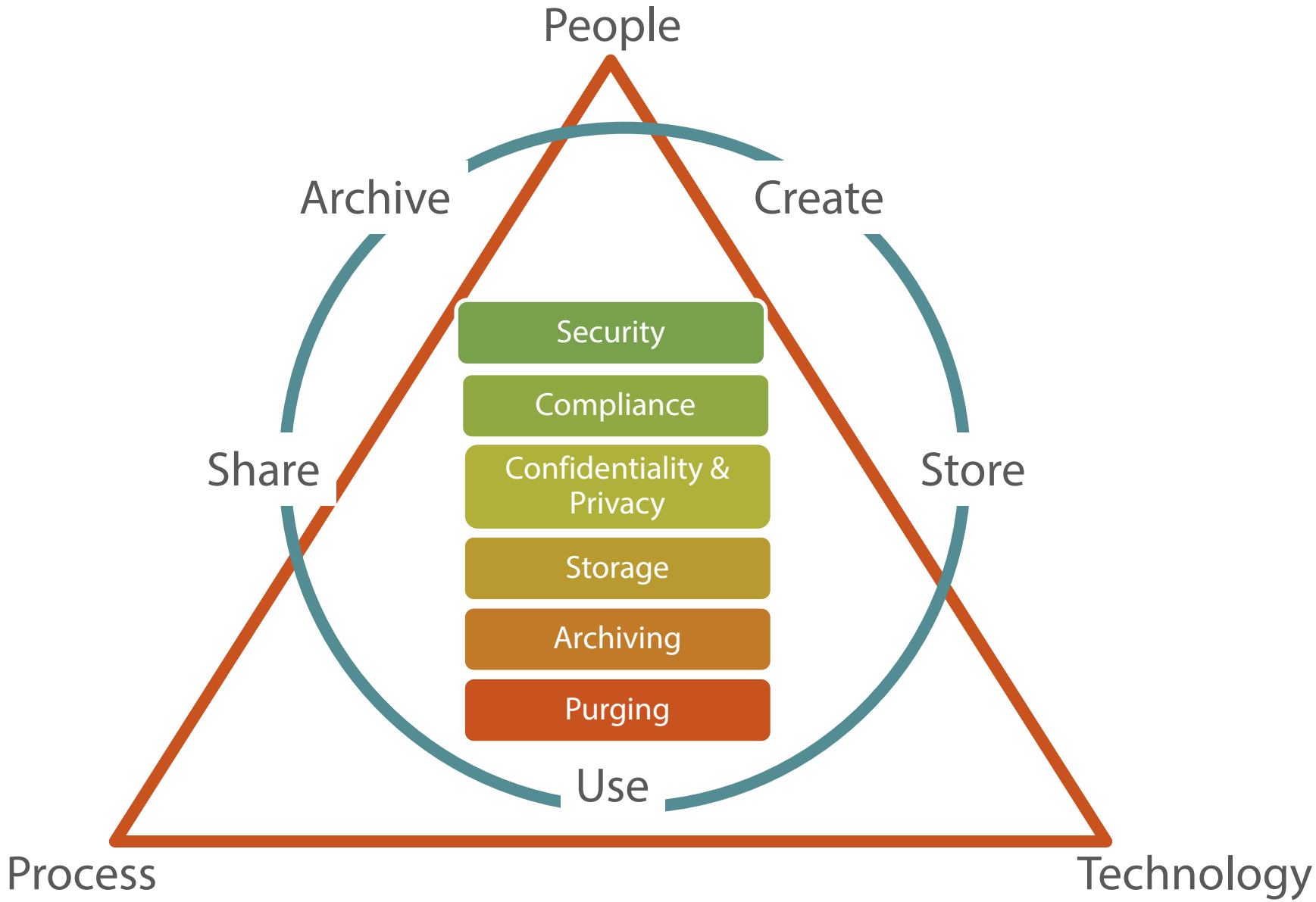
Enterprise Information Governance

Enterprise Information Security & Privacy

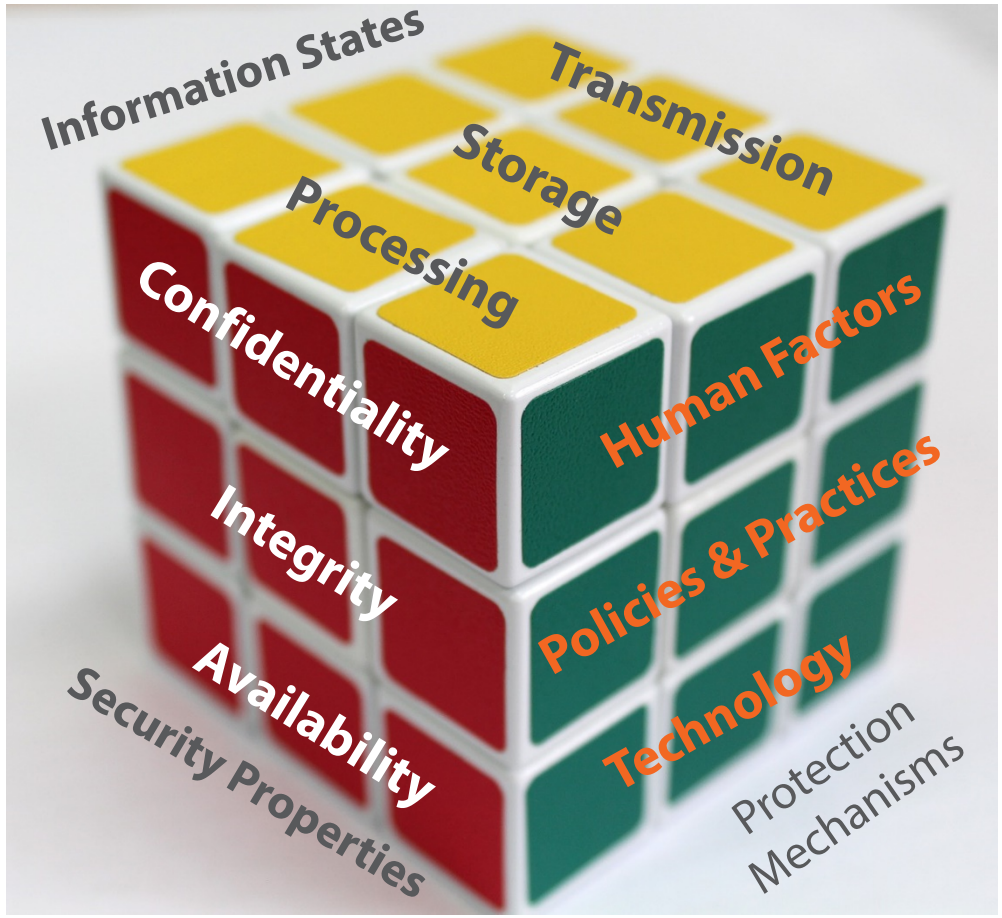
Enterprise Information Integration - Block



Information Governance – Building Block



Information Security and Privacy - Block



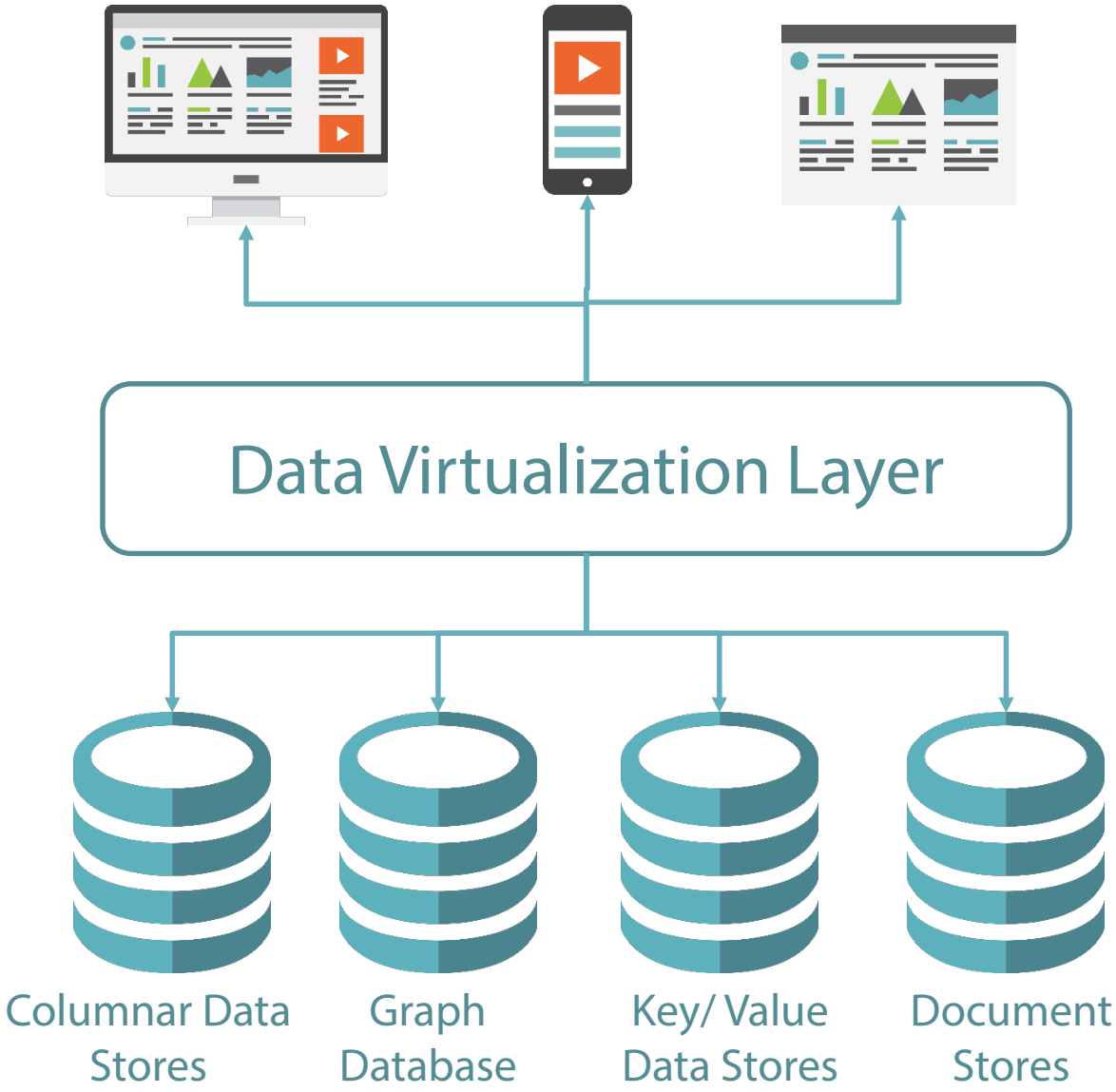
This block concerns with protecting information assets from unauthorized access

Minimizing the probability of loss of mission critical information

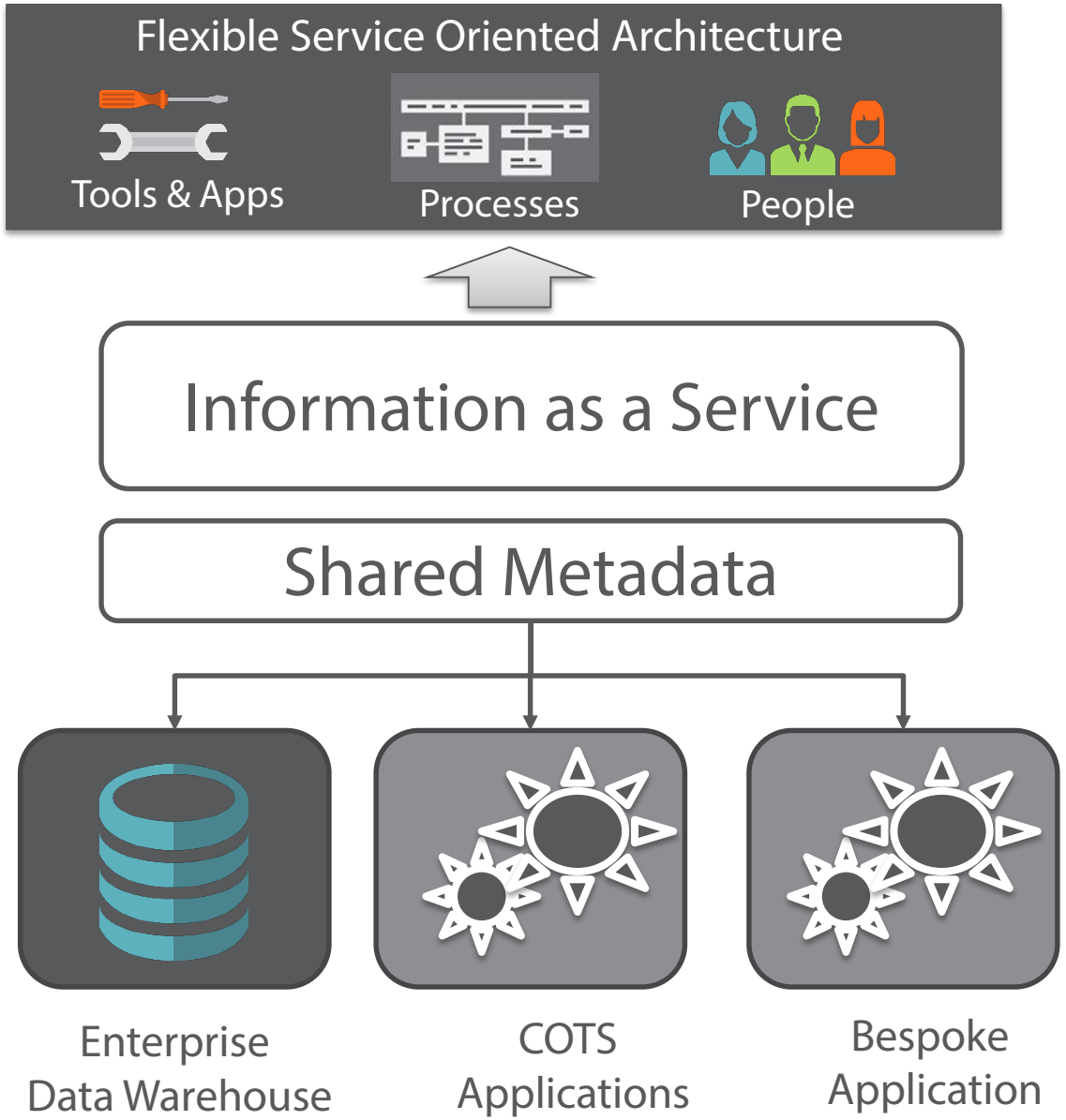
Information privacy among other things enable a company to comply legal regulations

McCumber's Cube: http://bit.ly/1KFVT5N

More Advanced Information Architecture Building Blocks

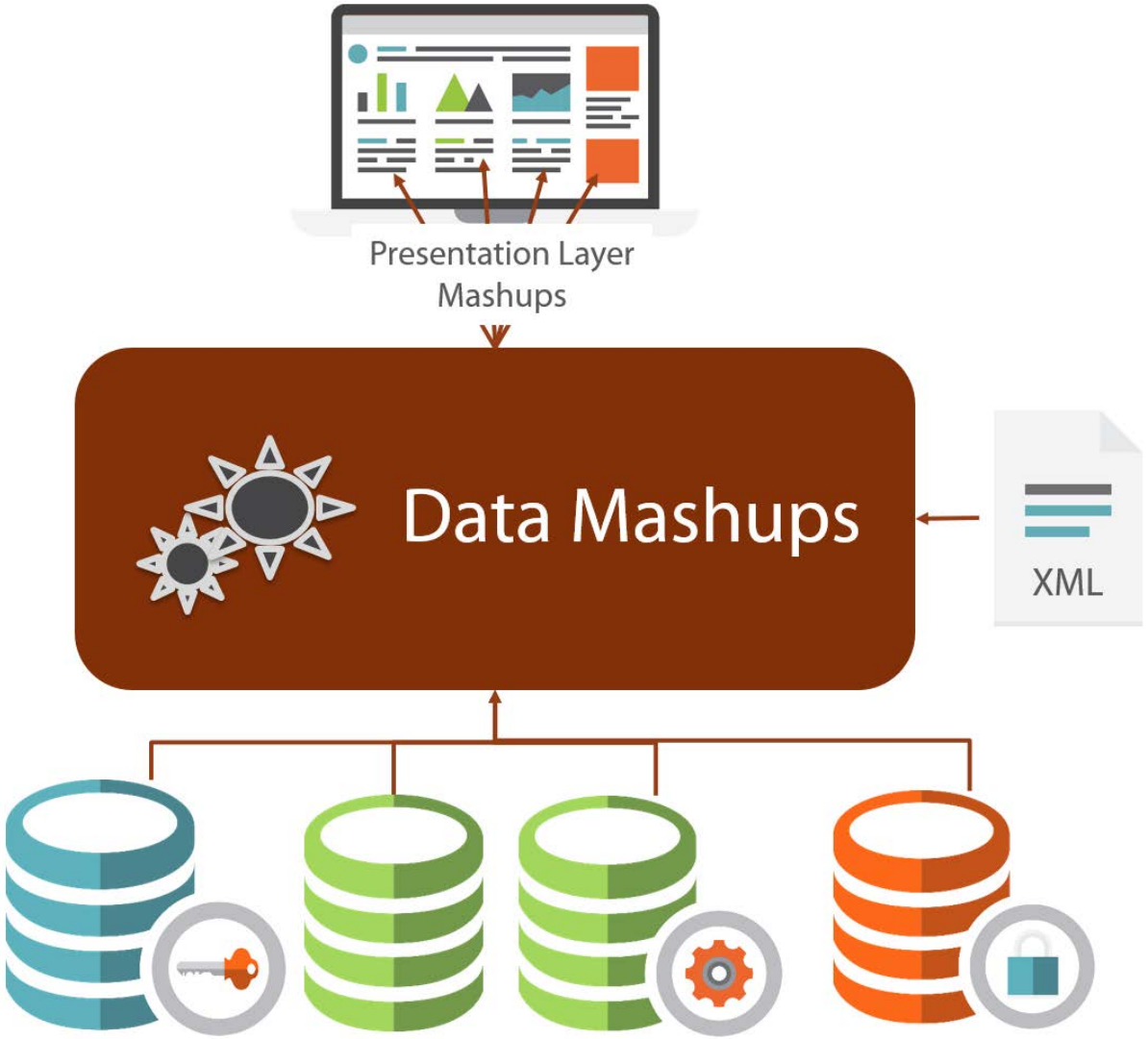


Data virtualization enables applications to retrieve and manipulate data without requiring details such as its formatting or location



Enterprise data are exposed as enterprise services
Made available for virtually any application

Data Mashup – Building Block



Mashups typically use web 2.0 architecture

REST based APIs and lightweight integration techniques such as JSON, RSS, AJAX etc.

Key Drivers Include:

Empowering end-users to create the insights they need

Reduce the dependence on IT and enabling business users to work with data directly

Other EIA Building Blocks

Cloud Computing

Big Data

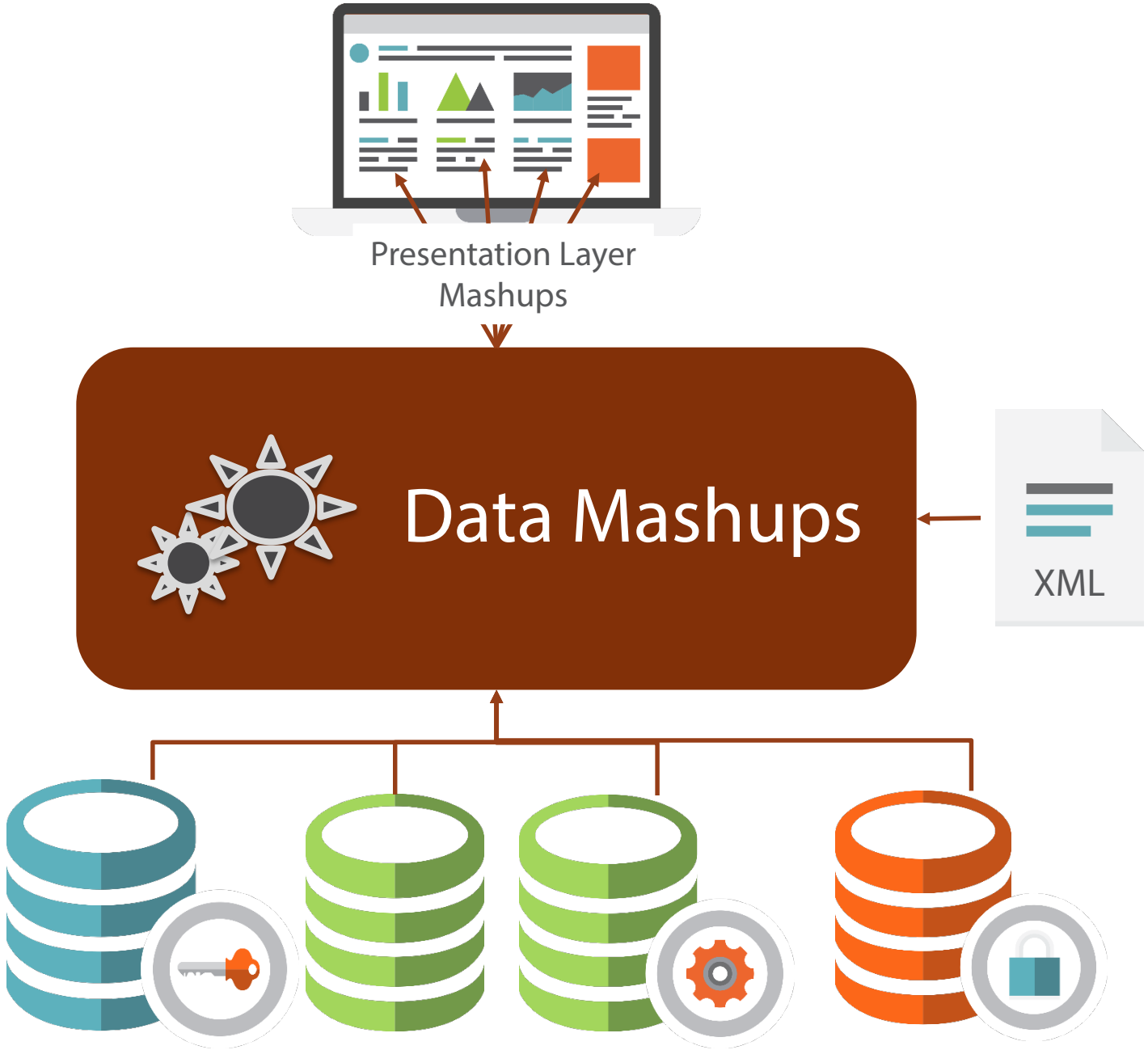
Quick Recap

We began by looking at forces and business drivers for enterprise information architecture and the high level goals

A working definition of enterprise information architecture and some of the characteristics of a well architected information enabled enterprise

Then we looked at the enterprise data classification that defines the five key data domains

Finally we covered the key building blocks of enterprise information architecture that you find in an enterprise


Presentation Layer
Mashups
Data Mashups
XML