Enterprise Approach in Software Development

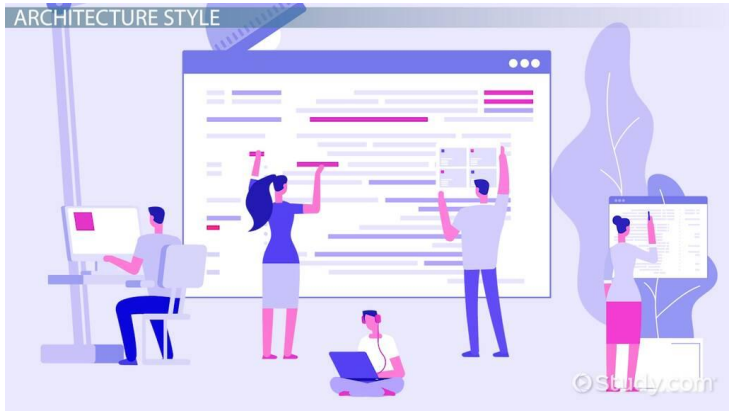
The matured approach

Laksiri Balasuriya

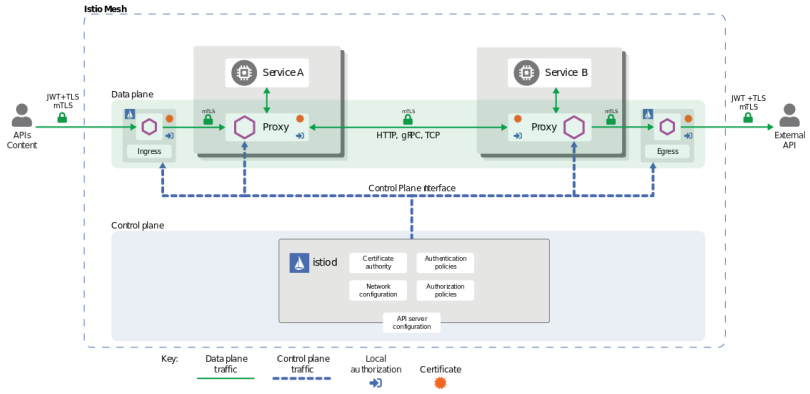
Cloud-Native DevOps:

Enterprise Grade Application Development

Software Architecture



Service mesh



What is an Enterprise :

The TOGAF Standard considers an "enterprise" to be any collection of organizations that have common goals.

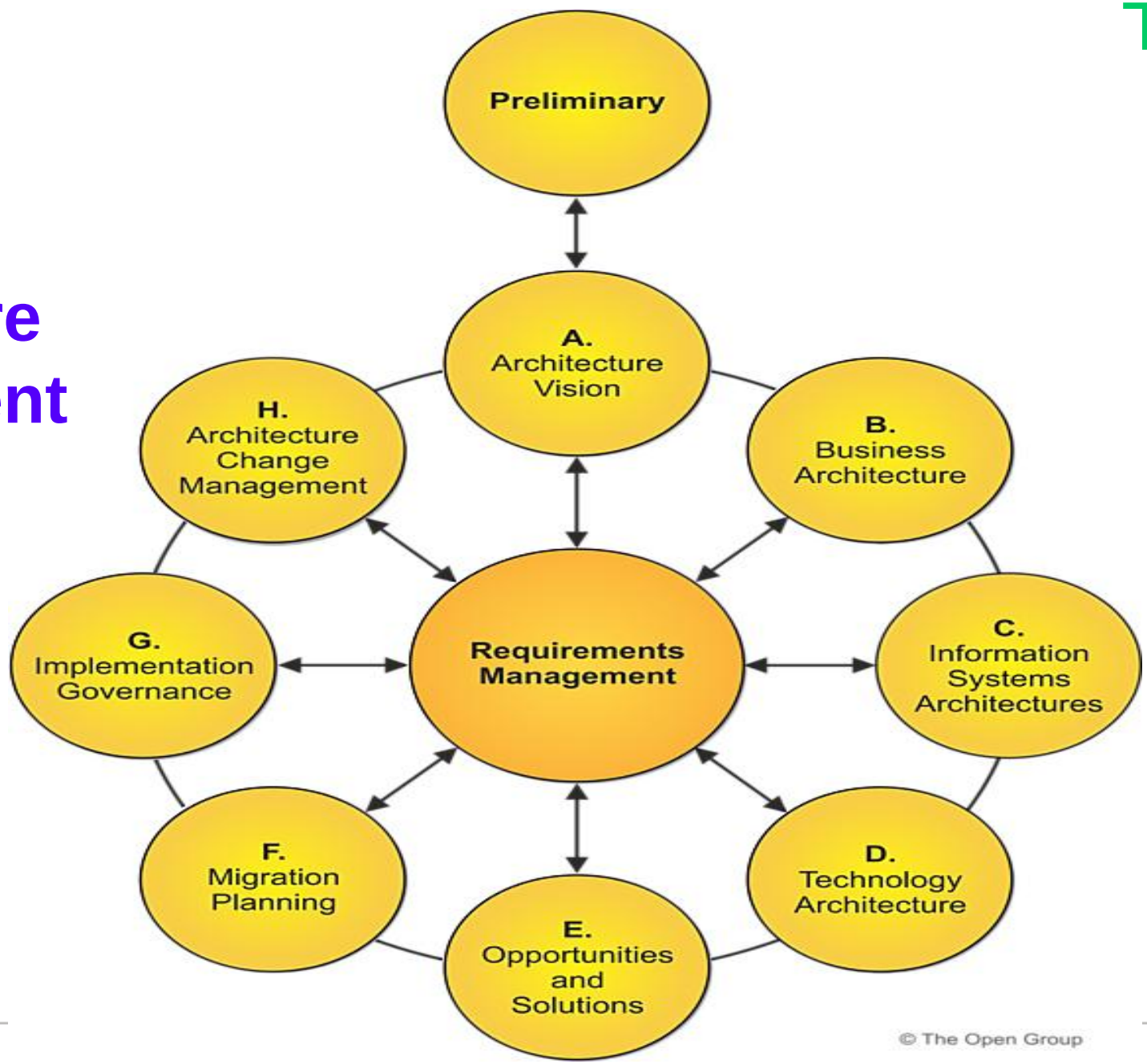
For example, an enterprise could be:

- ✓ A whole corporation or a division of a corporation
- ✓ A government agency or a single government department
- ✓ A chain of geographically distant organizations linked together by common ownership
- ✓ Groups of countries, governments, or governmental organizations (such as militaries) working together to create common or shareable deliverables or infrastructures
- ✓ Partnerships and alliances of businesses working together, such as a consortium (an association, typically of several companies) or supply chain

Lets watch 

The Big Picture

Enterprise Architecture Development Cycle



Let's make it a ground reality

University

Intellect

Assignment to cover OOP concepts

Inheritance , Polymorphism etc..

0 – 3 years

Beginners Level Competency

Proof of concept

Component Based

3 – 7 years

Mid Senior Competency

Scenario

Integrated Solutions

7 years above

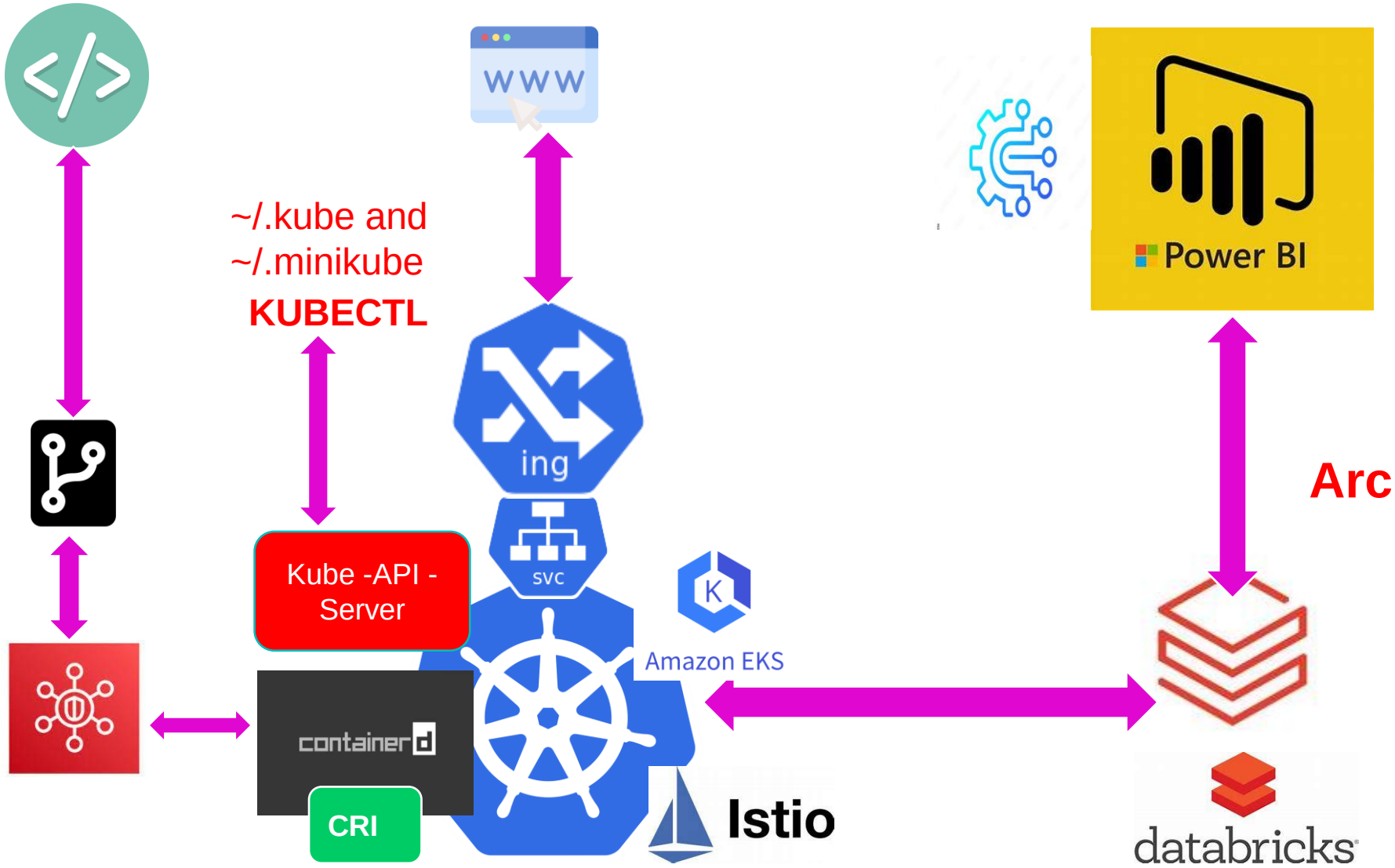
Senior Level Competency

Pilot Project

Enterprise Grade Solutions

Requirement:
Real time data visualization dashboard

Enterprise grade Solutioning with event driven



Architecture center

Enterprise Approach – Deep Dive

What Client Expects :

- ✓ Not an outcome of a POC
- ✓ They don't wont learners
- ✓ They need versatilist
- ✓ They expect guidance from a consultant
- ✓ What is value addition
- ✓ They need Enterprise Approach

Versatilist – Continuously upskill , cross skill and reskill

Delivery team need to focus on :

- ❑ Business Architecture
- ❑ Information system Architecture
- ❑ Technology Architecture

- ➢ **Business Case**
- ➢ **Requirements understanding / Red-hot Requirements/Use case diagrams**
- ➢ **Project Charter / SRS**
- ➢ **Process Maps - indicating the user journeys**
- ➢ **Policy documents – sign off from stake holders for business process**
- ➢ **User stories which links to process maps**
- ➢ **Business use cases**
- ➢ **UI / UX with user journeys**

- ➢ **OS**
- ➢ **Cloud Native**
- ➢ **Low code / No Code**
- ➢ **The development platform**
- ➢ **Data Engineering**
- ➢ **Middleware**

- ➢ **Software Architecture**
- ➢ **Architectural Patterns**
- ➢ **Design Patterns**

AI Augmented Delivery Life Cycle

Task: Plan

- Business Case
- Requirements with clarity
- Project Charter
- Backlog Prioritization
- Release plan
- Delivery timeline
- Operational requirements

Tools : Prototyping , defining

- IBM Requirement Assistant (Watson)
- UXPressia
- Lucid Chart with JIRA Modern Requirements
- Caliber

Tools for planning

- GitHub
- Atlassian
- Monday.com
- GitLab
- Asana
- ClickUp
- Wrike

Task: Release

- Schedule as per Delivery time line
- Release artifacts
- Release management

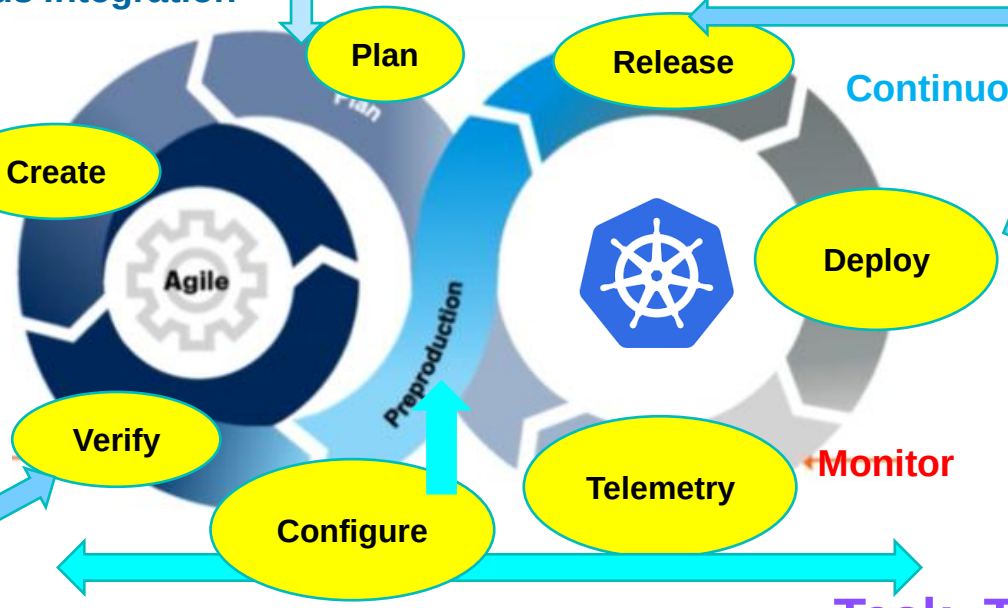
Tools : Release management

- Azure pipelines
- Vagrant
- Plutora
- Jira
- Spinnaker
- Jfrog

Continuous Integration

Continuous Deployment

Continuous Delivery



Task: Deploy

- Production deployment
- Fallback
- Approval Management
- Configurations

Tools Deployment management

- Harness
- GitOps with Argo C
- Wercker
- Octopus
- Platform.sh
- Spinnaker
- Chef
- CloudBees
- Jenkins
- Azure DevOps Server

Tools : Create

Code

- Github Copilot
- Tabnine
- Intellij IDEA with AI
- Amazon Code Guru
- Visual Studio with AI assist

Build

- Code climate
- GitLab
- CloudBees
- TravisCI
- Jenkins

Task: Create

- Software Architecture and design selection
- Unit test
- Functional test
- Static Analysis
- SCA

Security

- Mend SCA
- Black Duck - Synopsys
- Veracode
- Synk Opensource
- Cloud Defence AI

Task: Verify

- Code Inspection
- Defect , bugs fixing
- Regression , Integration , Performance test
- Unit testing
- Configuration test

Tools : Verify

- Lambdatest
- Type mock
- Pcloudy
- Applitools
- Uibot
- SmartBear
- Testim

Tools : IAC

- Cloud Poser
- Teaclave
- Vercel
- Terraform
- Spectro Ccloud
- UpGuard
- Pulumi

Task: Configuration

- Platform engineering
- Application provisioning and configuration

Task: Telemetry (AIOps)

- Traffic Monitoring
- Alerts and metrics management
- Orchestration dashboards
- Health and performance

Tools : Telemetry management

- Prometheus
- Honeycomb
- Splunk with Victor Ops
- Datadog
- Dynatrace

Enterprise approach : Strategic - Technical

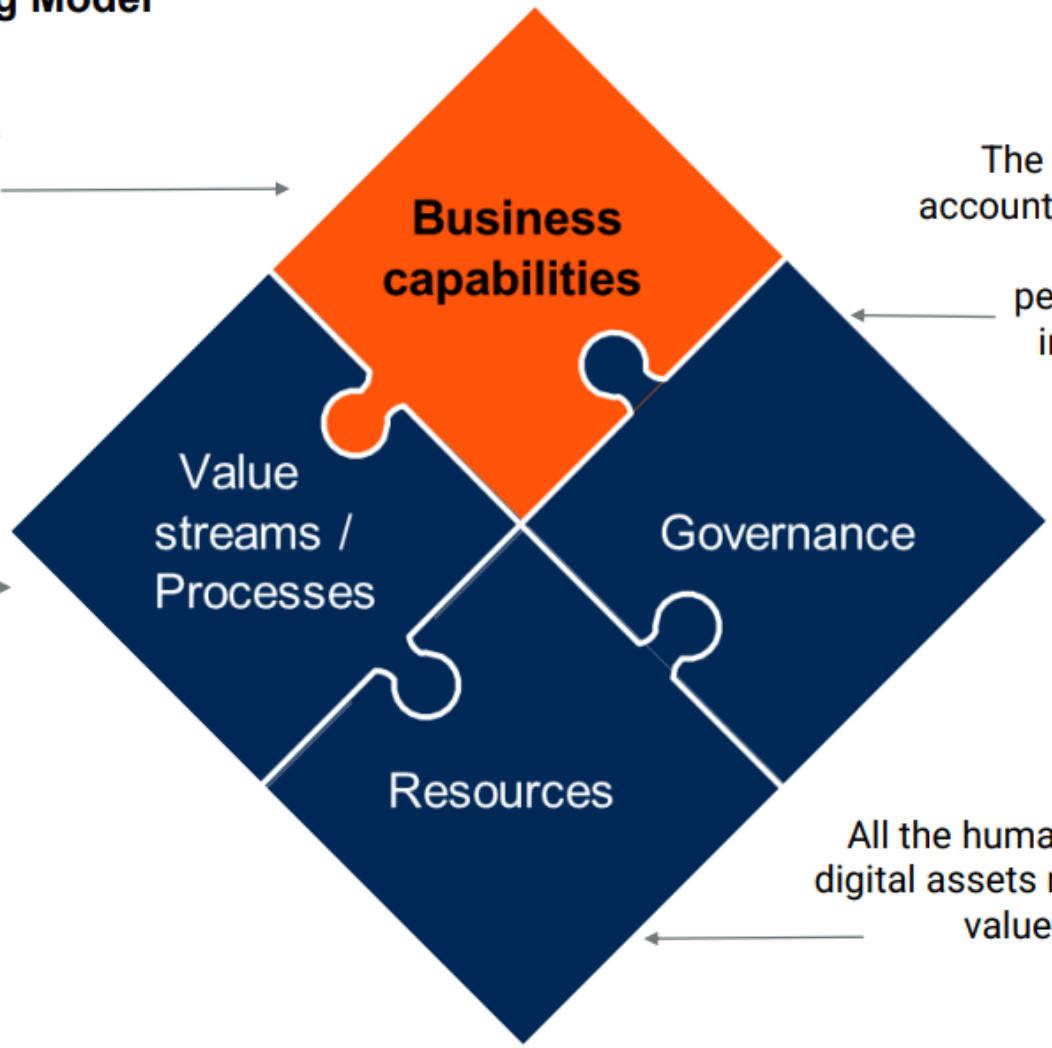
Strategic

Defining the Enterprise Operating Model

Components of the Operating Model

The necessary actions to create and deliver the organization's value proposition or mission.

How capabilities are executed to ensure customers or constituents experience the value of your products or services.



The decision rights – executive accountability – for both corporate compliance and enterprise performance and establishes investment and risk criteria.

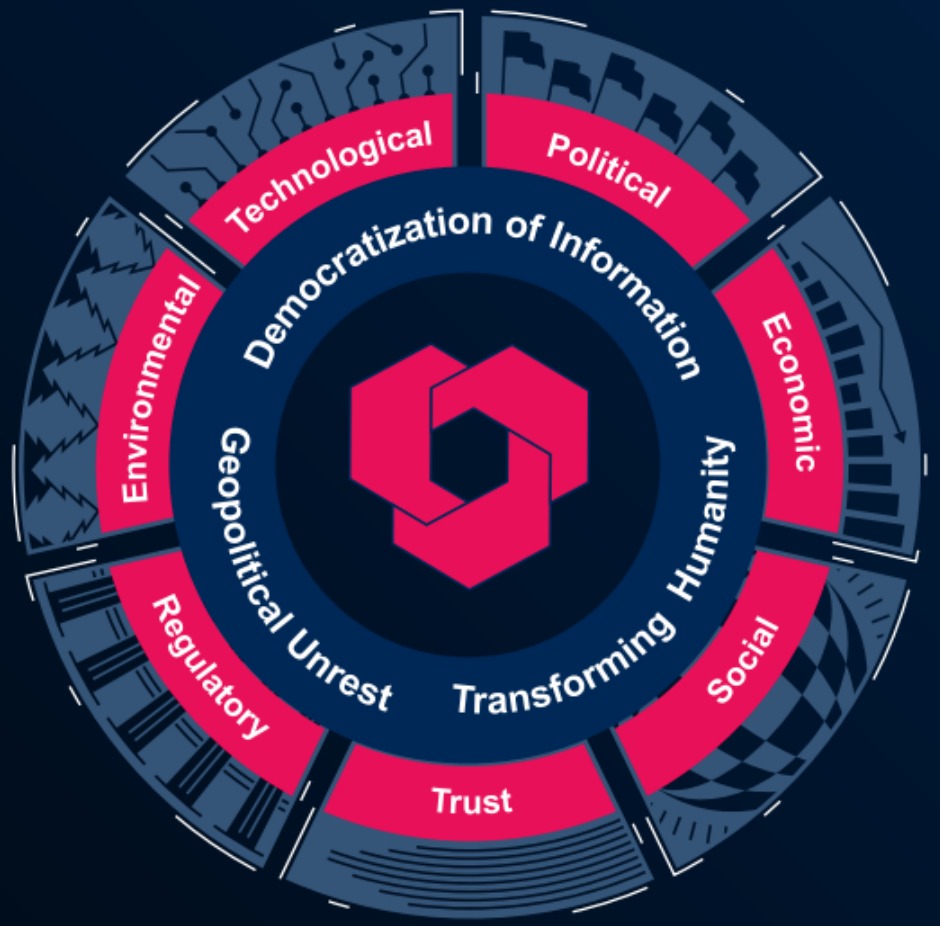
All the human, physical, financial and digital assets necessary to execute the value streams and processes.

Gartner

Enterprise approach : Strategic - Technical

Strategic

7 Forces Impacting Your Organization's Future



Technological: Evolution, impact and disruption of technology change

Political: Political attitudes, institutions and legislation shifting the political environment

Economic: Factors in the economic environment locally and globally that influence businesses and governments

Social: Attitudes, behaviors and lifestyles of individuals and groups in a society

Trust: Ethical expectations, behaviors, duties and biases of people and companies toward one another and society

Regulatory: Changes in laws and governmental policies and regulations to reward or punish a particular behavior

Environmental: Technical, political, economic, cultural, ethical and legal changes supporting environmental protection and sustainability

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Strategic

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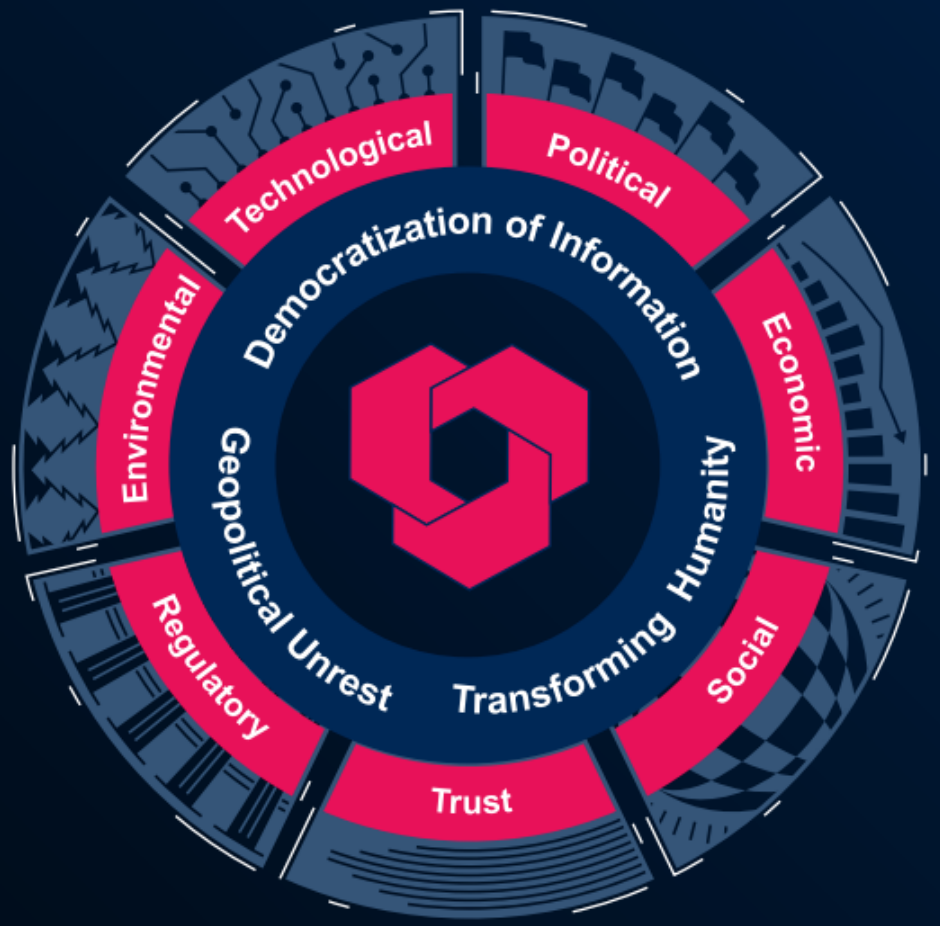

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