

2. CORE CONCEPTS

TOGAF Standard:-

- is an architecture framework.
- It provides the methods and tools for assisting in the acceptance, production, use, and maintenance of an Enterprise Architecture.

Architecture:-

- The fundamental concepts or properties of a system in its environment embodied in its elements, relationships, and in the principles of its design and evolution.

► Architecture domains:-

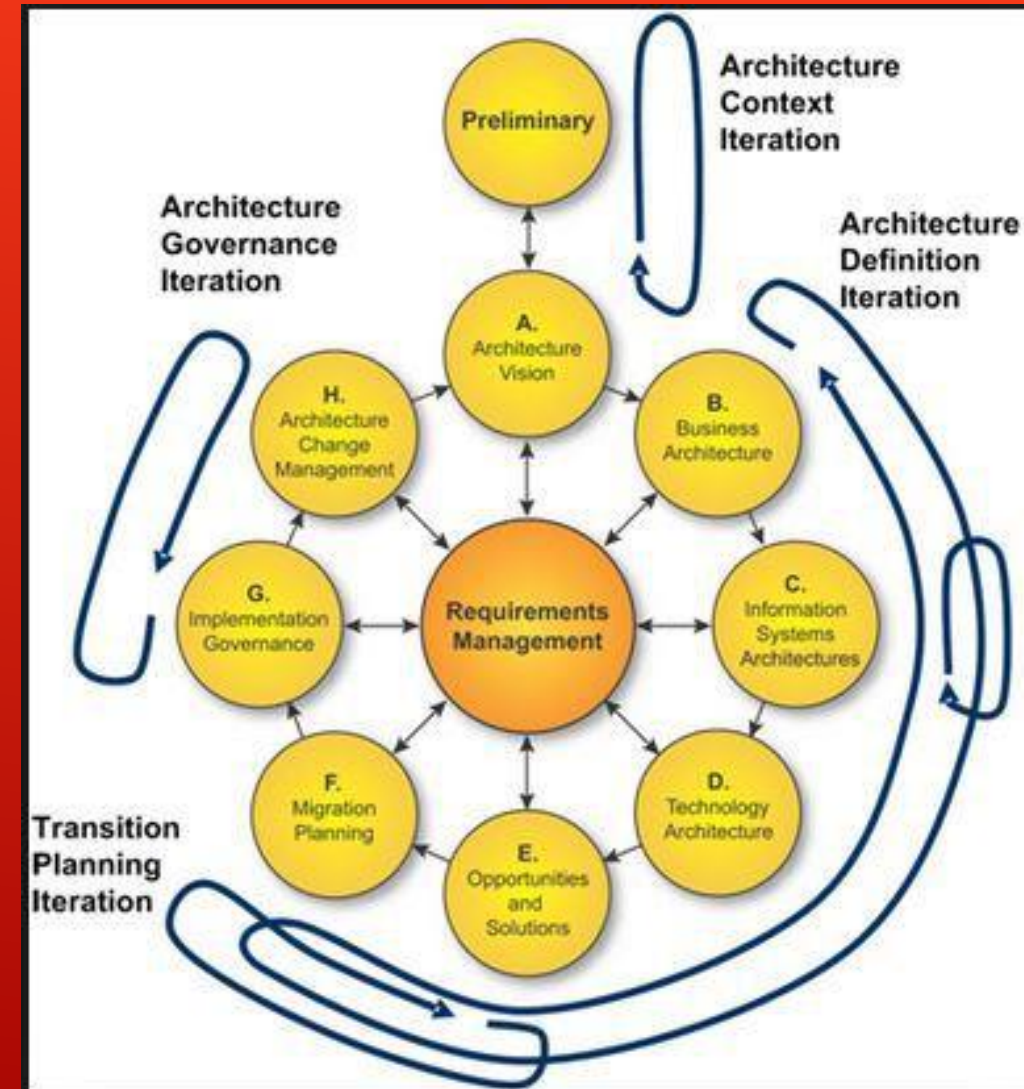
- **Business Architecture:** defines the business strategy, governance, organization, and key business processes
- **Data Architecture:** describes the structure of an organization's logical and physical data assets and data management resources
- **Application Architecture:** provides a blueprint for the individual applications to be deployed, their interactions, and their relationships to the core business processes of the organization
- **Technology Architecture:** describes the logical software and hardware capabilities that are required to support the deployment of business, data, and application services; this includes IT infrastructure, middleware, networks, communications, processing, standards, etc.

► Architecture Development Method (ADM):-

- provides a tested and repeatable process for developing architectures.

→ ADM Phases:-

- **Preliminary Phase** describes the preparation and initiation activities required to create an Architecture Capability
- **Phase A: Architecture Vision** describes the initial phase of an architecture development cycle
 - defining the scope
 - identifying the stakeholders
 - creating the Architecture Vision



- **Phase B: Business Architecture** describes the development of a Business Architecture to support the agreed Architecture Vision
- **Phase C: Information Systems Architectures** describes the development of Information Systems Architectures to support the agreed Architecture Vision
- **Phase D: Technology Architecture** describes the development of the Technology Architecture to support the agreed Architecture Vision
- **Phase E: Opportunities & Solutions** conducts initial implementation planning and the identification of delivery vehicles for the architecture defined in the previous phases
- **Phase F: Migration Planning** addresses how to move from the Baseline to the Target Architectures by finalizing a detailed Implementation and Migration Plan
- **Phase G: Implementation Governance** provides an architectural oversight of the implementation
- **Phase H: Architecture Change Management** establishes procedures for managing change to the new architecture
- **Requirements Management** examines the process of managing architecture requirements throughout the ADM

- ▶ **Deliverable** :- represent the output of projects
- ▶ **Artifact** :- classified as catalogs (lists of things), matrices (showing relationships between things), and diagrams (pictures of things).

Ex:-

- requirements catalog
- business interaction matrix
- use-case diagram

- ▶ **Building block** :- represents a (potentially re-usable) component of enterprise capability that can be combined with other building blocks to deliver architectures and solutions
 - * **Architecture Building Blocks (ABBs)**:- typically describe required capability and shape the specification of (SBBs)
 - * **Solution Building Blocks (SBBs)** represent components that will be used to implement the required capability

Enterprise Continuum:- is a view of the Architecture

Repository that provides methods for classifying
architecture and solution artifacts as they evolve from generic
Foundation Architectures to Organization-Specific Architectures.

- Architecture Continuum
- Solutions Continuum



► **Architecture Repository:-**store different classes of architectural output at different levels of abstraction, created by the **ADM**.

-**Architecture Metamodel:-** describes the organizationally tailored application of an architecture framework, including a metamodel for architecture content

-**Architecture Capability:-** defines the parameters, structures, and processes that support governance of the Architecture Repository

-**Architecture Landscape:-** is the architectural representation of assets deployed within the operating enterprise at a particular point in time

-**Standards Information Base (SIB):-** captures the standards with which new architectures must comply استجاب

-**Reference Library:-** provides guidelines, templates, patterns, and other forms of reference material that can be leveraged in order to accelerate the creation of new architectures for the enterprise

-**Governance Log:-** provides a record of governance activity across the enterprise

-**Architecture Requirements Repository:-** provides a view of all authorized architecture requirements

-**Solutions Landscape:-** presents an architectural representation of the **SBBs** supporting the Architecture Landscape which have been planned or deployed by the enterprise

► Establishing and Maintaining an Enterprise Architecture Capability:-

In order to carry out architectural activity effectively within an enterprise, it is necessary to put in place an appropriate business capability for architecture, through organization structures, roles, responsibilities, skills, and processes.

→ TOGAF Architecture
Capability

► The benefits of Architecture Governance include:

- Increased transparency of accountability, and informed delegation of authority
- Controlled risk management
- Protection of the existing asset base through maximizing re-use of existing architectural components
- Proactive control, monitoring, and management mechanisms
- Process, concept, and component re-use across all organizational business units
- Value creation through monitoring, measuring, evaluation, and feedback
- Increased visibility supporting internal processes and external parties' requirements
- Greater shareholder value
- Integrates with existing processes and methodologies and complements functionality by adding control capabilities

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3. DEFINITIONS

Abstraction:-

- The technique of providing summarized or generalized descriptions of detailed and complex content.

Actor:-

- A person, organization, or system that has one or more roles that initiates or interacts with activities.
- **Actors** may be internal or external to an organization.

Application Architecture:-

- A description of the structure and interaction of the applications as groups of capabilities that provide key business functions and manage the data assets.

Application Component:-

- An encapsulation of application functionality aligned to implementation structure, which is modular and replaceable.

EX:- a business application such as an accounting, or payroll.

Application Platform:-

- The collection of technology components of hardware and software that provide the services used to support applications.

Architectural Style:-

- a collection of principles and characteristics that constrain how an architecture is formed.

Architecture:-

- The structure of components, their inter-relationships, and the principles and guidelines governing their design and evolution over time.
- The fundamental concepts or properties of a system in its environment embodied in its elements, relationships, and in the principles of its design and evolution.

Architecture Building Block (ABB):-

- A constituent of the architecture model that describes a single aspect of the overall model.

Architecture Continuum:-

- A part of the Enterprise Continuum. A repository of architectural elements with increasing detail and specialization

Architecture Development Method (ADM):-

- The core of the TOGAF framework.
- A multi-phase, iterative approach to develop and use an Enterprise Architecture to shape and govern business transformation and implementation projects.

Architecture Landscape:-

- The architectural representation of assets in use, or planned, by the enterprise at particular points in time.

Architecture Model:-

- A representation of a subject of interest.
- provides a smaller scale, simplified, and/or abstract representation of the subject matter.

Architecture Principle:-

- A qualitative statement of intent that should be met by the architecture.
- = set of principles that relate to architecture work.

Architecture View:-

- A representation of a system from the perspective of a related set of concerns.

Architecture Viewpoint:-

- A specification of the conventions for a particular kind of architecture view.

Architecture Vision:-

- A description of the Target Architecture that describes its business value and the changes to the enterprise that will result from its successful deployment.

Artifact:-

- An architectural work product that describes an aspect of the architecture.

Baseline:-

- A specification that has been formally reviewed and agreed upon.
- thereafter serves as the basis for further development or change.
- it can be changed only through formal change control procedures or a type of procedure such as configuration management.

Boundaryless Information Flow:-

- A shorthand representation of "access to integrated information to support business process improvements"
- representing a desired state of an enterprise's infrastructure specific to the business needs of the organization.

Building Block:-

- A (potentially re-usable) component of enterprise capability that can be combined with other building blocks to deliver architectures and solutions.

3. DEFINITIONS

- **Business Capability:-**

- A particular ability that a business may possess or exchange to achieve a specific purpose.

- **Business Function:-**

- Delivers business capabilities closely aligned to an organization, but not necessarily explicitly governed by the organization.

3. DEFINITIONS

- **Business Governance:-**

- Concerned with ensuring that the business processes and policies (and their operation) deliver the business outcomes and adhere to relevant business regulation.

- **Business Model:-**

- A model describing the rationale for how an enterprise creates, delivers, and captures value.

3. DEFINITIONS

- Business Service:-

- Supports business capabilities through an explicitly defined interface and is explicitly governed by an organization.

- Capability:-

- An ability that an organization, person, or system possesses.

EX:- Enterprise Architecture, marketing, customer contact, or outbound telemarketing.

3. DEFINITIONS

- **Capability Architecture:-**

- A highly detailed description of the architectural approach to realize a particular solution or solution aspect.

- **Capability Increment:-**

- A discrete portion of a capability architecture that delivers specific value.
- When all increments have been completed, the capability has been realized.

3. DEFINITIONS

- **Communications and Stakeholder Management:-**

- The management of needs of stakeholders of the Enterprise Architecture practice.
- manages the execution of communication between the practice and the stakeholders and the practice and the consumers of its services.

- **Concern:-**

- An interest in a system relevant to one or more of its stakeholders.
- Concerns may pertain to any aspect of the system's functioning, development, or operation, including considerations such as **performance, reliability, security, distribution, and evolvability** and may determine the **acceptability of the system**.

3. DEFINITIONS

Course of Action:-

- Direction and focus provided by strategic goals and objectives, often to deliver the value proposition characterized in the business model.

Foundation Architecture:-

- Generic building blocks, their inter-relationships with other building blocks, combined with the principles and guidelines that provide a foundation on which more specific architectures can be built.

3. DEFINITIONS

- **Gap:-**

- A statement of difference between two states.
- the difference between the **Baseline and Target Architecture**.

- **Governance:-**

- The discipline of monitoring, managing, and steering a business (or IS/IT landscape) to deliver the business outcome required.

3. DEFINITIONS

- **Information:-**

- Any communication or representation of facts, data, or opinions, in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audio-visual forms.

- **Information System Service:-**

- A discrete behavior requestable from an application (e.g., log in, book train seat, transfer money).
- The automated elements of a business service.

3. DEFINITIONS

- **Information Technology (IT):-**

- The lifecycle management of information and related technology used by an organization.
- An umbrella term that includes all or some of the subject areas relating to the computer industry:
 - Business Continuity, Business IT Interface, Business Process Modeling and Management, Communication, Compliance and Legislation, Computers, Content Management, Hardware, Information Management, Internet, Offshoring, Networking, Programming and Software, Professional Issues, Project Management, Security, Standards, Storage, Voice and Data Communications.