Enterprise Continuum:

It is usually impossible to create a single unified architecture that meets all requirement of all stakeholders for all time. Therefore the Enterprise Architecture will need to deal not just with Enterprise Architecture but with many related Enterprise architecture.

Each architecture will have a different purpose and architecture will relate to one another.

Effectively bounding the scope of an architecture is therefore a Critical Success Factor (CSF) in allowing architectures to break down a complex problem space into manageable components that can be individually addressed.

Enterprise continuum provides method for classifying architecture and solution artifacts both internal and external to the architecture repository, as they evolve from generic foundation architecture to organization specific architecture.

The Enterprise Continuum enables the architect to articulate the broad perspective of what, why and how the Enterprise Architecture has been designed with factors and drivers considered.

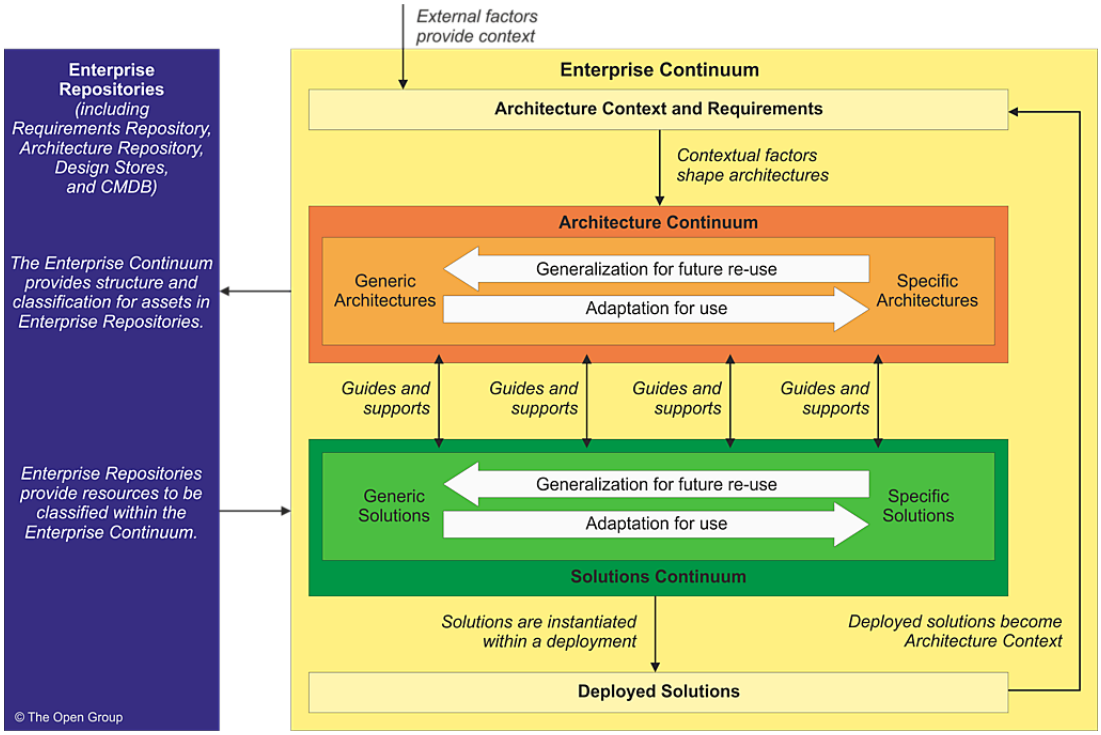
Enterprise continuum is an important aid to communication and understanding both within individual enterprise, and between customer enterprise and vendor organization. Without an understanding of "Where in the continuum you are" people discussing architecture can often talk at cross purposes because they are referencing different point in the continuum at same time without realizing it.

Any architecture is context specific for example there are architectures that are specific to individual customer, industries, subsystems, products or services.

Enterprise Continuum and Architecture Re-Use : The simplest way of thinking of the Enterprise Continuum is as a view of the repository of all the architecture assets.
It contains architecture descriptions, models, building blocks, patterns, architecture viewpoints, and other artifacts that exist both within enterprise and IT industry at large.

Example of internal architecture and solution artefacts are the deliverables of previous architecture work, which are available for re-use.

Example of external architecture and solution artifacts are wide variety of industry reference models and architecture pattern that exist and are continuously emerging, including those that are generic, those that are specific to certain aspect of IT (such as web service architecture, or generic manageability architecture) etc.



The Enterprise continuum is partitioned into three distinct Continua as follows:

1. Enterprise Continuum : outermost continuum and classifies the assets related to the context of overall Enterprise Architecture.

   Enterprise continuum classes of assets may influence architecture, but are not directly used during the ADM.

   The Enterprise Continuum classifies contextual assets used to develop architecture, such as policies, standards, strategic initiative, organization structure and enterprise level capabilities.

   Enterprise Continuum contains two specialization namely Architecture and Solution Continua.

1. Architecture Continuum : Offer a consistent way to define and understand the generic rules, representation and relationship in architecture, including traceability and derivation relationship.

   Architecture continuum represents a structuring of ABB which is re-usable architecture assets.

1. Solution Continuum : Provides a consistent way to describe and understand the implementation of assets defined in Architecture Continuum.

   Solution continuum defines what is available in the Organizational environment as re-usable SBBs.
   Solutions are result of agreement between customer and business partner that implement the rules and relationship defined in the architecture space.

   Solution Continuum addresses the commonalities and difference among the product, system and services of implemented system.

The Enterprise Continuum is intended to represent the classification of all assets that are available to an enterprise. It classifies assets that exist within the enterprise along with other assets in the wider environment that are relevant to enterprise, such as product, research, market factors, commercial factors, business architecture and legislation.

Architectures are fundamentally shaped by concerns outside the practice of architecture and it is therefore of paramount importance that any architecture must accurately reflect external context.

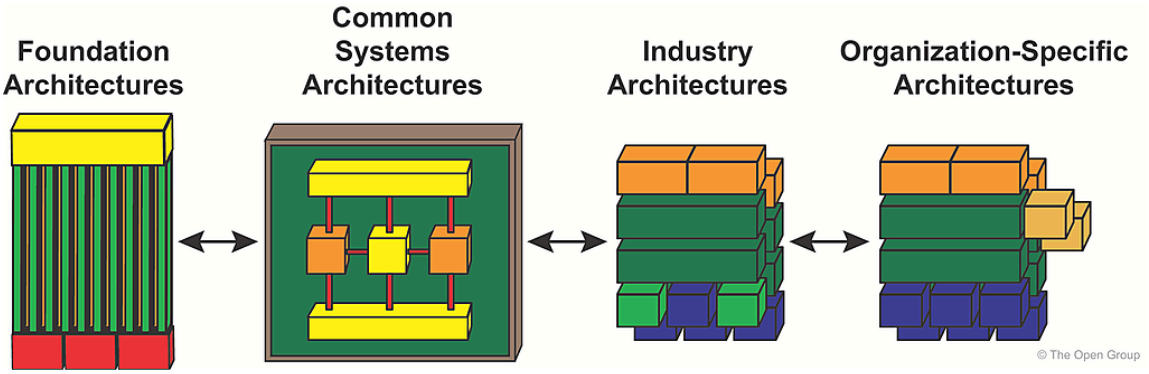
Typical contextual factors include:

- External influencing factors, such as regulatory change, technological advances and competitor activity.
- Business strategy and context including mergers, acquisitions and other business transformation requirement.
- Current business operations, reflecting deployed architectures and solutions.

ABBs are defined in relation to a set of contextual factors and then realized through SBBs.

SBBs are live solutions and becomes part of baseline operating model of the enterprise.

Architecture Continuum : Illustrates how architectures are developed and evolved across a continuum ranging from Foundation, through Common system, industry and to an enterprise's own Organization specific architecture.



Architect will look to find re-usable architectural elements towards left of the continuum. When elements are not found the requirement for missing elements are passed to the left of the Continuum for incorporation.

Evolutionary transformation continuum does not represent formal process, it does represent a progression which occurs at several levels:

- Logical to Physical
- Horizontal (IT Focused) to Vertical (Business focused)
- Generalization to Specialization
- Taxonomy to complete and specific architecture specification.

Foundation architecture : Consists of generic components, inter-relationship, principles and guidelines that provides a foundation on which more specific architecture can be built.

Common System architecture : Guide the selection and integration of specific services from Foundation architecture to create an architecture useful for building common solution across a wide number of relevant domains.

Ex : Security architecture, management architecture, network architecture, an operations architecture etc.

Industry architecture : Guide the integration of Common system components with industry specific components and guide the creation of industry solutions for targeted customer problems within a particular industry.

Ex : Data model representing business function and process specific to a particular vertical industry

Organization specific Architecture : Organization specific architectures describe and guide the final deployment of Solution components for a particular enterprise or extended network of connected enterprise.

There may be a variety of Organization specific architecture that are needed to effectively cover Organizations' requirement by defining the architecture in increasing level of detail.

Solution Architecture : Solutions architecture represents the detailed specification and construction of architecture at the corresponding level of Architecture Continuum.
At each level, the solution continuum is a population of architecture with reference building block - either purchased product or built components. Populate repository based on Solution Continuum can be regarded as a solution inventory or re-use library, which can add significant value to task of managing and implementing improvements to the enterprise.

Foundation Solutions : Very generic concepts, tools, products, services and solution component that are the fundamental providers of capabilities.

Common System solutions : is an implementation of Common Systems architecture comprised of a set of product and services.
Common system solution represents collections of common requirements and capabilities rather than those specific to a particular customer or industry.

Industry solution : Industry solution is an implementation of an industry architecture, which provide re-usable packages of common components and services specific to industry.

Organization specific solution : Implementation of Organization specific architecture that provide the required business function.

Relationship :

- Enterprise Continuum provides an overall context for architectures and solutions and classifies assets that apply across the entire scope of enterprise
- Architecture continuum provides a classification mechanism for assets that collectively define the architecture at different level of evolution from generic to specific
- Solution continuum provides the classification for assets to describe specific solution for organization that can be implemented to achieve the intent of the architecture.

36. Architecture Partitioning

Partitioning is used to simplify the development of EA.

Partitioning lies at foundation of Architecture Governing and are distinct from levels and organizing concepts of Architecture Continuum.

Architecture are partitioned because:

- Organizational unit architecture conflict with one another
- Different team need to work on different element of architecture at same time and partition allows for specific group of architecture to own and develop specific elements of architecture.
- Effective architecture re-use requires modular architecture segment that can be taken and incorporated into broader architecture and solution.

It is valuable to partition and organize the Enterprise Continuum into a set of related Solutions and architectures with

- Manageable complexity for each individual architecture and solution
- Defined grouping
- Defined hierarchies and navigation structures
- Appropriate processes, roles and responsibilities attached to each grouping

Classification criteria that can be used to support partitioning of solutions:

Characteristics	Usage Support solution partitioning
Subject Matter (Breadth)	Solution are naturally organized into groups to support management and control. Example of Solution partitions

	according to subject matter would include applications, department , divisions, products, service centres, sites etc.
Time	Solution lifecycle are typically organized around different timeline, which allows the impact of solution developement, introduction operation and retirement to be managed against other business activity occurring in similar time periods
Maturity / Volatility	Maturity and volatility of a solution will typically impact the speed of execution required for the solution lifecycle. Additionally, volatility and maturity will shape investment priorities, solutions existing in highly volatile environments may be better suited to rapid, agile development techniques.
Depth	The level of detail within an architecture has a strong correlation to the stakeholder group that will interested in the architecture. Typically less detailed architecture will be of interests to executive stakeholder. As architectures increases in detail their relevance to implementation and operation personnel will also increase.

Key objective of preliminary phase is to establish "Architecture Capability" for enterprise. In practical terms this activity will require establishing a number of architectural partitions, providing defined boundaries, governance and ownership.

If more than one team is expected to work on a single architecture, this can become problematic, as precise responsibility of each team are difficult to establish. For this reason partitioning of architecture is app.

Steps within the preliminary phase to support architecture partitioning are as follows:

- Determine the organization structure for architecture within the enterprise - The various standing team that will create the architecture should be identified.

For each of these teams, appropriate boundaries should be established, including:

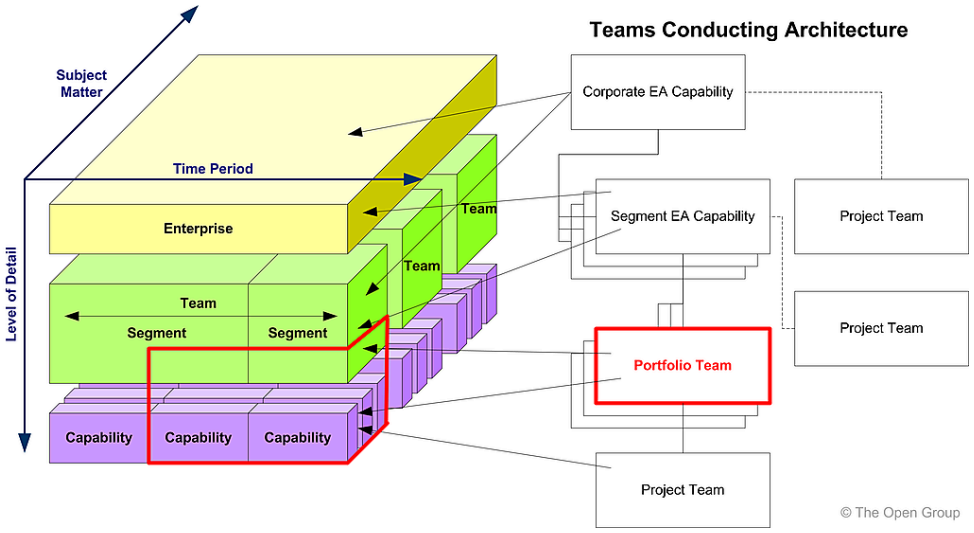
- Governance bodies that are applicable to the team
- Team membership
- Team reporting line.

- Determine the responsibilities for each standing architecture team : for each architecture team, the responsibilities should be identified:'

This step applies partitioning logic to EA in order to firstly identify the scope of each team and secondly to partition the architecture under the remit of a single team. Once complete, this step should have partitioned the entire scope of enterprise and should have assigned responsibility for each partitioned architecture to a single team. Partitioning should include:

- Subject matter area being covered
- Level of detail at which the team will work
- Time period to be covered
- Stakeholders

- Determine relationship between architectures : This step allows governance relationship to be formalized and also shows where artifacts from one architecture are expected to re-used within other architectures. Areas of consideration:
    - Where do different architectures overlap/dovetail/ drill -down?
    - What are the compliance requirement between architectures?



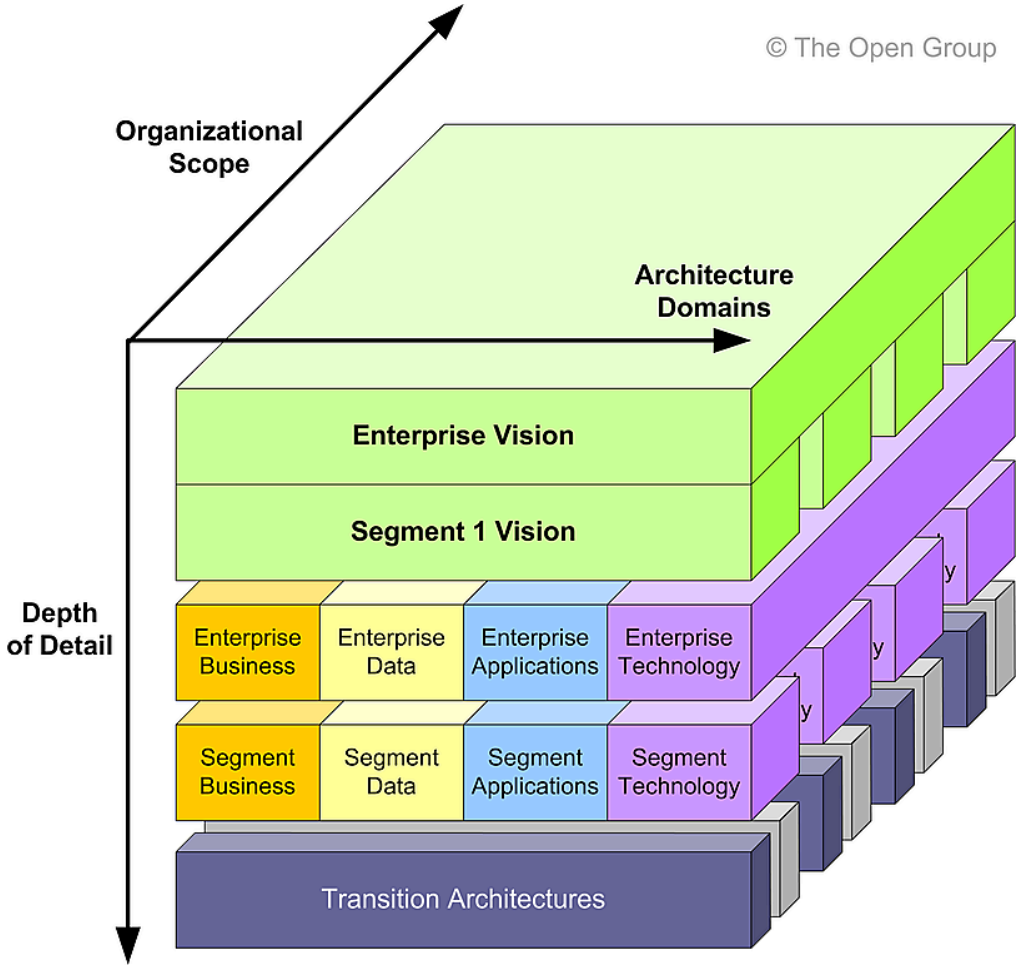
For large complex enterprises, federated architectures - independently developed, maintained, and managed architectures that are subsequently integrated within an integration framework - are typical.

Such a framework specifies the principles for interoperability, migration and conformance. This allows specific business unit to have architectures developed and governed as standalone architecture projects.

In order to mitigate against risk, standards for content integration should be defined and architecture governance should address content integration as condition of architecture compliance.

Integration can be addressed from a number of dimensions:

- Integration across the enterprise domains provided a cross domain view of state of segment of the enterprise for a point in time.
- Integration across the organizational scope of business provides a cross segment view of the enterprise.
- Architecture vision provides an integrated summary of architecture definition which provide an integrated summary of transitions architectures.



37. Architecture Repository

Architecture repository allows an enterprise to distinguish between different types of architectural assets that exists at different levels of abstraction in an organization.

Architecture repository is one of the part of the wider Enterprise Repository which provides the capability to link architectural assets to components of the detailed design, deployment and service management repository.

At a high level following classes of architectural information are expected to be held within an Architecture repository:

- Architecture metamodel : Describes organizationally tailored application of an architecture framework, including a method for architecture development and a metamodel for architecture content.

- Architecture capability : Defines the parameters, structures and processes that support governance of Architecture Repository.

- Architecture Landscape : Presents an architectural representation of assets in use or planned, by the enterprise at particular point in time.

- Standard Information Base : Captures the standards with which new architecture must comply, which include industry standard, selected products and services from suppliers or shared services already deployed within an organization.

- Reference Library : Provides guidelines, templates, pattern and other forms of reference material that can be leveraged in order to accelerate the creation of new architecture for enterprise.

- Governance logs : Provides a record of governance activity across the enterprise.

- Architecture Requirement Repository : Provides a view of all authorized architecture requirements which have been agreed with Architecture Authority.

- Solution Landscape : Presents an architectural representation of SBBs supporting the Architectural Landscape which have been planned or deployed by enterprise.

Architectural Landscape : Holds architectural views of the state of the enterprise at particular point in time. Due to the sheer volume and volume and diverse stakeholder need throughout at entire enterprise, the architecture landscape is divided into three levels of granularity.

- Strategic Architecture : Shows long term summary view of entire enterprise.
  Strategic architecture provides an organizing framework for operational and change activity and allows for direction setting at an executive level.

- Segment architecture : More detailed operating model for areas withing an enterprise.
  Segment architecture can be used at program or portfolio level to organized and operationally assign more detailed change activity.

- Capability architecture : Shows in a more detailed fashion how the enterprise can support a particular unit of capability.
  Capability architectures are used to provide an overview of current capability, target capability and capability increments and allow for individual work packages and projects to be grouped whin managed portfolio and programs

Reference library : Provides a repository to hold reference material that should be used to develop architectures. Reference material held may be obtained from variety of source including :

- Standard bodies
- Product and service vendor
- Industry communities and forums
- Standard templates
- Enterprise best practice.

Reference library should contain:

- Reference architecture
- Reference model
- Viewpoint library
- Templates

Standard Information base : Provides a repository area to hold a set of specification, to which architecture must conform.

Establishment of SIB provides an unambiguous basis for Architecture Governance Because :

- The standards are easily accessible to projects and therefore the obligations of the projects can be understood and planned for
- Standard are stated in a clear unambiguous manner, so that compliance can be objectively assessed.

Types of Standards:

- Legal and regulatory obligations
- Industry standard
- Organization standard

Standards Lifecycle : Typically, standards pass through the following steps

- Proposed Standards
- Provisional Standards (Trial Standard)
- Standard (also known as Active Standard)
- Phasing out standards (Deprecated standard)
- Retired standard (Obsolete Standard)

Standard classification within the SIB : Categorized according to Building block.

- Business standard
  - Standard shared business functions
  - Standard roles and actor definitions
  - Security and governance standard for business activity

- Data standard
  - Standard coding and value for data
  - Standard structure and formats for data
  - Standard for origin and ownership of data.
  - Restriction on replication and access

- Application standard
  - Standard/shared application supporting specific business function
  - Standard for application communication and interoperation
  - Standard for access, presentation and style

- Technology standard
  - Standard hardware products
  - Standard software products
  - Standards for software development.

Governance log : Governance log provides a repository to hold shared information relating to ongoing governance of projects.

Maintaining shared repository of governance information is important because:

- Decision made during project are important to retain and access on an ongoing basis.
- Many stakeholders are interested in outcome of project governance.

Content of Governance Log :

- Decision log
  - Product selection
  - Justification for major architectural features of projects
  - Standard deviations

    - Standard lifecycle changes
    - Change request evaluations and approvals
    - Re-use assessments

- Compliance assessments : at key checkpoint milestones in the project of a project, a formal architecture review will be carried out.
    - Project overview
    - Progress overview (timeline, status, issues, risks, dependencies etc)
    - Complete architecture checklist
    - Standard compliance assessment
    - Recommended actions
- Capability assessments : Depending on their objectives, some projects will carry out assessments of business , IT or architecture capability
    - Template and reference model for executing capability assessments
    - Business capability assessments
    - IT Capability assessments
    - Architecture maturity assessments.

- Calendar : Calendar should show a schedules of in-flight projects and formal review sessions to be held against these projects

- Project portfolio : Project portfolio should hold summary information about all in-flight project that fall under architecture governance including:
    - The name and description of the project
    - Architecture scope of the project
    - Architectural roles and responsibilities associated with the project

- Performance measurement :

Architecture requirement repository :

Content of Architecture Requirements Repository :

- Strategic Architecture Requirements : Shows long term summary view of the requirements for the entire enterprise.

- Segment Architecture Requirements: Provides more detailed operating model requirement for areas within an enterprise.

  Segment architecture requirement may identify requirements at the program or portfolio level to identify and align more detailed change activity.

- Capability Architecture requirements

  Strategic architecture requirements identify operational and change requirement for direction setting at an executive level.

Solution landscape : Holds SBBs which support the ABBs specified, developed and deployed.
The building block may be products or services which may be categorized according to Enterprise continuum categorization and/or ABB specification as Strategic, Segment or Capability SBBs.

SBBs may also include tools, systems, services and information which describe the actual solutions that may be selected and their operation.