Module 18 : Architecture Content Framework

How to Proceed :

A. Part 1 : First read the immediate portion, which is a Summary portion : Part 1 is for reading right now

   This portion is important for

   1. Understanding TOGAF for practical purposes – Supplement class session understanding with this
   2. For Certification purposes, Level 1 and Level 2

B. Part 2 : Go through and workout the exercises in the Part 2 : Module18Questions&Answers. Very helpful for Certification preparation

C. Part 3 : Later when you find more time, do go through portion which says Part 3 : Detailed Courseware. That portion is useful for getting extra grades in Certification and for more proper understanding of TOGAF. Some sections of it are quoted from internet sources and from good authors as discovered by our Participants in earlier courses.

Part 1 : Summary portion

You may like to first read this Quick Look : Glossary and Acronym

Metamodel : Is a model is a model of a model It is about the analysis, construction and development of the frames, rules, constraints, models and theories applicable for the actual model

Content Metamodel : In TOGAF, this section provides an overview of the objectives of the content metamodel, the concepts that support the metamodel, and an overview of the metamodel itself.

Core Content Metamodel Concepts : The TOGAF architecture is based on defining a number of architectural building blocks within architecture catalogs, specifying the relationships between those building blocks in architecture matrices, and then presenting communication diagrams that show in a precise and concise way what the architecture is.

This section introduces the core concepts that make up the TOGAF content metamodel, through the following subsections:

- Core and Extension Content provides an introduction to the way in which the TOGAF framework employs a basic core metamodel and then applies a number of extension modules to address specific architectural issues in more detail

- Core Metamodel Entities introduces the core TOGAF metamodel entities, showing the purpose of each entity and the key relationships that support architectural traceability

ADM produces

process flows, architectural requirements, project plans,

project compliance assessments etc.

Three categories of architectural product work are :

Deliverable : Contractually specified, formally reviewed , agreed , signed-off work product.

Artifact : Architectural work product describes an aspect of the architecture. Classified as catalogs , matrices , diagrams . E.g. Requirement catalog , business interaction matrix , use-case diagram

Building Block : Component (re-usable) of business , IT or architectural capability can combined with other BB to deliver architectures and solutions.

ABB typically describe required capability and shape the specification of Solution Building Blocks (SBB's) e.g. A customer services capability may be required within an enterprise supported by many SBBs. Such as processes, data and application software.

SBB represents components that will be used to implement the required capability.

Catalogs

- Specific foundation level representing lists of building blocks of a specific type, or of related types

For example

- Principles Catalog created in the Preliminary Phase
- Organization/Actor Catalog created in Phase B
- Driver/Goal/Objective Catalog

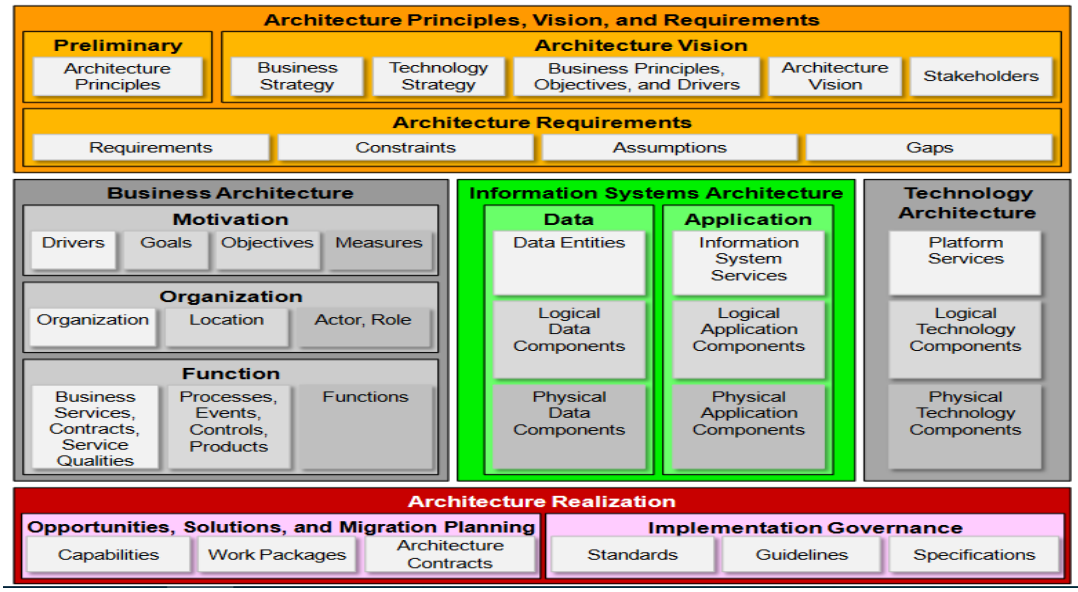
Matrices

- Specific foundation level show the relationships between building blocks of specific types
- Matrices are used to represent list-based rather than graphical-based relationships
- For example
  - The Stakeholder Map Matrix created in Phase A

Diagrams

- Graphical representing building blocks in a rich and visual way, especially suited to stakeholder communication.
- For example
  - Value Chain diagram created in Phase A
  - Business footprint diagram created in Phase B

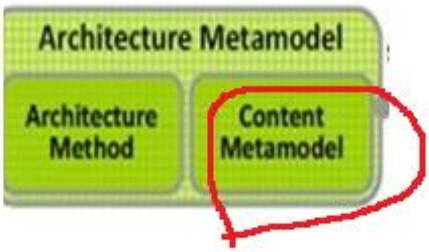
Building Block is a package of functionality defined to meet business needs across an organization. It has a type to correspond a TOGAF metamodel (such as actor, business service, data entity, software or infrastructure element)

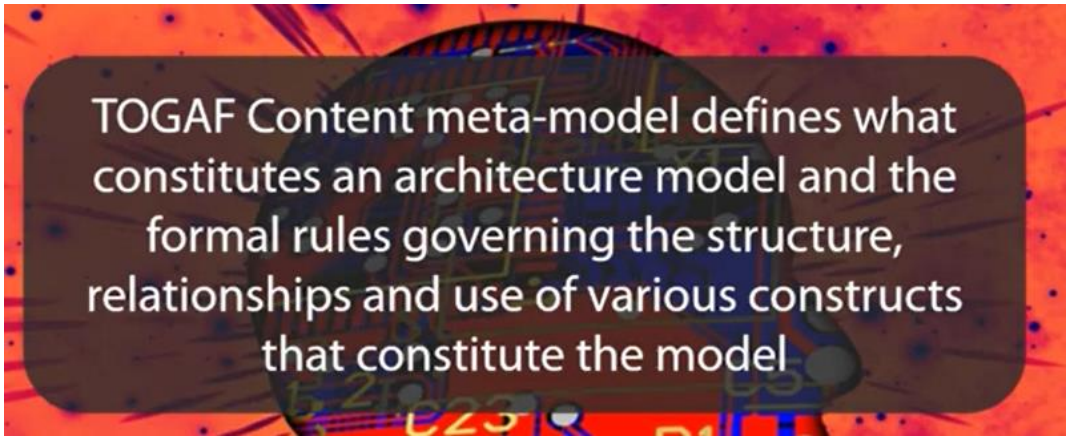


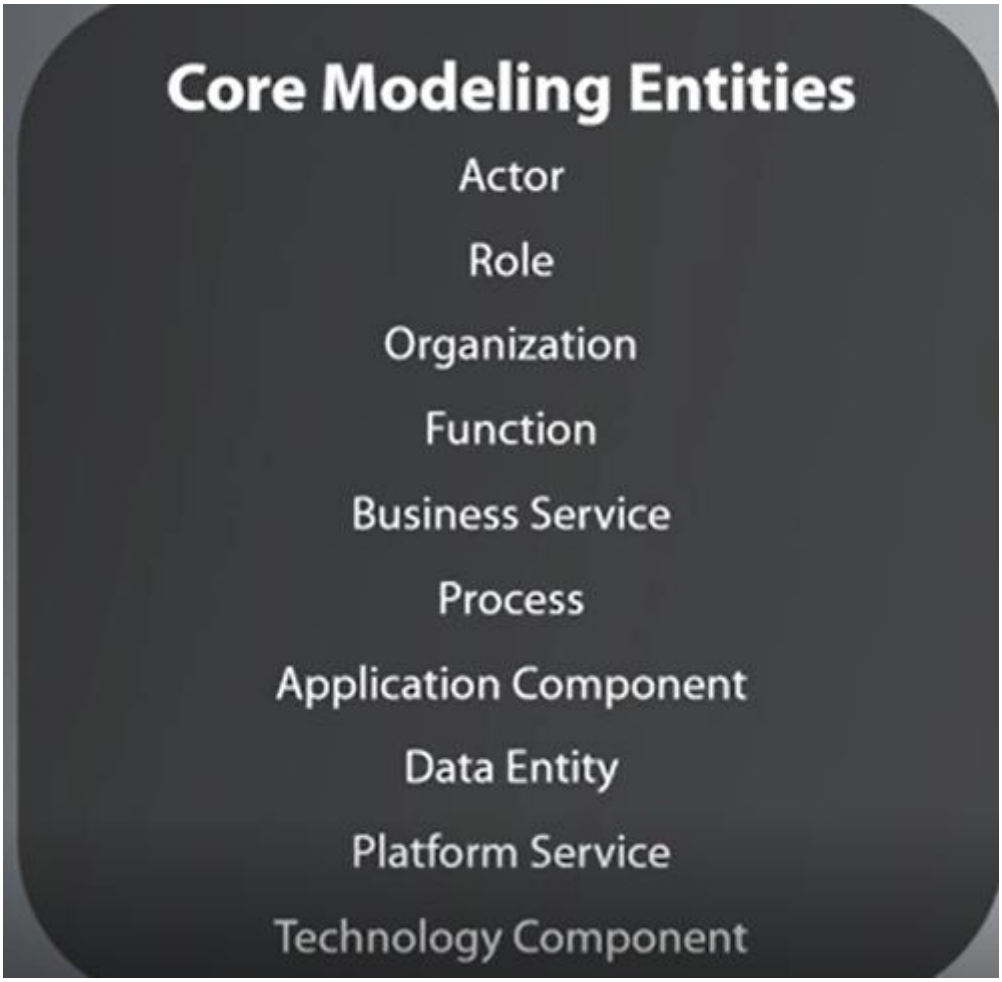
This is Content (Framework) Model.

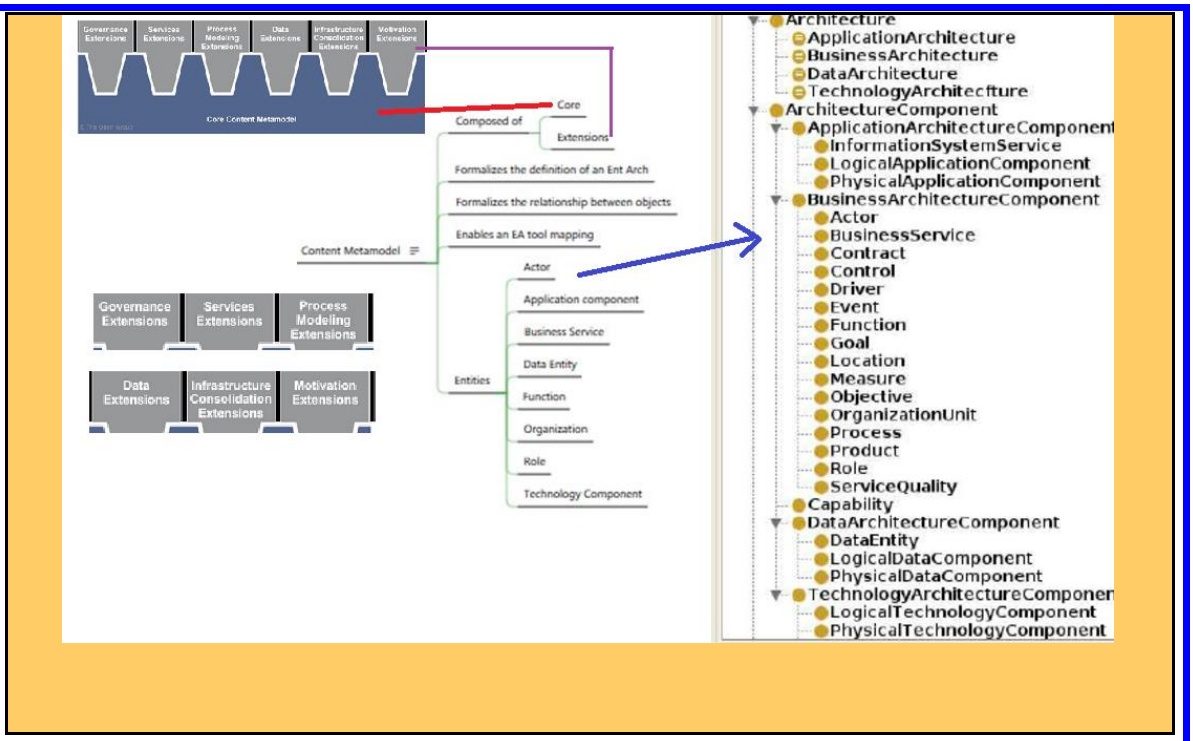
What then is Content Metamodel ?

The Content Metamodel provides a definition of all the types of Building Blocks that may exist within an architecture, showing how these Building Blocks can be described and related to one another.




TOGAF Content meta-model defines what constitutes an architecture model and the formal rules governing the structure, relationships and use of various constructs that constitute the model


Core Modeling Entities
Actor
Role
Organization
Function
Business Service
Process
Application Component
Data Entity
Platform Service
Technology Component



Examples :

Actor : A person, organization, or system that is outside the consideration of the architecture model, but interacts with it

Application Component : An encapsulation of application functionality that is aligned to implementation structure

Data Entity : An encapsulation of data that is recognized by a business domain expert as a discrete concept

Technology Service : A technical capability required to provide enabling infrastructure that supports the delivery of applications

Metamodel : Not a Model, but describes one Content Metamodel : Definition of all symbols used in Arch Modeling

Leads to a well-defined Content Framework

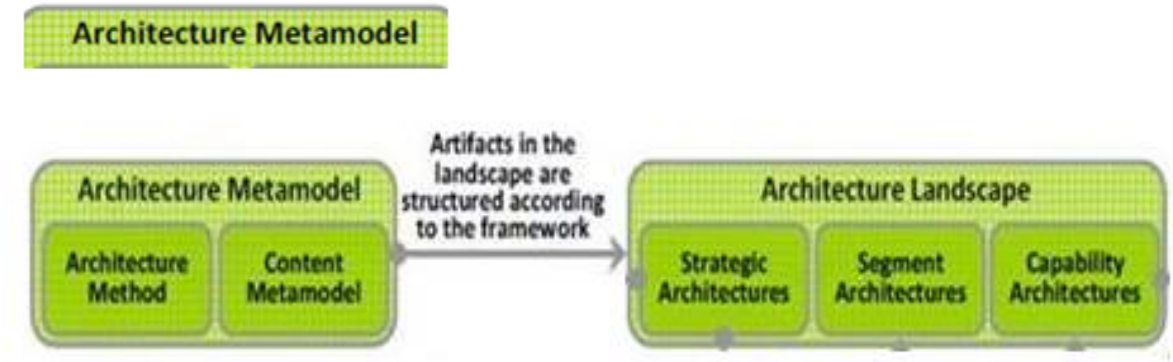
Think : Where does the entry of Metamodel fit in the overall TOGAF set of Components ?

Answer : In the Architecture Repository

"**Meta Model**" is something very specific: it defines the attributes of the **Building Blocks**, which is a set of generic "things": a database, a service, an "actor" (a person or a whole partner corporation), an application, a messaging system, a Content Management solution, etc.,

"Meta Model" is only a small part of the more general Architecture Repository.

The **Architecture Metamodel** describes the organizationally tailored application of an architecture framework, including a method for architecture development and a metamodel for architecture content.



MetaModel :

Architecture Metamodel, the Tailored TOGAF is what we refer for process steps throughout the ADM process

Content Metamodel is what we refer for "what goes where" when dealing with the Building Blocks of the Landscape when working throughout the ADM process

ABOVE QUESTION, IN LEVEL 1 :  1810

Q : One that describes how and with what the architecture will be described in a structured way.

A. Metamodel
B. Metadata
C. Architecture Continuum
D. Enterprise Continuum
E. TOGAF Reference Models

Answer : A

Explanation :

Anything that describes a "model" (describing how to arrive at a model) is a metamodel. This is like something that describes the data (database structure) is metadata (schema).

In Architecture Repository, we have a Architecture Metamodel section. Within that Content Metamodel is description of how each artifact in the Content Model (Content Framework) is.

The other metamodel is Architecture Metamodel. Since TOGAF documentation and process / structure as appearing in the official documentation has to be tailored to suit the Enterprise, the customized TOGAF document is called Architecture Method.

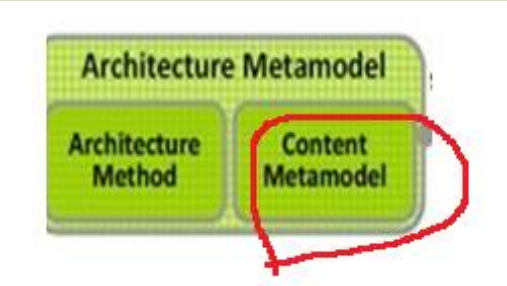
Section 3.50 : Metamodel

A model that describes how and with what the architecture will be described in a structured way.

Section 30.1 : Overview

The TOGAF Architecture Development Method (ADM) provides a process lifecycle to create and manage architectures within an enterprise. At each phase within the ADM, a discussion of inputs, outputs, and steps describes a number of architectural work products or artifacts, such as process and application.

The content metamodel provided here defines a formal structure for these terms to ensure consistency within the ADM and also to provide guidance for organizations that wish to implement their architecture within an architecture tool.



Following question, which HAS appeared in Level 2 Exams, is a clear example of how each and every Chapter of TOGAF documentation is IMPORTANT for Certification. It has appeared from a Chapter that is often ignored by those preparing for the Certification.

(Only snippets shown here. See the pdf file : AcrossAllModulesQuestions&Answers for full question and approach to answering it)

Part of the Scenario appears as :

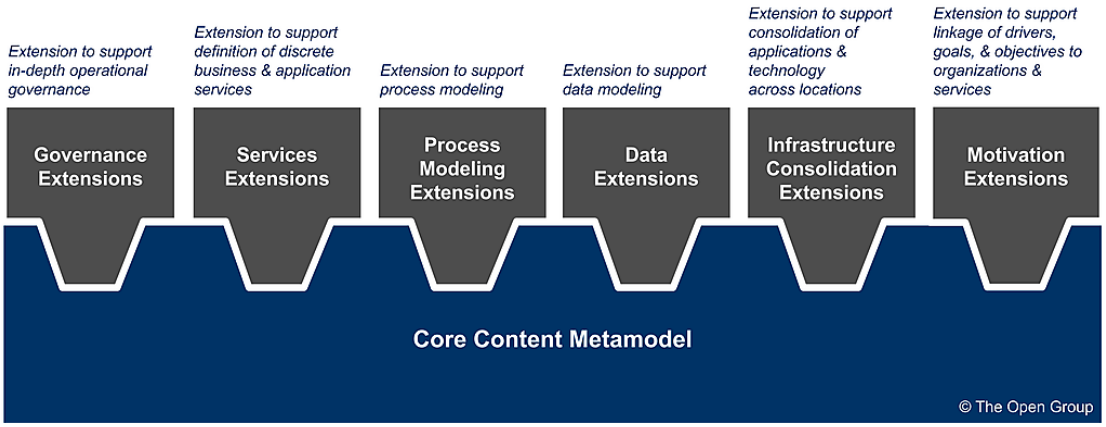
Since reliable, high-performance, and secure communications are essential to preserving national security, the Executive Director has placed more stringent requirements for the architecture for the upgraded system. It must be able to provide assurance and verification of specific performance measures on the key services that are most crucial for system operation.

The Chief Architect has noted that the core EA artifacts that have been used since TOGAF 9 was introduced are not adequate to describe these new capabilities. The artifacts do not have explicit provisions for defining the in-depth measurement requirements regarding specific services required for the system.

You have been asked to make recommendations for tailoring the Architecture Content Metamodel to accommodate the requirements of the upgraded system.

Please go through Chapter 30. Content Metamodel in TOGAF documentation and understand more about points.

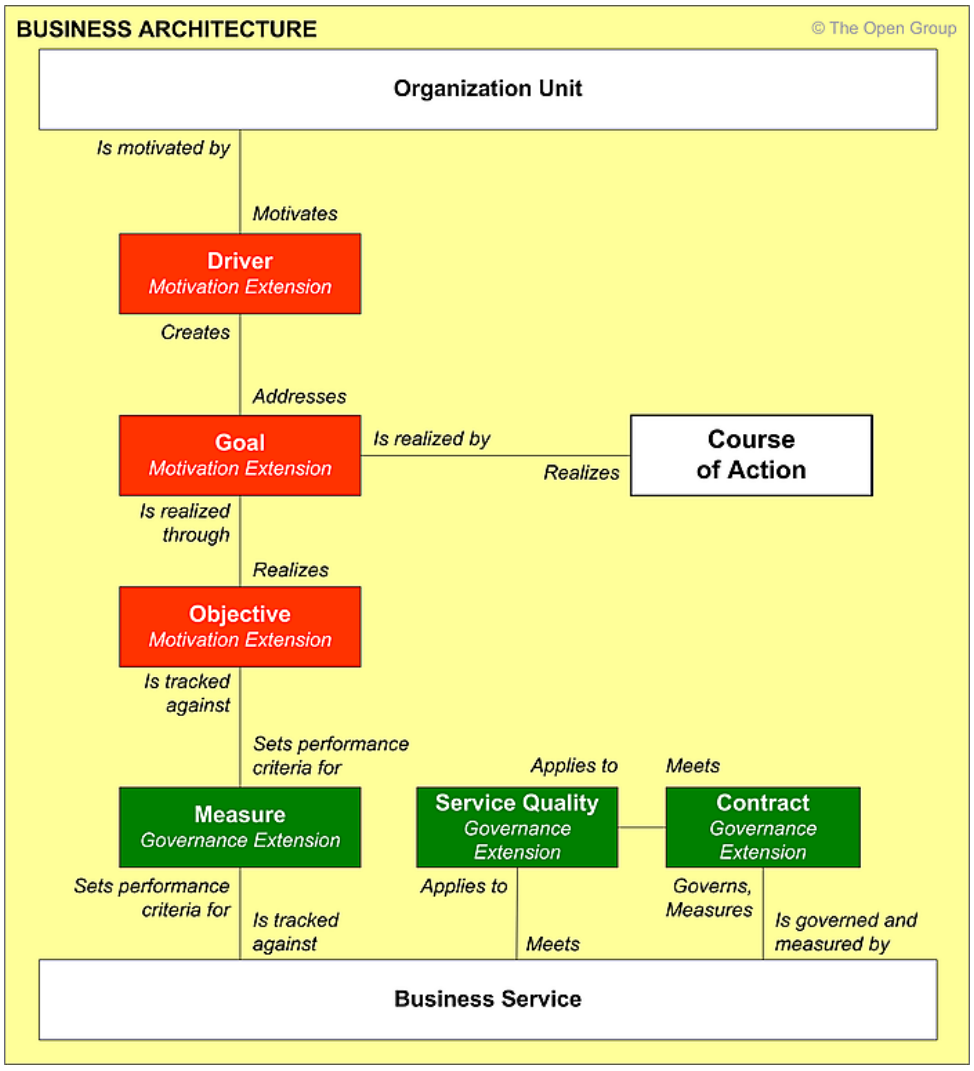
30.4 Content Metamodel Extensions



Some of these are mentioned in the boxes appearing below.

Governance Extensions : to allow additional structured data to be held against objectives and business services, supporting operational governance of the landscape.

- to apply measures to objectives and then link those measures to services
- to apply contracts to service communication or service interactions with external users and systems
- to define re-usable service qualities defining a service-level profile that can be used in contracts



This extension should be used in the following situations :

- When an organization is considering IT change that will result in a significant impact to existing operational governance models
- When an organization has granular requirements for service levels that differ from service to service
- When an organization is looking to transform its operational governance practice
- When an organization has very strong focus on business drivers, goals, and objectives and how these trace to service levels

Relating to the **Case Study**

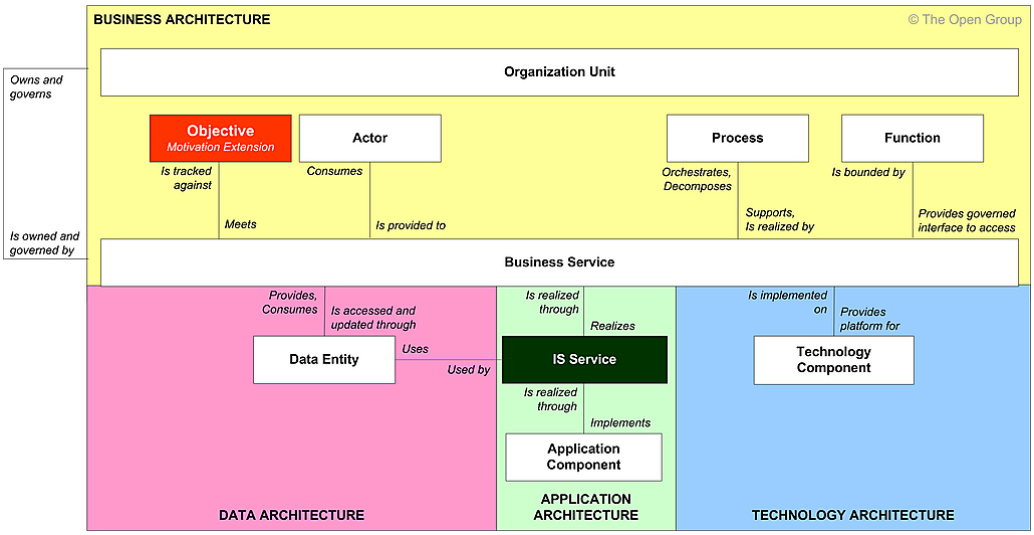
Nice to Know Box

Points of Essence :

The EAs added extensions relating to service levels which were defined in a more structured way, with re-use potential of the service profiles across contracts, which in turn span across various Portfolios.

Infrastructure Services, such as SRE (Site Reliability Engineering) with Observability (measures to get the internal states of the service determined by its external outputs – say using Kalman's test) were introduced. Multiple Observability areas such as Log Aggregation, Health Check API and services, Exception Tracking Services and Distributed Tracing Services were emphasized.

Services Extensions : to allow more sophisticated modelling of the service portfolio by creating a concept of Information System (IS) services in addition to the core concept of business services.



This extension should be used in the following situations :

- When the business has a preset definition of its services that does not align well to technical and architectural needs
- When business and IT use different language to describe similar capabilities
- Where IT service is misaligned with business need, particularly around the areas of quality of service, visibility of performance, and management granularity
- Where IT is taking initial steps to engage business in discussions about IT architecture

Relating to the **Case Study**

Nice to Know Box

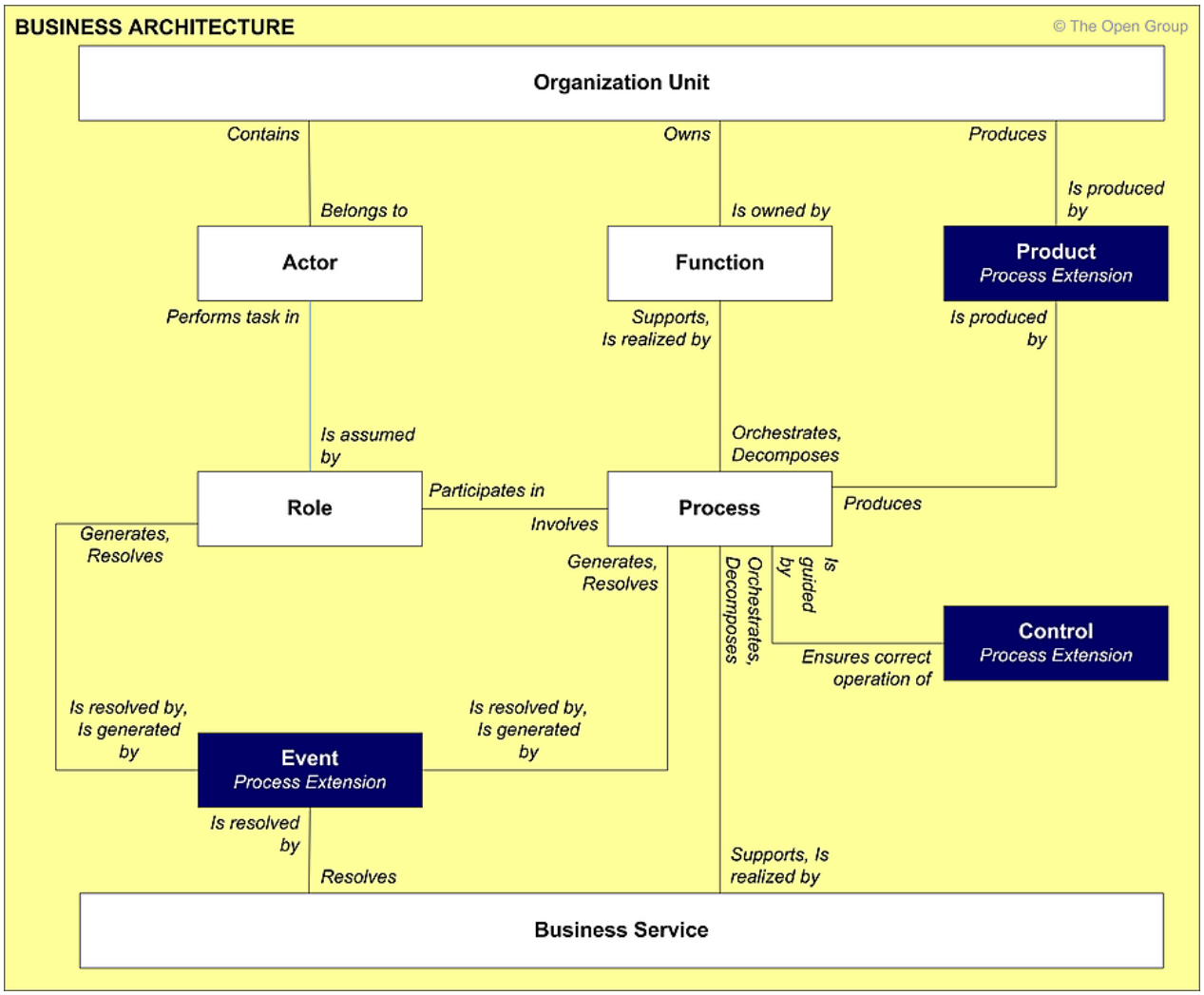
Points of Essence :

Business and IT Alignment was made stronger through focus on DDD – Domain Driven Design and insistence of Ubiquitous Language in all DevOps scenarios. The DevOps was focused with Architects leading the practice and with Agile mechanisms were made to mandatorily follow ABB level outputs.

Proper and adequate provisions for Service Registries, Service Discovery mechanism and so on.

Data Services based on Patterns such as those following Shared Database when needed and in importance of CQRS (Command Query Responsibility Separation) were emphasized. Event Sourcing as a Pattern of importance and Single Source of Truth as a feature and core Component of Data Services was advocated.

Process Modeling Extensions : to allow detailed modelling of process flows by adding events, products, and controls to the metamodel.



The scope of this extension is as follows :

- Creation of events as triggers for processes
- Creation of controls that business logic and governance gates for process execution
- Creation of products to represent the output of a process
- Creation of event diagrams to track triggers and state changes across the organization

This extension should be used in the following situations :

- Where the architecture must pay specific attention to state and events
- Where the architecture is required to explicitly identify and store process control steps; for example, to support regulatory compliance
- Where the architecture features critical or elaborate process flows

Relating to the **Case Study**

Nice to Know Box

Points of Essence :

State and Events of legacy and brownfield projects were fished out and in all migration projects these were brought into the Modern system integration tasks, through Strangler Pattern and through insistence of proper Facades.

Event based modelling, Event centric message brokers and Saga Pattern to sequence based transactions were among the measures brought into the Architecture.

Special attention to regulation based checkpoints and checking services were introduced.

Complete overview of API Gateways, Front End for Backends and such features so that they find place in all areas appropriate.

Data Extensions : to allow more sophisticated modeling and the encapsulation of data.

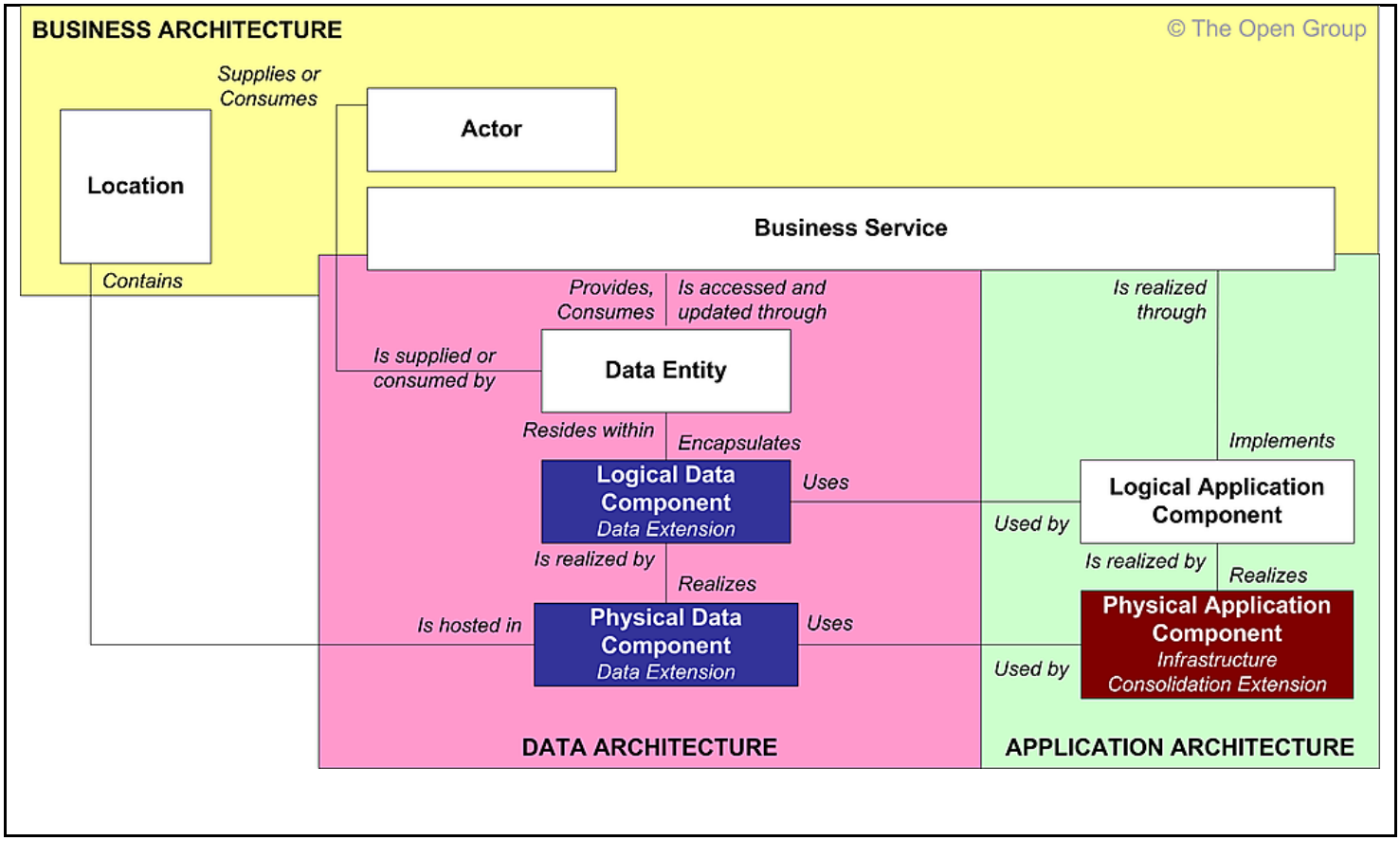
The core model provides a data entity concept which supports the creation of data models, which is then extended by this extension to include the concept of a data component. Data components form a logical or physical encapsulation of abstract data entities into units that can be governed and deployed into applications.

The scope of this extension is as follows :

- Creation of logical data components that group data entities into encapsulated modules for governance, security, and deployment purposes
- Creation of physical data components that implement logical data components and are analogous to databases, registries, repositories, schemas, and other techniques of segmenting data
- Creation of data lifecycle, data security, and data migration diagrams of the architecture to show data concerns in more detail

This extension should be used in the following situations :

- Where the architecture features significant complexity and risk around the location, encapsulation, and management of or access to data


BUSINESS ARCHITECTURE
© The Open Group
Supplies or Consumes
Location
Actor
Business Service
Contains
Provides, Consumes
Is accessed and updated through
Is supplied or consumed by
Data Entity
Resides within
Encapsulates
Logical Data Component
Data Extension
Uses
Is realized by
Realizes
Is hosted in
Physical Data Component
Data Extension
Uses
Is realized through
Implements
Logical Application Component
Used by
Is realized by
Realizes
Physical Application Component
Infrastructure Consolidation Extension
Used by
DATA ARCHITECTURE
APPLICATION ARCHITECTURE

Relating to the **Case Study**

Nice to Know Box

Points of Essence :

Aggregates, Aggregate Roots, Entities, Value Objects and other DDD inspired Data components introduced.

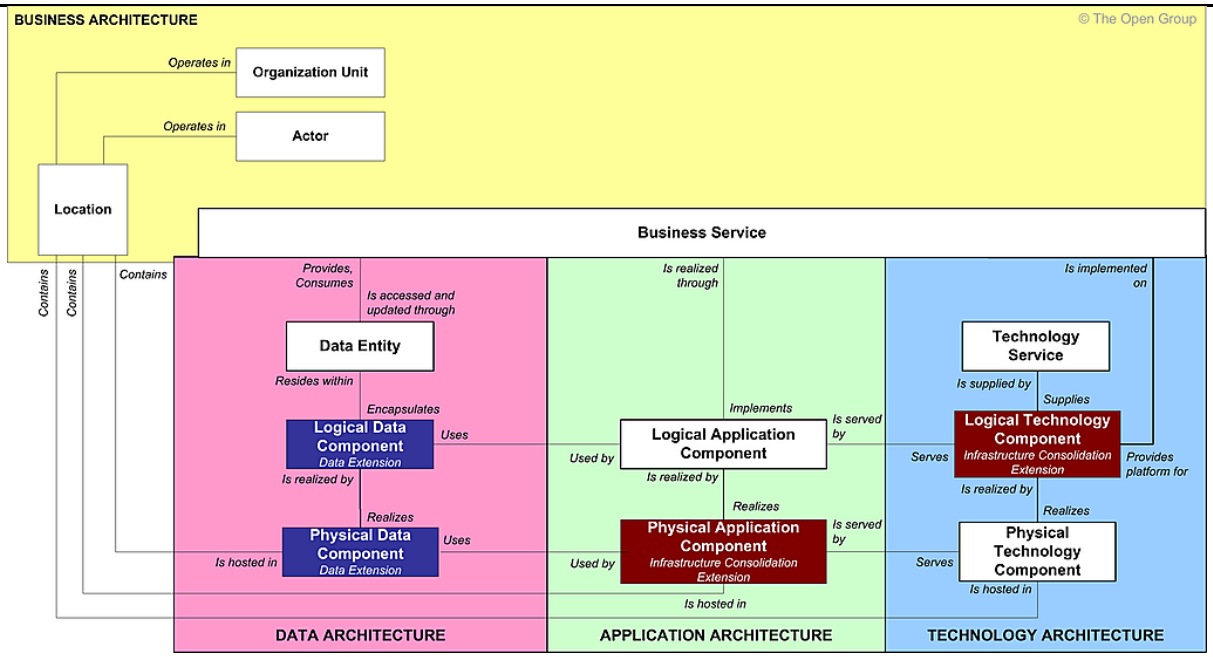
State of Art practices in Data Warehousing, larger than large data situations and strategies to conquer them and so on are among the Modern data thought processes which found acceptance in the Architectural practices.

Early stage plans to introduce Machine Learning and other Predictive Data Analytical practices took shape.

Infrastructure Consolidation Extensions : intended to be used in landscapes where the application and technology portfolios have become fragmented and the architecture seeks to consolidate the business as usual capability into a smaller number of locations, applications, or technology components.

The scope of this extension is as follows :

- Creation of logical and physical application components to abstract the capability of an application away from the actual applications in existence
- Creation of logical and physical technology components to abstract product type from the actual technology products in existence
- Creation of additional diagrams focusing on the location of assets, compliance with standards, structure of applications, application migration, and infrastructure configuration



This extension should be used in the following situations :

- Where many technology products are in place with duplicate or overlapping capability
- Where many applications are in place with duplicate or overlapping functionality
- Where applications are geographically dispersed and the decision logic for determining the location of an application is not well understood
- When applications are going to be migrated into a consolidated platform
- When application features are going to be migrated into a consolidated application

Relating to the **Comprehensive Case Study**

Nice to Know Box

Points of Essence :

The Portfolios highlighted higher attention to the following, right from Phase A onwards.

Cloud Enablement and rapid and controlled migration, taking into account various Cloud offerings such as :

public cloud, private cloud. hybrid strategy

serverless applications, building secure, reliable, cloud-native applications

Cloud deployment models: IaaS, STaaS (STorage as a Service), PaaS, DaaS (Database as a Service), FaaS (Function as a Service), and SaaS

Cloud Database Services, which automates many administration tasks such as backup, patching, and replication

Cloud based Document and NoSQL databases with in-memory caching

Queue Services to decouple distributed systems and serverless applications

Notification Services as managed publication / subscription messaging services

Cloud centric Services to manage the application source code repositories

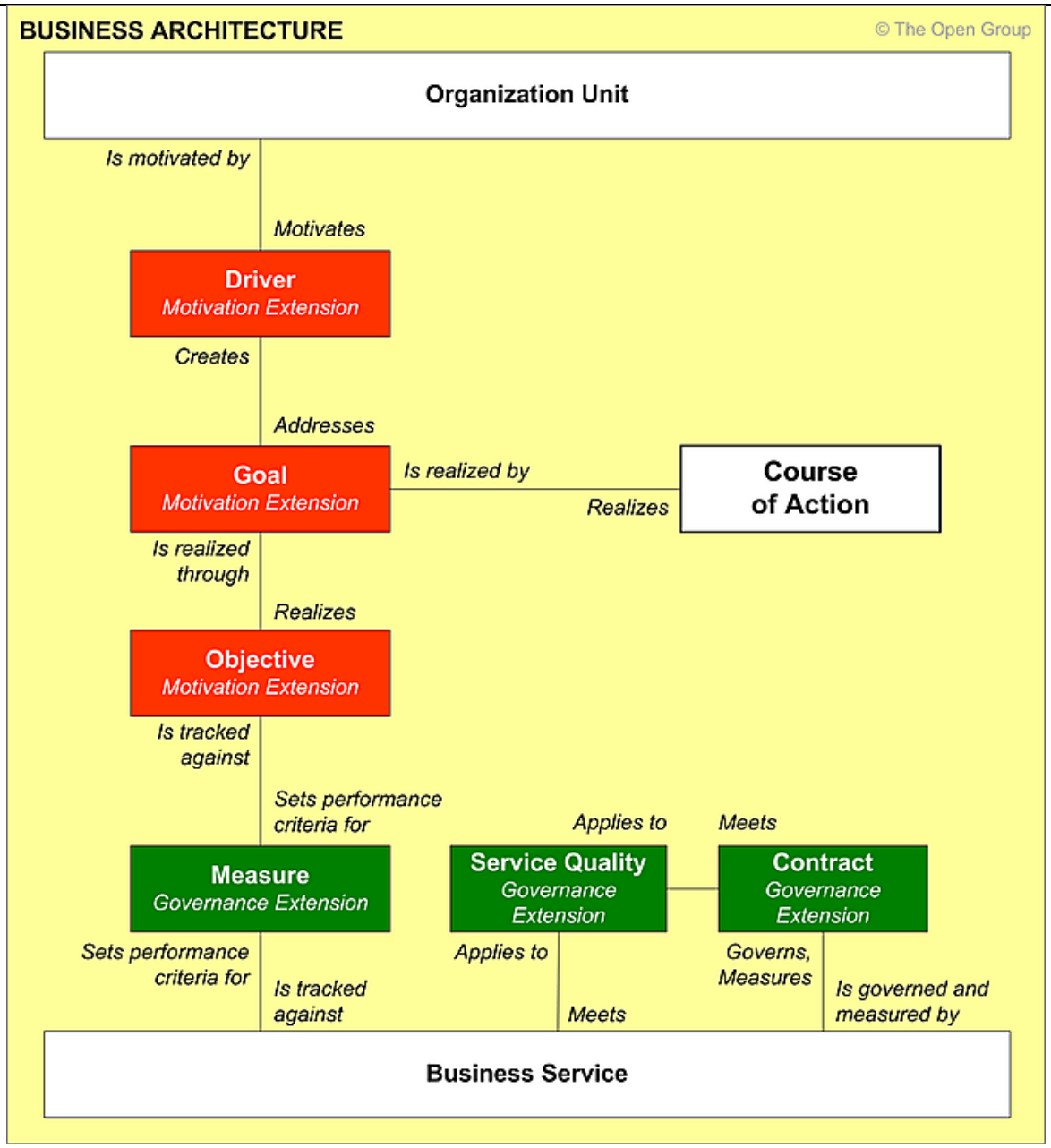
Adaptation of Patterns such as Circuit Breaker, Sidecar and so on.

Exploring SLAs such as 99.999999999 percent durability.

Motivation Extensions : intended to allow additional structured modelling of the drivers, goals, and objectives that influence an organization to provide business services to its customers. This in turn allows more effective definition of service contracts and better measurement of business performance.

The scope of this extension is as follows :

- Creation of a metamodel entity for Driver that shows factors generally motivating or constraining an organization
- Creation of a metamodel entity for Goal that shows the strategic purpose and mission of an organization
- Creation of a metamodel entity for Objective that shows near to mid-term achievements that an organization would like to attain
- Creation of a Goal/Objective/Service diagram showing the traceability from drivers, goals, and objectives through to services



This extension should be used in the following situations :

- When the architecture needs to understand the motivation of organizations in more detail than the standard business or engagement principles and objectives that are informally modeled within the core content metamodel

- When organizations have conflicting drivers and objectives and that conflict needs to be understood and addressed in a structured form
- When service levels are unknown or unclear

Relating to the **Case Study**

Nice to Know Box

Points of Essence :

During the Architecture Vision Phase of a particular engagement, the scope of the engagement will be used to make a determination on appropriate extensions to be employed in order to adequately address the architecture requirements. Since it is initiated at Phase A itself, the same was carried forward through all B D A T segments and then into Phase E and F, towards Architecture Realization to capture change roadmaps showing transition between architecture states and binding statements that are used to steer and govern an implementation of the architecture in Phase G and Phase H.

This Motivational extension was proposed to take care of all Portfolios of this ecommerce Architecture Initiative which is spread over many years. During Subsequent Short, Tactical Term plans in every Phase A (say as it happened for every year ahead) the finetuning of the Motivational aspects of Governance related Metrics and Quality enhancement of Services was part of the CD / CI efforts. Since Technological Improvisions and Business Changes were part of this continuous journey, Business to IT alignment was achieved to a great degree.

The online ordering took more personal touch with AI based sensing, voice and circumstance based triggering of ordering of goods and services. Delivery was through drones, autonomous delivery vehicles and so on. Hyperlocal stationing of goods and services became a norm.

Part 2 : Module 18 Questions and Answers (Also Explanations)

Please answer questions appearing below on a piece of paper and then check the answer and explanation appearing immediately below the questions. Some Questions may be on earlier modules too.

You can choose the ones you want to answer now and keep the rest for a workout on your own later on.

The pictures that appear next to the question is only to break the monotony and has no special meaning.

The star rating gives you a clue of the relative importance of questions, from Certification viewpoint. Three-star questions may appear more often than two star and so on

1801  Which are the three main categories of architectural work product that Architecture Content Framework specifies ?

A. Architecture Vision, Architecture Requirements Specification and Architecture Roadmap
B. Source Architecture, Target Architecture and Gap Analysis
C. Architecture Vision, Architecture Design Document and Transition Architecture
D. Building Block, Artifact and Deliverable
E. Request for Architecture Work, Statement of Architecture Work and Architecture Contract

Answer : D

Explanation :

TOGAF mentions very clearly that Building Block, Artifact and Deliverable are the three work products. This is specified in the Architecture Content Framework with more details about each.

See under : **2.5 Deliverables, Artifacts, and Building Blocks**

1802  Which part of the TOGAF document provides a structural model for architectural content that allows the major work products that an architect creates to be consistently defined, structured, and presented

A. Part I: Introduction
B. Part II: Architecture Development Method (ADM)
C. Part III: ADM Guidelines and Techniques
D. Part IV: Architecture Content Framework

Answer : D

Explanation :

A study of each part of TOGAF documentation reveals that Part IV deals with this.

See under : **2.5 Deliverables, Artifacts, and Building Blocks**

The TOGAF Architecture Content Framework (Part IV) provides a structural model for architectural content that allows major work products to be consistently defined, structured, and presented.

1803  Which one of the following does the Architecture Content Framework describe as a work product that is contractually specified, formally reviewed, and signed off by the stakeholders ?

A. An artifact
B. A building block
C. A catalog
D. A deliverable
E. A matrix

Answer : D

Explanation :

Deliverables means those Architectural artifacts that the Solution Architect will deliver back to the Enterprise Architect as per 'contractual' (means task mandated during a week or a specific period) stipulation.

A deliverable is a work product that is contractually specified and in turn formally reviewed, agreed, and signed off by the stakeholders. Deliverables represent the output of projects and those deliverables that are in documentation form will typically be archived at completion of a project, or transitioned into an Architecture Repository as a reference model, standard, or snapshot of the Architecture Landscape at a point in time.

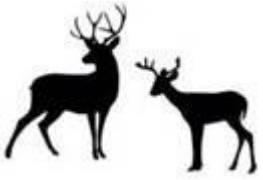
Architects executing the Architecture Development Method (ADM) will produce a number of outputs as a result of their efforts, such as process flows, architectural requirements, project plans, project compliance assessments, etc. The content framework provides a structural model for architectural content that allows the major work products that an architect creates to be consistently defined, structured, and presented.

The Architecture Content Framework uses the following three categories to describe the type of architectural work product within the context of use :

A **deliverable** is a work product that is contractually specified and in turn formally reviewed, agreed, and signed off by the stakeholders. Deliverables represent the output of projects and those deliverables that are in documentation form will typically be archived at completion of a project, or transitioned into an Architecture Repository as a reference model, standard, or snapshot of the Architecture Landscape at a point in time.

An **artifact** is a more granular architectural work product that describes an architecture from a specific viewpoint. Examples include a network diagram, a server specification, a use-case specification, a list of architectural requirements, and a business interaction matrix. Artifacts are generally classified as catalogs (lists of things), matrices (showing relationships between things), and diagrams (pictures of things). An architectural deliverable may contain many artifacts and artifacts will form the content of the Architecture Repository.

A **building block** represents a (potentially re-usable) component of business, IT, or architectural capability that can be combined with other building blocks to deliver architectures and solutions.

1804  Which section of the TOGAF document describes the purpose of deliverables produced as outputs from the ADM cycle ?

A. ADM Guidelines and Techniques
B. Architecture Capability Framework
C. Architecture Content Framework
D. Architecture Governance Framework
E. TOGAF Reference Models

Answer : C

Explanation :

The Architecture Content Framework provides a detailed model of architectural work products, including deliverables and their purpose, artifacts within deliverables, and the Architecture Building Blocks (ABBs) that deliverables represent.

1805 Which of the following are defined in functional level in TOGAF ?

A. SBB
B. ABB
C. View
D. Architecture

Answer : B

Explanation :

Architecture building blocks start with conceptual portions of architecture and always stop at a functional level and never get into implementation and specific technology levels.

Architecture Building Block (ABB) are a constituent of the architecture model that describes a single aspect of the overall model. Architecture Building Blocks (ABBs) describe the functionality and how they may be implemented without the detail introduced by configuration or detailed design.

1806 Which section of the  TOGAF document contains a structured metamodel for architectural artifacts ?

A. Part II: Architecture Development Method
B. Part III: ADM Guidelines and Techniques
C. Part IV: Architecture Content Framework
D. Part VI: TOGAF Reference Models
E. Part VII: Architecture Capability Framework

Answer : C

Explanation :

Part IV: Architecture Content Framework is the only Part in TOGAF documentation which describe the architectural artifact in a structured way, placing it in Phases which are likely to produce each artifact.

See under : **Preface**

PART IV (Architecture Content Framework) This part describes the TOGAF content framework, including a structured metamodel for architectural artifacts, the use of re-usable Architecture Building Blocks (ABBs), and an overview of typical architecture deliverables.

1807 Which part of the TOGAF 

document describes an overview of typical architecture deliverables ?

A. ADM Guidelines and Techniques
B. Architecture Capability Framework
C. Architecture Content Framework
D. Enterprise Continuum & Tools
E. TOGAF Reference Models

Answer : C

Explanation :

An overview description of each and every artifact that is recommended as a deliverable in every Phase (Preliminary, Phase A to Phase H) is available in Architecture Content Framework, which is Part IV of TOGAF documentation.

See under : **Preface**

PART IV (Architecture Content Framework) This part describes the TOGAF content framework, including a structured metamodel for architectural artifacts, the use of re-usable Architecture Building Blocks (ABBs), and an overview of typical architecture deliverables.

1808  Which of the following are combinations of ABBs and SBBs that provided effective solutions in the past and can be reused to provide new solutions ?

A. Architecture View
B. Architecture Viewpoint
C. Architecture Pattern
D. Architecture Continuum

Answer : C

Explanation :

In TOGAF, patterns are considered to be a way of putting building blocks into context; for example, to describe a re-usable solution to a problem. Building blocks are what you use: patterns can tell you how you use them, when, why, and what trade-offs you have to make in doing so.

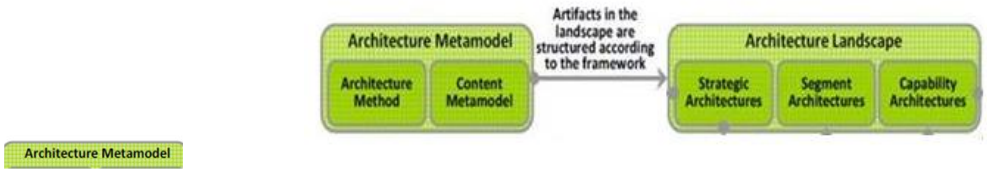
Patterns offer the promise of helping the architect to identify combinations of Architecture and/or Solution Building Blocks (ABBs/SBBs) that have been proven to deliver effective solutions in the past, and may provide the basis for effective solutions in the future

Think : Where does the entry of Metamodel fit in the overall TOGAF set of Components ?

Answer : In the Architecture Repository

"**Meta Model**" is something very specific: it defines the attributes of the **Building Blocks**, which is a set of generic "things": a database, a service, an "actor" (a person or a whole partner corporation), an application, a messaging system, a Content Management solution, etc., "Meta Model" is only a small part of the more general Architecture Repository.

The **Architecture Metamodel** describes the organizationally tailored application of an architecture framework, including a method for architecture development and a metamodel for architecture content.



1809 One that describes  how and with what the architecture will be described in a structured way.

A. Metamodel
B. Metadata
C. Architecture Continuum
D. Enterprise Continuum
E. TOGAF Reference Models

Answer : A

Explanation :

Anything that describes a "model" (describing how to arrive at a model) is a metamodel. This is like something that describes the data (database structure) is metadata (schema).

In Architecture Repository, we have a Architecture Metamodel section. Within that Content Metamodel is description of how each artifact in the Content Model (Content Framework) is.

The other metamodel is Architecture Metamodel. Since TOGAF documentation and process / structure as appearing in the official documentation has to be tailored to suit the Enterprise, the customised TOGAF document is called Architecture Method.

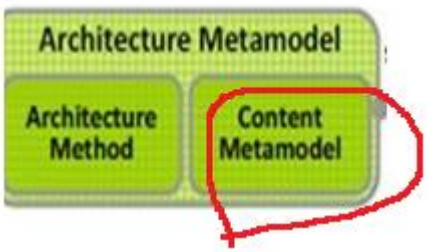
Section 3.50 : Metamodel

A model that describes how and with what the architecture will be described in a structured way.

Section 30.1 : Overview

The TOGAF Architecture Development Method (ADM) provides a process lifecycle to create and manage architectures within an enterprise. At each phase within the ADM, a discussion of inputs, outputs, and steps describes a number of architectural work products or artifacts, such as process and application.

The content metamodel provided here defines a formal structure for these terms to ensure consistency within the ADM and also to provide guidance for organizations that wish to implement their architecture within an architecture tool.




1810

One that describes how and with what the architecture will be described in a structured way.

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B. Metadata
C. Architecture Continuum
D. Enterprise Continuum
E. TOGAF Reference Models

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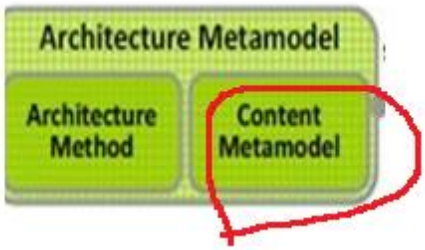


Very important to get to know parts of TOGAF documentation

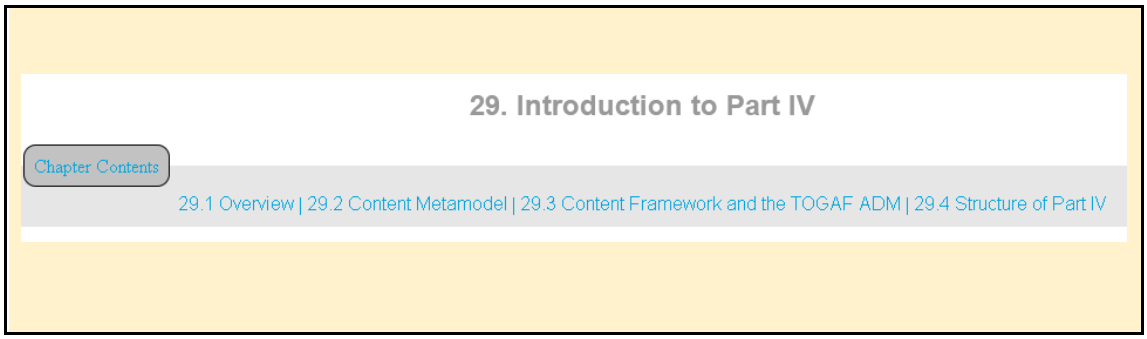
https://pubs.opengroup.org/architecture/togaf9-doc/arch/

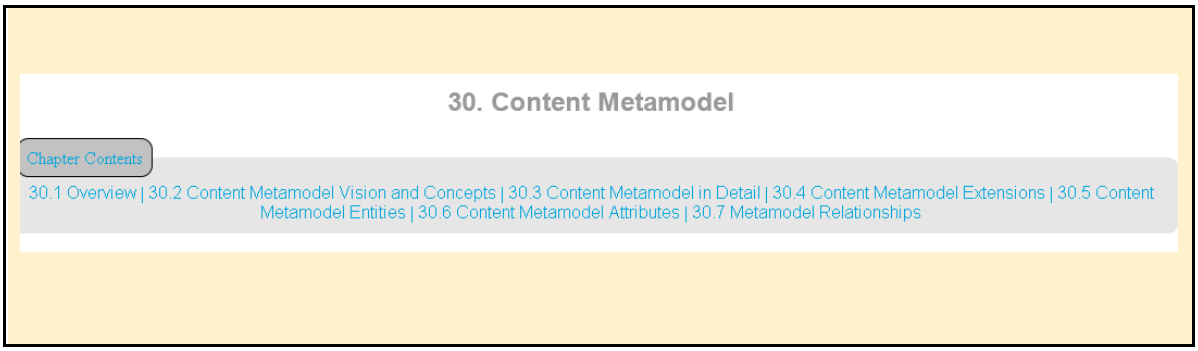
You will need this link to be open most of the time in this course

Similar content will **open during your Level 2 Exam**.

Sorry, not during Level 1 Exam

A number of Chapters deserve your attention at this stage :





31. Architectural Artifacts

Chapter Contents

31.1 Basic Concepts | 31.2 Developing Architecture Views in the ADM | 31.3 Views, Tools, and Languages | 31.4 Architecture Views and Architecture Viewpoints | 31.5 Conclusions | 31.6 Architectural Artifacts by ADM Phase

32. Architecture Deliverables

Chapter Contents

32.1 Introduction | 32.2 Deliverable Descriptions

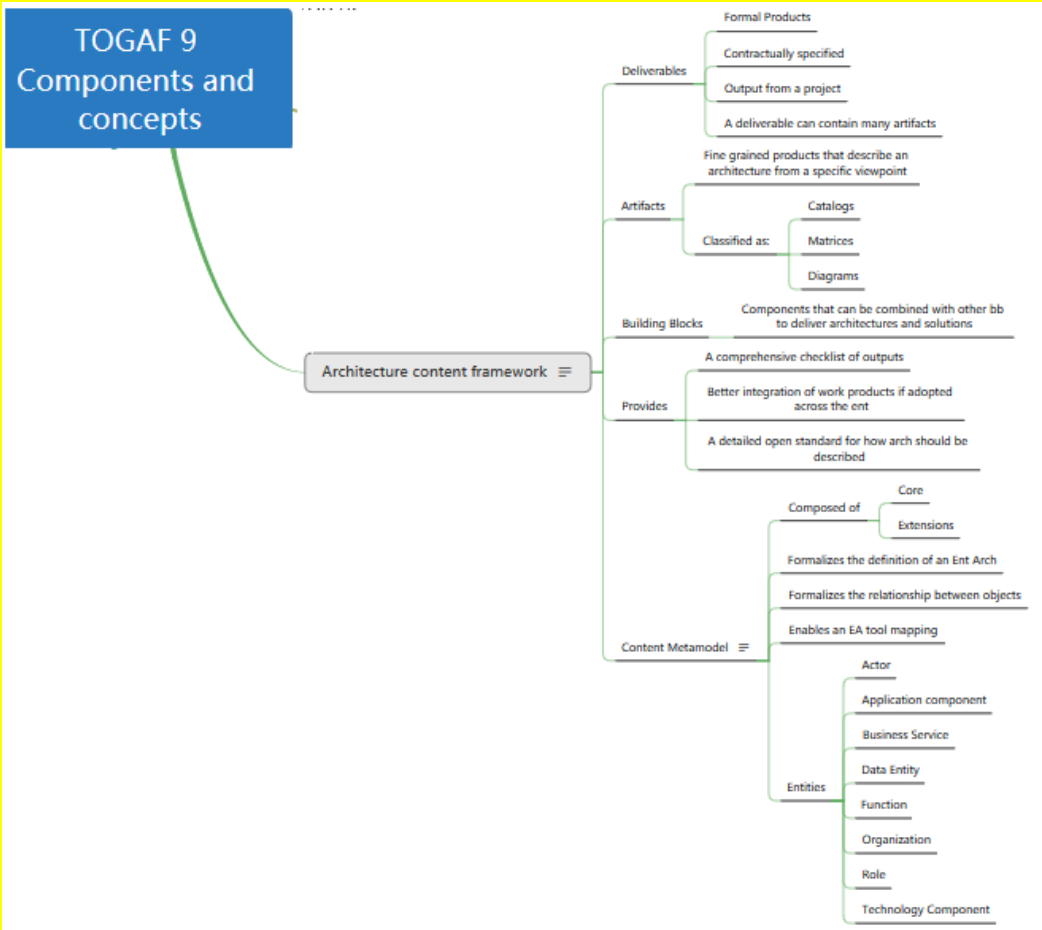
33. Building Blocks

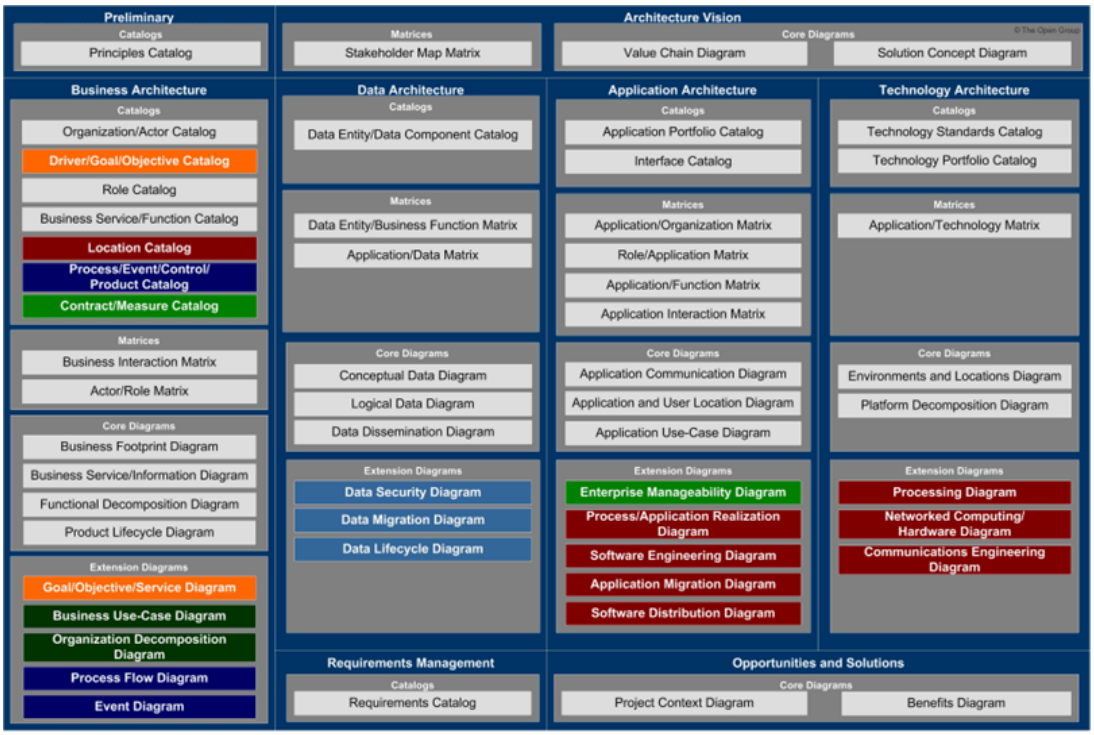
Chapter Contents

33.1 Overview | 33.2 Introduction to Building Blocks | 33.3 Building Blocks and the ADM

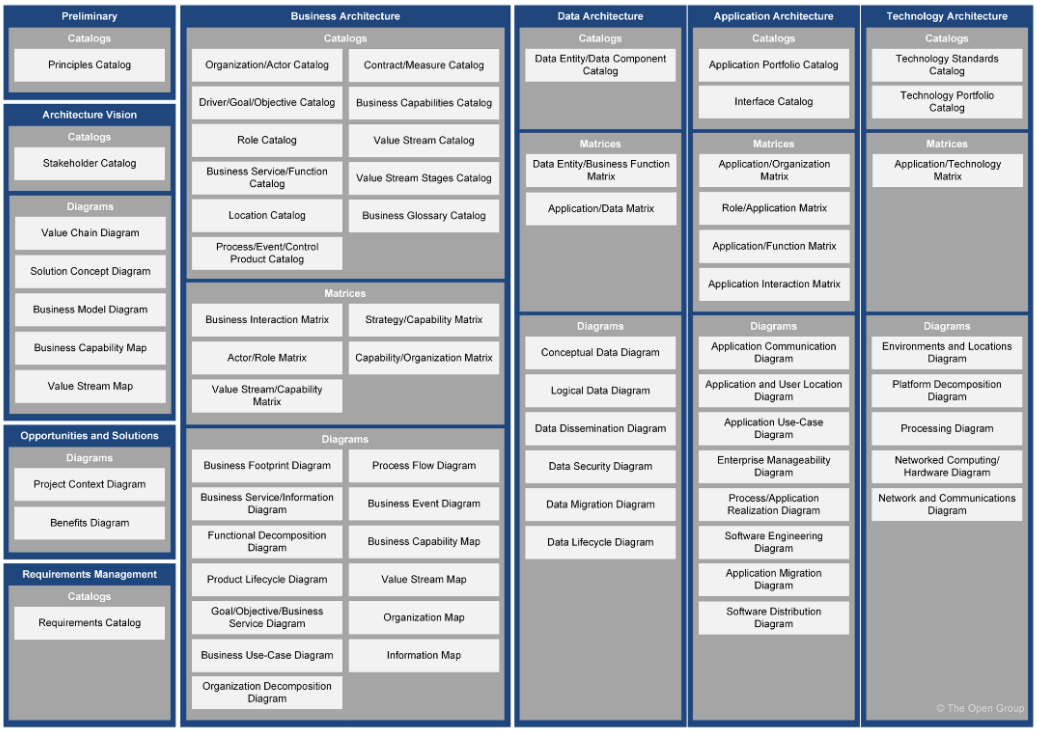
Part 3 : Detailed Courseware

Mind Map of Architecture Content Framework





TOGAF recommendation on which Phase can create what exact Artifact Content



TOGAF 10 recommendation on which Phase can create what exact Artifact Content

Nice to Know Box

In a Nutshell :

Content Frame(work) : Which BB goes into which slot on the Landscape of the Architecture Repository

This is related to

Meta-model

A meta-model is a model that describes a model. In other words it defines what can constitute a model and any rules around how a model can be put together

Content Metamodel : A meta – (means about) the Model elements.

In simple words, it is the definition of each and every element (Artifact) that is seen in the Building Blocks

- **Actor**: a person, organization, or system that is outside the consideration of the architecture model, but interacts with it
- **Application Component**: an encapsulation of application functionality that is aligned to implementation structure
- **Business Capability**: a particular ability that a business may possess or exchange to achieve a specific purpose
- **Business Service**: supports business capabilities through an explicitly defined interface and is explicitly governed by an organization
- **Course of Action**: direction and focus provided by strategic goals and objectives, often to deliver the value proposition characterized in the business model

This is related to

in the Architecture Repository

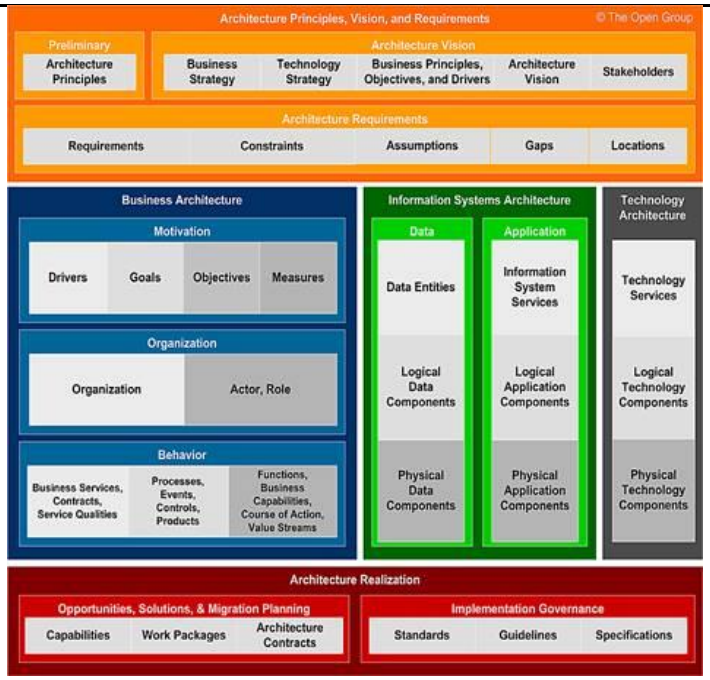
The Content Framework defines a categorization framework to be used to structure the architecture documents and outcomes.

The Enterprise Metamodel defines the types of entities likely to appear in the models that describe the Enterprise, as well as their relationships.

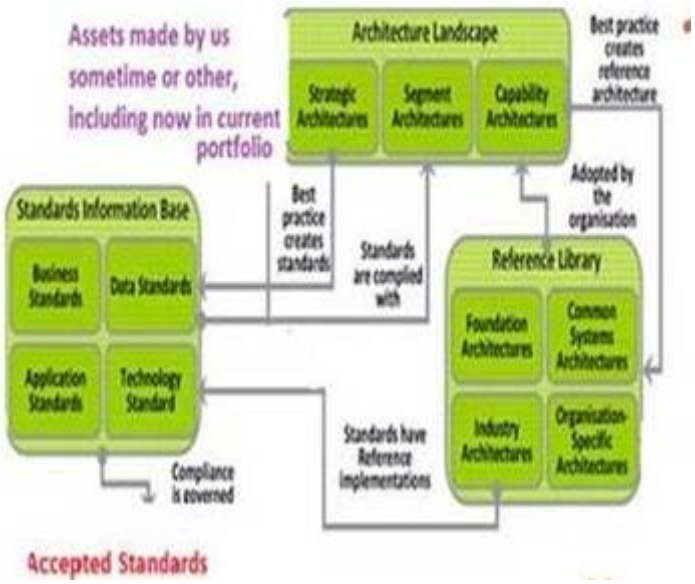
Nice to Know Box

TOGAF recommendation on which Phase can create what exact Artifact Content Framework

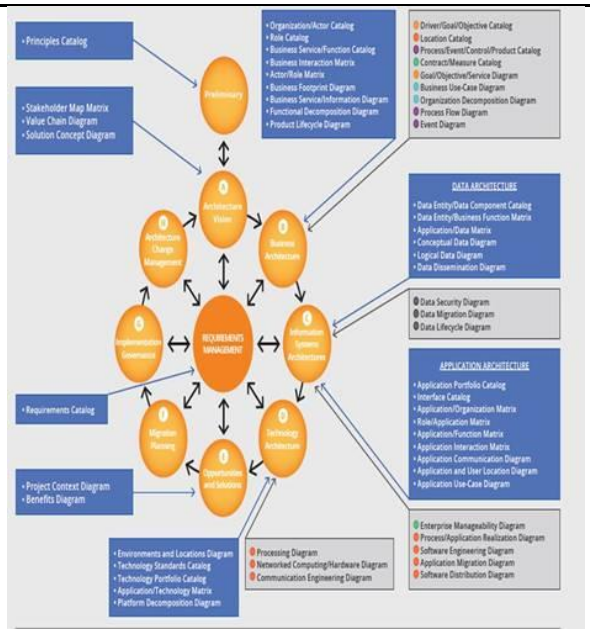
What kind of content, under which group of Architectural work



Content Schema, which Building Block fits in which Phase – classification



Placed in : Accepted Standards

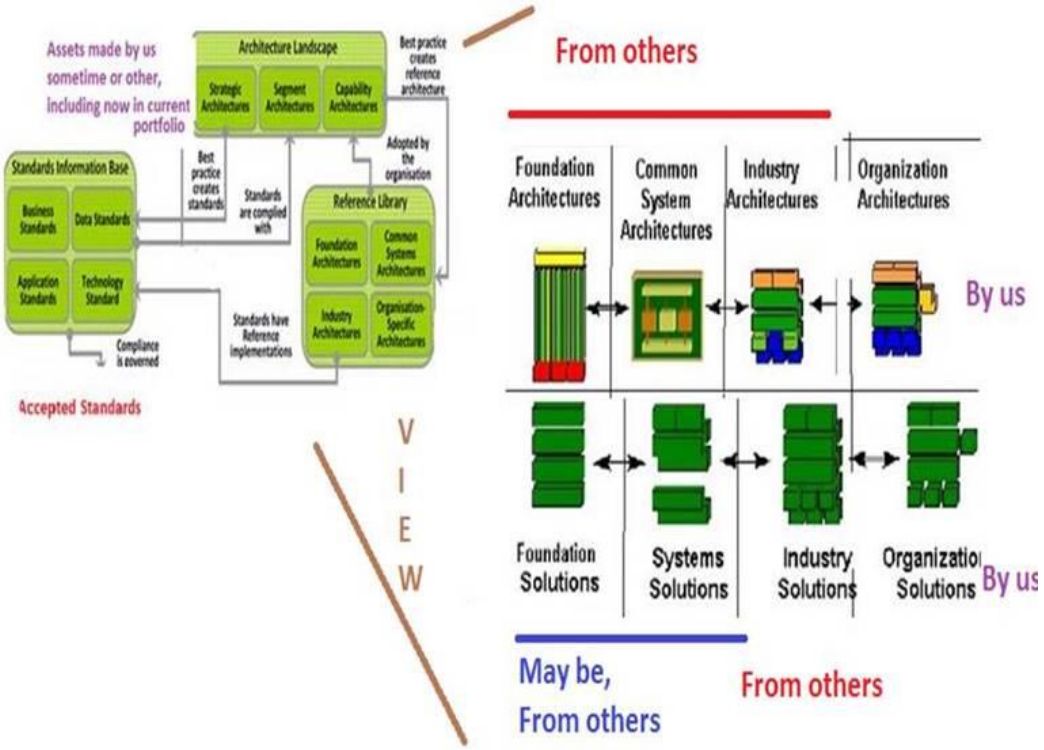


ADM flow and Building Blocks produced

(Tailored TOGAF leaves out what we do not need, but may add more that we need)

Nice to Know Box

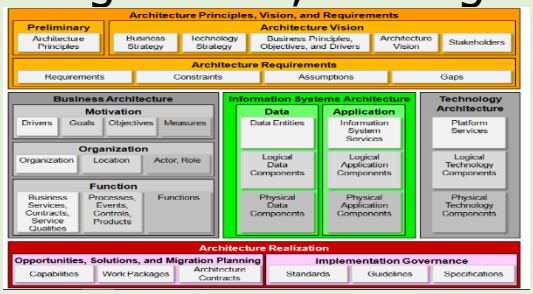
Retrieved with the help of :



Nice to Know Box

Content (Framework) Model : Only about Artifacts, Building Blocks

But guides us, which goes where

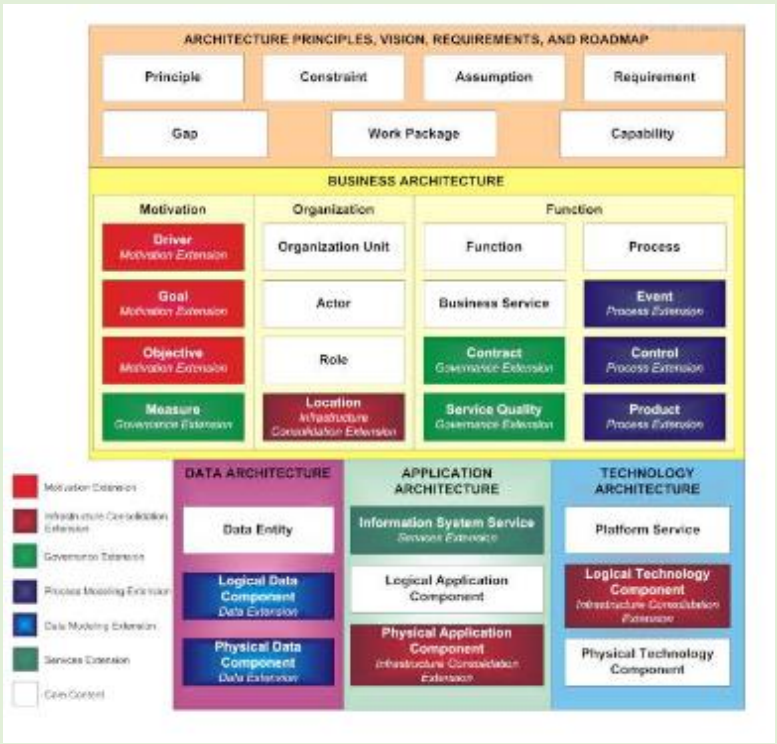


This is what every **person related to Architecture MUST KNOW**

Content Meta Model : Definition of the Artifact

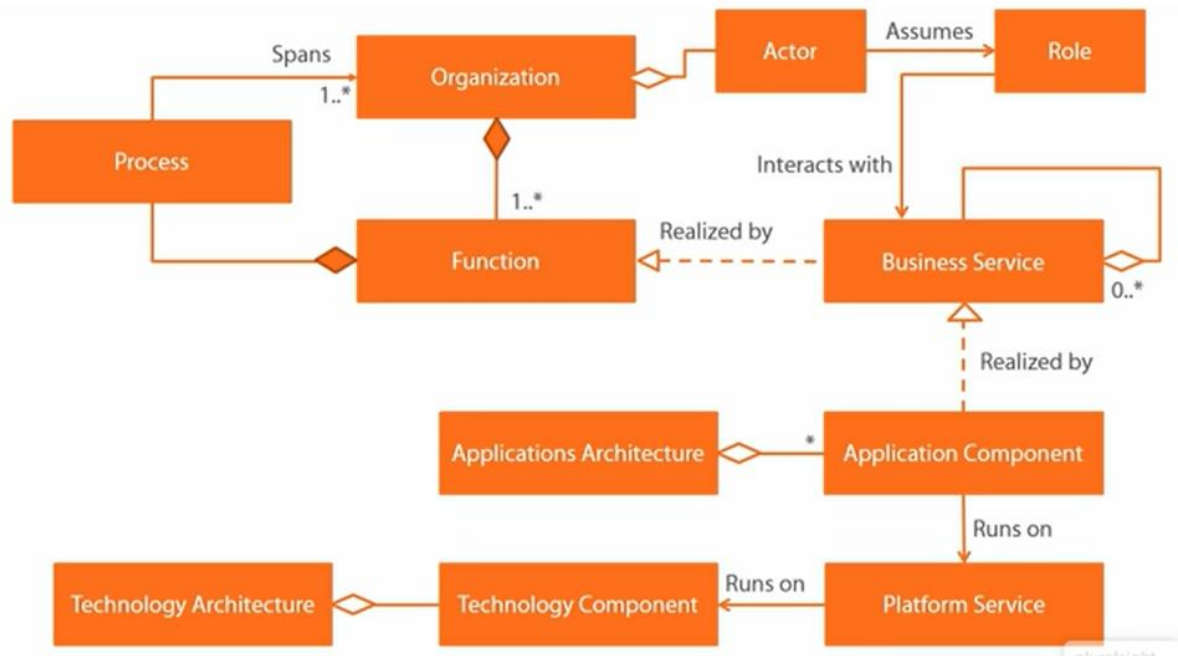
Example : What is an Actor

Not about ~~Where does Actor fit in, in Business Architecture~~



TOGAF Content Metamodel Entities

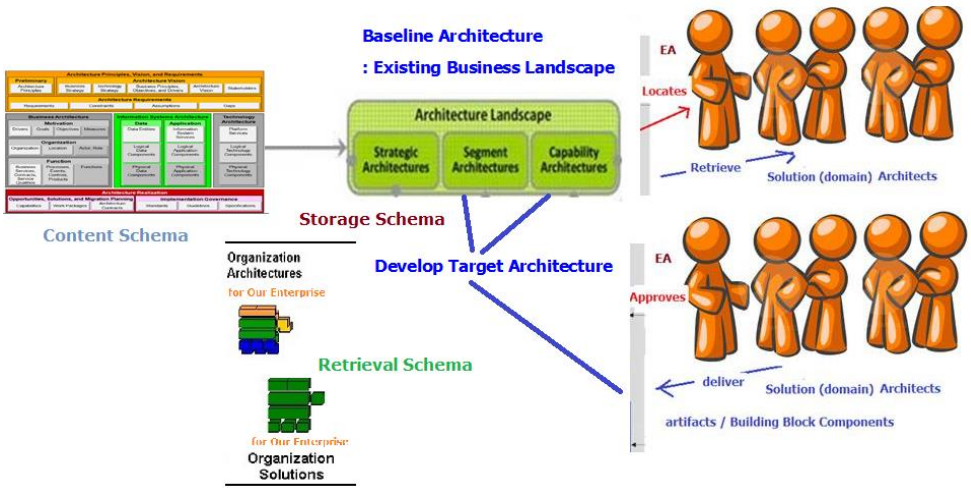
Defines a set of entities that allow architectural concepts to be captured, stored, filtered, queried, and represented in a way that supports consistency, completeness, and traceability



This can help the person creating Building Block Artifacts

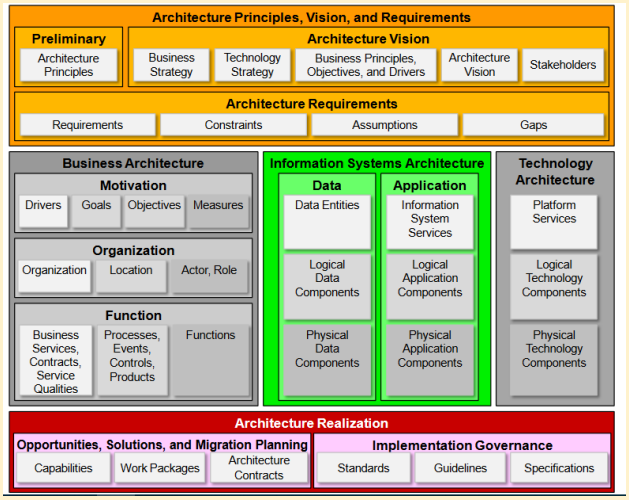
towards getting clarity

Nice to Know Box



Pictorial Quiz

What is this ? - >



And what is this ? - >

- **Actor**: a person, organization, or system that is outside the consideration of the architecture model, but interacts with it
- **Application Component**: an encapsulation of application functionality that is aligned to implementation structure
- **Business Capability**: a particular ability that a business may possess or exchange to achieve a specific purpose
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- **Course of Action**: direction and focus provided by strategic goals and objectives, often to deliver the value proposition characterized in the business model

Where to find them in TOGAF 9.2 standard documentation ?

Points to Ponder

Scenario Approach : Where would it fit ?

Which is Component of TOGAF is about storing Architectural material, especially Architectural assets prepared by us. Which is the part name for this ?

The Architectural Repository, a physical storage system and Enterprise Continuum which is a nice name of a virtual way to access the assets needed by regular working Architects, developers and others related to project.

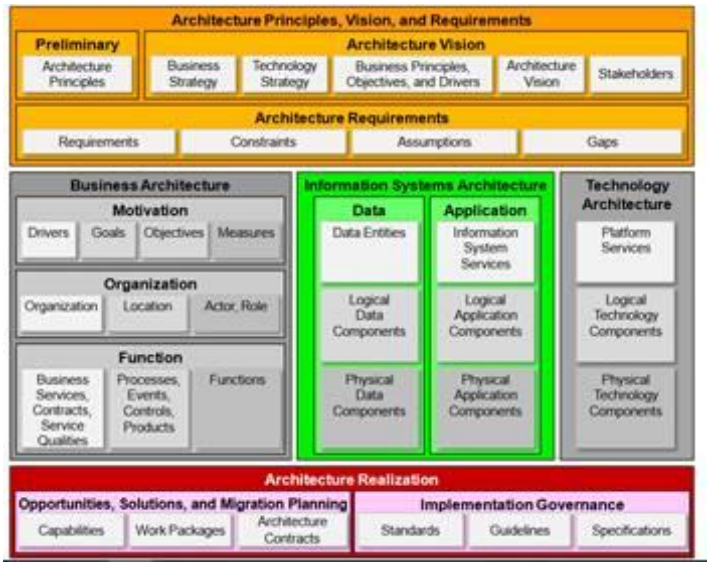
It is Part V : Enterprise Continuum

If the above mentioned component is about assets and referable materials and all about their storage and retrieval, when then do we have Part IV : Architecture Content Framework

This part describes the TOGAF content framework, including a structured metamodel for architectural artifacts, the use of re-usable Architecture Building Blocks (ABBs), and an overview of typical architecture deliverables.

The Content Frame is more about which ABB or SBB fits inside which exact slot in the Storage system

or even in the Retrieval system



Nice to Know Box **From TOGAF 10**

The TOGAF® Standard — 10th Edition

Artifacts Associated with the Enterprise Metamodel

THE Open GROUP

The Enterprise Metamodel is used as a technique to structure architectural information in an ordered way so that it can be processed to meet stakeholder needs.

The majority of architecture stakeholders do not actually need to know what the architecture metamodel is, and are only concerned with specific issues, such as:

- "What functionality does this application support?"
- "Which processes will be impacted by this project?"

In order to meet the needs of these stakeholders, the TOGAF concepts of **building blocks, catalogs, matrices**, and **diagrams** are used.