

Comprehensive Case Study : Phase A : Architecture Vision

Files of this Case Study are to be referred and continued only in this sequence order, please :

-  CompCaseStudyStart
-  CompCasePhA
-  CompCasePhB
-  CompCasePhCAppArch
-  CompCasePhCDataArch
-  CompCasePhD
-  CompCasePhE
-  CompCasePhF
-  CompCasePhG
-  CompCasePhH

Preliminary Phase started synchronizing with the receipt of **Request (Requirement) of Architecture work**. The Enterprise which has to get into **e-Commerce** from physical commerce is now prepared for the large-scale **Architectural Transformation Initiative**.

The EA project, which is not a 'project; in itself but is a **project of projects**, has the long term (3 year) Strategic Initiative to address the pain points of :

Digital Journey in all aspects of e-Commerce : Online as total access mode

Enterprise Mobility : Even all employees use digital means, where relevant

Cloud Enablement reduce CapEx : To reduce capital costs of IT estate

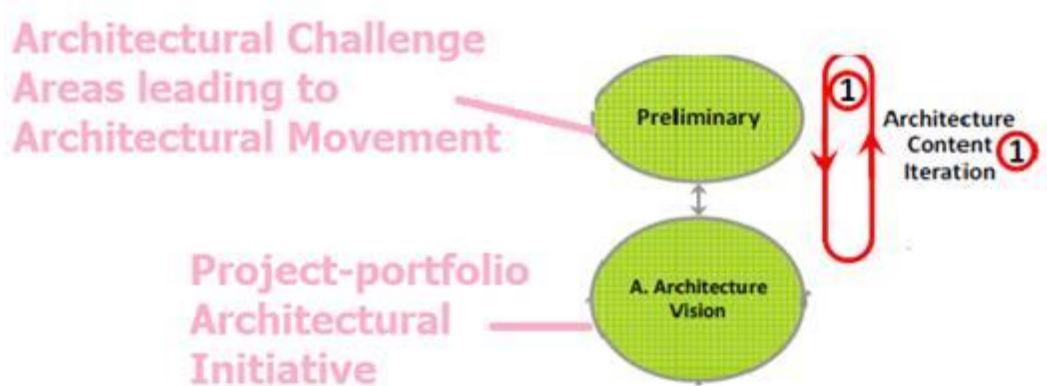
To reduce OPEX of the IT estate by decentralized Services

Gradual replacement of legacy and obsolete technology which drags down business, revenue and efficiency

But all these are possible only when actual projects are taken up. You, the Chief Enterprise Architect, now **delegated two of your Senior Enterprise Architects** to narrow down to a few Project Portfolios and carry out the activities of Phase A : Architecture Vision. You will keep in touch with them on a day-to-day basis, but the actual work and **steps will be carried out by each Sr Enterprise Architect**.

You have decided that each set of the Project Portfolios are to be taken with a maximum of **one year as the time** to complete and start the execution. We are **now in year zero**. By end of Year One, they all selected projects will have to go live and become functional as executing systems. Still, our **role is only in Architecture**. We all note that PMO and IT Operations Department also will have their role at the later stages of these projects.

You know well that this is the initial phase of the Architecture Development Method (ADM) where the Architectural Development Cycle starts. The **tasks in this Phase** include **defining the scope, identifying the stakeholders, creating the Architecture Vision, and obtaining (in principle) approvals**.



Before moving towards getting the approval, the most important objective of this Phase is : Develop a **high-level aspirational Vision of the Capabilities and Business Value** to be delivered as a result of the proposed Portfolios.

You also noted that the word 'projects' does not mean they end up as an executable software, through many will end up so. Even a [whitepaper or a study or a significant improvement](#) to existing (brownfield) software are all 'Architectural Projects'

Points of Essence : Within Steps of Phase A : Architecture Vision

:

Study and Decide (Establish) on the set of projects in the portfolio :
known as Architecture Project

Order Placement; Rest of Pipeline

Who are the Stakeholders, what are their Concerns regarding these projects : A Stakeholder Map

Powerful Stakeholders with High Interest respective each project : Focus more on them

What about Business Goals, Business Drivers, and Constraints ?

Confirm based on what is suggested as Long Term Initiative, but as applicable to these projects in current portfolios : Ones like [capture market of share](#) xx% ; [achieve Customer satisfaction](#) of zz% ; [seamless User Experience](#)

What about Architecture Principles ?

Confirm after due elaboration about the way they will apply to these portfolios

Carry out an Assessment of Business Transformation Readiness

Are the projects ready to take off for its Architectural work ? Early stage assessment based on factors such as : [Desire, Willingness, and Resolve](#) ; [Funding; Sponsorship and Leadership](#) etc.,

Defining Scope

For [Portfolio 1](#) : Will cover ; For [Portfolio 2](#) : Will cover

Target Architecture Value Propositions, Business Case, KPIs

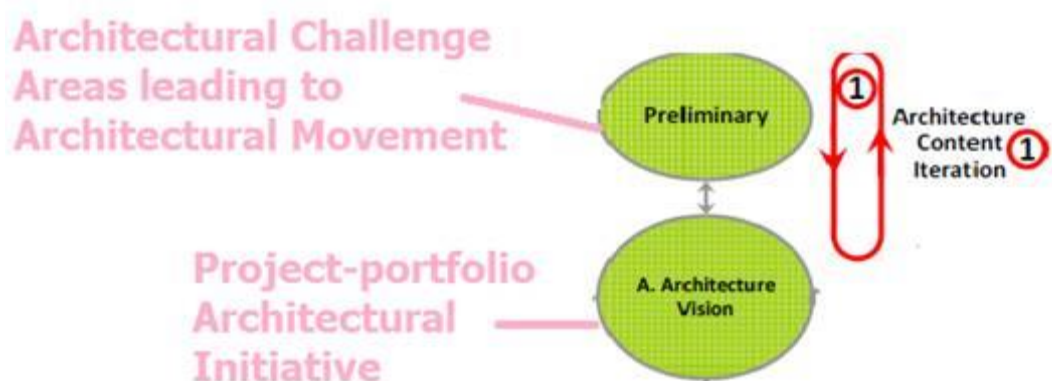
Business Value, Justification for projects; KPIs like Orders accepted and processed per minute

Develop the Architecture Vision

Vision Document
Statement of Architecture work
and Communication Plan

Naturally, this Phase A is **not about getting into 'Requirements Gathering'** as the focus activity; Phase B will focus on that.

Since you have formulated the **Preliminary Phase**, you know well that the **Enterprise is fully prepared**, and the **Top Management is 'brought on board'** on the long-term Initiative. Only in context where it is not so, Vision Phase documentation suggests : **In situations where** the Architecture Framework in place is not appropriate to achieve the desired Architecture Vision, **revisit the Preliminary Phase** and extend the overall Architecture Framework for the Enterprise. You noted the two-way arrow between the two Phases and is **prepared to get back to Preliminary Phase, if at all needed** before this Vision Phase is completed.



Each of the **Sr Enterprise Architects** get set into **the task**, noting the following :

What kind of projects fit in a Portfolio ? Set of related projects

Greenfield – Fresh ; Brownfield – Existing, enhancement

Non-developer projects : Training, White papers ...

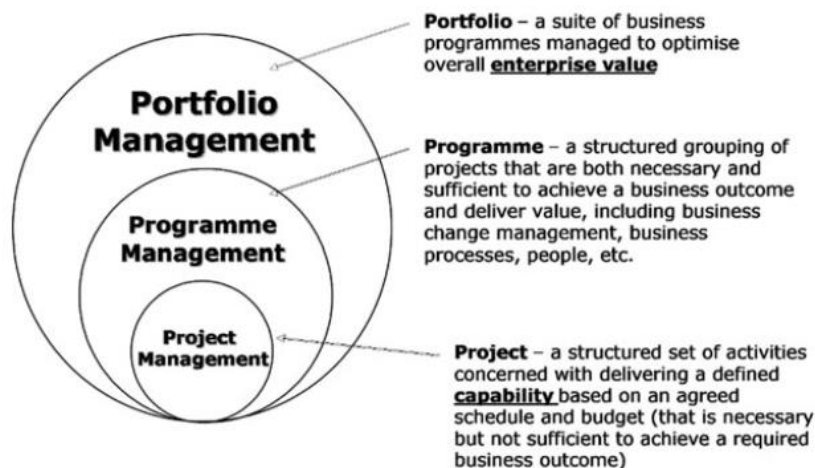
The Step : Establish the Architecture Project is connected with **Project Portfolio** within Architectural Movement

Need to arrive at list of Projects and Portfolios thereon for this Arch cycle.

Very important to note that Phase A : Architecture Vision is also part of Strategic Planning of architecture.

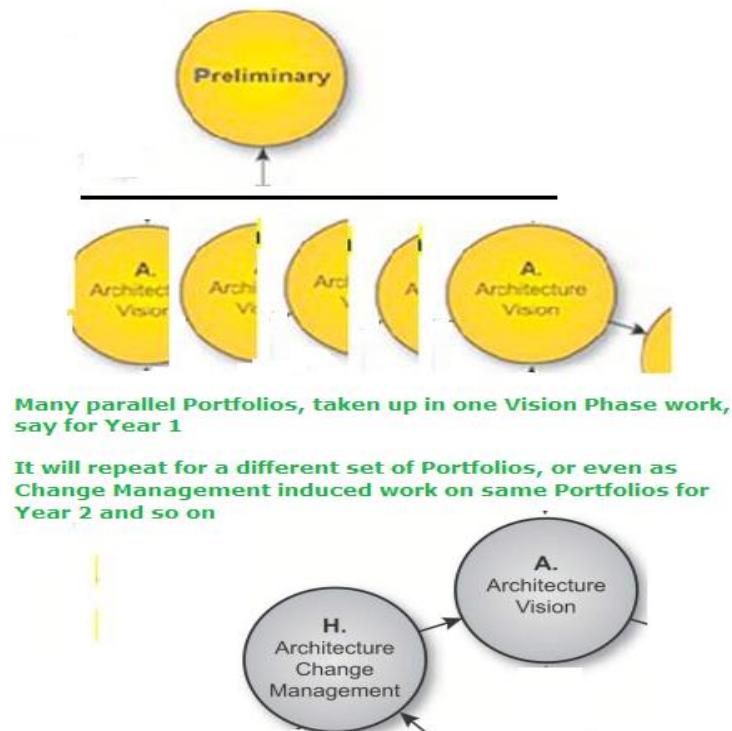
Hence it is not correct to look into projects of immediate concern in this Phase.

It is prudent to take a long-term view as committed by Preliminary Phase and then only narrow down to specific targets for the immediate period :



In the **e-Commerce Enterprise** :

You, the Chief EA proceeded to select Portfolios of importance. Two are mentioned below as typical examples to proceed with. More than two will be there, but we restrict our focus to just two.

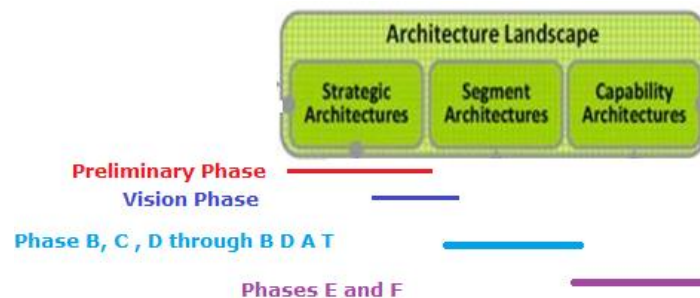


Two 'programmes' that are closely aligned to the two portfolios are also discussed in general in this Case Study. By mentioning 'programme', we think on a larger slate than working on mere software and IT centric 'projects'.

The programme will extend to Training Activities to all Employees involved in using the IT systems (Training suggestions and specifications thereon by EA department, to be executed by others); Architecture for Call Centers and other customer / vendor contact means; Selection of all supporting devices for automation, including Bar Code or other gadgets needed at fulfilment or even at physical stores; Billing cash Registers, Digital Payment collection devices and so on; Various supporting equipment driven by automation at fulfillment (specialized equipment and storage and retrieval systems) and at all stages till delivery is effected to the customer and so on.

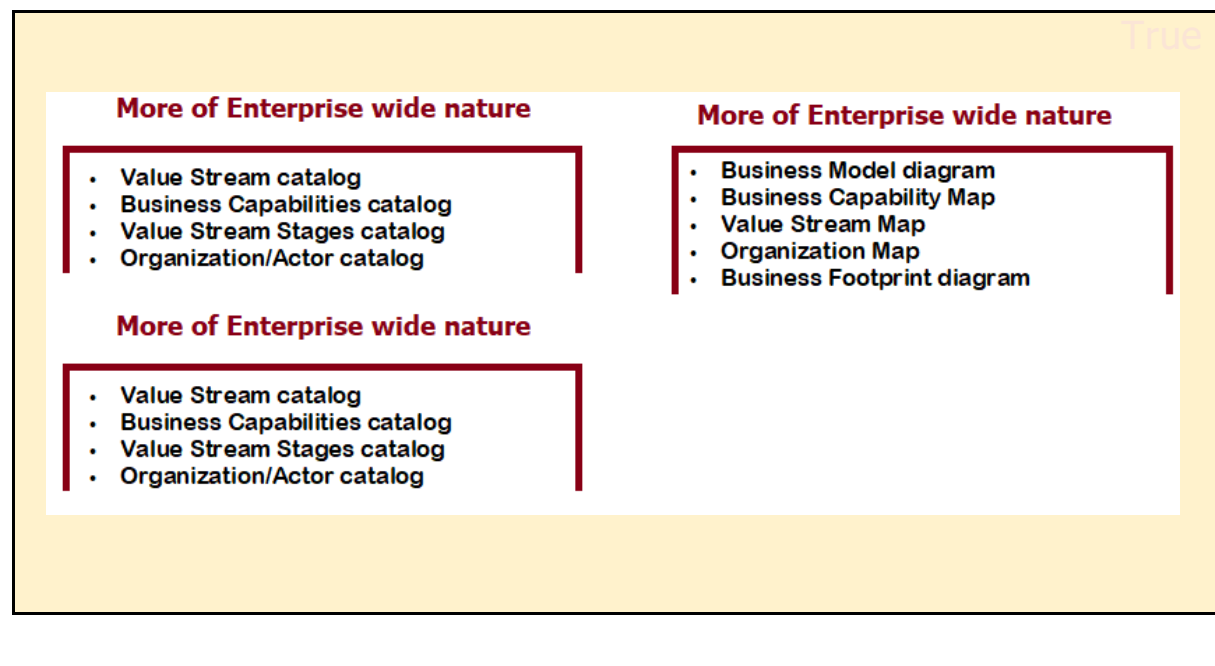
This is 'strategic' since you, as Chief EA will think beyond one year period and map the Preliminary Phase Initiative over three years to the programme that you are generally laying out now. For example, if you are also thinking of drone based or robot based delivery to customers, you are a real Strategist, though it may come up in later years in this Initiative.

At this stage you will also narrow down to a few projects which are discussed further in details. These are 'projects' which involve BA (Business Architecture), DA (Data Architecture), AA (Application Architecture) and TA (Technology – Infrastructure Architecture), known as B D A T Segments.

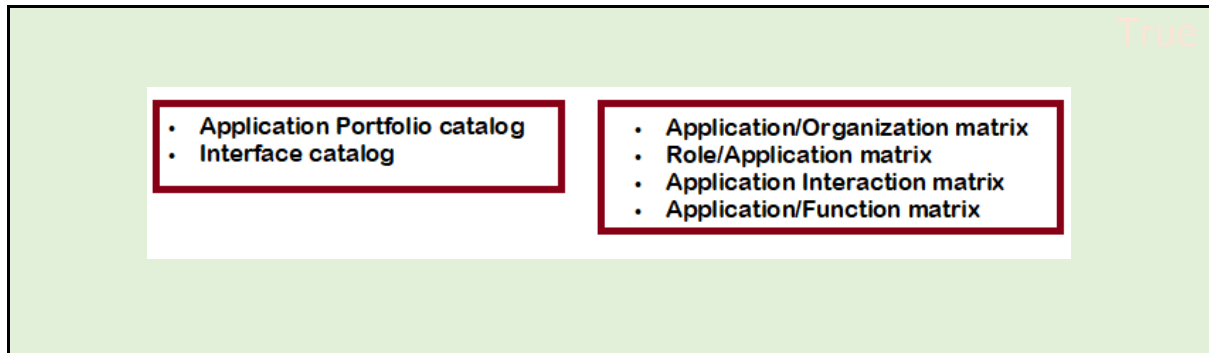


Do not be surprised if any enterprise-wide artifacts are considered and updated, especially in Phases B, C and D. These are Segment Architecture work extending on Strategic objectives mentioned above.

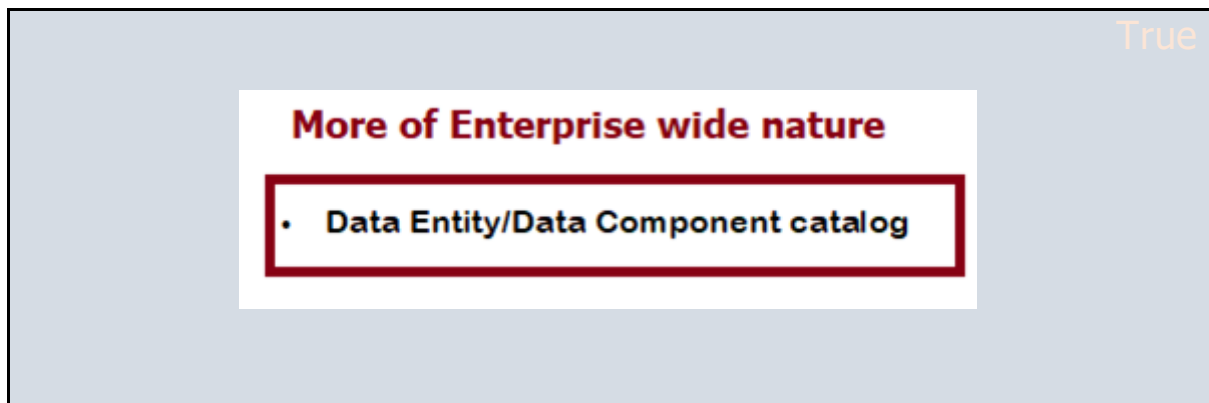
For example, Artifacts in Phase B : Business Architecture can be selected as all or some among :



For example, Artifacts in Phase C : Application Architecture can be selected as all or some among :



For example, Artifact in Phase C : Data Architecture can be :



For example, Artifacts in Phase D : Technology Architecture can be selected as all or some among :



Two portfolios taken as a sample, through there will be more to be planned and architected **parallelly** for the time period of **an Architecture Development Cyclic**.

The Cycle time is taken as **one** year now.

The **portfolio** comprising of a few 'projects' in each are :

Order Placement

Fulfilment; Delivery

We will just take **two Project Portfolios** right now, though the Enterprise would be having a few more Project Portfolios running in parallel. We will bring them all back at a later stage, in Phase E.

The Portfolios will have to narrowed down at some stage in Phase A. It need not be the first step, **since none of the steps in any Phase is compelled to be in sequence**. It is the discretion of the Enterprise Architects to decide right order of steps or even to revisit a step after yet another one is partially done.

The Portfolios are anyhow decided and finalized after due consultations. Also note that we have defined the basic context of the Enterprise - going for **e-Commerce** while they are still having physical store presence. Please refer and read it again from Preliminary Phase, before you read further.

One of the Sr Enterprise Architects, who has higher domain experience in Sales and Marketing on merchandises to various category of Customers was **assigned with the responsibility of working with Portfolio 1 of Year 1**. The outline approach will be connected with **all initial and regular activities of e-Commerce approach till the time the order is placed and accepted**. This Sr Enterprise Architect is also tasked with integrating necessary legacy systems (brownfield) by upgrading the Architecture and technology such that they gel smoothly with the greenfield systems.

Order Placement

The **projects** under the radar of this person related to :

How to get Customers for the online system. Onboarding Customers, mostly new one, but not ruling out existing in-store Customers.

How to get Vendors registered for the online system. Vendor Registration, not necessarily new ones, but all those who are providing goods or services in the in-store activity.

The **process that starts in a prospective Customer looking for a product or service** and ends up not going for it or ending up in **placing an order with payment and confirmation**. This is a complicated process and many stages and branches do appear in its logic. Also, the process will vary for Corporate (company) Customer. It could also be different for Institutional (say educational institutions, welfare groups and so on) Customers.

Selected **legacy applications and systems which will get integrated with the above** suitably – includes CRM – Customer Relationship Management – a packaged software.

Let us be clear that above outline is the **first cut aspirational view of the Portfolio**. This is **not to be taken as a Requirement Capture**, which will happen only in subsequent Phases of ADM. **Aspirational** is the term used in expressing a **passion and desire** towards wanting to achieve something great. However, a few more **lines and paragraphs (and possibly diagrams) on scope and other high-level details will be added** before the necessary Building Blocks and Documents of this Phase are completed and which may become **part of submission for in-principle approval of the Portfolio**.

Another Sr Enterprise Architect, who has higher domain experience in post-sales and in warehouse to dispatch to delivery routines has been **assigned with the responsibility of working with Portfolio 2 of Year 1**. The outline approach will be connected with **fulfillment and door delivery of the e-Commerce goods or service**. It will start **from the time the order is placed and accepted**. Sr Enterprise Architect is also tasked with integrating necessary legacy systems (brownfield) by upgrading the Architecture and technology such that they gel smoothly with the greenfield systems.

Fulfilment; Transporting to location; Delivery

The **projects** under the radar of this person related to :

Proceeding with the **best way the item or items selected are located and packed (Fulfilled)** with destination details. This could vary for a service order as compared to a goods order.

Moving the package closest to the destination city or area in the shortest possible time commensurate with optimum cost of the operation.

Positive way the **item is delivered to the right address** at the best time suitable to the Customer.

Selected **legacy applications and systems which will get integrated** with the above suitably – includes SCM – Supply Chain Management – a packaged software.

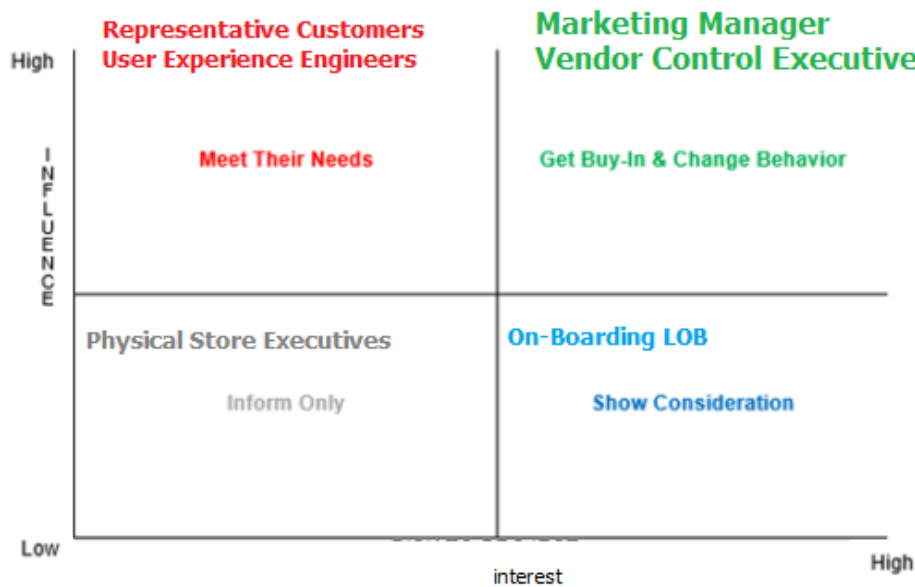
Portfolios include not just **Greenfield projects** but some **Brownfield integration** also

Legacy integration with Order Placement

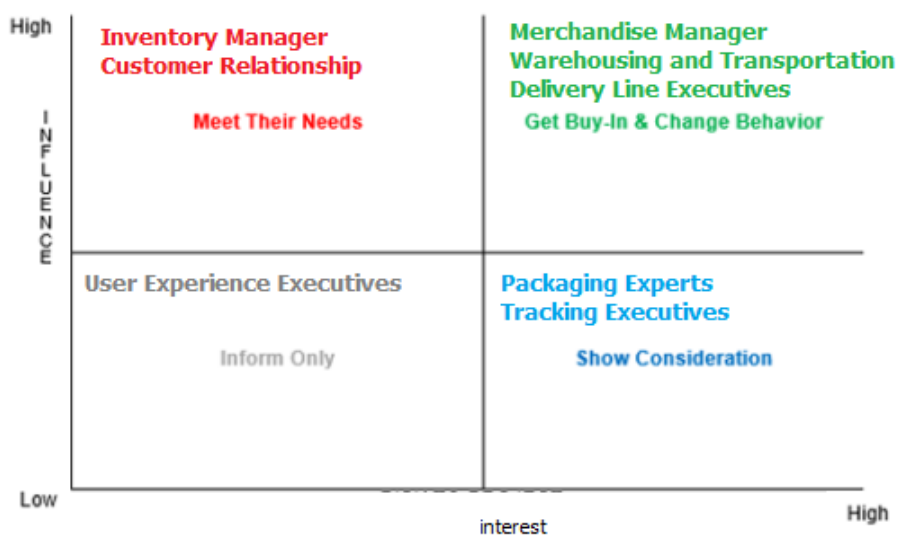
Legacy integration with Post order stages

The step of Identifying Stakeholders, their Concerns, and the high-level Business Requirements is very important one in this Phase. It also boils down to **arriving at Stakeholder Power Matrix first** and then **engage them to understand the concerns and the key high-level Requirements.**

Stakeholder Engagement : Stakeholder Map : Power – Interest Map



Only a sample one shown here for Portfolio 1 of Year 1
Feel free to enhance it with your own ideas. Participating in these Case Studies is the best way to understand it and goes a lot in understanding TOGAF to the right depth.



Only a sample one shown here for Portfolio 2 of Year 1

Again, feel free to enhance it with your own ideas. [Participating in these Case Studies is the best way to understand](#) it and goes a lot in understanding TOGAF to the right depth.

The engagement of respective Sr Enterprise Architects and their Team with various stakeholders and understanding their concerns helped them arrive at the high-level details appear in rest of this document. Though we have shown only [Business-related stakeholders](#), nothing stops them from contacting [other stakeholders who are from technology and other areas](#).

Goal for portfolio, what will [drive](#) it towards achieving the same and how our Architecture will help

A [step](#) of Vision Phase reads as : **Confirm and Elaborate Business Goals, Business Drivers, and Constraints**. While Goals and Drivers have been defined for the overall long-term strategic Initiative, it now needs an elaboration (develop its parts and detailing it). This is needed so that the Sr Enterprise Architects understand the way to proceed with the aspirational view and move it into scope and other issues.

Goal in [Portfolio 1](#) : To [capture market of share](#) of xx% in first year and increase it by yy% in every year for next two years.

Goal in : Order Placement

Goal in [Portfolio 2](#) : To [achieve Customer satisfaction](#) of zz% in first year and maintain it in subsequent years even while the number of Customers would be increasing exponentially.

Goal, Drivers : Fulfilment; Transportation; Delivery

Drivers : [Seamless User Experience](#) in ordering and [error free execution](#) in every subsequent chain of events.

You, the Chief EA and the respective Sr EAs have kept the following in mind at this stage :

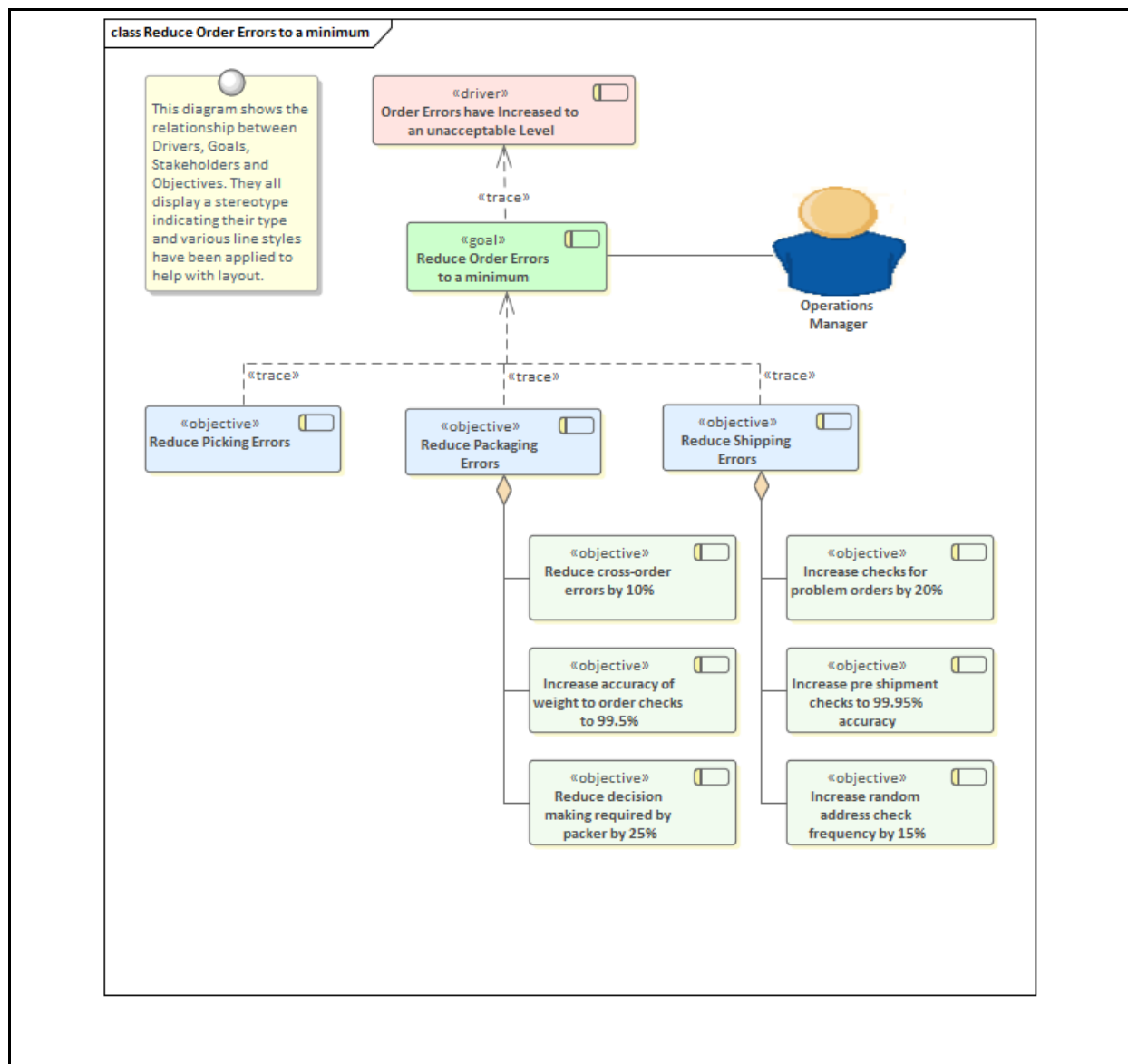
Program increments, and projects are the funding envelopes initiated to deliver a business benefit through creating, changing, or decommissioning assets. They have financial goals, functional goals, and time-frame goals. But even after all the investment dollars have been spent, the assets live on, and they require operational support, maintenance, and basic enhancements.

These will strengthen the definition of the Vision and would lead to a **Statement of** (high-level description) of the **Architectural Work** involved. It gives a chance to see if the existing definitions of the Work is current. The **listing of possible constraints at this stage** will help clarify any areas of ambiguity and becomes an early-stage assessment of the risks involved.

We note, from the documentation in the Tool : Enterprise Architect , from Sparx Systems :

Business Goals and Objectives Modeling is arguably the most important input to the development of an architecture, as it sets the right context for the alignment of architecture with the business strategy.

Enterprise Architect can be used to model the Goals and Objectives and relate them to each other, with each Goal being decomposed into a number of Objectives that can be measured. Stereotypes can be used to create Goal and Objective elements, and these can be added to any number of diagrams.



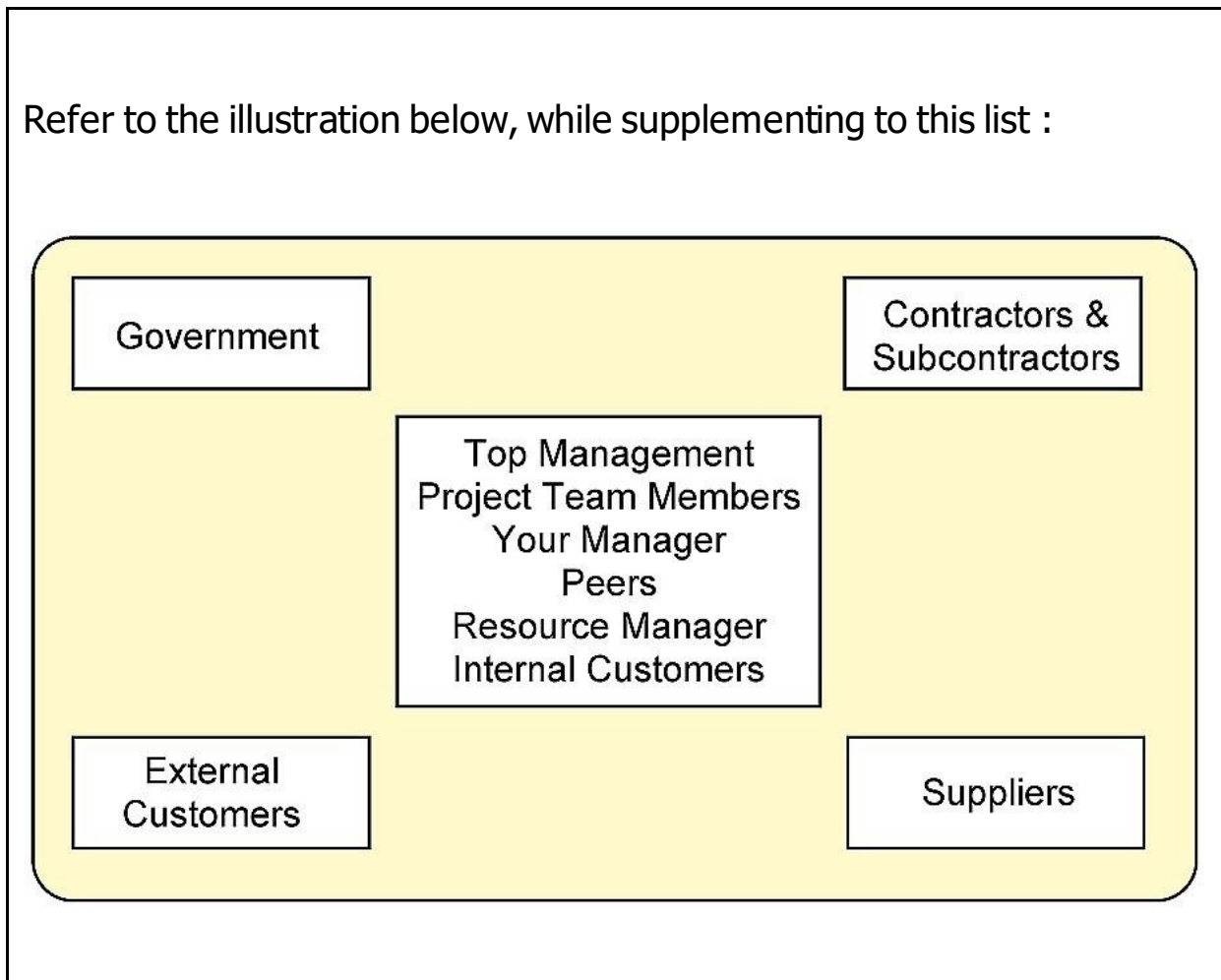
Have a look at a list of possible Stakeholders. Amongst these only who fit in as High Influence and Power with High Interest will be focussed in Phase A.

Nevertheless, any good EA will draw up a list like this and you in turn can attempt to add more to this, so that the appropriate Stakeholder can be reached at the appropriate Phases of ADM.

These are not in any particular order. Also, as noted above, a lot more can be added to this list if you are keen on reworking this Case Study to a deeper level. Some of these are in PMO or Operations Department since TOGAF treats them as outside of EA Department.

Customer Services Department
End users
Marketing Department
Web Master - Content Manager
Legal Department
Procurement Department
Finance Department
Accounting Department
Accounts receivables Department
Logistics Department
Warehouses Department
Security Department – Overall Security
IT security Department
IT Procurement Department
Buyers
Social Media team Department
Retail suppliers
Transport
Supplier Call Centres Department
Data Warehouse Department
Operations Department
Back office Department
Knowledge Manager
Sales Directors
Directors of Commerce
eCommerce SMEs
Project Manager
Digital Marketing Department
Developers
Customer Care Department
Cloud Operations Department
Product Management Department
Global eCommerce Director
eCommerce Programme Manager
Distributer sales Department
Regional sales Department
Employees
All other End users of IT systems

Refer to the illustration below, while supplementing to this list :



On Business Capability

While the Preliminary Phase involved Architectural Capability Maturity assessment, here the Business Capability needs an evaluation, with **specific focus on the Portfolios involved**. The one in Preliminary Phase referred to the Capability of the Enterprise to develop and consume the Architecture. Here we are at a Portfolio level and there is a need to clarify priorities of the relevant business strategy in taking up this Portfolio at this stage.

Business Capability is a coarse-grained set of coherent features and functions that provide business benefit. Business Capabilities are the Building Blocks of solutions and should be reusable across multiple solutions. Architectural Artifact Assets are the Building Blocks of business capabilities and should be reusable across multiple capabilities.

Capability Assessment for the portfolio, measured through relative Business Value

In the words of Management, this is to **identify the required Business Capabilities in the area** (of Portfolio 1 and Portfolio 2 separately) that the Enterprise must possess to act on the strategic priorities. If the priority is not justified anywhere, it is better to abandon or postpone this Portfolio. In the words of TOGAF documentation : deriving from **skill shortages, information required, process weakness, or systems and tools**, are a **serious consideration in the Vision** of whether the architecture effort should continue.

Both the Sr Enterprise Architects have done this exercise and are convinced that the **Business Capability of respective Portfolios justify going ahead** at this stage. They have recognized that the Capability is a combination of business processes, people (organization, knowledge and skills, culture), technology solutions, and assets (facilities, funds, etc.). They have **arrived at the conclusion that the current baseline level is good enough** to proceed and are incorporating the necessary Capability addition in arriving at the Target Vision.

They have also aligned these with strategic performance objectives as documented in the Preliminary Phase, wherein the Pain Point areas are :
Digital Journey in all aspects of e-Commerce : Online as total access mode

Enterprise Mobility : Even all employees use digital means, where relevant

Cloud Enablement reduce CapEx : To reduce capital costs of IT estate

To reduce OPEX of the IT estate by decentralized Services

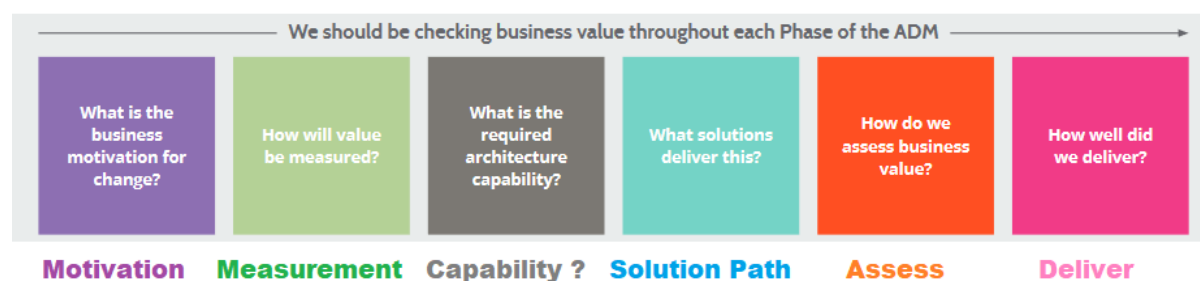
Gradual replacement of legacy and obsolete technology which drags down business, revenue and efficiency

This step seeks to understand the Capabilities and desires of the Enterprise at an appropriate level of abstraction. The **Sr Enterprise Architects**, backed by their own experience and knowledge of TOGAF have duly **identified the shortcomings or limitations** in the Capability of the Enterprise in the two Portfolio areas.

Portfolio 1 envisions the Software and IT systems to enable the ways and means to strengthen the process whereby the **Customer is not only be able to locate the need, but has a smoother experience of getting details thereon**; they are also **prompted with other items** of higher or lower price range or those ones which can be supplemented during the purchase. Even the **billing and payment experience** is envisioned to be as smooth as possible with a possible **EMI – Equated Monthly Instalments** style credit **when asked for**.

Similarly in **Portfolio 2**, the envision extends to right items being located, packed, moved and delivered within the most reasonable timeframe and in a safe manner. All the possible software and automation means will have to planned for.

Here the Business Capability needs an evaluation, with **specific focus on the Portfolios involved**.





See this in Chapter 28 : 28.5 Business Value Assessment Technique

The **listing of possible constraints at this stage** will help clarify any areas of ambiguity and becomes an early-stage assessment of the risks involved.

Expand Overall Capability study to the Portfolios

Phase A is a smoother transfer of Strategic moves of Preliminary Phase to Portfolios identified at Segmental level

Portfolio 1 : Software and IT systems to enable the ways and means to strengthen the process whereby the Customer is not only be able to locate the need, but has a smoother experience of getting details thereon;; they are also prompted with other items of higher or lower price range or those ones which can be supplemented during the purchase. Even the billing and payment experience is envisioned to be as smooth as possible with a possible EMI – Equated Monthly Instalments style credit when asked for.

Similarly in **Portfolio 2**, the envision extends to right items being located, packed, moved and delivered within the most reasonable timeframe and in a safe manner. All the possible software and automation means will have to planned for.

Business Transformation Readiness check

Done informally now and will repeat more formally in Phase E later on

The **step of Business Transformation Readiness Assessment** can be used to evaluate and quantify the organization's readiness to undergo a change. This goes a little more beyond evaluation of Business Capability.

Business Transformation Readiness Assessment - Maturity Model					
Factor 2: Need for Enterprise Information Architecture			Class	Organizational Context	
			BTEP Readiness Factor	YES	
Definition	There is recognition by the organization that information is a strategic corporate asset requiring stewardship. There is also recognition that the data is not universally understandable, of requisite quality, and accessible.				
Maturity Model Levels					
0 Not defined	1 Ad Hoc	2 Repeatable	3 Defined	4 Managed	5 Optimized
Information is not recognized as an asset. There is no clear stewardship of data.	Data Management (DM) concepts are intuitively understood and practiced on an <i>ad hoc</i> basis. Stewardship of the data is informal. Data is recognized by certain internal experts and senior management as being of strategic importance to the organization. Focus is primarily on technically managing redundant data at the applications level.	Many parts of the organization value information/data as a strategic asset. Internal DM experts maintain clear lines of responsibility and stewardship of the data, organized along lines of business and at all senior levels. Staff put into practice DM principles and standards in their daily activities.	Data is recognized as a strategic asset in most parts of the organization, and throughout most levels from operations to senior management. Resources are committed to ensuring strong stewardship of data at the lower management and information expert levels.	Data is recognized as a strategic asset in all parts of the organization, and throughout most levels from operations to senior management. Resources are committed to ensuring strong stewardship of data at the senior management and information expert levels.	Data is treated in all levels throughout the organization as a strategic asset to be exploited and re-used. Data products and services are strongly integrated with the management practice of the organization. All staff are empowered and equipped to take stewardship of information, and are seen as "knowledge workers".
				Recommended Target State	

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The Readiness Assessment is repeated again in Phase E of ADM. However, this is an **early-stage assessment now** and the factors that can be considered now include :

- **Desire, Willingness, and Resolve** : We need a clear indication of the intent to accept the impacts. Key resources (e.g., financial, human, etc.) are to be allocated for the endeavour. So, an assessment which concludes that there is agreement throughout the stakeholder Departments that the transformation initiative is the "right" thing to do is welcome now.
- **Funding**, in the form of a clear source of fiscal resources : does that exist to meet the potential expenditures down the line ?

- **Sponsorship and Leadership** : Does this exist with the right LOB Executives and is broadly shared ?

(See Chapter 26. Business Transformation Readiness Assessment for more details. We will be visiting this only in Phase E of this Case Study)

Scope of each Portfolio : Especially **Breadth** and Depth

Getting into the **step : Defining Scope**

High level Scope definition of the projects in portfolio : Breadth, Depth, time needed for Architecture : This is to be prepared now since it will form the core of the **document named Statement of Architecture Work**

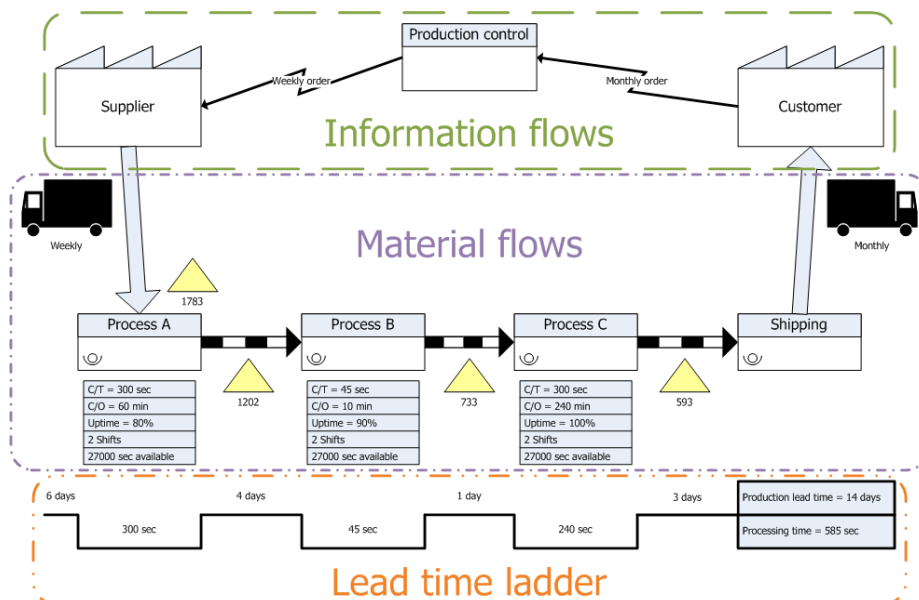
The scope portion is important because it **defines what is inside and what is outside the scope** of the Baseline Architecture and Target Architecture efforts.

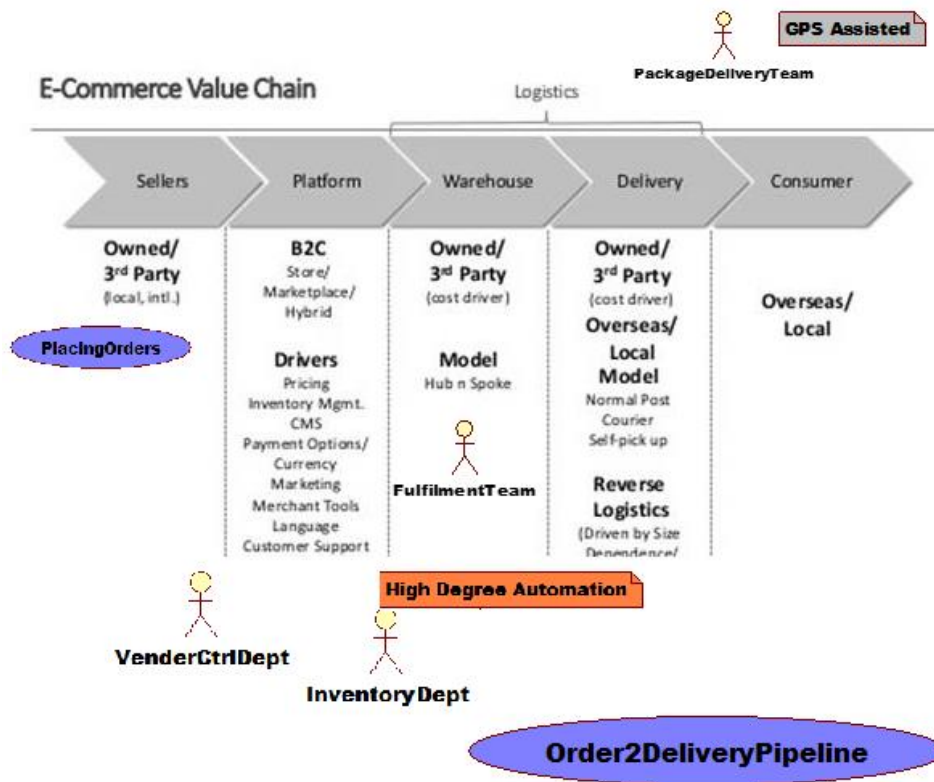
The **Breadth of coverage** of the Portfolios in the Enterprise :

For **Portfolio 1** : Will cover all new areas of **Order Placement process**. Legacy integration will be made to cover in-store items also to be accepted in the order based on available hyper-local delivery mechanism.

For **Portfolio 2** : Will cover all **further areas of order process pipeline** starting in Order Acceptance and going through Fulfilment at Warehouse or manufacturer locations, Integrated Transportation to respective destinations and effective and positive Delivery at the Doorstep. Legacy integration will be made to cover in-store items also to be delivered through hyper-local delivery mechanism

(Add more of your own to make sure you understand the way TOGAF works); A Value Stream Map or Value Chain Diagram is ideal here.





Value Chain

Duly related to Solution Concept diagram appearing a little below

As per TOGAF Documentation :

A Value Chain diagram provides a high-level orientation view of an enterprise and how it interacts with the outside world. In contrast to the more formal Functional Decomposition diagram developed within Phase B (Business Architecture), the Value Chain diagram focuses on presentational impact.

The purpose of this diagram is to quickly on-board and align stakeholders for a particular change initiative, so that all participants understand the high-level functional and organizational context of the architecture engagement.

We will see more about this diagram in the Business Architecture portion of this Case Study

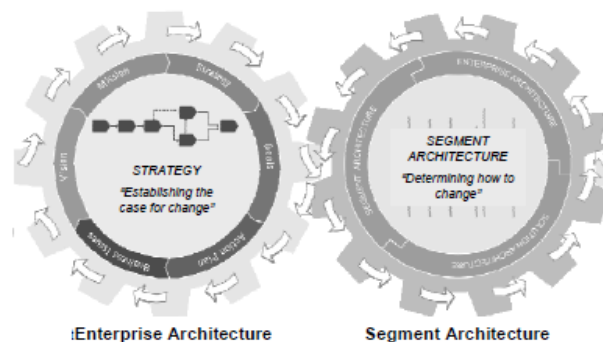
The **Depth is about level of detail** required. Each Portfolio documentation (not shown here into its full degree) gives out the outline of the usage of the ADM for this particular project. It will suggest how each ADM Phase will proceed - giving a sketchy brief of the Baseline and Target of each ADM Phase from its inception to the completion of the Architectural work.

For example, in Portfolio 1, it is envisaged that a new CRM – Customer Relationship Management as a Packaged software will need to be integrated with all greenfield software portions that are prepared fresh, not leaving out the brownfield alignment. All these need Baseline and Target indications. With the insight of this Sr Enterprise Architect, it is indicated that Micro Service slices will start at version 0.6 of Application Architecture and will influence other Architectures thereon. (Version number start with 0.1 as B D A T output of this Phase, in line with TOGAF recommendation for Requirement Management)

For example, in Portfolio 2, it is anticipated that a new SCM – Supply Chain Management as a Packaged software and a strong Data Warehouse solution will both need to be integrated with all greenfield software portions that are prepared fresh, not leaving out the brownfield alignment. All these need Baseline and Target indications. With the insight of this Sr Enterprise Architect, it is indicated that Micro Service slices will start at version 0.5 of Data Architecture and will influence other Architectures thereon.

In other words, version 0.1 of Business Architecture, Application Architecture, Data Architecture and Technology Architecture is given out as high-level as indicated by the Sr Enterprise Architects for each of the Portfolios now. This will help the other Architects to take off from a level of comfort. Guidelines as to how the rest of versions 0.2 to 1.0 will progress as iterative runs of the ADM is also indicted now.

A rough timeline is prepared for the entire Project Portfolios over the one-year span. The same is interposed on a long-term Roadmap that the Preliminary Phase has laid out as its long-term strategic Initiative.



The Portfolios involve ALL FOUR Segmental Architectural Domains: **B D A T**

You should be able to sense how the Initiative at Strategic Enterprises Architecture level (partition, as TOGAF calls it) is slowly taking a plunge into the Segment (Business, Data, Application, Data and Technology) related Segment Architecture (ABB – Architecture Building Block) work from now onwards. This is to continue till Phase D is completed.

At the completion of this Phase A. the following “contents’ of Architecture are ready :



The groundwork is also done, as described here, such that the following portions of Requirement Management ‘content’ are also taking shape in Phase A to Phase D initially as Architecture Building Blocks – Platform Independent but as detailed Architecture and design pieces needed.



Time to look at [all Architectural Principles](#) defined and see [which ones](#) are to be [validated](#) and followed for the portfolio

Further, a step : [Confirm and Elaborate Architecture Principles, including Business Principles](#) is in place. You ensured that the existing definitions are current and are [in line with the Principles laid out earlier](#). These needs be attached to the Vision document which is the precursor to secure their endorsement (in-principle approval) by Corporate Management. This a stage to clarify any areas of ambiguity in the Vison since the Architecture Board, who are the custodians of the Principals, will play a role in the approval process.

Principles valid for Portfolio 1 : Order Placement

Principles valid for Portfolio 2 : Post-Order Pipeline

Three important deliverable documents of this Phase now take shape

Vision Document

Statement of Architecture work

Communication Plan

The **step : Develop the Architecture Vision** is actually one that relates to the set of work that includes :

Vision Document

Statement of Architecture work

and Communication Plan

all these relating to the respective Portfolio of Projects

TOGAF documentation says : Based on the stakeholder concerns, business capability requirements, scope, constraints, and principles, create a **High-level View of the Baseline and Target Architectures**. The **Architecture Vision typically covers** the breadth of scope identified for the project, at a high level. Informal techniques are often employed. A common practice is to draw a simple **Solution Concept Diagram** that illustrates concisely the major components of the solution and how the solution will result in benefit for the Enterprise.

Most of the points in this paragraph above is already discussed in relation to this Case Study. Solution Concept Diagram is a suggested (not compulsory) artifact Building Block in Vision Phase.

As per TOGAF documentation :

A Solution Concept diagram provides a high-level orientation of the solution that is envisaged in order to meet the objectives of the architecture engagement. In contrast to the more formal and detailed architecture diagrams developed in the following phases, the solution concept represents a "pencil sketch" of the expected solution at the outset of the engagement.

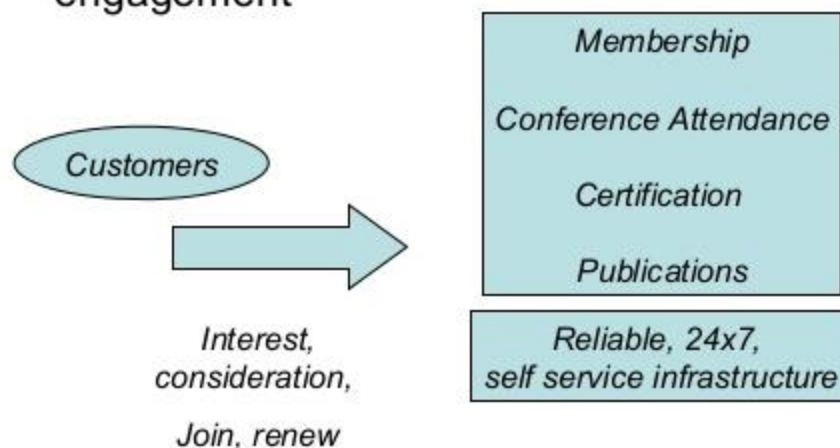
This diagram may embody key objectives, requirements, and constraints for the engagement and also highlight work areas to be investigated in more detail with formal architecture modeling.

Its purpose is to quickly on-board and align stakeholders for a particular change initiative, so that all participants understand what the architecture engagement is seeking to achieve and how it is expected that a particular solution approach will meet the needs of the enterprise.

A sample, but not from this Case Study :

Example Solution Concept Diagram

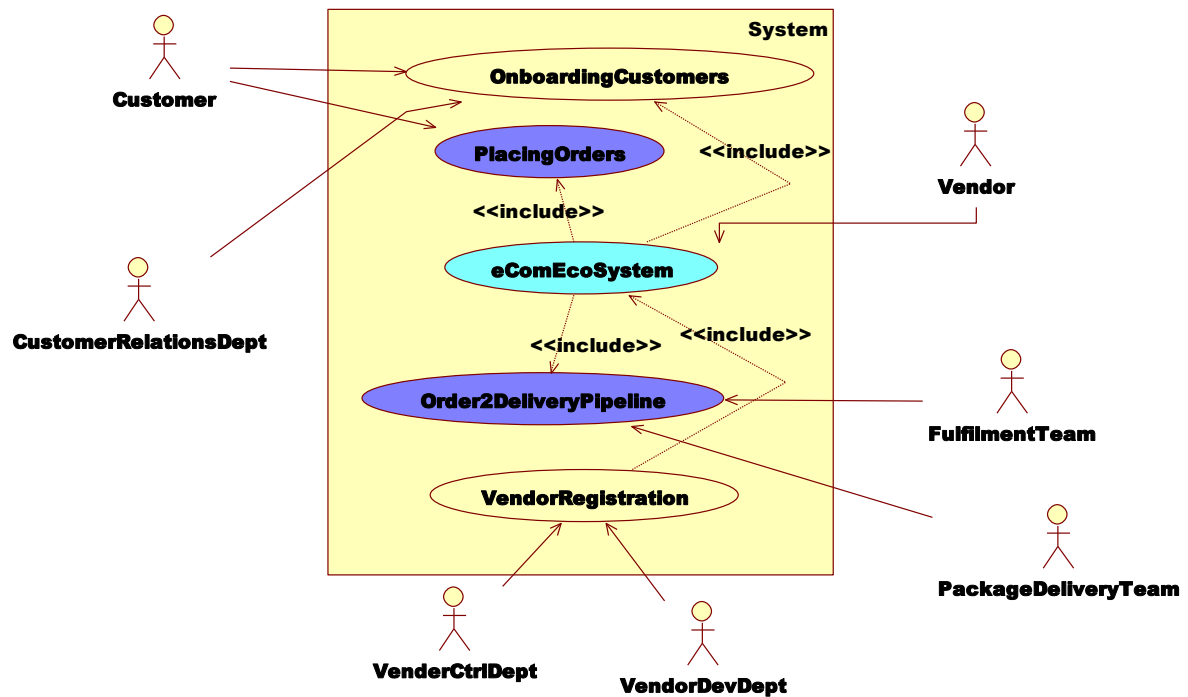
- A high-level representation of the solution envisaged
- A *pencil sketch* of the expected solution at the outset of the engagement



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This diagram, as seen by us, can be modelled after a combined Portfolio Use Case Diagram at Rank 0 as per Use Case Engineering practices.



Technology Canvas envisaged :

Web application for DeskTop and Laptop Customers

Suitable Front-end Technology for other Devices; includes voice commanding

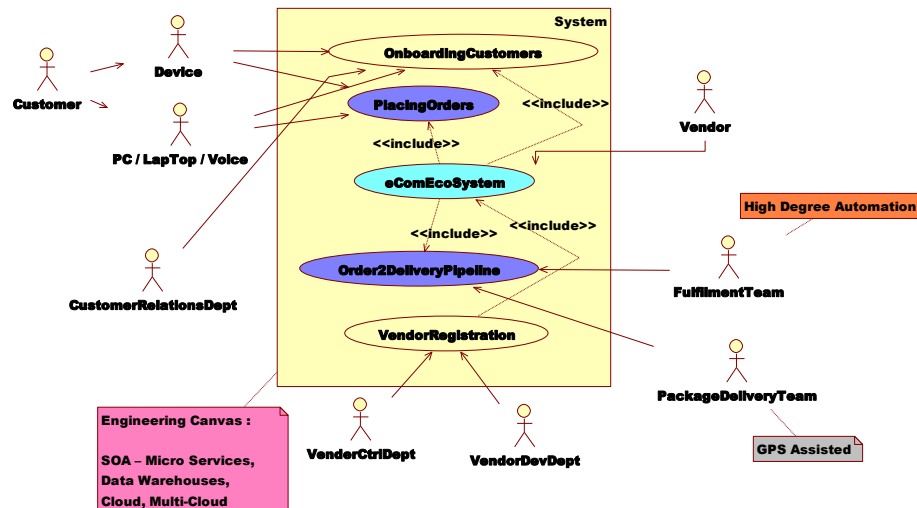
Consider more Modern Technologies at server side and at physical points :

SOA – Micro Services, Data Warehouses, Cloud

Fulfilment side Automation

Package Delivery is assisted by GPS

Many more, based on this sample list



TOGAF does not insist on specific Tools for any of the diagrams. We have ventured to use STAR UML, a public domain freeware Tool to the extent possible in making the diagrams and resort to other tools only when needed. Above Diagram is prepared in Star UML (version 5.0)

Business Scenarios, another technique suggested by TOGAF is used in modelling in Business Architecture. TOGAF only suggests this technique as an option in Vision Phase. We are making use of it in the next Phase.

Architecture Vision document, in its template may include :

Stakeholders and their Concerns

List of Issues/Scenarios to be Addressed

Business Vision Statement and Diagram (we have used Solution Concept Diagram)

Points like this and other ones that appear in the Vision document have been discussed, by and large in the sections above.

It includes the result of the step : **Define the Target Architecture Value Propositions, through Business Case, KPIs**

Business Case – A mechanism to justify the need for the project and its probable cost – a justification document is part of these.

Sample approach to Business Case

The business case development process begins with a financial decomposition of the organization to search for opportunities

Business Case Development Approach



Can include :

Market analysis for online Order Placement routines :

Assessment of Technology and Architecture benefits :

Early-Stage Cost / Benefits Assessment ;

Option appraisal – Alternative Architectures studies and Recommended option :

Key assumptions and dependencies therein :

Risk and Sensitivity analysis : Initially envisaged Risks and Mitigation approaches

(Technology risks, Customer Acceptance risk ...)

Architecture Resource requirements and Architecture related costs :
(This is not whole project cost. Only an indicate project cost is covered in a previous step relating to Early Stage Costs / Benefits Assessment)

Time scales : Overall Roadmap for Three-year span and positioning of this Portfolio within that)

Conclusions and Recommendations

KPI is brought in support of Business Case – Justification indicators

We note from above that your Sr Enterprise Architects have included Target Architecture Value Propositions, KPIs (Key Process Indicators) etc., in the Vision documentation suitably.

KPIs is drawn from areas such as :

1. **Process KPIs** - measure the efficiency or productivity of a business process.

Average Days to deliver an order (software to enable speeding it up)

Average time taken to pack a typical order in the Warehouse

Average time to reach packages from Warehouse to delivery city or town

2. **Input KPIs** - measure assets and resources invested in or used to generate business results.

Amounts (Total Cost of Operations) spent on Portfolio 1, Portfolio 2

Funding for employee training for Portfolio 1

(Onboarding Executives, Vendor Registration Executives)

Similarly for Portfolio 2

3. **Output KPIs** - measure the financial and nonfinancial results of business activities served by the Portfolio

Number of new Customers acquired through referral from
Online reach

4. **Leading KPI** - measure activities that have a significant effect on future performance

Peak load achievable on a Peak Sale day

Fulfilments achieved on same day

5. **Lagging KPI** - is a type of indicator that reflect the success or failure after an event has been consumed

Deliveries failed despite proactive planning per day

Payment failures attributed to Gateway operations

6. **Outcome KPI** - Reflects overall results or impact of the business activity in terms of generated benefits, as a quantification of performance

Newer online Customers every month

Improvement in order-to-delivery lead time

7. **Qualitative KPI** - A descriptive characteristic, an opinion, a property or a trait

Customer rating on Order Process

Customer Rating on delivery and overall experience

8. **Quantitative KPI** - A measurable characteristic, resulted by counting, adding, or averaging numbers.

Quantitative data is most common in measurement and therefore forms the backbone of most KPI

Please add more KPIs here on your own

The other supplemental documentation will be : A **Communications Plan**
: Indicating :

- Identification of **stakeholders and grouping** by communication requirements
- Identification of **communication needs**, key messages in relation to the Architecture Vision, communication risks, and Critical Success Factors
- Identification of **mechanisms that will be used to communicate** with stakeholders and allow access to architecture information, such as meetings, newsletters, repositories, etc.,
- Identification of a **communications timetable**, showing which communications will occur with which stakeholder groups at what time and in what location

Initial assessment of Risks associated with the portfolio

Possible **ways to mitigate** them as we go on with ADM

On Risk Perception :

Compliance Risk

Are you **complying with all the necessary laws and regulations** that apply to your business ?

Even if the business does not expand geographically, the company can still incur new compliance risk just by expanding the product line.

As the business expands, the needs to comply with new rules that did not apply to till date would arise.

Mitigation : Get a list of all possible regulatory and self-compliance points

Operational Risk

So far, we have been looking at risks stemming from external events.

But internal processes in company is also a source of risk.

There could be a “people” failure, but also a “process” failure. Delivery return and refund frauds may happen.

Anything that interrupts the company’s core operations comes under the category of operational risk.

Mitigation : Training of personnel, Process checkpoints and system checks, random checks etc.,

Technological Risk : There could be unknown issues that may crop up when using Modern Technological approaches : Vision envisages beyond Web Systems : Suitable Front-end Technology for other Devices, More Technologies at serve side :SOA – Micro Services, Data Warehouses, Cloud

Mitigation : Subsequent work at D, A , T levels will look into stability of technology before incorporating the same. Further Platform Independent Approach is done at Architectural and HLD – High level Design Level. Switch back to a more stable Technology is always possible if the chosen Platform Specific LLD – Low Level Design is having serious issues

Financial Risk

Most categories of risk have a financial impact, in terms of extra costs or lost revenue.

Mitigation : Advance watch on cash flow, ..

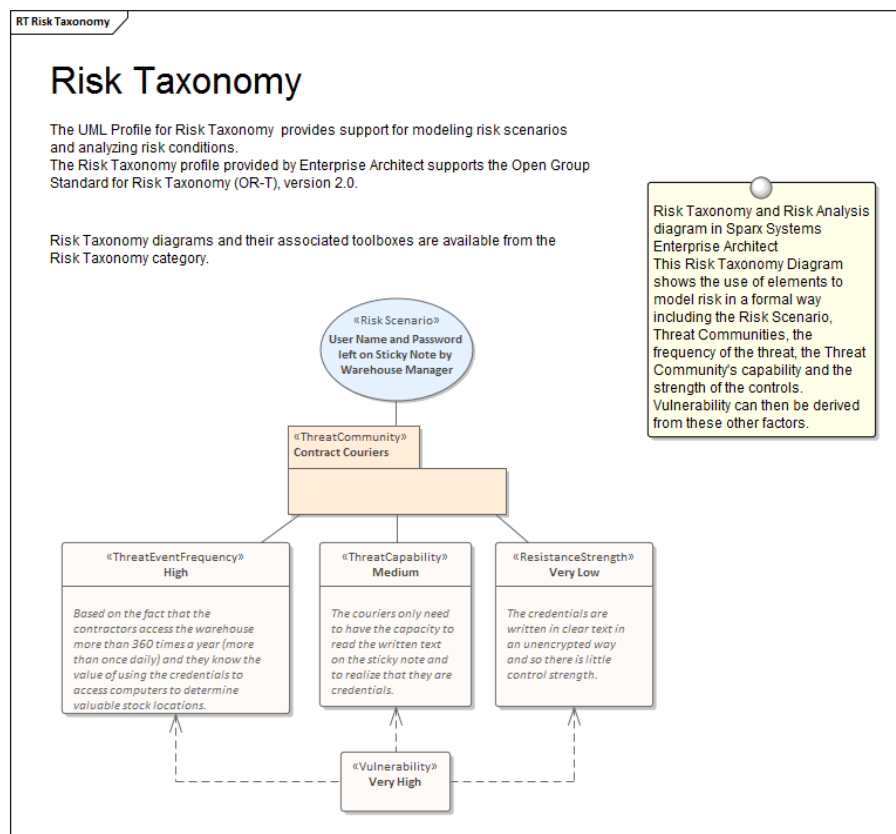
Reputational Risk

Reputational risk can take the form of a **major lawsuit**, an **embarrassing product recall**, **negative publicity** about the staff, or high-profile **criticism** of your products or services

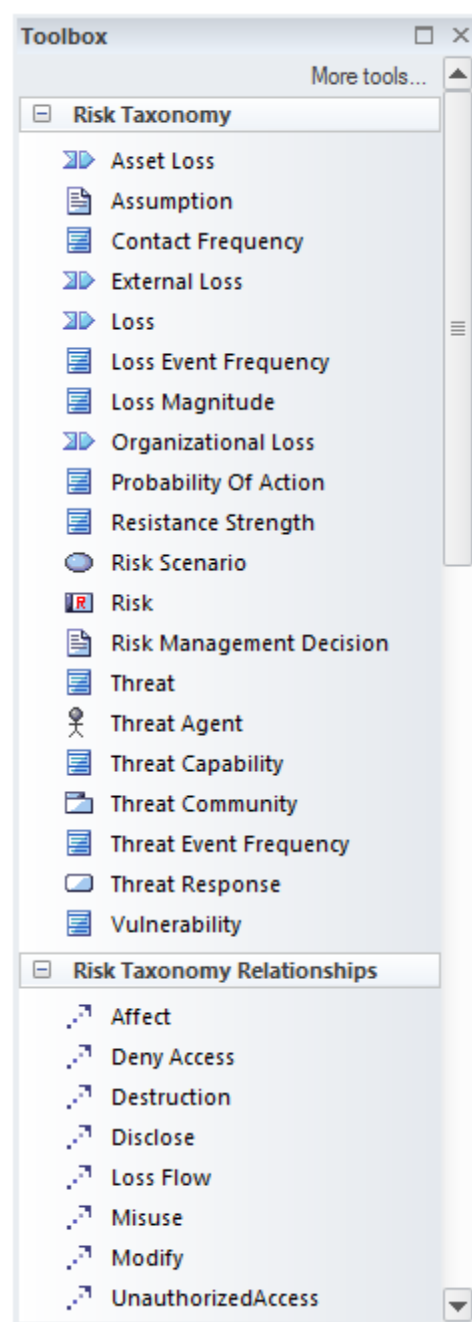
Mitigation : Social media integration, ...

We note, from the documentation in the Tool : Enterprise Architect , from Sparx Systems the following :

The Risk Taxonomy is a facility to define a comprehensive, stable and reusable set of risk categories that can be applied universally across the system. This includes definitions of Threats, Loss type, Contact Frequency, Loss Magnitude, Risks and more. It is based on the Open Group Standard for Risk Taxonomy (OR-T) and provides a toolbox and diagrams for defining the Taxonomy.



The Risk Taxonomy can be used at varying levels of formality depending on the initiatives, processes and requirements for risk assessment. The Relationship Matrix could also be used to record the relationship between the discrete values, Threat Capability and Resistance (Control) Strength to determine the derived Vulnerability. A Toolbox of elements and relationships is available for the Risk Taxonomy diagram allowing sophisticated models of risk to be created.



Who is communicated (from EA department), when and how

On Communication Plan

Stakeholder Communications Requirements		
Role	Name/Group	Information Needs
Group CIO	Hiram M. Price	Updated project status
Chief Architect	Melissa M. Smart	Updated project status
Architecture Board	Candice D. Walk, Christine S. Hulings, Shirley J. Moorhead, Kenneth C. Bass, Robert T. Thompson	
Enterprise Architects	Annemarie R. Daniels, Michael S. Sanchez, Linda D. Hall, Kenya E. Smith, Arnold A. Robinson, Charles D. Baker, Donna R. Shine	<div> Select Communication Information Need Thorough understanding of Architecture Vision Create New Configure... </div>
Domain Architects	Jerry N. Ash, Maria R. England, Brianna M. Woody, Ashley B. Harvey	
Program Management Office	James W. Baxter, Wilson R. Confer, Norman C. Reese	
Service Management	Ralph M. Otto, William M. Charity, Jose P. Goodrich	

*The objective of
Communication Plan is to keep
people informed, to
create an
environment of
trust, and to
provide an
opportunity for
feedback*

Role of Stakeholder	Department / Area	What Information Needed	Why is it Needed (Purpose)	Which Frequency	How Disseminated	Who initiates Communication
Highest Managers	Marketing, Distribution ...	Viewpoints of Top Management	Policy orientation	More during Preliminary Phase and Phase A	Preferably brief direct meetings	Chief EA

LOB Manager - 1	Online Order Enablement Section	Complete process expected during online exploration till order is placed	Anticipate automation bottlenecks and solve them proactively	High frequency during Phases B, C and D	All possible contact means which all eliminate delay in communicating	Sr EA, EA, B D A T Segment Architects
LOB Manager - 2	Fulfilment Section	Complete process expected during warehouse fulfilment till packages are transported onward	Anticipate automation bottlenecks and solve them proactively	High frequency during Phases B, C and D	All possible contact means which all eliminate delay in communicating	Sr EA, EA, B D A T Segment Architects
LOB Manager - 3	Delivery to Customer Section	Complete process expected from receipt of packages in destination city / area till actual completion of delivery	Anticipate automation bottlenecks and solve them proactively	High frequency during Phases B, C and D	All possible contact means which all eliminate delay in communicating	Sr EA, EA, B D A T Segment Architects
LOB Manager - 4	Customer Relationship	Integrating and improving existing CRM	Handholding regular customers and addressing their concerns; Developing Relationship for more business engagement	High frequency during Phases B, C and D	On demand Meetings	Sr EA
Representative Vendors	Large, Small and Very Large Suppliers	OnBoarding , Supply Chain practices	To understand their Point of View	Major work in Phase A; On demand thereafter	Direct meeting with few representative Vendors; Online Survey with others	Sr EA

Supply Chain Personnel	Supplies / Services Buying and Inventory Management departments, including Inventory Manager	How they expect IT systems to interface with their physical tasks	Smoother supply is needed for smoother purchase. Find areas where more automation is possible	Major work in Phase A and Phase B	One to one Meeting	Sr EA
Physical Store Personnel	Cash Register and Payment points to start with	Pain points in integrating existing legacy to newer systems	Smoother integration with Physical Stores	Whenever an ADM Phase considers legacy alignment	Direct meeting with representative store personnel, with clear explanation of what is being planned	EAs, B, D, A, T Segment Architects
Representative Customer	Large, Small and Very Large Suppliers ; Also involving Customer User Experience Engineers	Buying Behaviour	Planning Process of ordering and all downstream ones involving a Customer	More during Phases A and B as needed. Quarterly thereafter to plan future changes	Online and physical meeting, small group sessions and individual interviews, also online surveys	Sr EA carries this out with sample Customers
Training Manager	Learning - Online, physical	Best way to take suggestions of training needs forward	Towards success measures of Employee Empowerment	Every quarter for planning Training for next quarter	Electronic communication	EA
Operations Personnel	Operations / DevOps	Legacy connections ; also daily automatic execution of new services with Observability	Smooth handing over and for Site Reliability Engineering	From Phase F till handing over	Workshops, weekly meetings	EA and Full Stack Solution Architect
Code Development Personnel	Own developers; outside partners	Possible obstacles that can be solved from Architectural approach	Let Solution Building blocks be realistic towards code realization	During Phase G	Online and Offline modes	Full Stack Solution Architect in close coordination with EA

Procurement Personnel	Only those related to procurement of Software and Hardware	How they expect the procurement specification to be	To understand the non-technical portion herein, keeping the technology decision still with the Architects only	During Phase F and Phase G	One to one Meeting	Sr EA
Security Personnel	Chief Security Officer and Team	Existing Security norms;	To offer best of breed Security Architecture	During Phases B to E	Online Meetings	Sr EA, EA and other Architects
Ethics and Regulation	All connected with internal Ethical Standards and those related to Statutory and other industry Regulatory Practices	Norms and Rules relating to areas where architectural work is being done	To stay in line with the Architectural Principles in this aspect	In Preliminary Phase and on demand thereafter	Direct Onetime Meeting; Electronic Communication thereafter	Sr EA

Diagrams and other Building Blocks as recommended by TOGAF can be superset or a different set of what is chosen by the Sr Enterprise Architect here.

■ Matrices :

— Stakeholder Map matrix

■ Diagrams :

— Business Model diagram

— Business Capability Map

— Value Stream Map

- Value Chain diagram
 - Solution Concept diagram
- TOGAF Recommended Artifacts
- EA decides what are actually needed**

The Solution Concept Diagram was shown and discussed above.

Many of the diagrams in the list above are also in the list for Business Architecture. For details of these, refer to the file :

However, documents suggested by TOGAF are followed to the extent practicable :

Documents Produced in this Phase :

Statement of Architecture Work

(Project objectives, scoping requirements , approach ...)

Vision Document

(Scenarios / issues, Vision of Drivers, Information and Processes, Models and Constraints, Architectural Requirements)

Communication Plan document

(To whom, when, how : Formats, Channels, Events)

Artifact - BBs first produced sketchy in Phase A, but gets updated for Business / Application / Data / Technology Architectures subsequently

Stakeholder Map (Power - Index) Matrix is a mainstay in this Phase

We note, from the documentation in the Tool : Enterprise Architect ,
from Sparx Systems :

Stakeholder Management is critical to successfully
initiating and maintaining an architectural program. Architects will need
to engage with a wide range of stakeholders from senior executives
down to implementation staff. The engagements will often require
political sensitivity, diplomacy and flexibility to ensure the stakeholders'
needs and concerns are dealt with appropriately.]

Providing relevant and tailored views of the architectures will be critical
to ensuring that the stakeholders are kept informed and that they spend
the time needed to understand the impact the architectures will have on
their domain. Having a comprehensive communication plan is critical to
ensure that the stakeholders receive the information they require and to
maintain an interest and input into the architectures.

Enterprise Architect has a wide range of facilities and tools that can
assist with the stakeholder management. This includes the ability to
model the individual and groups of stakeholders, to classify them in a
taxonomy and to show the extent of their influence by using a series of
nested Boundary elements. There is a wide range of diagrams, matrices
and lists that will be relevant to certain stakeholders, including 'List'
presented in the Specification Manager, Component diagrams describing
Applications, and Class diagrams used to present the information
architectures, principles and a range of other ideas.

class Stakeholder Matrix

Stakeholder Influence x Impact Matrix

High

Influence of
Stakeholder

Low

Low

Impact on
Stakeholder

High

Karl Zimmerton:
Development and
Implementation
Manager

Paul Magnolia: Test
Manager

Felicity Newton-
Jones: Human
Resources Manager

Yukiko Miakawati:
Chief Financial
Officer

Katherine Celta:
Training Partner

Alessandro Taglia:
Customer
Experience Manager

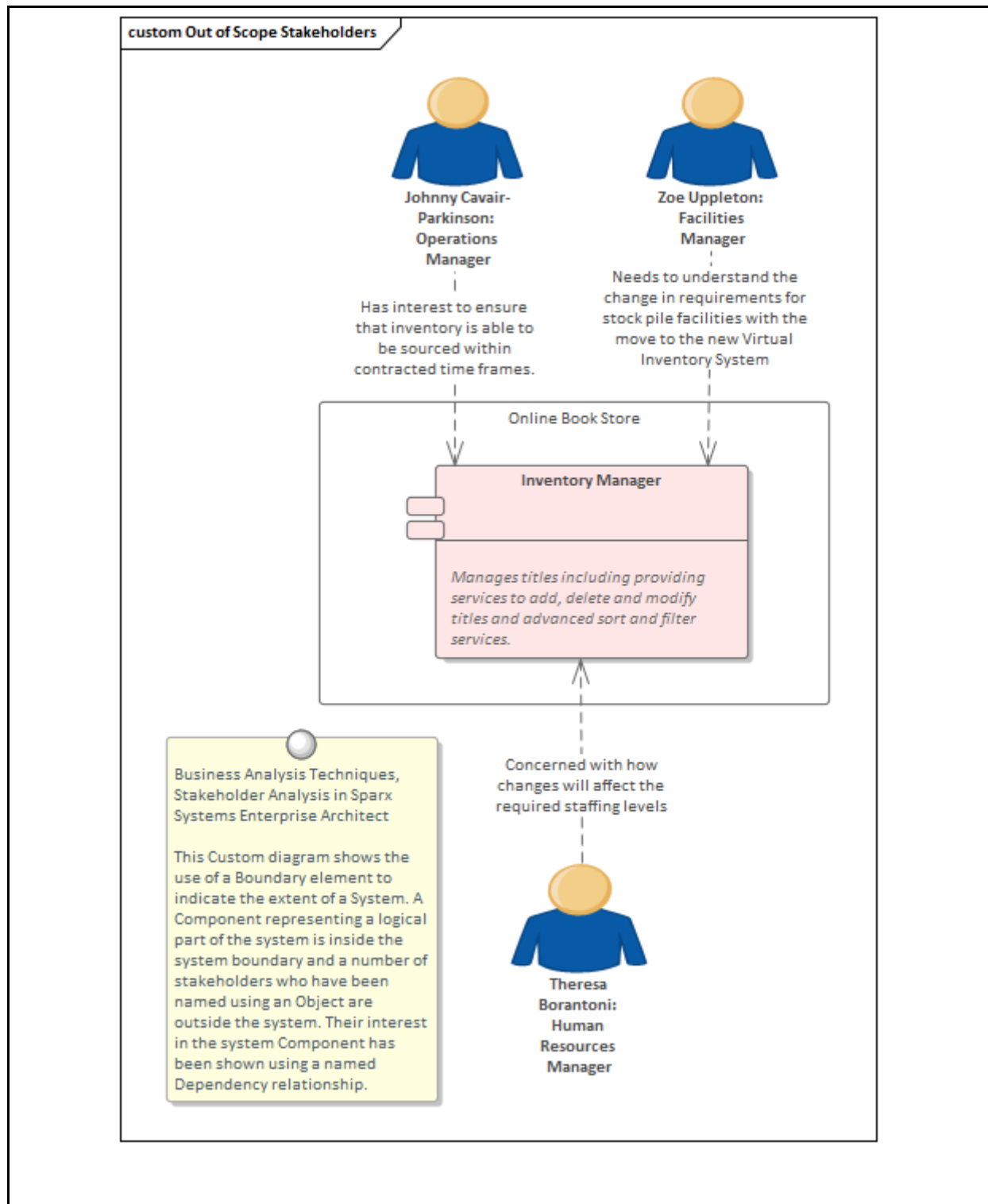
Hamlyn Piper: Chief
Financial Officer

Toni Rothland: Stock
Control Manager

Andre Douglas:
Chief Technical
Officer

Business Modeling, Stakeholder Management in Sparx Systems Enterprise Architect

This diagram maps the level of stakeholder influence against the level of stakeholder interest. The size of the Boundary element can be changed to accommodate more stakeholders. Instances of the Stakeholders have been used to indicate the person who occupies the role.



Prepared the initial first cut documentations as follows :

Architecture Definition Document : Version slice 0.1 of

Business Architecture :

In each portfolio, the Concept Diagram as a business footprint, highlighting the basic aspirational outline of the project vision is prepared. Defined the level of granularity for proceeding further.

Named the Views (diagrams) at the next version slice levels that will come up as we proceed (Mandatory :

Business Scenarios as Use cases getting into Ranks of ...;

Activity Diagram to supplement the understanding of Business flow;

Business Process Diagrams only for ...;

Event Storming based diagrams for ...;

Value Stream Mapping for ...

Since these Portfolios go **as per DDD, Domain Driven Design**, work on the **Context Map** and the initial definition of **Bounded Contexts** are documented suitably. Early ideas of management footprint (showing span of control and accountability) is added.

Defined the kind of relationships that are to be modelled between the business function categories, business functions, logical application components, and application services.

Application Architecture :

Indicated what is relevant at the conceptual level when it comes to Building Block artifacts.

General idea of how Application Services and their Views are to be architected for these Portfolios is documented. (Service Registry and API Gateways and so on).

Named the Views (diagrams) at the logical level that will come up as we proceed.

(Mandatory : Class Diagram and Sequence diagram; State charts for Aggregate entities)

(Optional diagrams for ... - includes Event storming with Events, Commands, Actors, Opportunities, Hot Spots, Constraints, ..)

How to on documentation regarding : User Interfaces, User personas, Security over application components and so which are to be modelled.

How to on documentation of Governance Services be modelled.

How to on documentation of Service Capability Mapping and related Metrics which are to be architected.

Defined the details on which NFRs are to be focussed during Application Architecture work.

Data Architecture :

Documentation on what kind of logical-level view(s) and physical view(s) needed in different data centric areas of the Portfolios in order to understand the architectural decisions, and which planning level Views will form the basis for this. Also on areas where Data Warehousing, Data Marting and Data Analytics from Data Lake may become necessary. How Data Visualization and Business Intelligence will be represented.

Details on how the information formats, relationships and cardinality are to appear in the views.

Defined the details on which NFRs are to be focussed during Data Architecture work.

Infrastructure Technology Architecture :

Documented general idea of how Investiture Services and their Views are to be architected for these Portfolios.

Named the Views (diagrams) that will come up as we proceed.

(Mandatory Deployment Diagram of front end to last node in backend;
Cloud related connection diagrams for relevant portions; ..)

(Optional diagrams for ...)

Details on how the relationships between logical infrastructure components, and infrastructure services ae to be modelled.

Details on how configuration specific details are to be modelled. How Integration hubs and such other features ae to be modelled.

Defined the details on which NFRs are to be focussed during Infrastructure Technology and Platform and hosting related Architecture work Specific guidelines on designing and modelling Security features.

Architecture Requirements Specification :

Contains, as of now, pieces of specifications (Functions, SLA on NFR) such as :

Section 2.1 : Architectural Requirements got its initial lines of filling in.

Initial notes on descriptions of the contracts (interactions) between the Application services and on similar contracts in other services in Data and Infrastructure segments.

Similar notes on other points leading to SLAs on all Segments.