



Solutions Architecture

Introduction To Solutions Architecture

Learning Objective

- ❖ Understand what Solutions Architecture is, its purpose and where it fits in modern agile environments
- ❖ Understand the key deliverable of a solutioning process
- ❖ Understand the importance of creating business solutions, not technical solutions

Topics Covered

- Definition
- Responsibilities
- Solutions Architecture in SAFe (agile at scale)
- Solution Blueprint
- Other key concepts
- Business solution vs. technical solution
- Story telling

Labs

- Discuss what the right ingredients are for a complete, end-to-end architecture of a solution
- Discuss the benefits of a comprehensive solutions architecture process can help in a modern agile environment

Inputs and scope

Learning Objective

- ❖ Understanding Platform Protection Role in Security
- ❖ Understand what inputs are required into a solutioning process and who typically owns them
- ❖ Understand how to define scope and associated MVP (Minimum Value Product)
- ❖ Understand the importance of NFRs and how to document them
- ❖ Understand the importance of the business case

Topics Covered

- Uncovering business benefits. Business case
- Business solution vs. technical solution
- Requirements and inputs. Owners
- Defining and documenting scope
- MVP definition process
- Non-Functional Requirements
- Stakeholder management

Labs

- Discuss what to do if the requirement inputs are not available or do not have the required quality or completeness.
- Discuss the importance of stakeholder management via practical cases. Power maps and behavioral styles.
- Practical case to discuss a solution readiness process in an agile environment.
- Practical case on the difference between an accurate and an incomplete business case and the changes it made to a large enterprise initiative.

Designing the architecture of a solution

Learning Objective

- ❖ Understand how to break down an e2e solution into its constituent building blocks to facilitate the due diligence and engage the various domain architects.

- ❖ Understand why documenting the as is pays off.
- ❖ Understand why a solutions architecture is not just the target architecture.
- ❖ Understand how a solution can be used a driver to unlock value for an organisation via consolidation, simplification and decommissioning.
- ❖ Understand the importance of documenting key design decisions for audit and governance purposes.
- ❖ Discuss the various artefacts / templates that can be used to document the architecture.
- ❖ Understand the use of patterns as accelerators.

Topics Covered

- Understanding what you are dealing with: As-Is
- Business Architecture
- Target architecture: Application, Data, Security and Infrastructure Architecture
- Technology stack & licenses
- Interfaces
- Transition States
- Decommissioning
- Migration & Archiving
- NFR assessment
- Key Design Decisions
- Working with domain architects

Labs

- Practical case on the impact of inaccurate NFRs in a critical business project
- How to use Key Design Decisions to drive changes to the architecture
- Discuss the use of catalogues as single source of truth
- The power of architecture patterns and how domain architects can help

Designing the delivery of a solution

Learning Objective

- ❖ Understand why a solution is not just the technical aspects

- ❖ **Understand how to work with projects managers, engineering teams and product owners**
- ❖ **Understand the building blocks of the delivery**

Topics Covered

- Delivery frameworks
- Plan on a Page
- Governance
- Change Request
- Locations
- Organisational Chart
- Staffing Plan
- RAID
- The power of PoC
- PMs, Engineering teams and POs

Labs

- The onshore / offshore dilemma
- Practical case on best delivery framework for an organisation
- Examples of PoCs and how they helped shape a solution

Delivery control models

Learning Objective

- ❖ **Understand why defining delivery guardrails benefits a project**
- ❖ **Overview of control models and how to define new ones depending on the types of controls required**

Topics Covered

- Controls in an agile environment
- Earned Value as key delivery control
- Other control models

Labs

- Practical case on how to burn the budget quickly due to lack of controls

Designing the cost of a solution

Learning objective

- ❖ Understand how to present costs and set the right context around it
- ❖ Understand how transparency and traceability facilitates the discussion on cost
- ❖ Understand how to translate a solution into a price
- ❖ Understand the importance of estimating models and how to build them

Topics covered

- Estimating assumptions
- Estimating models – use, how to build them, why they are important
- Cost components
- Contingency
- Commercial Factors
- Putting it all together
- Presenting cost – the Chinese menu
- Reviews & approvals

Labs

- Practical case on setting expectations on cost via estimating assumptions
- Practical case on how the way costs are presented can make a major difference in a commercially competitive environment
- Practical case on how to build a simple estimating model

Governance of a solution

Learning objective

- ❖ Understand how to manage changes in the architecture throughout the

delivery lifecycle, retaining the integrity and business value of a solution

- ❖ **Discuss how QA can be your friend and help you improve your solution**
- ❖ **Discuss how to compromise and agree trade-offs in the solution**

Topics covered

- Objectives
- Principles & guardrails
- Design Authority – terms of reference, deliverables
- Change Request process and alignment with Design Authority
- Quality Assurance

Labs

- Practical example of compromises in a solution. How to leverage your blueprint to reinforce your position as guardian of a solution
- Quiz – you make the decision as Solutions Architect on a design question. Compare your choice against real cases

Visualizing and explaining your solution

Learning objective

- ❖ **Understand why your solution is useless if no one can understand it**
- ❖ **Understand why a robust visualization model is important**
- ❖ **Understand the power of simplicity and completeness in architecture**
- ❖ **Understand the use of architecture views to adapt the architecture to different stakeholders**
- ❖ **Understand the importance of catalogues**
- ❖ **Automated generation of architecture diagrams**

Topics covered

- C4 notation model – principles, examples and advantages over other notation standards
- Colour coding standards
- Automated generation of architecture diagrams based on catalogues

- Enterprise tools for visualisation and architecture management
- Documentation management
- MS Office free approach

Labs

- Practical case – create your own C4 diagram and associated color coding. Create views for various stakeholders
- Practical case – adapt technical language to the business
- Practical case – create a simple dashboard to summarize a complex project for senior stakeholders

More practical tips

Learning objective

- ❖ **Understand practical tips on designing & governing a solution based on experience**

Topics covered

- List of recommended / not recommended practices and rationale behind them
- Discuss any additional questions the attendee may want to raise

Labs

- Quiz – you make the decision as Solutions Architect on best next action. Compare your choice against real cases

Industry certifications

Learning objective

- ❖ **Discuss some of the industry certifications available in the market that, in my experience, will increase your knowledge and improve your chances to get a better role or job**

Topics covered:

- TOGAF
- SAFe
- Cloud (AWS, GCP, Azure)
- PMP

Case studies

Topics covered:

- These are real-world practical cases for large organizations:
- Build a micro services architecture in a SAFe environment
- Proof of Concept to validate a new technology stack and assess technical and delivery capabilities of an organization
- Decommissioning roadmap using transition states and associated control models
- How to abstract a solution and create a digital asset that can be reused across other areas of the organization