

Modelling Using Archimate and Sparx EA

Course Number: MOD-300

Format: Instructor Led, Classroom or Virtual

Standard Duration: 36 hours, can be shortened to 24 hours for experienced audiences

Overview

This 36 hour course is made up of three modules designed to introduce modelling techniques, Sparx EA, and Archimate to IT professionals that have introductory-level experience with modeling techniques and want to readily use/apply Archimate with Sparx EA to their work. The course starts by building a core set of foundation skills in UML and Sparx EA before formally introducing and exploring the Archimate language. The course is arranged in three distinct modules to allow easy customization. Audiences that have extensive UML and modeling experience can request a shorter, tailored course that excludes the first module which is foundational in nature.

Module 0: Modeling Foundations, Tool Essentials, and Introducing Archimate	12 hrs
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Prepares students for learning modeling techniques by introducing foundational concepts that underpin all of the techniques and notations that will be explored in other units. Illustrates key concepts relating to stereotypes, UML profiles, types of relationships, and traceability.

Module 1: Archimate In Depth & The Technology Layer	12 hrs
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Drawing on the modeling foundations, this unit establishes an in depth understanding of the Archimate Language overall and a basic understanding of modeling Technology Layer concepts - infrastructure, implementation & deployment with Archimate and Sparx EA.

Module 2: Application Layer, Business Layer Essentials, and Core Extensions	12 hrs
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Introduces key constructs of the Application Layer and essentials of the Business Layer. Extensions to the core, including Implementation and Migration and Motivation, are covered in general.

Module 0: Modeling Foundations & Introducing Archimate




Overview

Prepares students for learning modeling techniques by introducing foundational concepts that underpin all of the techniques and notations that will be explored in other units. Illustrates key concepts relating to stereotypes, UML profiles, types of relationships, and traceability.




Learning Outcomes

- Use basic features of the chosen modeling tool.
- Understand and be able to use basic UML notation.
- Be able to explain what stereotypes are in UML.
- Be able to describe what Archimate is and what it is intended for.
- Understand the concept of instances as it applies to modeling.
- Understand and explore traceability.

Session 1 Outline

Timing	Topic	Exercise
10m	Introductions / Objectives	
20m	1. UML, Archimate, and Modeling In General	
60m	2. Essential Modeling and UML Constructs	
15m	< Break >	
40m	3. Tool Primer: Sparx EA Essentials	
30m	4. Exercise: Understanding Stereotypes	

Session 2 Outline

Timing	Topic	Exercise
30m	5. Recap / Catch-up Last Session Topic(s) & Q/A Session	
60m	6. Essential Building Blocks in UML	
15m	< Break >	
60m	7. Understanding Instantiation using Components	
30m	8. Tagged Values: Adding our own stuff to UML	

Session 3 Outline

Timing	Topic	Exercise
30m	9. Recap / Catch-up Last Session Topic(s) & Q/A Session	
60m	10. Understanding Traceability	
15m	< Break >	
20m	11. Traceability in Sparx EA	
20m	12. Publishing and Sharing Models	
10m	13. Archimate Resources	
10m	14. Understanding Archimate Views	

Module 1 Outline: Archimate Essentials & Technology Layer Modeling




Overview

Drawing on the UML essentials of component and deployment model, this unit establishes a basic understanding of modeling infrastructure, implementation & deployment with Archimate and Sparx EA. As the first module to focus on Archimate, considerable time is spent understanding foundation constructs of the modeling language.



Learning Outcomes

- Gain an in depth understanding of Archimate as a whole.
- Understand the building blocks used for implementation, infrastructure, and deployment in Archimate.
- Be able to depict physical views of the architecture using Archimate and Sparx EA.
- Establish and understand opportunities for traceability between Implementation/Infrastructure/Deployment and other Archimate perspectives.


Session 1

Timing	Topic	Exercise
15m	Introductions / Objectives	
20m	15. Recap Q&A Module 0 / Sparx EA & Archimate	
60m	16. Archimate Framework Essentials	
15m	< Break >	
40m	17. Archimate Viewpoints	
30m	18. Archimate Notation Essentials: Relationships	

Session 2

Timing	Topic	Exercise
30m	Recap / Finish or Continue Last Session	
15m	19. Derived Relationships in Archimate	
10m	20. Archimate Notation Essentials: Shape Changing	
30m	21. Archimate Notation Essentials: Exercises	

Session 3

Timing	Topic	Exercise
30m	Recap / Finish or Continue Last Session	
45m	Archimate Notation Essentials: Exercises (cont'd)	
60m	22. Formally Introducing the Technology Layer: Shapes and Constructs	

Session 4

Timing	Topic	Exercise
30m	Q&A / Recap	
60m	23. Exercise: Translating Looser Diagrams to Archimate	
30m	24. Technology Layer Viewpoints	
30m	Break	
30m	25. Exercise: Using Technology Layer Viewpoints	
10m	26. Patterns in Archimate / Reference Material	
5m	27. Module 1 Assignment Orientation	

Module 2 Outline: Application & Business Layers

Overview

The central application layer is a key focal point of Archimate and the concepts present a critical element of connecting IS and business oriented elements of an architecture. In this session we will become familiar with all the key constructs and viewpoints of the application layer and experience a number of (simplified) case studies to explore its uses. We will also learn essential elements of the business layer



Learning Outcomes

- Gain an introductory overview of the Application layer and its related viewpoints.
- Introduce the business layer and Implementation / Migration Layers
- Improve skill with Sparx EA and learn principles and techniques for managing models effectively.
- Be able to depict application layer elements using Archimate and Sparx EA.




Session 1

Timing	Topic	Exercise
10m	Introductions / Objectives	
30m	1. Recap Module 1 & Advice on Getting Started	
60m	2. Managing Model Content in Sparx EA: Useful Features & Capabilities	
15m	< Break >	
30m	3. Model Organization & Management Guidelines	


Session 2

Timing	Topic	Exercise
45m	4. Overview of the Application Layer	
10m	5. Overview of related Architectural Viewpoints	
30m	Recap / Finish or Continue Last Session	
30m	6. Useful Constructs for Architects: Overview of The Implementation & Migration Extension	

Session 3

Timing	Topic	Exercise
30m	Recap / Finish or Continue Last Session	
45m	7. Business Layer Essentials	
30m	8. Sparx EA Techniques: Importing Data	
90m	9. Case Study 1: Modeling Application Structure and Usage to Support Business Process Automation/Improvement	
30m	Present / discuss case study model(s)	

Session 4 (optional follow-up)

Timing	Topic	Exercise
30m	Recap / Finish or Continue Last Session	
90m	10. Case Study 2: COTS Software Replacement & Re-Integration [Alternative: Case Study from Student/Client Environment]	
30m	Present / discuss case study model(s)	
15m	11. Assignment Orientation [Archimate Module 1 / 2 Assignments]	