

# Agile architecture, analysis, and modeling

## Duration

2 days

## Description

Nowadays, organizations developing software products are requested to be more reactive and efficient. Agile approaches seem well adapted to this new context since they propose to frequently deliver high added value solutions to users. For instance, the Scrum method explains how it is possible to plan development taking into account business value in collaboration with subject-matter experts.

However, the Scrum method, being somewhat prescriptive, does not explain how software development disciplines must be adapted to an iterative and incremental approach, simply covering emerging architecture, analysis, and modeling.

For organizations having implemented rigorous processes, Agile methods can seem a little light and improvised. Especially since they do not take into account the importance of upstream analysis work to manage technical risks associated with software development projects.

## Objectives

The "Agile architecture, analysis, and modeling" course offers solutions to the dilemma between Agile approaches and waterfall methods by answering the following questions:

- How to ensure balance between upstream elicitation and an emerging approach?
- How to mitigate technical risks with Agile approaches?
- How self-sufficient and multidisciplinary teams are using architecture requirements?
- How to design solutions and write analysis documents iteratively and incrementally?
- With Agile approaches, what are becoming the roles of architect and analyst?

Comprising practical workshops, this course will simulate the reality of analysts and architects. During the course, participants will have the opportunity to experiment various analysis and modeling techniques for each and every steps related to software development within the context of a project carried out using the Scrum framework.

## Target audience

- Architecture managers
- Analysts
- Technical leads.

The workshops cover different forms of architectures according to the participants' speciality (i.e., functional, business, software solution or data).

The course is not adapted to IT infrastructure or network architecture managers.

## Prerequisites

- Experience in analysis and modeling
- Knowledge of Agile methods (perusal of [scrum.org](http://scrum.org)'s Scrum Guide).

## Content

## Agile architecture, analysis, and modeling

What is software architecture and what are its different forms?

- The challenges of risk mitigation and complexity management
- The role of architects and analysts

What are Agile approaches?

- Overview of the Scrum method
- Benefits and impact of Agile approaches on the role of the architect and analyst as well as on the analysis discipline
- Differences between waterfall and Agile methods

Emerging analysis principles

- Balance between anticipation and adaptation during the tasks resulting from elicitation

Systemic vision

- Determining what is sufficient to initiate development work
- Workshop: Analysis practices and high-level deliverables, such as the vision board, project charter, product canvas, story mapping, as well as layer and context diagram

Requirements management

- Product backlog tool and collaboration with the Product Owner
- Planning according to business criteria and technical considerations

Writing the requirements

- Empirical writing of quality requirements
- User story tool
- Different techniques: breaking down stories, Kano, spikes, INVEST, Scrum's and Sashimi's definition of "done"

Project follow-up

- Use of Scrum's inspection points to achieve the product's objectives
- Increment acceptance during the sprint review
- Improvement of practices during the sprint retrospective
- Quality and technical debt management with the product backlog

Agile documentation

- Empirical writing of documents
- Reduction of the writing effort and documentation waste
- Documentation technique according to the deliverables' life cycle and usefulness

Role of the Agile architect

- How to exercise leadership within an Agile context
- Delegation according to both the topic and context
- Scott Ambler's Architecture Owner: behaviour and responsibilities

Role of the Agile analyst

- How to contribute as an analyst within an Agile team
- Collaboration with the development team and Product Owner
- Behaviour and responsibilities