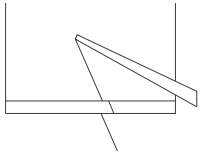
Bring ideas to life
VIA University College

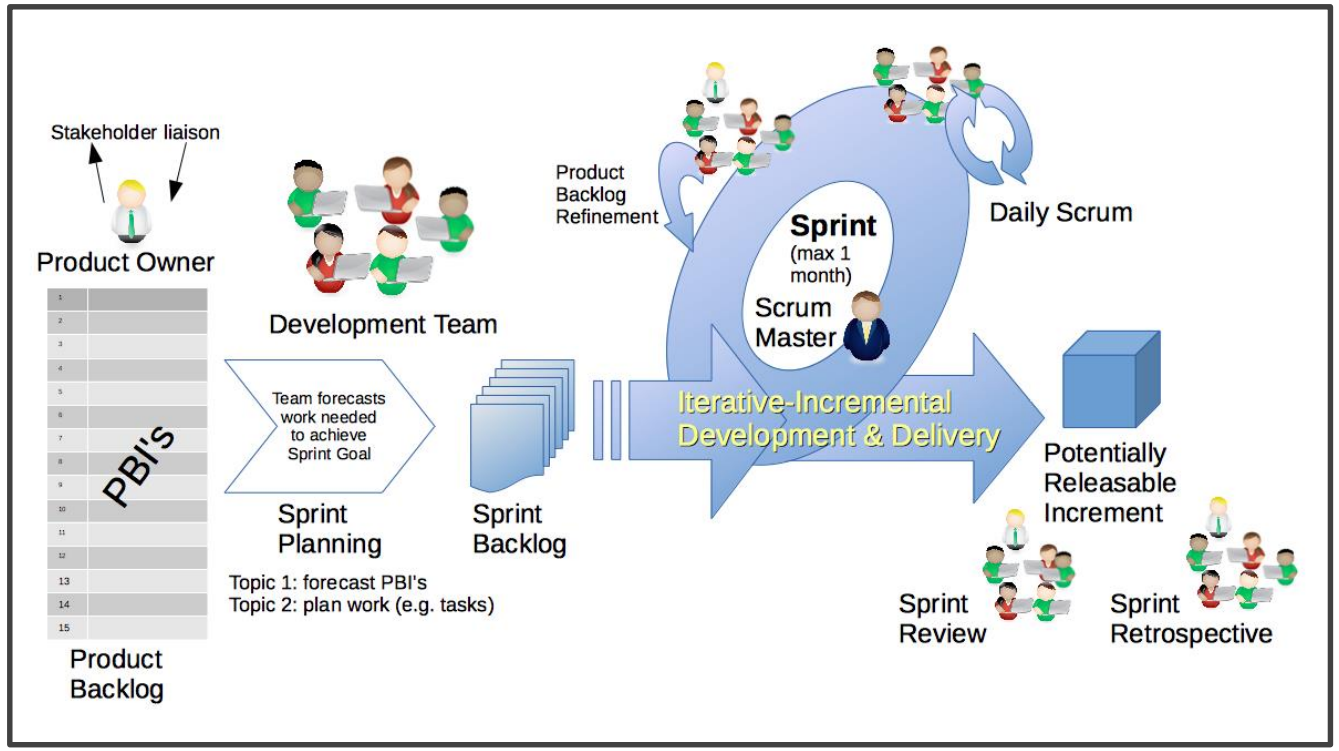


Unified Process/SCRUM

SEP2

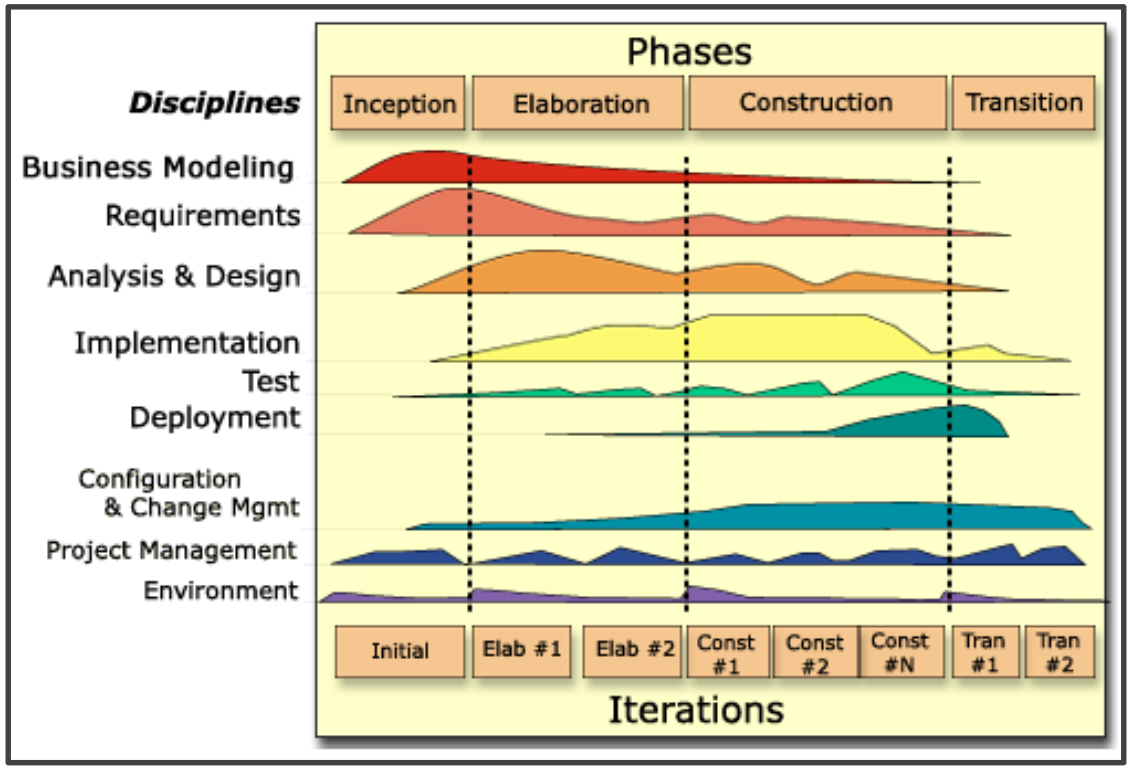
SCRUM vs Unified Process

Mainly Process

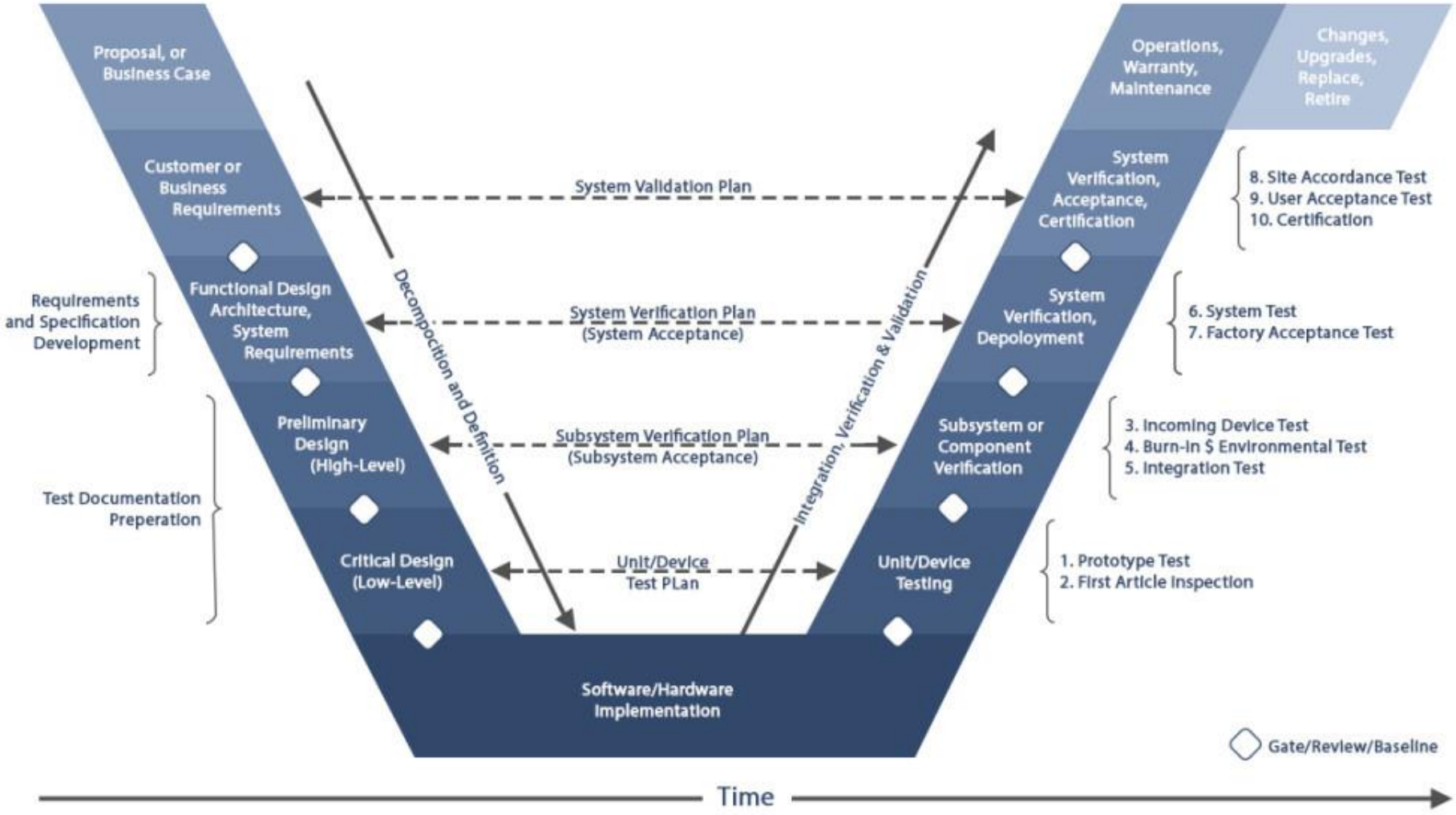


Process, disciplines and artifacts

- One Iteration fits in one Sprint



V-Model & Test


Proposal, or Business Case
Customer or Business Requirements
Functional Design Architecture, System Requirements
Preliminary Design (High-Level)
Critical Design (Low-Level)
Software/Hardware Implementation
Unit/Device Testing
Subsystem or Component Verification
System Verification, Depoloyment
System Verification, Acceptance, Certification
Operations, Warranty, Maintenance
Changes, Upgrades, Replace, Retire
System Validation Plan
System Verification Plan (System Acceptance)
Subsystem Verification Plan (Subsystem Acceptance)
Unit/Device Test PLan
Decompcition and Definition
Integration, Verification & Validation
Requirements and Specification Development
Test Documentation Preperation
8. Site Accordance Test
9. User Acceptance Test
10. Certification
6. System Test
7. Factory Acceptance Test
3. Incoming Device Test
4. Burn-in $ Environmental Test
5. Integration Test
1. Prototype Test
2. First Article Inspection
Gate/Review/Baseline
Time

Why making Artifacts?

The point of creating artifacts and documents

- **Is not** the diagram or the document itself
- **It is** the thinking, analysis and proactive readiness!!

The purpose of modelling is to improve the understanding!!

"In preparing for battle I always found that plans are useless, but the planning indispensable"

- General Eisenhower

Inception

We must be able to answer these questions after the inception phase

- What is the vision and business case for this project?
- Is it feasible?
- Buy and/or build? – Are there already something on the market?
- Rough unreliable range of cost: Is it $10K-100 or in millions?
- Should we proceed or stop?

The goal is only to: Decide if the project is worth a serious investigation (during elaboration) – not to do the investigation!

Inception Artifacts

Artifact	Comment
Vision and Business Case	Describes the high-level goals and constraints, the business case, and provides an executive summary.
Use-Case Model	Describes the functional requirements. During inception, the names of most use cases will be identified, and perhaps 10% of the use cases will be analyzed in detail.
Supplementary Specification	Describes other requirements, mostly non-functional. During inception, it is useful to have some idea of the key non-functional requirements that have will have a major impact on the architecture.
Glossary	Key domain terminology, and data dictionary.
Risk List & Risk Management Plan	Describes the risks (business, technical, resource, schedule) and ideas for their mitigation or response.
Prototypes and proof-of-concepts	To clarify the vision, and validate technical ideas.
Iteration Plan	Describes what to do in the first elaboration iteration.
Phase Plan & Software Development Plan	Low-precision guess for elaboration phase duration and effort. Tools, people, education, and other resources.
Development Case	A description of the customized UP steps and artifacts for this project. In the UP, one always customizes it for the project.

Artifacts are only partly finished in inception!!

[Larman, 2005] Table 4.1

What requirements to focus on?
Inception

10% - 20% of the Architectural significant, Risky and High Business-value requirements

Inception vs. SCRUM

Often a time boxed discipline where we get a better understanding of the problem domain and the problem at hand

Typically done before any SCRUM sprints are started

Elaboration

We must be able to answer these questions after the elaboration phase

- Have the vision been refined to our new knowledge?
- Is the iteratively build core architecture good for the rest of the system?
- Are the main part of the requirements identified?
- Is it possible to create a more realistic estimate for the project?

This is the phase where the core architecture of the system is established, and high risk issues are mitigated!

After the elaboration phase there is typical a milestone where it is decided if the project should be stopped or continued

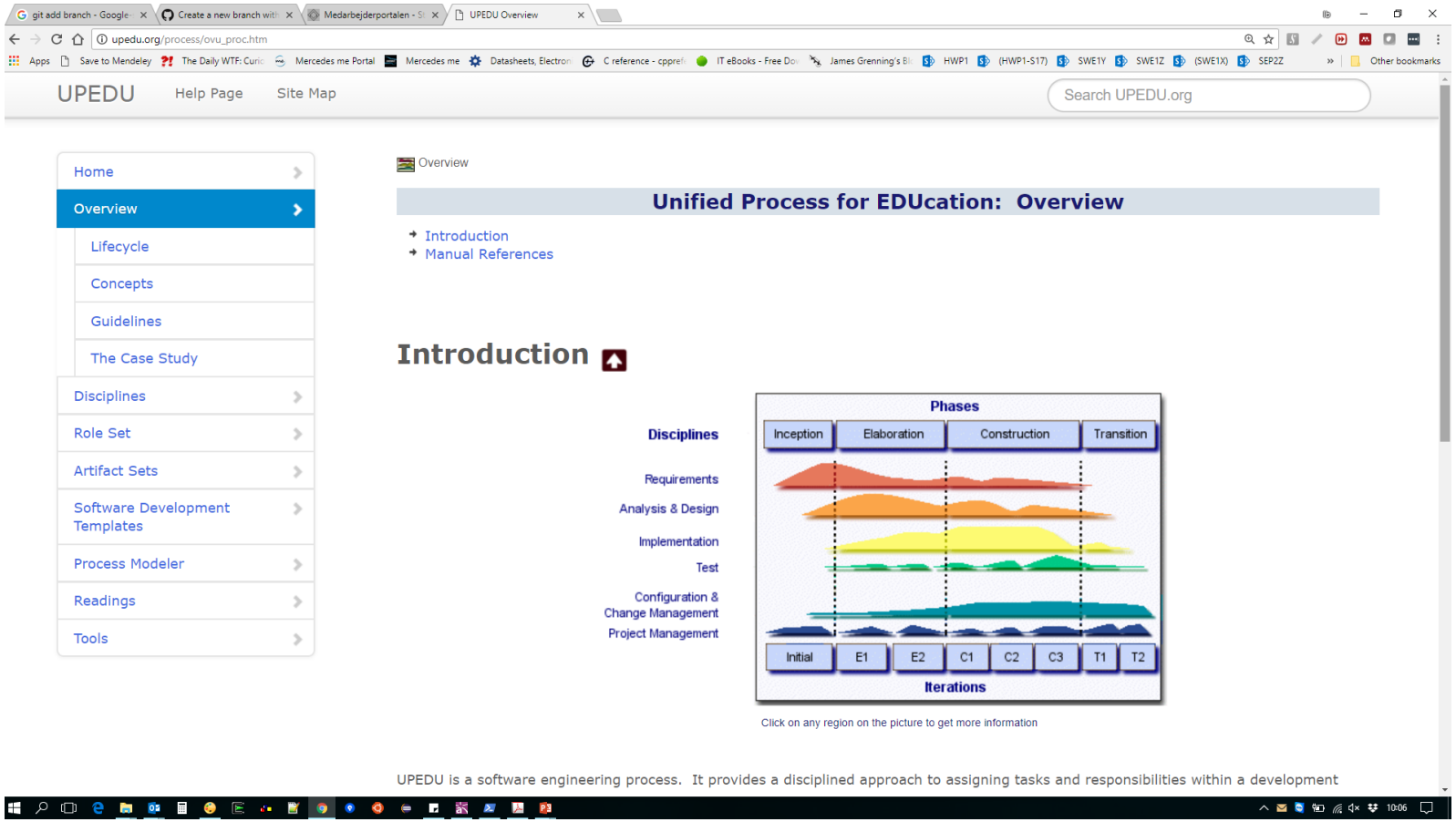
Elaboration Artifacts

Artifact	Comment
Domain Model	This is a visualization of the domain concepts; it is similar to a static information model of the domain entities.
Design Model	This is the set of diagrams that describes the logical design. This includes software class diagrams, object interaction diagrams, package diagrams, and so forth.
Software Architecture Document	A learning aid that summarizes the key architectural issues and their resolution in the design. It is a summary of the outstanding design ideas and their motivation in the system.
Data Model	This includes the database schemas, and the mapping strategies between object and non-object representations.
Use-Case Storyboards, UI Prototypes	A description of the user interface, paths of navigation, usability models, and so forth.

[Larman, 2005] Table 8.1

Unified Process for Education

http://upedu.org/



SEP 2

The SEP2 project will be assessed significantly different from the SEP1 project

In SEP2 it is very important that the skills of SWE1, DBS1 and SDJ2 clearly emerge in the delivered

Emphasis will be placed on a clear connection between the requirements, analysis, design, implementation and test-activities

Everything must be documents with relevant UML diagrams and associated descriptions

A working implementation **is not enough** to pass SEP2

SEP 2 Project Report

You are using an agile process for your Semester Project, but remember to:

- write your **Project Report** according to the Waterfall-sequence

The Process Report will tell about the agile process