SWEN90016

Software Processes & Project Management

Marion Zalk
Department of Computing and Information Systems
The University of Melbourne
mzalk@unimelb.edu.au

2021 – Semester 1
Lecture 2

Lecture 1 – Recap

- ✓ Understand Assignments and our expectations
- ✓ Understand key elements of a Project and why organisations use them
- ✓ Understand the foundational components of Project Management
- ✓ Understand key skills, responsibilities & activities of a Project Manager
- ✓ Understand key elements of how to manage Projects
- ✓ Exposure to some Project Management Methodologies

Lecture 1 – Recap

- ✓ Explore key drivers in why projects fail / succeed
- ✓ Understand how organisations select the best / right projects
- ✓ Understand the Project Initialization process, Business Case structure and why organisations use them
- ✓ Explore various Investment techniques and financial models
- ✓ Understand responsibilities associated with building a Business Case and the accountable group / individual
- ✓ Understand what a Project Charter is and how it is used

L1 - Recap

Intended Learning Objectives

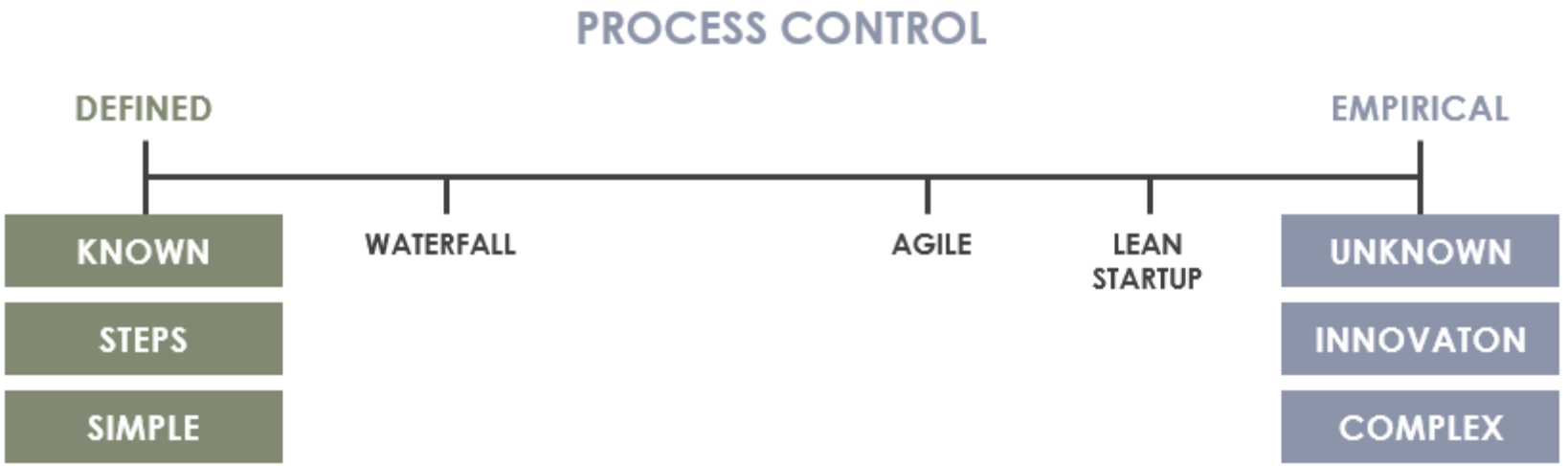
Module 4 – Process

Module 5 – Formal.

Module 6 – Agile

Module 4.1 – Empirical and Defined Process

Empirical process control expects the unexpected, while defined process control expect every piece of work to be completely understood in upfront.

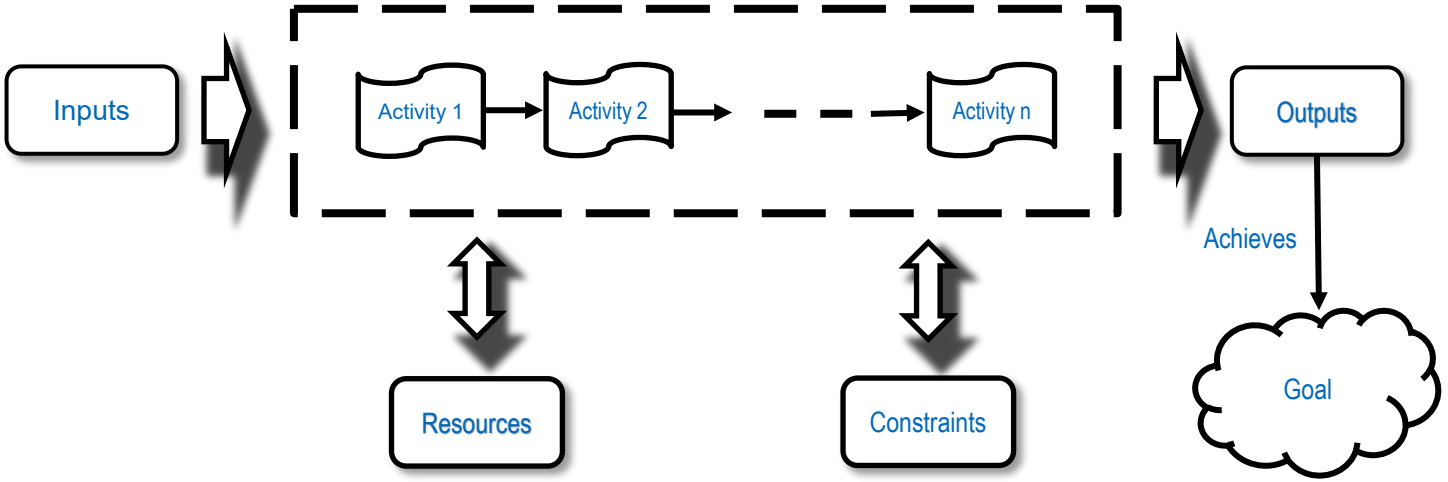


www.visual-paradigm.com/scrum/empirical-vs-defined-process-control

Module 4.1 – Defined Process Control

A process with a well-defined set of steps. Given the same inputs, a defined process should produce the same output every time.

Great when in an environment with relatively low volatility that can be easily predicted; given the same inputs, a defined process should produce the same output every time based on its repeatability and predictability nature.

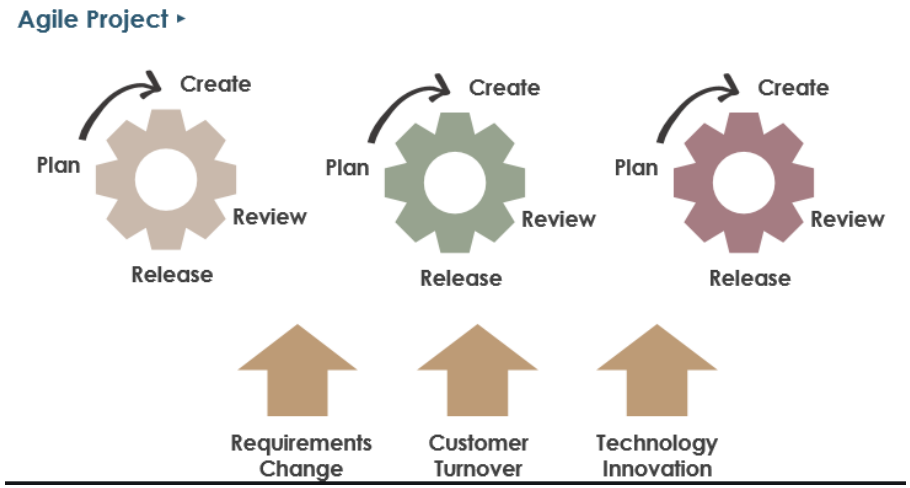


www.visual-paradigm.com/scrum/empirical-vs-defined-process-control

Module 4.1 – Empirical Process Control

In empirical process control, you expect the unexpected. Empirical process control has the following characteristics:

- Learn as we progress
- Expect and embrace change
- Inspect and adapt using short development cycles
- Estimates are indicative only and may not be accurate



www.visual-paradigm.com/scrum/empirical-vs-defined-process-control

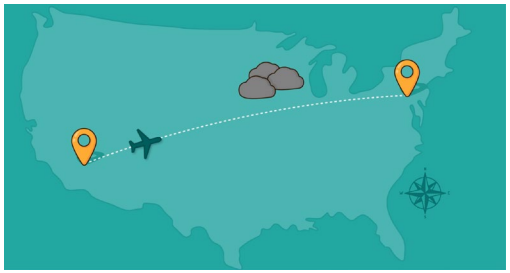
Module 4.1 – Defined v Empirical

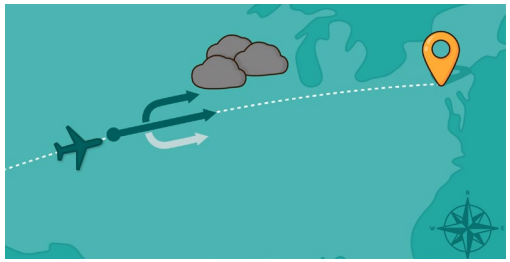
Defined / Repeatable Process

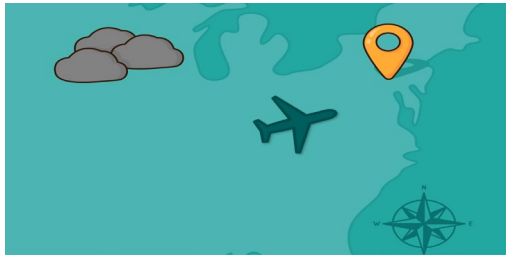
www.mountaingoatsoftware.com/exclusive/scrum-foundations

Module 4.1 – Defined v Empirical

Defined / Repeatable Process

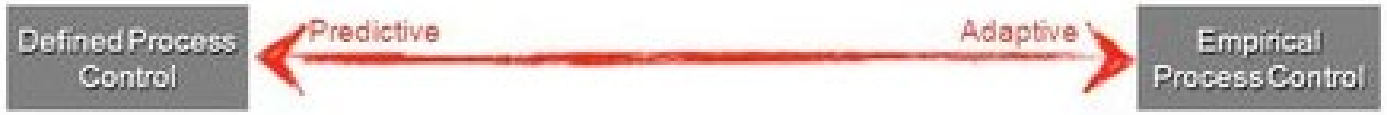






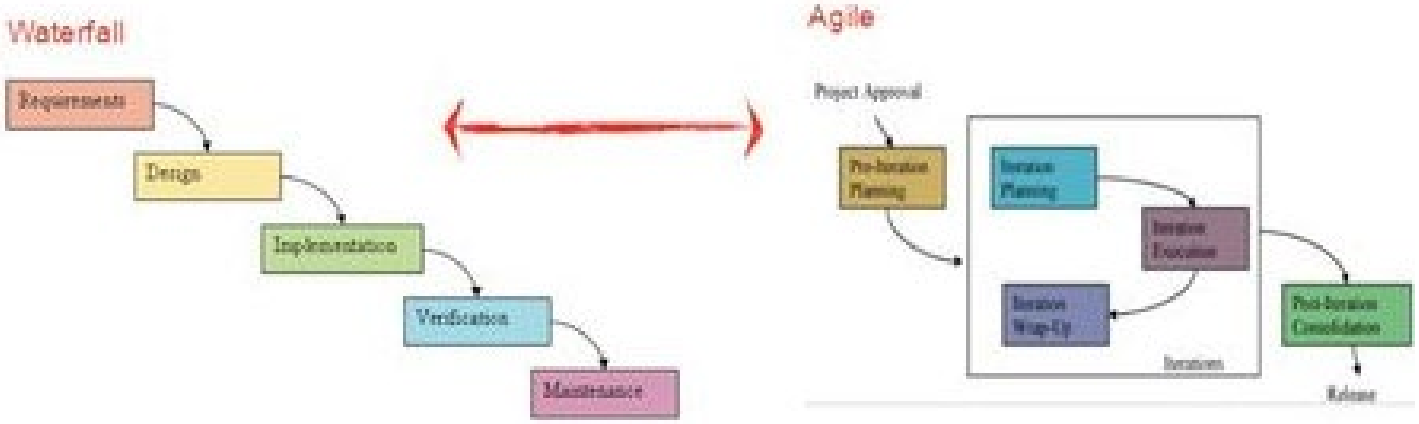
www.mountaingoatsoftware.com/exclusive/scrum-foundations

Module 4.1 – Defined v Empirical



*Requires that **every piece of work be completely understood**. Given a well-defined set of inputs, the same outputs are generated every time. A defined process can be started and allowed to run until completion, with the same results every time.*

*Provides and exercises control through **transparency**, frequent **inspection** and **adaptation** for processes that are imperfectly defined and generate unpredictable and unrepeatable outputs.*



www.visual-paradigm.com/scrum/empirical-vs-defined-process-control

Module 4.1 – What does a Process have to do with Project Management and Software Engineering?

1. Project Management is a process as it defines a series of tasks (Planning, Executing and Controlling) to deliver a specific / an agreed set of outcomes.

2. System Development Lifecycle (SDLC) is a term used in Software Engineering. It describes a process for planning, creating, testing, and deploying an information system. SDLC can be composed of hardware only, software only, or a combination of both.

Module 4.1 – What does a Process have to do with Project Management and Software Engineering?

1. Project Management is a process as it defines a series of tasks (Planning, Executing and Controlling) to deliver a specific / an agreed set of outcomes.

2. System Development Lifecycle (SDLC) is a term used in Software Engineering. It describes a process for planning, creating, testing, and deploying an information system. SDLC can be composed of hardware only, software only, or a combination of both.