
CERN

Project Charter, Mandate, Brief and other Artefacts that Initiate a Project: Characteristics, Similarities and their adaption in the OpenSE Methodology in use in the Accelerators & Technology Sector of CERN

Content

- Problem statement
- Objectives
- Approach
- Outcome

Problem statement

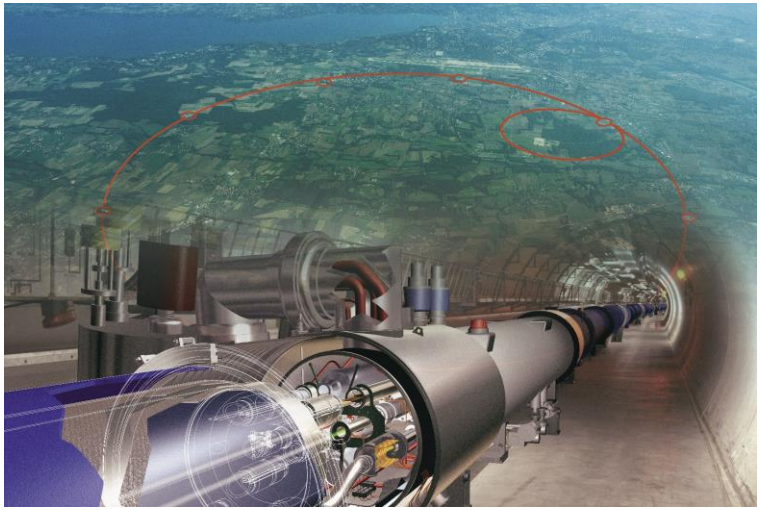
Mechanical Engineering

Civil Engineering

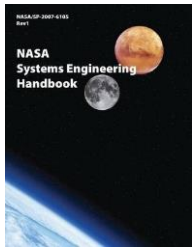
PRINCE2®

Computer Engineering

The Scrum Guide



System Engineering



Project Management

PMI
Project Management Institute

Problem statement

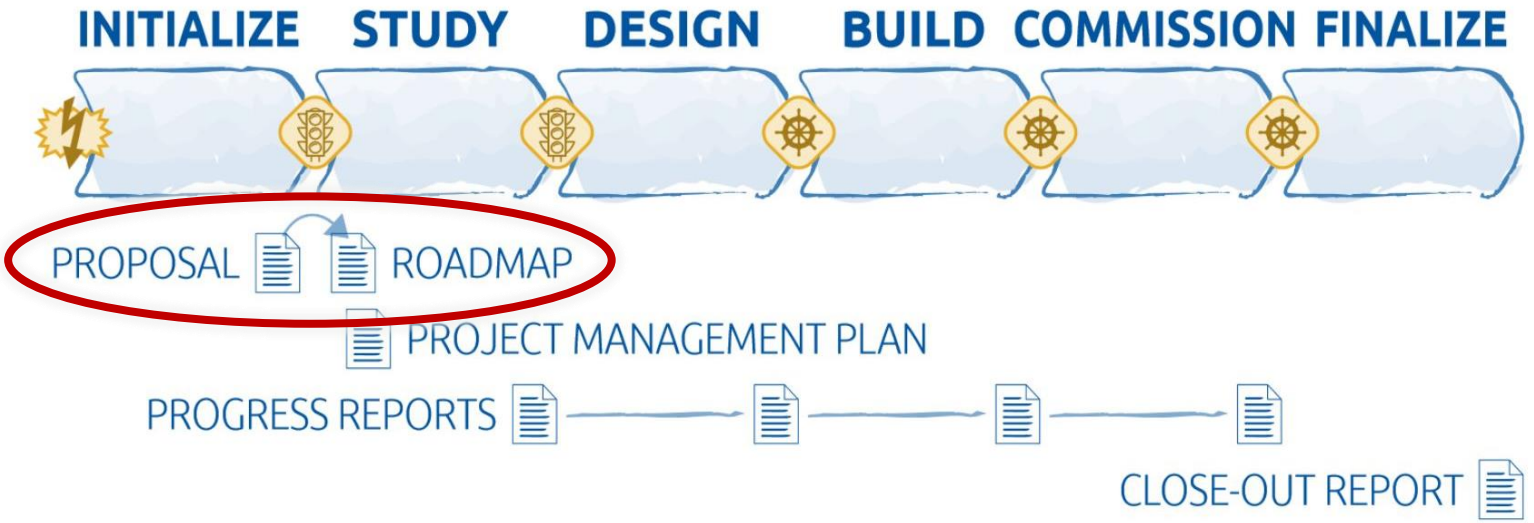


Figure IV.1. The key project management deliverables.

Objectives

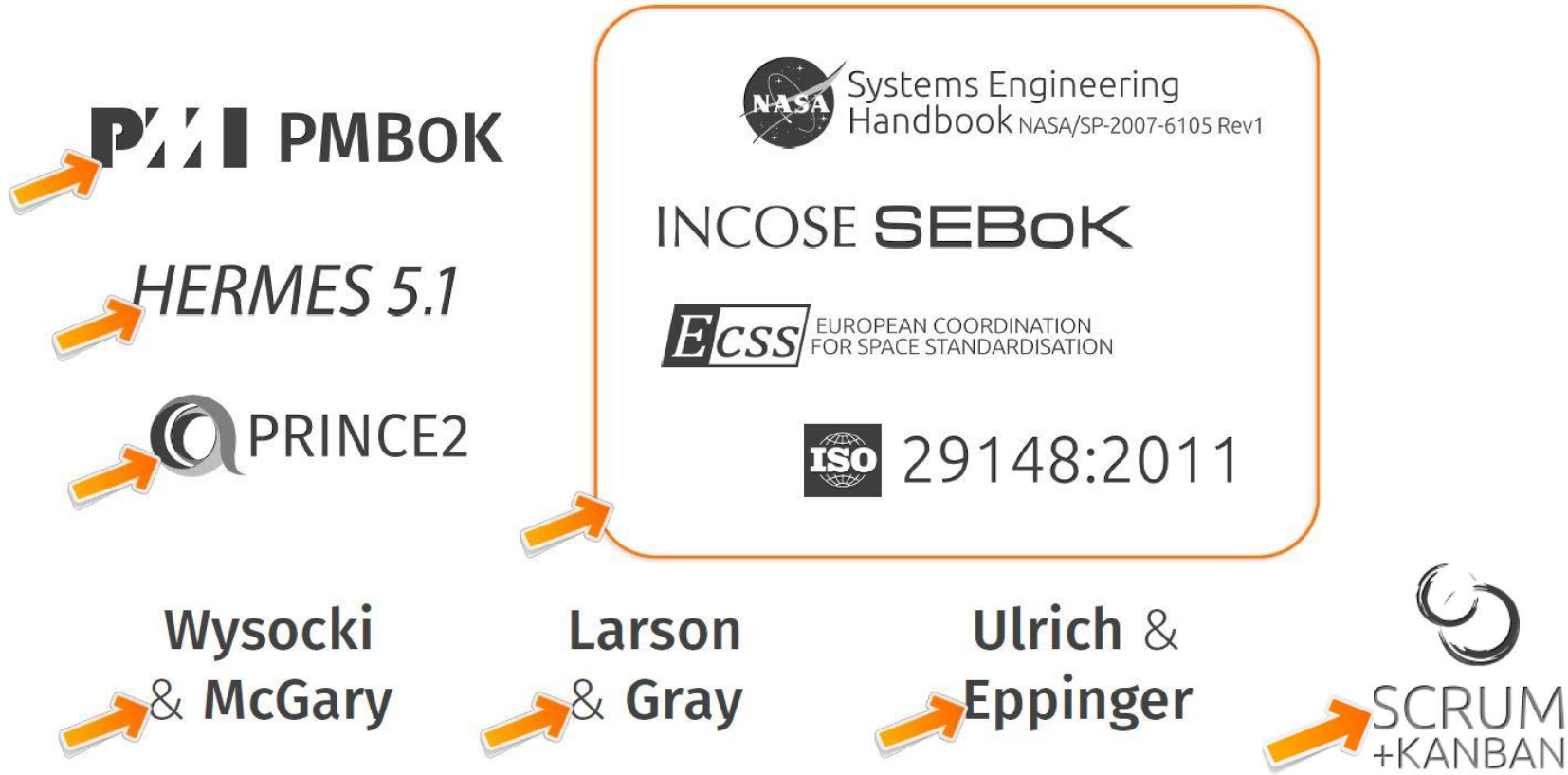
- Overview of the different artefacts
- Clarify the characteristics and similarities
  - Location along project lifecycle
  - Typical content
  - Authoring and approval

- Open a discussion about a more synthetic document

Approach

- Inventory of artefacts that initialize a project
  - In standards and methodologies
  - In textbooks
- Domains
  - System Engineering
  - Project Management
  - Agile Framework

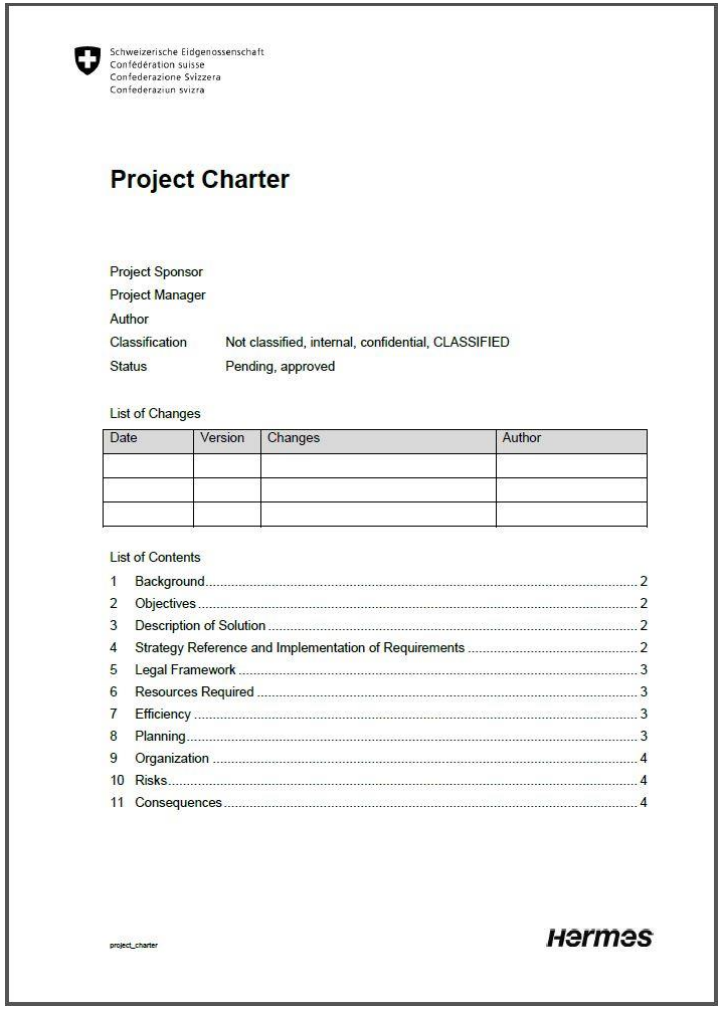
Approach


PMBoK
HERMES 5.1
PRINCE2
NASA Systems Engineering Handbook NASA/SP-2007-6105 Rev1
INCOSE SEBoK
Ecss EUROPEAN COORDINATION FOR SPACE STANDARDISATION
ISO 29148:2011
Wysocki & McGary
Larson & Gray
Ulrich & Eppinger
SCRUM +KANBAN

Project Charter of the PMBoK

- Formally authorizes the project
- Documents initial requirements
- Establishes a partnership between the performing organization and requesting organization
- Once approved, it formally initiates the project

Project Mandate of HERMES 5.1



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Project Charter

Project Sponsor
Project Manager
Author
Classification Not classified, internal, confidential, CLASSIFIED
Status Pending, approved

List of Changes

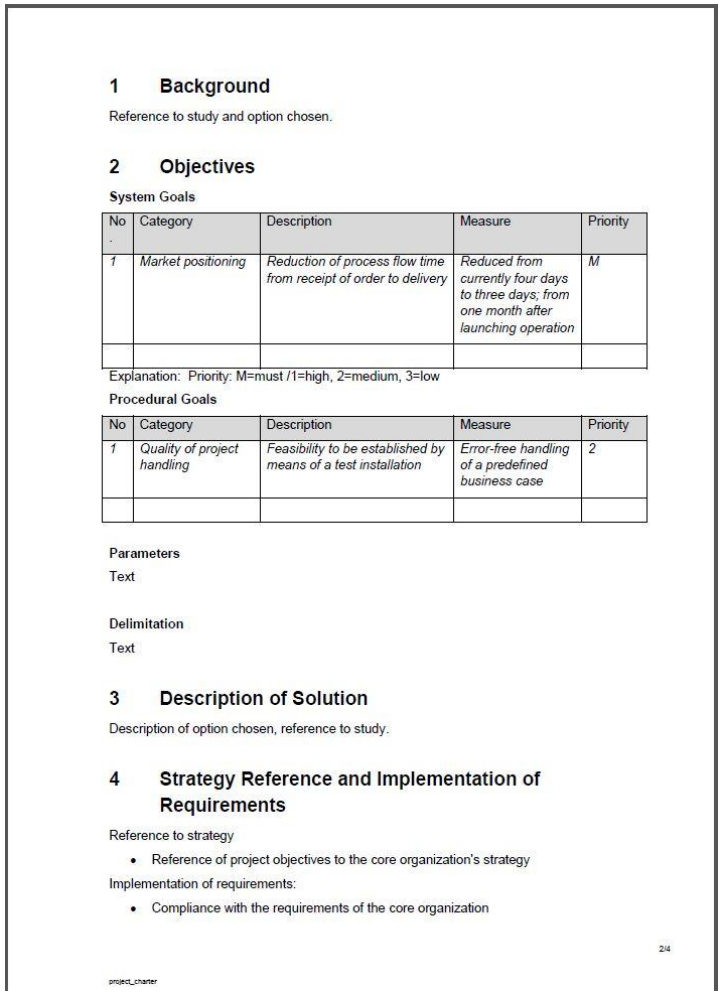
Date	Version	Changes	Author

List of Contents

project_charter

Hermes

Project Mandate of HERMES 5.1



1 Background

Reference to study and option chosen.

2 Objectives

System Goals

No.	Category	Description	Measure	Priority
1	*Market positioning*	*Reduction of process flow time from receipt of order to delivery*	*Reduced from currently four days to three days; from one month after launching operation*	*M*

Explanation: Priority: M=must /1=high, 2=medium, 3=low

Procedural Goals

No	Category	Description	Measure	Priority
1	*Quality of project handling*	*Feasibility to be established by means of a test installation*	*Error-free handling of a predefined business case*	*2*

Parameters

Text

Delimitation

Text

3 Description of Solution

Description of option chosen, reference to study.

4 Strategy Reference and Implementation of Requirements

Reference to strategy

- Reference of project objectives to the core organization's strategy

Implementation of requirements:

- Compliance with the requirements of the core organization

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project_charter

Project Mandate of HERMES 5.1

5 Legal Framework

Conclusions from analysis of legal framework

6 Resources Required

Costs (CHF)

Phase	Planned
Initiation*	
Concept	
Implementation	
Launch	
Total	

*Advance (Actual)

Human Resources Required

Phase	Planned
Initiation*	
Concept	
Implementation	
Launch	
Total	

*Advance (Actual)

Other Resources

Rooms, IT infrastructure, specific software, etc.

7 Efficiency

According to the core organization's requirements: Usually costs and time required for project and operation; benefit (quantifiable or not quantifiable)

8 Planning

Milestones and deadlines

Milestone	Planned
project release	*12.12.2015*

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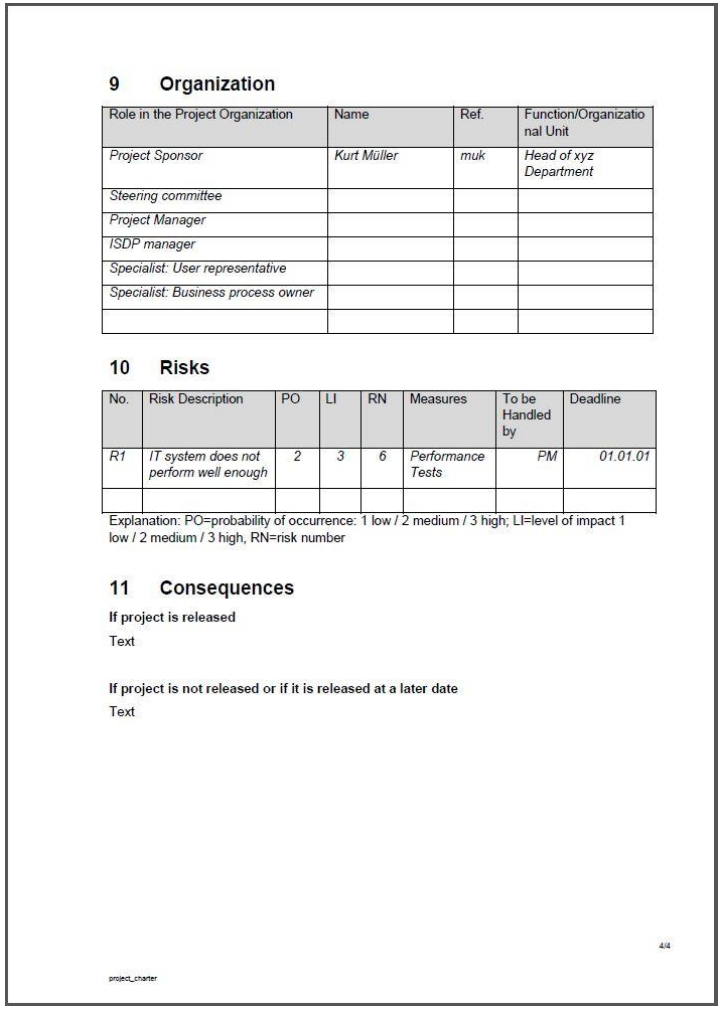
Project Mandate of HERMES 5.1



9 Organization

Role in the Project Organization	Name	Ref.	Function/Organizational Unit
Project Sponsor	*Kurt Müller*	*muk*	*Head of xyz Department*
Steering committee			
Project Manager			
ISDP manager			
Specialist: User representative			
Specialist: Business process owner			

10 Risks

No.	Risk Description	PO	LI	RN	Measures	To be Handled by	Deadline
R1	*IT system does not perform well enough*	*2*	*3*	*6*	*Performance Tests*	*PM*	*01.01.01*

Explanation: PO=probability of occurrence: 1 low / 2 medium / 3 high; LI=level of impact 1 low / 2 medium / 3 high, RN=risk number

11 Consequences

If project is released

Text

If project is not released or if it is released at a later date

Text

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project_charter

Project Overview Statement

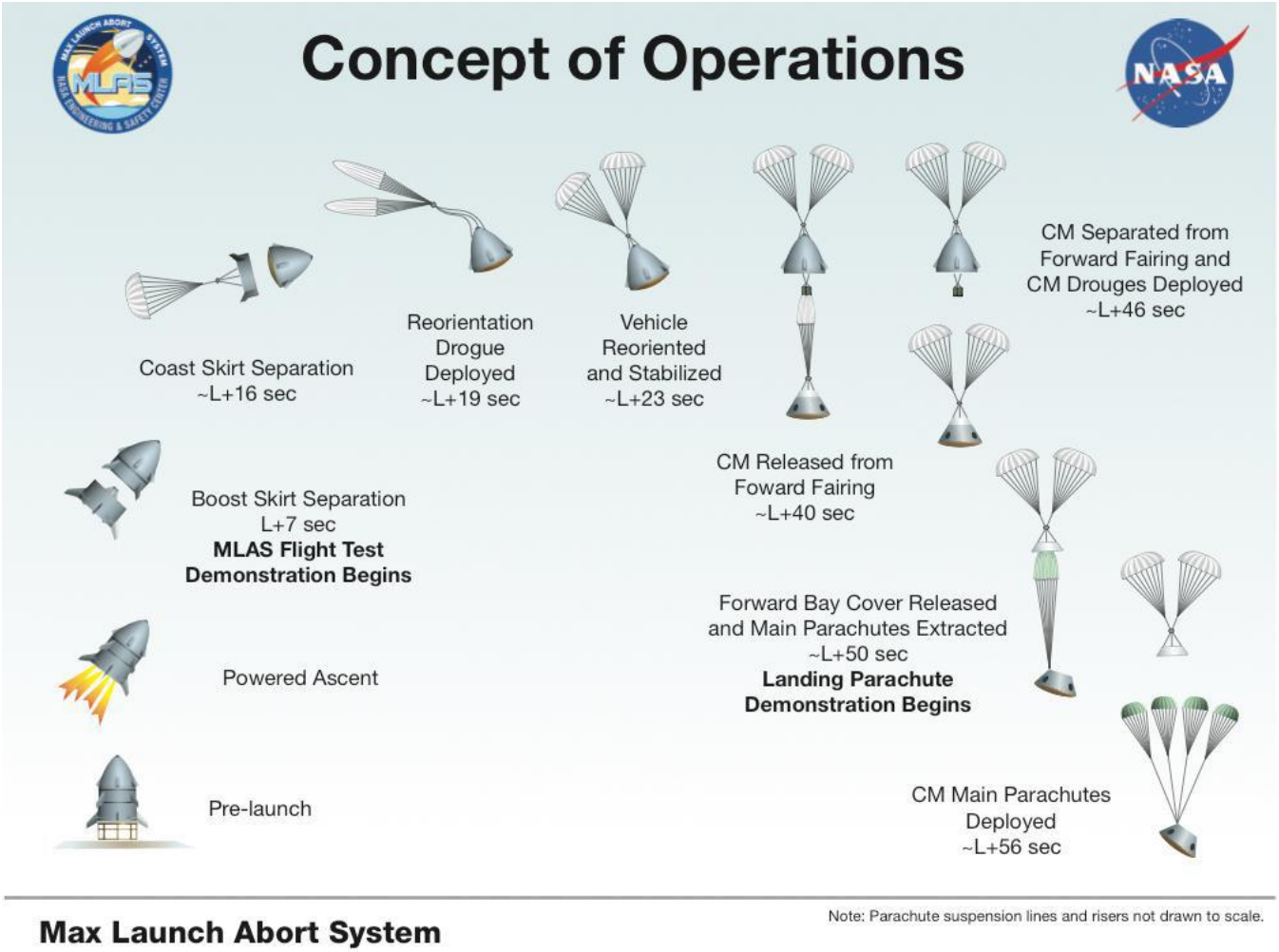
- R. K. Wysocki, R. McGary (2003) *Effective Project Management*, 3rd Ed., Wiley

PROJECT OVERVIEW STATEMENT	Project Name	Project No.	Project Manager
Problem/Opportunity			
Goal			
Objectives			
Success Criteria			
Assumptions, Risks, Obstacles			
Prepared by	Date	Approved by	Date

OpsCon/ ConOps of IS

- OpsCon or OPSCON (systems operational concept)
- ConOps or CONOPS (concept of operations)
- Specification of the system from the point of view of a future user
- Serves to communicate to the developers, users and suppliers all the qualitative and quantitative characteristics of the future system

OpsCon/ ConOps of IS



OpsCon/ ConOps of IS

OpsCon/ ConOps of IS

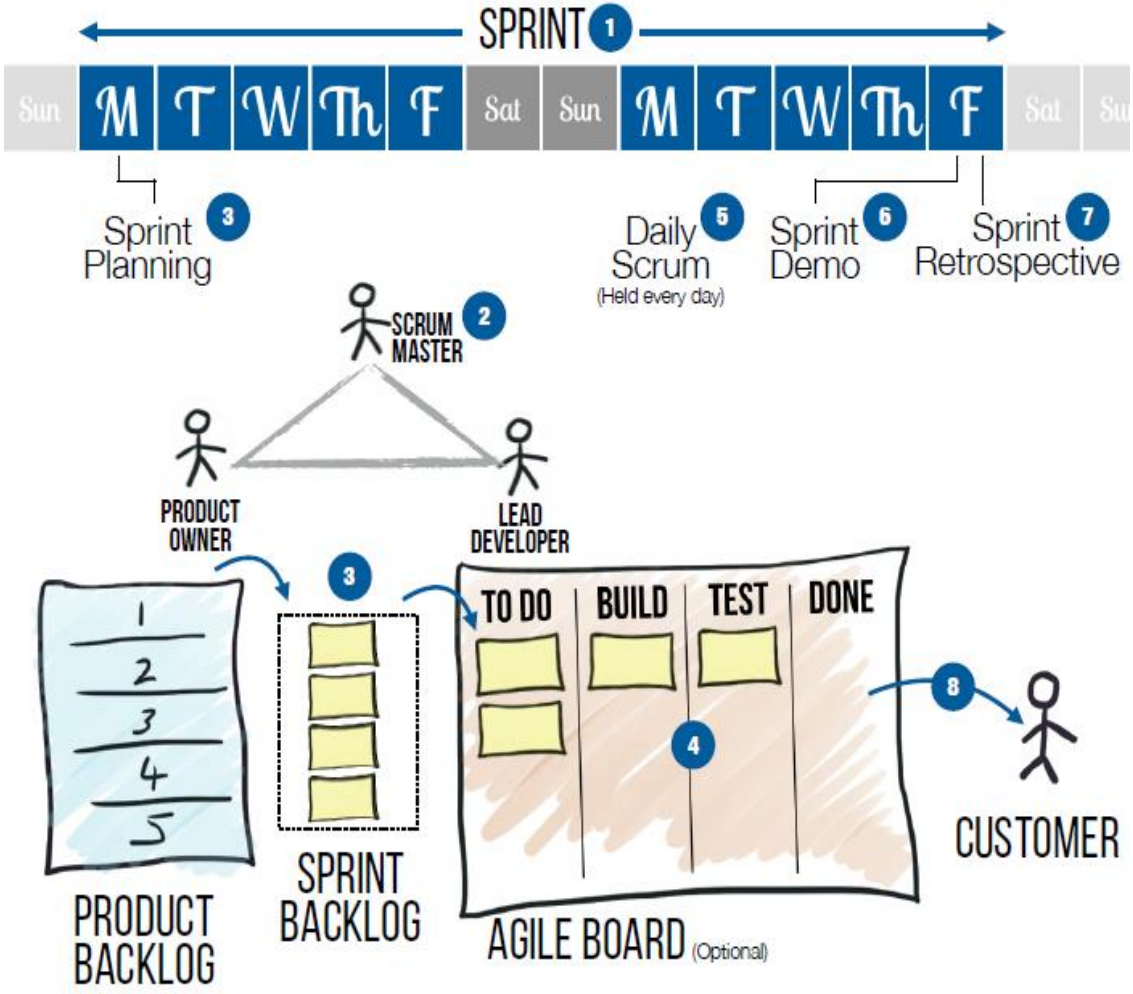
- Document precise in describing the future system
- Not in the spirit of project development
  - No milestones
  - No organisation and steering
  - No budget/ resources

Initialisation of a project in SCRUM

- Hub for requirements and functionalities proposed for the product

PRODUCT BACKLOG (example)					
ID	**Name**	**Imp**	**Est**	**How to demo**	**Notes**
1	Deposit	30	5	Log in, open deposit page, deposit €10, go to my balance page and check that it has increased by €10.	Need a UML sequence diagram. No need to worry about encryption for now.
2	See your own transaction history	10	8	Log in, click on "transactions". Do a deposit. Go back to transactions, check that the new deposit shows up.	Use paging to avoid large DB queries. Design similar to view users page.

Initialisation of a project in SCRUM



Initialisation of a project in SCRUM

- About the execution of a project

PROJECT OVERVIEW STATEMENT	Project Name	Project No.	Project Manager
Problem/Opportunity			
Goal			
Objectives			
Success Criteria			
Assumptions, Risks, Obstacles			
Prepared by	Date	Approved by	Date

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Initialisation of a project in SCRUM

- No “initialisation of the project” in a traditional sense
- Short iterative cycles instead of waterfall approach
- Compare “apples and oranges”?

Outcome

	Project Overview Statement	Mission Statement	Project Scope	Project Charter	Project Brief	Project Charter
Methodology	Wysoci, McGary	K.Ulrich, S. Eppinger	Larson E.	PMI	PRINCE2	HERMES5
Point in Lifecycle	Initialisation	Initialisation	Initialisation	Initialisation	Initialisation	Initialisation
Authored by	Everyone	Project Team	Project Manager	Project Manager	Project Manager	Project Manager
Approved by	Project Board	N/A	Key Users	Project Board	Project Board	Project Board
1. Section (description/ background/ justification of the project)	X	X	X	X	X	X
2. Section (Describes the aim, goals, objectives)	X	X	X	X	X	X
3. Section (Solutions)				X	X	X
4. Section (Stakeholder Requirement)		X		X	X	
5. Section (Risks)	X			X	X	X
6. Section (Milestones)			X	X		X
7.Section (Budget)				X		X
8.Section (Organigram/ administrative roles)	X			X	X	X
9. Section (Chapters that couldn't be associated to the other sections)		Benefit proposition; Target market(s) for the product; Assumptions and constraints that guide the development effort	Reviews with Customers			Efficiency; Strategy reference and implementation of requirements; Consequences; Legal framework

Sources

- Picture LHC: http://cms.web.cern.ch/news/cms-experiment-cerns-lhc
- Picture PMI: https://www.innovativelearning.eu/products/pmi-capm-pmp.html
- Picture NASA Handbook: https://www.bookdepository.com/NASA-Systems-Engineering-Handbook-NASA-Sp-2007-6105-Rev1-Nasa-Headquarters/9781782663331
- Picture Civil engineering method: http://www.sciencedirect.com/science/book/9780750657310

Sources

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- Document Icon (slide?) : http://www.freepik.com/free-icon/document-search-interface-symbol_734976.htm
- Product Backlog example: H. Kniberg, Scrum and XP from the Trenches - How we do Scrum, InfoQ, 2007
- SCRUM at a glance: „Development that pays," 2017. [Online]. Available: http://www.developmentthatpays.com.