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CERN Academic Training website

Franciska-Leonóra Török (293171)

VIA Supervisors:

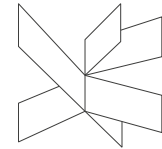**Michael Viuff**

Kasper Knop Rasmussen

CERN Supervisor:

Maria Dimou

Software Technology Engineering
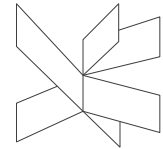
6th Semester

30/03/2022

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1   Background description

Lectures can be used by instructors to help students to easily acquire knowledge of terms, basic facts, and simple concepts. There is no difference in the effectiveness of lectures and other methods for conveying simple information [Bligh, 2000] [1].

CERN Academic Training lectures include both cutting-edge science and valuable historical information [2]. These lectures cover physics and technology research results, as well as news from other disciplines. Past lectures often present a great historical value. Lectures are open to all members of the CERN staff (including fellows, students, workers, users, and apprentices) free of charge. Some of these lectures are also available in a dedicated YouTube playlist [3]. All lectures are recorded and published on the Web, along with visual support materials. The complete catalogue of the Academic Training Programme lectures is archived since 1968, however, not all of them have videos. Similar lectures can also be found in other CERN programmes, such as Colloquia, Seminars, and various student programmes. Our project is only concerned with Academic Training lectures; however, it is a pioneering example for adoption by the others.

CERN Academic Training consists of a series of a few hourly lectures, all on consecutive days. Everyone at CERN receives an email inviting them to participate. It is generally decided by the lecturer and his/her sponsor what degree of complexity the lectures will have. On top of that, all lectures in any domain with their full content and their slides and video in the CERN Document Server (CDS) [4] are available for viewing from the lectures' description page [5]. Sponsors of these lectures are mostly members of the CERN Academic Training Committee (ATC) [6].

While CDS ensures that these lectures are archived in a dedicated collection, there is no easy way to find lectures in that collection as they are simply indexed with the most recent first.
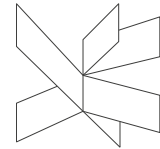
2   Problem Statement

Even though CDS archives these lectures, there is no attractive presentation and advertising of Academic Training lectures to encourage the programme exploration by various target groups.

1. How to make the process of promoting lectures more attractive?
2. How to encourage the target audience to consume lectures more often?
3. How to help the target audience reach Academic Training lectures more easily?
4. How to gain proposals from target audience to get ideas for future lectures?
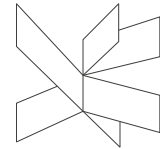
3   Definition of purpose

In this project, the aim is to design and build a dedicated online location specifically to promote CERN's Academic Training lectures in a coherent way, and one that can be easily maintained in the future.
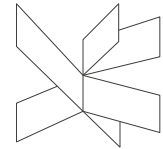
4 Delimitations

1. The product will prioritize videos over records with other filename extensions like PDFs.
2. The product will not provide categories by subjects.
3. The product will not assure possible searches from subtitles.
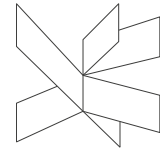
5   Methodology

For this process will be used a quite unique methodology that incorporates the best of both Waterfall and Agile methods.

Agile-Waterfall hybrid method allows teams developing software to work within the Agile methodology, while software development part and project manager stick to the Waterfall approach.
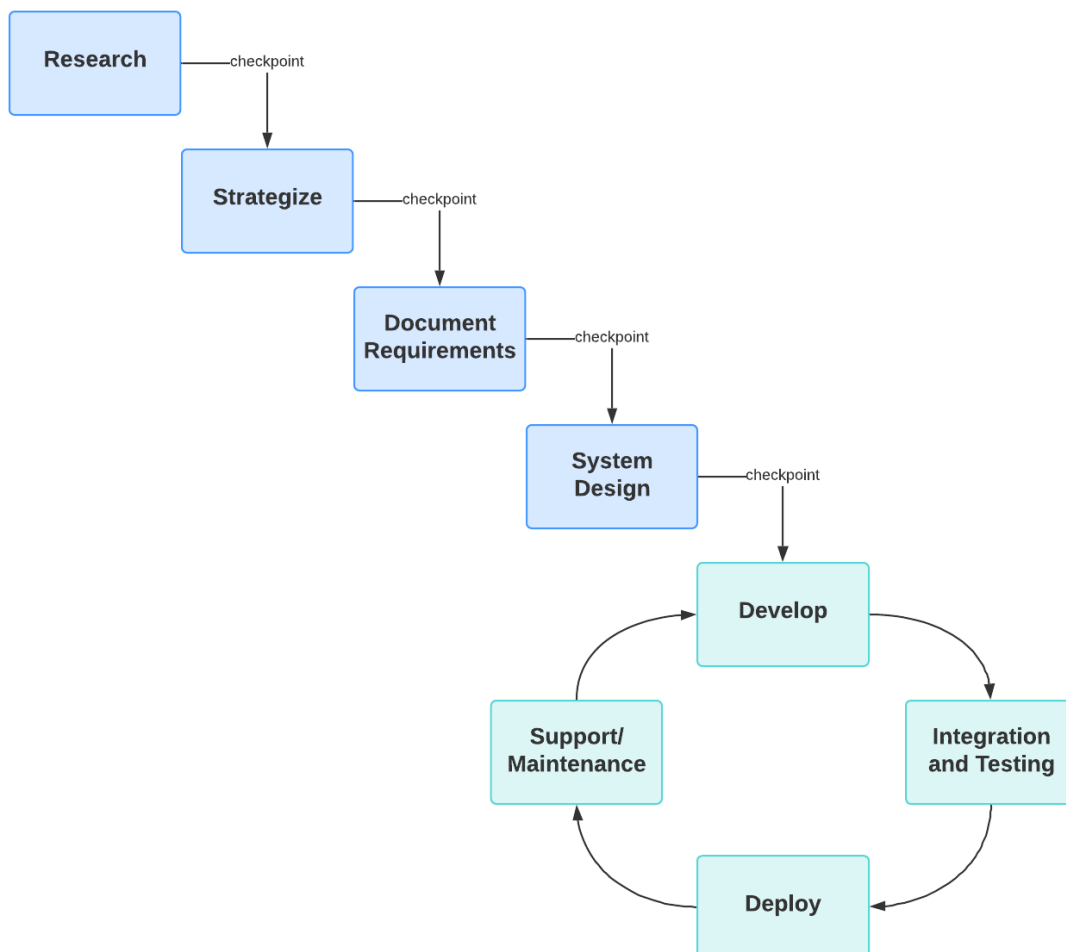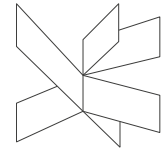

Figure 1: Agile-Waterfall Hybrid method (E. Bergmann & A. Hamilton, lucidchart.com)

This methodology has been chosen because the project has a delivery date, hence it would benefit from Agile's fast design, analysis, and planning. Using Waterfall at the organization level (starting from Research, Strategy, Requirements, Design), and using the Agile approach at a project level (circulating between Development, Testing, Deployment, Support/Maintenance) was found the best fit for this project.
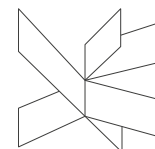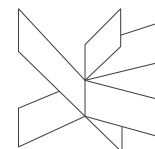
6 Time schedule

The Time schedule is based on CERN JIRA tickets, ATC meetings and the need to have the site in production by the end of June 2022.
VIA deadlines are stated accordingly.

|	
CERN Mockups [Start]	05 August 2021
ATC Meeting – Presentation of mockups	17 August 2021
CERN Mockups [End]	By early October 2021
CERN Proposal for technology use	13 October 2021
CERN Architecture	Mid-October 2021
CERN Implementation [Start]	14 October 2021
ATC Meeting	14 October 2021
CERN Testing [Start]	1 November 2021
CERN Implementation [End]	02 February 2022
CERN 1st Deployment	04 February 2022
Documentation [Start]	11 February 2022
CERN Terra Incognita Presentation	28 February 2022
CERN ATC Meeting – Project Presentation	15 March 2022
VIA Project description Draft [Start]	18 March 2022
VIA Project description Draft [End]	31 March 2022
VIA Project description Final [Start]	08 April 2022
VIA Project description Final [End]	28 April 2022
VIA Requirements/User Stories [Start]	29 April 2022
VIA Requirements/User Stories [End]	09 May 2022
VIA Design part [Start]	March-June 2023
VIA Design part [End]	March-June 2023
VIA Implementation Part [Start]	March-June 2023

| VIA Implementation Part [End]	March-June 2023
CERN Testing [End]	Mid-June 2022
Documentation [End]	28 June 2022
CERN Project Delivery	30 June 2022

Figure 2: Time schedule
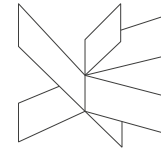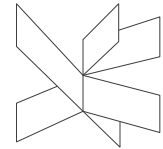
7 Risk assessment

Risks	Likelihood Scale: 1-5 5=high risk	Severity Scale: 1-5 5=high risk	Product of likelihood and severity	Risk mitigation e.g Preventive-& Responsive actions	Identifiers	Responsible
Bad quality data	2	4	8	Raise awareness with the sponsors	Bad searches	ATC chairperson
Non endorsement by the user community	3	3	9	Dissemination campaigns	Questions answered in the site	Site maintainer and the whole of the ATC
Software out of date or vulnerable for security	3	5	15	Maintenance processes well documented	Warnings in the repo	Site maintainer

Figure 3: Risk Assessment
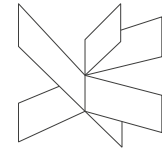
8   Sources of Information

1. Bligh, D.A., 2000. Bligh, D. A. (2000). What's the use of lectures? San Francisco: Jossey-Bass. Jossey-Bass.

2. CERN Academic Training web site – Project Description – IT student projects: https://it-student-projects.web.cern.ch/projects/cern-academic-training-web-site

3. CERN Lectures: https://www.youtube.com/channel/UCwXkOx0EuKBR5m_OOiaZRUA/playlists

4. CERN Document Server (CDS) : https://cds.cern.ch/collection/Academic%20Training%20Lectures?ln=en

5. Academic Training Lecture Regular Programme – Indico: https://indico.cern.ch/category/72/

6. Academic Training Committee (ATC): http://hr-dep.web.cern.ch/official-bodies/academic-training-committee

7. Agile-Waterfall hybrid method: https://www.lucidchart.com/blog/is-agile-waterfall-hybrid-right-for-your-team

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Appendices

1. Group Contract
2. Additional delimitations – Freeform Document