

## Final report

## Animated introduction to Project Risk Management



## **Preface**

This report is made by group 33 as a summary analysis of the digital project, which was done by us. In the report we explain the aim and main characteristics of the digital project, made a self-evaluation of the management efforts, evaluation of the final digital product, and finalised it with the success factors and most important lessons learned.

We can identify our project group as a self-organizing group sharing the common goals of producing the digital product. As a self-organizing group we did not have a particular determined roles for each of the member, but have the motivation of working together to fulfil the project and to reach the same quality. All group members are listed below.

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# **1. Digitalization projects**

Based on our experience from working with this project we have identified three key challenges with digitalization. These challenges relate to identifying needs, lack of skills in the project organisation and distribution of the end product.

## **1. Identifying needs.**

In order to identify the needs that were the basis for the project, we first needed to identify the different stakeholders. We assessed that the three major stakeholders were the project owner, the project organisation (us) and the end user. The end user was very vaguely described. Therefore we needed to figure out which group the project owner wanted to target. Based on discussions with the project owner and assessment of similar projects conducted by the same owner, we decided to target students enrolled in Applied Project management at NTNU. After identifying the target group we analysed the needs of this group. We did this through creating a survey that we performed for our class. The analysis provided us with information about the study patterns and the challenges the students are experiencing while learning project management. According to Bassam Hussain managing stakeholders plays a fundamental role in project management, because they add to the uncertainty of projects through their potential to create increases in organisational complexity. In order to handle this increase in complexity he suggests following three steps: identification, assessment and implementation of communication strategies. (Hussain, 2018) In our experience the process of identifying stakeholders and their needs, helped us to create a product that serves the stakeholders needs in a better way.

## **2. Lack of skills.**

After analysing the needs of the end-users we needed to develop a product that could cover these needs. When deciding what kind of product to create, we had to consider our skill level. Our project organisation consists of engineers with little experience within IT and digitalization. As a result, we had to adjust the scope of the product so that we could create it with the resources available. We needed to use a large amount of time to acquire relevant skills. This meant that there was less time left to product development. We think that our project could have achieved better results if we had a higher skill level in the relevant disciplines. According to Ngereja, this is typical for digitalization project as 73 of employees report that there is a shortage of digitalization skills in their industry (Ngereja, 2019).

## **3. Distribution.**

In order for our project to give value to the target group, we need to make easy to access and understandable. An animation without viewers will not have any impact on the learning experience. In order to ensure the target group will see the animation we created a recommendation for distribution that was attached to the product when delivered. This attachment describes several ways of distributing the in order for it to reach the target group. It is meant as a tool to transfer the project from the implementation phase to the operation phase, and to ensure that the product stays relevant.

## 2. Self-evaluation of the project management effort in the project, success or failure? And why?

The project management efforts exerted in the project has been evaluated per success factor. A tabulation of is written below.

Success Factor	Evaluation	Reason
<b>Clarity of project purpose and objective</b>	Success	Identification of the project goal and its expected benefits was done and kept in mind during the project execution.
<b>Adequate project planning</b>	Success	As shown in our gant chart which is found in the project plan, almost 30% of the project timeline was dedicated to project planning. The time period might not represent everything, but a lot of planning was put into the planning phase i.e. end-user analysis, owner analysis, risk analysis, stakeholder analysis, time planning, and success criteria.
<b>End-user consultation and analysis of their feedback</b>	Success	A survey in the form of a <i>kahoot</i> questionnaire was done in class. This served as the group's end-user consultation and analysis of their feedback. The group based the product decision from the result of the survey – which is a product that gives them additional explanation to the lesson, can be studied alone, and presented visually.
<b>Technology to support the project</b>	Success	Since the project is a digitization project, a software to deliver the deliver the product is needed. This was done successfully by using the best and easiest software that can deliver the planned result.
<b>Approval by client</b>	Success	Aside from the end-users, the client was also consulted prior to finalizing the product. The client did not suggest a specific product, but a list of requirements and targets were laid down which was also made basis by the group.

<b>Good communication between the project team members and motivation</b>	Success	A good working environment was set in every meeting and working session. A reason for this is that everyone is on the same page and understands the motivation in making the product successful.
<b>Skills, knowledge and competence</b>	Success	In order to gain competence and knowledge about the program that was used, time was spent to learn how to create and edit the video.

Table 1: Success Factors

We evaluate our project as successful.

Scale	Strongly Disagree	Disagree	Neither disagree	agree nor	Agree	Strongly Agree
<b>Your response</b>					X	

Table 2: Project evaluation

### 3. Self-evaluation of the value to the learners? Can you document your assessment?

To evaluate the final product, it is critical to find out if the product has the desired outcome. In the project plan, the following factors were discussed:

- Is the product informative?
- Is it possible to understand the topic without attending the lecture?
- Is the material available at any time and any place?
- Does it improve the students learning process?
- Is the material flexible and adaptable in the future?
- Is the material a good supplement tool for teachers to prepare the students for the day after the lecture?
- Is this a possible new learning method to introduce in the entire NTNU education system?

*Description of the method used to evaluate the final product*

To make an evaluation we decided to conduct a **three-step evaluation of the product**.

First, **evaluation by focus group**. A focus group is a small, but demographically diverse group of people and whose reactions are studied in guided or open discussions about a new product or something else to determine the reactions that can be expected from a larger population (merriam-webster, 2016)

. We made a presentation for focus group (7 people) with the interviewing afterwards, to get a feedback about our product and to have a possibility for final corrections.

Secondly, we made a *Kahoot* on a project presentation for all students, taking Applied Project Management class. Since, these students represent **the target group for the project**. We decided to hold the Kahoot during the presentation, since therefore we can reach more students. Third was **evaluation from project owner**. During the project presentation we got the overview and raw assessment of the product from the owner, in the meaning of subsequent usage of the product.

*The number of informants who have contributed to the evaluation, and how these informants have been selected.*

The focus group consists of 7 people, with the following characteristics:

- Our fellow classmates, who are taking class of Applied Project Management and second-year students who took this class last year. Since they represent the future target group, they are interested in the end product, they will benefit from the product, thus they can make a fair assessment and feedback.
- The age of the participants ranged between 22 - 29 years. We got students with different backgrounds and experience for assessment the final product. People in different age have different expectations of the methods of learning and ways of getting information, thus we got the broader overview of our product.
- We also involved people from different countries to provide an ethical diversity of the feedback. Since, they had a various education experience, based on which they can provide more extensive feedback.

Kahoot was made on a project presentation for all students, taking Applied Project Management class. Since, these students represent the target group for the project. By making a Kahoot we got an overview of students' reactions to the product, the main purpose was to find if students can evaluate the end product as valuable for their learning process. (Approximately 51 Students) Norwegians and international.

The project owner was involved in Kahoot survey and in providing overall review during the presentation.

*Results of tests, surveys or interviews with students or persons who have reviewed the product.*

**Results from interviewing the focus group:** the respondents find the end product as a “good introduction to the risk management, giving the overall understanding of the topic”- 100%, all respondents agreed that they “could use the product in their learning process”-100%. Most of the respondents agreed that “the product could be used during the exam preparation”-85%.

Overall grade for the project was still “very good”, but some details which should be clarified in an animation script were pointed up. In addition, we got a recommendation about more detailed disclosure of the topic, thus could “contribute into the wider usage of the product in the learning process”.

**Results from Kahoot for the target group:**

**Results of project owner evaluation:** Project owner appreciated the idea of using animation as an introduction to the upcoming lecture, “it can give a good overview for students about upcoming lecture”. In addition, he especially appreciated the recommendation for distributions, which accompanied the final product.

The results of the Kahoot are encouraging. A total of 87% of the participants found the video informative. Also, a total of 84% found the video to be an addition to understand the subject of the lecture better. 78% of the participants found that this video would improve the overall learning experience and 86% found it a good way to study before the lecture. Finally, 88% of the participant would like to see NTNU implement similar video’s in different subjects throughout the course of study. In Table 3 areTable 3 all the results from the Kahoot.

<b>Was this video informative?</b>	<b>Yes(64%)</b>	<b>No(7%)</b>	<b>Mostly(23%)</b>	<b>Partly(7%)</b>
<b>Will you be able to understand the subject better without going to the lecture?</b>	Yes(39%)	No(16%)	Maybe(45%)	
<b>Do you think this product will improve your learning experience?</b>	Yes(57%)	No(5%)	Mostly(21%)	Barely(17%)
<b>Is this product a good way to study before the lecture?</b>	Yes(69%)	No(7%)	Mostly(17%)	Barely(7%)
<b>Do you think NTNU should implement more of these products in the courses?</b>	Yes(88%)	No(12%)		

Table 3: Kahoot results

In conclusion, the project seems to be a good fit for students who want to study the subject before a lecture, as can be seen in question 4. These kinds of animations give the students a great first impression about the subject and enables them to know what the lecture is going to be about and to start thinking about the subject. For exam training these videos are less suitable, as an exam preparation needs more in-depth analysis of the subject and more interaction between the subject and the student.

Based on the results from evaluation methods mentioned above, we **agree** with the statement that *our product is of high quality and we recommend it to be used as a learning aid in project management course.*

<b>Our product is of high quality and we recommend it to be used as a learning aid in project management</b>							
<b>Scale</b>	Strongly Disagree	Disagree	Neither disagree	agree	nor	Agree	Strongly Agree
<b>Your response</b>						X	

Table 4: recommendation



#### **4. Factors that have contributed to failure / success.**

Success factor refers to a set of factors that the project must comply with in order to increase its likelihood of success. After the project is finished the project can be assessed as a project failure or a project success. The success factors can be used to come to this conclusion. Therefore, they can be seen as the most important lessons learned from executing a project. (Hussain, 2018)

In chapter 2 is already explained why we see our project as a success. Different factors have led to this success. The success factors in table 5 are from the book 'The Road To Success'. (Hussain, 2018) We have discussed which factors we observed in our project and the process when we reflected on our project. Besides the success factors, the explanation why this factor contributed to our success is also listed in table 5.

The most important factor for success in our project was the collaboration. All our team members were not having the right skills for executing the project. Therefor we needed to require the right knowledge. We needed to support each other and help each other out to make this project a success. By collaborating as a team, in the way we did, we have the opinion that this was the critical success factor in our project.

In addition, was the adequate planning, involving the project owner and the end-user in the early phases (Kahoot) very useful to come up with a right product.

Success Factors	Explanation
Commitment	As a team we were committed to the project, since we all wanted to make it a success. The fact that it will be graded was for us a good motivation and made us commit to the project.
Clarity of roles	In the beginning we discussed and decided which team member would do which part of the project. This made us give an overview on who was working on the project and when and if everything was goes as we planned.
Skills, knowledge	This was a little bit a setback. We did not have the required skills or knowledge of animation. This is the reason that our development/video making process took a bit longer than planned because we had to acquire the necessary skills
Alignment of project purpose & Clarity of purpose and objectives	From the start we made sure we were all aligned and on understood what the reason was why we made the animation. In addition, we made sure we all had the same commitment. We aligned from the beginning for what we were striving, through discussions.
Trust	When we created the project team, we chose each other because we knew we could trust each other (we knew each other from before) This enabled us to trust each other in the project and spread the tasks/workload (by knowing one would fulfil his/her task)
Adequate planning	The plan of product had to be handed in on time, therefore we planned on time and we tried to stay true to this planning. This helped us in finishing the project on time.
Honesty in reporting	We were honest to each other about the status of the project process when we had meetings. This enabled us to see if we were on schedule and to make sure everyone did what was expected of them.
Flexibility	The whole product was very open to own interpretation. We could do what we wanted, within very large boundaries. This gave us a lot of autonomy, but also it made it difficult to narrow down to one product. By the means of would it satisfy the product owner.
End-user/stakeholder involvement	We tried to fulfil the project-owner requirements. Since they were very open, we involved the end-user from the start to find out where they would be satisfied with. We tried to go back and forth, especially in the beginning, between end-user and project owner, so we could make a product that would be perceived as value-adding to the end-customer and fulfil the project-owner requirements.
Collaboration within project organization	Even though everyone had their own tasks, we tried to help each other out when we needed help and made sure we knew the status of the project. We worked well as a team together, which was necessary in a project where the needed knowledge was not in our field.

Table 5: Success factors in our projects

## **5. important lessons from your project**

My first advice is to have a group in which all the members have common goals and want to achieve the same quality of the final product, with people that commit in every activity of the project, otherwise it would create discomfort and frustration within the group and excessive workload for some members.

Therefore, it is important to start the project as soon as possible in order to have the time to carry out all the activities, without rushing and avoid delivering a mediocre project. In order to achieve the objectives, a detailed schedule can be made in which internal deadlines can be included to feel yourself more under pressure and don't postpone the work.

As for all the assignments made during the course our approach was to set meetings, understand the objectives of the work, reason on that and split the work, and depending on the complexity of the tasks work alone or with other members.

When we started to work on the project, we noticed that we needed to collect more information in order to develop the work, therefore we involved some of the stakeholders in the project asking questions directly as towards the teacher (project owner) and with a Kahoot towards the class (end users).

What we learnt from this work is that the first meetings have to be used to understand the learning objectives of the final product, to identify who has to be the target of the project and the skills mastery by the group in digitalization field, and only after to have considered all these elements what product to produce.

A good plan, complete and well structured, is useful because it can be used as a checklist and guideline to follow carefully by the group also, to present the project to the stakeholders involved.

With a good plan you can get a successful project but not the other way around.

Due to the lack of digitalization skills, we had thought and included in the plan as well a contingency, a sort of Plan B if we had not succeeded in the creation of the animation, and that would lead the involvement of a person outside the group.

The plan also included how the product was evaluated and how we incorporated the feedback received into the project prior to delivery, as also appropriate changes due to possible errors.

To sum up, the lessons we learnt during this work are grouped on the list below:

- 1- Have a consolidate and committed group;
- 2- Work without conflicts;
- 3- Respect the schedule and start the project as soon as possible;
- 4- Collect all the information;
- 5- Stakeholders are important and have to be involved;
- 6- Identify and clarify the learning objectives;
- 7- Frequently meeting to follow-up the work;
- 8- The plan of the project has to be complete and structured;
- 9- Consider a Contingency;
- 10- Ask someone to evaluate the project before to hand-in.

## **6. References**

Hussain, B. (2018). *The road to success*. Trondheim: fagbokforlaget.

merriam-webster. (2016, may 4). *Definition of FOCUS GROUP*. Retrieved from merriam-webster:  
[www.merriam-webster.com](http://www.merriam-webster.com)

Ngereja, B. (2019). Digitalization projects. Trondheim, Norway.

## 7. Peer-review report

The peer-review is executed for group 26. They made a video with question in between, which you can answer.

### Strengths

We found that this group had a good idea and execution. The video contained interaction though first explaining the case and asking relevant questions afterwards. A good point with that is that you get feedback immediately, therefore increasing the learning experience.

Secondly, we found that the technical aspect, i.e. the animation quality and voice over to be good and to the point. Also, the group managed to include some humour in the animation and the colours used makes it visually pleasing.

### Weaknesses

While watching the product, we saw that proper introduction was missing. In the middle of the video, there were moments when we wanted to replay a specific part but couldn't because the product doesn't have the capability for this: you need to replay the whole video. This may result in more time usage when someone wants to review a part of the video. Lastly, the first question requires you to write specific answers, and when someone uses other terms with the same idea/meaning, the product will mark them wrong.

The product we reviewed is of high quality and we recommend it to be used as learning aid in project management					
Scale	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Your response				X	

Table 6: Recommendation for group 26

Because of the above description of the product we would recommend the grade **8** to this product.

## **8. Attachment**

### **Product Description**

The product is a visualisation of chapter 10 'Risk Management' of the book of Hussain. (Hussain, 2018) The video was made using animation techniques and has voice over to explain the different subjects in the chapter 'Risk Management'. It can be used as a way for the audience to get an introduction in the subject before the start of the lecture of risk management, to create interest. .

The video was designed to be watched on tablets, smartphones, laptops and pc's. It is a .mp4 file, therefore it can be distributed through multiple media platforms, like blackboard and YouTube.

### **Recommendations for distribution.**

This document is an attachment to group 33's end product.

In order for our product to give added value to the students it needs to be distributed in a proper way. It needs to be easily accessed and advertised in order to maximize the product value.

For proper distribution, we recommend the following three steps:

1. Upload on Blackboard.

By uploading the product as a part of the learning materials on blackboard one will assure that the product is accessible at a platform widely used by the target group.

2. Use as an introduction to the lecture on Project Risk Management.

By presenting the product at the start of a lecture or as a reading instruction to a lecture the product will become known to the target group. Our assessment is that this strategy will increase the number of viewers.

3. Upload on YouTube.

This strategy ensures that the video is easily accessible for everyone with internet access.

## **Project Plan**

### **The product**

In order to find out what product we should create we assessed three main factors:

- End user needs
- Project owner needs
- Project group strengths.

In order to find the end users' needs we choose the students of Applied Project management as our focus group. We then made a survey in the form of a Kahoot in order to figure out their preferences on learning. The results for this survey was:

- Most students are visual or logical learners.
- Most students prefer to study alone
- Most students would like better or additional explanations of the curriculum.

Further we interviewed the project owner on his preferences regarding the project. We found that the project owner emphasised three things.

- Use of digital technology.
- Giving added value to learners of Applied Project management.
- Have a long enough lifetime in order to give value to future students.

At last we assessed the strengths and weaknesses of the project group. In order to figure out how we could utilize our resources in the best way. Our group does not posse advanced computer skills, but some of the members have basic knowledge of video making and editing. We assess that the end-product will benefit from playing on these strengths.

Based on these assessments we have decided to make a video where we summarize Chapter 10 in “The road to success” (Bassam 2018)

### **The expected benefits of the product.**

The term benefit refers to the outcome that the project will produce after the project output are in operation. It includes benefits to the owner, users, society, and so on. The outcome is characterized by a high level of uncertainty and many conditions must be met in order to achieve the intended outcome. The main principle is that the benefits can be accomplished only if the purpose is achieved.

In this case the benefits are:

- Informative product that clarifies the students doubts inherent to different topics;
- Possibility to understand a topic even if it is missed the lecture;
- Available material at any time and at any place;
- Improving the students’ learning process thanks to digitalization that makes the learning faster and simpler;
- High students’ satisfaction;
- Flexibility and adaptability of the material in the future;
- Supplement tool for teachers to prepare students for the day after the lecture;
- Possible new learning method to introduce in the entire NTNU university system.

## **Required skills**

In order to produce our project, we need to acquire several skills like:

- Video Making;
- Production;
- Editing;
- Knowledge of the material to explain within the video (in our case chapter 10);
- Communication and collaboration inside the teamwork;
- Problem solving;
- Creative;
- Best learning method.

After doing the Kahoot and having understood the major threats of the students we will use the internet and our personal knowledge as a tool to research the best learning methods for students.

For some of the skills listed above like, editing, video making and production we are going to collaborate with a third person that will help us to digitize our project and introduce us in the animation world. Furthermore, we will also use the internet and YouTube tutorials to maybe acquire directly these skills.

In order to realise a product useful and that fulfilled the students' needs, through the study of literature and books we will have a deep knowledge of the topic that we are going to explain in our product.

During this teamwork we will need to achieve a good communication and collaboration within the group, we are a small and well organized group that means we don't have a leader but we choose to have a coordinator that help us to set up meetings and to respect the deadlines.

## **Stakeholders**

Involving stakeholders during project development is an important step that needs not to be skipped. We first identify the stakeholders:

- Project owner
- End-users (Students / Classmates)
- Project team
- Supplier – Platform
- Supplier – Competence
- Other learners
- NTNU Administration



Next step is we to conduct stakeholder mapping:

	Interest		
Influence		Low	High
	High	<p><i>Group 2</i> Supplier - Platform</p>	<p><i>Group 1</i> Bassam Hussein End-users Project team</p>
	Low	<p><i>Group 4</i> Other Learners NTNU</p>	<p><i>Group 3</i></p>

Table 7: Stakeholders map

As learned through Bassam's class, below are actions to be taken by us with regards to the stakeholders.

*Stakeholders in group 1 should be collaborated with:*

- Owner – will be interviewed, ask for input, identify what creates value for him
- End-users – will conduct survey, identify what is valuable for them, will conduct proof of concept test with them
- Project team – will discuss internally to learn what are the competence needed and plan the project development

*Stakeholders in group 2 should be made satisfied:*

- Supplier of the Platform – will comply to their terms of licensure agreement

*Stakeholders in group 3 should be informed, but based on the stakeholder mapping, we found out that there are none in this group.*

*Stakeholders in group 4 should be monitored and observed:*

- Other learners, NTNU Administration – will observe if they have ideas that can bring more value to the project.

## Risk assessment

In order to assess the risk of the project the project team had a collective brainstorming. In this session we addressed different incidents that can affect our project. After identifying the incidents, we assessed them with regards to consequence and probability. We used the risk assessment matrix presented under to do this. After assessing the risk, we came up with measures to reduce the risk. At last we made a new risk assessment with the measures taken into consideration. Our risk assessment is presented in the risk assessment table.

Risk assessment matrix			
Consequence/ Probability	1.Low	2.Medium	3.High
1 Unlikely	1	2	3
2 Probable	2	4	6
3 Likely	3	6	9
Minor risk			
Significant risk			
Critical risk			

Risk assessment table									
What	P	C	R	Measures	P	C	R		
The project will not meet the requirements of the project owner	2	3	6	Interviewing the project owner. Involving the project owner in the process.	1	3	3		
The project will not meet the needs of the end users	2	3	6	End user survey. End user 1.st version evaluation.	1	3	3		
The project cannot find a suitable platform for its product	1	2	2	No measures needed	1	2	2		
The end product will not function as intended	2	3	6	Soft deadlines→ Time to improve built inn in the project schedule	1	3	3		
The project group will lose its motivation	3	2	6	Regular work sessions and meetings	2	2	4		
Arguments in the project group will reduce its performance	2	2	4	Addressing problems early. Appointing project coordinator.	2	1	2		
The project members will not prioritize enough time on the project.	3	3	9	Regular meetings and work sessions. Soft deadlines.	1	3	3		
The project will to large according to the available manpower	2	3	6	Proper project planning. Dividing the project into work packages	1	3	3		
The value of the project will be reduced by similar products	1	1	1	No measures needed	1	1	1		

Table 8: Risk assessment for this project

## Project breakdown structure

A project breakdown structure shows the key project deliverables, the sub-deliverables and the work packages. In a WBS the above 3 aspects are organised in a hierarchical decomposed structure. It shows and explains the different parts that has to be executed and completed to have fulfilled the project. For our project there is decided to make a video. This is the major deliverable of the project. To realize this deliverable, it is divided in four sub-deliverables:

- Learning design - In what way is the video useful as learning material?
- Produce product - Which steps are undertaken to produce the video?
- Manage project - What has to be done to manage the project as a whole?
- Evaluation - Does the video satisfy the CSF?

The deliverable, sub-deliverables with their work packages are visible in schedule 6.1. The work packages cover all that has to be carried out to deliver the sub-deliverable and therefore to deliver the main deliverable.

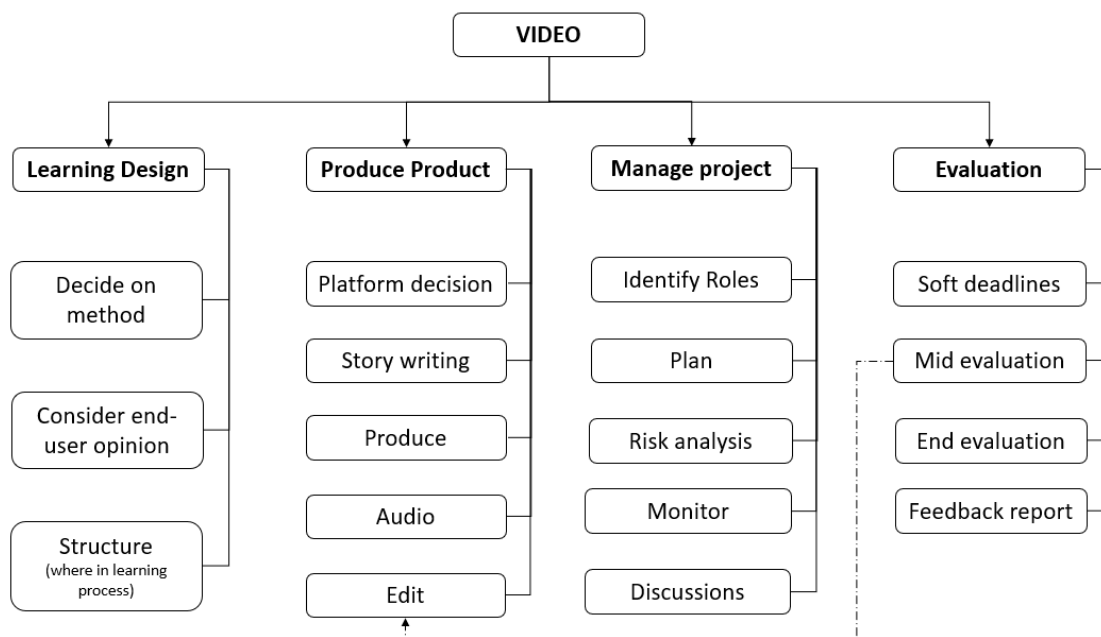


Figure 1: Work package

## Learning Design

Decide on method: *In what way is the video bringing the learning material to the end-users.*  
 Consider end-user opinion: *Communicate with the end-user what their learning preference is.*  
 Structure: *In what way can the video be used, what would be the structure of the learning period.*

## Produce Product

Platform decision: *Compare platforms and find the best fit for our video.*  
 Story writing: *Summarize the learning material in a script which can be followed when to produce the video.*  
 Produce: *Produce the video by following the script.*  
 Audio: *Record the audio (conversations, explanations, music, etc.)*  
 Edit: *Add video and audio together and edit it to make it one.*

## Manage project

Identify Roles: *Assign roles within the project team.*  
 Plan: *Plan the project by timing deliverables.*  
 Risk Analysis: *Define the possible risks and find a way to address them.*  
 Monitor: *Keep track on the execute phase of the project (goes everything follow the plan?)*  
 Discussions: *Have meetings and discuss the progress and solve encountered problems together.*

## Evaluation

Soft deadlines: *Create deadlines within the project team to stay on schedule.*  
 Mid evaluation: *Retrieve feedback from a pilot group to revise before the hard deadline. Improve the product.*  
 End evaluation: *Evaluate on the project.*  
 Feedback report: *Evaluate the end product.*

## Project schedule

In order for the project to be finished in the designated time, a time schedule is made. This time schedule includes the general time frame set by the project owner. The blocks in the schedule represent the different major deliverables, sub-deliverables and work packages from the previous chapter. The time schedule is as following:

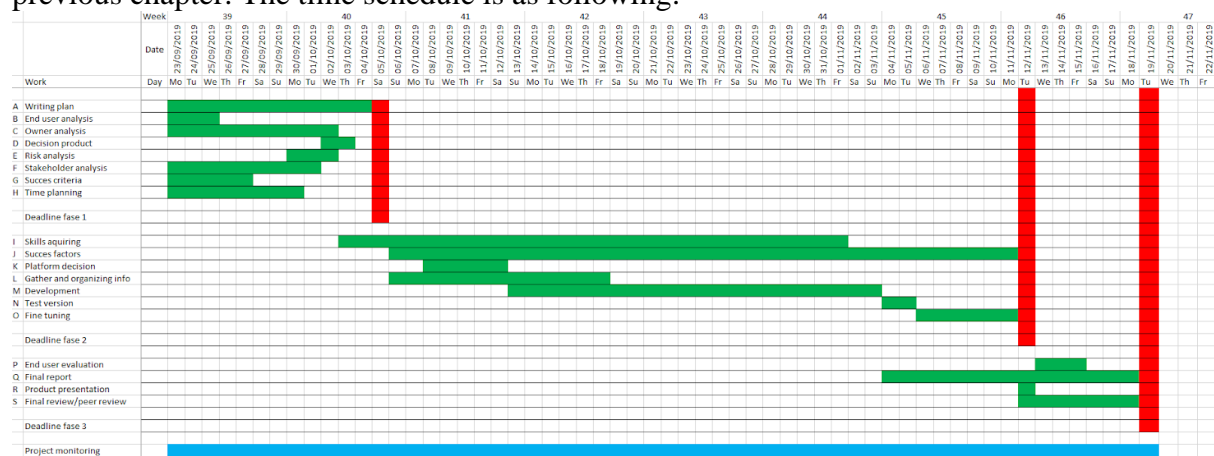


Figure 2: Time schedule

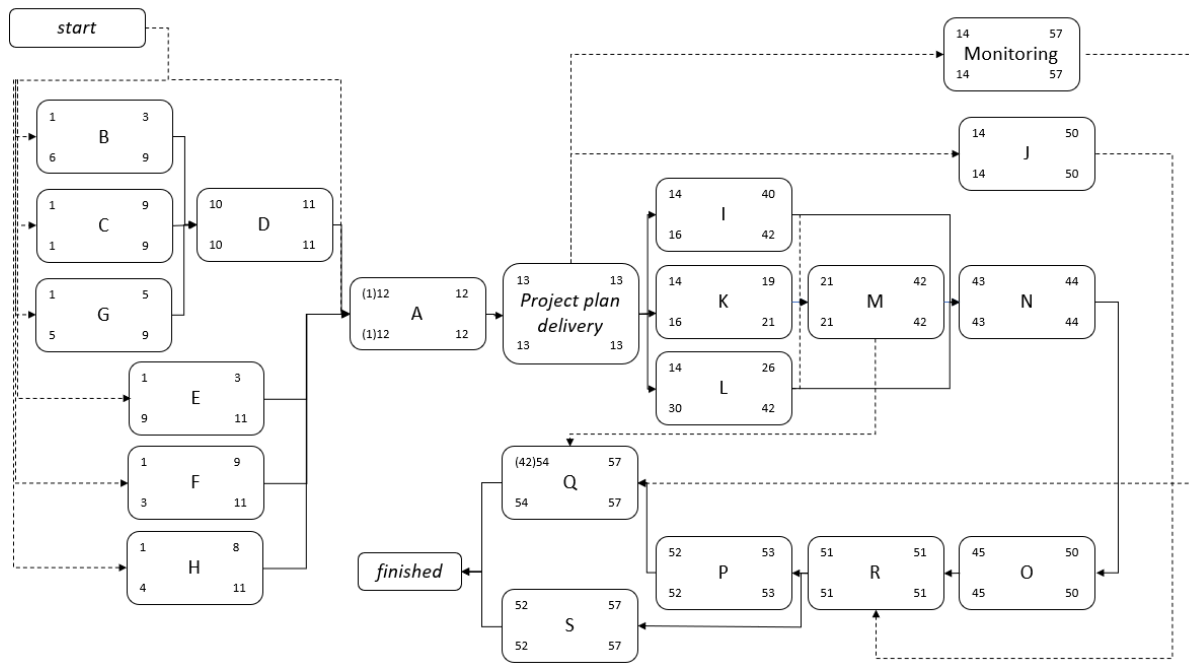


Figure 3: Network Diagram

The network diagram is based on the time schedule. Therefore, the duration of the activities displayed are in days.

The dotted lines indicate that the task does not completely rely on the previous task, but it should be done from the activity before and till the activity it ends. It can't be done before or after the task, but the other activities do directly rely on these tasks. In addition, there are a couple activities (A and Q) which can only be finished after the activity before but can already be started on before this activity is finished. The digits in between the parentheses indicate the time that these should be started, without having the last information of the last necessary activity.

### Success factors

The term 'success factor' refers to a set of factors that the project must comply with in order to increase its likelihood of success (Turner 2009). Based on our acquired knowledge and expertise, several main success factors, as well as, the activities which have to be implemented and decisions which have to be made in order to fulfilment these factors are listed below:

- **Clarity of project purpose and objective**  
Examining literature, handouts and assignments task, clarification on any issue with the project owner, in order to determine the main function of the product (purpose) and objective.
- **Adequate project planning**  
Development a detailed plan kept up to date with agreed deadlines, timetable. It will help to understand the scope and complexity of the project, determine the milestones (deadlines for reports, approvals, delivering dates), make work visualization, defining the dependents between the tasks, indicates the availability of resources and requirements for making decisions.
- **End user consultation and analysis of the end users feedback**  
Collecting and analyses information (data) from end-users, to clearly understand the End user needs and willingness in the new digital product and to avoid any

underestimations. Since the End users are well familiar with kahoot.it application, a decision was made in favour of conducting a survey via this application.

- **Effective monitoring and control of the project**

Based on the project plan and timeline was made a decided to milestones and organized regular meetings on Mondays and several additional meetings close to the due dates. As well as keeping track of all requirements for the project and its results (including requirements at the operation phase, for approval, for implementation, technical and functional requirements).

Since the project team is relevant small and self-organised, there is no need for a project leader, but to execute the monitoring and control functions the project coordinator was chosen.

- **Technology to support the project**

Since the project is a digitization project, technologies are required. Several programs for video production, editing and animation were analysed and the most relevant to the project, costs and availability were chosen to be used.

- **Approval by client**

To increase the chance the project will be approved by the client, was scheduled several references to the client during the project to get feedback and to have a chance to make changes in the product, as well as to provide a testing pilot version to the client during the implementation phase.

- **Troubleshooting expertise**

Since the project is run in parallel with other tasks and projects of the same project team, and it is difficult to prioritize one particular project, was decided to address problems as they arise.

- **Good communication between the project team members and motivation**

The project coordinator is in charge of creating a trustful and friendly atmosphere, possibility to ask questions, work on the project together.

- **Skills, knowledge and competence**

Examining the literature, acquired knowledge implementation. Involvement of external Stakeholders with the relevant skills and competence into the project to decrease the level of uncertainty.

- **Flexibility**

Providing some countermeasures to handle uncertainty, managing the risk factors. ‘Group thinking can reduce the project team's ability to request answers to critical questions about implementing, context, or other factors’ (Janis 1977), thus the autonomy for team members to work in accordance with the deadlines is provided. This increases intellectual stimulation, motivation and self-learning.

## **Digitalization**

“**Digitalization** is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities,” according to Gartner’s glossary. In relation to our project, digitalization increases and transforms studying process efficiency, improves data availability, and creates more value by leveraging digital technologies and digitized data.

1. Applying of digital technologies and digitized data, to achieve better results with less effort.
2. Innovations in the product/process
3. Improvement of the product/process - automation, optimization, autonomy, increasing flexibility and individuality of product/process.

4. Creating value in the product/process.
5. Starting point for the project creation - the end result. Continuous communication with client to be aware about his current needs and expectation.
6. Requires fast actions because of high competition in the market.

The value of digitalization for the project:

1. Students will get a better understanding
2. Students will have easier access to information
3. Everyone is online, it is the future
4. Students can access it at all times
5. Students have all the information in one place
6. It does not take up any more space