Reflection Report for Product-Based Assignments

GløsHappening

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1 - Introduction

In our project we have designed a webpage that easily shows the events that take place on the Gløshaugen campus on a given day.

Every day many different student organizations and other groups of interest have different events happening around the Gløshaugen campus. Think of a company visiting campus and having a stand where students can interact with the representatives of the company, a sports club from NTNUI having an event where they promote their sport and club to recruit members, etc. But if you don't happen to run into one of these events while walking around campus, the question then becomes how will you know what events are happening around campus, where exactly they take place, at what time and who are hosting them? They might promote their event on their group's website or social media, but there might be many different events happening on the same day which will make it difficult to navigate and find them all online. If you don't follow their social media feed or if an event is hosted by someone you are not familiar with, you might never even find out that they are hosting an event on campus. This is where our idea comes in.

On our webpage, GløsHappening, we aim to be a place to showcase everything that happens on Gløshaugen campus but put into one place. If you are hosting an event on campus, you can simply go to our website, there will be a large map of Gløshaugen campus. Just place a pin on the map showing your location and add a short description of the event, who, what, where it is taking place. Others can then go to the webpage and see all the pins placed around the map, indicating what events are taking place on campus that day. This tool not only allows to be kept informed on what is happening on campus, it is also a great tool to discover new clubs, associations, etc.

2 - Evaluation of Project management effort

Right after the project assignment was published, the consensus in the group was to do a product-based project. We decided early on an app or webpage. In our group are several exchange students and with their experience of just having arrived on campus, we brainstormed around the idea of an application for events happening around campus. Some more brainstorming by ourselves and airing the ideas to each other we came to the outline specified in the introduction of this report. We have different scope of knowledge in our group which can be said to have worked in our favor. One group member has previous experience with making a webpage, it therefore became natural for us to listen to his advice on how to organize the work effort and divide up tasks. By using that we could leverage the other group members and their area of competence to delegate tasks and responsibilities.

We decided to mainly divide up the workload into front- and back-end. One half of the group working on back-end, making the functions of the webpage that we want to implement to work. The other half was set to work on front-end, meaning the design of the webpage, what colors to use, design of logo and since we wanted our webpage to have an interactive map of Gløshaugen, drawing of an easy to navigate map. In the research phase of the project, we found different webpage builders and explored if we could use these to build our webpage how we wanted it and if there wouldn't be a need to build it from scratch with coding front- and back-end. After some time, we found this to be not feasible with the functionality we wanted and would therefore have to build it ourselves. Overall distribution of roles and responsibilities have been good. The group members have all been able to be a part of the project and contribute. One problem was that we underestimated the complexity of the coding part to make the webpage, having to leave most of that to the member with previous experience. But we just reorganized ourselves, letting him focus on the coding and the rest of the group focused on every other task that had to be done.

In our risk management plan, we rightly stated many of our concerns, but we focused too much on the finished product. By that, we mean we focused too much on functionality of the product, how it was used and if we would finish on time and not so much on the management part and the production process. This is mainly where we had some bumps in the road. We didn't foresee for example us getting stuck on seeing if we could use webpage builders to make our webpage and wasting time on that. Or the scope of some of the sub-tasks in the

project. One of the sub-tasks in the front-end part of the project was drawing an easy to navigate map of Gløshaugen. We learned that it would take a lot of time to do well. Since we discovered that early, we decided to find an already made map online and use that. Overall, the risk management plan was good although it didn't have enough focus on the management part. But we can't foresee everything, every problem that might come up during the project and plan how to deal with it. Whenever we met with something that might cause a problem, like the webpage builders, we always took a step back, looked at it objectively and dealt with it.

During the entire project we have actively used WhatsApp to communicate with each other and tried as best we could to meet regularly to work together on this project. After each meeting we delegated further tasks, discussed what to do and where we were at so we could work on the project in our own time. If there where instances where a group member couldn't meet up, they either worked from where they were at, or the group delegated tasks for them to do on their own. For filesharing, we made a group in Microsoft teams. This has worked well for sharing files that need sharing or for links to documents for assignments and reports. The communication of the group has been effective during this project.

Our original success criteria where the following:
- Project participants' motivation
- Enough data research
- Good communication between everyone involved
- Good technology to support the project
- Fluency on the web page
- Good assessment of the user needs

Throughout the project, all members have been motivated to work on the projects, we have communicated well and tried as best as we could to meet, work on the project and make a good product. Through a user survey we managed to get a good assessment of user needs and through our own estimates, as students at NTNU, with some of us being exchange students, we were able to determine that there is a use and a need for our application. The final product, the webpage, looks good, it is easy to navigate and has all the functions we wanted to include and works as we envisioned. There are no deviations from our original success criteria and the final product has been delivered in accordance with those criteria.

We evaluate our project management effort as successful:

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
				X

3 - Evaluation of the impact

One target audience of our product is NTNU students (both Norwegians and international students) who would benefit from our website by being more informed on the events taking place around the campus. Another target audience are the organizers of events, such as clubs, student associations and companies. They would benefit from our website because it would make their events more visible and attract more people who are interested.

During our project we managed to build a prototype webpage, create a logo, and conduct a survey. The website is interactive, meaning that we can click on different buttons designed to do a certain task, and has different functionalities. We consider our final product to be very satisfying and in accordance with our goals. It is in fact better than we had imagined, as we might have underestimated our resources in the initial stage of our project, so the outcome is positive. Therefore, on a technical level we consider our product to be a success.

The evidence that supports our evaluation is the final website prototype (you will find the link in the appendix) and the survey we conducted. This survey was meant to assess the usefulness of our product concept, the users' needs and gain some feedback that would enable us to improve our idea to build the best webpage. We received a total of 54 responses of students from NTNU. The feedback was positive (see figures below), we had a lot of people saying they find our idea useful, and they would use the website quite often.
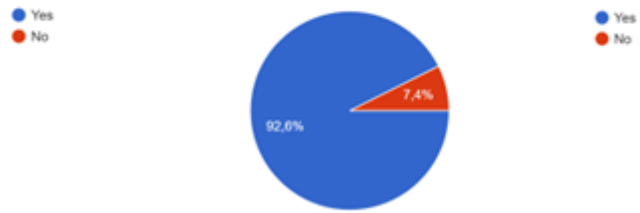
We evaluate the quality of our results as outstanding.

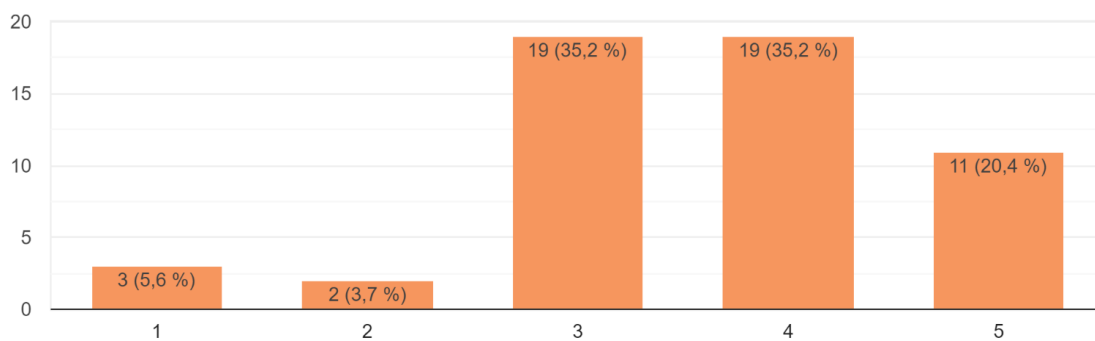| Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
			X	

Do you think it would be a useful tool ?
54 réponses

● Yes
● No

94,4%

Would you use our website ?
54 réponses

● Yes
● No

7,4%

92,6%

How often would you use it ?
54 réponses

Therefore, we were able to assess if and how our product would be useful for a targeted audience. Since our product is a prototype and not the actual website that will be running, we cannot directly assess the satisfaction of end-users. We can only predict it by using their feedback from the survey, which is greatly encouraging for the moment.

Concerning the other success criteria of our project, we managed to complete the project by deadline, meaning our webpage prototype was ready when we had planned it and we had time to write our project report and make our presentation video. Moreover, all the members of the project team are happy and satisfied with the work we achieved, and it was completed in a good working environment/atmosphere. Finally, we have managed to create value by building a website which will be useful to students. We had some technical difficulties to deal with during the product development phase and sometimes had some schedule difficulties to meet up for the project as everyone had different timetables. So overall the project success is great but not perfect.

4 - Factors that have contributed to success

The biggest project success factor was having a clear well-defined goal from the beginning. We had a clear product in mind and agreed what the function of the product will be while writing the pre-report. This helped everyone to focus on a common goal and use all the time possible in building the website. This is also played big role in the motivation level of each team members.

The other success factor was having a member that has the knowledge of building a website. This helped tremendously all the way from the planning process to the product making. It helped us to know what the necessary tasks were and how to split them up. It also helped us decide what was doable in the amount of time we had. This was important since time was the major constraint on the project.

The group was very committed to finish the project in time. Having the project count for half of the grade for this class was a good motivator. Although it was difficult to find time that worked for all of us since we all have different schedules. We still managed to meet up at least once a week even though at times not every team member was present. To make sure every member was included and knew what is happening, we wrote a summary at the end of every meeting. The summary included what we did, and which decisions were made and was shared in a google docs file that every member had access to.

Another success factor was that the group was on the same page and trusted one another. It was easy to make decisions on how the website should look and how it should be created. This came in to play when we decided to build the website from the ground up rather than using a site that helps create website. Even though this was a big change, the decision took little time since it was well communicated, and everyone understood why it was necessary.

The decision mentioned above is a good example that shows that the group had an adequate communication. Everyone was flexible to changes regarding to both changes of schedule and to changes made in website and adapted accordingly.

When comparing these factors with the ones mentioned at The Road of Success: Narratives and Insights from Real-Life Projects, we can see that they are all mentioned in the book. Furthermore, it is also clear that the ones that appear in the literature, but that we did not mention, were also a key to be able to succeed with the project, and we would have failed if any of them were not meet. The success factors we mentioned previously are the ones that seemed most important and critical to us.

5 - Most important lessons from your project

You should first think about the feasibility of your project before deciding on the type of product. The time to develop this product is relatively short, so you should consider this. You should also consider the skills and competences that you need to develop your product (Can you do it yourself? Will you need help from other people? Will you need to acquire new skills, and will you have time to learn them? Etc.). Choose your project according to the skills of the members of the team, already thinking in advance on which person could take charge of the different tasks.

Our advice is to make sure you have a nice group cohesion, as this plays an important role in motivation and good communication between members of the project team. Also make sure that you start working quickly after you have chosen your product and that you don't waste time. We learned that setting up regular meetings helps to keep the project going and progressing, as well as keeping all team members implicated and that no one is left behind. Which leads to another important point that should be highlighted: communication is essential to discuss together any problem that may arise and keep everyone informed on the progress of the project, what is everyone doing to make it work and if you have any doubts concerning any topic.

Our experiences suggests that it can be hard to find a fixed time and day of the week during which you can do group work. Indeed, every team member can have a different time schedule that can be led to change and therefore finding a common time slot can be easier said than done. Therefore, flexibility is a key aid to help you navigate this obstacle. We, for instance, adapted every week according to everyone's plans and found a time that best suited everyone.

Another advice is to be open-minded about your project and seek to gain insights and feedback on your product. For instance, in the survey we conducted some people suggested new functionalities that we could add to the website. We took in account these feedbacks when designing the webpage and this allowed us to make our product better. Being able to adapt is also important to overcome potential difficulties that may arise during the project and especially during the development of the product. Things may not work out the way you thought it would and you need to be prepared to this eventuality. To overcome this, you need to work as a team to be able to think of how to solve this problem and find alternative solutions.

Lastly, the most important thing is that you choose a project topic/product that you find interesting, as this is the core source of motivation. You should take advantage of the fact you can freely choose your project topic. Choosing a topic that is interesting will also allow you to have fun and enjoy working on it.

6 - Reflection on learning and unlearning

For this project, the main task was to make the GløsHappening website functional and interactive for all users. Creating a website is not easy, as it requires a great level of programming skills. At first, we tried to make the website using other tools that helped creating websites easily, to avoid having to program it from scratch. We then realized that the functionalities we wanted to implement, such as creating accounts or having an interactive and editable map for the user, were not possible without programming on our own. Luckily, one of us had experience in this kind of tasks and it has made everything easier. In turn, the rest of us have learned basic notions of web programming both by looking for different ways to do the project and by looking at the code written by our partner. Nowadays programming is found in all kinds of projects, so this knowledge will be of great help in future projects during our professional career.

As for teamwork, as in all the projects in which we have been and will be involved, we must communicate with each other and work together to carry out the work in the best possible way. At the same time, the fact that we are a team made up of students from different parts of the world has helped us to improve our communication in a common language, English.

Moreover, the only previous idea we had about creating websites was that we could do it without programming, through other tools created by other people. However, as we have already mentioned, the functionalities we wanted to implement in our website were too complex to be done through a tool available on the internet. When we realized that we had to program the website from scratch in languages such as Python, HTML or JavaScript, we didn't know if we would have time to finish it as only one of us knew how to program and the rest of us had to learn in record time. This has helped us to know that projects don't turn out as we initially planned them, as what seemed easy to do in our heads, has a complexity behind it that we don't realize its magnitude until we really get to work on it. Realizing these details and correcting them in time is part of the process, both for the project in question and as a learning process for future work.

7 - Acknowledgments

References

1. Hussein, B. (2018). The Road to Success: Narratives and Insights from Real-Life Projects, Fagbokforlaget.

Appendix 1: Pre-Report

TPK5100 - Applied Project Management
Pre-Report

Group members :

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- Melat Yosef Girmay
- Itza Camila Hittner
- Pablo Rico Gomez
- Bjørn Rye-Holmboe
- Roman Valverde Belaustegui

I.   Product presentation

Our group has decided to build a product based project. We will be producing a prototype web page whose main target is students of NTNU. The page aims to provide students with an interactive map that includes all events/activities happening around campus each day. The idea would be that anyone can add "pins" with location on the map (with a limited number of pins added per person each day) to indicate that an event is taking place and which type of event. Therefore, students who see an event taking place can notify other students, as well as event organizers can notify where and when their event is taking place. Examples of events that could be added to the map: student associations stands, food distribution ("free food" type of event), student fairs, international exchange students events, sport teams meet-up, etc. The prototype can be used to attract potential investors and to demonstrate the idea.

If the product prototype ever went live, the expected benefits of the product is for the web page to be useful to students and help them find events/activities related to their interests. We also want it to benefit the organizers of events and student associations, in order to attract more people and give them more visibility.

II.   Stakeholders

If our product were to go live, the potential stakeholders of our project would be:
- students of NTNU
- student associations of NTNU
- NTNU administration office
- events organizers

Most of the stakeholders will not be directly involved during the project due to the fact that the final product is a prototype. We consider ourselves able to identify the stakeholders' interests and concerns on our own this early in the development. The web page will not be in service, thus, the potential stakeholders will not be affected. If the product were to leave the prototype phase, then the interests of the stakeholders must be considered more in depth.

III. <u>Project risk assessment plan</u>

Here are the following risks that the project group has identified and how we can prevent these risks:

	Risk	How we will address the risk
Product	1. Not managing to build the web page 2. Not being that useful to students 3. People posting nonsense or inappropriate content .	1. Building a simple web page, starting with something easy to make and then eventually improving it. 2. Conducting a survey amongst a group of students to ask what they would like to see and how they would like the page to be 3. Monitoring the content, by checking regularly what is posted, and having words that can't be used on the site. Removing pins with irrelevant messages.
Management	1. Not being able to finish on time	1. -Planning ahead -Taking control measurements and assessing how far we have come.

IV. Resources needed to produce the product

Each member of the group has many skills that will be useful to the project, and we have gained some new project management knowledge during the course. However, we will need to acquire the following additional skills to produce our product:

- Web page creation. We can acquire the necessary skills by looking at web pages and videos on internet.
- Creativity: we need to create an easy-to-use, effective and eye-catching interface to make it more comfortable to use.
- Marketing: we need to reach as many NTNU students and event organizers as possible so that they know about this site and that it is used by everyone, since without users who use it, the site is useless. Although, the purpose of the app isn't to be used, it is only for the course project so attracting users would be an idea if we wanted to maintain the app working.

V. Project breakdown

The main deliverables for this project are:

- Product: Prototype of the webpage
    - Designs
        - Front end design
        - Color composition
        - Drawing of the map
        - Design of pins and assets
    - Functionality
        - Placing pins
        - Writing description
        - Viewing pins on the map and reading description
- Project assignment report (03/11)

Work packages:
- Investigation
    - User needs
    - How to create a webpage
- Design
    - Develop map
    - Develop logo
    - choose templates
- Functionality
    - Backend logic and database
    - Frontend web page

VI. Project schedule

First step will be mapping potential interest from stakeholders and determining the needs for our proposed web page. We could first make a survey between the students to see their opinion, get new points of view on the idea and ask what they would like to see in the app but this is our idea of the project so the response doesn't matter. In fact, we think that we have enough different opinions from classmates to consider that it is a good idea and we know how we want to do it to be useful. After that, we will contact the student associations and events organizers and ask for their collaboration on the process. We will try to recollect as much feedback as possible on the idea before starting to develop it. This will also help to spread information about the project so, once it is released to the public, people will already know about it and download it.

Then, we will start the development phase of our project, where we will acquire the skills to make the web page and start designing the prototype.

Finally, the concluding phase will be to do the finishing touches of our prototype and mainly focus on writing the project report and see our work with a critical eye.

Sept-Oct

Investigation phase

1-2 weeks

Oct

Development phase

3-4 weeks

Oct

Concluding phase

1 week
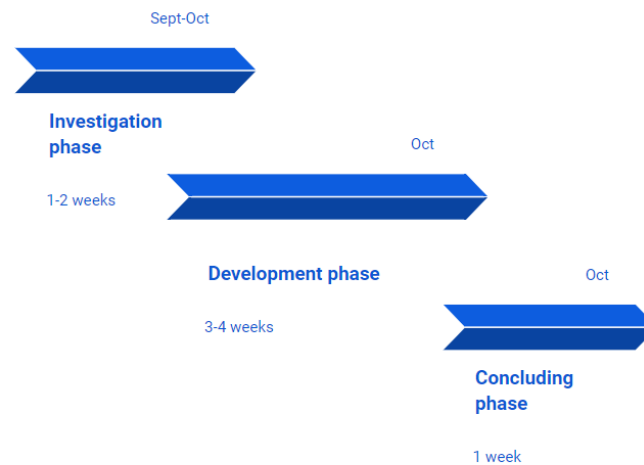
VII. Success factors

The following rules should be adhered to during the project planning and execution in order to reach success:

- Project participants' motivation
- Enough data research
- Good communication between everyone involved
- Good technology to support the project
- Fluency on the web page
- Good assessment of the user needs

VIII. Roles

The project will mainly be divided into sub roles, front end and back end. One half of the group will work with the front end, design of the web page, choosing color composition, drawing the map etc. The other half will work on the back end, getting the functions of the web page to work.

When working, if we notice one part lagging behind or being easier and therefore progressing faster than the other, we can switch to working on the more pressing task, if deemed productive, to keep the project moving forward.

IX. Communication plan

We need an agreement between collaborators and stakeholders that outlines what, when and how information will be shared at key intervals.

Concerning internal communication, the group will meet each week in person at a given time and day to work on the group project. If, occasionally, someone cannot make it to the meeting the group can arrange for another time/date. But this is to be avoided, in order for the project to progress rapidly. A whatsapp conversation is used by the group to communicate about anything concerning the project and share information quickly. The group also has a "Teams space" to gather all the documents and data concerning the project, where information will regularly be added.

Concerning external communication, in order to inform the group, we could take a Zoom-call weekly to recap the updates of the project and what the plans to do in the next week if we haven't talked about it in the personal meetings. To inform the rest of stakeholders we can do a report and post it on the website. With this, if someone enters the web page before finishing the web page, they could see a follow-up of it through the every two weeks reports and they can also propose ideas and participate in the creation of the web page via e-mail but as we said in I.Stakeholders, we consider ourselves able to identify the stakeholders' interests and concerns on our own to know how to develop the app so we think that we won't need the feedback of students and event organizers during the development. Finally, when the web page is finished, the developers will do a summary report explaining in detail how they did the web page and how to use it, being this an user guide for the students and event organizers.

Appendix 2: Link to webpage

As the project concerned building a prototype, it was never meant to go live. However, the website will be made temporarily available from November 4th until November 11th, by clicking the following link:

http://78.156.10.186:5000/

The website might experience downtime within the period, so if it is not accessible, try again at a later time.

Appendix 3: Link to video presentation

You will find our project presentation video by clicking the following link:

https://youtu.be/FbKVeeNv-7I