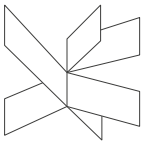

Eat & Meet – Project Report

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84.000 characters

ICT/GBE Engineering

Spring Semester 2021

04/06

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"I hereby declare that my project group and I prepared this project report and that all sources of information have been duly acknowledged"

Debressy Juliette

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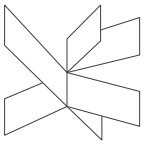

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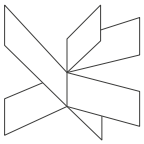
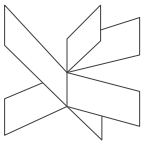
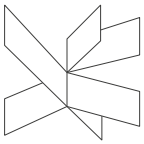




List of figures and tables

Acknowledgements

We would like to thank our supervisors Lene and Knud for their support and time throughout the course of this project.



Summary

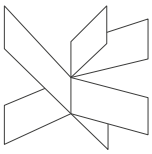
The purpose of this project was to create a social networking platform based around food to allow people, exchange students especially, to get to meet and bond with one another. This subject was chosen because of how the pandemic situation was affecting social interactions, especially in exchange programs where students studied from home and were not able engage in social activities.

The project was made using modern web technologies such as the Vue.js framework for the front-end and Google Firebase for the back-end (authentication, storage and database functions). These choices allows the application to be responsive and updated in real time. The versioning during development was carried out using git and GitHub, as it allowed the developers to work simultaneously on the code and keep back-ups of different versions of the project.

In order to complete the business analysis for this project, PESTLE Analysis, Porters five forces analysis, SWOT analysis and other strategic tools have been used to determine which approach should the team adopt toward the project's environment. This analysis provided a deep insight about the market situation, competitors, what are opportunities and what are the areas which can be covered.

It has been found that there were factors which may affect business such as Politics, and other legal matters, however in SWOT it has been observed that there are enough opportunities for the business which will focus on eating and meeting. Finally, it has been seen that the business can grow based on above factors.

The ICT team was successful in creating a fully functional social network website following the defined objectives and delimitations, which could be expanded and refined in case of an official release to the public.



1. ntroduction

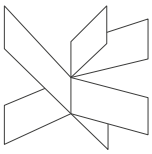
1.1 Background description

People, especially students in foreign countries, can often find themselves isolated in an unfamiliar place, or simply yearning to meet new and interesting people. In this age where people feel increasingly distant despite being more connected than ever, there is need for a way for strangers to bond in a simple and casual manner.

According to Thomas, (2020), It has been found that students become lonely when they move to university with the help of a survey from more than 500 respondents.

According to Food, the Ultimate Connector, (2014), food is a key factor which connects humans, from school to old age. When students join school, they share their lunch boxes, later people meet at food points such as restaurants with friends and other social circles, and at some events such as wedding or other food is shared so it can be said that food is the crucial factor in connecting people therefore, this app focuses more on food which will help students to socialize and reduce the burden of loneliness.

There were many platforms for socializing such as Facebook and Instagram, but when it came to cooking and meeting there was not any specific platform for doing it, which is why this project aims to provide one. According to Yeh & Inose (2010, p.15-28), social connectedness reduces acculturative stress in international students and made them feel more satisfied and had positive impacts on their mental health. The objective of this experiment was to provide a platform that will also allow users to congregate and engage with others about meals by cooking or dining alongside, while they do not know each other and come from various traditions, nationalities and heritages. Whilst the Service is available online and globally, it is targeted at the west since loneliness may vary considerably, as does the reaction to the Service. The remedy will therefore focus on western culture and start in Europe initially and hopefully expand to other western countries. In order to give most correct services for the target audience, western world trends related hospitality habits will be examined more closely.



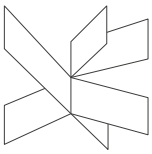
1.2 Problem Statement

The intention for this project was to create a platform that would allow individuals (exchange students in particular) to gather and meet with each other around food, by either cooking and/or eating together despite not knowing one another, and coming from different backgrounds and cultures.

1.3 Aim and Objectives

The first aim of the project was to find an effective way to alleviate loneliness, which is often a big problem for the younger generation and especially for students.
Indeed, with the global health crisis linked to Covid19, loneliness has become a major concern for these populations, and it seemed appropriate to provide an innovative solution to this problem.
The objective was thus to realize a fully functional website, with user accounts and posts, that would encourage its users to socialize and share experiences. To this end, the site needed to be simple and quick to use, and provide all of the basic features needed to organize small-scale gatherings revolving around food.
In terms of the business analysis, the aims of the project are to:

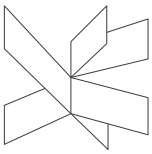
- Identify the main target group for the project
- Identify the competitive advantage of the application and explain what different features it is providing from what is offered by competitors or similar services.
- Identify the greatest competitor
- Identify the main stakeholders
- Investigate the best ways to advertise our service
- To come up with effective strategies to finance the platform



1.4 Delimitation

Before starting the project, it was important to set limits in order to structure the work. Thus, it was concluded that the platform would be limited to the function of planning gatherings. There would be no possibility of renting venues or equipment for them and it was also agreed that the platform would not be set up to sell products or meals.

The site was created with the purpose of attracting a userbase of mainly, but not exclusively, exchange students.
While the service would ideally be available worldwide, it would be aimed mostly at western countries, as both the context of loneliness and the response to the service might have proven different in other parts of the globe.
The majority of features theorized during the project description phase were implemented as planned, but a few that were mentioned had to be abandoned due to time constraints, as they were deemed of secondary importance and the development team preferred to focus on polishing the more important aspects of the platform.
Such features include the ability to filter posts by attributes other than location, the possibility for users to specify their preferences and allergies on their profile, and using geographic coordinates and real-time position instead of the name of the city in order to localize posts.
It bears mentioning, however, that these features could have been easily implemented if more time had been available, and their removal does not invalidate the site's functions (their additions would have merely made some activities more streamlined for the users).



2. Methods concerning business application

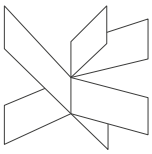
To identify the target audience, the business team has carried out a research to identify which segment are they aiming to target for the project.

Then a SWOT analysis has been conducted by the business team to identify the competitive advantage of the application and to investigate the features and characteristics of the application that makes it stand out from its competitors. The SWOT analysis will also help potential users distinguish this application from others based on its pros and compared to other applications.

Moving on, to identify the competitor, the business team has done so by a market study using internet research along with using PORTER forces of model. This helped the business team identify at least 2 of its competitors and gave them an idea about what to expect in the future.

To determine who the main stakeholders in this project are, the business team has done a stakeholder's analysis and PESTLE analysis. This helped the team identify at least 3 out of the 5 main stakeholders that they have identified along with determining which stakeholder suits them in the best possible way. Similarly, to market and advertise the application, the business team used social media and other electronic methods to increase awareness.

Lastly, to come up with effective finance strategies there were prospection about ways of financing and financial plan. The team has found most effective and efficient way to finance their activity taking into consideration all the aspects the solution needed to be developed and for a potential company based on it.



2.1 Audience analysis

The first step in the analysis of the project environment was the external analysis.

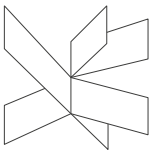
In order to properly define the project's needs and responses, it was essential to gain a thorough understanding of the external environment.

It was necessary to have a more concrete vision before proceeding with the project. The information required was therefore provided by a more precise analysis of the target group, and a deeper analysis of a typical user by building a persona, which then offered a clearer vision of the platform’s potential audience.

2.1.1 **The target group**

As stipulated in the project description delineations, the target group would only be students from Western countries in the first place. In addition, it was decided that during the launch phase of the website, the platform would then be built only for Europeans, in order to limit itself to a smaller audience, with the aim of testing the viability of the solution and thus assessing the future needs for a second phase of launch in Western countries outside Europe and then why not during a third phase aimed at making the solution accessible globally.

At first, and in order to get a first draft of what the target group might look like, it was important to determine the total number of students in the world and then in Europe.



This research has produced the following results:

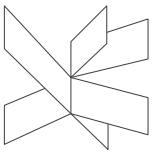
- Number of European students who have benefited from mobility with the Erasmus program in 2017: 800,000.
- The countries in Europe with the most foreign students and the number of foreign students in 2018:

Countries	Number of foreign students
France	239 000
Germany	228 756
Italy	90 419
Netherlands	86 189
Austria	67 691
Spain	65 000
TOTAL	**777 500**

- The proportion of students with access to the internet in the European Union: 95%

Thus, in cross-referenced this data, it seemed logical to target an audience of approximately 792,000 people considering that international students represent a group of around 800,000 people and that out of those 800,000 people, although in Europe the rate of access to the internet of students is only 95%, it has been assumed here that 99% of mobility students have access to the internet because most universities require access to a computer for all students and provide a free internet connection to them.

Thus, in its first phase of large-scale launch, the platform would be presented in the countries of Europe hosting the most foreign students as shown on the table above and would have the potential target of 792,000 international students.



2.1.2 The project's persona

Creating a persona was a key stake for the marketing process. After defining the target group, it was obvious that the platform's main target was students and more exactly European students for the first phase of its launching.
It was then important the elaborate a typical profile of the people that had to be reached to get a better understanding of their needs and wishes towards the project.

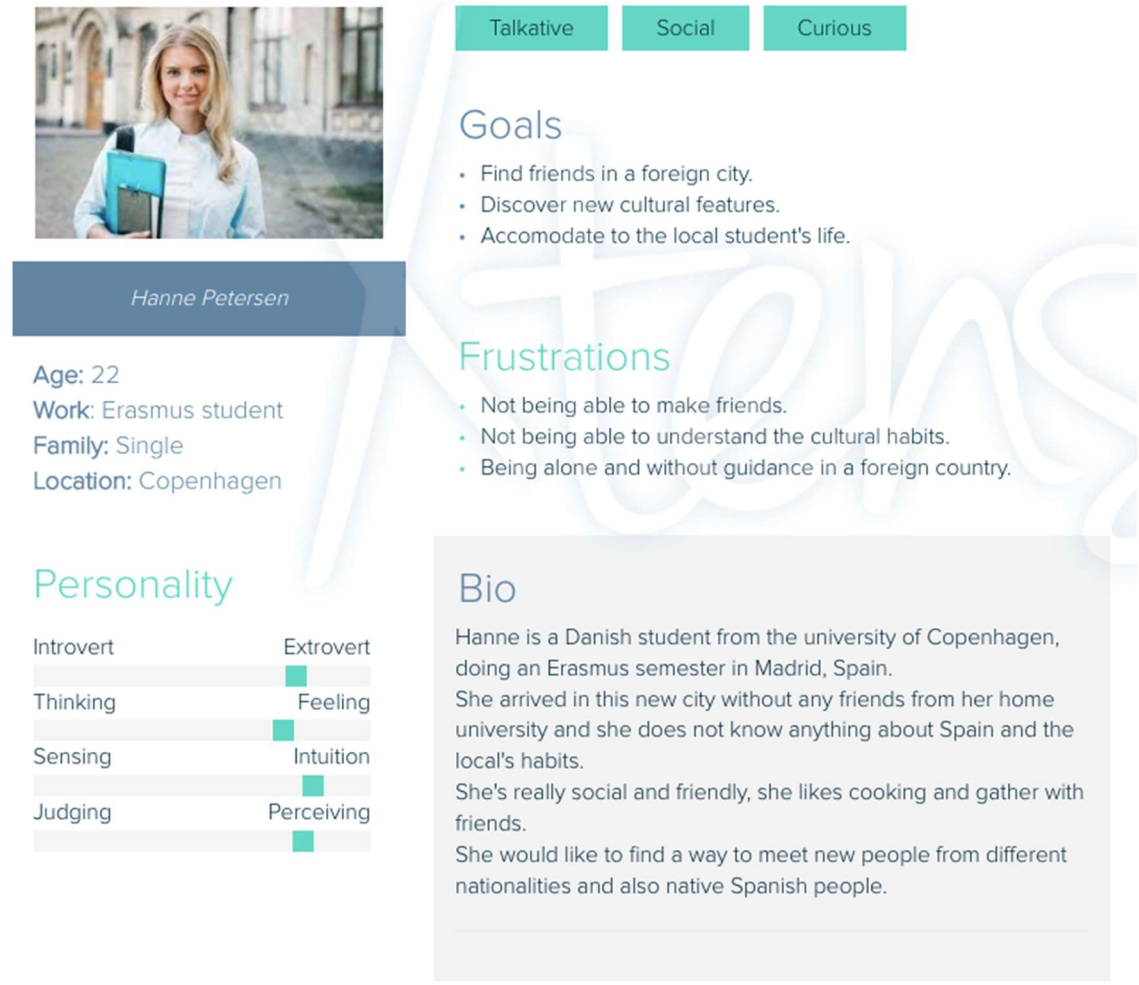
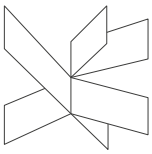


Figure 1 : Eat&Meet's persona



2.2 Strategic analysis

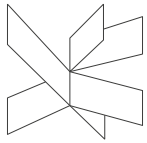
Before launching a project, it is very important to determine a launch strategy and for this, a strategic analysis of the project environment and the project in its entirety is necessary.
To this end, various strategic analysis tools have been employed to establish the strategic framework of the platform.

2.2.1 The Business model Canvas

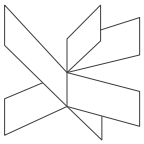
To keep working on the idea of Eat&Meet ‘s concept a Business Model Canvas (BMC) has been created to sketch how the whole concept could look like. Therefore, each part of the BMC is explained a little bit more in detail in the following paragraphs.
Before the Business Model Canvas the group checked first the feasibility of the platform in terms, if it is worth it to create

	Designed for:	*Designed by:*	*Date:*	*Version:*
Business Model Canvas	Eat&Meet	FJ	20.05.2021	1.0

Key Partners	**Key Activities**	**Value Propositions**	**Customer Relationships**	**Customer Segments**
Different universities Student accommodations renters Student social organisms	Scheduling gatherings Providing a safe and easy way to link the customers together **Key Resources** Human ➔ Staff/Customers Intellectual ➔ Experience/Qualification Financial ➔ Rent/Food/Licenses Physical ➔ Rooms/Offices/ Servers Time	Customer-driven ➔ Helping the customer to make new friends and human connections For the Customers ➔ New friendships ➔ New cultural knowledges ➔ New customers ➔ Networks ➔ Partnerships	Friendships Advisors to new customers **Channels** Word of mouth Email Pinterest Facebook Instagram Website	New Erasmus Students each year Previous Erasmus students once back in their home country



Cost Structure	**Revenue Streams**
Rent for the offices Human Resources Maintenance of the servers Different forms of advertisement	Through advertising on the website



Key partners

During the building process of the solution's BMC, it seemed necessary to define which partners would get in touch with Eat&Meet platform.
The first option was to develop a partnership with universities enrolled in the Erasmus+ exchange program, imagining that students wanting to meet new people from different culture could log into the platform in order to develop their network quickly and meet other exchange or local students.
The platform would allow them to develop stronger and meaningful relationships in order to optimize their integration into their new environment. In addition, the vision of new users on the platform would definitely be a real additional value for all members.
The second option was to extend those partnership to student accommodations renters so they can promote the platform directly where the students stay at.
The third potential ally of the platform would be student organisms that could also share the platform's concept.
Indeed, the more students from different horizons and origins the platform brings together, the more effective it can be and will allow its members to acquire new cultural knowledge and relationships.

Key activities

As with key partners, it was necessary to define what would be the key activities. By sticking to the basic concept, the key activity of the solution would be the organization of food related gatherings. The aim is to create a real dialogue and exchanges, these being supposed to generate the benefits expected by the platform's users.
The benefits would therefore in theory be generated by the exchanges made during these gatherings. To further stimulate the concept of the platform, gatherings will have to focus on culturally related menus that also fit a student's budget.

Regarding the current sanitary situation in Europe and in the world, those gatherings will have to take into consideration all the sanitary risks and require clues about the health status of each participant to avoid all the platform's members from taking risks.

Value proposition

The value proposition of this idea is showed on the figure 2 and represents a loop that repeats itself, in fact when a student, joins the platform it will create a new network with the people already present on it. They will all be able to acquire new connections with this network and so become friends. This partnership will allow them to get even more friends through socialization with their new friends' circle. At the end of this loop, if all users are satisfied, they will talk to new people and with the help of word-of-mouth, new people will join the platform and follow the same steps as their predecessors.

In this way the user has the possibility to acquire many things such as: new relationships, cultural knowledges, new recipes ideas and tips...
Eat&Meet will have the possibility to have more and more people in its audience's network and will therefore have more chance to see new people arrive.

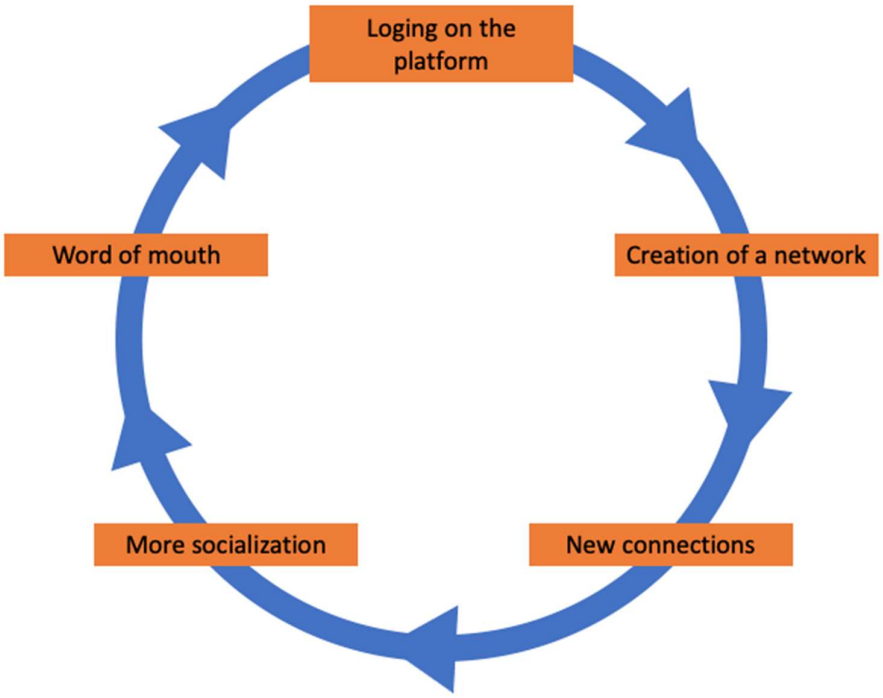


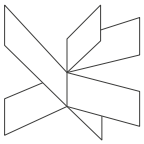
Figure 2 : Eat&Meet's value proposition

Key resources

In order to create the value proposition, the main key resources that the company needs are the platform users themselves, which have cultural and culinary knowledges to share with the new people who join Eat&Meet.

Financial resources are necessary to run the digital platform so the different participants can create posts then broaden their networks. The organisation of meals or meetings would be good examples.

Finally, the physical resources include office space or rentals to store the servers an eventual office which have been mentioned also earlier.

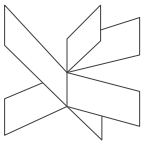


Revenue streams

Cost structure refers to the proportion of fixed and variable costs within an organization. For the Eat&Meet idea, the main cost to implement the idea are split into three different sub segments. First, there are physical resources, this would be the rent and cost for the offices and servers to take place, which would also include licenses for legal matters and services. Secondly, there is marketing which is by far the most important cost as it takes up about half of the total cost as well as this would determine how many people are reached in order to gain a larger audience for Eat&Meet. The marketing costs would be used mainly towards social media as it is by far the best way to reach a larger audience. Last part of the cost structure is human resources, that will include the research and development costs. These will mainly depend on the time spent by the developers on the construction of a reliable website. Time that has to be used on marketing is included there.

Channels

In order to reach its customer segments to deliver its value proposition, Eat&Meet needs to communicate with social networks like Pinterest, Facebook, Twitter and most of all Instagram because it is the one of the most used platforms by students. Eat&Meet's website is also a good channel to reach its customers. Also, the use of e-mails and the creation of a newsletter could be helpful to build customer loyalty and inform them about Eat&Meet's news. Finally, the last channel that seems to be the also necessary for this projects that wants to develop locally is word of mouth.

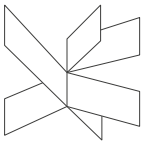


Customer segment

For the customer segments you have to choose for whom you are creating value and who are the most important customers. To elaborate on this interrogation there are three categories of customers considered. The first are obviously students enrolled in the Erasmus+ program that will be the base of the potential audience. These students will be the first ones in need of new connections and the most willing to open themselves to new cultures and people. The second target for this platform are students that already experienced an Erasmus exchange program and that want to keep learning more about other cultures and meet new foreign students from all around the world. It is quite the same objective as for the current Erasmus students, they will be in need of new connections ad will be wanting to extend their social network. The last segment are local students. It can be very interesting for some local students to have the opportunity to participate to gatherings with exchange students Horsens. It could motivate some students to either open themselves more deeply to new cultures and travel, and they will probably have some good tips and pieces of advice for their new foreign friends.

Customer relationship

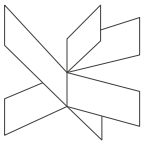
For the customer relationship there will be one targeted type of relationship. As previously said, the main purpose of the platform is to allow students to create relationships and connect to each other through the organization of gatherings related to food and cooking. Then, the main type of relationship would be friendship between the users.
However, customers are also related to each other as advisors when they use word of mouth to share the platform with their personal group of friends.



2.2.2 PESTEL analysis

To find the opportunities and threats in the external environment of a business, the best technique that can be used is pestle analysis. It is important to analyze and consider PESTEL analysis because it displays the complete picture of the factors of the external environment which affects the business in multiple ways and the owner of the business can take the decision according to the situation (Yusop, 2018). For example, running a business which is related to a digital platform, it is crucial to know the internal as well as external environmental factors. As being the owner of the business, it is also important to consider that internal factors such as employees, salary, financial, assets are controllable whereas the external factors which includes the tax reforms, consumer taste, demand and income, rapid change in the technology, security and safety guidelines etc. are uncontrollable which needs to be taken care of in order to maintain the growth and success of the company. Take a closer look at the PESTEL analysis for business Eat & Meet so that the decision can be taken according to the external factors for the business. Pestel analysis is basically an abbreviation which is as under:

1- Political Factor
2- Economic Factor
3- Social Factor
4- Technological Factor
5- Environmental Factor
6- Legal Factor.



Political Factor:

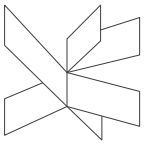
Eat & Meet can greatly be affected by the political factor whether the business is being done anywhere in the world. Tax reforms, health and safety guidelines are one of the examples from political factors which needs to be considered (Yusop, 2018). Once these regulations have been determined it will greatly influence the business however, effective decisions can be taken in order to minimize the impact of these regulations. It is the responsibility of Eat & Meet to ensure that the service they provide is updated with the latest technology and trend.

Economic Factor:

This factor plays a great role for the development and the growth of the business, and it directly impacts the business (Yusop, 2018). This application can bring economic boost by creating jobs opportunities in the market. Later on, it will also focus on the advertisements which will provides a platform to other businesses to reach out the audience of their choice by targeting them accordingly.

Social Factor:

There are multiple social factors which can negatively or positively affect the business (Yusop, 2018). Social factor represents the demographics trends such as population, growth, income distribution, professional attitudes and emphasis on safety and health awareness, lifestyle and cultural barriers (Yusop, 2018). However, today, people are more health conscious and always prefer food which is according to their diet, and which is healthier, they prefer organic and fresh food rather than going for junk food this is the main social factor which can affect the business. Eat & Meet application will cater both types of users who prefer to talk about healthy food, wanted to cook and eat healthy food and those users who prefer to talk about junk food and wanted to cook so that the user base can be increased. Another social factor that can affect the business is the busy



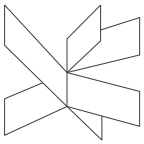
lifestyle of the people, especially students that is being targeted, because they are already stuck in their studies, projects and work shifts. The main purpose of this online business idea is to influence socializing; therefore these factors play a great role for the development of Eat & Meet business idea.

Technological Factor:

It is the most powerful factor of pestel analysis because innovation, technological advancement and rapid changes in technology can greatly impact the business (Yusop, 2018). It is important to keep the online business up to date and adopt the changes occurring in the technology by upgrading application, website and service as well. There are different management software programs which can be used to maintain the workflow of Eat & Meet which can make work easier and can lead the business towards the profitability.
However, technological factor is the factor that will greatly impact the business because by going along with the rapid changes in the tech industry can lead the business towards success. As it is one of the factors that influence the decision-making process, by understanding what is happening in the technological sector, you can avoid spending a lot of money in developing technology that will quickly become obsolete due to disruptive technological changes elsewhere.

Environmental Factor:

These are the factors which include ecological and environmental aspects for example the climate, weather, factors that affect climate change etc. (Yusop, 2018). However, because of the growing awareness of climate change and its major impacts is also affecting organizations operations and their offerings (Yusop, 2018). It is important to consider internal as well as external environment of the business, by considering this factor user will be influenced towards the high usage of plants whether its indoor or



outdoor and will place indoor plants and maintain the cleanliness in the workplace.

Legal Factor:

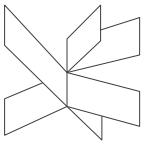
These factors highlight the impact of law and regulations on the businesses, laws such as antitrust law, employment law, copyright law, patent law, health and safety law etc. It is very important that companies should be aware of these laws and should know what is legal and what is not so that they can operate successfully (Yusop, 2018). However, Eat & Meet will be greatly influenced by legal and local bodies. It is the responsibility of Eat & Meet to make sure that the security of data remains on top priority and will not breach any policy related to data security. However, in any case if the company are unable to comply the data protection law then they must pay heavy penalties and fine as per the legal bodies.

2.2.3 Swot analysis

The first step of the marketing analysis of the platform has therefore been to do a SWOT analysis to find the core strengths of the project, its development perspectives but also to find the potential threats and weaknesses of the platform so the team would then be able to work out solutions to these.

Strength:

- New and innovative concept to link people that is not functioning like other social networks.
- Not only a chatting platform. Eat&Meet allows its users to plan, schedule and chat with other people, aiming to organize dinner and gatherings around food.
- The platform is easy to use and provides all the information users need to plan their gatherings.



Weaknesses:

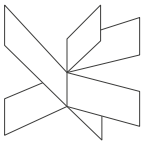
- The project only offers a website to the users who are mostly young people. Users might feel more comfortable to use an app.
- The project is a brand-new idea so there is no previous audience it can rely on.
- The platform's only purpose is for people to meet and schedule, not to be a social media such as Instagram where they can post photos

Opportunities:

- Extend the platform to other regions of the world.
- The massive spread of the vaccine against Covid19 through European countries and the reopening of public places.
- Users might be able to use the platform for more private or family gathering, as a tool to plan and organize.

Threats:

- Other social media like Facebook could try to imitate the platform ad its concept since they already have a big audience and the funds to do it easily.
- The platform could be the victim of its own success and users could start using simple text messages to communicate if they become friends.



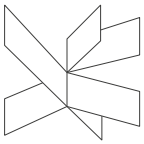
2.2.4 Porter's forces

To understand the dynamics of any industry, Porter's Five Forces is an important tool that can be used. The application and impact of these five forces on Eat & Meet is discussed below:

1-Competitve Rivalry
2-Bargaining Power of Supplier
3-Bargaining Power of Buyers
4-Threats of Substitution
5-Threats of New Entrants

Competitive Rivalry

The competitive rivalry would be more intense in the digital industry if there is a higher number of competitors available in the industry. These industry players strive to maintain a larger market share than their competitors, while maintaining the flow of profit and supporting the growth of their business (Bruijl, 2018). Therefore, there is a serious threat of rivals in the online business, making it difficult for small businesses to maintain their high profitability. As the idea of Eat & Meet is related with the digital industry and nowadays, the competitor of this industry is increasing rapidly because of the growing digital era and many small-scale businesses based on different applications and software programs. However, there would be minimum customer loyalty, and they will switch from one app to another according to their preferences.

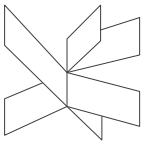


Bargaining Power of Supplier:

This factor refers to the cost of input driven by the supplier. The efficiency of work is based on the availability of material and supplies which is supplied by the company's suppliers (Bruijl, 2018). In the five factors of porter's the bargaining power of a supplier shows the impact of suppliers on the firm and on the industry. When the suppliers have high bargaining power, the competition becomes more intense because of the resources. The high cost of supply for any business is because of their labor supply. Eat & Meet will require skilled computer technicians, in the online business world, there's a surprisingly excessive call for laptop programmers and developers which is why their wages is comparatively higher than other field of workers. Bargaining power of supplier also includes the share of business that the company have for them.

Bargaining Power of Buyers:

It is one of the most important factors that needs to be considered specially in the online business world, because buyers are the key influencer of making the pricing decisions for the company (Bruijl, 2018). Online businesses usually stay away from the industries where the buyers have the power of pricing (Bruijl, 2018). In such industries the marketplace is quite imbalance because businesses must work hard and perform their best to facilitate their customers. However, initially Eat & Meet will not require any charges for subscription but gradually will also enter the online advertisement industry and will charge a specific amount for the displaying ads in the application.



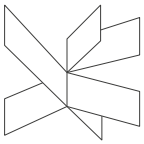
Threats of substitute Products

It has become easier for customers to switch from one application to another because there are multiple entities exist in the online business industry. Also, there is a low switching cost which also makes it convenient for customer to shift their loyalty from one application to another application (Bruijl, 2018). This ease of moving from one app to another and in case if the user does not experience according to their expectation, it makes a higher chance of threat of substitute products.

This threat is something that digital business ought to be cautious of. Eat & Meet is a great platform to socialize and to talk about food, but it is important to figure out that what will anchor people to stay with Eat & Meet for that a proper mapping is required so that a set of features can be included in the application which is missing from the services that competitors are providing.

Threats of New Entrants

To enter into an online industry a moderate level of investment is required which makes it easier to enter into this industry. Anyone can easily register as a host and accept payment. This has created a "Red Sea" situation with many competitors (Bruijl, 2018). The economy of scale is also one of the factors that makes it easier for the new entrants to enter into a business (Bruijl, 2018). The new business that are entering into the online business for the first time also must make sure that they can establish the cost advantage for their customers. However, these new entrants can impact the market share of Eat & Meet and the financial performance because there is low switching cost and user can easily move from one app to another app based on their preferences and taste. Also,



high brand development cost will be invested which will also impact these new entrants and because of them the competition level in the industry will also increase.

2.3 Marketing and communication analysis

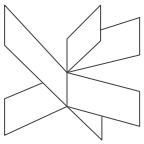
2.3.1 The marketing mix

Product:

Eat&Meet is a platform so there is no “product” but only a service in its case. Eat&Meet is therefore a social platform that offers to its users the ability to gather around meals. To do so, the platform offers different services fitting the different needs of its users.
If the user desires to post an add about a gathering he/she wants to organize, he/she can easily post it on Eat&Meet, selecting all the different criteria of the gathering he/she wants to organize by choosing the menu, the number of people welcomed to the gathering, the place, the time … for those users, the platform also lets them the option to divide the cost of their meal by letting the other users the choice of which ingredient they want to buy for the meal preparation.
If the user just desires to join a gathering, the platform allows him/her to look through all the gatherings offered in his/her geographical area. Therefore, the user can look for a gathering that suit their wishes toward their diet, their budget, and their time schedule.

Price:

The service offered by the platform Eat&Meet is basically free for all users in the way that they won’t be charged of any subscription fee if they want to use the platform and plan gatherings or simply join some.
The only cost that will be allocated to the user will be for the ingredients needed by the host of the gathering they chose to join.



The cost supported by the user will therefore depend on which menu has been previously elaborated by the host. This cost should then remain fairly low.

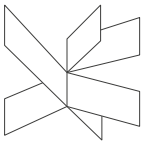
Place:

Each gathering organized by a user will take place at the location the host of the gathering chose. Eat&Meet is an internet platform and is thus not a physical place where its users can meet, like a restaurant would be.
The location of the gathering can be set anywhere the different guests and host can cook and eat. This place will be chosen by the host who must make sure that it actually fits the needs in terms of kitchen tools and space required to accommodate all the guest and welcome them in an adequate way.

Promotion:

Eat&Meet will massively use social medias to advertise its service during its early launching. As the platform is a brand-new actor on its market, it cannot rely on big funds dedicated to the advertisement so social medias appear to be the cheapest and most efficient alternative that can be used. The first would then be to create accounts on the principal social medias such as Instagram, Facebook, Twitter, Pinterest… Those accounts would therefore be the first step of the advertisement campaign and be fed with different types of content like photos taken and sent by the users, temporary stories, recipes ideas, users' feedback on their experience, cooking classes to guide the user but also news about the platform's development.

The platform could also use some printed advertisement methods such as posters that could be given to universities hosting Erasmus students so they can acknowledge the platform directly at their arrival in their country of studies.



The platform is aimed to be a friendly and safe space for every user so the promotion should keep this state of mind as its main philosophy toward advertisement on its social medias knowing that Eat&Meet's main target are young international students.

People:

Eat&Meet's whole staff should always keep in my mind the core values of the platform and try give out the best for its customers. Thus, the staff would have to remain open minded as the platform requires its users, keeping in mind that the first purpose of Eat&Meet is to meet people from other cultural horizons and share moments with through the influence of culinary traditions. This value should be reflected in the attitude of the staff and assistance so users of the platform can get the suitable help and pieces of advice they in adequation with their needs or potential issues.

Process:

The user has first to create an account before being able to log on the platform. After this first step the user is now able to log onto the platform and fill up all its personal information about a special diet, its city or favorite area where its desires to meet new people, eventual allergies … After its profile complete, the user can create an ad for a new gathering it wants to host by choosing the menu, setting up a list of ingredients, a location, and the time for the gathering. The user can also, if it does not want to immediately be the host of a gathering, scroll through the different ads previously posted by other users on the platform and find the one that matches the best its expectations toward a certain menu, location, or date.

2.3.2 Advertisement

As previously said, the best way to advertise the platform will be social medias such as Pinterest, Facebook, Twitter and of course Instagram.

In January 2021, Instagram counted roughly one billion active users worldwide making it the most popular social network.
A third of the platform's users are in the 18-24 age range.

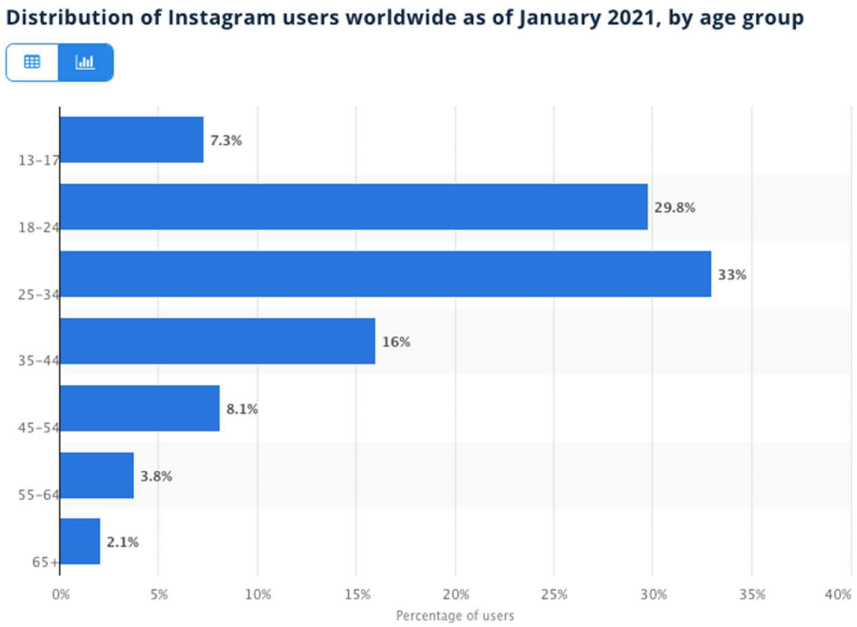
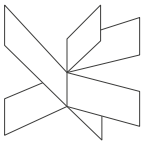


Figure 3 : Distribution of Instagram users worldwide

The platform is well known for its use of hashtags that are aimed to boost the reach of each post and allow all users to search for their favorite hobbies through them, using location to find people or accounts in their area that potentially share the same interests.



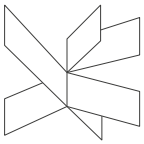
Thanks to hashtag #Eatandmeet that is already used by more than 5 million users on their post, the platform could easily use Instagram to reach locally the targeted audience, by posting photos and temporary stories using both the hashtag and the location.
For example, the other very popular hashtag #instafood already counts more than 199 million of posts using it and shows therefore the audience that a combined use could bring.
Moreover, using cities hashtags in addition to the #eatandmeet, could also allow the platform to get the attention of its potential users in a more efficient and easy way.

The usage of stories is also a great way to advertise the platform. On Instagram, one third of the stories viewed are from businesses accounts. Stories would allow Eat&Meet to keep the attention of its users daily and push them to regularly schedule new gatherings.

The content of posts and stories should be mostly based on recipes and food to attract the customer's attention and then lead it the more cultural content and on the website.
The atmosphere on each post will have to be friendly and always keep in mind the main purpose of Eat&Meet which is to make friends that come from different cultures thanks to food.

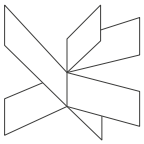
The publication time of each post or story should also be taken into consideration and be focused on the lunch and dinner time when users are hungry and then more likely to be sensitive to food related content.
E-mail newsletters should also use the time range to be sent.

Posts on the other social platforms such as Facebook, Pinterest or Twitter would then follow this trend and try to use hashtags and location to reach the audience.
The main focus of Eat&Meet's communication should however be on Instagram which appears to be the best platform to advertise this project regarding statistics.



2.4 Financial plan

As Eat & Meet is the new entrant in the digital industry, it has been assumed that at the initial level the business would be little slow because it will take time to spread awareness of this new application concept where people can meet with unknown individuals and eat together and know each other while making their own food or while having food together but as the time passes it will initially gain more user base in the market because this would be a new concept and initially people will at least give it a try to see how it works, to make new friends and learn about new cultures and ethics. Eat & Meet would be based on partnership principles and all the partners will equally invest the capital in the business and will also take loan from other sources on different terms and conditions in case if more capital are required.



3. Methods concerning ICT implementation

The website was realized as a single-page web application, with a front-end coded using HTML, CSS and JavaScript supported by the Vue.js[1] framework, which interfaces with the Firebase Firestore service provided by Google[2].

Certain aspects of the site, such as the appearance or the contents of the database, were decided before the implementation through the use of diagrams and mockups, which were however modified as the site grew and changed.

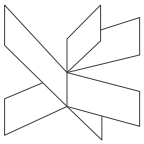
The site was realized mostly with the Chrome and Firefox browsers in mind, as they were those employed by the team during its coding.

The code for the website is provided through a link to the GitHub repository, which can be found in Appendix 2.

3.1 Analysis

The site was designed with a single kind of user in mind. On the platform, a registered user can create posts for food-centered meetings, for which he can define several characteristics such as the location (defined in terms of the city where the meeting will be held), the number of participants, the date, what will be cooked and the recipe that will be followed. The user can also make a list of ingredients for the post, so that participants may take charge of bringing them to the event.
Users can also join an existing meeting by selecting the corresponding post, which they are able to access through a dashboard. In this dashboard, posts can be filtered in a number of ways, such as by visualizing those created by the user or those that will be

[1] https://vuejs.org/
[2] https://firebase.google.com/



held at a specific location, and they are sorted by the date in which they are going to take place.

The author of a post can always remove users from it and delete the post all together, and once the post reaches full capacity or its date has passed no more participants can be accepted.

Participants to a post are able to enter the post's board, a section available strictly to members where they can engage with one another to the site's chat feature, as well as taking charge of specific ingredients they may wish to bring.

From this same page, after the date of the post has gone by, users are able to rate their experience with each of the other participants during the course of that single meeting.

Users are also able to edit the information on their profiles and their profile pictures, and can visit other user's profiles by clicking on their names during navigation.

On a user's page, other users can see their public information, such as age and city of residence, and they can see a history of the posts to which the user has participated.

A user who does not have an account can register from the login page (if they are 18 years old or older) by inserting their public information, or they can recover their password through their email if they have one already but have forgotten its credentials.

3.1.1 Requirements

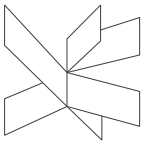
The requirements for the project are as follows, as delineated in the project description and following the MoSCoW prioritization:

Must have:

- Providing users with a way to meet at least one new group of people within a week's timeframe, while giving them a valid reason for interaction revolving around food.
- Allowing users to encounter at least one culture different than their own.
- Allowing users to search meetings by location.
- Allowing users to register and log into their account on the site.

Should have:

- Allowing users to see another user's meeting history.
- Allowing users to signal/flag an user, or rate them anonymously.



- Allowing users to set up such a meeting in less than 10 minutes and opening less than 3 new pages after logging in.
- Allowing users to change details for their account.
- Allowing users to communicate with each other through the website.
- Allowing users to recover their password if they have forgotten it.

Could have:

- Allowing users to set up a profile where they can store or delete data (verify id, allergies, etc.).
- Allowing users to search for posts by multiple parameters.
- Allowing users to change their login credentials (e-mail and password).
- Allowing users to take charge of ingredients in a manner integrated with the platform.
- Allowing users to block others.
- Allowing users to set a picture for their posts.
- Automatically search for meetings in the user's general vicinity.
- Allowing users to modify their posts after creating them.
- Allowing users to customize their profile pictures

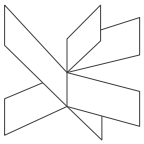
Will not have:

- Allowing users to follow other accounts.
- Give notifications to users.
- Allow users to log in through other accounts, such as Google or Facebook.

3.1.2 Functional Requirements

Main use cases for the project, as defined in the project description:

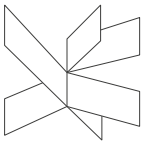
ID:	**1**
Title:	Create an account
Description:	The user signs up to the site by creating an account, possibly adding preferences in regards to allergy, religion, etc.
Primary Actor:	User
Preconditions:	The user does not have an account registered with their email
Postconditions:	The user is registered with an account
Main Success Scenario:	• The user clicks on the 'sign up' button • The user fills in the registration form with their data (first name, last name, e-mail, phone number, birthday, city of residence, picture).



	• The user proceeds to choose a password • The user creates the account.
Extensions:	• The user may specify restrictions on allergies, religion and other preferences, or links to their social media. • If the user's email is already linked to an account on the site, they will be asked to enter a different one. • If the user's age is below a certain threshold, they may be denied registration.
Frequency of use:	Frequent (every time a new user registers)
Priority:	Very high

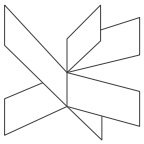
ID:	**2**
Title:	Log in
Description:	The user logs into their account
Primary Actor:	User
Preconditions:	The user has registered with an account
Postconditions:	The user is logged into their account
Main Success Scenario:	• The user clicks on the 'log in' button • The user fills in the text boxes asking for their username and password • The user confirms.
Extensions:	• The user may click 'Forgot my password' if they do not remember their credentials. They will then have to enter their e mail address, and a message with instructions for resetting the password will be sent to them. • If the user enters a wrong email or password, they will be alerted and asked to enter different ones.
Frequency of Use:	Very frequent (every time a registered user need to use the site)
Priority:	Very High

ID:	**3**
Title:	Create a cooking session
Description:	The user creates a cooking session with a post specifying what he plans on cooking, how many people they want, what ingredients are needed.
Primary Actor:	User
Preconditions:	User has an account and is signed in (user has specified their general location).
Postconditions:	User's post has been created and saved in the database.



Main Success Scenario:	• The user clicks on 'create a new post'. • The user fills in the fields on the page with the necessary details of the meeting such as number of participants, the recipe, the ingredients and the location • The user confirms
Extensions:	• The user may choose additional details, such as the presence of animals at the location, whether smoking will be allowed, etc • The user may choose if they want the participants to bring the ingredients, in which case they can be split among the attendees • The user may choose if they want to just call people over for eating or for cooking as well
Frequency of Use:	Frequent (every time a user creates a new meeting occasion)
Priority:	Very High

ID:	**4**
Title:	Join a cooking session
Description:	The user joins an existing cooking session
Primary Actor:	User
Preconditions:	User has an account and is signed in (user has specified their general location). Another user has created a cooking session.
Postconditions:	User has joined the cooking session.
Main Success Scenario:	• The user enters a page for searching meetings in the area • The user chooses one not at full capacity • The user looks at the details, the creator and the participants (each user will have a score based on previous meetings) • The user confirms joining the meeting
Extensions:	• The user may decide to narrow the search for sessions by specifying one or more preferences.
Frequency of Use:	Very Frequent (every time a user joins a meeting)
Priority:	Very High



ID:	**5**
Title:	Rate a cooking session
Description:	The user rates a cooking session they have attended and its participants
Primary Actor:	User
Preconditions:	User has an account and is signed in (user has specified their general location). User has joined a meeting and (6) hours have passed since the meeting time.
Postconditions:	User has rated the meeting and its participants.
Main Success Scenario:	• User clicks on the meeting they have attended • User clicks on 'rate meeting' • User rates the experience of the meeting in general • User rates the participants • User confirms
Extensions:	• The user may decide to skip the rating part
Frequency of Use:	Moderate(every time a user decides to rate a meeting)
Priority:	Medium

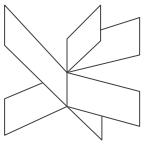
3.1.3 Non-Functional Requirements

The application's non-functional requirements include:

- Being able to support at least 100 users.
- Ensuring that only registered users can access the site.
- Ensuring that only participants to a post can access its private board.
- Ensuring only a post's creator can delete it.
- Requesting confirmation to the meeting's creator before allowing users to join it.

3.2 Design

3.2.1 Application

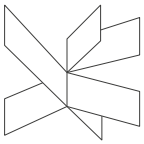


The project is structured in two main parts, the front-end, and the back end, as is common when developing a website. The front-end is realized with the Vue.js framework; we decided to opt for Google's Firebase (free plan) for the back end. The combination of these two modern technologies enables the site to be responsive and updated in real time, providing a great experience for the user. Firebase has its own library in numerous programming language, but for this website the two technologies work together using the JavaScript version of the library. Installation and updates are made using Node.js.

Vue.js is a modern web framework that is used to create Single-page Application, which are becoming the most common way of designing a website. With this technology the page is dynamically rendered and only updates are done only on the necessary elements. All of this will lead the user to have a better experience on the website.

Using a framework, such as Vue.js, makes the code easier to implement and to maintain because it divides the application into views and components. In Vue.js views are similar to the more common html pages and can include components, and they can also contain scripts and stylings inside them which are local to each view. Components are similar to views in that they can contain their own HTML, CSS and JavaScript, but they are designed to be included within views or other components in order to make certain sections of the site reusable and compartmentalized. Each view and component are defined in their own file, separating the code in such a way allows the developers to efficiently work on different functionality of the project without version issues. It also makes the code easier to maintain, and since Vue.js has extensive and detailed documentation, it is easy for programmers to understand and implement new functionalities.

For the application's design it was decided to define several views which would constitute the main pages of our website, with components within them. Some of the components were reused on multiple views in order to maximize efficiency and to be able to make the site's appearance and functionalities consistent. Components were especially favored in cases where lists of items were displayed, as they are particularly suited to showing multiple instances of a similar element.



For the back end, Google Firebase was chosen, as it provides easily accessible file storage, authentication, and a NoSQL database - Firestore. It is also delivered with a free plan up to a certain number of queries, which suits this project, and has abundant documentation. Firestore stores data in a JSON file tree using collections, which are similar to tables in SQL. Each collection consists of documents identified by an id, which are akin to a table's row in SQL languages. Each document then contains attributes, which can be of many types (such as dates, numbers, strings and more); one difference with SQL tables, however, is that these attributes can also take the form of arrays of objects, each with their own attributes. Firestore's JavaScript library allows the web application to "subscribe" to changes in a collection, which allows users to see changes to the database almost immediately after they happen. Vue.js is particularly suitable to work with Firestore's live updates as one of its features are computed properties, a type of function that is designed to be used to generate some type of data (such as a variable or array) by computing it from other, already available data, in such a way that as soon as the computed property's sources change their value, the computed property's value changes as well.

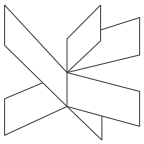
To achieve a good synchronization of the data between different views and components, as well as keeping a single source of information to avoid redundancies and inconsistencies, it was decided to use a Vue.js plugin by the name of Vuex.

Vuex is a form of storage for data and methods that makes them accessible across a Vue.js application, which allows to easily access important data and frequently used functions from every view or component of the application that may need them.

In order to make the communication between Vuex and Firestore more streamlined and easier to read, a library of bindings by the name of Vuexfire[3] was employed.

To handle switching between different views, the Router plugin for Vue.js was employed. This plugin is designed to allow to make the single-page web application switch between different views in a manner similar to how a more traditional website switches between

[3] https://vuefire.vuejs.org/vuexfire/



different pages, making it possible to associate each view with a specific URL, and to pass data between views when switching.

Finally, filters were employed to ensure a consistent formatting and displaying of information throughout the site. Filters are a type of Vue.js function designed to take data in a certain form and elaborate it so that it can be displayed in a specific manner, such as by removing special characters from dates or making names start with a capital letter. Some of these filters were defined in the 'main.js' file, which handles the creation of the Vue.js instance using the contents of 'App.vue': in this way, they were made available to globally to the entire application, ensuring that the same type of formatting would be applied in every similar section of the site.

3.2.2 Graphic Interface

The mockups for the site's appearance were designed using the Figma[4] design platform.

The first interface that was drawn was centered on the data a user could have access to by visiting a page, and by extension which fields the database should contain. On one of the early mockups of the website's Post page (Figure 5), the user can see on a single window what will be cooked, when, with whom, how expensive it is and if the host has set preferences such as not smoking or not welcoming pets. This was as much a step towards defining the visual identity of the website as towards designing the database.

[4] https://www.figma.com/

Figure 4: Early Post mockup

In later mockups, the goal shifted to defining where each HTML and Vue components should fit. The appearance is a lot lighter, each element acting as a placeholder and helping to visualize not only a desirable layout, but an achievable layout with the tools in hand.

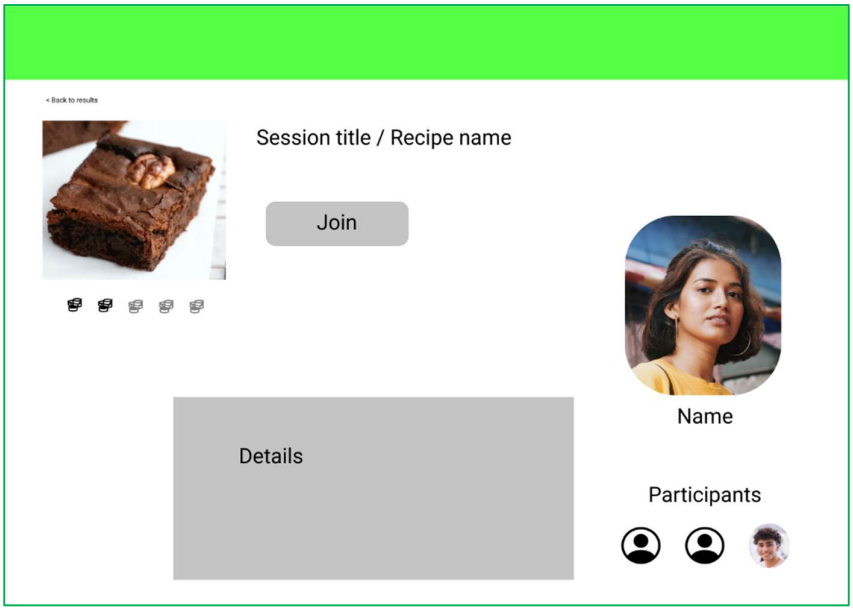


Figure 5: Post page mockup made with Figma

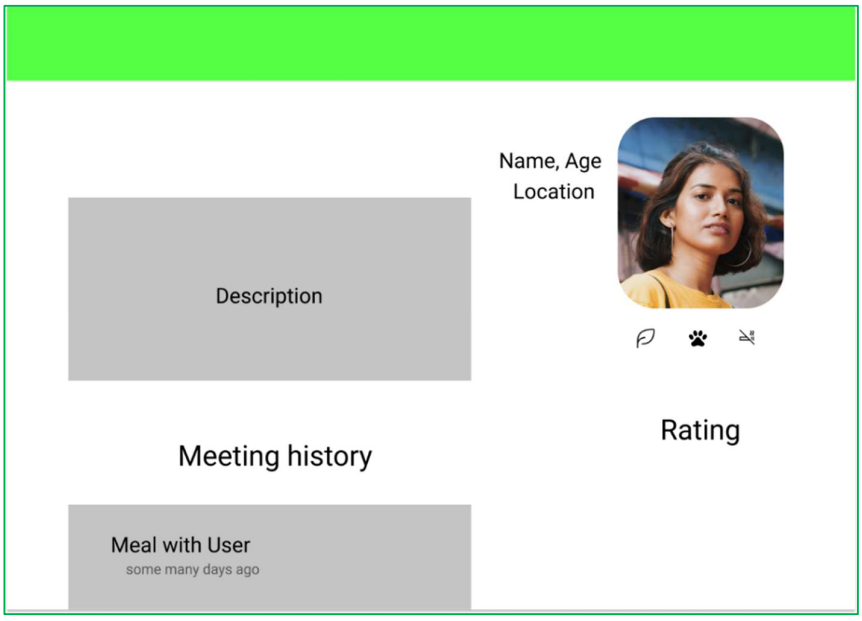


Figure 6: Profile page mockup made with Figma

Two different menu layouts were imagined, one with a sliding panel on the right side (Figure 8), and a second one with all links accessible from the header (Figure 9).

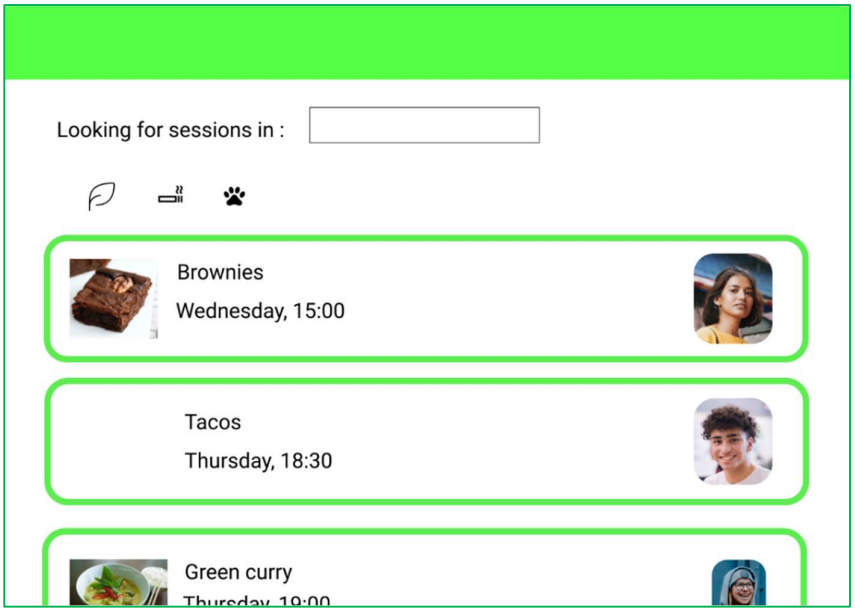


Figure 8: Search page mockup made with Figma

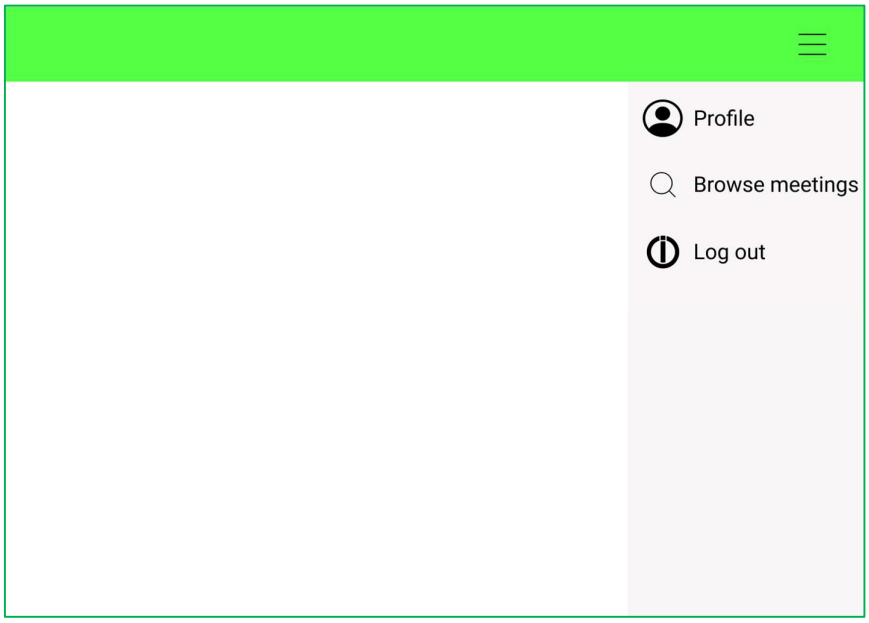


Figure 7: Menu layout 1 made with Figma, a sliding panel menu

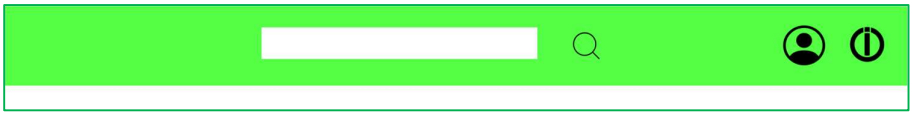


Figure 9: Menu Layout 2 made with Figma, a header menu

3.3 Implementation

As the website is a single-page web application, all “pages” the user can visit are rendered through the main ‘App.vue’ page, which can then switch between different views through the use of the Router plugin.

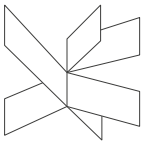
These views, in turn, are used to contain several components (who in turn can include other components), which contribute to building what is shown to the user as a whole.

See Figure 5 later for a diagram of all the components and views.

The UI is made up of a top banner, implemented through the use of the “Header” component, which is displayed only to registered users and allows them to navigate through the website’s main views (the dashboard, the user’s profile and the settings page) as well as providing them with a button that they may use to log out of their account.

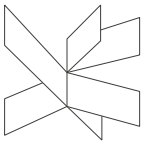
The main body of the user’s interface is made up of these views and the components they contain: additional views can be reached by navigating the site, such as the CreatePost view, used for creating new posts, and the PostBoard view, which is accessible only to a post’s members and displays a private area containing some special functionalities such as an ingredients list and a chat sections, both of which are implemented through components, making them easily reusable in other parts of the site (the ingredients list, for example, is also used in the CreatePost view).

After a user logs in, their information (their id and profile details) are fetched from the database and stored in the Vuex store instance, which is then queried by the various views and components that make use of that information. If a view or components wants to update the user’s data, it can to do by calling a Vuex action, which is a type of



asynchronous function that will handle errors and then in turn call a mutation, a type of synchronous function that will update the state that stores the data. Because the components that make use of that data are taking it directly from the state, they will all be updated in real time.

The user needs to be logged in to access the website, that is, to create a post, join a post, add comments, etc. (i.e., anything different than registration and login). The user is able to login on the first page of the site “Login”, if they do not have an account yet, they can create one by clicking on the pertinent button. If the user happens to forget their password, they can click on “forgot password”.. This front-end part of this process is contained in the view “Login.vue”, which makes use of the “PasswordReset.vue” component, and the back-end is implemented using the authentication service provided by Firebase, which handles the authentication process and creates and id for the user while also storing their e-mail and password. More information like birthday, first and last name are stored in the ‘users’ table on the Firestore database, which is updated by using the corresponding command through a Vuex action. The password recovery process is



itself implemented by using a function of the Firebase library, which takes care of notifying the user with an e-mail to let them choose a new password.

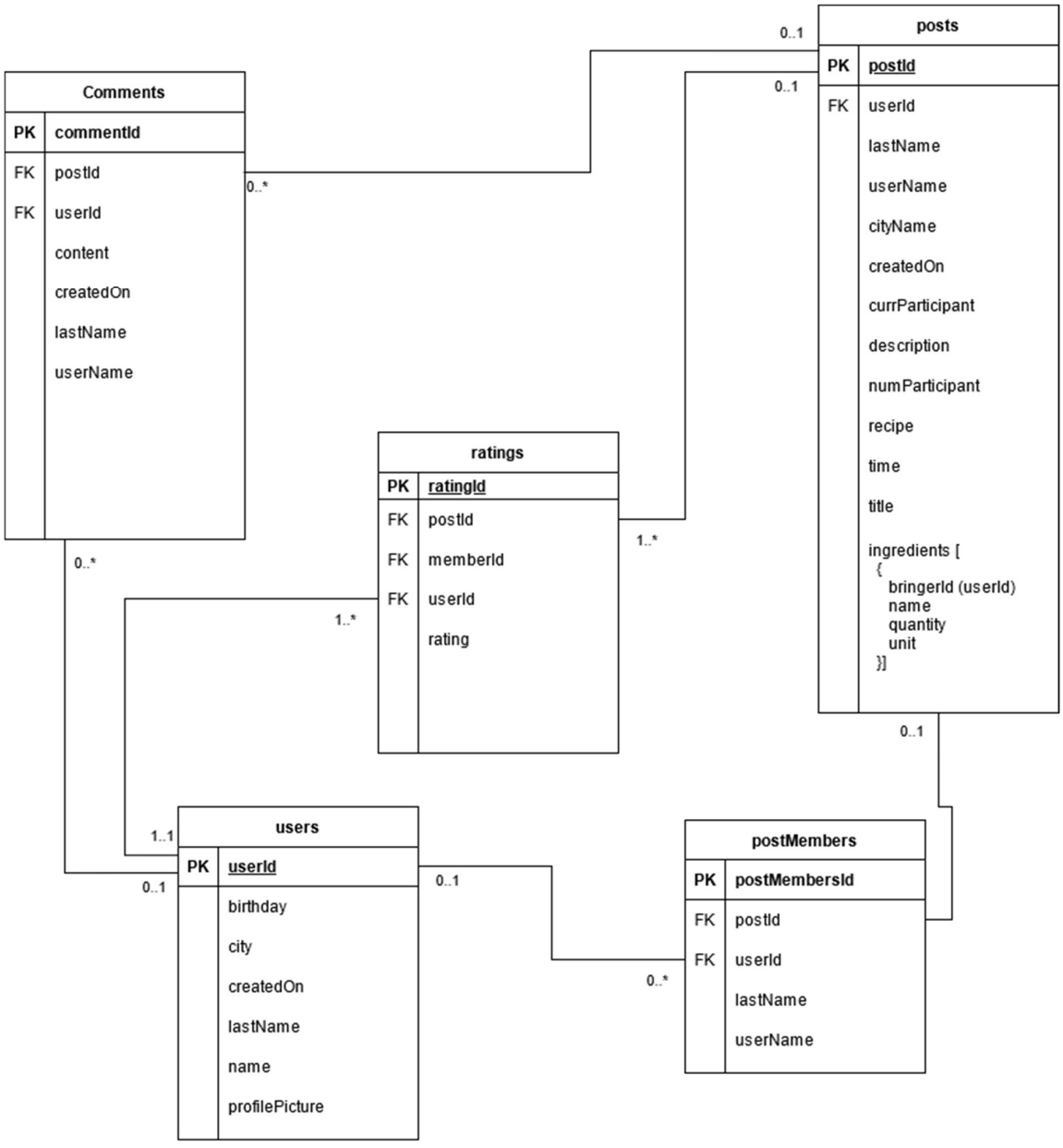
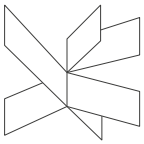


Figure 10: General ER diagram for Firestore database



The diagram in Figure 4 shows how the database is structured inside of Firestore. The two most important collections are ‘users’ and ‘posts’. The ‘users’ collection contains additional information about the site’s users, while information regarding authentication like their e-mail address are handled by Firebase’s authentication service directly. The user’s ‘profilePicture’ attribute is a URL to their profile picture, stored in the Firebase-provided storage. The ‘posts’ collection is instead used to store the information regarding individual posts on the site, and as such has numerous attributes. Among these, the ‘cityName’ attribute is used to allow users to search for meals in their area from the dashboard, ‘ingredients’ is a list of the meal’s ingredients, which are made of a name, a quantity and a unit of measurement (kg, g, L, etc.), and by a ‘bringerId’, the id of the user who will bring this ingredient. The ‘postMembers’ collection stores the users who have joined a post, while the ‘ratings’ table stores the opinion each user has expressed regarding their experience with another user (‘userId’ rates ‘memberId’) for a specific meal they have attended together (‘postId’). Finally the ‘comments’ table stores the comments made by users in the comment section for a given meal.

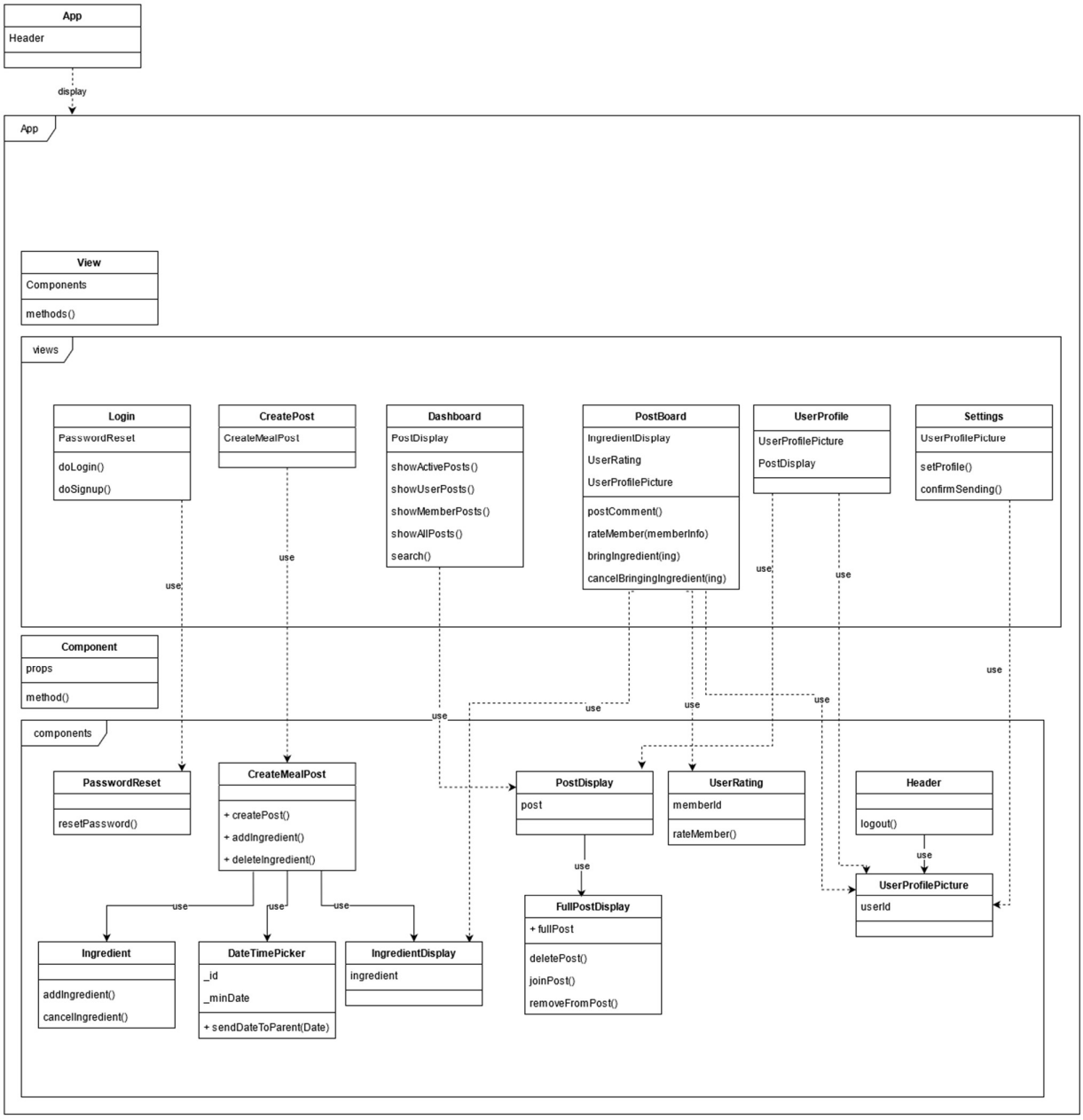
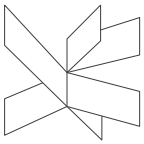


Figure 11 : Class Diagram for Vue.js

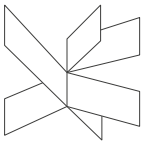


The diagram in Figure 5 is an equivalent to a Class diagram for the front end (Vue.js). It is not exactly a class diagram, as Vue.js is not an object programming language, but a similar approach was taken as views and components resemble classes and objects in certain ways. For example, the data local to a view or component could easily be compared to a class' attributes, its methods to a class' private methods, its props (a type of attribute in components that can be set from its parent view or component to "pass down" data) to setter methods, and its events (a type of trigger used by child components to signal or pass data to their parent) to OOP's public methods invocation. Furthermore, the ability to re-use components multiple times within a single or different views and components bears striking similarities with how the same class can be instantiated into multiple objects in OOP.

The diagram shows the links between the different components and views. Components can use each other by including other components, as for example 'CreateMealPost' uses 'Ingredient', 'DateTimePicker' and 'IngredientDisplay'. The view CreatePost then displays 'CreateMealPost'. The 'App' view is the parent of the entire site, as every page is displayed inside it (Singe-page Application principle), and it also always displays the 'Header' at the top of the page.

Once a user has joined a meal, either by creating a post or joining an existing one, they have access to the 'PoastBoard' page that contains comments, the list of ingredients end a list the post's members. Comments are a way to chat with the other members of a meal's post, using which the users can exchange information, define the exact address where it will take place, specify their diet (allergies, preferences…) and discuss who will bring each ingredient. After making their decisions for the ingredients, each user can confirm them by clicking on the 'bring' button of the ingredient in the list of ingredients.

Posts are displayed on the 'Dashboard.vue' view through the use of the 'PostDipslay.vue' and 'FullPostDisplay.vue' components. The list of posts is taken by an array that is stored in the Vuex store instance and updated in real time by binding it using Vuexfire to the 'posts' collection on Firebase. This array of all of the posts on the site is then filtered by 'Dashboard.vue' component, so that only the posts corresponding to the filters selected

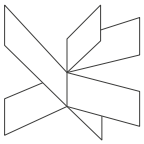


by the user are shown, which happens by passing them as ‘props’ to a dedicated ‘PostDisplay.vue’ component.

By clicking on the ‘show full post’ link under each post, a user can visualize a post’s full details as determined by the ‘DisplayFullPost.vue’ component, where they are also able to view a list of the post’s participants (binded in real time using Vuexfire to the ‘postMembers’ collection on Firestore). If they are post’s creator, they are also able to remove the other members or delete the entire post, whereas if they are not (and the post is not at full capacity or past its date) they can join the post and become its members, or leave it if they already are. All of this is accomplished by calling actions on the Vuex instance, which in turn notify Firebase to change the database.

Members of a post can also access its private board from the post’s full details by pressing the “view post board” button. This will switch the current view to ‘PostBoard.vue’, and it will also pass to it as a ‘prop’ the id of the post that was selected by using Vue Router, so that the board may fetch from the Vuex store’s collection of posts the correct one to display. This view makes use of the ‘IngredientDisplay.vue’ component (which is also used in the ‘CreatePost.vue’ view, accessible from the dashboard) and the ‘UserRating.vue’ component, which enables users to rate their experience with other members once the date of the post has passed.

A user can access their profile on the ‘UserProfile’ page to see their ratings for their previous meals as well as a list of the meals they have attended. They can also see another user’s information by going on their profile page by clicking their name in the members list of any post (this is once again accomplished by passing the user’s id to the view using Vue Router). The user can modify their information as well as their profile picture on the ‘Settings’ page.

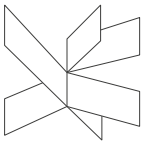


3.4 Test

The system was tested by going through all of the main use cases for users and verifying the system's reaction to several edge cases.

3.4.1 Test case: create an account

Step	Action	Reaction	Result
1	Enter birthdate "01/01/2021", Click "Create an account"	Display error message - the user should be above 18 years old.	-  "Please select a date inferior to 2003-06-04"
2	Enter email address "test", Click "Create an account"	Display error message - the address has bad formatting.	- "The email is badly formatted"
3	Enter password "test", Click "Create an account"	Display error message - the password should be at least 6 characters.	- "Password should be at least 6 characters"
4	Enter email address that is already used, Click "Create an account"	Display error message – this email address is already in use	- "The email address is already in use by another account."
5	Enter first name, last name and city but leave other fields blank, Click "Create an account"	Display error message - all fields should be filled.	- "Please fill in all the fields"

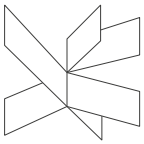


6	Enter valid data : “Test” “Test” “test@test.net” “testtest” “01/01/2003” “Test”, Click “Create an account”	User is redirected to Dashboard page and has now access to the website.	User is added to the database.

3.4.2 Test case: login

Pre-conditions: user has created an account with login “test@test.net” and password “testtest”.

Step	Action	Reaction	Result
1	Enter email address “test”	Display error message - the address has bad formatting.	- “The email address is badly formatted.”
2	Enter email address “test@test.net” and password “test”	Display error message - the password does not match.	-“The password is invalid or the user does not have a password.”
3	Enter email address “test@test.net” and password “”	Display error message - the password does not match.	- “The password is invalid or the user does not have a password.”



4	Enter email address “test@test.net” and password “testtest”	Redirect to dashboard page.	User is now logged in.

3.4.3 Test case: forgotten password

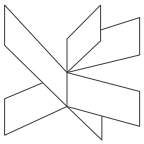
Pre-conditions: user has created an account with login “test@test.net” and password “testtest”.

Step	Action	Reaction	Result
1	Enter email address “test”	Display error message - the address has bad formatting.	- “The email address is badly formatted.”
2	Enter email address “test@test.net”	Sends an email to this address with a link to reset the user’s password.	The user can follow the link received by email and set a new password.

3.4.4 Test case: create a post

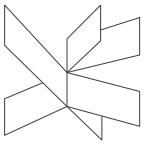
Pre-conditions: user has created an account and is logged in. User needs to be on the page ‘createPost’.

Step	Action	Reaction	Result

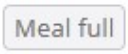
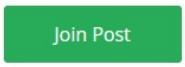
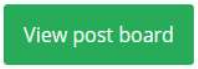


1	Click “Post my meal”	Display error message – title, city name, number of participants are missing	“Please fill in all required fields. Missing fields : -Meal title -Number of participants -City name”
2	Write title, Click “Post my meal”	Display error message – city name, number of participants are missing	“Please fill in all required fields. Missing fields : -Number of participants -City name”
3	Write City name, Click “Post my meal”	Display error message - number of participants are missing	“Please fill in all required fields. Missing fields : -Number of participants”
4	Fill the number of participant Click “Post my meal”	Post created with corresponding values, time is set of tomorrow, other fields are empty	
5	Create a new post and fill all the required fields, Remove the default date and leave it empty, Click “Post my meal”	Display error message – time is missing	“Please fill in all required fields. Missing fields : -Time of the meeting”

3.4.5 Test case: join a post



Pre-conditions: the user has created an account, is logged in and another user has created a post with available spots.

Step	Action	Reaction	Result
1	User tries to join a meal that is full	The user can not join the post, the button is disable	The button is disabled, user cannot join the post: 
2	User tries to join a meal which date has passed	The user can not join the post, the button is disabled	The button is disabled, user cannot join the post: 
3	User tries to join a meal which date did not passed and is not full	The user can join the post, the button is enabled	The button is enabled, user can join the post: 
4	User can see 'PostBoard' page of the post he joined when he is on the 'ViewFullPost' mode	The button 'View post board' is shown, the user can go on the 'PostBoard' page	Button is clickable, and let you go to the post board 

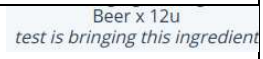
3.4.6 **Test** case: add ingredient

Step	Action	Reaction	Result
1	Leave fields blank, click "Add Ingredient"	Display error message – all fields need to be filled.	"Please fill in all required fields. Missing fields :'Quantity (must be > 0)' 'Unit(kg,l.,…)'"

2	Fill ingredient name “test”, input characters into “Quantity” field	Input is blocked - Quantity field only allows numbers	
3	Input data : “test” “1” “unit”	Ingredient is added to the post and can now be deleted	

3.4.7 **Test** case: bring ingredient

Pre-conditions: the user has an account, is logged in and has joined a post where the host has filled ingredients

Step	Action	Reaction	Result
1	From the dashboard or profile page, click on “View Post Board”	Display the post board page	-
2	Select an ingredient and click the button “Bring”	The ingredient is marked as being brought by the user and can’t be selected by others.	
3	Select an ingredient that is already being brought by someone else.	The ingredient is marked as being brought and the button doesn’t appear.	

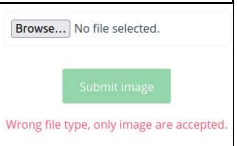
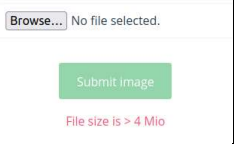
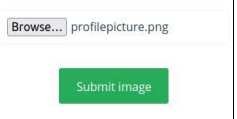
3.4.8 Test case: post comment

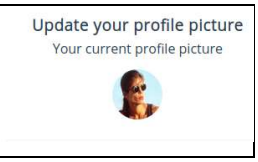
Pre-conditions: the user has an account, is logged in and has joined a post

Step	Action	Reaction	Result
1	From the dashboard or profile page, click on “View Post Board”	Display the post board page	
2	Type a message in the textbox and click the Send button	A text bubble appears displaying the user name, profile picture, and how long ago it was sent	

3.4.9 Test case: change profile picture

Pre-conditions: the user has an account and is logged in

Step	Action	Reaction	Result
1	Click “Browse” button	Open file explorer	
2	Select .pdf file	Display error message	
3	Select too heavy file	Display error message	
4	Select a picture under 4Mio	File name is displayed and button is active	

5	Click “Submit image”	Picture is updated and displayed	

3.4.10 Test case: update user information

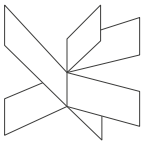
Pre-conditions: the user has an account and is logged in

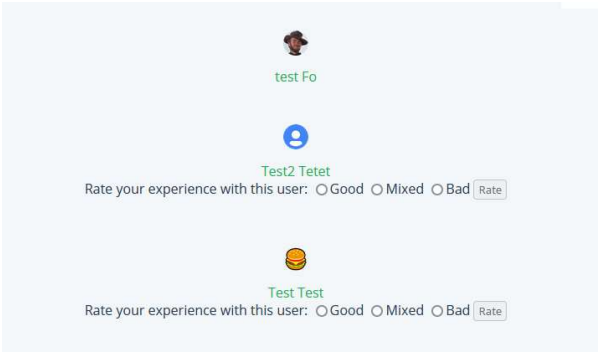
Step	Action	Reaction	Result
1	Change any field to “ “	Restore to previous state	
2	Change birthdate to 01/01/2021	Display error message - the user must be at least 18 years old.	

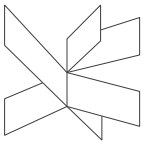
3.4.11 Test case: rate a user

Pre-conditions: the user has an account, is logged in, has joined a post a meal , the meal happened, user is on ‘PostBoard’ page.

Step	Action	Reaction	Result
1	The user tries to rate a user for a meal that did not happened	The interfaces to rate users is not shown	The interfaces is not shown 



2	The user tries to rate himself	The interface to rate himself is not shown	The interface is not shown for the user 
3	The user selects a rating and click on ‘rate’	The user is rated	User is rated
4	The user tries to rate a user that he already rated	The interface to rate a user is not shown	



4. Results/findings and Discussion

This project has had the opportunity to evaluate the feasibility of the platform. Although a thorough analysis of most aspects of this solution was conducted, it is still difficult to determine exactly what the outcome will be. Indeed, a whole semester of work was able to give general answers and to allow the development of a basic solution in order to answer a majority of the problems to be solved.

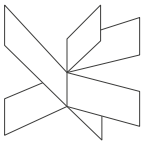
However, such a period of time is still too short to be able to say precisely what the real feasibility of the project would be. The analysis carried out allowed to understand which general strategy would be the one to adopt, in relation to the strengths and potential weaknesses of the concept, but also in relation to the state of the competition on the market.

The web application is fully functional and contains all features necessary for it to accomplish the purpose behind its conception. It is a streamlined, easy to use platform in which users can quickly create a post to organize gatherings of an arbitrarily large number of individuals revolving around food, specifying what will be eaten and through what process it will be made, and, if necessary, specifying which ingredients need to be brought.

Users can just as easily join an existing post up to its full capacity, communicate with the other participants by using the built-in chat function and declaring which ingredients, if any, they will bring through the appropriate interface.

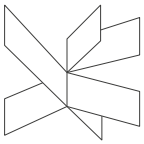
It is also possible for users to modify details of their accounts (including a profile picture), to view other user's post history and to rate their experience with other participants in order to encourage friendly behavior and deter bad actors.

The site is perfectly capable of supporting multiple users, although the back-end service used as a database would require a financial investment to be kept active if numerous users started using the site with moderate frequency. This issue could be mitigated by improving portions of the code in order to reduce the number of queries forwarded to the database.



While many other features and improvements could be added with enough time, the application in its present state constitutes a satisfactory proof of concept for the type of platform this project aimed to realize, and meets all of the basic requirements that were agreed upon by the group during its conception.

Further improvements to the existing framework could for example include more options by which to filter posts, the employment of geographical coordinates to calculate proximity with a posts location, better customization options for users, the ability to make meetings private or whitelisted, the ability to block or report users and integration with existing platforms and social networks.



5. Conclusions

At the end of this semester and therefore of this project, several conclusions can be drawn about the results obtained and the work done.

Firstly, the various analyses carried out on the project concept have shown the advantages of the project in terms of competition, but also the aspects of the market in which the solution could potentially be launched.

Although it is not possible to draw any immediate conclusions about the potential results shown by the project, the different aspects explored were encouraging and showed the potential of the idea developed by the team but would however need more time and work to reach its true capacity and maturity.

In conclusion, it can be stated that the project meets all of the requirements that it was conceived to meet.

It is a fully functional social platform for creating posts for, and participating in, user-organized events centered around food and cooking, and through its archive of a user's attended gatherings it may also serve as a repository for recipes.

From a technical point of view, the application could yet be refined in its aesthetic and by adding some additional quality-of-life improving functionalities, but all the necessary elements are present.

In case of a full release, some of the database tables could be merged and optimize to reduce the number of queries required to fetch data, thus making the site more responsive and less expensive to operate.

The application constitutes an innovative approach to the standard social network formula, and a solid base upon which to expand in order to realize a fully competitive and original platform that manages to distinguish itself from competitors and encourages a new way to socialize with strangers and acquaintances.

6. Sources of information

Bruijl, G. H. T. (2018). The relevance of Porter's five forces in today's innovative and changing business environment. Available at SSRN 3192207.

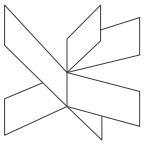
Elisabeth Hu (November 2018) *The 17 countries that host the most international students*. [online] Available at : https://www.businessinsider.fr/pays-qui-accueillent-le-plus-etudiants-internationaux-unesco/#16-espagne-65000-etudiants-16 (Accessed 10 April 2021).

Eurostat (May 2020) *Access and use of internet in the European union in 2019*. [online] Available at: https://www.insee.fr/fr/statistiques/2385835#tableau-figure1 (Accessed 10 April 2021).

FMI (2014) Food, the Ultimate Connector. [online] Available at: https://www.fmi.org/blog/view/fmi-blog/2014/03/17/food-the-ultimate-connector#:~:text=Food%20is%20the%20universal%20bonding%20agent%20that%20brings%20people%20together.&text=An%20industry%20dedicated%20to%20providing,secret%20ingredient%20in%20every%20recipe. (Accessed: 13 March 2021).

Statista (Feb 2021) *Distribution of instagram users worldwide as of January 2021, by age group.* [online] Available at: https://www.statista.com/statistics/325587/instagram-global-age-group/ (Accessed: 25 May 2021).

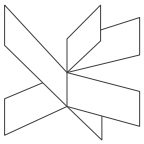
Thomas, F. (2020) *Student Loneliness: The Role of Social Media Through Life Transitions.* [online] Available at: http://sfx.dbc.dk/dbc-45DBC_VIAUC?ID=doi:10.1016%2Fj.compedu.2019.103754&genre=article&atitle=Student%20loneliness%3A%20The%20role%20of%20social%20media%20through%20life%20transitions.&title=Computers%20&%20Education&issn=03601315&volume=146&



issue=&date=20200301&aulast=Thomas,%20Lisa&spage=&pages=&sid=EBSCO:APA%20PsycInfo:2020-00228-001&req.language=eng (Accessed: 13 March 2021).

Yeh, C.J. and Inose, M., 2003. International students reported English fluency, social support satisfaction, and social connectedness as predictors of acculturative stress. *Counselling Psychology Quarterly*, *16*(1), pp.15-28.

Yusop, Z. B. M. (2018). PESTEL analysis. COMRAP 2018, 34.



Appendices

I. Authorship

This appendix delineates which group members are responsible for each section of the report and of the website's code (names are in alphabetical order).

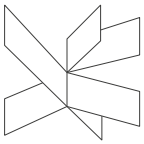
Report:

Summary – Franck, François, Naveen, Tommaso

1. Introduction
   1.1. Background Description – Franck, François, Juliette, Naveen, Tommaso
   1.2. Problem Statement – Franck, François, Juliette, Naveen, Tommaso
   1.3. Aim and Objectives – Franck, Tommaso
   1.4. Delimitation – Franck, Tommaso
2. Methods concerning business implementation
   2.1. Audience analysis – Franck
   2.2. Strategic analysis – Franck
   2.3. Marketing and communication analysis – Franck
   2.4. PESTEL analysis – Naveen
   2.5. Porters five forces – Naveen
   2.6. Financial plan – Naveen
3. Methods concerning ICT implementation
   3.1. Analysis – François, Tommaso
   3.2. Design – François, Juliette, Tommaso
   3.3. Implementation – François, Tommaso
   3.4. Test – François, Juliette
4. Results/findings and Discussion – Franck, Tommaso
5. Conclusions – Franck, Tommaso

Web application code:

- Login, signup, and password recovery – Tommaso
- Dashboard and post displaying – François, Tommaso
- Post creation – François, Tommaso
- Post Ingredients – François
- Settings page – François, Tommaso
- Profile Pictures – François
- Post board – François, Tommaso
- User ratings – Tommaso
- Site appearance – François, Juliette
- Cross-browser date/time selector – François



II. Code

This appendix provides the link to the GitHub repository that hosts the website's code.

https://github.com/Foutete/FoodMeeting