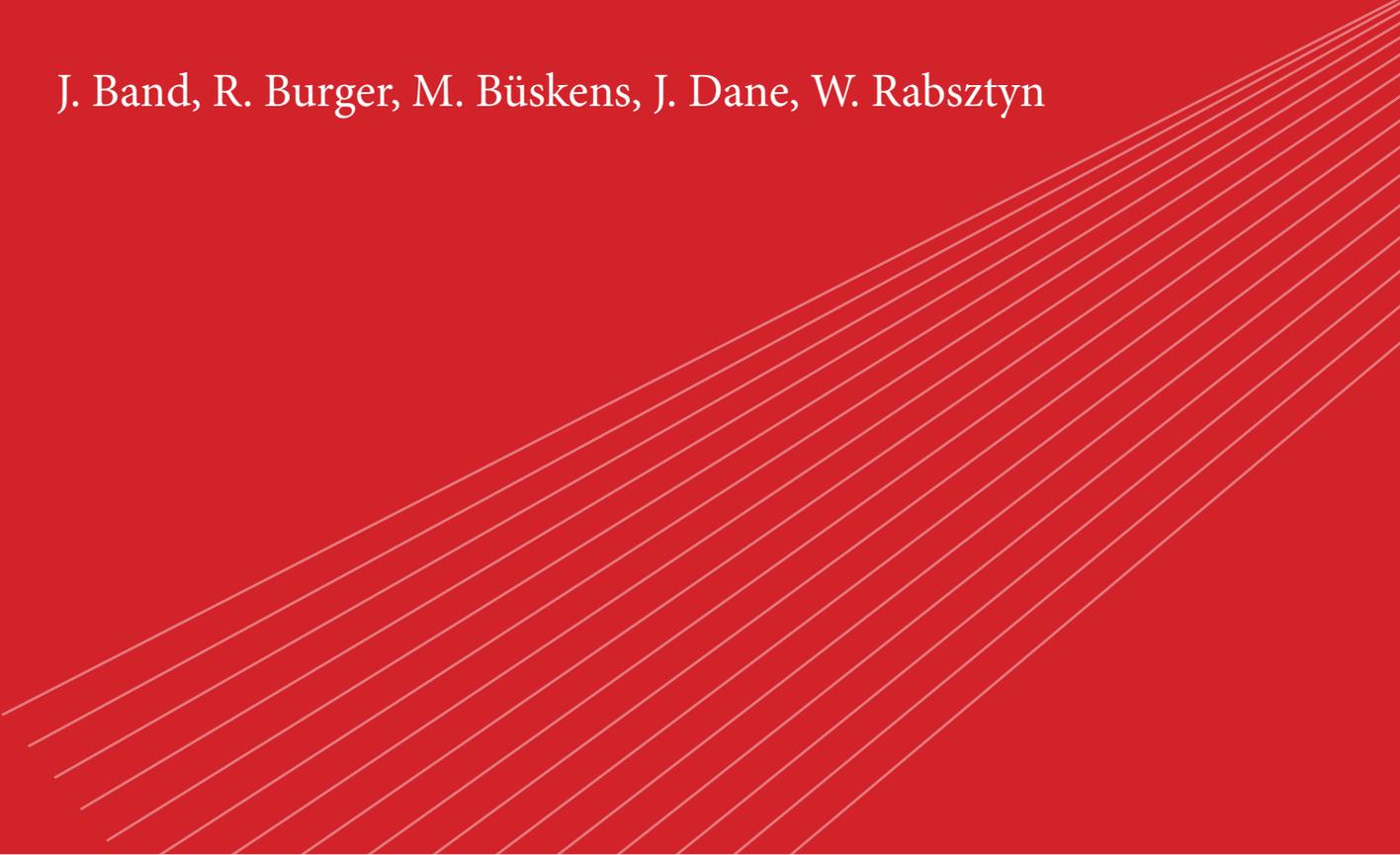


MeetMate

J. Band, R. Burger, M. Büskens, J. Dane, W. Rabsztyn

A series of thin, white, parallel lines radiating from the bottom right corner towards the center of the slide, creating a sense of motion or a stylized graphic element.

Introduction

During our working lives, none of us are able to be present at every single meeting. We get ill, we have other appointments or other reasons for us having to call and say we can't make it to a meeting, class or presentation. Afterwards, we hope there might be a pdf file or some notes online so we can still get some feeling of what the meeting was about. But the things that are spoken about during the meeting are mostly lost. Current videochat software provides limited functionality and doesn't solve the issues above. There are actually several other issues as well. For example: background noise, limited vision and low quality audio and video. All of these issues need to be addressed and we believe we have done so with the MeetMate.

The MeetMate allows for a full experience of presence at a meeting. It is placed at the meeting and records a 360 perspective view of what is going on. Therefore, you can look around and have a complete perception of what is going on. When you want to talk, you press a certain key and speak into a microphone. When this key is not pressed down, there is no sound going through the microphone hereby eliminating the background noise. The presentation that is projected (i.e. powerpoint or prezi) is also send through to the user's screen so he/she has a clear view on this as well. The entire presentation is also recorded in 360' format, so other users can look back at the meeting as well and have complete control. Probably even more so, because the observer can pause, rewind and look at the meeting from a different perspective.

In the following report, we will try to show why we believe the MeetMate is able to tackle the competition.

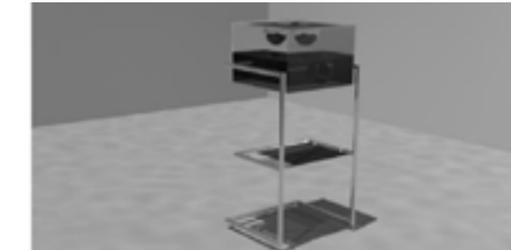
The MeetMate, a singular device which improves contemporary meeting techniques and generates a complete feeling of presence without being there.



4-5

Technology and Competition

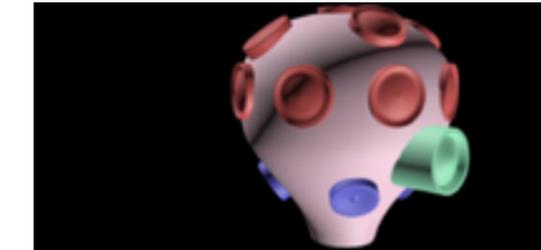
A brief review of the technological aspects and our future competitors.



6-7

Time

What is important to keep in mind as time passes. We discuss the past, present and future market drivers and our roadmap as we envision it



8-9

Values and Risks

What are the most important values in our product. How do we make sure we do not lose track of what we intended to create. What risks are there and how can we limit them.



10-14

Reflections

Competition/ Technology

Competition

In order to understand why the MeetMate might be better than the competition, we need to know what our competition is. In this case, there are 3 main competitors which are Skype, Microsoft Office 365, and TeamViewer.

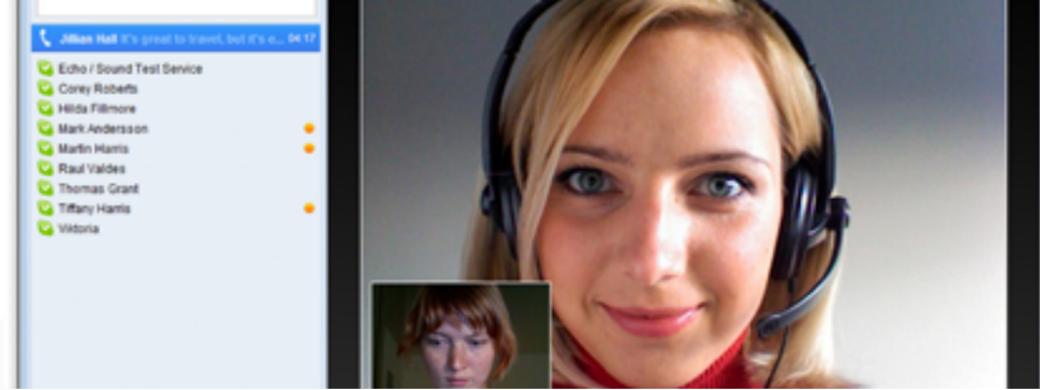
These are all existing software programs meant to con-

nect people over internet. They all have similar interactivity. A webcam on both sides which records and sends video and audio towards the other end. The only real difference between them all is the software interface.

We intend to bring something new to the table. Not just a new interface, but a new way of communication. Freedom to be control your

sight and audio in a room without actually having to be present.

In the right technology tree, we can see every aspect of what is needed to ensure a full rich experience of our concept. In order for our product to succeed, we need to be able to guarantee that every part is incorporated in the design.

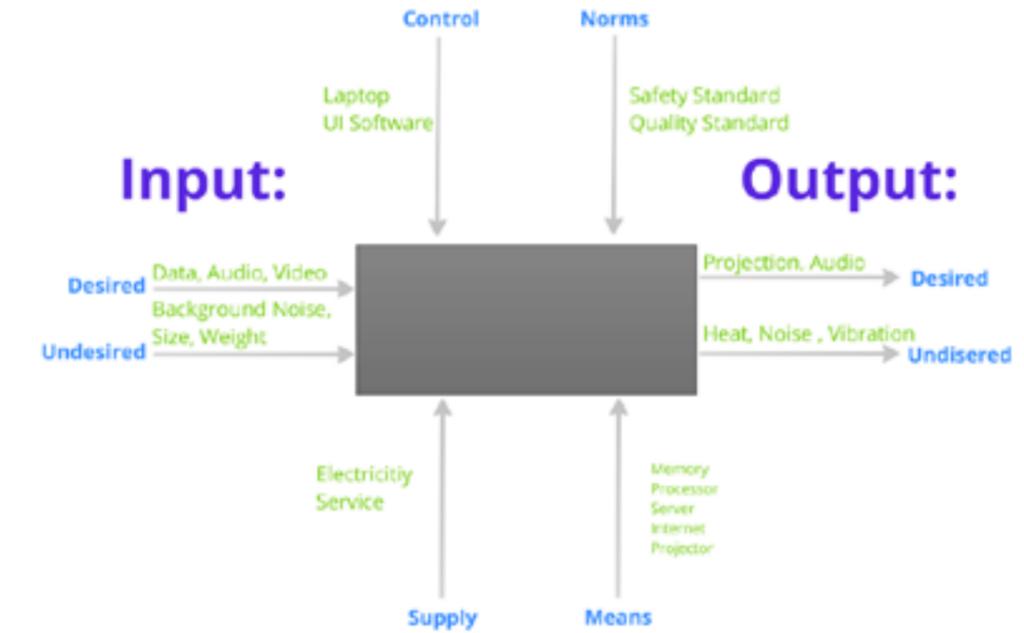


Skype. Our main competitor. It allows the user to directly send video and audio towards the person calling. However, it doesn't allow a full experience of presence. Something we do.

A black box diagram has been made in order to see what happens all around the MeetMate and quickly visualizes the focus points.

it states that the undesired output in heat, noise and vibration. This is almost inevitable with beamers. A beamer is almost always used during presentations and if we make sure to incorporate the least noisy and least vibrating beamer there is, the feeling of quality is still preserved.

While it also shows that background noise is an undesired input, it is actually greatly reduced by controlling moments of speech and filter software. However, it is currently still inevitable for a small amount of background noise to get past the filter.



Technology Tree MeetMate

Product Function

Controlling your view
Camera
360-Lens/Mirror
Being able to present
Beamer
Being able to view the participants who joined in digitally
Beamer
Control
Electronics
Motherboard
Software
Being able to hear everything
Microphones
Speakers
Amplifier
Software

Manufacturing Technology

Only hear the joined in participants when desired
Portability
Network connection
Signal processing
Software
External Server
Somewhere to put laptop
Tableau
Portability
Wheels
Casing

Camera Manufacturing
Lens Manufacturing
Mirror Manufacturing
Beamer Manufacturing
PCB Assembly
PCB Testing
Programming
Gluing
Microphone Manufacturing
Speaker Manufacturing
Plastic Molding
Steel construction manufacturing
USB Input Manufacturing
Steel Cutting
Server
Network Expertise

Supporting Technology

Objective-C and C++ Programming
System Architecture
Design
Embedded Software
Material know how
Reliability Testing
Safety Testing
Stress Testing
Consumer Testing
User Interface Design
PCB Design & Layout
Consumer Marketing
Network maintenance
Network Security

Time

Market Drivers by Time

In 2001, the first version of the communication protocol, VOIP (voice over IP) was developed. A major development that started in 2004 was the introduction of mass-market VoIP services that utilized existing broadband Internet access, by which subscribers place and receive telephone calls in much the same manner as they would via the public switched telephone network.

Later on there was conference calling over an active internet connection. Web conferencing refers to a service that allows conferencing events to be shared with remote locations. The service is made possible by Internet technologies, particularly on TCP/IP connections. It allows real-time point-to-point communications as well as multicast communications from one sender to many receivers. It offers information of text-based messages, voice and video chat to be shared simultaneously, across geographically dispersed locations. Applications for web conferencing include meetings, training events, lectures, or short presentations from any computer.

Market drivers by time

'01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '.future

voice over IP

skype release

Unlimited free calling

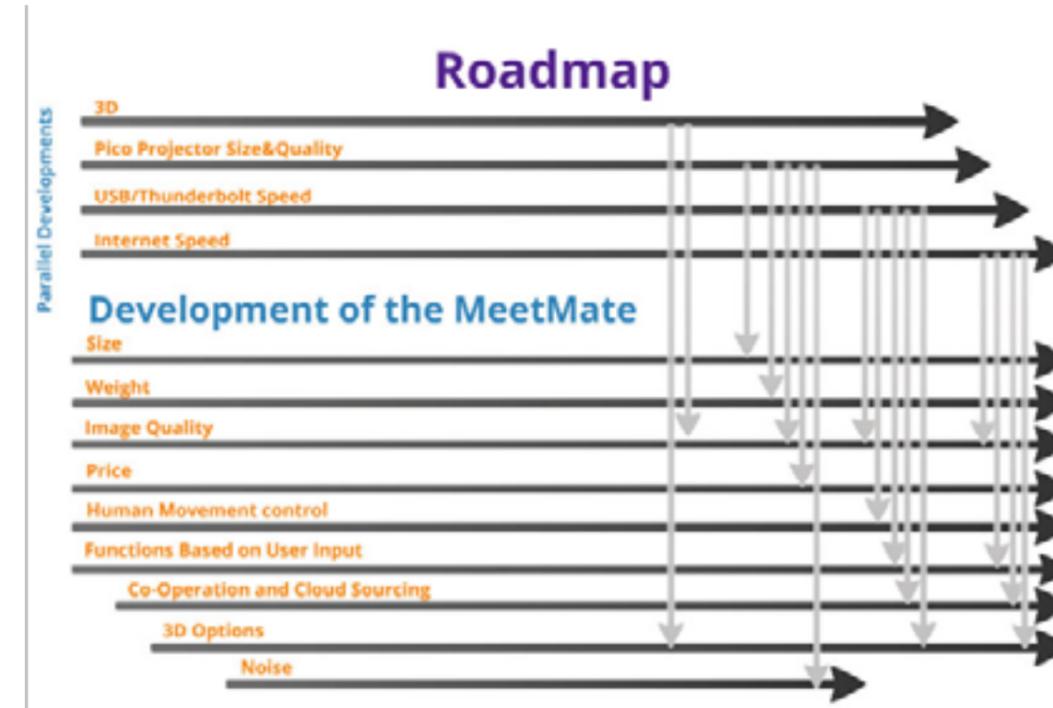
Video Calling

Converence Calling using VOIP

MeetMate

3D calling

▲ Above, you can see a time scale in which the process is shown over the years. Notice that there's a gap from '08 till '12 meaning that there has been little progress. We recognized the potential for something new which would use contemporary technology to improve the old experience.



Roadmap

The roadmap accounts for all the technologies that will be developed over time and can possibly be integrated in the MeetMate. Think of technology such as 3D, Pico Projectors, Usb/Thunderbolt Speed and Internet Speed.

By tracking these developments we can set up a rough roadmap for the MeetMate. There is a lot of standard development mentioned in the roadmap as well, such as size, weight and price. The other developments are much more uncertain and depend strongly on the consumer's wishes and the costs of these developments.

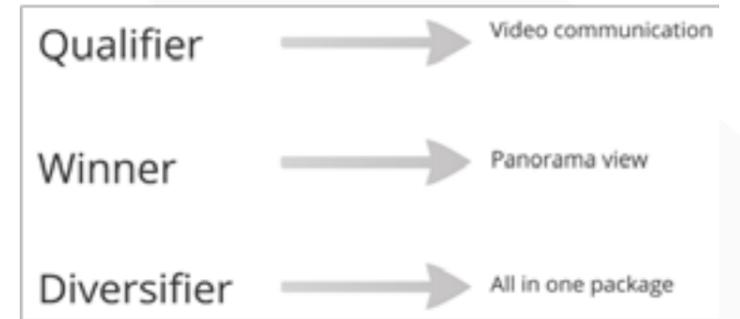
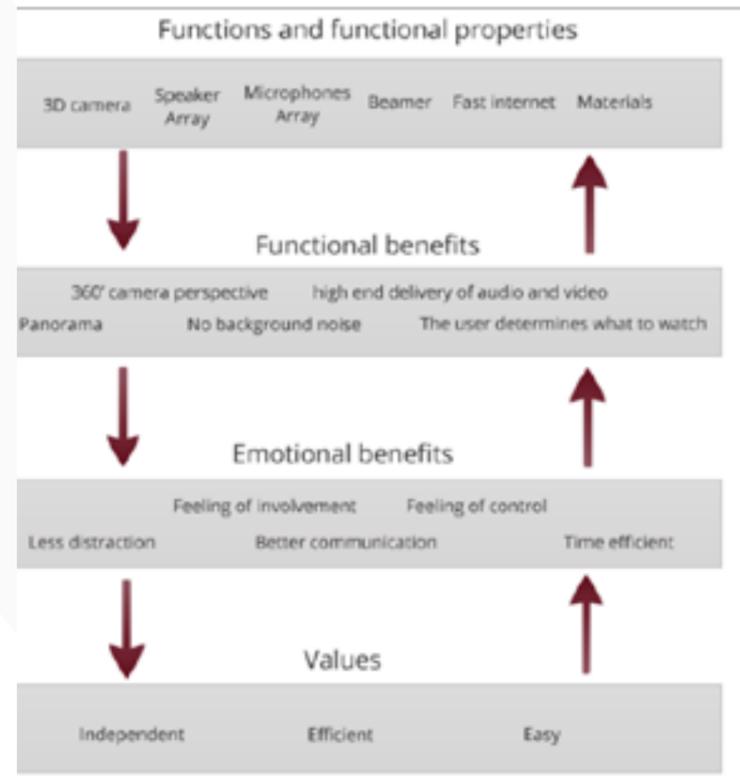
A personal belief of ours is that eventually there will be a larger demand for Co-Operation and Cloud Sourcing in the future market. The most important reason for assuming this is because it is already an upcoming trend (Dropbox, iCloud and Chromium). It can also be meaningful to the MeetMate and is therefore something to keep in mind.

We envision that there will also be a development in image quality. Internet speed is becoming faster and faster, which allows bigger data to be transferred at once. The development of USB 3.0 and the new Thunderbolt standard also stimulates the growth in data-transfer, because it directly influences the amount of data which can be send and received within a certain amount of time.

The MeetMate in its current form is the size of a small chair. But we believe it could become the size of portable webcam within a matter of years. What is important to note is the urge to still have the same functionality when resizing the product. Our reasons for believing in the possibility of resizing the MeetMate are two, the rise of the pico projector (which is significantly smaller than current projectors) and the continuously reducing in size of cameras.

The development of the pico projector also aids in drastically reducing the noise emitting from the MeetMate.

Values



There are certain values which lead to the MeetMate's superiority over its competition. These values can be further separated in emotional values which in its turn exist out of functional values through technological properties. When building the product, it is important to be aware of the beginning values. They are what the customer desires and of course there are various ways to fulfill these desires.

In the end, it's all these value together which lead to the key-buying factors. They allow the product to be successful marketwise.

Winner, Qualifier and Diversifier

The qualifier is that which is needed to achieve the same level of functional benefits as the competition. In this case, it would be the possibility and functional possibilities for video communication which qualify us as a decent competitor.

The diversifier is that which separates us from the competition. In our case the diversifier is a combination of certain functions: The possibility to talk by pressing a button instead of continuous sound, having the presentation directly on your screen, and the background noise reduction are the most important diversifiers.

The winner is what puts you above the competition. So a function or performance that no one else is able to deliver. Our winner is integrating the function panorama view in the video communication. The 3D camera already exists but it has not been used for video communication up until now and this new function is what will add the most value to video communication right now. Another huge winner is the possibility to record in 360 degrees format and the opportunity to review the entire presentation later on.

Risk assessment

The risks of this product are raised because there might be too much competition. There already are already a lot of ways to communicate with each other over a distance. However, our product will add several functions that will improve the current communication techniques (See the previous mentioned Qualifier, Diversifier, Winner bracket). Something to keep in mind though, is the urge for a well assembled device. Since every part is integrated into a whole, it is difficult to replace one single part when it is broken. Solutions regarding this issue could be a guarantee for at least some years, a place for repairmen, or an assemblage of several easily dismountable parts which can be changed when broken.

Below you can see the various channels that need to be present. Our task would be that of product developer and manufacturer. An important note here is the way of generated income of the product, namely through monthly subscriptions.



Reflections

Reflection Jorian Dane

I chose this assignment because I wanted to learn more about the business aspect of the design process. I also had to develop my “Business Design Processes”-competency to get more awareness, because I didn’t develop it last semester.

Before this assignment, I didn’t really take a look at the business aspect of design. I knew that you have to keep it in mind, but I didn’t have the knowledge to get a better view. I can tell that this assignment gave me the proper knowledge to clarify the business aspect of a product. Thinking about the end user desire of a product gave me a much better insight of the aim of the product and its competitors.

Making value ladders and thinking about the buying factors gave me a better insight in what the user motivates to buy a certain product. The method of making a technology tree makes you think about the question of how to make the product and which manufactures you will need to produce it. The black box model is very useful in my opinion, because you will think more deeply about the desired and undesired factors of a product. This is just some of the useful techniques and methods that we have learned throughout the assignment.

In the beginning, I was quiet nervous when we had to give our first presentation. After several presentations it became more common to me, which reduced my nervousness. The weekly presentations were useful for increasing my presentation skills.

10 The teamwork in our group went great, for each assignment we clearly divided the tasks so that everybody knew what he/she had to do. One little problem was that everybody had their own weekly schedule which made it sometimes difficult to meet and discuss about certain things. Throughout the weeks this became much better.

The assignment gave me a good vision of how to bring a product on the market and how you can present it to stakeholders on a marketwise way. I have learned a lot from this assignment, which gave me a better awareness in the competency “Business Design Processes”. The feedback after the weekly presentations helped greatly in refining the interpretation of the theories and models. I am sure that the techniques and methods that I have learned, will come in handy in my upcoming years as an Industrial Designer.

Reflection Jort Band

I subscribed for this assignment, because I wanted to develop the competency area Business Process Design. I was also interested in the ideas of product platforms and roadmaps, because it’s a term you hear a lot in the professional world. This is why I chose this specific assignment to develop my competency area.

For the assignment I had to do a presentation with a group every week, about a case study in which we had to apply all that we had learned the previous week(s).

During this assignment I learned a lot about the market in which a product is introduced. Especially in the technology sector where developments moves at an incredibly fast rate. To keep up with this rate it is key to understand the market and the end-user.

To be able to do this you have to have a concept. A concept is the core of what your product is offering. For example a walkman; its looks changed over time, but the concept stayed the same (portable audio).

During the development of a product the concept is the only thing that stays the same. The rest can be modified, like a new design, quality improvement or added functionality.

So the basics of a product platform is in fact the concept. This is not the only thing that can be included in the product platform. In a product platform a certain technology can also be included, for example one main thing with the walkman platform was that it had to play cassette tapes.

I have learned that to keep up with competitors it is important to deliver better products and be faster than the competitors. What I mean by better product is; a product with better value for the user, this can be things like: price, durability, brand trust and quality. Of course what a better product is, also strongly depends on the target group you are

aiming at with your product.

One thing that is also really important in introducing a product into a market is risk assessment. This helps determine if it’s a smart move for you or a company to introduce a new product and its functionality.

With this risk assessment you can evaluate the risk and keep it at an acceptable level. A tool that also helps with risk assessment is the house of quality. In this matrix you can compare your product to other (similar) products in the market. I also made a house of quality for my assignment, by doing this I learned how the house of quality works and how to apply it.

I also made a technology tree, which also is a great tool to use. The technology tree helps you make a list of functions and makes an oversight of the technology and services needed for those functions. The technology tree is also handy for your risk assessment as you can see what you can outsource, do yourself or re-use in a product.

That having said the technology tree also aids forming a roadmap, because you can see which modules or functions can be improved over time and thus make a better oversight of the product.

Another tool that is also handy is the value ladder this gives great insight into the wishes of the end-user. This helps reducing risk by having knowledge of what the end-user wants and also what things are important to them. Although I didn’t make an extended value ladder for my assignment I know how it works and how to apply it.

Another thing I learned was making a roadmap. A roadmap is a prediction of capabilities that your future product may have due to technological advancements. It’s also a handy tool to gain oversight in the fast developing technological industry and how to apply it to your product.

After the assignment I can honestly say that I have a greater insight into the competency Business Process Design. I learned a lot during this assignment about; product viability, product development and how the market and its drivers work. Besides this it also helped me develop my presentation skills, by continuously getting feedback on our presentations. This is a very helpful skill for presenting that can help me with presenting my ideas to a client.

Reflection Myrthe Büskens

During the first lesson we learned about the product life-cycle, product complexity, project complexity and the decision making process. I found it interesting to see that the basic needs and wishes of people stay the same over time, the demands we put on it changes however. When bringing a product on the market you have to make decisions.

We had to give a presentation about the buying process and about the key buying factors. What I learned was that when coming up with a concept you always have to give it an emotional value otherwise it won’t touch people and they won’t remember your product. You see this in commercials as well; they sell the benefits or the values, not the actual product. So you always have to think: what is the message? What do you want to sell and what do you want people to receive?

When bringing a product to the market you have to make choices, these decisions form the company. Examples of such decisions are choosing between radical and evolution or between specific and multi-functional. There are companies who want to make the best of both worlds so they make something in between instead of choosing between two options. However, this is risky, it might be that you address two target groups but it might also be that you satisfy no one.

What I found a bit difficult to grasp was that you have to be careful with thinking that something is impossible, in this way you limit yourself, but on the other hand you are very limited by money and the market because it is very risky to do something completely new. You have to choose whether you want your product to be brought to the market gradually or radically. For both options there are advantages and disadvantages. Most of the times gradually is the answer, for example you can add a function or remove an error, make a new combination or use it in a new setting, but sometimes innovation is the answer to success. It seemed to me that those choices are very difficult to make and I need more experience and knowledge to make these kind of considerations.

You have to do market research before putting a product on the market, therefore you have to do a technology assessment. For each product there are three types of technologies: product function technologies, manufacturing technologies and the supporting technologies. When putting these three functions in a technology tree you link what is needed to what is possible. What I learned is that you really have to understand the inside of the product and the market preferences. Only in this way can you adjust your product to the value drivers and buying factors. You have to assess the real dynam-

Reflections

ics, make decisions and test scenario's with multiple sources. There will always be a split between different user groups, so it is about where you, as a designer, want to take the society.

We also had to discover the inside and the technological aspects of a cd-player. Although I did not fully understand every part of the inside of the device it did help me to understand that every module of a product is to serve a different purpose and that the interaction between all the different modules make the functions of the product. It was now far more easy to make a black box for a product. During one of the lessons we learned about the architecture of a product. The architecture is not only the different modules and functions but also how they interface and interact with each other.

I found it interesting to look at the risk analysis of a product; I liked to think about which factors caused the risks to be raised and which caused them to be reduced. You have to do a risk analysis so you can tackle the issues. When presenting your product you can also choose to explain this risk analysis in order to give the audience the feeling that you are on top of everything and that you have thought about everything.

). A platform is a proposition in which there are various ways. For example there is the physical, this is what stays the same over time. There is also the core function, this is what enables the diversity and flexibility. In the end I learned that a platform needs a clever architecture, a good vision on dynamics, life cycle and product range. A roadmap is not exactly what is going to happen exactly but more of a plan what can happen in the upcoming time (say next two years. When you are trying to sell your product to someone the roadmap becomes very important. People want to know what your next step is, what role you will play and what role you expect your audience to play.

This assignment was very helpful to me because it gave me a clearer understanding of how products behave on the market and how the market affects the products. Up until now I had not thought about limiting myself when designing because of that the product might not do well on the market. Before this assignment I had not taken that aspect into account yet. I found it very interesting to learn about how a product can be brought successfully on the market and about all the research you have to do before your product is even near to being sold in the stores. Although I do think that I need to follow more assignments in this competency area to expand my knowledge in this field, I think that I can apply this new knowledge in future projects very well.

Reflection Willem Rabsztyn

When I was starting with this competency, I didn't really had a concrete thought of what thing I would learn. After those 6 weeks I surely am feeling that I've learned something. For example, When making an offer for a customer wish in my business, I am now using terms as value ladders, functional / emotional benefits. Therefore I'm certain that I made some progression in the competency Business process design.

Insights

I gained lots of insights in how markets work and how customers think, and how to react on those to main aspects. The part of those insights I would mostly use in the future is value ladders. Describing your product or service with functional and emotional benefits fromout the user is a very strong point to position your product / service in the market.

Teamworking

When doing this assignment I also gained some experience in the competency teamwork and communication.

We are continuously busy with a group assignment, every week we had to present something with our group. Therefore we had to divide tasks, plan things out and communicate good with each other about what and how to do certain processes. Every week we had to make a prezi presentation together. I made the prezi presentation running so everyone could join the presentation. We also had to have the same layout and we had to make it one presentation.

In the beginning the group needed some push into the right direction. No one took the initiative to make some plans or do some task division. Therefore I emailed my group with a task division who everyone could fit, planned things out and made the appointment for our next meeting.

In the last weeks I saw some more initiative from the other group members.

Presentation skills

I also gained some more presentation experience. As mentioned before, we had to present some assignment weekly. Therefore I got used to this "stress" and I'm now more comfortable in front of a group.

Reflections

Reflection Rik Burger

I didn't spend a lot of time or effort developing my Business Process design last semester, so it was definitely necessary to do so now. What I found most revealing were the various approaches to design processes. This assignment showed me that you can also start a design process from a business/market perspective and that it can actually aid you in keeping in touch with the desired abstract values of what you sought out to create. For example: By using value ladders, it is possible to see how those abstract values are able to be translated into something tangible. It also makes you aware of the possibilities regarding materials and technology.

This is also important to remember, that the abstract values of a design are what makes a design most successful. Of course, there needs to be a decent tangible representation of these abstract values. But the abstract values are at the base of it all.

This assignment has also taught me various approaches to check whether a design is valuable in the sense that it is marketable/profitable. By making a house of quality for example, you can check exactly where your design stands between the competitions. Thereby clearly showing what leads the competition might have.

During the many weeks, I spend most time working in a team dividing tasks and communicating/discussing about the various aspects of our assignment. This had lead to more awareness on how I can successfully deal with various people and keep a professional attitude.

14 I will keep this all in mind and will definitely try to incorporate what I've learned in future design processes to see what result they might have.

