



DB108 Designing Open Innovation Spaces

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1. Introduction

1.1 WijkLeerBedrijf

Lokaal+ is a project by SUMMA College, that provides internship places to Social Care students. Their main goal is to provide companionship to elderly people who are alone by organising activities and provide informal care. These activities aim at students and the elderly learning from each other.

WijkLeerBedrijf is the extended project of Lokaal+. It is a collaboration of the SUMMA College, Calibris and the municipality of Eindhoven. In the future other stakeholders like care homes or home care organisations will be involved. WijkLeerBedrijf will expand the internship possibilities by transforming the neighbourhood into a school environment, also for people who are unable to go to Lokaal+. Students will offer informal care to elderly people at home; for example go for a walk with them. The informal care and the activities will be adjusted to the needs of elderly people. These needs, however, remain unknown. Hilde Meijs has formulated the challenge to discover unknown needs of (passive) elderly people and discovering new opportunities for students and technology companies to support the elderly people. An opportunity for promotion is also existent, since the initiative is currently only promoted by mouth to mouth communication and flyers handed out by students.

1.2 Open innovation spaces

“Open innovation is a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology.” ^[1]

Alternatively, it is “innovating with partners by sharing risk and sharing reward.” Open innovation typically starts with either an unmet need, around which you build a competitive marketplace, or a network, around which you build a collaborative community. The partners then co-develop innovations and the most promising will be brought to market. ^[2]

Different than a “company-client” challenge, this challenge did not require to design for one company. Instead, it required to design for a need and a problem that is involving different stakeholders and target groups. Each stakeholder had a different need. In relation to introducing technology, elderly, care organisations, technology companies, and students have their own needs for the development of technologies. The process aimed at finding opportunities for collaborations with all the stakeholders to create a strong network. This network could support the development of new technologies for elderly, that are beneficial for all stakeholders.



1.3 MIR

During this module, MIR (Information processing maturity assessment) was continuously used to position one concept in a knowledge sharing context and relate it to the position of other concepts.

The MIR method exists of four different levels. The first level, MIR 0, supports the exposure of information. Secondly, MIR 1 supports accessing information. This level is followed by MIR 2, which supports sharing information. Finally, MIR 3 supports the integration and generation of information. The module requested to place the challenge and each step of the process within the different MIR levels. For example, the annotation that Lokaal+ facilitates elderly and students to share experiences, is placed in level 2. This process happened on a daily basis, which enabled us to position ourselves towards others, see opportunities for different knowledge sharing contexts, and continuously reflect upon what the effect was of the decisions we made. In the end a group reflection on all the different inputs was made to create our own definition for the different knowledge sharing levels. These were:

MIR 0:

Non specific data is available in one point and can go to multiple points without receiving feedback. The data is there, you can get aware of it and gather information.

MIR 1:

You can view it but not act on it (by sharing), it makes people and/ or data easy accessible, and it enables the search of specific information (raw data which has been turned into specific information).

MIR 2:

is about supporting collaborations inspired by context, people and systems in order to create win win situations. Is also about sharing information in new way's out of their normal context, in a playful way.

MIR 3:

The network ensures that the information system is self-sustainable and the information system enables you to follow the product to measure its effectiveness.

2. Problem Analysis

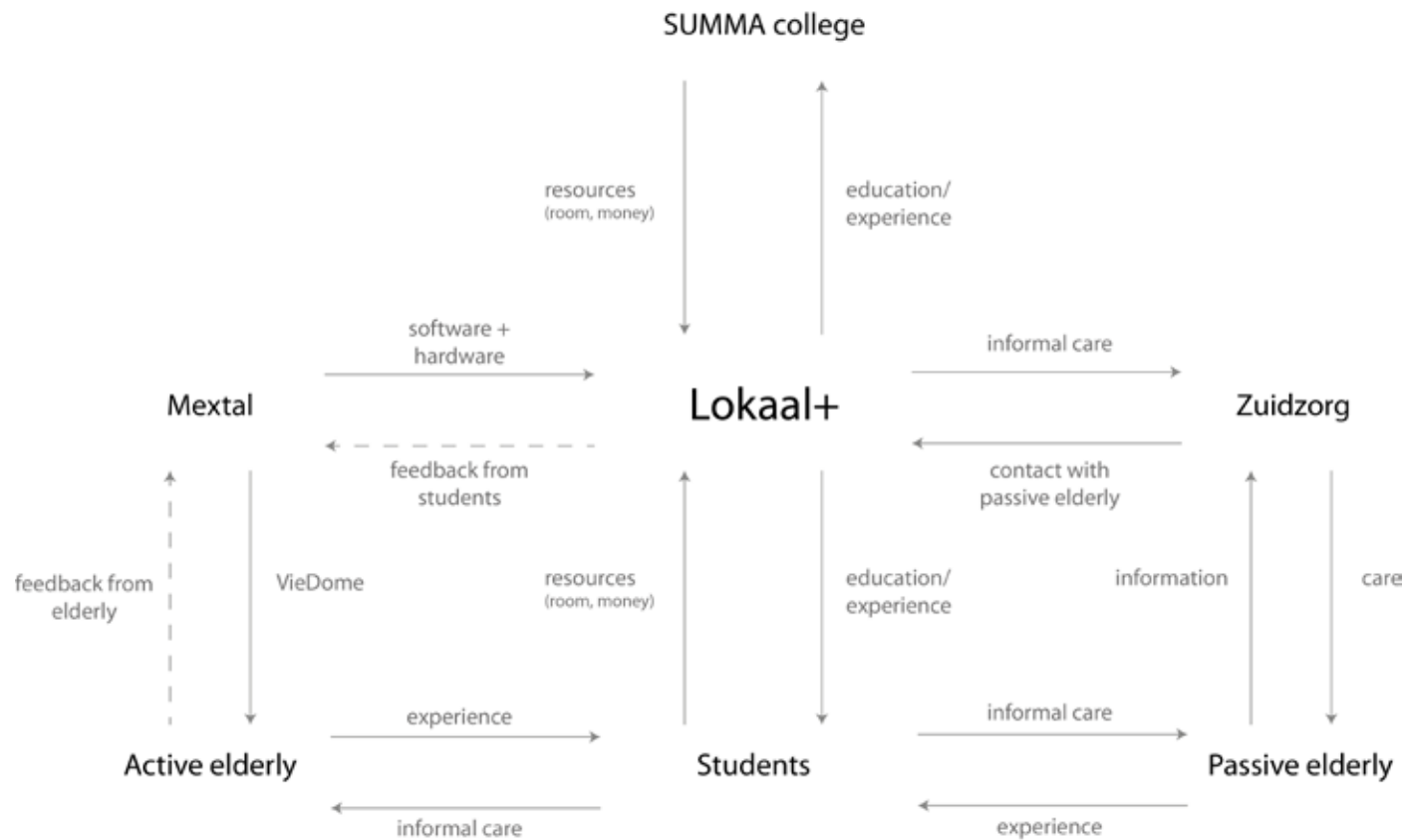
2.1 Stakeholder profile

The project description of Hilde Meijs indicates the following stakeholders for the WijkLeerBedrijf project: the SUMMA College, Calibris, the municipality of Eindhoven, care instances and Mextal. However, currently there are only a few stakeholders actively involved in Lokaal+: the SUMMA college (teachers and students) and the elderly people visiting Lokaal+. In the near future, Zuidzorg (home care organisation) will participate in Lokaal+ as well.

Each stakeholder has its own benefits for collaborating in the Lokaal+ project. The SUMMA college can provide its students with appropriate internship places and can therefore guarantee the quality of their study. For the students it is an opportunity to gain new experiences and train their skills. Elderly come to Lokaal+ because it provides them with (new) contacts and companionship. For Zuidzorg it will be an opportunity to provide the elderly with the care, Zuidzorg cannot provide due to time and money issues.

2.2 Information flows

In the previous paragraph all stakeholders are introduced. However, not only do all stakeholders benefit from participating in the Lokaal+ project, Lokaal+ also benefits from their participation. Moreover, several stakeholders have benefits from the participation of other stakeholders. For example, without the elderly requesting services, the students would not have the opportunity to gain more experience. To create an overview of all information and benefits shared between stakeholders, a map is created of the information flows. Key in the information flows is Lokaal+, therefore Lokaal+ is central in the overview. Two different types of elderly are indicated in the overview. The active elderly are still active. They travel on their own and are involved in several activities and associations. They have social contacts or participate in activities to gain new contacts. The second group is the passive elderly. They can no longer travel on their own or have lost their social connections. They do not actively seek for contact with others, although they tend to feel lonely. Lokaal+ hopes to get in contact with passive elderly due to caretakers of Zuidzorg. They come at people's homes, are familiar with their needs for contact and can introduce the elderly to Lokaal+.



Another company that is incorporated in the information flows, is Mextal due to the discovery of a design opportunity (dotted lines). Mextal has provided Lokaal+ with a system VieDome. The system enables elderly people to communicate with others from their home. In this way they can maintain social contacts when they are no longer able to travel on their own. By placing the system in Lokaal+, Mextal hopes to teach elderly how to use the system when they are still active. Information from Lokaal+ has revealed that one elderly visiting Lokaal+ already has this system. Mextal hopes that by providing the system to Lokaal+ more elderly will buy their system. However, Mextal has not provided support to Lokaal+ on using the system. The system is not adapted to their needs or to the needs of the elderly.

2.3 Design opportunities

The design opportunity arises in two fold. On the one hand, the system needs to be introduced better to elderly so they are tempted to use

the system and buy one themselves. On the other hand, students and elderly could provide feedback to Mextal about VieDome to create better systems that are adapted to the needs of elderly people.

The design opportunity is placed on the MIR map. The first part of the design opportunity is providing support to elderly people. Support can be placed in two MIR levels. One the one hand support is available for elderly to learn the new system (MIR 1). On the other hand Lokaal+ facilitates support by enabling students and elderly to share their experiences (MIR 2). For this reason support is placed in between MIR 1 and MIR 2. Due to providing feedback and collaborating with different stakeholders, views can be shared. Together they can work towards a new view (a new system). Combining views is a category in MIR 3, therefore this part of the opportunity is placed in MIR 3. A second benefit of sharing and combining views is that a shared knowledge is created. This is also part of MIR level 3.

3. First Concept

The first video is an approach to define the context of the challenge. The visit to Lokaal+ revealed that the promotion and the activities provided by Lokaal+ are well adapted to the known needs of active elderly people. Collaboration with Zuidzorg enables Lokaal+ to provide more services to passive elderly people, who have not yet contacted Lokaal+ and to discover their needs.

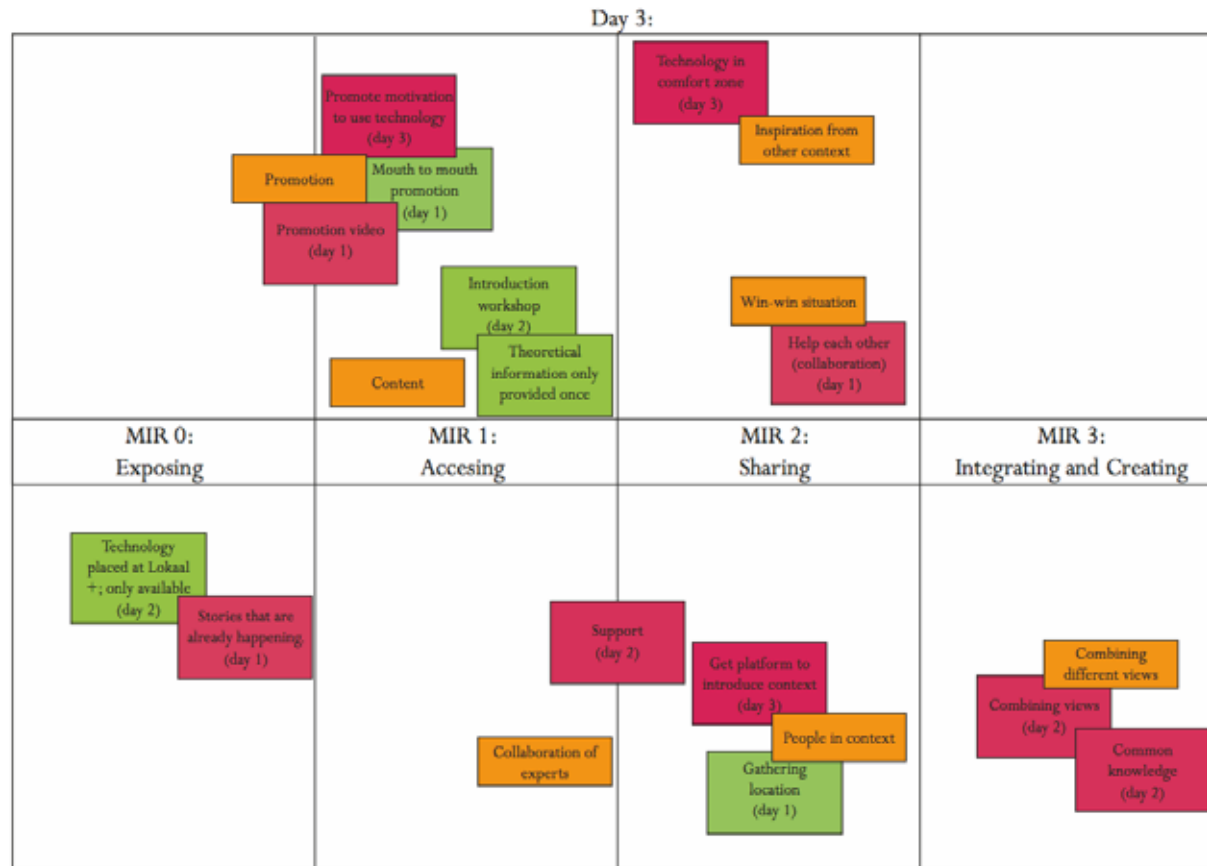
However, the role of Mextal and the implementation of the technology provided, do not invite Lokaal+ or elderly people to incorporate technology in their activities. The reason for this is that the technology was not properly introduced neither to the Summa college students nor to the elderly.

The goal of this challenge, as stated in the video, is to introduce elderly to new technologies. This introduction could be achieved through a collaboration between Lokaal+, elderly people, students and Mextal. The dialogue between these stakeholders creates an opportunity for each side to express their views and expectations as far as the technology is concerned. Together they will create new ideas and common knowledge



through a meeting platform. All stakeholders, present in the meetings, will have regular contact with other teachers, students, elderly people and colleagues involved in the project to collect their views on technology. The meetings will result in new products, such as study materials or improved devices for elderly people.

The benefits for each stakeholder from this platform are also analyzed in the video. The platform enables Lokaal+ to exchange experiences between elderly people and students, to offer different kinds of internships and to raise new allowances from the Eindhoven council. The students are offered new experiences, new learning opportunities and the ability to participate in the process. The benefits for elderly people are to learn new skills in a fun way, be prepared for the future and to participate in the process. Mextal can improve its products, promote their products better and receives more opportunities to introduce their system. Finally, the care homes benefit from the platform to receive more informal care from Lokaal+, to have less lonely elderly and the ability to apply technologies that are better adapted to elderly people.



3.1 Feedback and reflection

The concept for the platform touches the core of the challenge, but it is important that small steps are taken throughout its creation process. The first approach should be focused on a local level. All steps should analyze how each stakeholder is involved and describe what the platform is. It can be something between the VieDome system and the user (elderly), or it can be something to make the system fun for the user.

3.2 MIR analysis

On day 3, the design challenge on the MIR map was revised according to the approach presented in the video. Firstly, the goal is to promote motivation to use technology (promotion- MIR 1). Since elderly people need to get familiar with technology, the platform becomes the tool used to introduce this context to them (people in context- MIR2). To put technology within the comfort zone of the elderly, it could be introduced as part of their everyday activities to become more fun and familiar (inspiration from other contexts- MIR 2).

4. Final Concept

4.1 The platform

To define the platform a couple of brainstorm sessions were performed to expand the view on the matter. With the use of these brainstorm sessions an assembly of facts, motivations and examples of other information sharing platforms are collected. With these data each team member wrote down his/her own vision of the platform. With these shared visions and combining these visions a defined platform could be created.

The platform are a series of workshops to create activities using Viedome for students and elderly. By starting these workshops a collaboration has to be formed between all the stakeholders to share their experiences. These stakeholders will meet on regularly basis and will exist of teachers and students from Lokaal+, elderly people involved in Lokaal+, representatives from Mextal and representatives from involved care homes. All persons, present in the meeting, will have regular contact with other teachers, students, elderly people and colleagues involved in the project to collect their views on technology. The meetings will result in new and improved products.

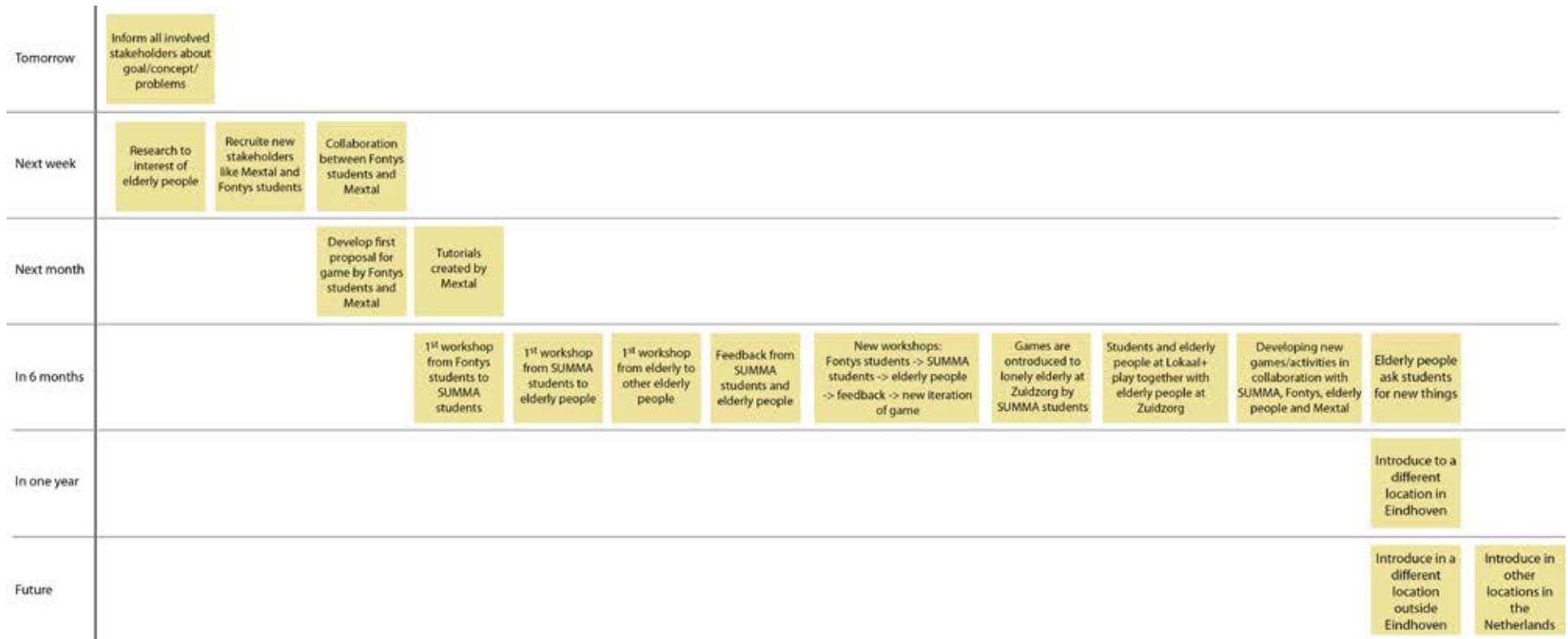
What is the platform?
Lloyd - teachers and Students
Dora - Series of workshops
on different levels
Kyra - Tool To create activities
Fan - Viedome

Compromise:

Series of Workshops to create
activities ^{using} Viedome for Students
and elderly

two kinds of workshops/support

- Information
- developing games



4.3 Product roadmap

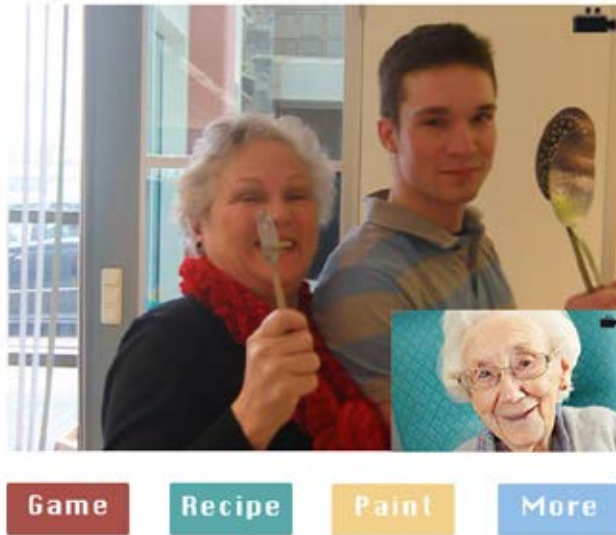
The roadmap shows steps that need to be taken to achieve the goal. In this, four stakeholders are described, who are: Mextal, students and teachers from SUMMA College and elderly people. Lokaal+ plays an important part in the roadmap. For the first step Lokaal+ has to inform all the involved stakeholders about the goal they want to reach and the problems they face and the concept that is developed. After this step Lokaal+ asks SUMMA students to research the interests of elderly. During this process Lokaal+ can involve other stakeholders, like Fontys students and Mextal to form a collaboration and achieve their goal.

In this collaboration, a first proposal for a game for the Viedome system is developed by Mextal and Fontys students. Also tutorials are provided for the first workshop for SUMMA students and teachers. Teachers will

follow advanced workshops to learn more about the system so that they can provide information to students in need. From this workshop SUMMA students can teach the new game to elderly people who will teach this to other elderly. When students and elderly get familiar with the game they can provide feedback to Mextal.

Mextal and Fontys students can use this feedback to improve the system with new games and other activities. New workshops need to be given to inform the SUMMA teachers, students and elderly about the updated system. They can again give feedback back to Mextal. When this is running, new stakeholders can be involved in this project and the system can be introduced to other regions within Eindhoven. Finally this platform can be introduced to other organisations in the Netherlands.

SocialDome



Contacts



SocialDome



4.4 Lo-fi prototyping

An example for the collaboration platform is SocialDome. SocialDome is an interface that looks like the interface of VieDome but involves activities that are more linked to the everyday life of the elderly (searching for recipes, playing games with other users of SocialDome and communicating from a distance). This interface is firstly introduced in the final video, where the application of playing a game is presented. The game can be played by multiple users that are in different places. It represents a fun way for the technology to be introduced to the elderly, by a student, as part of their everyday activities.

4.5 Acting out

To create a clearer impression about how the SocialDome interface can be introduced to elderly people at Lokaal+ and at home, an acting-out performance took place during the final presentation. The personas for the acting out involved two students of Lokaal+ and three elderly people. They are further described in the Appendix. One student and two of the elderly are positioned in the Lokaal+ premises, while the other student and the third elderly are at home. By distributing the roles to the people attending the presentation they got a more personal viewpoint of the advantages the platform can offer to the elderly.

Socialdome



Contact



Game

Recipe

Paint



5. Group Reflection

5.1 Reflection on product

Our final product is SocialDome and a network of stakeholders to provide feedback on the products developed for elderly. The network facilitates the sharing of feedback. Mextal still has to translate the views from elderly and students to products. This does not result in new knowledge and neither in combined views. SocialDome is a product that facilitates learning. It allows Lokaal+ to involve the system VieDome in their activities and allows students to teach elderly to work with VieDome. In the introduction the description of MIR 2, on which the group agreed, states: MIR 2 is about supporting collaborations inspired by context, people and systems in order to create win win situations. Is also about sharing information in new way's out of their normal context, in a playful way. We feel this MIR level suits our product best, due to enabling sharing, supporting collaborations and the creation of a win-win situation. Ideally, we envision our network to facilitate the sharing of views, which will lead up to combining these views and creating shared knowledge. The future concept would therefore be placed in the third MIR level.

5.2 Reflection on process

Introduction

The process can be defined into 3 phases. First, the context was explored, the challenge was defined and the involved stakeholders were mapped out. In the second phase, the gathered information was processed and analyzed, which caused the possibilities to become more clear. This was documented in a short video which was presented in the middle of the week. Finally the gained feedback on the video helped us to go deeper in the solution, and present a clear scenario of how we see our platform

working. During this process many decisions were made. This reflection will zoom in on some of the details and the gained insights.

Context exploration

At the start of the exploration, we decided to go into the context and actively take part in the activities. Thereby we divided different roles for each team member to participate in different activities. After this experience we combined all different views which gave us a better overall view of the context. The problem was that the international students in our group missed the details because all conversations and the report were in Dutch. Also the context described in the paper differed from the context that we experienced in Lokaal +, which led to the consequence that we had to take more action to clarify the context.

Translation context to concept

The information from the context was translated into current and possible information flows between stakeholders. Mapping this gave us already insights into where the biggest opportunities were. We decided to translate our findings into a movie. This process of making the movie was a bit chaotic. We needed a lot more time for it than we expected in the beginning. In the end it would have been better if we did not try to make the video too perfect, because the main goal for the video was to gain feedback on how to continue.

Movie wednesday

The movie on wednesday only focussed on the context and the possibilities in this context. This was a conscious decision because we needed feedback on which direction to go on. We received the feedback to look what it would mean for all the different stakeholders, and to zoom in on the details. How can you introduce technology better for elderly? We already touched this subject, but the examples were missing.

Defining platform

We decided our concept should be some kind of a platform that combined the insights from all the different stakeholders involved. We started our process diverging: we did brainstorms to recap all the information we had, we looked at examples from other platforms, and what this could mean for our platform. At that point we noticed that we all had different views on how the platform would be. We decided to all write our vision down, and combine these into one direction.

Product roadmap

To make it more explicit we decided to see what the impact of our envisioned platform could be for the future in a product roadmap. This gave us insights in what the end result could be. To define the roadmap even better we made an experience flow for every stakeholder involved. On different touch points we looked what it would mean for the general roadmap.

In the roadmap and the experience flow we discovered that the relation between elderly and students was key towards the introduction of new technologies for elderly. The information from the roadmap was too much to explain in a video, therefore we decided to set the scenery of the platform, and then focus on the relation between the students and the elderly in an acting out.

Acting out

Through our focus on this specific touch point in a clear scenario the audience was more involved. This was an essential decision in our process. It made the story specific enough to express what we really meant. Because we already set the specific context of the scenario in the movie, the acting out was good to follow up for the public.

5.3 General Reflection on module

While reflecting and looking back we can see how our challenge fits really well in designing open innovation spaces. We missed some good examples about open innovation spaces during the introduction, in order to relate our challenge to other challenges.

The MIR tool was good for us to start the reflection and discussion. But we don't see it as something that is perse needed for the reflection. Due to the daily repetitions of the reflections, we all had the same understanding of where we came from and where we were going to. The MIR tool itself helped to define the context better and to see opportunities for different MIR levels. However, it did not help us in developing the concept further. What helped us further was the feedback received and the discussions around the MIR analysis.

We expected more stakeholders to be highly involved with the challenge, but they were not involved in the project yet. We had to assume a lot during the process because we did not had information about how the stakeholders considered this challenge. Maybe this was our responsibility to figure out, but due to time constraints we decided not to go too deep into the exploration. The possibility we had, to explore the space of Lokaal +, helped us to see how all the different stakeholders related to our project. Within Lokaal+ we gained information from the teacher, students and elderly and how these stakeholders related. The relations to Mextal, the local municipalities, Zuidzorg, etc were lacking. We hope that through the video we made all the stakeholders more aware of the challenge they are facing, in order to achieve a higher involvement with future students.

6. Feedback

During the final presentation the client, Saskia van Erven-Reijmer from Lokaal+, provided feedback on our product and placed it within the MIR map. Also the client from the other case, ING, provided feedback on our product. This part summarizes the feedback provided by both clients.

6.1 Feedback from Saskia van Erven-Reijmer

Key to this product is doing things together, do things joined. It is about sharing experiences and knowledge from all stakeholders. That is why it is placed in MIR level 2. It is placed in the category people in context since it involves the people of Lokaal+

Secondly, it is easy and practical. It makes the system and the information accessible, therefore this characteristic is placed in MIR 1.

6.2 Feedback from ING

The concept of introducing through games is playful. It supports accessibility since it lowers the threshold for participation. This would position playful in MIR 1. However, it is included in daily activities. It is a social way of introducing new technology. This would place it in MIR 2, since it is about sharing, it is motivating to use the system and invites for continued use. In the group discussion the decision is made to place it in MIR 2.

The next characteristic is that it is part of the lifestyle. This in line with the previous characteristic, therefore it is placed in MIR 2. It is positioned in the category people in context due to fitting to the people's lifestyle.

The product addresses needs. The network allows for sharing views and needs. It combines different views, so it is placed in the MIR level 3.

The terms needed for using the system are introduced while working with the system. This is about sharing knowledge, since the student shares

his knowledge of the terms and the system while working together with the elderly. It creates a win-win situation, but it is outside the familiar context (it addresses new terms). Therefore this characteristic is placed within the categories win-win situation and out of context in MIR 3.

Social and technological skills are required. Both the elderly and the student need to communicate with each other to receive new knowledge. Similar technological skills are required to handle the system. The skills are needed to access the information. It is placed within MIR 2 and a new category is created within this level: skills of people. It builds on an existing system. It is a familiar context, which is opposite to out of context. Therefore it is placed in MIR 2.

7. Apendix

7.1 Personas for acting out

Student 1: Anne van de Berg

Anne is 21 years old. She studies Social Cultural Care and helps regularly to organise and guide the cooking activity. She is motivated to help and likes the contact with elderly. She especially likes to organise and create new activities for elderly. She has been introduced to the VieDome and SocialDome system and received the internship assignment to teach to elderly people to use the system.

Student 2: Milan Kundera

Milan is a 18 year old student in the second year of his study Social Care. He just started his internship at Lokaal+. Milan is very interested in technology and was curious to the VieDome system. Other students introduced him to the system and how to involve elderly. Milan is eager to teach elderly people to use the system. He is a bit disappointed that his job today is to go to people's home to clean.

Elderly 1: Joost van den Broek.

Joost is 83 years old. He lives alone in his apartment close to Lokaal+. He is passionate about cooking and loves to try out new recipes. He participates in the cooking class is to meet other elderly. Joost does not like technology and sees no need to use it. When he does not succeed in operating the computer, he becomes impatient and a bit grumpy.

Elderly 2: Els van der Meij.

Els is 76 years old. She lives in Eindhoven, while her children live in Rotterdam and Deventer. She is divorced and feels quite lonely since she cannot walk that well anymore. She visits Lokaal+ several times a week and once a week a student comes to clean her house. Els has bought a VieDome system, however she does not really know what to do with it.

Elderly 3: Karel Visser.

Karel Visser is 68 years old. He has retired a few years ago and is enjoying his hobbies. A friend of him introduced him to the cooking club to get to know new people. He found it to be so cosy that he comes every week to join the cooking activity. Karel is very active and likes to stay up to date. He is familiar with computers and uses internet regularly.

One student and two of the elderly are positioned in the Lokaal+ premises, while the other student and the third elderly are at home.

7.2 The scenario

At Lokaal+, Students and elderly are preparing to cook together.

Elderly 3 asks elderly 1 where he was the previous week, as he missed a really good meal.

Elderly 1 asks Student 1 for the recipe from last week.

Student 1 invites the elderly to look the recipe up in the computer.

The student 1 shows the elderly1 how to open the computer.

Student 1 shows Elderly 1 how to find the recipe the next time.

.....

Student 2 goes to clean a house.

Elderly 2 complains about being lonely and not being able to go to Lokaal+ due to the weather.

Student 2 suggests to elderly 2 to join the cooking at Lokaal+ through VieDome.

Then student 2 explains to elderly 2 how to connect to Lokaal+.

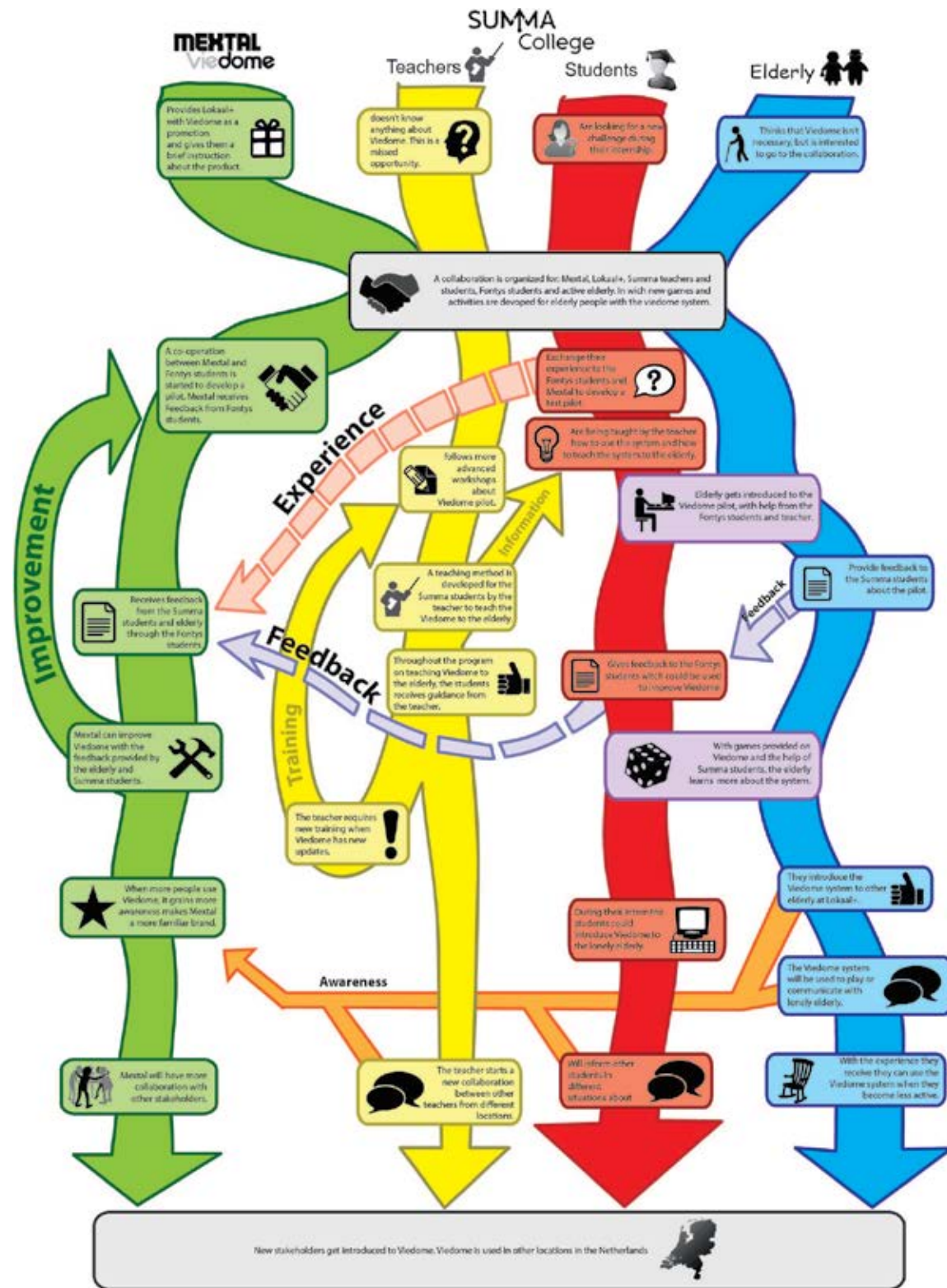
Elderly 3 at Lokaal+ (already familiar with VieDome) hears the call and answers it.

Elderly 3 explains the activity happening at Lokaal to elderly 2.

Elderly 2 gives positive feedback to student 2 about finding company.

7.3 Experience flows

To understand better what other stakeholders will undergo in this process, an experience flow is created. In this the stakeholders elderly, students, teachers and Mextal are examined on which steps they have to take and what their feelings are during these steps.



8. References

[1] Chesbrough, Henry William (1 March 2003). Open Innovation: The new imperative for creating and profiting from technology. Boston: Harvard Business School Press. ISBN 978-1578518371.

[2] <http://www.100open.com/2011/03/open-innovation-defined/>

