careables.org

# Deliverable 1.1

## Engagement strategy & documentation of events


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# 1 Executive Summary

Engagement of target groups is a core aspect of Made4You. As one of the aims is to build an ecosystem by linking existing local communities of citizens with disabilities and their families, healthcare professionals and makers it is important that one of the core strategies of the project is to interact with these communities and establish collaboration between these separate communities to develop their own open source and license interventions. Communication and engagement via different means are core to reach the target groups and in workpackage 1 we focus on a series of events as a core means to engage and collaborate.

In this deliverable we first describe how we plan to engage the different stakeholders with the final aim to make them users of the careables services, namely co-design sessions and the careables platform. This document has been elaborated in close collaboration with the team responsible for project communication, dissemination and outreach. It is important to stress that depending on the context and the target groups different engagement methods should be applied. The Made4You partners have defined a strategy of how to move people from becoming aware of careables to being informed and finally to actively participate.

During the first year the project team already held 25 open days, 28 workshops, 4 educational events, 7 maker gatherings and 42 presentations of the project to diverse audiences. During the Made4you open days and even during presentations, hosted at different locations, many ideas for careables were developed. The open healthcare solutions our participants have come up with a very diverse and range from a smart pill box to a smart toy and pimped cane for a blind person. Some of these open solutions are presented in this deliverable.

Drawing from first experiences we developed some guidelines on how to best organize careables engagement events. These guidelines are included in this document and should help other maker spaces or open healthcare interested audiences to start their own co-design sessions for open health and care solutions.

# 2 Introduction

Made4You facilitates co-design of open healthcare for people with physical limitations. People's needs regarding their physical limitations are personal, subjective and diversified. To customize healthcare solutions, a process of personalization is needed. Currently such personalisation is not often provided due to industrial focus on 'one size fits all' solutions. Industrial innovation budgets are often allocated to development of solutions that serve many people, while concepts for solutions that only serve few are left disregarded because they are labeled as commercially unfeasible. To overcome this lack of development of meaningful and more individually tailored healthcare solutions, the Made4You project aims[1] to:

1. Build an ecosystem, linking existing local communities of citizens with disabilities and their families, healthcare professionals and makers and establish collaboration between these separate communities to develop their own open source and license interventions.
2. Provide access to open source and digital fabrication tools enabling citizens with disabilities and healthcare professionals, in co-creation with designers and makers (DIY communities and makerspaces) to create customized self-made solutions to improve quality of life or services provided.
3. Improve the accessibility of open source products; co-production of products that are tailored to people with special needs or disabilities as well as healthcare professionals and bypassing the limitations of the classical industrial production.
4. Foster the ecosystem through open exchange of knowledge, case stories and manuals. Within the DIY approach, local production and global knowledge sharing is key.
5. Build guidelines that allow anyone to replicate formats everywhere, considering the socio-technical aspects as well as relevant legal and regulatory frameworks, quality standards, IPR implications, security, safety and privacy issues.

The long-term goal of the Made4You project is to affiliate a community of designers, users, fablabs and maker-spaces who develop similar projects and replicate events and activities in various cities all around Europe or even globally.

In creating a critical mass of projects that can be used and build upon: a knowledge-sharing platform that aims to achieve mass adoption and global impact will play a critical role. However, the platform will only be of value if it can be deployed as an effective tool for communities and individuals that participate in this bottom up type of healthcare innovation. Therefore, this document offers a strategy for engaging this community, and choosing types of communication that will reach relevant stakeholders. Doing so will answer questions like: Who exactly are we talking about when we say community?", and "What are the roles of project partners in actively involving these people?". These questions are of great importance because the success of the project will coincide with the degree in which

[1] Source: GA part A

can support our community members in facing social, physical and emotional challenges. By elaborating on these questions, this document allows for an engagement strategy to be formulated. The aim of the strategy is to define how to elicit the needs of existing communities and how to interact and involve new communities and stakeholders[2].

We envision our community engagement strategy to be strongly entwined with the subject of communication. Therefore, this document must be considered strongly related to external communication, being followed up with more detailed internal guidelines by the D5.1 Awareness raising, outreach & dissemination report. Other main deliverables that are to some degree coincide with this engagement strategy, and its later execution are:

| Deliv Nr. | Deliverable name | Lead |
|---|---|---|
| D1.2 | Final documentation of events, maker gatherings & trainings incl. Community Map | 2 - WAAG |
| D1.3 | Training kit | 2 - WAAG |
| D5.1 | Awareness raising, outreach & dissemination report | 4 - GIG |
| D5.2 | Adoption, Exploitation & Sustainability Report | 4 - GIG |
| D5.3 | White paper on legal guidelines | 7 - KUL |
| D5.4 | Final Dissemination and Sustainability Report | 4 - GIG |

Besides providing a more specific and locally adaptable approach towards community engagement, this document reports on activities that have taken place, and a selection of projects that have been developed as case studies within this phase of the project.

# 3 Defining community engagement

The central definition of community engagement is: ''A planned process with the specific purpose of working with identified groups of people, whether they are connected by geographic location or specific interest, in an online or offline environment. Furthermore, community engagement is both a process and an outcome.[3]"

But what exactly is a community? By starting with a clear answer to that question first, we allow ourselves to further clarify our understanding of community engagement. To Habermas, community is the lifeworld, where 'we communicate with others, deliberate,

[2] T1.1 Formulated engagement strategy from GA part A

[3] *https://aese.psu.edu/research/centers/cecd/engagement-toolbox/engagement/what-is-community-engagement*

come to agreements about standards and norms, pursue in common an effort to create a valuable form of life – in short, the lifeworld is the world of community'[4].

A common definition of community emerged as a group of people with diverse characteristics who are linked by social ties, share common perspectives, and engage in joint action in geographical locations or settings[5].

Communities can take many forms. From local neighborhoods to online self-organized communities. In Made4You we use a community approach to connect people with the same interest, or goal where they might not be aware of (yet). When engaging with existing communities to build a 'new' one, you look for the commons goal that unite different communities. When defining what a community is: the common goal, interest, background or feeling of identity are useful parameters to look for.

Since the communities that are important for Made4You are not (primarily) geographically determined, the 'community of place' approach is not really applicable here. More important approaches to communities are the community of interest and the community of practice.

- **Communities of interest** are defined by people with a shared interest or background (i.e. Action group, Patients' Groups). They can also be defined by people with protected characteristics (i.e. race, gender, disability, age, religion etc.) This is a group of people interested in sharing information and discussing a particular topic that interests them. Members are not necessarily experts or practitioners of the topic. The purpose of the community of interest is to provide a place where people who share a common interest can go and exchange information, ask questions, and express their opinions about the topic. Membership in this community is not dependent upon expertise – one only needs to be interested in the subject.

- **Communities of practice** are communities that have a practical or professional interest in the topic in common like bus drivers, air quality experts or mobility planners. The purpose of a community of practice is to provide a way for practitioners to share tips and best practices, ask questions of their colleagues, and provide support for each other. Membership is dependent on expertise one should have at least some recent experience performing in the role or subject area of the community of practice. You will reach these communities more because of their professional interest or expertise, than their political background or strong opinion.

[4] *(in Bellah et al., 1998, p. 17)*

[5] *https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1446907*

# 4 Community engagement within Made4You

Community engagement within Made4You is based takes place on both a local and global level.

On the local level, the partner labs and makerspaces host meet-ups. Stakeholders are invited to join and share their ideas and experiences on open healthcare, and the progress of the project is presented. Fab Labs welcome citizens to get acquainted and collaborate during the Open Days. Each partner lab will program Open Days on people-centered healthcare services and open med-tech solutions. Furthermore, open calls to participate are initiated to engage a broader audience of citizens, healthcare professionals and makers, engineers and designers.

Primary stakeholders on the local level are: citizens with physical limitations, communities of patient groups, networks of carers and healthcare professionals, and communities that are actively developing open healthcare solutions. Fab Lab and maker communities, communities of hackers, social designers and artists are also stakeholders and participate in the activities on the local level.

However, the maker- and Fab Lab communities are also part of a global network. On the global level, the community engagement is driven by the Made4You-platform and the communication channels of the partner Fab Labs and GIG-network. Maker gatherings are organised throughout the project to bring maker community members together to inspire, share experiences and establish a trusted atmosphere to intensify the collaboration.

The first year of the project the consortium-partners will gather. In the second and third year, other Fab Labs and maker community members worldwide should also participate.

Lastly, biomedical engineering students, students in healthcare or medicine, design or art students and Fab Academy students are educated with training kits in the co-design and development approach of Made4You.

To further structure and understand the engagement process on both the local and the global level, the following steps will be followed.

1. *Define purpose and scope of community engagement*
2. *Define target group*
3. *Map the stakeholders*
4. *Frame the message*
5. *Choose the engagement methods*
6. *Engage the community*

These points will be elaborated upon in the next chapter.

# 5 Engaging the community

## 5.1. Define purpose and scope of community engagement

Community engagement could be executed on different levels. The levels as described below can be seen as a process and a result to work towards, since community engagement is both a process and an outcome.

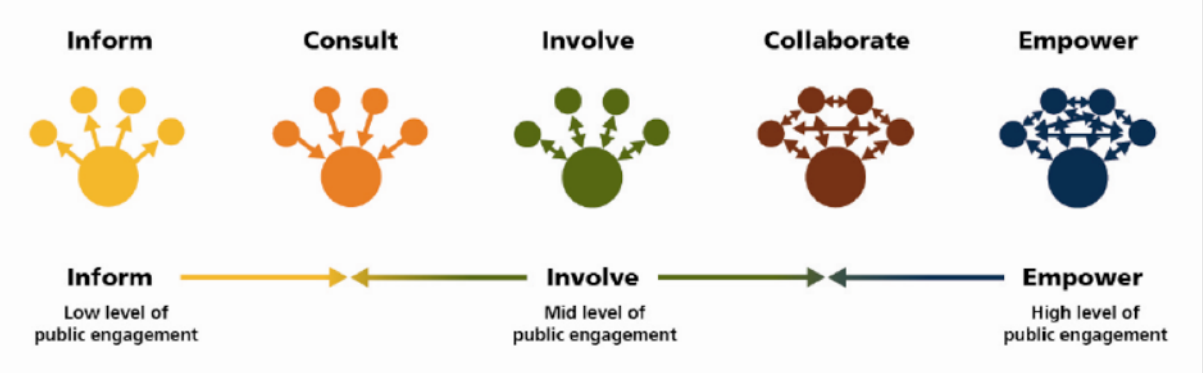



*Figure 1: Levels of engagement*

Made4You has high ambitions in community engagement. Empowerment of communities is the ultimate goal. But the steps before the stage of 'empowerment' should be executed first in order for empowerment to truly happen.

Ideally, the communities will go through all these different stages. Informing people about our project, and creating awareness around the project and the activities that we will execute in the coming three years are therefore essential. Our goal is to adapt the questions that are present in the community of care professionals and users, so consulting them on the challenges is a logical next step. This is not the end of the process, since designing the solutions should involve both makers, users and care professionals. In fact, one can envision having to go through these individual steps per stakeholder subgroup. Collaboration between these groups will be the focus of the online and offline community engagement efforts. When the Careables platform is up and running, and community members are able to suggest, develop and execute their own care solutions, empowerment is reached.

## 5.2. Define target group

With the aforementioned concepts in mind, we introduce a circle model to plot the different stakeholder groups on. This model can be used to clarify the different types of engagement that one can imagine, per stakeholder. The model is introduced below.

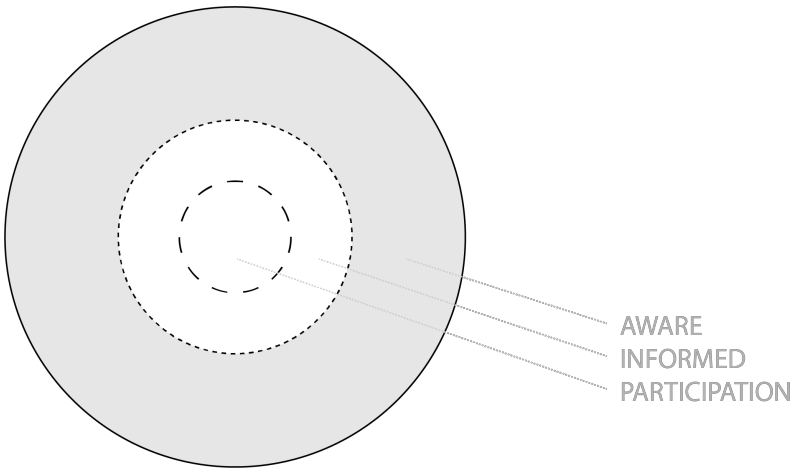



*Figure 2: Circular engagement model*

The model consists of three circles. Each place in this circle is now further elaborated on:

- **Outside the circle** // People who are not aware of the platform or project and will not automatically understand the value of combining open source maker practices with health care related challenges. This group should be presented with a clear explanation why this unique cross-over and multidisciplinary approach is worth learning more about. We aim for this group to get aware of the concepts and ideas that are the base for Made4You.
- **Aware** // People in this layer of the circle are more aware of communities like the 'Maker Movement' and/or the need for tailor made health care solutions. They might have seen open source hardware project benefiting society before and can imagine the power of the cross-over between these worlds.
- **Informed** // People who are informed had an interaction with Made4You in some form. They've seen a presentation, online content or had contact with people involved in the project. For these people, who are aware of the project plan, and informed on some of the activities will be triggered to participate.
- **Participant** // Participation in Made4You could have many forms. This can be joining an event, collaborating on the platform or sharing challenges with the community. The main goal of participation relates to the platform Careables. Participation leads to challenge identification, prototyping and development. That will be the focus point of the engagement strategy.

### Target groups & communities

The target group is built up out of different communities we'll engage with in Made4You. The goal is to get as many of your community members to the center of the circle (participation). To reach this goal we look at ways to get people through the stages that are defined in the layers around the center of the circle. We also distinguish between different types of organisations, domains, or communities that individual stakeholders are a part of for this has to be taken into account.

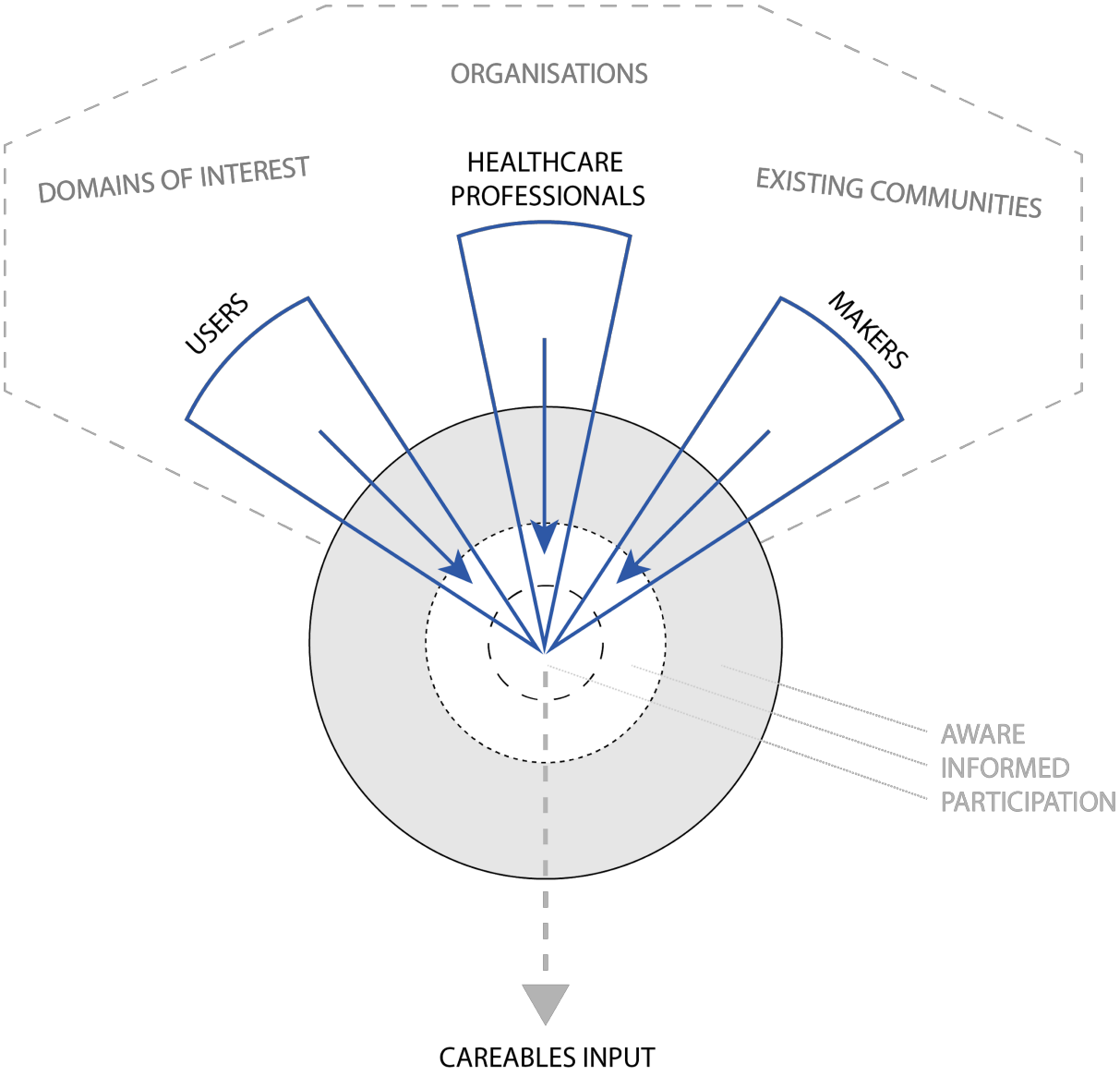



*Figure 3: Target groups and communities*

## 5.3. Mapping the stakeholders

When mapping stakeholder we should distinguish between a collective and an individual level. Within each level, several stakeholder types have been identified, that will be further elaborated upon:

### Mapping individual participants

- Users
- Makers
- HealthCare professionals

### Mapping collectives

- Domains of interest // Maker movement, Critical making, DIY/DIT culture, Open Source, Rapid prototyping // Learning possibilities.
- Organisations // FabLab network.
- Existing communities // #WeAreNotWaiting

The monitoring and mapping of all stakeholders will be done as a separate project outcome. All partners will contribute to the creation this overview.

## 5.4. Frame the message

When framing the message, we use the model we introduced earlier as a starting point. This model illustrates the different levels of engagement. In this paragraph, different messages are formulated for different levels of engagement that we aim for.

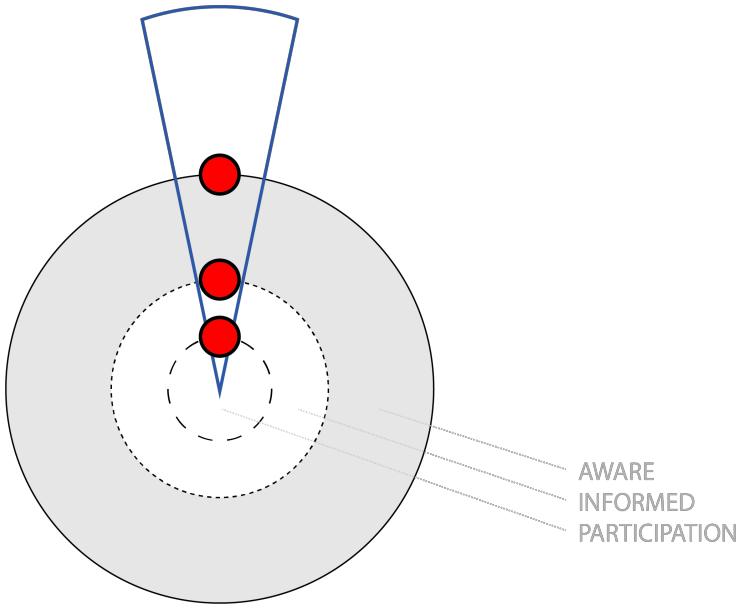



*Figure 4: Circular engagement model*

The red dots indicate the points of increased engagement. These are moments:

- From unaware, to aware
- From aware to informed
- From informed to participating

On the following pages, three tables have been drawn up to formulate key messages for each specific case per key stakeholder.

*Table 1: Key messages for healthcare professionals*

| | unaware to aware | aware to informed | informed to participation |
|---|---|---|---|
| **Health Prof** | Maker Movement has a lot to offer for healthcare<br><br>The connection between healthcare and the maker movement, fablabs and makerspaces is a groundbreaking new combination. Innovation in healthcare tends to be slow, expensive and inefficient.<br><br>Makerspaces have the potential to change the fabrication of hardware drastically. Prototyping, reproduction and experimentation is opened-up for basically everyone.<br><br>With a crossover between these two worlds, thinking about care solutions will change. Solutions have the potential to be tailor-made, quickly prototyped and easy to reproduce.<br><br>This means that your work as professional can potentially improve in terms of quality of care and satisfaction of the users. | Improve your work as a professional with more tailor made solutions.<br><br>Linking the ideas & principles from the maker movement to care solutions will be done on community-based events, channels and platforms.<br><br>This will mean that we'll facilitate the cooperation between healthcare professionals, users and makers.<br><br>In this cooperation and during these meetings (online & offline), the different perspectives of these groups will eventually co-create better solutions.<br><br>This project will organize as many 'touching points' between the different communities, to be able to kick-start a new way of healthcare innovation. | Cooperate on concrete care solutions with users and makers, and share with colleagues.<br><br>Find a place where you can regain control of a big part of your professional environment<br><br>Contributing can be done through the careables platform, the meet-ups, the challenges and the open days. If you are looking for concrete new solutions, insights or inspiration for your work, join on of the meetings nearby and join the conversation. If you have a concrete idea on a new or improvement of a care solutions? Even better! Join the development trajectory in a FabLab near you!<br><br>You insight as professional can greatly benefit the knowledge on what's necessary, what works and how to fit the solutions into the daily life of professionals. |

*Table 2: Key messages for users*

| | unaware to aware | aware to informed | informed to participation |
|---|---|---|---|
| **User** | Maker Movement has a lot to offer for healthcare and your life<br><br>The connection between healthcare and the maker movement, fablabs and makerspaces is a groundbreaking new combination. Innovation in healthcare tends to be slow, expensive and inefficient.<br><br>Makerspaces have the potential to change the fabrication of hardware drastically. Prototyping, reproduction and experimentation is opened-up for basically everyone.<br><br>With a crossover between these two worlds, thinking about care solutions will change. Solutions have the potential to be tailor-made, quickly prototyped and easy to reproduce.<br><br>Explore the options of a FabLab and see how this could improve your life with tailor made solutions, that you help design, develop and test. | Take the opportunity to execute the idea you always had to improve your life.<br><br>Feel empowered by understanding the steps and possibilities that you can take yourself<br><br>Linking the ideas & principles from the maker movement to care solutions will be done on community-based events, channels and platforms.<br><br>If you're a user of care solutions that are hard to use, ugly or simply not around? The maker movement is present everywhere around the world experimenting with digital fabrication techniques, that can benefit you. This project will allow you to get in contact with them, cooperate on care solutions for you and learn from each others expertise. | Take your idea into the FabLab, design it, improve your daily situation and share with the world.<br><br>Regain control of your situation by being able to face physical, emotional, and social challenges and design practical solutions for your problems.<br><br>You will have the unique opportunity to meet makers, care professionals and like-minded people, to cooperatively design improvements for your daily life.<br><br>In hackathons, design challenges and open days you will meet people that can help you design the idea you always had but couldn't execute yet. |

*Table 3: Key messages for makers*

| | unaware to aware | aware to informed | informed to participation |
|---|---|---|---|
| **Maker** | Including healthcare into the maker movement will allow FabLabs to live up to their potential.<br><br>The potential of FabLabs and makerspaces is huge, but has not fully reached the world of healthcare yet.<br><br>This is about to change, since Made 4 You wants to do just that. To be able to make more social impact with open digital fabrication, a crossover is organized.<br><br>You as a maker can potentially improve care solutions dramatically by making them more tailor-made, cheaper and easy to re-use for many more users in the future. | Inviting care professionals and users will foster the creativity of design.<br><br>Linking the ideas & principles from the maker movement to care solutions will be done on community-based events, channels and platforms.<br><br>This will allow you to cooperate with user and care professionals that want to improve their daily routine and/or care solutions.<br><br>You'll be able to increase the impact of FabLabs to an extent that users and care professionals really benefit from solutions you help to design | Cooperate, design and share your ideas on the worldwide platform.<br><br>Take a step towards meaningful innovation by exploring multi-disciplinary co-creation on a platform that enables worldwide cooperation.<br><br>This project will invite people from different backgrounds inside a FabLab to work on practical solutions for their professional or daily challenges. During hackathons, open design challenges and many other events, you'll be able to create designs that will reach many others through the Careable platform, that allows to share you open source designs and generate input from the worldwide maker community. |

## Framing for existing organisations and communication.

One important detail in communication is to respect the organisation or communities that different stakeholders come from. We will fail to position our platform as a tool if using this tool means that active community members perceive that they give up part of their own identity. We must therefore allow not only for strengthening collaboration, but also for strengthening the communication and identity of the community members involved. That means the platform should also functionally designed to do so.

If a member of an existing community joins meetings, open days and collaborates on the Careables platform it should be clear that Made4You has something to offer for the communities that they are already a part of as well. These benefits can be summarized by the following three points.

**Connect**

Working cooperatively on this project at the Careables platform will allow you and community members to meet representatives from other domains that could inspire you. This might allow you to set up new partnerships, or connect to new potential members of your own community.

**Strengthen**

It will help you strengthen the community by being part of something bigger and be able to promote your community in a new context. With new insights, experiences and connections, communities can grow, develop and get stronger when using the Careables platform. Becoming visible in a new context can improve publicity for the case they're working on.

**Deepen**

Working in the context Made4You can deepen communities' expertise on a new level. With new input from like-minded people, but also new insights from other domains, will allow communities to deepen their expertise in their own area and develop new skills on other ones. Communities that join have the opportunity of learning skills, improving their existing skill and teach theirs, to a new group of people.

Potential careables users from existing communities and organisations should feel that being a part of the Made 4 community will allow them to also remain representative of their own community or organisation. It's a matter of "What's in it for me". Therefore individuals we try to integrate in the bigger community should be helped to clearly identify how Made4You connects to their needs on a personal level, but at the same time it must also be evident how Made4You strengthens the existing communities of which they already are representatives.

## 5.5. Choose engagement methods

This section introduces the multiple engagement methods that have been identified. These methods are presented as they have been introduced in WP 1 and 5 of the grant agreement of the project. Doing so will ensure continuation of the original proposed direction, thus enabling us to not be distracted from that starting point. Repeating these points here will also allow for other communities and individuals to understand which activities can and will be deployed to spread Made4You vision and activities.

### Outreach materials, tools and Website

Using the documentation of results of the initial meet-ups hosted by the consortium partners as described in WP1, outreach material for each of these target groups will be developed to enable addressing each target group in a directed and relevant manner. These will be used to support WP1. Before the creation of the platform, a project website and design will be developed. Visual materials like the CI will be provided for all project partners conducting outreach activities (This will include a presentation template for all to use). The project website will include a blog, newsletter and information relevant to each of the target groups. The primary language will be English. Specific media and outreach materials will be translated into the different national languages to ensure the reach of the broader audience[6].
This will be coordinated by GIG between M1-4.

### Host (Meet-ups), presentations and experience workshops

Stakeholders are actively invited to join the conversation on open healthcare solutions, the role of people with physical healthcare needs and healthcare professionals in co-design and delivery of such products and services. They also share ideas or projects they are working on. In experience workshops participants, will ideate on a solution and rapid prototype into a tangible object. The number of Meet-up group members will grow to 2.000 members. Each hub will, furthermore, present the Made4You ambition through 75 presentations and experience workshops on location. [7]

The paragraph above comes from the WP on community building. However, the communications WP also adds this goal by also prescribing outreach to wider stakeholder groups on an EU and international level, in particular legal experts, policy makers and relevant public sector stakeholders to communicate the results from WP6 and stimulate broader discussions around critical ethical and policy relevant aspects. To this end, direct targeting of responsible actors on the EU level through correspondence, publications (white-paper) and non-public meetings will be part of the activities as well as submitting suggestions for panel sessions, discussion rounds and round-tables at relevant public events and conferences. Such events can include conferences focused on health provision, health innovation, digital fabrication and challenges to policy making through digital

[6] T5.1.2 of GA part A
[7] T1.2.1 of GA part A

transformation. In the series of debates and presentations 1.000 participants in total will be involved[8]. This task will be carried out between M19 and M36 and is led by Waag.

A logical result from this ethical reflection will be the white paper on legal guidelines, which will be published on possible approaches to address legal aspects in co-producing open source healthcare solutions. The white paper will be coordinated by GIG and will be made available through the project website in M24 and submitted for presentation at a conference for Co-Design experts (such as Participatory Design Conference, International Conference on Design Creativity or Social Innovation Research Conference). Next the publication will be distributed amongst key stakeholders,

In order to spread wider public awareness, the project will connect with other communities both professional and general interested public through different forms of events. These events can include hosting open health specific areas at maker-related events attended by the general public as well as community members such as Makerfaires, re:publica or the annual Fabconference[9]. This will be coordinated by GIG between M7-36.

## Open Days

Each hub will host regular open days specifically targeted on open healthcare. These open days are aimed to start the development, prototype solutions with citizens or healthcare professionals, but are also aimed to inspire stakeholders and general public. The hubs (in Amsterdam, Berlin and Milan) host 100 Open Days in total throughout the project. The format to program Open Days dedicatedly for healthcare is published online, and actively promoted among affiliate partners. The network of affiliate partners will also organise 100 Open Days throughout the project. [10] During the kickoff, partner labs agreed on each taking on a third of the total amount of Open Days, keeping into account that other partners also have the ability to organise some open days independently.

## Open Call

To boost the ideation of solutions each partner lab organises an open call. The best concepts will be further developed and prototyped (in WP2). The Open calls take place in Amsterdam, Berlin, Milano, and at two GIG makerspaces. The program entails the goals, set up and activities to host this Open Call. To ensure that outcomes of the Open Call feed into the activities of WP2, guidelines for the registration are provided. Each hub can adjust to their local context, if necessary. The results of the Open Call are gathered and integrated into an overview. The outcomes are used in the Outreach (WP5) and selected solutions join the co-design process in WP2. [11]
WP1 related tasks coordinated by Waag between M3-36

[8] T 5.2 Of GA part A
[9] T5.3 of GA part A
[10] T1.2.2 of GA part A
[11] T1.2.3 of GA part A

## Maker Gatherings

Although Fab labs and makerspaces have numerous platforms and networks at their disposal to collaborate, these opportunities are seldom used in full. The global experience exchange stimulates the knowledge exchange between the partner labs on type of solutions as well as documentation processes. Specific interest is the exchange of approaches to open healthcare of non-EU labs with the European labs, especially since GIG network members have already extensive experience in global collaboration and knowledge transfer. Several gatherings are organised in different locations. During the first year, GIG network members and Fablab teams attend. Furthermore, online collaboration tools are used to keep the momentum going. In the second and third year of the project, other Fab labs and makerspaces around the world participate. The total number of labs and makerspaces will grow to 50 labs. [12]
Task coordinated by GIG between M3-36

## Education activities and student engagement

In this task, we reach out to the communities of students. This includes students in the field of medicine, paramedical professions, design & arts, biomedical engineering and fabacademy. The aim is to educate them in the process of codesign and delivery of people-centered healthcare solutions and to teach them how to be involved in this participatory design process within their expertise. The knowledge exchange between labs, lessons learned from existing communities
and the insights of the pilots are fed into the training module. [13]
Task coordinated by WAAG between M3-36

## Engagement with existing open healthcare communities

A first inventory of worldwide organisations and communities that are active in open healthcare is developed in preparation to this proposal. All partners reach out to these communities to connect and share insights on their work. Partners will continue to scout new initiatives and communities throughout the project.[14] All communities that Made4You has established a collaboration with are visualised in a community map. The map will be incorporated into the Made4You platform. [15]
Task coordinated by WAAG between M3-36
Map is deliverable by WAAG in M36

## Training Kit

The training kit consists of a definition of the ambition and goals. Furthermore, it describes the process, supported by formats, of participatory design process in open source healthcare solutions. Do's and Don'ts are included, lessons learned and best practices shared.

[12] T1.3 of GA part A
[13] T1.5 of GA part A
[14] T1.4 of GA part A
[15] D1.2 of GA part A

Depending on the specific context of the target group, this kit can be adjusted. It will be openly downloadable from the Made4You website. [16]
Deliverable by WAAG before M24

### Moving exhibition

A moving exhibition of open health applications (building on the results of WP2) will be developed and showcased at events, relevant public spaces and museums. The entire exhibition will be designed to be easy to transport and easy to scale in size and required investment (both up or down). The size of the exhibition is flexible to allow a museum to do a temporary exhibition, as well as a school or an event to use a smaller version or partners to do a pop-up event. To underline the possibility to replicate the solutions developed, a "zero shipping" version of the exhibition will be designed too. This consists in a package on information, tutorials, links to the material on the platform, attached to an email. No pieces will be shipped, only information. Besides making the exhibition easier to spread and replicate it will also be used as a part of the testing of the platform.
Task coordinated by OPEN between M19-M24

# 6 RESULTS

This chapter offers insight in project activities so far. A brief description on maker gathering setup is provides, after which the first OpenCall setup and its outcomes is described.

## 6.1 Formats for the gatherings of makers

To support the exchange of information and knowledge regarding facilitation of events, we document and share several formats for the gatherings of makers. This exchange of formats enable other Fab labs or makerspaces to host such gatherings. The gatherings are organised thematically. Guidelines and advice about the process of hosting these meetings, is something we aim to share with other organisations.

The ways that different project related gatherings take place will differ greatly within the project and amongst project partner. By testing and trying different approaches, we gain a better understanding about what does and what does not work.

In April, GIG hosted the first Maker Gathering within the Made4You project. At this GIG summit, 80 makers, innovators, designers and hackers came together and got to know each other, exchanged knowledge and brainstormed new projects. The format consisted of 3-minute-intro-presentations by every participant to facilitate the getting to know each other. Through an Open Call before the event, topics for breakout-sessions where collected and a schedule with 3 parallel programme slots created. Topics included humanitarian making,

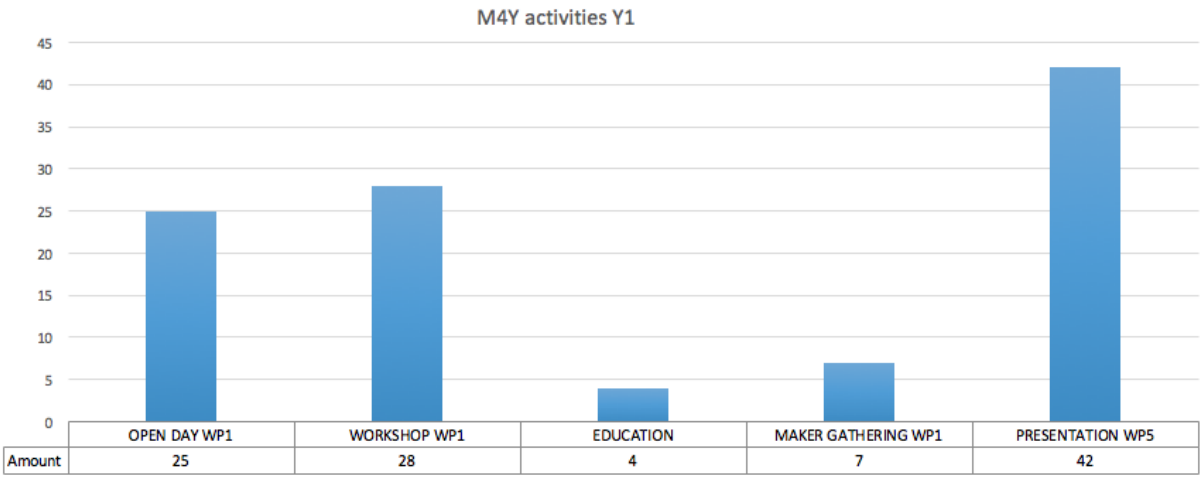
[16] D1.3 of GA part A

documentation of making-projects, a Careables specific session and also more informal exchange of experiences within the group. Through focusing on diversity within the group, a wide variety of topics and ideas was discussed. We know that it is crucial to ensure that there is added value for the makers themselves and it doesn't feel like contributing to somebody else's event, but that you can really own it. Parts like a joint setup, teardown, cleaning session and evening programme are also important for the community feel.

Additionally, Careables contributed to other Maker Gatherings as is common in the community because maker fairs or gatherings live from the input each initiative or individual maker is bringing in.

## 6.2 Events so far

In this paragraph a visual report from all activities that took place during Y1 is presented. The range of activities varies from experience workshops and presentations. The Meetups are not mentioned as individual events, since we choose to see meetup as the instrument for outreach that it is. As such, incorporating Meetups as a separate label for event is less justified or relevant. The overview below is based on the continuous reporting that different partners are asked to do during the project.




In some cases, differentiation between this categories proved challenging. We therefore allowed ourselves to make combinations between for example 'education' and 'presentation' when one of the partner organisations hosted educators in the field of healthcare to inspire and involve them in the Made4You approach.

### Report on Open calls

In Amsterdam two Open Calls have taken place as a prototype for the Open Calls that the network will be further pursuing during the second year of the project. In these series, care professionals, makers, and individuals facing any healthcare challenge were invited to join and co-create meaningful health innovations. The first series was organised at Waag in

Amsterdam and consisted of 8 sessions. In the second series, we chose a more wheelchair accessible location and condensed the program into 6 sessions. All sessions lasted 4 hours. Using design thinking as a foundation, we drafted and improved a structure to guide the individual participants through the process. This structure consists of the following steps:

**Step 0 // Acquisition and organisation**

The first step for making any event successful is attracting the attention of participants. In the first two open call trajectories, Waag embraced the stakeholder differentiation that is also proposed in the community engagement strategy. Therefore we focused on makers, healthcare professionals, and individuals with healthcare challenges. These participants were asked to participate in teams working on creating actual solutions for healthcare challenges.

In digitally-signing up for participation of the event, we asked people to share to which groups they most strongly related themselves. When setting up digital participant acquisition and registration, Waag recommends asking for people's background. That allows organisers to find out if there is a balance between individuals that will propose challenges to work on, and makers or designers to help in prototyping different solutions, and healthcare professionals to support the development process from a medical perspective. If, during the preparation and registration period, organisers see that these groups are not balanced, some more targeted acquisition can take place in preparation of the event.

In our events, we did not make a sub-selection of participants yet. Instead we invited everyone, and used the first session as an occasion for pitching project ideas. Later we monitored the composition of in-situ team formation. We did set up a maximum of 50 participants in the registration process.

One important challenge to identify is the way in which we can connect to these different target groups. Through its project portfolio, Waag has build up a strong network with ties to makers, individuals with an interest in technology, and healthcare professionals. However, one can imagine that the outreach to makers would be more challenging for healthcare providers or other organisations that would like to set up an event, but that have not yet connected to the maker community before. In such cases, we advise such organisations to look for cooperation with other organisations that already have stronger ties to the missing target group. This is a way to compensate for missing links with makers of other relevant stakeholders that are not part of the existing network (yet).

In communication about the OpenCall one must provide clarity about what the setup of the Open Call is. One must emphasize that It is not an event where people pitch ideas that will be produced by a team of professionals. Instead. It is an event in which participants are asked to develop (learn, fail and discover) themselves in collaboration with a varied team of individuals. We have had several cases in which participant expectation did not alight with the setup of the events.

**Step 1 // Present challenges and form teams**

Session 1 is primarily about introduction, setting the scene and creating an open and comfortable atmosphere. This creates mutual trust which in turn increases participant's tendency to later cooperate, share project ideas and share personal opinions. To set the scene and create a productive and open setting, we like to use a playful exercise. This exercise is described in four steps that are presented below:

**Concept for drawing introduction:**

1. Form groups of two and draw your conversation partner while talking and getting to know each other
    a. You are NOT allowed to lift the pen from the paper
    b. Look at each other - so you are not looking at your paper
2. Draw for 1 minute - then switch conversation partners. Collect the drawing made of you right after the conversation.
3. Continue this process until people have collected 2 or 3 portraits.
4. Get together with entire group. Everyone chooses 1 portret, that you they have the strongest association with. Everyone in the group presents reason why they like it: I.e. it resembles my creativity / I like the cubist style / the drawing matches my out-of-the-box thinking.

This exercise will result many funny drawings, and will help in setting a comfortable scene for later co-creation. Coordinators only need paper, pens and possible some rigid (cardboard) background which they can use to draw while standing up. Only choose this approach if participants are physically able to join.

A brief introduction of the made4You philosophy should follow. This session should include:

- The Positive Health definition as a starting point of being able to influence health yourself. This definition emphasized that health is about succeeding in facing diverse personal challenges. Not merely about being free of injuries or illness;
- Elaboration on different reasons why people decide to make their own solutions;
- Inspiring examples;
- A setup of the entire series;
- The relevance of documentation;
- Clarity on available budgets if relevant.

After a brief presentation of Made4You and the concept of the sessions. the next step will be the idea pitching. The idea pitching is not set up as a competition but more as collegial sharing. After all project ideas are shared, teams are formed by just asking people to join the project that they are (most) interested in. Session coordinators play an important guiding role in this process. They must monitor group size (ideally minimally 3 and max 5) and spread of skill over different teams. To keep people motivated in all sessions, it is of great

importance that people are allowed to work on projects that they themselves feel passionate about.

When groups are formed, initial brainstorming is started. For those session, we can (if needed) provide groups with a bit of an outline based on a few questions they can ask themselves.

**Outline for concept development**

You will start exploring the challenge by generating ideas or solutions.

The aim is to think freely, be associative. Nothing is crazy, you can think and dream up anything you'd want. Let your inspiration flow. Go nuts! An idea doesn't have to be practical or feasible. You'll have the opportunity to judge the ideas for their impact, desirability or their feasibility at a later stage.

1. *Formulate ideas or solutions for the challenge. Write down your associations (key words). Draw your solutions or ideas. Don't limit yourself to the challenge, but be creative and exchange with your team members.*
2. *Create a list of minimum 10 ideas. Make sure that you don't list variations to one idea.*
3. *Create a top 5 ideas with your team. Discuss why you chose a specific idea.*

*(Feel free to also, fold, tear, cut, stick or do whatever helps the flow of ideas.)*

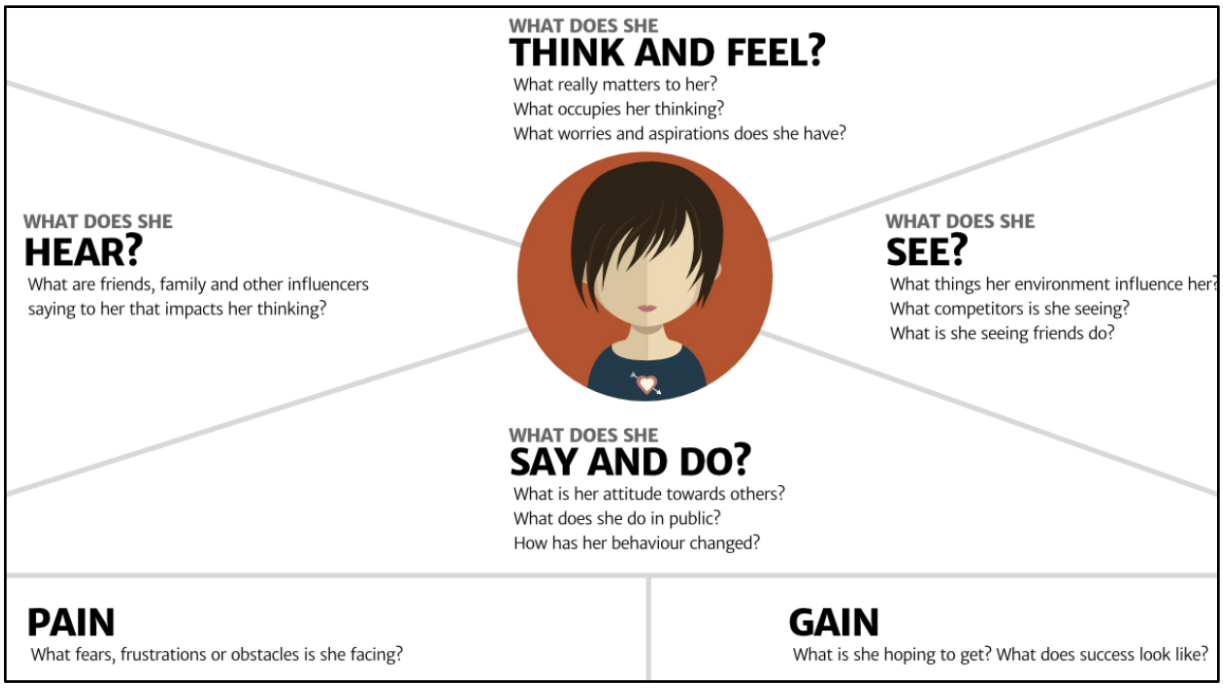
**Step 2 // Research Solutions and sketching**

The next session will be about further research into the problem and early concept creation. Teams will start actually working on the solution. Always keep the specific end user (or target group) in mind. Make sure teams identify the most important aspects of the challenge as well as the end user. This will guide them through the design process and production of your prototype. Teams can ask themselves the following questions:

1. Describe the challenge: what is it that needs to be solved?
2. Describe the challenge in indicators?
    a. *What are the limitations?*
    b. *What does this mean?*
    c. *How does this manifest in real life?*
3. Research current state:
    a. *Are there existing solutions?*
    b. *Are these sufficient?*
    c. *Do they fit the needs? Why so or why not?*
4. Is there (academic) research available? What are the insights?
5. Describe the end user or target group, use the format of persona.

   a. *What are characteristics?*
   b. *What are ambitions of this person?*
   c. *How is a day in the life of this person?*
6. Cluster the indicators.
   a. *Include existing solutions, if there are any.*
   b. *Check the needs of end user (persona).*
7. Brainstorm on possible solutions. This can be modifications of existing solution. Don't limit yourselves to one idea, but ideate on several solutions.
8. Choose the solution that you will be working on. Start sketching and designing.

One important step to not forget is the process of emphasizing with the user as done in step 5. In many cases, this user will (hopefully) be a part of the team. Using the overview below, people can have a guideline for a conversation with this user in order to get a better understanding of the person that teams are developing for. If multiple user groups exist, this exercise can be repeated. If teams do not value this structure, they are free to emphasize in ways that seem better suited to them.




Besides emphasizing, the design brief can also be a way of further specifying the direction of the project and to collect insights from this session. A format for the design brief is included as an appendix within this document.

Another tool we provide in this this session is the overview for scanning existing solutions (step 5) and identifying unmet needs (step 6). A format for structuring this exploration is provided in Appendix 2. This format can be filled with post-its in a brainstorm session. It helps teams to go from a central challenge or issue, to relevant directions for further development, without ignoring what already exists.

**Step 3 // Finalising the concept**

In this session, participants get more space to further work on their concepts. They are also invited to start prototyping using the means at hand. As a session coordinator you are advised to consult with the different teams. Based on their further directions, the session coordinator can assist by connecting the team with other individuals that have the necessary skills to materialise the proposed concept directions. The coordinator is supposed to facilitate in concept creation, but also to convince the teams that prototyping is a necessary next step. Teams do NOT have to conceptualise until they have discovered the perfect solution (they rarely ever will). Instead, rapid prototyping is an important step to proceed to in an early stage because the teams will learn a lot just by developing and testing their initial ideas. That way, teams learn by doing. Before teams are willing to move on to prototyping, it is often important to start from a shared perception that all prototyping adds knowledge and that there is no such thing as failure.

In this third session, coordinators should also further elaborate on the topic of documentation. In our case, we introduced WeVolver as a platform, and we distinguished between documentation and instruction documents. These documents are both offered as digital templates to be uploaded to WeVolver. These two types of documents are both about describing the project and project progress, however, there are also differences:

- **Documentation document** // It's about the design research. It's about the process (what you try, how you fail). When teams stop exploring and start making, they are actually in the prototyping phases. Every time teams actually create a new project prototype, one is advised to refer to a separate individual instruction document in which creating of the prototype itself is described.
- **Instruction document** // It's an Instruction of how to make a (final) version of the project. When creating several final versions of a project, it is advised not to replace old versions of this file with an improved one, but to include and keep previous file versions. Doing so creates an overview of project versions. Don't include all your research in the instruction document. It is better to describe that in the Documentation file.

As a starting point for these documents, we provided two templates that contain a structure with relevant subjects that could be a part of the description. Again, these structures were used as a suggestion and not as an obligation. The goals of this separation in two documents is to connect to the actual need of individuals that read about the project. They are either interested in making it, learning from the research process, or both. By providing separate instruction and documentation, makers are not confronted with endless stories about failed material that they are not interested in, and people wanting to understand the project related learning process are equally not annoyed by endless part-lists and practicalities.

**Step 4 // Prototyping**

This session is about prototyping. Session coordinators can assist the teams by being sensitive to the prototyping needs in the different project. The best way to do this, is by going around and asking how things are progressing. Experience has shown that teams value

a lot of time to do this step. It is therefore advised that you limit the length of any additional presentations prototyping to a minimum. If anything is presented, please adjust that to the needs of participants at that specific time in the process.

**Step 5 // Finish prototyping and documentation**

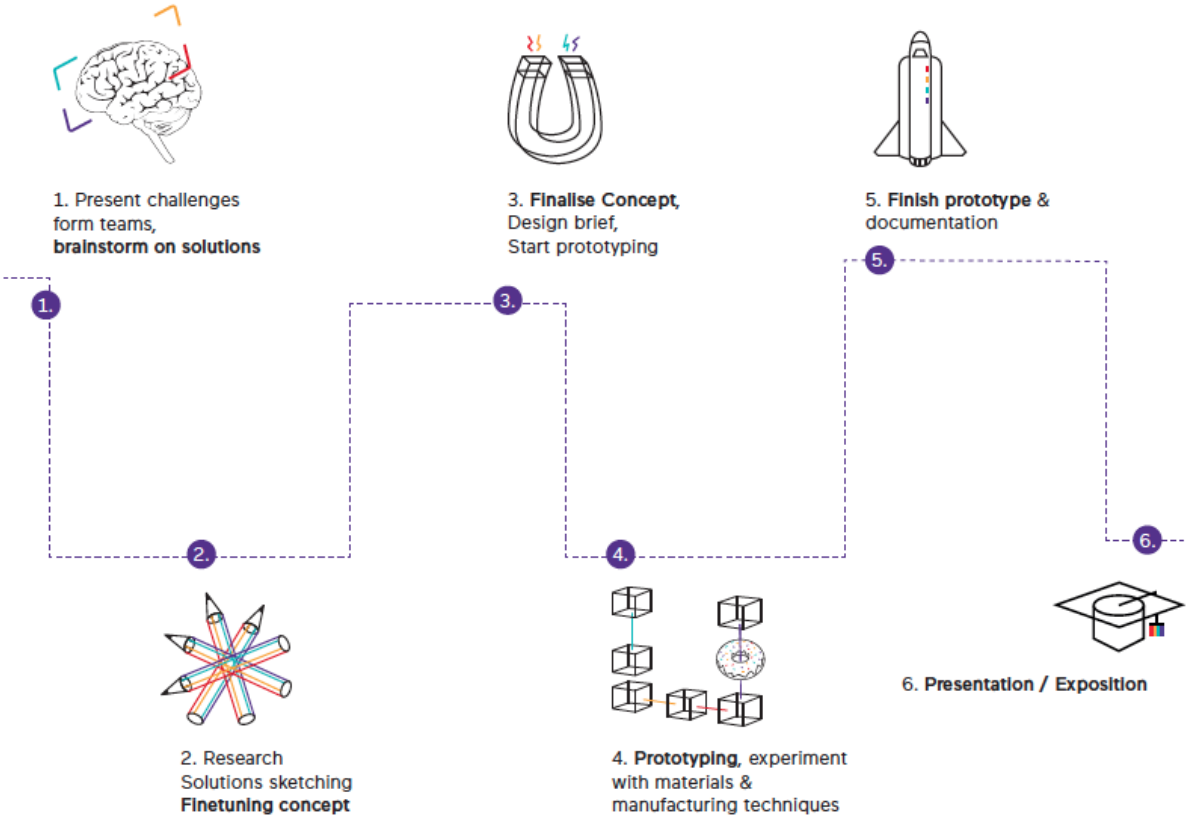
As with the last session, this session also revolves around active prototype development. Also monitor if people are finding their way in the documentation process, and if they offer any meaningful suggestions for improving the online infrastructure for project documentation.

**Step 6 // Presentation and Expo**

In this last session, we allow for some final prototyping. After that we provide the teams with paper sheets or other means to present their work on different tables. At a clearly communicated time in the sessions, doors are opened to a general public that is invited beforehand. Of course this general public includes friends and family of participants. After a brief introduction (presentation) of the Made4You program, and why this sessions took place, the entire group passes by the tables of participants. At each table, the session coordinator interviews one spokesperson per project. Every project gets an even amount of attention. Please provide amplification of interviews if needed. This need depends on space and amount of people.

Afterwards, visitors are offered a refreshing drink, and the opportunity to revisit different projects that have been developed. Teams themselves can answer any further questions.

In the overview on the next page, we have visualised the roadmap we have developed in the two open calls that have so far been organised. This overview includes all individual sessions. In practice, this is not such a lineair proces because prototyping always generates new insights that lead to renewed or refined concept development. However, the process does reflect the core activities per meeting.




MAKEHEALTH: PROTOTYPING || PROGRAM SESSIONS

**Overall points of attention when hosting open calls**

- During the sessions, people are free to plan work themselves. Allow for ambition and time investment to be determined by teams themselves.
- Providing food during the session (lunch) really helps people to energy levels high when working together . Furthermore eating together also strengthens the social bond within teams and among the entire group.
- Session coordinators can choose to set up wrap up sessions after different exercises of at the end of sessions. In wrap up sessions, the different teams are asked to report on progress, and to ask question to the entire group of participants. This is a way of crowdsourcing solutions for challenges that the individual teams face.
- None of the tools we offer are obligatory. Our experience has shown that people perform best if they are themselves remain responsible and respected managing their own progress in ways they themselves see fit.
- Based on the first introduction, coordinators can develop nametags which might also give some insight in skillsets of the different participants.
- During or after the project, participants are provided with a form to submit receipts of costs they are allowed to make for the project. These forms are set up in such a way that they are processable by the financial administration of the hosting organisation. Please be as clear as possible about budget, and VAT situation when introducing this process to the participants.

- Include one or more coordinators per session. Be really clear about who the general spokesperson is so no confusion arises.
- Consider allowing the teams to gather at different location to process work in an extracurricular setting. If that is possible, it is often greatly appreciated and it can provide an additional boost of progress.
- Keep vocabulary non-specific to keep these sessions as accessible as possible. Talking about Lean SIx SIgma of Theory of Constraints may make the event more “corporate” than it needs to be, While only emphasizing sketches and git version tracking might make it too “techy”. These things like vocabulary and tone of voice are important when trying to present something to appeal to a wide range of participants.
- Bring up licensing early on in the project. At Waag, we only brought this up at the end of the first open Call. Participants replied to that by saying that licensing should have been something they discussed in the first session already. In the second series of the OpenCall we indeed included the subject of licensing in the earlier sessions
- Do allow for inspirational speakers to clarify some themes during the OpenCall sessions. However, also guard the fact that the teams need 90% of the time in the series for hands on project development and prototyping.
- Mind the accessibility of the venue. To make the event as inclusive as possible, it is preferred to find an event location / makerspace that provides wheelchair access (and check for accessibility of lavatory facilities as well)

## 6.3 Overview of ideas

During the Made4you open days and even during presentations, hosted at different locations, many ideas are developed. In this section, an overview of these ideas and prototypes is included. At the broad variety of Made4You events, participants are often asked which solutions need to be improved or developed for current versions do not suffice, are too expensive or don't exist. Asking this question and showing some inspiring examples of what has already been done, yields a lot of input. In this section we will share some of the things that participants have come up with. However, we do not share all ideas that people have suggested. We will only focus on the ideas that have been suggested and in some way developed further.

In order to give an overview of the most meaningful ideas and prototypes, we have provided an overview below. Made4You participants working on these project have been reminded to embrace the Wevolver platform as a base for documentation. However, up until now we notice that this documentation has in many cases not been of great quality yet. This is caused by the fact that project members emphasized hands-on making above documentation, and the fact that we were working on developing documentation standards, in parallel with als developing the platform itself. The feedback of users was in many cases the foundation for these improvements. We aim to further improve this documentation together with the team members. This remains an important challenge that is yet to be tackled.

### Stomanoir

The Stomanoir supports Ostomates in their hygiene care by providing a sanitary solution to personal inconveniences. The team wanted to find a method to eliminate unpleasant odours when depositing a used stoma bag in the trash can. The solution was found by producing silicone caps to attach to the stoma bag and in doing so, locking-in odours before they can escape. The next challenge was to make the caps from biodegradable materials. Specifically for urostomies, a disposable sticker was produced to secure urine odours from seeping. Additionally, they manufactured an innovative travel bag, providing the Ostomate with a portable toilet if/where necessary.

## Quali-fire

The team wanted to find a way to monitor the symptoms of Multiple Sclerosis (MS) as a way to investigate what could be possible external markers of inflammation, in order to help people with MS manage and understand the causes of inflammation. This speculative project aimed to use automated measurement to better understand the causes of inflammation, thereby helping to reduce external factors in daily life and manage disease progression. Measurements include a CPR blood test to indicate inflammation, an infrared sensor to record continuous temperature measurement and a wearable device that registers the frequency of spasms and muscle stiffness.

The project brings together qualitative and quantitative data to provide valuable information about environmental factors which could promote inflammation and potentially disease progression.

## Squeeze-a-ball

Squeeze-a-ball is a knitted pressure sensor wrapped in a knitted anti-stress ball hooked up to a tablet computer. People can squeeze the ball whenever they experience pain, and the amount of force indicates their pain level. The squeeze force will be recorded and visualised in a tablet application, both real-time and as a pain diary.

By making pain measurement less intrusive, patient-initiated, and capable of real-time monitoring, Squeeze-a-ball can improve the clinical reaction to pain, improve the scientific understanding of pain, and provide biofeedback-based distraction for the patient. This prototype was developed in MakeHealth session one, and further developed in session two.

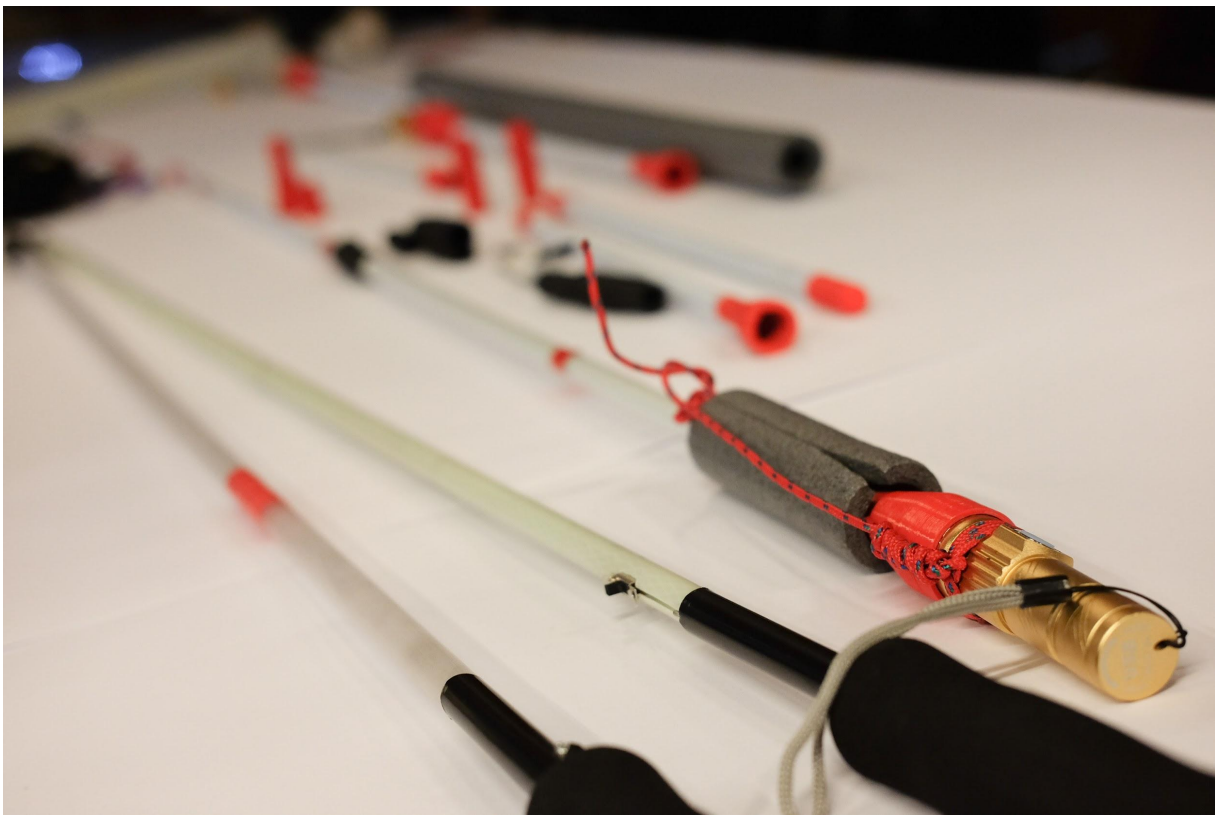
## A room shoe

Falling down at home is a major cause of fatalities and requiring long-term care for elderly people. There are several causes for falling down, however in this project, the team focused on the friction between shoes and flooring since elderly people tend to drag their feet along the flooring. According to literature, there is a safety range of friction coefficient which prevents falling down. In order to maintain the safe friction range, a room shoe features a felt outsole, is lightweight, and has an ankle strap developed based on friction testing between some outsole materials and some floorings.

## Pimp my cane

Debby lives in Amsterdam, and she is visually impaired. She was overlooked by a car and got hit. By enhancing the visibility for visually impaired people by means of light emitting white canes, Jedi style, this could be prevented.

So she started experimenting together with a team and made a shiny sextopus, and Debby fumbled with thrash and flashlights. Her brother gave her prepared reflecting sticks, and another team member made the 3D printed pieces that can hold a flashlight. Together they will continue developing the canes and later this year they will launch a campaign to share the cane open source and ready to use. This prototype was developed in MakeHealth session one, and further developed in session two



## BruxHack

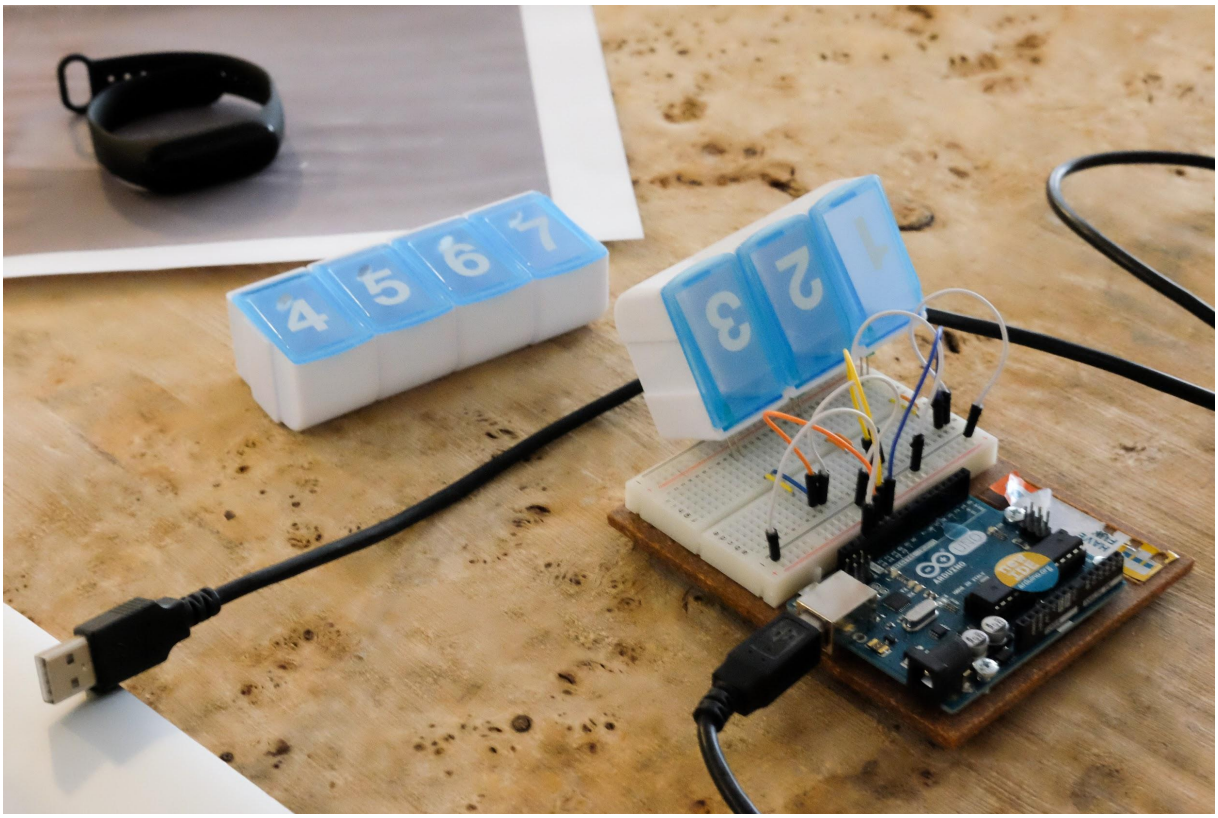
The BruxHack is a night-time wearable that aims to stop you from grinding your teeth and clenching your jaws, a condition known as bruxism. They chose an eye-covering, sleep mask-like design. It has an integrated Near-Infrared Spectroscopy (NIRS) which measures the oxygenation of the masseter muscle, as well as a Transcutane Electric Neuro Stimulator (TENS) which stimulates the nerve to the masseter muscle, thereby ensuring muscle relaxation without being noticeable. The current version is an early prototype that yet needs to be experimentally tested on both effectiveness and usability.

## No pomodoro

A common challenge for people with acquired brain damage after stroke, is brain fatigue and a lack of day structure. The team developed a solution for this challenge. They developed a wearable device that discreetly vibrates at pre-programmed times to structure the day and like a metronome tells the user to have a break of to become active again. This prototype was developed in MakeHealth session one, and further developed in session two.

## Smart Pillbox

The smart pillbox is developed as an improvement to current pillbox solutions. According to the team, current solutions were not personalised enough, therefore not making use of the motivational advantages that such personalisation can have. The Smart Pillbox is a box with integrated speakers. This box can be set up by relatives from the social environment of the user. These people can record personalised messages helping the user manage the daily pill taking routine from a personalised approach.



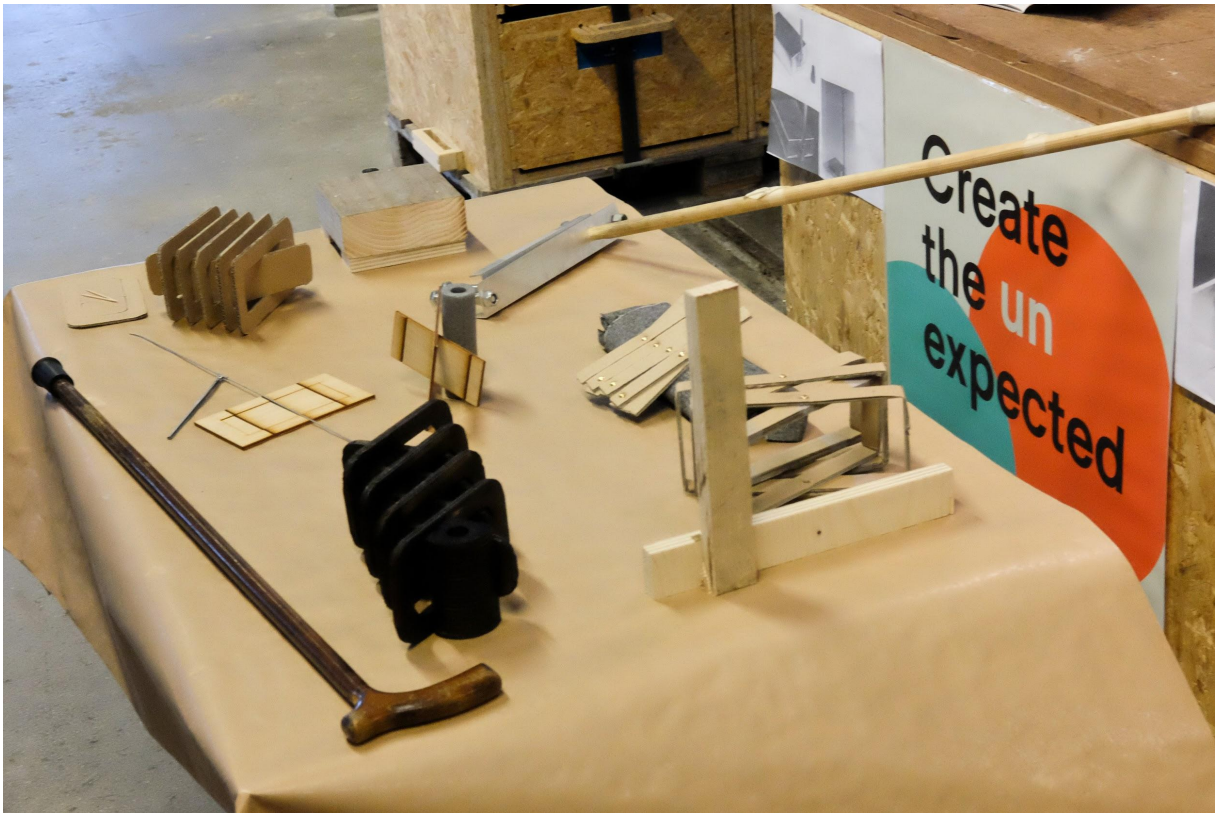
## Camping Lift

The camping lift is a device that helps lift people that are in a wheelchair due to physical disabilities who want to enjoy camping in tents. In these tents, beds can be rather low. Often these beds are made up of beds on the floor. The problem is that people have to be lifted into their wheelchair when getting up. This can be a big and strenuous challenge for informal caregivers around them. The camping lift is a device that mechanically lifts the person up from ground position, to a higher sitting position, therefore facilitating the transition from bed to wheelchair.

## Removable Mid-Step

In Amsterdam, many apartments are only accessible by central stairways. Elderly people can often struggle climbing these stairs - often to their own houses - when they become less mobile due to aging or other mobility challenges. Making changes to these houses, like adding chairlifts to stairs, can be an expensive trajectory.

The removable mid step provides a concept for a foldable box that can be attached to the walking cane of the user. This so-called mid-step can be manually placed on each stairway-step. By placing the box on the step, the user can provide him or herself with a relatively low and extra step. This effectively halves the height of each step, and therefore the height that the user has to push him/herself up.



## Rollavie

Rollavie has been developed as a reaction to walkers often being a standardised product in which esthetical needs are often less embraced in the design process. In the case of Rollavie, a teenage girl coping with physical disabilities, wanted to adjust her walker to her personal esthetic preference. The aim of this personalisation was to shed the image of the walker as a typical device for elderly people. Together with a team she successfully customised several features of the walker making it less of an “older people’s device”.

## Smart Toys

Smart toys is born out from a challenge formulated by healthcare professionals. A participating professional noticed that exercise to increase motorical skills is often perfectly practiced in the environment of the healthcare provider. Sadly, these important exercises are often disregarded or ignored when the patient is back home. Smart Toys is a game that young users can navigate by actually performing specific repetitive movements that are part of the variety of exercises that patients must execute to improve their motor-skill. This way, exercises are presented in a way that motivates young users. The project has developed by a sensor equipped toy/controller, a narrative, and a tangible object that can be navigated by using the toy/controller in a set of exercises.

## Odyschrift Demonstrator // Connect four

Odyschrift presents a decision making logic that can be executed using just a joystick. This logic can be used for people with motorical challenges and can be envisioned a tool for everyday thing as speaking (choosing words letter) and calculation (choosing numbers and symbols). In Made4You, Odyschrift logic has been adapted to a tangible game set of “connect four”. Through the decision making logic, the user can control actual chips falling in the differents slots of the gameboard.

## Baby Pur

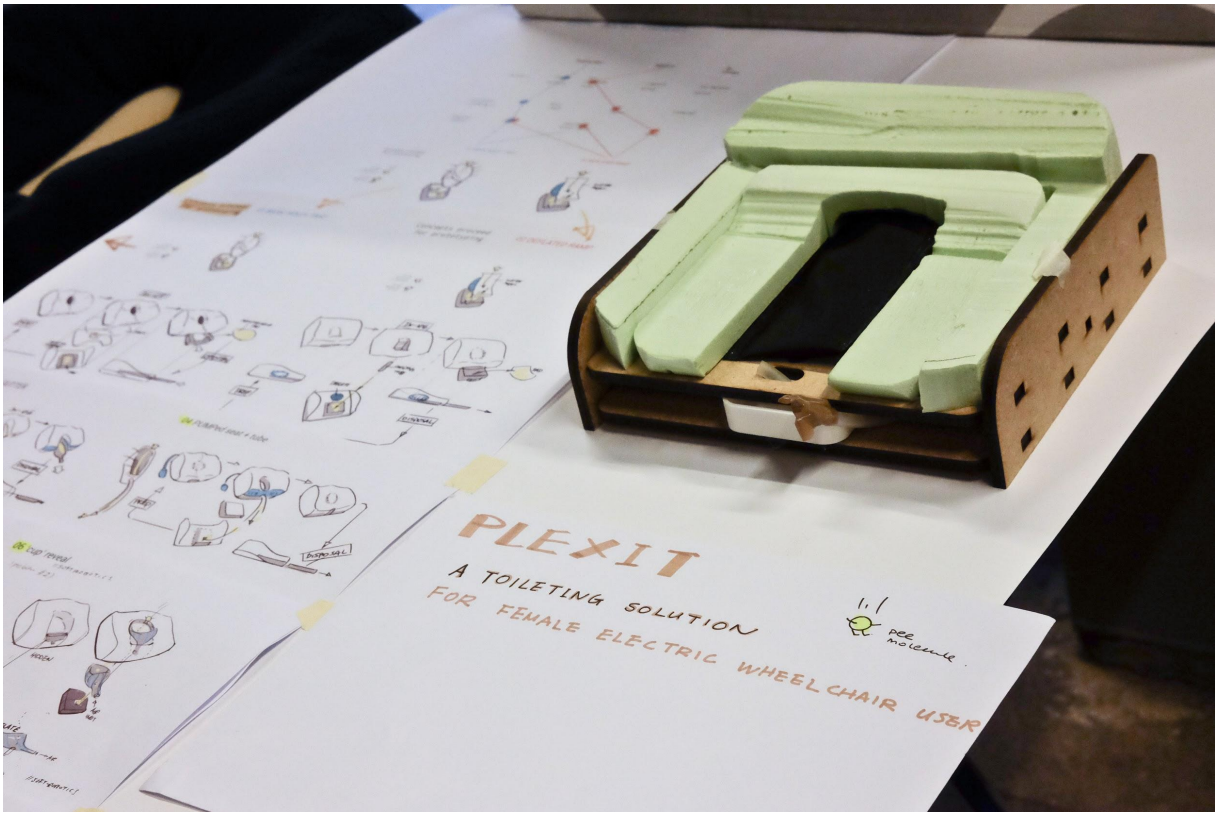
Baby Pur is a blanket that recognises physiological feedback of babies. The blanket can be programmed to react to this feedback by providing movement and sound. These activities can mimic the presence of someone or provide an intervention that calms the baby down or stimulate it otherwise.


## Breathing apparatus

The breathing apparatus closely links to Baby Pur. However, the breathing apparatus experimenting with technology to make users more aware of their breathing rhythm. This can be of use when this rhythm needs changing, or when it needs to be controlled for meditation-purposes. The technology the apparatus experiments with is worn around the waist, and changes value based on the radius of the chest area that changes when the user breaths.

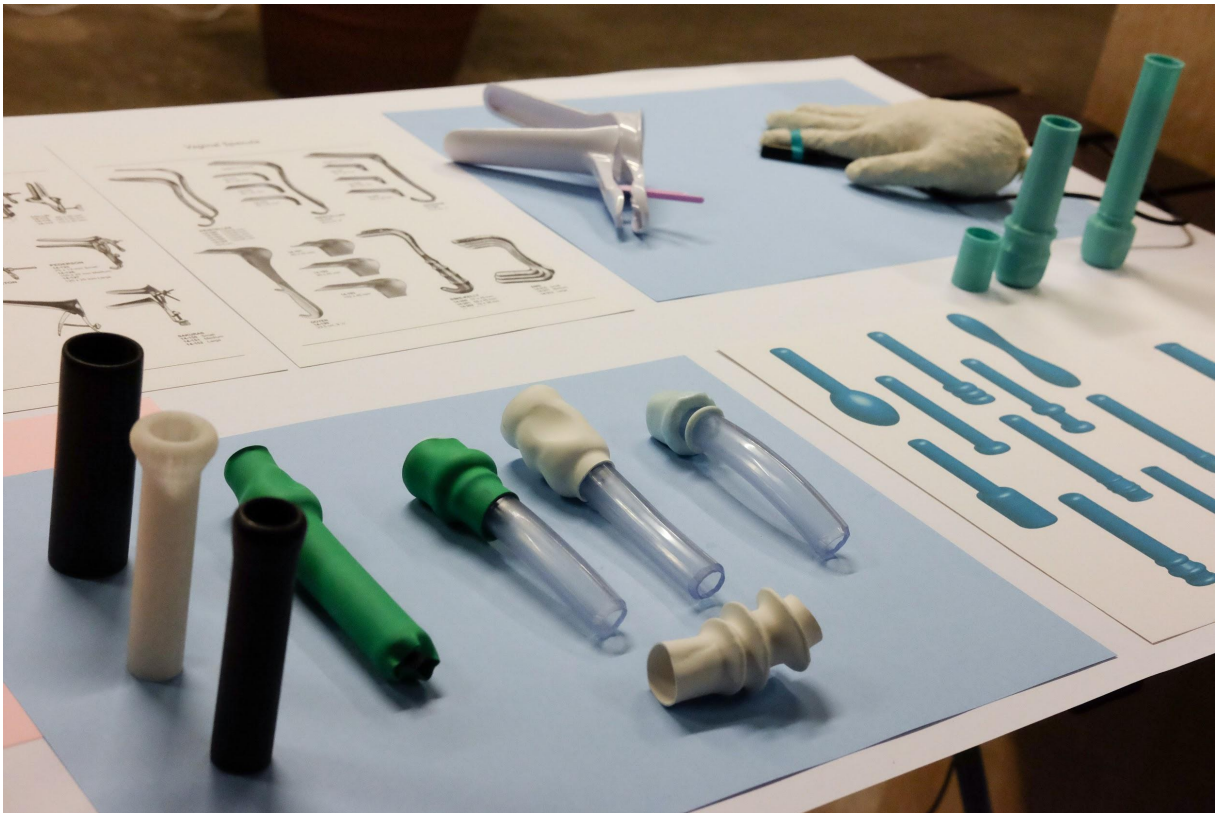
## Wheelchair toilet

The wheelchair toilet group was committed to improving the toilet going process for thoroughly immobile people in wheelchairs. Where diapers or catheters are widely used ways of offering alternatives for toilet use, these options certainly have several identified disadvantages. The wheelchair toilet team explored ways and technologies for incorporating a fully functional toilet function within the seat of the wheelchair itself. That way, the team aimed to pioneer a more user friendly alternative for toilet use for people in wheelchairs.


PLEXIT
A TOILETING SOLUTION
FOR FEMALE ELECTRIC WHEELCHAIR USER

## Gynaecological alternatives

This group, working around a female gynecologist who started questioning her practice from a patient point of view, identified many practices that show room for improvement to make gynaecological consultation more patient friendly and less intrusive. The group questioned current standards and developed alternatives for the cold and clinical tools that are currently being used in gynecological practices.



# 7 APPENDIX 1 // Design Brief

[This document describes a brief overview of your project. It includes the characteristics of the end user, key objectives and scope. These are the requirements to keep in mind during the development and prototyping process.]

Project: _____
User: _____
Brief Prepared by: _____
Date: _____
Review/updates: _____

**Challenge:** *Use this section to describe the challenge that you want to solve or improve. State the relevance, necessity or need from the perspective of the end user.*

| |
|---|
| |

**End user / user group:** *Detailed description of end user. Include details as gender, age, ambitions, needs, lifestyle preferences, daily activities etc. You can also refer to the persona (if you've developed this).*

| |
|---|
| |

**Insight:** *Share your most relevant insight based on your research of existing solutions, interviews or co-creation with end-users etc.*
*Key objectives: Explain the conclusion you've come to, based on the insight of your initial research. Include the preferences of end user, and the absolute 'no-go' for end user.*

| |
|---|
| |

**Concept / solution:** *Articulate the concept by revealing your initial idea or solution in a few sentences.*

**Scope:** *Detailed list of everything your solution is expected to deliver.*

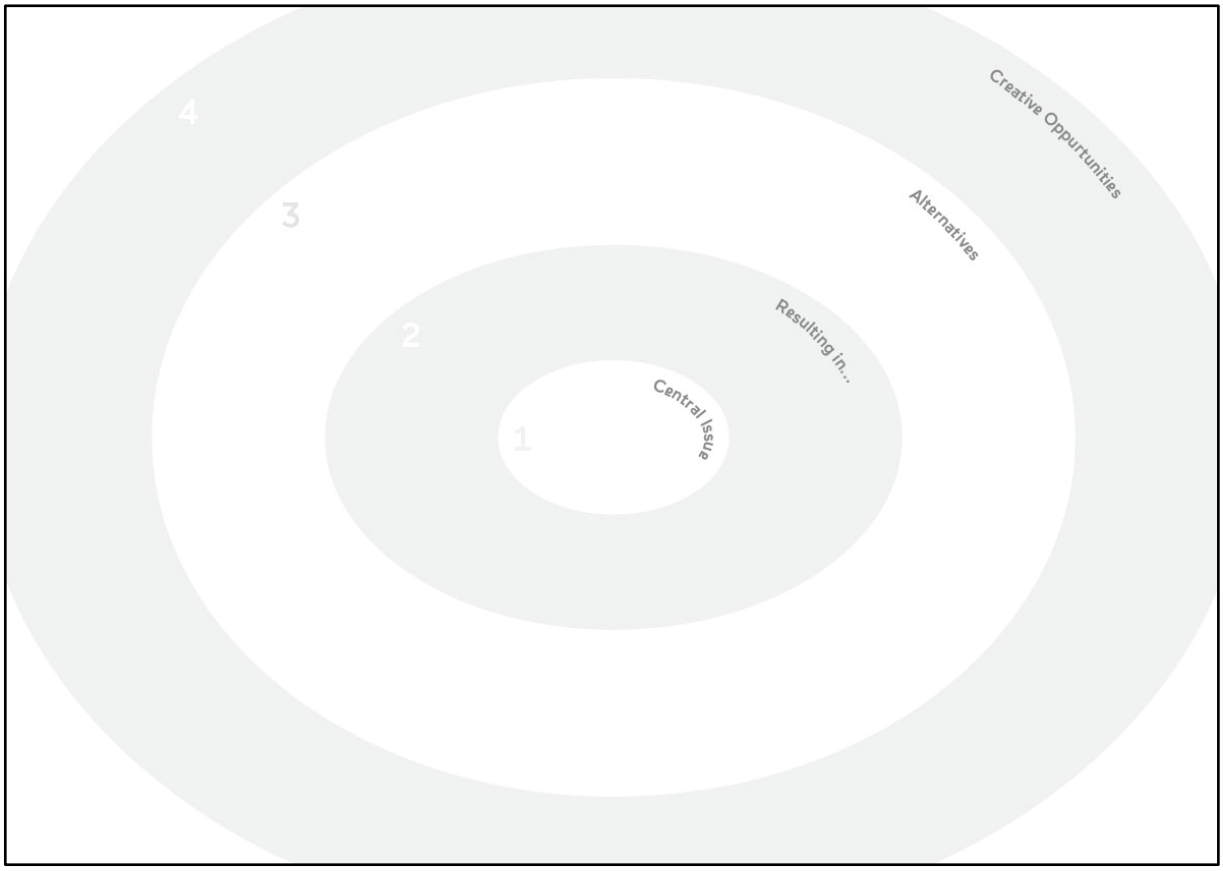
**Not in scope:** *Use this section to specify design elements or functionalities that are out of scope.*

**Benefit:** *Describe the reason what the added value or impact for the end user is.*

**Regulatory issues:** *Note any regulations which will impact the design e.g. product labelling laws or healthcare regulations.*

**Measures of success:** *Describe the success factors that your solution needs to meet. How will you ensure the solution is appropriate for your end user? What activities will you conduct to ensure this*

# 8 APPENDIX 2 // Concept development tool




(this overview can be printed on an A3/A2 size paper)

# 9 APPENDIX 3 // Documentation document template

## Documentation // Project Title

### Introduction

Proper documentation is an often forgotten, but crucial part of the design process. People need to know the steps you have taken in order to get involved. Whether it is for a potential contributor, user, or just an interested reader, any relevant steps you have taken can be paramount to their understanding of your product.
Imagine someone whom you've never met before. What would that person need to know before being able to get involved? This step by step guide will help you answer that question.

### License

From the moment your project is created, it is protected under the copyright law. This means that no one can use it without your permission.
If you want to allow others to copy, distribute, and make some uses of your work while getting the credit for the work you put in it please specify a Creative Common license that works the best for you, or any other license that might better suit your needs.

### Product Category

As a general framework for specifying the life areas that your solution relates to, we look at tabel 2 on page 13 of the International Classification of Functioning:

- LEARNING AND APPLYING KNOWLEDGE
- GENERAL TASKS AND DEMANDS
- COMMUNICATION
- MOBILITY
- SELF CARE
- DOMESTIC LIFE
- INTERPERSONAL INTERACTIONS AND RELATIONSHIPS
- MAJOR LIFE AREAS
- COMMUNITY, SOCIAL AND CIVIC LIFE
- ANY OTHER ACTIVITY AND PARTICIPATION

In which area does your solution enable activity or participation for people with restrictions?

Useful definitions: Activity is the execution of a task or action by an individual. Participation is involvement in a life situation. Activity limitations are difficulties an individual may have in executing activities. Participation restrictions are problems an individual may have in involvement in life situations.

### The project in one sentence

Please specify what your product is and what it does. This information can be used as short introduction to your project.

## What is it?

Provide a longer description of your product and what it is or does. This information can be used as a longer introduction for people that have been hooked by the photo or description of your project.

## Why did you make it?

Here you can specify the reason the project started and exists. The more the project is related to the need or challenge of a problem owner or healthcare professional, the higher the chances of it being or becoming a relevant solution.

## What does it do?

This space can be used to further specify what your product really does. Feel free to go into technical details.

## Research

In this section, you describe how you worked towards the final product. What steps did you take in researching and developing it. The descriptions of all your brilliant failures and key decisions will emphasize the quality of your work. It will also make it easier for others to understand your product.

***Step 1:***

Describe your first step here:

***Step 2:***

Describe your second step here:

***Step 3:***

Describe your third step here:

## Credits and contacts

Who has been working on this? What are their expertises? and (how) can they be contacted. For example: This document has been designed and made in 2018 by Jurre Ongering with help from Joost Kaan.

# 10APPENDIX 4 // Instruction document template

## Instructions // Project Title

In this section you will make a description of how your project can be made. This includes all things from material list, to settings of the machine you use.

### License

From the moment your project is created, it is protected under the copyright law. This means that no one can use it without your permission.
If you want to allow others to copy, distribute, and make some uses of your work while getting the credit for the work you put in it please specify a Creative Common license that works the best for you, or any other license that might better suit your needs.

### Difficulty level

Is your product hard to make? Please specify wether you believe it takes a lot of experience and skill to create your product, or that it doesn't.

### Tools Needed

Please specify which tools one needs to make your product

### Material list

Please specify what material one needs to make this product. If you have some suggestions for (online) shops to buy this stuff, then please provide links

### Time:

How much time does it take to make this?

### Cost:

How much money does it cost to make this?

### Sales:

Do you aim to sell this version of your prototype? If so, how can people order and what is the price for selling it. â€‹

### Instruction // How can the final object be made?

***Step 1:***

Describe your first step here:

***Step 2:***
Describe your second step here:

***Step 3:***
Describe your third step here: