



Fostering Red Cross youth innovation

**A Human Centred Design curriculum with
an emphasis on problem framing**

Master thesis
Strategic Product Design
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Preface

Dear reader,

This graduation project concludes my time as a student, and what an incredible journey it has been. The last few months were intense and sometimes felt a bit odd, with the varying pandemic regulations we all had to cope with. During my graduation project I was fortunate to work with some amazingly inspiring people and I would like to thank every single one of them, for sparking my imagination, sharing your knowledge and boosting my motivation.

First and foremost, I would like to thank The Netherlands Red Cross for providing me with the opportunity to contribute to this project. Thank you Saskia, for all the hours you have spent with me, either at the office or online, you have been a great support and an inspiring mentor throughout all stages of my research. Your strategic and academic thinking brought my work to a greater height. Thank you Michel, for giving me this graduation opportunity. Your realistic and to the point feedback has helped me tremendously. Furthermore, I would like to thank all the other people from the IFRC and NLRC who were involved in this research.

Additionally, I would like to thank my supervisory team, who supported me along the way. Thank you Rebecca, for always taking the time to talk with me and for your always inspiring comments. Your pep-talks always kept me going; 'keep pushing'! Thank you Giulia, for your always knowledgeable words and constructive feedback. It was a pleasure to work with you both, I am very grateful.

A special thanks to all the Red Cross youth volunteers, without you this research could not exist. I enjoyed all the interactive moments we shared and I'm certain that you've taught me more than the other way around.

Lastly, I want to thank my friends and my family for always supporting me, no matter the circumstances. Thank you Rutger for all the coffee chats and long days at the university library we had, while we were both in the midst of our graduation projects. Laughing with you has helped me work through challenging moments. Specially, I would like to thank Daniela, for your everlasting patience, motivation and support.

Enjoy reading!

Koen Merkx
30-03-2022



Executive Summary

The International Red Cross Red Crescent Movement, 'The Movement', is the world's largest humanitarian network. More than 50% of the 14 million active volunteers are youth volunteers. These youth volunteers play vital roles in humanitarian action and development around the world by addressing needs in their communities. To develop the potential of these youth volunteers and enhance their collective impact, The International Federation of Red Cross and Red Crescent Societies (IFRC) launched an IFRC Youth Innovation Academy: Limitless. Limitless offers youth volunteers a theoretical introduction to the design process and financial support for the development of their ideas. Applying for the programme starts with the introduction of a COVID-19 related problem, followed by a number of workshops to guide projects of the youth volunteers.

This thesis examines whether the design of the Limitless program matched its aim of fostering humanitarian innovation, and based on the research conducted it presents a new human-centered curriculum design to foster innovation through a strong focus on problem framing. This bridges the gap between the (currently unanswered) human perspective and the incentive to facilitate innovation from within the IFRC.

From extensive literature and empirical research it can be concluded that the current programme lacks multiple components necessary for successful facilitation of innovation. Foremost, the initial challenges presented by the youth volunteers were often found to be too broad and ill-defined, therefore making it difficult to come up with a solution within the scope of the programme. Resulting from these initial findings, thorough research on how to facilitate innovation was carried out. Based on this a set of design guidelines and barriers for innovation was formulated. These guidelines formed the starting point of the concept design.

The design phase explored how a strategically designed solution can complement the currently missing components of the Limitless programme. An overarching platform is proposed, which aims to stimulate interaction between multiple stakeholders and creates more growth potential for the youth volunteers' projects. The first module within the action-oriented curriculum presented via the platform emphasizes problem framing. A deeper dive into theory and practice around this resulted in a novel workshop format for which a back-end flowchart and a front-end digital prototype were developed. The concept was iterated upon multiple times, in order to create a format that best meets the needs of the youth volunteers. Validation with youth volunteers suggests that the novel workshop does indeed improve the ability to create a well-framed problem statement.

This research contributes to the IFRC's ambition to support young innovators in their innovation journey. It also highlights more generally how humanitarian innovation can be improved and how growth potential can be designed. For future implementation and further development of the curriculum, a selection of recommendations is presented.

Reading guide

The reading guide gives an overview of the different text and lay-out features of the report.

Each chapter starts with a short introduction, and all the chapter sections are introduced. Each section starts with a brief introduction.

The chapters end with a summary.

01 | Project Context & Approach

Each chapter has a summary at the end with a gray background

This text is used for all the figures and tables titles

This text is used for sub-headings in

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Chapter 01

Project Context & Approach

This introductory chapter provides an overview of the project context and the research approach. The relevance and context are described in section 1.1, the stakeholders are introduced and elaborated upon. Section 1.2 introduces the research approach and the project objective. The aim for this research is set with corresponding research questions.

Overview

1.1 Project context

1.2 Project objective & approach

Summary

Background Image: Learning how to wash your hands, picture rights: Netherlands Red Cross

1.1 Project context

To get a clear understanding of the outer- and inner scope context, this section introduces how COVID-19 has affected the humanitarian aid sector and how the Red Cross Movement responds to these developments. This thesis is written in collaboration with the Netherlands Red Cross. Although this research is conducted within the scope of the IFRC and the Netherlands Red Cross Society, all departments of the International Red Cross Red Crescent Movement are introduced.

1.1.1 A growing need for humanitarian aid

The United Nations Office of Humanitarian Affairs (OCHA) calculated in their 2022 Global Humanitarian Overview that in 2022, 274 million people will be in direct need of humanitarian protection and assistance. Compared to 235 million people in 2021, this is a growth of 39 million people (which is equivalent to the population of Canada). In order to assist the people in need, across 63 countries, \$41 billion is required (OCHA, 2022).

According to data from the World Bank, the extreme poverty level started growing again as a consequence of the COVID-19 pandemic (World Bank, 2021). This results in a projected growth of 97 million more people living in poverty in 2020, compared to 2019 (figure 1.1). Currently, there are 698 million living in extreme poverty (World Data Lab, 2022). Mostly in Sub-saharan Africa, the number of poor people is growing. A growth of the global poor has last been measured in 1998, after the Asian Financial Crisis. There is an immediate need for more humanitarian aid.

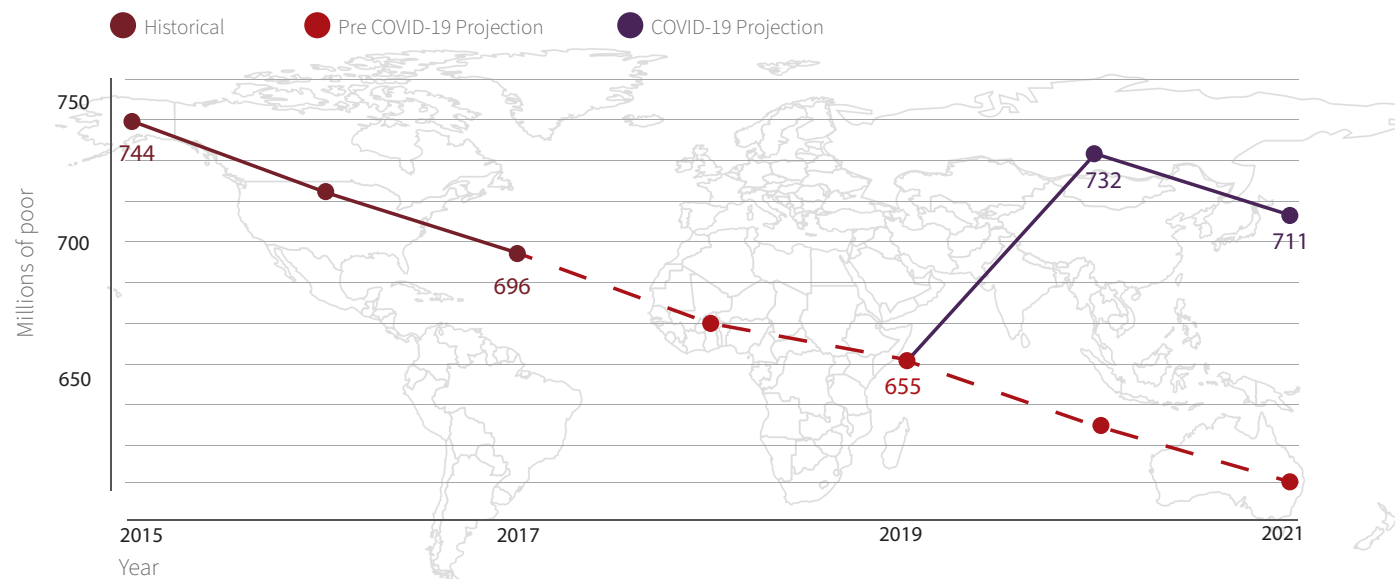


Figure 1.1: Extreme poverty, 2015 - 2021 (Lakner et al., 2020)

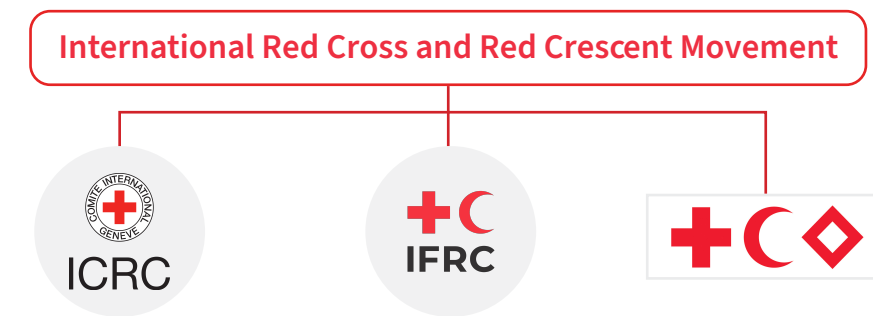


Figure 1.2: The International Red Cross Red Crescent Movement organisational overview

1.1.2 The International Red Cross Red Crescent Movement

The largest humanitarian network in the world, the International Red Cross Red Crescent Movement (RCRC), 'The Movement', is made up of three parts; the International Committee of the Red Cross (ICRC), the International Federation of the Red Cross and Red Crescent Societies (IFRC) and the 192 National Red Cross and Red Crescent Societies (see figure 1.2). Combined, the movement has over 14 million active volunteers, making it the largest humanitarian network (ICRC, 2022).

The movement is guided by the seven Fundamental Principles: voluntary service, humanity, independence, impartiality, unity, universality and neutrality (figure 1.3). The main purpose is to contribute to peace in the world by helping those who suffer, without discrimination.



Figure 1.3: 7 Fundamental principles

1.1.3 The ICRC

The International Committee of the Red Cross is an impartial, neutral and independent organisation with the exclusive humanitarian mission to protect the lives and dignity of victims of war and international violence. It directs and coordinates situations of conflict and armed violence (Standing Commission of the Red Cross and Red Crescent, 2022).

In 2021, the ICRC launched their largest-ever funding appeal for 2,3 billion Swiss francs (€2,17 billion), doubling the appeal of 2012. This represents the growing demand for extra funding and resources in order to provide humanitarian aid for those in need.



Figure 1.4: Henri Dunant, 1859

After helping wounded soldiers at the battle at Solferino, Italy 1859, Henri Dunant lobbied political leaders to take more action to help and protect war victims. This led to the foundation of The International Committee Red Cross (ICRC) in 1863 by Dunant and fellows in Geneva, Switzerland.

1.1.4 The IFRC

The International Federation of the Red Cross and Red Crescent Societies was founded in 1919. Their mission is to direct and coordinate international assistance through all the National Societies, to victims of natural and technological disasters, refugees and health emergencies. The IFRC acts as a representative for- and is the guiding force of all the National Societies, promoting cooperation and strengthening their capacities for disaster preparedness, health and social programmes.

The IFRC acknowledges in their 2030 Strategy that it is essential to have a new approach, in order to effectively address all the global problems.

“We recognise that new approaches are needed to drive global change. We have a responsibility to use our reach and our resources effectively. To do this we must listen, think and act differently, and be open to learning and adapting along the way.” (IFRC Strategy 2030)

In this 2030 Strategy, 3 main goals, 5 challenges and 7 transformations are listed (table 1) which the IFRC wants to address in the coming years (IFRC, 2021).

First all the above are mentioned and later is explained how this research reacts to these topics.

This research will particularly aim to contribute to the second goal: ‘People lead safe, healthy and dignified lives and have opportunities to thrive’. It adds on the transformations 1: ‘Supporting and developing NSs as strong and effective local actors, 2: ‘Inspiring and mobilising volunteerism’ and 5: Influencing humanitarian action. And it is subjected to all challenges, since they are interconnected and require committed local action to handle them and accomplish positive global change. How all this translates in the goal of this research will be described in paragraph 1.2.1.

3 Main goals	5 Challenges	7 Transformations
People anticipate to, respond to and quickly recover from a crisis	Climate and Environmental crisis	Inspiring and mobilising volunteerism
People lead safe, healthy and dignified lives and have opportunities to thrive	Evolving crisis and disasters	Supporting and developing National Societies as strong and effective local actors
People mobilise for peaceful and inclusive community	Growing gaps in health and well-being	Ensuring trust and accountability
	Migrations and identity	Working effectively as a distributed network
	Values, power and inclusion	Influencing humanitarian action
		Undergoing a digital transformation
		Financing the future

Table 1: IFRC Strategy 2030: Goals, Challenges and Transformations

IFRC Solferino Academy

To support the professional and personal development of all the volunteers and staff, the IFRC has developed an array of learning resources. Amongst these is the Solferino Academy. This innovative academy aims to challenge and inspire the current way people are working across the Movement. Equipped with innovators and creative problem-solvers, the Solferino Academy advises and guides the network of volunteers and employees to address the greatest and most demanding humanitarian challenges (Solferino 2022). To infuse the IFRC with innovative experiments, the Solferino Academy focuses on exploring new ideas, approaches and products. Amidst these experiments in the Limitless Innovation Academy (see figure 1.5).

Limitless

As an initiative of the Solferino Academy and with support of the IFRC Youth Innovation Academy, the Limitless programme came to life. This innovation programme offers RCRC youth volunteers the opportunity to expand, refine and bring their ideas to life. Most of the participants come from middle- and low income areas: Africa, Southeast Asia and South- and Middle America. To sign up, youth volunteers have to apply with a video which introduces a COVID-19 related problem within their community and an initial idea on how they are going to tackle this challenge (application video's can be found here: <https://limitless.solferinoacademy.com/live>).

The competitive programme consists of 4 phases (see figure 1.6) the application, a period of workshops, a mentoring phase and eventually the winners will be selected. During the process there are two initial selection rounds. The first round takes place after the applications, 500 participants are selected. After the workshop phase, a second selection round takes place where 50 participants are selected. Eventually, 15 winners are chosen.

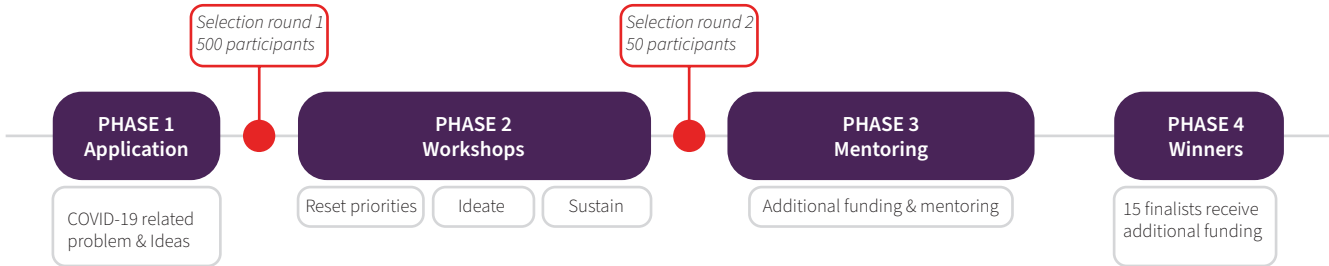


Figure 1.6: Limitless programme overview



Figure 1.5: IFRC, Solferino, Limitless organisational structure

During this project the participants can receive funding. The 500 starting participants receive initial funding. The 50 participants who are selected to continue after the workshops receive mentoring, support and additional 4000 CHF funding to pilot their project. Eventually, the 15 winning projects receive between 10.000 - 20.000 CHF each to implement their innovation for the long term.

This graduation research took (partially) place parallel to the Limitless programme. This opened opportunities for interaction, research and engagement with the organisation and participants of Limitless. Further elaboration in chapter 3.

1.1.5 The National Red cross and Red Crescent Societies

Stationed in 192 countries, the National Societies facilitate the auxiliary role between The Movement and the public authorities in the humanitarian field, the local volunteers and the people who are in need of aid in their country. They provide a range of services including disaster relief, health and social programmes.

Auxiliary status

The National Societies are not considered to be NGOs (non-governmental organisations). A specific legal connection, which is described as the auxiliary status, with public authorities enables the National Societies to be in a unique, hybrid situation between the operating fields of a government and NGO. They must always act according to the fundamental principles, amongst which is independence, so they have to maintain autonomy at all times.

1.1.6 The Netherlands Red Cross

One of the oldest National Societies is the NLRC, founded in 1967. Currently the NLRC houses 384 employees and counts 20.857 volunteers. The NLRC actively operates both nationally and internationally. The NLRC played a major role during the great flooding disaster of 1953, World War 2 and hosts an annual '3FM Serious Request', collecting money for disaster prevention and care. Princess Margriet (figure 1.8), member of the Dutch Royal Family, has been the most famous volunteer, volunteering for more than 50 years eventually leading to the foundation of the Princess-Margriet-fund, addressing natural disasters worldwide (Rode Kruis, 2022).

NLRC IH Strategy

The IH ('Internationale hulp' (international assistance)) department of the NLRC drafted a strategy connected to- and resonating with the IFRC 2030 Strategy.

Within their strategy the NLRC aims to prevent and alleviate human suffering along three parallel roads (IH Strategy 2030, 2021):

By supporting emergency response across the globe wherever and whenever needed, and with building resilience during and after it in mind;

By strengthening a selected number sister National Societies in their emergency response and also helping them anticipate and reduce impact of conflicts and disasters;

By unlocking the expertise of which the Red Cross Red Crescent Movement is both a source and a beneficiary, through specialist networks, partnerships, brokering, innovation, humanitarian diplomacy and more.

This research project falls under the scope of the third 'road'; during this research the internal humanitarian innovation capacity is analysed and a concept for improvement is proposed. Further information on this approach in paragraph 1.2.3.

Figure 1.8: Princess Margriet receiving the certificate: 'Rode Kruis Helpster 1e Klas' in the presence of former Queen Juliana. Via: AD



1.2 Project Objective & Approach

The following section introduces the research question and sub-questions, the aim of this project and how this will be addressed with the research approach.

1.2.1 Project aim

The central aim of this research is to explore the possibilities to contribute to the creation of positive local impact. Simplified: Find out how the Youth Volunteers can be assisted in their work. Creating local impact means creating something: e.g. a product / service / platform which supports a community in a positive manner. The people, in this research, responsible for this impact are the Red Cross Youth Volunteers. By using an action research approach, the currently running Limitless programme will be analysed, whereafter opportunities for improvement are defined.

Focus

Specifically, this research will look into problem framing. Problem framing emphasises the focus on the problem definition. Namely, how a problem is defined, sets how a problem is approached, enabling a problem to be redefined or reframed. Exploring this 'problem space' opens a more open approach to solving the problem with a wider range of alternative solutions (Bardwell, 1991).

Since defining the problem is (should be) the beginning of each (innovative) project, this is a crucial step. This research will look into the current state of problem framing in the Limitless programme, the underlying theory of problem framing and if -and how- this can be improved, through a human centred design lens.

Motivation

This aim stems from the following motivation: Worldwide, in every city- village- and neighbourhood, people invest their time and resources in projects to deal with local problems and improve the livelihood in their communities. Providing them with the right (design) tools can potentially help realise, accelerate, improve and enlarge these ambitious initiatives.

1.2.2 Research Questions

The following research question and additional sub-questions are formulated in order to create an understanding of the research objective.

Research question:

How can local proactive problem solving capacity be enhanced for Red Cross youth volunteers through the Limitless programme?

Sub research questions:

1. What and how can an innovation academy contribute to enhancing local problem solving capacity?
2. How can a problem statement be carefully and effectively reframed?
3. How can a design tool contribute to the capacity of problem solving?
4. How can engagement with stakeholders be created in the problem solving process?

1.2.3 Approach

The double diamond model (figure 1.9) is used for this research’s process, since it allows space to diverge twice; during the first phase: Discovery and the third phase; Develop. These diverge moments provide the opportunity for an exploratory approach. The two converge phases: Define and Deliver aim to bring the findings from both Diverge phases to a coherent conclusion. Different research methods are used throughout this project. Each phase is elaborated upon in figure 1.9.

The goal of this phase is twofold; to get a thorough understanding of the context in which Youth Volunteers operate and to gain an understanding about how design can play a role for humanitarian innovation.

Discover

Action research

In order to learn about the youth volunteers, an extensive action research has been executed. Action research is a method which is used for research into social phenomena. During this process a researcher enters a real-world situation and aims both to improve it and to acquire knowledge. This is done through specific planned actions, to test certain assumptions and findings (Checkland & Holwell, 1998).

During this research, multiple contact moments are designed in order to learn from the practitioners. These interactions included two questionnaires, a workshop on problem framing, focus group sessions and an online group, which was created to stimulate conversation.

Literature study

An extensive literature study was performed and expert interviews were held to acquire an understanding of; the current developments in humanitarian innovation, how (human centred) design in the humanitarian sector is developing and how design (education) can help infuse local problem solving. This led to a more specific research direction.

Define

The goal of the define phase is to create a synthesis of the gathered information and explore novel approaches for humanitarian innovation by further specifying the design direction. A number of conclusions and design directions are drawn from the action research activities. Some of these activities are continuing in this phase, according to the Limitless timeline (fig xx13).

A number of expert interviews were held to dive deeper into the topic of problem framing and design tools in a humanitarian context. From this synthesis, the foundation of the development phase is created.

Develop

In the development phase, a prototype is created which aims to provide an improved alternative for (a part of) the Limitless program. The prototype consists of a back-end flowchart and front-end workshop tool (see paragraph 3.2). Validation sessions with Limitless participants are conducted to validate the concept. For the design phase of this research, participatory design will be used. This approach facilitates collective creativity between the expertise of the researcher and the situated expertise of the people whose work is to be impacted by the change (Convivial toolbox book, pg28).

Deliver

Final tests with human centred design experts, for last iterations and improvements are conducted. After optimisation, the workshop tool will be delivered as a printable document and an online too

1.2.4 Project scope

Several parties play a role in the scope of this project. An inner and outer scope are defined.

Inner scope

This research is written in collaboration with the innovation department of the NLRC. Limitless is the main subject throughout this research and the youth volunteers, participating from all over the world, are the main target group of this research. They are a great source of real-life information and contribute directly to the concept creation.

This project contributes to the long established relationship between the faculty of Industrial Design Engineering and the NLRC. Besides this project, the NLRC is a client in the ‘Design Strategy Project’ (DSP), a course in the Strategic Product Design master. This research is (partially) linked to the content of the DSP course.

Outer scope

There is an urgent demand for innovation in the humanitarian sector, the understanding of humanitarian innovation by practitioners, politicians and academics too, still is immature (Rush et al., 2021). Fortunately, there are (design) innovation experts doing great work for the humanitarian sector, by creating programs and tools. Companies and organisations which are active in this sector are part of the background research of this project.

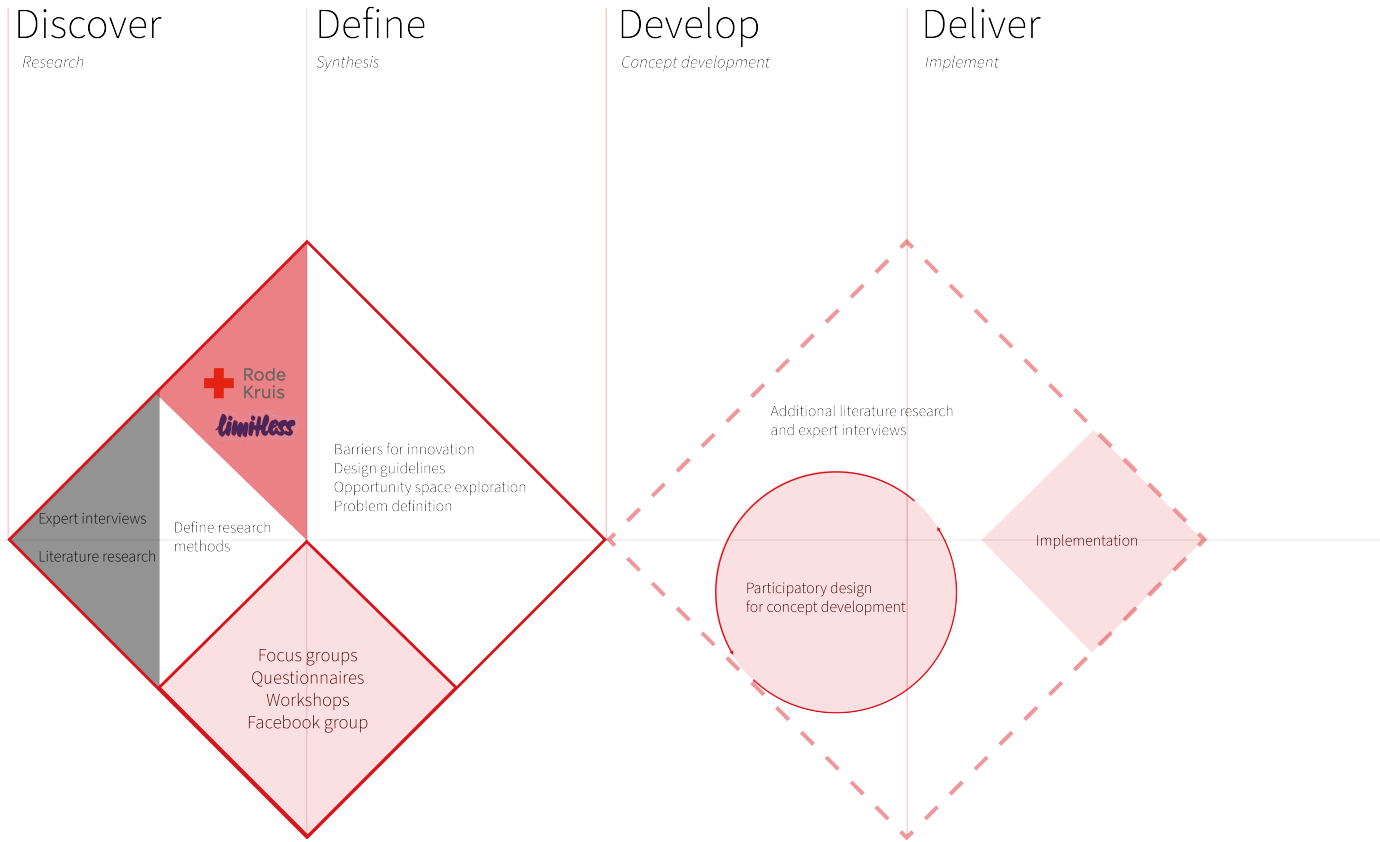


Figure 1.9: Double Diamond approach overview

01 | Project Context & Approach

Project Context

This project is in collaboration with the Netherlands Red Cross, one of the National Societies of the Red Cross Movement.

To address the potential of the youth volunteering network and the growing demand for humanitarian innovation, the IFRC created an youth innovation academy: Limitless (figure 1.10).



Figure 1.10: Logo Limitless

This programme assists youth volunteers from across the world, with guidance and funding for projects which address COVID-19 related problems in their respective communities.

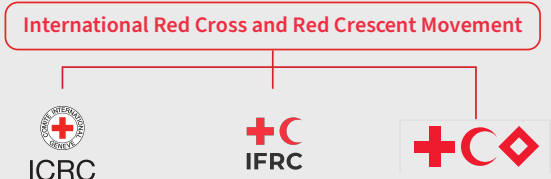


Figure 1.11: Organisational overview

Project Objective & Approach

The objective for this research is formulated into a research question:

How can local proactive problem solving capacity be enhanced for Red Cross youth volunteers through the Limitless programme?

The approach for addressing this objective is framed in a double diamond model (figure 1.12). First an action research, parallel to the literature study, is conducted. After which a synthesis is created and from there, concept developments starts, eventually leading to delivering a strategic design solution for the set research question.

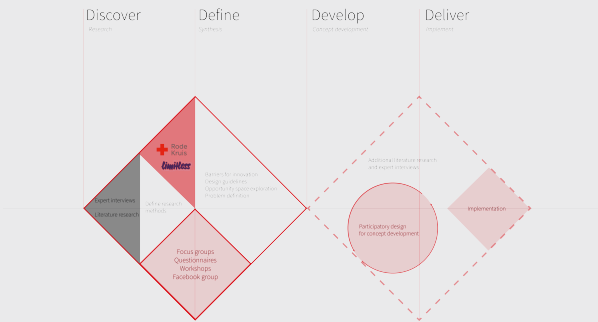


Figure 1.12: Double Diamond model

*Life’s most persistent and urgent question is,
‘What are you doing for others?’*

- Martin Luther King Jr.

Chapter 02

Analysis

A LITERATURE REVIEW ON THE INTERSECTION OF HUMANITARIAN INNOVATION

This chapter aims to create an understanding of the domains which contribute to establishing humanitarian innovation and creating local impact. A thorough understanding is created through literature research into different subjects, in order to find areas of synergy and possible gaps in research.

Section 2.1 introduces the different subjects, whereafter each subject is explored in subsequent Sections 2.2 - 2.4. The final Section provides an overview of the key findings and conclusions of this chapter.

Overview

- 2.1 The intersection of humanitarian innovation
 - 2.2 Human Centred Design
 - 2.3 Design Education
 - 2.4 Local problem solving capacities
- Summary & Key insights



Background Image: A Tuvalu Red Cross instructor delivers introductory training to new volunteers of the fundamental principles. Credits: IFRC - Rob Few

2.1 The intersection of humanitarian innovation

Fostering humanitarian innovation through creating local impact; which components influence this and how do they relate to each other? This section introduces these research areas and briefly elaborates on the importance of each.

2.1.1 The components

Creating local impact, in the context of this research, can be done through facilitating the youth volunteers with the right resources. These resources are not just any other tool or method, it has to correspond with their ability as practitioners of innovation, their knowledge about a design project and their culture.

In order to understand how these youth volunteers are best supported, three areas of research are defined; human centered design, design education and local problem solving capacities, see the Venn diagram in figure 2.1.

This literature research contributes to the identification of a potential knowledge gap and/or gap in practice. Later on, these findings form the foundation for the process of developing a novel approach for establishing humanitarian innovation and improving local impact making.

Parallel to the literature research, an empirical research is executed along the timeline of the Limitless academy. This is further explained in chapter 3.

The three areas of research are briefly introduced.

Human Centred Design

The Red Cross is a human centred organisation, placing the human perspective central in all their work. Human Centred Design is an approach for solving problems and beliefs that the problem owner, the one experiencing the problem, holds the key to the answer. Further elaboration in section 2.2.

Design Education

The demand for humanitarian innovation is growing (section 1.1.1) and to answer to this growth, future innovators have to be trained. Design education has made major transformational leaps over the last decades. This literature review focuses on how design can best be applied in the scope of this research. Further elaboration in section 2.3.

Local problem solving capacities

Understanding how problem solving capacities differ around the world is highly relevant for this research, since the target group, the youth volunteers, are located all over the world. Most Limitless participants live in developing countries, and therefore this section will focus on the research in this specific context. Further elaboration in section 2.4.

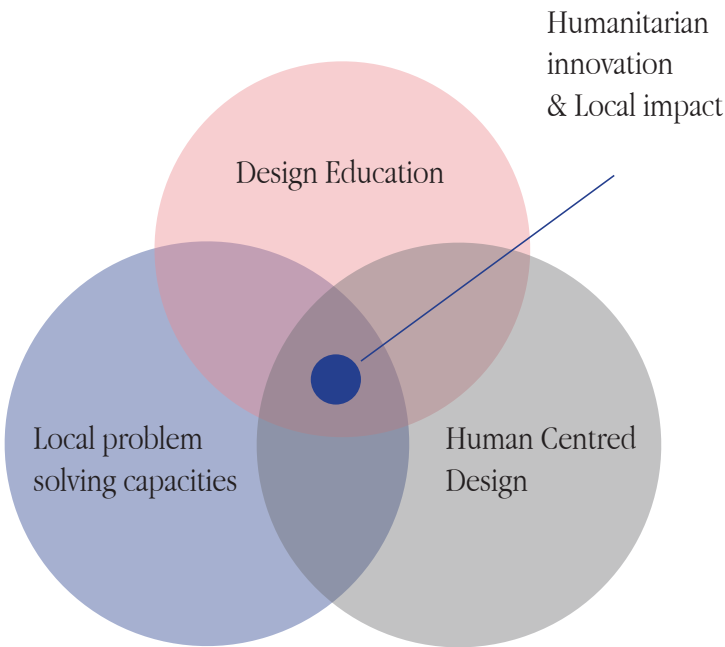


Figure 2.1: Venn diagram visualising the literature study subjects

2.2 Human Centred Design

This section will elaborate on the definition of Human Centred Design, introduce design thinking and dive a bit deeper into the general meaning of ‘design.’

2.2.1 What is HCD

According to IDEO (2015), a world- and industry wide- renowned (Human Centred) design agency, embracing Human Centred Design means that:

‘Believing that all problems, even the seemingly intractable ones like poverty, gender equality and clean water, are solvable. Moreover, it means believing that the people who face those problems every day are the ones who hold the key to their answer.’

The Red Cross Red Crescent Movement is a humanitarian organisation (ICRC, 2021). The Human Centred Design (HCD) principle, puts the human perspective at the centre of the problem-solution space.

Zhang and Dong (2009) argue that ‘understanding human needs and how design responds to human needs are both essential for Human Centred Design.’ Adding to this, BCG discusses that the goal from a Human Centred Design approach is to create concepts which are not only innovative, but more importantly, readily acceptable (MacDonal & Rekehlman, 2020).

The aim of Human Centred Design is to arrive at a solution which is desirable, feasible and viable (figure 2.2). Starting by what is most desirable for the people designing for/with (IDEO Human Centred Design Guide, 2015).

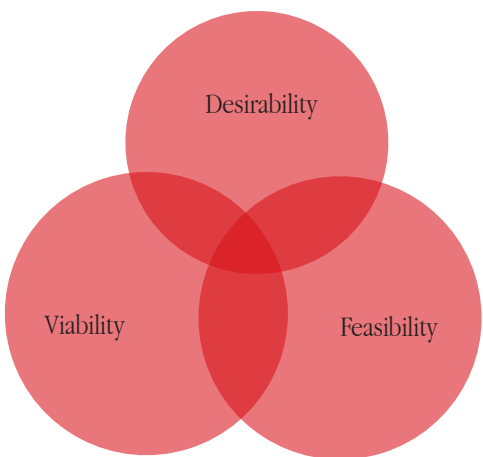


Figure 2.2: Triangulation of HCD

2.2.2 Design Thinking

Moving from a problem towards a solution rarely is a linear process. Design thinking can be described as a mindset, a way of approaching a problem with creativity, in order to embrace empathy, optimism, iteration and ambiguity.

This human centred approach aims to integrate the demands from people (*desirable*), the technological possibilities (*feasible*) and the demands for business success (*viable*) (Brown, 2021)(figure 2.2).

IDEO defined the 3 core activities of design thinking as: Inspiration, Ideation and Implementation (figure 2.3). This is an iterative, non-linear process, which stimulates rethinking ideas and learning from new problems which arise with the implementation of a solution. The latter is a phenomenon described in literature as ‘the co-evolution of problem-solution’.

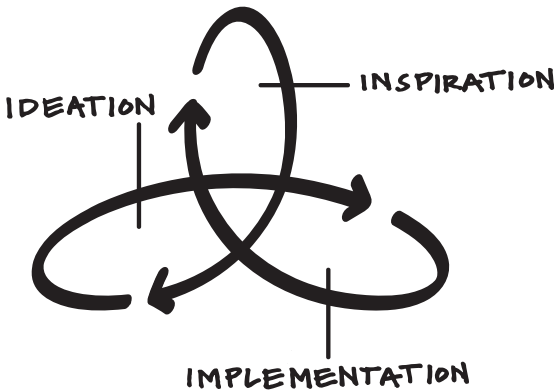


Figure 2.3: Three core activities of design thinking (IDEO, 2021)

The initial model by Maher et al. (1996) represents creative design; a matter of remodelling and sharpening together both the problem formulation and the ideas for a solution (Dorst & Cross, 2001). Figure 2.4 visualises how the problem space and solution space co-evolve together, whilst interchanging information. Section 2.4 further elaborates on this matter.

2.2.3 What is design?

Since the term ‘design’ can be rather vague and interpreted in multiple ways, like; design is about *aesthetics*, design is about *holistic thinking* or design is a *tool*, this section elaborates on the definition of design in the context of this thesis research.

Design is an act aimed at revolutionizing and changing the world (d’Anjou, 2011). The actions of designers form the foundation for the future, through their decisions-making and innovations (Dorst & Royakkers, 2006).

Design is about addressing problems through a creative lens and finding suitable solutions, either strategic, physical or service oriented. Designers create those products and services, which have a societal and environmental impact. (Papanek, 1971). These creations are usually a product of one’s imagination and creativity (Lloyd, 2009).

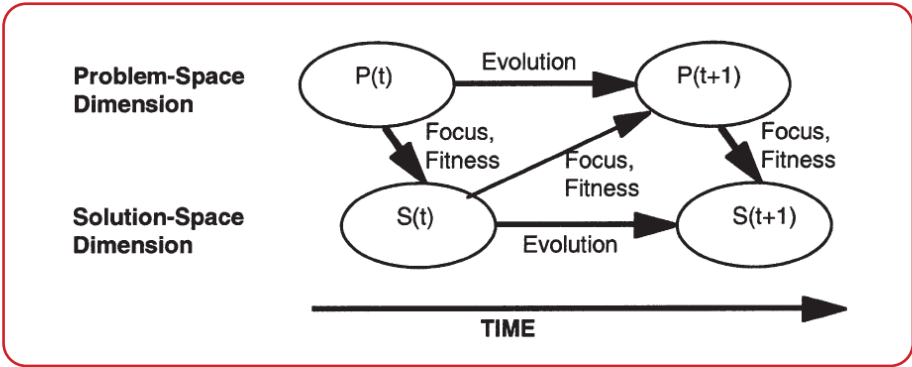


Figure 2.4: The co-evolution model of Maher et al.

2.3 Design education

This section provides an overview of the role design and design education have played (so far) in the humanitarian sector and reviews the potential values for this phenomenon in the near future. Learnings from the past and perspectives for the future are presented.

The demand for humanitarian and development aid rose unprecedentedly in the last decade (Anheier et al., 2019). This demand requires the humanitarian sector to professionalise; to reinvent itself by introducing business management methods, creating a more sustainable and effective use of the available resources (Capet et al., 2013). In order to meet these demands, addressing challenges through a strategic design approach might be valuable. Designers have already made a tremendous contribution on a physical-product level, by developing low-cost customised products for the humanitarian and development sector, producing life-saving products via e.g. digital fabrication methods (Petrick, 2013; Birtchnell, 2014; Gibson, 2015).

2.3.1 Shifting perspective

The field of design, both in educational and professional context, has gone through major developments.

Taking the faculty of Industrial Design Engineering of Delft University of Technology as

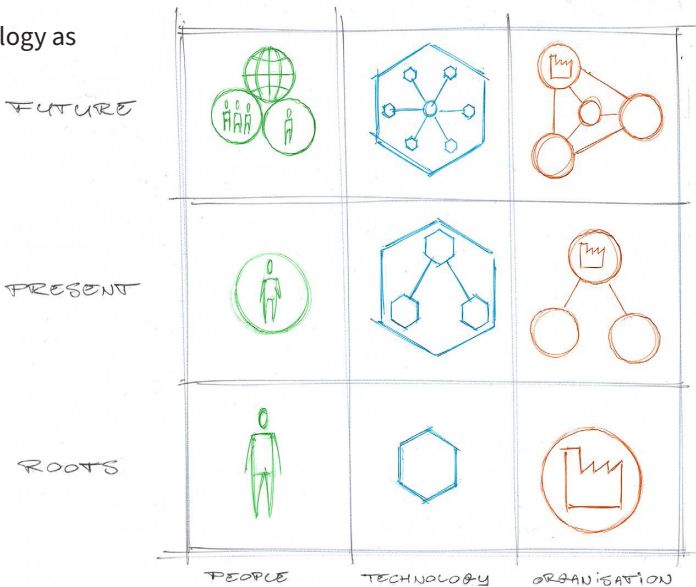


Figure 2.5: Diagram of the current design position, via TU Delft (Voûte et al.)

an example, which illustrates the perspective switch from design being predominantly for aesthetic purposes, towards an era where design operates on both product level and a holistic, overarching way of approaching twenty first century challenges (figure 2.5).

Figure 2.6 visualises how the educational curriculum of the faculty has purposefully changed over the years, in order to shape future designers which are capable of solving these novel challenges. The educational programme shifted from products, via services, to the systemic level of societal challenges, based on the changes in social demands. Design gradually became an academic discipline, combining science and engineering (Voûte et al. 2019).

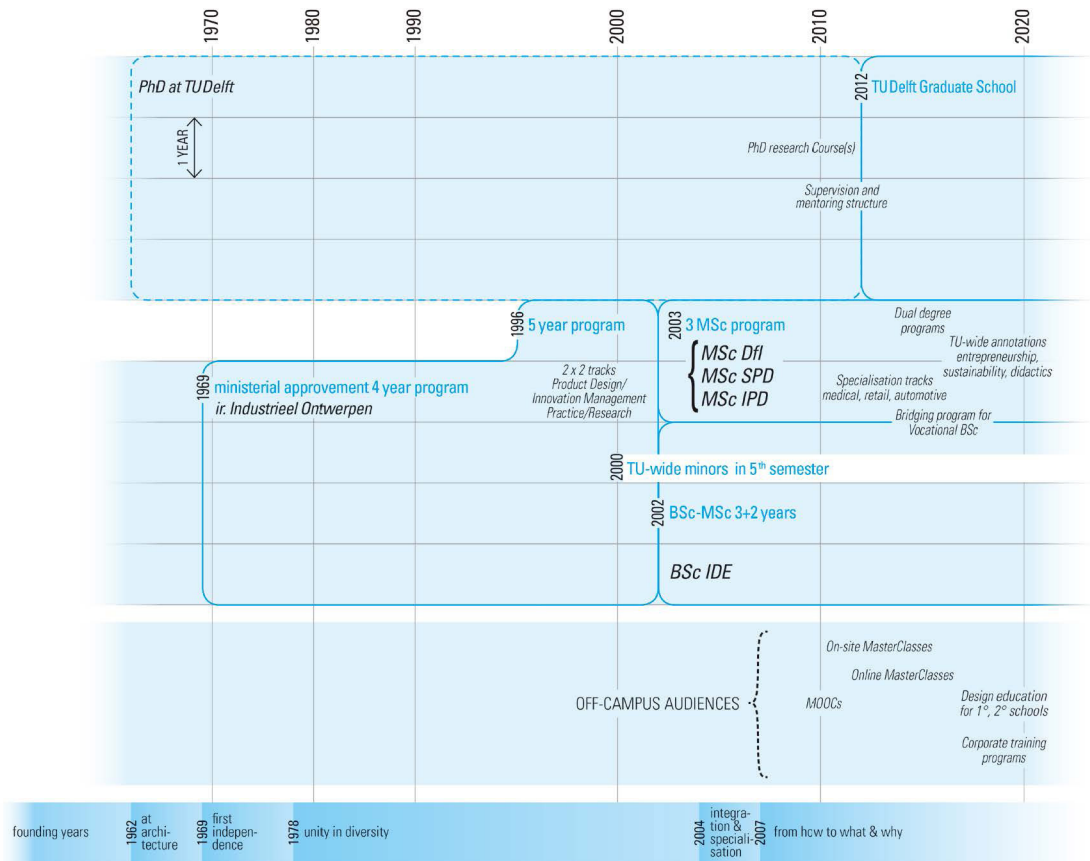


Figure 2.6: Educational changes over the years at IDE (Voûte et al.)

2.3.2 Fundamentals of design (education)

To get a better understanding of the importance of design in practice and the design education preliminary to becoming a design practitioner, the fundamentals are discussed.

According to Donald A. Schon (1992), one of the most influential philosophers of design and design education of the past generation, design is conceived to be the unifying core, when taking the perspective from philosophy and design to professional practice.

To ‘design’, according to Schon, is to create a framework of meaning in an undefined situation, by carrying out practical activities in that particular situation. This results in three implications for Schon, which are taken into consideration during the ideation process:

1. ‘Design is learnable but not didactically or discursively teachable; it can be learned only in and through the practical operations of frame experimentation.’
2. ‘Design is holistic: its parts cannot be learned in isolation. Rather, it must be learned as a whole, in a molecular way, because to design is to work toward a pattern, a coherent order, a world of meaning comprising all components of a situation.’
3. ‘Designing depends upon the ability to recognize desirable and undesirable qualities of the discovered world. But novice students (e.g. youth volunteers) do not possess this ability, and it cannot be conveyed to them by verbal description. Therefore, the language of design is an inseparable part of a practical word-action complex...’

2.3.3 A new era of design education

Norman and Meyer plead for an era of design which requires new skills. Skills which meet the demands of the new areas of design, like applied social and behavioural sciences, an understanding of human cognition and emotion combined with the required scientific knowledge, in order to get a thorough understanding of the client (/target group) and eventually properly validate ideas, before implementation (Meyer & Norman, 2019).

Design Qualities for education

According to Noël, former Human Centred Design researcher, the ultimate goal of design education is to provide society with responsible, knowledgeable and skilled professionals that can help people better achieve their goals (Noël, 2020). Ten qualities for design education are suggested and tabulated below (table 2). For each quality-for-design-education-goal, an initial design principle regarding the concept development is formulated.

Quality for education goals	Design principles
1. Train & Educate: Moving beyond Know-how	Focus on doing instead of theory
2. Create a Context for Inquiry: From Objects to Problems	Learn how to frame a problem
3. Change the Conceptual Network: Identifying the Problems' Components	Emphasise on carefully identifying the problems' components
4. Broaden the Scope: From Designing Solutions to Implementing Change	Approach problems from a holistic point of view
5. Figure out the Subdisciplines: What Are We Educating for?	Focus on what is necessary first
6. Encourage Teamwork to Foster Collective Thinking	Facilitate for teamwork and co-creation
7. Equip for Life: From Learning to Do to Learning to Learn	Stimulate interest in theory and practice combined
8. Engage Students in Their Learning, They No Longer Sit Still	Create activities which stimulate engagement
9 Foster Reflection and Build Capacity to Incorporate a Sustainable Lens	Learning form peers and learning from self reflection
10. Promote Inquiry from Different Angles: Where you begin affects where you end	Provide guidance and structure

Table 2: 10 qualities for design education

2.3.4 Design for non designers

Designers are action-oriented and want to create an impact on the world immediately (Weil & Mayfield, 2019). In a way, the Youth Volunteers too want to directly make a positive impact. How can these 'non-designers' become designers within their local communities?

There is no one-size-fits-all curriculum for design (Weil & Mayfield, 2019). 'Design-Thinking' generally is recognized to be 'an ubiquitous capability for innovation' (Morehen et al., 2013). Kort & Reilly (2001) argue that (western) educational pedagogy could not simply be transferred to developing countries, because this existing pedagogy mostly cultivates the development of ruled-based thinking (figure 2.7), and this way of thinking does not suffice for the societal challenges and demands in these developing countries.

Kort & Reilly propose an alternative, novel, model for education, which addresses the need for 'life-long learning', 'learning-how-to-learn', and the ability to 'apply knowledge to unfamiliar circumstances'. This novel model (figure 2.8) focuses on the development of knowledge, subtracted from information and the development of wisdom from knowledge.

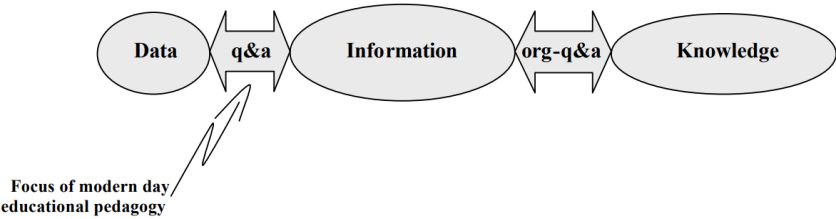


Figure 2.7: Educational pedagogy model to support rule-based thinking

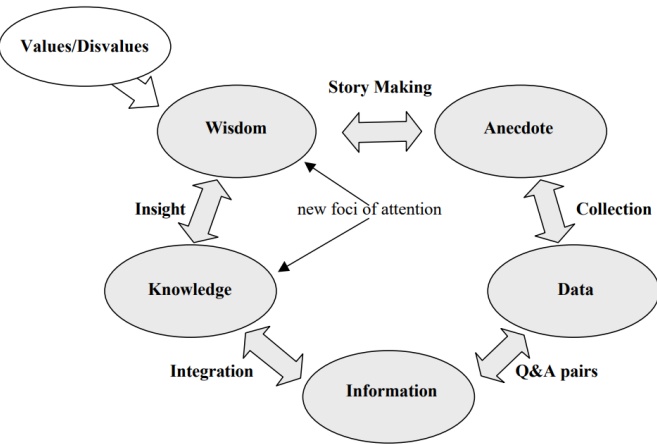


Figure 2.8: Novel educational pedagogy model by Kort & Reilly

2.3.5 Influences of COVID-19 on education

When the World Health Organisation published the first official Disease Outbreak News on January 5th, 2020, the world global COVID-19 pandemic became world news (WHO, 2020). Before the world could imagine what future damages the virus would do, the first consequences were experienced; the normal way of daily commute to work changed into a remote working place, social life became drastically limited and education too had to be adapted (Impey, 2020; Chew et al., 2020).

Education adapted and quickly made (where possible) a transition to online pedagogical solutions, like online lectures, workshops, exams and more. However, this transition exposed both inequalities and challenges and benefits for developing countries (Oyedotun, 2020). Some of the benefits which can be used in the context of this research are listed (complete list of benefits and challenges see appendix 4):

General benefit:

‘Another benefit of the transition to online teaching is the opportunity for live cloud recordings of teachings, meetings, lectures and other interactions.’

Pedagogical benefits/changes

‘Students and staff (= Youth Volunteers and RC employees) were able to explore different learning options using technology and other online tools for instruction and learning.’

‘The opportunity of working remotely, which allows both staff and students (= Youth Volunteers and RC employees) to continue engagement outside the confines of a traditional university classroom (= office / field work).’

Personal growth and development benefit

‘Exposure to several sessions of training organised by the university’s Software Department (= Limitless organisation team) for lecturers on various forms of digital learning and education; and also, the sharing of materials and videos for the benefit of lecturers by colleagues and university administration (= Limitless innovation content).’

2.3.6 Takeaways

The developments in both design education and the way people work (partly as a consequence of the pandemic) draft a vision for a future design educative project. Several opportunities concerning remote and online working were explored, which in return bring additional challenges to the table. There is a significant discrepancy between innovation and facilitating innovation practices in high- middle- and low-income countries.

In order to discover the best formula for creating a fruitful concept, the next chapter will dive into the perspective of the youth volunteers through an empirical research.

2.4 Local problem solving capacities

This section elaborates on how and why different environments influence problem solving capacities and how this affects the successfulness of innovations.

2.4.1 Creating impact

Throughout this research, local action is defined as the creation of- and impact through humanitarian innovations, which encourages communities to become more resilient. This is described in the IFRC 2030 Strategy:

*“ .. we enable **healthy and safe** communities, reduce vulnerabilities, **strengthen resilience** and foster a culture of peace around the world.”*

The Youth Volunteers play a major role in establishing local action. Through the continuous presence of the National Societies in communities and the auxiliary role which is fulfilled by both the volunteers and the National Societies, the RCRC is positioned in such a manner that local action and support can be optimised.

2.4.2 Community resilience

Straightforward, community resilience means that people in a community have the power to overcome challenges they are facing. Unfortunately, countless communities are not able to do so (WHO, 2020). To get a better understanding of how this resilience can be built up, a more thorough definition has to be

determined.

The notion, ‘bouncing back’, is one of the predominant features of definitions of resilience. However, in order to describe resilience in the context of varying communities, the definition by Pooley and Cohen (2010) is taken:

“The potential to exhibit resourcefulness by using available internal and external resources in response to different contextual and developmental challenges”

This definition resonates best with the situation the Youth Volunteers are operating in. Regularly, volunteers and RC employees need to work with the resources that are locally available, lacking external assistance and financial capital to work with external resources. Besides this, the work areas of all the youth volunteers are extremely varied, since they work with different communities in different contexts.

According to the Panel on Humanitarian Financing for the UN Secretary General, the growing humanitarian needs can best be dealt with by addressing the root causes; the most vulnerable communities. Development is the best resilience-builder and therefore, there should come an organised investment in local resilience-building (Panel on Humanitarian Financing for the UN Secretary General, 2016).

2.4.3 Innovation in different environments

Although design education seems to be making big leaps, not everybody is able to profit from this generally positive progression. There is a distinction between high-, middle- and low income countries when looking at the capacities to implement innovation (Lorentzen, 2010). There are multiple reasons for this (which are explored in chapter 3), with the overarching themes of lower level of education, poverty, health and public freedom.

Certain conditions have to be met when you want to successfully implement an innovative product (a product can be a physical or digital product or service), like: available resources, interest from the end user, understanding the value of the product and cultural resonance. Unfortunately, it is often found that innovations in a developing country have marginal effects (Cirera & Maloney, 2017). Especially, the user experience for digital innovations does not seem to match the similar face-to-face interactions which are supposed to be replaced (BCG, 2020).

To improve the ability of communities in developing countries to implement innovation, a better understanding of the cultural pedagogical and didactic differences is necessary. Liem and Sanders (2011) claim that a design process can be improved when the perspective of the end-user is treated with respect and empathy. Hence, tailoring a design process means an improved chance of achieving successful innovation.

Red Cross Youth volunteers play an important role in this process. They are the communicating pillar between the needs from within the communities and the network and resources of the RCRC and therefore, they can take an important, facilitating, role in the process of designing innovative products.

2.4.4 From problem to solution

Often it is assumed that a problem is already well defined and an exploration for potential solutions can just start. However, Maher et al. argue that an exploration process *‘derives a problem and the corresponding solution from an ill-defined problem’*. Figure 2.11 visualises this misconception which is often found in practice.

Hence, it is important to emphasise on the exploration phase, during which the problem should become well defined and which simultaneously generates a framework for the solution.

Fixation

In his literature review, Crilly (2019) addresses the notion of *design fixation*, and whether this affects design creativity in a positive or negative way. Jansson and Smith (1991) initially found the occurrence of design fixation in the first ever lab experiments, where designers were presented with a set of specific pictures. Later it was observed that key features from these pictures were included in their designed solutions, even if this was not in the design brief.

Fixation is an interesting phenomenon for the context of this research, since the youth volunteers often see their drafted, mostly ill-defined, problem statements through a fixated lens (research results in chapter 3).

Therefore, it is crucial to create awareness about the importance of creating a well-defined problem. Once this has been established, a certain amount of fixation is acceptable, as long as the youth volunteers keep focussing on the right problem definition.

From this it is concluded that in order to establish a co-evolution of the problem solution space, first the problem area should be defined, whereafter the specific problem framing and corresponding solution exploration can be established.

In section 8.4, the implications of this theory in the context of this research are discussed.

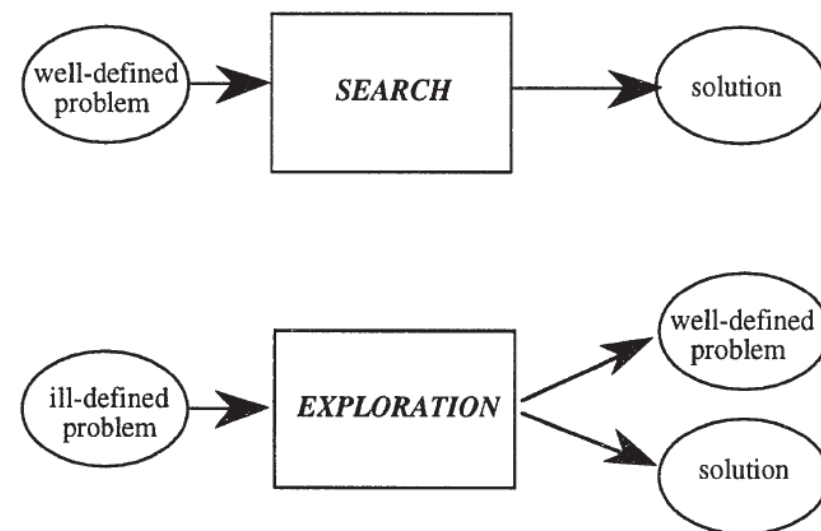


Figure 2.11: Input and output of search and exploration (Maher et al.)

02 | Analysis

Human Centred Design

HCD works from a human perspective. To practice HCD means that:

‘Believing that all problems, even the seemingly intractable ones like poverty, gender equality and clean water, are solvable. Moreover, it means believing that the people who face those problems every day are the ones who hold the key to their answer.’

Creating a successful solution means creating something which is desirable, feasible and viable.

Design education

Design has moved from a mostly product oriented profession towards a more holistic thinking way of approaching problems. 10 Qualities for design education are connected to design principles and barriers and opportunities derived from COVID-19 are discussed.

Local problem solving capacities

The IFRC wants to strengthen resilience and create local impact. Doing so requires a thorough understanding of the co-evolution of the problem and solution space. Fixating on ill-defined problems can cause projects to fail or to create a limited impact. Therefore it is important to establish a well-defined problem statement and use this as the foundation for innovation projects.

*“.. we enable **healthy and safe** communities, reduce vulnerabilities, **strengthen resilience** and foster a culture of peace around the world.”*

- IFRC Strategy 2030

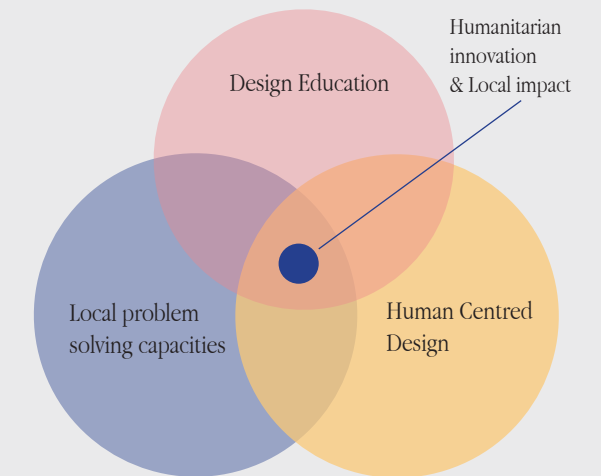


Figure 2.12: Research areas

Chapter 03

Engagement with the youth volunteers

EMPERICAL RESEARCH

This chapter explains the steps of this action research and elaborates on the results of all the interactive activities. In Section 3.1 an overview of all the activities is presented. Section 3.2 presents the results of two questionnaires. The insights of a series of interactive workshops is presented in Section 3.3. A number of focus groups and interviews brought a personal perspective, which can be found in Section 3.4 and lastly, Section 3.5 introduces the online platform which has been created to facilitate interaction between the youth volunteers.

Overview

- 3.1 Engagement
- 3.2 Questionnaires
- 3.3 Workshop problem framing
- 3.4 Focus Groups & Interviews
- 3.5 A collaborative platform
- Summary & Key findings

Background Image: Bulgarian Red Cross volunteers, via unsplash.com

3.1 Engagement

As described in chapter 1, the starting point of this research is Limitless, the IFRC Youth Innovation Academy. The participants of this programme, the Youth Volunteers, hold the key information to designing a meaningful, valuable product. This empirical research took place parallel to the Limitless programme, opening up the opportunity to use this activity as a source of information. This section introduces the moments of contact with the youth volunteers.

3.1.1 Channel overview

The Limitless participants are involved in this research through four channels; two extensive questionnaires, a number of workshops, 10+ focus groups sessions and an online Facebook-group which functions as a communication platform. The sequence in which these interactions appeared is visualised in figure 3.1.

Besides those formal channels there has been personal contact with the participants throughout the period of this graduation project. The collected information concerns the local projects participants are currently working on, their knowledge (or lack of) about an innovation process and their dreams and desires for a better future. Furthermore it touches upon the challenges the participants face, which are found to be divergent, per country or financial/cultural region.

Questionnaire 1

The goal of the first questionnaire is to measure expectations and get an idea of the current level of expertise and experience of the participants.

Workshop

To develop an understanding of the current level of problem framing capacities, an interactive workshop regarding ‘creating a problem statement’ has been conducted, together with the NLRC. In total 4 sessions were hosted with in total over 200 participants

Focus groups / interviews

After hosting the workshops, a more in depth research, consisting of a series of focus groups, has been carried out. In total, over 35 people / groups participated in these sessions.

Facebook group

One of the first findings from the empirical research was the lack of a platform for communication. Therefore, a Facebook-group was created.

Questionnaire 2

After the workshop phase a second questionnaire is sent out to the participants, to measure how the workshops have influenced their projects.

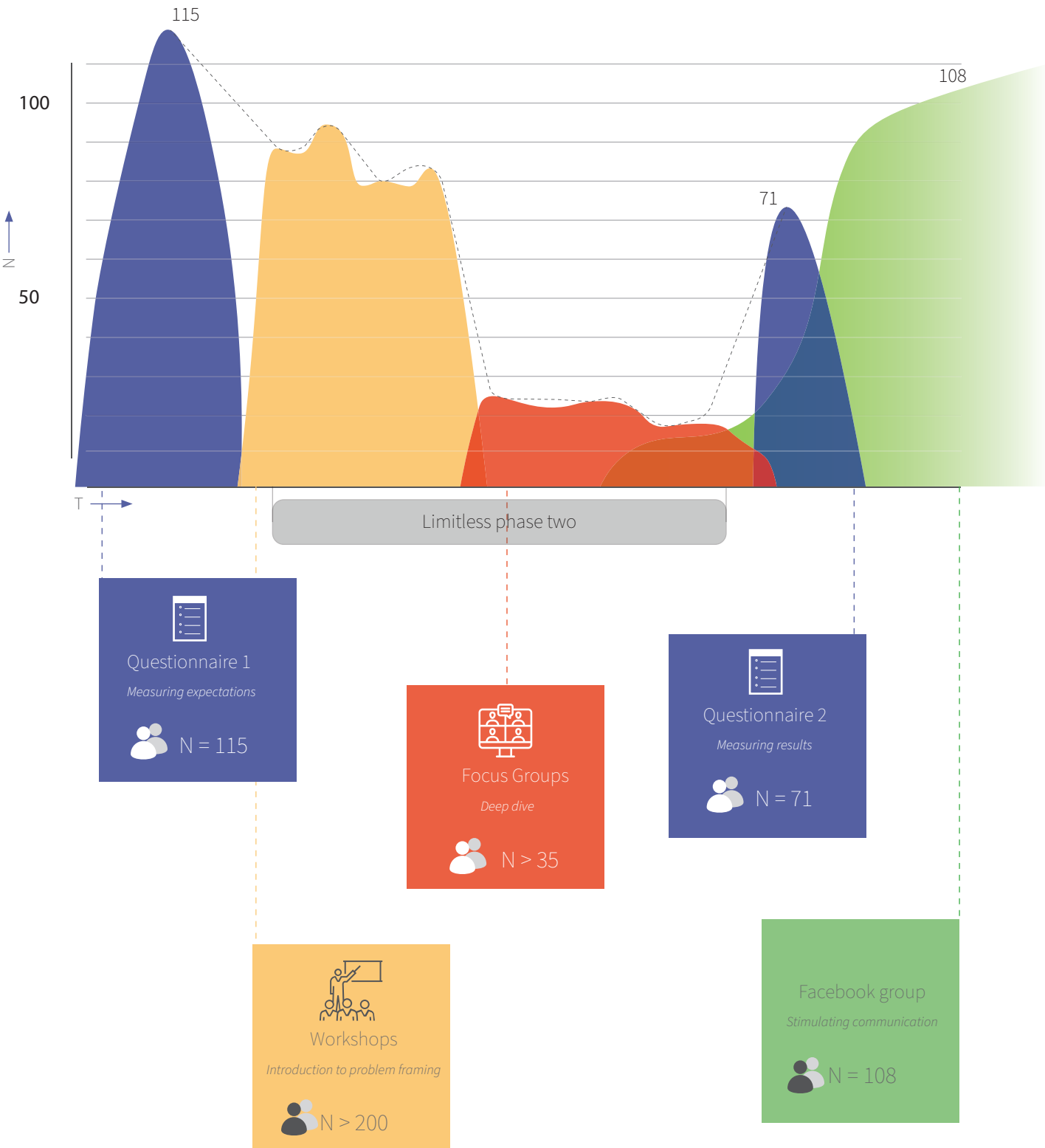


Figure 3.1: Channel overview

3.2 Questionnaires

The workshops of the Limitless programme are designed to assist youth volunteers with their innovation projects. To measure if these workshops were effective and created the desired effect; youth volunteers who are more comfortable and educated about how to work through an innovation project, two questionnaires were created. The first questionnaire was sent to the participants before the workshops started, the second questionnaire came after the workshop phase finished.

3.2.1 Measuring expectations

Questionnaire 1

The first interaction with the participants was by means of an extensive questionnaire, which contained 16 questions regarding their experiences with design projects and their interest in and expectations for their participation in the Limitless programme, accompanied with a number of demographic questions (see appendix 1 for the complete questionnaire). The goal of this first questionnaire is to get a grasp of their level of experience with applying design methodologies to solve (local) problems, their understanding of ‘innovation’ and the reasons for them to participate in this program.

The organisers of the Limitless programme send out this questionnaire to all the participants before the start of phase 2 (see figure 3.1). Out of approximately 500 participants, 115 filled out the questionnaire. The low conversion rate can relate to the relatively poor internet connection of a large part of the volunteers.

The output of the questionnaire, combining the open and multiple choice questions, provided a comprehensive source of information to analyse and eventually draw conclusions from. A few remarkable findings:

The initially defined problems, which functioned as reasons for participation, often were too broad to solve within one project. Therefore, there is a great need of redefining (reframing) the problem (statement) and making the participants aware that this is necessary in order to start a project with a realistic chance of success.

Participants indicate that they want to learn, connect and get help from fellow volunteers.

Limitless is not actively facilitating this connection.

Participants struggle to define ‘innovation’ correctly.

Almost half (40,2%) of the Youth Volunteers have a maximum of 4 hours a week to develop their idea.

Only 62% of the participants indicated having access to a laptop.

3.2.2 What did the workshops teach the participants?

Questionnaire 2

After the workshop face came to an end, a second questionnaire was sent out to all the participants. This questionnaire had 71 responses, so there is a difference in number of responses. This could be explained by the stage of the process in which the youth volunteers are, assuming that they are more occupied with their projects than before the workshop phase started.

The numbers and percentages can still be perceived as representative for the participants, because the majority of questions had a clear winning answer. Still, these insights should be interpreted keeping in mind that it contains less than half of the participants.

The aim of this questionnaire, succeeding the first questionnaire, was to compare their knowledge about innovation, learnings from the workshop sessions and find out what they need in order to let their projects succeed.

The most relevant findings from the two questionnaires compared are presented on the right. An additional data overview can be found on the next page (figure 3.2) and a complete overview of questionnaire 2 in appendix 2.

Participants are doing extensive research to their problem after attending the workshops

Participants indicated to have put their learnings into practice, mostly problem framing, doing additional research and making new connections

Participants are as confident to realise their idea as before starting the academy

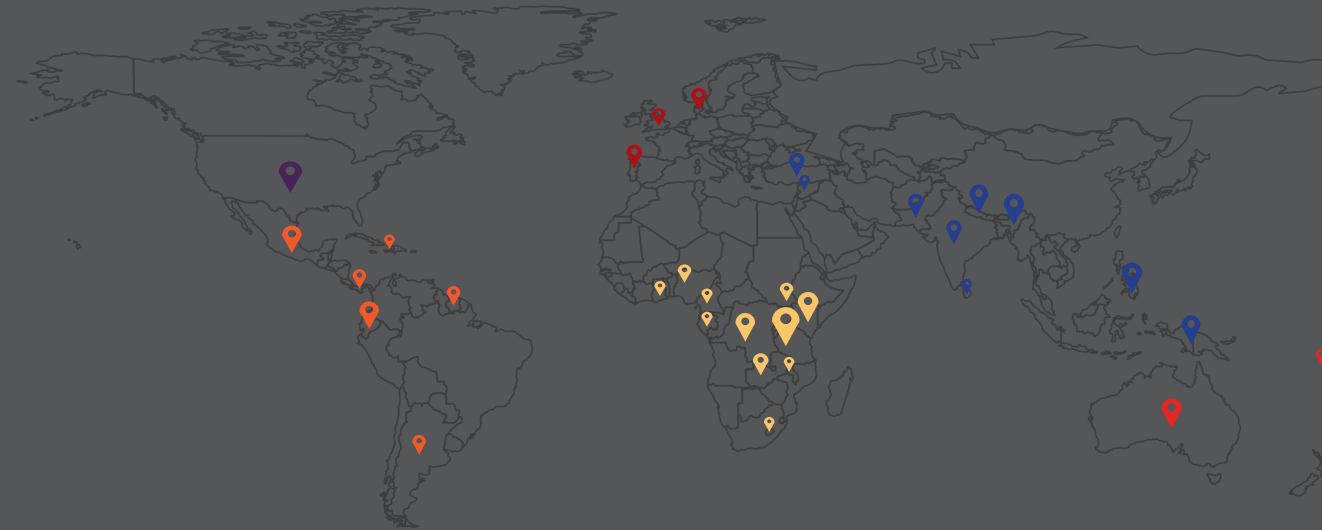
Lack of financing still is perceived as the main barrier for implementing ideas in the communities.

Knowing the community was already the most important factor, but the understanding has grown through the programme. After the workshops took place, a significantly lower percentage indicates that financing is a key factor for success.

Participants indicate that Limitless has helped them to come up with a better solution to their problem.

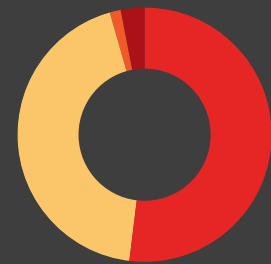
Participants came to realise that background research is very important and that many of them have to do extensive research

Participants indicate that they would like to have more interactive, mentoring sessions and a way to communicate with other Youth Volunteers



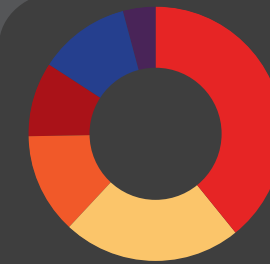
Where are the youth volunteers from?

Uganda - Kenya - Congo - Nigeria - Cameroon - Rwanda - Zambia - Malawi - Ghana - Lesotho - Gabon - Australia - Fiji - Turkey - Libanon - Nepal - Bangladesh - Philippines - Pakistan - India - Sri Lanka - Indonesia - Denmark - England - Portugal - United States - Mexico - Haïti - Suriname - Argentina - Honduras - Ecuador



Did the workshops influence your understanding of the problem?

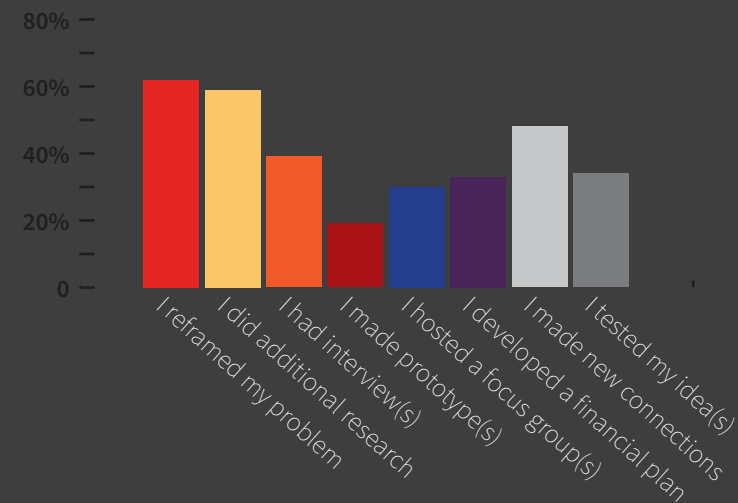
- Yes, I have conducted additional research and have validated my problem with the community
- A little bit, I have gathered additional insights
- No, I have the same understanding of the problem
- Others



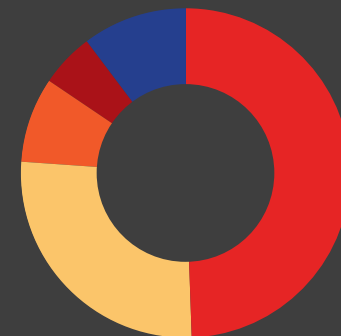
How much time a week available to work on this project

- 1-4 hours
- 4-8 hours
- 8-16 hours
- 16-14 hours
- > 24
- Others

How did you apply what you learned so far?



Hightes attained educational level



- Bachelor
- College
- Primary school
- High school
- Others

What would have helped you in Limitless phase 2?

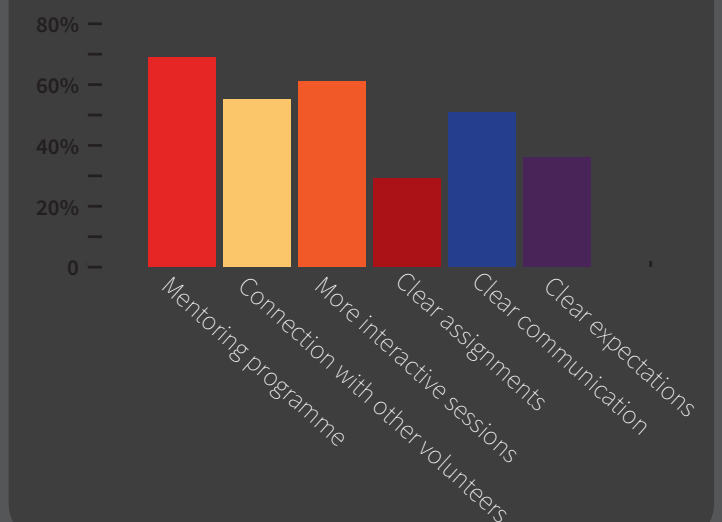


Figure 3.2: A selection of results from the questionnaires

3.3 Workshop problem framing

The NLRC was one of the National Societies in charge of hosting a workshop. I was fortunate enough to be part of this experience and host a workshop around problem (re-)framing for all the youth volunteers which signed up for the sessions.

3.3.1 Educative workshops

Before the first questionnaire, the Inspire phase gave participants the opportunity to learn more about innovation processes and impactful projects, through various webinars. After those inspirational sessions, the participants were guided with a number of workshops.

The aim of this phase is to support the participants with their initial ideas and inspire them for further development, by introducing them to different tools and methods. The online workshops were hosted by experts from multiple National Societies, amongst which the NLRC. Approximately 500 selected participants took part in this phase. The following topics were covered with the workshops:

1 Reset priorities

Know my community
Reframe the problem
Understand the causes
Develop the Theory of Change

2 Ideate

Framing hypothesis
Mapping networks
Understanding personas
Developing a prototyping plan

3 Sustain

Improving the user experience
Reiterating via quick feedback loops
Developing a business plan
Working out loud

To contribute to this research, I was given the opportunity to co-host one of the workshop sessions. Together with the NLRC, a workshop about problem framing was designed: *‘Are you asking the right question?’* (figure 3.3).

Due to different time zones and limited availability of the (part time) volunteers which participated in the Limitless programme, the session was hosted 4 times over a period of a week, making iterations on the content in between.

With 80 participants on average. During this workshop, theory about problem framing was explained and a number of short practical interactive exercises were introduced. This enabled the participants to directly implement the theory into their own projects.



Figure 3.3: Opening slide workshop ‘Are you asking the right question?’

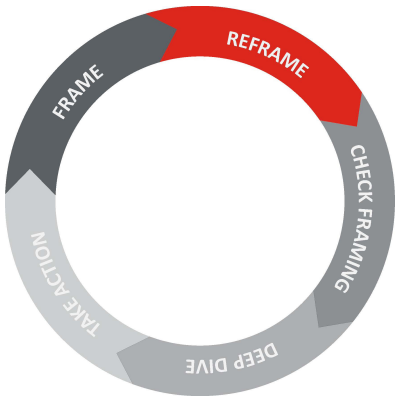


Figure 3.4: Reframing cycle

3.3.2 Interactive format

For the first exercise the participants had to write down their challenge (‘Frame the problem’, figure 3.4) on a piece of paper and identify 2-3 stakeholders, using a full sentence and keeping it as short as possible, within 3 minutes. The results were shared in the chat.

After writing down the personal problem statements, the participants were asked to review what they had written down and try to iterate on their first version, by looking at a number of questions:

- Is it true?
- Did you include an explanation?
- Did you include a solution?
- Did you limit potential solutions?
- Is it clear?
- Whose problem is it?
- Are there strong emotions?
- Are there false trade-offs?

After this exercise, an interactive moment started where multiple statements were reviewed and improved. Feedback on these sessions was valuable, it showed how difficult it is to properly frame a problem, in order to keep it within the power of solving for a youth volunteer.

After completion of the workshop, the participants were asked to leave their email addresses in the chat for further engagement in this research if they wanted to. The response was incredible, since many left their contact details. These contact details were later used to invite youth volunteers to take part in the focus group sessions.

3.3.3 Results

During the workshop was found that a lot of the participants had difficulties to formulate a proper problem statement and when they had written down a problem statement, experienced difficulties to create a reframed version of this. First a few examples were provided though the slides, addressing both correct and poorly-framed problems, see figure 3.5.

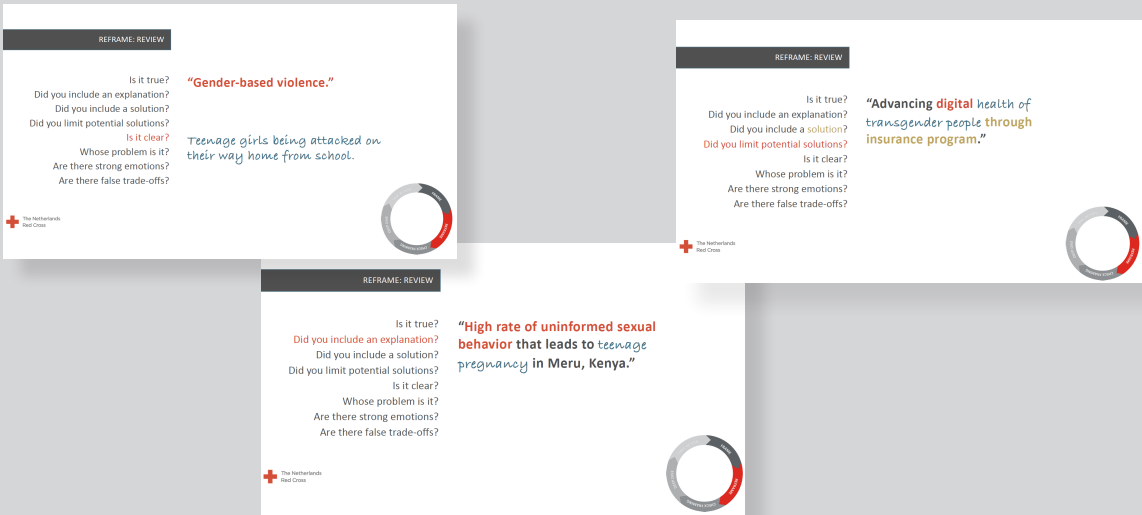
The reactions were multi-sided; some participants managed to create a well formulated problem statement were others did not. An examples from a participant sharing her problem statement and reframed problem statement in the Zoom-chat:

“Unemployment is on high rate in the youths of Uganda.”

Reframed to a more specific problem statement:

“High rate of jobless youths in my community.”

Figure 3.5: Reframing examples during the workshop



3.4 Focus groups & Interviews

The most common methods for data collection used in qualitative research are interviews and focus groups (Baillie & Gill, 2018). Since this research was done during the pandemic, and the participants in the focus groups were mostly overseas, all interaction has been done through digital channels.

3.4.1 Getting to know the volunteers

After the first encounter with participants during the workshop sessions, a deeper engagement was necessary to follow up on the insights of the workshop findings. Focus groups were used to start the conversation and gather more information from the participants.

Via an online planner tool (Calendly), participants could sign up for a focus group session. In total, 14 sessions were scheduled, with a maximum of 5 participants (/groups) per session. Figure 3.6 gives a visual overview of the number of participants in each focus group session

These sessions were hosted over the course of 2 weeks. Unfortunately, some participants did not show up during the session or could not join properly due to connection errors. Therefore, a few sessions turned into an interview instead of a focus group, which created a different setting

and gave the opportunity for even deeper engagement. The aim of the focus groups was to get a better understanding of their experiences with the Limitless programme so far, and which role the volunteers have in their communities. The online interaction had various influences on the conversations. Some participants seemed to be comfortable with the online environment, where others were more passive and less comfortable, not turning on cameras and microphones.

The focus groups were initially semi structured, with some prepared topics to discuss. However, experience learned that it was more informative to have an open conversation where the Youth Volunteers could express their uncertainties, questions and remarks. This open approach led to a wide variation of findings.

People with lots of different backgrounds took part in the sessions, which provided rich insights from different parts of the world.

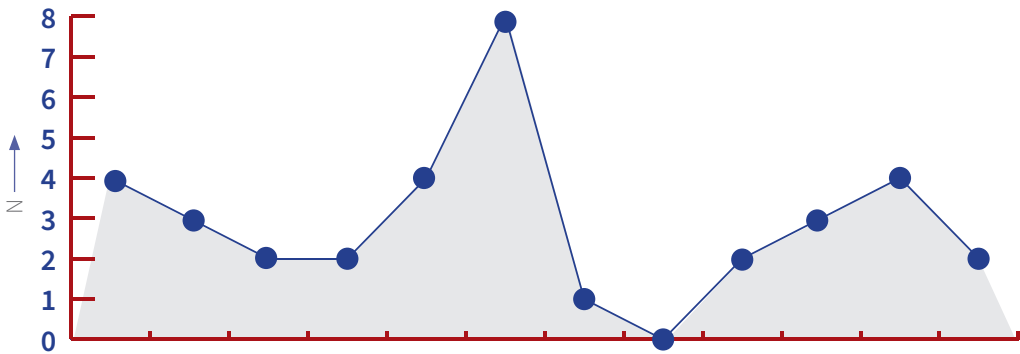


Figure 3.6: Number of participants for each focus group

3.4.2 Key learnings

The results and learnings from these sessions were corresponding with the insights from the questionnaire and workshop sessions, but more importantly, more detailed information was gathered. Some key learnings are explained:

Some participants already built a prototype and used a project which they started before the beginning of the Limitless programme. Therefore, the content of their projects did not always perfectly match with the Limitless challenge: to solve a COVID-19 related problem.

Others had a hard time defining a clear problem, which is within their power of solving and thus were stuck at the start of their innovation journey, not knowing where and how to begin.

A lack of communication from the organisation made it unclear what to deliver when. The participants had great urge for better communication and a lot of questions were raised during the focus groups, which unfortunately could not all be answered. Often it was not clear what the topic of a workshop was.

Applying what the youth volunteers learned during these sessions was generally perceived as very difficult, since they were not presented with ready made, low threshold tools, but rather with too much theoretical background instead of practical information.

Youth volunteers work directly in a specific community, but often they themselves are not living in this community. Sometimes, this disconnection was hard to overcome, since important people within communities can be hard to reach and work with. A desire for collaborative tools was expressed, so the youth volunteers can better engage with the communities.

One of the participants indicated that he would like to see some innovation examples, from a similar context. So not again someone with a western background who is explaining what to do, but someone with a similar background, which has achieved great things through a way which is also reachable for the youth volunteers.

Often the question was raised whether it was possible to rewatch the workshop sessions, since a lot of the participants could not be present at each session (partly due to different time zones). The organisation (Solferino Academy) indicated that recordings of the sessions would soon be online, but unfortunately this promise was never met.

A desire for group focussed mentoring was expressed by most of the participants, since they had difficulties with how to proceed with their projects. There is a need for better guidance, and the volunteers should be handed tools which they can apply in their context. Right now this is not available and therefore makes it hard to understand what to do and how to continue.

Again, they expressed their wish to have a general platform to communicate with other peer volunteers and with the organisation, to ask questions, help each other and share inspiration.

Eventually all these sessions created a network of enthusiastic youth volunteers who want to get the most out of their projects. Multiple personal bonds were formed and some Youth Volunteers are still in contact with Koen. After these sessions the idea arrived to create an alternative platform which could be used to communicate. Hence, a Facebook group was created and all the participants were invited to join.

3.5 A colaborative platform

One of the main requests from the participants, being able to share information and stories with each other, was something which could be realisable with minimum resources. Therefore, a private group on Facebook was created. Although Facebook does nowadays not seem like the best platform for such activities anymore, it is a platform which is intensively used by a large number of participants.

3.5.1 Purpose

Information from the focus groups created the incentive to start an online group. Reaching a large group at once can be difficult, but Facebook groups provide easy communication and content sharing tools. All the participants indicated to be active on the platform and therefore this medium had their preference.

After sharing the link to this group, the number of members quickly reached one hundred. This accurately represents the desire for a medium to communicate, one could argue.

The goal of the platform is to stimulate sharing ideas and projects, and it functions as a communicative channel for questions and general assistance.

3.5.2 Changing conversations

When the group was just launched, most posts were either questions about the workshops (which were being hosted around that time), or gave insights about how the volunteers were experiencing the Limitless programme so far.

From the organisational side, some questions were posted, regarding the incentive to share content or to ask questions about the progress being made thus far.

After the workshop phase ended, the youth volunteers were supposed to be starting with ideation and prototyping phase of their projects. The content of the posts therefore changed and the youth volunteers started to share more information on their projects, combined with videos and pictures.

Once the selection round for the next phase was done and additional funding was supposed to become available for the participants lots of questions came in. Most were about not receiving funding or not being on the list for funding. This caused trouble for the volunteers affected by this issue.

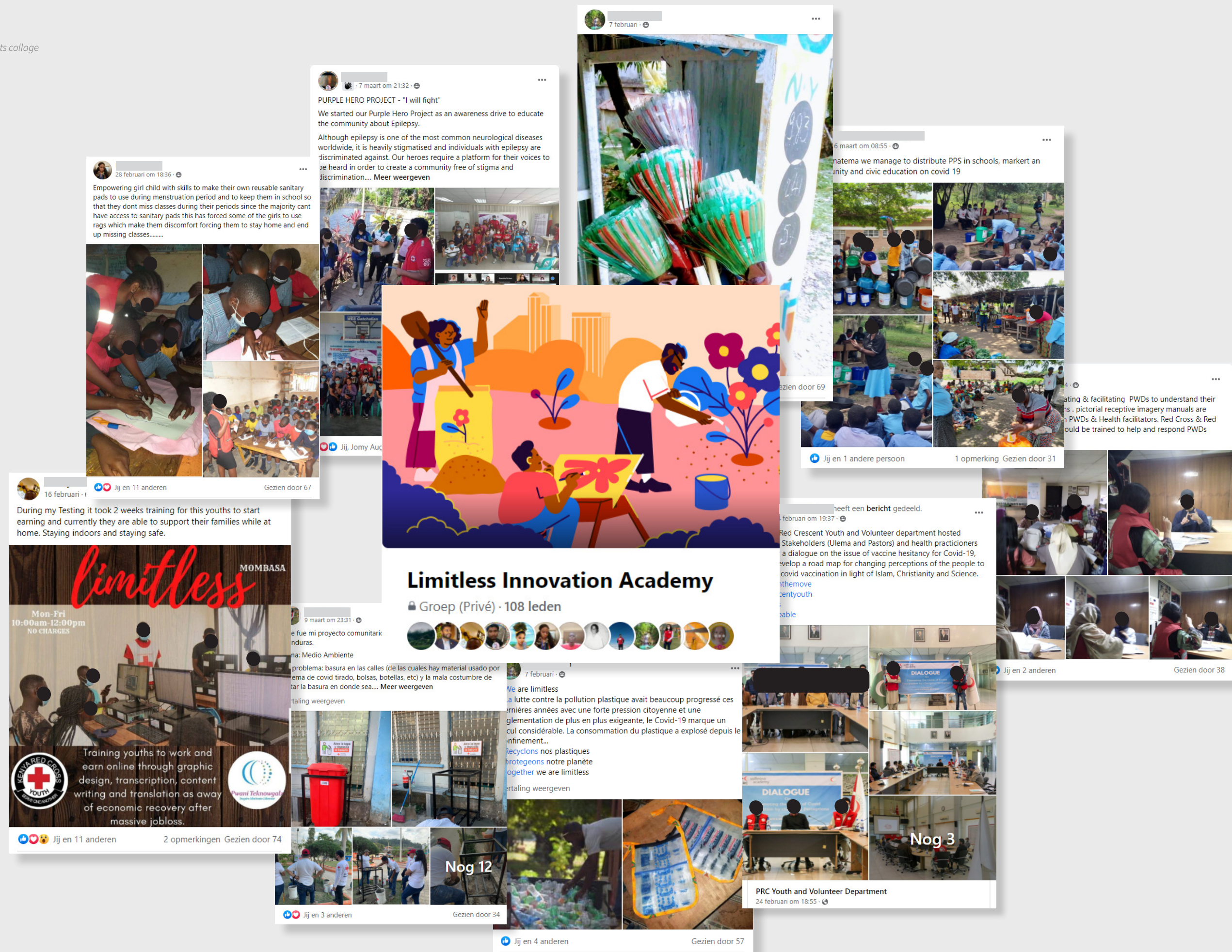
From this it became clear that communication from the organisational perspective was not managed well. A lot of the participants were left in the dark. Since the actual organisational organ of Limitless, the Solferino Academy, was not part of the Facebook group, some questions remained unanswered.

The next pages present a selection of the material of this online group. A collage of the posts can be found on the next pages (figure 3.7). Some posts are shared here, to get an idea of the environments the youth volunteers come from and what type of projects they are working on.



Figure 3.7: Facebook group-posts collage

Figure 3.7: Facebook group-posts collage



03 | Engagement with the youth volunteers

Engagement

This chapter provides an overview of all the empirical research activities. All the information gathered during this activities is crucial to gain an thorough understanding of the needs and desires of the youth volunteers. These insights, combined with the findings from the literature review, create a base for developing design directions. Chapter 4 will create a synthesis from the collected information. Briefly all the key findings are mentioned.

Key findings

- *Need for practical, ready to implement tools*
- *Need for a clear problem statement to begin challenge with*
- *Need for better communication*
- *Need for more structured guidance*
- *Need for interaction with peers*
- *Need for feedback from professionals*
- *Need for community feeling*
- *Need for a platform where all information can be found*
- *Need for a tool which is both online and offline available*

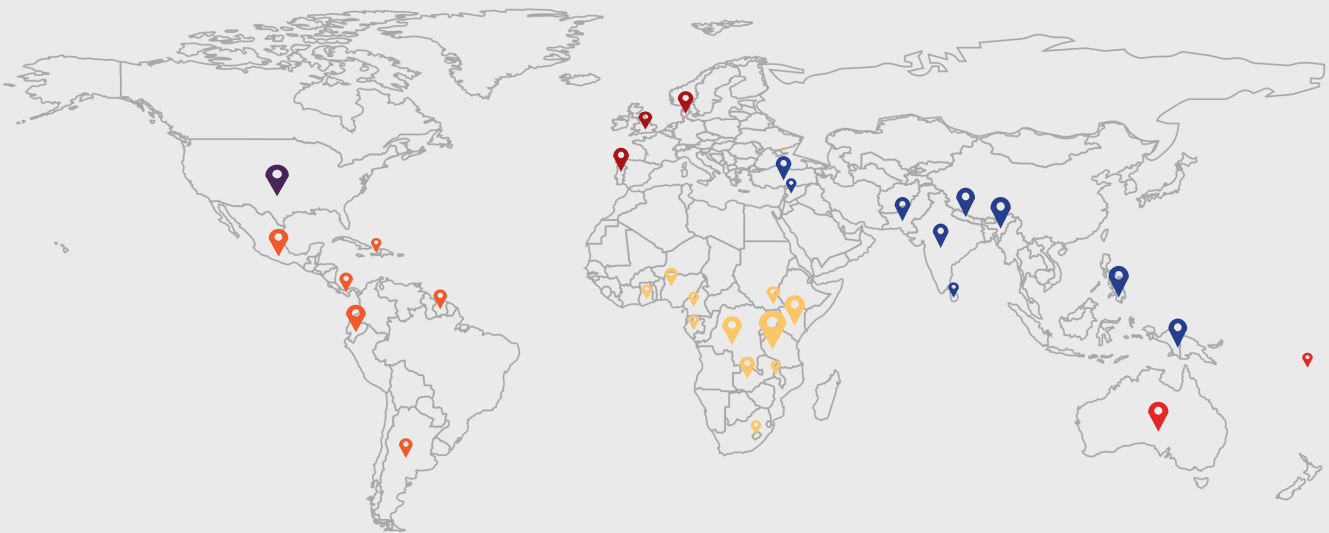


Figure 3.9: Youth volunteers location



Chapter 04

Synthesis

RESEARCH SUMMARY

Concluding this part of the research, the research findings can be connected in order to find a possible gap. Section 4.1 elaborates on the research gap. In section 4.2 a set of barriers and a set of design guidelines are drafted, to guide the ideation phase. Section 4.3 dives deeper into the notion of problem framing.

Overview

4.1 Connecting the dots

4.2 Design guidelines and Barriers

4.3 Problem framing

Summary

Background Image: Rode Kruis biedt voedselhelp in Afghanistan via het Nederlandse Rode Kruis

4.1 Connecting the dots

In this section the findings from research are translated into a vision for design. In order to come to this vision, design goals are introduced. To scope this research down, for it to fit the duration of this thesis, the focus is set on two phases of a design cycle.

4.1.1 Missing perspective - research gap

An innovation academy should have the capacity to let people learn, learn from each other, learn from professionals and learn how to apply certain knowledge. Currently a number of human centred design toolkits have been developed to encourage identifying and solving problems with a selection of prefab tools. Limitless aims to be human centred, but lacks proper guidance and the availability of ready-to-implement tools.

Where learning should be about fostering collective thinking, implementing change from designed solutions and engagement (Noël, 2020), Limitless currently brings little future perspective for the youth volunteers, in a sense it actually is quite limited. The winners receive a relatively large sum of money for further continuation of their projects, but little perspective on actual growth and optional guidance for further development.

To address this gap, a novel curriculum should be developed, which takes all the demands and desires of the participants, the youth volunteers, into account and starts with a section about formulating a good problem statement. A design goal is set and a framework which visualises the vision for this novel approach is created.

4.1.3 Design goal

Workshop

The goal for the novel workshop concept is to create a SMART problem statement, in order to get to a problem statement which is understandable, achievable and realistic.

SMART goals help improve performances (Lawlor, 2012). Creating this form of problem statement helps the youth volunteers to create a starting point for their innovation journey, which is realistic and does not exceed their capacities. Peer feedback, and feedback from a mentor,

should be integrated in the format, so peer learning is encouraged and the participants have the opportunity to receive professional feedback.

The workshop should be guiding, but open for interpretation. A modular set up will help to address all the needs of the participants.

Holistic perspective

Limitless should become a programme which is better suited to the way of working- and learning of the youth volunteers. The content should be readily implementable and applicable in different (unfamiliar) scenarios (Kort & Reilly, 2011).

A full curriculum should be developed, guiding the youth volunteers through all the phases of a design process. For each step, a set of tools in a workshop format should be developed, connected through an online platform.

Besides this online working environment, there should be an option to work offline in an analogue setting.

4.1.4 Focus

The scope for creating the concept will be on the first two phases of a design cycle (figure 4.1): Empathise and Define. The aim is to create a workshop which is an improved alternative for these phases of the current Limitless programme. This workshop will focus on creating an appropriate framed problem statement. During this development, multiple iterations will be made in order to achieve the optimal result.

Empathise

Empathy is the foundation of Human Centred Design, since the problems you are trying to solve are rarely your own. Understanding values and culture helps to empathise with the user (of the solution you design). To empathise is to observe, engage, interact and understand

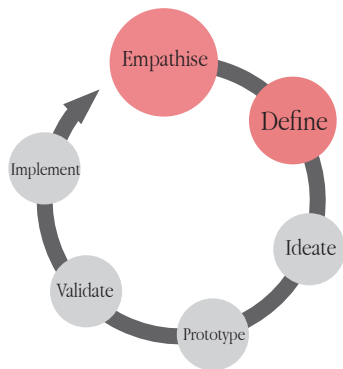


Figure 4.1: Design cycle

the user and its behaviour in their local context (dSchool, Institute of Design at Stanford, 2021).

Define

After the define phase the problem you strive to solve should clearly be expressed. To get there, all the empathy findings should be transformed into a meaningful challenge. Immerse with the end user, gather insights and needs and formulate a problem statement. Understanding the challenge and what is within your power of leveraging, is crucial for creating a successful solution in the next steps (dSchool, Institute of Design at Stanford, 2021).

4.1.5 Vision framework

A framework is created to serve as a basis for the platform and functions as a vision for further development, see figure 4.2.

Centrally placed is Limitless, the facilitator and connecting platform for all the stakeholders. All internal stakeholders; youth volunteers and mentors are part of the online environment.

The youth volunteers are in charge of the projects and have the connections with the communities. The latter are excluded from the online environment, since it should stay within the boundaries of the IFRC. Interpersonal interaction is stimulated and facilitated through the online network.

The mentors, who hold an advisory role, are not directly connected to Limitless. They rather function as experienced professionals which help participants with their project during mentoring hours and through providing (written) feedback.

Communities are not directly linked to Limitless. Volunteers engage with the communities when necessary, using tools provided by Limitless.

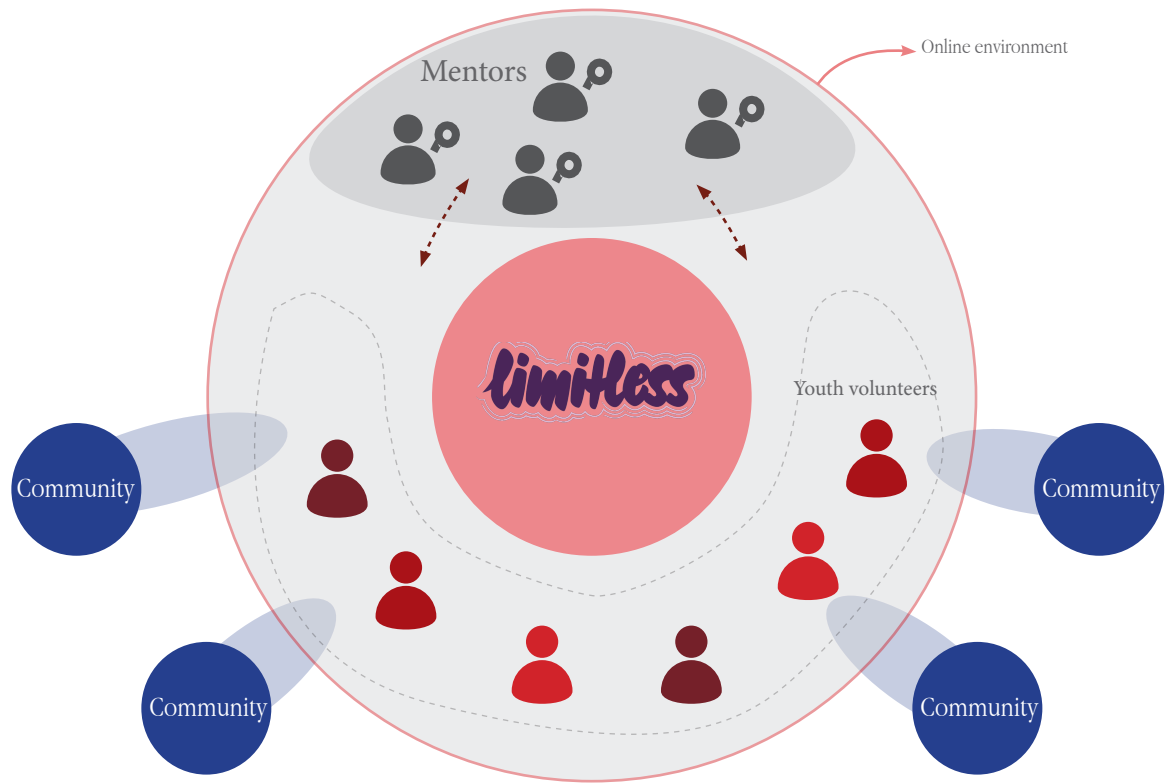


Figure 4.2: Vision framework to design a novel curriculum

4.2 Design guidelines & Barriers

A set of design guidelines is developed to guide the ideation process. These guidelines are the results of the literature review, empirical research and interviews. Besides guidelines, a number of barriers are defined from the empirical research. These barriers should be overcome with the proposed concept.

4.2.1 Design Guidelines

The guidelines are subdivided in 3 categories. Each guideline is complemented by a short description.

Educational

- **Create personalizable Limitless programmes**
Each project is different and thus should the programme be variable and customizable.
- **Provide realistic examples**
Participants learn a lot from examples which they can relate to.
- **Align the youth volunteer with the communities' values**
When values are not aligned it is difficult to work together, therefore a tool for value alignment should be integrated.
- **Acknowledge cultural barriers between volunteers**
Limitless is a global project, so not all participants will interpret things in the same way.
- **Stimulate iteration throughout projects**
Volunteers have to learn how to iterate their work by constantly researching and critically questioning their work.
- **Stimulate teamwork and co-creation**
To come to a better understanding of a situation. Within NSs and together with the communities.
- **Stimulate peer to peer learning**
Volunteers should share their work and activities in order to inspire and learn from each other.
- **Create awareness for the importance of a program like Limitless**
In order to grow and include future partners, and to stimulate volunteers to keep innovating and being creative.

- **Create room for reflection**
Learning by doing is what happens during Limitless. Reflecting is important to realise what you have learned and what can be improved in the future.
- **Use a Human Centred Design approach**
Youth volunteers are the key to the answer and therefore this curriculum should be human centric.

Connecting to communities

- **Work with the limits of cultural barriers**
Respect boundaries, but seek for detailed insights.
- **Learn how to adjust to their standards**
Each community has different standards, thus the tools should be applicable within multiple contexts.
- **Exercises should be fun to do**
Fruitful interaction is stimulated when activities are fun and create engagement between the practitioners.
- **Co-create with locals**
Include the community members in the research and let them contribute to solving the problems.

Don't overcomplicate things

- **The outcomes should be SMART**
Educational background levels are varied amongst the volunteers. Outcomes of the workshop should be simple and realisable.
- **Spark interest to carry out further research if necessary**
Often further research can improve the process. Stimulate the volunteers to look further than their own perspective.
- **Stimulate asking questions about the theory**
Since the academy is mostly practice-oriented, this does not mean that theory is not important. For those interested it should be possible to further discover innovation theories.

4.2.2 Barriers

Barriers are outcomes of the research, grasped in a discrete sentence. The goal is to overcome these barriers with the development of a novel concept within this thesis. Each barrier is introduced.

1. Communication and expectations are not well managed by the IFRC.

Letting volunteers in the unknown, therefore a transparent communication platform should be established.

5. Lack of peer to peer learning opportunities

Peer feedback, and peer interaction should be stimulated throughout the whole process, without constraints

2. The additional layer of complexity, the theory behind innovation and HCD, makes the whole education program harder to understand. There is a need for another way of learning.

The curriculum should be practice-led, with additional options to learn more about the theory for those interested.

6. Problem framing seems to be difficult

Creating realistic problem statements is found difficult and volunteers should be assisted with their problem formulation.

3. Engagement with communities is difficult.

Therefore a set of tools should be developed which assist the volunteers in connecting with communities and gathering information.

7. The approach is not human centred enough, but rather from the perspective of the IFRC

The curriculum should be developed from a bottom-up perspective, beginning with the demands of the participants. Currently it is too much about what the IFRC thinks the participants need, instead of operating from their actual needs.

4. Misconceptions about innovation, which are amplified through the current approach.

A decent understanding about what innovation is should be created.

4.3 Problem framing

Referring back to the research from Maher (1996), the problem space evolves over time with the solution space. Coming to a successful solution means creating a well-defined problem statement. This section dives deeper into the concept of problem framing and gives a practical example with the problem definition of this thesis research.

When the youth volunteers were asked to share their problem statements in the chat during the problem framing workshop, it immediately became clear that at least half of these problems were too difficult and complex to solve for youth volunteers themselves.

4.3.1 How does this affect Limitless?

Since research has indicated that the problems with which the youth volunteers apply for the Limitless programme are often too broad and vague, thus ill-defined, this point of action has to be addressed. Currently there is one workshop regarding problem framing integrated in the programme.

For future editions, the start of each project should include a phase of problem identification. The suggested programme-changes are presented in figure 4.3.

Instead of applying with a problem and an idea, the participants should have the opportunity to apply with just a problem. The first step will be to work with this problem area and shape a problem statement. This phase should contain a series of activities which stimulate researching the problem space. Through these activities, each project has the potential to start with a thoroughly analysed problem space, resulting in a well-defined solution space. From there on, the programme will continue with other phases. Chapter 6 further elaborates on this novel approach.

4.3.2 Reframing the problem definition of this thesis

What would the value of this thesis be if during this research the problem definition would not be critically framed and, if necessary, reframed. Well, fortunately the problem definition has

indeed been developed and reframed.

This thesis started with a problem definition as part of a project brief. In this brief however, the problem definition was that: *design training had to be developed for youth volunteers, in order for them to become more resilient for future challenges.*

From research it is learned that the emphasis should not be on educating ‘design’, but rather on creating a system which integrates design thinking in such a way that it facilitates youth volunteers with design thinking tools and methods, without them actively studying and learning about the theory behind design thinking. Simply because the group of youth volunteers seems to be profiting from tools which they can directly implement in their own projects, instead of learning about theory.

Therefore the focus of this research has shifted to creating a workshop which is directly usable, combined with an additional service which touches upon the other demands of the youth volunteers.

As discussed in section 4.1, the workshop will address problem framing and the goal is to create a SMART problem statement.

This is essential for Limitless to become more successful in the future, because a majority of the projects which are participating in this year’s edition started with a problem definition which is too ill-defined to work with (in the scope of this programme).

To achieve this, an intervention in the programme should be made, where a problem framing section is integrated in the beginning of the programme, to enable all the participants to start with a well-defined problem.

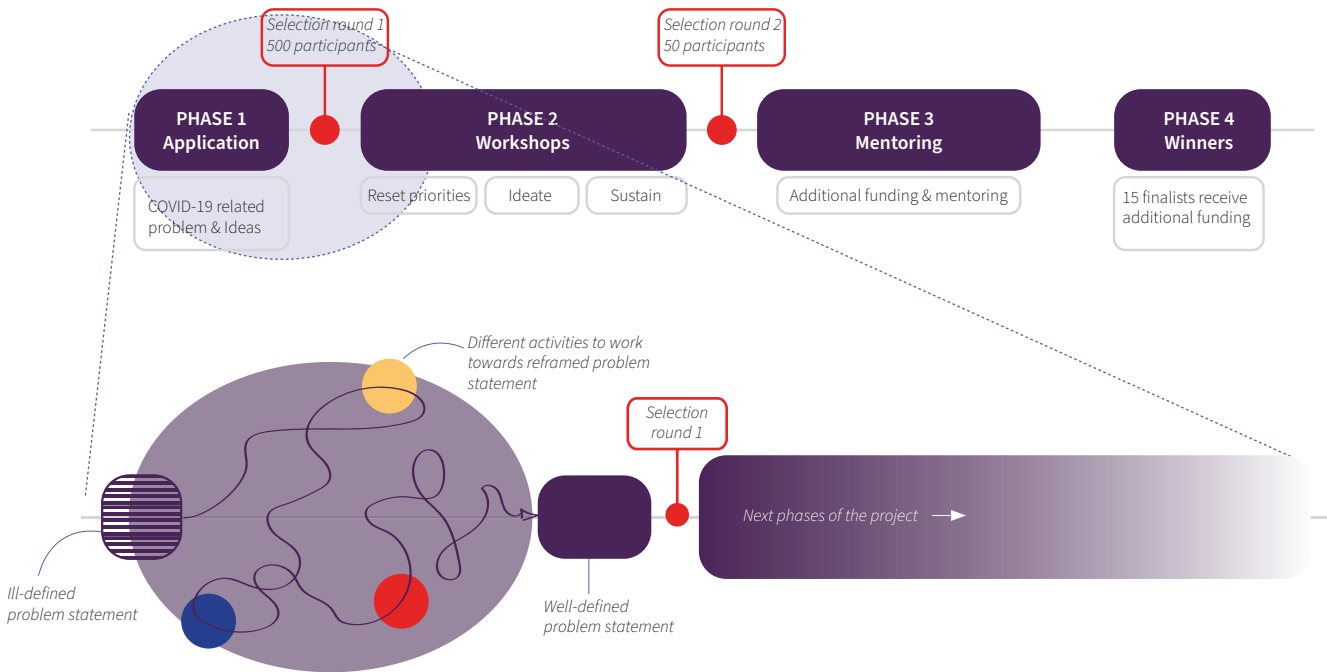


Figure 4.3: Proposed Limitless programme overview

04 | Synthesis

Design goals

From the research phase, two major design goals are formulated:

Create a workshop concept which facilitates SMART problem -identification and -framing.

Create a system which makes Limitless become a programme which is better suited to the way of working- and learning of the youth volunteers.

Focus

The focus of the ideation and conceptualisation phase of this thesis will be on the empathise and define phase of the design cycle (figure 4.4). The other phases will be briefly introduced.

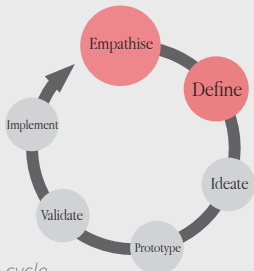


Figure 4.4: Design cycle

Guidelines and barriers

A set of guidelines and barriers for design are drafted from the research insights. These will guide the ideation phase.

Implications for the Limitless programme

The findings propose a change in the set-up of the current Limitless programme. Both from a holistic point of view as from a specific content-wise point of view. These will be further explored in the next chapter.

Chapter 05

Ideation

FROM INSIGHTS TO DESIGN

This section gives an overview of the steps which are taken to go from the research insights through ideating towards a framework for a concept design. From the analysis a set of design guidelines is subtracted which form the basis for this chapter. First the iterative approach is introduced in Section 5.1. Followed by the back-end design in Section 5.2. This chapter ends with an elaboration on the strategic value in Section 5.3

Overview

5.1 Approach

5.2 Organisational integration

5.3 High level framework

5.4 Back-end design

5.5 Strategic value

Summary

Background Image: untitled, via Google Images

5.1 Approach

This section elaborates on the iterative approach which has been taken for creating the concept and the prototyping methods are introduced.

5.1.1 Iterative approach

The development of the concept has been done through an iterative approach, see figure 5.1. On both content and style multiple iterations have been carried out.

The insights from the research phase were used during the brainstorm to come up with multiple concepts. Eventually one concept has been chosen and further developed. During this development multiple iterations took place, based on feedback from the NLRC innovation team. After multiple iterations, the concept is tested with a number of youth volunteers.

Multiple ideation techniques were used to come up with ideas for the initial concept, which eventually resulted in a problem framing workshop.

5.1.2 Workshop problem framing

To create a prototype which could be easily tested in the situation of Limitless, a digital prototype was developed.

Through Adobe XD an interactive webpage could be created, which functions as a mock-up concept. Besides a XD concept, the format is also developed in a PDF, in order to print or download it.

Since the prototype is digital, the UI (user interaction) and UX (User experience) are important success factors. Multiple iterations are carried out to optimise the digital experience. An overview of the iterative steps can be found in appendix 5.

To create a clear understanding of the steps in the workshop, a flowchart has been developed for the Empathise and Define phase (section 5.4).

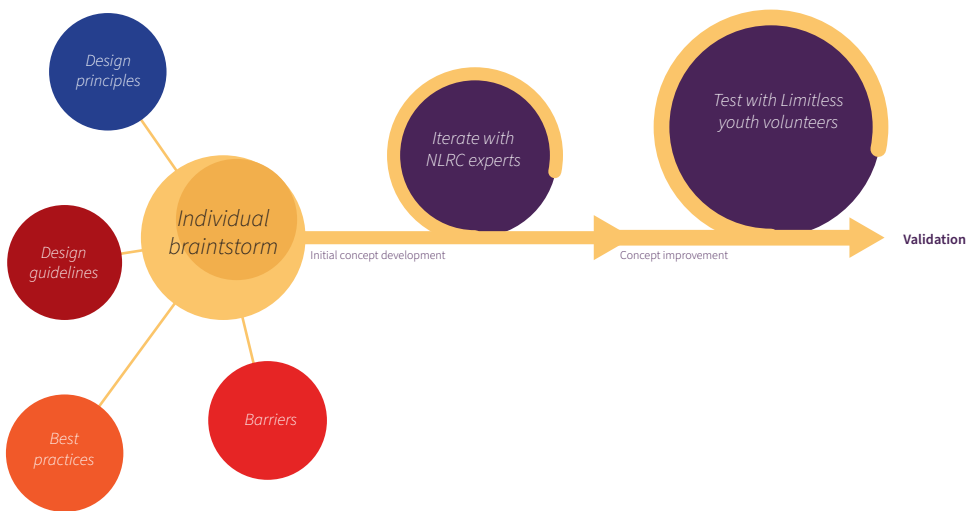


Figure 5.1: Iterative process overview

5.2 Organisational integration

Limitless is currently directly addressing the youth volunteers, the National societies and local branches are totally left out of the programme. This is not necessarily wrong, but leaves out potential for support and collaboration.

5.2.1 Current positioning

Figure 5.2 visualises the current programme set-up; The Solferino Academy is in charge of the organisation of Limitless, which is directly addressing the youth volunteers. The National Societies and the local branches are not included in the programme.

However, throughout the programme there are continuous moments of interactions with Red Cross experts; during the webinars, workshops and in the mentoring phase. Therefore it is advised to include the NSs and Local Branches in the organisational set-up of the Limitless programme.

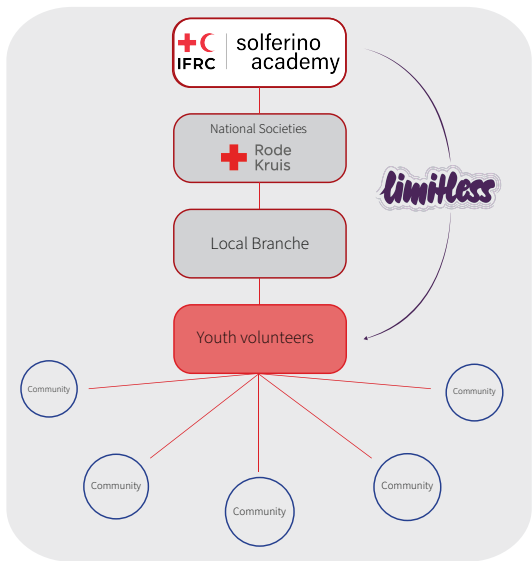


Figure 5.2: Original organisational set-up

5.2.2 Integration of Limitless

The new approach proposes a programme in which the National Societies and Local Branches are directly involved in the Limitless programme (figure 5.3).

Hereby, the programme can use the facilities and network strength of the IFRC, to improve the interaction between youth volunteers and professionals. The organisation of Limitless will be in charge of the communication with the professionals, in order to facilitate the best assistance for the participants, while the youth volunteers keep in charge of communication with the communities.

Further elaboration on the organisational set-up can be found in chapter 6.

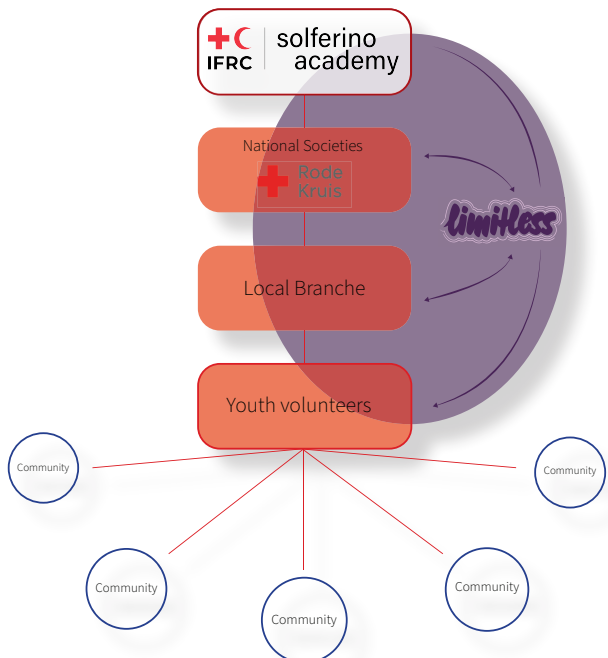


Figure 5.3: Proposed organisational set-up

5.3 High level framework

To provide a more holistic overview of the complete concept, a ‘high level framework’ is developed. A service blueprint visualises the totality of the concept design, including the stakeholder interactions, concept implementation and other relevant factors over the timeline of a youth volunteer participating in the Limitless programme.

A service blueprint gives a visual overview of all components that constitute a service (Reason, Løvlie & Flu, 2015). The innovation curriculum, the core of Limitless, is a service itself. To understand all the interactions, involved stakeholders and other influential factors, a service blueprint is developed which provides a visual overview of all these components.

Overall the blueprint (figure 5.4) can be divided into six parts; the empathise and define phase (for which a workshop prototype is designed), the ideate, prototype, validate and implement phase.

The innovation journey of a Limitless participant describes in which part of the programme - ‘the curriculum’- what kind of activities take place. Besides the journey of a youth participant, the journey of a project mentor is added and the action points from an organisational point of view are provided in the organisational journey row.

All the interaction moments with the corresponding stakeholders are visualised, according to the timeline which represents the different design phases of the programme. The frontstage features and backstage learnings describe what the curriculum features do and what the underlying teoretical and practical learnings are.

The problem framing workshop is integrated in the blueprint. The components which are not developed yet are also placed in the Limitless row.

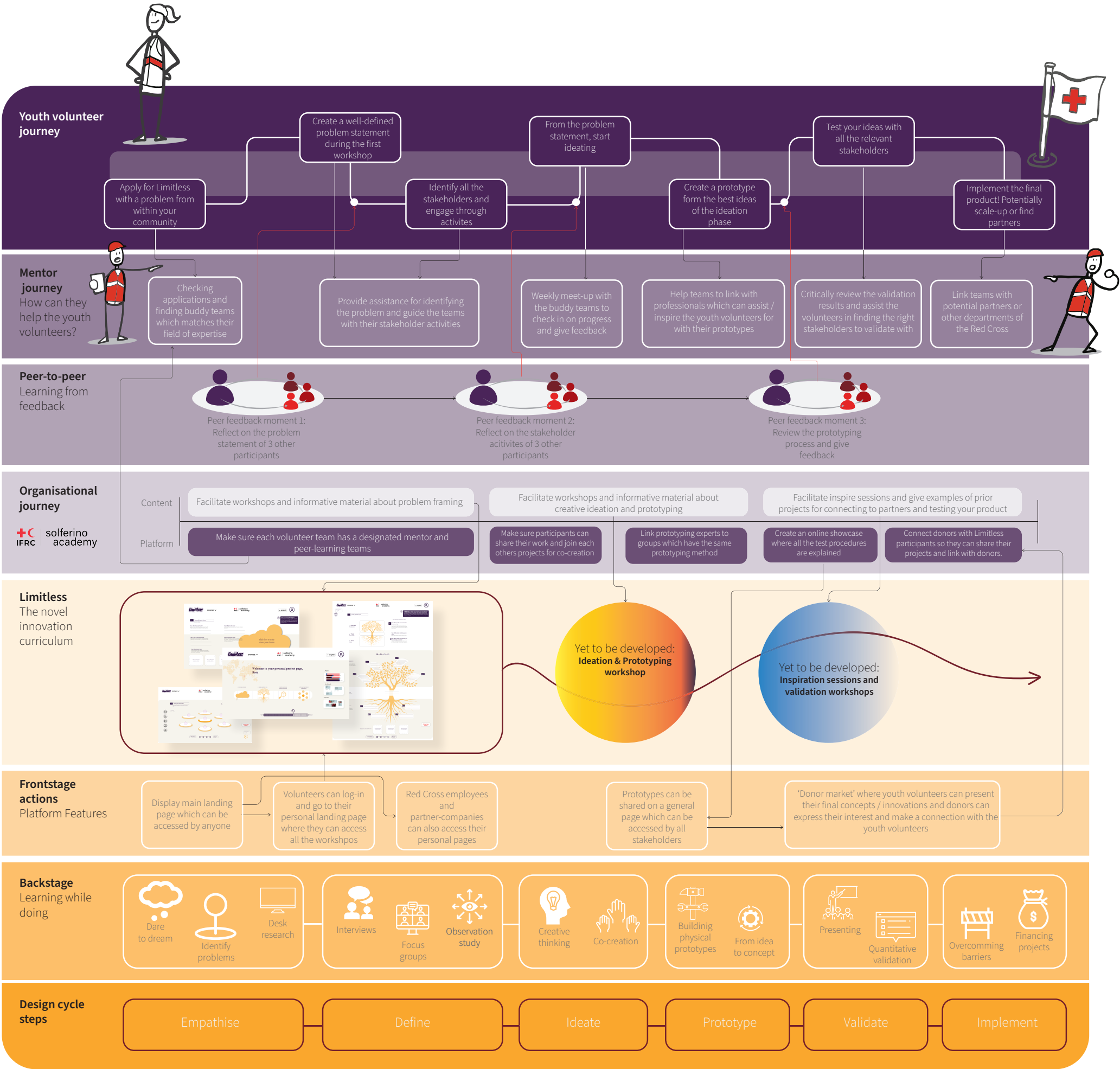


Figure 5.4: Service blueprint for further concept development

5.4 Behind the scenes

Back-end design

A flowchart is created to get a better understanding of how the workshop should work, how the UI and UX work and how all the interactions are connected. This forms the basis for the front-end prototype.

5.4.1 Shaping the workshop

Creating a logical back-end flowchart is mandatory to create a workshop which has an unconsciously smoothly flowing process. A flowchart is developed for the Empathise and Define phase (figure 5.5 & 5.6).

This flowchart functions as the backbone of the front-end design of the workshop. In the flowchart, all the process steps are visualised and peer- and coaching feedback moments are included.

Both phases are designed to create a problem statement and do multiple iterations throughout the exercises in order to improve the problem statement.

Empathise

The first phase starts with an introduction about why problem framing is important and how to do so. Following this introduction, the first exercise is about formulating a dream. Consciously the decision is made to introduce this exercise here. It stimulates the participants to think freely about what they would like to improve in their community, without constraints. It is important for the youth volunteers to let go of all biases and obstacles of daily life for a moment, so they can imagine and dream away.

After formulating this dream via a set of questions, the participants move to the next step, which is the translation from their dream into an obstacle which is currently withholding them from realising their dream.

When this problem is defined, the next step is to build a problem tree around this problem. What are the causes for this problem and what are the consequences from this problem?

The next step is to formulate a problem statement via a prefab format. When the first version is formulated the participants can identify the stakeholders involved in their project. The stakeholders will later be involved through a number of activities.

To stimulate peer learning, a mandatory feedback moment is integrated. After providing feedback for 3 other problem statements, participants will receive the feedback on their work and so they can continue to the next step.

The last part of the empathise phase is a consultation from an expert who provides feedback.

Define

The define phase dives deeper into the problem. It is time to connect with the stakeholders, by means of a number of tools. These tools are developed to stimulate interaction and peer learning.

The participants can pick a number of activities and work through these with the designated stakeholders.

From these findings, a last version of the problem statement is drafted, after which there is a second mandatory feedback moment. Working towards the final version of the problem statement, one more reframing exercise and an additional expert review moment take place.

Empathise

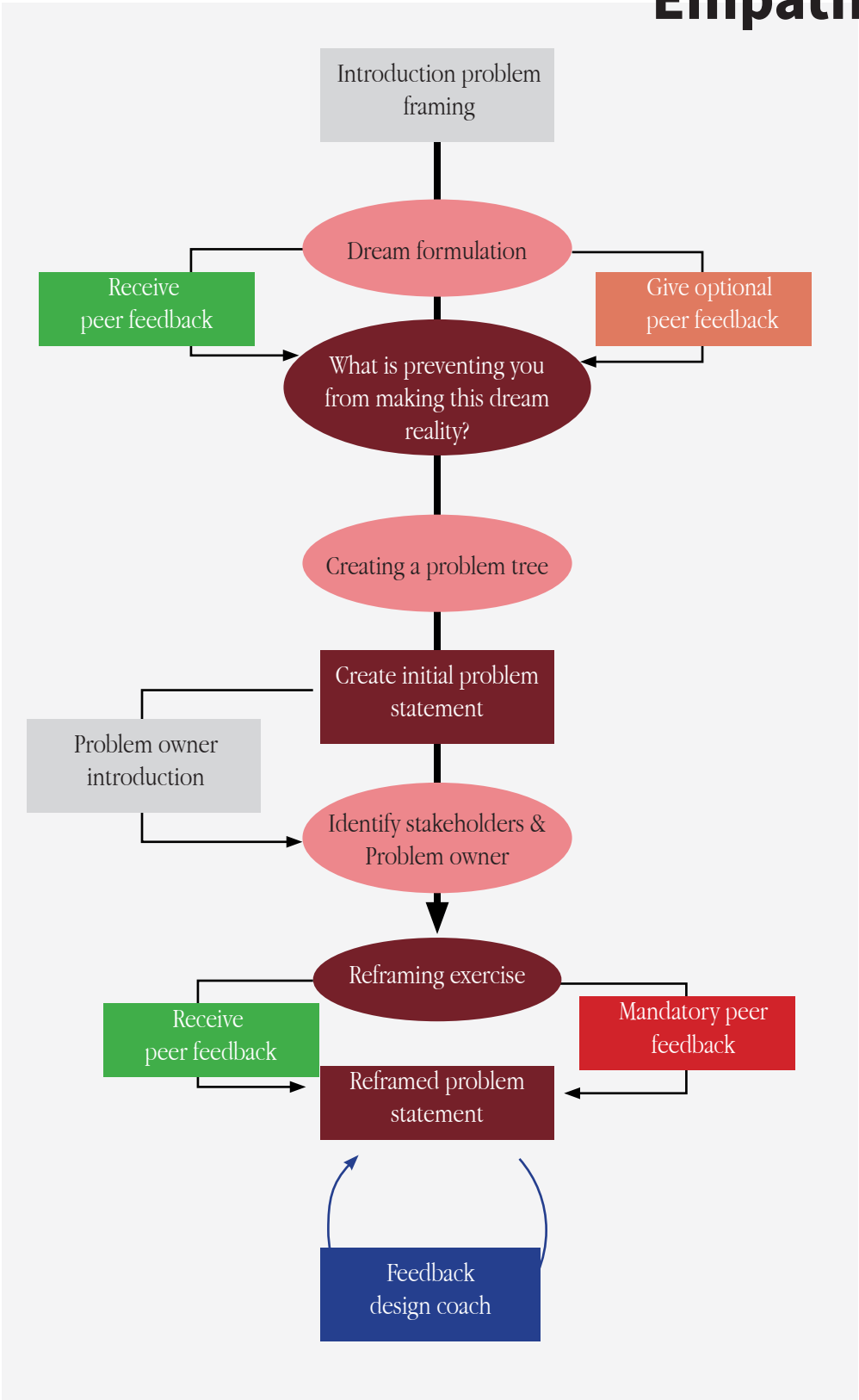


Figure 5.5: Workshop back-end flowchart visual - Empathise phase

Define

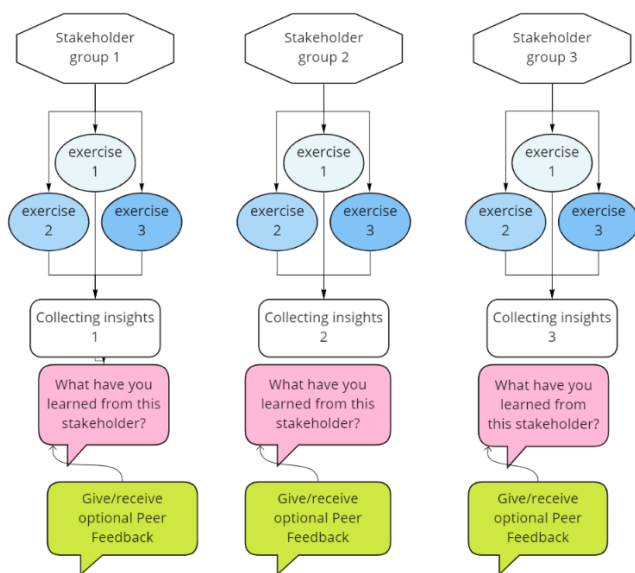
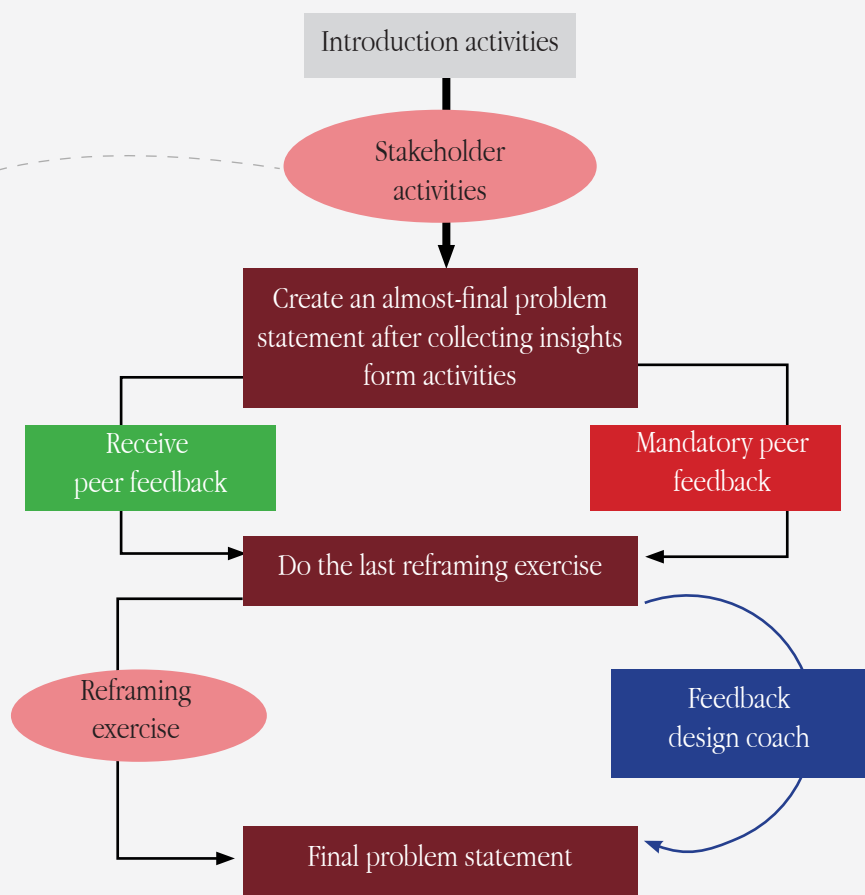


Figure 5.5: Workshop back-end flowchart visual - Define phase

5.5 Strategic Value

Improving the Limitless programme contains both improving the content and improving the strategic design of the programme. This section dives into a few components which can add strategic value to the programme.

5.5.1 Data triangulation

A problem should always be researched from multiple perspectives, therefore data triangulation is included in this concept.

A combination of different exercises, carried out by the youth volunteers, together with multiple stakeholders, should help to gain a wider perspective on the problem area (figure 5.6).

This triangulation should be established for multiple stakeholder groups. So ideally, the participants carry out three exercises for each stakeholder.

Most likely this will be too much, since the time is limited for this phase of the programme; each phase takes approximately two weeks. Therefore a selection should be made from the available activities.

5.5.2 Peer-to-peer learning

As described, alongside the content of the workshop, a peer to peer feedback system should be initiated.

This should stimulate the Youth Volunteers to look at other projects, to provide them with feedback and share inspiration. Mandatory feedback moments will be introduced in the concepts, so peer to peer learning will be automatically integrated.

This system will force the volunteers to look critically at other projects and shed a light on the work of their peers. Automatically, the volunteers will create a sense of connection and affection towards each other. Providing feedback happens in an anonymous way, in both directions.

Besides peer to peer learning, mentors / design coaches should be introduced to inspire, assist and motivate the volunteers.

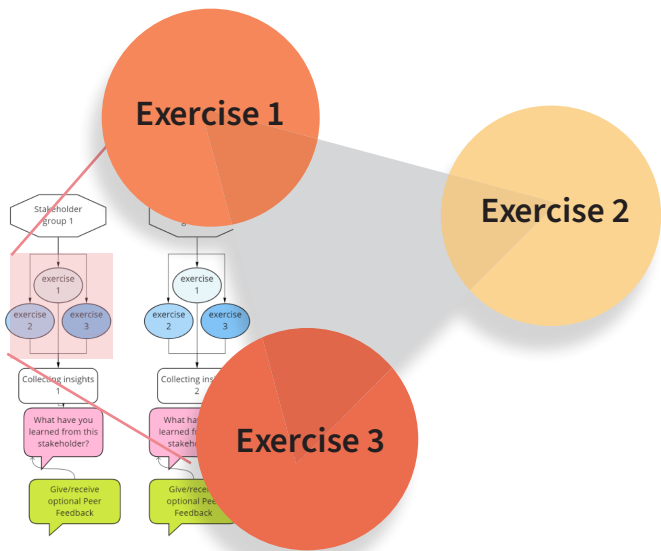


Figure 5.6: Data triangulation

5.5.3 Integration of innovation coaches

From the empirical research, the demand for mentoring was one of the most recurring topics. Professionals who have affection for innovation projects ('innovation coaches') should be given the opportunity to become a mentor for the Limitless programme in order to assist (and collaborate with) the youth volunteers.

Figure 5.7 expresses this vision, where a mentor is the overarching power over a group of youth volunteers, who in their turn are connected through peer-to-peer learning.

Simultaneously, these experts learn about the current projects (trends) which are going on and possibly scout projects which can be extended through a certain partnership.

A great opportunity for this mentoring platform could be the collaboration with the Hourglass programme; a recent initiative from the Solferino Academy which links humanitarian decision-makers with experts and innovators. On this platform, experts make time available to answer questions from humanitarian staff

and volunteers. Since it is an initiative of the Solferino Academy, and Limitless is too, the connection can be easily made and both programmes will profit.

5.5.4 Strategic positioning

Currently the projects running in the Limitless programme have relatively little potential to grow.

In the best situation, a project gets selected as one of the 15 winners and receives a 10.000 CHF funding. For these 15 projects this is a good initial capital injection to get started, but it is still the beginning. Unfortunately all the others, who have not been selected as the winners, have little further perspective to get funding for their projects.

Therefore, a platform should be created to showcase all the projects and connect the youth volunteers with international RCRC employees, potential donor organisations and other parties. This could open opportunities for all parties to get in touch and explore potential partnerships / funding projects / inspirational projects.

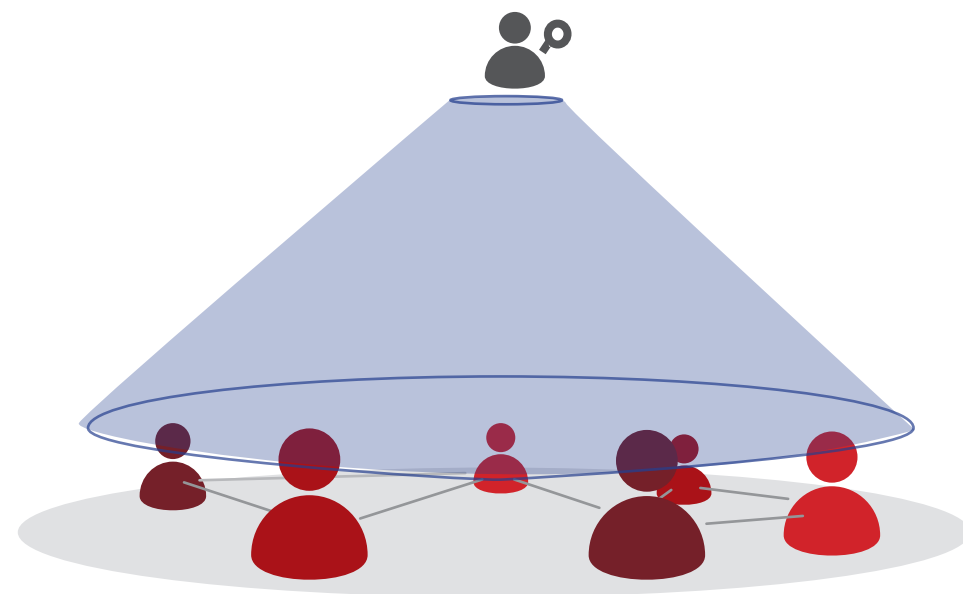


Figure 5.7: Peer-to-peer learning vision

05 | Ideation

Approach

During the ideation phase of this thesis an iterative approach has been used to come to a well defined problem statement and a suitable concept. The problem framing workshop prototype has gone through multiple iterations before testing it with the youth volunteers. After this activity for validation (chapter 7), recommendations are formulated for further improvement (chapter 8).

Organisational integration

Limitless does not directly involve the National Societies and local branches in the organisational model. This leaves potential unused and therefore an alternative organisational model is discussed (figure 5.8), in which the NSs and local branches are directly involved.

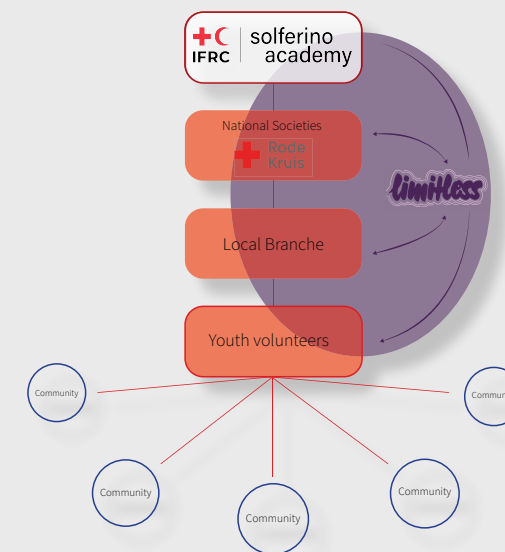


Figure 5.8: Proposed organisational set-up

High level framework

To provide a complete overview of the concept framework, a service blueprint is created (figure 5.4). Links between the components represent how the system works and in which order the actions should be carried out. The workshop prototype (chapter 6) is placed in the framework and room for further development is indicated.

Workshop flowcharts

The workshop concept is created for the empathise and define phase. Two flowcharts give a detailed step-by-step representation of all the steps which have to be taken to work through the format.

Strategic value

Two points which add strategic value to the programme are touched upon. Data triangulation is implemented in the concept, which allows the participants to get a more complete view on the problem definition, through a number of activities with different stakeholders.

Peer-to-peer learning is the second strategic implementation. With the current programme set-up peer interaction was hardly possible, while this was one of the most critical points of feedback from the youth volunteers. Therefore a number of mandatory feedback and interactive moments are proposed.

Chapter 06

A novel humanitarian innovation curriculum

CONCEPT DELIVERY

In this chapter, the prototype is presented. Section 6.1 introduces the platform concept and the stakeholders. In section 6.2 the workshop prototype is thoroughly explored. A vision for implementation is suggested in section 6.3.

Overview

6.1 A novel humanitarian innovation curriculum

6.2 Problem Framing workshop

6.3 Implementation

Summary

Background Image: Honduras - Access to education, via Unsplash.com

6.1 A novel innovation curriculum

In this section, the overview of the platform concept is presented. The 4 major stakeholders; Youth volunteers, Red Cross employees, Donor companies/organisations and visitors are introduced.

6.1.1 Overview

The curriculum is built on a platform which is not only for the youth volunteers. The youth volunteers are the ‘students’ on this platform, where they are connected to multiple other stakeholders. An overview of the stakeholders is given in figure 6.1.

Youth Volunteers

Limitless is a youth-oriented programme. In the beginning of this year’s Limitless edition, around 500 groups signed up. In the future this group of enthusiastic young volunteers who want to make an impact in their community should grow. In order to grow, Limitless should be marketed around all the national societies and local branches.

Currently most of the participants came from developing countries, barely no participants came from high-income countries. All volunteers can benefit from this platform and more perspectives in a community result in better results.

Red Cross employees

Employees working for the IFRC, ICRC and National Societies should be able to connect through Limitless. To do so, an account has to be created, with a personal profile which they can use to mark their online presence. Doing so enables them to connect with volunteers and other interested parties.

Donors

Donor companies can apply for a personal page if they have interest in funding Red Cross projects. With this personal page they can express their interest in funding programmes and projects, display their portfolio of previous projects, start-ups and other funding opportunities.

The platform can function as a ‘donor-market’, for all the projects which are looking for funding or professional expertise / partnerships.

Visitors

Visitors can access the platform at all times, browsing through projects and challenges. A visitor can also make a profile and use this to donate money to projects. Visitors can also register as new (youth) volunteers if they want.

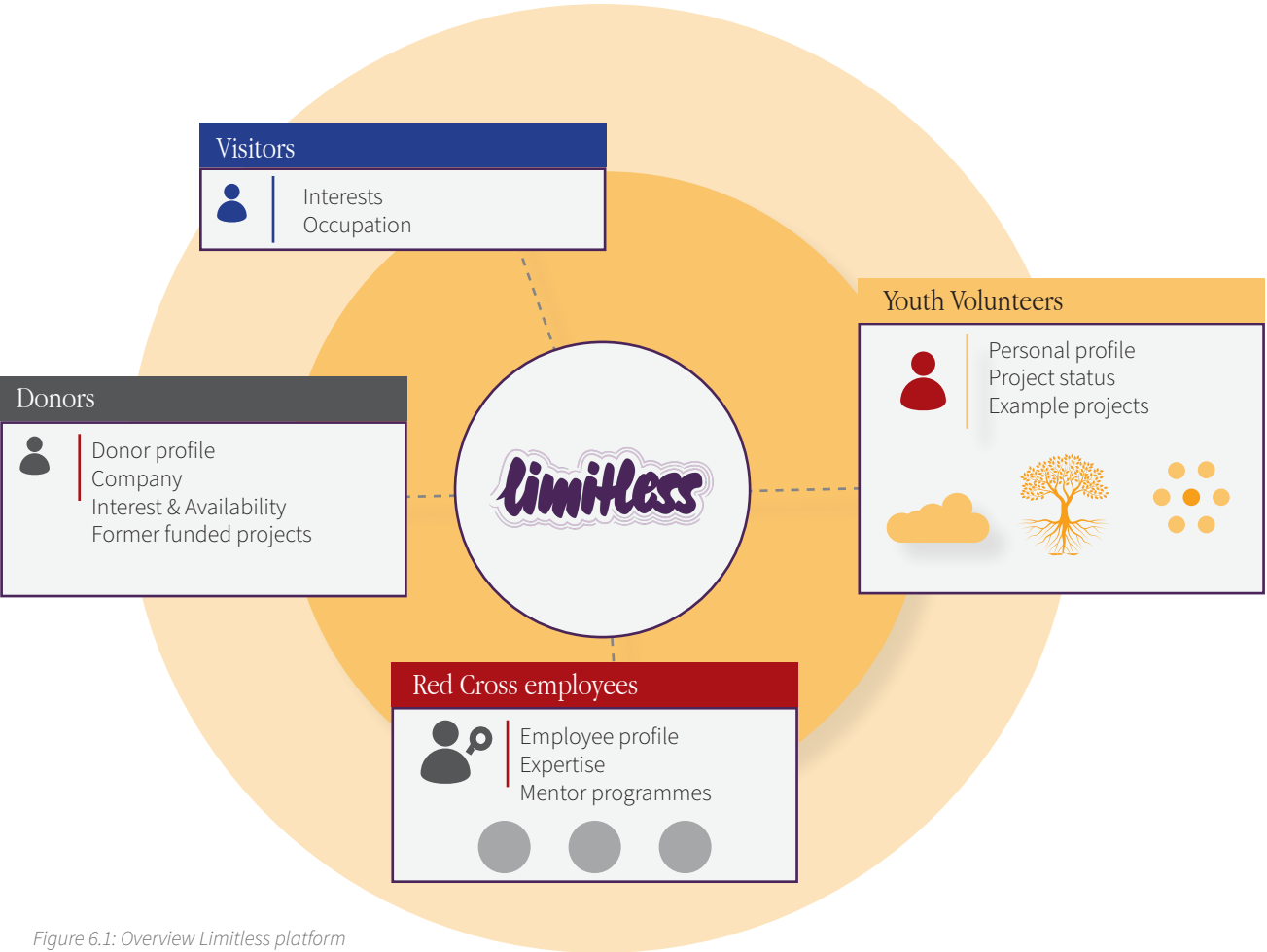


Figure 6.1: Overview Limitless platform

6.2 Problem Framing workshop

This section dives into the design of the problem framing workshop. Each page is discussed in detail through the eyes of a youth volunteer.

6.2.1 Style

The appearance of the workshop is designed for the target group, not too formal, using bright colours, a lot of figures and an easy to use - and understand- interface. The problem framing workshop consists of a number of steps, which are discussed.

6.2.2 Steps

As explained, the problem framing workshop is part of the youth volunteer page, and part of a complete curriculum, following the steps of the design cycle, introduced in section 4.1.4. The workshop contains six steps (figure 6.2) which are briefly introduced with the flowchart in section 5.4.1. A detailed overview of all the pages can be found on the next page (figure 6.3).

The steps in the prototype are as follows:

- 1 Formulate your dream
- 2 What is preventing you from realising your dream?
- 3 Create a problem tree
- 4 Reframe your problem statement
- 5. Identify stakeholders
- 6. Reframe your problem statement again

The page for step 2, 4 and 6 is similar, since they have to frame their problem statement in each step.

6.2.3 Peer feedback

Each section has an option for providing feedback (see screen 04 'Formulate your dream'). So each volunteer can have a look at the project of a peer (which is anonymised) and give feedback for each step.

Similarly, a participant can get feedback from other participants and use this to improve their project.

6.2.4 Example pages

Each page has the option to look at an example. These examples are available by clicking a button on the bottom right corner of each page.

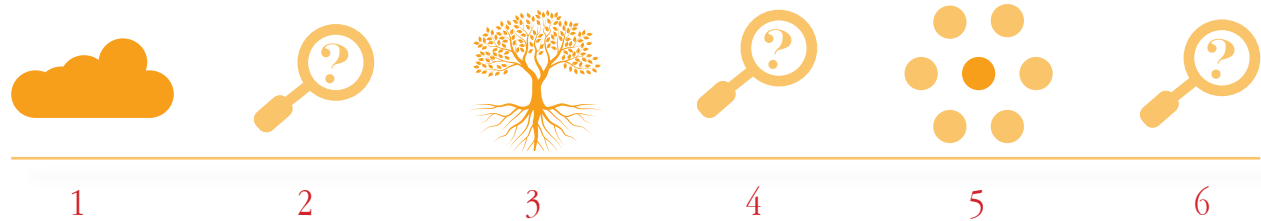


Figure 6.2: The 6 steps of the problem framing workshop

Using Rio's perspective to explain the concept

In the following pages, the concept is explored through the eyes of one of the youth volunteers, Rosa. This user scenario helps to understand the workshop concept and how it builds on the framework presented in section 5.3. While walking through all the steps of the workshops, all the details are explained. The reasoning behind the sequence of the steps will become clear through Rosa's user scenario.

Name Rosa W.
Location Rwanda
Age 25



Header

In the header Rosa can browse through a dropdown menu, go to the homepage of the Solferino Academy, pick another language and go to her personal page.

01 General landing page



4 Sections

Rosa enters the homepage where she can choose between 4 options. Rosa is a volunteer so she chooses the top right option. She can also visit the other options if she is interested.

02 Youth volunteers landing page



Rosa chooses to go to her own profile.

Youth volunteer landing page
Rosa can choose to have a look at the projects of her fellow Limitless participants, or continue to her own page.

A process bar visualises how far in their progress all the projects are.

03 Youth volunteers personal page



Rosa's personal landing page gives an overview of the steps in the problem framing workshop.

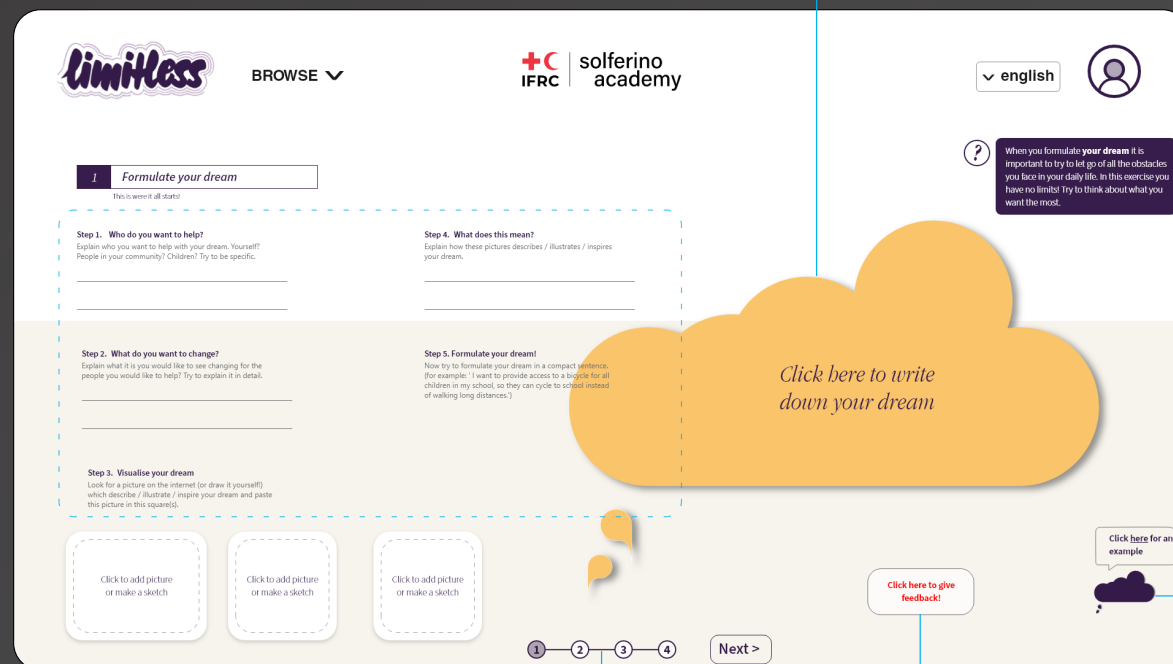
The Dream

The first exercise. Rosa has to answer a few questions to eventually formulate her dream.

Explanation box

Each page has an explanatory text, which tells the participants why this step is relevant for the process.

04 'Formulate your dream' - page



Guiding questions

Five questions help Rosa with formulating her dream. Question 3 gives her the opportunity to add some visual material, like pictures or drawings.

Navigation

Tool to switch between steps

Example

If the exercise is not clear this button allows you to see an example page, for inspiration

Give Feedback

Each page has a button which allows you to give feedback for another projects dream formulation

Rosa's personal progress bar, she is currently at 65% of the workshop

Smart menu

The smart menu on the right gives direct insights in the progress Rosa has made each step, she can directly see feedback remarks she has received on her work so far and she can directly serve to the projects she has provided feedback for.

limitless

BROWSE

IFRC

solferino academy

english

3

Problem statement

Start with formulating your problem statement by filling out the blanks.

?

You want to have a clear objective for your innovation journey. That is why you should start with a well-defined **problem statement**. Something which helps you to imagine what you want to solve, for whom and what the desired result will be.

?

I want to solve

for..... because

Click here to give feedback!

Click here for an example

< Previous

1 2 3 4

Next >

Problem statement
Here Rosa has to write down her problem statement. After each activity she will come back to this page to see if she can reframe her problem statement or not. This is considered to be the most important because the final problem statement is used for the ideation phase.

Scan the code or click here to experience the prototype!
(optimised for laptop size displays)

limitless

BROWSE

IFRC

solferino academy

english

Click here for an example

2

Create a Problem Tree

?

A **problem tree** is a method to create an overview of the causes which lead to a certain problem, what this problem is and what the consequences for the community are. Start by defining the causes, set the problem and think about your ability to solve the problem and explain what the consequences are for your community.

Steps (working from bottom to top)

3. Branches
Consequences

2. Trunk
Main problem

1. Roots
Causes

Step 3. What are the consequences for the community?
Be creative and (visually) explain what the impacts the community and in which way. After writing those down, reflect on what you have written down and ask yourself the question: If these consequences are there a negative or positive impact.

Step 2. Define which problem you can solve
Which of these causes is within your power of solving?

Step 1. What causes are preventing you from realizing your dream?
Write down all the causes and problems which you can think of as hindering you from realizing your dream at this moment. If possible, add pictures and/or illustrations.

1 2 3 4

A B C D

Step 3. What are the consequences for the community?
Be creative and (visually) explain what the impacts the community and in which way. After writing those down, reflect on what you have written down and ask yourself the question: If these consequences are there a negative or positive impact.

Step 2. Define which problem you can solve
Which of these causes is within your power of solving?

Step 1. What causes are preventing you from realizing your dream?
Write down all the causes and problems which you can think of as hindering you from realizing your dream at this moment. If possible, add pictures and/or illustrations.

Add pictures and sketches here

Click to add picture or make a sketch

Click to add picture or make a sketch

Click to add picture or make a sketch

Click here to give feedback!

< Previous

1 2 3 4

Next >

Problem tree exercise
First the exercise is explained and the analogy of the 'tree' is explained.

Step 3: Consequences
After step 1 and 2, Rosa has to identify what the consequences of this problem are for the community. for the ideation phase. She can place her answers in the 'leaves' of the tree.

Step 2: The main problem
In step two Rosa has to determine which of the causes from step 1 she can solve. This will become the main problem, placed in the centre of the branch of the tree.

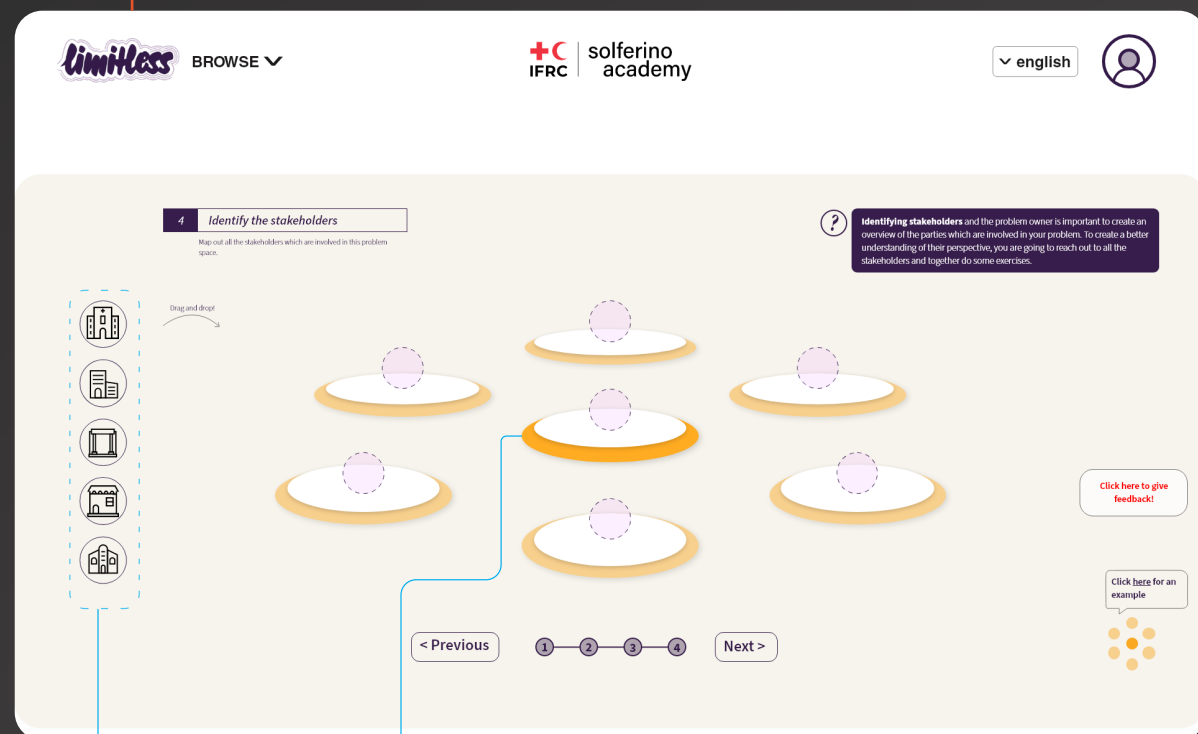
Step 1: Cause
The first step lets Rosa make the translation from her dream to a problem, what is her preventing from making her dream reality? She has to identify all the important causes.

Again the option to upload visual material like sketches, pictures and videos.

After this step, Rosa can choose to move on to the next step or go back to reframing the problem statement.

82

83



A list of predefined stakeholders is provided which Rosa can use to drag and drop in the circles. She can also write down other stakeholders or add pictures.

Stakeholders
Now is the time for Rosa to discover which stakeholders are involved in her project. She first has to determine who is the problem owner of her project and then she can start to define the other stakeholders.



Scan the code or click **here** to experience the prototype!
(optimised for laptop size displays)

Figure 6.3: Overview workshop pages

6.3 Implementation

This section elaborates on the vision for the implementation of the concept and potential future milestones. A 3-horizon model is presented, which discusses how Limitless can grow in 3 steps. Finally this section reflects on the feasibility, viability and desirability.

6.3.1 Yearly planning

Currently the Limitless programme is hosted for the first time, one time a year. Ideally, this programme would run multiple times a year. Due to the different schedules of the youth volunteers, it would be favourable if there would be (e.g.) four moments a year in which they can start this programme.

A network of experts has to be connected to each edition, to create enough capacity for feedback. The empathise and define phase are designed to be finished in two weeks length, each. They could be part of the full design cycle, but can also be a smaller workshop on its own.

6.3.2 Design coaches

Most of the Limitless participants expressed a desire for more guidance and mentoring. Therefore Limitless needs to build on a network of design coaches which have time available and the right skillset to help youth volunteers with their projects. This year's edition started with 500+ participants. Ideally, every participatory group will have one mentoring session a week. This does not necessarily have to be privat, it can be combined with other participants. A mentor should be able to work with 10 different groups, if he/she is able to schedule a few sessions with 2/3 groups per session. This means that for the begin stage, 50 mentors will be needed. Since the mentoring becomes more intense as the project continues, these 50 mentors should stay engaged throughout the whole programme.

6.3.3 Growth perspective

Future milestones

To create a vision for implementation, a 3-horizon model is developed. Figure 6.4 gives a rough overview of three steps with the corresponding milestones and focus point.

Horizon 1

For the first horizon, one year from now, the focus should be on creating an online platform, which can contribute to the current programme and stimulate stakeholder engagement and facilitate online learning. Besides, a connection and integration with other Red Cross tools and programmes should be established, like the Y-adapt programme from the Climate Centre and the eVCA tool.

Horizon 2

The second horizon is two year in the future. In those two years a lot of development can take place. Therefore, the platform should establish itself within the Red Cross Movement and a number of partner companies and organisations should become integrated in the platform and the educational aspect, to share knowledge and explore possible collaborations. The role of the youth volunteers can slowly start to shift, giving them more responsibility and involving them in educative exercises where they can become the educator instead of the student.

Horizon 3

The most ambitious and incrementally different changes happen in the third horizon. This horizon is aimed at 2030. Limitless should by then have become a platform which is run by (former) youth volunteers and the Solferino Academy and other Red Cross partners should only have an advisory role. This way, the youth volunteers learn from each other, from peers, and the platform has a real value where all the youth volunteers can connect, inspire and help each other.

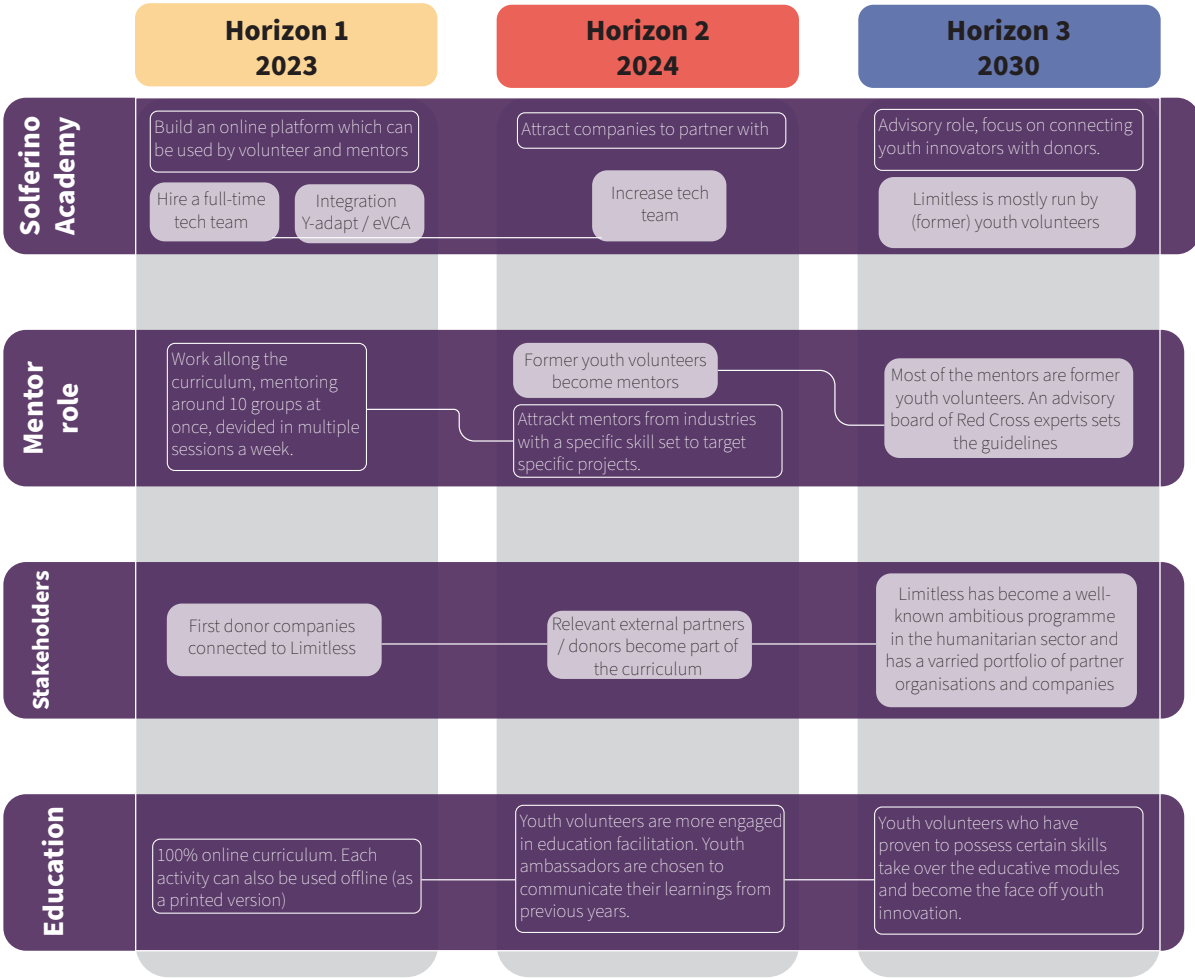


Figure 6.4: Future horizons model

06 | A novel humanitarian innovation curriculum

A novel curriculum

A vision for an online Limitless platform is presented and all the stakeholders are introduced. Youth volunteers, Red Cross employees and Solferino Academy staff will make the most use of the platform. The ambition is to connect other stakeholders, like donor organisations and companies with the youth volunteers on this online platform.

Problem framing workshop

Part of this educational platform is the problem framing workshop. A detailed walk-through experience is presented to get an understanding of the goal of the workshop.

Implementation

The vision for implementation of this concept is translated into a 3-horizon model, which elaborates on three steps, 2023, 2024 and 2030.

Developments organisation-wise are discussed, as are the changing roles of the youth volunteers, from being the student to eventually becoming part of the educational staff. Limitless should ideally become a platform which is run by youth volunteers, for youth volunteers, advised by the Solferino Academy and other (Red Cross) mentors.

In the future, this programme should be establishing a connection between industries and humanitarian innovation.

Chapter 07

Validation

WHAT DO THEY THINK?

In this chapter the results from validation are shared. First the approach for validation is presented in section 7.1, followed by an analysis on the results of the validation session in section 7.2.

Overview
7.1 Validation approach
7.2 Results
Summary

Background image: Roma was president Berlusconi's old tent for the big families from Lebanon. Via Emilia 40, Anagni, Italian Red Cross

7.1 Validation approach

This section elaborates on the set-up for the validation of the developed concept. The participants in the validation process are introduced and the tools are elaborated upon.

7.1.1 Validation set-up

The problem framing workshop

This validation activity has been the last interactive moment with the youth volunteers for this research (figure 7.2). To validate the workshop, an interactive PDF is created of the designed workshop format (section 6.2) and sent out to all the youth volunteers who entered their emails on the list of interest (see appendix 6A).

The choice for an interactive PDF is based on the fluctuating internet connections and limited digital experience. The interactive PDF allowed the volunteers to download the workshop and fill it out while being offline. Some of the participants printed the PDF, used a ballpoint to fill it out and sent it back to me by taking pictures with their phone of the printed pages. One group was more digitally experienced and they added their own visuals to the form. This example is included in appendix 6B.

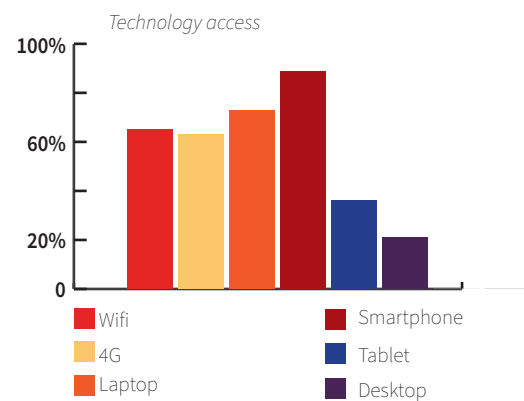


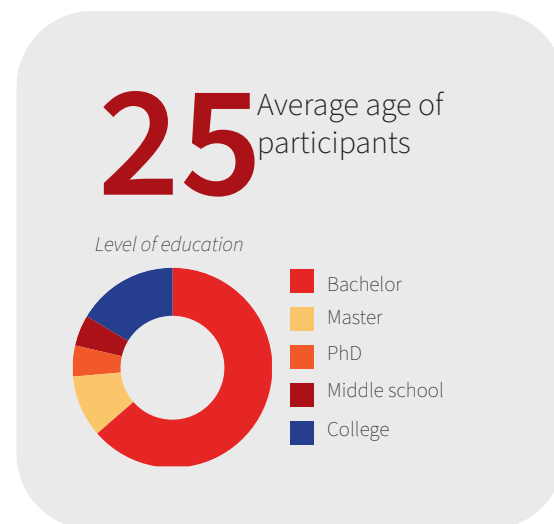
Figure 7.1: Validation participants data overview

The volunteers were asked to fill out the questions in this format (digital or analogue) and sent the file back to me (via e-mail). The answers do not have to be related to their Limitless projects.

Complementary to this PDF, a questionnaire (appendix 3) was sent to the group of volunteers. This questions were related to the steps in the PDF file, like;

How relevant they perceived the activities?
Was the goal of each step clear?
Did this format help them to formulate their dream / problem statement?
What else would help them in this stage of the process?

Below some demographics of the participants are visualised. Remarkably, still a relatively low percentage has access to a laptop (73%).



Interestingly, eventually 20 people filled out the questionnaire and only 12 of them actually sent me their filled out workshop file.

It is not clear why these 8 other participants did not send the PDF file. Assumptions can be that they simply did not understand what to do; they did not have enough time (or felt like it) for filling out the form. However, further research is necessary to find out the exact reasons

From the participants who did send me their files, great information on their projects and thinking can be gathered. Unfortunately there was not enough time to thoroughly analyse all of the answers. This can be an interesting starting point for further improving the problem framing module, since these filled out form contain a lot of information.

Now the perspective of the Limitless participants is measured, the platform concept and the workshop concept should also be discussed with professionals from practice, like Butterflyworks, and eventually it should be presented to the board of Limitless, the Solferino Academy.

The mentor profile

For further exploration of the ideal mentor profile, a more thorough analysis with the current mentors (yet to be presented) is required, from both the perspective of the youth volunteers and the perspective of the Solferino Academy.

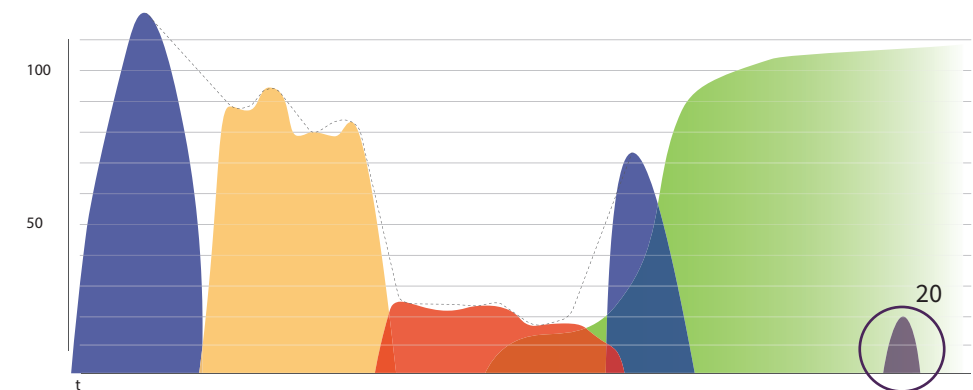


Figure 7.2: The last interactive moment of this research

7.2 Validating the problem framing workshop

This section sheds light on the learnings from validating the problem framing workshop concept with a selected group of youth volunteers. Important results are shared and some remarkable quotes and comments are presented.

7.2.1 Validation results

The results of the questionnaire provided useful data on the content of the workshop. The sequence of all the steps and the content of all the questions are discussed. On the next page, an overview of the most relevant answers is provided (figure 7.3), for a full overview see appendix 3.

Fortunately, in general the reactions are positive and the workshop seems helpful. A few quotes from the open questions are shared:

“Breaking the question down made me seriously consider what I actually wanted to achieve and why.”

“The steps help me identify the problem, assess the effects, and determine the blueprint to deal with the problem critically thinking about how the idea can be shaped into reality comprehensively and effectively causing a social change and development.”

“It was a simple process but a meaningful one. I could come up with my vision for this project in a complete and meaningful sentence in no time. I think the ideator must be equally clear about the concept in which they’re working which makes the whole process much easier.”

“Thank you so much for this amazing formula. I’ll definitely share this within my network.”

Concluding the questionnaire, the participants were asked if they found something was missing in order to help with the process of formulating a problem statement, and they were asked whether it would have helped if they had access to a Red Cross coach during this process and if so, what they would want to ask. Below the insights are shared (figure 7.4).

Would a RC coach have helped during this process?

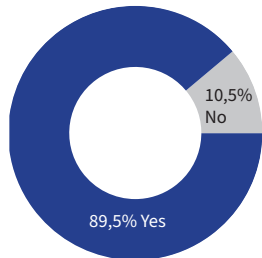


Figure 7.4: Advice from the youth volunteers

What would you ask a RC coach?

When formulating the consequences of the initiative, how do you go about addressing the negative consequences?!

I think is not for questions is for to debate my ideas and put there the most important or good idea. I put in doubt myself is the reason that I need to coach for support me.

How do you deal with the contrary information from the community project owner?

If I had a coach, I'd try to relate my innovation project to the questions that were framed and i would have received tailored answers.



Figure 7.3: Collection of insights from the questionnaire

07 | Validation

Approach

A combination of an interactive PDF prototype and a corresponding questionnaire are sent out to all the participants who indicated to be interested to stay involved in this research. 20 Participants filled out the questionnaire and (only) 12 of them replied with a filled out PDF file.

This last interactive moment within this thesis concludes the research communication with the youth volunteers, the facebook group stays online.

Validation results

Great insights are derived from the questionnaire and the received filled out workshop templates. Due to a lack of time, the insights from the workshop documents can be further analysed in the future, in order to improve the content.

Results from the questionnaire were mostly positive.

Chapter 08

Discussion & Recommendations

This final chapter delves into the meaning, relevance and importance of the results of this thesis. First a selection of recommendations is proposed in section 8.1. The outcome will be discussed in section 8.2. The limitations of this research are presented and areas of future research are explored in section 8.3. To round off, a personal reflection reviews the process of writing this thesis.

Overview

- 8.1 Recommendations
- 8.2 Discussion
- 8.3 Limitations and Future research
- 8.4 Contribution to practice
- 8.5 Personal reflection

Background image: <https://www.shutterstock.com/image-vector/american-ambulance-123456789>

8.1 Recommendations

This section provides recommendations for four components of the concept; the online platform, how mentors should be involved, the integration of design tools and the organisational aspect.

8.1.1 Recommendations

Online platform

Currently the Limitless participants are left in the dark with what to do and especially, how to do so. There should come a clear, simple to use online platform which volunteers can access with their smartphones and computers.

The platform should be optimised for communication, asking questions and sharing content.

Besides communication the platform should also function as a library of tools; tools which can be used at any moment, in no particular order.

In this platform, all groups should have the ability to create a personal account in which they track and record their own innovation process.

A part of the platform should also be available for external parties, to discover which projects are currently going on, whether there are possibilities for investments and to look for potential partnerships.

The platform can be the connecting factor between the youth volunteers, which are currently undervalued and underrepresented, and the rest of The Movement.

Involvement of mentors

Mentors should be available throughout the entire programme. The people in this function can change, as long as they have some affection with innovation projects, design or business development.

Proposed is a set timeslot in which the mentors are available for (earlier posted) questions or live sessions with the participants. There should always be an option to ask questions and have a response in less than a week.

Furthermore, the mentors should take a few projects a week to review and provide feedback for. This will speed up the process of the projects and help to create better results.

Mentors can come from all Red Cross National Societies, as long as they have the right skills to help with the programme.

Tool integration

Tools have to be further developed, tested and tailored to the demands of the youth volunteers. For different types of projects, different tools can be developed. However, it is preferred that the tools are generally usable for each context.

For each step of the design cycle a corresponding toolbox should eventually be developed. This development should be tailored to the demands of the Limitless participants.

Organisational

On an organisational level, a lot of changes have to be made. There should come a (part time) team which is responsible for managing the online community and websites, the involvement of mentors and third parties.

A decision should be made on how often the Limitless programme is running, or if it can be accessed all year through. Preferably, the tools and platform are accessible all year. It might be that not always the right amount of mentors are available. At least the online platform should be available and up to date at all times, so it can become a real community.

The programme should keep developing and expanding where possible, adding more features and eventually creating a platform which is internationally renowned and which can be used by the whole Movement.

Phase 3 Limitless

Phase 3 of the programme is starting in a few weeks, which allowed the organisation to implement some of the findings from this research. Resulting in an enlarged number of mentors, which will be available each week for 2 hours to assist the groups which are still in the programme.

Besides the expanded number of mentors, a series of webinars is introduced; a prototyping webinar, a social innovation inspiration webinar and a pitching webinar. Three topics which will inspire the participants assist them in the progress of their projects.

8.2 Discussion

The initial assignment of this thesis was to research how the Limitless programme could be improved, in order to enhance local proactive problem solving capacities for the Red Cross youth volunteers. Besides improving the programme, a framework for strategically positioning the programme within the Red Cross organisation is proposed. This section elaborates on multiple points of discussion concerning this research.

Creating a concept for enhancing problem solving capacity has been the goal of this thesis. Learning from literature, interviewing experts and creating an understanding of the demands from the stakeholders through empirical research resulted in a set of guidelines and barriers for the design process. A conceptual framework (chapter 5.3) laid the foundation for the design; a novel approach to the Limitless programme, starting with a workshop created to properly frame a problem statement. To review if the designed concept realises the demands which were found in literature and empirical research, each research question is discussed.

8.2.1 What and how can an innovation academy contribute to enhancing local problem solving capacity?

From research it is found that identifying and solving problems through the Limitless programme is not a matter of lack of motivation, but rather a constraint of a number of factors. The youth volunteers expressed these constraints as: **a lack of guidance, a lack of structure, unrealistic expectations and too broad problem definitions**. Reflecting on the literature review, these findings resonate with the (currently missing) qualities for future design education and its goal (Noël, 2020), namely that design education should provide society with responsible, knowledgeable and skilled professionals that can help people achieve their goals. One of the qualities - ‘Change

the conceptual network - Identifying the problems’ components’ - is most relevant for this research. Since the start of each of the youth volunteers projects, the moment of defining the problem, is often too broadly defined, lots of projects are difficult to realise. Therefore, assistance for identifying the problems’ components should be the main focus for the start of the programme.

The goal of the complete innovation academy should be to guide the volunteers; hand them tools and methods when necessary and provide them with examples and knowledge, without taking away their responsibility of managing the projects. The designed concept aims to provide a structure which can be used by the youth volunteers as a guideline for their projects. Besides this structure for each individual concept, the international network, which is established by the online platform and all the involved stakeholders, aims to create a solution for the currently missing (knowledge) interaction between volunteers mutually and between volunteers and professionals.

Human centeredness

Although the Red Cross operates from a human centred point of view, the actual human centeredness of the current way of executing the Limitless programme can be discussed. Hence a human centred way of working is about

understanding the human needs and how designing solutions responds to those needs (Zhang & Dong 2009). Presently, the actual needs from the participants of the Limitless programme, the youth volunteers, are often not met (chapter 3) and more importantly, barely asked for and listened to.

To achieve the level of human centeredness which the Red Cross strives for, these needs and desires of the participants should be taken into account and acted upon. The novel design presented in this thesis does take the key learnings from the research into account. From these learnings, the workshop Problem Framing concept was created and validations with participants indicated that 83,3% of the questionnaire participants experienced the problem reframing exercise as helpful for creating a problem statement.

8.2.2 How can a problem statement be carefully and effectively reframed?

There are enough problems which have to be solved in our world. Especially in low-income countries, where a large part of the Limitless participants come from. Identifying problems does not seem to be the problem (..), framing those problems in a realistic way however, does seem to be difficult. A youth volunteer has limited knowledge and resources, and should therefore be aware of taking on a challenge which is within their power of solving. If the challenge, stemming from the initial problem statement, is too broadly defined, a project becomes difficult to realise.

From the workshop session ‘Are you solving the right problem’, which was hosted in phase two of the Limitless programme (see section 3.3), we learned that lots of the participants did create a vague and too broadly defined problem statement. This way of incorrectly framing the problem statement resulted in uncertainties about how to start with a project and unrealistic ambitions.

To assist the youth volunteers during the process of problem framing, the workshop concept provides a step-by-step guide. This guide is designed to create a problem statement through a number of activities, iterating on the formulation of the problem statement after each activity. The respective steps; formulating a dream, creating a problem tree and mapping

stakeholders are developed to foster the thought process which leads to formulating the problem statement. From validation it is found that 77,8% did change their problem statement during the workshop. Additionally to the guiding workshop format, mentoring throughout the full process is introduced, as is peer feedback. With these functions integrated, the final design achieves the design guidelines ‘Stimulate peer to peer learning, Create room for reflection, Stimulate co-creation, Stimulate iteration and Create SMART outcomes’.

However, to ensure that problem framing will be done correctly in the future, the youth volunteers should be made aware of the importance of the matter, since it all should come from an intrinsic motivation. A low threshold theoretical introduction has to be developed and shared during the start of the programme.

8.2.3 How can a design tool contribute to the capacity of problem solving?

According to Cirera and Maloney (2017), innovations in developing countries often have marginal effects. This makes the Limitless programme highly valuable, since it strives to educate and assist young innovators with their local (often in developing countries) projects to create impactful innovations.

Currently the problem solving capacity is enhanced through webinars which superficially introduce theory and some tools. Engagement is missing and an incentive for learning is only working in one direction, from the organisation (Solferino Academy) to the participants. As discussed, there is no option for peer-to-peer learning and interaction with experts.

The final design aims to integrate the educational concept proposed by Kort and Reilly (2001), which addresses ‘learning-how-to-learn’ and ‘life-long learning’, by introducing design thinking tools to guide youth volunteers through their process. This builds on the qualities proposed by Noël (2020);

Engage Students in Their Learning, They No Longer Sit Still.
Encourage Teamwork to Foster Collective Thinking

A design process can be improved when the perspective of the end-users are treated with respect and empathy (Liem & Sanders, 2011). The proposed concept strives to gather a thorough understanding of the perspective of the end-users and all the other stakeholders involved.

To keep all the perspectives aligned throughout the full process, engagement moments should be designed for the other steps of the innovation process.

8.2.4 How can engagement with stakeholders be created in the problem solving process?

Currently the participants indicate that engagement with stakeholders forms an obstacle for the process of their projects. Therefore, the proposed concept focuses on the engagement of stakeholders throughout the entirety of the project. In the designed workshops, one of the steps is to identify the stakeholders involved. This is the start of creating engagement. For the further development of this programme and the other steps of the design cycle (see figure 4.1), a series of activities should be designed to foster and facilitate co-creation with stakeholders. It is important that the participants learn to involve relevant parties and people in their projects. Through a series of low threshold, fun activities, the engagement should be established.

From research it is learned that connecting to stakeholders is often experienced as difficult. Therefore National Societies and local branches should play a more active role in facilitating this connection between youth volunteers and other parties. Creating this connection differs per context and therefore it is impossible to develop a one-size-fits-all solution for this problem. This is something which should be locally addressed and facilitated, with Limitless as a guiding platform.

8.2.5 How can local proactive problem solving capacity be enhanced for Red Cross youth volunteers through the Limitless programme?

The need for humanitarian assistance is growing, while the funds are decreasing. Two developments which are negatively influencing the potential for humanitarian innovation. This research tries to touch upon these developments and the greater goal of this research is thus to

contribute to the capacity for local problem solving, through providing a programme for humanitarian assistance and creating a platform which attracts donors.

The outcome of this thesis could be seen as a minor step into the direction of a system which connects youth volunteers with the greater Red Cross Movement community, potential donor partners and other interested stakeholders. Eventually the identified barriers (section 4.2.2) are overcome; Too complex format, Peer to peer learning, Problem framing difficulties, A true human centred approach.

The workshop format created guidance and provides a clear structure, solving the current level of complexity. Peer to peer learning is established by the feedback system introduced throughout the platform and the problem framing difficulties are overcome with the proposed workshop. The human centred approach is improved by learning from the participants and translating these insights into design directions for the proposed programme improvements.

Comparing with other humanitarian innovation tools

Throughout the development of the concept, multiple humanitarian toolkits and methods are explored.

Available materials, shared by private companies or non-profit organisations often consist of a set of free to access tools. From this available material a lot can be learned, especially for further development of the Limitless programme. However, what is missing in most cases, is that none of the available toolkits are connected to an overarching platform which enables creators to connect, either with each other or with the organisation.

Butterflyworks is a social design studio which specialises in co-creation and design thinking in international development (Butterflyworks, 2022). Their toolbox and corresponding platform the Butterfly community are used as inspiration for this project. The platform allows participants to connect with the Butterflyworks experts. An interview with Irene Conversano, one of the Butterflyworks experts, taught me a lot about their approach and how humanitarian innovation can be improved. Their approach is already proving its value, but there is still room for improvement. Although the Limitless programme differs in its core from what Butterflyworks is doing, it is interesting to compare and learn from both facilitators of innovation.

8.3 Limitations & Future Research

The interest of this research is to support the Solferino Academy in the development of their Limitless programme. To arrive at a novel concept, the current state of the programme is extensively researched and relevant desk research has been done. This section shared the limitations of this research and proposes future research areas.

8.3.1 Limitations

Literature research

In the first phase a literature study into Design education, Local problem solving capacity and Human Centred Design was carried out, to get a broader understanding of the relevant context for this project and to identify how improvement can be made. The amount of literature on these topics is extensive, hence some details can be missed. Besides, different theories and visions on the future of design education are established and considering the duration of this project, can not all be taken into account.

Empirical research

The extensive empirical research generated valuable insights which are directly used as guidance for the concept design in this thesis. Since a large group of volunteers, which participate in the Limitless programme, contributed to the research, insights from multiple perspectives and different contexts could be gathered. Still, these insights do not capture all the participants, since a lot of the participants did not take part in the empirical research.

Ideally the opinions of all the participants should be measured and heard, in order to create an even more complete vision for improvement of the programme. Lastly, communication was not always as easy; some of the participants had bad internet connections and therefore parts of the conversations were not totally clear.

Design

For the development of the concept design, a digital prototype is chosen, because the Limitless programme currently is completely online and the participants live all over the world. The front-end design is created in Adobe XD, to create an interactive prototyped webpage. From the questionnaire it was found that not all the participants have access to a tablet, laptop or a desktop and since the prototype is designed for a regular laptop display, the prototype might not be workable for all the participants.

Validation approach

For validating the prototype, an interactive PDF, which holds the same content as the webpage, was sent out to all the participants which indicated interest in further engagement in this research. The participants were asked to fill out the PDF (which could be accessed through opening the PDF in a web browser), send the filled-out PDF back to me and fill out a corresponding questionnaire. A limited number of reactions came from this request, most likely because the request to fill out both the questionnaire and the PDF was too much for most. For further validation, the workshop should also be tested with design professionals and experienced humanitarian innovators.

8.3.2 Future research

Based on the findings of this thesis, propositions for future research can be made. Since the Limitless programme is still active and will most likely come back next year, it is interesting to see how further research can directly influence the programme. Looking from a wider perspective, the humanitarian field has to innovate in order to meet the growing demands from society. In order to meet those demands, extensive research and development has to take place in the area of innovating in developing countries. This thesis aims to inspire this further research and development, which has so much unanswered potential.

Local connection

The proposed workshop concept aims to stimulate local co-creation. Further research should tell how exactly this can be done in an optimal way. This should be a combination of deeper anthropological studies combined with further, on the ground, empirical research. The studies should emphasise on how can be designed for interactions, while respecting all cultural norms.

Adaptability

The current concept is quite generic in a sense that it can be used in multiple contexts. In order to create a more tailor made workshop, the format should be optimised for different situations. Eventually this would mean that multiple variations of the workshop are available. Research is needed to dive deeper into the relevant topics and create suitable tools for each.

The online platform

Once a platform is established which can be used for both youth volunteers and organisation, further research should tell how this platform can facilitate the most value for all the stakeholders. The platform can be further developed by introducing new functions. Eventually it would be interesting to see if a combination between an online and offline system can be created, in order to facilitate more analogue, in person, sessions.

The tools

Further exploration and research into design tools is desired for further development of the programme. Ideally, for each step a number of activities are created, which together form an integrated coherence.

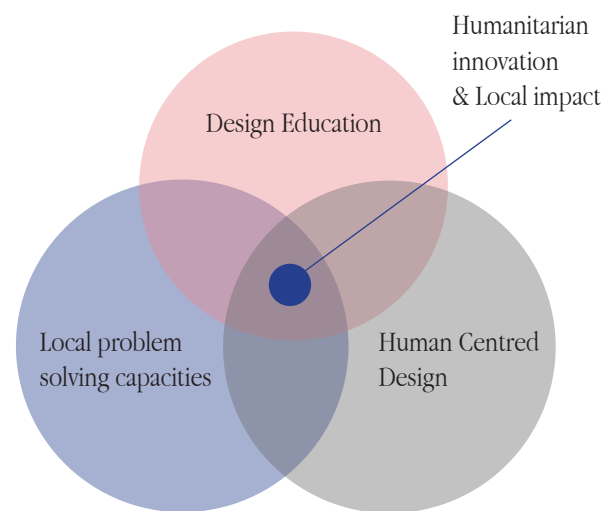


Figure 8.1: Three research areas

8.4 Contribution to practice

This research is performed in the intersection of Humanitarian innovation and local impact (figure 8.1). Design education, Human Centred Design and Local problem solving capacities are researched through a literature review and extensive empirical research. This section shares the contribution to these sections.

This research contributes to creating a humanitarian curriculum which fosters innovation. A concept is presented which functions as inspiration for further development of the Limitless programme and its educational design curriculum. A more HDC approach stimulates youth volunteers to better frame their problem and therefore have a greater chance at solving local problems. Design education, through learning-by-doing, helps youth volunteers to get familiar with wicked problems, complex challenges and all the stakeholders involved.

Human centred design

Currently Limitless implies to be human centred, but to be truly human centred, one should put the voice of the human first. Therefore, the problem framing workshop and the online platform are tailored to the needs of the youth volunteers. The current way of educating is not optimal for numerous causes, mostly the digital interaction causes problems. Instead of focussing on live workshop sessions, the proposed concept can be accessed whenever the youth volunteers wish to do so.

Local problem solving

The problems which the youth volunteers try to solve are most of the times experienced by the communities rather than by the youth volunteers themselves. It is found that the connection with the concerned communities is not always easy. A selection of tools should be developed which focuses on overcoming these barriers for communication. Therefore, the stakeholder identification is implemented in the early stages of the designed curriculum.

Design education

Design can be a difficult phenomenon to describe, let alone teach. In the environment where most Limitless participants work, which are mostly developing countries, people do not have the time to make up fictional cases to study and learn. Instead, they have to be supplied with ready-made tools which can be directly implemented. Currently Limitless puts a lot of effort in hosting educational webinars and workshops, but the youth volunteers indicated that this knowledge is difficult to translate into their real world problems.

Therefore, a ready to use workshop template is developed, which the youth volunteers can directly use to work with their projects.

Learning, in this context, comes mostly from doing. Teoretical background information should be available, but not mandatory. Those who are interested and have the time should be able to learn more about this.

Co-evolution of the problem solution space

The model proposed by Maher et al. (1996) (figure 8.2) and later interpreted by Dorst & Cross(2001)(figure 8.3), which visualises the co-evolution of the problem and solution space is perceived to work differently in this study (figure 8.4).

Namely the initial problem space $P(t)$ is often too broadly framed and therefore an initial evolution in the problem space happens, resulting in multiple, already better defined, problem areas ($P_n(t) = P_1(t), P_2(t), \dots$), before moving to the solution-space.

From there on, each problem space goes through a co-evolutive cycle with the corresponding solution space ($S_n(t) = S_1(t), S_2(t), \dots$). Co-evolution continues, arriving at the second stage of the problem space ($P_n(t+1)$). From here on the evolution happens again, resulting in multiple better defined problem areas.

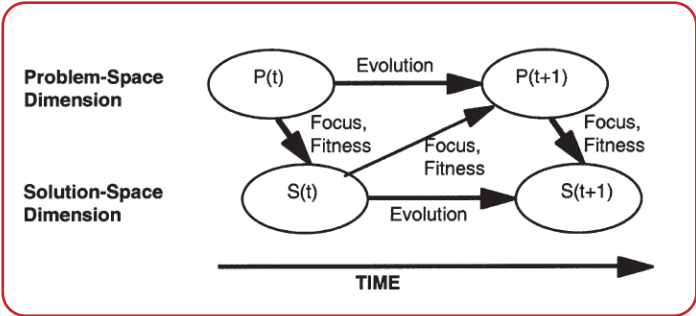


Figure 8.2: The co-evolution model of Maher et al., 1996

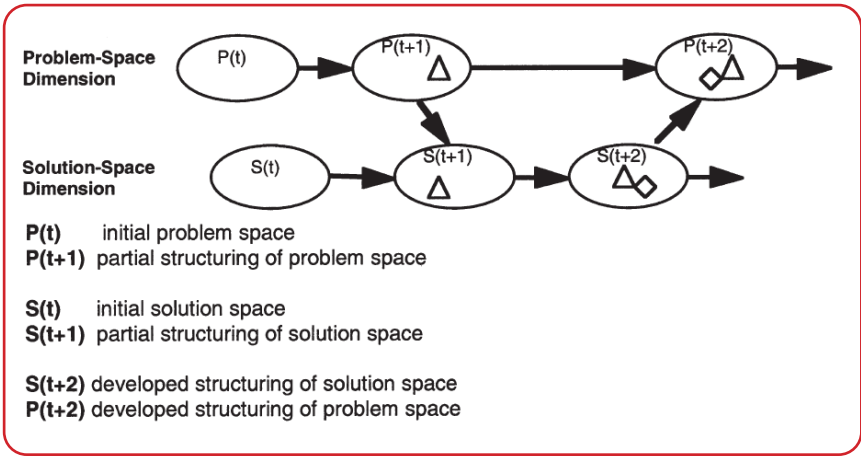


Figure 8.3: The co-evolution model of Dorst & Cross, 2001

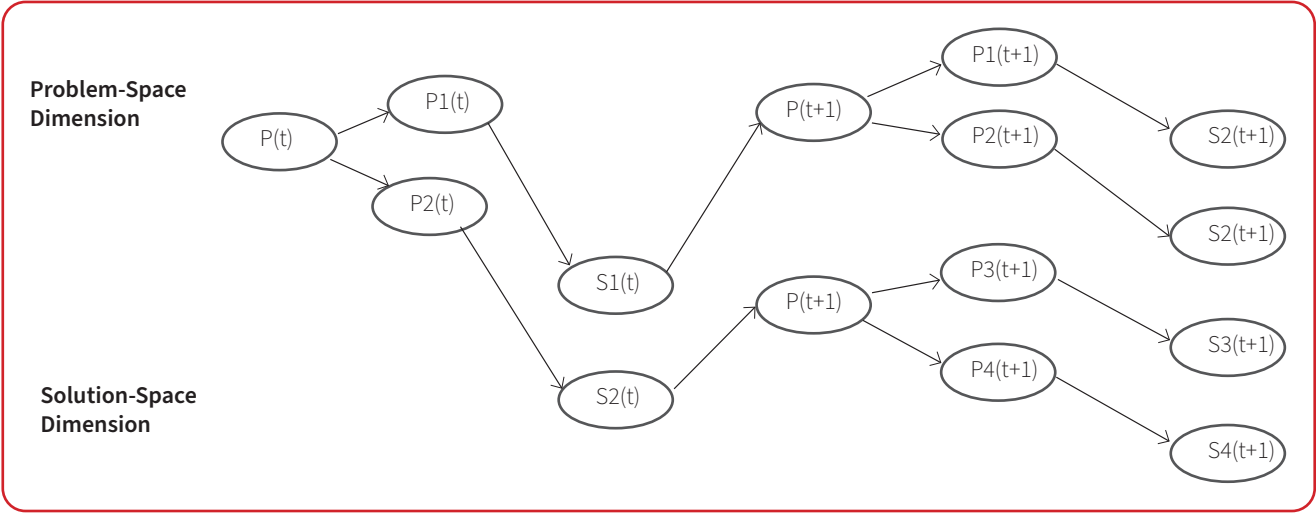


Figure 8.4: The co-evolution model as perceived in this study

8.5 Personal reflection

While searching for a graduation project in the humanitarian field, I got in contact with my chair, Rebecca. She introduced me to a project which had to do with an innovation academy hosted by the Red Cross; Limitless. I was fortunate enough to become part of the connection between the Netherlands Red Cross and the TU Delft, through this research. I will now reflect on my graduation experience and my personal learnings.

Working with youth volunteers

I like to work with people from different cultural backgrounds, it always brings interesting perspectives to the table and I get to learn a lot about how life can be different depending on your social background and where you come from. Working with the youth volunteers has been an absolute pleasure. I did not have any experience in the humanitarian field so all was new to me. I was amazed by the projects the youth volunteers were working on and the effort and time they put (voluntarily!) in. It might just be that I learned more from them, than they did from me. I am still in contact with a few youth volunteers which I have spoken to a lot over the course of the programme. I plan to stay in contact with them since it is nice to help them with their projects, where possible and simply because I really enjoy it.

What I found most remarkable, is the ease with which we (in my personal environment) accept everything as normal; proper education, funding to learn and live, unlimited resources for almost everything and a good healthcare system. Working in the humanitarian field makes me feel more

grateful for the everyday things in life (which are thus not 'everyday-things for a lot of people'). I would encourage you to have a look at humanitarian projects and see if you would like to contribute, since help from smart people is always welcome.

Out of comfort zone - contributing to the innovation academy

Parallel to my graduation project, the Limitless programme was happening. This opened up a lot of opportunities to be part of the educational side of the programme and observe from the sidelines, to see what is going good and where room for improvement was.

Encouraged by Saskia, I actively took part in the workshop phase, where we hosted the problem framing workshop together. It was quite exciting to host this workshop (which was around 45 minutes of lecture and a few interactive moments in between) for 90 people. Besides the workshops, all the focus groups sessions were a lot of fun to do and provided me with lots of valuable insights.

Besides the scope of Limitless, I had a lot of interaction with experts from the humanitarian field, mostly through interviews. It was great to talk to experts who work on similar topics as I was doing. I contributed to a case study, hosted by ButterflyWorks; a human centred design agency in the humanitarian field, which provided some interesting connections and a great learning experience.

Besides Limitless, the Red Cross was also part of the Design Strategy Project, a SPD master course at the Industrial Design Engineering faculty. I was invited to join the sessions with the students and use my learnings to help guide them with their projects.

Project management

Project management has never been my best competence. Partly working from home due to COVID-19 did not always make it easier to work on an individual project for half a year. Yet I was fortunate to have a great supervisory team and the opportunity to visit the NLRC office for some inspiring and motivating brainstorm sessions with Saskia and Michel. In general I think I have managed this project quite okay, I could have been more efficient but in the end I am glad with the result of this research and all that I have learned from the experience.

Creating impact

I always want to achieve some form of impact with the project I do. I hope the result of this thesis motivates and inspires the Limitless organisation. Over the course of my graduation I was a little engaged with the representatives of the Solferino Academy, who are in charge of the organisation behind Limitless. I was glad to hear that my findings are already implemented for the next phase of the programme; a large group of mentors will become available to assist youth volunteers. I was asked to become one of the mentors, so for the next month I will be assisting a group of the youth volunteers with their projects.

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Fostering Red Cross youth innovation

*A Human Centred Design curriculum with
an emphasis on problem framing*

