

Humanitarian Innovation at the Netherlands Red Cross

A case study on
disaster preparedness
on Sint Maarten

Master thesis
Strategic Product Design

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Colophon

Humanitarian Innovation at the Netherlands Red Cross

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Executive summary

This report shows the process and result of a graduation project at the Netherlands Red Cross (NLRC). In their search to improve the humanitarian system, innovation is necessary. However, the Netherlands Red Cross faces challenges associated with time, resources, culture and methodologies to execute a research regarding the integration of innovation into the organisation. Based on this problem the following research question was formulated:

“How can humanitarian innovation at the Netherlands Red Cross be improved?”

To answer this research question, two ethnographic studies were conducted in the context of the headquarters of the Netherlands Red Cross and Red Cross operation on Sint Maarten. Ethnographic research is a qualitative research method in which you observe, interact and empathise with the topic that is being researched. It is mainly used to gain a deep understanding of the context when dealing with highly complex problems.

Ethnographic Study 1

The first ethnographic study took place at the headquarters of the Netherlands Red Cross, involving methods such as observations and interviews. The research resulted in a general understanding of the way of working at the NLRC. Furthermore, multiple bottlenecks of innovation were identified:

- *Donor structure*: The donor criteria are perceived as restrictions. As the Red Cross is dependent on funding from the donors, the proposals aim to ‘please the donors’.
- *Organisational silos*: The organisational structure of the NLRC is based on different ‘silos’. These silos hamper collaborations and holistic thinking, which negatively influences the ability to innovate.
- *Project proposals*: Besides the goal of the project, the proposals also capture how this goal should be accomplished. These boundaries are perceived as restrictions. It leaves little room for new approaches.

Finally, the ethnographic research at the NLRC HQ gave insight into how the second ethnographic research should take place. Working on innovation within the current structure of the NLRC would be impossible. In order to innovate, a stand-alone project was required. This stand-alone project would allow enough freedom to conduct field research.

Ethnographic Study 2

The second ethnographic study was conducted on Sint Maarten. The island, located in the hurricane prone Caribbean, was hit by hurricane Irma in September 2017. The Red Cross responded and provided relief aid to the inhabitants of Sint Maarten. Besides the initial relief operation, the recovery programming is expected to take up to three years.

The field visit, which had a focus on disaster preparedness, allowed research into the programming of the Red Cross on Sint Maarten. This provided the opportunity to gain insights into how the Red Cross works in the field. Furthermore, other stakeholders on the island, such as beneficiaries and the government were engaged through interview and observation methods. The insights from the field visit can be structured on three levels:

1. Design principles;
2. Organisational insights, and;
3. Concept insights.

1. Design principles

The design principles act as guidelines, helping Red Cross staff members give direction in the design process, idea generation and decision making. Following these principles could enable innovation within the Netherlands Red Cross. The principles seem to be valid for the entire Red Cross and Red Crescent movement. However, this needs to be confirmed during future research. The following five design principles are formulated; (1) embrace a holistic approach; (2) pivot the existing situation; (3) ensure knowledge is transferred; (4) use a context specific approach and; (5) use a phase specific approach.

2. Organisational insights

The organisational insights are based on a case study on the school meal project, one of the projects of the long-term programming. The case study gave insights into the qualities and competencies that are currently available within the NLRC. Furthermore, it shows that through collaboration, the missing identified qualities: creativity, ideation, speed, hands-on approach and decisiveness, can be implemented into (future) projects.

3. Concept insights

The concept insights are the insights that gave the inspiration for the final concept that was developed during this thesis. From the field research was concluded that the Red Cross aims to help the most vulnerable people. Although many people did receive help during the relief operation of the Red Cross, many others, including the most vulnerable did not receive help. These people were often geographically and socially isolated. This means that there is a need for local knowledge in order to identify these vulnerable people prior to a disaster.

To gather this local knowledge, the Red Cross should be better integrated and connected to the neighbourhoods. This can create a win-win situation, as the Red Cross is able to help more people, while simultaneously learning about the community. By making use of current momentum that exists because of hurricane Irma, these changes can be implemented. Furthermore, there are opportunities for solving structural problems on the island. In this way the concept has long-term societal benefits before, during and after a disaster.

Concept

The concept, 'Community Based Data Collection', that was developed for this thesis consists of three different phases: preparation, quick response and long-term benefits. Each neighbourhood will have a local 'data collector' with knowledge of the community, which will gather relevant data for the three different phases. The data will serve a different purpose in all three phases.

Preparation

- Identify the most vulnerable people in the communities by mapping the neighbourhoods;
- Use data to estimate the quantity of relief good necessary per community, and;
- Identify and map valuable capacities on the island for a 'sharing economy (relief operation)'.

Response

- Use data from the preparation phase to deliver appropriate and focussed aid;
- Use a communication system (e.g. pop-up wifi) to provide communication possibilities for both beneficiaries and the Red Cross, and;
- Use real time data to optimize relief aid.

Long-term benefits

- Identify and map structural problems on Sint Maarten;
- Provide information to specialized organisations in order to solve these problems, and;
- Create a financial independent project by having a 'data based business model'.

Conclusion

This thesis aimed to answer the research question: 'How can humanitarian innovation at the Netherlands Red Cross be improved?'. Although many interesting and relevant insights, such as; bottlenecks of innovation, identification of design principles that can be embraced and opportunities for innovation on Sint Maarten, have been gathered. It is not possible to give a definite answer to the research question. However, it is the 'first part of the puzzle' in order to provide an answer. Luckily, the collaboration between the TU Delft and the Netherlands Red Cross will continue and build further upon the research done in this thesis.

Recommendations

For the continuation of this collaboration the following recommendations have been formulated:

- *Stimulate organisational change*: Changes in the organisation and culture of the Netherlands Red Cross, such as embracing the design principles, will only find support if staff members have concrete examples to relate to. This must be done through ‘leading by example’.
- *Create a concrete case on Sint Maarten*: Although the concept has been introduced in this thesis, it still needs to be developed further. The Netherlands Red Cross should develop this concept further through pilot projects, in collaboration with the TU Delft and other actors such as 510.
- *The role of the Red Cross*: Some aspects of the concept (e.g. sharing economy relief operation) require the Red Cross to take up a different role as usual. It requires the Red Cross to move from a traditional ‘providing’ role to a ‘facilitator’ and ‘connector’ role. This change in role, and the corresponding mindset that is required, opens an interesting area for innovation within the humanitarian sector.
- *Explore different contexts*: Although Sint Maarten is a very interesting context to research, it does make this research biased. Sint Maarten is just one context in which the Red Cross is active, while there are many others all around the world. Exploring other contexts allows some of the insights to be verified, while exploring new opportunities.

In conclusion, to kickstart the preferred (cultural) organisational changes, opportunities that have been discovered in this thesis need to be further developed and implemented in practise through pilot projects. Furthermore, by simultaneously researching new contexts, the results of this thesis can be verified and new areas for innovation can be discovered.

Acronyms

ERU	Emergency Response Unit
FPA	Framework Partnership Agreement
ICRC	International Committee of the Red Cross
IDE	Industrial Design Engineering
IFRC	International Federation of Red Cross and Red Crescent societies
NGO	Non-governmental organization
NLRC	the Netherlands Red Cross
NLRC HQ	the Netherlands Red Cross headquarters
NSs	National Societies
OCHA	Office for the Coordination of Humanitarian Affairs
PNS	Partner National Society
PP	Programmatic Partnership
RC/RC Movement	Red Cross and Red Crescent Movement
SP	Strategic Partnership
SPA	Standard Project Approach
SXM	Sint Maarten
TU Delft	Technical University Delft
VCA	Vulnerability and Capacity Assessment
WASH	Water Sanitation and hygiene

Preface

At the start of a design project, you never know where you will end up. Each project takes you on a journey with unexpected insights, activities and experiences. At the start of this project, back in December 2017, I would have never expected to end up halfway across the world, in Sint Maarten.

In the 10 months that I spend at the Netherlands Red Cross I got introduced to the world of humanitarian aid. A world I knew very little about. I got introduced to the world of the Red Cross and saw the passion all staff members have for the work that they're doing.

I learned about hurricane Irma and the devastating effect it had on Sint Maarten. I got to know the island and the people. I now understand why they call it 'The Friendly Island'.

Special thanks to Jeroen, Maaïke, Rebecca, Michel, Lisette, Frederike, Jette, Maud, Adriaan, Jesper, Ronald, Felix, Madelein, Maëva & Job for making my time at the Netherlands Red Cross and especially the visit to Sint Maarten unforgettable.

Although the journey was challenging, I'm very happy with the final result. I hope you will enjoy reading my report.

Paul

Table of content

01 Introduction	15
Project context	16
The Netherlands Red Cross	18
Research questions	22
Approach	24
02 Literature review	27
What is innovation?	28
Types of innovation	30
Enabling factors	32
03 Methodology	37
Research method	38
Design method	40
04 Innovation at Red Cross	43
Introduction to innovation at the Netherlands Red Cross	44
Project structure	48
Context selection	54
Key findings	64
05 Sint Maarten	67
Introduction Sint Maarten	68
Hurricane Irma	76
Red Cross relief operation	88

06	Preparation & approach field visit	99
	Defining the domain	100
	Research setup	101
	Preparation & approach	103
07	Field visit	111
	Insights from the field	112
	Organisational insights	194
	Design principles	206
	Outcome	208
08	Concept	211
	Introduction concept	212
	Elaboration concept	218
09	Symposium	227
	Symposium	228
10	Conclusion	231
	Conclusion	232
	Limitations	236
	Recommendations	237
11	References	239





Chapter 1.

Introduction

This first chapter gives an introduction into this graduation project at the Netherlands Red Cross, part of the Strategic Product Design master at the Technical University Delft.

First, the context in which this graduation assignment took place is described. Next, the Netherlands Red Cross and its role in the Red Cross and Red Crescent Movement is discussed. Furthermore, the research questions which this thesis attempts to answer are introduced.

Finally, the used approach and the role of this graduation project within the Delft Design labs are explained.

1.1 Project context

Global trends, such as armed conflicts, more intense natural disaster and protracted crises have resulted in an increasing amount of people in need of humanitarian assistance. These humanitarian crises and disasters, events that are threatening the health, safety and wellbeing of a large group of people, are affecting more and more people.

1
136 Million people are in need for humanitarian aid.
- OCHA, 2018

Among many other organisations, the Red Cross / Red Crescent Movement provides this assistance. Alongside the growing needs, the cost of international humanitarian aid has more than tripled in the last 10 years (American Red Cross, 2015). This results in a large shortage of funding.

2
\$22.5 Billion of funding is required to provide the necessary humanitarian aid.
- OCHA, 2018

Besides this, many traditional assistance mechanisms are not suitable or inefficient in the changing socio-economic contexts. For example, in the provision of shelter, the focus has moved from the provision of tents or other readymade solutions towards assistance that builds on local knowledge and practices.

These challenges, within a changing humanitarian context, make the Red Cross realize that in order to fulfil their mission, a different way of working is required. They strongly believe that investing in innovation will support the improvement of the humanitarian system and will enhance the delivery of assistance and protection (American Red Cross, 2015). By using new methods, techniques and service models the Red Cross can have a greater impact with the help they provide.

Furthermore, the Red Cross aims to localize humanitarian aid. In this way the provided aid matches better with the context and the beneficiaries that require the help.

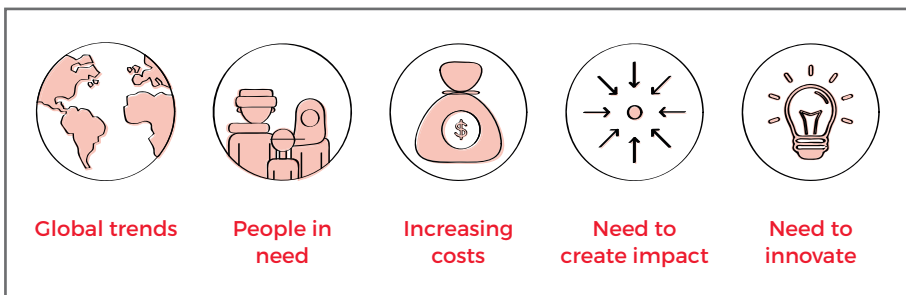


Figure 1: Different element of the project context.



Figure 2: Some examples of global trends: rebel fighters in Ethiopia, Syrian refugees near the Jordan border & destruction by typhoon Haiyan in the Philippines.

1.2 The Netherlands Red Cross

Introduction

This subchapter gives an introduction into the Netherlands Red Cross and its role in the Red Cross and Red Crescent Movement. First, the goal of the Red Cross and Red Crescent movement is discussed. Secondly, the organisational structure is shown. Next, the three parts of the movement (committee, federation and national societies) are introduced. Finally, the role of the Netherlands Red Cross within in the movement is discussed.

The movement

The aim of the Red Cross and Red Crescent movement is to strengthen resilience of vulnerable people exposed to hazards and crisis situations and respond to disasters and conflicts to save lives and alleviate suffering. They act before, during and after disasters to meet the needs and improve the lives of vulnerable people.

The organisational structure can be seen in figure 3.

The International Red Cross and Red Crescent Movement can be seen as the ‘umbrella’. It is a global humanitarian network of 80 million people that helps those facing disaster, conflict and health and social problems. It consists of the International Committee of the Red Cross, the International Federation of Red Cross and Red Crescent Societies and the 191 National Red Cross and Red Crescent Societies (ICRC, n.d.).

The Red Cross supports people regardless of their nationality, race, religious beliefs, class or political affiliation. The following seven fundamental principles guide their humanitarian work: humanity, impartiality, neutrality, independence, voluntary service, unity and universality (ICRC, 1986).



Figure 3: Organisational structure of the Red Cross organisation.

ICRC

The International Committee of the Red Cross (ICRC) is an independent and neutral organisation that focuses on helping people that are affected by conflict and armed violence. It ensures humanitarian protection and promotes the laws that protect the victims of war (ICRC, n.d.).

1

“To protect the lives and dignity of victims of armed conflict and violence and to provide them with assistance.”

- Part of ICRC’s Mission Statement

IFRC

The International Federation of Red Cross and Red Crescent Societies (IFRC) is the world’s largest humanitarian network that reaches 150 million people through the work of over 17 million volunteers (IFRC, n.d.). Its focuses on health and community care, disaster response, disaster preparedness and promoting humanitarian values.

2

“Prevent and alleviate human suffering, and thereby contribute to the maintenance and promotion of human dignity and peace in the world.”

- Part of IFRC’s vision

National Societies

The Red Cross or Red Crescent National Societies are autonomous organisations within their own country. By working with both professional staff and trained volunteers, humanitarian activities are

Figure 4: ICRC in a warzone in Syria.



Figure 5: IFRC in action in Peru after floodings.

carried out. These activities are in line with the local needs, their own status and the national law (ICRC, 2012). In case of disasters, the primary role of the National Societies is to provide first-line disaster response services (IFRC, n.d.).



Figure 6: The Netherlands Red Cross National Assistance at the Dutch festival Pinkpop.

The Netherlands Red Cross

One of the 191 National Societies is the Netherlands Red Cross (NLRC). In the Netherlands there are more than twenty-five thousand volunteers and around four hundred professional staff (Rode Kruis, 2017). These people do not only work during crisis situations in The Netherlands (National Assistance), but they also support other Red Cross or Red Crescent National Societies with technical assistance, supplies and money (International Assistance).



The Netherlands Red Cross



National assistance



International assistance



Humanitarian Innovation

International Assistance

This graduation project is embedded in the International Assistance division of the NLRC. This division is responsible for all NLRC international support for victims of disasters and conflicts and for vulnerable people exposed to hazards. The international strategy of the NLRC is based on two pillars: disaster response and increasing community resilience (The Netherlands Red Cross, 2017).

Part of the International Assistance division of the NLRC are the six overseas branches. Together Aruba, Bonaire, Curaçao, Saba, Sint Eustatius and Sint Maarten form the Red Cross Dutch Caribbean.

Humanitarian Innovation Team

A part of the International Assistance division of the NLRC is the Humanitarian Innovation Team. The team works on the development of an innovation strategy and portfolio. Examples of current humanitarian innovative initiatives are the 'Red Village - Localised and open humanitarian innovation', a living lab ecosystem to co-create and develop humanitarian innovation. And 'From Waste to Work - Start-up solutions for Irma recovery in Sint Maarten'.

3

"We profile ourselves with humanitarian innovations that have been proven in practise."

- NLRC multi annual plan.



Figure 7: Examples of work of the Red Cross and Red Crescent Movement.

1.3 Research questions

To successfully deal with the challenges in the future, as described in chapter 1.1, the Netherlands Red Cross needs to identify new approaches in the delivery of assistance (Netherlands Red Cross, 2010). These new approaches aim to improve the humanitarian system with innovative ways of responding to disasters and increasing community resilience.

Although the Netherlands Red Cross strongly believes in innovation and there are examples of successful innovations, they are currently not able to successfully and constantly embrace innovation as a valuable asset. The integration of innovation into the organisation is currently being hampered. In a large and complex organisation as the Red Cross, the 'Humanitarian Innovation Team' does not have the time, resources and methodologies to execute an elaborate research regarding the integration of innovation into the organisation. Therefore, the main research question explored throughout this thesis is:

Research Question:

How can humanitarian innovation at the Netherlands Red Cross be improved?

This main research question is divided into three sub research questions. The first question aims to research what kind of assets are currently in place at the Red Cross to enable humanitarian innovation. The second question aims to investigate the bottlenecks that hamper humanitarian innovation. The final question uses the insights of both research questions in order to determine opportunities for humanitarian innovation within the Netherlands Red Cross.

Sub Question 1:

What enables humanitarian innovation at the Netherlands Red Cross?

Sub Question 2:

What are the bottlenecks of humanitarian innovation at the Netherlands Red Cross?

Sub Question 3:

What are the opportunities for humanitarian innovation at the Netherlands Red Cross?

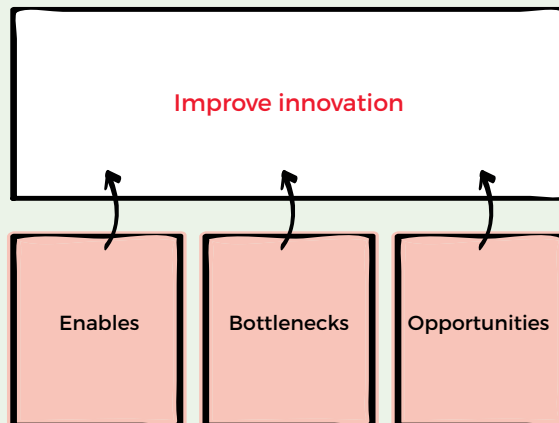


Figure 8: Schematic overview of the research questions.

1.4 Approach

Research question

The Red Cross organisation and the contexts it works in are too complex to conduct a comprehensive research. Providing a complete and thorough answer to the research questions formulated in chapter 1.3 will not be possible within this thesis. However, as part of the Delft Design Labs, a first step can be made.

1

"It is not possible to answer the research question within this thesis."

- The Author

Each lab demonstrates the stimulating synthesis between design and research, in which scientific and societal contribution go hand-in-hand.

Students, PhD candidates and faculty members work together with a wide variety of societal partners in over 50 different projects (Delft Design Labs, n.d.).

2

"We unite scientist, students and societal partners to catalyse knowledge development and design innovation."

- Delft Design Labs

Delft Design Labs

This graduation assignment is the first project in the collaboration between the faculty of Industrial Design Engineering (IDE) of Delft University of Technology (TU Delft) and the Netherlands Red Cross (NLRC). It is part of 'the Big Picture', one of the Delft Design Labs.

The Delft Design Labs provide platforms for prolific collaborations with all kinds of societal stakeholders.

The partnership with the Red Cross/ Red Crescent Movement, the largest international humanitarian organisation, creates the opportunity for projects with a high impact. The collaborative ambition is to execute multiple (graduation and research) projects, that have to result in a long-term relationship between the Red Cross and the TU Delft. Moreover, it will result in a design-driven innovation approach and concrete solutions that support the Red Cross to help people better.



Figure 9: Logos of Technical University Delft, Delft Design Labs and The Netherlands Red Cross.

Design research

This thesis is the ‘first part of the puzzle’ in solving the formulated research questions. A design research approach will be used, which is able to deal with highly complex and uncertain problems, the many different stakeholders involved and the open formulated research questions.

The approach combines both research and design. A central part of the approach is a design practise project (Fallman, 2008). It uses methods and processes from design practise. The holistic and iterative approach integrates knowledge and theories from many different disciplines.

In order to gain an understanding of ‘innovation’, a literature review (see chapter 2) was conducted. This knowledge was used to further develop the methods and approaches for this thesis. These methods are discussed in chapter 3.

The outcome of this thesis will be threefold. First, initial insights into the enablers of innovation will be communicated towards the Red Cross. Second, factors that hamper innovation within the organisation will be discussed. Finally, innovative solutions with practical implications for the Red Cross will be developed.

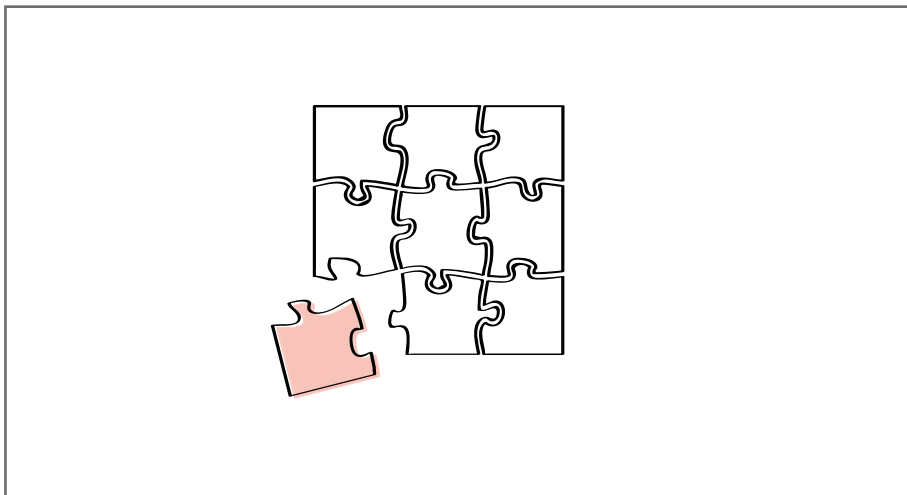
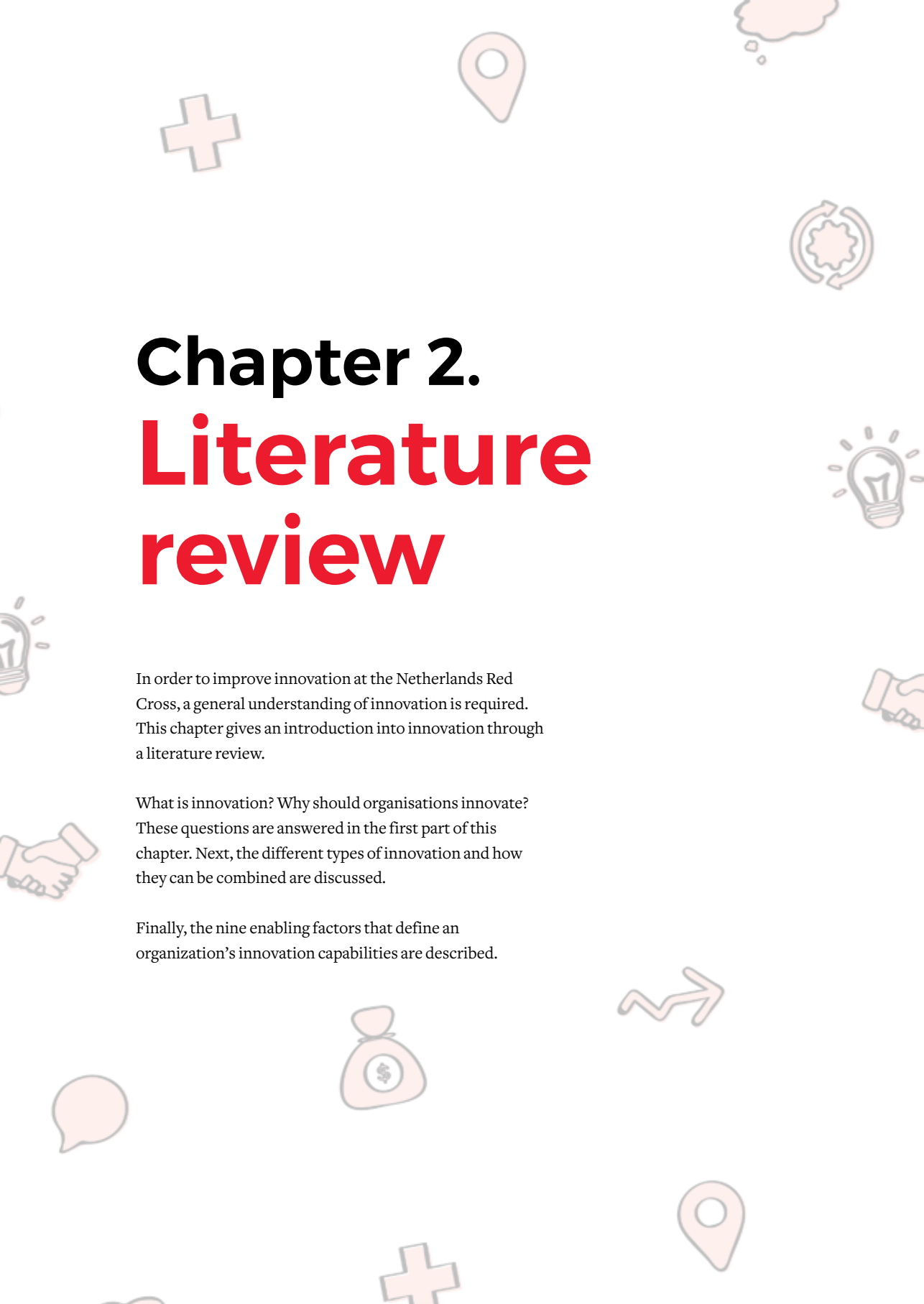


Figure 10: First piece of the puzzle.





Chapter 2.

Literature review

In order to improve innovation at the Netherlands Red Cross, a general understanding of innovation is required. This chapter gives an introduction into innovation through a literature review.

What is innovation? Why should organisations innovate? These questions are answered in the first part of this chapter. Next, the different types of innovation and how they can be combined are discussed.

Finally, the nine enabling factors that define an organization's innovation capabilities are described.

2.1 What is innovation?

Innovation

In literature there are many different definitions of innovation. According to Kanter (2000) innovation is the creation and exploitation of new ideas. Tidd & Bessant (2014) describe innovation as the process of creating value from ideas. While Buckler (1997) has a much more 'abstract' description of innovation: Innovation is an environment, a culture - almost spiritual force - that exists in a company and drives value creation.

According to Bond (2016), most NGOs don't yet have a clear organisation definition of innovation. Nevertheless, some corresponding elements, that seemed essential for innovation, were found. These were:

Novelty: The development or implementation of new ideas and approaches.

Effectiveness: Achieving a more positive impact on a social problem.

These points indicate that most NGOs are oriented towards so-called social innovation. The main difference between social innovation and other forms of innovation is the focus on solving social challenges and needs. These insights lead Bond (2016) to the following definition of social innovation:

"Any solution that has the potential to address an important development problem more effectively than existing approaches."

However, as can be seen in the beginning of this chapter, it's hard to define what innovation exactly is, hence the many different definitions. This makes it difficult for organisations to clearly state what makes a new idea innovative. Being able to communicate, both internally and externally, how an innovation is an improvement of the current situation is essential for gathering support.

"It's not always black and white - this is innovation and this isn't."

- Bond (2016)

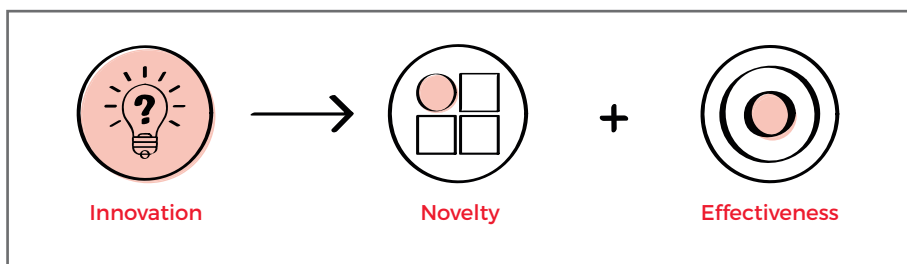


Figure 11: Essential elements for innovation.

Why innovate?

Research defined a number of ‘megatrends’ that will substantially influence the humanitarian sector on global and national scale. These megatrends, such as, climate change, demographic shifts, urbanisation, geopolitical shifts, natural resource scarcity and technological transformations, are influencing all sectors of society (Bond, 2015).

Furthermore, because of the speed at which these trends are changing and having an impact on the world, the need for innovation is becoming more apparent (Bond, 2016). Organisations that do not get stuck in their ‘business as usual mindset’ and are working more agile and connected have a better chance to disrupt the sector and come up with solutions that are able to cope with the fast-changing world.

Bond (2016) identified the four **motivating factors** that drive (social) innovation within NGOs. Often the NGOs are motivated by a combination, if not all, of these motivating factors:

- (1) The ambition to help affected communities better by increasing the effectiveness and impact of the organisation’s work.
- (2) Standing out from other NGOs in the competitive funding environment.
- (3) Staying relevant and ‘future fit’ in a fast-changing world.
- (4) A recognition that new solutions are needed to meet the scale of the global challenges we face.

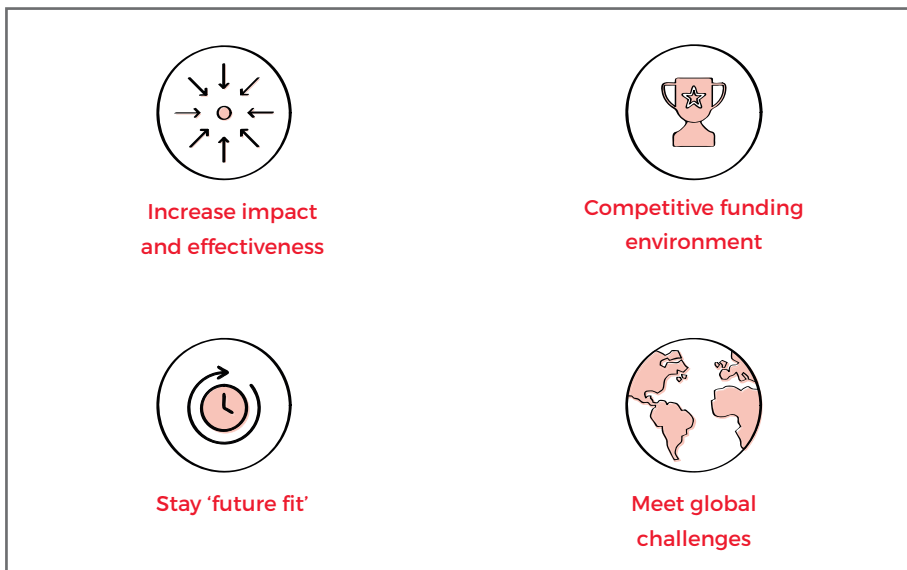


Figure 12: Motivational factors that drive (social) innovation.

2.2 Types of innovation

Types of innovation

Bond (2016) developed a framework in order to identify the different types of innovation. According to the framework, there are nine different types of innovation. Organisations can combine multiple types of innovation. For example, 'simple innovations' only use one or two types, while more 'sophisticated' (and often more groundbreaking) innovations combine multiple innovation types at the same time.

1. Funding model

Innovation of funding models is about finding new ways of financing your projects. The business model or funding source is different in comparison to the standard in the sector.

2. Collaboration

Working together with new (and unusual) partners to learn from each other. Innovation through collaboration is about finding new ways of working that can be implemented to increase the impact of the organisation.

3. Organisational structure

Innovation of the organisational structure is about organising your (human) resources in such a way, that they can be used optimally. In this way an organisation's assets can reach their true potential to deliver impact.

4. Process

Innovation of processes or methods focuses on finding new ways of delivering projects or carrying out activities, to do the work more effectively.

5. Service / product

Innovation of services and products is about developing new projects, programmes and initiatives that achieve more impact.

6. Service / product coordination

The coordination between services and products focuses on connecting or developing complementary services and products that deliver better outcomes.

7. Communication channel

Innovation of communication channels is about delivering your services/products to supporters and beneficiaries through new channels.

8. Brand

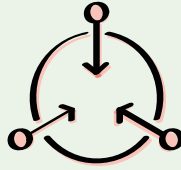
Innovation of branding is about representing your organisation and its products and services in a novel way.

9. Engagement

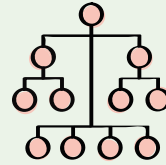
Increase engagement of beneficiaries or supporters to create meaningful interactions.



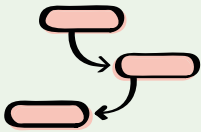
Funding model



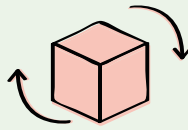
Collaboration



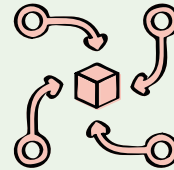
Organisational structure



Process



Product / service



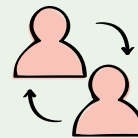
Product / service coordination



Communication channel



Brand



Engagement

Figure 13: 9 types of innovation.

2.3 Enabling factors

According to the Inventium innovation framework (Inventium, 2013) a NGOs innovation capability is defined by nine enabling factors. As shown in figure 14, the factors are based on three pillars (structure, leadership and people) and increasing levels of innovation maturity (foundation, graduation and optimisation).

Culture

The culture (or climate) of a company is the way the employees perceive the organisation. For the culture to stimulate innovation, it needs to meet certain conditions. The organisation needs to challenge their employees, give them an autonomous feeling, support their ideas and innovative behaviour, create opportunities to collaborate between departments and take risk to actually implement innovative ideas.

On the other hand, there are even several organisational cultural barriers. These barriers, such as the lack of support from superiors, dealing with bureaucracy and hierarchy, the fear and acceptance of failure and the discomfort with 'out of the box' ideas, prevent people from innovating.

Strategy

The innovation strategy makes sure that the innovations that take place within the organisation are not random and purely based on luck. It gives a direction to innovate towards. The innovation strategy should be aligned with the organisation's broader strategy, as innovation isn't a detached part

within the organisation. By connecting the innovation strategy to the corporate strategy the purpose of innovation becomes clear.

However, this alignment can also have a downside. If the strategies are too aligned, the corporate strategy can limit the innovation. Especially with radical innovation, as these often do not fit the short term agenda of the corporate strategy.

Communication

Innovation is a difficult concept, as there are many different ways it can be interpreted. This is illustrated by the variety of definitions of innovation given in chapter 2.1. This can lead to different interpretations of innovation. Strong communication can ensure that everyone is on the same page and is working together towards the same goal.

Process

The process gives structure to the way innovation takes place within the organisation. From identifying challenges all the way to scaling up the new solution. Many organisations have traditional (rigid) processes, such as the logframe planning approach, that don't support innovation. It doesn't provide the necessary flexibility to drive innovation. Having the right innovation process can enable organisations to integrate innovation better into their way of working. By looking at and learning from other sectors, successful innovation processes can be adjusted and implemented into the humanitarian sector.

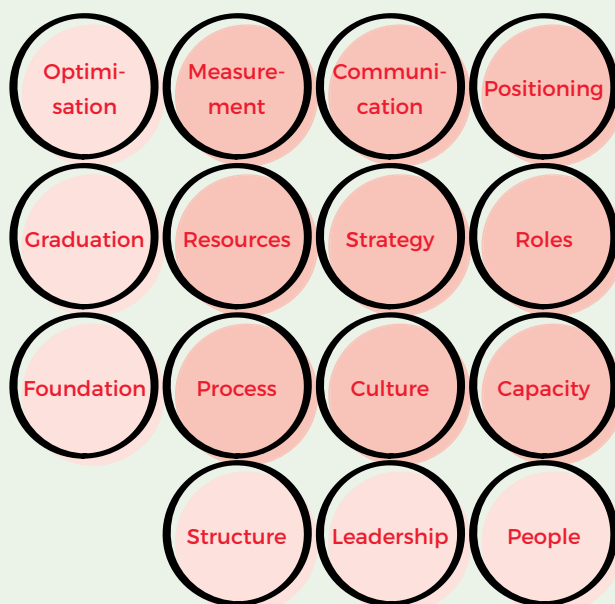


Figure 14: Enabling factors of innovation.

Resources

Innovation can only succeed if time, money and people are allocated. In the humanitarian sector allocating these resources can be difficult, as the priority is often on helping people in the moment instead of investing in innovation. However, recently the recognition for allocation of resources has grown. In most cases this results in a 'innovation fund' to finance innovative ideas or 'innovation labs' to facilitate innovation.

Measurement

Measuring and quantifying innovation efforts enable measuring the impact and effectiveness of innovations. This knowledge can help the decision makers whether to continue with a project or reallocate the resources to another project. Furthermore, it can be used to gather feedback from users during pilots and improve the prototype. This is essential in the process of improving and scaling up innovations.

Capability

Innovation is a difficult discipline and requires a set of competencies that not everybody has. Luckily these skills can be developed. However, this is not happening sufficiently at the moment. Developing innovation skills for employees is critical, because an organisation needs people who can generate and implement great ideas.

These skills can be developed by setting up accelerator programmes and labs to train current employees. Other options are to recruit new employees with specific skill, from different backgrounds or start collaborating with people outside the sector.

Roles

In order to be innovative as an organisation, the employees need to be innovative. Organisations struggle with the dilemma whether to create a specialized innovation department or to integrate innovation into the company as a whole. On one hand, this is done by an innovation lead or team, that delivers innovative ideas and approaches themselves or encourages innovation from others throughout the organisation. On the other hand, this is done by integrating innovation into the employee's role. This means that innovation is specified in the job description and innovative behaviour is motivated for all employees.

Positioning

The position of the organisation within and outside the industry will determine how the organisation will be perceived. Positioning the organisation as a leader on innovation could lead to potential collaborations. Currently, the humanitarian sector isn't seen as a leader on innovation. However, an increasing amount of NGOs are sharing their innovative experiences in order to establish their role within the sector.

Innovation is holistic

The aforementioned enabling factors all influence an organisation's ability to innovate. However, innovation cannot be enabled by just improving all enabling factors individually. As innovation is holistic in nature (Ahmed, 1998), the interplay between the different enabling factors make innovation so complex. In literature, little is known about the interplay between these enabling factors of innovation.

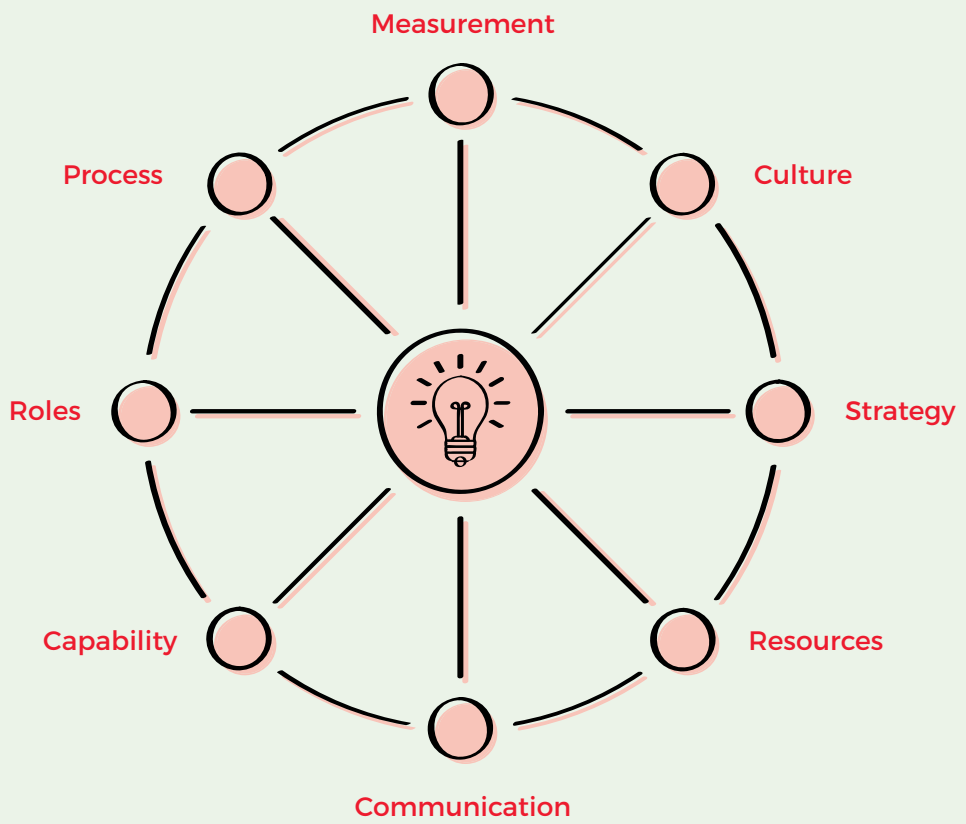


Figure 15: Enabling factors of innovation.



Chapter 3.

Methodology

This chapter describes the research method used within the graduation project. The selected method, ethnographic research, is used to conduct two studies. A study at the headquarter of the Netherlands Red Cross and a study during the field visit to Sint Maarten.

Furthermore, the proposed design method is introduced. First, the foundation of the method, Human-Centered Design is explained. Next, the five phases of the design method are elaborated.

3.1 Research methods

Introduction

This subchapter describes the research methods used during this thesis. In order to answer the research questions two ethnographic studies that have been conducted. The first study took place at the headquarter of the Netherlands Red Cross, while the second study took place during the field visit to Sint Maarten.

Ethnographic research

During this thesis, two ethnographic studies have been conducted. Ethnographic research is a qualitative method where researchers observe, interact and empathise with a study's participants in their real-life environment. It is used to support a designer's deeper understanding of the design problem. It is most often used for complex and/or critical design problems (Spotless, n.d.).

The ethnographic researches have been conducted at the Netherlands Red Cross Headquarter and during the field visit.

If the situation allowed it, recordings have been made. These are either voice recordings, videos and photographs. In other situations, the insights and quotes are based on notes taken during the research. This means that some quotes do not have the exact same wording but are reformulated based on memory and the taken notes. The interviewees are anonymized, to a certain extent, as some of the information can be perceived as sensitive.

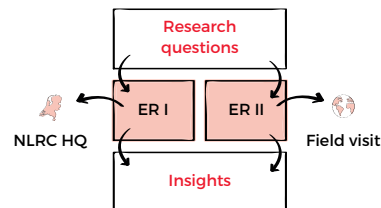


Figure 16: Schematic overview research methods.

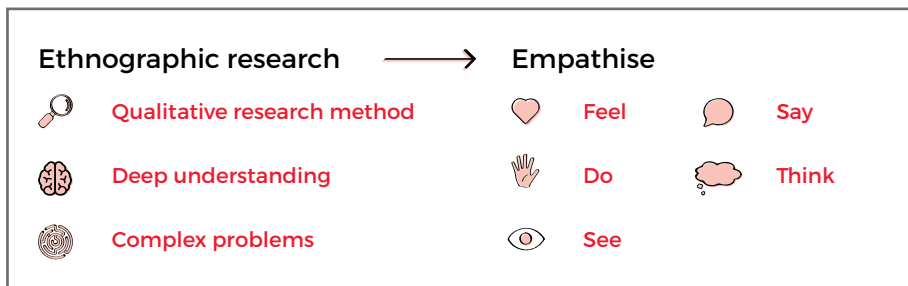


Figure 17: Characteristics ethnographic research and empathy.

NLRC HQ

The first ethnographic study, at the NLRC HQ, took place from December 2017 until April 2018. It aimed to gain understanding about the role of innovation at the NLRC. During this period, multiple qualitative research methods were used to support the ethnographic study. The main methods were desk research, semi structured interviews, informal conversations (e.g. at the coffee machine) and observations.

Field visit Sint Maarten

The second ethnographic study took place during the field visit to Sint Maarten, from 11 May 2018 until 28 May 2018. The main methods used were semi structured interviews, informal talks, observations, a focus group and a workshop. The selection of Sint Maarten as destination for the field visit can be found in chapter 4.3.

Figure 18: Overview of conducted research activities.








NLRC HQ	Field visit
 19 interviews	 23 interviews
 22 Monday morning meetings	 2 guided tours
 50+ days at the office	 17 days in the field
 2 different office locations	 Focus group discussion & workshop



Figure 19: Ethnographic research 1: The Netherlands Red Cross office.



Figure 20: Ethnographic research 2: Field visit on Sint Maarten.

3.2 Design method

Introduction

In order to improve the humanitarian response, the Netherlands Red Cross should have an idea of what the needs, wants, desires and behaviour of the people in the future could be. With a clear vision about the future, humanitarian innovation can be used to connect the present with the future.

Human-centered design

The foundation of the entire process is human-centered design. Human-centered design is based on the belief that all problems can be solved and that the people who face those problems on a daily basis are the ones who hold the key to their answer. Human-centered design is about adopting the right mindset and daring to try. It offers the problem solvers the tools to deeply understand those people, come up with new ideas and create innovative new solutions, that create real impact, based on people's actual needs (IDEO.org, 2015).

1. Framing

To start the project, the project team has to be selected, the domain and scope have to be determined and a project plan has to be created. The domain, also called the context, is the subject that requires a new vision. The scope determines the time frame (how far in the future will this vision take place?). This first stage is critical, as it will influence the entire process of the project.

2. Future exploration

Research shows that by using people centred methods (e.g. Design Thinking (Brown, 2009)) to structure and facilitate a vision of a possible future, designers are - to a reasonable extent - able to predict where society is heading (Calabretta et al., 2016). This possible future is explored by mapping the future world in a specific domain and scope, that is determined in phase 1 'framing'. In the determined context and scope, several building blocks, so called context factors, have to be identified.

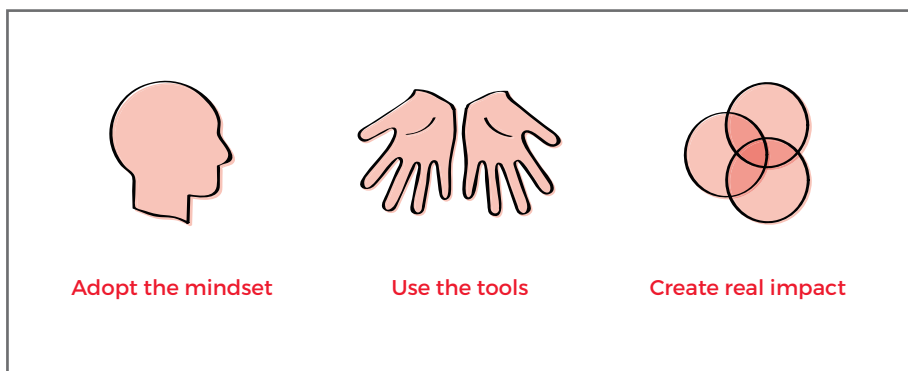


Figure 21: Characteristics Human-centered Design.

3. Future vision

A method used to create a future vision is Vision in Product Design or ViP (Hekkert & van Dijk, 2011). It aims to develop a future vision that can lead to design concepts that will be meaningful for people in the future. It does so by collecting the context factors from the 'future exploration' and combining them to create a coherent view of the future. This coherent view is called the future vision. This vision is often placed in a framework.

The visual framework portrays the interplay of the diversity among possible behaviours that ultimately reflects the needs, desires and concerns that may emerge in the future of a specific domain (Calabretta et al., 2016). Based on the future vision, opportunities for humanitarian innovation will be explored through ideation and creative sessions.

4. Design

Based on the future vision, a vision concept will be developed. Vision concepts (e.g. a concept car from the automotive industry) are 'experimental artefacts' in order to explore the future (Styhre et al., 2005). In the development of this 'experimental

artefact', visual synthesis, prototyping, and storytelling play an important role (Mejia Sarmiento et al., 2016). By generation, iteration and selection of ideas, the design of the vision concept is made. Prototyping this vision concept enables people from different backgrounds to experience a 'tangible future'.

5. Vision concept

The vision concept has to be communicated clearly in order to serve its purpose. The communication can be targeted to both internal and external sources. The goal of the vision concept has to be made clear in both types of communication. Internally, there are multiple target audiences such as the International Assistance department, the NLRC and the Red Cross / Red Crescent Movement. Externally, the vision concept is communicated towards audiences such as beneficiaries, donors, other NGOs, governments and the general public. For all these target audiences the concept vision serves a different purpose.

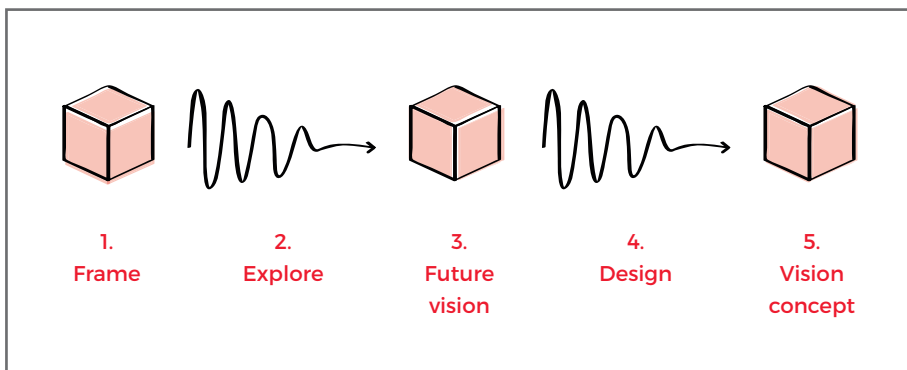


Figure 22: Proposed design method.





Chapter 4.

Innovation at the Red Cross

To gain insight into the current state of innovation within the Netherlands Red Cross, an ethnographic was conducted at the headquarters of the NLRC.

First, an introduction to innovation at the Netherlands Red Cross is given by describing the main insights from exploratory interviews with eight NLRC staff members. Next, the way of working of the Netherlands Red Cross and the current project structure are elaborated. It describes what the role of innovation is within this structure and which barriers are encountered.

Furthermore, the selection process for the context of the second ethnographic research is described. Using different selection criteria, the location of the field visit was determined. Finally, the key findings of innovation at the Netherlands Red Cross are summarized.

4.1 Introduction to innovation at the Netherlands Red Cross

To gain insights on innovation within the organisation, interviews with eight employees of the Netherlands Red Cross International Assistance department were conducted. The interviewees were selected based on their function, (field) experience, knowledge of partner national societies and personal conviction.

During these exploratory interviews, ‘topic cards’ were used to structure the interview. These topic cards contained topics related to innovation within the Red Cross. From all interviews the most interesting insights are selected as described below.

1. A clear vision is important

First of all, the majority of the interviewees agreed that it is important to have a clear vision as an organisation. The vision should give a sense of direction where you want to go as an organisation. The world is changing and the way aid is provided is changing as well. The vision should make it clear what the role of the Red Cross should be in changing aid sector. This vision needs to be communicated clearly, within and outside the organisation.

1
“What will be our added value in this ‘new’ aid sector?”
- Red Cross

2. Vision on different levels in the organisation

In a complex organisation such as the RC/RC Movement, there are different organisational levels. In most cases, all these levels have their own vision, that should align to the overall vision of the organisation. According to Netherlands Red Cross employees, there is a huge challenge in translating the visions from all the levels in the organization to actions in the field.

2
“How do we get from a vision in the office, to actual helping beneficiaries in the field?”
- Red Cross.

However, matching visions between National Societies enables long term partnerships. These partnerships give the opportunity to set up long term sustainable solutions for the people that need it the most.



Figure 23: Innovation 'topic cards'.

3. Opportunities need to be discovered

The opportunities for innovation are out there, but they do need to be discovered. The opportunities are there where the Red Cross can add value. By collaborating and bringing people together, these opportunities can be discovered.

3

"We need to try help our colleagues to see the opportunities as well."

- Red Cross.

A part of that collaboration is giving opportunities to others. Instead of competing, the organisation who is best positioned needs to act on that opportunity.

4. Innovation creates opportunities

Opportunities can be seen in different levels of the organisation. However, they should always lead to the same goal: helping the most vulnerable in humanitarian need.

4

"Innovation needs to happen at the place where the problem is."

- Red Cross

Innovation can play a large part in this. To spot and act on opportunities, a certain positive attitude is required. Without looking at it positively, opportunities will never be utilized.

5. The danger of opportunities

Although opportunities are essential for innovation, there is also a downside. Often the opportunities are based on assumptions made by Red Cross employees. In their enthusiasm they directly start working on the opportunity without knowing whether the situation is actually like they assumed. The people in need might have very different priorities. This creates a mismatch between the actual needs and the help that is provided.

5

"We need to make connections between the needs and the opportunities"

- Red Cross

6. Breaking down the silos

As the 'Humanitarian Innovation Team' is still in development, it is currently not clear how the collaboration on innovation should take place. In order to collaborate, it is necessary to know how to make use of each other. Several of the interviewees mentioned that they are not up to date with the work of their colleagues. In this way it is difficult to make clear how the work of the different departments is related.

6

"At the moment, everybody is on their own island. Re-inventing the wheel."

- Red Cross

7. Loss of knowledge

There is a lot of knowledge around at the Netherlands Red Cross. Some of the employees have been working at the Red Cross, or other NGOs in the aid sector, for many years. However, the high turnover of people is causing that the acquired knowledge stays with the person, rather than the function. Moreover, a lot of knowledge gets lost during the installation and briefing of new employees.

7

“When I started, there was no hand-over. I had to get all the information myself.”

- Red Cross

8. Collaborate with partners outside the Red Cross

Furthermore, the collaboration with stakeholders outside the Red Cross was mentioned frequently by the interviewees. It is seen as innovative to work together with the private sector. In that way a National Society can become more self-sustainable.

Currently, there are quite some collaborations between different stakeholders. According to Red Cross employees, these are not always successful. The interviewees mentioned that often there is a problem with miscommunication.

8

“There is some collaboration. But I’m not sure if we’re speaking the same language.”

- Red Cross

Moreover, these types of collaboration require a more flexible approach according to Netherlands Red Cross staff members. They mentioned that in practise it never works out as it was planned at the office.

9

“Things change in the field. You need to be able to adapt.”

- Red Cross

4.2 Project structure

To be able to understand how innovation at the Netherlands Red Cross works, a general understanding of their way of working is required. The focus of the Netherlands Red Cross is on communities that are exposed to natural and man-made hazards. The two main focus points are ‘Disaster Response’ and ‘Community resilience through partnerships’. First, the NLRC concentrates and strengthens their response to disasters by providing financial aid, materials and relevant expertise for victims. Second, the NLRC provides long-term support to a limited number of sister National Societies, aiming to build resilience in communities that are exposed to hazards (The Netherlands Red Cross, n.d.).

Community resilience through partnerships

Initially, the ethnographic research focused on the second focus point, community resilience through partnerships. At the NLRC the distinction is made between programmatic and strategic partnerships. The latter focuses on the development of the National Society. It engages with a National Society’s internal network, as it tries to stimulate organisational development. It aims to make the National Societies more self-reliant, so it becomes less dependent on external finances.

On the other hand, the programmatic partnership wants to ensure relevant cost-effective service delivery in order to strengthen a community’s safety and

resilience. By working together, a number of programmes that target the specific needs of the most vulnerable are assisted. In order to do so, an integrated way of working at community level is needed. Finally, the aim is to increase the capacity of the National Society in order to create a sustainable service delivery.

Partner countries

In the Netherlands Red Cross International Assistance ‘New Way of Working’ is stated that: “Our current work leads us to conclude that for maximum effectiveness, relevance and sustainability of our international support, we need to enter into longer-term partnerships with fewer sister National Societies”. This decision eventually led the NLRC to make partnerships with 16 sister National Societies. Figure 25 & 26 show the different partners of the Netherlands Red Cross and the type of partnership.

Programmes and projects

In the different partner countries, the Netherlands Red Cross works together with the National Societies on different projects and programmes. In these programmes and projects, activities take place that aim to build resilience in communities. Agreements made between the partner countries are captured in the Framework Partnership Agreement (FPA). In this agreement the interpretation of the strategic goals are formulated and it gives direction to potential programmes and projects that will take place in the partner country.

Figure 24: Overview partner national societies.



Partner National Societies	
SP	Benin
PP	Burundi
PP	Central African Republic
PP	Democratic Republic Congo
SP	Ethiopia
PP	Philippines
PP	Haiti
SP	Ivory coast
PP	Lebanon
PP	Malawi
PP	Mali
PP	Uganda
PP	Palestinian territories
PP	Sudan
PP	South Sudan
SP	Zambia

SP	Strategic partnership	PP	Programmatic partnership
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Figure 25 & 26: Overview partner national societies & two type of partnership.

NLRC project process

The current process of setting up a project at the NLRC (and in the rest of the humanitarian sector) is long and complicated. The process at the NLRC is captured in the ‘Standard Project Approach’ (SPA). In order not to get lost in the details, a simplified version of the process will be explained. Figure 27 shows the simplified overview of the process. In this version two phases are identified: proposal and implementation. Furthermore, three key activities are highlighted. In the lifespan of a project many different activities are conducted. However, not all are included in this overview.

Proposal phase

The start of a project can be seen as the moment a ‘call for proposals’ is published by one of the donors. This ‘call for proposals’ already defines a specific context and user needs. The Netherlands Red Cross can then, in coordination with the EU Red Cross, decide to write a proposal. This decision is made based on the partnership agreement, the capacity of the National Society and whether the NLRC is best positioned to implement the project.

Each of the donors and projects has its own set of criteria that the proposal should meet. From all the submitted proposals, eventually a selection has to be made. An assessment document shows the criteria on which the proposals are evaluated. For funding from the EU, one of the largest donors, innovativeness is one of the criteria.

However, one of the conditions of the innovativeness criteria is that the innovation has to be proven and quantified before it can be included in the proposal. This limits the opportunities for truly innovative ideas in the proposals.

The proposal phase and ‘call for proposals’, immediately gives insight into an interesting phenomenon in the humanitarian sector. It shows the donor structure of the many of the larger donors within the humanitarian sector. Just as the project process, the overview of the donor structure is a simplified version of the reality.

However, it does show the ‘donor driven’ or ‘money driven’ project approach that is currently in place. The donor, who controls the money, defines a context and user needs in the ‘call for proposals’, usually based on some kind of assessment done in the field. The Netherlands Red Cross then needs to check the proposal criteria and consult with the partner national societies to see if the project would be suitable within their collaboration. If so, the proposed user needs need to match with the local beneficiary needs in the specified context. These local beneficiary needs are either based on assessments (e.g. VCA) or assumptions made at the NLRC HQ. Moreover, many of these assessments are made fit for purpose. They are designed in such a way that they confirm or support what the donor wants to hear. The true priorities or needs of a community are sometimes ignored. Figure 28 shows that the process seems unilateral, as the beneficiaries are not truly involved in the design process. The focus is mainly on the donors.

Figure 27: Simplified illustration of the current project process at the Netherlands Red Cross.

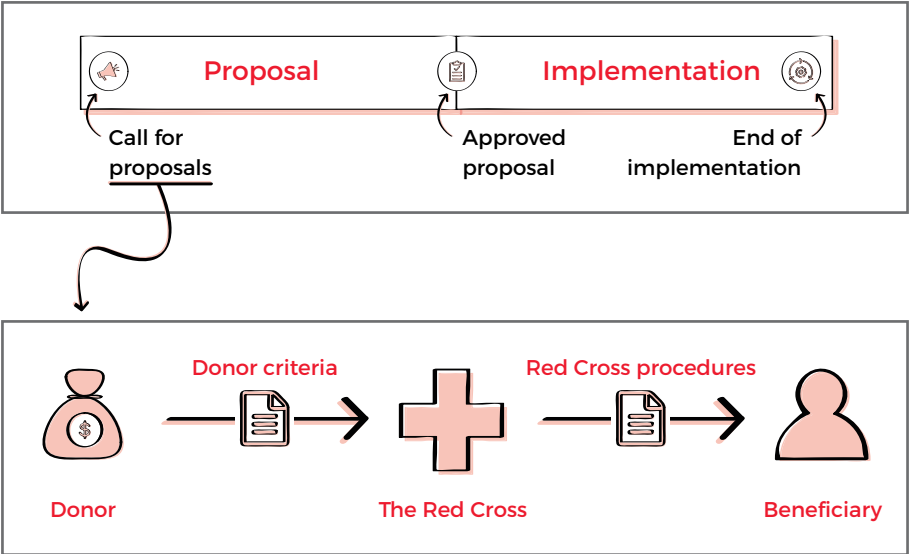


Figure 28: Simplified illustration of the current donor structure in the humanitarian sector.

In chapter 3.2, human-centered design, the foundation of the new proposed process, is described as following: “human-centered design is based on the believe that all problems can be solved and that the people who face those problems on a daily basis are the ones who hold the key to their answer”. To make the project process of the Netherlands Red Cross more innovative, the donor structure should also be reversed. This is perceived as challenging as it might

require the entire humanitarian sector to change as well. Figure 29 shows a newly proposed donor structure, that puts the beneficiary at the start of a project. Based on a thorough assessment, the determined needs of the beneficiaries should be central in the proposal writing as opposed to what kind of money is available. In this way the donor structure can become more ‘beneficiary driven’.

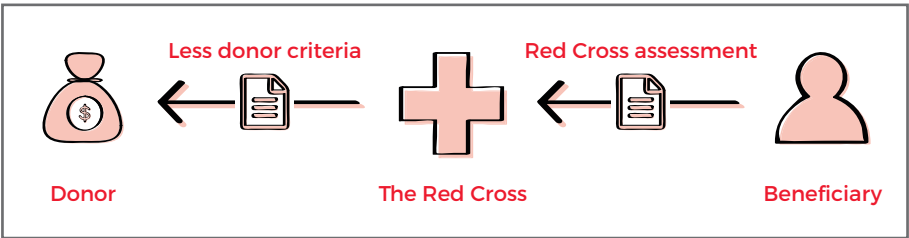


Figure 29: Simplified illustration of the new proposed donor structure in the humanitarian sector.

Implementation phase

The implementation phase takes place after the proposals have been written and approved. The plans made in the proposal now have to be implemented in the field. In practise this never goes exactly as planned. The National Society should try to implement it as close to the original plan as possible, because of donor requirements. This limits the opportunities for adjustments that would be a better fit for the context.

As the capacity of a National Society is often limited, they are not able to spend their scarce resources on innovative projects that might not lead to a preferred outcome. All the time and money that is spend should be of added value for the National Society.

The proposals are often written in such a way that there are very clear boundaries for the project. From an accountability and integrity perspective, these boundaries are very useful, and often necessary (e.g. corruption scandals). The rigorous measures that have been taken gives the donor more certainty that their money is spend the way they want it to be spend.

On the other hand, from an innovation perspective, these boundaries can also be seen as 'restrictions', as they limit the freedom and flexibility of the project team to try innovative approaches and iterate on current solutions.

Figure 30: Simplified illustration of the current project process at the Netherlands Red Cross.

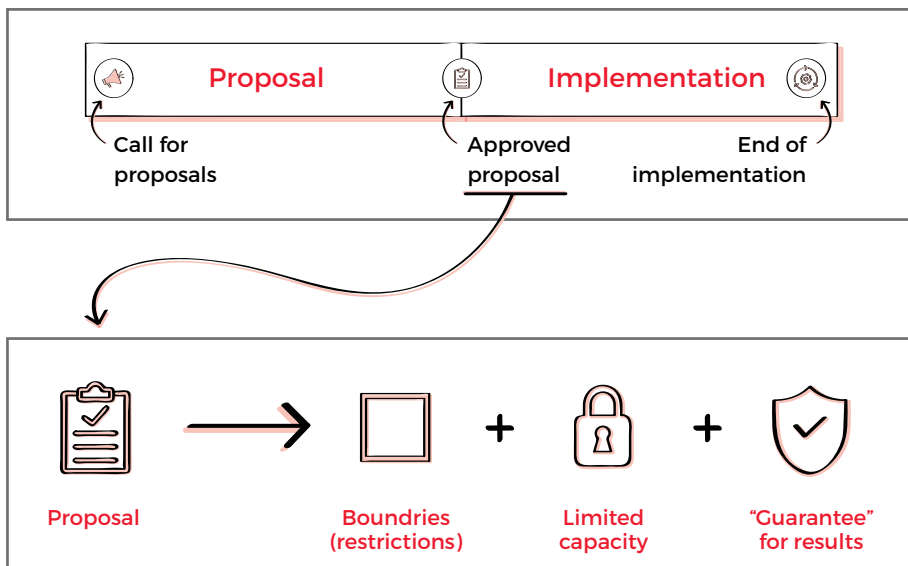


Figure 31: Simplified illustration of the consequences of the current proposal structure.

Stand-alone project

Another option would be to have a stand-alone project, that would be used to set up an innovative project outside the current structure of the Red Cross. As explained in the two previous options, there are many barriers for innovation within the current Red Cross process. A stand-alone project would be an attempt to avoid these barriers.

In order to have a stand-alone project, the project needs to be financial independent. This means that a donor has to agree with the uncertainty and flexibility of the project. Within the current donor landscape this seems difficult to find donors that are willing to accept these conditions.

Furthermore, the NLRC needs to find a National Society that is willing to implement the innovative project. The implementation of a project requires an investment of resources from a National Society. As these resources are often scarce, the National Society has to be convinced of the added value of the project and willing to take the risk.

For further projects it might be interesting to also take a look outside the 16 partner national societies and see if there are other national societies, with the right characteristics, that would be willing to work on such a stand-alone project.

Figure 32: Simplified illustration of the current project process at the Netherlands Red Cross.

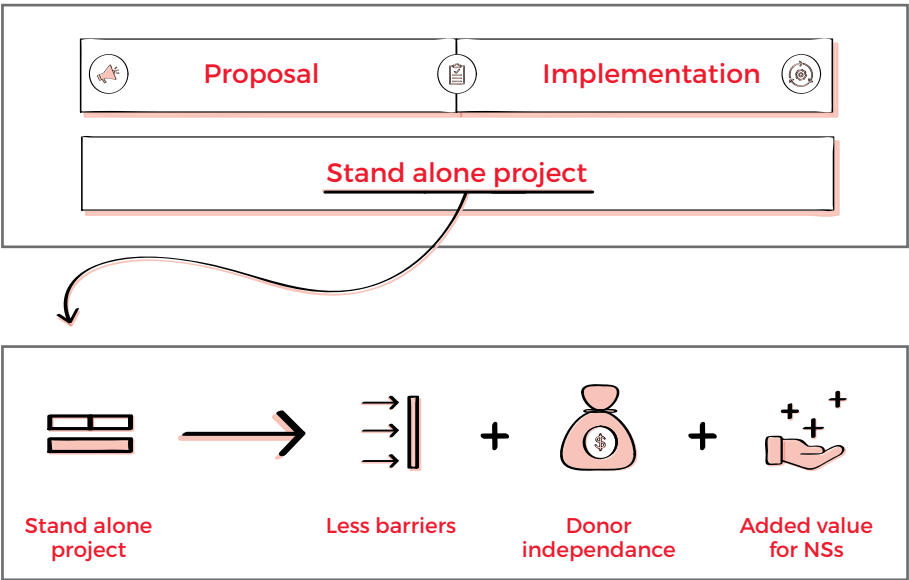


Figure 33: Advantages of a stand-alone project.

4.3 Context selection

In order to conduct an ethnographic research in the field, a context had to be selected. The first step to select a context, was to determine a geographical location. As the project is taking place within the Red Cross and Red Crescent Movement, the starting point of the selection were the 191 Red Cross and Red Crescent National Societies. To select a National Society, the selection criteria, type

of partnership, security, contact with project coordinator and language were used. Figure 34 shows an overview of the selection process. The outcome of this process was a selection of four possible countries that were explored further. Finally, a final decision between these four possibilities was made based on new selection criteria.

	Partnership	Security	PPC contact	Language
Benin	✗			
Burundi		✗		
Central African Republic		✗		
Democratic Republic Congo		✗		
Ethiopia	✗			
Philippines	✓	✓	✓	✓
Haïti				✗
Ivory coast	✗			
Lebanon	✓	✓	✓	✓
Malawi	✓	✓	✓	✓
Mali		✗		
Uganda			✗	
Palenstinian territories		✗		
Sudan			✗	
South Sudan		✗		
Zambia	✗			
Sint Maarten		✓		✓

Figure 34: Overview context selection process.

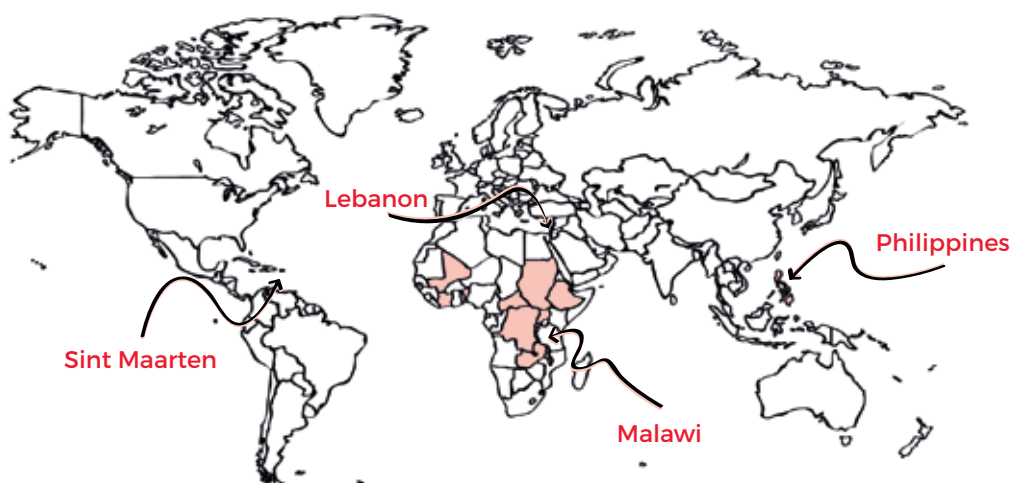


Figure 35: World map with partner national societies & the four selected countries.

1. Philippines

The Philippines is “the most exposed country in the world to tropical storms” according to Time Magazine (2013). Yearly, approximately twenty tropical cyclones hit the Philippines. In 2013 Cyclone Haiyan, one of the strongest cyclones ever recorded, hit the country. The work of the Philippines Red Cross is diverse, as the many different islands result in diverse contexts. The Philippines Red Cross focuses on reducing the impact of disasters, improving health and well-being and reduce unnecessary suffering from armed conflicts.



Figure 36: Logo Philippines Red Cross.

2. Lebanon

Lebanon is located in the middle east. It is bordered by Syria in the north and the east. A result of the Syrian civil war is a large influx of Syrian refugees into Lebanon. Estimated is that there are currently 1.5 million refugees, on a total population of 4.5 million Lebanese inhabitants (Rode Kruis, 2017). The refugees mostly reside in the major cities or in several informal settlements. The Lebanese Red Cross focuses on disaster management, response preparedness and providing medical assistance.



Figure 37: Logo Lebanese Red Cross.

3. Malawi

Malawi, located in southeast Africa, is one of the poorest countries in the world (Worldbank, 2017). The Malawi Red Cross focuses, among others, on Community Health Care, WASH and Community Resilience and Disaster Risk Reduction. As they are happy with all the help they can receive, the Malawi Red Cross is often willing to participate in innovative pilots. However, the current financial situation, with accusations of fraud, complicate the collaboration.



Figure 38: Logo Malawi Red Cross.

4. Sint Maarten

Sint Maarten is one of the overseas branches of the Netherlands Red Cross. In September 2017 the island was hit by hurricane Irma. On the island 4 people were killed and 91% of the buildings were damaged. The Netherlands Red Cross set up a relief operation to provide the inhabitants of Sint Maarten with water, food and shelter. Currently, different projects, in the long-term programming of the NLRC, are helping with the recovery of the island.



Figure 39: Logo Sint Maarten Red Cross branch.



Figure 40: Volunteers from the Philippines Red Cross rescue residents from their flooded homes.



Figure 41: The Lebanese Red Cross in a Syrian refugee camp in al-Sahel, Akkar, north Lebanon.



Figure 42: The Malawi Red Cross at a new water pump.



Figure 43: Volunteers of the Sint Maarten Red Cross in the neighbourhoods identifying the needs.

Selection criteria

The final decision of the context was based on a selection of criteria. The first criterion relates to the new innovation method and project approach used by the NLRC. Furthermore, the accessibility of the country was taken into account. Finally, the amount of freedom the context could provide is considered.

Match innovation method and project approach

The new proposed innovation method, as described in chapter 3.2, had to match with the project approach of the Netherlands Red Cross. Chapter 4.2 explains the three possibilities for project approaches. From analysis can be concluded that the only approach that could match with the new proposed method is the ‘stand-alone project’, as the new method differs too much from the current approach to be integrated in the NLRC way of working.

Although a stand-alone project the preferred project approach, the context had to be suitable for such a project. Based on conversations with the portfolio coordinators, it was concluded that convincing the national societies to allow such a project would be difficult. A complete stand-alone project would not be possible, there had to be some added value to one of the existing projects. This could be accomplished by putting the innovation project parallel to one of the existing projects.

Accessibility national societies

In the partnerships with other national societies, the Netherlands Red Cross and the

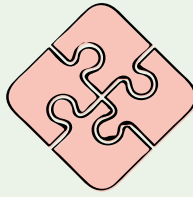
partner Red Cross are seen as equals. This means that the NLRC cannot just decide to start an innovative project in a partner country. This has to be a collaborative effort.

The accessibility and willingness to set up an innovative project differs per national society. Some national societies, such as Malawi, are seen as more experimental as others. The national societies of Lebanon and the Philippines are willing to work on innovation as long as the approach, goal and result of the project are clear. With the proposed innovation method this is not the case.

As the Sint Maarten Red Cross is not a partner national society, but part of the overseas branches of the Netherlands Red Cross, the way of collaborating is also different. Currently, the Netherlands Red Cross is active with the relief operation after hurricane Irma on Sint Maarten. This means that for this context, there is a more direct link, as the Netherlands Red Cross itself is involved.

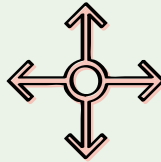
Freedom of the context

An important aspect of the innovation method is the field research, this means that the amount of freedom that is available at the different contexts has to be taken into account. If the context of Sint Maarten would be selected, there would be relatively speaking, a great deal of freedom. The country is prosperous, safe and accessible. In comparison to for example Lebanon, in which the field research would take place in refugee camps. It would not be possible to walk around such a refugee camp without supervision of the national society.



Match innovation method and project approach

Sint Maarten got hit by hurricane Irma in September 2017. This means that the way the Netherlands Red Cross is currently active on Sint Maarten, is relatively new. The long-term programming for Sint Maarten is still taking shape. Making use of the newly proposed innovation method, input for an innovative project can be gathered. The programming on Sint Maarten leaves more room for innovation as with a long running project in one of the other contexts.



Accessibility national societies

Sint Maarten is one of the overseas branches of the Netherlands Red Cross. This means that instead of having to deal with a partner national society, arrangements can be made at the headquarters of the Netherlands Red Cross in the Hague. Consequently, the threshold for this project to actually happen is much lower than when dealing with other national societies.



Freedom of context

As mentioned before, Sint Maarten is a (relatively) prosperous, safe and accessible country. This means that during the field visit a great deal of freedom would be available. The context allows free traveling across the island without supervision of the Red Cross. This has two advantages. First, there will be more freedom during the research. Second, the visit will be less of a burden for the local Red Cross, as they don't have to accompany the research whole the time.

Sint Maarten

Based on these criteria the decision was made to select Sint Maarten as the context. However, as mentioned before, it was also required to select an existing project of the Red Cross and set up the innovation project parallel to it.

To find a matching project, the long-term programming of the Netherlands Red Cross (see chapter 5.3) was analysed. The goal of this programme is ‘to assist the most vulnerable people of Sint-Maarten, Saba and Sint Eustatius in recovering from the adverse effects of Hurricane Irma in a way that they will be more resilient to future disasters’ (Netherlands Red Cross, 2017).

1 “Assist the most vulnerable people of Sint-Maarten in recovering from Hurricane Irma and make them more resilient to future disasters.”
- The Netherlands Red Cross (2017)

One of the expected outcomes of the Sint-Maarten programme is that ‘the capacity of communities faced by natural and manmade hazards to anticipate, respond and adapt to disasters is restored and sustainably improved by applying innovative approaches’ (The Netherlands Red Cross, 2017). In order to accomplish this, the project ‘Humanitarian Innovation’ is set up.

Currently, there is no concrete proposal for the ‘Humanitarian Innovation’ project. This gives the opportunity to explore the possibilities of a new humanitarian innovation method within The Netherlands Red Cross. The new method, ‘vision concept’, aims to explore the future in order to contribute to the improvement of the humanitarian response. In order to experiment with this new method, a certain amount of freedom is required. This can be achieved by setting up a ‘innovation initiative’ parallel to the ‘Humanitarian Innovation’ project, as can be seen in figure 44.

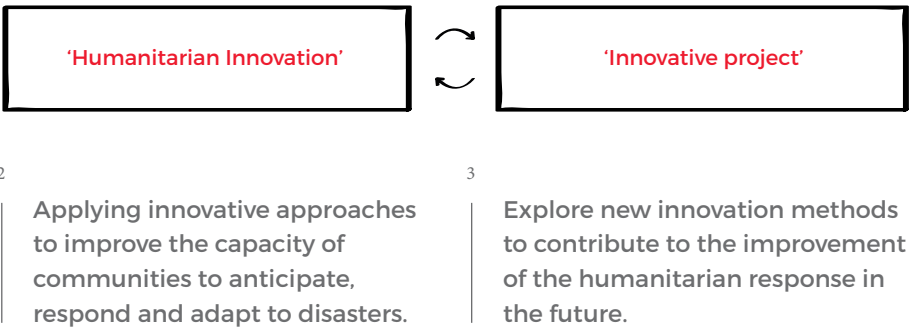


Figure 44: Visual representation of the ‘innovative project’ parallel to the ‘Humanitarian Innovation’ project.

Advantages Sint Maarten

To convince the responsible people of the advantages of the doing such an innovation project in the context of Sint Maarten and parallel to the ‘humanitarian innovation’ project, a number of arguments were used.

Long term vision

The focus of the Netherlands and Sint Maarten Red Cross is on the future, as clearly indicated by the long-term programming. This matches with the proposed process of the project. Making use of a selection of methodologies, explained in chapter 4.3, can result in a coherent set of solutions that have a meaningful impact on the lives of the people on Sint-Maarten.

Meaningful innovative solutions

The main methodology for the project is human-centered design. The strength of human-centered design is that it uses tools to deeply understand the users. From this deep understanding, new innovative solutions can be discovered. These methods ensure the solutions to be user and context specific. This means that the solutions will have an impact on the people on Sint-Maarten.

Projects for ‘Humanitarian Innovation’

It has not been specified yet what kind of activities will take place in the project ‘Humanitarian Innovation’, as there is no proposal yet. As the result of the vision concept project would be a future vision of Sint-Maarten and possible solutions that would fit into that future, it can be a source of inspiration for defining what the ‘Humanitarian Innovation’ project should be about.

Advantages NLRC

To convince the responsible people of the advantages of the doing such an innovation project for the Netherlands Red Cross, a number of arguments were used.

Partnerships

The Netherlands Red Cross International Assistance ‘New Way of Working’ states that for maximum effectiveness, relevance and sustainability of international support, longer-term partnerships with fewer sister National Societies need to be made. Although the project does not involve a partnership with a National Society, it does match with the philosophy of the NLRC to look at the long-term. Furthermore, it gives the opportunity to form new partnerships with non-Movement actors.

The position of the Netherlands Red Cross as innovator

The vision concept can support the Netherlands Red Cross on both innovation and communication. It enables to foresee a plausible and preferable future, while positioning itself towards particular audiences inside and outside the organisation (Mejia Sarmiento et al., 2016).

This means that the NLRC has the opportunity to position itself as innovator within the Red Cross / Red Crescent Movement. With that position and the different showcase of innovation project that the Humanitarian Innovation Team has, enables the NLRC to convince other National Societies to start innovating.

Furthermore, also outside the movement, the position of innovator can have positive influence. It could open up collaborations between the NLRC and new partners from both the public and private sector. Finally, it can influence the view of the general public on the NLRC.

Mentality change

The vision concept can be a clear example of what the Humanitarian Innovation Team could do for, and offer to, the International Assistance department at the NLRC or how the other Units could work on humanitarian innovation themselves. This project could inspire the NLRC staff and cause a change in mentality towards humanitarian innovation.

Furthermore, it could cause a mentality change at governments and other donors. The current way of financing humanitarian aid is not ideal for innovation. Showing what the NLRC is capable of doing might leave more room for humanitarian innovation.

New innovation tool

Although the outcome of this project is important, the process leading towards this outcome can also be of added value to the NLRC. By involving and collaborating with Red Cross staff members and clearly documenting the process followed throughout this project on Sint-Maarten enables the NLRC to apply the same process in another context. This means that the NLRC will acquire a new tool that can be used for future projects.








Sint Maarten	NLRC
 Long term vision	 Partnerships
 Meaningful innovative solutions	 Position of NLRC as innovator
 Input 'Humanitarian innovation' project	 Mentality change
	 New NLRC innovation tool

Figure 45: Advantages innovation project for Sint Maarten and the Netherlands Red Cross.

4.4 Key findings



1. Current donor structure holds back innovation

The current 'donor-driven' project approach has money as a starting point. Based on the donor's criteria, a project proposal will be written. In this proposal the NLRC will, together with the partner national societies, look if there are beneficiaries that have needs matching with the donor criteria. The restrictions of these donor criteria, together with the aim to 'please the donors', in order to get funding, makes the current donor structure not suitable for innovation.



2. Proposals limit the freedom for innovation

The project proposals that are being written do not only capture the goal of the project, but also how this goal should be accomplished. Predetermining the approach of how a goal should be accomplished limits the freedom for innovation. First, the approach has to be a proven concept in order to be accepted. Furthermore, it limits the freedom to make iterations during the implementation of the project.



3. Procedural culture present at the Red Cross

Within the Red Cross organisation there are many different procedures. On the one hand, these procedures give the organisation structure and helps with accountability, which is important in the humanitarian sector. On the other hand, the procedural culture does not stimulate innovation. People are not capable of, or are limited by all the procedures, to come up with innovative solutions.



4. Improving current process leads to incremental innovation

The current project process is deeply integrated into the organisation. Through a thorough analysis, opportunities for improving innovation could be identified. However, these opportunities would only lead to small changes, as it would be difficult to radically change a well integrated process.



5. No structure in place to prevent loss of knowledge

It is quite common for staff to change positions within the NLRC or even between different organisations within the humanitarian sector. This high turnover of staff results in a loss of knowledge. There is currently no structure in place to capture and transfer knowledge that has been gathered. New staff is often dependent on the willingness of their predecessor to get an extensive hand-over.



6. Silos hamper collaborations and holistic thinking

During the analysis of the Netherlands Red Cross, multiple 'silos', have been identified. These silos are present on different organisational levels. Within the Netherlands Red Cross, within the Movement, between the different National Societies and in the entire humanitarian sector. These silos hamper collaborations and holistic thinking, which negatively influences the ability to innovate.



7. Prevent mismatches, innovate from the field

Projects and innovations that are based on assumptions that are present at the headquarters could potentially lead to a mismatch with the reality of the field. Innovations should be based on insights gathered in the field. Innovation needs to happen at the place where the problem is. This can either be done by extensive (design) research or by making use of existing local knowledge.



8. Getting things done in the field

Innovation projects, such as this graduation thesis, are prone to the problem of staying too theoretical. In the end, the goal is to help beneficiaries as well as possible. In order to do so, innovative projects need to have a practical implication. They need to be implemented in the field, so they can make a difference for the people in need. This is one of the challenges, as often a proof of concept is required before implementation can start.





Chapter 5.

Sint Maarten

This chapter gives an introduction into the selected context: Sint Maarten.

First, an introduction of the island Sint Maarten, located in the Caribbean, is given. Some general information, the history and the economy of Sint Maarten is discussed. Also, the role of the Red Cross on Sint Maarten is explained.

Furthermore, hurricane Irma, the hurricane that caused destruction across the Caribbean and hit the island of Sint Maarten in September 2017 is introduced. Local inhabitants describe how they experienced the hurricane and photos give an impression of the destruction on the island.

Finally, the relief operation of the Netherlands Red Cross is discussed. Both the emergency phase and the long-term programming are elaborated.

5.1 Introduction Sint Maarten

Introduction

This chapter gives an introduction into Sint Maarten. First, some general information about the island is given. Second, the history of Sint Maarten is briefly explained. Furthermore, the economy, the unregistered inhabitants and the main tourist attractions are discussed. Finally, the role of the Red Cross on Sint Maarten is shown.

around 40% of the island, while the other 60% is constituted by the French overseas collectivity Saint-Martin. The capitals are Philipsburg (Dutch side) and Marigot (French side). The current population of Sint Maarten is 40,560, based on estimations by the United Nations (worldometers, 2018), while the population of Saint Martin is estimated around 32,125 (CIA, 2017).

General information

Sint Maarten is a constituent country of the Kingdom of the Netherlands located in the Caribbean. It is located on the island of Saint Martin, which is divided into two parts. Sint Maarten consists of 34 km² and encompasses

Sint Maarten was part of the Dutch Antilles until they were dissolved on 10 October 2010. From that day (10-10-10) onwards, Sint Maarten became an autonomous country within the Kingdom of the Netherlands.

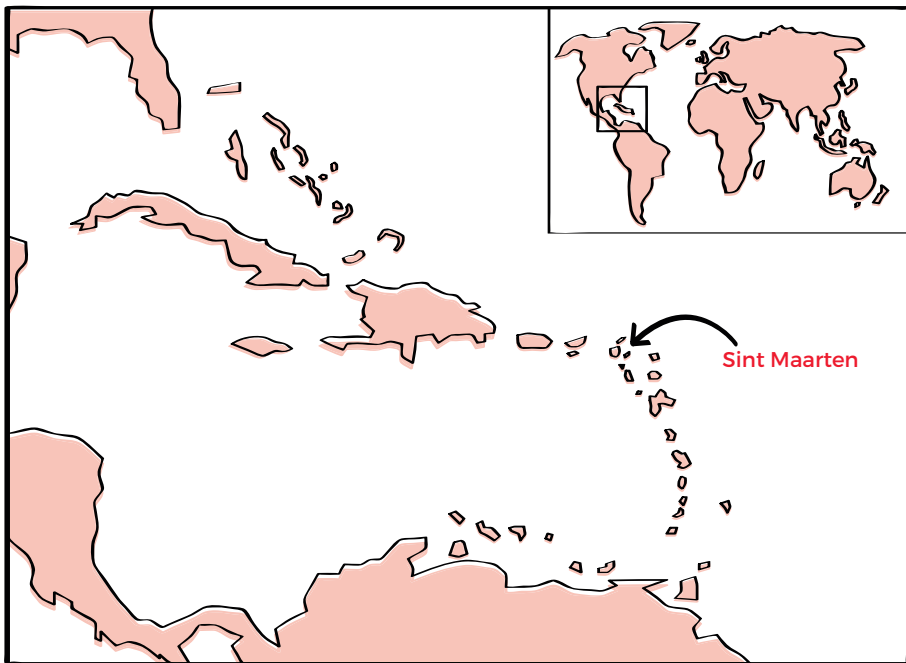


Figure 46: Sint Maarten's location in the world and in the Caribbean.

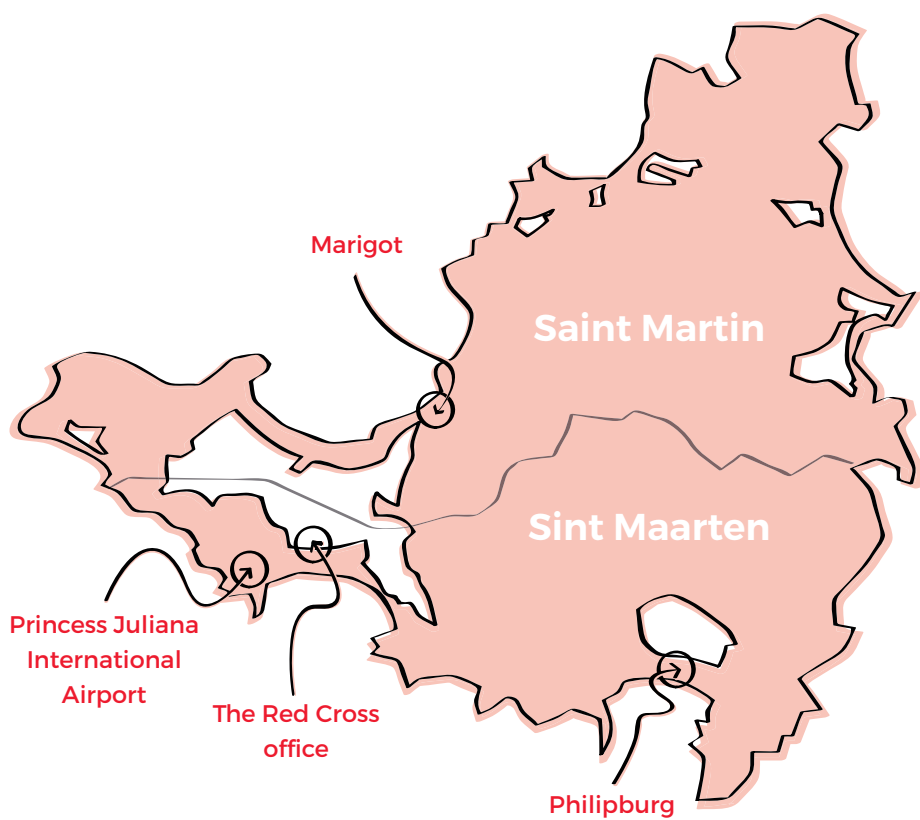


Figure 47: Map of Sint Maarten.

History

On November 11th 1493, Christopher Columbus, the Spanish explorer, landed on the island naming it Saint Martin, after the feast day of Saint Martin of Tours (St Martin island, n.d.). As the focus of the Spanish was on Mexico and the rest of South America, Sint Maarten was mostly ignored. Until the 1620s when Dutch settlers started extracting salt from the ponds (see figure 50) on Sint Maarten (Geographia, 2010). The presence of the Dutch can be clearly seen by Fort Amsterdam, build near Philipsburg in 1631 (see figure 48).

However, the island economic potential resulted the Spanish to reconquer it. In the following years the island was alternately claimed by the Dutch, the Spanish and the French. When the Spanish did no longer needed a base in the Caribbean, the island was claimed by both the Dutch and the French. In 1648 a treaty was signed, dividing the island between the two (Geographia, 2010).



Figure 48: The view from Fort Amsterdam over the Great Bay. Philipsburg can be seen in the distance.



Figure 49: The Border Monument located between Philipsburg and Marigot. Founded for the celebration of 300 years of Sint Maarten and Saint Martin.

The island, and especially the Dutch side, became an important centre for trading goods such as salt, cotton and tobacco. The island started to prosper with the establishment of plantations, worked by slaves. With the abolishment of slavery in the mid-19th century, the plantations were closed and the prosperity of Sint Maarten ended, the island went into economic decline (Geographia, 2010). As a result, many inhabitants emigrated to other Caribbean islands. The island's population decreased by 18 percent (St Martin island, n.d.).

This changed in the 1940s, when the island became a free port by abolishing all import and export taxes. The opening of the Princess Juliana International Airport in 1943, made the island easier accessible for tourists. The first hotel opened a few years later. In the next few decades, the island transformed from a small isolated island in the Caribbean to a modern international trading and tourism centre (Geographia, 2010).



Figure 50: The Great Salt Pond next to Philipsburg in 1920 (left) and in 2017 (right).



Figure 51: Postal card of 'Front Street and the Catholic Church in Philipsburg'. Gives an impression of Sint Maarten in the 1970's.

Tourist attractions

One of the most famous beaches and tourist attractions of Sint Maarten is Maho beach. It is well known for its location adjacent to the Princess Juliana International Airport. It is a popular spot for plane spotters because of its unique location at the beginning of the runway. As the beach is positioned directly under the flight path, large planes are flying less than 30 meters above the beach. Besides Maho beach, the island possesses a total of 37 (“paradise like”) beaches.

Furthermore, the abolishment of import and export taxes makes Sint Maarten a frequent stop for the Caribbean cruise ships. The cruise port terminal is located near Philipsburg. Many of the tourist arriving with the ships go to Front street in Philipsburg for some tax-free shopping.

Economy

The economy of the island is mainly based on the tourism industry. Around 85% of the workforce is engaged in this sector (CIA, 2018). In 2015, around 2 million cruise passengers came to the island (The Daily Herald, 2016), while roughly 500,000 visitors arrive at the airport of Sint Maarten, the Princess Juliana International Airport.



Figure 52: Front Street in Philipsburg, the shopping street in Sint Maarten.



Figure 53: Maho beach.



Figure 54: The Sint Maarten Cruise Port terminal near Phillipsburg.

Unregistered inhabitants

There are people from over 90 different nationalities living on Sint Maarten. Only a third of the population was born on the island. The majority of the population has the Dutch nationality, this includes migrants from the former Dutch Antilles. Furthermore, there are immigrants that relocated from neighbouring Caribbean islands, such as the Dominican Republic, Haiti and Jamaica, as well as from India and Guyana.

A significant proportion of the populations consists of undocumented inhabitants (also called unregistered inhabitants or illegal immigrants). There are no exact numbers available, but it is estimated that there are up to 15,000 undocumented living on the island (Transparency, 2015). The undocumented often live in poorly constructed houses in the 'bad neighbourhoods'.



Figure 55: Inhabitant of the neighbourhood Dutch Quarter washing clothes by hand.

Red Cross on Sint Maarten

The Red Cross Sint Maarten branch has been active on Sint Maarten for over 40 years. It participates in multiple social activities, such as handing out second hand clothing for poor families and supporting at soup kitchen for the homeless. They have a large group of active youth volunteers who are involved with projects at schools and retirement homes. The Red Cross is active almost daily at (sport) events and provide and teach first aid. The office of the Red Cross, also called 'The Base' is located near the Princess Juliana International Airport.

The Red Cross Sint Maarten branch is one of the six overseas branches of the Netherlands Red Cross. This means that the branches are part of the Netherlands Red Cross but are autonomous (up to a certain extend).



Figure 56 & 57: Red Cross instructor teaching first aid & the Red Cross office 'The Base'.

5.2 Hurricane Irma

6 September 2017. Hurricane Irma, the most powerful Atlantic storm in a decade, has caused widespread destruction across the Caribbean and the southern US (BBC, 2017). One of the Caribbean islands hit by Irma is Sint-Maarten. On the island 4 people were killed and 91% of the buildings were damaged (Rode Kruis, 2017). The category five hurricane, with gust wind of over 300 kilometers per hour, left the island devastated.

The main infrastructure, such as the airport and harbour are heavily damaged. The streets are under water, covered with debris, cars are turned upside down. Roofs of houses are ripped off. Whole neighbourhoods are without water and electricity. All communication systems are down. People are looting houses and stores. When the hurricane finally passed Sint Maarten, it left behind a destroyed and scarred island.

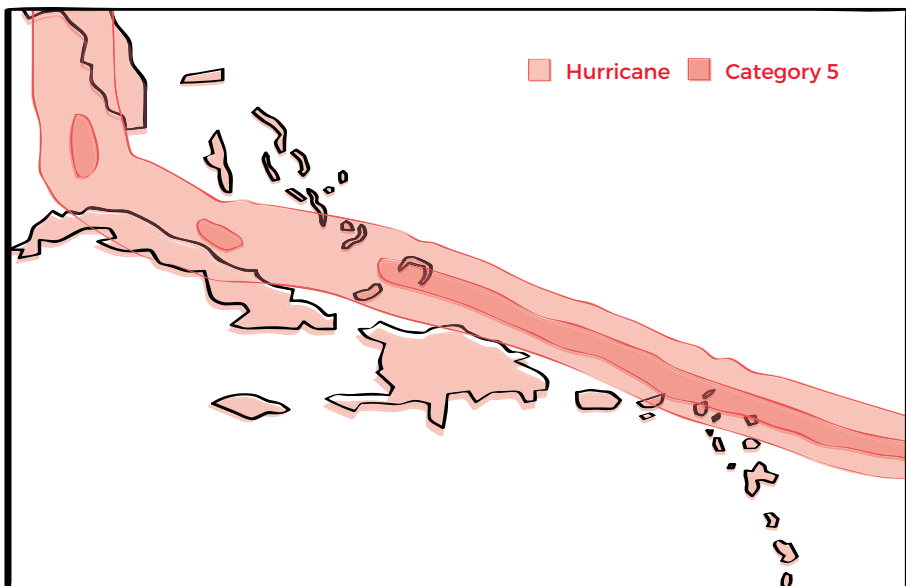


Figure 58: Hurricane Irma's path through the Caribbean.

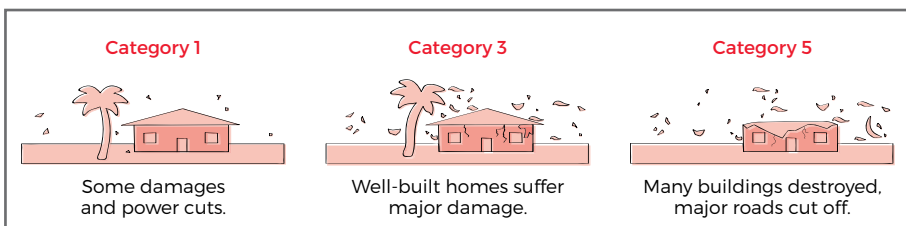


Figure 59: The effect of different category hurricanes.

Scars of Irma

The scars of Irma are both visible and invisible. First of all, Irma caused a lot of material damage. There are a lot of houses and cars heavily damaged. Even 8 months after Irma, and at the beginning of the new hurricane season, people are still living in damaged houses that are not suitable for living. Other people have to stay with family and friends, because their house was completely destroyed.

Furthermore, below the surface there are a lot of invisible scars. Many people suffer from (in)direct psychological traumas caused by Irma. Either from the hurricane itself or from the events that happened after the hurricane. The storm itself, was a 15 hour horrifying experience. Most people took shelter in their own house or in community shelters. Each person experienced the hurricane in their own way, but for many it had a big impact.

An inhabitant described the period that the hurricane went over Sint Maarten as the 'longest night of my life'. Many people took shelter in the bathroom, as this is often the safest place in the house, because of the concrete walls. From there they experienced the hurricane. As it was impossible to look outside, they experienced it through their other senses. The sound of the wind, the noise of breaking trees and debris hitting the house makes terrifying experience.

The first moments after the hurricane also made a big impact. People described the island as a warzone, they didn't recognise the place that they have lived for many years anymore. The damage to buildings, cars and also nature was immense.

2

"I'll never forget the moment I went outside after the storm. It looked like a bomb had exploded. I didn't recognize the island anymore."

-Beneficiary

An event that also made a lot of impact were the lootings. The lootings, which started during the storm, but especially after, caused a feeling of unsafety on the island.

3

"I don't understand why people acted like that. It was really scary."

-Beneficiary

The scars of Irma are a danger for the coming hurricane season. People still live in severely damaged houses, that are not hurricane resistant. The psychological scars also prevent them from taking action to prepare for the next hurricane. To the question "How are you going to prepare for the next hurricane season?", one of the beneficiaries responded:

1

"I cannot describe how terrifying the sound of the wind was. Just thinking about it gives me goosebumps."

-Beneficiary

4

"I don't want to think about it yet."

-Beneficiary

This was in May 2018, 2 weeks before the hurricane season officially started.

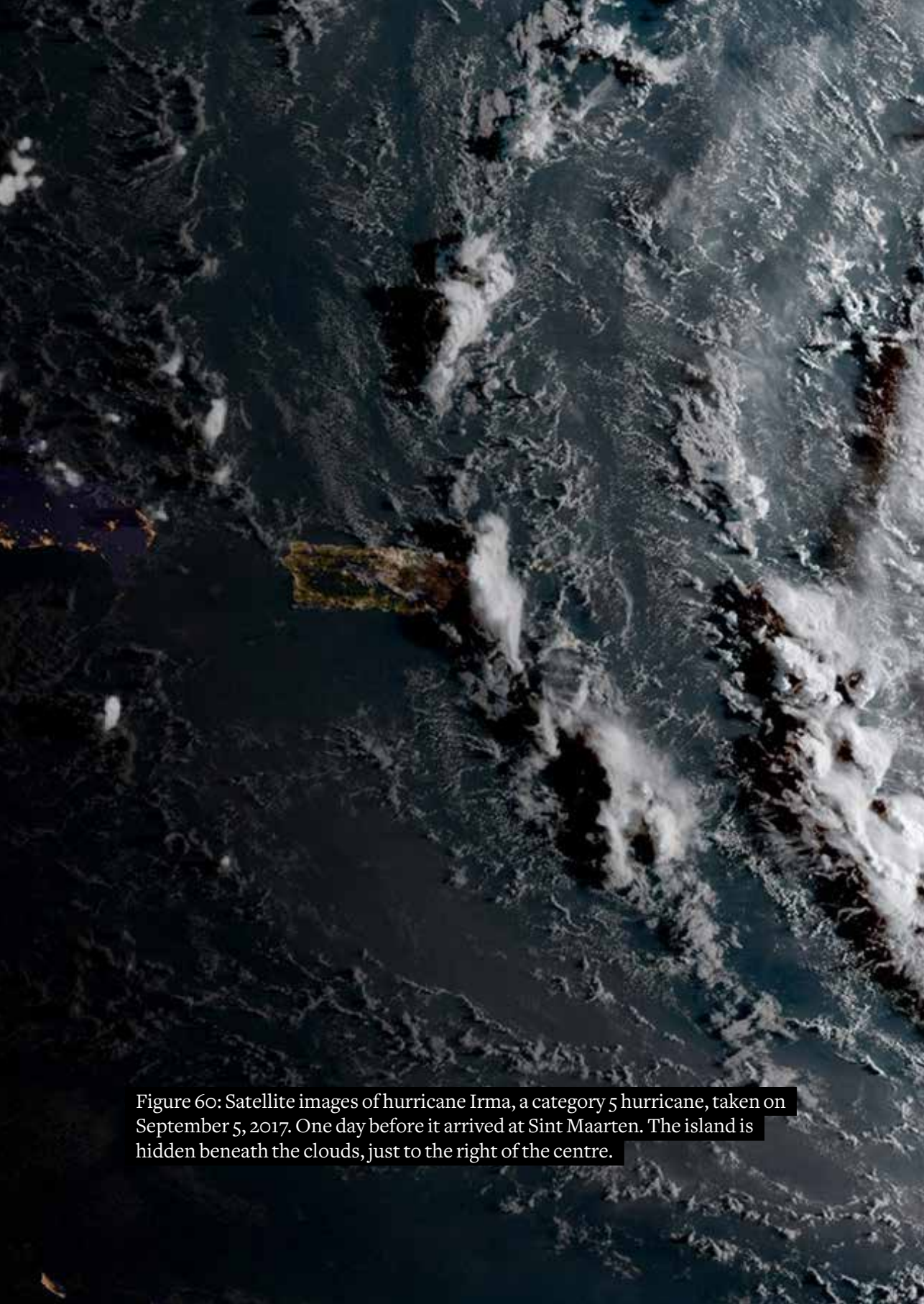


Figure 60: Satellite images of hurricane Irma, a category 5 hurricane, taken on September 5, 2017. One day before it arrived at Sint Maarten. The island is hidden beneath the clouds, just to the right of the centre.





Figure 61: Aerial footage of the aftermath of hurricane Irma.
Sint Maarten, September 6, 2017.





Figure 62: Photo of Hotel Mercure, in Marigot, Saint Martin.
Taken during the passage of hurricane Irma, September 6, 2017.





Figure 63: Boats thrown on land by the destructive force of hurricane Irma. Marigot, September 7, 2017.





Figure 64: Inhabitant of Sint Maarten returning to her home that was destroyed during the hurricane.



5.3 Red Cross relief operation

Introduction

The Netherlands Red Cross is 'the emergency humanitarian aid organisation of the Netherlands'. In the days prior to hurricane Irma hitting Sint Maarten, a crisis team of the NLRC in the Hague started preparing for a possible relief operation. Since August the 28th, the developments of the hurricane were closely monitored. The local branches on Sint Maarten, Saba and Sint Eustatius mobilised their volunteers.

Preparations for community shelters on the island were arranged in collaboration with the government. Relief experts were flown to Sint Maarten from Curaçao and Aruba to be present on the island even before the hurricane hit. The datateam from '510', an initiative of the Netherlands Red Cross, mapped the island in order to enable a quick damage assessment in the days after the hurricane (Rode Kruis, 2017).

Figure 65: Red Cross volunteers of the Curaçao Red Cross.



Figure 66: The Netherlands Red Cross office in the Hague.

'National action day'

On the 15th of September the 'national action day' was organised in order to raise money for Sint Maarten. This large fundraising event, that was broadcasted on television, raised a total of 18 million euros.

Throughout the entire country multiple initiatives were organised. This brought the disaster on Sint Maarten to the attention of the Dutch population.

Figure 67: The giro number opened by the Netherlands Red Cross for donations to Sint Maarten.



Figure 68: The action centre of the national action day in Hilversum.

Relief goods

The main challenge after the disaster was setting up the logistics operation, to get as many relief goods as possible as quickly to Sint Maarten. On the 8th of September with first flight with relief goods arrived at Curaçao. Items such as jerrycans, tarpaulins, kitchen materials and generators were flown in.

During large emergency response operations, the Red Cross works with 'Emergency Response Units' (ERU's). These teams consist of relief experts with experience in logistics and distribution. Furthermore, shelter, WASH and health experts together with a team of mobilised, local and regional, volunteers were active (Rode Kruis, 2017).

Distribution

In the first week of the distribution (13th until 21st of September), so-called 'blanket' distributions took place. These are large scale distribution to everybody who comes by the distribution point. In the following period (22nd of September until 19 of October) 'ticketed' distributions took place. These are aimed to helping vulnerable people. From the 8th of October, 'individual relief teams' started targeting the most vulnerable people who were not reached before. These distributions matched their special needs. From the 20th of October some distributions took place via 'community based organisations', who can make use of their network to distribute relief goods (Rode Kruis, 2017).

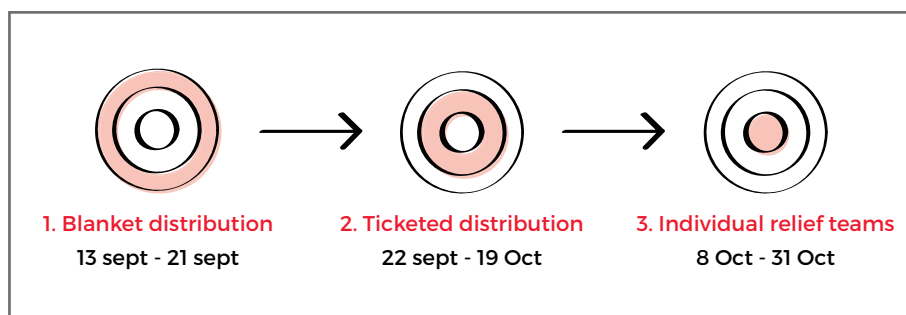


Figure 69: The different distribution approaches used by the Red Cross.



Figure 70: Red Cross distribution point.

Figure 71: Beneficiaries in line near the Red Cross distribution point.

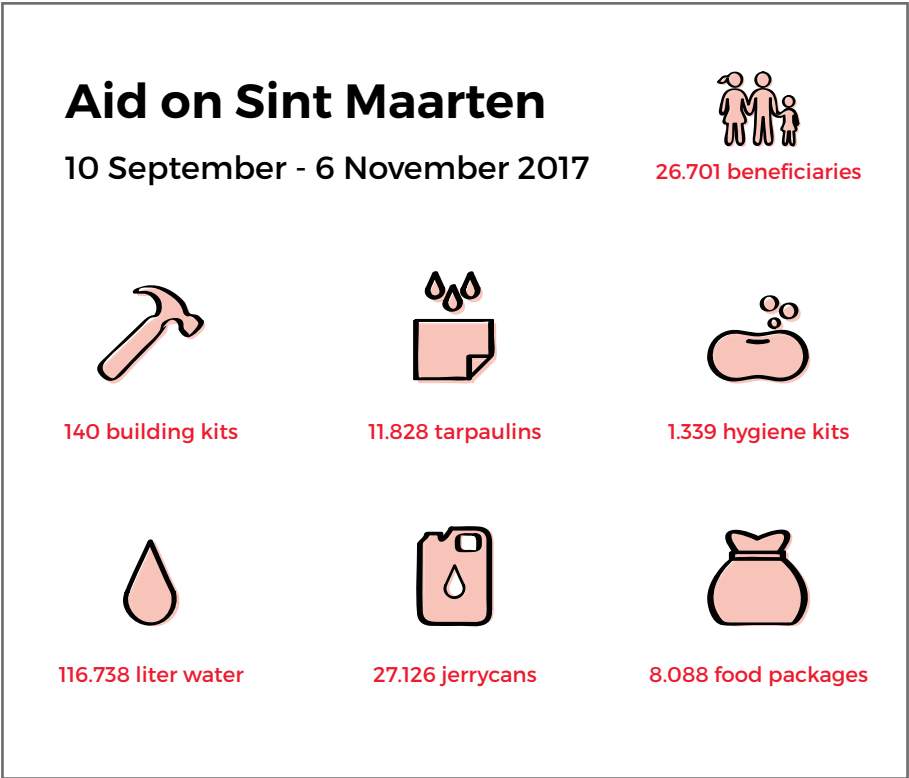


Figure 72: Overview of the relief operation.

Recovery phase

After the emergency aid phase had come to an end, the (early) recovery phase (see figure 73) started according to the ‘Build Back Better’ principle. It aims to improve Sint-Maarten and achieve a recovery that is better fairer, stronger and more resilient than the situation before the disaster (Workgroup National Recovery Plan, 2017). Numerous initiatives have started on Sint-Maarten, for example 4000 schoolchildren are receiving breakfast and lunch at school. This gives their parents more financial freedom and time to work or repair their house (Rode Kruis, 2017).

Besides the short-term initiative mentioned before, the National Recovery Plan takes the medium- and long-term into account. This is also the case with the long-term

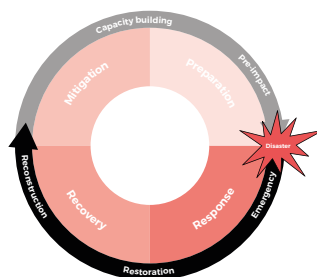


Figure 73: Disaster management cycle.

programming of the Netherlands Red Cross (see figure 74). The goal of this programme is ‘to assist the most vulnerable people of Sint-Maarten, Saba and Sint Eustatius in recovering from the adverse effects of Hurricane Irma in a way that they will be more resilient to future disasters’ (The Netherlands Red Cross, 2017).

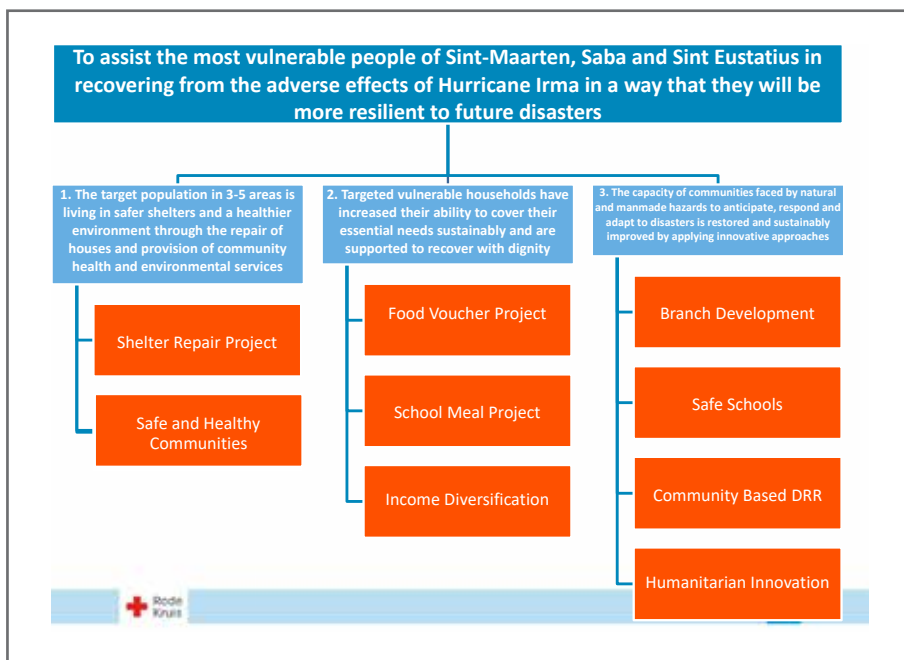


Figure 74: Long-term programming Netherlands Red Cross on Sint Maarten.

Long-term programming

In May 2018, at the time of the field visit, there were four projects of the long-term programming active. As the long-term programming is planned to take up to three years and the capacity of the branch and

NLRC operation is limited, only a certain amount of projects can be active at the same time. In the following overview, the situation of the different projects back in March is shown (Rode Kruis, 2018).



Figure 75: School meal project.



Figure 77: Food voucher project.



Figure 76: House repair project.



Figure 78: Waste2work.

1. School meal project

The school meal project feeds 4.000 school children every day. The children receive breakfast and a warm, nutritious lunch at school. It's the largest production of meals that Sint Maarten has ever seen.

The project was set up by Open House, in collaboration with the Netherlands Red Cross and the Sint Maarten Government. It helps both the children and their parents, who have more financial freedom and time to work (Rode Kruis, 2018).

School meal project



Oct. 2017 - June 2018



33 Employees



500.00 meals



18 Schools

2. Food voucher project

The food voucher project aims to reach the most vulnerable households, who match the selection criteria, such as unemployment or an unstable financial situation. These people will receive vouchers that can only be used at certain supermarkets.

The vouchers cannot be used to buy alcohol or tobacco (Rode Kruis, 2017). The vouchers benefit the vulnerable households as they gain more financial stability, while keeping control over their groceries, diet and stimulating the local economy (Rode Kruis, 2018).

Food voucher project



Nov. 2017 - Apr. 2018



\$80,- per voucher



2.800 households reached



45% shared their voucher



Figure 79: School meal project.



Figure 80: Food voucher project.

3. House repair project

The house repair project aims help people that were affected the most by the hurricane. Not only by repairing their house, but also by looking at the social situation. Together with the homeowner, the Red Cross make a repair plan for the house.

The Red Cross uses a social approach of the communities, trying to facilitate neighbours helping each other out. Construction material, tools and technical advice are provided, but the people are responsible for repairing their own house. (Rode Kruis, 2018).

House repair project



Nov. 2017 - Now



Repairing houses



2.000 households



Integrated social approach

4. Waste2work

One of the results of hurricane Irma is a large amount of waste. The landfills are growing fast. Either caused by the hurricane itself or by goods shipped in during the relief and recovery phase. The waste2work project aims to clean up the island while simultaneously

creating employment opportunities. Local entrepreneurs and start-ups from the Netherlands are working together to create viable business opportunities from waste. Creating value from waste gives Sint Maarten the opportunity to become less dependent of the tourism industry.

Waste2work



Jan. 2018 - Now



Local entrepreneurs



Recycling (hurricane) waste



Economic stability



Figure 81: House repair project.



Figure 82: Waste2work.





Chapter 6.

Preparation & approach field visit

In order to make optimal use of the time on Sint Maarten, the field visit had to be well prepared.

First, the research was narrowed down by selecting a domain. The domain, disaster preparedness, would function as a starting point for the research on Sint Maarten. Next, a research setup was made to structure the field visit. In this setup the goal, research questions, objectives and stakeholders were identified.

Based on the domain and research setup, initial contacts and arrangements were made. During the actual visit, multiple designerly activities were conducted in order to gain insights about disaster preparedness, the Netherlands Red Cross and the context of Sint Maarten.

6.1 Defining the domain

Defining the domain

With Sint Maarten as selected context for the field visit, preparations had to be made. First of all, the scope of the research had to be determined. Although Sint Maarten is a relatively small island, the time on the island was limited. In order to make optimal use of the time, the research had to be narrowed down to a domain. This domain would enable the research and the preparation to be more focused.

However, the domain of the research shouldn't become too narrow, as this would limit the (design) freedom. The domain was seen as a starting point for the research, but if during the field visit other, more interesting domains, would be discovered, the switch could be made.

Narrowing down the scope of the research, by choosing a domain, had to be done based on desk research. In this way, many assumptions had to be made before even arriving on Sint Maarten. In this approach lied a potential danger, as it meant excluding potential interesting research topics, but by conducting thorough desk research and validating findings with Red Cross staff, eventually a choice was made.

The chosen domain for the field visit to Sint Maarten was disaster preparedness. Disaster preparedness is commonly used in the humanitarian sector and has many different definitions. For this domain it is defined as following: 'all measures that can be taken to prepare for future disasters.'

Disaster preparedness

Areas of tropical cyclone formation can be divided into seven basins. Sint Maarten is located in the Atlantic Basin. The official hurricane season for the Atlantic Basin (the Atlantic Ocean, the Caribbean Sea, and the Gulf of Mexico) is from 1 June to 30 November. The peak of the season is from mid-August to late October (NOAA, n.d.).

Hurricanes are a yearly returning phenomenon, as is indicated by the term 'hurricane season'. This means that, although the hurricanes differ in magnitude, it is a given that each year Sint Maarten will be hit by hurricanes. Data even shows an increase in the frequency in formation of hurricanes and tropical storms.

The fact that these natural disasters can be predicted (to a certain extent) and are increasing in frequency, require Sint Maarten to be better prepared for the future. Defining disaster preparedness as the domain for the research, enables the Netherlands Red Cross to come up with an innovative disaster preparedness approach on Sint Maarten.

6.2 Research setup

Introduction

Based on the selected domain, a research setup has been made to structure the field visit to Sint Maarten. The research setup consists of the research aim, research questions, research objectives and a stakeholder overview.

Research aim

The research aim of the visit to Sint Maarten is to identify opportunities for *innovative disaster preparation approaches* for the Netherlands Red Cross by exploring, identifying and understanding the views of the different stakeholders involved on Sint Maarten.

The main research questions that will be addressed during the visit are:

Research Question 1:

What challenges and barriers are involved during disaster preparation on Sint Maarten?

Research Question 2:

What are opportunities to improve current disaster preparation?

Challenges are defined as problems that slow or disrupt disaster preparation. Barriers are defined as problems that prevents progress of disaster preparation completely. Research question two allows reframing of challenges and barriers into design opportunities.

Research objectives

Five research objectives have been identified that allow the planning of methods during the duration of stay on Sint Maarten.

These objectives are:

Objective 1:

Understand current state of disaster preparation.

Objective 2:

Identify and understand beneficiaries needs.

Objective 3:

Gain a general understanding of the context of Sint Maarten.

Objective 4:

Gain a general understanding and appreciation of the culture.

Objective 5:

Identify perceptions toward disaster preparation at Red Cross.

Stakeholders

Six stakeholders have been identified that seem to be relevant for disaster preparedness on Sint Maarten.

These stakeholders are:

1. Beneficiaries:

Inhabitants of Sint Maarten that matched the criteria and received aid from the Red Cross.

4. Other NGOs:

Other NGOs active on Sint Maarten besides the Red Cross.

2. Non-beneficiaries:

Inhabitants of Sint Maarten that didn't match the criteria and didn't received aid from the Red Cross.

5. Government:

The government of Sint Maarten.

3. Red Cross:

The Sint Maarten branch and the Netherlands Red Cross.

6. Local businesses:

Local shops and entrepreneurs.

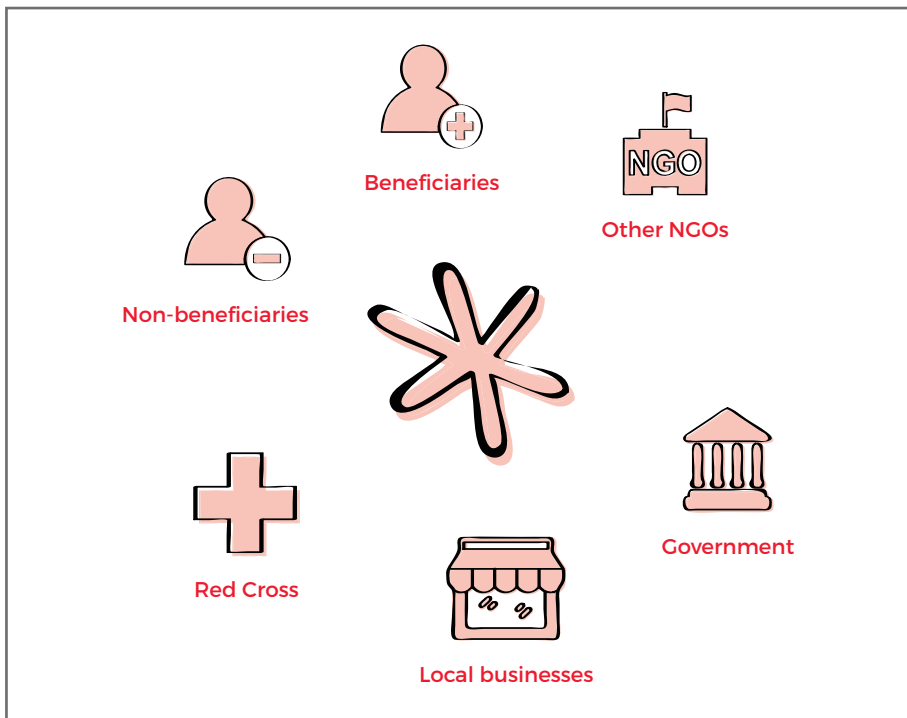


Figure 83: Stakeholder overview.

6.3 Preparation & approach

With the domain and research setup determined, arrangements had to be made in order to make optimal use of the time on Sint Maarten. Initially interviews were conducted with inhabitants of Sint Maarten, the two phases of the field visit were identified and different contact on the island were approached.

Timeline

A timeline of the field visit can be found on the next pages. The timeline highlights some of the activities conducted during the trip to Sint Maarten. The field visit can be divided in two parts. During the first part, a research team of the TU Delft was present. The team consisted of Jeroen van Erp, Maaïke Kleinsmann and Rebecca Price. The team was on the island from the 11th of May until the 17th of May.

During the second part, the field research was integrated into evaluation of the relief operation of the Netherlands Red Cross. The evaluation was conducted by the team consisting of Adriaan Korevaar, Jette Swinkels and Maud Broeken.

The collaboration with the evaluation team was from 17 May until 28 May.

Preparation interviews

In preparation of the visit to Sint Maarten, multiple interviews were conducted with (former) inhabitants of Sint Maarten. The aim of these interviews was to gain initial insights into how people experienced the hurricane and what kind of preparation measures were taken.

Contacts on Sint Maarten

To kickstart the research when arriving on the island, different contacts on the island were approached.

During the first part these were:

Contact person at the Red Cross, guided tour by Red Cross staff, guided tour by a local and contact with Open House.

For the second part these were:

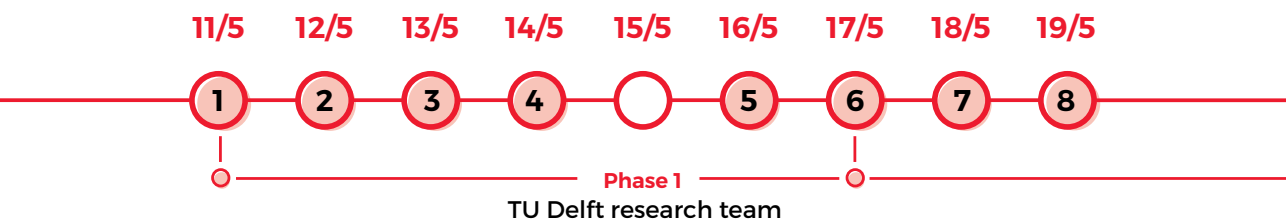
Beneficiary survey in the neighbourhoods, government interviews, workshop with Red Cross staff and volunteer at food voucher project.



Figure 84: TU Delft research team.



Figure 85: Red Cross evaluation team.



(1) Arrival @ SXM



(4) Meeting director NLRC



(2) Tour of the island
Red Cross



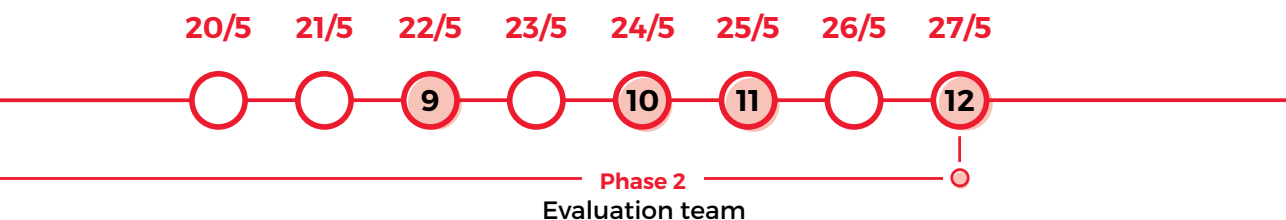
(5) Presentation



(3) Tour of the island
Local inhabitant



(6) Departure TU Delft
research team



(7) Survey neighbourhoods



(10) Interviews at
the government



(8) Food voucher project



(11) Workshop at
the Red Cross



(9) Survey neighbourhoods



(12) Departure from SXM

Figure 87: Impression of phase 2 of the field research.

Research and design

As mentioned before, the preparation prior to the field visit was meant to structure the research in such a way that, especially in the first phase, there was a clear agenda. By planning and setting appointments the first few days of the field visit were busy. However, there was enough freedom in the schedule to act on opportunities that revealed themselves. For example, before the field visit it was not clear that Secretary General of the Netherlands Red Cross would be present on Sint Maarten during the visit.

Furthermore, the research was focused and sharpened during the visit based on the first gathered insights. The preparation of the field visit was based on desk research and assumptions, which could now be validated. New assumptions based on initial insights during the first days required in depth research to validate. As the field visit was a total of 17 days, there was enough time to conduct new and deeper research.

Besides researching, a part of the field visit was used to start with initial designs. Starting with the ideation during the field visit made it possible to research certain assumptions on which the ideas were based and gather inspiration within the context of Sint Maarten. Through this approach multiple iterations on the first ideas have been made.

Activities of a designer

Designers use different activities, methods and tools in order to gain insights. This chapter shows a selection of designerly activities that were done during the field visit.

1. Engage all stakeholders

In the preparation for the field visit, six potential stakeholders, that seemed relevant for disaster preparedness on Sint Maarten, were identified. To gain understanding of an unfamiliar and complex context, multiple perspectives of different stakeholders had to be brought together. Designers can be the bridge between the different stakeholders (Valkenburg et al., 2016). Between different organisations, within organisations and between people.

By engaging with all these stakeholders insights could be gathered to create a holistic overview of the situation in relation to disaster preparedness on Sint Maarten. Designers have the ability to synthesise many different elements into a whole (Valkenburg et al., 2016).



Figure 88: Examples of interactions with stakeholders.

2. Design integration

The knowledge and insights from the different stakeholders and disciplines, enables the designer to make meaningful connections. By not only integrating the insights from the different stakeholders but combining interpretations of other designers can add value to the design. A multidisciplinary team can integrate the knowledge of different disciplines and put it together to make it one (Valkenburg et al., 2016).

3. Challenge the vision through dialogue with people

Design-driven innovators have the ability to show people what the world could be like. By challenging these visions through dialogue with all stakeholders, the value of the future vision and the value of the users can be understood. The vision should bring all stakeholder together and answer all their objectives (Valkenburg et al., 2016).



Figure 89: Examples of design integration & dialogues with stakeholders.

4. Zoom in and out of the problem in context

When solving problems in a complex setting, designers must have a full understanding of the problem and the solution space in context to explore multiple directions. The complexity of the problem and solution space is characterised by both the number of different stakeholders involved and the openness of the problem (and solution) space. Designers continuously zoom in and out between the different levels of abstraction in the context (Valkenburg et al., 2016).

With the complex situation of the Red Cross on Sint Maarten, different levels of abstraction can be identified. Some insights are applicable on a global scale, as they apply for the whole Red Cross and Red Crescent movement. While others only apply for Sint Maarten as they are very local and context specific. By constantly zooming in and out, both the global and local perspective are taken into consideration.



Figure 90: Looking at the context from different perspectives.

5. Be sincerely curious about people

Designers truly believe in and appreciate people, they approach reality and the world in an unpretentious way and exercise one of their basic human traits - empathy. They want to understand their users, without judging them. It's not only what they say, but also how they feel and experience things. Besides empathising for the users, the context of their problem is also empathised (Valkenburg et al., 2016).

By empathising and hearing the stories of the beneficiaries in the neighbourhoods, valuable insights were gathered. The field visit was a unique opportunity to experience the context of Sint Maarten and gain a deeper understanding of the situation.



6. Take people along

To innovate is to go beyond the current boundaries of an organisation. This is not a thing that comes naturally to organisations. The role of a designer is to facilitate and orchestrate the input of many stakeholders. They understand that this multidisciplinary approach is essential. It aims to convince people of the future vision and spur them to take responsibility for further development and implementation. The designer must ensure that during this process a language is used that is understood by all stakeholders (Valkenburg et al., 2016).

To successfully implement innovative disaster preparedness approaches on Sint Maarten, the Red Cross and all other stakeholders need to be taken along in the development process. By taking them along in this process, local ownership can be developed. This local ownership is essential in ensuring support and sustainable continuation for the project.



Figure 91: Examples of different meetings organized by the TU Delft research team on Sint Maarten.





Chapter 7.

Field visit

The following chapter discusses the insights that have been gathered during the field visit.

First, the insights that are used for the final concept are introduced. These concept insights are structured according to three different phases. Next, the insights on an organisational level are discussed. The organisational insights are based on a case study of the school meal project. Furthermore, five design principles are introduced. These principles can help NLRC staff members give direction to future innovative solutions

Finally, an overview of the three types of insights is given.

7.1 Insights from the field

Introduction

The insights from the field research, that are used for the final concept (see chapter 8), are structured according to three different phases. The following three phases have been identified:

- Prepare from day -1
- Start from day 1
- Continue after day +1

Per phase, four topics will be discussed.

These topics will be introduced by an image of the context and a quote from one of the stakeholders . These aim to help the reader to relate to the situation. After the introduction page, the topics will be elaborated (see figure 92). In this chapter the following topics will be discussed:

Prepare from day -1

- Helping the most vulnerable
- Prevent suffering
- Community preparedness
- Lack of information



Start from day 1

- Isolated beneficiaries
- Reliable information
- Distribution of goods
- Data sharing



Continue after day +1

- Sustainable continuation
- Loss of knowledge
- Local ownership
- Hurricane Luis



Disclaimer

The quotes used in this chapter to highlight certain insights, do not necessarily correspondent to the people that can be seen in the pictures.

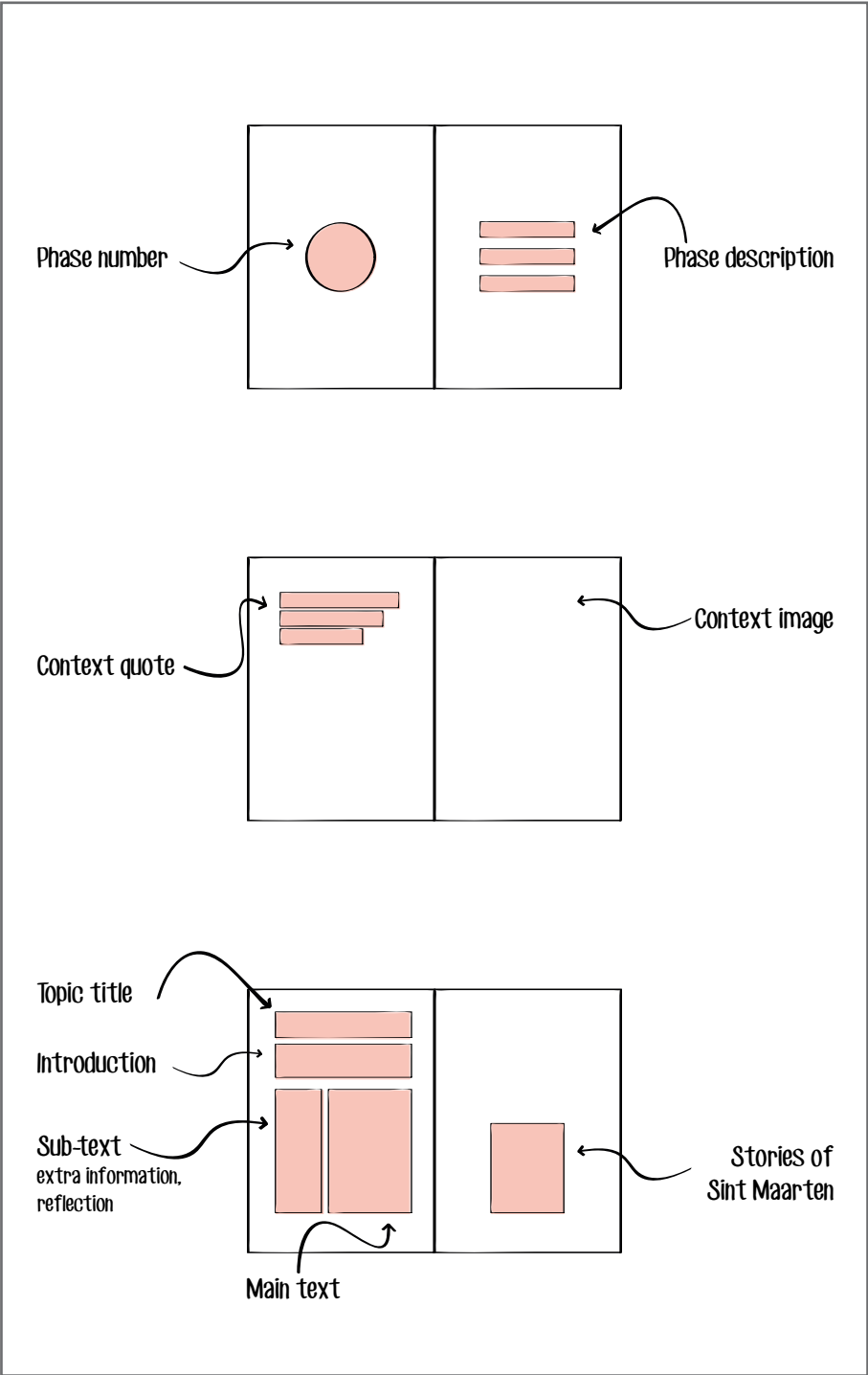
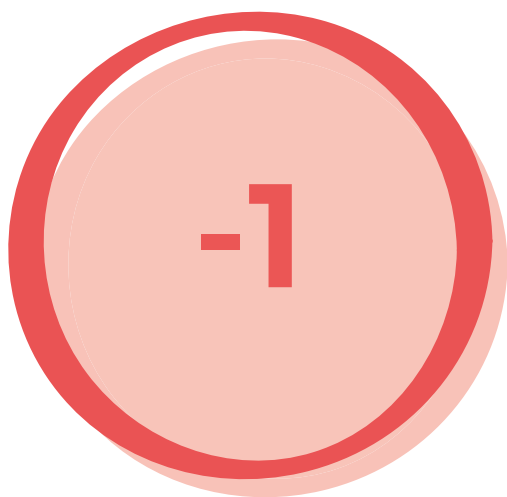
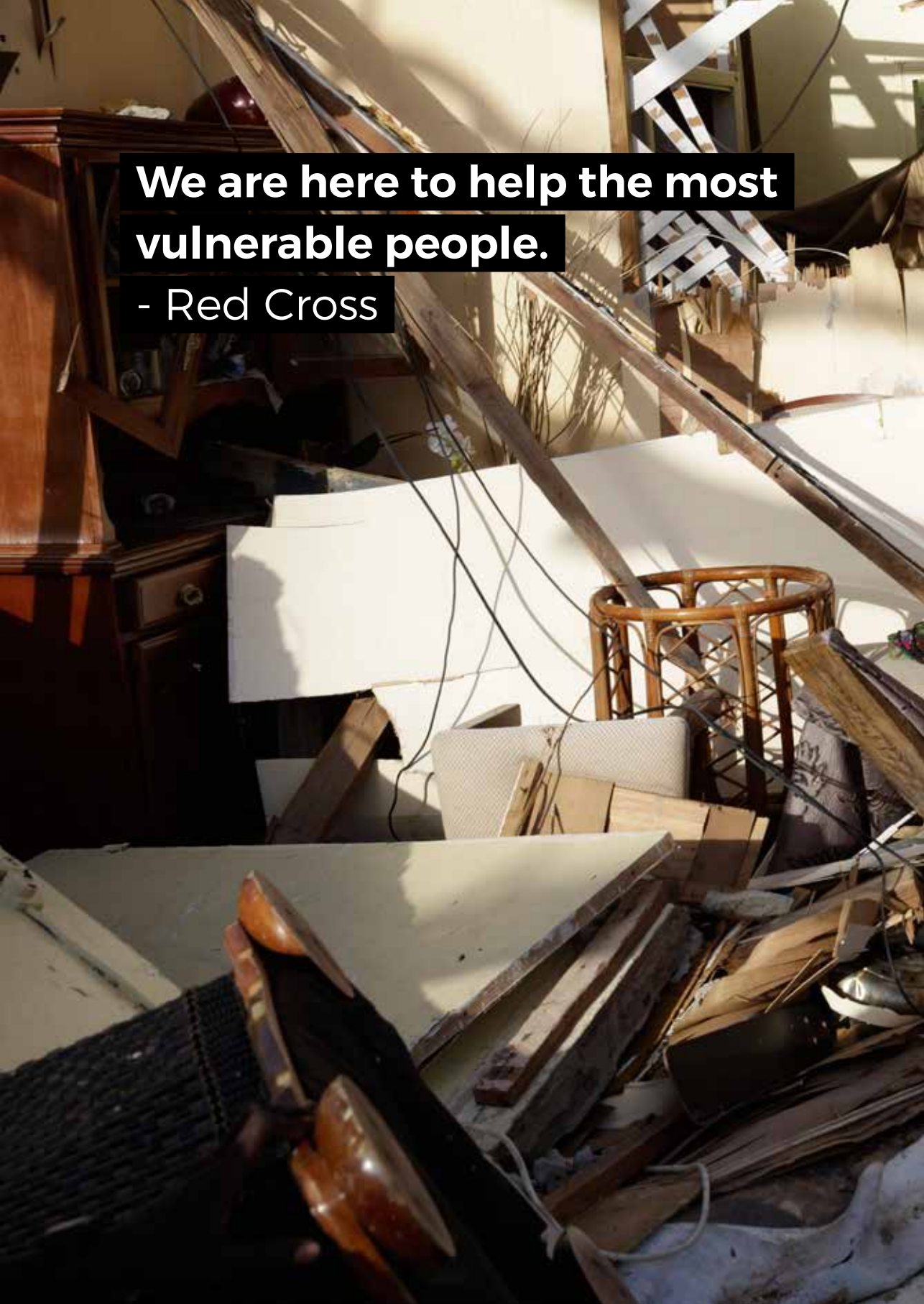


Figure 92: Reading guide 'insights from the field'.



**Prepare
from
day -1**



**We are here to help the most
vulnerable people.**

- Red Cross



Helping the most vulnerable

Introduction

This chapter describes the approach of the Netherlands Red Cross towards to most vulnerable people. First, a description of vulnerability is given. Secondly, the role of vulnerability within the mission of the NLRC is described. Finally, a reflection on the multiple distribution approaches used during the relief operation is made. This reflection shows whether the actions taken by the NLRC match with the role of vulnerability as described in their mission.

Vulnerability is a complex matter. Besides the definition used by the IFRC, there are many other definitions. Some experts argue that it is too complex to capture in one definition.

However, the given examples, poverty and lack of preparedness, are highly relevant for the Sint Maarten context.

The NLRC clearly states in their ‘new way of working’, that helping the most vulnerable has their special focus. Based on the used definition of vulnerability and the observations done on Sint Maarten, it can be said that the Netherlands Red Cross has the right focus in their mission.

Many people on Sint Maarten are currently in a vulnerable position. They have been in this position even before the hurricane, but Irma made their situation even worse.

What is vulnerability?

Vulnerability is defined by the IFRC (n.d.) as “the diminished capacity of an individual or group to anticipate, cope with, resist and recover from the impact of a natural or man-made hazard. It is often associated with poverty, but it can also arise when people are isolated, insecure and defenceless in the face of risk, shock or stress.

Vulnerability may also vary in its forms: poverty, for example, may mean that housing is unable to withstand an earthquake or a hurricane, or the lack of preparedness may result in a slower response to a disaster, leading to greater loss of life or prolonged suffering.”

Mission NLRC

The Netherlands Red Cross International Assistance ‘Our New Way of Working’ states the following:

1 “The mission of NLRC is to prevent and alleviate human suffering wherever it may be found, to protect lives and health, and to ensure respect for the human being. Our special focus is on those who are most vulnerable in disaster situations.”

-Red Cross

Furthermore, one of the NLRC’s strategic aims in its 2020 Strategy is “to promote a willingness to help the most vulnerable.”

A photograph of a single-story house in Sint Maarten that has been severely damaged by Hurricane Irma. The house has light blue walls and a white roof. A large blue tarp is draped over the roof, and the edges of the roof are exposed and damaged. The front porch is cluttered with debris, including a white refrigerator, a white door, and various other household items. A concrete block wall is in the foreground, and a utility meter is visible on the left side of the house. The sky is blue with some clouds.

Stories from Sint Maarten

Sint Maarten has come a long way since hurricane Irma hit the island last September. Some parts of the island are being restored to the paradise it was before. However, during the field research, I've visited some of the 'bad neighbourhoods' of Sint Maarten. A common sight in these neighbourhoods are the severely damaged houses, often primitively repaired with the tarpaulins distributed by one of the aid organisations. The front porch is often completely filled with old household appliances, broken furniture, building materials and other types of garbage. In some cases, the hurricane shutters used for hurricane Irma, are still hanging in front of the windows. The holes in the wall, caused by debris hitting the house, are evidence of the incredible force of the hurricane.

During conversations with the Red Cross staff members, it is confirmed that the aim is to help the most vulnerable people.

What happened in practise?

The Netherlands Red Cross clearly communicates that they want to help the most vulnerable people.

2

“We are here to help the **most vulnerable people.**”

- Red Cross

At first sight, it seems like the distribution approaches aim at reaching the most vulnerable people.

As described in chapter 5.3, the Red Cross used multiple distribution approaches in the first weeks after the hurricane. Figure 95 shows an overview of three of the used approaches. As can be seen in the illustration, each step aims to target the most vulnerable people more specific.

The individual relief teams were first used from the 8th of October, more than a month after hurricane Irma.

However, the timing and duration of the different phases indicates that during the first moments after the hurricane, the focus was on mass distribution, by using the blanket distribution approach. Focussing on helping as many people as possible, rather than helping the most vulnerable.

3

“We are here to help the **most vulnerable people.**”

- Red Cross

The used approach make it seem that the Red Cross focussed on reaching a large amount of people, logically, as there were a large amount of people in a vulnerable position.

The used approach and the mission of the NLRC don’t seem to match because of the difference in focus. A more elaborate research into the relief operation, give some insights into what happened in practise.

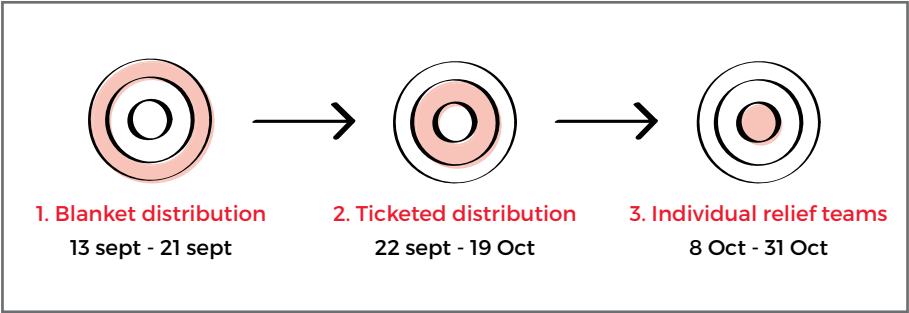


Figure 95: The different distribution approaches used by the Red Cross.

Although the relief operation infographic (see chapter 5.3) gives insight into the amount of people reached during the relief operation, no conclusion can be drawn about the amount of vulnerable people reached.

Through the personal stories of people during the field visit, such as the story of Audrey (as can be seen on the next page), it does become clear that many did not receive relief goods.

This leads to the conclusion that although the Red Cross certainly provided aid to a large quantity of people, which also includes many vulnerable people, it did not specifically target the most vulnerable people in the first period after the hurricane.

As can be seen in chapter 5.3, Red Cross relief operation, many relief goods were distributed. This means that many people have received aid during this period. According to the Netherlands Red Cross (2018) a total of 26.701 beneficiaries received help between September and November.

However, when compared to the 40.000 registered and 15.000 unregistered inhabitants of Sint Maarten (see chapter 5.1), it can also be concluded that many people did not receive relief goods.

Furthermore, this data does not give any insights about the amount of vulnerable people that have been reached. While this is highly relevant information, according to the mission of the Netherlands Red Cross. However, observations and interviews with beneficiaries during the field visit indicate that many vulnerable people did not receive aid during the relief operation.

4

“Many vulnerable people did not receive any help.”

- Beneficiary

On the other hand, interviews with other beneficiaries indicated that there are also many vulnerable people that do have been reached. Based on the data, observations and interviews, it can be concluded that although it was the goal, many vulnerable people have not been reached. The focus of the Red Cross, in the first moments after the hurricane, was on reaching a large group of people rather than the most vulnerable people, as illustrated below.

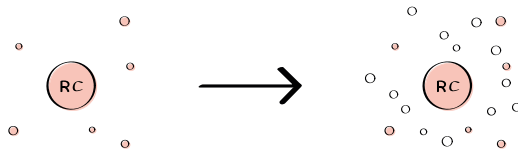


Figure 96: From helping the most vulnerable people to helping the most people (which also includes many vulnerable people).

Stories from Sint Maarten

The woman on the right is Audrey. I met her at the Red Cross office, where she was applying for the food voucher programme. During our conversation she mentioned that this would be the first time that she would receive any help. The Red Cross did come to her neighbourhood, but because of her disability she was not able to get out of the house. There are many people similar to Audrey out there. Luckily, she qualified for the project and was able to receive her food vouchers. However, she did receive this help eight months after hurricane Irma. Isn't that 8 months too late?



During conversations with the locals, the hospitality and sense of community were often mentioned as an important part of the culture of Sint Maarten. The sharing of relief goods with family and friends confirms this.

Logistically it is a challenge to reach everybody on the island. Making use of indirect distribution does enable the Red Cross to reach a large population.

(In) direct reached

Even though, it has been concluded that many vulnerable people have not been reached, there are also many that do have been reached. Beneficiaries often mentioned that they shared the aid they received with their family and friend who were in need.

5

"I shared the food I received with family and friends."

- Beneficiary

6

"I try to look out for my neighbours. They are old and could really use the help."

- Beneficiary

In both situations in figure 98, the vulnerable people (represented by the coloured circle) are reached. However, the high number of intermediaries used during the indirect distribution, make it riskier.

With direct distribution a vulnerable person can be specifically targeted. This can prevent people from falling through the cracks.

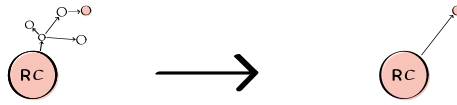


Figure 98: From indirect to direct distribution.

However, the Red Cross cannot assume that in this way all the vulnerable people will be reached. A more structural approach is required to ensure that especially the most vulnerable people will receive the help they need. The case of Audrey, shown on the previous page, is a clear example of vulnerable people falling through the cracks.

7

“This is the first help I will receive in the 8 months after hurricane Irma.”

-Beneficiary

Preparing and gathering information prior to a disaster enables to identify the most vulnerable. With this knowledge, individual relief teams can respond quickly after a disaster and provide specialized aid to the people who need it the most.

Furthermore, the most vulnerable people might require special care. Their needs might be different. In order to provide this kind of aid, information about these vulnerable people needs to be available. In the moments after a disaster, there is no time and energy to identify the most vulnerable and deliver specialized aid to them. After hurricane Irma, it took more than a month for the individual relief teams to become active.

8

“From the 8th of October we started with the individual relief teams. They focussed on reaching the most vulnerable people.”

-Red Cross



Conclusion

- The Netherlands Red Cross aims to help the most vulnerable people.
- The current distribution approach seems to focus on reaching the most people, instead of the most vulnerable.
- Indirect distribution has a large reach but is not structured enough to ensure that the most vulnerable are reached.

**The mission of the NLRC is to
prevent and alleviate human
suffering.**

- Red Cross





Preventing suffering

Introduction

This chapter introduces the aim of the Netherlands Red Cross to prevent and alleviate human suffering. Among others, it does so by preventing and preparing for disasters, also called disaster preparedness. Furthermore, the two main benefits of disaster preparedness are explained.

The mission of the NLRC, described in the previous chapter, clearly states its ambition to prevent and alleviate human suffering.

Disaster preparedness measures can play an important role in the prevention of human suffering.

However, the local branch of the Red Cross on Sint Maarten was not prepared for a disaster of this magnitude.

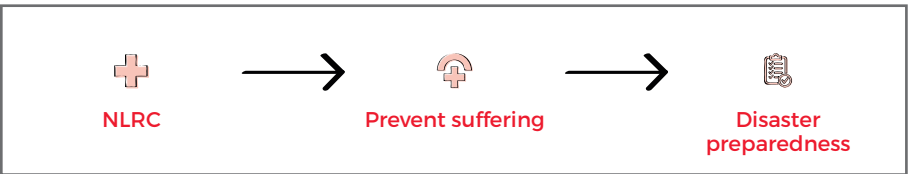
It did not have the capacities and programmes in place to successfully deal with the impact of hurricane Irma and quickly respond to the consequences.

Disaster preparedness

The New Way of Working of the Netherlands Red Cross has a focus on preventing and alleviating human suffering. It does so by limiting the impact of disaster situations, strengthening resilience and promoting a willingness to help the most vulnerable (The Netherlands Red Cross, n.d.). Furthermore, throughout the Red Cross movement, preventing and preparing for disasters is important. Disaster preparedness is central in the work of every individual National Society (Global Disaster Preparedness Centre, n.d.).

It is used to predict and if possible, prevent disasters, mitigate their impact and respond to the consequences (Global Disaster Preparedness Centre, n.d.). Disaster preparedness is seen a continuous and integrated process that combines multiple risk reduction activities and resources. It requires contributions of many different areas (IFRC, n.d.).

1 “Disaster preparedness refers to measures taken to prepare for and reduce the effects of disasters.”
-IFRC



Stories from Sint Maarten

A stuffed animal, blown away by the powerful winds or left behind in the chaos of fleeing the house, is lying between the rubble. It means that somewhere on the island, a child will go to sleep, after a traumatising experience, without the safety of its favourite animal friend.

This photo was taken on the 11th of September 2017 in the neighbourhood Cay Hill, only 5 days after Sint Maarten was hit by hurricane Irma. The photographer, Arie Kievit, was on the island to document the destruction and suffering the disaster caused.





Figure 102: Main benefits of disaster preparedness.

By taking the right preparation measures, a lot of suffering can be prevented. However, what are the right measures?

Reducing the impact of the disaster can for example be done by cutting down trees in the yard. The trees are a potential danger, as they can get blown over by the hurricane winds. Also, debris such as coconuts or branches can damage the house.

Although preventing suffering has the priority, the second benefit, saving money, can indirectly have a large impact.

The money saved by prevention can be spend on response and recovery. In the humanitarian sector resources are getting scarcer, which means the money should be spend in the most effective way.

The benefits

There are two main benefits to disaster preparedness. First of all, and most importantly, preparing for a disaster gives (vulnerable) people the chance to reduce the impact of the disaster, while being able to recover faster from the effects.

2

"I worked all day, cutting down trees in the yard. In total I made 8 trips to the rubbish dump."

- Inhabitant Sint Maarten

It can help to prevent and alleviate human suffering, just as described in the NLRC mission.

3

"The mission of the NLRC is to prevent and alleviate human suffering."

- NLRC

Furthermore, disaster preparedness often also has a financial benefit. Not only will preparing for disasters prevent suffering, it also saves money. According to the IFRC (2013), every dollar spend on disaster preparedness, saves \$4 on response and recovery. The 'Prinses Margriet Fonds' of the Netherlands Red Cross states that investing €1 in the prevention, can save up to €7 on average in emergency aid.

4

"Each \$ spend on disaster preparedness, saves 4\$ on response and recovery."

-IFRC

Figure 103: Vehicles and debris from destroyed houses and trees & Sint Maarten inhabitants observe the damage done by hurricane Irma in Philipsburg.



Conclusion

- NLRC wants to prevent and alleviate human suffering.
- Disaster preparedness is used to predict and prevent disasters, mitigate their impact and respond to the consequences.
- Disaster preparedness has human and financial benefits.

**One person's risk,
can be a danger for another.**
- Red Cross





Community preparedness

Introduction

This chapter discusses different ways of disaster preparedness. First, the necessity of community preparedness is introduced. Second, two ways of community preparedness are discussed. Jollification, helping out your family and friends, is based on community feeling, while structured preparation is more orchestrated and structured.

The field visit showed that there is a large difference in the preparation measures taken by beneficiaries. While some have taken elaborate preparation measures, others barely prepared themselves. This is often caused by a lack of knowledge about disaster preparation.

By working together in the preparation phase, the experienced and knowledgeable people in the communities can set the example. In this way the whole community can be better prepared.

Disaster preparedness

As an individual or household, disaster preparation measures can be taken. Besides taking individual measures, disaster preparedness also needs to happen on a community scale. For example, if your neighbour does not prepare well enough for a hurricane, surrounding buildings can get damaged by his debris.

1

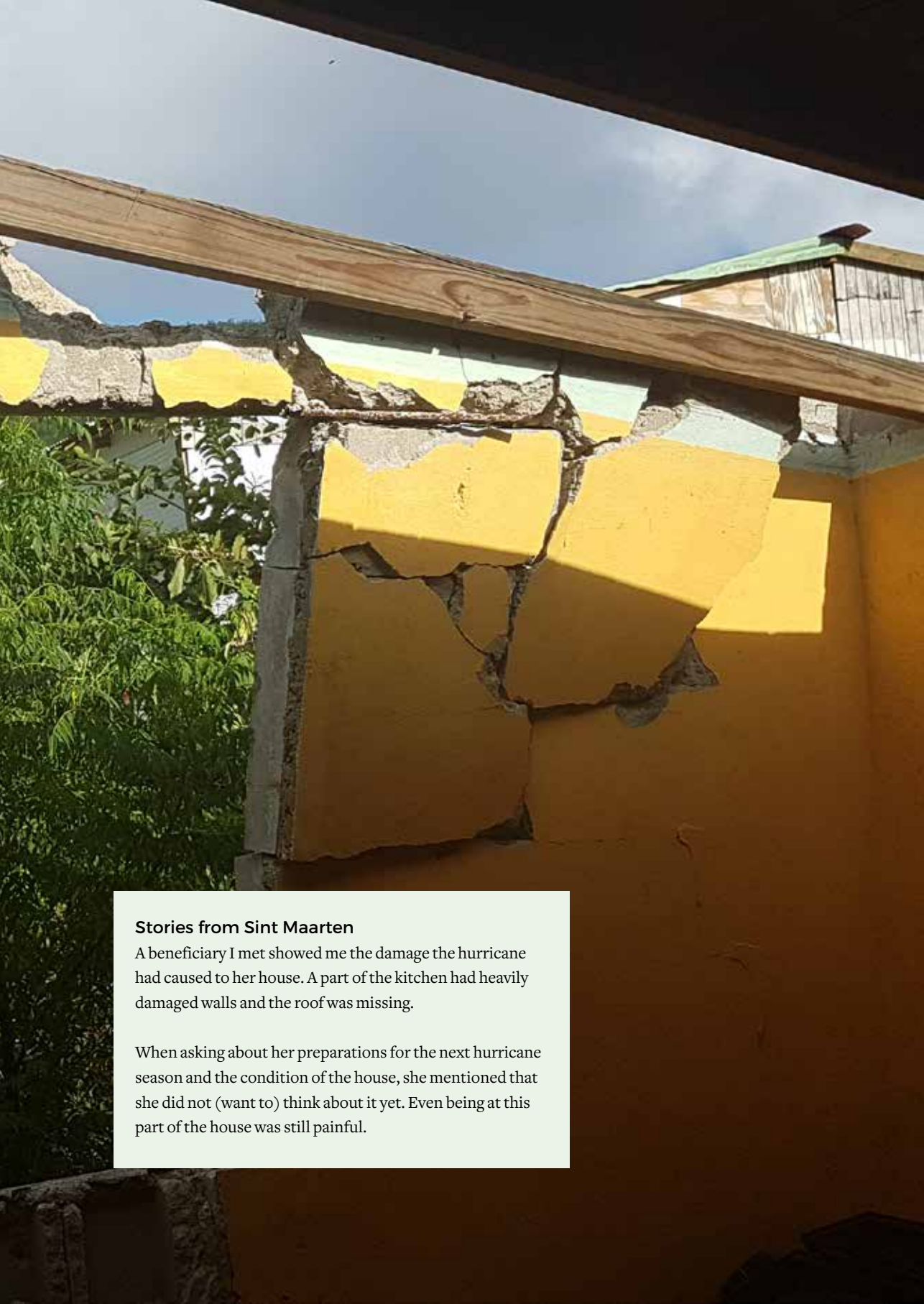
"Prepare together. It doesn't matter if you are ready if your neighbours rubbish flies into your house."

-Red Cross

2

"One person's risk can be a danger for another."

-Red Cross



Stories from Sint Maarten

A beneficiary I met showed me the damage the hurricane had caused to her house. A part of the kitchen had heavily damaged walls and the roof was missing.

When asking about her preparations for the next hurricane season and the condition of the house, she mentioned that she did not (want to) think about it yet. Even being at this part of the house was still painful.

As mentioned before, the hospitality and sense of community are seen as an important part of the culture of Sint Maarten. These characteristics manifest themselves in the old Sint Maarten tradition: jollification.

During the field visit, when driving around on the island, many community gatherings, like a barbeque were seen. This shows that the tradition of jollification still plays an active role on the island.

Especially for elderly, or other vulnerable people, who normally are not able to take preparation measures themselves, jollification can be their salvation.

Jollification is not only used to get work done, whether it is for disaster preparation or for another cause, it is also an important social aspect within a community.

It is seen as a way to deal with a common trauma, caused by hurricane Irma.

Jollification

In the preparation for the next hurricane seasons, a collaborative effort should be made to prepare as a community. Helping out your neighbours, family and friends is already part of the Sint Maarten culture.

3

"In my street everyone looks out for each other. That's a very comforting thought."

-Beneficiary

Jollification is an example of this. During jollification a community comes together to help each other out. This can be outside the hurricane season, for example, someone in the community wants to repaint his/her house. The community will then help out and turn it into a social event. After a hard day of work, a barbeque will be organised. On the other hand, it can be in preparation for a coming hurricane. For example, boarding up the house with hurricane shutters.

4

"My grandson and his friends helped me out with boarding up the house. I was very happy with their help, because I cannot do that myself."

-Beneficiary

The St. Maarten Foundation For Psychologists & Orthopedagogen (SFPO), see a bigger role for jollification. They state that jollification was a major part of the Sint Maarten culture, especially during previous disasters. It can give strength and restore a general sense of wellbeing during difficult and challenging circumstances (SFPO, 2017).

5

"Jollification could be viewed as a local coping strategy and a source of healing and rebuilding."

- SFPO



Figure 106: A group of men replacing the tarpaulin on the roof with corrugated zinc plates.

Although jollification can definitely help with disaster preparation, it is no guarantee that all neighbourhoods will be prepared enough.

Vulnerable people that are isolated and not part of a community would be left out by this approach.

Structuring the preparation approach could prevent this from happening. A suggestion of how this could work, can be seen here on the right.

Structured preparation

Community based preparation can also be organised in a different way. An independent organisation can arrange the preparation in a more structured way. For some neighbourhoods jollification might be sufficient, as the neighbours are willing to help each other out. For other neighbourhoods, there is less sense of community. They cannot rely on their neighbours to help them with the preparation. By structuring and orchestrating this process, a larger group of potential vulnerable people can prepare themselves for coming hurricanes.

5


“Community based preparation should be taken on by an independent party and be led by somebody who is financially supported.”

- Inhabitant Sint Maarten



Conclusion

- Preparation on both individual and community level necessary.
- Make use of the sense of community on Sint Maarten.
- Have a structured community preparedness approach to ensure that vulnerable and isolated people are not left out.



**The community councils
didn't have enough capacity
to provide the information to
reach the truly vulnerable.**

- Red Cross



Lack of information

Introduction

This chapter introduces the importance of information before, during and after a disaster. It discusses multiple ways of gathering information, such as through community councils, local staff and Global 510. It shows some bottlenecks of information gathering after hurricane Irma.

In the beginning of the Sint Maarten relief operation, the Netherlands Red Cross had multiple information managers, both at the NLRC HQ and on Sint Maarten. This information was mostly about what happened after hurricane Irma.

A community council consists of people that are from that neighbourhood. These people are often socially engaged citizens, with a large network within the neighbourhood. This enables them to provide the Red Cross with valuable information on how to reach the most vulnerable people in the neighbourhood.

Information management

According to the IFRC (n.d.), effective information management for disasters is essential in international disaster response and relief. It requires that accurate and timely information is available before, during and after disasters. Gathering reliable and actionable data on the locations of people in need, what their needs are, who is positioned best to help them, can improve effective and timely humanitarian assistance (OCHA, n.d.).

Community councils

This information can be collected from multiple sources. One of these sources that has been used during the Sint Maarten relief operation are the community councils. These councils are often well integrated into the community and are a large source of local knowledge.

1

“Meetings with community councils are important. They know the social landscape of the neighbourhood.”

- Red Cross

Stories from Sint Maarten

Community councils play an important role in identifying the most vulnerable people in a neighbourhood. This picture shows a meeting between the Red Cross House Repair team and a member of the Middle Region community council.



However, in the hectic moments after hurricane Irma, the community councils were not in place, so they could not provide the Red Cross with the right information. Although the Red Cross did assume that the community councils would be able to provide this information, the question is whether this is the responsibility of the council to do so.

The second time the Red Cross tried to make use of the community councils was during the distribution of food vouchers.

The Red Cross learned that having the community councils distribute the vouchers did not work. For the second round of voucher distributions, they choose another approach.

However, corruption in these kind of distribution approaches is not uncommon in the humanitarian sector. It is often perceived as a trade-off, it is a downside of an approach with many other benefits.

Collaborating with community councils can potentially improve the humanitarian aid the Red Cross can provide on Sint Maarten. However, clear agreements have to be made to prevent the lack of knowledge and corrupt distribution.

On Sint Maarten, the Red Cross assumed that the community councils would be able to provide them with information. However, the information provided by the community councils turned out to be insufficient. It did not enable the Red Cross to reach the truly vulnerable people.

2

“The community councils didn’t have enough capacity to provide the information to reach the truly vulnerable.”

-Red Cross

Community based distribution

During the first round of food voucher project, the Red Cross made use of the community councils to distribute vouchers. The idea was that the council would have local knowledge and could identify the most vulnerable people in the community. With the most vulnerable identified, the vouchers could be distributed to the ones who needed it the most.

In practise, this plan did not work out. The distribution of the vouchers did not go well, as in some cases the vouchers were given to family and friends of the community councils. In this way, some people received multiple vouchers, while others received none. The aim of the project, to help the most vulnerable people, was not met.

3

“The distribution of food voucher done by the community councils did not go well. Family and friends received many vouchers, while others got none.”

-Red Cross

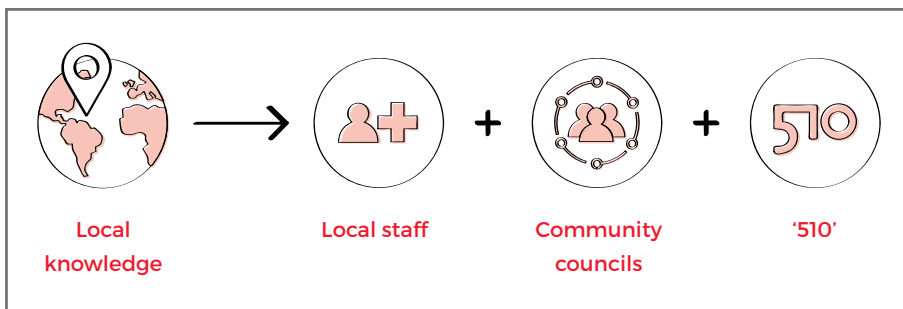
Although community councils are important stakeholders in the neighbourhoods, the collaboration with them during the relief operation was not ideal. This is a bottleneck, as they are often the best integrated into the neighbourhoods and thus have a lot of local knowledge.



Stories from Sint Maarten

Red Cross staff members are handing out foodvouchers to the inhabitants of the neighbourhood Cay Bay a week after hurricane Irma. The vouchers allow them to collect food packages at the distribution point. The residents indicate that besides drinking water and food, they need materials to start rebuilding their house.

Figure 110: Different sources for local knowledge.



By collecting different types of local knowledge from multiple sources, the Red Cross can create an elaborate overview of the situation before, during and after a disaster.

Local knowledge

The Red Cross does have other ways of gathering local knowledge, but only to a certain extend. The local staff members and volunteers of the Red Cross have knowledge about the local situation but are not so deeply integrated in the community as the community councils. Furthermore, the data initiative of the Netherlands Red Cross, '510', made use of drones in order to map the island. These maps were used for the damage assessment in the moments after the hurricane (Rode Kruis, 2017).

The initiative of Global 510 is an good example of innovative ways of gathering data. By using satellite and drone images of the situation before and after the hurricane, the damage can be assessed.



Figure 111: Imagery of Sint Maarten before and after hurricane Irma.



Conclusion

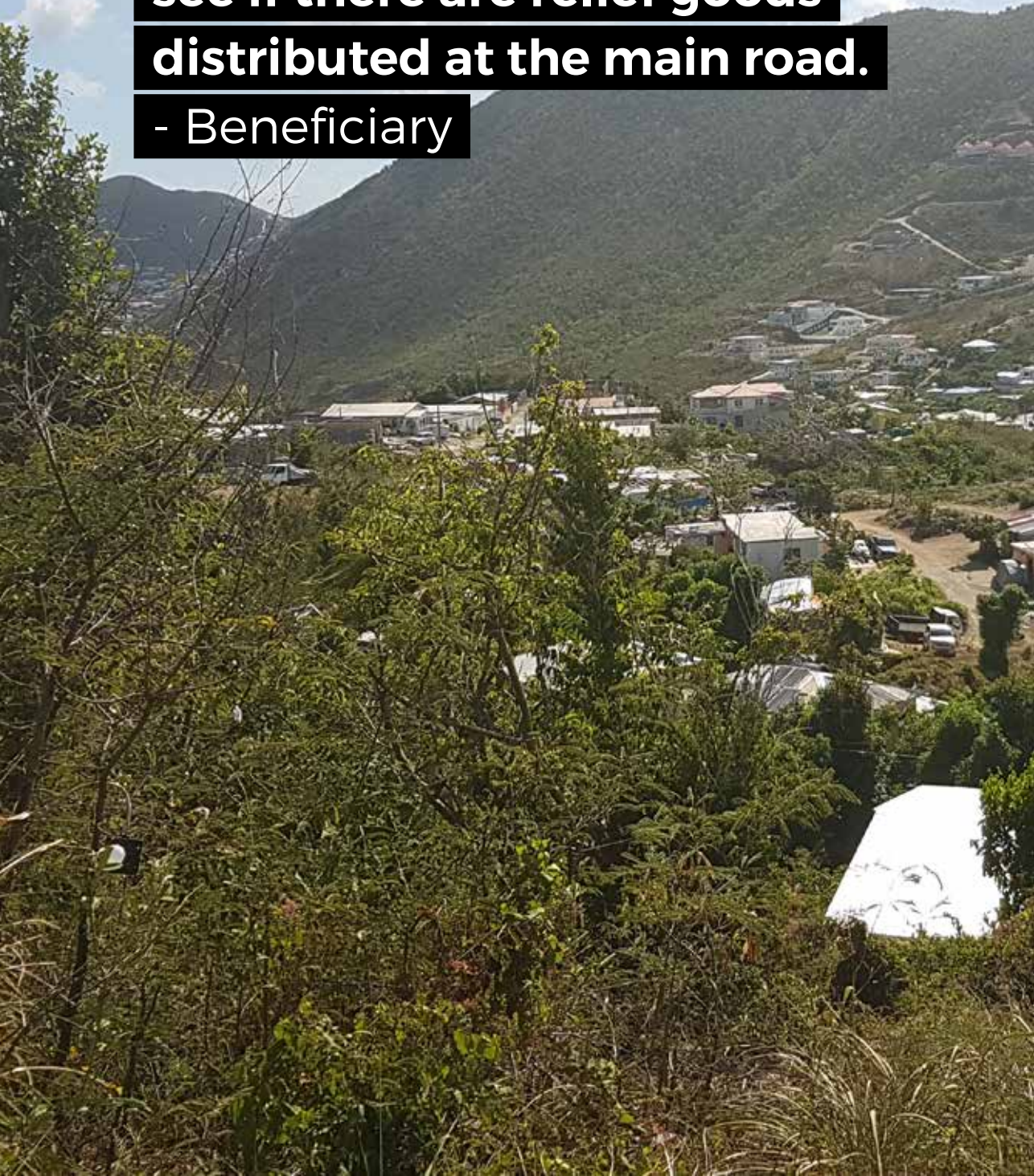
- Reliable information is essential in disaster response + relief.
- There was no capacity to provide the right information at the community councils.
- Incorporate anti-corruption mechanisms.
- Make use of multiple sources and types of information.



**Start
from
day 1**

**I live very isolated. I cannot
see if there are relief goods
distributed at the main road.**

- Beneficiary





Isolated beneficiaries

Introduction

This chapter introduces isolated beneficiaries, that often live in remote or difficult to access locations. The Red Cross has trouble reaching these people and the other way around. Through community communication, these isolated beneficiaries are reached indirectly.

Isolated houses can be found all over the island and through all levels of society. Figure 112 is an example of an isolated house, located at a luxuries holiday park. It can only be accessed through a dirt road.

Although the house that is shown in figure 113 is located in a busy neighbourhood, it is still perceived as isolated. The house is built upon a steep hill and is covered by multiple trees. This makes it difficult to find during the distribution of relief goods.

Isolated houses

The urban infrastructure of Sint Maarten is not as structured as in the Netherlands. This results in some houses that are far off the main road or even any road at all. Some houses are hidden behind trees and bushes, which makes them difficult to find. During the field research into some of the neighbourhoods, a local inhabitant mentioned her neighbour, who lived at such a hidden place. Only after following the instructions of the neighbour it was possible to identify the house she was talking about.

During the conversation with the neighbour, she indeed confirmed that she lives very isolated. She mentioned that she had some difficulties with receiving relief goods, as she was not able to see when the Red Cross would arrive.

1

“I live very isolated. I cannot see if there are relief goods at the main road.”

-Beneficiary



Figure 112: An example of an isolated house.



Figure 113: An example of an isolated house.

The isolated beneficiary mentioned that she was grateful for her neighbour. Without her support she wouldn't be able to receive the relief goods from the main road.

2

"I always call my neighbours if the supplies are at the road."

-Beneficiary

This isolate beneficiary was lucky that she has a neighbour who looks out for her, however this is not the case for everybody. Some people are not only geographically isolated, but also socially. They don't have anybody looking after them.

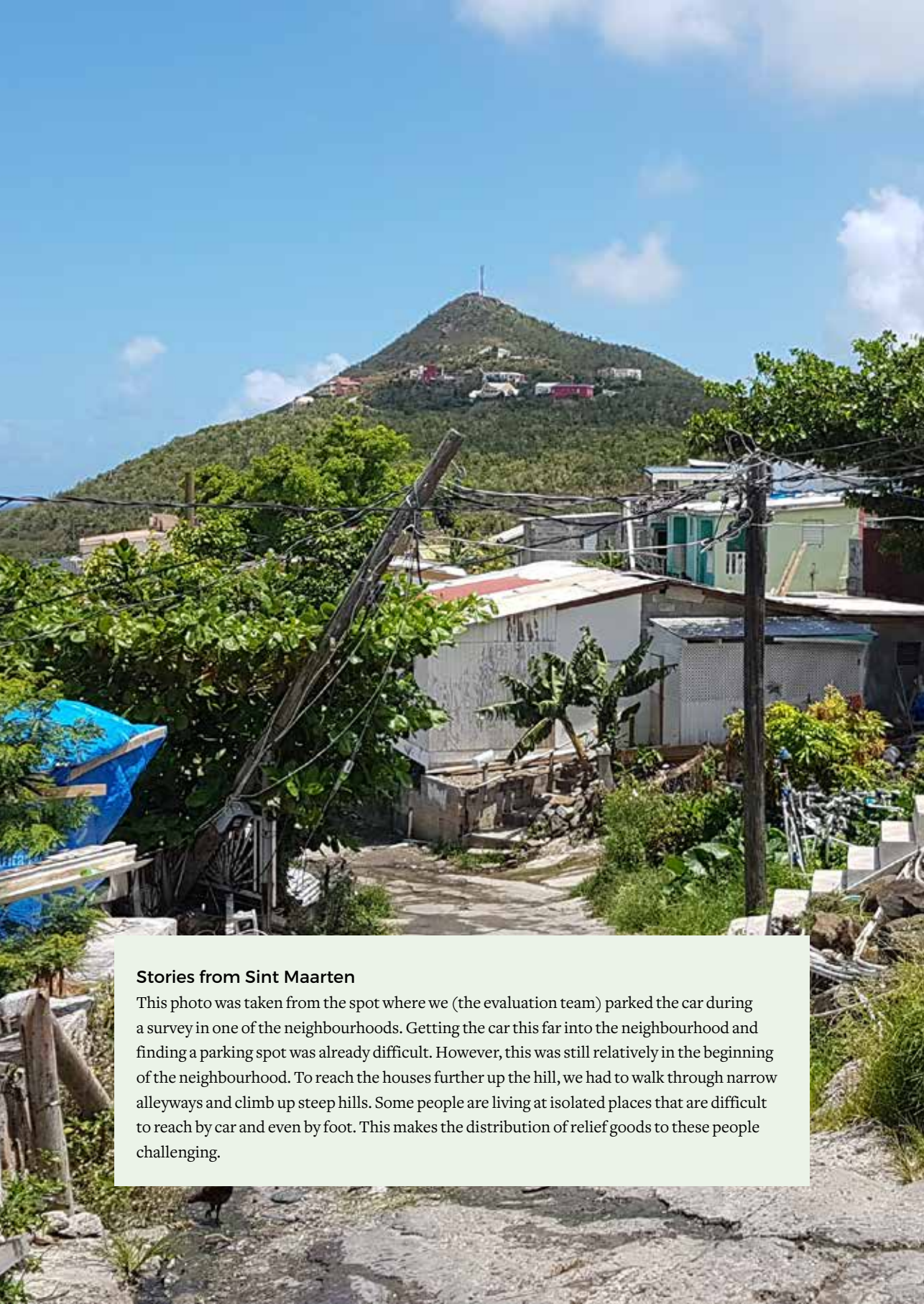
3

"Over there lives an old man all alone. He doesn't have any family around. I think that he can't take care of himself anymore."

-Beneficiary

Community communication

This is a clear example of people in communities helping each other out. This kind of community communication is important within the neighbourhoods, as it enables more people to receive aid. However, it is not structured enough to guarantee that all vulnerable people will be reached. It is often the case that the more isolated a person is, the more vulnerable that person is.



Stories from Sint Maarten

This photo was taken from the spot where we (the evaluation team) parked the car during a survey in one of the neighbourhoods. Getting the car this far into the neighbourhood and finding a parking spot was already difficult. However, this was still relatively in the beginning of the neighbourhood. To reach the houses further up the hill, we had to walk through narrow alleyways and climb up steep hills. Some people are living at isolated places that are difficult to reach by car and even by foot. This makes the distribution of relief goods to these people challenging.

Disabled or injured beneficiaries are extra vulnerable because of their lack of mobility.

Furthermore, even if the Red Cross does get close to a beneficiary, the beneficiaries are not always capable of receiving the help because of their disability. The leg injury of a beneficiary caused her to be stuck at home. She is not mobile enough to collect relief goods at a distribution point, even if she knew about it.

Even though the Red Cross was in the neighbourhood, close to the beneficiaries' house, because of her disability she was too isolated to receive any aid.

4

"Only afterwards I heard that the Red Cross was there, but I wasn't able to get out of the house."

-Beneficiary

Besides leg injuries, like mentioned before, there are many other disabilities that make beneficiaries more vulnerable. While for some disabilities it is difficult to provide aid (e.g. leg injury), for others it can be done with little resources (e.g. providing glasses).

Special needs

Vulnerable people often have special needs. A relatively simple product such as glasses could improve the quality of life and make the beneficiary less vulnerable. Identifying, before and after the hurricane, what the needs of the most vulnerable people are can give insights into how focussed aid can be delivered.

5

"My glasses broke during the hurricane. I'm very dependent on other people now."

-Beneficiary

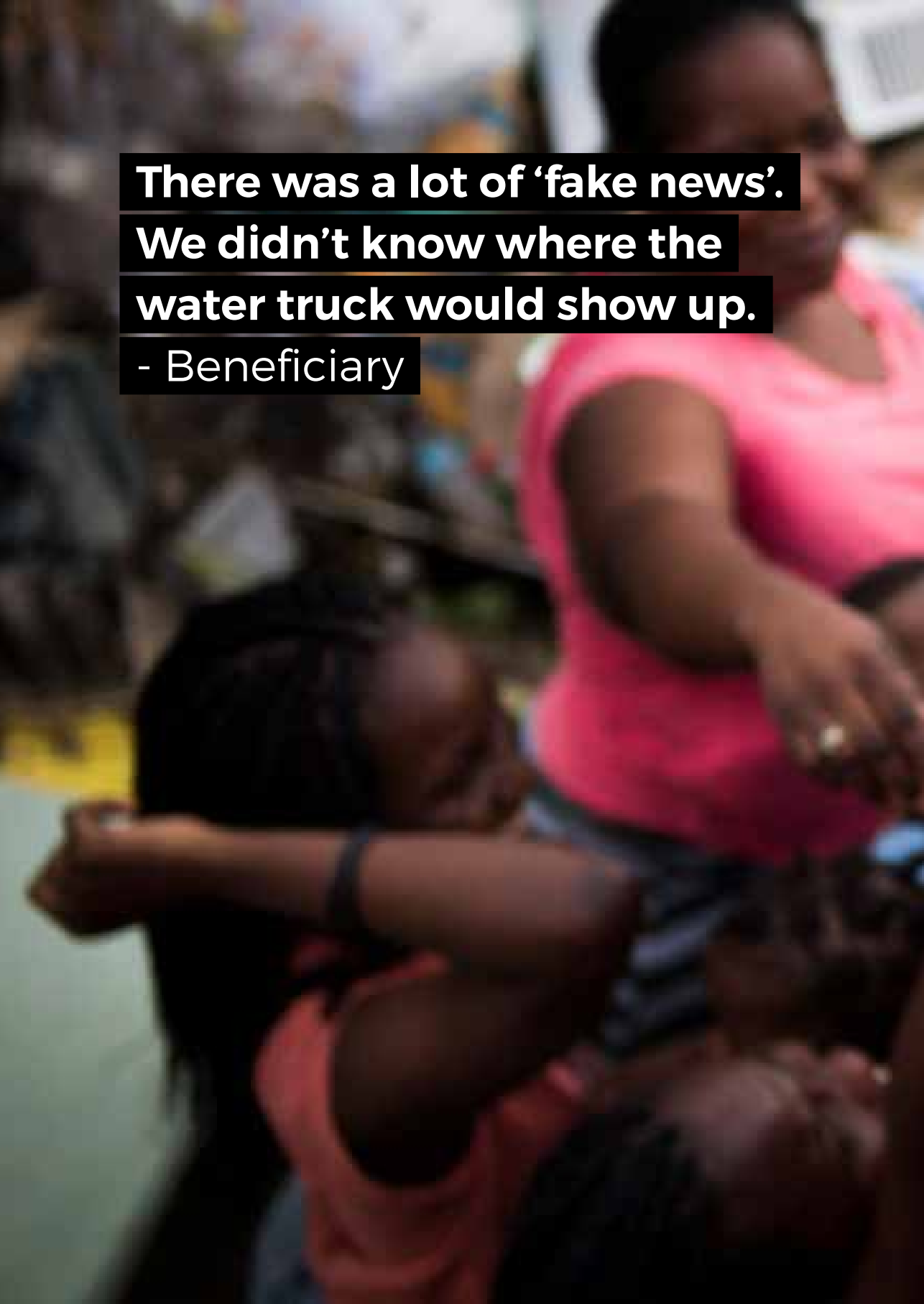


Conclusion

- Sint Maarten is a difficult context for distribution of relief goods.
- There are isolated places that require extra attention.
- Can't rely on indirect distribution.
- Some vulnerable people have special needs.

**There was a lot of 'fake news'.
We didn't know where the
water truck would show up.**

- Beneficiary





Reliable information

Introduction

This chapter introduces the importance of beneficiary communication and the negative effects of having a lack of communication. It discusses the preparation necessary to be able to communicate before, during and after a disaster. Furthermore, it shows the risks of having unreliable information and the opportunity that reliable information brings.

The advantages of beneficiary communications are clear. Whether it is improving the communication between the Red Cross and the beneficiaries or between beneficiaries themselves.

However, the preparation before hurricane Irma did not have a clear focus on beneficiary communication. There was no system in place to ensure communication channels in the first moments after the hurricane.

Beneficiary communication

Beneficiary communication connects humanitarian programming with vulnerable people by employing the right communication channels to provide and receive information. It is relevant in all stages of disaster management from preparedness to post-disaster interventions. It is a cross cutting aspect that can result in a greater quality of aid delivery (Global Disaster Preparedness Centre, n.d.). It has many benefits, among others, it can save lives, promote dignity and trust in the operation and can give people a voice in decision-making. This can improve the effectiveness and efficiency of the programmes (IFRC, 2011).

The (beneficiary) communication after hurricane Irma was not good. It was caused by the fact that most of the communication channels were not functioning. It was not possible to use telephones, as the telecommunication infrastructure was down.

1
“It was impossible to reach anybody. The telephone lines were gone. Only a few hotels still had wifi.”
-Red Cross



Figure 116: Benefits beneficiary communication.

Stories from Sint Maarten

Venroy has been living on Sint Maarten for over 17 years. He's originally from Jamaica, where his mother and three daughters still live. For over a month he has been trying to contact them. The Red Cross tracing team helps locating missing people and restoring contact between family members. They offer people the possibility to a 'three-minute-call'.

With the help of the Red Cross, Venroy is able to contact his family on Jamaica. During the three-minute call he gets to speak with his daughter. He reassures her that he is doing fine and promises to call again soon.



As can be seen in the example above, the work of the Red Cross tracing team can have a big impact on somebodies' life. By using the 'three-minute-call' communication channels between beneficiaries can be established.

However, there are more possibilities for establishing other communication channels. Whether that is one-way communication such as the radio or two-way communication (e.g. via wifi).

For many people this was also a psychological burden, as they didn't know how their family members were doing.

2

"I haven't been able to reach my family yet. I just want to let them know that I'm okay."

-Beneficiary

The only source of information that was functioning was the radio. This does mean that some preparation measures, such as buying a radio and batteries, were required in order to receive any information. Some beneficiaries did not, or were not able to, take these preparation measures. They had to rely on word to mouth communication.

3

"I didn't prepare enough for Hurricane Irma. I never expected it to be this bad."

-Beneficiary



Stories from Sint Maarten

One week after Irma. People are standing in line at the water distribution point in the neighbourhood Cay Bay. Many of the houses in the neighbourhood are destroyed or heavily damaged. There is no access to electricity or drinking water.

In some cases did the lack of communication from the Red Cross, or other organisations, lead to the spreading of unreliable information. In the absence of a clear and reliable source of information, the inhabitants of Sint Maarten had the (logical) response of seizing the information that was available through word to mouth communication.

Having the right communication channels in place would enable the Red Cross to ensure reliable and trustworthy communication.

Unreliable information

After hurricane Irma some unreliable information was spread through word to mouth communication. There were rumours about the time and location help would arrive. This resulted in the fact that people got their hopes up, as they thought the Red Cross would show up and they would receive help, but ended up being disappointed, as it was 'fake news'. In this way people got frustrated with the Red Cross, which could eventually lead to damage of the Red Cross image.

4

"There was a lot of 'fake news'. We didn't know where the water truck would show up."

-Beneficiary

Opportunity

On the other hand, if the Red Cross would be able to clearly communicate with the beneficiaries and show what they're capable of in the first moments after the hurricane, there is an opportunity to win their trust and give them hope. The communication of the Red Cross should always be reliable and trustworthy.

5

"You give a message to the people. Because you are there, you give them faith!"

-Red Cross

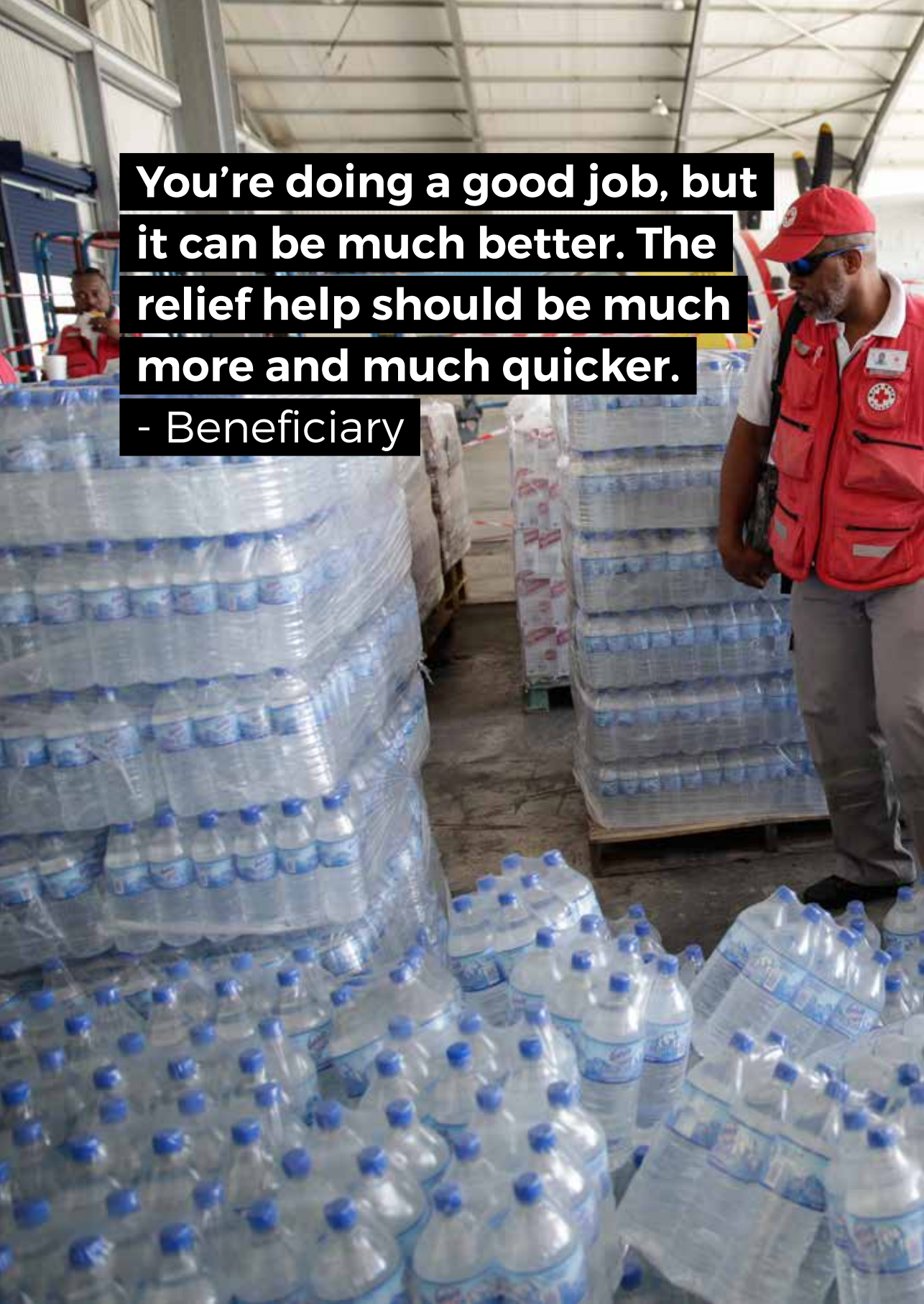


Conclusion

- Almost all communication channels were down after hurricane Irma.
- Beneficiary communication can result in greater quality of aid delivery.
- Ensure reliable and trustworthy communication channels.

**You're doing a good job, but
it can be much better. The
relief help should be much
more and much quicker.**

- Beneficiary





Distribution of goods

Introduction

This chapter discusses how grateful people are for the help they received. However, some people take a more critical look at the help the Red Cross provided. By looking at both the quantity of relief goods and the distribution approach. Especially, the indirect distribution approach that was used.

The fact that the Red Cross helps people in need doesn't go unnoticed by the inhabitants of Sint Maarten. The work that is done, before and after the hurricane, is appreciated.

However, the positive results of the survey should be interpreted carefully since the survey was conducted by Red Cross staff and volunteers wearing the Red Cross emblem or uniform. The results could be biased because of beneficiaries giving social desired answers.

Grateful for all help

In the conversations with beneficiaries it was often mentioned that they were grateful for the help they received. Even if they did not receive the help themselves, but a far relative, they would still appreciate the work that the Red Cross did after the hurricane.

1

"The Red Cross is doing a good job! Although I didn't receive any help myself, I know a lot of other people did."

-Beneficiary

This appreciation also became clear in the result of the survey conducted on the Sint Maarten (Rode Kruis, 2018). The survey asked the inhabitants about their experience with the Red Cross in the period just after the hurricane. In general the inhabitants perceived the Red Cross positively.

2

"The emergency aid provided by the Red Cross in the first weeks after the hurricane was highly appreciated by the inhabitants."

-Red Cross

Furthermore, during the multiple field visits, the interaction with the beneficiaries was almost always positive. They were grateful and happy with the Red Cross as an organisation and were willing to make time for small talk or an interview.

The presence of the Red Cross logo did not hold back some of the beneficiaries. They felt free to speak and take a critical look at the organisation. They did appreciate the listening ear and somebody who took their comments serious.

The beneficiaries probably don't have sufficient knowledge about relief operations to have substantiated criticism about it. However, their personal experience gives them the possibility to reflect on the quality of the Red Cross relief operation, especially with the knowledge about the financial resources that were available.

Distributing and dividing relief goods is challenging. The chosen distribution approach aimed to divide the relief goods equally between the people.

However, there are many examples of situations in which the beneficiaries did not agree with this approach. They felt that even though the relief goods should be divided fairly, the personal situation of the beneficiary should be taken into account.

Living up to the standard

Some of the beneficiaries were able to, besides their gratitude, look at the relief operation in a critical way.

3

"It's good what you guys are doing, but it can be much better. The relief help should be much more and much quicker."

-Beneficiary

This beneficiary questioned the quantity and the speed with which the relief goods were handed out. He was frustrated by the fact that he had to wait in line for a long time, just to receive a few small water bottles. Even though he was grateful for the help, he was also aware of the size of the Red Cross organisation and the financial resources it has. He expected the Red Cross to deliver the aid with a certain standard, which it was not able to deliver according to him.

4

"I know a lot of money was raised, but I don't see that back in the help that we get."

-Beneficiary

Distribution approach

Furthermore, the chosen distribution approach, which would give everybody the same amount of relief goods, did also lead to frustration.

5

"Why does a big family get the same amount of help as a single person?"

-Beneficiary

6

"I only received one tarpaulin, which was insufficient. I needed at least three to properly fix my house."

-Beneficiary

Given the circumstances, this distribution approach seemed like the logical choice. However, if the Red Cross, or even Sint Maarten as a whole, is better prepared for a future disaster of this magnitude, more specific aid could be offered.

With the structure that was available, it was impossible to give ‘focus aid’ to the people. Without preparation and information gathered before the hurricane, it was not possible to identify vulnerable people and quantify the relief goods per household. Instead the choice was made to hand out goods as quickly as possible to as many people as possible.

7

“In the first week we did large scale distributions. Everybody could come to the distribution point”

-Red Cross

The Red Cross was able to reach many people during the relief operation. According to their own estimations, 26.701 people received relief goods between September and November (Rode Kruis, 2018).

In this way a large quantity of people were reached in a relatively short time. However, in some case the distribution of goods was not structured enough. For example, some people received 5 tarpaulins at the same time, that were just thrown of a truck that was passing by.

8

“Some people received 5 tarpaulins, while others got none.”

-Beneficiary

Although the tarpaulins that were thrown of a truck were not from the Red Cross, the actions of other organisations do have impact on the Red Cross.

The aim of the relief workers was probably that through indirect distribution, the tarpaulins would be spread through the neighbourhood and reach vulnerable people.

9

“I tried to share the relief goods as much as possible with my family and friends.”

- Beneficiary

The sense of community, as described before, did lead to beneficiaries sharing relief goods.

This approach does work when aiming to distribute a large quantity of relief goods indirectly over the island, but it does not guarantee that indeed all vulnerable people will be reached.

However, currently two of these tarpaulins are still laying in the beneficiaries’ house wrapped in plastic. Of course, this means that she is better prepared for a next hurricane, but that wasn’t the purpose of the relief operation. It can thus be concluded that the Red Cross cannot rely on the sense of community to share all the relief goods and reach the most vulnerable people.



Figure 120: Red Cross water and food distributions.



Conclusion

- People are grateful for the help they receive.
- Relief goods were not evenly distributed.
- The Red Cross distribution process needs to meet the quality standard.
- Indirect distribution is not sufficient.

**The Red Cross doesn't want
to share beneficiary data.
- Government SXM**





Data sharing

Introduction

This chapter shows the importance of data responsibility and how the Red Cross anticipates to it in their policies. It introduces multiple projects in which the Red Cross gathers data. This data is not shared internally, with other organisations or the government. However, sharing data, if done carefully, could benefit the quality of aid that is delivered.

The role of data has become increasingly important in the humanitarian sector. It enables organisations, such as the Red Cross, to deliver more personalised humanitarian aid.

The use of data brings along a responsibility, as it is not without risks. If the gathered data would fall in the wrong hands, it could negatively influence beneficiaries. Especially in conflict zones, but also on Sint Maarten, where there is a sensitive political situation in regard to unregistered inhabitants.

Data responsibility

The recently implemented ‘EU General Data Protection Regulation’ was made to align different data privacy laws across Europe, to protect and empower all EU citizens data privacy and to reshape how organisations approach data privacy (EUGDPR, 2018). The Red Cross is aware of the responsibility they have in relation to data privacy. This can clearly be seen in their Data Responsibility Policy.

1 “Responsible use of data means doing no harm, bearing in mind the consequences that the use of data could have on vulnerable people around the world and taking measures to avoid putting individuals or communities at risk. The collection and utilisation of potentially sensitive data may negatively impact vulnerable individuals or communities - despite the good intentions.”
-Data Responsibility Policy, Global 510



Figure 122: Data collection through verification of personal information at the food voucher project.

In the first days after the hurricane, the beneficiary needs are inventorized. Red Cross staff and volunteers go door to door with a survey on a smartphone. This enables the Red Cross to collect data about the needs. Beneficiaries indicate that they need drinking water, food and building materials.

In the first days after the hurricane, the beneficiary needs are inventorized. Red Cross staff and volunteers go door to door with a survey on a smartphone. This enables the Red Cross to collect data about the needs. Beneficiaries indicate that they need drinking water, food and building materials.



Stories from Sint Maarten

To receive food vouchers, beneficiaries need to verify that they indeed qualify for the program. In order to do so, they first need to register, for example via their smartphone. Afterwards, they need to come to the Red Cross office with some personal information like name, day of birth, address and income. During registration days, Red Cross volunteers are present at the office to check this information, as can be seen in figure 122. All data is gathered in an excel template.



Stories from Sint Maarten

The Red Cross runs multiple projects at the same time. During the field visit, the Red Cross was active with the school meal project, the food voucher project and house repair project. With all three projects, beneficiary data is being gathered. However, this data is not shared between the different projects and centralized in one databased.

Sharing beneficiary data puts the Red Cross in a dilemma. On the one hand, sharing the data could potentially improve the aid that is offered. While on the other hand, it could negatively influence unregistered inhabitants.

The choice was made to not share the data with the government. However, this does not mean that the Red Cross should never share data. Sint Maarten could benefit from an organisation that could bring all this information together.

Collecting and sharing data should be done in a controlled way. Clear agreements about the purpose of the data have to prevent the data being used for the wrong reasons. The natural status of the Red Cross makes them suitable to lead such a practise.

Sharing data

The Red Cross made the decision not to share beneficiary data with the government of Sint Maarten, as it contains sensitive information. The Red Cross and the government have a different perspective on the situation of unregistered people living on Sint Maarten. Sharing this data could direct or indirect negatively influences these beneficiaries.

2

"The Red Cross does not want to share their beneficiary data."

-Government SXM

The different organisations active on the island all have information, but there isn't a central organisation bringing this all together. The Red Cross fundamental principle 'neutrality' enables them to take up the role as a neutral party to collect the data of the different organisations.

3

"Neutrality: In order to continue to enjoy the confidence of all, the Movement may not take sides in hostilities or engage at any time in controversies of a political, racial, religious or ideological nature."

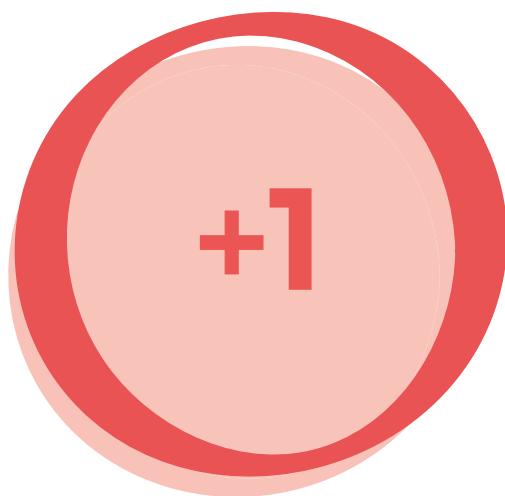
-Red Cross and Red Crescent Movement

By collecting and sharing this data, more effective and specialized aid can be offered to the inhabitants of Sint Maarten.



Conclusion

- Be responsible with data. Make use of the 510 policy.
- Clear agreements about data sharing should be made.
- Collecting and sharing data enables more effective and specialized aid.



**Continue
after
day +1**

**The school meal project
will end, because there is no
sustainable continuation.**

- Open House





Sustainable continuation

Introduction

This chapter discusses briefly how by collaborating and iterating the school meal project was set up. However, the project is about to end, as there is no sustainable continuation. This could result in a backlash for the most vulnerable people on Sint Maarten.

The school meal project, and in particular the collaboration between Open House and the Red Cross, is discussed more elaborate in the case study in chapter 7.2.

The government's plans of introducing school meals were not close to implementation yet. The collaboration with the Red Cross and Open House speeded up this process.

The win-win-win situation that the school meal project created, had direct and indirect benefits for many different parties. This holistic approach makes it such a strong project.

The school meal project is seen as the most successful project of the recovery phase. Furthermore, it would not only be valuable during the recovery phase but could be of added value as a structural project focussed on the long-term.

School meal project

The school meal project was set up in collaboration with Open House, in the first period after the hurricane. The initial idea was to make use of the festival experience of Open House to set up a soup kitchen, this eventually changed into the school meal project. The government, who had plans to introduce a similar programme at public schools prior to Irma, was also involved in this process.

1

"There was already a plan to introduce meals at public schools."

-Government SXM

The aim of the school meal project was to have an incentive to bring the children back to school, help out the parents who might have lost their house and jobs and to provide a nutritious meal for the children.

2

"The school meal project has many different benefits, for both children and their parents."

-Government SXM

The school meal project turned out to be a success. Six months after the hurricane, in March 2018, the milestone of 500.000 prepared school meals was reached.

3

"The Red Cross provides half a million school meals on Sint Maarten."

-Red Cross



Stories from Sint Maarten

Many of the school meal project staff worked in the hospitality industry before hurricane Irma. The collapse of that industry forced them to look for other work. Their new job, which allows them to help rebuilding the island by providing children with nutritious food, gives them a satisfactory feeling.

The potential and impact of the project was recognized early on, which resulted in the extension of the project.

However, this extension, until the end of the school year, was of relative short-term.

For the project to succeed on the long-term, an active role of the government is required, as the Red Cross does not have the time and resources to keep the project going.

The government acknowledges the success of the project and has the intention to continue it or set up a comparable project. However, they haven't been able to make arrangements to have it running at the beginning of the new schoolyear.

Sustainable continuation

Despite its success, the school meal project will end at the end of the school year, because there is no sustainable continuation. The project has already been extended once before, until the end of June, but now the budget of the Red Cross does not allow space for this project anymore.

4

"The school meal project will end, because there is no sustainable continuation."

-Open House

While the Red Cross and the government of Sint Maarten have worked closely together during this project, they haven't succeeded in transferring the project to the government to ensure its continuation.

5

"At the end of the schoolyear the project will end. Although, we are having discussions with the school principals about the future."

- Government SXM

Figure 128: Local staff members working the school meal project kitchen.



Figure 129: Schoolchildren with the breakfast provided by the Red Cross.



The government of Sint Maarten has to deal with all the different consequences of hurricane Irma. Besides the school meal project, there are many other projects going on at the moment. However, in such circumstance it is also important to look ahead. By integrating long term planning, continuation of the project could have been secured.

As a result, some vulnerable people that had to send their children to school without breakfast, even before Irma, are now in an even worse situation. They could really benefit from a long-term programme that would ensure nutritious meals at school.

It is remarkable that even though there were already plans of the government to set up a comparable project, during the course of the project, neither a continuation plan or an exit strategy have been made. As a result, a successful and valuable project will end.

6

"The project should continue. Maybe not in the way it's organised now, but it should continue."

- School meal project staff

7

"For some of the children the project is not be necessary anymore. However, we should work with the children that still need it."

-Government SXM



Conclusion

- Backlash can be expected from abruptly ended school meal project.
- Have a sustainable continuation plan or exit strategy from the start.

**All knowledge and
experience at the Red Cross
will be gone in 3 years.
- Government SXM**





Loss of knowledge

Introduction

This chapter describes the role of the Sint Maarten Red Cross before and after hurricane Irma. It changed from a relative autonomous branch, operated by local staff, to a much larger operation run by delegates. At the end of the NLRC operation on Sint Maarten, many of the experience staff will probably leave. To prevent the loss of knowledge, the capacity of the local staff should be trained in the meantime.

As the previous large disaster on Sint Maarten was hurricane Luis in 1995, the activities of the Red Cross Sint Maarten branch were not so much focussed on large scale disasters, but on being involved in society and helping out vulnerable people when needed.

During these activities, the Sint Maarten Red Cross was relatively autonomous, while the NLRC had a more supporting role. However, seen the limited capacity of the Sint Maarten branch, the NLRC had to increase their influence, which changed the dynamic between the NLRC HQ and the Sint Maarten branch.

SXM RC before Irma

Before hurricane Irma, the Sint Maarten branch of the Netherlands Red Cross used to be more autonomous, as the scale of their work was also smaller. The main activities were teaching first aid and being present at events in case of emergency. There was good communication between the Red Cross and the government.

1
“We used to work together with the SXM RC, now we are working with the NLRC. They make the decisions.”
-Government SXM

Since hurricane Irma, the role of the NLRC has changed. As the scale of the operation has become much bigger, their influence has also increased.

2
“The SXM RC is very dependent on the NLRC.”
-Government SXM

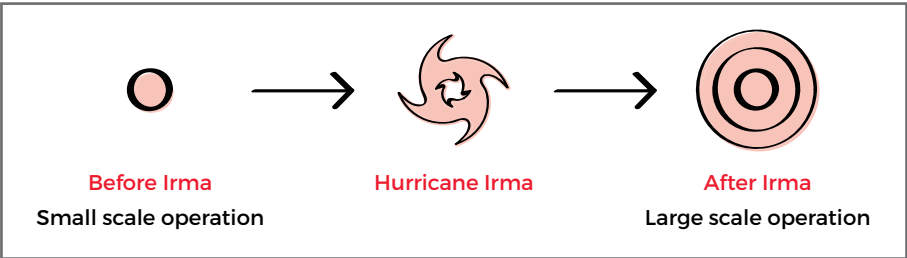


Figure 131: Transition of the scale of the Red Cross operation on Sint Maarten.



The change in dynamic, caused by the decrease in autonomy, has created some tension within the Sint Maarten branch. Although people realise that the influence of the NLRC is necessary with an operation of this scale, the tension originates from the abruptness with which this happened.

The current approach has both advantages and disadvantages. With a disaster of this magnitude, quick and qualitative results are needed. Ideally, this was done by hiring local staff. However, it is difficult, virtually impossible, to find enough quality staff in the area within such a short period of time.

By hiring experienced delegates, projects can be set up quickly. On the other hand, the knowledge and experience that will be gathered by these delegates will only be stay on the island temporary, as the scale of the operation will be scaled down on relative short-term.

The increase in influence of the NLRC does feel like ‘an invasion’ to some people, especially seen the history between Sint Maarten and the Netherlands.

3
“The history with Holland is still a sensitive subject.”
-Red Cross local staff

Loss of knowledge

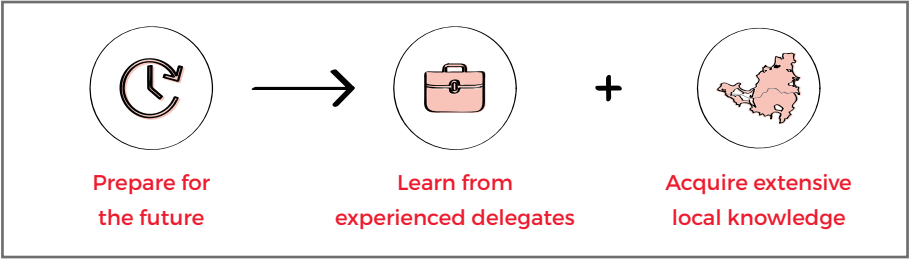
Although the Netherlands Red Cross will be active on Sint Maarten with the recovery programme for quite some time, eventually they will leave and the Sint Maarten branch will be left alone to deal with the situation. Within the current structure of programming, the Netherlands Red Cross hires delegates with lots of field experience to set up their projects.

4
“We need people with field experience.”
-Red Cross

The fear is there that in three years, when the Netherlands Red Cross will scale down the operation on Sint Maarten, all knowledge and experience will disappear with them.

5
“All their knowledge and experience will be gone in 3 years.”
-Government SXM

Figure 133: Preparation for the future of the Sint Maarten branch.





Stories from Sint Maarten

One of the main activities of the Sint Maarten Red Cross before hurricane Irma was teaching first aid. Although the activities of the branch have become much more diverse with the projects of the relief and recovery operation, they still provide first aid courses at their headquarters. The photo shows a Red Cross instructor demonstrating CPR.

The Sint Maarten Red Cross has experienced and skilled staff and volunteers, even before hurricane Irma. However, the knowledge that they had, was on specific topics, such as first aid.

For the future it needs to be clear what capabilities the Red Cross wants to have and how to acquire these. A possibility is to learn from that experience delegates that are currently present on the island.

Capacity building

By building capacity at the Sint Maarten branch during the period that the Netherlands Red Cross is still active, a more sustainable future of the branch can be ensured. Increasing this capacity benefits both the branch as the Netherlands Red Cross.

Training both local staff and volunteers will ensure that this knowledge will not be lost. There is even the unique opportunity to acquire local knowledge that a delegate will never be able to have to a certain level. Having a high level of local knowledge gives the Sint Maarten branch a unique selling point.

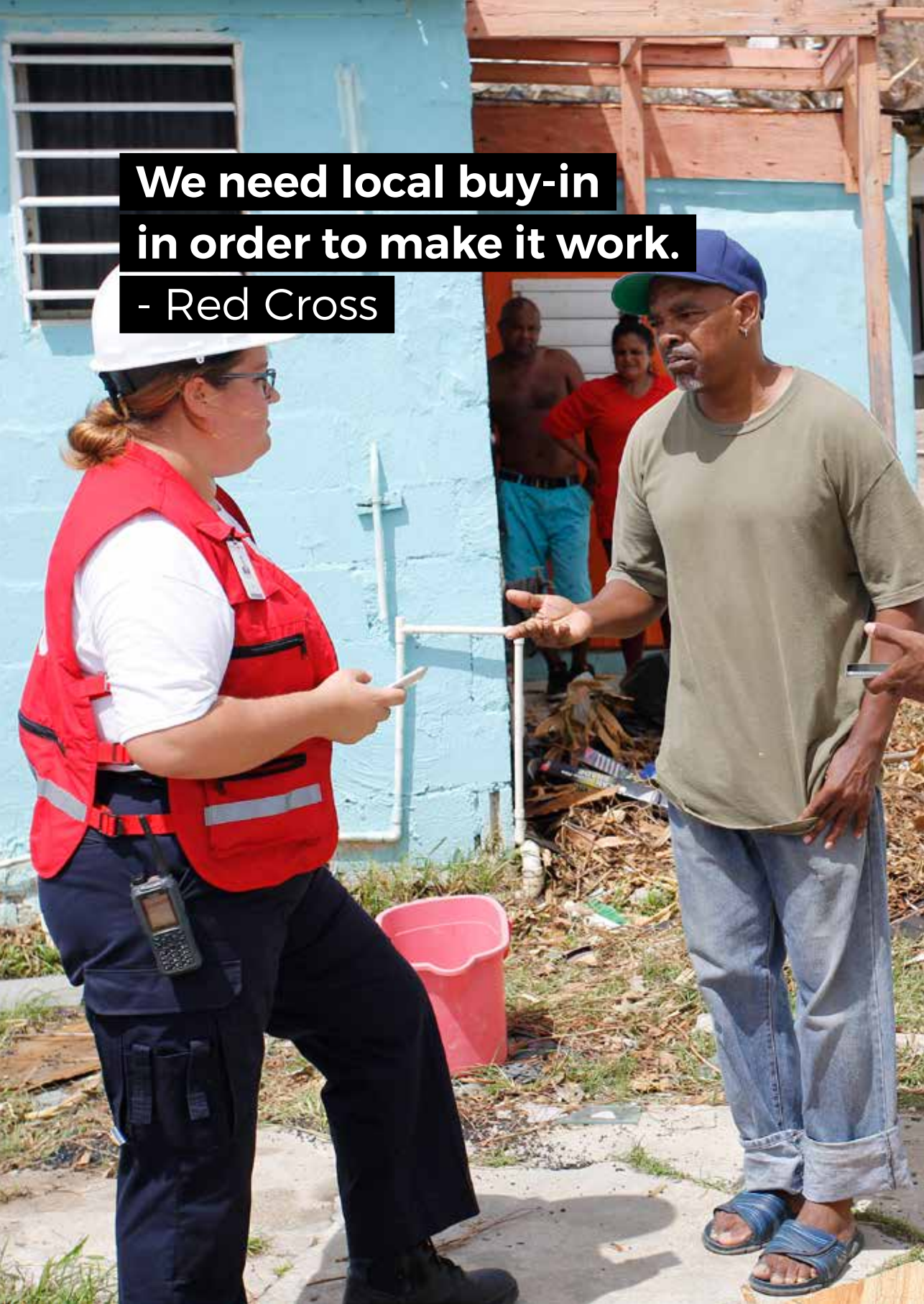


Conclusion

- Build capacity on the island to ensure long-term benefits.
- Have a system in place to prevent knowledge loss.
- Role of the Sint Maarten branch needs to be clarified.

**We need local buy-in
in order to make it work.**

- Red Cross





Local ownership

Introduction

This chapter describes the need for local ownership in order to ensure a sustainable future. This can be done by becoming more integrated into the communities, which is not the case with the current approach, opposed to the approach used during the relief operation. In this way general awareness can be increased and local knowledge can be acquired.

The situation in some parts of Sint Maarten is still bad. People still don't have a roof over their head, are unemployed and struggle to make ends meet. To fix these kinds of problems, both short- and long-term solutions are necessary.

In order to have a long-term impact on the communities, local buy-in is crucial. To create this, the Red Cross should integrate and play an active social role within these neighbourhoods. However, the current position of the Red Cross office stimulates this approach.

Long term benefits

The relief operation of the Netherlands Red Cross is planned to take up to 3 years. This may seem as a relatively long time, but when trying to fix more structural problems it is a short time. There needs to be some kind of local ownership to ensure a sustainable future.

1
"We need local buy-in in order to make it work."
-Red Cross

Integration into communities

Besides the local staff and volunteers, the inhabitants of Sint Maarten need to be involved. By creating a network in each neighbourhood, the Red Cross can integrate more into the communities. Currently, the Red Cross office is at a corner of the island (see figure 136). The threshold for people to come by the office is quite high.

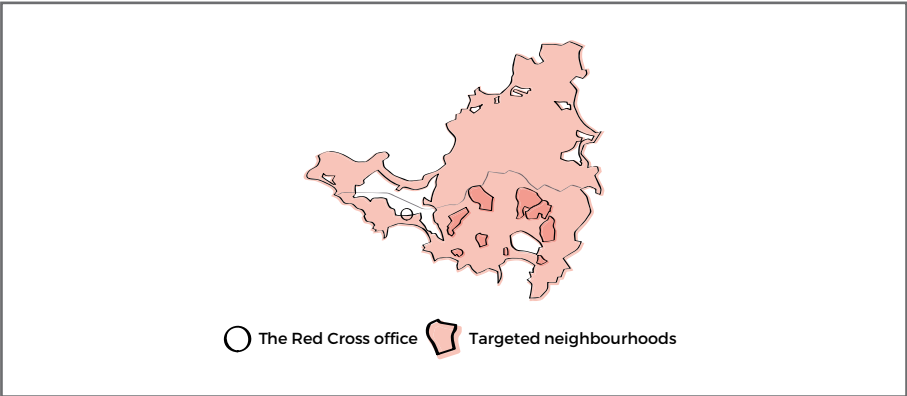


Figure 136: Map of Sint Maarten showing the Red Cross office and the targeted neighbourhoods.



Stories from Sint Maarten

A survey was conducted during the evaluation of the Red Cross relief operation. To get respondents, a group of staff and volunteers went into the neighbourhoods to ask inhabitants for their participation. Besides the questions that the beneficiaries answered for the survey, there were also a lot of questions the other way around. The beneficiaries wanted information about the different projects of the Red Cross and how they could apply for help.

Dealing with large amounts of paperwork and email, is not unique for Sint Maarten. Also at the NLRC HQ this happens on a regular basis.

Also, the current way of working results in the delegates and local staff to have a lot of paperwork, which prevents them from going into the field.

2

“Because of all the emails and paperwork, we don’t go into the field anymore.”

-Red Cross

During the relief operations there were different needs than during the recovery operations, hence the difference in approach.

This approach in the recovery phase is different from the one during the relief operation. In the first period after the hurricane the Red Cross was very active in the field and this approach did not go unnoticed.

Although the needs have changed, the current approach could use more ‘field focus’. As this was one of the strengths of the Red Cross during the relief operation.

3

“The Red Cross did the best job with going into the neighbourhoods.”

-Government SXM

4

“I really appreciate that you guys were here helping out in the neighbourhood.”

-Beneficiary



Stories from Sint Maarten

Red Cross staff and volunteers helped out in many different ways during the first days after the hurricane. For example, by helping beneficiaries cleaning up their heavily damaged house. In the background the destructive force of the hurricane is displayed by all the fallen trees.

Figure 139: Red Cross staff members working in the neighbourhood.



During the field research it became clear that the Red Cross is normally not that visible in some of the neighbourhoods. When walking around, many people came by to ask questions about the different projects.

Also, they commented that they have not seen the Red Cross around since the end of the relief operation.

Parallel to the integration into the neighbourhoods and ensuring the local buy-in, relevant knowledge about the local situations can be gathered. This exchange of aid and information for local knowledge results in a win-win situation.

When looking at the future, enlarging the network of Red Cross staff and volunteers can improve the visibility of the Red Cross. More people in the field means more focal points of the Red Cross. These vocal points can inform the inhabitants about the work the Red Cross is doing. As a result, the general awareness will be increased.

5

“If we go into the neighbourhoods, we notice that a lot of people have questions for us. This gives me the feeling that we should go out there more often.”

-Red Cross

Local knowledge

Furthermore, by ensuring local buy-in, local knowledge can be gathered. This is a valuable source of information. Having a large network of locals, to provide information of where the most vulnerable people would be situated, enables the Red Cross to provide more focussed and better help.

6

“We can see it as a two-way street. We can help them out, while we learn from them.”

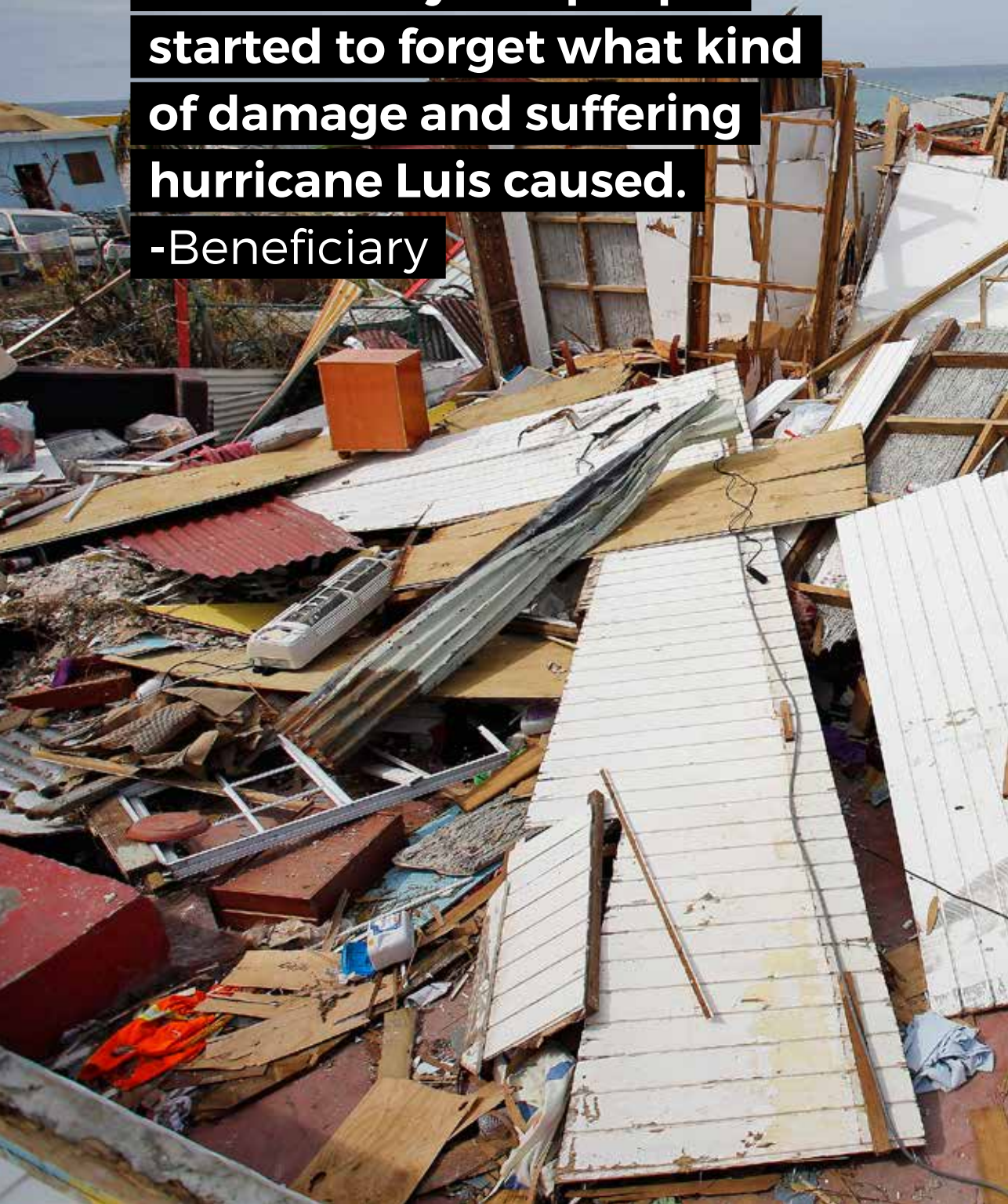
-Red Cross



Conclusion

- Need local ownership to secure long-term goals.
- Integrate the Red Cross into the communities.
- Gather more (in-depth) local knowledge.

**After a few years people
started to forget what kind
of damage and suffering
hurricane Luis caused.
-Beneficiary**





Hurricane Luis

Introduction

This chapter describes the impact that hurricane Luis had on Sint Maarten. It caused a change in mindset of the people who experienced the disaster. These people were willing to take preparation measures. However, gradually there was a decline in the awareness for disaster preparations. Both on individual and organisational level.

The older inhabitants of Sint Maarten try to compare hurricane Irma with hurricane Luis, the previous large disaster that hit the island. The opinions are divided on which of the two was the worst, as everybody experienced the hurricanes differently.

However, something everybody can agree on, is the fact that both hurricanes had a large impact on the island. The long-term impact of hurricane Irma is still unclear. This will be determined in the coming period.

The people that experienced Luis, never wanted to experience the same thing again. That is why they felt the necessity to be better prepared for coming disasters, such as Irma.

Impact

The news article on page 192 illustrates the situation in the days after hurricane Luis. It had a big impact on the lives of the inhabitants of Sint Maarten.

1

"I was still very young, but I will never forget that hurricane. I've never been so scared."

-Beneficiary

Even though it happened more than 22 years ago, it did change the mindset of some people.

2

"Hurricane Luis did definitely change Sint Maarten and the people that experienced it."

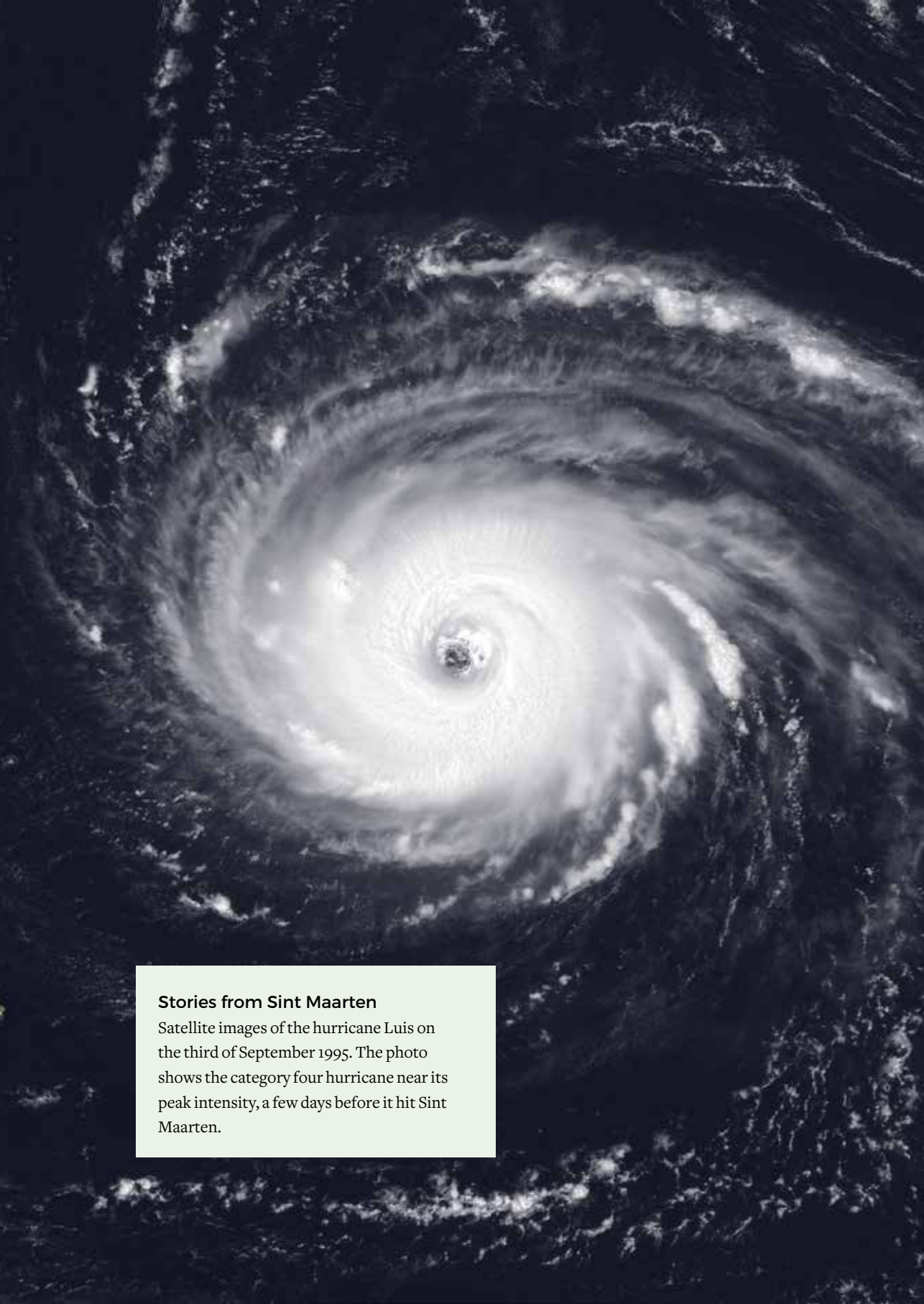
-Beneficiary

They took preparation measures to ensure that the next hurricane would not impact them as much as hurricane Luis. And with result, in general it can be said that the houses of the people who experience Luis were better prepared for hurricane Irma.

3

"The people who experienced Luis were better prepared for hurricane Irma."

-Beneficiary



Stories from Sint Maarten

Satellite images of the hurricane Luis on the third of September 1995. The photo shows the category four hurricane near its peak intensity, a few days before it hit Sint Maarten.



Stories from Sint Maarten

“The Dutch Caribbean island and especially Sint Maarten were hit by hurricane Luis. Hurricane Luis was a category four hurricane causing winds of 200 kilometers per hour, waves of 5 meters high and prolonged rainfall. This resulted in large parts of the island to be flooded. The slums, where thousands of unregistered people were living, were wiped out by Luis. On the island between 60 and 70 percent of the houses are damaged. In the Simpson Bay Lagoon more than 200 yachts are thrown on shore or sunk. The police reported a large number of cases on looting.” - Trouw, 1995.

Besides preparation measures such as buying canned food, storing large amounts of water and having a radio present, people also wanted to invest in protection for their house.

This could either be done by building their houses more hurricane proof or strengthen the existing houses with measures such as placing zinc roofs and hurricane shutters.

Individual measures

Hurricane Luis made such an impact that in the first few years people were willing to invest in better housing and other preparation measures, such as hurricane shutters for their house.

4

“The houses build after Luis were of better quality. Besides the new building regulations, people also wanted it themselves.”

-Beneficiary

Although a disaster of this scale has a large influence on the lives of the people of Sint Maarten, it doesn't stay top of mind, especially over such a long period of time.

First and foremost, this is a good thing. The hurricane traumatised many people on the island. Luckily, time can heal those wounds.

On the other hand, the momentum that the hurricane caused does give opportunity for change. On the topic of disaster preparedness, but also on more structural problems that the island is dealing with. However, the focus needs to be on 'the right kind of problems', be actually bring sustainable change.

Gradually, as the years passed, the memory of hurricane Luis became less and less. Simultaneously, the realisation of how important disaster preparedness is, also declined. Investments such as hurricane shutters were already purchased, but no new initiatives were taken to prepare for a next hurricane. Furthermore, many new immigrants, who did not experience the hurricane, arrived on Sint Maarten.

5
"After a few years people started to forget what kind of damage and suffering hurricane Luis caused."

-Beneficiary

Organisational measures

Also on organisational and government level, the sense of priority was declining with each year a hurricane season without any major hurricanes passed. The money required to maintain certain preparation measures could also be used for other purposes.

6
"Spending money on disaster preparedness doesn't win you the elections."

-Beneficiary

This shows that just using the momentum of the hurricane to advocate preparation measures is not sufficient. If in the coming years after Irma there are no major hurricanes, the priority will again shift away from disaster preparedness.



Conclusion

- Experiencing a hurricane can change mindsets.
- The sense of urgency changes over the years.
- Make use of the current momentum, while using long-term benefits for sustainable continuation.

7.2 Organisational insights

Introduction

This chapter describes the insights gathered on organisational level based on a case study of the school meal project. The school meal project, as explain in chapter 5.3, has been a collaborative effort by Open House, the Red Cross and the government of Sint Maarten. The project was able to feed 4.000 school children per day.

This case study focuses on the collaboration between Open House and the Red Cross. It uses the process of the school meal project as an example of different organisational qualities. By analysing the process and understanding the way of working of both parties, certain ‘essential qualities’ can be distilled and put to use in other contexts.

Open House

Open House is an organisation that helps to innovate the event industry by identifying its biggest challenges, bringing together key players, co-creating high-tech solutions and implementing best practices (Open House, n.d.).

Furthermore, they work together with the Netherlands Red Cross to innovation the humanitarian sector. Although the festival world and humanitarian aid seem to be worlds apart, festivals are the perfect testing ground for humanitarian aid innovation. Like refugee camps, festivals are set up to temporarily host a large number to people. Both need working infrastructures for energy, water, waste, sanitation and crowd management (Open House, n.d.). Previous collaboration resulted in innovative solutions for building shelters using renewable energy and electrical tools (Open House, n.d.).

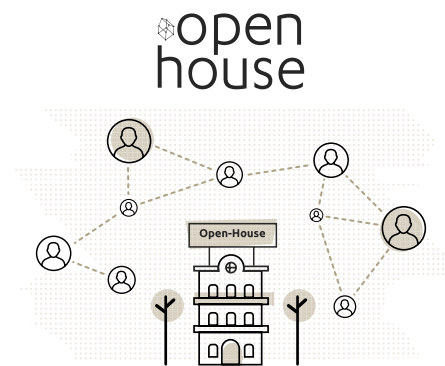


Figure 143: Open House logo & innovation at festivals.

Timeline

Figure 144 shows the timeline of the school meal project. In this timeline 4 phases can be identified.

1. Assessment & ideation

At the beginning of first phase, a team of Open House arrived at Sint Maarten. During a two-week period, assessments were made to verify whether the original idea, setting up a soup kitchen, was the best option. During discussions with the Red Cross and the government, the decision was made to set up the school meal project.

2. Setting up the project

During the second phase, the new idea of setting up the school meal project went into action. Many arrangements had to be made in a short period of time, during difficult circumstances, in order to get such a large project running. For example, a location, kitchen equipment, ingredients, (local) staff to prepare all the meals and trucks to bring them to the schools. After two weeks of hard work, the first breakfasts were served to the school children. And halfway November the first hot lunches were served.

3. Transition to the Red Cross

The third phase started with the arrival of a Red Cross delegate. During a period of one month, both Open House and the Red Cross were involved in the project. A special occasion during this transition period was the visit of the Willem-Alexander, the King of the Netherlands. Although this brought a lot of attention to the school meal project and was motivational for the staff working there, it also required investing time to prepare the visit. During this transition period, Open House handed the project over to the Red Cross.

4. Optimizing the project

The first couple of months of the project had been a hectic period. Considering the difficult circumstances the project started in, a lot had been accomplished by using a hands-on approach. However, as the project was supposed to be run by the Red Cross for a longer period of time, optimization of the project was required. A more structured approach was implemented in order to streamline the process. Also, the decision was made to outsource the preparation of the lunches to a kitchen on the French side of the island.

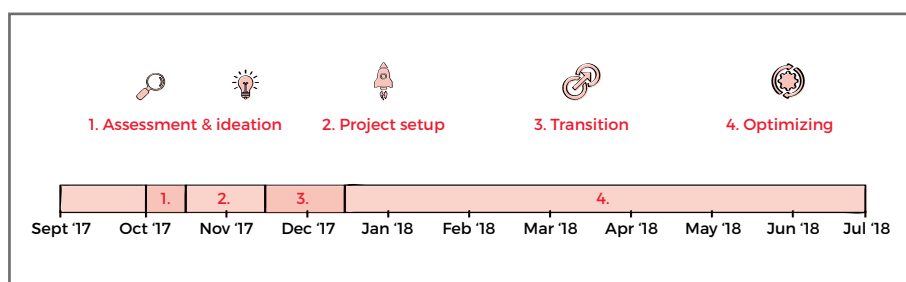


Figure 144: Timeline school meal project.

Key moments

When looking at the timeline of the school meal project, in more detail, multiple key moments can be identified. These key

moments describe important events during the course of the school meal project. Figure 145 shows an overview of these key moments.

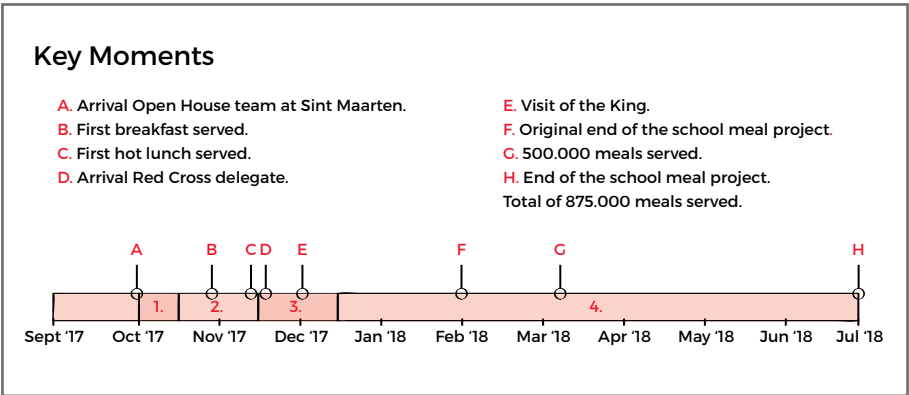


Figure 145: Key moments of the school meal project.

Involvement

A clear distinction between the involvement of Open House and the Red Cross, in the different phases of the project, can be made. Both organisations were involved in different ways during the project. As can be seen in figure 146, Open House was active in the beginning of the project (first three phases),

while the Red Cross took over the project in the last two phases. Although the Red Cross did not have a delegate present during the first two phases, they were somehow involved in the process. The Head of Mission (HoM), who was in charge of the entire relief operation, was involved to some extent.

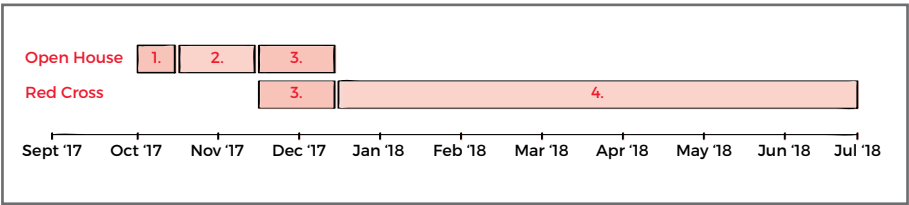


Figure 146: Involvement of Open House and the Red Cross during the school meal project.



Figure 147: Impression of the beginning of the school meal project.



Figure 148: Impression of the school meal project.

Positive

When analysing the school meal project, some positive aspects can be identified.

1. Assessment & ideation

Assessment + ideation

To come up with suitable ideas, that match the context, a good assessment needs to be made. Understanding the local context is essential for implementing new ideas.

Flexibility

The assessment showed that the original idea, setting up soup kitchens, would not be best suitable for the context. Letting go of the original plan and coming up with a new, and better, plan required flexibility.

Involvement stakeholders

Involve important stakeholders, such as the government, in the process.

Speed

The sooner the project is set up, the faster vulnerable people can be helped. Working fast is of added value.

2. Setting up the project

Hand-on approach

The difficult circumstances in the moments after a disaster require a hands-on approach. You have to work with what you got.

Creativity

As Open House has little experience in the humanitarian sector, they were not limited by existing ideas of the sector. The creativity in the team enabled them to come up with innovative solutions.

Iterating

Use the lessons learned during project, to directly implement changes and improve the project.

Decisiveness

The circumstances require a fast working approach. Being able to adjust and quickly make decisions can speed up the project.

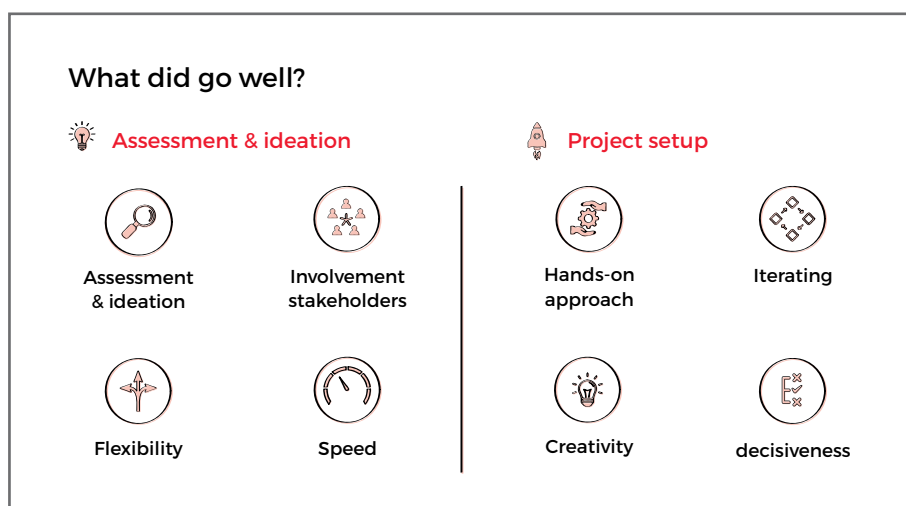


Figure 149: What went well during the school meal project.

3. Transition to the Red Cross

Visit of the king

Well organized visit. Mentioned as the highlight of the entire project by local staff and brought a lot of media attention to the project.

Red Cross knowledge

With a Red Cross delegate present, knowledge about Red Cross procedures became available.

4. Optimizing the project

Optimizing project

Improving the project to ensure less waste. Clearer roles for local staff.

Making profound changes

Not scared to implement changes, that have large consequence for the project. For example, moving the production of the lunches to the French part.

Involvement schools + parents

Involve the schools and parents in the project to see how relevant the project still is.

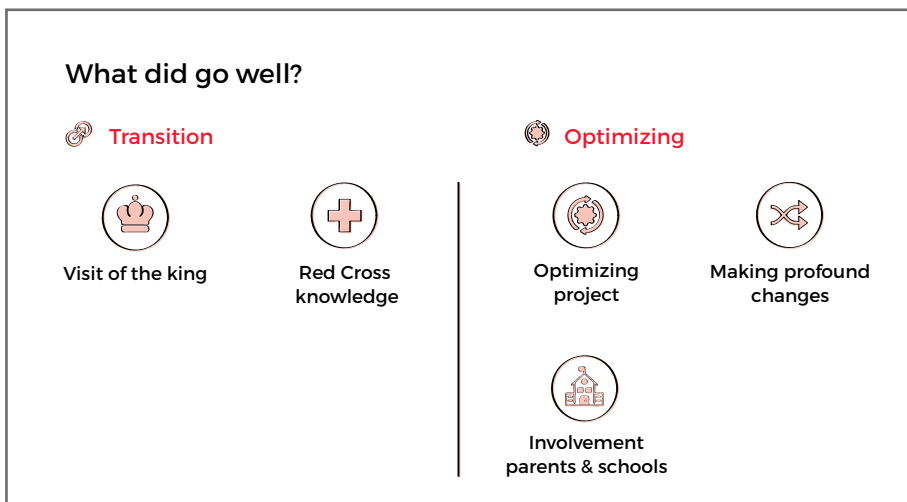


Figure 150: What went well during the school meal project.

Negative

When analysing the school meal project, some negative aspects can be identified.

1. Assessment & ideation

Lack of structure

The way of working of Open House can seem unstructured, when compared with the Red Cross. As the project was handed over to the Red Cross eventually, some initial structure could have improved the hand over.

No Red Cross delegate present

Without a Red Cross delegate present, Open House did not know how to deal with certain procedures of the Red Cross.

Roles and responsibilities

There were no clear agreements about roles and responsibilities in the project. In the hectic period just after hurricane Irma there was no time to arrange this.

2. Setting up the project

Dealing with local staff

The local staff did not feel appreciated for the work they were doing. They did not feel part of the Red Cross and not part of Open House.

Learning attitude

During this first period, a lot of knowledge could be gathered and later be shared. However, this did not really happen.

Lack of humanitarian knowledge

As Open House is not familiar with the humanitarian sector, they don't have knowledge about it.

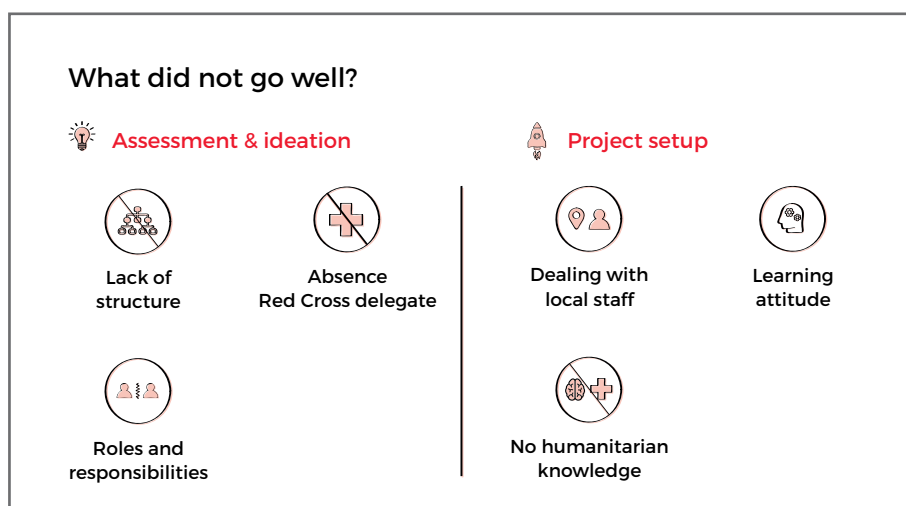


Figure 151: What did not go well during the school meal project.

3. Transition to the Red Cross

Recognition differences between organisations

There was not enough recognition for the different ways of working of both organisations. This led to frustration.

Transfer of knowledge

Most of the lessons learned were not transferred from the Open House team to the Red Cross. The same thing happened between the two Red Cross delegates. In this way a lot of valuable information got lost.

4. Optimizing the project

Lack of exit strategy

There was no exit strategy integrated from the start of the project.

Involvement local staff

Many of the local staff were involved with the project from the start. They were not used as a source of information.

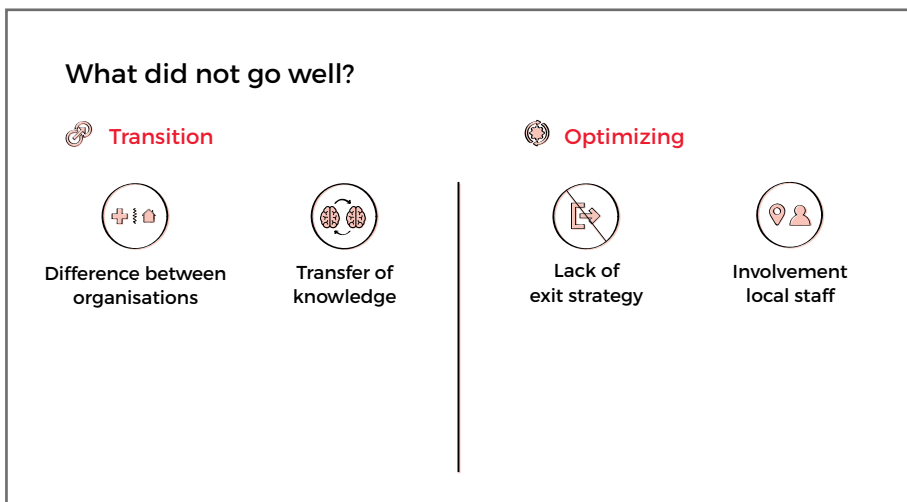


Figure 152: What did not go well during the school meal project.

Organisational insights

The analysis of the school meal project resulted in insights on an organisational level. By reviewing the project, ‘essential qualities’, from both Open House and the Red Cross were distilled. By ‘distilling’ these qualities outside the school meal project, the insights are useful outside the Open House and Red Cross collaboration.

Some of the identified qualities the Red Cross already possesses. Within the Netherlands Red Cross or within the network of the RC/RC Movement. However, other qualities are currently not present. In order to acquire these, the Red Cross either needs to work

on internal capacity building or start (new) collaborations, such as Open House or other comparable organisations.

Assuming that on the short term the Red Cross will not be able to grow their internal capacity fast enough, the following timeline will be based on the collaboration with an external organisation. Figure 153 shows a newly proposed timeline that differentiates the phases during which the Red Cross and the external party should actively participate. Phases 1, 2, 3 and 4 are the same as in the analysis of the school meal project. However, two extra phases, phase 0 and 5, have been added to the timeline.

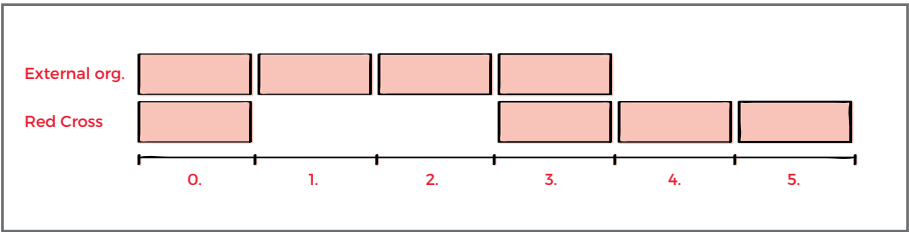


Figure 153: Newly proposed timeline for future collaborations with external organisations.

Proposed process

The different phases of the new collaborative process, as shown in figure 154, will now be elaborated. For each phase some

‘essential qualities’ can be identified. These are qualities that either, or both, of the organisations should have in order to successfully implement the different phases.

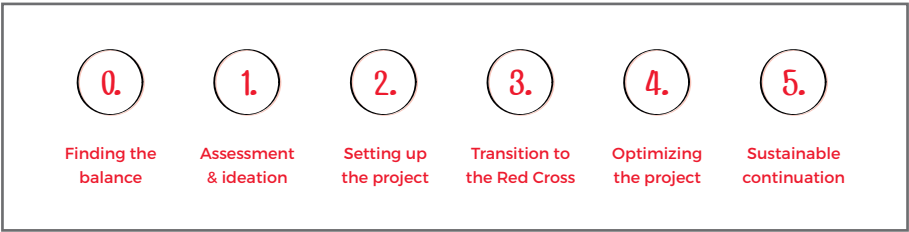


Figure 154: Phases of the new collaborative process.

O. Finding the balance

Prior to deployment of an external party, agreements have to be made about the roles and responsibilities of both parties. These discussions aim to find a balance between different factors in which the NLRC and external parties often differ. Contradictory factors such as 'freedom' vs 'procedures' and 'speed' vs 'proposals' have to be determined in a context and phase sensitive way.

Although the external party would most likely prefer as much freedom as possible, as these procedures can also be perceived as restrictions, integrating basic Red Cross procedures could benefit the project in the long-term. Making clear agreements about which procedures should be in place in each phase could benefit both parties. The agreements should be balanced enough so there is enough freedom without restrictions, but also enough structure in place to implement the Red Cross procedures later on in the process.

These discussions should take place a reasonable time before deployment, as a quick response is required when a disaster takes place.

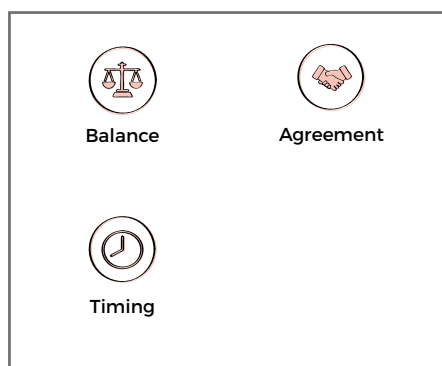


Figure 155: Characteristics phase 0.

1. Assessment & ideation

In the first phase the external party needs to conduct as quick, but high-quality assessment. With the input of the assessment, the ideations process can start. If all is well, the agreements made in phase 0 have made sure that there is enough freedom for this process and the outcome it leads to. As the ideas might be iterated, a flexible approach is required.

Furthermore, the right (local) stakeholders need to be involved in the process from the beginning. Their involvement can ensure local ownership, that will be beneficiary in the long-term. Finally, all the aforementioned needs to happen as fast as possible. Timing is essential in such disaster situations.

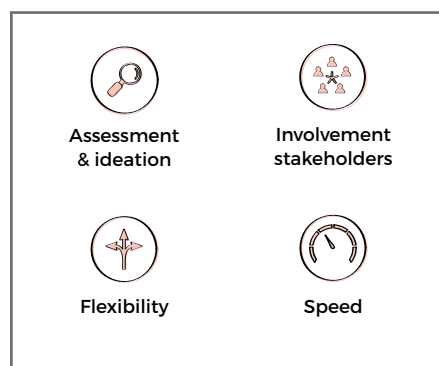


Figure 156: Characteristics phase 1.

2. Setting up the project

When the ideation phase is done, the idea needs to be implemented. The difficult circumstances in the moments after a disaster require a hands-on approach. You have to work with what you got. This means that sometimes the ideas from phase 1 don't work out after all. By being creative and keep iterating, new solutions that fit the context better can be implemented. During such a hectic period, difficult decisions have to be made fast. Spending too much time carefully considering all options will slow down the process.

During this process many insights can be gathered about the project, the context and the other stakeholders. These insights should be captured in a way that they can be transferred to the Red Cross is the next stage.

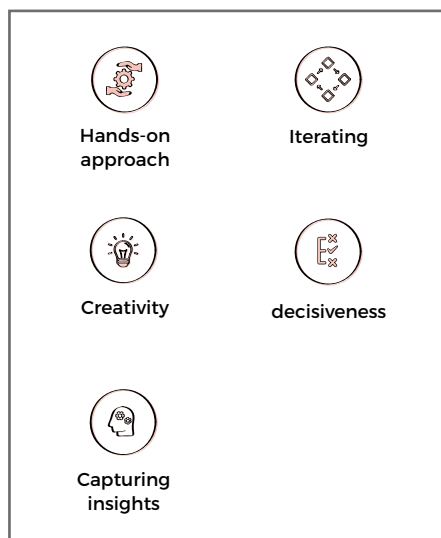


Figure 157: Characteristics phase 2.
204

3. Transition to the Red Cross

When the project is running, it should be handed over to the Red Cross as they can run it for the long-term. The agreements made prior to the deployment, can be used to make the transition happen. The duration of the phase should be long enough to transfer all necessary knowledge. Having a system in place to ensure knowledge transfer could benefit this.

This transition should be taking place while simultaneously working the project. The local staff members working the project and the beneficiaries receiving aid from the project should not suffer from this transition period.

Furthermore, the transfer of the operation from the external party to the Red Cross should also be clearly communicated towards all involved stakeholders, as the transfer could result in changes in the project and the management style.

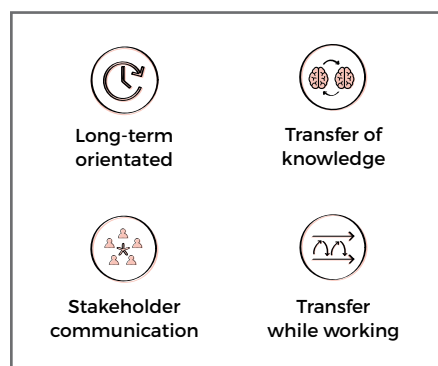


Figure 158: Characteristics phase 3.

4. Optimizing the project

After successfully transferring the project to the Red Cross, the project should make changes in order to prepare for the long term. The Red Cross has access to many experienced delegates that have the necessary qualities for such as an optimisation. Red Cross procedures, that fit the context and phase of the project and that are proven to be successful, can be used to optimize the project. This creates a more stable and constant project.

With the change in focus from short term results towards long-term results, also requires a different way of interacting with the stakeholders. Having local people involved in the project is beneficiary for the long-term, as they will have to take ownership of the project after the Red Cross leaves. As mentioned before, they should be involved from early in the process.

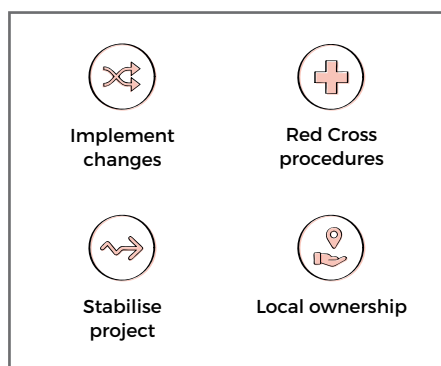


Figure 159: Characteristics phase 4.

5. Ensuring sustainable continuation

The final phase has two possible goals. First, and preferably, to ensure sustainable continuation of the project. Second, to be aware of the consequences if the Red Cross decides to stop the project. This would require an exit strategy.

To ensure sustainable continuation of the project, the Red Cross should find stakeholders that are locally involved and willing to take over the project in the future. In this phase the Red Cross will work together with this stakeholder to come up with a plan on how to transfer and continue the project.

On the other hand, if the project would not continue, the Red Cross should have an exit strategy available. This strategy should be able to deal with questions such as: What would happen at the end of the involvement of the Red Cross? What would be the consequences for the beneficiaries if the project would stop? The main focus of this stage is to ensure that there is no backlash of the ending of the project.



Figure 160: Characteristics phase 5.

7.3 Design principles

Introduction

Design principles are a set of guidelines and design considerations (IDF, n.d.). They are aimed at helping designers (and the organisations they are working with) give direction to the design process, inspire the idea generation and help making decisions (Jungleminds, 2014). The principles describe the most important elements that should be included in the solution. These ‘unifying elements’ can be used to create consistency within your solutions and iterations (Design Kit, n.d.).

Through research and combining insights, five design principles have been identified. The design principles are based on conclusions made by the TU Delft research team. Although the principles are only based on the research conducted on Sint Maarten, the principles seem valid for the entire Red Cross and Red Crescent movement. However, this needs to be confirmed during future research.

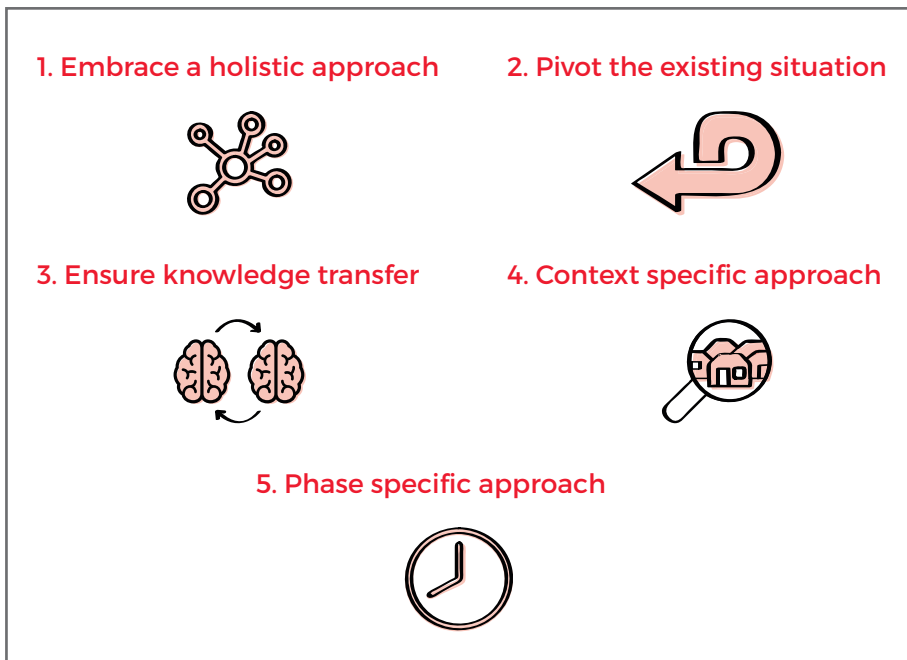


Figure 161: Five design principles.

1. Embrace a holistic approach

Holistic design is a design approach which sees a design as an interconnected whole that is part of the larger world (IDF, n.d.). It incorporates all aspects of the ecosystem into the design. It takes multiple viewpoint of the stakeholders into account. It aims to create a win-win-win situation.

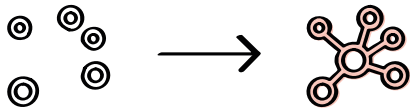


Figure 162: Embrace a holistic approach.

4. Use a context specific approach

The Red Cross is active all over the world, so are their procedures and solutions. These do not always fit the context. By making use of local knowledge, the procedures and solutions can be better aligned with the context.

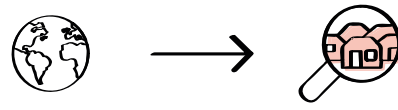


Figure 165: Use a context specific approach.

2. Pivot the existing situation

Use the disaster to pivot from the existing situation and solve problems. Use easy implementable solutions for the short-term and build sustainable new solutions to solve structural problems. Communicate the long-term benefits to all stakeholders.

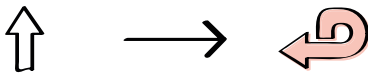


Figure 163: Pivot the existing situation.

5. Use a phase specific approach

Making a clear differentiation between phases within an operation enables the Red Cross to match a specific approach to each phase. Based on this approach, staff members with the right characteristics can be selected.

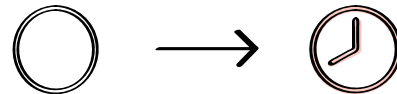


Figure 166: Use a phase specific approach.

3. Ensure knowledge transfer

The high turnover of staff requires a system to share and exchange knowledge to prevent information from getting lost. Both internal and external knowledge needs to be taken into account.

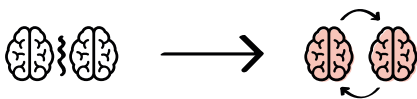


Figure 164: Ensure knowledge transfer.

7.4 Outcome

Introduction

The field visit gave the possibility to research a context in which the Netherlands Red Cross is active in the field. As a result, many insights were gathered during the two and a half weeks on Sint Maarten. During and after the field visit, while analysing the results, different ‘levels of insights’ could be identified. The insights have been structured in clusters according to the identified level of insight.

Design principles

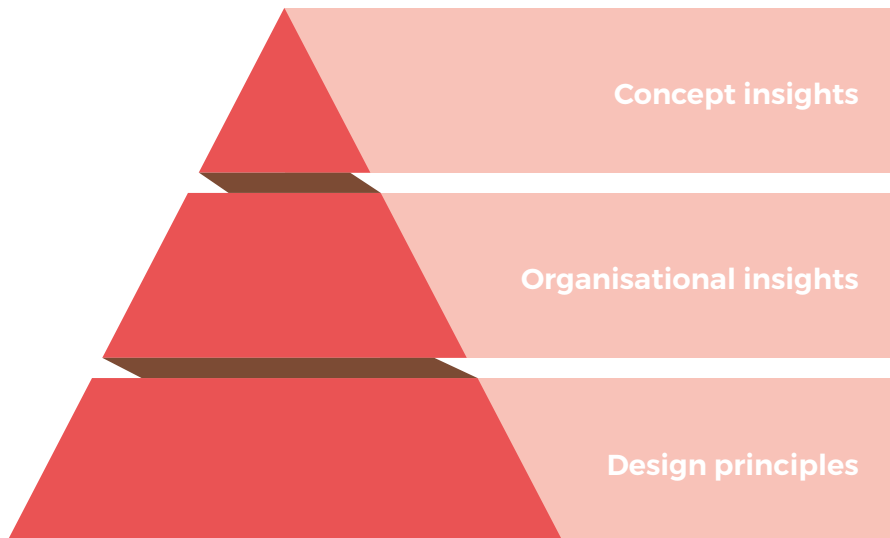
First of all, insights have been clustered in the ‘design principles’ category. The design principles are set of guidelines and design considerations (IDF, n.d.) that are valid for the entire Red Cross and Red Crescent movement. They can be used as starting point for new designs, also in other contexts where the Red Cross is active.

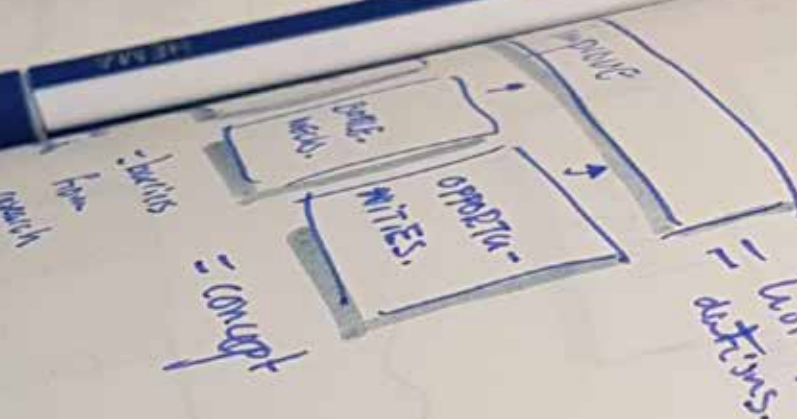
Organisation insights

Secondly, insights have been clustered in the ‘organisation’ category. This shows the current situation and gives recommendations for organisational change. These insights mostly apply to the organisation of the Netherlands Red Cross on Sint Maarten, but similarities with the entire movement have also been identified.

Concept insights

Finally, insights have been clustered in the ‘concept’ category. These insights are the inspiration and argumentation for concept solution for disaster preparedness. They are often specific for the Sint Maarten context. However, some insights are more globally and could be used in other contexts as well.





divide into
3 categories.





Chapter 8.

Concept development

In this chapter, the concept that has been developed based on the insights of chapter 7 is described. First, a recap of the main insights is given. Next, the concept is introduced by a scenario. This scenario explains the different components of which the concept consists.

Furthermore, the concept is elaborated by highlighting these components. It is structured according to the three phases of the concept: Preparation, response and long term benefits.

8.1 Introduction concept

This chapter introduces the concept that has been developed during this thesis. The concept is based on the insights that were captured during the field research and are elaborated in chapter 7.1. As the field research resulted in a large amount of insights, the most important ones are explained in figure 171. These insights are combined through multiple ‘smaller ideas’ into one holistic concept.

The concept, ‘Community Based Data Collection’, consists of three different phases: preparation, quick response and long term benefits. Each neighbourhood will have a local ‘data collector’ with knowledge of the community, which will gather relevant data for the three different phases. The data will serve a different purpose in all three phases.

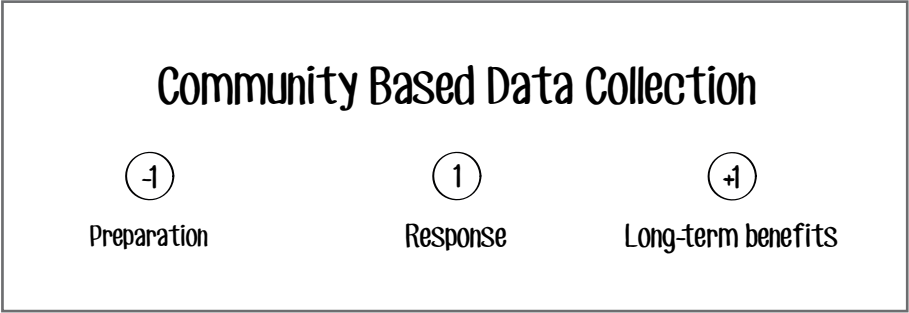


Figure 169: The concept, Community Based Data Collection, with the corresponding phases.

The scenario

The concept is introduced by a scenario, as can be seen on the following pages. This scenario consists of four parts. First, the current situation is described. Next, the preparation phase explains how the collection of data helps the Red Cross prepare for future disasters.

In the response phase, the use of data to deliver focussed aid and optimize the stream of relief goods is elaborated. Finally, the long-term benefits phase shows how besides disaster preparedness and response, the data can also be used for solving structural problems.

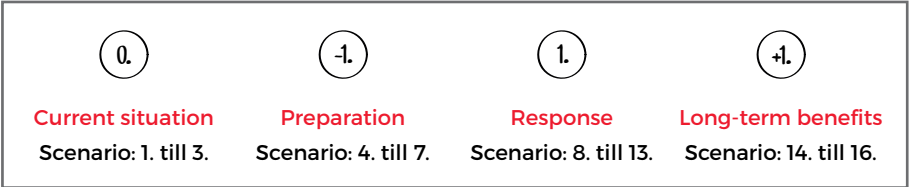


Figure 170: The four parts of the scenario.



Vulnerability

There are many vulnerable people on Sint Maarten. The Red Cross aims to help these people. They use multiple distribution approaches to do so. However, during the relief operation of hurricane Irma, many of these vulnerable people did not receive help or only after a long period of time.



Integrate into the communities

Currently, the office of the Red Cross is located at the edge of the island. The travel distance is perceived as a threshold for the beneficiaries. By integrating the Red Cross more into the communities, a win-win situation arises. The Red Cross is able to help more people, while simultaneously learning about the communities.



Isolated beneficiaries

Many of these vulnerable beneficiaries live isolated. They can be geographically isolated, because of the infrastructure or the hills and trees on the island that cover their houses. Furthermore, beneficiaries can also be socially isolated. If they don't have friends or family around, they are dependent on organisations as the Red Cross to provide them with aid.



Use current momentum

When looking at previous hurricanes that hit Sint Maarten, it can be seen that in the first few years there is a 'momentum'. This momentum, in which the memory of the hurricane is still fresh, allows changes to happen. If this momentum is not used, time will make the memory of the hurricane less 'top-of-mind' and more difficult to implement changes.



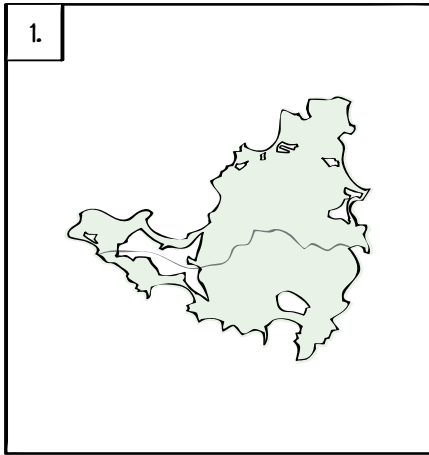
Need for local knowledge

In order to identify these vulnerable and isolated beneficiaries, local knowledge is necessary. There are multiple sources the Red Cross can use to acquire this type of knowledge. However, the relief operation showed that there was little knowledge available to identify these vulnerable people and provide them with aid.



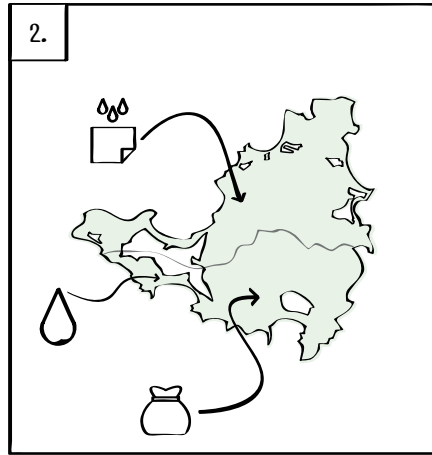
Ensure long-term benefits

The implemented changes should not only be relevant for the short-term, but also for the long-term. Having a concept that incorporates both types of benefits, can result in 'quick-wins' for the short-term, while having a sustainable future with the long term benefits.



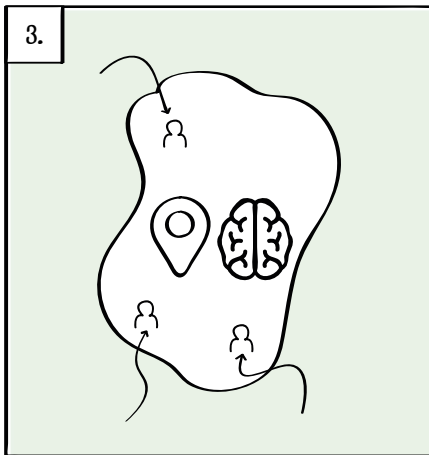
Hurricane Irma

Sint Maarten, located in the hurricane prone Caribbean, got hit by hurricane Irma last September.



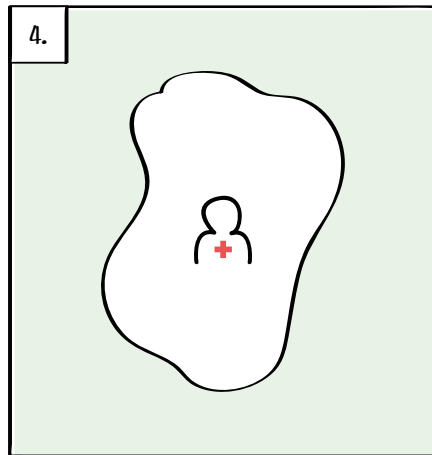
Relief goods

Luckily, the Red Cross responded. They provided the local inhabitants with relief goods such as water, food and tarpaulins.



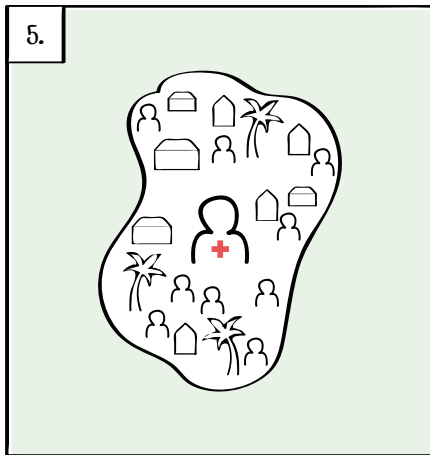
Missing local knowledge

However, the Red Cross could benefit from local knowledge to deliver more focussed aid and truly reach the most vulnerable people in the neighbourhoods.



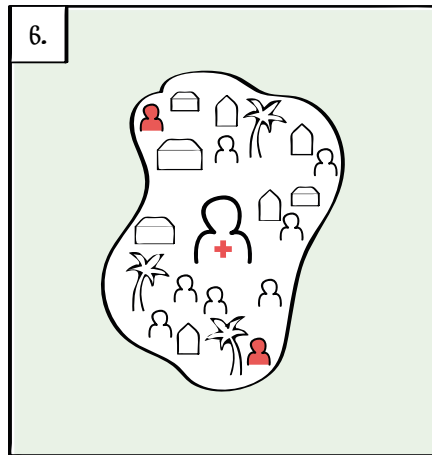
Integrated approach

Integrate the Red Cross into the community to gather essential information that enables the delivery of focussed aid.



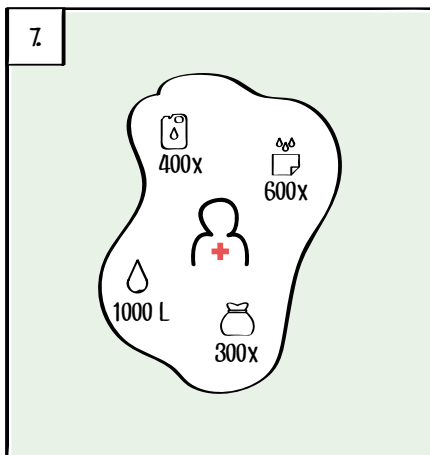
Mapping the neighbourhood

A local data collector will gather essential information to create a social map of the neighbourhood.



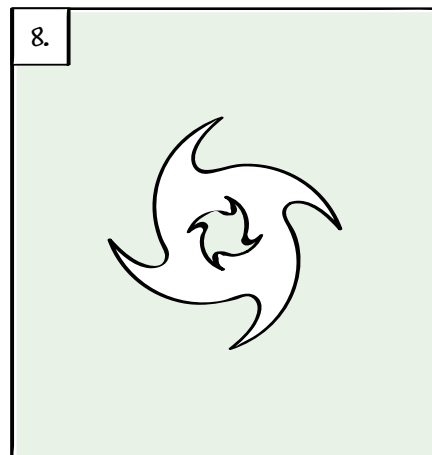
Identify the most vulnerable

The Red Cross is able to identify the most vulnerable people in the community.



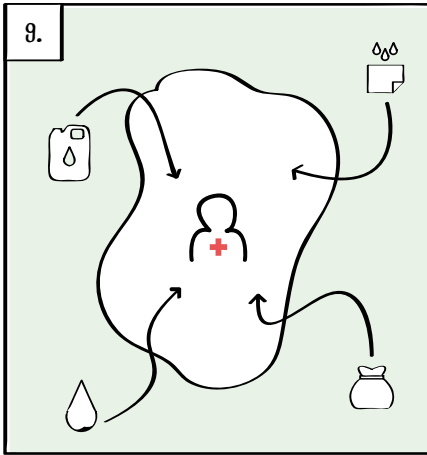
Quantified relief goods

With reliable data gathered in the community, the Red Cross is able to quantify the necessary relief goods per neighbourhood.



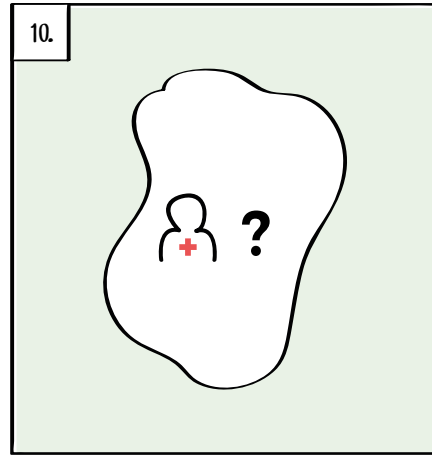
Hurricane hits Sint Maarten

A hurricane hits Sint Maarten. With the data gathered in the preparation phase, the Red Cross is able to quickly start the relief operation.



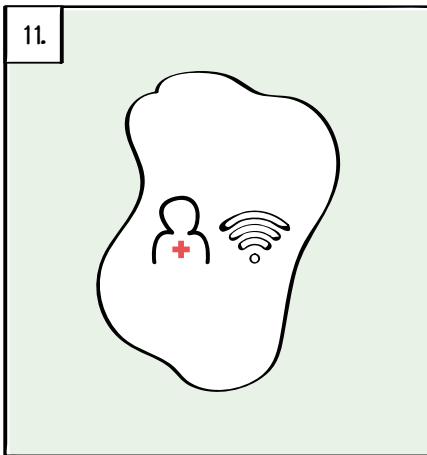
Quick start relief operation

Supported by the data collector, that is present in the neighbourhood, the Red Cross can start moving relief goods into the neighbourhoods.



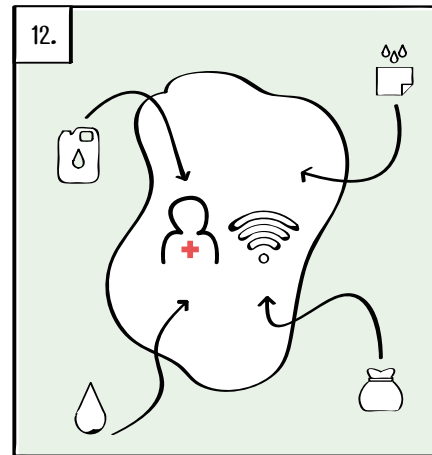
A changed situation

Even though preparations have been made, a disaster on this scale can completely change the situation.



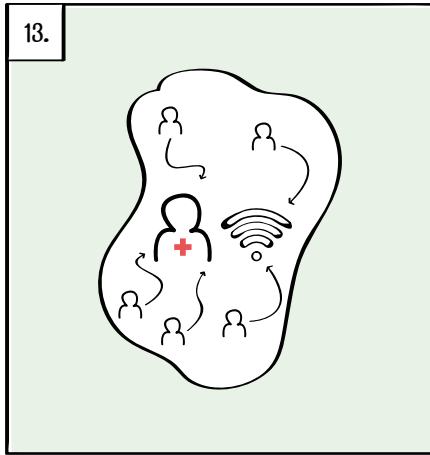
Real time data

Having a communication system in place that enables real time data collection can optimize the stream of relief goods.



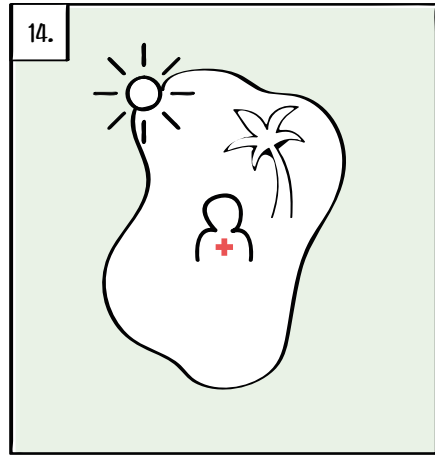
Data based distribution

Data based distribution gives a clear insight into how relief goods are distributed.



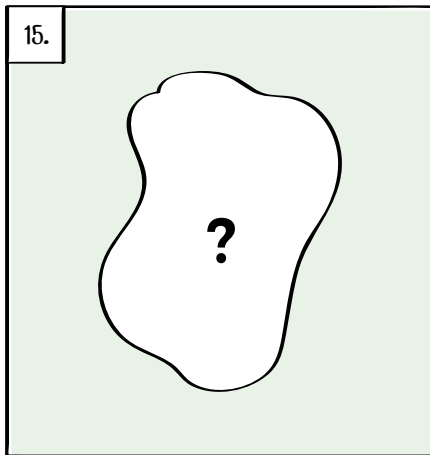
Community connection

The communication system will be at a meeting point. This physical connected spot can improve communication for both the inhabitants and the Red Cross.



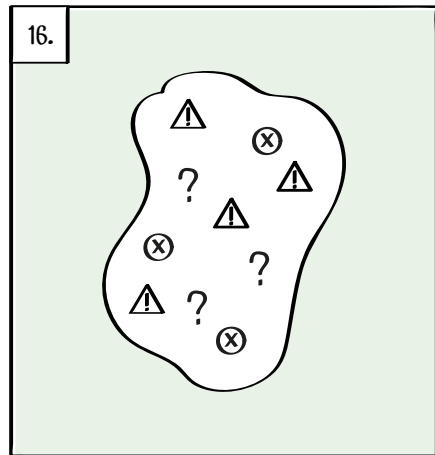
No hurricane hits Sint Maarten

Fortunately Sint Maarten doesn't get hit by a hurricane in the coming years. What is the added value if there are no disaster situations?



Missing database

Not only for the Red Cross is there little data available for Sint Maarten, but for other organisations as well. There is no central statistics agency.



Mapping structural problems

While there are a lot of structural problems on Sint Maarten that could be targeted if there was trustworthy data available.

8.2 Elaboration

In the scenario an abstract representation of a neighbourhood on Sint Maarten is shown. In order to provide aid to the most vulnerable, the Red Cross should have inside knowledge about this neighbourhood. They should know who these people are, where they live and what their needs are. This knowledge enables them to provide aid in a focussed and efficient way. Although the Red Cross makes use of different sources of local knowledge and (big) data, they are currently not able to reach the most vulnerable people in this neighbourhood. The following sources of local knowledge can be identified:

1. Sint Maarten Red Cross branch

The first source of information is the local branch. The Sint Maarten branch of the Netherlands Red Cross has been active on Sint Maarten for many years. The local staff has knowledge about the island, the neighbourhoods and the people. They can be found in the neighbourhoods during their field work. Many of the local staff and volunteers are from the vulnerable neighbourhoods themselves. Although this knowledge existed before hurricane Irma, it proved to be insufficient in the moments after the disaster.

2. “510”

The second source that can be used is “510”, an initiative of the Netherlands Red Cross. They started their preparation in the week

before the hurricane. In disaster response it is crucial to have maps up to date. Knowing there were many makeshift buildings unmapped on the island lead to a request to the ‘mapping community’ to map the Dutch side of the island (510 Global, 2017). After the hurricane Sint Maarten would be covered by clouds, which would make using satellite imagery for damage assessment useless. Team members of 510 were sent to Sint Maarten to map the island with drones and manage all the incoming information.

The data gathered by 510 global provided a lot of insights and proved to be very valuable for the damage assessment. However, the data only shows what happened at the outside of the house (e.g. damaged buildings on drone footage). Who lives in the house, what happened in the house and what the needs are unknown.

3. Community council

Finally, the community councils are used as a source of information. The community councils know the social landscape of the neighbourhood and thus can provide the Red Cross with valuable information. Besides a general overview of what is happening within a community, they often also know what is happening ‘behind closed doors’. These kinds of insights are essential in reaching the truly vulnerable people.

Combining sources

To create an overview of what is happening within a neighbourhood and identify the most vulnerable people, all these sources of information have to be brought together. The different sources bring in different levels of local knowledge. In total five levels have been identified. From general knowledge on the island, to specific knowledge on what is happening inside the houses. An estimation of the types of knowledge that are currently available on the island is shown. As can be seen in figure 172, in theory the three different sources cover all five levels of local knowledge.

However, during the relief operation it became clear that this was not the case in practise. The community councils were not able to provide the Red Cross with the information that they needed. This resulted in a knowledge gap. In order to be less dependent on the community councils, the Red Cross should integrate more into the communities to collect the relevant data.

This can be done through the proposed concept: ‘Community Based Data Collection’.

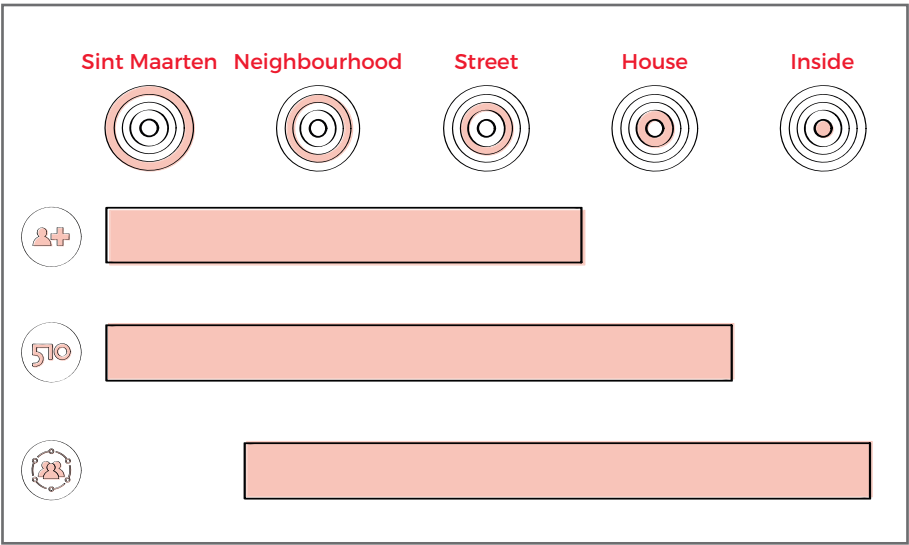


Figure 172: Three sources of local knowledge should cover all five levels of local knowledge.

As the scenario gave a first impression of the concept, this chapter will elaborate some of the details of the concept. This is done by highlighting some aspects of the tree different phases of the concept: preparation, response and long-term benefits.

-1: Preparation

Matches ambition of NLRC

The goal of mapping the different neighbourhoods on Sint Maarten matches with the ambition of the Netherlands Red Cross. In 'Red Cross projects in the Caribbean' (Rode Kruis, 2017) a proposal is formulated to 'map vulnerable communities

at the Caribbean islands'. This means that not only vulnerable communities on Sint Maarten will be mapped, but also at the other overseas branches (Aruba, Bonaire, Saba, Curacao and St. Eustatius).

Integrating this project proposal into the 'Community based data collection' concept creates a win-win situation. The data that collected when mapping vulnerable communities can be shared in order to prevent double work. On the other hand, the collaboration also gives the opportunity to scale up the 'community based data collection' concept and implement it also at the other Caribbean islands.



Figure 173: Proposal to map vulnerable communities at the Caribbean islands.

Collaborate with other organisations

The Red Cross is just one of the many organisations that are active on Sint Maarten. Some of these organisations are there temporary, while other are there permanent. All of these organisations have specific knowledge about the island and the inhabitants, however, currently this information is not shared. Many organisations work in an isolated way.

Learning from other organisations and sharing insights can be benefit all involved parties. For example, 'the White Yellow Cross', an organisation that is active in the healthcare, with a special focus on the elderly, has a large source of information about one of the most vulnerable groups on the island: the elderly.

Current programming

During previous and current projects of the Red Cross, data about the beneficiaries has been gathered. Currently, as most projects operate individually and there is little collaboration, the data that is gathered is also not shared. Creating a database with the gathered data of all different projects would already result in a large source of information.

Especially as the types of data gathered are quite different. For example, the data from the 'food voucher project' has a focus on the financial situation of the beneficiaries. Additionally, the information gathered during the 'house repair project' has a more social focus. The house visits also aimed to gain insight about the home situation of the beneficiaries.



Figure 174: Organisations that are / were active on Sint Maarten.



Figure 175: Data collection at the food voucher project.

Sharing economy relief goods

The main part of the concept focuses on collection data about beneficiaries in order to map the most vulnerable people on the island. Another aspect that could be mapped are resources. In this way a map of all the resources that are currently present on the island can be created.

For example, if the Red Cross can identify how much water each hotel has always in stock, this water can be used as prepositioned stock when Sint Maarten gets hit by another hurricane. Furthermore, other resources such as food could be identified. A restaurant always has a certain amount of hamburger in their freezer. These will get spoiled without electricity to power the freezer. The Red Cross could facilitate a barbeque in order to provide food to the people while preventing food to spoil.

The term resources could be interpreted in the broadest sense possible. Besides water and food, resources such as shelter, tools or even skills can be identified. This part of the concept changes the role of the Red Cross from a ‘provider’ towards a ‘facilitator’.

The sharing economy is not a new concept outside the humanitarian sector. All over the world there are platforms that allow people to ‘map their own resources’ and share them to others. Both materialistic and unmaterialistic. For example, the Dutch platform ‘Peerby’, which allows neighbours to borrow or rent tools from each other. Furthermore, the platform ‘Skillshare’ allows people to learn new skills through courses made by their peers. The Red Cross could be inspired by these kinds of platforms and develop a sharing economy that fits both Sint Maarten and the humanitarian sector.

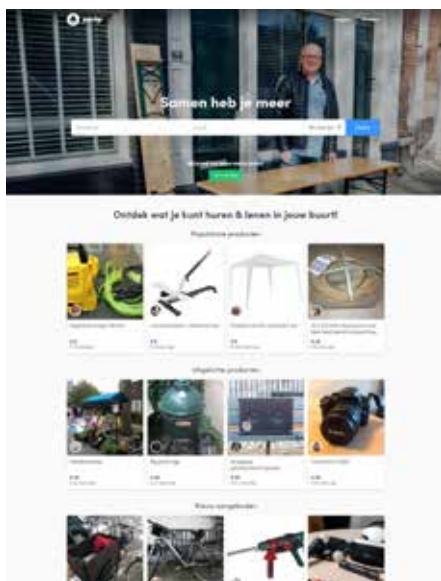


Figure 176: Screenshot of the Peerby website.



Figure 177: Screenshot of the Skillshare website.

1: Response

Communication system

One of the identified problems in the first moments after the hurricane was the lack of communication. The destructive forces of the hurricane caused all the communication channels to be down. Without the means to communicate, many of the beneficiaries could not contact their family and friends in order to check how they were. This negatively influences the psychological state of people, as they were anxious and worried.

Luckily, there are currently product available that could provide emergency communication channels for large groups of people. Products such as ‘MeshPoint’, as can be seen in figure 178, provide internet access for groups up to 400 people. It was developed to provide Syrian refugees with the possibility to get in contact with their family and acquire necessary information. Furthermore, it could be used to help coordinate aid workers, volunteers and response teams in crises situations (MeshPoint, 2017).



Figure 178: Screenshot of the MeshPoint website.

Real time data collection

Having such communication channels in place also gives the opportunity for real time data collection. This could optimise the stream of relief goods, as it gives insights into how much relief goods are needed per location. This allows the logistical means to be used more efficiently.

This idea also matches with the ambition of 510, the data initiative of the Netherlands Red Cross, to work with real time data. System that would be necessary to work in such a way do already exist. Logistics companies such as 'UPS' and 'PostNL' use comparable systems. Collaborating and learning from these types of companies could result in a real time data system that is suitable for humanitarian purposes.



Figure 179: Potential partners for real time data collection.

Disaster response ambassador

The branch of the Sint Maarten Red Cross is currently working on a new project: disaster response ambassadors. In this project volunteers are recruited in each neighbourhood to be trained to response after a disaster. These ambassadors could be complementary to the 'data collectors' that will be active in the same neighbourhoods. The ambassadors could help in gathering data, as they are from the neighbourhood and are related to the Red Cross.



Figure 180: Advertisement Disaster Response Ambassador.

+1: Long term benefits

Solving structural problems

An important aspect of the concept is the fact that it should have benefits in the case that there is no large disaster in the coming years. One of the benefits is that it could help solving the more structural problems that exist on the island.

Currently, it is quite known that there are many structural problems on the island. However, there is no data available to identify how large the problems exactly are and where the problems take place. This is not only the case for the Red Cross, but also for the government and other organisations.

Besides collecting relevant data for disaster preparedness, but also data about the structural problems, gives the opportunity to target these and solve these problems. This can either be done by the Red Cross, or another organisation, such as UNICEF or the White Yellow Cross, that are specialised in solving specific problems.

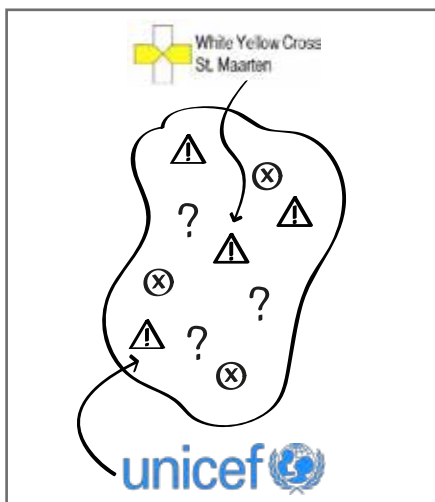


Figure 181: Potential partners for solving structural problems.

New business models

Having access to such a large amount of data also brings opportunities for new business models in order to make the project financially independent. Selling the data to other NGOs that want to solve problems on Sint Maarten (or the Caribbean), but don't have the information about the size and location of the problem, creates a win-win situation.

Not only can the costs of the project be shared by multiple organisations, but the organisations can also benefit from the information that has been gathered.

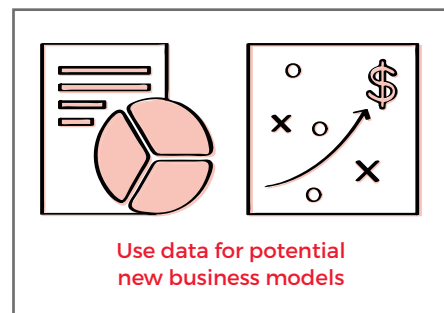


Figure 182: Use data for potential new business models.





Chapter 9.

Symposium

This chapter gives a short impression of the symposium 'How to innovate Humanitarian Aid' that was organised at the Faculty of Industrial Design Engineering. It discusses the three topics of which this symposium consisted. One of these topics was a presentation about this graduation project.

9.1 Symposium

On the 30th of August 2018, a mini-symposium on 'How to Innovate Humanitarian Aid' was organised at the Faculty of Industrial Design at the Technical University Delft. The symposium consisted of the following subjects:

- What hurricane Irma tried to tell us - about the results of design research executed on St. Maarten.
- Graduation presentation Paul van der Veen - a case study on disaster preparedness on St. Maarten.
- Panel discussion about innovation & humanitarian aid - what can be done to innovate humanitarian aid?

The aim of this symposium was to present the (preliminary) result of the Delft Design Lab 'The Big Picture'. The symposium brought together people from multiple disciplines, amongst others there were attendees from the Netherlands Red Cross, the faculty of Industrial Design Engineering, the faculty of Technology, Policy and Management and Oxfam Novib

During the Q&A of the presentations and the panel discussion the findings of the research were discussed and input for future research was gathered.



Figure 183: Impression of the minisymposium 'How to Innovate Humanitarian Aid'.

MINI SYMPOSIUM, THURSDAY THE 30TH OF AUGUST:

How to innovate humanitarian aid?

presented by:  



schedule:

- > **What hurricane Irma tried to tell us**
About the results of design research executed on St. Maarten
- > **Panel discussion about innovation & humanitarian aid**
What can be done to innovate humanitarian aid?
- > **Graduation presentation Paul van der Veen**
A case study on disaster preparedness on St. Maarten

when / time: Thursday the 30th of August 2018 / 9.00 - 12.30 / free entrance
where: TU Delft, Faculty Industrial Design Engineering, IDE Arena
<https://www.tudelft.nl/en/ide/organisation/contact/how-to-get-here/>
organisers: The Netherlands Red Cross: Michel Becks
TU Delft, Faculty Industrial Design Engineering, Delft Design Labs:
Jeroen van Erp, Maaike Kleinmann, Rebecca Price & Paul van der Veen




Figure 184: Poster of the minisymposium 'How to Innovate Humanitarian Aid'.






Chapter 10.

Conclusion & recommendations



This chapter aims to answer the formulated research questions by concluding the insights from the conducted research. It is structured according to the three subtopics: enablers, bottlenecks and opportunities.

Furthermore, it discusses the possible limitations of the thesis and the used research methods.



Finally, it gives recommendations for the further development of innovation at the Netherlands Red Cross.

10.1 Conclusion

In chapter 1.2 - project context - the problem that the Red Cross, and other humanitarian organisations, are dealing with is described. Global trends are causing an increasing amount of people in need for humanitarian aid. Consequently, the costs for humanitarian aid are increasing. In order to fulfil the mission of the Red Cross, different ways of working are required. Innovation will support the improvement of the humanitarian system, by using new methods, techniques and services to increase the impact of the help they provide.

As the 'Humanitarian Innovation Team' of the Netherlands Red Cross currently does not have the time, resources and methodologies to execute a research regarding the integration of innovation into the organisation, the following research question was formulated:

Research Question:

How can humanitarian innovation at the Netherlands Red Cross be improved?

In order to try answering this complex research question, the following three sub-questions were formulated.

Sub Question 1:

What enables humanitarian innovation at the Netherlands Red Cross?

Sub Question 2:

What are the bottlenecks of humanitarian innovation at the Netherlands Red Cross?

Sub Question 3:

What are the opportunities for humanitarian innovation at the Netherlands Red Cross?

The relation between the research question and the three sub-questions is illustrated in the following figure.

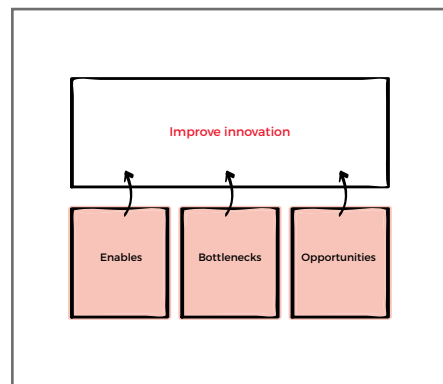


Figure 185: Schematic overview of the research questions.

What enables innovation?

In chapter 2 - literature review - nine enabling factors for innovation are identified through literature research. Furthermore, during the field research 'design principles' and 'organisational insights' that could improve the innovation within the Red Cross were identified.

Enabling factors

Literature shows that the following nine factors enable innovation within an organisation: *culture, strategy, communication, process, resources, measurement, capability, roles and positioning*. Although the two ethnographic researches gave initial insights into the state of innovation within the Netherlands Red Cross, further research is required to determine the status of these nine factors within the Netherlands Red Cross.

Design principles

Based on the insights gathered during the field research, five design principles were formulated. The design principles act as guidelines, helping Red Cross staff members give direction in the design process, idea generation and decision making. Following these principles could enable innovation within the Netherlands Red Cross.

The design principles are as following:

1. Embrace a holistic approach
2. Pivot the existing situation
3. Ensure knowledge is transferred
4. Use a context specific approach
5. Use a phase specific approach

The principles seem to be valid for the entire Red Cross and Red Crescent movement. However, this needs to be confirmed during future research.

Organisational insights

The case study on the school meal project, in which the Red Cross collaborated with Open House, gave insights into the Red Cross as an organisation. It showed the qualities and competencies that are currently available within the organisation. Furthermore, it shows that through collaboration, missing qualities such as: creativity, ideation, speed, hands-on approach and decisiveness, can be implemented into projects.

What are bottlenecks of innovation?

In chapter 4 - Innovation at the Red Cross - the key insights from the ethnographic research at the headquarters of the Netherlands Red Cross are discussed. The main bottlenecks of innovation that have been identified are:

Donor structure

The current donor structure limits the possibility for innovation as the donor criteria are perceived as restricting. Furthermore, as the Red Cross is dependent on funding from donors, the proposals aim to 'please the donors' instead of doing what is best for the beneficiaries.

Project proposals

The project proposals do not only capture the goal of a project, but also how it should be accomplished. Besides that the approach needs to be predetermined, it also needs to be a proven concept in order to be accepted.

Organisational silos

The organisational structure of the Netherlands Red Cross is based on different 'silos'. These silos hamper collaborations and holistic thinking, which negatively influences the ability to innovate.

Headquarter assumptions

Projects that are based on assumptions that are present at the headquarters, could lead to a mismatch with the field. Projects that are based on insights gathered at the field, connect better with the local context.

Opportunities for innovation

In chapter 8 - concept development - the proposed concept is explained. This concept is a concrete opportunity for innovation for the Netherlands and Sint Maarten Red Cross. The concept consists of multiple ideas that are combined to a holistic whole.

Community based data collection

This concept, 'community based data collection' consists of three different phases: preparation, quick response and long term benefits. Each neighbourhood will have a local 'data collector' with knowledge of the community, which will gather relevant data for the three different phases. The data will serve a different purpose in all three phases. The concept has the following ideas integrated:

Communication system

The field research indicated an absence of communication means in the first moments after the hurricane. To solve this problem, there are communication systems available on the market, especially designed for the humanitarian sector. However, a pilot is necessary to test how this would work within the way of working of the Netherlands Red Cross.

Sharing economy relief goods

The idea 'sharing economy relief goods' consists of three different phases: preparation, quick response and long-term benefits. The concept is based on the fact that there are resources available on Sint Maarten. However, it is currently not clear what and where these resources are available.

The resources (in the broadest sense e.g. human resources, relief goods, shelter, food, water) can be mapped by the Red Cross during the preparation phase, so they can be used accordingly during the other two phases.

Solving structural problems

Although it is known that there are structural problems on Sint Maarten, little is known about the size and the exact location of these problems. By mapping these structural problems, the Red Cross can target and solve these problems. Furthermore, the Red Cross could share the gathered data with other organisations that are specialized in solving some of these problems.

Role of the Red Cross

Some aspects of the concept require the Red Cross to take up another role as usual. Traditionally, the Red Cross fulfilled a 'providing' role in the humanitarian response. For example, providing relief goods by shipping or flying them to the disaster area. In this concept the Red Cross takes up the role as 'facilitator'. Either by connecting different organisations and sharing the necessary information, or by facilitating the sharing of resources by businesses and individuals.

10.2 Limitations

In this chapter, some limitations of this thesis are discussed.

- *Field research was only at Sint Maarten:*

Although the field research was very valuable and resulted in many interesting insights, it is only one context in which the Red Cross works.

The Netherlands Red Cross currently has 16 partner national societies, which all work in different contexts. Even within one country there is a difference in contexts. For example, whether the Red Cross is active in a rural or urban area.

Furthermore, the culture of the country in which the Red Cross is active has a large influence on the way aid should be provided. Although there are certainly (cultural) differences between Sint Maarten and the Netherlands, they are both relatively prosperous, western countries.

It would be interesting to conduct design research in a context with different cultural values. This research would enable the findings and insights from this thesis to be verified.

- *Concept needs to be developed further:*

As the time working on this thesis is not unlimited, there are aspects of the concept that have not been developed yet.

The foundation of the concept has solid argumentation through the extensive research that has been conducted. However, many of the details of the concept require to be elaborated. Currently, there are still many uncertainties and questions. These are a potential danger, as they make the concept less convincing.

The aim of the design method is to have a concept to show and convince the Red Cross staff members of the added value of design. A concept that has not been fully developed might work counterproductive.

10.3 Recommendations

For the continuation of this collaboration the following recommendations have been formulated:

- *Stimulate organisational change:* Changes in the organisation and culture of the Netherlands Red Cross, such as embracing the design principles, will only find support if staff members have concrete examples to relate to. This must be done through 'leading by example'.

- *Create a concrete case on Sint Maarten:* Although the concept has been introduced in this thesis, it still needs to be developed further. The Netherlands Red Cross should develop this concept further through pilot projects, in collaboration with the TU Delft and other actors such as 510.

- *The role of the Red Cross:* Some aspects of the concept (e.g. sharing economy relief operation) require the Red Cross to take up a different role as usual. It requires the Red Cross to move from a traditional 'providing' role to a 'facilitator' and 'connector' role. This change in role, and the corresponding mindset that is required, opens an interesting area for innovation within the humanitarian sector.

- *Explore different contexts:* Although Sint Maarten is a very interesting context to research, it does make this research biased. Sint Maarten is just one context in which the Red Cross is active, while there are many others all around the world. Exploring other contexts allows some of the insights to be verified, while exploring new opportunities.

In conclusion, to kickstart the preferred (cultural) organisational changes, opportunities that have been discovered in this thesis need to be further developed and implemented in practise through pilot projects. Furthermore, by simultaneously researching new contexts, the results of this thesis can be verified and new areas for innovation can be discovered.



Chapter 11.

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General

Figures: 1, 8, 10 - 13, 15- 18, 22, 24 - 35, 44 - 47, 69, 83, 92, 95, 96, 98, 100, 102, 110, 116, 131, 133, 136, 144 - 167, 169 - 172, 182, 185
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Chapter 1

Figure 2: Some examples of global trends: rebel fighters in Ethiopia, Syrian refugees near the Jordan border & destruction by typhoon Haiyan in the Philippines.

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Figure 3: Organisational structure of the Red Cross organisation.

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Figure 4: ICRC in a warzone in Syria.

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Figure 5: IFRC in action in Peru after floodings.

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Figure 6: The Netherlands Red Cross National Assistance at the Dutch festival Pinkpop.

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Figure 7: Examples of work of the Red Cross and Red Crescent Movement.

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Figure 9: Logos of Technical University Delft, Delft Design Labs and The Netherlands Red Cross.

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Chapter 2

Figure 14: Enabling factors of innovation.

Own illustration, based on Innovation Audit Bond.

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Chapter 3

Figure 19: Ethnographic research 1: The Netherlands Red Cross office.

Photo by Jette Swinkels, 2018.

Figure 20: Ethnographic research 2: Field visit on Sint Maarten.

Photo by Rebecca Price, 2018.

Figure 21: Characteristics Human-centered Design.

Own illustration, based on 'Field Guide to Human Centered Design' by IDEO.

Chapter 4

Figure 23: Innovation 'topic cards'.

Photo by Paul van der Veen, 2018.

Figure 36: Logo Philippines Red Cross.

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Figure 37: Logo Lebanese Red Cross.

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Figure 38: Logo Malawi Red Cross.

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Figure 39: Logo Sint Maarten Red Cross branch.

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Figure 40: Volunteers from the Philippines Red Cross rescue residents from their flooded homes.

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Figure 41: The Lebanese Red Cross in a Syrian refugee camp in al-Sahel, Akkar, north Lebanon.

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Figure 42: The Malawi Red Cross at a new water pump.

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Figure 43: Volunteers of the Sint Maarten Red Cross in the neighbourhoods identifying the needs.

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Chapter 5

Figure 48: The view from Fort Amsterdam over the Great Bay. Philipsburg can be seen in the distance.

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Figure 49: The Border Monument located between Philipsburg and Marigot. Founded for the celebration of 300 years of Sint Maarten and Saint Martin.

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Figure 50: The Great Salt Pond next to Philipsburg in 1920 (left) and in 2017 (right).

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Figure 51: Postal card of 'Front Street and the Catholic Church in Philipsburg'. Impression of Sint Maarten in the 1970's.

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Figure 52: Front Street in Philipsburg, the shopping street in Sint Maarten.

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Figure 53: Maho beach.

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Figure 54: The Sint Maarten Cruise Port terminal near Phillipsburg.

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Figure 55: Inhabitant of the neighbourhood Dutch Quarter washing clothes by hand.

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Figure 56 & 57: Red Cross instructor teaching first aid & the Red Cross office 'The Base'.

Michelle Hamers, The Netherlands Red Cross, 2017.

Jeroen van Erp, 2018.

Figure 58: Hurricane Irma's path through the Caribbean.

Own illustration. Based on: National Hurricane Centre, UNITAR/UNOSAT.

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Figure 59: The effect of different category hurricanes.

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Figure 60: Satellite images of hurricane Irma.

NOAA / Reuters, 2017.

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Figure 61: Aerial footage of the aftermath of hurricane Irma.

Gerben Van Es / Dutch Defense Ministry via AP, 2017.

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Figure 62: Photo of Hotel Mercure, in Marigot, Saint Martin.

Lionel Chamoiseau / AFP / Getty, 2017.

Retrieved from: <https://www.theatlantic.com/photo/2017/09/photos-from-saint-martin-after-hurricane-irma/539103/>

Figure 63: Boats thrown on land by the destructive force of hurricane Irma.

Retrieved from: <https://www.theatlantic.com/photo/2017/09/photos-from-saint-martin-after-hurricane-irma/539103/>

Figure 64: Inhabitant of Sint Maarten returning to her home that was destroyed during the hurricane.

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Figure 65: Red Cross volunteers of the Curaçao Red Cross.

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Figure 66: The Netherlands Red Cross office in the Hague.

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Figure 67: The giro number opened by the Netherlands Red Cross for donations to Sint Maarten.

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Figure 68: The action centre of the national action day in Hilversum.

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Figure 70: Red Cross distribution point.

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Figure 71: Beneficiaries in line near the Red Cross distribution point.

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Figure 72: Overview of the relief operation.

Illustration based on Rode Kruis infographic (2018).

Figure 73: Disaster management cycle.

Own illustration. Based on Wajong (2017).

Figure 74: Long-term programming Netherlands Red Cross on Sint Maarten.

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Figure 75: School meal project.

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Figure 76: House repair project.

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Figure 79: School meal project.

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Figure 80: Food voucher project.

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Figure 81: House repair project.

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Figure 82: Waste2work.

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Chapter 6

Figure 84: TU Delft research team.

Photo by Rebecca Price, 2018.

Figure 85: Red Cross evaluation team.

Photo by Maud Broeken, 2018.

Figure 86: Impression of phase 1 of the field research.

Photos 1, 2, 3 by Rebecca Price, 2018. Photo 4 by Jeroen van Erp, 2018. Photo 5 by Maaïke Kleinsmann, 2018.

Photo 6 by Paul van der Veen, 2018.

Figure 87: Impression of phase 2 of the field research.

Photo 7 by Jette Swinkels, 2018. Photos 8, 9, 11, 12 by Paul van der Veen, 2018.

Photo 10 retrieved from: <https://www.sxm-talks.com/wp-content/uploads/2016/11/page3a193-1.jpg>

Figure 88: Examples of interactions with stakeholders.

Photo by Rebecca Price, 2018.

Figure 89: Examples of design integration & dialogues with stakeholders.

Photos by Rebecca Price & Maaïke Kleinsmann, 2018.

Figure 90: Looking at the context from different perspectives.

Photos by Jeroen van Erp, Paul van der Veen & Jette Swinkels, 2018.

Figure 91: Examples of different meetings organized by the TU Delft research team on Sint Maarten.

Photos by Rebecca Price & Maaïke Kleinsmann, 2018.

Chapter 7

Figure 93: Inhabitants of Sint Maarten comforting each other.

ANP/Arie Kievit, 2017. Retrieved from: Rode Kruis, beeldbank.

Figure 94: House damaged by hurricane Irma.

Photo by Paul van der Veen, 2018.

Figure 97: Photo of Audrey.

Photo by Jeroen van Erp, 2018.

Figure 99: A family collection bottles of water at a Red Cross distribution point.

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Figure 101: Stuffed animal between the rubble.

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Figure 103: Vehicles and debris from destroyed houses and trees & Sint Maarten inhabitants observe the damage done by hurricane Irma in Philipsburg.

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Figure 104: Houses destroyed by hurricane Irma.

Photo by Paul van der Veen, 2018.

Figure 105: House heavily damaged by hurricane Irma.

Photo by Paul van der Veen, 2018.

Figure 106: A group of men replacing the tarpaulin on the roof with corrugated zinc plates.

Photo by Jeroen van Erp, 2018.

Figure 107: House hidden away in a neighbourhood on Sint Maarten.

Photo by Jette Swinkels, 2018.

Figure 108: Red Cross meeting with the community council.

Michelle Hamers, 2018. Retrieved from: <https://www.rodekruis.nl/dossiers/sint-maarten/>

Figure 109: Red Cross staff members handing out food vouchers.

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Figure 111: Imagery of Sint Maarten before and after hurricane Irma.

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Figure 111: Photo from view point on Sint Maarten.

Photo by Paul van der Veen, 2018.

Figure 112: An example of an isolated house.

Photo by Maaïke Kleinsmann, 2018.

Figure 113: An example of an isolated house.

Michelle Hamers, 2018. Retrieved from: Rode Kruis, beeldbank.

Figure 114: Cay Hill, Sint Maarten.
Photo by Paul van der Veen, 2018.

Figure 115: Handing out water from a water truck.
Retrieved from: <https://cdn.cnn.com/cnnnext/dam/assets/170912121641-caribbean-st-martin-island-aid-super-169.jpg>

Figure 117: Beneficiary making a three-minute call with the help from the tracing team.
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Figure 118: Beneficiaries waiting at a Red Cross distribution point.
ANP/Arie Kievit, 2017. Retrieved from: Rode Kruis, beeldbank.

Figure 119: Logistics at a Red Cross distribution point.
ANP/Arie Kievit, 2017. Retrieved from: Rode Kruis, beeldbank.

Figure 120: Red Cross water and food distributions.
ANP/Arie Kievit, 2017. Retrieved from: Rode Kruis, beeldbank.

Figure 121: Beneficiaries waiting at a Red Cross distribution point.
ANP/Arie Kievit, 2017. Retrieved from: Rode Kruis, beeldbank.

Figure 122: Data collection through verification of personal information at the food voucher project.
Photo by Paul van der Veen, 2018.

Figure 123: Red Cross volunteers preparing for conducting a survey.
ANP/Arie Kievit, 2017. Retrieved from: Rode Kruis, beeldbank.

Figure 124: The food voucher online register.
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Figure 125: The Red Cross Sint Maarten branch office
Michelle Hamers, 2018. Retrieved from: Rode Kruis, beeldbank.

Figure 126: Red Cross staff members preparing lunch for the school meal project.
Michelle Hamers, 2018. Retrieved from: Rode Kruis, beeldbank.

Figure 127: Red Cross staff members preparing lunch for the school meal project.
Michelle Hamers, 2018. Retrieved from: Rode Kruis, beeldbank.

Figure 128: Local staff members working the school meal project kitchen.
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Figure 129: Schoolchildren with the breakfast provided by the Red Cross.
Rode Kruis, 2017. Retrieved from: <https://www.rodekruis.nl/wp-content/uploads/2017/11/schoolkinderen-met-kratten.jpg>

Figure 130: Red Cross staff speaking with inhabitants of Middle Region.
Michelle Hamers, 2018. Retrieved from: Rode Kruis, beeldbank.

Figure 132: First aid instructor teaching CPR at the Red Cross office.
Michelle Hamers, 2018. Retrieved from: Rode Kruis, beeldbank.

Figure 134: First aid instructor teaching CPR at the Red Cross office.
Michelle Hamers, 2018. Retrieved from: Rode Kruis, beeldbank.

Figure 135: Red Cross staff identify needs of the inhabitants of Sint Maarten.
ANP/Arie Kievit, 2017. Retrieved from: Rode Kruis, beeldbank.

Figure 137: Conducting surveys in the neighbourhoods during the evaluation.
Photo by Jette Swinkels, 2018.

Figure 138: Red Cross staff helping beneficiaries clean up their house.
ANP/Arie Kievit, 2017. Retrieved from: Rode Kruis, beeldbank.

Figure 139: Red Cross staff members working in the neighbourhood.
ANP/Arie Kievit, 2017. Retrieved from: Rode Kruis, beeldbank.

Figure 140: Buildings destroyed by hurricane Irma.
ANP/Arie Kievit, 2017. Retrieved from: Rode Kruis, beeldbank.

Figure 141: Satellite images of hurricane Luis.
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Figure 142: The aftermath of hurricane Luis
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Figure 143: Open House logo & innovation at festivals.
Retrieved from: <https://www.open-house.nl/>

Figure 168: The authors note book used during the field research.
Photo by Paul van der Veen, 2018.

Chapter 8

Figure 173: Proposal to map vulnerable communities at the Caribbean islands.

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Figure 174: Organisations that are / were active on Sint Maarten.

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Figure 175: Data collection at the food voucher project.

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Figure 176: Screenshot of the Peerby website.

Retrieved from: <https://www.peerby.com/one>

Figure 177: Screenshot of the Skillshare website.

Retrieved from: <https://www.skillshare.com/>

Figure 178: Screenshot of the MeshPoint website.

Retrieved from: <https://meshpoint.me/>

Figure 179: Potential partners for real time data collection.

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Figure 180: Advertisement Disaster Response Ambassador.

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Figure 181: Potential partners for solving structural problems.

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Chapter 9

Figure 183: Impression of the minisymposium 'How to Innovate Humanitarian Aid'.

Photo by Maaike Kleinsmann & Els Hageman, 2018.

Figure 184: Poster of the minisymposium 'How to Innovate Humanitarian Aid'.

Jeroen van Erp, 2018.

Paul van der Veen
October 2018