

Humanitarian innovation: strengthening organizational and operational capabilities through novel approaches

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by

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Disclaimer

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Executive Summary

The growing number of crises throughout the world, combined with the limited availability of resources, has pushed the humanitarian sector to change its approach to crisis response. This has led humanitarian organizations to shift towards more innovative and sustainable ways and solutions. For the past decade, the concept of humanitarian innovation has gained in popularity. However, its exact meaning is still poorly understood by many.

The purpose of this exploratory research is to investigate how humanitarian organizations can foster internal innovation and improve crisis response through innovative approaches and partnerships with the private sector. The study is centered around key objectives. First, it aims to learn the benefits of encouraging innovation within humanitarian organizations and to identify the obstacles that organizations encounter when trying to accelerate humanitarian innovation. Furthermore, it tries to find various tools and approaches which help to stimulate innovation at organizational level. Finally, it attempts to assess the impact of collaboration with the private sector.

The findings show that fostering innovation within humanitarian organizations can greatly improve their operations' effectiveness and efficiency. Nonetheless, a variety of barriers emerge when innovating. They include restrictive funds, rigid internal procedures and reluctance to change. However, nurturing a culture of innovation and breaking down some barriers can be enabled by clearly defining the concept of innovation and educating organizations' leaders and members. Additionally, encouraging open communication and incorporating innovation into operations could be valuable for humanitarian organizations. Practical tools and approaches for promoting innovation were identified, such as establishing dedicated innovation units and stimulation mechanisms related to innovation.

Several key recommendations are raised to encourage innovation and enhance both internal and external operations. These involve leveraging technologies while keeping in mind their ethical implications. Moreover, making use of networks and innovative funding, as well as adapting procedures would be meaningful to achieve this purpose.

Finally, the success of partnerships with private companies can be ensured by aligning strategic goals, communicating clearly, finding mutually beneficial outcomes, and effectively negotiating intellectual property rights.

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List of Acronyms

AHP	Accountability to Affected Population
ALNAP	Active Learning Network for Accountability and Performance in Humanitarian Action
DFID	Department for International Development
GAHI	Global Alliance for Humanitarian Innovation
GPHI2	Global Partnerships for Humanitarian Impact and Innovation
HGC	Humanitarian Grand Challenge
HIF	Humanitarian Innovation Fund
ICRC	International Committee of the Red Cross
IFRC	International Federation of the Red Cross
MDH	Misinformation, Disinformation, and Hate Speech
MSF	Médecins Sans Frontières (Doctors without borders)
NGO	Non-governmental organizations
OCHA	Office for the Coordination of Humanitarian Affairs
UN	United Nations
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
WAHA	Women and Health Alliance
WASH	Global Water, Sanitation, and Hygiene
WFP	World Food Programme

1. Introduction

The humanitarian sector is by definition a field of constant emerging challenges across the globe. Humanitarian actors, who always had an innovative spirit, are known to strive to devise new ways to reach and assist the most vulnerable. Yet, the increasing number and diversity of crises requires humanitarian organizations to explore unprecedented approaches and solutions to address challenges such as population displacement, climate change, armed conflicts, epidemics, malnutrition, natural disasters, and many others.

In fact, 326 million people around the world needed humanitarian assistance in 2022. Unfortunately, only 218 million of these individuals received assistance, leaving millions of others behind (OCHA, 2022). This existing gap between the demand for humanitarian assistance and the response's rate for affected populations underlines the importance of acting on time and ensuring future emergencies responses are not jeopardized. Nevertheless, some humanitarian organizations already have initiated interesting actions to better address the mounting challenges, but some obstacles are observed when trying innovative approaches to enhance their operations' effectiveness.

Therefore, this study aims to explore new ways for humanitarian organizations to foster internal innovation to ultimately improve their response to crises, but also the potential of establishing more collaborations with the private sector. The research question is: **How can humanitarian organizations foster internal innovation and improve response to crises through innovative approaches and private sector collaboration?**

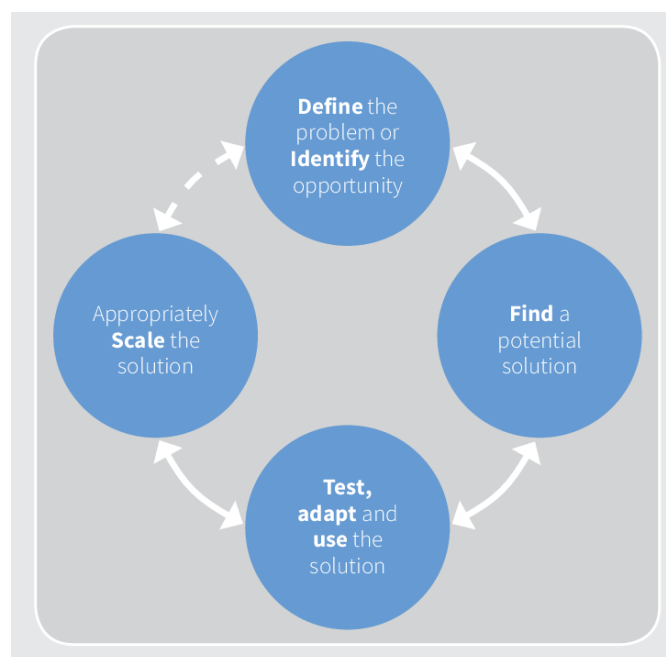
The assumption made was that humanitarian innovation could, in terms of efficiency and effectiveness, greatly benefit humanitarian organizations' internal operations like finance or HR practices for instance, and their response to crises. The qualitative report tries to achieve several research objectives. Indeed, it aims at identifying barriers that humanitarian organizations face when innovating internally; to determine the benefits of giving more room for innovation; to determine how humanitarian organizations can have a culture of innovation and identify the tools and methods to foster it; and finally, to evaluate the impact of implementing innovative approaches and the impact of collaborating with the private sector. By delving into the subject area and exploring, this report provides insights and recommendations for humanitarian organizations to stimulate innovation, thereby making their operations more effective and more efficient.

2. Literature review

2.1 Innovation

The word innovation is often misunderstood by individuals who tend to believe that innovation is something absolutely new and radical (Kahn, Kenneth B. 2018). It is often confused with the term invention which refers to anything that has never been done before (Merriam-Webster, 2017). However, innovation in the business context is defined as a way to adapt and improve by finding and scaling solutions to problems in a variety of forms, such as products, processes, or business models (Betts and Bloom, 2014; McKinsey, 2022). This last definition of innovation will be used during the whole project. Figure 1 illustrates the innovation process, which begins with identifying the problem, followed by proposing potential solutions. Next, the chosen solution is tested, adapted, and implemented before it is ultimately scaled up.

Figure 1 - The innovation process



Source: Betts and Bloom (2014, p. 14)

2.1.1 Technology in the humanitarian world

Generally speaking, technological innovations aim to help people make their life better. OCHA, in its report *“Humanitarianism in the network age”*, provides data that highlight that we are living in the network age where it is important to flag that information sharing should be considered as a basic need (OCHA, 2013). It uses an interesting quote from Don Tapscott, author and professor who said: *“This is not an information age, it’s an age of networked intelligence, an age of vast promise”* (OCHA, 2013: 9). The report argues

that present humanitarian practice did not take advantage to make a better usage of information by the new technologies such as mobile phones and social media. It also suggests that these practices failed to exploit the partnerships made available by the network era. As a fact the humanitarian world is constantly changing, it is essential for humanitarian organizations to adapt accordingly in order to achieve their objectives. Three forms of adaptation are suggested:

1. It is imperative that humanitarian aid organizations modify their approach to incorporate new data sources. People can get more accurate and trustworthy information by using methods like crowdsourcing and crowdseeding, “*with sophisticated analysis layered over big open data*” (OCHA, 2013: 43).
2. To adapt, humanitarians must work with new partners and employ new techniques. Open dialogue between conventional humanitarian actors and a wider range of stakeholders, including the communities they support, should be a part of this continuing process.
3. Humanitarian organizations need to understand the basic principles of sharing information as a basic need to better address challenges faced in the field and prevent avoidable disasters like deaths of people in famine contexts for instance.

Therefore, adaptation is to be at the heart of their activities. The OCHA report underlines that if humanitarian organizations foster innovation within the context of their continuing operations, a more effective humanitarian system can be achieved (OCHA, 2013).

For humanitarians and the populations they seek to assist, it is crucial to acquire up-to-date and precise information to be adequately prepared to provide prompt and appropriate responses. On top of that, the information will be useful to better assess the potential drawbacks and benefits as well as to gather the required resources (Belliveau, Joe 2016). In its paper, Belliveau identifies three key areas that are essential for ensuring and maintaining humanitarian access. Those areas are access to information; physical access; and enhancing quality and monitoring resource use. Some technology-based innovations have been tested in the field such as the use of drones or the use of bar codes scanned with smart phones to track voucher-based food distributions. While these innovations can lead to improve aid delivery effectiveness, it is felt by humanitarian actors that it cannot be at any cost, specifically at the cost of core principles such as impartiality or neutrality that might be violated. Other challenges may arise, creating a potential gap between humanitarians and those in need. Therefore, organizations should not over-rely on technology (Belliveau, Joe 2016).

2.2 Humanitarian Innovation

The term humanitarian innovation refers to the application of innovation to improve responses and assistance (Betts and Bloom, 2014). While this term has long been used in the humanitarian sector, it recently regained popularity. In fact, in 2009 the *Active Learning Network for Accountability and Performance in Humanitarian Action* (ALNAP) was the first actor to provide comprehensive ideas on innovation in the humanitarian sector which helped to raise awareness of innovation. Prior to this date, there were some thoughts and ideas regarding how the private sector's adoption of management principles and techniques had given a boost to the humanitarian sector in terms of innovation (Bloom and Faulkner, 2015). Today, there are still gaps in understanding the way innovation should be led in humanitarian contexts and challenges though ALNAP provides 15 cases studies they conducted in the field on humanitarian innovation to reach a broader audience in terms of awareness (Obrecht, Warner, 2016). There is a growing conviction that focusing on innovation in the humanitarian is crucial, yet this conviction appears to be growing at a much slower pace than the private sector (HERR, 2011).

Following ALNAP's extensive insights provided on innovation in the humanitarian sector in 2009, the Department for International Development (DFID) of the UK launched a 3 million pounds investment in innovation that same year. Since then, humanitarian organization started to reflect more and encourage new perspectives on innovation processes (Betts and Bloom, 2014). Programs have been launched which are designed to encourage innovation in the humanitarian sector, by providing support funds and helping in scaling up solutions to humanitarian organizations. Three broad categories have been developed in Betts' and Bloom's report (Betts and Bloom, 2014):

1. Grants and Finance
2. Research and Development
3. Collaborations and Networks.

To provide some examples, the *UN Innovation Network*¹ for collaboration and networks, the *Harvard Humanitarian Initiative & Humanitarian Academy* for research and development, or *Innovation Funds*² for grants and finance.

¹ Multiagency

² UNICEF and UNHCR

Another such global initiative is the Humanitarian Grand Challenge (HGC), which aims to unite a variety of actors and provide funds and support to humanitarian organizations to develop and scale up their solutions (HGC, 2020). The HGC identifies four distinct areas addressable with innovation which need special attention under emergency situations. These areas refer to access to life-saving information; health supplies and services; water, sanitation, and hygiene (WASH); and finally access to energy. These programs emerged in a context where the whole humanitarian system started to understand the need to innovate.

In addition, in the private sector acceleration programs exist with the goal of giving support, coaching, mentoring, and providing funds to startups (Hathaway, 2016). In fact, there is the *Humanitarian Innovation Accelerator Programme* that acts as other acceleration programs with the only difference of accelerating the development of startups who find solutions to address the global challenges in humanitarian contexts with technology-powered solutions (WFP, 2020). In 2021, 52 innovative projects have been funded with an impact on 9 million people in 67 different countries in the globe.

2.2.1 Increasing awareness

In 2012, amid growing awareness of the need for innovation in the humanitarian sector, the HERR already called attention to the need for strong leadership nationally and internationally, expanded partnerships and more innovation. This aims to improve the humanitarian response during time of crises and disaster. To make this a reality, it stresses the importance to ensure that necessary skills and incentives are in place to enhance overall response capabilities (DFID, 2012).

Existing strategies are developed aiming at improving efforts during crises on an evidence-based approach³ and increased accountability to build resilience and save lives. In other words, to identify the best methods and approaches for this purpose (DFID, 2012). The DFID considers the evidence-based approach as crucial for improving humanitarian responses during crises and disasters. By connecting innovation with evidence, it allows humanitarian organizations to identify which innovations contribute to long-lasting gains in outcomes. This approach makes it easier to make informed decision-making and helps organizations focus on the most effective strategies, which would likely lead to a higher likelihood of achieving better results.

³ An evidence-based approach refers to the process of making decisions and implementing actions based on the best available evidence, often derived from research and data analysis.

When the idea of innovation gained traction in the sector, humanitarian professionals expressed their dissatisfaction with the sector's leadership which failed to promote and cultivate innovative ideas such as new approaches and creative thinking (White and Levitt, 2008).

2.2.2 Evidence-based approach

Bloom and Faulkner suggest that innovation without any evidence of its impact is meaningless and does not contribute to raise awareness. However, applying an evidence-based approach in humanitarian assistance faces challenges. Such challenges refer to testability of important questions, inaccurate population estimates, irrelevant nutrition surveys, inadequate health service metrics, rapidly changing circumstances, restricted physical access, political implications, power differences between outsiders and affected people, ethical concerns, budget constraints, and short time frames for information collection in rapid-onset emergencies (Bradt, David 2009; Knox and Darcy, 2014). Despite the apparent logic of providing effectiveness evidence, the adoption of innovative approaches in humanitarian approaches is unlikely to occur without demonstrating their effectiveness. In order to demonstrate that adopting new practices will have a long-term impact on humanitarian response, evidence-based innovation is essential (Bloom and Faulkner, 2015) because it fosters trust among many parties, including donors, humanitarian organizations, and the affected communities (DFID, 2012). As Betts states:

“there can be no innovation without evidence”; unless we can measure the impact of pilots and have metrics – standards for measurement – for what success or failure mean, then attempts to innovate are likely to be dead-ends, and potentially even harmful. Yet we have few good metrics for innovation, and monitoring and evaluation standards in the area remain underdeveloped.” (Bloom and Faulkner, 2015: 24)

An article from Forbes promotes this evidence-based innovation approach where one of the most important elements is understanding the customer. This latter can be translated by the affected people in the humanitarian context (Forbes, 2021). More specifically, the study of 21,000 executives found that increasing consumer awareness (36%) and investing in emerging technology (32%), are the top initiatives for businesses that value innovation. It highlights that pairing customer understanding and emerging technologies' investment is important as inputs for an evidence-based innovation approach. Companies should concentrate on using the right customer research methods and carrying out rigorous experiments with new technologies. Those businesses may alter their industries by using an evidence-based approach to innovation, much like how

evidence-based medicine enhances patient outcomes (Forbes, 2021). The DFID similarly highlights the need for a strong understanding of risk through data-driven approach and reporting to drive effective and innovative response (DFID, 2012: 4).

Regarding this approach, Bloom and Faulkner also mention that “many labs also benefit from open innovation with the private sector, partnering to exchange knowledge and resources”, which implies that it promotes increased collaboration and can produce superior results (Bloom and Faulkner, 2015: 10).⁴ Open innovation refers to “the concept of using a wide audience to contribute to innovation” (Bloom, Louise 2014: 3). Leveraging the collective wisdom of a large group of people is an effective way to stimulate innovation. In recent years, the widespread availability of online technologies has made it increasingly popular to seek contributions from a diverse range of individuals.

2.2.3 Innovation labs

There is now a growing conviction that innovation is a valuable way of thinking and conducting activities at the organizational and system level (Bloom and Faulkner, 2015). In addition, Bloom and Faulkner discuss the numerous benefits of “innovation labs”⁵ that exist within UN agencies. In their paper, innovation labs are defined “as physical or virtual spaces that enable and support the innovation (technological or otherwise) of those who participate in the space” (Bloom and Faulkner, 2015: 8). Innovation spaces accelerate the creativity and critical thinking of their participants through a range of activities and events. Spaces may take the form of working units, labs, networks or centres that are established with a focus on supporting innovation within a particular organization or environment. The innovation process is seen as a potential source of creating solutions, which is the final goal, for various existing problem in the humanitarian world. Two strategic approaches, known as “innovation imperatives”, utilized by innovation labs to realize this goal involve fostering organizational change and empowering communities to drive their own change. Bloom and Faulkner believe that a more innovative and flexible organization will be better equipped to deliver services to its intended population (Bloom and Faulkner, 2015).

In their paper, Betts and Bloom distinguish between two kinds of innovation. The first type concentrates on products, services, and technologies, whereas the second involves organizational-level changes (Betts and Bloom, 2013). Regarding changes at the

⁴ The concept of innovation labs will be described further

⁵ Also called « innovation spaces »

organizational level, those refer to how humanitarian organizations adjust and enhance their internal processes, structures, and management practices to better address the needs of crisis-impacted communities. This translates into a top-down approach where humanitarian organizations develop and execute ideas for the affected population. However, it is suggested that a bottom-up approach, which actively engages affected communities in designing, implementing, evaluating, and scaling solutions, is more likely to be effective. Despite humanitarian organizations often claim to consider all stakeholders' views and involve affected communities in every stage of program design and execution, the reality often falls short of these claims (Ramalingam et al., 2010).

2.2.4 Factors for humanitarian innovation

Humanitarian innovation is spurred by four major factors which have been identified by Betts and Bloom. Those factors are: a growing demand driven by humanitarian actors, donors, and the evolving needs of the affected communities for new business model; advancements in technology development; increased partnerships; and private sector engagement (Betts and Bloom, 2014). For these latter, according to Niall Boot, a GOAL⁶ global WASH advisor, there is importance to link the humanitarian sphere with social entrepreneurship and impact funds given that it can have a significant impact on the humanitarian field by facilitating sustainable solutions and fostering better collaboration in addressing complex crises (BIARI, 2018; Boot, 2014).

2.2.4.1 New business model

Humanitarian caseload rises over the years and becoming more complex (Kiley, Penny 2009; Tran et al., 2021). There are expectations that unprecedented events will be caused by climate change, the scarceness of natural resources or pandemics. As a result, those problems will badly affect some fragile and weaker states where political instability and risk will deepen. On the other hand, it is argued that the national capacity of dealing with crises will expand and should be reinforced. In other terms, the capacity of dealing is expected to grow, and it's important to support and enhance this development. Kiley and Harvey propose that national governments must play a deeper role in times of crises instead of having mainly an international community's intervention (Kiley, Penny 2009; Harvey, Paul 2010). Kiley defines the international community as the alliance "of aid donors, UN agencies, international NGOs and some private-sector companies" (Kiley, Penny 2009: 5) working together to respond to emergencies and

⁶ GOAL is an international humanitarian and development organization working to relieve the suffering of the world's poorest and most vulnerable people.

crises. She expects that the default response will shift to a hybrid model where governments would take on a stronger role in crises responses while working alongside with international organizations, instead of the traditional approach where international alliances dominated this role. Thus, based on the expected increase in the frequency of extreme events and the significance of gradual changes, a new business model for humanitarian assistance is needed. The new approach should “be less focused on events and more focused on pattern and structures” (Kiley, Penny 2009: 5). At the same time, it is crucial to consider not only extreme events but also their underlying causes, while upholding the ethical principles of humanitarian action. This new and more sustainable approach should be linked to broader issues like poverty, vulnerability, and governance. The major funding issues that the ICRC is currently facing or the inability of the UN to respond to the recent earthquakes in Syria and Türkiye for instance (RTS, 2023; UN Türkiye, 2023) emphasizes the need to shift to a better model where capabilities and funds can be used more efficiently to deal with the increasing complexity and number of crises. Indeed, the insufficient funding from states and the lack of resources demonstrate that international organizations lack the potential to support the responses on their own. Because of this, a hybrid model may result in more sustainable and domestically funded solutions (Kiley, Penny 2009). The new model could also look for more innovative sources of financing and more partnerships with institutions whose core activities are not humanitarian aid (Betts and Bloom, 2014).

2.2.4.2 Social enterprise

The European Commission defines a social enterprise as “an operator in the social economy whose main objective is to have a social impact rather than make a profit for their owners or shareholders” (Noya and Clarence, 2013). The Humanitarian Innovation Fund (HIF) Guide of Elrha, which will be further described, identified the Business Model Canvas, often used by the private sector, as a tool that can be used to better understand who is to be targeted in the humanitarian sector (Elrha Higuide). Indeed, it is essential to recognize various “customer segment” as communities impacted by crises, humanitarian practitioners and funders.

2.2.4.3 Technology development

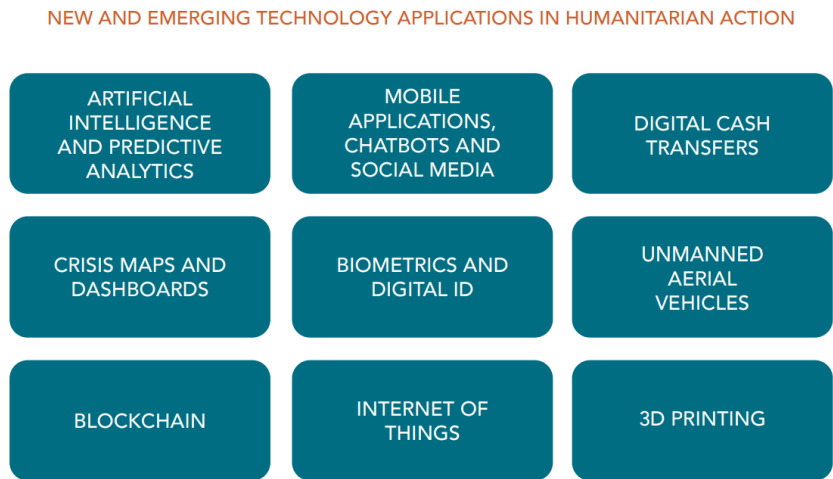
As a fact, humanitarian organizations increasingly use emerging technologies in their humanitarian intervention (Chandola, Basu 2022). For example, new technologies like telemedicine during the COVID-19 pandemic, the Earth Observation and geospatial technologies during the 2018 Kerala floods or Crisis Mappers to support emergency responses efforts in the 2010 Haitian earthquake (Betts and Bloom, 2014). Other

examples include the use of social media in relief missions like the present Russia-Ukraine conflict, and even earlier scenarios like the migrant crisis and the vaccination campaigns. Technology has also proven useful in other cases such as remote perinatal care. The benefits of technology in assistance are proven, however some challenges and risks are also to be studied (Chandola, Basu 2022; Betts and Bloom, 2014).

Those risks refer to, for instance, misinformation, disinformation, and hate speech (MDH), and privacy, data protection, and security (Chandola, Basu 2022). Innovative and emerging technologies can facilitate the shift from a reactive to a proactive humanitarian effort by allowing for quicker, more efficient, and potentially improved responses (Tran et al., 2021). Paul White, from the Norwegian Refugee Council said “we need to adapt but make sure our protection and humanitarian principles are still the core of our work” (Cornish, Lisa 2017). As the OCHA states, the use of technologies is changing the approach of humanitarian action “from reaction to anticipation” (Tran et al., 2021: 2; Chandola, Basu 2022: 7).

Figure 2 shows the new and emerging technologies used by humanitarian actors to improve their humanitarian action.

Figure 2 – New and emerging technologies



Source: Tran et al. (2021, p. 3)

2.2.4.4 Partnerships

According to Betts and Bloom, various actors like diaspora groups, businesses, and locals first responders can now bring unique capacities to the humanitarian system. However, the traditional actors have taken time to build partnerships that make the most of what each has to contribute. Partnerships, which are a component of innovation, are crucial for coordination as well as for drawing in ideas, best practices, and resources

from a variety of sources, including private technology developers, military R&D agencies, universities, and affected individuals (Betts and Bloom, 2014).

Partnerships can help solve problems by bringing new perspectives, expertise, skills, and knowledge to the table. Multidisciplinary teams are essential to guarantee that all problems' dimensions are understood and can be addressed. Solving complex problems necessitates the involvement of multidisciplinary teams and collaborations among various stakeholders (Betts and Bloom, 2014). During an interview Nathan Cooper from the International Federation of the Red Cross said "*one of the things we've found most effective is to partner with organisations that are already doing innovative work*" (Elrha Higuide). Finally, partnerships frequently involve players from the public or private sectors as well as NGOs or UN organizations.

As a global partnership example, the *Global Partnerships for Humanitarian Impact and Innovation initiative* (GPHI2), supported by ICRC, Fondation Lombard Odier, and IMD, was launched to develop innovative solutions for humanitarian challenges by leveraging the private and humanitarian sectors' creativity to aid conflict victims (IMD, 2015)

2.2.4.5 Private sector engagement

Humanitarian organizations understood in the past decades that the growing involvement of the private sector could contribute to humanitarian actions in ways other than as a financial source. Different motives drive private sector engagement in humanitarian innovation, such as philanthropy, corporate social responsibility. In addition, the increasing number of social entrepreneurs like *Samasource*, *Dimagi*, and *Technology for Tomorrow* shows the potential for this form of humanitarian enterprise. Otherwise, large corporations like Deloitte, Ericsson, and IKEA provide goods and services towards humanitarian causes as part of their corporate social responsibility initiatives (Betts and Bloom, 2014). The OCHA also highlights the growing role that private sector can play in humanitarian action and points up the benefits of partnerships between business, governments, and the humanitarian sector. But the report identifies challenges and concerns about the participation of the private sector such as conflicts of interest and humanitarian principles (Betts and Bloom, 2014; OCHA, 2017). More research and evaluation of private sector involvement is necessary, and it is crucial to form effective alliances with well-defined goals and shared responsibilities (OCHA, 2017).

2.3 Barriers to innovation

2.3.1 In the private sector

While innovation is increasingly understood to be essential to creating sustainable businesses, a number of organizations in the private sector continue to struggle with implementing effective strategies to shift to a more innovative culture. These difficulties may arise from various barriers that impede the innovation process and hinder progress within companies. Some companies even do not certainly give space to innovation for several reasons.

For instance, the concept of risk and uncertainty is one of the reasons why businesses and their employees seek to avoid risk and uncertainty (Garcia, 2021). The second reason is that some businesses do not correctly align innovation with their objectives, which hinders innovation. This can be related to the absence of leadership. Innovation should be viewed as a strategic movement that the entire organization understands. Humanitarian practitioners feel that more innovation in the field needs to be done (White and Levitt, 2008). A third reason is focusing on short-term results exclusively, in other words the short-termism (Bocken and Geradts, 2020). Managers in companies tend to maximize their shareholders value which means that they prioritize achieving quick results. The lack of resources—which can be in the form of money, time, or human capital—and the lack of collaborations with other parties to produce worthwhile outcomes are the final two causes of leaving innovation behind.

2.3.2 In the humanitarian sector

Given the constraints of innovation in the private sector, some of the reasons can be applied for the humanitarian sector as well. However, there are specific reasons that contribute to the innovation's slowness in the sector. Three major challenges for humanitarian innovation have been identified (Betts and Bloom, 2014).

Restricted market is one of the challenges. In fact, the humanitarian system market is similar to other markets. This can be explained by the fact that humanitarian goods are often viewed as global public goods. As a result, many believe that humanitarian goods should be funded exclusively or predominantly by the public sector. This means that there is little incentive for the private sector to participate as well.

Secondly, “ethical constraints” play a role as well in the slow pace of innovation which is unique to this sector. It is important to consider the disparity in power between those in need and those providing aid when bringing actors outside the humanitarian system.

Indeed, as stated in Elrha's report on challenges to scaling innovation in the sector, "humanitarian innovation is ethical, responsible and considered" (Elrha, 2018: 19). This means that ethics is a core element that might "exacerbate conflict, cultural sensitivities, and local power dynamics" (Betts and Bloom, 2014: 11). Despite the existing framework of innovation for the sector, there is still no established set of ethical standards. For example, using technologies may have the potential to enhance the way support and services are delivered. Yet, if beneficiaries are unaware of how technologies are being used and their worth, then trust may be affected which would harm humanitarian efforts directly in the field (Cornish, Lisa 2017). The IKEA Foundation, Oxfam, Save the Children, World Vision, government donors, and research representatives were among the stakeholders present at the inaugural Asia Pacific Humanitarian Leadership Conference in April 2017, which was covered by Lisa Cornish. To create ethical standards in humanitarian response, these participants advised gathering a variety of stakeholders such as academia, practitioners, the private sector and experts in codes of conduct (Cornish, Lisa 2017). For instance, there is the Global Alliance for Humanitarian Innovation (GAHI) that was first launched by the World Humanitarian Summit in 2016 to then become a legal entity of the Elrha at the end of that same year. The GAHI is a collaborative network of governmental agencies, academic institutions, businesses, and humanitarian organizations. Its main goal is to limit redundancy and increase the sector's overall impact. To achieve this, GAHI leverages a diverse range of resources, skills, and competencies. It works as an intermediary to connect, mobilize, and amplify its members' efforts by linking problems to those with the capacity to solve them. It also mobilizes social, intellectual, and financial resources and promotes the sharing of effective practices (McClelland, Ian 2017). Another illustration of this type of network is the Humanitarian Innovation Fund (HIF).

The third challenge is similar to the private sector which is the aversion to risk (Garcia, 2021). The concept of risk and uncertainty does not provide incentive for organizations to invest more in innovation. This concept might be even more present as many donors have aversion to new approaches not tested and to activities not directly linked to humanitarian organizations' core activities. These two elements encourage humanitarian organizations to carry on as usual while discouraging long-term business development (Betts and Bloom, 2014). But this is also linked to the funding specificity of the sector which requires organizations' investments to go to the beneficiaries. It is clear that the humanitarian sector continues to prioritize providing funding to countries facing crises and focusing their financial support primarily on beneficiaries (OCHA, 2022).

On the other hand, a number of current barriers might prevent the development of innovations. The HGC identified two broad categories of barriers that limit the ability to respond appropriately to the needs of affected communities (HGC, 2020). The first corresponds to sector-specific barriers which includes local, organizational, or national and the second is referred to as political settings that humanitarian stakeholders are unable to change. This implies that it can become more difficult to produce innovation based on the location and the context there.

2.4 Humanitarian system

For a long time, humanitarian action was perceived to be managed only by NGOs or local governments. Even though this is not the case anymore given that many other actors contribute directly or indirectly to aid effectiveness. Indeed, the private sector showed how supportive its intervention can be for development and aid projects. In fact, the majority of international donors and institutions have progressively expanded their collaboration with the private sector. This increased engagement has involved bilateral donors, development finance institutions, the United Nations, and multi-stakeholder institutions and initiatives (Jung et al., 2011). New collaborations, so called public-private partnerships (PPPs), are enhanced between humanitarian organizations and for-profit ones to stimulate contributions towards development goals for more effective results (Davies, Penny 2011).

2.4.1 Humanitarian ecosystem actors

Today, the humanitarian system is more complex involving several actors whose core function and mission are not humanitarian action. The below Figure 3 shows a representation of the current humanitarian system (Obrecht and Swithern, 2022) that first was developed by Betts and Bloom in 2014. It acknowledges the current system's complexity, fluidity and its connections with other entities. It includes organizations that are operationally or financially linked and/or have shared overarching goals, norms, and principles.

The diversity of actors in the humanitarian system offers opportunities for new connections, shared learning, and idea sharing. This network can create an innovation ecosystem that accelerates adaptation and learning/knowledge acquisition by actively taking part in humanitarian innovation projects (Betts and Bloom, 2014). But the key actors to enable innovation to occur are donors, agencies and users (Ramalingam et al., 2014). Users in this case refer to the beneficiaries. Having a complex ecosystem as such is not the ultimate solution for innovation to happen. It is argued that innovation

ecosystems are more a constructed social system that better works and become productive when there is a clear governance structure and when each actors have well-defined roles (Ramalingam et al., 2014).

Figure 3 - The international humanitarian system



Source : Obrecht and Swithern (2022, p. 27)

2.4.2 Humanitarian funding

Humanitarian actors use most of their donations to deliver their core activities and achieve their missions leaving behind innovation. However, an increasing awareness on the need to use a more innovative approach for funds is showed by donors to guarantee that future humanitarian responses is safeguarded, meaning that humanitarian organizations are prepared to handle the future challenges in a sustainable way (Cornish, Lisa 2017). Therefore, thanks to the barriers that created a lack of innovation, several initiatives have emerged to foster and fund innovation in the sector.

2.4.2.1 Examples of innovation funding in the sector

As examples, the Elrha which is “a global charity that finds solutions to complex humanitarian problems through research and innovation”, developed the Humanitarian Innovation Fund (Elrha, 2022: 3). The goal is to “improve outcomes for people affected by humanitarian crises by identifying, nurturing and sharing more effective and scalable solutions” (Elrha, 2022: 3). This fund, established in 2011, has a portfolio of innovation projects of over 150. Nowadays, there are several other fund programs that have been established with the aim of supporting and funding innovation for the humanitarian sphere. To provide some examples, as funding programs there are the *UNICEF Innovation Fund*, *WFP Cooperating Partners Innovation Fund*, *Deloitte Humanitarian Innovation Program*, *Google Org: Impact and Community Grants*, *Global Innovation Fund*, and some others (Parater, Lauren 2015).

On the other side, Innovation Norway who provides programs and services to stimulate entrepreneurship, has the *Humanitarian Innovation Programme* that help humanitarian organizations to develop and scale innovative solutions to improve humanitarian action (Humanitarian Innovation Programme, 2022). This program developed a paper where it calls for the use of more innovative financing systems that leverage the private sector resources to support humanitarian action. As an example, there is the *ICRC Humanitarian Impact Bond* (Fosseli Olsen, Elisabeth 2019)

2.4.3 Humanitarian innovation tools and approaches

There are many different practical approaches to foster innovation in the sector. As an example, design thinking is a way of thinking that integrated stakeholder engagement from the early stage (Ramalingam et al., 2014). It is referred to a bottom-up approach where communities are involved in the development of innovative solutions (Ramalingam et al., 2010). Having innovators, innovation labs, and accelerators are a good way to allow more innovation at the operational

and organizational level and scale them. However, practical experience of those tools and approaches remains limited. In addition, there is a necessity for more tools to assist in this process of innovation development (Elrha, 2018)

3. Methodology

This exploratory research aims at identifying innovation barriers in the humanitarian sector, determining the benefits of innovation, determining how to foster a culture of innovation and assessing the impact of innovation in organizations' operations as well as the impact of collaborating with the private sector.

Before going deeper into the subject and starting to discuss the results of the research, a good and thorough understanding of the topic area had to be acquired during the secondary data collection. As this topic of humanitarian innovation and its literature typically consist of qualitative research/case studies that have been undertaken in the field, qualitative data is at the core of this thesis. Indeed, the data is collected from several reports that non-profit organizations, NGOs, UN agencies and other institutions in the sector published. Additionally, articles and interviews have been used to better comprehend the current state of humanitarian innovation.

Once the topic area was understood, and to achieve the research objectives and respond accordingly to the research question, primary data came into action. Since most of the data is qualitative and the research is exploratory, in-depth interviews was the best option as method of data collection. In-depth interviews are defined as *"a qualitative research technique that involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program, or situation"* (Malhotra and Birks, 2003). Therefore, in-depth interviews were performed with representatives of several organizations in the humanitarian sector to collect primary data and produce high-quality insights.

To ensure that a sizable number of respondents would agree to be interviewed for the purpose of the thesis, many were contacted by email to arrange interviews. In fact, eight people accepted to have depth interviews which helped to yield data of high quality. Respondents were working in different organizations such as MSF Sweden, ICRC, Swissnex, the Humanitarian Innovation Program of Innovation Norway, Medair, Women and Health Alliance (WAHA), and IFRC. The duration of interviews ranged from 30 to 60 minutes.

All interviews were conducted online via MS Teams between April and May 2023. All respondents consented to being recorded for transcription purposes, ensuring accurate information is utilized in the results and discussions sections of this study. To gather insights on humanitarian innovation, respondents needed to be working or having worked in the humanitarian sector. But also, having experience in humanitarian

innovation, meaning that people in partnerships units, or people who worked as head of innovation unit, or people that were part of projects aiming at improving services or products to beneficiaries within the sector. To find those potential interviewees, LinkedIn and the mentor's suggestions happened to be helpful.

Given that this research has several objectives, specific questions were developed for each objective to ensure relevant data is gathered for each goal. In fact, two questions per objectives were framed which results in 12 questions in total. The sample of questions can be found in **Appendix 9**. Naturally, not all of the questions could be asked due to the respondents' time limits. However, at least one question of each objective could be discussed with all the respondents. As the conversation progressed, further questions were raised. Some questions were asked depending on the experience and knowledge of the respondent to ensure insightful information collection.

3.1 Limitations of the study

This study's sample size of 8 in-depth interviews is not representative of the humanitarian sector as a whole, which could restrict the generalizability of some of the findings.

Because interviewees were identified using LinkedIn and mentor recommendations, there may have been selection bias because the respondents to this study may not be representative of the wide range of professionals involved in humanitarian innovation. The length of each interview has also limited the conversation's breadth and depth.

To ensure high quality insights could be gathered, a brief introduction was given before each interview to create a welcoming environment for the interviewees.

Finally, as only qualitative data could be collected from the interviews, the analysis might be subject to interpretations.

4. Results

In this section, all the results are data coming from the interviews conducted with professionals. This part will be divided into seven parts corresponding to the six objectives of this research in addition to respondents' definition of innovation in the sector. Indeed, a synthesized summary of the results is provided for each question, while also highlighting any unique or differing perspectives that contribute to a broader understanding of the topic. In addition, indications in footnotes for each result will specify which interview it was drawn from. Each interview's transcription has been broken down into paragraphs to make it easier to find the information in the relevant appendix. This method of presenting the findings helps make the key material easier to understand and more structured, which is necessary to better address the research question and meet the research's objectives.

4.1 Definition and attributes of innovation

Different types of definition for innovation in the humanitarian sector were given during interviews.

One interviewee said that innovation is about using tools or methodologies to help increase value within organizations by collaborating with internal and external actors with a focus on addressing the needs of beneficiaries. It should be a process that requires to think out of the box.⁷

At MSF for instance, innovation is viewed as a vehicle for change, which can be incremental or transformational, to lead to better outcomes. But it is also a way to make people work together whether inside organizations or outside in relation to the beneficiaries. Therefore, four respondents said that innovation is not about technology only as the sector tend to believe,⁸ but more about finding creative ways and approaches to solve existing problems.⁹ Someone else in MSF believes that innovation is the process that involves thinking out of the box and being pragmatic. The key point of innovation is the creativity between the problem and the solution.¹⁰

⁷ Interview Respondent B – paragraph 1

⁸ Interview Respondent C – paragraph 1, Interview Respondent H – paragraph 1

⁹ Interview Respondent D – paragraph 1, Interview Respondent E – paragraph 1

¹⁰ Interview Respondent G – paragraph 1

Another interviewee thinks that innovation is the ability to adapt, manage change, and respond to uncertainties. Another aspect of innovation is knowing that it is not limited to creating new products, but also combining existing elements in novel ways.¹¹ The same interviewee believes it is essential for humanitarian actors to recognize that innovation is something they have been doing on a regular basis, and that it enables the development of localized solutions for affected populations.¹²

In addition to all the above, Innovation Norway thinks innovation can also be an innovative business model or systems innovation.¹³

4.1.1 Importance of innovation in the humanitarian sector

When asked about the importance of innovation, most interviewees declared that it is a necessity. Although funding in the humanitarian sector is on the rise, challenges are also increasing simultaneously, making innovation crucial as it can help identify more effective ways of working. For example, by leveraging technology, organizations can reach a larger number of people while requiring fewer funds. Two respondents said that there is a need to adapt quickly given that the environment is changing rapidly.¹⁴

4.2 Benefits of giving more space for innovation at the organizational level

Most interviewees consider that allowing more space for innovation in organizations has the potential to improve their overall efficiency and effectiveness. The respondent of Medair affirmed that innovation is perceived as having two facets: disruptive innovation and incremental innovation, the latter also known as process improvement. There are many examples of incremental innovation having benefits such as reducing waste in finance, in HR operations or whatever other processes which demonstrates organizations commitment to enhancing efficiency. In contrast, disruptive innovation occurs less frequently, perhaps once a year, and has the potential to achieve a truly remarkable and significant impact when it does happen. Two respondents mentioned that something important to know is that organizations often have many offices around

¹¹ Interview Respondent E – paragraph 7

¹² Interview Respondent E – paragraph 1

¹³ Interview Respondent D – paragraph 1

¹⁴ Interview Respondent D – paragraph 1, Interview Respondent E – paragraph 1

the world where they operate. Therefore, collecting those examples of innovations from various offices can be valuable to apply them in other contexts.¹⁵

Two respondent considers the use of technology, such as artificial intelligence or mobile phone capabilities, as a way to improve services and develop innovative solutions like early cancer diagnosis or better understanding antibiotic resistance.¹⁶

Medair provided a key illustration of disruptive innovation is digital transformation that has the potential to greatly enhance efficiency and effectiveness within the organization. However, some NGOs are still in the early stages of digitizing their processes, and the challenges come from the difficulty of implementing this digitization on a global scale. For example, in one of Medair's office, a current project is about using AI and chatbot to improve communication with beneficiaries. Indeed, this project is part of the "Accountability to Affected Population" (AHP) where beneficiaries could use that channel to get in touch with organizations instead of doing it through WhatsApp, SMS, call centers like they used to.¹⁷

According to one MSF member, another example of disruptive innovation is the development of the kits approach. A kit is a packaged collection of articles or equipment needed to facilitate a specific task or purpose. There are obviously different types of kits such as surgical ones or first-aid ones. At MSF, the surgical kits enabled them to have pre-prepared equipment for different crises because those kits include complete surgical hospitals with all the necessary equipment to quickly treat patients. This innovation is nowadays used widely by other organizations who benefit from better equipment to better respond.¹⁸

Two respondents believe that adapting or readapting approaches can lead to better outcomes¹⁹, also when organizations use a solution in one context in another one to reach more people and needs.²⁰ It is therefore important to consider the audience's context and knowledge to better adapt.²¹

¹⁵ Interview Respondent A – paragraph 4, Interview Respondent H – paragraph 4

¹⁶ Interview Respondent F – paragraph 5, Interview Respondent H – paragraph 4

¹⁷ Interview Respondent A – paragraph 5

¹⁸ Interview Respondent C – paragraph 4

¹⁹ Interview Respondent B – paragraph 3, Interview Respondent G – paragraph 5

²⁰ Interview Respondent G – paragraph 5

²¹ Interview Respondent B – paragraph 3

An ICRC staff member in logistics provided another example when the ICRC in Bogota had to decrease the lead time for a water supply delivery. To accomplish this, they needed to reevaluate the whole process, reassess their interactions with suppliers, establish connections with other stakeholders, and redesign a new strategy. As a result, they were able to improve in lead time which resulted in increasing efficiency.²²

Two interviewees consider that one benefit of innovation within organizations is that it can break some barriers that were there before.²³ For example, it has facilitated better collaboration across different levels of the organization at MSF and encouraged active listening from an early stage when it is used as a tool to work together.

From a medical perspective, one respondent said that innovation and research teams are different than the operations' team. As operations focus on the actions they need to execute while innovation teams concentrate on exploring new methods and technologies to improve operations. Now, innovation became crucial for operations because they have complementary roles.²⁴

An interviewee provided the example of the Norwegian Refugee Council's (NRC) "Digital Community Hubs" which is a digital community hub enabling two-way conversations with people forced to flee. When the war in Ukraine started, this project allowed beneficiaries to be registered much faster and receive cash assistance. In fact, the IFRC is working on adopting this innovation too. Another innovation from the NRC is "KOBILI," a digital platform for legal assistance for refugees. This has expanded access to legal assistance for more people in a shorter time. At the end, those innovations save time, efforts and money in the long run.²⁵

A former ICRC staff mentioned the example of the ICRC's Physical Rehabilitation Program created in 1979. In 2016, the Rehabilitation team had the idea to develop the ICRC Sport Program where they had the chance to work in contract with an ex-basketball player who became paraplegic. This sport program was scaled in over 25 countries where affected populations could benefit from this tool for social inclusion and rehabilitation.²⁶ In addition, an IFRC member provided the example of the ongoing Goma water project in ICRC that is a good illustration of innovation happening at all levels,

²² Interview Respondent B – paragraph 4

²³ Interview Respondent C – paragraph 4, Interview Respondent G – paragraph 5

²⁴ Interview Respondent G – paragraph 5

²⁵ Interview Respondent D – paragraph 4

²⁶ Interview Respondent E – paragraph 4

going from strategic to operational innovation. The aim is to develop water and sanitation infrastructure in fragile contexts.²⁷

4.3 Barriers to internal innovation

When interviewees were asked about potential barriers organizations could face during the development and implementation of innovative solutions within their organizations, different perspectives were brought.

4.3.1 Challenges

Four respondents believe funding barriers are one of them. Traditional funding, provided by the donors, is often restrictive in the humanitarian sector. On the other side, the mentality attached to funding plays a role in terms of barrier too because in normal humanitarian projects donors have specific requirements for the final outcomes of the money they invest. The reason behind this barrier is the limited availability of funds.²⁸

One interviewee consider that the sector is also risk-averse by nature which means that there are concerns about the reputation which hinders innovation as humanitarians do not want and do not take risks because of the people they are dealing with who are vulnerable, but also in relationship with their donors. There is therefore a culture of fear surrounding mistakes that creates barriers to trying new approaches.²⁹ A member of WAHA said the nature of organizations does not allow them to focus much on development on new things because innovation falls outside the scope of the social mission of providing assistance.³⁰ Finally, one MSF respondent stated that the humanitarian sector focuses of immediate results and efficiency, which puts pressure on researchers and innovators and makes them less likely to take risks.³¹

One respondent perceive that a good thing is the humanitarian sector's increasing use of some technological software, devices, or biometrics to improve beneficiary management and reduce inefficiencies. However, there is a dilemma between efficiency and ethics because innovation may create an additional layer of vulnerability and risks.

²⁷ Interview Respondent H – paragraph 4

²⁸ Interview Respondent A – paragraph 1, Interview Respondent D – paragraph 2, Interview Respondent G – paragraph 2-4, Interview Respondent H – paragraph 2

²⁹ Interview Respondent D – paragraph 2

³⁰ Interview Respondent F – paragraph 2

³¹ Interview Respondent G – paragraph 4

This dilemma creates another barrier.³² The ICRC for instance established initially a data protection team before an innovation team to ensure that innovation efforts aligned with their principles. For these ethics and principles violation questions, an organization called Net Hope has been founded to bring humanitarian actors together to pool resources and to learn from each other regarding responsible innovation. Regarding innovation, there are no established official requirements for NGOs. Even though discussions are ongoing about principles to apply while innovating in the sector.³³ The same respondent believe that the challenge in partnerships arises from the differences in structures between organizations and private companies. The perception of innovation tends to vary between the private and humanitarian sectors, which can complicate collaborations.³⁴

One interviewee at MSF believes that staff members have very different opinions, especially on innovation.³⁵ This does not help when wanting to move things forward and create acceptance for innovation.³⁶

4.3.2 Organizational factors

One Medair' staff mentioned that donor funds are strictly governed by the finance department of organizations who manage money tightly. Therefore, there are internal financial policies, which makes it difficult to distribute funds for innovation because it is presumed that all financing should go toward providing life-saving assistance. There seems to be a strong belief in all these organizations that innovation should come from the private sector. This restricts the ability and willingness of humanitarian organizations to invest in internal innovative solutions.³⁷

In addition, five respondents believe organizations have a common barrier that is internal procedures.³⁸ From a logistics perspective, one interviewee perceive internal procedures to be rigid and affecting the path to innovation or adaption to new challenges. In fact,

³² Interview Respondent E – paragraph 4

³³ Interview Respondent E – paragraph 5

³⁴ Interview Respondent E – paragraph 2

³⁵ Interview Respondent C – paragraph 2

³⁶ Interview Respondent E – paragraph 1

³⁷ Interview Respondent A – paragraph 3

³⁸ Interview Respondent B – paragraph 2, Interview Respondent D – paragraph 3, Interview Respondent F – paragraph 3, Interview Respondent G – paragraph 3, Interview Respondent H – paragraph 2

there is a desire to maintain a consistent perspective across all sites which influence progress in innovation and understanding of innovation.³⁹

And from a procurement side, one respondent believes that organizations tend to follow policies designed to prevent corruption, but this limits the adoption of innovative procurement and the formation of new partnerships with more agile private companies. The sector often seeks the same specific inputs, neglecting the exploration of alternative options and the investigation of the market for potentially superior solutions. Instead, they would benefit more by establishing stronger supplier relationships and also by removing unnecessary bureaucratic processes while maintaining accountability. This would improve the current situation and increase agility in the procurement. In fact, this respondent mentioned a remedy against this barrier. The Humanitarian Innovation Programme of Innovation Norway is helping organizations to adapt their guidelines for more innovative procurement and avoid private companies to be frustrated when collaborating with humanitarian organizations. The program developed an innovative procurement tool focus on desired outcomes rather than specific inputs organizations may want to acquire.⁴⁰ The tool has three main activities which are needs assessment, market dialogue and performance-based specifications. It suggests focusing on understanding end-user needs, to then dialogue with the market for understanding the potential contribution it can have. Finally, it invites suppliers to propose creative and performance-based solutions. In the end, it would increase the likelihood of discovering innovative and effective solutions, as well as increasing more valuable partnerships and more interest in innovation.

Two interviewees argued that big organizations often claim and advocate for collaboration with others, but the reality shows the opposite as their actions may not match their stated intentions which creates a perception of having a dual nature.⁴¹ This situation led MSF, for instance, to work in isolation for a long time, believing that collaboration with others was unnecessary. However, according to three persons, in recent years innovation helped to drive away from this thinking and start collaboration more.⁴²

³⁹ Interview Respondent B – paragraph 2

⁴⁰ Interview Respondent D – paragraph 3

⁴¹ Interview Respondent C – paragraph 2-3, Interview Respondent E – paragraph 2

⁴² Interview Respondent C – paragraph 2-3, Interview Respondent E – paragraph 7, Interview Respondent F – paragraph 8

An interviewee mentioned that a challenge faced during innovative projects is the high turnover of personnel. Indeed, many teams are passionate and engaged to lead innovative projects, but sometimes those teams are changed following shift in positions. As a result, the new team often do not have the same engagement and knowledge to continue leading those projects which impact the project' efficiency and ownership.⁴³ In addition to this, a MSF member sees the current processes and HR policies of organizations as not tailored to the demands of innovations, which makes it tough to recruit and retain right talents.⁴⁴

Finally, one respondent believe that one significant innovation challenge lies in the organization's capacity to listen to people and respond accordingly.⁴⁵

4.3.3 Cultural factors

Five respondents believe that one aspect that hinders the implementation of new solutions is the resistance to change.⁴⁶ One ICRC member also said that people tend to question the necessity of change, especially if the existing system is working. Changes means adopting a better solution for better information and decision-making.⁴⁷

Three respondents said that a common misconception is to think that a single solution can be applied across diverse contexts, while this is not the case. Innovation should be about adapting the solution to the specific context where it needs to be implemented and scaled up.⁴⁸

Additionally, according to an Innovation Norway member, the bureaucratic mindset of the sector limits the ability to quickly adapt and collaborate. It is believed to be a cultural barrier which can be reduced by individual managers with open-mindedness and flexibility who could foster a better environment for innovation compared to traditional and rigid managers.⁴⁹

⁴³ Interview Respondent D – paragraph 2

⁴⁴ Interview Respondent G – paragraph 3

⁴⁵ Interview Respondent E – paragraph 10

⁴⁶ Interview Respondent C – paragraph 3, Interview Respondent B – paragraph 2, Interview Respondent E – paragraph 2, Interview Respondent F – paragraph 3, Interview Respondent H – paragraph 2

⁴⁷ Interview Respondent B – paragraph 2

⁴⁸ Interview Respondent B – paragraph 2, Interview Respondent E – paragraph 3, Interview Respondent F – paragraph 2

⁴⁹ Interview Respondent D – paragraph 2

Two people affirmed that an additional challenge during a bottom-up innovation approach is the presence of numerous "champions" of innovation in the field, who are often disregarded by headquarters. Due to the operational pressure in certain contexts in which they operate and financial constraints to innovate, the challenge lies in the ability to identify those "champions" and scale their ideas. Both think that organizations could provide these individuals with the necessary resources to scale their ideas though some organizations like the ICRC or MSF do already have such mechanisms in place.⁵⁰

4.4 Fostering a culture of innovation

One interview believes that it is important to recognize the inherent innovative spirit of humanitarians⁵¹. Then, two interviewees encourage the sharing and recognition of challenges across different countries and contexts⁵². Both declared that a challenge may manifest differently in one country compared to another, but it ultimately has the same root cause in both. This would enable organizations to detect commonalities and develop innovative solutions that can be applied in various places.⁵³

Two respondents think that to make sure innovation persists, quantifying the benefits associated with innovations as much as possible can help promote it as organizations can demonstrate a track record of successful projects to help convince stakeholders to invest further. However, the sector faces a lack of metrics to assess the impact of innovation, though recent advancements in assessment methods show promises.⁵⁴ Another one considers that donors also can influence innovation in the sector. Therefore, negotiations should be conducted with donors to allow for more flexible funding.⁵⁵

According to two interviewees, a good way to foster innovation is to have a dedicated innovation team comprised of staff with a combination of field experience and research expertise. Their goal is to have the ability to transform ideas into practical, applicable solutions.⁵⁶

⁵⁰ Interview Respondent E – paragraph 3, Interview Respondent C – paragraph 5

⁵¹ Interview Respondent A – paragraph 6

⁵² Interview Respondent A – paragraph 6, Interview Respondent F – paragraph 5

⁵³ Interview Respondent A – paragraph 6, Interview Respondent F – paragraph 5

⁵⁴ Interview Respondent A – paragraph 6-7, Interview Respondent G – paragraph 6

⁵⁵ Interview Respondent D – paragraph 5-6

⁵⁶ Interview Respondent G – paragraph 6, Interview Respondent H – paragraph 6

Two others believe that part of the actions to be taken is for organizations to include affected people in every stage of the innovation process⁵⁷, which refers to a bottom-up approach. One of the two said that this approach helps to better identify actual needs and ensure that the market exist for that innovation. Innovation Norway is putting in place tools and resources such as knowledge development, capacity-building, a community of practice to help organizations foster a culture of innovation.⁵⁸

In order to promote systematic learning and exchange of ideas, the ICRC in collaboration with IMD Lausanne founded the “*Global Partnerships for Humanitarian Impact and Innovation*” (GPHI2) where participants from various industries could come and share ideas to ultimately learn from each other. Two respondents think that this investment in education brings people to think differently.⁵⁹ One respondent mentioned that some organizations use innovation labs like the “Response Innovation Lab” (RIL) which strengthen the connections between various actors inside and outside the humanitarian ecosystem to develop, pilot and scale innovative ideas. It includes research institutions and affected communities too. Moreover, there are other programs organizations can benefit from such as the “World Food Program Innovation Accelerators” whose mission is the same as the RIL but focusing on finding solutions related to hunger issues.⁶⁰

4.4.1 Leadership’s role

Three respondents declared that organizations’ leaders play a crucial role in promoting innovation.⁶¹ While they may claim to support innovation, their actions do not always reflect this commitment. They should rather lead by example to move to a more sustainable and systematic innovation by saying and showing explicitly where they want to go. In order to achieve this, leaders should create a clear path for staff to bring new ideas, as well as offering the required resources and connect them with external actors to implement those new solutions. One of the three said that a top-down approach where the leadership puts innovation on the agenda helps to foster innovation too because managers to tend to focus on it.⁶²

⁵⁷ Interview Respondent D – paragraph 6, Interview Respondent G – paragraph 5

⁵⁸ Interview Respondent D – paragraph 6

⁵⁹ Interview Respondent E – paragraph 6, Interview Respondent G – paragraph 5

⁶⁰ Interview Respondent E – paragraph 8

⁶¹ Interview Respondent B – paragraph 5, Interview Respondent E – paragraph 6, Interview Respondent H – paragraph 5

⁶² Interview Respondent C – paragraph 5

According to several interviewees, leaders must also acknowledge and embrace the diversity within their organization, ensuring that each has its own space and voice. By showing a commitment to innovation across the organization and encourage open communication among staff members such as promoting the idea that nothing is impossible, leaders can effectively cultivate an innovative culture.⁶³

4.5 Tools, approaches and methods to encourage creativity at the organizational level

One interviewee mentioned an example of innovative methodology used in the warehouse of a private sector company which consist of establishing a space where employees can share challenges and potential solutions, regardless of their department. In fact, anyone in logistics could write on a yellow post-it a problem they face while working. And green ones were used by everyone in the company to write in potential solutions. This methodology can be applied to the humanitarian sector to stimulate more innovation and making people collaborate together.⁶⁴

In the case of MSF UK, they implemented a mechanism in the field called the “sapling nursery”. This system, also done within the ICRC, allows field staff to submit their ideas that, if approved, receive resources, support and mentoring. Those resources are only provided in the initial stage as it is when it is the hardest to get forward.⁶⁵

Other approaches are used at Medair. For instance, using an annual innovation award for country offices can provide recognition to innovative projects in the field. This can serve as a morale boost and encouraging a culture of openness because it caused those offices to be more involved in innovation. As an innovation advisor, it is possible to host webinar or regular meetings where staff is invited to share ideas, discuss methodologies and develop new connections internally. These approaches contribute to have an environment that supports innovation at the organizational level.⁶⁶

One simple tool used by MSF when facing challenges, and probably by others too, is the “Now Wow How” which involves understanding the current situation (Now),

⁶³ Interview Respondent E – paragraph 6, Interview Respondent G – paragraph 6, Interview Respondent H – paragraph 5

⁶⁴ Interview Respondent B – paragraph 5

⁶⁵ Interview Respondent C – paragraph 5, Interview Respondent E – paragraph 6

⁶⁶ Interview Respondent A – paragraph 8

brainstorming solutions (Wow), and finally creating practical steps to achieve it.⁶⁷ It is often used in workshops where participants work collaboratively through each stage with the help of whiteboards, sticky notes etc. This tool stimulates creativity and values everyone's ideas. It also encourages stakeholders from various departments, such as logistics and medical for example, to operate together, breaking down silos and fostering innovation across the organization. In fact, it uses a matrix that categorize ideas based on the ease of implementation and the level of newness. However, another former MSF member believes that before developing new ideas, it is key to investigate the problem and then see if existing solutions can be adapted to address the issue.⁶⁸

4.5.1 External resources and networks

Some interviewees believe the first main resources are donors who provide the funds for projects. But in fact, platforms exist such as "Tech for Dev"⁶⁹ that provide funding and workshops on innovation by gathering academics specialized in areas like blockchain, digital identity etc. Two respondents provided the example of the Net Hope organization whose goal is to improve IT connectivity among humanitarian organizations by proposing information on events related to innovation.⁷⁰ Most of the respondents believe that those external resources, like the GPHI2 mentioned previously or the Solferino Academy of the Red Cross, can be leveraged by humanitarian organizations to foster innovation.⁷¹

Three respondents believe it is crucial to collaborate with external partners is one main approach to foster innovation and lead to more efficient outcomes.⁷² In fact, Innovation Norway has worked on an innovative procurement project for NGOs, as previously mentioned⁷³, to foster partnerships with other sectors and procure themselves with products that are innovative, meaning different, rather than purchasing the same traditional products. Strategic partnerships, involving the private sector but also academia, can be effective in fostering innovation. Those partnerships must be need-driven and not company-driven. For that, knowing the priority list of organizations'

⁶⁷ Interview Respondent C – paragraph 6

⁶⁸ Interview Respondent F – paragraph 6

⁶⁹ "Dev" means development.

⁷⁰ Interview Respondent A – paragraph 9, Interview Respondent E – paragraph 5

⁷¹ Interview Respondent E – paragraph 6, Interview Respondent G – paragraph 7, Interview Respondent H – paragraph 6

⁷² Interview Respondent D – paragraph 3, Interview Respondent F – paragraph 5, Interview Respondent G – paragraph 7

⁷³ Interview Respondent D – paragraph 3

operations needs is vital before committing to a partnership. According to a former ICRC member, it is therefore important to be familiar with partners' background and intentions as well.⁷⁴

One respondent declared that exploring diverse financing methods is essential for organizations, including crowdfunding, crowdlending, and impact investments. Examples include "Refugee Impact Bond" and the ICRC's "Humanitarian Impact Bond". By doing so, organizations are exploring new ways of doing things, although the ideal approach has yet to be discovered.⁷⁵

4.6 Impact of implementing an innovative approach

Measuring the impact of innovative approaches in a humanitarian organizations' operations and response to crises can be challenging.

4.6.1 Measurement and assessment of innovation

Three respondents said that the key is to focus on helping beneficiaries. Indicators should be linked to the desired impact and tailored to measure the benefits for the beneficiaries. Organizations need to have a clear strategy and objectives first. It is essential to understand what the organization aims to achieve and to translate these objectives into concrete deliverables that can be measured.⁷⁶

Several interviewees mentioned that organizations have KPIs or other tools, but they remain weak and vary for each organization. The impact of innovative approaches is best evaluated through tangible outcomes and its ability to address the specific challenges.⁷⁷ When organizations consider the needs of the people they serve, the effectiveness and impact of innovation are best evaluated.⁷⁸

Two interviewees mentioned that some humanitarian organizations adopt a case-by-case measurement process tailored to unique project whereas in traditional projects, meaning non-innovation ones, there is a standardized measurement process. This

⁷⁴ Interview Respondent E – paragraph 7

⁷⁵ Interview Respondent D – paragraph 7

⁷⁶ Interview Respondent B – paragraph 7, Interview Respondent E – paragraph 10, Interview Respondent D – paragraph 9

⁷⁷ Interview Respondent C – paragraph 7, Interview Respondent B – paragraph 7, Interview Respondent D – paragraph 8

⁷⁸ Interview Respondent E – paragraph 10

absence of standardized measurement for innovation is still being debated due to the uniqueness of each project.⁷⁹ However, Medair employs sometimes a strategy of using the measurement of impact from the sector they buy from, such as utilizing shelter project metrics to measure the impact of their own project.⁸⁰

For example, a MSF member talked about its organization's project aimed to solve the issue of antibiotic resistance in low- and middle-income countries. They developed an app to interpret the tests done by laboratory technicians like a microbiologist would do. The app has been implemented as a medical device in five countries, supporting around 6'000 patients and improving the quality of treatment for antibiotic-resistant infections. Those figures are the measures used to assess the success of an innovation.⁸¹

4.6.2 Improvements in operations

One interviewee said that innovation is always expected to lead to improvements in operations and response to crises, even though some projects may fail. But even in that case, those failures can be considered as successes since they provide insights into what works and what does not, contributing for better decision-making.⁸²

Two respondents highlighted that the success of an innovation is marked by its transition from an innovative approach to a routine tool used in operations.⁸³ If the innovation does not become a routine tool, then it is an unsuccessful one. For instance, the kits approach was innovative in the beginning and is currently broadly used in the sector on a daily basis. Or the application for antibiotic resistance analysis at MSF is successful now because it is used everyday for antibiotic tests done in hospitals. Therefore, it is not just a one-time trial but a routine tool that must be adopted in the long-term.

4.7 Impact of collaborating the private sector

All interviewees consider that collaboration between humanitarian organizations and the private sector is characterized by benefits but also challenges. And one believes that humanitarians recently started to recognize the benefits of having more collaboration

⁷⁹ Interview Respondent A – paragraph 10, Interview Respondent G – paragraph 10

⁸⁰ Interview Respondent A – paragraph 10

⁸¹ Interview Respondent G – paragraph 10

⁸² Interview Respondent A – paragraph 10

⁸³ Interview Respondent F – paragraph 5, Interview Respondent G – paragraph 10

with the private sector and other institutions.⁸⁴ Two respondents then affirmed that by working with the private sector, organizations are forced to innovate more rapidly and think out of the box, meaning becoming more creative. Therefore, it is beneficial for organizations to collaborate with partners who differ from themselves in various aspects.⁸⁵

4.7.1 Benefits

Six respondents believe the key benefit for humanitarian organizations is gaining access to external expertise from that they lack. The private sector possesses the technical expertise and innovation capabilities that organizations should profit from.⁸⁶ For instance, according to a MSF member, assistance in product or process innovation to potentially develop more efficient solutions by collaborating with an engineering consultancy firm.⁸⁷ But also, two interviewees think the private sector can help organizations to develop sustainable business model to ensure long-term success and scalability of solutions.⁸⁸

And when asking interviewees about the incentives for private companies to partner with the humanitarian sector, the answers were similar as they all stated that private companies would benefit from an association with social causes, enhanced brand recognition, or also helping people.⁸⁹ In addition, one WAHA member believes that some private companies benefit from having access to new markets.⁹⁰

4.7.2 Challenges

A member of IFRC thinks that contextual understanding is a challenge. Indeed, the private sector often does not comprehend the humanitarian context, leading to misaligned priorities and potential difficulties in collaboration. Moreover, the two sectors have different incentives and risks. By engaging with the private sector, the introduction

⁸⁴ Interview Respondent C – paragraph 8

⁸⁵ Interview Respondent D – paragraph 11, Interview Respondent H – paragraph 7

⁸⁶ Interview Respondent C – paragraph 8, Interview Respondent D – paragraph 11, Interview Respondent E – paragraph 8, Interview Respondent F – paragraph 7-8, Interview Respondent G – paragraph 8, Interview Respondent H – paragraph 7

⁸⁷ Interview Respondent C – paragraph 8

⁸⁸ Interview Respondent D – paragraph 11, Interview Respondent G – paragraph 8

⁸⁹ Interview Respondent A – paragraph 12, Interview Respondent D – paragraph 11-12

⁹⁰ Interview Respondent F – paragraph 7

of a new set of risks and incentives can emerge which therefore forces organizations to ensure engagements are beneficial.⁹¹

According to three respondents, one of the challenges resides in finding the win-win situation for both parties involved in a project because private companies have other interests than organizations. Indeed, organizations are non-profit and slower in decision-making, while private firms seek profits and often operate more efficiently. It is therefore crucial to establish beneficial agreements, mutual understanding, and trust to guarantee the successful development and scaling of innovative solutions to ultimately have positive impact.⁹²

Three respondents are of the opinion that the intellectual property rights aspect brings another challenge, given that private companies often wish to keep ownership for profit purposes, while humanitarian organizations prefer open access in the sector. But this issue is being addressed by Innovation Norway with their innovative procurement tools for instance.⁹³

According to a former ICRC member, the negotiation process between the two parties is often when the challenge arises. For instance, the ICRC encountered difficulties when a technology company used Design Thinking tool to redefine what the real problem was and provide a pre-existing solution. The former ICRC member thinks that tailored products and solutions should be created specifically for the needs of the organizations. The issue of negotiating the solutions is a major one for small NGOs that may lack negotiation capacity. Indeed, companies have their own solutions and want organizations to adopt them instead of creating more adapted solutions to the specific needs of the sector. Negotiations in those cases become difficult and often results in poor collaboration. To resolve this, small NGOs should hire tech savvy in the boards in decision-making roles. Hence, the challenge lies in finding the most effective way to engage with private companies.⁹⁴

⁹¹ Interview Respondent H – paragraph 7

⁹² Interview Respondent C – paragraph 8, Interview Respondent D – paragraph 11, Interview Respondent E – paragraph 8

⁹³ Interview Respondent C – paragraph 8, Interview Respondent D – paragraph 11, Interview Respondent G – paragraph 8

⁹⁴ Interview Respondent E – paragraph 8

5. Discussion

5.1 Innovation perceptions

Through the rich variety of perspectives on innovation highlighted in this research, several points of consensus emerge. Innovation in the humanitarian sector is about improving processes and ways of doing things by accurately defining problems and finding solutions. Unfortunately, the term innovation is still misunderstood by people who tend to associate innovation only with technology, which is not the case. To have successful innovations, humanitarian organizations are required to use diverse strategies, which can go from creative thinking, collaboration, adaptation of approaches or technologies, and consider the context for developing new things.

The ultimate goal of innovation is to increase the beneficiaries' welfare and being able to respond and adapt more quickly to uncertainties. Innovation is therefore critical to deal more efficiently and effectively with the increasing challenges that the sector faces currently and will face in the future. Thus, the main attributes of innovation are connected to the advantages it can yield.

5.2 Advantages of innovation

In this research, it was assumed that innovation in the sector would improve organizations' operations. Indeed, the literature and the findings show that benefits of allowing more innovation in organizations are considerable and multifaceted. First, there are two categories of innovation that are identified:

- Incremental innovation
- Disruptive innovation

These two categories of innovation help to improve overall operational efficiency, cost-effectiveness, and greater services delivery.

The most frequent type of innovation is incremental innovation also known as process improvements. They can be referred to as the update of organizational functions, from HR operations to finance operations. Those regular small improvements demonstrate that organizations are willing to improve their efficiency to ultimately better serve their target populations. On the other hand, disruptive innovation being less common, can be seen as reforms in the way organizations work, which can lead to significant impacts.

Digital transformation is a typical disruptive innovation which can unfortunately become hard for some to implement on a global scale. For instance, if organizations consider the

use of technology such as artificial intelligence and chatbots functionalities, they can engage with their audience more effectively and especially more efficiently. Indeed, rather than relying on traditional communication channels like phone calls or call centers, beneficiaries could use chatbots to express their needs. This would allow organizations not only to serve more people but also save resources, including financial ones that could be redirected for other essential activities. Indeed, as more people, including beneficiaries, possess mobile phones, they can benefit from a faster and easier way to engage with an organization.

Moreover, in the medical world, technology also has its advantages. For instance, an application developed by MSF has improved understanding of antibiotic resistance which enhances the quality of treatment for antibiotic-resistant infections. This innovation addresses the shortage of microbiologists who are responsible for analyzing such results, given that the app performs their work instead. The literature explains that technology could be used as a leverage to innovation, and the above example shows the potential impact of technology in the sector as many lives could be saved for a lower cost.

The results also highlighted that the process of innovation has the capability to erase some pre-existing barriers, leading to more collaboration and communication across various levels of the organization. Innovation can be leveraged as a tool to foster better inter-departmental cooperation while ensuring that everyone's voices are heard since the early stages of the process. This demonstrates how innovation can improve organizational culture and encourage a more collaborative and creative environment.

Furthermore, innovation act as a complement to organizations operations' core activities. Given that operations focus mainly on providing essential services, innovation helps to find better ways of executing those operations. Hence, innovation should not be seen as optional but rather an integral part of those activities that can be enhanced, which makes innovation a vital catalyst for the functioning of organizations.

Innovation, when considered as adaptation, has showed how valuable it can be for operations. The introduction of the pre-prepared kits approach, equipped with complete surgical hospitals supplies for instance, was a revolution in emergency response. Today, this kits approach is broadly used by several organizations in the sector because it demonstrated its substantial benefits. The widespread adoption of it reveals how innovation can benefit an entire sector by potentially saving numerous lives effectively. Adoptions, in a sense, can mean to be able to assimilate the existing knowledge outside and exploit it for better outcomes.

On top of that, the possibility of innovation to lead to higher beneficiaries' welfare is represented through cases such as the ICRC's Physical Rehabilitation Program that promotes social inclusion and rehabilitation, as well as the KOBLI digital platform which increased access to legal assistance for refugees. These instances underline how creative ideas and approaches can enrich the quality of services provided.

To conclude this part, innovation can yield countless benefits as mentioned above, even though it involves constant efforts in problem-solving, adaptation, and a user-centric design to ensure that final needs are reached.

5.3 Obstacles for innovation

Diverse obstacles come into play when organizations are willing to innovate internally.

A major barrier to innovation seems to be funding. Knowing that funding in the sector is highly restrictive with donors providing funds for the execution of organizations' essential services to affected populations. The findings and the literature underline donors' specific outcomes requirements that give little room for innovation as the availability of funds is limited. These traditional models are not favourable to the fundamental flexible and exploratory nature of innovation. The literature also suggests that a more innovative approach for funds should be adopted. For instance, the *UNICEF Innovation Fund*, or the *WFP Cooperating Partners Innovation Fund* are such innovative funds that organizations should use to increase their financial resources for innovation.

In addition, the sector is characterized by an atmosphere of caution which is driven by the risk-averse nature of the sector who cannot afford to put in danger its reputation and the vulnerability of the people it serves. The sector also seeks immediate results or short-term gains, which directly create pressure on researchers or innovators. These people who aim to improve the current situation, can be prevented to innovate because innovation typically requires a long-term perspective and investment. Therefore, these factors stop the pursuit of the development of new innovative approaches and solutions which explain why the sector tend to carry on as usual.

Moreover, although the employment of technology holds promising in the sector, it comes with its own variety of difficulties. Undoubtedly, based on the findings and the literature, concerns about the ethical implications of technology usage represent another barrier. This is particularly true in relation to data protection and the possible expansion in vulnerability among beneficiaries. To tackle this issue, several initiatives have been

taken to promote responsible innovation, but their effectiveness is yet to be determined as there are still no solutions framed to ensure core principles are not violated.

Furthermore, the co-existence of various perceptions of innovation might hinder its progress. As previously seen, the definitions of innovation in the sector are diverse even for those in the area, and few people in organizations understand the importance of doing things differently to improve the overall performance. If organizations' leaders are not convinced about innovation benefits, then it becomes harder to change.

Regarding collaboration between organizations and private companies, these can be prevented by the disparity in structures and the way innovation is seen in those distinct sectors. Given that innovation in the private sector is more advanced, frustration on private companies' side come into play as the pace of innovation within the humanitarian sector is typically slower. Additionally, from a procurement standpoint, organizations often stick to purchase the same materials without considering potentially other alternatives. In fact, they tend to exploit existing resources instead of exploring new possibilities. This hinders changes in ways of doing things. Fortunately, there are initiatives like the "Humanitarian Innovation Programme" of Innovation Norway. This program has developed an innovative procurement guideline designed for humanitarian organizations to help them move away from traditional procurement practices, thereby encouraging the promotion innovation. Therefore, as the guideline suggests, organizations would benefit more if they look for desired outcomes rather than desired inputs.

The finding suggests that high turnover of personnel is affecting the success, continuity and ownership of innovative projects led in organizations. As a matter of fact, organizations' HR recruitment practices are not adapted to recruit the right people for the unique demands of innovation. The HR department should therefore focus more on equipping themselves with more adapted practices to hire people who would highly contribute to projects.

One significant hurdle to innovation is the inflexibility of internal procedures which can be characterized as rigid. In organizations, internal operations and activities are conducted in a specific way that does not easily support the process to innovate. The bureaucratic characteristic makes it difficult to progress towards better ways.

On the cultural side, it is notable that humanitarian workers are quite resistant to change. This resistance can manifest when adopting a new system or a novel way of doing things. As a result, such reluctance can prevent the quick development and implementation

progress of innovation. People would thus be less reluctant if they are provided with the right reasons of leading changes. Individuals with open-mindedness and flexibility can ease this barrier and foster an environment for innovation.

A common mistake is to want to replicate a solution working in one place to another one, neglecting the unique context. It is important to understand and evaluate the circumstances of a specific context to properly adapt a solution and make it successful. Indeed, the characteristics of some context might arise different challenges that need to be assessed.

To conclude this part, fostering innovation in the sector becomes complex due to several factors. And addressing them requires different ways like funding models, take more risks while considering the vulnerability of ethics, and collaborate with other actors to share the risks as well.

5.4 Strategies for promoting innovation

The findings highlighted various ways that can be employed to cultivate a culture of innovation. Indeed, numerous tools and approaches are currently being used to reach this objective.

First, findings emphasize the need to acknowledge the inherent innovative spirit of humanitarians because their daily work is to find solutions to challenges in the field. This refers to the definition of innovation. But it is necessary that organizations also encourage the open sharing of different challenges across different contexts. This could in return leverage open communication and collective knowledge. Consequently, the open sharing can help to come up with innovative solutions that can be applied everywhere to solve the same common issues. Indeed, challenges could arise in a different form, but the root of the problem is often the same.

The literature underlined that the sector was not satisfied with their leaders who failed in promoting more innovation. But the role of the leadership in encouraging a culture of innovation cannot be ignored. Leaders must not only verbally support innovation but also lead by example. Unfortunately, many organizations like to claim they support innovation while not acting on their mottos, which gives an impression of dual nature. By doing so, they will build pathways for staff to be more creative, and they will also provide needed resources to be able to execute some of the ideas. On this top-down approach, having innovation indicated in the agenda is a way to increase awareness about innovation and

ensure more focus on that. This last method can work but a culture of innovation is essentially impacted by the actions and attitudes of leaders in organizations.

Some organizations like the ICRC or MSF set up dedicated units to facilitate innovation. Innovation labs such as in UN agencies, like we have seen in the literature, would function similarly to bolster innovation. In those units, it is important however to assemble teams composed of individuals with both field experience and research skills to ensure they can act as catalyst for innovation by converting staff's ideas into concrete solutions. This approach demonstrates how some organizations are ahead in terms of innovation as they already have such units operational that helped to foster innovation at the organizational level.

When it comes to fostering innovation, numerous tools have been established to stimulate innovation. These tools are intended to demonstrate that there are opportunities for creative problem-solving to humanitarian staff. Therefore, some mechanisms have been put in place to encourage the generation of new ideas across several areas like logistics, medical and beyond.

For instance, the "sapling nursery" system helps medical field staff to propose new ideas and, if approved, receive the necessary resources to push the process in the initial stage. Additionally, the "Now Wow How" approach used by MSF is a great example tool of collaborative problem-solving. This approach gathers a variety of stakeholders to find the core problems by working collaboratively and generating solutions that could be implemented. Based on the findings and literature, these methods, that bear commonalities with design thinking and bottom-up approaches, can serve to stimulate creativity within organizations. This could reveal the hidden potential of staff members who would offer more values to their organization and be more empowered.

Furthermore, the practice of giving innovation awards within organizations, as Medair does, illustrates that organizations value innovative suggestions from their staff. This could potentially lead staff to feel more appreciated and more motivated to contribute further.

Another way for promoting internal collaboration and open communication is to regularly encourage staff to share new knowledge and discuss about diverse topics. To facilitate this, arranging meetings specifically dedicated to such exchanges can be beneficial. This approach nurtures a conducive environment to innovation which highlights the organizations' commitment to have a more collaborative culture.

On the other hand, utilizing external resources and networks can be valuable to foster innovation. As the literature and the findings suggest, creativity is encouraged by tapping into the wisdom of a huge community. This refers to the humanitarian ecosystem which can accelerate adaptation and learning. Indeed, humanitarian organizations cannot do everything alone, and they understood that collaboration and partnerships are integral to their success in operations and in innovation. As the literature underscores, initiatives across different categories like funding, R&D and networks have been launched to foster innovation in the sector. One such example includes the *UN Innovation Network*.

The humanitarian ecosystem is broad and should be cooperative in various domains to ensure operations are more effective. When it comes to innovation collaboration, findings highlight platforms like “*Tech for Dev*” or organizations such as Net Hope that are notable examples to boost innovative capabilities by offering funds, workshops, and opportunities for collaboration. Therefore, strategic partnerships should be a priority for organizations who seek to reach better outcomes. It is however important to consider partnerships with a need-driven mindset to ensure operational requirements are fulfilled. Additionally, partnerships should not be haphazardly formed, but a thorough understanding of partners’ background is essential to maintain organization reputation.

Finally, fostering a culture of innovation within humanitarian organizations, involves a set of various strategies. These include tools, approaches and networks that should be leveraged to empower their staff as well as encouraging creative thinking. In the end, they could lead to better outcomes. Forming well-analyzed partnerships is a critical component of innovation because they can further enhance innovative capabilities.

5.5 Innovation measurement and assessment

The fifth objective of this research is about evaluating the impact of implementing an innovative approach in a humanitarian organization. Findings shows that assessing the impact of innovative solutions can be complex but important to continuously improve humanitarian efforts. Indeed, the challenges is to find effective measurements for those new approaches. When assessing the impact of innovation, it remains crucial to directly link them with the benefits for beneficiaries. It is obvious that the success of an innovation must produce results that address specific challenges. This emphasizes the need to have clear strategic objectives given that these can be transformed into measurable deliverables.

Nonetheless, some KPIs can be used to assess innovation but their effectiveness remains weak. Therefore, as the literature also suggests, a more standardized approach

is needed but the unique nature of each innovative projects makes it difficult to do so as there is a need of flexibility and adaptability in measurement methods. In fact, due to this uniqueness, organizations tend to evaluate innovation on case-by-case basis to tailor measurement to the specific project.

Currently, there are no better option than adopting this case-by-case method to gauge the impact. The example of the antibiotic resistance project of MSF underscores the importance of this approach. For the project, clear strategic objectives with measurable outcomes were set to improve the quality of treatment for antibiotic-resistant infections in a significant number of patients. This clear objective allowed for a more accurate assessment of the innovation's success. The finding show that some organizations suggest using the sector-specific metrics where they buy from to measure their innovation. The example of the shelter project illustrates well this method of evaluation.

Evidently, innovation should ideally result in improved operations or emergency responses. But interestingly, the definition of success of innovation should not be restricted to the effective implementation of a solution. In fact, even initiatives that could not be implemented and scaled should be viewed as a success because the extractable insights are valuable to better decision-making. This underlines the continuousness nature of innovation where failures are no obstacles but more possibilities for further learning and growth.

Furthermore, a success in implementation of innovation can be recognized when a new approach or tool becomes a routine part of operations. The continuous use of an innovative approach proves its success. This underscores the importance of applicability in the innovation process where innovation's ultimate goal is to enhance the efficiency and effectiveness of operations.

In conclusion, measuring and assessing the impact of innovative approaches become challenging although some organizations adopt a multifaceted approach to do so. By evaluating better innovation, organizations would benefit from more effective and efficient responses as the evaluation would be informative of future operations.

5.6 Outcomes of partnerships with the private sector

When humanitarian organizations collaborate with the private sector, we note that valuable things can be accomplished while coping with difficulties. According to the existing literature, the contributions of private companies can extend beyond financial resources.

On the advantages side, findings explain that the private sector collaboration is a trigger to accelerate innovation's pace and organizations' creativity. The humanitarian sector has recently appreciated the collaboration with the private sector. This shift in perspective recognizes the potential high value that can be derived from partnerships with companies possessing expertise in specific areas. Indeed, organizations can tap into specialized knowledge and technical capabilities they lack. By engaging with entities outside the sector, it first encourages thinking out of the box, and it simultaneously helps to develop more efficient and sustainable solutions.

However, one might question the incentives for private companies to invest time and resources with humanitarian organizations. In fact, these private companies can benefit from association with good social causes which can improve their own brand reputation and recognition, but also the altruistic aspect of helping others.

For these collaborations to be valuable, several challenges need to be addressed. Certainly, the private sector does not function as the humanitarian sector which could lead to misaligned priorities and hinder collaboration. Finding the win-win situation while collaborating is difficult as well because the nature of each sector has different operational style. Indeed, the private sector is profit-driven and organizations look to meet the needs of people. A gap is raising between the two entities. Thus, communicating well, is critical along with establishing mutual understanding, creating beneficial agreements, and building trust. These are key to successfully develop new solutions. At the same time, private companies logically wish to retain ownership of the collaborative innovation for monetization purposes, while organizations are seeking to provide free access to those solutions. In fact, Innovation Norway is reportedly addressing this issue of intellectual property to ease collaborative process between the two sector and foster innovation on a larger scale.

Moreover, the negotiation process can present difficulties too. For instance, technology companies often wish to provide existing solutions they have to organizations. However, those solutions often do not meet the specific needs of the organizations who are looking for more tailored solutions. Therefore, the negotiation capacity of organizations with companies may be insufficient, which could ultimately lead to sub-optimal collaborations. To mitigate this, particularly in small NGOs, it could be beneficial to hire technology experts on the board when negotiating with technology companies. But bringing also an expert in negotiation is valuable for better decision-making and negotiations processes.

6. Recommendations

In order to respond the research question and to reach the objectives, some recommendations have been formulated based on the discussion above. We have seen that many benefits can be achieved by giving more space for innovation internally, even though it is clear that obstacles might raise, especially in the humanitarian sector.

Nevertheless, a variety of approaches, methods and tools are to be used to break some of these barriers and promote innovation in humanitarian organizations to ultimately improve operations. Internal means could be applied to foster innovation at the organizational level but also collaboration with the private sector appears to be fruitful, despite the challenges that come with it.

Below is the list of actions humanitarian organizations can employ to allow more innovation:

- **Clearly define the concept of innovation:** given that innovation is often misunderstood and associated with technology, staff members and most importantly leaders should be educated on this concept and its benefits to improve organizations' overall performance. Understanding that innovation is about long-term results is essential too. This could further create more acceptance when changes are made.
- **Encourage open communication, collaboration, and continuous improvement:** the process of innovation must be used as a tool to cooperate with other departments internally by sharing knowledge and ideas. But innovation involves constant learning. Even if failures in implementing a solution occur, the insights and knowledge earned can better guide future decisions.
- **Incorporate innovation with organizations' operations:** it is important to view innovation not as an option but rather a complement of operations given that it can serve as a critical catalyst of the good functioning of activities led in the field.
- **Always focus on beneficiaries' needs:** each innovative project should aim at increasing beneficiaries' welfare, and through innovation the quality of the services they will receive can be enriched.
- **Humanitarian organizations should consider innovative funding:** as the amount of funds needed are increasing to deliver the core mission, there are insufficient resources to initiate innovative initiatives within organizations. The

existing solutions for innovation can be valuable to remedy against this limited availability of funds.

- **Leverage technology and use a responsible innovation approach:** technologies are already used in the sector and can bring significant results if well employed. Organizations should however consider and evaluate the ethical implications of using technologies. Collaborating with organizations like Net Hope could ease the adoption of a more responsible innovation.
- **Leverage external resources and networks:** the humanitarian ecosystem and its resources are rich and can be used to create a more innovative-friendly environment among the humanitarian actors. Using the existing networks would help accelerate innovation by adapting and learning faster, but also to promote innovation in the sector.
- **Adapt internal procedures:** as innovation requires flexibility, there is a need to adapt internal procedures who tend to be rigid in the sector to be more supportive and avoid hindering the process of innovation.
- **Establish dedicated innovation units:** to facilitate and streamline innovation, it's essential to establish a primary innovation unit at the organization's headquarters. This dedicated unit would serve as the central hub for driving innovative strategies, increasing organizational awareness of innovation benefits, and fostering an innovative culture.

However, recognizing that meaningful innovation often originates from direct interaction with affected communities, it is equally crucial to establish local innovation labs in the field. These labs, working in conjunction with the central unit, would provide an on-ground platform for nurturing local ideas and solutions. Staffed by individuals with field experience and research acumen, these labs could effectively convert community insights into viable solutions, ensuring that the innovation process is inclusive, context-specific, and impact-oriented.

The synergy between the central innovation unit and local innovation labs would allow for the translation of high-level strategic innovation into practical, localized solutions. It ensures that innovation is rooted in the realities of the field, thereby increasing the likelihood of success and sustainability of implemented innovative solutions.

- **Implement innovation mechanisms:** leaders should adopt mechanisms, like the sapling nursery system, that stimulate staff' creativity and innovative problem-solving. This would also demonstrate the leadership's commitment to innovation by leading by example.
- **Tailor measurements to each innovative project:** when measuring the impact of innovation, it becomes difficult but feasible. Knowing that innovative projects are often unique by nature, it is important, for the time being, to evaluate the impact of innovation on a case-by-case basis. Ongoing discussions about a more standardized measurement for innovation are taking place.

When it comes to partnerships with the private sector, recommendations have been formulated to remedy against the challenges that could potentially hinder new collaborations:

- **Align priorities and establish mutual understanding:** first, setting clear strategic objectives is important when innovating. Then, misalignment of priorities can lead to unsuccessful collaboration. It is therefore crucial to find a common ground to align objectives between the two sectors. Communicating clearly expectations, roles and responsibilities as well as understanding each other's sectors and operational styles is essential.
- **Negotiate IP rights and ensure a win-win situation:** the problem of intellectual property rights in developing new solutions can prevent partnerships. It is therefore important to focus on each sector's interests, which are monetization for the private sector and free access for the humanitarian sector. Innovation Norway is currently working on a tool for this IP aspect. Finally, the efforts should be directed into creating synergy that benefit both sector.

7. Conclusion

The aim of this study was to identify how humanitarian organizations can encourage internal innovation and improve their response to crises through new approaches and partnerships with the private sector. The investigation facilitated the formulation of meaningful recommendations.

First, the concept of innovation in the sector, which extends beyond the technological aspect, needs to be clearly defined and understood. By educating staff and leaders of organizations, it can build more acceptance during the integration of innovative projects.

The study underlined the power of open communication, networks, collaboration, and continuous improvement. When considered as a tool for collaborative work and a source of learning, innovation can become an instrument for growth and better decision-making. But it also emphasized the necessity to consider beneficiaries' needs, explore other means of funding, and convert rigid internal procedures into more flexible ones. Furthermore, it underscored the importance of incorporating innovation as part of organizations' operations to significantly improve operations in the field. In fact, leveraging technology to enhance operations appears to be effective when ethical implications are considered.

Several tools and methods were highlighted to nurture a culture of innovation within humanitarian organizations. Additionally, leaders are playing a key role in fostering innovation within their organization by allowing the implementation of stimulation mechanisms and leading by example. Those increase staff's creativity and problem-solving skills who receive the necessary resources and support to develop their ideas and scale them.

In terms of private sector collaborations, their value can be significant as they bring specialized knowledge and expertise which further foster efficient and sustainable solutions. However, several actions such as aligning priorities, ensuring a win-win situation and negotiation intellectual property rights are key recommendations to have successful partnerships.

In conclusion, by employing those strategies internally, humanitarian organizations can not only enhance their operations but also increase the welfare of their beneficiaries. Although this study provides a comprehensive framework to foster innovation within humanitarian organizations, further research should be conducted to explore the differences in encouraging innovation between large and small organizations to tailor more specific strategies.

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Appendix 1: Interview Respondent A

Paragraph 1

Again, thank you very much for accepting to have this discussion with me. My first question is about identifying the barriers that humanitarian organization can have. So, do you find that internal challenges or barriers have hindered the development and implementation of innovative solutions within your organization? It can be any type of barriers or challenges.

Yeah, definitely. There's many, many, many, many barriers. In fact, I think I've never done innovation in the private sector, per se before this. But I imagine that there's more barriers in the nonprofit sector. Probably the very first barrier is around funding because humanitarian organizations are always looking for funding to support their operations. And, of course, the types of funding that they get for humanitarian operations is very, very restrictive, and yet the type of funding that's required for innovation funding cannot be restrictive. It must be much more unrestrictive really, because innovation does not take a direct path. And that's one of the key barriers is funding. And maybe you could say the other side of the coin is the mentality that is attached to the funding. I could give you an example: in a normal humanitarian project, the outcomes of the project are very, very clear. You're going to deliver this type of humanitarian assistance to those people, in this quantity, on that date. Very clear. And so the donor is essentially like purchasing those outcomes they want. They want those things guaranteed whereas humanitarian funding must be very unrestricted so that the humanitarian innovation can kind of find its way from the start, from the idea maybe being scaled up.

Do you know the reasons behind it?

Yes, I think it's pretty clear that the reasons for humanitarian funding being restrictive is there's never enough funding in a crisis. So therefore, the donor wants the funding to go as far as possible to cover as many needs as possible. And secondly, if it's an institutional donor like the US government, British government, and European government, whatever. They have the public and the politicians who are examining what exactly did the funding get used for. And so there's a lot of pressure on the donor agencies in the government to choose the money very wisely, let's say. Or to have a lot of accountabilities. And that results in the grants that they give being extremely restrictive, they cannot deviate very easily from the plan. And so that mentality is pervasive in the humanitarian industry. And when you add innovation, which is completely the opposite, then it's kind of like oil and water sometimes it's very hard to meet us.

Paragraph 2

Thank you very much. Next question is: do you find that there are organizational policies or cultural factors that have limited the adoption of innovative approaches in your organization?

Let me just add one thing to the last answer, I was just thinking of it as you were speaking, it's very important actually, it's kind of ironic, because humanitarians are by nature innovative. Because humanitarians, by nature in their job, must be very innovative in order to succeed. If you're working in a place like Ukraine or Yemen during a conflict, there's in everyday there's something that will prevent you from succeeding in your project. And you have to innovate ways to overcome those challenges. That's quite ironic. That's why I think money is very important because money is what changes the type of innovation and the mentality of innovation. Sorry, tell me your question again.

Paragraph 3

No problem, thank you for sharing, that was interesting. Do you find that there are organizational policies or cultural factors that have limited the adoption of innovative approaches?

Yes, I wouldn't say that they are overtly or directly trying to hinder innovation, but it's a byproduct or it's indirectly happening as a result, and those policies are coming out of for example the finance department of an NGO which wants to control spending of donor money very tightly. And also, you have sort of a final written policy in the organization that says that all of the available funding should go to life saving assistance. And so how can you use money to innovate if there are people dying of hunger, or these types of crises? There's always a pressure to put money towards those kinds of problems, and not put money towards invention. And that policy, it might have been written but everyone is sort of operating with that assumption. I think that all has somewhat changed in the last 10 years, because many humanitarians now have sort of woken up to the idea that some of the solutions to the challenges that they face globally are solved by innovative ideas. And they've seen the use of visual technologies in humanitarian aid has meant that the average humanitarian would do more. So, it's obvious to say that it had to come from such innovation. And where they would draw the line is that they would say that it's the private sector who should be providing those tools, whether it's an iPhone or Microsoft Excel or some drone, they will say, Well, you know, humanitarian money should not be spent on those innovation Those innovations, those innovations should

come from private sector and we get to use them. And that's where we are sticking right now in terms of changing people's minds.

Paragraph 4

Thank you, and we'll come back to that at the end because we will talk about collaboration with the private sector so that can be interesting. Now for the next questions about the benefits that it can bring to an organization and its operations. The question is: how has given more space for innovation within the organization led to improvements? It can be in operational efficiency or effectiveness or in responding to crisis. So, what are the improvements that can be brought by giving more space to innovation?

Good question, I think when we get down to this level of details, it really depends on how they define innovation in your organization. If you define it very broadly, then it is easy to find examples. If you define much more rigorously then those examples might be harder to find. In my experience and my current role, innovation has two sides of the coin. We have disruptive innovations that seems that we are trying to solve. And then you have incremental innovation, which we also call process improvement. So, with those innovations, we're trying to reduce waste or reduce in whatever processes. It could be finance, HR operations etc. So, every year we collect examples of those innovations. Because if you think about humanitarian organizations and international organizations, we have franchisees, or offices, in hundreds of countries, right. A big NGO could have let's say 200 hundred offices around the world. So, they don't know what they're all doing, how they're solving different challenges. And so, it's important to collect those examples of innovation from one country as of course they might generalize to many other countries. A good example of this is digital transformation. I think we think that digital transformation is obvious. Why wouldn't you use digital tools? Because they're obviously better than not using them. But in fact, many NGOs are quite immature in terms of their adoption of digital tools or digitizing processes in the organization. And the reason for this is because it's really hard to call it out globally. But you can imagine also, that country A has been using a process that's similar than country B, but it's different enough that it makes building the tool that much more difficult. So that's always going to be a challenge, I guess. But we collect all these processes, and we actually try to use them as examples of how the organization's problem-solving using humanitarian innovation. And you might collect dozens on the process improvement side, whereas on the disruptive innovation side there might be every year, just a handful really that truly achieve something remarkable, something impacting your country.

Paragraph 5

And do you have maybe one example? One recent example that you can share?

Yes for sure, for example with the rise AI in people's mind and ChatGPT, we're supporting a project in one of our office program. They are using AI power chat bot to communicate with beneficiaries. And so this is part of something called AHP which is "Accountability to Affected Population". This essentially means that if you're giving a humanitarian service to populations, you should also communicate very effectively with them to make sure they understand why they're receiving assistance. And of course, another big part of that is that if there is any fraud or sexual abuse, or anything negative happening in that project, which might be happening. Then the beneficiary or the public would communicate that to the NGO through that channel. In the past, NGOs have experiment with WhatsApp, Facebook, regular old SMS, hotline, call centers. But you can imagine, in a project where you have thousands and thousands of beneficiaries, it's very hard to manage all those feedback from them. So if ChatGPT or an AI-powered chatbot could interact with those beneficiaries and then only bring the prominent case to a human, then it would save a lot of money. And if that works, then we could imagine a whole industry could adopt it and it would save lots of money that was going towards call center that would now go towards more food or more shelter, or more water etc.

And on the process improvements side, I was just looking at one of the work we're doing now. For instance, when there's an earthquake and the NGO wants to buy ten thousand bales of tarp. It's going to cost like 5 million dollars and there is a bunch of documents that goes with that. Well, instead of receiving all these PDFs from every single bidder, they just want to have a platform that does it all electronically. It is something that the private sector does all the time but it still hasn't penetrated the humanitarian sector. So just taking the process that exists and digitizing it and making it much more efficient is a good example of process improvement.

Thank you. And is it an ongoing process in your organization?

Yes definitely. It takes many years to test it in one country program, and make sure it works. Then you have to translate it to other country programs.

Paragraph 6

Thank you very much, that was a very interesting example. Now the next questions are about the culture of innovation within organization. So, what specific actions

or initiatives can humanitarian organizations implement to foster a culture of innovation?

Wow, this is a big topic that we ask ourselves often. It goes back to what I said earlier, humanitarians by nature need to be innovative, particularly if they are in a crisis because they will always have to solve problems where they don't have the right or wrong solution. It's just you have to find a way around the challenge. It is very important to take that innovation spirit, which they are already doing, and kind of direct it towards larger problems. And that means opening up their eyes to how challenges might be similar in different countries. And I think that is the role of the headquarters to hear all of these innovations, or all of these pinpoints in different countries, and see the commonalities in them. The challenge might express itself this way in one country, and a different in another country but they're actually both the same challenge. A good example of this right now is the question identifying the beneficiaries while protecting the data. Because you can weaponize data, particularly nationality for refugees. So, we identify the people that we serve in every country in the world, and we're doing it a little bit differently in each country. So how to support that challenge within innovation. Now going back to the culture aspect, it's really sort of how make people understand that their problem in their country is not just related to the country, it can possibly relate to all other countries. Therefore, sharing it, recognizing it as a challenge, to use it as a comparison. I would say with innovation you have to package it in a way that doesn't overwhelm aid workers, particularly those in the field. Because I know that I'm adding it to their current workload. Typically, they already live at complete capacity. Often times in those country offices, you have maybe upper than 20% to 25% missing in charge staff. There is a gap in the program, so people are covering two positions. And when you ask for instance the most recent innovation, then it's really asking them of their time, and they would respond by saying they don't have the time. Personally, because I am doing this job for a long time, I'm able to understand when I can ask for questions and gain sort of the importance of pushing for more answers based on their role and what they are doing. Maybe the last part goes back to the financial side. Typically, the mistakes humanitarians made with innovation in the past is that they didn't really quantify the benefits of the innovation, and I'm not really sure why. Therefore, it's been challenging to convince humanitarians that the things that they are using now are based on innovation in the past. And those things have a huge benefit to their work. Whereas in the private sector, innovation that is purchased such as a device, they can easily figure out what that's worth to the company. In humanitarian aid, it's very hard to know what that innovation worth to the organizations was or to the crisis or whatever. Therefore, it's hard to show a track record to other

humanitarian to convince them to invest more in innovation. That is part of the culture that we can improve on.

Paragraph 7

Do you mean having sort of an evidence-based approach?

Yes, but not only, also quantitative evidence too.

And do you think that there is a lack of measures or metrics that can be used to foster innovation? Do you think the sector is missing that?

Yes, across the entire non-profit space, there is a huge emphasis to focus on impact, measuring it and understanding it, what is impact worth. It's not different with innovation. You attempt to create impact with your innovation but what if your impact doesn't work. Imagine you're improving a process and it's going to cost you 50 hours of time, and you are not really sure how many hours you're going to save as it's very hard to quantify that. Judging that impact is probably where we can improve. And I see a lot happening now and it is encouraging because I hope that it will find its way to innovations.

Paragraph 8

Thank you very much. Now we're going to talk about different tools or approaches to foster innovation. What tools, methodologies, or approaches have been particularly effective in fostering innovation within your organization?

I believe that 2 things have been successful in my role. The first is that we do, every year, innovation awards, so we recognize innovation in the organization. Even though there is no cash prize, they get the recognition of the innovation they created. And we also recognize the project and the country. Those countries programs can take it as a badge of honor that will make them feel as one of the best innovative country office. This recognition gives them a moral boost that caused them to be more involved in innovation, and speak about it, and foster that kind of culture of openness. The second thing just the fact that I'm in this role as an innovation advisor. It means that I can, for example, do a webinar once a month, or a zoom call with people in the organization just to talk to them about anything on their mind. For instance, we share TedTalks, various methodologies and we discuss them together. I think that's helpful too because that one is whoever wants to attend and we develop a relationship with those people. This helps to foster innovation in their own country offices.

Is it only for your organization's staff?

So far, we keep it internal because it's quite informal. We try to make it a sharing time and an open platform for people to talk about issues.

Paragraph 9

You talked about digitalization of some processes that could lead to innovation. Are there any external resources, networks, or platforms that your organization has leveraged to support innovative efforts? If yes, could you provide some examples?

I think certainly there are donors that give money to innovation even though it's not necessarily a platform but without them we would not be able to do the projects we do. In terms of platforms, one that comes to my mind is "Net Hope" which is a technology service adviser to NGOs. They are always proposing, through their newsletter, different events touching on the theme of innovation. Then for example here in Switzerland, there was in the past a platform for innovation advisers at different NGOs but it hasn't last for a long time. At that time, I think it was helpful for networking. Another one that comes to mind is at the EPFL where there is a platform called "Tech for Dev" (=development). They try to not only provide funding to non-profits or any innovation, but also to offer workshops where they did a good job. They are taking academics who have specialty in several areas like blockchain, digital identity, or international property etc. All these different topics associated with innovation, and they give workshops to NGOs, and that helps as well for networking too. There is a few at EPFL and another example is called "Essential Tech". It is a little more geared to investing in some innovation and creating a startup out of it. But because it deals with innovation in the developing world, it attracts lots of NGOs.

Paragraph 10

Now we'll talk about the impact of innovative approaches. How do you measure and assess the impact of innovative approaches on your organization's operations and response to crises?

We measure it on a case-by-case bases. When we have an innovation project, we setup the measurement deriving planning process, but it's very much customized to that project. Whereas for a normal humanitarian project which is non-innovation, then it is a standardized measurement process. That is very important because humanitarians want to compare the service, whether it's shelter or healthcare, or water & sanitation. For innovation, we talk a lot about the feasibility of standardizing the innovation measurement. We haven't yet because felt that each project was so unique. Having said

that, on the process improvements side, then we measure that very uniformly with different criteria. To give another example, we are doing right now a shelter innovation project. So, we set up the measurement of the impact and we borrow from the shelter sector of humanitarian assistance. So, we look into how they measure shelter project, and we see what we can use here to measure the impact of our innovation project. It will work to some degree but it's not a direct link.

Based on what you said, do you think it can lead to improvements in crises or other operations?

Yes, It has to. I think it's important though to say that sometimes we measure an innovation, and it fails. But that is still a success, because we identified that this solution is not correct. That is a key point of learning, but unfortunately many NGOs are hiding that. I believe it's important to recognize that because we don't want someone to repeat that. Publishing those results is therefore important.

Do you think that publishing those results could prevent donors from providing less funding in case the project is a failure?

No, I don't think so because typically when asking for innovation funding from a donor, it's very clear that there is a high likelihood of failure. Therefore, the donor is always prepared that the money it provides is not for saving lives directly. An innovation project should be done in an experimental way and set up the entire project about learning, not about saving lives. However, the learning that we take from that project might help to save more lives. If we save lives or help people, that's a by-product.

Paragraph 11

Ok, thank you very much. Finally, what have been the key benefits or challenges of collaborating with the private sector in the development and implementation of innovative solution for humanitarian challenges?

Sure, I would say that to ask this question it's important to separate between startups and multinational corporations. A lot of innovative technologies are coming from startups. They are the forefront of technology. But startups are not rich, so they are now interfacing or partnering with non-profits that doesn't have much money either. That becomes a problem because both cannot realize the project due to lack of money. So, you have to go looking for donors to fund your innovative project. Whereas for large corporations, like Microsoft who might have lots of money to put forward that project, the technology, or the solution that they provide might be much less innovative because it can be

something that is already being used by the private sector. A good example is, for instance, Microsoft who introduces a software used in the private sector to you for free. The question they will ask is whether the non-profit organization can use it as it is because Microsoft will not customize it. Whereas for the startups, they are ready to adapt it and customize it in any way you need. So, when collaborating with the private sector, it's very important to know when to involve them because a lot of times you're just trying to test the idea. So, all you need is a prototype that you want test in the context before you go to a big operation to build the thing. So, finding the partner to test the prototype get you more towards academics or labs in universities because they are also in the business of testing ideas and testing prototypes, trying to find a solution. And then once you find your solution, you go to an operation in order to really deliver it, scaling it for example.

Paragraph 12

And what would be the benefits for these private sector companies to collaborate with the humanitarian sector? What could it bring to them?

Well, there's really two that are right at the very top. Number one, they want their product, or their service associated with some social cause. So maybe there's a mandate in your organization or there's a desire from the executives to use their expertise in some sort of social good thing. So, it could be something as simple as like "we have this thing that we use, can you use it for good purposes in the development?" The second thing is that they want their brand to be seen as doing something good, sort of having recognition. Those are the two obvious. Finally, I think that a third one that we hear a lot is if the organization wants to give their employees an outlet for doing some sort of social good cause. Not the brand or the organization but actually the employees themselves. The organization wants to volunteer their employees by involving them in projects.

Thank you. Just to come back on the funding part, based on the research I've done, I saw that there was this Humanitarian Innovation Fund. I would like to know if your organization have tried to raise funds through this innovation fund program.

I know about this fund, but I don't know if we ever received funding from them. However, there are many now that are very similar, and we definitely received from them. Avoid putting two appendices on the same page. Insert a page break then indicate the number of new the appendix and its title.

Appendix 2: Interview Respondent B

Paragraph 1

Thank you again for having accepted this interview. The first question is the introduction question I would like to know how would you define innovation and what are the main attributes of innovation in your sector?

Well, I think that innovation is a result between attractiveness process that you should interact with methodologies, techniques, tools that helps to you to increase the value in the organisation. So, it's not something that only have been one time it's something that is cyclical that requires multiple actors. It means internal or external actors that help to minimize the strategy that we have in order to address the needs that we have for our customers, in our case our beneficiaries. So, when we talk about innovation, we need to try to think out-of-the-box. We need to try to know which is the traditional flow that we are establishing the process and how we are going to rethink about how we can design something completely different in the knowledge that we are generating in this flow and how can we add value to this flow.

Paragraph 2

Ok great thank you. The first question is: Do you find that internal challenges or barriers have hindered the development and implementation of innovative solutions within your organization?

Yes, for sure, I think it exists a lot of barriers in that case. And one of those barriers is that we have a lot of internal procedures that in some cases up generate a barrier to continue progress in this knowledge and the innovation that we want. Why? Because we want to generate a similar perspective or an equal perspective for all the organisation in all the sites, but it's not all the time that this situation helped us to have a better understanding of the innovation. Another point for example is the multicultural part that we have which could help us change those barriers. But if our procedures are really strict to be able to adapt to the new challenges we have, then it's really complicated. So, I think that the management in that case have a specific situation where they need to think how they're going to adapt operations in order to have a better solution to the needs of beneficiaries. So, if we want to have cost savings, if we want to increase the response then we need to redesign the solutions that we are thinking of.

Thank you. the next question is about what you mentioned already about internal procedures that are in place in the organisation which could act as a barrier. But

do you find that there are also cultural factors that have limited the adoption of innovative approaches?

Well, I think that in general, the people in general have a specific point that I consider to be change resistance. It doesn't matter where you are, in which place you want to establish something. I remember that during the implementation of a new ERP system. I was in charge of training some teams and explaining about the new change. Many people started to ask questions like: why are we going to change it if the solution we have is working? Why do we need to have a new one? Why do we need to change if we're doing this stuff in the same way? Why do we need to adapt to a new solution? I saw a lot of people with lots of resistance to change. Even in some cases, maybe it could sounds a bit weird, but some older persons were really annoyed to have someone younger coming with a new solution and giving a new response. So, it should not be a question of age, rather it should be a question of which will be the best option to have more information to make better decisions. I think that the cultural situation could impact in that way. I also consider that diversity organizations have could have another specific impact depending on the context. Obviously, it's not the exact same situation for all of us. Maybe in some context it could be the religion, for other ones it could be the age, and for others it could be the experience you have in other work. It depends on others' perceptions of you. Finally, if you want to have an innovation, humanitarian organizations should be more open for innovation and have a better understanding on the differences we all have to generate new flows.

Can we say then that cultural factors affect the path to innovation?

Correct, it is often considered that the same solution applies to all contexts. For example, you want to implement a solution in countries in Africa and you think that it could be applied for example in Europe or in Asia or in America. But each context has specific conditions, on a specific situation that you need to understand. The question should be how we are going to adapt those solutions. Innovation is not something that you put like that without consideration in any context, but it should be something adapted to the needs that they have in their specific context.

Paragraph 3

How has giving more space for innovation within your organization led to improvements?

To answer this question, I will bring two cases. The first one was in a situation that I had in the past where I was implementing this digital transformation solution. I remember that

when I started to train the new colleagues in the use of the tool, some of them didn't understand it. I saw that some of them were really confused in the flow. So, I tried to make it easier. I had a standard procedure, and standard PowerPoint slides but it was not enough because they still didn't understand. This is because they didn't know what the impact was and what was the objective to do their stuff in a new way. I understood that I needed to do hear them. One day I came back to them, and I had the opportunity to talk with them about different stuff. I remember asking them if they have an application to order something for delivery. Their answer was yes, and they named the application which was FoodPanda. During the training I was using the example of Amazon to illustrate what I was saying, but they didn't know much or even not at all about Amazon. And this was the key point that I needed. So, I asked more questions about FoodPanda, what it is, what you can do with it etc. The next days of the training I used the example of FoodPanda and they felt more proximity. They were therefore more open to learn about the training as they could identify themselves with the examples I used. It was the same information but only with adapting this course to them. In the end, it was easier to provide the training and for sure the learning curve changed a lot.

Paragraph 4

The second case I had is when I was working for another NGO. Just one point is that innovation is not only to have a specific product but it could also be part of a new process where you need to rethink or take maybe other options from other sectors for example. Now coming back to the answer, in that case I remembered that I had the situation where some people of a specific department of assistance had a project in the field. They needed a new water solution in that place. In this place, there were armed groups so it was not really easy to enter to this place. I recall that someone mentioned that some beneficiaries were dying because they were consuming non-drinkable water as it was not treated. The water was simply contaminated and killing people. So, I understood we needed to re-design something. In that aspect, I remember that the logistics department in that moment had a plan to have some water solutions in six months. Someone asked me how we could add value and how the logistics could help to change that situation. I answered by saying that we needed to rethink our process and maybe we can add value by decreasing the lead time we are expected to deliver the solution. Instead of six months we could have three months. By decreasing the lead time, we are having a better solution, we are innovating on how we're doing the process. We could redesign the flow that we are doing, but also how we would interact with the suppliers, how we would connect with other stakeholders which could be an integration with other organisations in order respond more quickly. Basically, I started thinking more outside the box again,

and try to link other stakeholders that we have in the chain. And this decrease in lead time happened successfully. What I mean is that innovation is not only about product, but also in the result.

Paragraph 5

What specific actions or initiatives can humanitarian organizations implement to foster a culture of innovation?

I think that it's managers who should have leadership in that kind of aspect. If managers don't change that aspect, it will be really complicated to generate some changes. However, if the leadership is here then we will have an impact in the culture. When we say that we want to generate some innovation in the humanitarian sector, it will be really easy if we start to design new solutions. To give you an example I will use the case of my previous experience in a multinational in the private sector. I remember that in the warehouse, they established a mechanism that for me was really interesting. They had in fact a wall with several post-its with different colours, yellow and green. In the yellow ones, anyone in the logistics department could write the challenges they had. And around the yellow ones, the green ones were filled with new options to have solutions. The green ones were filled by anyone in the company, no matter if they were in the logistics department. It's important however to know in which cases or which moment we can apply this type of methodology because some information might be confidential. Personally, I never saw this type of approaches in the humanitarian sector. I believe that if we have those type of methodologies, it would be easier to foster a culture of innovation.

And have you tried to apply this kind of methodology?

At this time no because it is not under my responsibility. This is a good idea that could be replicated in the humanitarian sector. I also saw that people have empirical knowledge, unfortunately and at least in the logistics department of the humanitarian sector this is not really the case as people don't really want to be able to learn new methodologies or new stuff. They consider that they always did things the same and it should be continued as it is. The opportunity would be to use what is done elsewhere and replicate it in the sector.

Paragraph 6

You mentioned before the example of the use of post it to generate new solutions. Next question would be: are there any external resources, networks, or platforms that your organization has leveraged to support innovation efforts?

In this moment, we don't have it. I did not mention it before, but I am doing my master in supply chain management. And recently we studied the circular economy. There I learnt that some companies are designing process where the waste that they generate are sold to other companies. For example, there was a case of a company that creates plastic. One of the components that they consider as waste was used as main element for another company in the same place. I was surprised that here we don't think the same way, the fact that the waste we can have can be a value for others. So, I believe that the new way we should be thinking is to think more cyclical. The question should be: how can we interpret that kind of solution in the humanitarian sector? How can we work closely with the private sector? I think that the private sector is more motivated to innovate more quickly. If we try to adapt our networks, our partnerships in a faster way then maybe interactions could change.

Paragraph 7

The next part is about the impact of implementing an innovative approach in a humanitarian organization and its operations. The question is: how do you measure and assess the impact of innovative approaches on your organization's operations and response to crises?

It depends on what do you want to measure. In some organizations, they have a lot of KPIs. They start to establish a lot of indicators in order to measure everything. But maybe we should think what the benefits for our beneficiaries would be. We need to focus on what is our principal purpose in the organization knowing that our focus is the beneficiaries. So, if we adapt that kind of indicators in how we are going to help these beneficiaries, it will be easy to know if the solution is useful or not. If we wanted to generate a change or if we wanted to generate some innovation, that is ok. But which will be the impact that this would have in our final beneficiary. We need to be pretty clear in what we want to measure. Here we have a lot KPIs, dashboards, information systems. At the end, the goal is to take decisions. It doesn't matter how many indicators or measures you have as long as you are not able to make good decisions. So, indicators should be related to the impact you want to measure.

Do you have an example of those KPIs?

Previously with our old ERP systems, everyone was working on different databases, so it was not easy to check the information or to compare information with other ones. When we switch to the new ERP systems, then we had access to others' information. The information was more on time. This helped also to make faster and better decisions. For example, with the old system we couldn't know what the amount of the stock that we had was, but with the new one we could even access to the stock in Geneva, in Mexico and other cities etc. Therefore, the availability of information helps to take new kind of decisions. Another example of KPI, in the logistics department, is that we were establishing something we call "OTIF" which means "order on time in full". This was an indicator that helps us to know if all the requirement of our customers were treated on time. It helps to know if we are delivering the products on the expected date. This is one of the main indicators we have now that we didn't have previously.

Paragraph 8

Now let's talk about the impact of collaborating with the private sector. What have been the key benefits and challenges of collaborating with the private sector in the development and implementation of innovative solutions for humanitarian challenges?

An organization always needs to be neutral, this is part of the principles that need to be considered every time. And personally, in my current studies, I learnt a methodology called problem-based learning, and it's incredible how each of us in the class have different perspectives to solve the issue. When you start to compare how a problem is solved in different sectors, you start to think more holistic. And you can generate value when you consider the key points and elements of a context. We are able to learn more if we listen more to others as well to know what the best solution would be. If a humanitarian organization can spend more money in technology for example, then we can learn and share knowledge which could finally impact our operations too.

In your experience, did you have any collaboration with the private sector? Or is it more opinion?

I think that it should happen but unfortunately it is not. If we had collaborations with the private sector, I believe our responses would be more impactful. For example, during the pandemic situation, a lot of NGOs saw that it was impossible to work alone. For sure, you can have projects or ideas to implement in the field, but you are not able to succeed alone during a pandemic. For example, I did a certificate provided by several organizations like WFP, UNICEF, Oxfam, MSF and other big humanitarian organizations

in addition to the institute of transport and logistics. They wanted to establish which would be the same process they wanted for all logisticians. The idea was to work together in order to have benefits in the operations we do. So, that kind of aspect helps to have better implementation of innovative solutions.

Just to clarify, it was a certification provided by a private company in the transport and logistics sector and other NGOs to have standards for logistics.

It was more an academic organization, not really a private company, linked with the humanitarian organizations.

Thank you very much.

Appendix 3: Interview Respondent C

Paragraph 1

Thanks again for having accepted this invitation. The first introduction question is: How would you define innovation in your sector? What are the main attributes of innovation, in your opinion?

Innovation is a lot of different things. When I look at how we look at innovation in our organization, we see it as a vehicle of change. Innovation is a way to try to make things better on small and large perspective. So, it can be incremental or transformational. It can be from the bottom of the pyramid to the top, or the other way around. It goes in many different directions, and it depends on what you want to use it for. It is a way to make people collaborate in a different way inside the organization but also in relation to the work we have with our patients. It's definitely not all about technology, it's much more about finding ways to better work together to, at the end, assist our patients.

When you say “together”, it's not only the organization but also the beneficiaries or external partners, right?

Yes definitely. That is what we are trying. Things have changed very much over the years, but we still have a very long way to go. For example, we will not use the word “beneficiaries” anymore because it gives a feeling of people sitting and waiting to get something. Before we used to create or develop something without many inputs from the patients themselves. However, what we try to do now, is to involve the patients in the early stage of a project.

Paragraph 2

Do you find that internal challenges or barriers have hindered the development and implementation of innovative solutions within your organization?

There are many, of course. In the case of my organization, we are very different opinionated people, in many different countries, who have different ideas on how things should be happening. And this does not make it easy to move things forward. There is not one direction looking at innovation. For people, innovation can be different things. For example, some people might say: what should we have people working around innovation specifically when we are innovating every day? And actually, in one way it's true. So, you will find very different opinions. That is one barrier. And I think that one of the big sad things we still see is that we are preaching about collaboration, and co-

creation, but when you look at big organizations, then the reality shows that there is very little collaboration in between. So, it's very much each organization in its own side, trying to conquer and solve the same problems and same challenges. And I think innovation is still a very attractive term. And for people it can be interesting for networking and reaching out to the external world. But people do not so easily want to open up with others, which is really a lost opportunity.

Paragraph 3

Do you think that this is due to organizational policies or cultural factors that limit the adoption of innovative approaches?

People always say that they are open to say they want the change but when it comes to changing themselves, it's not always the easiest thing. In my organization, we have been used to work in isolation, where we thought that we didn't need anyone. Until we realized that the world out there has people with expertise. So, there is this kind of cultural, or the organization itself, what it stands for and who they want to work with. But things have changed a lot, we are in the good direction, it was much worse before. I believe innovation has played a role in helping to change that.

Paragraph 4

How has giving more space for innovation within your organization led to improvements? It can be in operational efficiency or effectiveness in responding to crises.

The benefits are definitely that innovation, if you use it as a tool to work together, has broken some of the barriers that were there before. For example, it broke in a way the barriers to collaborate at different levels of the organization, to listen to what people have to say in the early stage, so that approach and process has been very helpful in my organization. Then, of course, there is the part of being able to work more efficiently and making concrete changes. For example, we moved from fossil fuel air conditioning to hybrid solar panel air conditioning. So, there are things that can make some changes on a broader perspective.

Do you have an example of innovation that MSF had which improved the outcome for affected populations?

I think the most known happened already long time before we even started to name all these innovation words. For example, I don't know if it's true, but we claim that we invented the kits approach. Now for example, if you have a cholera outbreak, an

earthquake, or another crisis, we have pretty much kits prepared for the whole thing. So, we can order a surgical hospital completely ready with everything we can imagine. So that is one big innovation that my organization has done. The other one is the nutritional strong food for children such as plant peanuts, with high nutrition for malnourished children. There are other things. I think that kits approach is the best one as everyone in health has adopted this approach which is really good.

Paragraph 5

Thank you for these examples. How can leaders within humanitarian organizations support and encourage a culture of innovation among their staff?

That is a good one. If you ask any heads of organization or management team, they will all embrace innovation. But when it comes to investing in it, putting the proper resources for it, then we are talking a different situation. And like I said before, innovation is happening everywhere and all time. But if you want to move to more sustainable and systematic innovation, then you need people to be able to work around it in the long-term and constantly. It's about the leadership showing by example. Like "we are an organization that wants to create a culture of innovation, meaning that we want to be open. We are interested in your ideas and the challenges that you are facing. And therefore, we create a path for you to be able to bring that idea of or that challenge of the chain for it to be able to make a difference". For example, somebody has an idea in the field, well there should be a mechanism where the person, if needed, would get financial resources, would get mentoring, would get support on human center design and would have support in connecting with external experts, external organizations, external research centers or companies to be able to make it.

And if we take the example of your organization, do you have this implemented. For instance, if someone has an idea, do you have a mechanism that support this?

We are trying. For example, in my organization in UK we have something we call "the sapling nursery". It is like you put a plant in the ground and you provided it with water, then it will grow. This is the whole idea. Only people in the field can submit an idea that will be then validated or not. If the idea is validated, then it will get mentoring and financial support. This applies only in the first stage. That is where the challenge lies, the beginning where you need to get that push to get forward.

Paragraph 6

Ok thank you. What tools, methodologies, or approaches have been particularly effective in fostering innovation within your organization?

The biggest successful and useful tool that we have developed has been the most simple one. That is particularly for my organization but also for other organizations. We realized that when working around innovation more systematically, it was not about technology or design things, it was more about making sure that people come with challenges or ideas, and understand the problem they are trying to solve. And that's sound strange but It's the reality. Especially in emergency organizations like mine, we go like with a jet plane, then we something think things after like what we could have done things differently. So, we worked very much around defining a simple tool called the "Now Wow How". With this tool, somebody can come to us with a challenge, from anywhere like from HQ, from field, from logistics, and what we do is that we bring the stakeholders together and we work half a day or the whole. We ask ourselves questions like: "where are we now?" which is the Now. We see what is working today, so we first take the successes and understand that together. Secondly the Wow, like "what are we dreaming of? Imagine that tomorrow we could do this". That is the part that everybody loves. Again, we do that together. Because this is something you see in organizations, we are very siloed. For example, the logistics department doesn't communicate much with the medical department, and the other way around. So, if you bring them together in this workshop then they will really interact. The third one is the How. We ask questions like: "how do we practically move forward with this?" It's very simple but very efficient. Because if you don't understand your Now, and pump in millions of ideas, you'll see that in 3-4 years you won't even know what you are trying to solve. Then we have the process, that many uses, and that we use also which is the initiation phase, the development phase, and implement phase. Again, the initiation phase is the most important one. It is the part that doesn't cost a lot of money, but it's the part where you need to take time to understand what is it that you want to solve. You cannot go somebody from operations coming to you and say that they want to use drones. No, it should be the other way around. It needs to say the problem and then find the best tool for that problem.

If I understood well, it is really about defining the real problem and then come up with ideas and solutions.

Exactly. There is this quote from Albert Einstein which says: "If I were given one hour to save the planet, I would spend 59 minutes defining the problem and one minute resolving it." It is extremely exaggerated but there is a lot of truth in it.

I know there are humanitarian innovation programs that help organizations in the sector to scale their new solutions. I would like to know if your organization also collaborated with this type of programs. For example, there is the Humanitarian Innovation Fund that provides funds, mentoring and other types of support.

No, we didn't. We have our internal funds but also for small projects. There you can apply for money. Otherwise, we have the "sapling nursery" mentioned earlier. We sometimes apply for external funds, but we saw and learned that 10 years ago there would be big funds but that would only be money. This does not help, you need the whole package.

Paragraph 7

How do you measure and assess the impact of innovative approaches on your organization's operations and response to crises?

It's difficult. We have KPIs but they are very weak because it all comes down to how do you measure success in innovation. It's different from organizations to organizations. For me and the innovation unit we have, when somebody comes to you and wants you to do something, and you can convince that person that it's not the right direction and that we don't think it's good to invest in that thing, well that's success. I think there are a lot of successes on that part. Successes that really have an impact and that really scale, I think you can count them on two hands, and I speak for the whole humanitarian innovation sector together. The ones that are successful are the ones that are the most simple to adapt, already partly existing and just tweaked and made better. I gave you the example of solar panel air conditioning. We have a concrete challenge from the field, we analyze it, we look into it, we look what is on the market, if what we need is not there, but we work together with agencies and companies that have the knowledge, and you tweak it to something that can be useful. And now for example, we have more than one hundred projects that have changed from pure fossil fuel driven air conditioning in the hospitals to the new hybrid system, which is a big impact. But these things are very small. I think in the field of digital health, you will see more and more results around that because you can reach through an app a lot of people. But then again it's a lot of buzz, lots of cool things, but there is not much yet prove of it.

Paragraph 8

Can you provide examples of how private sector collaboration has contributed to the development or scaling of innovative solutions within your organization?

We are not very good at it but we are becoming better. If you asked me this question in the last 10 years, I would have said that we don't collaborate with any external companies. I think that the innovation perspective has pushed to say that we are good at some things, but also really crap at other things. So, we cannot do everything, therefore we need to work together with others. There, companies, research institutes and universities can really play their role. The challenge is to find the win-win situation. Nobody does something for the sake of it. For example, we would have a legal company who will support us in dealing with contracts for companies like engineer consultancy company who will work 500 hours on a specific theme. Then, of course, they want to be able to say that they worked with an organization like mine. The challenge is really on the win-win because if you ask my organization they will always want to make, the solutions that will be discovered, accessible for everyone for free. And that is not really successful for the private company as there will be no profit. It's really about finding the balance in between those two. Another example, if you develop something that become concrete, the next step is to produce it and scale it. Then the question is: "who will benefit from it? Do we own it? Will they own it?" So, there are all these challenges that we haven't come to the ideal outcome yet. But again, we are getting closer.

Paragraph 9

Just to come back on the example you chose with the engineer consultancy company, is it more for product innovation or process innovation?

It could be process innovation, but mainly it's linked to helping develop product. But mostly on the prototype level. I remember that we worked around looking into a vest that could wear in areas where there is risk of chemical or biological attacks. We had that theme for concrete challenges in the field. And it came quite far with working with clothing companies, with experts in UK who can sort of imitate the effects of attacks like this. And we have the vest, but then it didn't go anywhere. So often it's easier to find an existing solution when you defined the problem well. The private sector often has the solutions for the problems but it needs to be a bit adapted.

What can be the key benefits of collaborating with the private sector in the development and implementation of innovative solutions for humanitarian challenges?

The main benefit is that they have the expertise in certain fields that we do not have.

Appendix 4: Interview Respondent D

Paragraph 1

Again, thank you for having accepted this invitation. First introduction question: How would you define innovation in your sector? What are the main attributes of innovation, in your opinion?

I think that innovation is about finding new ways to solve problems. Sometimes, when people think about innovation, they think about shiny new thing or whatever tangible things. But I think it's really more about finding new and creative approaches to existing problems. And sometimes, it's not even a physical thing, it could be an innovative business model or systems innovation.

Do you think innovation is important in the humanitarian sector?

Yes. We are working in a sector that is 50% under-funded, and we are facing huge challenges. The funding is actually increasing from the countries, but the challenges also increase. That means that we have to use innovation in order to find new and more effective ways of working. I believe that for example some technologies can sometimes to reach more people with less funds.

Paragraph 2

Thank you. Do you find that internal challenges or barriers have hindered the development and implementation of innovative solutions within your organization?

Yes, there are so many internal barriers and I think for us one of the biggest barriers is that there is so much movement of people in the sector. So, people apply to us for funding for innovation project, and then they have a very passionate team to lead the project, who has ownership to it, and have very engaged core team working on it, but then they switch positions, or countries, or they move around. And then we have other people coming on who do not have the same passion as the old ones, or ownerships, or the right competence to take it forward. So, we see that in many innovation projects that fall because they depend too much on the same few people. And sometimes these people working on the projects, they kind of push their heads against the wall in the rest of the system because it's so risk averse. I think also that part of the reason for why it's challenging is that people don't want to make mistakes in these contexts. Because it's vulnerable people and also the humanitarian organizations are very much depending on

their reputation. So, they're very much afraid of corruption, and for doing anything wrong in relationships with their donors as well. It is not best environment to try out new things and be creative because the system really doesn't allow you to do that. And I think the donors are also part of that hinder because I know that some donors require very strict reporting where organizations need to tell exactly what they're going to do. That's does not give them good room for thinking outside of the box. Sometimes, you have to go in another direction when you see that something doesn't work, you have to be able to move quickly. It's also a slow system to be moving around them. For our program we work on supporting humanitarian private innovation partnerships, so the organizations that we support, they enter into partnerships with private companies. We see that private companies are way more agile and lean in the ways that they work, which allows them to move quicker. And then the organizations are slow, bureaucratic and that also hampers innovation and partnerships because the really innovative private companies don't have the time or the funds to stay in this for a long time when nothing happens. And I think also it's a cultural thing. Of course, innovation happens in humanitarian organizations every day as their mission is to solve problems. But at the same time, the fear of doing something wrong sticks very deep, so I think it's also a cultural barrier.

Depending on where the organization is based can affect the speed of innovation?

Yes, I guess. It very much depends on individuals. Because if you have a manager open-minded and flexible and believes that innovation is important as an approach, then it creates a much better environment in a country office, rather than having a director that is traditional and was to do things in a certain way. That is what I found out on my master thesis, it really depends on the individuals.

Paragraph 3

You already answered part of the next question. But do you think that there are also organizational policies that have limited the adoption of innovative approaches?

Yes. We actually work a lot on procurement because procurement procedures are a huge hinder for innovation. It's because they don't want to be related to anything close to corruption, and that's really good. But it also stifles innovation processes and new forms of partnerships. For example, I met this Norwegian energy company at a conference once, and they were so frustrated because the humanitarian organizations kept asking for lithium batteries for energy storage. And the company said that they can offer batteries but they are more expensive and less efficient than their new solution. The

company could only offer them what they have been always asking for, so it limits the room for innovation. That is why we work with humanitarian organizations to adapt guidelines for innovative procurements. That is used in the EU and also in Scandinavian countries in the public sector with great success. With this guideline, they do a thorough needs assessments, investigating all the needs they try to address, and then they go to the process that we call “market dialogue”. They open up to the private sector and saying the problem they try to solve and ask for possibilities to solve, like if there is already existing solutions or if they need to develop something brand new. And then based on the needs assessments and the market dialogue, they publish a tender. And then they know how to ask for the outcome rather than the input. So, with the example I said, instead of asking for lithium batteries, they would ask for a solution for energy storage. This opens up the space for innovation and the companies could offer their most innovative solutions.

Paragraph 4

How has giving more space for innovation within your organization led to improvements? It can be improvement in operational efficiency or effectiveness in responding to crises.

I think a good example is a project in Norwegian Refugee Council called “Digital Community Hubs”.⁹⁵ This project started within NRC and when the war in Ukraine broke out, that innovation made it possible for them to register beneficiaries much faster and be able to support them with cash assistance much faster too. So, that innovation scaled very fast during that crises, and now also fund a project that IFRC is taking up that innovation. We also see another innovation in NRC called “KOBLE” which is digital platform for legal aid for refugees. That also led to more people having access to legal assistance than before. It is not supposed to take the place of people helping people physically which is of course needed, but it’s easier to reach a bigger amount of people in shorter time.

Based on these examples, can it also help to reduce the costs of some organizations?

Yes, I think it will in the long-run. And that is one of the great motivation for humanitarian organizations to go into innovation process, to save time and efforts in the long-run.

⁹⁵ Digital community hubs enable to have two-way conversations with people forced to flee.

Paragraph 5

What specific actions or initiatives can humanitarian organizations implement to foster a culture of innovation?

That's a good question. I think it needs to be both from the top-down. Like the leadership of the organizations who should put it on the agenda and say that this is we want to work and focus on because the managers below will also feel that they have the mandate to work in that way. And at the same time, I think we need to look at the bottom-up innovation from the country offices because they are the closest to the problems that they're trying to solve. I think you need both to support innovation. I believe it's all about people, how they choose to operate and open the room for innovation. But I think donors have a role here in what they demand from the organizations. And for donors to also support them in being more flexible with their funding. We know that because we receive a lot of applications, and we see that there is huge need for funding that is specifically for innovation.

Paragraph 6

Just to come back on what you said on the bottom-up approach, do you think that involving affected communities could also help to have more innovation?

Definitely, I think there is a lot of knowledge that they themselves need. And it should be the start of an innovation process in humanitarian organizations. I believe it's also important to include beneficiaries in every part of the innovation process because you need to ensure that the innovation you're developing meets an actual need and also ensure that there is a market for the solution after it's been developed. So, it really makes sense, business wise, to do it that way. That is also a requirement in the project that we support, the fact that they show they include affected people throughout the innovation process.

Basically, what you do is to provide fundings or also mentoring and supporting organizations in developing and scaling innovation?

We support projects with funding, but we also support them with knowledge development and capacity building. So, we develop tools and resources that they can use. We do a lot of innovative procurement focus materials, but also we also focus on innovative business models and humanitarian private partnerships. Now we are working on a tool for intellectual property rights because we see that this is also a challenge in innovation partnerships. We really learn from all the projects we support, and we provide

workshops, regular meetings where they can meet and learn from each other. In that sense, we provide community of practice for the projects that we support.

Paragraph 7

What tools, methodologies, or approaches have been particularly effective in fostering innovation within humanitarian organizations?

I would say the tools for innovative procurement because that is an innovation in itself as it's a brand new approach to work and partner with the private sector, and we see that it is effective and does foster new innovation partnerships that create solutions that actually meets people's needs. I think what's also valuable in that process is that humanitarian needs is at the forefront of process at the same time that you open up for creativity and innovation along the way. I also believe that you find a lot of the same elements in the human centric design and these other ideation approaches. I also think that there has been a lot of work on what is difficult about scaling innovation in the humanitarian sector. But there hasn't been done a lot of work on how to solve it and how to do it. That is something that we are working on now as it is needed for the future. Some work should be done on the part about business models and how we can work on that. That also relates to innovative finance, how can we bring in new finance to the sector that is so under-funded.

In terms of innovative funding, do you have some examples such as crowdsourcing?

Yes, crowdfunding, crowdlending and also impact investments. And different types of blended finance solutions. There is also a fund called "Refugee Impact Bond" based in Jordan or the "Humanitarian Impact Bond" of the ICRC. So, I think we are starting to see some examples of it, but I don't know if anyone has really found the best way to do it.

Paragraph 8

Ok, thank you. Are there any external resources, networks, or platforms that humanitarian organizations has leveraged to support innovation efforts?

You know there are the classic donors of humanitarian innovation projects like Grand Challenge in Canada, Elrha and the Humanitarian Innovation Program. Organizations have access to many great networks and much knowledge when it comes to humanitarian innovation. And you also have the hubs within the organizations like the "Response Innovation Lab" which has a great network, the hubs at "Save the Children", and the "World Food Program Innovation Accelerators".

Based on what you said, do you know how these programs measure and assess the impact of innovative approaches on organizations' operations and response to crises?

That's a very good question and it's very hard also. We haven't figured it out yet but we're working on it. Actually, we're doing an impact assessment of ourselves this year. And as part of that, we will ask consultants to develop a tool for our projects that they can use to assess their impact. Unfortunately, I don't have any answers. But organizations use different types of tools, maybe this question is better to be asked directly to the humanitarian organizations.

Paragraph 9

Do you think that if beneficiaries are satisfied with a solution, then it could be used as a way to measure innovation?

Definitely, how satisfied they are with the solution is a great way to measure it. But I think it's really hard to measure in the long-term. You know like knowing how many lives have been saved or improved because of this innovation. Numbers like these are very difficult in this context. "Customer satisfaction" can be a good way to measure it, yes.

Another question for you: do you only provide funds and support to organizations' innovation projects that have a guaranteed chance of success? Did you experience any failures in projects?

All our investments are very risky. You have to be in it with the knowledge that some projects will fail. And I think if all our projects succeed, then we're not where we are supposed to be because we're supposed to go where others won't. So, we go with risky investments. And yes, we have seen some examples of projects that didn't succeed. But at the same time, we also gain a lot of knowledge from seeing those projects, you know having to go with different direction, or just having to close down. We used that to continue to support new projects, and using this knowledge is such an important part of what we do because that also has to do with handling that risk level.

Paragraph 10

Can we also say that some projects were bad because the innovation process and the result were not a success?

It's difficult to say if it was bad because an innovation can fail due to many circumstances, and often it's not because the innovation is bad, but some of our innovations are

developed in areas where there's a lot of free handouts from other organizations. So, how do you develop a successful innovation that can provide clean energy for cooking when another organization in the same area keeps handing out free firewood. So, sometimes projects could fail because of that dynamic. That doesn't mean the innovation isn't good, perhaps it should be implemented in another area.

So, it depends on the context where the innovation is developed.

Yes, it's hard to say that this innovation doesn't work at all and should be thrown in the trash. I haven't seen an example of it, I've just seen examples of innovations not working in the environment that they're supposed to be working in during a pilot. And I think it's hard when you don't really know who has the responsibility to take up and scale an innovation. Is it the humanitarian organizations, is it the private company, is it another organization? So yes, it is difficult.

Do you know approximately how long it takes to implement a pilot project for example?

It varies a lot how big the pilots are. Some can be a 2-week thing, and some can be a 2-year thing. It really depends on the problem you're trying to solve and the innovation. But our timeline for early-stage innovation projects is 2 years but we see that lots of them get delayed. This is because we work in a slow sector.

Paragraph 11

What have been the key benefits and challenges of collaborating with the private sector in the development and implementation of innovative solutions for humanitarian challenges?

For the benefits, I think that by working with the private sector, humanitarian organizations can access solutions that they couldn't provide themselves. Because they are not engineers, energy experts or blockchain people, so they need to enter into partnerships with the people who know the technical solutions. With the company, organizations also access all the innovation capabilities of that company. It's always good to work with someone not so similar to yourself when you try to develop something as it forces you to think outside the box. Also, I think it pushes organizations to move forward at a higher pace that they normally would have. It's about realizing that humanitarian organizations cannot do everything themselves, they are the experts on humanitarian needs and how to provide lifesaving assistance in that part. But at the same time, they need to implement new and better solutions. So, I think that is the main positive

thing. But it is challenging, and there are many reasons. It's because organizations and private companies are not in the same sector. One sector does not work for profit and the other one does. So, what we see is that humanitarian organizations are "scared" of profits. That's a shame in my opinion because organizations think that they would make profit over suffering people. But for companies, the word profit means that they have a sustainable business model, and they can be a really strong partner in this project. So, I think that they need to realize that making a profit is not bad. I would be more worried working with a private company who was not making profits. I think that's a cultural thing, and also language. You know the humanitarian sector uses a lot of acronyms and terms that is not familiar to the private sector. So, sometimes they don't understand what they're talking about, and vice-versa. Then there is also the pace aspect as organizations are slower due to bureaucratic processes. This sometimes gets companies frustrated and they don't understand why everything is so slow and why there is a need to go through all those bureaucratic processes. So, there is a lack of understanding in both ways. It can also be challenging for trust. Trust is an issue. I think they both have trust issues towards each other that they need to work on. And when establishing innovation partnerships, I think the contracting phase is important when they are supposed to agree on what they want to achieve with the project, how to execute it and who is responsible for what. And also, how to divide intellectual property right, it's a big one. That is why also we are working on this tool now because we see that it can cost a lot of friction. And most of the time, it's because there is a lack of knowledge about intellectual property rights. The company would want to keep the intellectual property right within the company to monetize it later. And humanitarian organizations would want to keep it for themselves because they want to ensure that other humanitarian organizations can have access to the innovation later, which is a good motivation. But then, there is nothing in it for the private sector if they cannot monetize out of what they contribute with. So, it is challenging and there are many ways of doing it which I think that organizations aren't aware of all the different possibilities with the division of intellectual property rights.

Paragraph 12

What are the benefits for private companies to collaborate with humanitarian organizations? What is the win-win situation?

Sometimes, we see that they have the same motivation as organizations. They want to help people and contribute because they might have a solution that they know will make it easier for organizations to help more people than they could without the solution. So, they have a lot of the same incentives. For them, it's a business case as well. So, they

get profits out of the collaboration because they offer their resources, and the organizations pay for it. Then, there is also the reputational gains in working with these organizations. But I would say that overall, the main motivation is the same: helping people.

Do you have one example of a successful collaboration between the private and the humanitarian sector?

I think the one I mentioned previously is a good example because it scales to not only multiple geographical locations, but to other humanitarian organizations. It's the project lead by the NRC called "Digital Community Hubs". It is now scaling to also reach IFRC. That is a two-way communication channel that organizations can use to communicate better with their beneficiaries, to better understand what they need, and also use the platform for cash distribution.

Ok, thank you very much.

Appendix 5: Interview Respondent E

Paragraph 1

The first question is for the introduction. How would you define innovation in the humanitarian sector? What are the main attributes of innovation, in your opinion?

Defining innovation is probably where the game is being played when it comes to humanitarian innovation. Because many people will define innovation as the ability to adapt, the ability to manage change, the ability to respond to uncertain situations, which is what humanitarians are doing on a daily basis. Some other challenges are that many people have come, maybe over the past 15 years, to see innovation as embracing digital technologies, or adapting new methodologies like Design Thinking, when at the core of humanitarians, you have the notion of innovating to survive and to create solutions for people affected by conflicts. The challenge with that is if you go to humanitarian people dealing with emergencies daily, and you ask them to innovate, they will say that they don't have the time. However, if you tell them innovation is what they have done for the last years, then you create acceptance for what innovation is. And then you also ensure that innovation is not about methodologies, not about the playfulness that is sometimes attached to it, but it is first a mindset and really working what does it take to be an innovative organization. Making them understand that innovation is something they are doing and not something new was really what made a shake for many actors because it also opens up the space for localized solutions.

Do you think innovation is important in your sector? And why?

I think the problem is not so much about innovation, the discussion should be about the rapidly changing environment in which humanitarian response is being done. It's really a challenge of how environment is evolving and how do you need to adapt as an organization. And I must say that maybe at the beginning of my assignment, 2013 to 2017, a lot of the discussions on innovation was about learning from partners, like how can we be more innovative. What happened with digital technologies created an acceleration that I've never seen before of what innovation is about.

Paragraph 2

Thank you. Do you find that internal challenges or barriers have hindered the development and implementation of innovative solutions within your organization?

Absolutely, I think the key challenge in any organization is resistance to change. And it's funny for organizations that change every time to try to solve challenges. There is a very hard immune system. I would say, however, that I've seen a difference between the narrative of applying innovation when it comes to the delivering of humanitarian organizations and, in the case of my former organization, how you deliver assistance and protection, against what innovation means when it comes to innovating within the organization. It's almost as if the organization has a face when it comes external stakeholders and then the reality internally. The two realities are the two sides of the same coin because you cannot change one without the other. That speaks a lot about the barriers of innovation because it's never just about adapting a methodology, a tool or a solution, but it's about the how and the mindset, the culture, the willingness to change. That's surely one cluster of the internal barriers. The other one is probably the difference in structures in comparison to the partners you work with. This could be another cluster because, in the process of humanitarian innovation, very often humanitarian organizations reach out to the private sector for support simply because companies are the best at innovating. But there, the difference in culture, the difference in ways of seeing what the space for technologies is becomes easily a challenge. Then, you also have another cluster more linked to access to funding and also the reality that many humanitarian organizations are desperate for funding which somehow impact the innovation game in the extent that it's never just about innovating. Whenever you work with partnerships, it's never just about applying a new tool, a new solution, there is always some other dimension on both sides which is making the collaboration game very complex.

Paragraph 3

You mentioned the cultural aspect of a barrier. But do specific contexts affect the fact that innovation is not really fostered?

What I've seen is that there are two dynamics always. The first one is bottom-up innovation. You have a lot of people, including the field, which are champions of innovation that HQ is not aware of. The challenge for an innovation unit or any type of innovation work is to identify those people in the field and work with them and giving them the resources to scale up whatever solution they built, knowing that solutions will be localized because what works in one place might not work elsewhere. So, that is the bottom-up innovation and my organization has a few initiatives about that. Then you have the top-down innovation. It's whenever you ask for instance your head of delegations to innovate. I think the previous institutional strategy of my organization had innovation mentioned 5

or 7 times. By the way, that could be an interesting work to look at the old institutional strategy and looking at how many times the word innovation comes up. I know that there is an entire chapter talking about innovation. Then, the question is how they ask heads of delegations to translate the objectives on a regular basis. And there, interesting enough is the same thing. The champions will always have heads of delegation who, de facto, will be open to innovation and others that will be less. And I think the challenge for HQ is to accept that the responses from heads of delegation can be different. But then adapting the services you provide them so that those maybe against innovation can understand what innovation means and the fact that they are probably innovating. And for the champions giving them resources to be able to act as heads of innovation in their environment. But all of that falls on the ability to scale. And scale is a challenge whenever you talk to humanitarian innovation not only because of the environment and some of the dynamics that plays out locally, but also the limited financial resources.

Paragraph 4

How has giving more space for innovation within your former organization led to improvements? It can be improvements in operational efficiency or effectiveness in responding to crises.

I think if someone comes up with one product that saves one life, then it's already worthy effort. For me, I have to look back and say that there are 3 initiatives that I can think of my organization was founded on an innovative approach to what a solution to a big challenge was. Henry Dunant being able to create ICRC through his private network of bankers and influencers, in the context of today it was already a stroke of genius. Some people in academics think that what Henry Dunant did, would be the same as if today we found the solution to climate change. When there was so much fighting against each other, he came up with a disruptive proposal and created an alignment that was then endorsed by all governments was something we never heard before. My organization goes a long way looking at innovation. As far as specific initiatives, the one that I personally enjoyed the most is the ICRC Sport program. A few years back, ICRC created the physical rehabilitation program. We used to hire this sports specialist who used to be a professional basket-ball player and who had an accident and became paraplegic. He basically trained wheelchair basket-ball teams working and he's been working on a contract with us in a few locations through the support of a company that I negotiated with. We managed to scale up the sport program over 25 countries where affected populations that are going to the ICRC physical rehabilitation program, are using sport to not only reintegrate professionally but mostly to re-gain trust in themselves. It is

somehow a tool for social inclusion. That's one example. I saw a lot happening within the humanitarian community in the past few years. From being able to use data management, to use softwares from tech firms to manage beneficiaries more effectively, to use biometrics to better understand the people that you work with. There are many inefficiencies in humanitarian action. Many of them are therefore a reason because each organization have a different origin and a different mandate. Each have their own databases that are beneficiaries-centric. So, there is a lot of inefficiencies, they all have their reasons and I know that many organizations are looking at this as one layer of innovation. So, all of that are examples that are there to make humanitarian action more efficient. But then, you have a dilemma between efficiency and ethics. Because with innovation there is a lot of questions about the limitations and the risks attached to innovation. We say that failing is a necessity, but what does failing mean when the lives of people are at risk? Through the encouragement of embracing innovation and digital transformation you create an additional layer of vulnerability. That's a question that is quite out there at the moment.

Paragraph 5

Is there any official standards for NGOs to ensure no violation of any principles when innovating?

Speaking about principle, we can talk about the Red Cross principles, independence, impartiality and neutrality etc. If you add the modus operandi, which drives of the ICRC operates is the notion of trust and confidentiality. You really face dilemma when it comes to using digital technologies. If in your work you don't look at innovation as methodologies and so on, but also look at digital technologies where so many things are currently happening right now about what does responsible innovation mean, there are dilemmas. ICRC did something very interesting. If you look at, around 2013-2014, this is where a lot of NGOs started to create innovation. The ICRC did not start by creating an innovation team but they started by creating a data protection team. And the reason for that was that they realized that, through the ICRC embracing innovation and digital transformation, by doing so they would use tools that they don't necessarily control which could go against their intended ambition and against their principles. There is many initiatives out there that are now about ethics, innovation and also alliances within humanitarian organizations. One example is NetHope which is an organization based in Washington state bringing many NGOs together to benefit from some commonalities that they have. Like pooling some resources together to be stronger for innovation but at large (humanitarian action). I know there is a few discussions there about principles in

innovation. Another example is the Global Humanitarian Lab that was created in 2015 but killed in 2018. It was a joint initiative between MSF, ICRC and a few others saying that all humanitarian organizations are all doing pilots. For instance, let's say everyone is saying they need to use biometrics, they all have a pilot to use biometrics. The assumption was that there is no place to learn from each other, like what works and what doesn't. And secondly, there is no way to say ICRC or MSF are doing the same pilot, and instead of doing the pilot on their side, they should do it together and pool the resources together. So, that was what the Global Humanitarian Lab was aiming at. It did not work so well I must say but the ambition was there.

Paragraph 6

What specific actions or initiatives can humanitarian organizations implement to foster a culture of innovation?

I think that's really what the game is. For us, I think the key principles if I recall well was: first investing in education and showing that people have access to experiences that will bring them to think differently because learning is not about reading but more experiencing. For instance, we created an initiative with the worst branding called GPHI2 (Global Partnerships for Humanitarian Impact and Innovation), with IMD in Lausanne. With this, we identified 3-4 big challenges that we faced as the ICRC and at large as humanitarian community. We then brought maybe 30% from the ICRC, 30% from the private sector and the rest from government or the Movement. The idea was to work with IMD professors in thinking differently, cross-fertilizing across different industries and learning from each other. So, learning education frame as experiences I think is one level. The second one is ensuring that people meet others that are fundamentally different and that would probably fall under the importance of creating rituals. There is where the game played, rituals and how do you really create a movement where people can systematically learn. And then I think the other example is more about making sure that you have processes where those who want to innovate can try and do something about it. Those are some examples but then the key question everybody has is who should be the owner of that thing. Is it a centralized office at HQ, is it a centralized office in the field, is it about a network of decision-makers? You know each organization might have a different structure. I don't think there is any right or wrong answer, each organizations has its own DNA. But eventually the innovation mindset should be at the top of the organization.

For that, how can leaders have an impact? Or how can leaders within humanitarian organizations support and encourage a culture of innovation?

Leading by example is always important. But also, I think it's important to showcase that there are many facets of innovation, in the same way as you in a organization that is diverse. That innovation is not only one way, and especially for an organization like mine who tend to think that everybody thinks the same way but has a lot of different tribes internally. And showing that you have also this approach where you are respectful of the many tribes and that you ensure that each tribe has its own space and voice, and showing that, as a head of innovation or as a director, you don't have a colour that would then make people associate innovation with your specific colour. That is really key.

Paragraph 7

Ok, Thank you. What tools, methodologies, or approaches have been particularly effective in fostering innovation within your organization?

I believe one example is the partnerships, working with the private sector or academics. It's important especially at the moment. In my former organization, the collaboration with the private sector was always interesting and relevant. But that was an example of innovation having a colour which other did not necessarily accepted, you know there has been a lot of controversies. I think the key point here is that whenever you engage with the private sector, you need to be not company-driven but needs-driven. And the way to be needs-driven is to ensure that those who are owning a collaboration are the operations. So, at the end of the day from a structural perspective, if you are scaling up partnerships it's not a matter of does the fundraising team or the partnerships team have a prospect or a company they want to work with, but really a matter of what are the needs of the operations, their priority list, the challenges that they face, and ensure that you find then the relevant actors based on those needs. And having the processes attached to that, and a way of framing innovation as a response to a need of the operations is the crucial key. Then you have a lot things about if you engage with the private sector and ensuring that you are equipped the relevant tools to understand how a company is, where the company is coming from, what they are trying to accomplish. So, really before rushing into a collaboration, it's important to take as much time it needs to "date". You would not jump on a wedding with somebody you don't know. That is really the key challenge in having the right methodologies to ensure that everybody is aligned on what you are trying to create through a collaboration is key. The other example, back to my point of innovation having a colour, is the importance of the collaboration with academias and scientists. You could also argue startups in some ways. There has been a few examples of my organization doing it, especially when I left, the ICRC scaled up the collaboration with ETH and EPFL on some key humanitarian problems, and that is a

great example of how collaboration and innovation can work. I think the point there is humanitarian cannot do it alone, they need to collaborate with others. But others don't mean the usual innovator, or the usual innovator actors. There is a lot also with the governments. I think it all goes down to what is innovation. Innovation, very often, we see it as inventing a product. But in reality, the process there to invent a product is not that we are discovering a new ingredient, it is about mixing ingredients together in a different way. So, with that it's not necessarily about something new, it is about doing something different. That is where innovation plays out, and also where innovation can be easier to understand because everybody can innovate.

Paragraph 8

To continue on the private sector collaboration discussion, what can be the key benefits of collaborating with the private sector in the development and implementation of innovative solutions for humanitarian challenges?

Access to expertise, access to finances, access to assets, access to inspiration, access to so much. It's really a matter of, once again, what are your needs and ensuring that you are clear about what specific collaboration requires. I've seen a lot of collaboration going wrong. Not going wrong to the extent that it faced or it failed, but the negotiation process was too painful for us to do something. I will give you one example which might speak to you. I was always triggered by the methodologies used by especially technology-driven companies who came to us and other humanitarian organizations with workshops, with offers, with great deals to collaborate with them. But using a methodology called Design Thinking. The challenge there is that the way those methodologies are used sometimes it's drifted away from being purely design and purely needs-centric. But the way they use it, they ask you as an organization to reformulate your problems or challenges so that it fits a pre-existing solution. And a pre-solution is commercially available products that are there. If you look at digital products and if your principles are neutrality, etc. then there are some services that are not available of the shelf. So, products and solutions have to be specifically created for my organization and other organizations. The challenge there is when you talk to people on the other side of the private sector, in most cases they are people in sales. All people in public affairs who are here to help you in your way of using the product. What it creates at the end of the day is a model where you're not talking at the same level which is often why innovation work effectively. I believe the biggest challenge is not so much about implementing innovation, but more the negotiation phase and how do you get to know who you're working with to ensure that everything is aligned to make it work. A simplified

example is, imagine if an organization would say to a tech firm: “you convinced us that the data will be saved”, and a data breach occurs. If you then realize afterwards that the people convinced you are the sales people, or people from middle management who don't have the full overview of what the product can offer, then there is a big issue over there. The challenge is not for big NGOs but more about small and medium sized NGOs who have no ability to negotiate with big tech actors, no ability to really understand what technology is. And that is where other innovative approaches have to be embraced. For instance in small NGOs, they need to have people that are technology savvy in their board, not just in their staff, but to ensure that every decisions about the use of tech is made by people who really understand the consequences. So, it's really what the challenge is because then if a big organization comes to a small NGO and say: would like to use our software for free? Then why would they say no? That is where there are a lot of debates about what is the best way to engage with the technology sector.

Paragraph 9

Just to make, is then important to have a Chief Technology Officer in small NGOs?

It could be one, but then often they don't have the resources for that. What I meant more was having a member of your board that is a tech-savvy, who has the technical background to understand how technology functions. Many people think they know how technology works but it is becoming so much complex.

I want to come back to what you said in the beginning about collaboration with Novartis or Philips. Can you develop a bit more on that?

You look at the entity that was looking after those partnerships was called the Corporate Support Group (CSG). There you will find lots of valuable information.

Paragraph 10

Finally, how do you measure and assess the impact of innovative approaches on your organization's operations and response to crises?

I think you cannot have a benchmark without having a strategy first. My sense is people that rush into benchmarks and questions about effectiveness, should look back at themselves saying what is the strategy, what are we trying to respond, whose needs are we trying to serve. And then, the moment you know the what you are trying to achieve, then you should have indicators and the questions about effectiveness becomes easier. Because at the end of the day you can only speak of impact, something to show for, and I think that's really the question. But it's not just about that. From a methodological

standpoint, what are you trying to achieve and how you're trying to translate those objectives into some concrete deliverables that are then measured. That's probably what many organizations are struggling with but it goes back to governance and strategy questions. And also, the questions of who sets the objectives. Is it people who know how things will play out in the field and then if you know that your results are so much depending on the local environment, then it means that in the strategy process you need to include the people who are at the end of the value chain and showing that those people are coming up with a strategy. Also, if you want to be a need-driven company, you need to listen to the people first, and then come up with a strategy that responds to those needs. Humanitarian action needs to be people centric. And this is also where digital technologies are disrupting humanitarians because it gives people a voice, a voice to speak, a voice to express themselves. So, it is easier to listen now but then as you listen, you are confronted with your inability to respond to every single need and make choices. You could say the number one innovation challenge, both when it comes to any type of innovation and also technological innovation, is your ability to listen to people and act accordingly.

Thank you very much for this interesting response.

Appendix 6: Interview Respondent F

Paragraph 1

Thank you for accepting this invitation. How would you define innovation in your sector? What are the main attributes of innovation, in your opinion?

Let's say when we talk about innovation in humanitarian sector, for me it's how you can adapt to a context that is really different than the European context. Most of the innovations today, technology or whatever, they mainly come from Europe, and they are more adapted to the European context. But in regions like Africa they are not adapted. At the end of the day, all innovation is how you can adapt new technologies to a specific context.

Paragraph 2

Do you find that internal challenges or barriers have hindered the development and implementation of innovative solutions within your organization?

Each NGO has a social machine, has objectives, has a mandate, etc. Today, there are some organizations in the world, and they are specialized in innovation. They are not really known and small, at least to my knowledge. But let's say the mandate of most of these organizations is to provide assistance. There are not many organizations that have mandate for development. So, if we talk about innovation it's outside of the scope of most NGOs because it goes out of their social mission. This is why we can say it is difficult. Even there is no real line in these NGOs to say that "this is one of our objective". Those in charge of providing health for instance, so they find out that the things they have like the materials are not very adapted. Let's say it's not their mandate to innovate, there is no budget or structure. This makes it difficult to develop things. But right now, in my former organization there is a lot of change, even today there is one organization part whose mandate is to do innovation. From my time, when I was there it was not structured to do innovation.

Paragraph 3

I know today that some organizations have a specific unit for innovation. There are other organizations that does the same thing nowadays. But do you think that the fact that innovation is limited, or the adoption of innovative approaches is limited, is due to cultural factors or organizational policies?

We can have more space for innovation, but I don't think it is NGOs' role. Because if you look at big innovations, it's coming from big companies. We talk about drugs, equipment, other setup, and huge capital. I believe that my former organization has a good will, it can allow them to have contacts. But it's not their core mission. If we talk seriously about innovation, then it comes always from the industries. It's not to diminish the importance, but let's be realistic and not begin to talk about being innovative because it's not true. To have something completely innovative and original is really rare. When we talk about resistance in applications, it's normal. It's not easy to change, especially in organizations when they become big. Because there are procedures, guidelines, etc. which cannot be broken easily. We need a lot of work to prove, like evidence based. So, it's normal to face resistance in change. And also, it's to protect the organization. Because anybody crazy can come with an idea, then everybody will try it. So, a little of control is needed to know what you are doing. Especially, when it comes to medical, or something that directly impact life of people. So, for changing habits, procedures or whatever, we need a lot of proof that it works. To be real, this means that organizations should give the space to people with ideas. First validate the project, and then to provide the means to prove it. As I said, there is a lot of talking about innovation, but I don't have the impression that this is already structured. And I am talking about technical things, like using new equipment, new drugs etc. Now there is another issue, it's about treatment, or operational research. In operational research, the products come mostly from the private sector. There is a new drug, new vaccine, that we can try and offer by testing etc. This is also part of innovation, but it depends how we understand it. Because the people who develop those things, they also did the research before using them in the field. There is a lot of things about validation. So, innovation is more about adapting technologies that are existing.

Paragraph 4

How has giving more space for innovation within your organization led to improvements? From a medical perspective, how do you think that it led to improvements?

To be honest, I did not live a real huge revolution that we call innovation. As I said, we adapt and maybe it can be called innovation. For example, currently we developed and designed 20 years ago, hospital inflatable tents and it is still working today. It was adapted to one type of emergencies. In the end, my former organization did not produce and possess those, it was a question of adapting. At the end we wanted hospitals that are easy to deploy and the most adapted. These were already existing in the market

already. It was innovative in the approach. We found that these hospitals were very good when you have an earthquake for example to replace a real hospital temporary for like one or two years, and that you build in few weeks or one month. And really it worked well. Is it an innovation? Yes, in the design and the use. No, because it was already used by many other people. We cannot say it's real innovation. One big innovation in the sector, is the ready-to-use food for malnutrition. But it was not done by NGOs but by researchers or people working in the nutrition sector. It made a revolution. I don't know any NGO who can or has developed things like treatment against malaria for children, it's really coming from others.

Paragraph 5

You mentioned all these innovative things, but for you what specific actions or initiatives can humanitarian organizations implement to foster a culture of innovation?

To be honest, it's mixing things. At some organizations like MSF, they have simple tools using artificial intelligence to understand better and provide better information of the resistance of bacteria for example. And this is really promising since it works and can change a lot about the use of antibiotics etc. Now it's used more and improving. There is another idea, it's using mobile phones and the camera to try diagnose early stage of cancer. It's about working with technology companies. By taking pictures of your skin, you can have sort of a diagnosis, or least suspicion of something that can become a cancer. This is an initiative. It is often very hard to find funds for those projects to be developed, so it is easier to work with others who are doing those things, who are really researchers. Really, it's about asking "how can we better adapt". We try to be open-minded and understand what the needs are and try to find solutions. I believe NGOs are not those who should try to develop those solutions, using existing solutions in the market is better. Let us be a bit more adaptable rather than trying to always find new solutions. Just to tell about adaptability. We had a project about the use of ambulances in Pakistan. We improved our ambulances by collaborating with Japanese firms and it took over one year. But when it was a success, then it became a norm. Another issue we had in my former organization, is about tents for refugees. Every 6 months we need to change them and it costs 2000 dollars for a tent. They are not always the best adapted. So, lots of people were working on that, to find a solution not so expensive, more comfortable, with better hygiene. We found something done by Ikea, and it was really not bad. It could have been more adapted. Complicated to put it, but compared to normal tents, it's longer.

It was about thinking about another type of housing. Lots of organizations work on that, something as basic and simple as that is actually very difficult.

Paragraph 6

Now, for someone who has an idea and would like to develop it, what are the tools, methodologies, approaches, or networks that can be particularly effective in doing so?

Beside the authority they can have, it's those who fund. Convince the funders to provide funds. The funds are mostly coming from the public. Before looking for support on innovation, it is important to know the problem and check if there is an existing solution, or a similar thing. Then after finding a solution, we need to know if it is feasible. Finally, to find the budget. But there are networks like the Grand Challenge for example. We once applied to receive from them. I was in Iraq, and the issue was that the system for transport of patients was bad. So, we came up with a new system, like an app, inspired by Uber, to be more efficient while transporting patients. We used private cars of other people to transport more people. So, we took the idea of Uber and we adapted it to our context. If you can prove that something can be good for an organization's operations, then you can go to Grand Challenge and try to apply. And if validated, you'll get the support and resources needed. I believe innovation should go in this way. You can even go to companies to develop and implement new ideas.

I know that at MSF they have a mechanism to support innovative ideas called the “sapling nursery”.

I would be curious to know the impact this mechanism has. I am not saying this is useless, but I don't think it will really make a change. I had also thousands of ideas, and I am happy that others did not follow me because it would be completely crazy. So, you need people to stop you at the right time.

Paragraph 7

You talked about a lot of collaborative innovation. The question is: what have been the key benefits and challenges of collaborating with the private sector in the development and implementation of innovative solutions?

Let's make it theoretical. Today, you make a new formula. Then how can you make it become a problem? When also trying to develop something, you don't really what to mix together. This does not mix with that, so it is not that simple. You need to use the expertise of other because they are the ones qualified. It is easier today product in a

company and then adapt it. You may have NGOs in development, but this is not simple. I believe that lot of people have many ideas, but it's important to transform them into real projects, it's a collective work. There are organisms that can help. One thing I like to say is the ideas are coming more and more from the field. The participation from local universities, local researchers is really an added value. I think it's a mechanism that should be used by NGOs. Be open mind but also modest.

Paragraph 8

So, if I clarify what you said, one cannot do innovation without the private sector because they have the expertise and resources right?

Yes exactly. If you don't collaborate and want to develop something alone, it can cost you much more. To give you an example, we wanted to improve waste management, what we call incinerators. You can find those machines in India for instance. You don't have the material to destroy toxic products. It can be very complex. If you have something existing in the market, then it's easier to adapt it and use it. This does not mean that we have to stop research, and having opinion, but I think it's a question of priorities.

Just to finish on that, using existing solutions is also innovation and adapt them to your context. Using the information from outside and bring it into your organizations, to do something different.

I agree with you. The simplest is to adapt things again.

Thank you very much for your time and insights.

Appendix 7: Interview Respondent G

Paragraph 1

Again, thank you for accepting this invitation. How would you define innovation in your sector? What are the main attributes of innovation, in your opinion?

I would say that innovation is two things at the same time. It's thinking out of the box but at the same time being very pragmatic based on observations of needs, issues, barriers in terms of access. And to be able translate those observations into solutions with maybe methodologies that are unknown. Because everybody has solutions to a problem. For example, the problem today in the majority of the field is access to antibiotics. The solution is to get access to antibiotics. How to do that is the tool. That's where innovation intervenes, in our way of thinking about the solution, and think out of the box of the humanitarian world. But especially, the problem is that the humanitarian world is associated with low- and middle-income countries. So, we always have these approaches of thinking of solutions that are known and work in low- and middle-income countries. Even in the innovation, we put barriers to ourselves because some approaches and tools that were never tested are considered as not being a solution because we don't know if it works in those contexts. And I believe when we think about innovation, we should completely be free. Take the problem, take the solution, and then think about how we can adapt it. Not limiting ourselves to the difficulties that we know, the access, the constraints, the level of training, the negotiation with authorities, authorizations and those kind of things. This is the main I would say enemy of innovation.

Just to clarify, it's all about the process in between the problem and the solution?

Exactly, the tool and thinking out of the box, look into what is happening outside and not limiting ourselves to what we know as solutions working in low- and middle-income countries, and versus a known solution. Being completely blind to any pre-built solutions.

Paragraph 2

Ok, thank you for this definition. Do you find that internal challenges or barriers have hindered the development and implementation of innovative solutions within your organization?

We are our own enemies. The fact that we are humanitarian organizations is already a barrier to innovation. Because, first as a basic thing in terms of funding, at MSF for example we are funded by individuals donors. They are funding 10-20 euros per month,

for others much more, but in their idea this money is going to be used by food for children, for vaccination campaign, the implementation of cholera camp. I'm not sure the first idea is that this money will be used to pay research for innovation. This is intrinsically a barrier regarding the way we are funded. That it is also very specific to my organization because we have individual donors and it's important because this is why we kept our independence since the beginning. It's because we have no dependencies with no government, it's our own funding. So, the type of funding is the first barrier. The second barrier is the way of thinking of all the organizations. From the HR, to the supply, to the logistics, the priority is the operations. It's not to take time about solutions that might help operations, it's to be in the action. Innovation is always associated with long time, research, a lot of debates, also uncertainty about the success of innovation. So, that is not the objective of humanitarian organizations, that's the objective of research institutions, or other organizations like FIND. As an organization who has as mandate to treat patients who do not have access to a functional healthcare system, that is not a priority. So, it's a really huge barrier.

Paragraph 3

The third thing is the way the organization is built. Everything is limited, the processes are not at all adapted. I give you an example: in the project I work, I have a team of 35 people, and among them 80% are software engineers and product manager designers. Nobody understands why we are recruiting these people. But especially, if we want to recruit these people, the HR are not adapted to that and don't know how to deal with them. The salaries, the scale we are using is the same scale that we use for project coordinators in the field, for doctors in the field, not at all adapted to the market. Which means that, in terms of innovation, we are not going to be able to have the good human resources because we are not provided the adapted conditions based on the market. We adapted to the conditions based on the organization. And thinking that those resources are the same that the ones we are using in the field, which is not the same at all.

Paragraph 4

Then, I would say in terms of flexibility. As a big organization there is little flexibility. You have processes, procedures, you have standards, and you need to follow that. Each time you want to go out from that, which is 100% the case for us, you need to ask for an exemption. An exemption to a process that is not adapted to your innovation. So, it's an exemption to something that you don't even like believe or think that's it's something important for our way of working. And finally, I would say managing expectations is a

barrier too. Because we are humanitarian organizations in the action, asking how many patients did we treat, how many cholera camps, all about results. So, very quickly everybody is expecting results from you. From the beginning of my project, I said that research is uncertainty. I did not speak about my project for two years in my organization because I didn't want to create expectations and I didn't want to put pressure to myself and on my team. I wanted us to go to the proof of concept, and once we have a guarantee that pieces of the project were working, then we went to my organization's board to present it and they were shocked because they never heard about it, shocked because they had something that was working, and the first question they asked was why they did not tell about the project. The reason is that research is like this. You cannot commit to deliver within two years, there are too many uncertainties. After the proof of concept, this is another think when we can discuss about timeline and deliver. This way of thinking is not adapted to the humanitarian actions, because humanitarian action is really about now, the results, patients... and some guarantee. Of course, if you implement a cholera camp and you receive only 10 patients, at least in my organization we say ok it's fine, we are happy that 10 patients were treated because they are not going to contaminate thousands of other patients. But maybe in other organizations, they would say that 10 compared to the investment is not enough. It's not a question of investment as in a company, it's a question of efficiency. Like where you put your resources, and putting your resources in innovation is really something that is completely insecure and unsure.

Paragraph 5

Thank you for your answer and your example about the project you lead. The next question is: how has giving more space for innovation within your organization led to improvements? It can be in operational efficiency or effectiveness in responding to crises in your organization for example.

In my organization it's two things. For example, working about antibiotics resistance, we are mainly working on patient management. So, ensuring that the patient has access in a timely manner to the right antibiotic, the right dose, etc. But we are not acting on the public health because we very focused on our hospitals, the patients that we receive. Innovation can destroy the barriers of hospitals. Because what you are bringing can benefit the global population. And your organization will end up having a direct impact on patient management but also at the bigger picture on the global public health issue that is antibiotic resistance for example. The second thing, it's a question of education, is educating people. And research is uncertainty and the timeline of research is different from timeline of operations. We need to work together on that in order to manage the

expectations. And I think it's something that is really important because I'm pretty sure that the emergency desk has always managed emergencies or other operations. They are discouraged by innovation because of timeline. Because they think it's long, they think it's going to be complicated, if you have a realistic idea of the expectations around innovation, I think it's less scary for people to think out of the box and to come to see people who are doing innovation and say: I have an idea, what do you think about that? Because by sharing this idea, I'm working on innovation and I can tell them I know which universities are working on that, I know which partner can collaborate on that, I know how much it can cost, we can manage this. Having teams working in innovation in organizations can support and encourage all the ideas that are brilliant and coming from the field, and it helps also to manage the expectations. It's two different domains. I am researcher, my work is to do research, to discuss with universities, to discuss with donors in global health, it's not the work of the operations, and it's very complementary. Today we cannot continue to do operations without innovation. So, we really need to find this way of working to be complementary one with the other. Another good point for innovation is that if you use some method for one solution or one product, it's the same and can be used for others. It opens completely the spectrum of what you can do and what you cannot do. It's even more what you can do which is unlimited but at the condition of thinking out of the box. If you have one example that works in an organization, then it really helps to continue to try to adapt those solutions to other issues, public health issues or on individual patient issues. And then, I would say that the main advantage of innovation in the humanitarian sector is that for once you don't have companies who thought about something for high income countries, and they think about selling the thing to low- and middle-income countries. That is how we end up with diagnostic tests that were not developed for low- and middle-income countries. But with companies that are very strong financially speaking to convince national authorities that those tools are adapted. Innovation in the humanitarian sector, at least you are sure that your need came from the patients, came from the field, and that the solution reflect the needs of the patients and the population. And also, an important point, for my project for example it can from the field, it was built with the field and it was tested with the patients that we are seeing and now it is available for the field. So, I believe it's the first time that our diagnostic tests are developed first from the observations in the countries with the patients, developed with them, tested with them and available for them.

Paragraph 6

So, it's really about a bottom-up approach, including the patients from the beginning up until the end. What specific actions or initiatives can humanitarian

organizations implement to foster a culture of innovation? Are there other actions that you as an organization can do to foster innovation?

I think it's a question of communication. Saying to people nothing is impossible, and it's important even if someone thinks that he's thinking out of the box may be complicated to come with their idea. In fact, it's just that in the context of the humanitarian world they believe that this is not their work. Even myself initially with my project, I was saying that I don't have time, I don't think it's going to be possible. One of the way that help is also to have dedicated people for innovation. When I say dedicated people for innovation, there is no diploma in innovation. It's people who know and has experience in the field, but who also has some expertise in research. Not like strictly academic one, but applicable one. Because it's different to know how to do research than make a research a reality. And I think very quickly once the idea is clear within the organization, I don't think that the organization should create innovation by themselves, it's more a question of network. Humanitarian organizations can be a starter for solutions. And they can initiate to put all the stakeholders who can bring something to the project or build the project together. Humanitarian organizations should coordinate all the stakeholders in order to arrive this final solution or product that will be tested by humanitarian organizations. We did that in my organization, and I think it was a very bad idea. With my project we internalized everything. Everything was done by us from A to Z. Today we are a legal manufacturer, imagine a humanitarian organization, it's crazy. So, others have different expertise, and they know how to do that. Usually, those universities are happy to work and support organizations. So, I think humanitarian organizations should first have some people able to collect the idea, to dig a bit and to find a consensus when one idea is well built. And then, to work on creating this network from the one who is creating the proof of concept to the one who is going to finalize the final product, and then take it back and test it in the field because usually those stakeholders don't have the capacity of humanitarian organizations to be in the countries with the patients. It's to us to gather user feedback. Bring all those and really work on the prototype and come back with the final product that is adapted to the needs of the patients.

Paragraph 7

Are there any external resources, networks, or platforms that your organization has leveraged to support innovation efforts?

Google. For our project, we won a Google challenge, we won one million and a half and 8 eight engineers working for us for free. So, I think companies like Google or Facebook who are represented as devil in humanitarian world, I think we should learn how to take

what we want from those companies and let them keep what we don't want, and it's possible we did so. I would say making the scientific work and the few innovation projects of the humanitarian sector being more known. Because people don't know when we present innovation projects. So, it would be interesting to have like a conference where organizations come and present their projects. Then it can be open to the academic world and people who want to collaborate and support. But at least, they know also what the conditions of the game are, collaborating with humanitarian organizations because as you can imagine if we work with private companies or universities, they should expect that we will pay them millions to collaborate with them. So, managing those expectations about innovation work in the sector, why are the innovation that today are part of our world, I think can support the future of humanitarian innovation.

So, innovation is mainly about collaborating with others, and using expertise from outside because humanitarians cannot do everything by themselves.

Yes, exactly.

Paragraph 8

What have been the key benefits and challenges of collaborating with the private sector in the development and implementation of innovative solutions for humanitarian challenges?

The benefits is that the private sector is more professional than our sector. Because they are doing it for profit and they have people waiting for that profit. In the humanitarian world, you are doing it to save lives, and if you don't then at least you tried. That's not Pfizer or any other company would think about an investment in a project that doesn't work. I would say that benefit is really to make it more professional to have also the resources. We need to stop making people think that anybody can do innovation. Anybody can have an innovative idea, but 90% of the time it does not lead to an innovative solution. People are not skilled for that. So, when I say professional is also because they have the resources to create innovation. There is also a lot of communication in sales, it's more than just build the product, it's also about the strategy to scale the solution up. The other thing is that sometimes in the humanitarian sector we are naive. We are doing a lot of things for free, for patients, but even like this you need a business model. I think that the private sector has this approach that is straight forward in terms of thinking for the humanitarian sector.

Paragraph 9

And what do you think can be the challenges?

The challenge is the lack of understanding of the context where humanitarian organizations work. It was one main challenge for my project. It's that all the stakeholders and collaboration we had, they are happy to put the name of an organization to say that they collaborated with us, it's a communication thing. But in the everyday collaboration, we see that their request and conditions are not adapted to the priority of the humanitarian sector. I give an example, for my project we need to talk to microbiologists, and we schedule a call with them. The call has been cancelled because they was an emergency in Mali. They actually were frustrated and didn't understand. For us, the priority is not innovation but our mandate. The second thing is also in the intellectual property. Each time we create a collaboration agreement with a company, it's a nightmare between legal department. Because they often want to keep the IP, so legally speaking it's super complicated to ensure that the humanitarian sector paying for innovation and doing it for free keep a minimum of IP because we don't want this investment done trough the money of the funders. Money that was supposed to be used for care but that was given to innovation, so we don't want that to be used by a big pharma company who is going to sell this solution twice or three times the price. So, this is a big challenge that can also have an impact in terms of delay of the innovation because all legal discussion takes decades. And then the difficulty is also the communication. I give you an example about Google. Having 8 engineers of Google working for free for my project for one year, it's a blessing. But internally in my organization, it was a problem. A lot of people asked yes but in terms of communication are we ok to communicate that we are collaborating with Google. And I think having the image of the humanitarian organisation associated with a private company with its own image, its own history, can be a problem. And if we speak about all innovative solution about data, including data, this is even worse in term of difficulty.

For the IP side, I know that Norway Innovation is working on new guidelines for IP during collaboration of private company and NGOs to foster more collaboration.

I think for the humanitarian sector, we'll have some guidance. However, the private sector will remain the private sector with another objective. So, this question of IP is always going to be a case of who is going to win.

Paragraph 10

How do you measure and assess the impact of innovative approaches on your organization's operations and response to crises?

I think it's difficult to answer because it's very specific to each project. In my project's case, we have a problem of antibiotic resistance. To fight antibiotic resistance, we need to have access to laboratories. A lot of organizations are working on developing new diagnostic tools that are simplified for low- and middle-income countries. But one thing that we don't say is that you can train all your laboratory technicians to do the test. And for example, in my experience in the field between Yemen, Iraq, Syria, Mali, Niger, Nigeria, Senegal, I trained more than hundreds of laboratory technicians, who never did microbiologic, to do the test within two weeks. I'm pretty sure that I will take you in the lab, after 10 days you will know to do the test. But they will not be able to interpret the test because the interpretation of the test is done by microbiologists who have 5 years of training, specialization. And there is a super nice article about access to diagnostics that was published last year. They estimated that if you want to have same ratio population pathologists including microbiologists in sub-Saharan Africa, then compared to Canada or US, you need 400 years of training. So, on one hand the WHO if we don't act today, which was in 2016, we will have 10 million deaths by 2050 caused by antibiotic resistance. On the other hand, you are telling me that we need 400 years of training. So, how do we do? That's how I thought about this idea of having an app that can make the interpretation of any test as a microbiologist would do it. And for me it's quite simple, the impact of the innovation will be how much money, laboratory are provided a good quality of testing to patients who are treated. How many patients are treated using this technology. Today this app is used in routine as a medical device in 5 countries. I know that in those 5 countries, every month it's 200 patients. So, I know that this innovation supported around 6000 patients in term of treatment. It's very difficult to give a general answer because this is very specific. What I would say in general, an innovation should not remain an innovation. An innovation should become a tool that is used and not any more an innovation. If you don't succeed to switch from innovation to a routine test, then it's a failure. The success of innovation is the end of the innovation.

Thank you very much for this very interesting discussion and all your examples and insights.

Appendix 8: Interview Respondent H

Paragraph 1

So, the first intro question is: How would you define innovation in your sector? What are the main attributes of innovation?

Actually, that was the question I wanted to ask you. Sometimes innovation is confused with technological innovation which is of course important. But I think innovation goes much beyond that. It goes from strategic innovation to process innovation, to of course technological innovation. But they can be defined in many ways. The technological part is a component which is important but I'm not sure it is the most important for us.

Paragraph 2

Ok thank you. In my project, I define the innovation mainly as adapting and using different solutions or existing solution and apply it to the specific context. That's my definition of the innovation. Do you find that there are organizational policies or cultural factors that have limited the adoption of innovative approaches?

The easy answer would be yes there are. Organization readiness is definitely key for adopting innovation in the humanitarian sector. I think the way we are structured, we are not very much conducive for innovation. Our budget processes for example are very rigid and strict, and this is on a yearly basis so it is a huge barrier for changing things and thinking long-term. We have series of processes and procedures that create rigid frameworks that are something difficult to overcome. This is due to the fact that we work in a certain way, the fact that in most cases we respond to donors that impose rules and regulations. So, we have to respect certain strict rules to manage the funds that they give us. That's of course just part of the story, it is also about the culture of the organizations. We have been doing things in a certain way for many years, therefore we should keep doing it because they kind of worked and there is no reason to change. It's also leadership issue sometimes. Change and transformation is now promoted everywhere in my organization for example. So, it is the change for the organization. But out the change, the push you have from the leadership is different, and the messaging that you have is different. I think you should have heard these stories many times. What I think is important though it's do we need innovation? How we should reflect on innovation in our sector? When we talk about humanitarian response, by definition we save lives. And therefore, innovate, by definition, means taking risks. I think the level of risk that we can accept in this sector is not the same level of risk that we could accept in the private sector

for example. If you are a factory that does plastic paquets and you do a creative innovation which then didn't work. Too bad, you have lost a bit of time and little bit of money. If you do the same in our sector, people die literally. So, we have to be very careful using innovation. Don't get me wrong, we should do innovation at all levels, from strategy to little processes. We need it. But we also have to reflect on the opposite risk to be over enthusiastic on change. Because for our specific industry it comes with risks.

Paragraph 3

Do you think that there is a lack of responsible innovation, or sort of a framework of ethics or principles to follow to make sure innovation is less risky let's say?

No, every time we talk about innovation that is, especially in my organization, that's the first step to stop the ethical framework that you should work with it. I give you an example, it's engagement with the private sector within my organization. These happens in a very strict framework that needs to be respected. It is a caveat because you cannot engage with everyone, you have to engage with people in a certain way. So, it's low stand things, we lose opportunities but at the same time it's a protection that we have. Everything can be improved of course, and things will improve because we are living in a world of acceleration in many aspects, but at the same time this framework needs to stay there.

Paragraph 4

Thank you very much. How has giving more space for innovation within your organization led to improvements?

From operational level, so how we actually do things in the field for the beneficiaries throughout the whole chain until the strategy. Here we do operation inspector because for everything we use technology but also because we use more integrated processes, we engage in a different way with partners. So definitely, things are getting a little bit better thanks to innovation. But this is more up to the chain, up to the strategy. Now the strategy push for change, for innovation, for engagement with different types of donors, for HR rules, at policy level as well. So, we observe this innovation all of the steps of the value chain.

And do you have maybe one example of an improvement in the field? Like for instance when you had a direct contact with the communities.

I left the field in 2017 so it's a few years back and many things happened and are happening. There are many initiatives that are very good. One of that for example it is the Goma water project in ICRC. It's innovation at all levels. It's innovation not about

technology but it's innovation in terms of strategy, in terms of partnerships, in terms of budgeting. There are quite a lot of information about this specific project on the web. I will share you the links to check these initiatives. I think it's a very good example as it shows innovation from the operations up to the strategy. But there are many different examples, I mean the fund that I'm managing currently: the National Society investment alliance. It is another example of innovation that is directly supporting the National Societies with priorities that they define. It's not what they do that is particularly innovative, sometimes it is because we find initiatives for digitalization like digital platform that are innovative from a technical perspective. But this is a very good example of strategic innovation that change the way we engage with partners, the change fundamentally how we see the humanitarian response from a directing intervention to the localization to the humanitarian response. Which is another interesting level of innovation, the systemic innovation, so all the policy dialogues happening at global level.

Paragraph 5

Thank you for sharing these examples. The next part is about the culture of innovation. So, for you, How can leaders within humanitarian organizations support and encourage a culture of innovation among their staff?

It's almost by schoolbooks right. They have to do all the step that you find in the academic research. And you see it in actions because the engagement of the leadership. If you're looking for one single element that is fundamental, I think it's this one. I have many colleagues that disagree with that. That seeing things differently, so it's good if you talk with them to have different perspectives. Now, the leaders and the direction that they provide is what fosters change and innovation. The goals from setting up an environment that facilitates innovation, that provides policy dialogues. These are the guidance to structure things for changing innovation. They go through the examples they give. This is the schoolbooks, and this is partially what's happening. You have to check on the risk that you get also mixed messages. So, policy documents that talk about change, and then the practices which is more conservative and different. This is a bit risky but needs to be controlled. But it's like everywhere.

Paragraph 6

Based on that, what kind of tools and approaches can be used to foster innovation? For example, having a dedicated unit.

There are different examples, but which one is the best I am not sure. I mean you see different approaches from a unit that has innovation. I know that WFP has an innovation

unit. The Red Cross has also the Solferino Academy which basically a place that only does innovation. We have funds for innovation which is a good way to ensure that innovation is diffused as well, that everyone is free to do innovation within certain limits. Then we go back to the leadership and the culture, ensuring that innovation and taking risks is not punished, rather innovation should be promoted and given space.

Do you think that there are also external resources or networks that could play a role in fostering innovation? Collaborating with others for example.

I am living and working by definition in a collaborative environment because my organization is part of a network. It goes from the ICRC and the IFRC at a global level to the National Societies. But also, the Solferino Academy, the Innovative Finance Hub (HIFHUB) that focuses on innovation in financing. So, for me the ecosystem, the synergies that you build are fundamental. I was mentioning the Red Cross one, but I think that there are a lot of possibilities also looking beyond that and establishing connections. Within the ethical framework that we discussed before, we have to be careful about the data we have, and we share, the approaches etc. I've been in the sector for a while to remember about ten years ago we were super excited about cash. What we do is much more than just giving money, it's about identifying the right people, about doing the cash transfer in a certain way. So yes, it's a great innovation but it's not only the technological part that leads to the change we are making.

Paragraph 7

Thank you. You mentioned collaboration with the private sector. My question is: what have been the key benefits and challenges of collaborating with the private sector in the development and implementation of innovative solutions for humanitarian challenges?

First, there was an interesting article from Fortune which was about the private sector. I will share it with you too. It talks about those benefits and challenges exactly. I mean engagement with the private sector is increasingly important in terms of partnerships of course because of the different levels of support they can bring to the system. For example, technological skills etc. Even from a funding perspective, they will be more and more significant considering the increase of needs and the shrink of the budget. What we need to understand is that engaging in the private sector is different. The set of incentives that they have, and you have vis-à-vis them, is different and therefore the risks are different. We need to really reflect on the value proposition that we can propose to the private sector to make sure that on the one hand it is significant for them. Eventually,

they do work for a profit, so if they engage in humanitarian sector, they do it because they want to have a revenue return such as entering a new market. Like VISA did with the cash. It's about access to knowledge. This is how we should think about the value proposition. Even if we are talking about private sector foundations, we have to look in terms of guarantees and risks. And that's another leverage that we have to limit the risks they have in intervening in these types of contexts. At the same time, and this is the other side of the coin, we have to be very conscious in the fact that they are the private sector. There are ethical and moral issues that need to be considered. It's about how we engage with these actors. We cannot accept anything just because people put money on the table. It's not happening at all. I think this is an element that should continue. Engagements should be led by frameworks that are agreed in advance.

Paragraph 8

You mentioned as an incentive that the private sector could access other markets. But do you have other examples of incentives such as having a better reputation?

It's not only profit but it is a gain anyway. We need to be conscious in what we are giving them again. We are putting also our reputation on the table, and we are connecting our two reputations as well. In some cases, it is ok to do that but not in all cases. In some cases, they are middle ground. So, they have to change something so that they can connect with us.

Thank you very much. Now the last question of this interview: How do you measure and assess the impact of innovative approaches on your organization's operations and response to crises?

Honest answer, I don't know, and we don't know as a team. I am actually getting an expert who will start in a month that will look exactly into that because we don't know. We have to be very clear. We can measure well at output and outcome level. But when you look at impact, it's much more difficult because it's long-term. It is about profound change that happens within organizations and within the system. It's also because we are designed in a certain way. We are humanitarians, we are trusted, and change happens in the long-term. So, this is dichotomy that is happening. But it is difficult to measure. I think what we have to start understanding is that we do not promote change, we contribute to change. Change depends on many different variables. Now what is interesting to understand is how much we contribute to that change, are we a positive factor to that change or a break if the change is negative. It is to understand the change

that innovation and us promote within a much larger system, which of course makes things more complicated but that's our reality.

Thank you. I also asked this question to other interviewees and they replied similar things. We still don't know how to do it accurately. But I know that Norway Innovation is currently working on this issue.

Yes, there are people working on that. But we will see acceleration in the next few years.

Again, thanks a lot for your insights and your examples provided.

Appendix 9: Sample of questions for interviews

Introduction question:

- How would you define innovation in your sector? What are the main attributes of innovation, in your opinion?
 - Do you think innovation is important in your sector? Why?
 - Can you give examples?

Objective 1: Determine the benefits of giving more space for innovation at the organizational level.

- How has giving more space for innovation within your organization led to improvements (in operational efficiency or effectiveness in responding to crises)?
- Can you provide examples of how innovation at the organizational level has resulted in tangible benefits, such as cost savings, increased reach, or improved outcomes for affected populations?

Objective 2: Identify the barriers humanitarian organizations face for innovation internally.

- Do you find that internal challenges or barriers have hindered the development and implementation of innovative solutions within your organization?
- Do you find that there are organizational policies or cultural factors that have limited the adoption of innovative approaches?

Objective 3: Determine how humanitarian organizations can have a culture of innovation.

- What specific actions or initiatives can humanitarian organizations implement to foster a culture of innovation?
- How can leaders within humanitarian organizations support and encourage a culture of innovation among their staff?

Objective 4: Identify several tools and approaches to use to foster innovation at the organizational level.

- What tools, methodologies, or approaches have been particularly effective in fostering innovation within your organization?

- Are there any external resources, networks, or platforms that your organization has leveraged to support innovation efforts?

Objective 5: Evaluate the impact of implementing an innovative approach in a humanitarian organization and its operations.

- How do you measure and assess the impact of innovative approaches on your organization's operations and response to crises?
- Can you share any specific examples of how implementing an innovative approach has led to improved outcomes or more effective responses to crises?

Objective 6: Evaluate the impact of having more collaboration with the private sector.

- What have been the key benefits and challenges of collaborating with the private sector in the development and implementation of innovative solutions for humanitarian challenges?
- Can you provide examples of how private sector collaboration has contributed to the development or scaling of innovative solutions within your organization (and its operations)?