

Building innovation capability in an intergovernmental aid organization:

A case study of UNICEF's Innovation Unit

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*Building innovation capability in an intergovernmental aid organization:
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Abstract

In order to be an efficient and relevant intergovernmental organization, United Nations Children's Fund (UNICEF) has since 2007 made the 'innovation turn' and has become a leader in innovation activity in the UN body. The embracement and assimilation of technology and innovation are a marked shift in the way the organization works, compared to earlier times.

The purpose of this study is two-sided: Firstly, to examine what innovation practices UNICEF's HQ Innovation Unit uses in their aid work. Additionally, since the unit supports the organization at large to mainstream innovation practices, this study also investigates the possible ripple effects of that unit's work throughout UNICEF. There is a gap in research and understanding about innovation activity in UN agencies. This qualitative case study contributes to lessen that gap. It provides new knowledge about what innovation means for UNICEF, and also with new knowledge about the current organizational changes that occur. The empirical materials consist of document analysis, an observation session and interviews with members both from inside and outside the Innovation Unit.

A heavy technology focus, partnerships with the private sector, open innovation and a user-led approach are the main findings related to the first research question. The salient ripple effects are an assimilation of the unit's innovation practices and thinking methods in different UNICEF divisions and offices around the globe, in addition to the fact that innovation is now made a priority in UNICEF's strategic plan for 2014-2017. This study also found some inhibitors for innovation within UNICEF, and it points to challenges the organization is facing by having a separate innovation unit. However, due to several appropriate changes that currently take place in the organization, UNICEF's commitment to innovation seems to be a good strategy in order to stay efficient and relevant in the world of tomorrow.

Acknowledgements

A 14-months intensive and instructive master study has now been completed at the TIK Center for Technology, Innovation and Culture, University of Oslo. I am grateful for the opportunity to be a student at this future-oriented center.

First and foremost, a big thanks goes to my supervisor Taran M. Thune. Her insightful knowledge of innovation processes in the health sector was valuable the guidance of my research. But I also want to emphasize Thune's accessibility and inclusive personality in which eased the research process. Further, I want to thank Kim Gabrielli (Advocacy Officer at UNICEF Norway), Christopher Fabian and Norah Maki at UNICEF's Innovation Unit for the opportunity to conduct research in their office in New York. Lastly, I would like to send a big thank you to all of my informants in UNICEF I have interviewed. I am grateful for your perspectives and interest in my research.

It is worth mentioning it was with mixed feelings I discussed the topic of 'humanitarian innovation' when I worked on this thesis in August and September 2015. In those months, the world witnessed a heartrending refugee crisis in Europe, actually the biggest stream of refugees since the World War II. In moments of affection, I actually considered to leave the reading hall and travel to Greece to welcome and support the refugees. But I did not this time. However, this thesis might be a start of a longer journey where I, through a professional career, can use my engagement, academic knowledge and competency working to improve the humanitarian conditions on the planet.

September 2015, Oslo.

Harald Dean

ABBREVIATIONS

CO	Country Offices (in UNICEF)
CSI	The Center for Social Innovation
HI	Humanitarian innovation
IGO	Intergovernmental Organization
ILO	International Labour Organization
IU	UNICEF's Innovation Unit in New York
NGO	Non-Governmental Organization
NPO	Non-Profit Organization
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
RSC	Refugee Study Centre at the University of Oxford
SI	Social innovation
UN	The United Nations
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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1.0 Introduction

Much aid work has been criticized for being ineffective and sometimes actually making things even worse. Despite good intentions, much aid hasn't paid off (Betts & Bloom, 2014). Increasing awareness about this fact among donors has resulted in recent increased demands for efficiency and 'value for money'. Nowadays, donors expect aid organizations to engage into innovative thinking and to take risks, in line with the Silicon Valley's adage: "fail hard and fast" (Woodman, 2015).

As a response to this critique and demands, several aid organizations have embraced innovation theory, hoping it to be the key. The United Nations (UN) has made the 'innovation turn' and have a goal of mainstreaming innovation and integrating it into to their core processes and programs (Bloom & Faulker, 2015). Their innovation focus is two-sided; on the one hand they want to stimulate innovation in the local context, including the local community in the innovation process. On the other hand, the UN also wants an organizational change towards a more innovative organization culture (Bloom & Faulker, 2015). United Nations Children's Fund (UNICEF) and United Nations High Commissioner for Refugees (UNHCR) have since the year of 2007 established several innovation units and labs around the globe. Also, UNDP¹ and OCHA² have made innovation a priority. But it is not only within UN that this focus occurs. The topic 'Transformation through innovation' is planned to be one of four core topics in the upcoming World Humanitarian Summit in for 2016 (World Humanitarian Summit, 2015).

The intergovernmental organization UNICEF has become a leader in innovation activity in the UN body (Bloom & Faulker, 2015). Even though UNICEF has been innovative in their aid work for a long time, it is just until recently the organization has put an explicit focus on innovation (Llamazares & Mulloy, 2014, p. 109). In the mid-2000's Christopher Fabian and Erica Kochi started collaborating when they worked in the Division of

¹ UNDP United Nations Development Programme

² OCHA United Nations Office for the Coordination of Humanitarian Affairs.

Communication. With support from the lead of that division, Dr. Sharad Sapra³, Fabian and Kochi established an Innovation Unit (IU hereafter) at the UNICEF's Headquarter (HQ) Offices in New York. The new ideas and approaches they took in this newborn unit were to use technology, partnership with the private sector and to integrate a 'human-centered design' approach in UNICEF's development and humanitarian work around the globe. Such approaches were novel concepts for the organization, and are an enormous shift for in the way the organization works (Amatollo, 2015). In 2014, the Executive Director Mr. Lake said: "I believe UNICEF's most important contribution has been innovation. Technical innovation, of course, but also innovation in how we think about development" (UNICEF INNOVATION, 2014, p. 4).

Some of the IU's innovative work and members recently have garnered recognition. Time Magazine rewarded in 2011 the 'Digital Drum'⁴ as one of the world's best innovations of the year (UNICEF INNOVATION, 2011).



Figure 1: Ugandan boys using the Digital Drum. Photo taken at the Bosco Youth Centre in Gulu, Uganda⁵

³ Interview with Christopher Fabian

⁴ The Digital Drum is a solar powered computer kiosk, loaded with education software, aiming to help rural communities that have difficulty getting information about health, education and other issues. These 'drums' are durable, made of local metal oil drums. The initial design of the drum was developed by the Innovation Unit together with the South Africa's Meraka Institute, and further tested and developed in Uganda by UNICEF's Technology and Development Unit.

<http://www.unicefstories.org/2015/03/10/unicefs-digital-drum-time-magazines-50-best-inventions/>

⁵ <https://www.unicef.no/innovasjon/prosjekter>

In 2013, the self-proclaimed development geeks and Co-founders and Co-leads of the Innovation Unit, Erica Kochi and Christopher Fabian, were listed by TIME Magazine to be among the 100 most influential people in the world (Time, 2013). Additionally, Fast Company recognized UNICEF Innovation in 2014 to be one of the world's most innovative companies (Fast Company, 2014). The Innovation Unit seeks to give the world's most marginalized populations a voice and access to information and connectivity. This emphatic profile is underlying their daily development and humanitarian work (UNICEF INNOVATION, 2014, 2015b).

1.1 Problems for discussion

Some of the Innovation Unit's work is beneficial for thousands of vulnerable children on the earth. For instance, the Digital Drum. I wanted to know more about this Unit and examine how the IU integrates innovation practices to strengthen their aid work. This study firstly maps the innovation principles and practices at UNICEF's 'R&D Unit', the Innovation Unit in New York. Secondly, as the IU has a specific role to mainstream innovation across the organization, this thesis also investigates the potential and broader effects of that Unit's work in other parts within UNICEF. Such questions are important, because there is a lack of understanding and research that informs about innovation activities within the UN system (Bloom & Faulker, 2015, p. 4). Hopefully this thesis will contribute to enrich the understanding of innovation within the UN system, but also in the wider context of humanitarian and development work.

The research questions for this thesis are as follows:

- (i) What innovation practices does UNICEF's Innovation Unit use in their aid work?
- (ii) What are the ripple effects of the Unit's work, if any, in other parts of the UNICEF system?

Clarifications of concepts

By *innovation practices* I mean the approaches, principles and concepts UNICEF's Innovation Unit use in their development and humanitarian aid, concepts well known in traditional innovation theory.

By *aid work* I mean humanitarian *and* development aid, a distinction common used in the context of international aid and a distinction also UNICEF make (Wikipedia, 2015a)⁶. Humanitarian aid is performed during emergencies and development aid has a long-term perspective, investing in socio-economic development.

By *ripple effects* I mean organizational changes in terms of ways of working and thinking throughout the organization, spread out from the HQ Innovation Unit. This process of diffusion is by the Innovation Unit labeled *mainstreaming (innovation)*, which in the Unit's own words means to "mainstream the skills and competencies of innovation across the organization" (Innovation Unit, 2014)⁷. In order to operate with concise and familiar concepts, I will translate the term mainstreaming into terminology from diffusion of innovations in service organizations. When I further in this thesis use the term mainstreaming, I refer to following definition: *To mainstream innovation is to spread the novel approaches, behaviors and mindset of innovation practices, and make it more widespread throughout the organization* (Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004).

By *other parts* I mean other UNICEF units and divisions around the world at all levels; field-, country-, regional- or headquarter level.

To answer the research questions, data was collected from articles, online sources, direct observation and interviews. Direct observation was done within the IU's Office in New York, and interviews were conducted with significant persons from the IU, supplemented by key persons outside the Unit. Initially Advocacy Officer at UNICEF Norway Kim Gabrielli kindly connected me with Christopher Fabian, Co-lead of the Unit. Fabian referred me to the Academic Lead of the Unit, Norah Maki. After some email correspondence with Maki, in May 2015 I was invited to conduct field research within the Unit's Offices in New York. The particular research period extended over two weeks during the summer (from July 27 to August 7), followed by weeks of processing the evidence and writing the thesis. Further reflections upon the research methods are elaborated below under the subheading 3.0 Methodology.

⁶ Also Christopher Fabian emphasized this distinction in my interview with him.

⁷ Taken from an unpublished Innovation Handbook, made by the HQ Innovation Unit. I got the permission to quote it from the Communication Lead in the Innovation Unit, Dana Zucker. The permission is given via email September 15, 2015.

My goal was to produce a thesis that communicated UNICEF's experiences with innovation that I, and others, could benefit from. Hopefully, this thesis can contribute to and develop this emerging, but growing knowledge base further, with new knowledge about how a non-profit organization integrates innovation in their aid work. Let us therefore start to have a look at what the literature and debates reveal about innovation in the context of international aid.

2.0 Review of the literature

In order to understand how the UNICEF's Innovation Unit works with innovation, this chapter will examine the existing literature on innovation in the context of international aid. International non-profit organizations integration of innovation practices is a recent and new phenomenon, and there is relatively little research on the topic (Betts & Bloom, 2013, 2014). Initially in the literature search, I searched for words and phrases such as 'humanitarian innovation', 'development innovation', 'aid innovation, innovation in development, or a mix of them. What I found useful for this study was some articles on the topic of humanitarian innovation (HI hereafter).

Dr. Alexander Betts and Louise Bloom have been involved in the Humanitarian Innovation Project at the Refugee Study Centre (RSC) at the University of Oxford. The project's initial focus of work was innovation in refugee livelihoods, where the concept of HI has been scrutinized. Betts and Bloom shares their specific thoughts on the concept of HI in a working paper labeled *The two worlds of humanitarian innovation* (Betts & Bloom, 2013) and in a policy paper published by OCHA in November 2014 labeled *Humanitarian Innovation: The State of the Art* (Betts & Bloom, 2014). These two publications provide some perceptions of the concept. Those two articles inter alia explain the factors that are spurring humanitarian innovation. An article labeled *Innovation Management, Innovation Ecosystems and Humanitarian Innovation* published by Bessant et al., (2014) discuss the emerging trends in humanitarian innovation. These articles will be utilized in the literature review to frame and develop specific study propositions for my research. My argument is that the literature on humanitarian innovation, for instance the factors that are spurring and the emerging trends in HI, is very useful when understanding innovation practices at UNICEF.

UNICEF performs both humanitarian and development aid work. I did not succeed in finding literature on the latter topic (e.g. development innovation) except from literature on the concept of social innovation. In a broad way, the literature on social innovation covers the concept of development innovation, and is therefore appropriate to use in this thesis. When I discuss innovation principles and practices at the Innovation

Unit in the analysis and discussion chapter, I refer to both humanitarian AND development work.

Innovation is a buzzword today, for policymakers as well as practitioners. In order to be able to operate with clear and concise concepts in this thesis, the concepts of social and humanitarian innovation will firstly be explained (2.1 and 2.2). The following subchapters address the factors that are spurring innovation in this context (2.3), the emerging trends of innovation practices in this context (2.4), and the unique opportunities and challenges when bringing innovation theory and practices to international development (2.5). All these elements will contribute to build a framework for understanding innovation practices at UNICEF's HQ Innovation Unit in New York. One of the functions this Innovation Unit serves is to 'push' and spread innovation practices throughout the organization (Amatollo, 2015). In order to investigate the possible ripples of the Unit's work, a conceptual model that explains how innovations diffuse in service organizations will be outlined (2.6). This chapter ends with some study proportions made for this research (2.7).

2.1 The concept of social innovation

Innovation is widely regarded as one of the most important sources in order to gain sustainable competitive advantage in an increasingly changing environment (Schumpeter, 1942). Even though the concept of innovation is commonly associated with commercial interests and consumer needs, it is obviously not bounded to commercial activities in the private sector. As the slogan 'necessity is the mother of invention' illustrates, many historically examples of innovations emphasizes unmet social needs as the driving factor behind product, process and service innovations (Tidd & Bessant, 2013). Where conventional commercial entrepreneurship tends to focus on the individual, social innovation activities involves several actors such as business, public- and third-sector organizations. Drawing upon and combining innovation and development theory, social innovation is characterized by individuals or groups who seek to help the minority, the poor or weak people, in a Marxistian way. A well-known example is Grameen Bank with its Micro-Finance-Project (MFP) in Bangladesh, a project founded by the Nobel Peace Prize Laureate Mohammad Yunus. A short retelling of the MFP narrative is done in the following section.

In the Jobra village and other neighboring villages in Bangladesh, a great number of people were living below the poverty line. The poor faced a vital lack of capital and were deprived from access to financial services. Traditional bank services either ignored the poorest of the poor as a relevant customer group, or offered them impossible loan conditions with high interests. Hence the vulnerable people were captured in a bad circle: Remaining poor, unable to escape poverty, and unable to start with their own entrepreneurial ventures. Muhammad Yunus, Head of the Rural Economics Program at the University of Chittagong, became aware of this situation, and empathically started to look at how he could create solutions for the disadvantaged. With a strong belief that the poor knew how to maximize the benefits of their loans without official training in addition to believing that they would pay back on time, Yunus decided to lend 27\$ of his own money to the poor villagers. And as Yunus expected, he got repaid on time. He continued his personal banking services, and up-scaled it by establishing the Grameen Bank in 1976. By doing so, Yunus helped the poorest of the poor to break the old-bad circle, so they could start earning their own money and their own business. Since the year of 1976, the MFP has succeeded in, and still today continues helping thousands of people in rural villages to escape (unjust) poverty every year (Rahman & Nie, 2011).⁸

In the MFP case, Yunus' solution benefited the whole society (several villages), rather than private individuals. That fact fits into the definition of social innovation made by the Center for Social Innovation (CSI) at Stanford University. They define social innovation as "a novel solution to a social problem that is more effective, efficient, sustainable, or just than present solutions and for which the value created accrues primarily to society as a whole rather than private individuals" (Center for Social Innovation, 2015). Yunus' solutions were nonprofit solutions to social problems or challenges in a society (extreme poverty in rural villages), primarily aiming to create some form of social value and a difference in the world (eradicate poverty, increase the standard of living) rather than private fortunes.

⁸ Some of the text in this section is taken and redrafted from my exam essay in the course TIK-4001, submitted December 2014 at the Center for Technology, Innovation and Culture, University of Oslo. The title of the exam was: *What made Grameen Bank succeed in their innovative Micro-Finance-Project in Bangladesh?*

Yunus' solution was successful and joins the rank of examples of the postulation that only successful outcomes are labeled innovations (Carlsen, Clegg, & Gjersvik, 2012; Van de Ven, 1999). Innovations cannot exist of bad solutions. Unsuccessful cases are just labeled mistakes or failures. Hence, it is the outcome of the innovation process that determines whether it is an innovation or not (Carlsen et al., 2012; Van de Ven, 1999). Innovation is thus a subjective positive word. Hannah Arendt, one of the most influential political philosophers in the twentieth century, relates innovation to progress as she values innovation to be a cornerstone for human progress (Dehlin, Pitsis, & Simpson, 2012, p. 1). The MFP narrative exemplifies Arendt's postulation. Over several years, Mohammed Yunus invented, developed and implemented his solutions in rural villages in Bangladesh. His innovation was not a single remarkable idea or a unique event, but a purposeful practice over a given period of time, a fact most academics today agree upon (Drucker, 1998; Tidd & Bessant, 2013; Van de Ven, 1999).

Many people, firms and organizations innovate in their daily life without being conscious about it, or labeling it innovation. To be able to examine innovation practices at UNICEF's Innovation Unit, this thesis relates the word innovation to organizations that for a given time pay explicit attention to this specific activity, considering alternatives, with a wish is to solve problems or perform development work.

2.2 The concept of humanitarian innovation

Even though many humanitarian organizations recently have implemented the concept of humanitarian innovation in their agenda, Louise Bloom and Dr. Alexander Betts from the RSC claim the term hasn't been unpacked or adapted sufficiently in organizations' practices or thinking. As a result, a poor understanding and confusion in the international debate remains. Additionally, many IGO's and NGO's (but also in commercial sector) unfortunately heavily focus on product and technological innovations, like communication technology (ICT). In order to have an appropriate understanding of HI, Betts and Bloom stress that the concept should not be reduced to products or technology, but the concept should also include processes and wider business models (Betts & Bloom, 2013, p. 7). In order to unpack and create a richer understanding of the notion, the following section will elaborate on the concept and investigate into its core what HI really is.

Betts and Bloom states HI to be “a means of adaption and improvement through finding and scaling solutions to problems, in the form of products, processes or wider business model” (2014, p. 5). The authors stresses three additional elements in regard to the definition: (i) the concept can be applied to any area, for instance to logistics, to medicine, to media and it may include technology, but it is not reduced to it. (ii) Innovation is not the same as invention, but has to be implemented in a given context. It does not need to be new to the world, only new to the firm (applied in a different context than its birthplace). (iii) The degree of change can be from incremental to radical; it does require a particular threshold of change to be qualified as an innovation.

2.3 Understanding the context: Factors spurring humanitarian innovation

There are several factors driving the growing interest in innovation in the context of international aid. For instance, changing challenges requires a new business model, private sector engagement, the embracement of partnerships and technology optimism.

Changing and increasing challenges demands a new business model

In the last 10 years, the amount of people affected by crises has almost doubled, while the cost of international humanitarian aid simultaneous has more than tripled. Much of the tools and services are out of date; they were developed back in time and much of it is ill-suited to modern emergencies (Betts & Bloom, 2014). The tools and services were initially developed for rural issues with a short-term perspective, but the situation has now changed. More than half of the refugees now live in urban areas, and today’s emergencies are seldom short-lived. From 2006-2014 six countries in the world needed humanitarian assistance every year, and the UNHCR reported in 2014 that the average period of displacement was 17 years. For many contemporary urban refugees, access to information and connectivity are as critical as access to basic livelihoods (Betts & Bloom, 2014).

Much humanitarian aid has also been criticized for being ineffective and sometimes actually making things even worse. Despite good intentions, much aid effort hasn’t paid off (Betts & Bloom, 2014). Growing awareness about this fact among donors and the civil society has recently resulted in increased demands for efficiency and ‘value for

money'. Nowadays donors expect aid organizations to engage into innovative thinking and to take risks, in line with the Silicon Valley's adage: "fail hard and fast" (Woodman, 2015). Despite this critique, many agencies have for a long time performed 'business-as-usual'. The structure of the system has not changed and remains essentially closed. As a result pressure is building to fundamentally alter the tools, services, structures of the aid (Betts & Bloom, 2014; Bloom & Faulker, 2015).

The world is experiencing a recent trend where several actors and donors turn to innovation theory and perceive it as a means to transform their practice. Both Intergovernmental Organizations (IGO) (e.g. UNICEF, UNHCR, OCHA) and Non-Governmental Organizations (NGO) (e.g. Save the Children) have made the 'innovation turn', and for instance UNICEF has a goal of spreading innovation into the core of their different programs (Betts & Bloom, 2013).

Private Sector Engagement

The motives for the engagement of private sector in development programs are two-sided. On the one hand, due to growing resource constraints in the past decade, organizations hope for contributions from the private sector, particularly from the business community. Many IGO's and NGO's organizations are drawn towards the funding and the know-how knowledge the private sectors offers. Since 2010, the private sector is also playing other roles in the innovation processes. Initially seen as an alternative way of funding, the private sector are now also playing a role in product and process innovation (Betts & Bloom, 2014).

On the other hand, the private sector also has motives for engagement in aid work. The motives and modes of engagement differ, all from philanthropic contributions from individuals or foundations, to Corporate Social Responsibility (CSR) initiatives where humanitarianism is connected to brand or to existing research & development (R&D). In the name of CSR, large corporations like IKEA, Ericson and Deloitte are providing social goods and services (Betts & Bloom, 2014). Other private actors are motivated by the opportunity to develop solutions that, if proven to work in disasters, can be scaled up and commercialized for the bottom 2 billion people who live below \$2 per day, an opportunity C.K. Prahalad claims really exist (Prahalad, 2005). Additionally, many

international companies have realized that the company's bottom line is linked to the risks and vulnerabilities of the country offices, supply chains and staff, and hence are interested in an effective humanitarian aid. There are a growing number of social entrepreneurs, such as Samasource, Dimagi, and Technology for Tomorrow, and they exhibit the potential for such kind of aid 'business' (Betts & Bloom, 2014, p. 6).

The embracement of partnerships

A wide range of actors now contribute with unique capacities to the international development system, for instance businesses, diaspora groups and local first responders. Traditional humanitarian actors have been slow to realize this potential in partnerships. But UN and other Non-Profit Organizations (NPO)⁹ have recently realized one can benefit from the capacity and assets a wide range of actors bring into the network platform (Betts & Bloom, 2014). In a report from the UN's Economic and Social Council (ECOSOC) in 2012, the UN Secretary General said: "There is a need to build more inclusive global humanitarian system, with stronger relationships at the global, regional and national level" (UN, 2012, p. 7). Partnership is not just for coordination within the system, but it can also be a vehicle to draw in and exchange ideas, good practices, and to draw in resources from private, military, university actors, and also from the affected and talented people themselves. IGO's, NGO's and NPO's now collaborate with private technology developers, military R&D agencies and universities as well as with the talented aid recipients (Betts & Bloom, 2014).

Technology development and consequent optimism

This innovation trend builds upon earlier debates discussing the potential for technology to strengthen humanitarian aid. Successful transformative examples can be found in the cellular phone world, where basic cell phones provide a new platform for connectivity, access to information, needs assessment and feedback mechanisms for

⁹ The difference between NGO and NPO: NGO's is a non-governmental organization, created by legal persons who are not part of the government. The government raises the funds and NGO's eliminates the need for a government council; also known as civil society organizations.

NPO uses the extra funds for organizational purposes, rather than dividing between the shareholders and the owners of the organization. Examples of NPO's are charity, trade or public art organizations. <http://www.differencebetween.net/business/difference-between-ngo-and-non-profit-organizations/>

affected people. In 2012 the cell phone penetration on the African continent was at 75 per cent, and is expected to reach 97 per cent by 2017, according to Deloitte's 'Consumer Review of Africa in the 21st Century' (Deloitte, 2014). New technology-based tools and volunteer and technical communities (often online), for instance Crisis Mapper, enables humanitarian actors to respond to emergencies like the earthquake at Haiti in 2010, or the Typhoon Haiyan in the Philippines in 2013. Such new enabling technologies stimulate the current debate and optimism around the role of technology in humanitarian innovation. Other contemporary, growing and prominent 'humanitarian technologies' are for example GPS-enabling mapping systems for response coordination, social media analysis to conduct damage assessments, mobile phone-enabled fund transfers in the aftermath of crisis, and Twitter is used where use of hashtags helps to coordinate rescues and relief (Betts & Bloom, 2014).

The circumstances and conditions of international aid are thus altered. So has also the approaches used in aid work.

2.4 Emerging trends in humanitarian innovation

Technology optimism: Technology as the prime enabler

There exists an excitement about the role of technology for development in the humanitarian as well as in the private and public sector. Technology is viewed as a prime enabler, where firms and organizations are hopeful that technology can contribute with novel solutions to difficult challenges. The excitement concerns for example 3D printing, wearables, big data approaches, the role of 'Unmanned Aerial Vehicle' (UAV) and other enabling technologies (Bessant et al., 2014).

Partnership with private sector

Humanitarian agencies do not often think partnerships can enrich and strengthen their aid. The private sector can help them to recognize sources for innovations (opportunities and challenges), or later in the process to develop and implement the new solutions into the 'market'. Humanitarian agencies also believe external collaboration can reduce costs at different stages, launch access to skills, products and markets, and increase 'customer satisfaction'. (Bessant et al., 2014, p. 31). Likewise, the

private sector shows an interest in HI due to motives like Corporate Social Responsibility (CSR) or profiting from the bottom 2 billion (Prahalad, 2005).

The aid recipient's role more prominent in the innovation process

Conventional aid has approached social problems in a top-down manner with the recipients as a passive receiver of aid. But the relationship are now re-oriented towards a more balanced approach, with more involvement of the end-user. Just as the customer often plays a central role in the innovation process in private sector, the aid recipient role is often perceived as more important. Humanitarian agencies have also realized that the end-user (beneficiary) might a great source of innovation (Bessant et al., 2014, p. 30).

The roots of the tendency to pay attention to the people on the ground can be found in traditional innovation theory. 'User innovation', 'reverse innovation' 'social innovation' and 'indigenous innovation' makes all use of the existing local talents and systems in the innovation process. Due to formal limitation of this thesis, the next sections will briefly explain the concepts of user-led innovation.

User-Led Innovation

For a long time the user has been perceived as an important source of innovation. Clarifying examples can be found in sectors like farming and medical instruments, where users' ideas have been identified, taken up, prototyped and improved, all in a co-creation process with a firm. Users from such sectors often have a high motivation to innovate; they want the functionality of the new innovation. Therefore, they accept imperfections along the way and gladly contribute to improve the solutions. Such motivations might be similar for effected populations. In addition to be a great source for innovation, users also increase the potential for widespread adaption and diffusion, and the reason are because the idea originated from the local context, and not as a top-down solutions (Tidd & Bessant, 2013).

Due to recent trends of social networking and online communication platforms, the opportunities of user engagement increases. Examples of software like Linux, Wikipedia, and Mozilla display the potential in online user communities to be a source for

innovation, rapid diffusion and improvement (Chesbrough, Vanhaverbeke, & West, 2014). The users desire for creation, their interest in technologies, coupled with enabling technologies in design and manufacturing, has led to a growing trend where firms co-create with users. Adidas and Lego stand as good examples of user-involvement and co-creation with the user. Such models have been copied by the social and public sector, for instance in areas such as healthcare. Tools for higher level of user-involvement are increasingly available, and framework methodologies such as design-thinking are increasingly seen as more and more important (Bessant et al., 2014).

Given the exploration of the literature on growing trends in humanitarian innovation, the next sub-section will highlight some core challenges and opportunities when bringing innovation to a context of humanitarian aid. Such literature will be useful in my examination and discussion of the innovation practices at UNICEF's Innovation Unit.

2.5 Challenges and opportunities when integrating innovation in humanitarian aid

Recent trends from the commercial sector might create opportunities in the humanitarian sector. Two examples of the latter are trends of 'Open Innovation' and the increasing potential for engaging users at both ends in diffusion of innovation. However, engaging the end-user seems to be a huge challenge for several humanitarian agencies.

2.5.1 Open (social) Innovation

Even though innovation always has been a multi-player game, there have been dramatic shifts in thinking since the turn to the 21st century. In particular, the explosion of knowledge production and global distribution has forced a rethink from knowledge production to *knowledge flows* (Bessant et al., 2014; Chesbrough et al., 2014). One of the principles in open innovation is the realization that 'not all the smart people work for you'. The firm does not have to originate research or generate all the good ideas by themselves in order to profit from it. The message from Open Innovation is that it is all about *how to leverage and make best use of external R&D, ideas and knowledge that is available in networks* (Chesbrough et al., 2014).

This open innovation concept has major implications for how the innovation process operates pushing it towards a networked approach that again requires new methods to connect. There are considerable opportunities in open innovation, especially in a context of aid work where agencies can open up their challenges to a wide range of actors in networks. Agencies can get access to resources and knowledge outside the inner network, and utilize external sources to solve challenges agencies are facing. They interact with other sectors, share information, learn from each other and complement each other's work. Actors involved in open innovation build linkages beyond the inner network. Aid work is thus performed through networking, and this phenomena are in Chesbrough et al. terms labeled Open Social Innovation (OSI) (Chesbrough et al., 2014). Today, Internet and digital communication platforms provide opportunities for new routes to connectivity.

Because some IGO's and NGO's are large and bureaucratic, they are facing challenges to be 'locked-in' in existing routines and knowledge networks. They struggle to develop and institutionalize new routines and to engage in (new) network that might lie outside the existing one. Chesbrough et al. (2014) points out the importance of having the ability to build (e-) linkages and connections, to engage in online platforms where co-creation takes place, and to leverage internal *and* external knowledge networks in the innovation process. Such tasks can obviously be a challenge for many incumbent organizations face. According to Bessant et al., (2014), a key priority should be to connect with knowledge catalysts, especially via online knowledge platforms. The issue is thus just how to best connect, best leverage knowledge flows and best enable experimentation with different actors.

2.5.2 Engaging the aid recipient

Engaging the aid recipient in the innovation process creates several opportunities. The users are both a great resource of ideas, but what is maybe more important is that it increase the chance that the aid is compatible with the needs in the local context. Compatibility can often be a big barrier to diffusion and innovation success (Bessant et al., 2014). A key point in diffusion theory is that innovations that arise from within the local context and are carried by the locals will more likely be accepted (by the locals) than when they originate outside and are carried out by external actors (Rogers, 2003).

Life shows that as humans we often prefer the solutions that are provided by people that are like us (geographical, ethnical), and we sometimes resist solutions carried by external agents due to xenophobia and prejudices. These sociological aspects are very important, and require humanitarian agencies to involve the locals in the innovation process, solicit ideas and input from them, and co-create solutions with them. That will enhance compatibility (Bessant et al., 2014).

Theories of 'local ownership, partnerships and beneficiary participation' are documented in several IGO's and NGO's principles for aid work, for example The Code of Conduct of the International Red Cross and Red Crescent Movement. Even though community inclusion is an underlying principle, Ramlingam, Scriven and Foley (2009) claims it is widely recognized that such principles are rarely executed, as they say:

Helping people affected by a humanitarian crisis to find innovative ways in which they can help themselves is a core task for aid workers. (...) Although innovations have stemmed from re-thinking the relationship between aid agencies and the recipients of aid, the recipients themselves have not been active in these changes (Ramalingam et al., 2009).

Humanitarian agencies thus have to develop tools and techniques and particular a participative design approaches in order to achieve a high level of user-involvement (Bessant et al., 2014).

The next chapter review theory and a conceptual model that explains diffusion of innovations in service organizations, theory that are useful to investigate the possible ripple effects of the Innovation Unit's work throughout the organization (UNICEF).

2.6 Diffusion of innovations in service organizations

The origin of the concept of diffusion of innovation comes from Everett Rogers (2003), who initially studied the diffusion of agriculture practices among farmers. Rogers defines the process of diffusion to be "a process in which an innovation is communicated through channels over time among the members of a social system" (2003, p. 5). The content of the communication concerns new ideas or new practices, and the spread process can be managed or occur unplanned and unintended (Rogers, 2003).

Building upon Roger's work and other research on diffusions of innovations in different disciplines (e.g. health), T. Greenhalgh, G. Robert, F. Macfarlane, P. Bate and O. Kyriakidou (2004) have conducted a systematic literature review on the topic of diffusion of innovations. Based on this review, the authors have made a conceptual model that displays the process of, and the determinants that influence how an innovation spreads throughout a service organization. The authors stresses that the model also is applicable for other sectors, and request other researchers to test the model in other contexts. The model and the theory behind it is a simplification of the reality, and needs to be discussed. Just as the innovation process is seldom linear (Drucker, 1998; Tidd & Bessant, 2013; Van de Ven, 1999), nor is the diffusion process. The diffusion process is rather organic and circular, and consists of loops back and forth between the different stages (Rogers, 2003).

Since this research only focus on *what* the ripple effects are (and not on the determinants that influence the diffusion process), I have modified Greenhalgh et al.'s conceptual model in order to have a framework that will fit the examination the of potential ripple effects of the Innovation Unit's work throughout the organization. My modified model displays the stages in the diffusion process, starting as a novel idea and all the way to implementation in a specific context. The different stages are explained below.

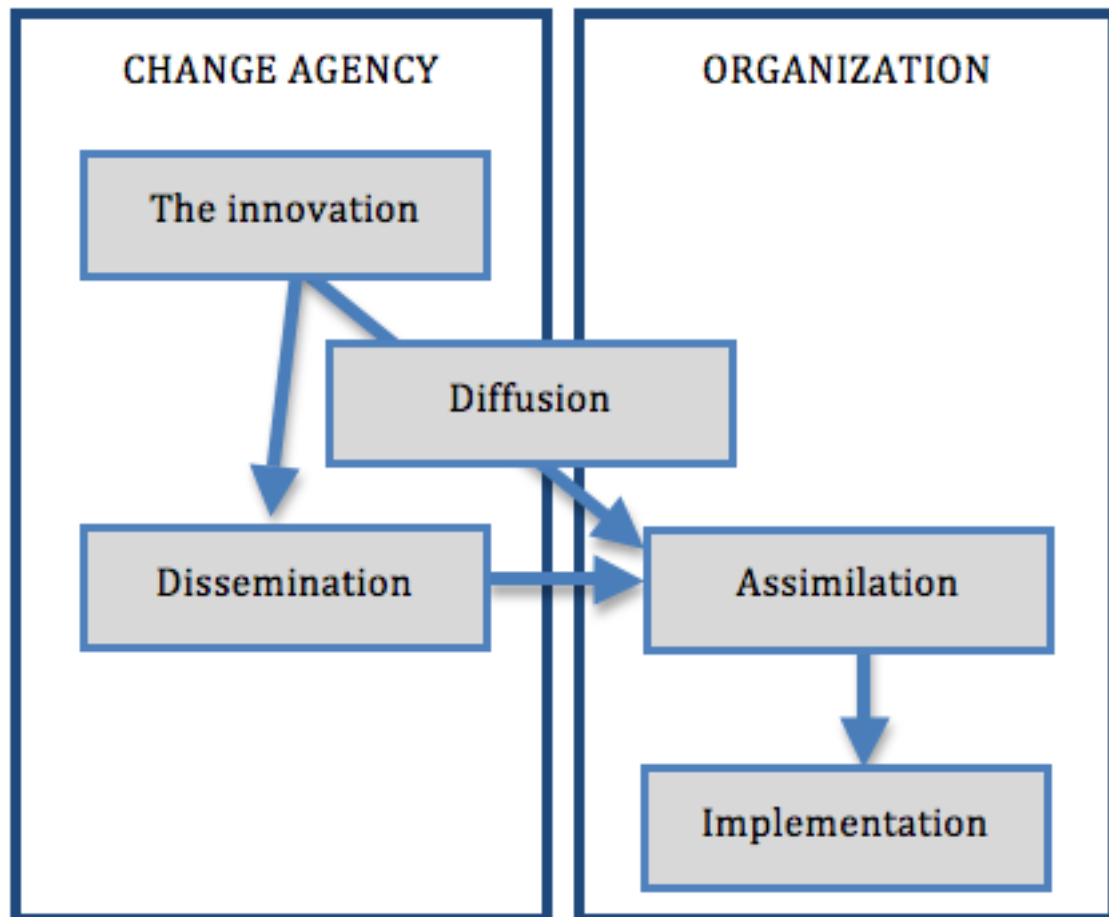


Figure 2. A conceptual model for understanding the stages in diffusion of innovation processes in service organizations. This is a modified version of a model created by Greenhalgh et al., (2004)

The innovation. According to Greenhalgh et al., (2004), innovation in service organizations is a novel set of “behaviors, routines, and ways of working” (p. 582) that are implemented by intended and coordinated actions, aiming to improve user experience, administrative efficiency, and cost effectiveness.

Diffusion and dissemination. The literature of diffusion of innovations in service organizations distinguishes between active and passive spread of innovations. Diffusion is the *passive* spread of innovations, in which is unplanned, informal, decentralized and occurs largely in horizontal manners. Grennhalgh et al., (2004) claims that many innovations occur in local services and spread informally and in an uncontrolled way (diffusion). On the contrary, dissemination is the *active* spread and is an intended effort to persuade groups of people to adopt an innovation. Dissemination occurs planned, formal, controlled, often centralized and largely vertical (Greenhalgh et al., 2004).

Adoption and assimilation. Humans are not passive recipients of innovations. They actively and purposely interact in this adaption process and decide whether they

want to adopt an innovation or not. Hence, this stage is about decision-making and a cognitive endorsement (of an innovation). A large body of research on adoption processes focuses on simple product innovations adopted by individuals. Greenhalgh et al., (2004) stresses that it is important to not use this literature to overgeneralize complex process-based innovations, for which the unit of adoption is a team or department, in which various changes in work practices will be required. The process where the unit of adoption is a team or department is in the literature labeled *assimilation*. Since this study focuses on ripple effects in other offices and divisions outside the Innovation Unit, I will throughout this thesis use the term *assimilation*.

The change agency. A change agency plays a significant role in a dissemination program. The role of the agency can for instance be to enable and facilitate assimilation processes in other agencies or to influence and support teams to implement an innovation.

Implementation. What distinguishes this stage from the assimilation stage is the actual manifestation of the novel way of working among individuals or groups. Where assimilation is the cognitive endorsement of an innovation (a change in thinking), the stage of implementation is the actual change in practice. Hence, implementation is the intended establishment and maintenance of an innovation in a specific situation (Greenhalgh et al., 2004).

2.7 Summary

This literature review has provided background information about the changes that take place in context of international aid. The situation is characterized by increasing demands from donors for getting 'value for money', private sector engagement, and a huge technological development with subsequent optimism that technology can transform and improve the aid of tomorrow. The emerging trends in terms of innovation practices in international aid work are user-led innovation, technology focus, and partnerships, especially with the private sector. Due to the fact that UNICEF is a leader in innovation activity in the UN system (Amatollo, 2015; Bloom & Faulker, 2015), I expected my unit of analysis, the UNICEF's Innovation Unit uses innovation principles and practices similar to the three prominent emerging trends described above. I therefore had and stated following study proposals for my research: I assume the Innovation Unit use following practices:

- (i) A User-led approach, involving the aid recipient in the innovation process.
- (ii) Collaboration with a wide range of actors across sectors, especially with the private sector, and
- (iii) Technology focus, seeking potentials in existing or emerging technologies.

In order to understand the innovation practices at the Innovation Unit in New York, I will use Betts and Bloom's conceptual understanding of humanitarian innovation; *a means for adaption and improvement* (Betts & Bloom, 2013), combined with the mentioned definition of social innovation: *a novel solution aiming to create value in a society, rather than private individuals*. I believe these definitions will be fruitful to understand the Innovation Unit's current innovation practices where they strive to realize the human rights of every child (UNICEF, 2013) I had no propositions regarding the investigation of the ripple effects of the unit's work. My findings on the latter topic will be interpreted in light of my modified model of diffusion of innovation practices in service organization as explained above.

3.0 Methodology

While quantitative research often starts with a hypothesis that is then tested using accepted statistical measures on a large amount of cases common randomly selected, qualitative research by contrast generates descriptions and explanations grounded in the analysis of the data collected. Other characteristics of qualitative research are (i) an author that throughout the writing interprets the data, (ii) greater attention paid to the particular theory or model of qualitative research the researcher is using, and (iii) and a fewer number of cases studied. It is the nature of the research questions that should guide the choice(s) between different research methods, not an ideological favoring of one particular research tradition (Silverman, 2014, p. 6-8). If one seeks to investigate social facts of the causes of some phenomena, quantitative methods are usually best suited. On the other hand, when asking “how” and “what” questions, qualitative methods are usually most appropriate (Silverman, 2014, p. 27).

Even if a researcher claims to merely reporting how respondents ‘see’ things or how things ‘are’, one inevitably is using an underlying and maybe unacknowledged theoretical position that determines what one perceive as ‘facts’. As a qualitative researcher, I assume that social facts in shaped by the models and concepts used by the researcher. In qualitative research, there are two prominent ways to perceive the world: *naturalism* and *constructivism*. Whatever theory one use, conscious about it or not, concepts will shape the research (Silverman, 2014). A naturalist asks, “What is going on?” and she wants to get inside social reality in order to *describe* what life looks like. Social facts are for a naturalist found in shared meanings and understandings. The focus is on the factual characteristics of the objects one investigates. Through data collections naturalists seeks to objectively *reflect* the phenomenon that occurs. For the last four decades interviews have been the most preferred methods for naturalists. Scholars in this tradition seek to understand human’s subjective ‘lived experience’ within a given context. Through empathetic interviews one can gain shared understanding and insight into this ‘experience’. By contrast, a *constructionist* claims that facts never ‘speak’ for themselves, but are given meaning by humans in a specific context. Even though constructionists also are interested in what is going on, there is a stronger focus on *how*

the 'what's' are sustained as realities of everyday life. Attention is paid to how things are going on, and includes contextual factors when research is conducted. This theoretical position is process-oriented and is interested in how interaction and discourses produce reality (Silverman, 2014, p. 24-26).

When I conducted interviews, it was not the conversation per se that was unit for analysis, but rather the content of what was said. This point, in addition to the fact that since the purpose of this thesis is to *describe* the innovation principles and practices the Innovation Unit use in their aid work, a naturalistic approach was chosen. When I conducted the interviews, I tried to have an empathetic attitude so I could gain insight into the interviewees' understandings and 'life world'.

3.1 Case Study as Strategy

Case studies can be descriptive, explanatory or exploratory, but they can also be combined. Even though each type has its own characteristics, overlaps among them occur. Yin defines a case study as a comprehensive research strategy, which "relies on multiple sources of evidence" (Yin, 1994, p. 13). According to the author, a case study is appropriate when the research is about a real-time contemporary issue, and when the researcher has no or little control over the events that occur. Such an approach also has its unique strength in its ability to cover all different evidence, for instance interviews, observations, documents and artifacts (Yin, 1994).

Both of my research questions are a *what*-question. A 'what-question' is *explanatory* in nature as it seeks to explain a phenomenon. This thesis will investigate the contemporary innovation practices at UNICEF's Innovation Unit, and such study requires no control over the behavioral agents or events. Of all the different strategies, and with Yin's support, a case study appears to be an appropriate strategy: It "is preferred in examining contemporary events, but when the relevant behaviors cannot be manipulated" (Yin, 1994, p. 8). In order to answer the research questions about what principles and practices the Innovation Unit use, and the possible ripple effects of the unit's work, the selected strategy in this thesis is chosen to be a case study. The main unit of analysis is UNICEF's Innovation Unit in New York with its 10-12 fulltime members.

There is no doubt that case studies are hard to do properly. But it is actually considered to be a “soft” research strategy. Robert Yin (1994) claims that such statement is a paradox, arguing that thus “softer” the research is, thus harder it is to conduct. One just has to be aware the specific research strategy, and take several circumstances into consideration. Case studies are often criticized as well. Common concerns and prejudices upon case studies are directed towards such circumstances: a lack of rigidity where sloppiness occurs, equivocal evidence, or a biased view, where it all influences the research and the following conclusions. To meet such criticisms, principles, goals and tests has been developed in order to ensure quality and reliability in scientific research (Yin, 1994). The various tests are explained below, under the subheading ‘Validity and Reliability’.

Access to Case

In fact, I did not *per se* come up with my research questions. The initial topic I had for the thesis was innovation in education in low-income countries. I therefore participated at the conference “Visjon 2030” in Trondheim (Norway) in March 2015, a national innovation bee that discussed solutions that can contribute to how the world can achieve the universal sustainability goals (SDG) to be adopted by the United Nations in September 2015, with specific focus on the areas of health and education. At a mingling session in one of the evenings during that conference, I met Kim Gabrielli, Advocacy Officer at UNICEF Norway, where I explained my interest in the topic. He eventually invited me to a personal meeting in Oslo. A month later Gabrielli and I met and discussed several possible topic to study. After a while Gabrielli started talking about UNICEF’s Innovation Unit in New York, and explained some the innovative work they are doing. As Gabrielli knows some of the unit’s members personally, he asked if it was interesting for me, if possible, to conduct research within that Unit in New York. I realized I faced a unique and rare opportunity, so I confirmed my interest.

I wrote a letter in which I explained the aims of the research project and my personal interests, a letter Gabrielli took forward and put me in contact with the unit’s Co-lead Christopher Fabian. Three weeks later I was accepted and invited “over” to them on Manhattan by the Academic Lead of the unit, Norah Maki. In late May Gabrielli and I met at his office for another informal meeting, where we discussed the research process.

Again Gabrielli gave an interesting tip, now about how the IU and its focus on innovation influences' other parts in the UNICEF system. The history repeated itself and that tip became my second research question. Today I am grateful for Gabrielli's interesting tips back then. I (guess I) could not have accomplished coming up with such questions by myself. Insight, outlook and a dose of curiosity seem crucial in order to find good research questions, and all those three factors grew inside me during this research period.

3.2 Sources of evidence

Case studies can consist of one or more different sources of information. It is an advantageous if several sources are used in the case study. Different sources give more perspectives to analyze and judge to research results from, either to supplement and strengthen, or to question and doubt the findings. Using and utilizing several sources of information will strengthen the reliability if done faithfully and correct, a concept labeled triangulation of evidence. Direct observation and systematic interviewing are commonly utilized sources of evidence in explanatory cases (Yin, 1994). Also in this case study those two sources are used, complimented by document studies as well.

Interviews

Since case study concern human affairs, interviews are (seen as) essential and the most important sources of information pertaining to the evidence of the case studies.

Interviews can take form as focused, semi-structured and open-ended (Silverman, 2014; Yin, 1994), and what type of structure chosen depends of what type of information (answers) one seeks.

Focused interviews occur over a short period of time, for example in one single hour. Such interviews may be open-ended, be performed in a conversational style, but they follow an interview guide with specific questions. The main goal is to confirm certain alleged facts. One should avoid leading questions, as it will weaken the (principle of) corroboratory purpose (Yin, 1994). Semi-structured interviews also follow a given structure, but it is not bounded to it; there is space for discussion and to follow up interesting answers with new and improvised questions. Open-ended interviews are commonly used to elicit life-stories, and the aim is to collect rich data and to understand

the culture and language of the respondent (Silverman, 2014). In case studies, key informants are often seen as a key for success. They can provide key insight, give tips and propose sources of corroboratory evidences, and launch access to such sources. Due to the danger possibility that interpersonal influence can steer the research in a particular biased way, a good advice is to rely on other sources, and also search for contrary evidence in a careful way (Yin, 1994). This happened in this case study, as I got access to a key informant, Co-lead of the Innovation Unit, Christopher Fabian. After our interview, he tipped and launched access to other persons I could interview regarding my investigation of the possible ripple effects. I followed Fabians' recommendations, and interviewed those persons he mentioned. In order to strengthen the reliability and validity in this research, I asked open questions to my respondents, and asked them to consider whether the ripples they saw was an direct or indirect effects of the IU's work or not.

Tape recorders can be a useful remedy when conducting interviews. When using it, one should ask for permission, have a plan for transcribing and systematic listening afterwards, it should not influence the interview situation, or it should neither be a substitute for active listening. Rather, it is an advantageous supplement to the notes the researcher takes. One should try achieving a natural situation as possible, so the researcher can be at ease, be aware of the interactions in the situation, paying all the attention on the respondent, so interesting statements can be followed up (Yin, 1994).

For durability and quality reasons, when conducting interviews one should be aware of possible bias', poor memory, noise, misunderstandings, and poor or imprecise articulation. Corroborating and double-checking with information from other sources of evidence is striving worthy (Yin, 1994). I needed to be aware of possible biases, because I admire UNICEF's aid work and is an organization in which I would like to see myself working. Such thoughts could have affected how I formulated my interviews and how I interpreted the results, especially in the examination of ripple effects. A relevant question I tried to bear in mind was: Is it obvious that the ripple effects are solely positive, or can the unit create negative ripple effects?

Due to the facts that formalized innovation processes in a context of international aid is a relatively new phenomenon and that the informants naturally possessed more in-depth knowledge than me in the field, *semi-structured interviews* were found to be the most appropriate form in order to be able to map every relevant aspect. Such approach allows for following up on interesting leads that the researcher did not have in mind initially. A prepared interview guide was made to steer the direction of the interview sections (the interview guide is attached, see appendix). But I knew that before I entered an interview section I had to have in mind that I needed to have an open and flexible approach, and might need to reformulate, delete or improvise new questions. Team members for the IU and leads of other divisions in other UNICEF body are all interviewed separately, except the interview with Christopher Fabian where also Norah Maki (Academic Lead) and Dana Zucker (Communications Lead) were present in the room. When I did interviews at the unit, I found it important to listen carefully, and be flexible and rigorous (not rigid).

Direct Observation

Ethnography studies require long periods of time in the field, with detailed, observational evidence. When doing observation, one should document the procedures as if someone were looking over your shoulder (Yin, 1994). It should be possible to arrive at the same result if the data collection was repeated with the same procedures. A critical task for ethnographers is to avoid the temptation of attempting to record *everything*. One should rather get rid of most of the data, be selective and constantly 'winnow' (Silverman, 2014). When making notes, it is common to distinguish between formal and less formal styles. Formal observation notes concern how the fieldworkers behave, and less formal one emphasize content, sequences, environmental conditions, for instance the condition of buildings or workspace, and location of furniture in the office (Yin, 1994). When recording, one should try to be as descriptive as possible. One is never a neutral researcher, but one implicitly chooses and excludes some things. In other words, one is not simply recording data, but also analyzing them. Therefore, it is important to record descriptions rather than impressions (Silverman, 2014).

Observation is a great source of evidence, in which I have the ability to observe by myself, and make my own opinion and interpretation about the innovation practices in

the unit. In order to investigate how the IU performs innovation work, direct informal observation was done. An intended observation session was conducted at a meeting Friday 7th of August at the unit's office, where some members from the team, two interns and myself were present. When I participated at that meeting, I avoided recording concrete instances with verbatim quotations and 'flat' or unadorned descriptions, but I rather focused on the topic, content and sequences. (The field note from the observation session is attached, see appendix C).

Documentation

In addition to interviews and direct observation, document studies were also done. Data from documents can provide positive, neutral or negative relationship with the findings from the interviews and direct observations. Document sources can be newspaper interviews, (innovation) strategy documents, minutes or other (Yin, 1994). In this study I utilized UNICEF's own publications (e.g. Strategic Plan and Annual Reports), minutes from one observation session, academic articles and books, and online newspaper articles.

3.3 Validity and Reliability

How can one be sure that stated conclusion in different reports, actually are true? Because conclusions in scientific research (often) depend on logic, one can judge the logic in order to establish quality. This also applies in case studies. There have been developed four tests, common to all social science methods. The four tests are: construct validity, internal validity, external validity and reliability. Below, the various tests will be explained, where research pitfalls and possibilities will be outlined. The tests will be linked to this thesis actual case, and show how the logic in this case can be judged, so the quality of this thesis can be secured.

Construct Validity

This test is often remarked on in case study research, criticizing the researcher for not being able to establish sufficient and correct operational measures, and doing subjective assessments. The point is that one has to develop sufficient measures, in order to demonstrate correlation between prior events, and the possible change (Yin, 1994). One seeks to logically state the relationship between concepts. To be able to do that, Yin

(1994) suggest three solutions: using multiple sources of evidence, establish a 'chain of evidence' and let the key informants review and vouch the findings.

Internal Validity

How can one be sure that 'a' was the significant factor that led to a change, 'b'? Could not another factor be the true reason behind the change? To ensure internal validity, one seeks to find causal relationships, and examine whether one thing leads to another. One must take into account all relevant factors and all rival explanations must be equally judged. Sometimes in research, inferences are made, and it happens when we are not able, or haven't seen a situation or event. It is difficult to observe causality in real-time case studies, to see the causality between events. To ensure internal validity and meet this challenge, one can use multiple sources of evidence, for example interviews (Yin, 1994, p. 35). Regarding my second research questions, all my findings are based solely on interviews. Due to formal limitations I was not able to use multiple sources of evidence, and that is clearly a limitation of this research. I therefore suggest further research, if available time and resources allows it, to investigate other resources, for instance doing observation in different country offices and conducting more interviews focusing on the determinants influencing the organizational changes. However, in order to ensure as good internal validity as possible in this thesis, I asked all of my respondents about concrete examples that prove the causality between the unit's work and the change in other units outside the Unit. The answers can be read in chapter 5.0, Empirical Findings.

External Validity

How can one know whether the findings are relevant in other cases, and so make generalizations? When can one say that the findings in one case are replicable to other cases? A common criticism is about the difficulty to make generalizations from one single case study. Such criticism contrasts case studies to common surveys, where a "sample" can be generalized into a broader context. Due to the fact that surveys deal with statistical generalization, this analogy is incorrect. As case studies do not state generalizations upon human populations or the whole universe, but rather seeks to generalize and contribute to broad theoretical propositions, they rely on analytical generalizations. In such cases, valid generalizations can be made Yin, 1994, p. 36).

Reliability

The final tests objective is to ensure reliability of the research, and reduce the possibilities of errors and biases. The main goal is the possibility of replication of the research, so a later investigator, if following exactly the same procedures and conducting the same case study all over again, should arrive on the same results. Therefore, it becomes important to document the different procedures and make the different steps as operational as possible. One should document as if someone is looking over one's shoulder (Yin, 1994). Summarized, one can have in mind that, when conducting research, one should have an auditor perspective, and write and document so the whole process becomes transparent. The whole research process should be possible to conduct all over again, with the same results. Including the research protocol, interview guides and transcribed interviews as an attachment can also strengthen reliability.

To ensure the reliability of this thesis, interview guides and an overview of persons interviewed are attached (see appendix). As multiple sources of evidence normally can strengthen the reliability and validity of a study reports conclusions, several sources are therefore used in this thesis: Individual interviews (semi-structured), observations, complimented by document analysis.

Composing the Case Study "Report"

The audience for this thesis is the dissertation committee, the Innovation Unit itself, UNICEF Norway, interested employees at UNICEF (I know a few), other and students, academics and practitioners in the field, interested in the intersection of innovation management and development. This thesis uses a linear-analytic structure, which is a common and highly used approach to write research reports (Yin, 1994). A goal was to conduct a thesis that can communicate UNICEF's innovation thinking and practices, so other interested can learn and become inspired. Hopefully, this thesis might also provide some theoretical and practical implications, with suggestions for further research.

Data analysis: Grounded theory

The analysis has been done in a 'grounded theory approach' (Silverman, 2014), where I have been looking at the themes during the analysis. I have used the software HyperResearch in the coding process. Grounded theory involves coding through memo-writing, theoretical sampling, and generating theories with basis on the data, rather than in hypotheses (which is common in quantitative research). When working with grounded theory and 'coding through memo-taking', one should not be too quick to code the reality into technical concepts from the discipline. One should be as open as possible, describe simplistic, and after a while one can 'put' concepts on the data. But one should be open to the fact that there are phenomena that fall outside established concepts, so one must develop new concepts in order to catch all the data (Silverman, 2014).

When the first interview was conducted with Christopher Fabian, I immediately started to transcribe it, just as Silverman (2014) recommends. When I arrived in Oslo again after the field trip, I transcribed the rest of the interviews and started the process of coding them. In order to analyze the research questions, a thematic coding was done for structuring the data. In fact, thematic coding is one of the most common forms for qualitative analysis (Silverman, 2014). When I coded the interviews, and just as Silverman advises, I tried to stay close the findings, and I labeled the phenomenon's, sequences, and important quotes, things that possibly could or couldn't be related to theoretical articles. When I then proceeded to the process of analyzing the findings, I tried to stay open-minded for as long as possible and to be curious about whether the findings fit or did not fit into the existing theories and concepts. I worked from practical quotes and nitty-gritty information towards categories and a more conceptual level.

All the respondents were given the opportunity to either stay anonymous or appear with full name. In this case, all of my respondents were comfortable with appearing with full name, and that made my study transparent so further researchers are able to replicate the same study and get the same results, or to follow up and build upon my findings.

Ethical concerns

The Norwegian National Committee for Research Ethics in the Social Sciences and the Humanities (NESH, 2001 / www.etikkom.no) has developed a set of guidelines in order to conduct ethical research. Two of the most important guidelines concern (i) the obligation to obtain consent from people participating in the study, and (ii) the obligation to inform the participants about the research. In order to safeguard ethical aspects in this study, I e-mailed all my respondents a 'Consent for Participation' form some days in advance. In that form, I outlined in a few chapters about the background and purpose of the research, and what participation meant for them. In addition, I started the interviews by offering my respondents a short introduction of my research.

4.0 Mapping the context: Innovation in the UN and UNICEF

This section will place the unit of analysis (the Innovation Unit) in a bigger picture by a short explanation of the United Nation's commitment to innovation, followed by a narrower view at UNICEF. This context information will help us to understand how the Innovation Unit and its work relate to other actors within UNICEF, but also help us to understand the data and analysis in the consecutive section (5.0).

4.1 Innovation in the UN

The United Nations have made the 'innovation turn' and have a goal of mainstreaming innovation and integrate it into to their core processes and programs (Bloom & Faulker, 2015). UN's innovation focus is two-sided; on the one hand they want to stimulate innovation in the local context, including engaging the local community in the innovation process. On the other hand, UN also wants an organizational change towards a more innovative organization culture. Several UN agencies have responded to these goals, and UNICEF's and UNHCR's have since 2007 established several innovation labs around the globe. But also UNDP and OCHA have made innovation to a priority (Bloom & Faulker, 2015).

The increasing innovation focus also manifests in the new Sustainable Development Goals (SDG) where innovation has been made an explicit goal: Goal number nine emphasizes inter alia the need for member states to foster innovation, and concretize this overarching goal into the necessity of supporting domestic technological development, research and innovation in developing countries (UN, 2015, p. 15). The latter goal of promoting domestic and local innovation is a paradigm shift in approaches and thinking, where a bottom-up approach now is emphasized more (where it earlier has taken a top-down approach) (Betts & Bloom, 2013, 2014; Bloom & Faulker, 2015).

4.2 Innovation in UNICEF

United Nations Children's Fund (UNICEF) is an intergovernmental organization (IGO), and shares the UN's goal of mainstreaming innovation into its programs and processes (Bloom & Faulker, 2015). UNICEF is a member of the United Nations Development

Group (UNDG), a consortium of UN agencies created by the Secretary General of the United Nation in 1997. Other members of the UNGD are UNDP, WHO, and ILO (Wikipedia, 2015b). UNICEF's universal mandate is to realize the human rights of every child (below the age of 18). That mandate pervades everything the organization does – in programs, in advocacy and in operations. The organization has an equity strategy, where they emphasize the most disadvantaged and excluded children and families. In UNICEF's Strategic Plan for 2014-2017, six priorities have been made: (i) young child survival and development, (ii) basic education and gender equity, (iii) HIV AIDS and children, (iv) child protection from violence, exploitation and abuse, (v) policy advocacy and partnerships for children's rights, and (vi) humanitarian action (UNICEF, 2013).

For UNICEF, innovation means “Doing something new or different that adds concrete value” (UNICEF Stories, 2013). UNICEF use innovation to create solutions that strengthen their programs that help bring essential services to children, especially those in vulnerable situations. This includes innovations in technology as well as innovation in ways of working and thinking.¹⁰

The Executive Director Anthony Lake has a vision of having innovation as one of the main core pillars of UNICEF (Kim, 2013). That vision is displayed in the figure below. The figure also displays the connection UNICEF Innovation has to the rest of the organization.

¹⁰ Source: An email from the Communications Lead in the Innovation Unit, Dana Zucker, with information about what innovation means for UNICEF. Email received 9th September 2015. Permission to use the text in this thesis is given by D. Zucker.

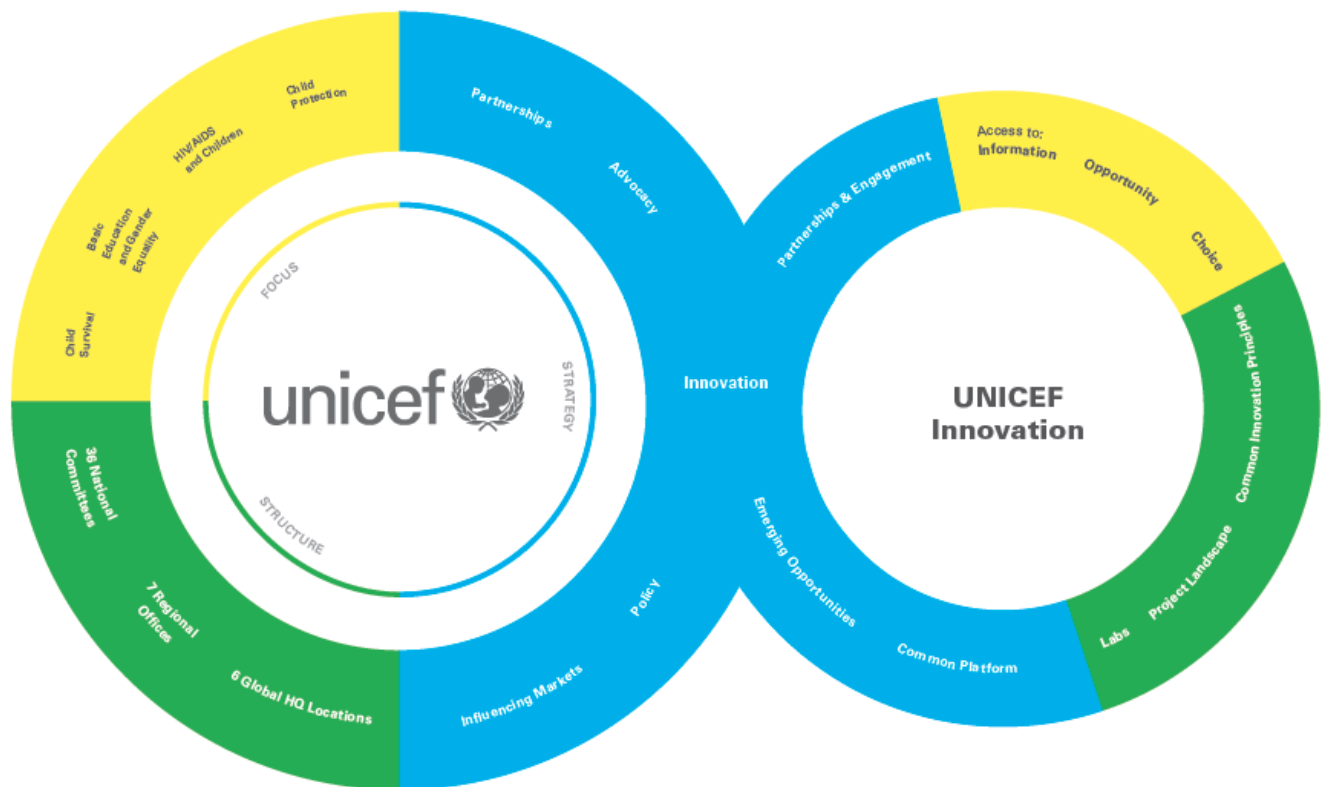


Figure 3: UNICEF Innovation's place within UNICEF

The way UNICEF is structured is shown in the green field in the left circle. The organization has 36 national committees, 7 Regional offices and 6 Global HQ Locations. UNICEF's focus areas are: Child protection, HIV/AIDS, basic education, gender equality and child survival (yellow field). Partnership, advocacy, innovation, policy and influencing markets are UNICEF's strategies (blue field) in their work. It is *innovation* that is the intersection and connects UNICEF Innovation to the rest of the organization. UNICEF Innovation (right circle) seeks to provide children and *youths access to information, opportunity and choice* (yellow field). The strategies used to achieve such goals are partnership, utilizing emerging opportunities and creating a common platform for innovation (blue field). UNICEF Innovation's work is structured through several Innovation Labs around the globe (see also figure below), through projects, and by having the innovation principles as guidelines for all of its work (green field).

The Innovation Division was established in 2007, and nowadays is a leader in innovation activity in the UN body (Amatollo, 2015; Bloom & Faulker, 2015). UNICEF Innovation is an interdisciplinary team of individuals around the world engaged in identifying, prototyping and upscaling technologies and practices to support and strengthen UNICEF's development and humanitarian work (UNICEF INNOVATION,

2014). UNICEF Innovation is organized in several units around the world, with each unit serving different purposes. UNICEF Innovation is comprised of:¹¹

An **Innovation Unit in New York** that supports UNICEF programs on the ground and the organization at large through integration of technology, design thinking and partnerships with the private sector and academia.

An **Innovation Center in Nairobi** that identifies and field tests scalable innovations.

A **node in San Francisco** that builds partnerships with the technology sector, and help scale social innovation startups.

An **innovation group on Supply in Copenhagen**, which works closely with private sector and other partners on supply and product innovation.

A **network of 14 Innovation Labs around the world** (from Armenia to Zambia) that bring together the private sector, academia, and the public sector to develop solutions for key social issues, and scout for new ideas from unexpected places (UNICEF INNOVATION, 2015b).

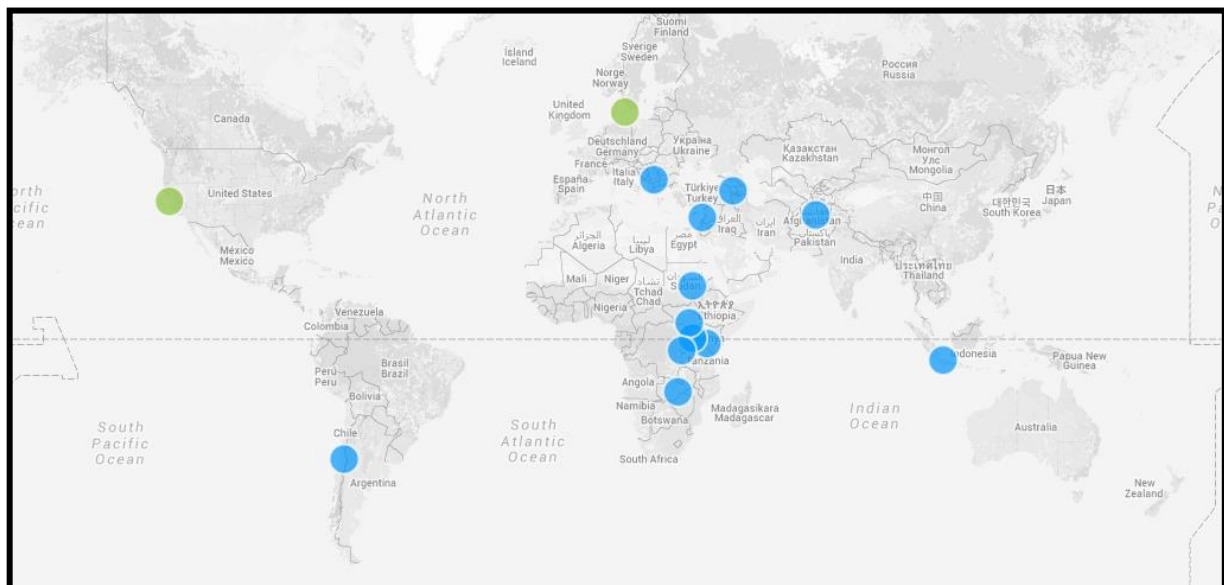


Figure 4: Mapping UNICEF’s Innovation Labs around the globe

The map above is a print screen taken from UNICEF Innovation webpage¹², displaying the geographical location of the units, node, labs and divisions. (But it clearly misses the

¹¹ The following section is taken from their webpage, under the heading ‘Why Innovate?’ The URL link is the same as in footnote number 12.

¹² http://www.unicef.org/innovation/innovation_73201.html

unit in New York though). This map is useful when analyzing the ripple effects in other parts in the UNICEF body.

4.2.1 UNICEF's HQ Innovation Unit

In the mid-2000s, when Co-leads Christopher Fabian and Erica Kochi worked in the Division of Communication, Fabian and Kochi established the NYHQ Innovation Unit with support of the lead of that division, Dr. Sharad Sapro¹³. The new ideas and approaches they took in this newborn unit was to use new technologies, partnership with the private sector and to integrate design attitude approached in UNICEF's development and humanitarian work around the globe. Such approaches were novel concepts for the organization. In late 2013, Erica Kochi moved to San Francisco to start a node of the unit to be in closer proximity to the technological start-ups in Silicon Valley. Compared with divisions from the rest of the organization, the HQ IU enjoys much freedom and is a relatively autonomous unit. It has a cross-cutting and privileged position in terms of where the unit sits in the organizational chart. At the center of UNICEF's Innovation Ecosystem, the Co-leads Christopher Fabian and Erica Kochi now report directly to the top of the pyramidal structure of UNICEF, to the office of the Executive Director, Mr. Anthony Lake (Amatollo, 2015, p. 27-28)

The chart below displays how the Innovation Unit as of January 2015 is structured, connecting it to macro level perspectives such as principles, partnerships and innovation fund. It shows reporting links to the Executive Director and ties to other actors within the 'ecosystem' (Amatollo, 2015, p. 62). The chart also helps us to understand the ties and relations between the different actors.

¹³ Interview with Christopher Fabian

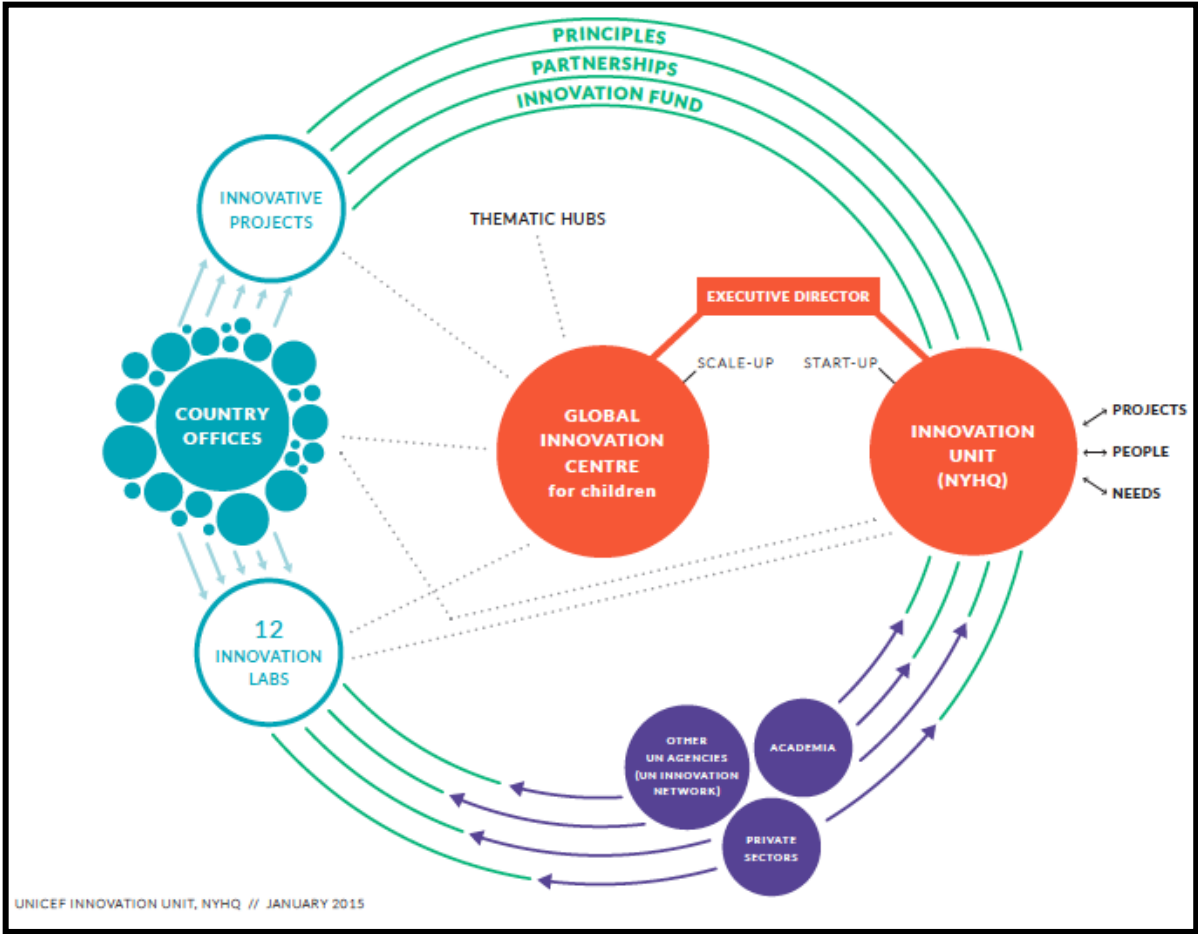


Figure 5: UNICEF Innovation Organizational Chart by January 2015. Taken from Amatullo, 2015, p. 62.

5.0 Empirical Findings

In early July 2015 when I made my preparations for the data collection in New York, Academic Lead of the Innovation Unit Norah Maki tipped me about a recent published report made by the Mariana V. Amatollo (2015), a PhD scholar¹⁴. Her report labeled *Innovation by Design at UNICEF: An Ethnographic Case Study* was a part of her dissertation: *Design attitude and Social Innovation: Empirical Studies of the Return on Design*, for the PhD in Management: *Designing Sustainable Systems* (Amatollo, 2015). In her research, Amatullo examined the design practices and design attitude at the Innovation Unit in the context of organizational change that has taken place at UNICEF in the last years. When I read her report I realized she had studied many of the same phenomena and processes that I planned to do, but the dividing difference is that Amatullo studied it from a design perspective, where my 'lenses' are from the innovation management tradition. My initial thought was then: Does my research become superfluous now? But it is not. Actually, Amatollo caters to, and request that "further research may be able to build on and further validate" her findings (Amatollo, 2015, p. 52). Also Louise Bloom, Alexander Betts and Romy Faulker from the Refugee Study Centre (RSC) at the University of Oxford claims there is a lack of understanding and research that inform about innovation activities within the UN system (Betts & Bloom, 2013, 2014; Bloom & Faulker, 2015, p. 4). The gap in research legitimates my research, and my study contributes to lessen the gap. Amatullo's study will also be an important source of information and point of reference for this study.

The sources in this case study are interviews, one observation session, documents and materials found online. The findings of this study will be presented in two subsections. The first subsection addresses the first research question; namely the innovation practices the Innovation Unit use in their aid work. The second subsection of these sets of findings presents the ripple effects of the HQ unit's work in other parts in the organization.

¹⁴ Mariana V. Amatullo, PhD. Scholar-in-Residence. Design and Innovation Fellow. Weatherhead School of Management. Case Western Reserve University

5.1 The innovation practices

The HQ innovation unit has since its establishment in 2007 developed a set of nine principles for innovation and technology in development that capture key perspectives for innovation in the unit (UNICEF INNOVATION, 2015a).



Figure 6: The nine innovation principles. Photo taken by Harald Dean 6th August 2015, at the Innovation Unit's office in New York.¹⁵

The principles are: 1. Design with the User, 2. Understand the Existing Ecosystem¹⁶, 3. Design for Scale, 4. Build for Sustainability, 5. Be Data Driven, 6. Use Open Standards, Open Data, Open Source, and Open Innovation, 7. Reuse and Improve, 8. Do no harm, 9. Be Collaborative (see appendix D for an elaboration of these principles). The principles function as guidelines for UNICEF innovation work, at Headquarter level as well as at regional and country level. These principles have been adopted and endorsed by key international development organizations, for example Bill and Belinda Gates Foundation, WHO, UNHCR, OCHA, UNDP, and IKEA Foundation (UNICEF INNOVATION, 2015a).

The innovation unit label these principles “best-practice guidelines” (UNICEF INNOVATION, 2015a) for development programs. Amatullo (2015) label them “code of

¹⁵ Permission to photography and to publish the photo given by the Academic Lead Norah Maki

¹⁶ This principle is the new version of the old 'Build with local tools and people'. The poster on the wall (see picture) is an outdated version, and that phenomenon displays how often things change in this unit.

ethics” (p. 39). Some of the principles function more as code of ethics, while others are concept and approaches adopted from traditional innovation theory. Examples on the latter are the principles: *Design with the user* (1), *Design for scale* (3), *Open innovation* (6) and *Be collaborative* (9). On the contrary, the principles: *Understand the existing ecosystem* (2), *Build for sustainability* (4), *Be data driven* (5), *Reuse and improve* (7) and *Do no harm* (8) are points to ethical aspects. A distinction between *code of ethics* and approaches is therefore appropriate to make. As I, with regard to the first research question, did an examination of the innovation practices at the unit rather than their code of ethics, only the findings on the topic of innovation practices will be explained in the following paragraphs. An elaboration of this distinction is made in the discussion part.

Human-centered design

A pervasive innovation practice in the Innovation Unit is the phenomena of *human-centered design*. The IU has actually made this to an innovation principle for their work. In the Annual Report of 2014, the unit stressed the need to engage the end-user in the innovation process:

We knew that we needed to help solve concrete problems experienced by real people, not just building imagined solutions at our New York headquarters and then deploy them. We needed to team up with governments, partners, and end users in countries to come up with meaningful and sustainable solutions (UNICEF INNOVATION, 2014, p. 2).

C. Fabian and his team have realized that an innovation built in New York often fails in the ‘real life’. In an interview from 2013 Fabian shared what his unit had learned: “One of the things we have found in our team is that everything we build in New York for UNICEF’s 135 country offices fails!” (Pruthi, 2013) A similar view stated the Polio Lead in Amatullo’s (2015) recent published study: “Human-centered design, the value if pretty obvious...if we come in and we have the solutions and we push them down and then they don’t work” (p. 43). When UNICEF developed the Digital Drum (mentioned in the introduction part), the IU’s role was to develop the initial design *together* with the

South Africa's Meraka Institute¹⁷, where the further process took part in UNICEF's Technology and Development Unit in Uganda (UNICEF INNOVATION, 2011). Hence, the IU's role is minor in the innovation process, leaving the major parts of the process to the Country Offices and Innovation Labs around the world and by doing this intends to take care of the principle of a human-centered design.

With a human-centered design the IU seeks to include all relevant 'user groups' during the whole innovation process, from planning, development, implementation and assessment. They also seek to "ensure solutions are sensitive to, and useful for the most marginalized populations" (UNICEF INNOVATION, 2015a). The unit "supports on request" the Innovation Labs and Country Offices in their innovation work (UNICEF INNOVATION, 2015b). That means coordination and establishment of connections between offices (country offices as well as headquarters), and the unit help labs and country offices with partnership and in the integration of technology in their programs.

Technology practices

In the late 2000, the Innovation Unit on behalf of UNICEF started to integrate mobile technology aiming to strengthen the organization's international aid (UNICEF INNOVATION, 2014). Co-lead Christopher Fabian explained: "About seven or eight years ago Erica Kochi and I started to look at how we could, sort of, accelerate some of the things in UNICEF and in the UNICEF's world, using technology practices, using things that we know work in private sector."¹⁸ These technology practices have been maintained until today, and nowadays the unit is looking 3-5 years ahead and search for opportunities for innovation in emerging technologies like 3D printing, digital currency and drones (UAV's) (Amatollo, 2015, p. 61). The unit also supports the organization at large to integrate technology into the programs (UNICEF INNOVATION, 2015b). The overarching aim is to utilize the potential in emerging technologies to deliver better results for children (UNICEF INNOVATION, 2014).

¹⁷ South Africa's Meraka Institute is the Council for Scientific and Industrial Research (CSIR) in South Africa, and is concerned with research and development for socio-economic growth. <http://www.csir.co.za/meraka/>

¹⁸ Interview Christopher Fabian

In August 2015 the Innovation Unit was running a campaign and competition called ‘the Wearables for Good Challenge’, where they looked into how wearable technologies could be adapted and developed in order to save lives¹⁹. UNICEF collaborates with the private firms Arm²⁰ and Frog²¹, and the project are coordinated by the IU in New York and the node in San Francisco. In the project the innovation units ask the world society: How can we “develop innovative, affordable solutions to make wearables and sensor technology a game-changer for women and children across the world”? (UNICEF, 2015) They also ask if wearables could be the next mobile revolution. The challenge runs from May 19 to the 2nd of November 2015, will have two winners, and each winner receives funding (\$15 000 USD) plus an idea incubation prize which is delivered by the three partners of the project (UNICEF, 2015).

The Unit does not invent new technologies at UNICEF, but they are leveraging existing technology. Polio Lead Asch Harwood explained to me the unit’s role when integrating technology in innovation processes: “I think around our technology stuff, we tend to be horizontal innovators like people who are taking things that are already happening at places and just applying it. So we are not inventing new things.”²²

Currently, the IU is also exploring the opportunities in drones, also called Unmanned Aerial Vehicles (UAV’s). This topic was discussed in a meeting I participated in Friday 7th of August at the unit’s office on Manhattan²³. A student, who for two months had been an intern and conducted research on drones, presented and explained the different models in that meeting. After the presentation, the team then had a discussion about the opportunities and challenges using drones in their programs, for example in delivering services of vaccines and medicaments during emergencies. The picture below displays an example of a drone.

¹⁹ <http://wearablesforgood.com/>

²⁰ “ARM designs the technology that lies at the heart of advanced [digital products](#), from wireless, networking and consumer entertainment solutions to imaging, automotive, security and storage devices.” Taken from <http://www.arm.com/about/index.php>

²¹ <http://www.frogdesign.com/>

²² Interview Asch Harwood

²³ See appendix for field note.



Figure 7: A drone, also called Unmanned Aerial Vehicle (UAV) ²⁴

Partnership

Partnerships have always been an important strategy for UNICEF. According to Juan Pablo, “the organization only works through partnerships” ²⁵, either with governments, private sector, NGO’s or community organizations. The unit has made collaboration (‘Be collaborative’) to one of their nine principles for technology and innovation practices. The unit seeks to work across silos, to “engage diverse expertise across disciplines and industries at all stages” in order to “create coordinated and more holistic approaches” (UNICEF INNOVATION, 2015a). An example can be found in the abovementioned ‘Wearable For Good Challenge’, where the IU partner up with the private firms Frog and ARM.

The need for partnerships is explained in UNICEF’ Innovation’s Annual Report of 2014:

We knew that we needed to help solve concrete problems experienced by real people, not just building imagined solutions at our New York headquarters and

²⁴ This photo is taken from UNICEF Stories, a blog run by UNICEF Innovation. The drone in this photo was not used in the meeting I refer to, but just stands as an example. I did not succeed in getting access to the pictures of the drones discussed in that meeting. <http://www.unicefstories.org/2015/09/25/unmanned-systems-bring-support-and-communication-when-disaster-strikes/>

²⁵ Interview Juan Pablo

then deploy them. We needed to team up with governments, partners, and end users in countries to come up with meaningful and sustainable solutions (UNICEF INNOVATION, 2014, p. 2).

Tom Olsen, Senior Advisor at the Public Partnership Division in UNICEF NY explains the benefits of partnerships:

The civil and private sector has much more money, more experience, knowhow and access to technologies and related information than UNICEF or the UN combined. Here the HQ Innovation Unit has done a fantastic job by being able to create partnership that expands beyond the traditional partners and donors. In return, together we look at old and new technologies, sharing knowledge and ideas, which again has transformed into real intervention on the ground (Uganda, Sierra Leone, Liberia, and Chile) as we have created common goals and vision. More important, these joint ventures have shown that we have common interests and are willing to help, share and work with us in order to achieve results for children.²⁶

This is a view also Juan Pablo shares, in fact, he claims that “the more partnerships you have, the better your work is going”.²⁷

Academic partnership is a prominent strategy the Innovation Unit use in their aid work. The Academic Lead Norah Maki manages collaboration with universities and other academic institutions from the office in New York. Partnership enables the unit to look “into future spaces through new research, around new technologies, new methods”, but also helps them “remain agile”.²⁸ According to Maki, the reasons why academic partnership is important are:

Academic partnerships help UNICEF remain agile into the future (...) The second piece is next generation talent development. So how do we engage with the next generation of designers, engineers, researchers, business people, and entrepreneurs who are going to be shaping the economy and the social structures in the next couple of decades? We found that academic collaborations are really

²⁶ Interview Tom Olsen

²⁷ Interview Juan Pablo

²⁸ Interview Norah Maki

an excellent way to connect with that population. And we helps to influence the coursework that's been thought, and shape programmes that allows students to engage in real-world application of their work²⁹

Maki further explained to me that such partnerships occasionally results in students starting to job for them after graduation.

Open Innovation

The innovation unit has developed 'open innovation' to be an important principle for its work (principle number 6). The unit encourage using "Open Standards, Open Data, Open Source" (UNICEF INNOVATION, 2015a) in their programs. Investment in software as a public good is a priority, seeking to develop software to be open source by default "with the code made available in public repositories and supported through developer communities" and to expose data and functionalities in "documented APIs (Application Programming Interfaces) where use by a larger community is possible" (UNICEF INNOVATION, 2015a). Also principle nine – 'Be collaborative' encourage to widely share the work, results, processes and best practices that take place. UNICEF has ongoing projects in Afghanistan in these days (2015) that build upon open source. Chris Fabian explains: "(...) these ideas are basic, like the idea that we should building open source technology. (...) So now you ((see them worked easily)) in Afghanistan, build up in new projects and it's going to be open source."³⁰

In summary, the prominent innovation principles and practice UNICEF's Innovation Unit's uses in their aid work are: a 'Human-Centered Design', a technology focus, partnership (especially with the private sector) and Open Innovation. As the Innovation Unit has a role to mainstream innovation practices throughout the organization, the next section will examine the possible ripple effects of the Innovation Unit's work in other divisions and offices outside the unit.

5.2 Are there any ripple effects?

Due to the fact that the Innovation Unit is a fairly recent established unit in the UNICEF body (established in 2007), and because organizational changes normally takes long

²⁹ Interview Norah Maki

³⁰ Interview Christopher Fabian

time to achieve (Tidd & Bessant, 2013), this study has had a broad approach when investigating ripple effects. The findings are presented in a thematic manner, including examples and relevant quotes from the conducted interviews.

This case study indicates five different ripple effects within UNICEF and two broader effects outside the organization: (i) A creation of space and a language to talk about innovation. (ii) A spread and adoption of the Unit's innovation principles in other units (iii) Innovation is now a priority in UNICEF's Strategic Plan (iv) Country Offices are now generating new ideas (v) Field-, Country- and Headquarter offices are now exploring and integrating technology in their programs (vi) Other UN agencies seek advices from the UNICEF's Innovation Unit (broader spillover-effect). (vii) The innovation principles are adopted by other aid agencies (broader spillover-effect).

All of the following quotes are an answer to my question: *The Innovation Unit consults and support the organization at large to mainstream innovation practices. Do you experience any ripple effects of the Unit's work in other divisions within the UNICEF system?*

(i) A creation of 'space' and a language to talk about innovation

Some of the respondents reported about a new 'space' and a language to talk about innovation in their own office. Juan Pablo, Education Specialist in the Education Division reported:

There is definitely... there is the creation of a space. A space to talk about things that maybe were not discussed nine years ago in the organization. And that space has been created by the work of many people, some of them in the Unit.³¹

According to Polio Lead Asch Harwood, the IU's impact on the polio division has been noticeable. A part of Harwood's job has been to mainstream innovation practices, and after a while, his colleagues and even his counterparts in the Polio Division started to incorporate the language and techniques of innovation. And when they were asked about their work, they replied the IU supported them: "We're doing this, and we are

³¹ Interview Juan Pablo

doing this with the support from the innovation unit".³² Harwood also reported about an increasing use of the word innovation in some country offices:

We use this in the country offices increasingly now. We use this word innovation (...) We're trying to apply new techniques around on behavior change, and this is all coming out of this language. I am not saying that I created this, but definitely helped to create some space, and that was the idea to do this.³³

This new language of innovation contributes to experimentation practices, where the country offices are trying new techniques in their programs. Harwood claimed the IU to be the source and cause of this change.

(ii) An adoption of the Unit's innovation principles in other units.

Several respondents reported about an adoption of some of the Innovation Unit's formulized innovation principles, both in field-, country- and headquarter offices.

For example, the Division of Communication had adopted some of the principles.

Christopher Fabian reported:

Headquarters still has an important function and here we've seen a tremendous uptake of those same principles like (...) real time information and real time data. (...) so if division of communication says: "Hallo, we really needs these things", I say: "Great, you actually have two people in your division who are using the same principles, and they are connected to these networks and they can do it!" So now we have an internal network that didn't existed two or three years ago.³⁴

A field office in Brazil (who do not speak English at all), have also adopted the formulized innovation principles. Education specialist Juan Pablo reported: (...) They try to frame it or to follow the nine innovation principles. That came as a surprise because we are talking... ((in)) that office, no one speaks English!³⁵. An additional finding comes from Afghanistan. In some of the new projects UNICEF currently are running there, UNICEF's country office in Afghanistan has adopted the principle of open source, an integrates that principle in the projects. Christopher Fabian explained:

³² Interview Asch Harwood

³³ Interview Asch Harwood

³⁴ Interview Christopher Fabian

³⁵ Interview Juan Pablo

(...) these ideas are basic, like the idea that we should building open source technology. Super basic! (...) So now you ((see them worked easily)) in Afghanistan, build up in new projects and it's going to be open source, and it's going to be on the work with other things. And that's the biggest markers of success that I can see. We are not doing a lot of it now, it's happening in other parts of the house.³⁶

One of Amatullo's informants reported that the UNICEF as an organization have embraced the innovation principles, and saw value in that:

It doesn't always lead to something concrete, but the fact the organization has embraced this philosophy is really valuable. When Chris and Erica released this set of principles, people looked at them and said, oh these are clever.... It is an enormous shift from business as usual (Amatollo, 2015, p. 39).

(iii) Innovation is now a priority in UNICEF's Strategic Plan

UNICEF has made innovation to a priority and strategy in their Strategic Plan for 2014-2017 (UNICEF, 2013). Such a strategy is fairly new; it has never existed before in official documents. Christopher Fabian explained the novelty and grandeur of this strategy:

So in the last years of strategic planning, 2014-2017 Strategic Plan, you () have innovation as a strategy, and that have never been through before. And, I mean strategic plan is a very high level overview over the organization, but it is the document that binds all over our country offices. (...) I know in that strategy there is five meaning indicators of innovation (...) And there is thing like: Do you have access to real time data in your program in your country? Do you work with local entrepreneurs? Do you have south-south ties to other countries for developing your ideas? Are you able to fail? Are your projects agile? Do you build up a project plan for four years, or are you looking at it, like, for a month at a time?

[Interviewer: mm] And. Even to have those things expressed is huge in the organizational documents of UNICEF.³⁷

³⁶ Interview Christopher Fabian

³⁷ Interview Christopher Fabian

In the Strategic plan for 2014-2017, UNICEF solidifies the commitment to innovation to include access to real time data, collaboration with local communities in host countries, south-south cooperation, and long-term and sustainable projects. According to Fabian, that is a new way of thinking for the organization.

(iv) Country offices are now generating new ideas

Ayano Suzumura, Lead for the field support team in the Innovation Unit reported that some country offices are now more vocal about their experimentation practices.

This unit has made some kind of success, or has proven that these crazy ideas work. I think that have made them being more vocal about their crazy ideas, (...) It's not from us, but from country offices that these ideas are coming up now. So I think that one change that we have made is that we make people be more adventurous and crazy [laughter]. So we kind of took a risk and we gave an example to be crazy.

(v) Field-, country-, and headquarter offices are now exploring and integrating technology in their programs

Ayano Suzumura reported about conversations and explorations of the possibilities in drone technology in some of the country offices:

I think there are many changes. For example, some country offices have already started talking about using drones. They wanted to explore possibilities in these drones or UAV's in their work, and maybe that would have been considered crazy in the past.³⁸

Polio Lead Asch Harwood told his division is now using smart phones to collect, facilitate and provide real-time data to the frontline workers.

So, going back to your original question, is there any ripples? I mean yes. (...) We're actually having a lot of smart phones collecting data, facilitating real-time data. We're trying to help provide more information to frontline workers through phones.³⁹

³⁸ Interview Ayano Suzumura

³⁹ Interview Asch Harwood

During the Ebola outbreak in West Africa in 2014, UNICEF's used mobile phones in their work. Christopher Fabian travelled into the field and set up a system in which mobile phones were used to collect and report real-time data.

Chris went down there and he started looking at: How can we report back? How can we get the overview over the situation? How can we make sure or knowing where you have outbreak, and how can we report it back in real time? And that's when he went in, to set up a system about how they can use their mobile advices.⁴⁰

(vi) Broader spillover-effect: Other UN agencies seek advices from the UNICEF's Innovation Unit

Other UN agencies such as UNDP, UNFPA and UNHCR are nowadays seeking advices from the HQ Innovation Unit. According to Deputy Suzumura, this is a ripple effect of the Innovation Unit's work. She explained:

Another effect is that... When we talk about innovation in the UN system, everyone looks and seeks some advices from UNICEF, because they see us as the champion of innovation. (...) [Interviewer: Why do they [other UN agencies] ask?] Because, for example, if some agencies want to establish an innovation unit or an innovation lab, or they want to think about using mobile technology - we already have these experiences - they ask us: How did you do it? We have had so much interaction with the rest of other UN agencies, especially in the last year, and they have started innovation units and labs (...) [Interviewer: You said that other UN agencies have asked. Do you have some examples?] Ayano Suzumura: Yes, UNDP, UNFPA and UNHCR. We have a network of UN agencies on innovation, and they are asking us: What are you doing?⁴¹

If a UN agency wants to establish an innovation lab, they call the Innovation Unit and ask for advice, because they know the Innovation Unit is experienced with innovation practices. There now exists a network of UN agencies that works with innovation practices, and the Innovation Unit interact, advice and support them all of them in their work.

⁴⁰ Interview Tom Olsen

⁴¹ Interview Ayano Suzumura

(vii) Broader spillover-effect: The innovation principles adopted other aid agencies

Several leading international development organizations are inspired by, and have adopted the Innovation Unit's innovation principles. UNICEF writes on their webpage that agencies like Gates Foundation, IKEA Foundation, WFP, WHO, OCHA, UNDP, UN Foundation, and UNHCR have endorsed or adopted the principles in their work.

Challenges for the Innovation Unit

Harwood claimed UNICEF with its separate innovation unit, are facing a challenge of silo innovation activities.

One of the things that do worries me about the innovation unit - and I think everybody here would recognize it - is that... this is the trade off: by creating an innovation unit, you in a sense silo innovation, right? So this is the tension that I think we all face.⁴²

Also Ayano Suzumura reported about a similar challenge. She explained that the unit is facing a challenge about trust from the rest of UNICEF. According to Suzumura, the reasons lays in the way the unit is structured and the way people are employed (temporary job contracts).

It is not that people do not want to stay; it is just that we are not setting up a sustainable team on purpose. (...) There is no stability and there is no formal sustained way to connect with the rest of UNICEF. That creates a bit of a problem, because there is maybe less trust from the rest of UNICEF. They think that: Oh, these people they come and go. And that happens in reality, so that is a challenge to manage the team with the rest of the unit.⁴³

Resistance to innovation at UNICEF

Amatullo's study (2015) reports that there exists some resistance to innovation within UNICEF, and Amatullo claims that to be a challenge for the organization. As I was studying the ripple effects, this was a topic to which I also found it appropriate to pay attention to. I therefore asked my respondents: *In your perspective, what are the main barriers or inhibitors for bigger organizational changes?* Similar like Amatullo's findings,

⁴² Interview Asch Harwood

⁴³ Interview Ayano Suzumura

my respondents reported about some obstacles to change within the organization, either at a personal or material level. Ayano Suzumura claims some of her colleagues are having a tendency to choose comfortable and familiar approaches:

Although we've been using same approached for the last 45-50 years, some people are very comfortable with these approaches, although it is not making the impact as we want. But they think it works, and they just don't want any change in how they work, because they are so used to it. So it's not really fear, but that they are just comfortable with what they are doing.⁴⁴

Also Tom Olsen reported about some resistance to change within the organization: "(...) We need to be more open for change as there is resistance to change within the organization."⁴⁵ U-Report project officer for UNICEF Nigeria Caroline Barebwoha, reported about the same: "There is obviously definitely some reluctance from different sections in taking up certain innovations. (...) Because they have always has a particular way of doing things."⁴⁶ Fear of making failures is one of the causes to this resistance, said Tom Olsen. He explained: "One of the biggest challenges we are facing as an UN organization is that we are afraid of failures."⁴⁷ Additionally, Olsen stressed scarce resources and accountability to donors as significant causes to this resistance. "First of all, we are operating with scarce resources and we have to report back to the donor community and reporting back on "tries and failures" are not an option as every penny counts"⁴⁸.

Olsen pointed to a solution that might help to overcome such bottlenecks: To stay close to the partners and let them understand and know how you work and spends the donations:

(...) we need to have the partners with us; governments, public and private sector and we need to bring them in close so when you are talking about testing, trying and failure, they do understand what we are talking about as they have been a

⁴⁴ Interview Ayano Suzumura

⁴⁵ Interview Tom Olsen

⁴⁶ Interview Caroline Barebwoha

⁴⁷ Interview Tom Olsen

⁴⁸ Interview Tom Olsen

part of the discussions and the process from the beginning and not at the end when we present the report.⁴⁹

These findings have in this sub-section been presented in a thematic manner using my respondents' words and terminology. The findings will in chapter 6.2 be translated into terminology from theory on diffusion of innovations in service organizations.

⁴⁹ Interview Tom Olsen

6.0 Discussion and Conclusion

The purpose of this study was two-sided: Firstly to examine the innovation principles and practices at UNICEF's Innovation Unit. Secondly, this study has also looked into what the ripple effects are of the unit's work, in other parts within in the UNICEF system. The empirical material was found through document analysis, in-person- and Skype-interviews with persons within and outside the innovation unit in New York, and by direct observation. The existing research on humanitarian and social innovation combined with a conceptual model for understanding diffusion of innovations in service organization, laid the foundation to do empirical research at UNICEF's Innovation Unit.

The main findings in this study are as follows: For the Innovation Unit (also for UNICEF), innovation means: "Doing something new or different that adds concrete value"⁵⁰. The four prominent innovation practices at the Innovation Unit are, a user-led design', technology focus, collaboration with the private sector and 'Open Innovation'. The practices are all means to be able to create a concrete value. In other words, the practices are means to enabling a realization of the human rights of every child. The unit's understanding of innovation is hence in accordance with the definitions of humanitarian and social innovation: *a means to find solutions to problems* (humanitarian innovation), (Betts & Bloom, 2014), and *a novel solution aiming to create value in the society* (social innovation) (Center for Social Innovation, 2015).

Although the Innovation Unit has developed a set of nine innovation principles, only four of them (mentioned above) relates to concepts and approaches in traditional innovation theory, the other five functions more as code of ethics for aid programs⁵¹. In fact, it was only the four innovation practices my respondents emphasized in my interviews, namely principles of 'Design with the User', 'Design for Scale', 'Use Open Standards', 'Open Data, Open Source, and Open Innovation', and 'Be Collaborative'. My document studies (UNICEF INNOVATION, 2014) and my study of the 'Wearable for Good Challenge'

⁵⁰ <http://www.unicefstories.org/2013/12/17/doing-something-new-or-different-that-adds-concrete-value/>

⁵¹ 2. Understand the Existing Ecosystem, 4. Build for Sustainability, 5. Be Data Driven, 7. Reuse and Improve, 8. Do no harm).

(UNICEF, 2015) indicated the same. Hence, my argument is that these are the four prominent innovation principles the Innovation Unit use in the aid work. With regard to the emerging trends of innovation practices in the aid sector (sub-chapter 2.4), it was reasonable to emphasize these four practices when investigating the Innovation Unit's innovation practices. For that reason, it was also appropriate to distinguish between codes of ethics and innovation practices.

Due to heavy technology optimism among practitioners in this sector, the five codes of ethics are reasonable principles that take care of important values and concepts so effective and respectful aid can be performed. They are also connected to each other. For example, principle number four, 'Build for sustainability', reminds practitioners to build programs sustainable from the start, to have a long-term perspective, and to invest in local communities, aiming to catalyze growth in the local community (UNICEF INNOVATION, 2015a). When integrating technologies in aid programs, this principle is important so the innovations can contribute to make the beneficiaries become self-reliant and independent of external aid.

6.1 The innovation practices

User-led design

The Innovation Unit has a user-led design focus in their work. But some of my respondents labeled this practice as a 'human-centered design', a term belonging to the design discipline (Amatollo, 2015). However, the content is the same as a 'user-led approach' that belongs to traditional innovation theory (Tidd & Bessant, 2013). Compared to a traditional R&D unit in the private sector, the IU does not develop innovations from their office in New York. Such an action would have been on a collision course with the principle of a human-centered design (UNICEF INNOVATION, 2015a). The unit rather functions to *support on request* country offices in their work. It is the Country Offices, which in close geographical proximity to the end users develop innovations and solutions together *with* them, not *for* them (UNICEF INNOVATION, 2014). My findings here corroborate with study propositions one, that the end-user are more prominent in the innovation process. This is also what Betts and Bloom (2014) described as an emerging trend in the context of humanitarian aid: A bottom-up approach seems more prominent at UNICEF.

Partnership

The IU clearly collaborates with a wide range of actors, and the innovation principle ‘be collaborative’ displays the Unit’s focus on partnership in its work. The ongoing ‘Wearables for Good’ campaign is good example on how the Unit engages with the private sector, in this example the global design firms Frog and Arm (UNICEF, 2015). These findings also strengthen Betts and Bloom’s (2014) claim about a recent trend where the private sector is increasingly also are playing a role in product and process innovation. It also corroborates with the same authors (Betts & Bloom, 2014) claim that IGO’s and NGO’s are drawn towards the funding and the know-how knowledge the private sectors offers.

In fact, the IU embraces partnerships. Tom Olsen, who for one and a half year had been working close with Christopher Fabian and the IU, explained to me that the IU has done a “fantastic job” by creating partnerships⁵². But Olsen also stressed that private sector also has an interest in UNICEF’s aid: “these joint ventures have shown that we have common interests and are willing to help, share and work with us in order to achieve results for children”.⁵³ The latter point corresponds with what was outlined in the start of this thesis, namely that private sector has interests in humanitarian innovations for different reasons, e.g. philanthropy or Corporate Social Responsibility (CSR). The IU also engages in partnership with academia. In summary, and as expected, the Innovation Unit engages in partnership, both with private sector, academia and governments.

Technology practices

The Innovation Unit’s relatively recent history displays that the unit highly engages in technology practices. The award-winning Digital Drum, but also the ongoing ‘Wearables for Good’ Challenges have technology as a core element. Technology is seen as a significant means that can strengthen international aid (UNICEF INNOVATION, 2014). After a five-month study of the unit, people met from the unit in person and participated in a meeting at the unit’s office, my subjective impression is that technology optimism in the Unit exists. Such finding corroborates with Betts and Bloom (2014) claim about

⁵² Interview Tom Olsen

⁵³ Interview Tom Olsen

technology optimism to be present in many humanitarian agencies. But the optimism exists for a reason. The unit has experienced success in different projects, for example with the Digital Drum or with the Polio program in Pakistan. And who knows what the outcome will be in the Wearables for Good Challenge? Due to this success, it is therefore natural that the IU continues to search for opportunities in existing and emerging technologies.

Open Innovation

The Innovation Unit does not invent new technology by themselves, but leverage existing technology to strengthen the organizations aid work. Polio Lead Asch Harwood explained: "I think around our technology stuff, we tend to be horizontal innovators like people who are taking things that are already happening other places and just applying it. So we are not inventing new things."⁵⁴ Aid work is thus performed through networking, and this phenomenon is in Chesbrough et al.'s (2014) terms *labeled Open Social Innovation* (OSI). UNICEF might have realized that 'not all the smart people work for you', and that they do not have to generate all the good ideas by themselves in order to 'profit' from it.

In the 'Wearable for Good Challenge' UNICEF Innovation opens up their challenges to a wide range of actors, and exemplifies the 'Open Innovation' principle the Unit have made for the organization (UNICEF INNOVATION, 2015a). UNICEF gets access to resources and knowledge outside the inner network (via Frog and Arm), and utilizes external sources to solve challenges they are facing. According to Bessant et al., (2014), a key priority in order to succeed in open innovation practices should be to connect with knowledge catalysts, where academia really resides. The Innovation Unit's partnership with academia is a smart move to utilize external knowledge and technology that in the end can strengthen their international aid work.

⁵⁴ Interview Asch Harwood

6.1.1 New approaches or just 'old wine in new bottles'?

As innovation is a buzzword today, it is appropriate to discuss my findings and examine whether the Innovation Unit's practices actually are novel ways of working, or if it's just 'business as usual'.

The outlined literature explained that humanitarian aid historically has taken a top-down approach, omitting the end-user or beneficiaries in the (innovation) processes. The Innovation Unit does not develop solutions in New York, but leaves it to the Country- and field offices to develop solutions *with* the local community, and not *for* them. The Innovation Unit sees value in such a bottom-up approach. Compared to UNICEF programs decades back where programs were characterized by a top-down approach (Betts & Bloom, 2013), this user-led focus is a new approach and a shift in thinking and practice. Also Amatullo (2015) found this change in her investigation of the unit.

Partnership is an approach and strategy the Innovation Unit also uses in their innovative work and the private sector is a common collaborator. Betts and Bloom claimed partnership to be an emerging trend in humanitarian innovation, but for UNICEF partnership have always been the norm (UNICEF, 2013), a fact also Juan Pablo emphasized in my interview with him.⁵⁵ Partnership as a new trend might be the case for other non-profit agencies, but for UNICEF this approach has existed since its establishment right after the World War II (UNICEF, 2013; UNICEF INNOVATION, 2014).

The Innovation Unit has always innovated and utilized tools and technologies available in the society to strengthen their programs on the ground (UNICEF INNOVATION, 2014). In this perspective, the Unit's technology focus is not a new approach. However, as different technologies increasingly continue to influence our social lives (this is also the case in many low-income countries), I assume the Unit's technology focus likely will continue and maybe increase in the future. For example, the technology optimism shines through the 'Wearables for Good Challenge' (UNICEF, 2015). Based on earlier success with the Digital Drum, vaccination programs and other cases, the optimism and focus exists for a reason. It improves their work. This focus is in that sense a new approach in

⁵⁵ Interview Juan Palo

the UNICEF's work, where different technologies increasingly penetrate their programs, consequently strengthening the drive to realize the human rights for every child.

Talking about the general concept of Open Innovation, since the year of 2000, a trend has emerged where stakeholders via networks share ideas and knowledge for free (Chesbrough et al., 2014). This study found the concept of Open Innovation to characterize some the Innovation Unit's work. For example, some projects in Afghanistan build on the principle of Open Source, and the actual software can easily be utilized and improved by other individuals or organizations. Such phenomenon has never existed before, and marks a clear shift in how UNICEF practices development and humanitarian aid. Open Innovation is therefore a relatively novel approach for the organization. Betts and Bloom (2014) did not mention Open Innovation as an emerging trend in their article.

In summary, three of the Innovation Unit's practices can be said to be novel, a user-led design (bottom-up approach), technology focus and Open Innovation. The principle of partnership is 'business as usual' and is not a new approach - because partnership has always been the norm for UNICEF. That latter fact, in addition to the fact that 'open innovation' characterizes the IU's work, requires a rewrite and nuance of the literature on emerging trends in humanitarian innovation. I will come back to that under the sub-heading (6.3.2) implications for practice. The next section will discuss the findings the ripple effects of the Innovation Unit's work throughout the organization.

6.2 Ripple effects

Regarding ripple effects of the Unit's work in other offices in UNICEF, this study indicates five different ripple effects within UNICEF and two broader ripple effects. The empirical findings will firstly be translated into terminology from diffusion terminology, distinguishing between assimilation and implementation. Thereafter, the findings will be discussed in light of my model on diffusion of innovations in service organizations explained in the theory chapter (2.6). The model functions as a lens to distinguish between what kind of innovations that are assimilated (endorsed and accepted), and which are actually implemented in programs.

6.2.1 Translating the findings into diffusion terminology

	EMPIRICAL FINDINGS (5.0)	DIFFUSION TERMINOLOGY
(i)	A creation of space and a language to talk about innovation.	Assimilation of a language of innovation
(ii)	A spread and adoption of the Unit's innovation principles in other units	Assimilation of the innovation principles in HQ divisions, as well as country- and field offices
(iii)	Innovation is now a priority in UNICEF's Strategic Plan	Assimilation of innovation in the Strategic Plan
(iv)	Country Offices are now generating new ideas	Implementation of experimentation practices in country office
(v)	Field-, Country- and Headquarter offices are now exploring and integrating technology in their programs	Implementation of technology in programs at field-, country-, and headquarter level
(vi)	Other UN agencies seek advices from the UNICEF's Innovation Unit (broader spillover-effect)	Assimilation of the innovation principles in organizations outside UNICEF
(vii)	The innovation principles adopted by other aid agencies (broader spillover-effect).	Assimilation of the innovation principles in organizations outside UNICEF

Figure 8. A table translating the findings into diffusion terminology

The embracement, assimilation and integration of the innovation principles are an enormous shift in the way the organization work, compared to a couple of decades back. All these ripple effects are put into the conceptual model I explained in the theoretical chapter (2.6). The ripple effects are distinguished between those that are assimilated and the ones which are implemented in UNICEF's programs. This overview displays how far UNICEF has come on their way to mainstream innovation throughout the organization.

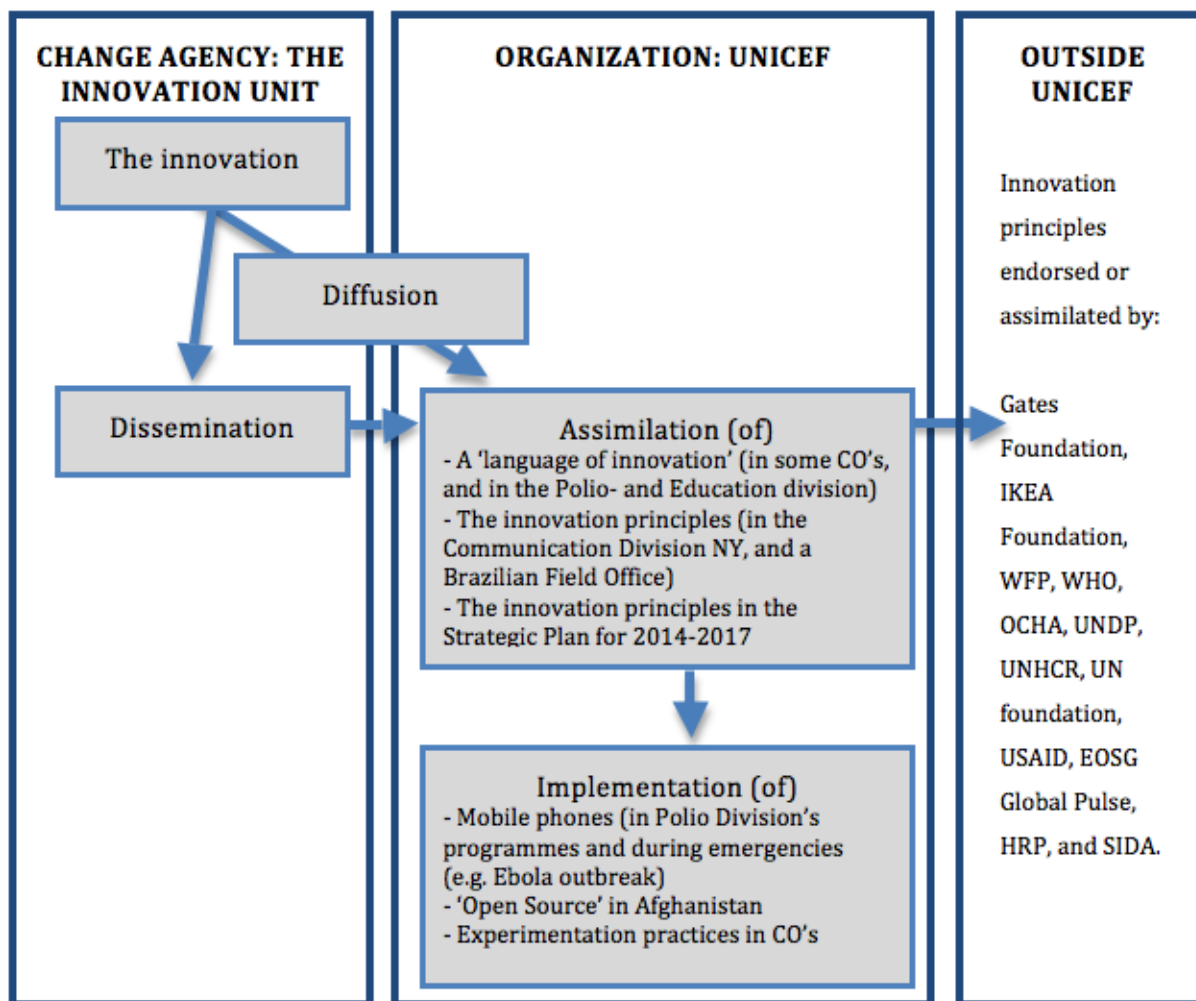


Figure 9. A model displaying the ripple effects of the Innovation Unit's work

Resistance to innovation at UNICEF

The inhibitors for bigger ripple effects and organizational innovation within UNICEF vary from personal to material reasons. At a personal level, people are comfortable with their existing approaches⁵⁶ and work methods⁵⁷, or a fear of making failures⁵⁸. At a material level, scarce resources and accountability to donors are crucial inhibitors to innovation⁵⁹. Accountability to donors is also a prominent finding in Amatullo's study (2015). In order to be an efficient and relevant international aid organization, these inhibitors are worth having a closer look at and see if they can be eliminated. Tom Olsen shared his view with me on how such bottlenecks can be overcome. He stressed the need to create a shared understanding among governments, public and private partners about experimentation practices, and include them in the discussions and processes

⁵⁶ Interview Ayano Suzumura

⁵⁷ Interview Caroline Barebwoha

⁵⁸ Interview Tom Olsen

⁵⁹ Interview Tom Olsen

from the very beginning (in contrary in the end when a report is presented). I do agree with Olsen on this. Transparency is crucial in innovation processes and will probably be more important in the upcoming years, due to increasing demands from donors.

(Future) Challenges for the Innovation Unit

Asch Harwood claimed UNICEF is facing a challenge by having a separate innovation unit: “by creating an innovation unit, you in a sense silo innovation, right?”⁶⁰ Deputy Ayano Suzumura stressed a similar challenge. She reported that the unit might experienced less trust then optimal from the rest of UNICEF, and she emphasized permanent job contracts to be the reason. These challenges are something the Executive Director and other Leads at UNICEF should pay attention to, and evaluate whether the chosen structure and organizing of the Innovation Unit are the most appropriate one. I guess such a discussion will emerge naturally as years go by and UNICEF gains experience with organizational innovation.

This data was solely collected through interviews. If other sources had been investigated, for instance surveys, observations and looking at evaluation reports, the strength of the evidence would have increased. Due to the formal limitations of this thesis, that was not possible to do. Nevertheless, it can be an interesting topic for a PhD or other research projects.

6.3 Implications for practitioners, researchers and public debates

6.3.1 Limitations and suggestions for further research

Throughout this thesis I have sought to construct an authentic and transparent narrative, so coherence and veracity can be secured. Despite such attempts, there are one clear limitations of this study.

The Lead of the Innovation Unit, Christopher Fabian, suggested and launched contact to informants regarding ripple effects of the unit’s work. That might have influenced my findings. As Yin (1994) warns, there is always a danger of interpersonal influence and bias when key informants launch access to other persons. When key informants launch

⁶⁰ Interview Asch Harwood

access to other informants, Yin's advice is to use a triangulation of evidence so the validity of the research can be strengthened. Due to formal limitation of this research such as the amount of time available and the size of this report, I did not search for, and used other sources. However, I am not sure I would have received other findings and concluded very differently if I had found my informants by myself or interviewed other people in the organization.

This study has not paid attention to the determinants that influence the spread of innovations in UNICEF. I have only focused on *what* the ripple effects are, and not *how* they have spread. Traditional diffusion theory discusses such phenomenon's lot. A question that has risen during this research period is: What determinants influence the spread process of innovations within UNICEF? Due to the time available and size of this report it was not possible to pay attention to such question. But as innovation gets more and more mainstreamed throughout UNICEF, I suggest further research pay attention to the determinants that influence the diffusion process. The systematic review on diffusion of innovation in service organizations written by Greenhalgh et al., (2004), combined with their conceptual model (a modified version of their model is used in this research) can be a useful article starting point to examine this diffusion process. Other nearby theoretical angles of incidence to study the Innovation Unit could have been organizational innovation, institutional entrepreneurship (also called *intrapreneurship*), or start-up/sub-culture. I have not paid attention to this literature, but such literature can provide fruitful frameworks for further studies of the unit.⁶¹

No doubt, the Innovation Unit has a transformative function on the whole organization, and UNICEF is changing a lot in these days. I propose further research also should include and have in mind possible negative ripple effects of the Unit's works.

Amatullo's (2015) and my findings on innovation/design practices and diffusion are and will in the upcoming years be very interesting readings for UNICEF, but also for other non-profit agencies, and persons interested in international aid. I therefore encourage

⁶¹ In my perspective, the Innovation Unit is a group of creative and boundary spanning individuals. To study (the concept of) *intrapreneurship* in the context of the Innovation Unit would have been interesting.

future students and researcher to continue this path, and continue to lessen the gap in research and understanding about innovation activities in the UN system.

6.3.2 Implications for practice

Louise Bloom and Dr. Alexander Betts from the Refugee Studies Centre (RSC) claimed the term 'humanitarian innovation' hasn't been unpacked or adapted sufficiently in organization's practice or thinking. As a result, a poor understanding and confusion in the international debate remains. This thesis has linked the terms humanitarian and social innovation to the actual work UNICEF's Innovation Unit are performing. The unit's innovation practices are all means, techniques and approaches the unit utilizes to create a concrete value, the realization of the human rights of every child. This connection and examples from UNICEF are something the international debate can benefit from, so the aid sector can operate with more concise and clear understanding of what innovation means for them. Additionally, as many IGO's and NGO's (but also in commercial sector) unfortunately have heavy focus on product and technological innovations like communication technology (ICT), this study of the Innovation Unit displays that the concept of innovation also includes phenomena such as innovation in working methods, approaches, thinking and business models (e.g. partnerships and user-led innovation). This latter point is also in line with what Betts and Blooms recommends being included into the concept of humanitarian innovation (2013).

Some of my findings may be generalizable and can so contribute to expand the growing literature that inform about innovation activities within the context of international aid. The fact that the unit engages in Open Innovation practices is a finding that the literature on emerging trends (Betts & Bloom, 2014) did not mention. As UNICEF is a leader in innovation activity among the world's IGO's and NGO's (Amatollo, 2015), I assume Open Innovation will be an emerging trend in the upcoming years. Betts and Bloom (2014) also mentioned partnership with the private sector to be an emerging trend, but such collaboration has always existed as a UNICEF strategy. The existing literature on 'emerging trends' therefore needs to be rewritten and nuanced, and should include the concept and practice of Open Innovation.

UNICEF's innovations, for example the Digital Drum and the Polio Division's replacement of traditional vaccination form with mobile services in Pakistan are innovations that display how technology can transform international aid and realize the human rights of every child. Hence, it seems to be a good strategy to include technology in aid programs. Practitioners such as IGO's and NGO's advantageously can integrate technology in the humanitarian and development programs. Besides, the IU's five principles or code of ethics are useful guidelines for effective technology integration and a respectful aid.

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Appendix A: Interview Guide

The questions were adapted to each respondent.

PART ONE – INTRODUCTION (interviewer):

“Hello (name). Thank you for taking your time to meet me in person today for this interview. It is much appreciated. Before getting started, let me first shortly explain the purpose and process of this session.

Purpose for the interview: This project is a part of my master program at Faculty of Technology, Innovation and Culture (TIK) at University of Oslo, Norway. My specialization is 'Innovation and Global Challenges'. Personally I find the intersection between the fields 'innovation management' and 'development' interesting. Therefore, in this study I want to examine how UNICEF HQ Innovation Unit works with innovation practices in their work, and the possible ripple effects of this unit's work in other parts within the UNICEF system. My two research questions for this projects goes as follows:

- (i) How does the Innovation Unit HQ work with innovation?
- (ii) What are the ripple effects of the Unit's work, if any, in terms of an increased attention to innovation in development and humanitarian work, in other parts within the UNICEF system?

Your perspectives are important in this research project, and will contribute to fill a gap in research and understanding about innovation activities within the UN system.

I have planned to include your name in the thesis. Please let me know if your want to be made anonymous.

Audio Taping: In order to capture your comments accurately, to ease the conversation flow, and without being overloaded with memo writing work, I will use a recorder. If you feel uncomfortable with the recorder, I can at any time turn it of. Please let me know.

This interview session will take approx. 30 min. Will that fit your schedule? I will ask you to consider what questions that can be answered shortly, and which one that needs a longer answer. Any question before we begin?

PART TWO – BACKGROUND INFORMATION

1. What is your current work position in the organization? Can you *shortly* describe your role and responsibilities?
2. Can you explain how your work and division relates to the HQ Innovation Unit?
3. In the context of UNICEF, what does innovation means for you?
4. How do you perceive the HQ Unit's role, structure, and tasks in the organization?

PART THREE – CORE QUESTIONS

a) Innovation practices

5. Can you *shortly* tell a story that displays how this HQ Unit works with innovation practices? It doesn't matter whether it was a success or failure as it is the processes that are important for this study.
6. Some academics claim many humanitarian organizations to be partnerships averse. But the innovation unit emphasizes partnership, and collaborates with private sector, academia and individuals around the globe. The Unit opens up their challenges to a wide range of partners across sectors, and collaborates with private firms, for instance Frog and Arm. (collaboration and partnership). How do you work with partnership, and why is partnership important for your work?

b) Ripple effects

7. The HQ Innovation Unit supports the organization at large to mainstream innovation practices. In terms of organizational change, do you experience any direct or indirect ripple effects of the Unit's work in other divisions or within the UNICEF system? And if yes, do you have an example that proves that causality (between innovation unit and the outcome)?
8. The HQ Unit acts as a driver for organizational change. A recent published study from Mariana Amatullo (2015) reports that there is some resistance to change within the organization. In your perspective, what are the main barriers or inhibitors for bigger organizational changes?

PART FOUR – CLOSING

9. What would have happened if the HQ IU did not exist?
10. Do you have any reflections on what the role the Innovation Unit will have in the future?
11. Do you want to add something that is unsaid and relevant for this case? Things that I not have asked you for, or something you want to share?

(Interviewer): Thanks for your time today. Your insight is valuable in order to understand UNICEF works with innovation and how UNICEF possibly changes as a consequence of mainstreaming innovation in the organization. If needed, is it OK that I use the contact information you shared and contact you again? Your contact information will be kept close to my chest and shredded by October this year when this study is scheduled submitted.

Appendix B: List of semi-structured interviews in the study

DIVISION	NAME AND POSITION	TYPE OF INTERVIEW	DATE OF INTERVIEW
Innovation Unit, UNICEF HQ, NY	Christopher Fabian, <i>Co-Lead, UNICEF Innovation</i>	1x in-person interview	29 th of July, 2015
Innovation Unit, UNICEF HQ, NY	Ayano Suzumura Deputy and Lead of Field Support	1x in-person interview	6 th of August, 2015
Innovation Unit, UNICEF HQ, NY	Juan Pablo Giraldo Ospino <i>Education Specialist/ Innovations in Education</i>	1x in-person interview	6 th of August, 2015
Innovation Unit, UNICEF HQ, NY	Asch Harwood <i>Innovation Lead, Polio</i>	1x in-person interview	6 th of August, 2015
Innovation Unit, UNICEF HQ, NY	Norah Maki <i>Academic Lead</i>	1x in-person interview	6 th of August, 2015
UNICEF NY HQ, Public Partnership Division (PPD)	Tom Olsen <i>Senior Advisor</i>	1x Skype- interview	7 th of August, 2015
UNICEF Country Office, Nigeria	Caroline Barebwoha <i>U-report Project Manager</i>	1x Skype- interview	4 th of August, 2015.

Appendix C: Field Note Observation

Place: 6th floor UNICEF Headquarters, New York

Friday August 7, 2015

Innovation Team Weekly Meeting 1:00-2:00 PM

- The innovation team including two interns and myself enters the meeting room at the 6th floor in the headquarters building. Deputy Ayano Suzumura takes the lead and tells the meeting is expected to take an hour, and is solely dedicated to two presentations the unit's interns have prepared to give.
- One of the interns starts of and gives a longer presentation where explains the state of the art of the market of photovoltaics (PV), also called Solar Power. (The intern explained to me before the meeting that the unit possibly will engage in Solar Power systems in their future work, and his task is to map the market and explain the possibilities and opportunities to them.) The intern is currently studying a BA in Environmental and Sustainability Studies at a university in the US, and is doing two months internship at the unit during the summer vacation. After his presentation, Ayano Suzumura opens up for questions and comments.
- Then the other intern shares his two-months research on drones (UAV's). During his internship he had conducted research and mapped the different types, and in the meeting he explained the difference between them. The team ran out of time, so the presentation became shorter than it was supposed to be. The group then had a discussion about the topic, and discussed the prevailing use of UAV's, how UAV's can be used, and the opportunities in them. For example they had a short discussion about the possibilities in using them for delivering vaccines and medicaments during emergencies. The intern gets some input and suggestions from some of the team members, and the intern answers he will look into it upcoming fortnight. After an hour the meeting ends, and a new group of people enters the room as the innovation leaves the room.

Appendix D: Nine Principles of Innovation and Technology in Development⁶²

These principles are not intended as hard and fast rules but meant as best-practice guidelines to inform the design of technology enabled development programs.

1. Design with the User

- Develop context appropriate solutions informed by user needs.
- Include all user groups in planning, development, implementation and assessment.
- Develop projects in an incremental and iterative manner.
- Design solutions that learn from and enhance existing workflows and plan for organizational adaptation.
- Ensure solutions are sensitive to, and useful for, the most marginalized populations: women, children, those with disabilities, and those affected by conflict and disaster.

2. Understand the Existing Ecosystem

- Participate in networks and communities of like-minded practitioners.
- Align to existing technological, legal, and regulatory policies.

3. Design for Scale

- Design for scale from the start, and assess and mitigate dependencies that might limit ability to scale.
- Employ a “systems” approach to design, considering implications of design beyond an immediate project.
- Be replicable and customizable in other countries and contexts.
- Demonstrate impact before scaling a solution.
- Analyze all technology choices through the lens of national and regional scale.
- Factor in partnerships from the beginning and start early negotiations.

4. Build for Sustainability

⁶² The text in this appendix is entirely taken from UNICEF Innovation webpage: http://www.unicef.org/innovation/innovation_73239.html

- Plan for sustainability from the start, including planning for long-term financial health i.e., assessing total cost of ownership.
- Utilize and invest in local communities and developers by default and help catalyze their growth.
- Engage with local governments to ensure integration into national strategy and identify high-level government advocates.

5. Be Data Driven

- Design projects so that impact can be measured at discrete milestones with a focus on outcomes rather than outputs.
- Evaluate innovative solutions and areas where there are gaps in data and evidence.
- Use real-time information to monitor and inform management decisions at all levels.
- When possible, leverage data as a by-product of user actions and transactions for assessments.

6. Use Open Standards, Open Data, Open Source, and Open Innovation

- Adopt and expand existing open standards.
- Open data and functionalities and expose them in documented APIs (Application Programming Interfaces) where use by a larger community is possible.
- Invest in software as a public good.
- Develop software to be open source by default with the code made available in public repositories and supported through developer communities.

7. Reuse and Improve

- Use, modify and extend existing tools, platforms, and frameworks when possible.
- Develop in modular ways favoring approaches that are interoperable over those that are monolithic by design.

8. Do no harm

- Assess and mitigate risks to the security of users and their data.
- Consider the context and needs for privacy of personally identifiable information when designing solutions and mitigate accordingly.
- Ensure equity and fairness in co-creation, and protect the best interests of the end end-users.

9. Be Collaborative

- Engage diverse expertise across disciplines and industries at all stages.
- Work across sector silos to create coordinated and more holistic approaches.
- Document work, results, processes and best practices and share them widely.
- Publish materials under a Creative Commons license by default, with strong rationale if another licensing approach is taken.

UNICEF innovation principles have been endorsed or adopted by the following partners: UNICEF, USAID, Gates Foundation, EOSG Global Pulse, WFP, WHO, HRP, OCHA, UNDP, SIDA, IKEA Foundation, UN Foundation, and UNHCR.

Appendix E: Simplified transcription symbols

The symbol system, examples and explanations are mostly taken and copied from Silverman, 2014, p. 449 (*Interpreting Qualitative Data*). But I have made some additional symbols and adjustments relevant to this study.

SYMBOL	EXAMPLE	WHAT IT MEANS
(())	And he ((Sapra)) also has a connection	Double parentheses contain author's descriptions rather than transcriptions.
()	... action and into () of the organization	Empty parentheses indicate the transcriber's inability to hear what was said.
(word)		Paranthesised words are possible hearings
[]	Interviewer: I am fascinated and [Norah: That's your...]	Left brackets indicate the point at which a current speaker's talk is overlapped by another's talk. Or: Contextual occurrences, other things than just words.
WORD	You HAVE to be	Capitals, except at the beginnings of lines, indicate especially loud sounds relative to the surrounding talk. (can be interpreted as words the interviewee emphasizes')
(...)	country offices. (...) I know in that strategy	I have cut some words I interpreted to be irrelevant to the situation.