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eHealth in Corporate Social Responsibility

Explorative Study on Extended Stakeholder Value for Health

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<p>The role of health as a CSR stakeholder is relatively new perception and in research rather un-explored. Still, in addition to traditional health and safety, there are signs of CSR efforts in literature on supporting physical and nutritional health and of further extended health initiatives for wider society, often linked with combined collaborative efforts with private-public partners, NGO's and expert organizations. CSR in business is increasingly becoming a norm. Companies are seeking ways to implement CSR cost-effectively. Meanwhile NGO's, UN's Global Compact and WHO are calling for actions to tackle global economic, environmental and social challenges, and are promoting responsible business practices, public-private co-operation and technology innovations to help in achieving UN's Millennium Development Goals.</p> <p>This study contributes to the literature of CSR. It is driven by interest to explore the companies' perception of Health as CSR stakeholder, its extent in CSR activities and the ability of companies to utilize new technologies in these efforts. The material used in this study was the published CSR, sustainability and citizenship reports, which were evaluated qualitatively.</p> <p>The study found that the new technology usage was relatively broad and not rarity. The fast spread of mobile phones and the maturing infrastructure have opened new opportunities to support employee and supplier health, human rights, and charity initiatives, as well as to improve access to healthcare and to enable better quality, specialized healthcare. 5 companies of 17 used eHealth and mHealth by definition in health creation and disease</p>	

prevention. 7 companies used mobile applications in employee and supplier health promotion and health education and 3 companies in disaster response and human rights surveillance. In addition 3 companies had used their assets in computing power and cloud applications in big data analysis for researchers, and in clinical decision support to aid clinicians and policy makers. In addition to direct benefits in society, the companies taking part in collaborative initiatives reported added value in terms of added stakeholder value, increased employee satisfaction, decreased employee turnover, improved governmental relations and increased company intellectual property.

Keywords

Corporate Social Responsibility, CSR, mHealth, eHealth

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1 Introduction

1.1 Foreword

In only a few centuries has mankind witnessed a dramatic change. Industrialization starting in Europe late 1700s has spread in vast pace resulting wealth, but also immense growth of population, un-controlled usage of natural resources and great deal of pollution. There is a growing number of scientists suggesting that the era we live in should be called “anthropocene” due to the immense impacts the human being has made to our global system (The Guardian, 2014a). The mankind is starting to realize that the development cannot continue limitlessly. United Nation’s Global Compact, which was launched year 2000, calls businesses to collaboration with civil society, governments and labour to fight the global challenges (UN Global Compact, 2012). Since its launch this initiative has grown to having over 12 000 participants, including over 8 000 companies in approximately 145 countries (UN Global Compact, 2014b).

At the same time business is shaping its form towards new business models. There are growing number of supporters for Conscious Capitalism (Hanson, 2011), Sustainability (Sharma and Khanna, 2014) and Corporate Social Responsibility (CSR). These business models have gained more attention after the company scandals in recent decades, and thereafter the following economic crisis in the United States and later in Europe (Chatterji and Levine, 2006). The crisis provoked harsh criticism to business as usual which aimed mainly to short-term wins with less regard of the means. European Commission described the change of the atmosphere:

Public trust in business was shaken as never before and fundamental questions were raised concerning not just the regulation and public accountability of business but also its values, its culture and its relationships with stakeholders. Furthermore, it gave an additional impetus to the trend to redefine the responsibilities of business not just as responsibilities to the traditional constituencies of shareholders, employees, suppliers and customers but also to a much broader range of stakeholders at a global level, and, indeed, even the physical wellbeing of the planet itself. (European Commission, 2011b, p.7)

The fast population growth, un-even distribution of wealth, people's lifestyle changes and destruction of clean air and water supplies have created significant global health challenges which put the global stability at risk. To fight the challenges world leaders agreed in the United Nations summit year 2000 a set of Millennium Development Goals (MDGs) to reduce extreme poverty and diseases, and to maintain environmental sustainability with time-bound targets to year of 2015 (United Nations, 2000). The United Nations Global Compact (UNGC) was created to call companies voluntarily take actions to support MDGs and to promote responsible corporate policies and practices (UN Global Compact, 2012).

This study wants to contribute to the literature of Corporate Social Responsibility (CSR). It first introduces concept of CSR and the model of extended stakeholders, which it then adapts and further questions if health should be included as CSR stakeholder. This study studies how companies view their role in health promotion and explores the ways companies could contribute positively to social well-being and health, and how they could use new promising technologies as eHealth and mHealth in initiatives.

For the methodology was chosen qualitative explorative study with a sample of 20 companies. As health promotion in CSR is quite a recent phenomenon, choosing a qualitative case study defends as a methodology (Yin, 1981) to better recognize the hints of health promotion in in-direct ways. Because health is not the conventional CSR stakeholder, it is not necessarily part of the standard reporting practices, and therefore not necessarily explicitly visible. The target of the study is introduced in more details in section 1.2 and the structure of the study in section 1.3.

1.2 Target of the Study

The aim of this study is to evaluate the companies' perception of the social responsibility activities, especially in terms of health creation. The purpose is to assess their CSR strategy and the CSR activities targeted for better health. As a secondary target, the study aims to evaluate the agility and ability of companies to use new technologies and innovations for cost-effective CSR, and especially the use of eHealth and mHealth which are promising new technologies for health creation (PwC, 2012). This study

adapts the stakeholder model and evaluates a broader perception where the population health could be a stakeholder. Health promotion could ensure stability in the business environment, create healthy and productive work force and furthermore strengthen the business relationship with the society and governments as a contributor to social wellbeing. This study is also interested in how much the companies use co-operation with NGO's and social entrepreneurs to support their efforts and if they use the benefits of new technologies for health promotion.

This study aims to contribute to academic literature on the subject of CSR in the angle of health creation, which is rather un-explored in current research based on the author's literature review, and based on Monachino and Moreira (2014), who came to the same conclusion in their extensive review of CSR involvement in health promotion. They searched research articles from years 2003-2013 using two academic databases, and found only 12 articles that passed their inclusion criteria.

What this study does not assess is companies' CSR performance or the cost-effectiveness of initiatives, nor does it try to cover extensively all business regions, varying business environments and industry types. Although the sample size of 20 companies is relatively large, it is still only a sample, and covers mainly big sized well-established companies. The results are not necessarily valid with small and medium sized enterprises or with business areas not covered.

The research target is to seek answers to the following key questions:

- 1) What is the companies' perception of stakeholder groups? Are there signs of health promotion and health creation, also beyond occupational health and safety?
- 2) How, if any, the health promotion has been implemented; through the selection of the product portfolio, through health education, by supported health programs, like mass vaccinations, or by other means?
- 3) Has the company participated to collaborative initiatives in these CSR efforts and why?

- 4) How adaptive the company was to utilize new merging healthcare technologies like eHealth or mHealth applications? How successful the new healthcare technologies have been in value creation?
- 5) Did the companies use innovations and engage in new product introduction within the initiatives? Does company mention synergy benefits, external or company internal, for the initiatives? Has the new products or solutions been used commercially afterwards or shared without profit creation?

1.3 Structure of the Study

Chapter 1 introduces to the subject and the target. Chapters 2 and 3 construct the basics of this study; the review of current status of CSR, of global health challenges and of eHealth and mHealth. Chapter 4 introduces author's proposition and describes the methodology by which the study is conducted. Chapter 5 presents the results of the study and its limitations, and Chapter 6 is author's afterword.

2 Corporate Social Responsibility

2.1 Stakeholder Model and Shared Value

The concept of corporate social responsibility has emerged to economic research in 1930's (Carroll 1979, p.497). After since many researches have studied the subject, yet still today there is no clear consensus of the subject matter. The most cited article against the idea of CSR is probably "The Social Responsibility of Business is to Increase its Profits", written by Milton Friedman year 1970 in the New Your Times Magazine, where he cited his book "Capitalism and Freedom" with words "there is one and only one social responsibility of business – to use it resources and engage in activities designed to increase its profits so long as it stays within the rules of the game" (Friedman, 1970). He presented the model of pure shareholder responsibility and many have favoured the idea. Year 2015 Denning wrote to Forbes magazine that one reason to the popularity might have been that people just wanted to believe in it (Denning, 2013). The soundness of Friedman's article have been criticised in many counter researches afterwards. According to Denning during that time there was a fierce global competition and executives needed ways to increase profits quickly. He continues by mentioning that even Jack Welsh, former CEO of General Electrics, who earlier spoke in favour of Milton Friedman's theory, said in an interview year 2009, that the "shareholder value is the dumbest idea in the world". Since 1970 a lot has happened both in terms of business research and in terms of economic and environmental change. Still Carroll's questions are valid. Carroll (1979) runs extensively in his article through the development of CSR concept and the main researches of the subject, varying from solid profit making to high social responsiveness. He remarks that since all the arguments, both counter and against, have clear validity, the future research should try to answer and articulate the three most important aspects (1979, p.499):

- 1) A basic definition of social responsibility? (I.e. Does our responsibility go beyond economic and legal concerns?)
- 2) An enumeration of the issues for which a social responsibility exists (I.e. What are the social areas – environment, product safety, discrimination, etc. – in which we have a responsibility?)
- 3) A specification of the philosophy of response (I.e. Are we reactive or proactive?)

Article being 36 years old, all of these questions are still relevant and debated. Hack et al. (2014) reviewed definitions and purpose of CSR from 1950's until today, and concluded that despite the high attention gained by scholars, there is still no fixed definition. This study does not try to replace those many researches, articles and surveys that have been made of the concept until this day. Rather, it returns to Carroll's profound questions from year 1979, especially in regards of his second question of the areas of responsibility. In the mixture of definitions, this study relies on definitions of well-established global organizations, and gives brief overview of the evolution and different perceptions of CSR.

United Nations' report of sustainable development, known as Brundtland report, defines:

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs (United Nations, 1987, p.2).

United Nations Industrial Development Organization (UNIDO) defines

Corporate Social Responsibility is a management concept whereby companies integrate social and environmental concerns in their business operations and interactions with their stakeholders (UNIDO, 2015)

International Organization for Standardization (ISO) defines social responsibility as

Responsibility of an organization for impacts of its decisions and activities on society and the environment, through transparent and ethical behavior that

- contributes to sustainable development, including health and the welfare of society;
- takes into account the expectations of stakeholders;
- is in compliance with applicable law and consistent with international norms of behaviour; and
- is integrated throughout the organization and practised in its relationships (ISO, 2010)

Whereas impact of an organization is:

Positive or negative change to society, economy or the environment, wholly or partially resulting from an organization's past and present decisions and activities (ISO, 2010).

European Commission defines CSR as “the responsibility of enterprises for their impacts on society”, and elaborate that

Respect for applicable legislation, and for collective agreements between social partners, is a prerequisite for meeting that responsibility. To fully meet their corporate social responsibility, enterprises should have in place a process to integrate social, environmental, ethical, human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders, with the aim of: – maximising the creation of shared value for their owners/shareholders and for their other stakeholders and society at large; – identifying, preventing and mitigating their possible adverse impacts. (European Commission, 2011a, p.6)

Tied together, the CSR is an inclusive business practice, which aims for adequate and visible corporate governance and for long-term sustainable profits while taking responsibility of a wide stakeholder group. The stakeholder theory (Harrison and Freeman, 1999) challenges shareholder theory by introducing responsibility towards all stakeholders that can be affected or that can affect the business; its employees, customers, suppliers, governmental bodies, non-government organizations (NGO's), communities, environmental ecosystem, and even competitors and media. The main idea is that in addition to producing sustainable profits to its investors, the business is a social being and it has a dependency relation to its stakeholders, and should distribute the value it creates to all stakeholders in openly, visible and well governed manner. CSR can be described as a triangle in three levels. Most companies fulfil the basic compliance, towards regulations and codes of conduct. Increasing amount of companies also take care of their ecological footprint and social inclusiveness. Genuine strategy of creating value for extended stakeholder group, often built into business processes, can be thought of more evolved stage of CSR. See Figure 1 for the overview.

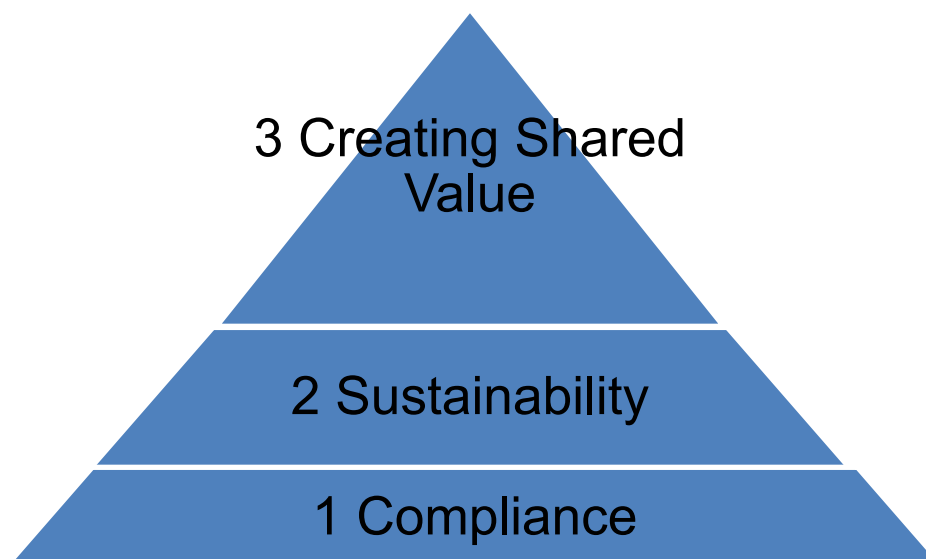


Figure 1:

1. Compliance against laws, regulations, standards and codes of conduct. Basic health and safety of employees, basic product safety
2. Enhanced sustainability; securing environmental and social future for the business, ensuring low employee turnover
3. Sharing created value in the society and also paying back to environment. Often a result of stakeholder dialog

According to Porter and Kramer (2011) shared value can reshape capitalism and drive the next wave of innovation and productivity growth because it opens managers' eyes to human needs, large new markets and competitive advantages. Any company is in dependency relationship with its stakeholders; it needs money from its investors, labour from employees, raw materials from suppliers, revenue from the costumers, and "license to act" from governments and activist groups. In our times where information is easily accessible and news travel fast, the companies are reliant on their stakeholders' acceptance. General public, governments, associations and NGO's are demanding the companies to adopt the positive behavioural norms and responsible business actions. Pressure groups, like for example Ethical Consumer (2015), emerge and their power cannot be underestimated, as have been harshly experienced by many companies in the past.

Strategic CSR is a CSR practice where CSR is integrated into company's business strategy. Strategic CSR requires long time horizons, large resource commitments, and significant adjustments to organizational structures (Bansal, Jiang and Jung, 2015).

Strategic CSR can be a powerful tool for strategic decisions and risk management (Porter and Kramer, 2006). As compared to lighter versions of CSR adoption, Porter and Kramer (2006) underline the importance of using CSR analysis as a tool when drawing the strategy. They claim that if the corporates would analyse the prospects of CSR using the same framework what they use in their core business, they could discover that CSR is more than just a cost or philanthropy; it can be a source of opportunity, innovation and competitive advantage. Porter and Kramer see strategic CSR as a way of doing things differently than competitors; truly looking for opportunities for shared value. They list examples of strategic CSR realizations which use company assets such as Toyota's Prius, a hybrid car, which created both competitive advantage and environmental benefits, or Microsoft's Working Connections partnership with American Association of Community Colleges, which aimed to address Microsoft's shortage of IT professionals, and in addition it addressed a social need, or Nestlé, which works directly with small farmers in the developing countries, by providing know-how and technologies which create social benefits and improve economic development, while securing a reliable supply chain and a strategic advantage (Porter and Kramer, 2006, p.10-11). According to experts of Globescan Incorporated (2014) a good sustainable company is "integrating sustainability deeply within an organization, a strong vision, performance against goals, and sustainable products as key drivers."

CSR is wide activity, which includes but is not limited to a) management of its stakeholders, b) strategic approach to manage stakeholder needs so that all gain, including investors, c) concern about social justice and human rights, d) business-government, business-NGO and business-business partnerships, and e) the communication of all these mentioned. Chaklader and Gautam (2014) state simply that "[CSR] generally refers to serving people, communities, and society in ways that go above and beyond what is legally required of a firm".

As radical as the philosophy of CSR may seem, it is arguable if it is new. Looking back some hundred years, the concept where business takes care of its employees was often "business as usual" of that time. Davis and al. (2008) remind that for example in 1800's the factory owners provided roads, canals and housing as well as education and health care. They claim that it was as late as after the 2nd World War that companies really started to question their responsibilities. So, one could argue that the concept of creating profits only for investors is an idea of a modern age. Many people feel strongly against companies questionable actions. First wide boycott was seen year

1977 when European NGO's started a boycott against Nestlé because of its marketing of mother milk formula in Africa, which resulted diseases and malnutrition (Davis and al., 2008). The boycott resulted the World Health Organization (WHO) to forbid provisions of samples of formula, and Nestlé to abide it. The boycott was the first example of a group power.

There are no unambiguous studies of the direct financial benefits of CSR (Bocquet and al., 2013, p.2). One reason may be that there is no clear consensus of the definition of CSR, as also noted by Bocquest and al. (2013), nor are the benefits always measurable and, if they are, the metrics are mixing and immature. Will and Hielscher (2014) state: "it is still an unsettled issue whether companies do well because they are doing good or whether companies that are doing well can also do good." Enlightened shareholders and investors do want to protect their investments with a good governance and proper risk management, even at the cost of possible short-term wins. To cite ISO (2010), the organization's performance in relation to the society has become a critical part of measuring its overall performance, as in the long run "all organizations' activities depend on the health of the world's ecosystems." ISO describes the complexity of today's business by the following components affecting company's performance:

- its competitive advantage;
- its reputation;
- its ability to attract and retain workers or members, customers, clients or users;
- the maintenance of employees' morale, commitment and productivity;
- the view of investors, owners, donors, sponsors and the financial community;
- and
- its relationship with companies, governments, the media, suppliers, peers, customers and the community in which it operates (ISO, 2010)

The positive impacts of reputation, and the vehicle for CSR to function as reputation insurance, should not be under-estimated although it is maybe not the most noble of the motives behind CSR adaption. Minor and Morgan (2011) made a study with Standard & Poor's 500 companies over a period 1991-2006 and found out that when unforeseeable adverse events occurred, the stock prices of the companies did not decline as much if the company was engaged in CSR. They suspect that this may be caused by the fact that people may presume that with the CSR engaged companies the event was more of a bad luck, than just mere bad management that may be a tip of an ice-

berg. They conclude that although “doing good” is the more visible CSR characteristic, the element of “not doing harm” is actually more important (Minor and Morgan, 2011, p.41). It should also be noted that the opposite to “not doing harm” would probably be a definition of “irresponsible CSR” which can be thought of as “corporate actions that are widely regarded as damaging to corporate governance, employee relations, communities, public health, human rights, diversity, the environment, etc” (Chun Keung, Qiang and Hao, 2013, p. 2026). Chun Keung, Qiang and Hao noticed in their study a clear correlation with tax avoidance and irresponsible CSR, which seems to imply that un-ethical CSR behaviour, may in fact be followed by other un-ethical business making, which would support the findings of Minor and Morgan (2011).

2.2 Health’s Role as a Stakeholder

There is relatively little discussion among literature of the role of health and health promotion within CSR. The healthcare and the health promotion is traditionally stated, and therefore maybe not considered as part of CSR. With the increasing amount of lifestyle diseases and diseases caused by un-healthy environments, it is though in magnitude worth of discussion. This chapter tries to give examples on how the health could be a CSR stakeholder. The biggest source of information is an extensive research that was made by Business for Social Responsibility (BSR), the leading non-profit CSR organization in the United States (Porter and Kramer, 2006, p.3). They surveyed 28 of its member companies and literature reviewed 36 year 2013 in order to evaluate the role of business in population health in USA with focus on the role of CSR and with aims to improve the health and wellness of employees, communities, suppliers, customers and the general public (BSR, 2013).

In BSR’s view not many companies have extended their health initiatives across the whole value chains; suppliers, local communities and general public, thus have not realized their potential in supporting health, but are more focused on traditional thinking of occupational health and employee safety and mitigating negative health impacts of their products. They found that some companies act, like Walmart, which is providing greater access to affordable and nutritious food in the areas of lower-income neighbourhoods and communities, or Qualcomm who partners with WebMD to develop integrated digital health resources and tools to enable customers to manage wireless health data of fitness, wellness, and medical devices. PepsiCo has integrated a health,

wellness, and safety agenda into its Sustainability Farming Initiative to improve the livelihoods of its suppliers. And Kaiser Permanente partners with media company Home Box Office to raise awareness about the obesity epidemic in the United States. (BSR, 2013, p. 5)

BSR's research identified three key trends. Firstly the society and the key stakeholders expect an increasing role in strengthening population health, for example to promote wellness and address social and environmental determinants of health. BSR expects this demand to grow. Secondly they claim that companies are indeed responding to the increased expectations, but mainly focus on the employees, and in some industries on the customers. Thirdly, the health and wellness is still siloed to the responsibility of the human resources department and companies underutilize cross-functional expertise like procurement, marketing, research and development (R&D), corporate affairs, communications and philanthropy. (BSR, 2013, p. 6)

Based on the research BSR recommends the following actions: The health and wellness should be brought to the whole value chain, and more understanding should be built on how health and wellness is linked to other social and environmental challenges. The stakeholders should be engaged to identify new opportunities, measurable key performance indicators (KPIs) should be identified, and cross-functional health network should be established to improve health outcomes and to identify the key health and wellness gaps and opportunities. Collaboration across companies and industries should be increased to better understand the private sector's role in contribution to population health. (BSR, 2013, p. 7)

Despite of the high and growing spending on healthcare in the United States (PwC, 2012), the severe lifestyle caused health problems, as obesity and many preventable chronic and infectious diseases, continue to grow (PwC, 2012, p.7). In fact, it is estimated that the current generation of children may have shorter life expectancies than the previous generation (BSR, 2013, p.9). There are also environmental, societal and behavioural factors that affect in-directly to health like for example air and water quality, level of education, tobacco use, diet and exercise or harmful use of alcohol (BSR, 2013, p. 11).

The BSR survey also evaluated the main business drivers for increasing health. Main reason for companies was to reduce healthcare costs, mainly through employee pro-

grams. Some companies also mentioned reduction of healthcare costs as their strategy or even as national challenge. Strengthening reputation and avoiding potentially large financial impacts was one key driver, as well as increasing productivity of work force and attracting talents. Google is mentioned as a firm providing free yoga and Pilates, courses on stress management, health consultations, and a personal health counsellor. There were also industry specific drivers, like increasing sales of products, decreasing regulatory risks (healthcare and beverage industry, agriculture) and decreasing operational risks (energy and oil industry) (BSR, 2013, p.20-22). Some companies invested in the raw material production and sourcing stage, especially if production took place in socioeconomically disadvantageous areas (BSR, 2013, p.27). Companies saw also other in-direct benefits; like extending health support to employees' families, which strengthen employee loyalty and improve productivity and attendance (BSR, 2013, p.34).

Examples of health initiatives can also be found from literature. Chattu (2015) describes a case of Johnson & Johnson (J&J) which acted by the threat of HIV/AIDS. 35 million people are living with HIV (2013) and 1,5 million died to AIDS related illnesses year 2013 (WHO, 2015a). Chattu describes HIV/AIDS as a direct threat to businesses affecting work force through absenteeism, sickness and deaths. J&J is working to fight the disease by donations of its products and by sponsorships. It also partners with different corporations and NGOs and assists small and medium sized companies in the supply chain in preventive activities in 25 countries worldwide. (Chattu, 2015)

The health can also be promoted through the company's core business. In Ghana and Liberia telecom operators participated in the MDNet program (Africa Aid, 2005 – 2011) as part of their social responsibility program by donating free SIM cards and free phone calls between the MDNet users while hoping profits from personal calls with the provided SIM cards. The other example is in United Kingdom where a company erases mobile and computer memories and recycle, but also donate the formatted and re-installed devices to the developing countries (Corporate Mobile Recycling Ltd, 2015).

Monachino and Moreira (2014) call for an open international discussion of the potential inclusion of health promotion into CSR model and of the new beneficial partnership and health promotion strategies. They find three roles in which health could be promoted: 1) In health protection via products, goods and services, 2) in health promotion, helping people to control their health via distribution and healthy lifestyle marketing strategies,

and 3) by social determinants; living conditions, access to health and creation of wealth. They support a view that CSR activities could be consistent with a role of health promotion, as the companies anyway fulfil expectations given by the WHO. BSR remark that so far CSR has played an important role in addressing social and environmental challenges, and suggest that population health could be the next frontier for CSR, and companies could use the same framework and learn from success stories, thus mobilize CSR to enable better health outcomes (BSR, 2013, p.40).

2.3 CSR Today

There are signs that CSR approach is becoming de facto operating mechanism in business. The biggest global corporate sustainability initiative, United Nation's Global Compact (UNGC), has over 8000 companies and 4000 non-business participants from over 160 countries (UN Global Compact, 2014a); participants which have agreed to follow the core principles of UNGC and report annually on their status. Harrison and Freeman noted already 1990, while reviewing 49 studies on CSR that the stakeholder theory has become a "mainstay of management theory" (Harrison and Freeman, 1990, p.483). OECD also reports significant progress over the past decade driven by a combination of evolving global guidelines, increased stakeholder expectations and more demanding corporate visibility as well as voluntary action by corporate leaders. Yet OECD also reminds that the speed nor scale needed to address social and environmental challenges is not sufficient, and that there are still negative headlines in the media of sweatshops and tragedies in facilities. (OECD Observer, 2014)

Especially multinational companies are adapting strategies in the aim of improving competitive advantage and managing risks (KPMG International Cooperative, 2013, p.8). European Commission (EC) is also having an active role in promoting CSR to the business world as a "vital link between innovation and competitiveness and social inclusion" (European Commission, 2011b, p.10). In EC's report from 2011 they note that many business leaders are aware of the need for responsible management and accountability, and that there is an increasing dialogue, but that still only a limited number of global companies have CSR at the core of their business model and strategy, and that too many companies still see it from the point of view of reputation (European Commission, 2011b, p.5).

ISO released 2010 a standard of Social Responsibility called ISO 26000 (ISO, 2010) which itself manifests of CSR becoming a norm. KPMG, one of the major sustainability expert organizations in the world, says in its survey from year 2013 that CSR reporting is now a standard with significant growth since the last survey from 2011. 93% of the 250 biggest companies in the world publish CSR reports annually, which suggests that CSR has become a dominating business standard (KPMG International Cooperative, 2013).

Companies seem to adapt CSR, and approach it as an evolving process; transforming from fragmented CSR approach to strategic with stakeholder engagement and mere philanthropy. However, measuring progress is problematic. UNGC Guidelines advised in year 2014:

A top priority is to find ways to better measure sustainability impacts, which will help to direct effective corporate strategies, inform community and stakeholder dialogues, and guide investor decision-making (2014a, p.9)

Measuring CSR is difficult not only because the definition varies, it is problematic also because we should measure and compare both non-financial and financial performance. Chatterji and Levine (2006) emphasize that the measures should be reliable, comparable and valid, meaning that they should be repeatable and measure the right things. Investments to CSR are substantial. According to Chatterji and Levine, (2006, p.14) “socially responsible investing is a huge business, with over \$2.2. trillion in assets, or one out of every nine dollars invested, in professionally managed portfolios that use socially responsible investing strategies”. They claim that investments are grounded because “consumers should be provided with simple and clear ratings, perhaps in similar detail to the nutritional value packaging on food, which will allow them to make an informed decision in a short amount of time” (Chatterji and Levine, 2006, p.14).

New business expectations can be thought as an analogy to the human behaviour in respect to the global moral rules; companies should “behave” and live a “healthy life” to live long and prosper. One way of living a healthy business life is a concept of CSR; openness and honesty that can be evaluated at any time by any a third party. The year of 2014 was a year of accelerated awareness and action for sustainable development (GlobeScan Incorporated, 2014). For year 2015 SustainAbility forecasts:

As the dividing lines between industrialized and emerging markets blur, multinational corporations have been progressively promoting economic growth in the developing world and contributing to solutions to complex global problems like poverty. The role of companies is set to further accelerate as UK agencies and the EU strengthen their focus on the participation of business in international development (SustainAbility, 2014).

2.4 Co-operation, Innovation and Technology

What can companies do to fulfil the expectations in socially effective way and with reasonable amount of money? Few companies have expertise on sociological dynamics in all countries they operate. One way to combine the investments of a company and a local or subject expertise is collaboration with NGOs. This model is becoming increasingly popular according to panel held in December 2014 (The Guardian, 2014b). One of the panellists, Corporate responsibility and sustainability manager at Coca-Cola, said that “Partnerships are essential. We are a soft drinks company so we can’t do it all on our own. We need expertise around sustainability and making a difference in the field. Human relationships are what counts. We have to understand what are our common objectives.”

European Commission states that partnerships and co-operation bring benefits in building brand reputation, consumer preference and customer loyalty, driving innovation and growth in the developing and emerging markets and in cost savings (European Commission, 2011b, p.28).

There is an increasing trend to align partnership activities with companies’ core business. Such strategies offer more opportunities to create high quality sustainable contributions to society, and in return bring value to the business (European Commission, 2013, p.102).

Recent studies show that there is a rise of social entrepreneurship, which shows promising positive impact to healthcare markets. Robinson (2010) evaluated 26 social enterprises in United Kingdom, launched year 2006, and found that they were very successful and many exceeded the expectations. Robinson hypothesizes that this would be

due to social enterprises being “independent, innovative, flexible and responsive”, while also combining public sector’s ethos with the efficiency of business. Innovation and technology usage is often a key to successful social endeavours. SustainAbility (2014) see clear shift in traditional business models and forecast that new technologies, changing consumer preferences and a growing amount of social entrepreneurs and innovators will alter existing markets. Gökçen and al. (2014) made a study of technology usage in CSR activities and concluded that “in order to be socially responsible and get a competitive advantage, businesses should correspond to the change and be able to manage technology.” It is about normal business intelligence; if you are being innovative and unique and remember the parties that your business depends on, you may succeed in winning long-term profits. Gökçen and al. divide business innovations in two categories: process innovation and product innovation (Gökçen and al. (2014, p. 24). Process innovation is about how company operates, which may be of interest of consumers while products may hold responsible attributes, like the consideration of health and safety. Gökçen and al. (2014, p.27) study concludes that connecting CSR and the management of technology and innovation supports risk management and company’s decision making process, and also enables improvements in productivity. Interestingly, Bocquet and al. (2013) made a study of the correlation between companies’ CSR adaption and innovations, and found out that companies with strategic CSR profile were more innovative both in products and processes than companies with only responsive CSR. They found a correlation that social concerns drive the innovation and they suggest that companies with strategic CSR can sustain a competitive advantage and ensure better, longer-lasting economic performance than a firm with responsive CSR (Bocquet and al., 2013, p.20).

Over 800 interviewed qualified sustainability experts (GlobeScan Incorporated, 2014) were clear in their opinion; the real sustainability leadership is in hands of social entrepreneurs, NGOs and scientific leaders. With the size of economic, environmental and social problems, the experts believe that governments are not agile enough to solve problems with the urgency needed, i.e. the governmental intervention comes too late. “Over the past 20 years experts have lost faith in government-driven processes to advance sustainability. Technology and the private sector are currently seen as the main drivers for short-term sustainability gains.” (GlobeScan Incorporated, 2014, p.22). This opinion is in accordance with European Commission which sees that partnerships and broader multi-stakeholder alliances play a key role in developing socially responsible strategies and trust (European Commission, 2011b, p.19).

2.5 CSR Communication

“It’s a jungle out there” as fictitious TV detective Monk says. Capital markets and consumers are getting increasingly interested in companies’ social responsibility performance, but with varying standards and codes of conduct, several indexes and rankings, and with the companies own perception of their social responsibility, it is very difficult to get a full “objective” picture of the companies’ sustainability level. The multitude of dimensions of CSR does not make the communication any easier. The various codes of conduct are overlapping resulting an area covered by several reporting standards, not necessarily fully comprehending each other. Many of the standards are demanding, and do not always suit well to certain industries so the industries and organizations have developed new ones (Tschopp and Nastanski, 2014, p.2), and poor CSR performers may invent new standards which are non-comparable to the others:

Who can distinguish which of the certifications from Worker Rights Consortium, Worldwide Responsible Apparel Production, The Clean Clothes Campaign, or Fair Labor Association best match a consumer’s desire to avoid products made in sweatshops? (Chatterji and Levine, 2006, p.3)

Same concern is brought up by Castka and Singer (2006), who argue that if the company receives a certificate from self-regulated regime, how we really know their performance.

Very used sustainability indexes are Dow Jones Sustainability Index (DJSI), FST4Good, Global Compact (Sanzo et al., 2012, p.388). Kramer and Porter (2006, p.3) claim that in this “ratings game” there is quite a cacophony. For example Dow Jones Sustainability Index includes in its rating an economic performance, but weighs for example customer service 50% more than the corporate citizenship, whereas FTSE4 Good Index does not include economic performance or customer service at all. Dow Jones Sustainability Index also uses the size of the board to measure community involvement, which may not necessary related. Most of the ratings rely on surveys, where response rates are statistically insignificant and the responses are not verified externally. Chatterji and Levine (2006) point out that the companies spend a lot of money and effort trying to comply with several standards, and answering to several yearly surveys by organizations maintaining the ranking lists, which become costly to

all stakeholders but does not necessarily create more value. Still, following the guidelines, retrieving certificates and answering to surveys is important part of company's communication efforts and therefore an important aspect of the business. To make compliance even harder, business regions and countries have their own regulations. Problematic with all these standards has been that since there is no one definition of CSR nor is there a clear consensus on how it should be measured (Garre-Rubio et al, 2012, p. 451).

The KPMG surveys regularly companies' Corporate Responsibility Reporting, with first publishment year 1993. The survey is based on the public company material. Year 2013 it covered 41 countries and 4100 companies. Based on the survey, there has been "dramatic increase" in CSR reporting rates over the last two years, especially in emerging economies. For example 71 % of Asia Pacific countries now publish CSR reports, while it was only 49% year 2011. Overall reporting percentage had grown from 64% to 71%. Within 250 world's largest companies the percentage is 93%.

Cr reporting is the means by which a business can understand both its exposure to the risks of these changes and its potential to profit from the new commercial opportunities. Cr reporting is the process by which a company can gather and analyze the data it needs to create long term value and resilience to environmental and social change. Cr reporting is essential to convince investors that your business has a future beyond the next quarter or the next year (KPMG International Cooperative, 2013)

In the reports, the use of Global Reporting Initiative (GRI) was most widely spread, whereas 78% of the companies followed GRI reporting guidelines. The intention of the GRI Reporting Guidelines is

to offer Reporting Principles, Standard Disclosures and an Implementation Manual for the preparation of sustainability reports by organizations, regardless of their size, sector or location. The Guidelines also offer an international reference for all those interested in the disclosure of governance approach and of the environmental, social and economic performance and impacts of organizations" (Global Reporting Initiative, 2013b).

GRI participated also in the creation of ISO 26000 guidance of Social Responsibility (ISO and Global Reporting Initiative, 2014). There are also other widely used global standards such as the UN's Global Compact, the OECD's Guidelines for multinational enterprises (MNEs), the International Labor Organization (ILO) Conventions, and the ISO standards (Tschopp and Nastanski, 2014).

The effect of country specific regulations is visible since countries with stricter national regulations scored high in survey: Denmark (Financial Statement Act for large companies), France (Grenelle II Act for large companies), India (Top 100 companies beyond 2012/2013), Indonesia (Law No. 40/2007), Japan (mandatory for certain types of companies), Nigeria (financial services companies), Norway (Norwegian Accounting Act for large companies), Singapore (for listed companies and large companies), (South Africa (King Code of Governance), UK (for companies in London Stock) and USA (for certain industries). The same dependency was found by Tschopp and Nastanski (2014, p.21-25); the non-financial reporting on many of the studied CSR dimensions were influenced by the national background, the country specific standards. However, they also found that the emergence of global standard lead to harmonization of CSR reporting, which might be due to increased interaction between the firms, and the international conferences arranged by these active parties creating global codes of conducts.

In overall, the companies recognized that opportunities overtook efforts of reporting. The most potential was seen in social and environmental change in innovation of new products and services, mentioned by 72% of the top 250 biggest companies. The opportunity for strengthening brand and company reputation was the next highest reason, cited by 51%, followed by improving market position and growing market share (36%) and cutting costs by 30% of the reports. What is noteworthy is that only 10% of the reports mention improved shareholder value and the opportunity for social and environment change.

The results of the survey imply that the CSR is becoming a new business standard. It is decision-useful to a wide range of stakeholders, including institutional investors and financial analysts. "Providing stakeholders with sustainability information can add value to a company by helping managers make better internal decisions and providing greater transparency to external stakeholders to help gauge the true economic performance of the company." However, "the lack of a single set of generally accepted CSR

measures and reporting principles, must be overcome before CSR reporting possesses the same credibility as financial reporting“ (Lynch, Lynch and Casten, 2014, p.20).

2.6 Standardization

In addition to volunteer CSR reporting, companies may want to differentiate with standard compliance and by obtaining certificates by accreditation process. The standards within CSR are though varying and often overlapping. There are quality standards, environmental standards and pure CSR standards in addition to various international sustainability indexes mentioned earlier. The International Organization for Standardization (ISO) is the world's largest and leading standardization organization (ISO, 2015a) and an umbrella federation of national standard bodies. Work is carried out in technical committees, and once the draft of standards is ready, it is circulated within the member bodies for voting wherein approval by at least 75 % of the member bodies is required for the publication (ISO, 2010). The process and the worldwide involvement ensure the applicability of the standards. In addition to mere standards, they are also a valuable source of information and they help to raise awareness (Castka and Singer, 2006).

ISO 26000 is the leading guidance on Social Responsibility (ISO, 2015b). It was developed using a multi-stakeholder approach with “more than 90 countries and 40 international or broadly-based regional organizations... from six different stakeholder groups: consumers; government; industry; labour; non-governmental organizations (NGOs); and service, support, research, academics and others. In addition specific provision was made to achieve a balance between developing and developed countries as well as a gender balance in drafting groups” (ISO, 2010). The idea was to harmonize the codes of conduct, which the standard lists in Annex A to assist in understanding the standard (ISO, 2010). Year 2014 ISO and GRI published together guidelines to help the use of ISO 26000 and GRI in conjunction, providing cross-reference tables between those two documents (ISO and Global Reporting Initiative, 2014).

There are also several standards that cover some parts of the CSR concept and are commonly in use. ISO 14001, ISO 14064 and 14032 handle mostly environmental issues, but ISO 14000 family also includes a number of CSR specific standards for different stages in the value chain (Castka and Singer, 2006). ISO 14001 is certifiable and widely adapted and more than 300 000 companies already have the certificate in 171

countries worldwide (ISO, 2015c). For the occupational health and safety management there is a separate standard OHSAS 18000 (OHSAS, 2015) which is to be replaced by the fore coming ISO 45001 (The British Standards Institution, 2015).

Practices and the level of regulation vary considerably between countries and continents. In United States it is mostly voluntary based, and in Europe many countries have adapted regulatory approach. In Europe, European Commission's RARE project found 4 different types of CSR adaption: Implicit "agora" type in Mediterranean, explicit "business in community" type in Anglo-Saxons, regulated "sustainability and citizenship" in Continental and stimulated "partnership" type in Nordics. (European Commission, 2011b, p.13). In France the Nouvelles regulations économiques (NRE) requires all companies listed in France stock market to create comprehensive sustainability report, including for example compliance with ILO agreements (Allouche, 2006). In Canada, market authorities require listed companies to fill in Annual Information Form (Government of Canada, 2012). In the United States the U.S. Environmental Protection Agency (EPA) requires all companies handling hazardous materials to comply with strict regulations and publish risk analysis and management of workers and surrounding communities (U.S. Environmental Protection Agency, 2015). Year 2014 India set a norm, which obliges companies to spend at least 2% of their annual profits to CSR activities (Ernst & Young LPP, 2014).

In overall the standards are many and complex, and also costly, especially if fulfilled besides the several survey based indexes. Chatterji and Levine (2006) suggest that new processes should be established where companies could meet criteria in surveys with standard compliances without having to fill in all the questions; for example compliance to ISO 14001 would rule out the need for additional evidence. They also suggest a practical idea that the CSR performance should be transformed to standard machine readable language, for example XML. The company could publish the performance in their web sites, which would allow the organizations and consumer groups to form data of their interest without additional efforts from the companies.

3 Global Health and eHealth

3.1 Global Challenges

Our generation lives in a world where climate change, too high energy consumption and pollution threaten the stability of ecosystem. Population growth is estimated to result 8,92 billion year 2050 (United Nations, 2004) and the rich-poor gap increases to grow as well as in-equity in healthcare and education. World Economic Forum (2014) released its latest Global Risks report. The report is based on a survey of more than 700 leaders and decision-makers globally. Economical, societal and environmental concerns dominate the list. The report highlights three risks specifically: the increasing instability in the increasingly multipolar world, the high employment and un-securities causing risks to the young generation, and the cyberspace risks. In the global health area the risks are the decreasing healthcare funding due to economic crisis, the ageing population and the growth of chronic and lifestyle diseases. The report emphasizes the need for public-private partnerships for managing these risks and the shift towards a culture of long-term thinking.

United Nations set Millennium Development Goals (MDG's) to fight poverty and diseases, increase education, maintain environmental sustainability and ensure that globalization becomes a positive force for the world's people (United Nations, 2000). The MDG report from year 2014 (United Nations, 2014b, p.3-5) concludes that in 15 years global poverty halved and 95% of children in developing regions have now a primary education, the likelihood of a child to die before age five has been nearly cut in half, the target of access to improved sources of water was achieved and the combat against diseases showed good results. However, the report also states that there is still work to do in environmental sustainability, in the proportion of undernourished people, and the maternal and child mortality is still too high.

Thus, common efforts are paying off, but post-2015 agenda was needed. Therefore UN is now proposing 17 new Sustainable Development Goals (SDGs) (United Nations, 2014a) that are planned to become applicable January 2016 with the deadline of 2030. According to Guardian (2015) the 2000 MDGs failed to consider the root causes of problems and was more targeted to poor countries with finance from wealthy countries, but now every country is expected to work towards SDGs. New 17 goals continue

fighting against poverty, diseases and for education and equality, but there is also focus more on overall sustainability; sustainable management of water and energy, sustainable economic growth, full employment and decent work for all, sustainable industrialisation, innovation, sustainable consumption, sustainable ecosystems, peaceful and inclusive societies and strengthened global partnerships (The Guardian, 2015).

3.2 Global Health

WHO defines the Health as:

A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 2013c)

WHO publishes information on global health on a yearly basis. Year 2015 the information was gathered from 194 countries using varying types of sources, and report includes also a summary of the progress towards health-related MDGs. According to WHO significant progress has been made in health-related MDGs, but the gains have been regionally uneven. The next goals should focus on this inequality as well as changing social and environmental determinants, embedded with sustainable development, and driven by universal health coverage (WHO, 2015c). The same trend can be seen in OECD's report from Europe (OECD, 2014). Regions with huge rural areas, big urban areas and high-tension population are lacking basic facilities. Even though the life expectancy has grown and the quality of care has increased, the inequality persists.

One of the biggest global healthcare challenges is the population aging (WHO, 2015d, OECD, 2014), which adds additional pressure to effective healthcare and to remote and home care. Aging is also a factor in the increasing number of dementia cases, causing a significant share of total healthcare costs (OECD, 2014). Mental health disorders increase, affecting around 300 million people worldwide. Lifestyle related diseases increase; cardiovascular diseases are the leading cause of death globally (WHO, 2015d) and diabetes is estimated have reached 10% of the world's adult population and its complications are the 4th leading cause of death in Europe (WHO, 2015d, OECD, 2014).

Still today, around 6,6 million children die yearly under age of 5, which could be prevented by vaccines, medication and access to clean water and sanitation. Preterm birth deaths and complications of pregnancy and childbirth are high in poor countries manifesting the global healthcare gap. (WHO, 2015d). Tobacco kills nearly 6 million people yearly (WHO, 2015d). Air pollution causes respiratory diseases, lung cancer and cardiovascular diseases (OECD, 2014 p.59). Alcohol related harm and the use of illicit drugs, is a major public health concern in the European Union; it was the third leading risk factor after tobacco and high blood pressure in Europe in 2012 (OECD, 2014, p.51-53).

Healthcare challenges differ among developed and developing countries. Developing countries struggle with the increase of chronic diseases and the ageing populations. Healthcare expenditures keep rising. Year 2009 USA spent 75% and Australia over the double into healthcare compared to year 2000. The need for cost-effective care and home care increases due to elderly citizens. The developing countries are struggling with poor healthcare delivery infrastructure, low number of hospital beds, low number of physicians, nurses and mid-wives per people. 2006 there was an extreme shortage of health workers in 57 countries, of which 36 were in Africa (WHO, 2007), where also the communicable diseases cause extra challenge (PwC, 2012).

Meanwhile the healthcare is changing its form. Digitalization enables collection of vast data, computing power enables complex data analysis, increasing data bands enable remote care and connectivity, device sizes are getting smaller, and the self-care is increasing. The healthcare has become better accessible to all people. One of the promising new technologies are eHealth and mHealth. The next chapter will discuss about these concept and their possibilities.

3.3 eHealth and mHealth

Healthcare industry and healthcare markets is a mixture of public healthcare and healthcare industry, i.e. making profits with innovations, combination of public and private healthcare providers, and regulators who attempt to monitor and regulate the quality of healthcare products and health care. Health care industry usually works closely in collaboration with the healthcare providers and scientists. These close and private partnerships have led to quite a mixture of devices, device networks and best practic-

es, and caused interconnectivity standards lack behind. Also, the overlap between consumer products, and professional products aimed for healthcare providers, creates confusing mix of standards, which are not necessarily relevant to clinical needs (National Telehealth Technology Assessment Resource Center, 2010-2013). Center for Health Market Innovations (CHMI) which aims to link developers, investors and research in innovative health programs, claim that health markets are under-performing due to fragmentation and the un-affordability to a larger population (Center for Health Market Innovations, 2015). Healthcare industry also lacks behind what the care providers and customers want due to the heavy regulation in the industry, causing delays to the releases on market. Miller (2014) says that the health industry simply does not provide currently what the patients would need.

Significant efforts have been made with information and communication technologies (ICTs), e-services and mobile technologies to prevent deaths and improve global health (Itu4u, 2014). mHealth is a good and accessible technology to provide electronic communication, remote monitoring, virtual diagnostics and self-care. The potential of eHealth is recognized in solving healthcare in-equality problems, increased during the economic crisis (OECD, 2014, p4). Recent survey made by WHO and International Telecommunication Union (ITU) (2014) discuss the vital role that ICT and eHealth play in helping to achieve MSG, and of the “quiet revolution” due to its profound effects on the health of people worldwide and to the ways it supports health-care professionals and transforms the way people live.

WHO defines eHealth as

Cost-effective and secure use of information and communications technologies in support of health and health-related fields, including health-care services, health surveillance, health literature, and health education, knowledge and research (ITU, 2011)

WHO Global Observatory defines mHealth, component of eHealth, as

Medical and public health practice supported by mobile devices, such as mobile phones, patient monitoring devices, personal digital assistants (PDAs), and other wireless devices (WHO and ITU, 2012)

eHealth is a broad application area. It can be used to exchange electronic medical records and patient data, in multimedia consultation, in remote imaging, in medical diagnostics, in remote medical procedures and in medical education. Recently it has also been used increasingly in storing genomic data as part of personalized electronic health records. (ITU, 2011)

mHealth uses mobile phone's voice and short messaging service (SMS), and general packet radio service (GPRS), third and fourth generation mobile telecommunications (3G and 4G systems), global positioning system (GPS), Bluetooth technology (WHO and ITU, 2012), and specifically implemented applications. mHealth can be roughly divided to consumer based and healthcare system based. Consumer based usually aim for wellness, disease information, diagnosis through consultation, treatment compliance, reminders and monitoring vital signs. Healthcare services may include emergency response, vital sign tracking, healthcare data collection, clinical decision support and administration reminders (Williams and McCauley, 2013).

Dicianno and al. (2015) divide health applications to 6 categories: 1) Lifestyle-oriented apps, self-care applications, which help people to lead a healthier lifestyle by tracking for example activity and diet, 2) Patient-oriented apps, which aid with medical problems through self-identification, care options and adherence to treatment, 3) Clinician-oriented apps, which aid medical personnel in patient care by providing educational information, decision support, measurement tools or calculators, 4) Disease management systems, often with web-based portals, which help clinicians monitor patients with chronic conditions, and may be integrated with electronic medical records (EMRs) and pharmacies, 5) Traditional telehealth systems which use electronic communications to deliver information and services over any distance through a computer, and which may include external medical devices to enable for example blood pressure or heart rate monitoring, and 6) mHealth systems, which are similar to telehealth, but via a mobile phone or a tablet. In mHealth they see opportunities due to several characteristics of mobile phones; interactivity (ability to bidirectional communication), personalization (ability to customize), timeliness (ability to deliver at the right time), context sensitivity (ability to shape based on circumstances and environment), ubiquity and accessibility (familiarity to vast population segment and geographic areas). They also describe an effective form of mHealth with a concept of gamification; using game-like features in non-game contexts, providing challenges and a reward system.

World Health Assembly (WHA) 58th World Health Assembly meeting year 2005 recognized in its resolution 2005: “eHealth is the cost-effective and secure use of information and communications technologies in support of health and health-related fields, including health-care services, health surveillance, health literature, and health education, knowledge and research” (WHO, 2005), and it encouraged WHO member states to draw strategic plan for the development of eHealth services and the infrastructure. The 66th meeting year 2013 emphasized the need for better standardization, interoperability and governance (WHO, 2013a).

mHealth is enabled by the high growth of mobile phone accessibility globally. Mobile phones are cheaper to purchase than personal computers and mobile networks are today well spread (ITU, 2014). New smart phones that enable running applications bring a new horizon to the field. Software companies and mobile vendors are active and the U.S. Food and Drug Administration (FDA) just published its guidance for Mobile Medical Applications (U.S. Food and Drug Administration, 2014).

The emergence of mobile phones has shown significant growth, especially in the developing countries. For example in Nigeria the teledensity (number of connections for every 100 people) year 2014 was 99,32 whereas year 2003 it was 3,35 (The Nigerian Communications Commission, 2015). CNN News (2012) lists ways mobiles have recently changed Africa; by enabling remote banking services, increasing entertainment, connections and activism, in promoting education with school children and farmers, and helping in disaster management and health promotion. Mobiles are both empowering people, but also enabling access to education and health.

WHO and ITU published 2012 a “National eHealth Strategy Toolkit” (WHO and ITU, 2012) to help countries to develop their national eHealth strategies. In the report it states: “eHealth saves lives, saves money, improves the health of individuals and the population at large; strengthens health systems, promotes equity and social justice, and does much more besides. Its strategic application by governments reflects the latest and best ideas, innovations and ambitions for progress in public and individual health.”

3.4 mHealth Initiatives in Literature

Ahmed and al. (2014) made a study in Bangladesh of the eHealth status and of the integration challenges. They researched 26 initiatives starting from the late 1990s. The range was wide; with tele-consultation and tele-medicine (remote diagnosis, advice on disease management, prescriptions and referrals, raising health awareness), patient record systems and health management information systems (for example vaccine registries), mobile phone based call centers and SMS services. In Bangladesh country regulations mandate operators to provide SMS service for government for free (WHO, 2011), which eases the use of mHealth in health initiatives.

The Kuwait-Scotland eHealth Innovation Network (KSeHIN) is an example both of international collaboration between governments, healthcare professionals, educating parties and industry, and of the aim of improving healthcare outcomes. Kuwait population is increasingly suffering both of diabetes and obesity. Scotland has developed a diabetes care system by a national informatics platform. The collaboration was established to deliver the information system and the service development and post-graduate education package to Kuwait. The educational unit consists of standalone individual modules, symposia and workshops, as well as simulators in the skills centre. KSeHIN has been able to change the chronic disease management in Kuwait and diabetes clinical care using technology innovation (eHealth) and academic health science. (Conway and al, 2014)

Aranda-Jan, Mohutsiwa-Dibeand and Loukanova (2014) conducted a systematic review on mHealth projects in Africa during 2003 and 2013. 44 of the projects were included into the study, of which 19 were to do with follow-up's and medication adherence, 10 of data collection and reporting, 4 of staff evaluation and guidelines compliance, 4 disease surveillance and intervention, 2 drug supply-chain and stock management, 2 staff training and support, 1 patient education, and 2 overviews of mHealth. The projects included informing birth outcomes, reporting drugs' secondary effects, monitoring children's vaccinations, monitoring tuberculosis and diabetic patients, identifying pregnant women needing referral services, monitoring HIV infected children, clinical tele-consultation and malaria monitoring. The projects were collaboration projects between universities, research institutes, non-profit organizations, private sector and public sector. The findings showed feasibility and potential of technology, but found limitations in privacy and confidentiality, low training and skills. They concluded that "In

general, mHealth projects demonstrate positive health-related outcomes and their success is based on the accessibility, acceptance and lowcost of the technology, effective adaptation to local contexts, strong stakeholder collaboration, and government involvement” (Aranda-Jan, Mohutsiwa-Dibeand and Loukanova, 2014, p. 3).

Jarosławski and Saberwal (2014) made a study of eHealth programmes in India 2014. They studied 28 organizations and found a wide variety of eHealth initiatives, including tele-consultation (mobile and web-based), data collection and surveillance with SMS forms, treatment compliance and distant medical education. Interesting form of tele-consultation was a van carrying nurses, physicians and a technician with a small pharmacy and ultrasound, ECG and X-ray equipment. mHealth was used with Accredited Social Health Activists (ASHAs) who worked in rural areas, by providing mobile phones with supervision, instructional videos and questionnaires. mHealth was used also with health related games, educational services and reminders.

eHealth Africa (eHealth Africa, 2015) is a not-for-profit organization which aims to improve healthcare using newest technologies, and by developing health management information systems, and by managing and evaluating health programs. eHealth Africa works in co-operation with NGOs, state and government officials. Example programs are the eHealth Nigeria, which implemented electronic forms for all clinical areas, reduced data duplication and fastened access to data. Another example is RapidSMS based mCBS platform which enabled community midwives to send information of maternal and newborn health, which was then being processed to a response team of health professionals for emergency response and follow-up.

Dimagi (Dimagi Inc., 2015) is a private social enterprise with headquarter in USA, delivering innovative low-cost technology solutions to help underserved communities around the world. Dimagi works by partnering with big and small organizations, and has developed healthcare IT, mobile and web applications and SMS services. Examples are systems for community health workers to manage HIV care and safe pregnancy, health education programs and medication reminders.

mHealth example in the area of health and wellbeing is a small start-up company from Finland, which created a scalable cloud service applications for mobile data collection year 2011 in partnership with non-for-profit organizations Plan International. The applications can be used by healthcare and field workers in remote and urban areas to col-

lect, monitor and analyze data. It is being used in Thailand for tracking the spread of tuberculosis, in India for oral cancer monitoring and treatment guidance and in Malawi for treating HIV-positive, pregnant women. The innovation which was developed for NGOs is scalable for private sector with high growth opportunities. The partnership won an European CSR Award in “Partnership in the SME Category” year 2013 (European Commission, 2013, p.30).

mHealth has been successfully used in mass vaccination campaigns, like in Haiti after the earthquake struck year 2010. This America Red Cross funded program managed to collect 1,9 million pieces of data and deliver 86659 cholera vaccinations in 40 days with a total cost of 29129 dollars with the help of mHealth (Teng and al., 2014).

WHO (2011) made an extensive survey of mHealth initiatives with the help of 800 eHealth experts in 114 countries. Based on its findings the report concludes that “[mHealth] has the potential to transform the face of health service delivery across the globe”. The usage of mHealth was high-ranged from maternal and child care to reducing diseases, enabling timely access to health services and health information and helping in diagnosis and clinical decisions. An example of improved access to care is from Bangladesh where Ministry of Health & Family Welfare provided mobile phones to all hospitals and obliged one doctor from each district to be available 24 hrs a day. Citizens were allowed to call to the numbers for free. This encouraged a private entrepreneur to open successfully a similar “HealthLine” for a small fee, following a telecommunication operator and a private hospital. In the Democratic Republic of the Congo governmental office in partnership with a telecommunications operator, launched Ligne Verte Toll-Free Hotline for family planning for a low cost. Similar for-profit programs were found in developing countries, usually partnering with network operators. Toll-free emergency services were found mostly in the developed countries, but also in African region to fight communicable diseases like HIV/AIDS and cholera. Reminder services by SMS were found in several countries, mostly used with chronic diseases like diabetes and tuberculosis. Also, in Colombia the Department of Health used SMS messaging to pregnant women to encourage prenatal care, HIV testing and vaccinations. In many countries SMS messaging was also used in health promotion like reduce smoking or malnutrition. Health education was provided through mHealth. In Bangladesh health awareness was increased by sending SMS to all mobile phones in the country encouraging for example to vaccinations. SMS was also used in national emergencies. (WHO, 2011)

Similar programs can be found world-wide. The programs are often collaboration programs with a variety of public and private sectors, for-profit and not-for-profit organizations, and local social entrepreneurs. CHMI (Center for Health Market Innovations, 2015) has a mission to “promote programs, policies and practices that make quality health care delivered by private organizations affordable and accessible to the world’s poor“, and have already collected over 1400 programs in their database, which manifests the activity in the field of health markets. OECD emphasizes the importance of collective corporate actions, which include governments, NGOs, unions and investors (OECD Observer, 2014). The strict border of business making and social responsibility is blurring as we speak.

3.5 Challenges in mHealth

Potentials of mHealth are vast, especially in the developing countries with hard-access areas. It can be used to support clinical workflow with decision support systems, remote consultation, mobile electronic health records (EHR), e-prescriptions, patient portals, and treatment and medication reminders. Technology requirements, which may be rather self-evident in the developed countries, might still be a challenge in developing countries. Jaroslowski and Saberwal (2014, p.8-9) mention four main challenges in mHealth:

- 1) Connectivity: The prime hinder for example in India although the internet and mobile connectivity are improving and getting cheaper
- 2) Software: Applications should be usable with people by different education level and languages. Applications should run on multiple platforms, not only on high-end smart phones. Ability to process and transfer EHRs and images effectively and using standard formats for interoperability is important.
- 3) Hardware: Hardware for monitoring medical parameters: heart and lung sounds, blood pressure, temperature, blood glucose, skin and ear, nose and throat images, SpO₂, ECG and pulse rate. The development and validation of these equipment take time.
- 4) Analytics: There might be a lack of resources for analysing data.

Several studies (Ahmed and al., 2014, Aranda-Jan, Mohutsiwa-Dibeand and Loukanova, 2014, Dicianno and al., 2015) find the overall lack of cost-effective studies problematic, especially the lack of researches which would assess the cost-effectiveness objectively and would evaluate the impacts to the whole health system. Jarosławski and Saberwal (2014) note that none of their interviewed organizations were able to provide data of cost-effectiveness. The initiatives were mostly driven by the fact that any aid to rural area with the scale of neglect of health care there is, would improve the situation, so no effort had been done to measure the effectiveness. There are studies in literature that have been able to prove also the cost-effectiveness (Mushamiri and al, 2015), but mostly the initiatives concentrate on improved health outcome, which is a value itself.

The lack of interconnectivity is problematic. Dicianno and al. (2015) point out that there are only few systems (in USA) which allow integration to EHRs and PHRs although it is crucial to obtain information of multiple, chronic medical conditions. Jarosławski and Saberwal (2014) conclude that the companies are often pioneers and are forced to come up with their own technical solutions resulting in-compatibility and not being able to transfer data across hospitals. ITU states that reaching the potential in mHealth will only be achieved through technology standards (ITU, 2012). Standards minimize the risks of new technology development; prevent single vendor lock-in's, reduce costs, eliminate need for customized solutions, ensure widespread adoption and address concerns about privacy, security, and patient identification. Because the standardization occurs at all layers (physical layer, data link layer, network layer etc.), this is a specific challenge (ITU, 2012). Health Level Seven (HL7) is a standards development organization developing specifically electronic health information systems, i.e. exchange, storage and use in the application layer. HL7 partners with other institutions, like ISO, in eHealth standards. ISO creates EHR standards and partners with HL7 and DICOM. ISO/IEEE 11073 is a medical device communication standard. (ITU, 2011, ITU, 2012)

Governmental support would be valuable to overcome connectivity problems and ensure security. Jarosławski and Saberwal (2014) emphasize the role of government. The current lack of policies, corruption, preference to paper records, and the bad management, insufficient incentives, lack of technical staff and electricity in public hospitals, which resulted 70% of the eHealth initiatives to be driven by private hospitals or by non-profit organizations, rather than public hospitals. ITU (2011) is concerned of the quality of connections, particularly how to ensure accuracy of medical information, how

to secure patient-to-provider communications, and how to guarantee adequate service reliability. Several studies were also concerned of the security of the patient data; for example regarding phone ownership and phone sharing as well as male control over household phone (Aranda-Jan, Mohutsiwa-Dibeand and Loukanova, 2014, Dicianno and al., 2015, Mushamiri and al., 2015). Barlow (2015) mentions the need for proper practices, encryption and access control.

Aranda-Jan, Mohutsiwa-Dibeand and Loukanova (2014) mention the limited number of SMS message characters, network reliability and lack of technical expertise. Jarosławski and Saberwal (2014) found a challenge in the tendency for donors to prefer certain technologies and fashionable diseases, so that the programs become more of a donor-driven than needs-driven. Lack of co-operation and collaboration among the eHealth pioneers was found a major issue by Jarosławski and Saberwal (2014), as well as lack of communication between IT and medical professionals. Jaroslawski and Saberwal (2014) also mention challenges in human nature; shortage of skills required, reluctance to learn new, turnover of medical staff and attitudinal problems. Difficulty to use was mentioned by Mallow and al. (2014, p.48). Victorson and al. (2014, p.5) emphasize the need for applications to be “culturally competent”, tailored to the needs and cultural norms of the selected population. Ahmed and al. (2014) saw problems in the amount of trained eHealth and mHealth professionals and in the collaboration between ministry of health and ministry of ICT.

The WHO member states are committed to maximize the benefits of eHealth, including mHealth, in their WHA resolution year 2005 (WHO, 2011). eHealth has potentials in cost-effective healthcare and health promotion activities and is being researched worldwide. It is recognized by WHO to have potential to transform the face of health services globally and to help achieve the UN MDGs (WHO, 2011). mHealth is growing fast due to maturing infrastructure; ITU reported in 2014 that mobile-broadband market segment has continuous double-digit growth and estimated that by the end of year 2014 there will be 2,3 billion mobile-broadband subscriptions and 2.3 billion mobile-cellular subscriptions. Mobile phones are better accessible worldwide than personal computers due to lower cost and better supporting infrastructure (ITU, 2014) and two thirds of countries have introduced electronic national health information systems (WHO and ITU, 2014).

4 Implementation of the Study

4.1 Author's Proposition

What combines the essence of Corporate Social Responsibility (CSR) and eHealth is that both possess powerful means to contribute to profitable business and both can help in creating better quality lives. CSR is well-established management tool that can be used to direct company activities, drive risk management and ensure good stakeholder relations. Well-informed shareholders are demanding CSR activities to better secure their investments. The consumer activism is growing and getting more powerful. Regulating bodies and governments are activating, for example India set a norm year 2014 for companies to spend at least 2% of their annual profits to CSR activities (Ernst & Young LPP, 2014, p. 68), many European countries oblige it, and several organizations promote CSR among United Nations, WHO, ISO, European Commission and OECD. New ISO standard 26000 manifests the maturity level of the concept, and based on KPMG's survey (KPMG International Cooperative, 2013) from 2013 93% of the 250 largest companies in the world are already publishing CSR reports.

Author proposes that these two activities could be supportive; for instance a company having facilities in low-income country could participate in mHealth trials wherein it could promote the health and health education of its employees, and create wellbeing and stability as well to a wider society. There are examples of good collaboration efforts in this area among private companies, NGO's and governmental parties. Participation to collaborative activities would further strengthen the CSR strategy and know-how, while also creating social value. Porter and Kramer emphasize the value of cooperation and the symbiotic relationship between the corporates and society saying that business is good in "creating jobs, wealth and innovation" but "successful corporations need a healthy society. Education, health care, and equal opportunity are essential to a productive workforce." (Porter and Kramer, 2006, p.5)

Author's proposition is based on literature review and current debate that Health could be a CSR stakeholder. In the United States this is being promoted in national level by Business for Social Responsibility (BSR) (BSR, 2015). Global health issues are global stability threat, and with the growing globalization and population growth, the importance is growing. Global health is not only a question of altruism or moral responsi-

bility; it is also a question of security and stability of a business environment. Innovation and technology can be used cost-effectively in promoting health, and private-public collaboration could further enhance the innovation. mHealth is intriguing option that has already demonstrated good efficiency in health promotion, especially in regions with less-developed infrastructure; for example bad roads and lack of wired networks. Mobile network coverage is currently good worldwide and the price of mobile phones makes them accessible for a wide population.

4.2 Methodology

This study represents qualitative research. The reason for choosing the qualitative method was that while assessing companies' sustainability material it better recognizes the hints of health promotion in in-direct ways. As the health is not in the conventional sense the CSR stakeholder, it is not part of the standard reporting practice and therefore is not necessarily explicitly visible. Therefore qualitative analysis defends as a method in aims of revealing information not easily recognizable by other means.

Companies are evaluated qualitatively to find activities which possibly extend the perception of CSR as it is today conceived in vastly recognized standards as Global Reporting Initiative (GRI) guidelines and ISO 26000. Qualitative data is complemented with some figures to get a fuller picture of the status quo and to complement qualitative analysis which by nature is error prone to research bias. Author uses detailed research questions which are partly derived from the GRI guidelines (Global Reporting Initiative, 2013a), but contain also author's questions relevant to this research.

The theory overview and the recent inventions and initiatives in this study are retrieved mainly from e-sources; most recent research papers and publications, web sites of recognized organizations, and web sites of the initiative coalitions.

The companies for this case study were selected by criteria explained in details in chapter 4.3, units of the sample are then described in chapter 4.4 and the limitations and criteria of soundness in chapter 4.5.

4.3 Sampling Plan

The size of the sample was selected fairly high, 20 companies. The health initiatives, and especially eHealth and mHealth usage, might not be found in all, so the size was selected high enough to expect results. On the other hand, the absence of the phenomena can also be concluded as a result, but that would be mostly visible in the quantitative part of this study.

The sample was selected by the following criteria:

Criteria A: Company publishes CSR reports. This is excluding criteria; if the company claims no CSR activity and has no public reports, which cannot be evaluated, then the company is not picked to the sample. However, how the companies label their CSR reports is not relevant. The naming practices are various; the reports may be called Corporate Social Responsibility reports, Citizenship reports or Sustainability reports. The only criteria is that it contains information of the company's social responsibility activities.

Criteria B: Company has CSR integrated in its strategy. The companies that have perceived the essence of corporate social responsibility and integrated it to their strategy are assumed to have more diversified CSR activities which make them good candidates for this study. This criteria aims on diversification; it needs to be emphasized that this study does not plan to assess the CSR performance in any ways. The list of "The GlobeScan / SustainAbility Surveys list of 2014 Sustainability Leaders" was used in Criteria B evaluation. The list is comprised by 887 CSR expert opinions globally, and is quite recent, so it is judged by the author to suit well for the selection. (GlobeScan Incorporated, 2014)

Criteria C: If company publishes CSR reports which are of good form, it provides good material for this study. KPMG, a major sustainability expert organization, published a list of companies with a good quality CSR reporting. "The KPMG Survey of Corporate Responsibility Reporting 2013" (KPMG International Cooperative, 2013) has been used in evaluating criteria C.

Criteria D: Big companies with substantial brand are well established, and with experience and “know-how” of various stakeholder relations; with investors, suppliers, employees and customers. The Forbes list of The World’s Most Valuable Brands was used in evaluating criteria D.

4.4 Companies in Sample

17 companies were included after the exclusion criteria A.

1 Unilever

Winner in Sustainability Leaders list 2014

Type: Public, dual-listed, headquarters in Netherlands and in UK

Industry: Personal care, food, refreshment and home care

Number of employees: 172 000

Manufacturing and marketing in 100 countries

Products sold in over 190 countries

(Unilever, 2015a)

2 Patagonia

Second in Sustainability Leaders list 2014

Type: Private, headquarters in USA

Industry: Fair trade outdoor apparel

(Patagonia, 2014)

3 Marks & Spencer

Fourth in Sustainability Leaders list 2014

Type: Public, headquarters in UK

Industry: Retail (department stores)

Number of employees: 85 800

Suppliers 3000, retail stores in 54 countries

(Marks and Spencer Group plc, 2015a)

4 Nestlé

Fifth in Sustainability Leaders list 2014

7th in Corporate Responsibility Reporting list 2013

Type: Public, headquarters in Switzerland
 Industry: Consumer packaged goods, food and beverage
 Number of employees: 339 500
 Countries of operation: 197
 (Nestlé, 2015a)

5 NIKE

7th in Sustainability Leaders list 2014
 21st in Forbes list of Valuable brands
 Type: Public, headquarters in USA
 Industry: Apparel, accessories
 Number of employees: 48 000
 Area served: worldwide
 (Nike, 2014)

6 Coca-Cola

12th in Sustainability Leaders list 2014
 Fourth in Forbes list of Valuable brands
 Type: Public, headquarters in USA
 Industry: Beverages
 Number of employees: 130 600
 Operations and sales in over 200 countries
 (The Coca-Cola Company, 2014)

7 Apple

Winner of Forbes list of World's Most Valuable Brands
 Type: Public, headquarters in USA.
 Industry: Technology
 Number of employees: 92 600, in retail 46 200
 Operations and sales worldwide
 (Apple, 2015a)

8 Microsoft

Second in Forbes list of World's Most Valuable Brands
 Type: Public, headquarters in USA
 Industry: Technology

Number of employees: 130 600
Operations and sales in over 200 countries
(Microsoft, 2014)

9 IBM

Fifth in Forbes list of World's Most Valuable Brands
Type: Public, headquarters in USA
Industry: Technology
Number of employees: nearly 400 000
Operations and sales in over 170 countries
(IBM, 2015a)

10 McDonald's

6th in Forbes list of World's Most Valuable Brands
Type: Public, headquarters in USA
Industry: Restaurants
Number of employees: 1,8 million (including franchisees)
Restaurants in over 100 countries
(McDonald's, 2014)

11 Samsung

8th in Forbes list of World's Most Valuable Brands
Type: Public, headquarters in South Korea
Industry: Technology
Number of employees: 286 300
Operates in 220 locations around the world
(Samsung Electronics, 2014)

12 A.P. Moeller Maersk

Winner in Corporate Responsibility Reporting list 2013
Type: Public, headquarters in Denmark
Industry: Transport, oil and drilling
Number of employees: 89 000
Operations in 130 countries
(A.P. Møller – Mærsk, 2015)

13 BMW

Second in Corporate Responsibility Reporting list 2013
11th in Forbes list of World's Most Valuable Brands
Type: Public, headquarters in Germany
Industry: Automotive
Number of employees: 116 300
Production and assembly in 14 countries, sales in 140 countries
(BMW Group, 2015)

14 Cisco Systems

Third in Corporate Responsibility Reporting list 2013
12th in Forbes list of World's Most Valuable Brands
Type: Public, headquarters in USA
Industry: Telecommunications and media
Number of employees: 74 000
Operations in 165 countries
(Cisco, 2014)

15 Ford Motor Company

Forth in Corporate Responsibility Reporting list 2013
Type: Public, headquarters in USA
Industry: Automotive
Number of employees: 181 000
Operations in all continents
(Ford Motor Company, 2014b)

16 Hewlett-Packard

Fifth in Corporate Responsibility Reporting list 2013
Type: Public, headquarters in USA
Industry: Electronics and computers
Number of employees: 302 000
Operations worldwide, suppliers in over 45 countries
(HP, 2014)

17 ING

6th in Corporate Responsibility Reporting list 2013

Type: Public, headquarters in Netherlands
Industry: Finance, insurance and securities
Number of employees: 53 000
Operating in more than 40 countries
(ING Group, 2014a)

5 Results

5.1 Company Overview

20 companies were evaluated, of which 3 were excluded based on the exclusion criteria and 17 selected to the sample. Due to the nature of this study and the sample plan, the majority (16) of the 17 companies were public and big in size. The sector was wide; it included companies from food and beverages, restaurants, clothing, textiles, carpets, retail, technology, transportation, automobiles and financial services. 10 companies were from United States, 6 from Europe and 1 from Asia. 10 companies out of 17 were participants in the United Nations Global Compact.

5.2 How Companies See CSR

17 CSR reports were reviewed in the study. Reports varied in form and size. 13 of the companies used GRI reporting format. The dominant theme in reports was the forward thinking. CSR was established to ensure future success and to reduce risks, while simultaneously supporting social and environmental progress. CSR was about creating growth, reducing costs and managing risks to guarantee the future prospects.

“Risks are getting more complex, for example, the interaction between food, water and energy” “our firm belief that for a company to prosper over the long term and create value for shareholders, it must create value for society at the same time.” (Marks and Spencer Group plc, 2015a)

“We believe that sustainable action makes our business model more competitive and secures our company’s future growth.” (BMW Group, 2015)

“By including sustainability considerations in all our business decisions, we create added value for the company.” (Nestlé, 2015a)

“Commitment to sustainability is helping us achieve our vision of building great products, a strong business and a better world.” (Ford Motor Company, 2014a)

“[We] will change the world for the better and ensure we maintain an enduring, sustainable and profitable business model” (McDonald’s, 2014)

License to operate and demand from customers was said being one reason for social inclusion and shared value.

“We consider our role in society as supporting and stimulating economic, social and environmental progress, and aiming for a better quality of life for people.” (ING Group, 2014a)

“At the same time, we are demonstrating our commitment to international conventions such as the ten principles of the UN Global Compact” (BMW Group, 2015)

Continuous improvements was also common theme. Companies accepted that they cannot do all at once. They aimed for iterative improvements and long term goals. KPI’s were used to evaluate the effectiveness and the return of investments (ROI). Nike reported that its CSR focus had changed from reputation management to embracing new innovation opportunities. “We believe businesses must embrace sustainability as an innovation opportunity and governments should act to create the right policies and incentives to accelerate change at scale” (Nike, 2014). In many reports the change was recognized agent for innovation, which had helped them to grow, with better and sustainable offerings, but also with savings and in revenue increase. Cisco reported that “Building strong communities supports the growth of our business by creating economic stability; by giving us access to new markets, customers, and sources of innovation; and by building a healthy pipeline of well-educated talent.” (Cisco, 2014)

Companies were well utilizing their core assets in CSR activities.

Our approach to Corporate Social Responsibility (CSR) is to use our expertise, technology, and partnerships to create positive impact around the world (Cisco, 2014)

We actively look at opportunities and growth areas in the sustainability arena and are eager to partner with clients to finance their sustainability challenges (ING Group, 2014a)

Companies understood that they have the means and power to make the difference, as stated in UN's Business Manifesto: "Business and investors are already the biggest engine of poverty reduction and economic growth in the developing world" (UN Sustainable Development Solutions Network, 2014). CSR goals were often linked with the United Nations MDG's. The benefits were also recognized.

Commitment to sustainability is helping achieve vision of building great products, a strong business and a better world (Ford Motor Company, 2014a)

Charity and donations were common forms of CSR, usually managed by subsidiary organizations. Companies had matching donations programs and employee volunteerism was encouraged. Companies reported taking part in disaster relief and response, either by money donations or by donating company products and expertise. Companies supported basic human needs and contributed in educational efforts. Education was targeted for educating new professionals for the company, but also for basic education in developing countries. Training for hygiene, sanitation and health issues was common.

Stakeholder dialog was considered important and there was vast variety of stakeholders; NGO's, labour unions, socially responsible investors, activists, and society at large. Health as is was not mentioned as a stakeholder. New media channels were used in the stakeholder dialog. Hewlett-Packard used a social media type communication channel called "Living Progress Twitter platform" where it participated in Twitter chats with media partners and society (HP, 2014).

All companies recognized the effectiveness and need for co-operation and collaboration; with other businesses, NGO's, academics, healthcare institutions, social entrepreneurs, agencies and governments. Marks & Spencer said that the biggest lesson they have learned through their journey has been that the world cannot be changed alone. Coca-Cola said that they do not have all the answers, all the access or all the know-how. Moeller Maersk said it partners with not-for-profit organizations in trade growth

regions to accelerate poverty reduction. Industry coalitions were common and important when dealing with industry specific challenges or region specific challenges, like corruption or employee safety.

Companies reported alignment with global codes of conducts like United Nations Guiding Principles on Business and Human Rights and United Nations Declaration of Human Rights, UN Global Compact Principles, International Labor Organization (ILO) Core Labor standards, OECD Guidelines for Multinational Enterprises, and standards of the Fair Labor Association. It was general that in countries where labor laws are weak, companies used either international conventions or their own code of conducts. Companies also gave sustainability training and human rights training.

5.3 Summary of Health Initiatives

This section will summarize initiatives specifically for Health in CSR reports. Section 5.4 then introduces eHealth and mHealth initiatives. An overview of basic health initiatives; extended occupational health, education programs, charity, volunteer work and disaster response can be seen in Table 1 Basic Health Initiatives. These initiatives are not covered in details in this study, unless related to new technology usage.

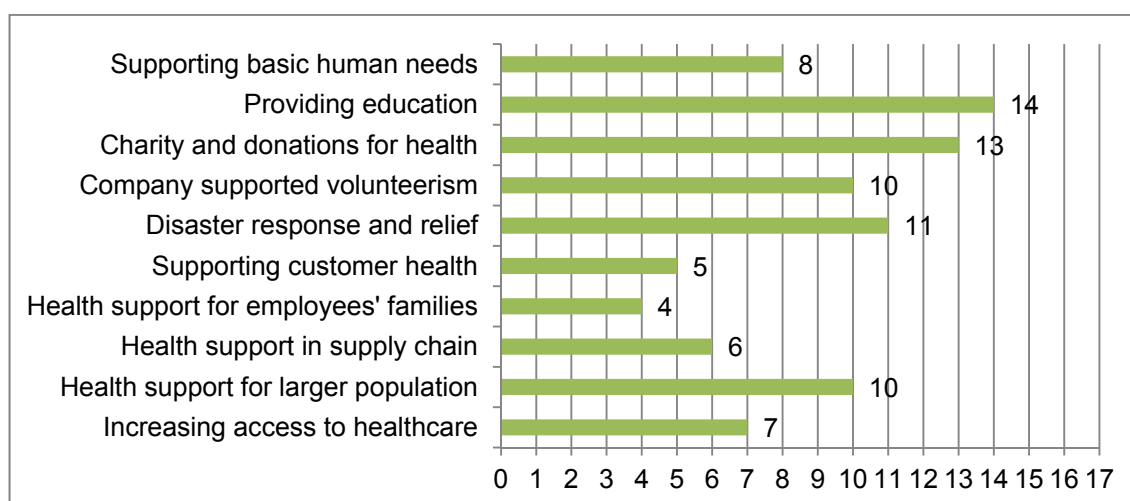


Table 1 Basic Health Initiatives

Unilever have a goal of helping billion people to improve their health and well-being by 2020, mainly by two initiatives: health and hygiene, and more nutritious product portfolio. Dove Self-Esteem Project educates girls and women on body myths. In aims of

more nutritious product portfolio, Unilever reports that now third of their product portfolio meets nutritional standards. They have reduced salt levels, saturated and trans-fats and sugar, increased essential fatty acids and provided healthy eating information. Report summarizes their health contributions to reducing diarrhoeal and respiratory diseases through hand washing, by providing safe drinking water, by improving access to sanitation, by improving oral health, and by improving self-esteem. (Unilever, 2015a) (Unilever, 2015b)

Patagonia is producing 100% traceable outdoor clothing in a sustainable manner. Probably due to its field of industry, where the best effects can be made in environmental awareness, there are no signs of actual health initiatives in their environmental and social report (Patagonia, 2014). Patagonia donates funds to Health Care Without Harm in Europe, which is not-for-profit organisation to promote best practices in sustainable health care (Health Care Without Harm, 2015).

Marks & Spencer funds Project HOPE (Health Opportunities for People Everywhere) which offers health care and health education to women in factories in the developing countries. The project provided better preventive health care and services in seven factories in Cambodia and Indonesia, educated local healthcare providers, and provided medical devices to measure hemoglobin. They also delivered knowledge of healthy behaviors such as hand washing, family planning and prevention of diseases (diarrhoea, parasitic diseases, pneumonia, HIV). As a result anemia, which was common among factory workers, was treated and new policies were implemented. KPI's were collected by an independent observer. They saw 5 % increases in attendance and in average 7% increase in productivity. Return on investment (ROI) was counted 23 pounds per each 1 pound spent (Project HOPE, 2015) (Marks and Spencer and Project HOPE, 2015). Marks & Spencer also donates to Breakthrough Breast Cancer, and year 2006 it launched post-surgery lingerie products. 10% of its sales are donated to Breakthrough Breast Cancer (Breakthrough Breast Cancer, 2015). Marks & Spencer Health Philosophy was launched 2014 to educate customers on healthier diets. (Marks and Spencer Group plc, 2015b)

Nestlé as a food manufacturer, focused mainly on nutritional quality. Nestlé is investing in health science and innovation and strives for reducing salt, sugar and saturated fats in its products in order to fight non-communicable diseases. Nestlé aims to forge a new industry between food and pharmaceuticals based on nutritional therapies for consum-

ers and partners in healthcare. Start Healthy Stay Healthy was science-based education program to provide guidance for parents and caregivers during the first 1000 days of life. Nestlé Healthy Kids program and United for Healthier Kids program educate of the importance of appropriate nutrition and exercise for improving children's health. In areas where it is difficult to get essential vitamins Nestlé fortifies foods to help families stay healthy. In addition to nutritional efforts, Nestlé's Skin Health's goal is to promote skin health by prescription drugs, self-medication, therapeutic skin care and aesthetic and corrective medicine to treat serious conditions such as skin cancer. (Nestlé, 2015b)

Nike participates in Designed to Move campaign together with organizations, governments and companies, which studies effects of physical inactivity in childhood and creates early positive experiences in sports. In addition to occupational health, some of the factories in its supply chain provide on-site clinics for the workers, and they are looking for new ways of partnering with NGO's and factory owners to support workers lives better. (Nike, 2014)

Coca-Cola is committed to consumer well-being by helping to make informed choices with front-of-pack nutritional labeling and with physical activity programs. Company has chosen three focus areas to make a difference; Women, Water and Well-Being. Coca-Cola allows usage of its vast logistic chain and offers its distribution expertise to increase access to critical medicines and medical supplies. The Project Last Mile was collaboration project with USAID, The Global Fund and Bill & Melinda Gates Foundation aiming to improve storage, distribution and marketing of critical medicines and supplies. The project helped developing preventative maintenance model for vaccine refrigerators and to increase access to critical medicines and HIV/AIDS prevention and treatment. Coca-Cola also participated in disaster reliefs using manpower, product donations, transportation and logistical expertise. It worked with local health officials, experts and health management organizations to implement workplace and community programs and employee healthcare benefits for bottler employees and their dependents in Africa. It also provided antiretroviral drugs and confidential voluntary HIV testing and donates to Global Fund to fight AIDS by prevention, treatment, counseling, testing and care services. (The Coca-Cola Company, 2014) (The Coca-Cola Company, 2015)

Apple focuses its CSR efforts in supplier surveillance for health and safety, but also to educational programs; both professional and life-style related. Apple piloted mobile

education program for factory workers, via smart phones and in iPad class rooms, in professional skills and in health education and personal relationships. Apple also provided funding for education and healthcare for miners in six CSR programs. (Apple, 2015b)

Microsoft's occupational health is extended to spouses, dependents, and domestic partners. It includes health screening for risks of heart disease, diabetes, high cholesterol, high blood pressure, and mammography screenings as well as weight management and tobacco cessation programs and fitness programs. Through the Solutions for Good program Microsoft launched Office 365 for not-for-profit organizations worldwide. Microsoft also partnered in health education in HERproject (Health Enables Returns). There was research for supportive technology for disabled, for example eye gaze technologies and speech synthesizers. More on Microsoft's mHealth initiatives can be found from chapter 5.4. (Microsoft, 2014)

IBM, as a technology company, invests in education, for example through their Watson platform academy. In the disaster recovery they collaborated with Red Cross to evaluate cloud-based management tools for disaster information. IBM collaborated in public-private partnerships to improve population healthcare. During Ebola, IBM launched a social media platform for employees in affected areas for infection control, travel guidance and communication. IBM's Watson is new technology platform which does big data analytics. It can be used for clinical decision support to identify medical treatments (IBM, 2015b). Watson was used to find a cure for children diagnosed cancer, neuroblastoma, where survival rate is only 30 percent. In the Cancer Center in Japan super-computer was used to screen 3 million drug candidate molecules in two years. In research 7 drug candidates were found for further pharmaceutical research. In Peru IBM helped to build women's clinics in rural areas. In Ghana IBM worked with Ghana Health services in initiative to reduce mother-to-child HIV transmission with data analytics and cloud solutions. More on IBM's mHealth initiatives can be found from chapter 5.4. (IBM, 2015a)

McDonald's had changed its portfolio to healthier choices and had added nutritional information to its packaging. McDonald's partnered in the Alliance For a Healthier Generation to improve product nutritionals, and with the International National Food & Beverage Alliance with WHO to support healthier diet and physical activity campaigns. McDonald's participated in disaster relief. It supports Ronald McDonald Houses and

Family Rooms for families with seriously ill children. Ronald McDonald Care Mobiles, in 9 countries, are mobile clinics providing pediatric healthcare for example immunizations, health check-ups, dental care and treatments for chronic and acute illnesses (RMHC, 2015). (McDonald's, 2014)

Samsung's key CSR areas were education, employment and healthcare. Hope for Children initiative in North America supported education and health of children and youth. Samsung had supported children with hearing impairments in the cochlear implant surgeries. In low-income countries Samsung provided healthcare and education support. In Africa, it launched Digital Villages, which include solar-powered internet school for 24 students, solar-powered tele-medical centre, and admin centre for local entrepreneurs with electricity supply (IT News Africa, 2015). Care Drive programs, in China, Russia and Africa, run mobile healthcare centers, which include solar-powered ear, eye and dental clinics. (Samsung Electronics, 2014)

A.P. Møller - Mærsk's contribution to economic growth is by investing in education and healthcare in low-income countries. In the growing markets there is shortage in skillful work force in maritime industry, so A.P. Møller - Mærsk have educational programs, for example in Angola. As a logistics company, the environmental performance is in bigger role in CSR report than social or health issues. The company though mentions its contributions to humanitarian help, for example during the Ebola crisis in Guinea, Liberia and Sierra Leone, where the company funded UN logistic efforts and allowed usage of its freight, containers and experts. (A.P. Møller – Mærsk, 2015)

BMW offers academic education programs and has variety of health education offerings promoting health of their workforce. Coaching program helps employees identify health concerns and ways of dealing them. In society they focus on regions where they have manufacturing, for example in South Africa they participate fighting HIV/AIDS. In each new region they examine social challenges and evaluate how their expertise could be used to improve local conditions. (BMW Group, 2015)

Cisco contributes to health by improving labor standards in supply chain, improving access to healthcare and promoting flexible working to enhance health and well-being. Employee and Family Assistance program offers support in elderly issues, adoption and for example dealing with cancer. Expert Medical Opinion program enables free second medical opinion. They also have employee campaigns for weight management, life balance and preventive care. In local communities they support education,

healthcare and basic human needs programs. Cisco partners with humanitarian organizations such as NetHope in disaster-stricken areas. Cisco's Tactical Operations team is part of UN Emergency Telecommunications Cluster, which is global network of organizations providing communications services in humanitarian emergencies. Trained volunteers support disaster areas using Cisco Network Emergency Response Vehicles and Emergency Communications Kits with satellite and 4G communications channels. More on Cisco's mHealth initiatives can be found from chapter 5.4. (Cisco, 2014)

In USA Ford Motor participates in national health care reform in program aiming to deliver better health care to its employees while helping to lower total national health care costs. The program tries to prevent chronic diseases; asthma, diabetes, coronary artery disease, congestive heart failure and chronic obstructive pulmonary disease. In India Ford Motor has Happy Schools to improve access to primary education and to support children in health and nutrition, and Ford Motor is in NGO relationship on working for community needs and concerns which mention breast cancer, obesity and treatment compliance. (Ford Motor Company, 2014a) (Ford Motor Company, 2014b)

Hewlett-Packard has participated in BSR's Health Enables Returns (HER) Project in China, Malaysia, Mexico, and Thailand. In China and India Hewlett-Packard collaborated with Unicef to improve healthcare delivery and analytics, and in Kenya, in Social Innovation contest the winning team designed innovative mosquito trap to protect against malaria. For employees Hewlett-Packard has preventative health programs with cancer screenings and education. In the United States they piloted meQuilibrium, a web-based tool for health management. More on Hewlett-Packard's eHealth initiatives can be found from chapter 5.4. (HP, 2014)

ING contributes to economies in all countries they operate, and to shared global issues by their core expertise and functional capabilities. With UNICEF they partner in educational projects in the goal of providing one million children with access to education by 2015 as well as in healthier living conditions. (ING Group, 2014b)

5.4 eHealth and mHealth

This section will summarize initiatives utilizing and developing new technologies. An overview can be seen in Table 2 Mobile and cloud technologies in CSR.

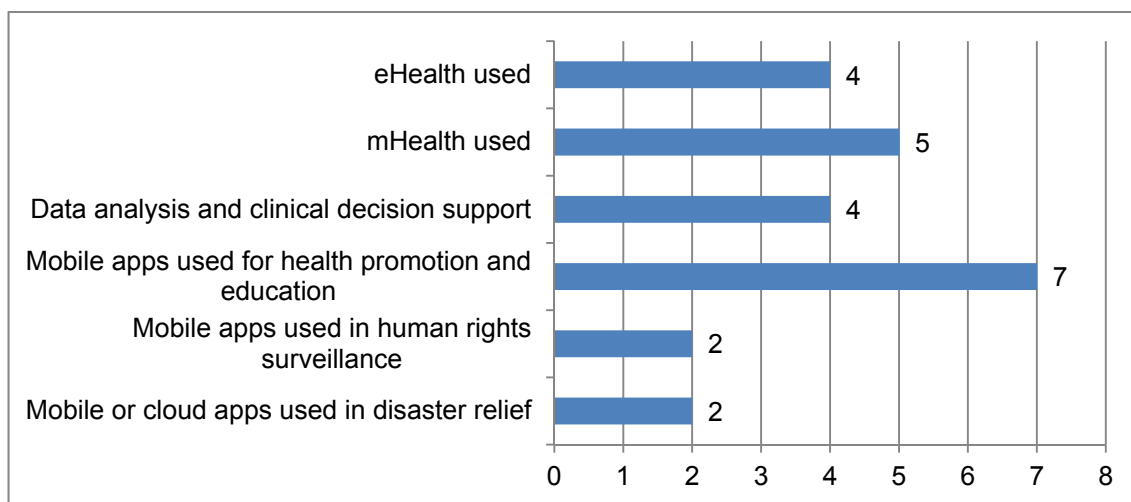


Table 2 Mobile and cloud technologies in CSR

Coca-Cola had partnered with a fitness technology company to create an activity tracker, synched with smartphone to set and track progress of activity and weight goals. Another program resulting mobile application innovations was a CSR competition “Shaping a Better Future” where winners received funds for their projects. In the competition two mobile applications received award; one was in South Africa to connect organizations and young volunteers and to offer experiences for better employment, and another in Mexico for increasing participation to local economic and social development. (The Coca-Cola Company, 2014)

Microsoft offers to charity organizations applications which employees have developed specifically for Corporate Citizenship programs. In the report it mentioned a goal to launch three to five technology solutions to not-for-profit organizations. Microsoft had launched HelpBridge, a free disaster response mobile application that provides a way to contact close-ones, donate money and goods, and donate volunteer time. It allows sending updates to emergency contacts and share GPS coordinates in case of emergency. Microsoft hosted human rights focused “app generator” workshop where the human rights defenders and NGO’s were heard on what they would need in their efforts. (Microsoft, 2014)

IBM offered its expertise and partnered with Irish Centre for Fetal and Neonatal Translational Research (INFANT) to improve early detection of hypertension and pre-eclampsia in pregnant women. The project was to enable remote monitoring from home to reduce stress and frequent follow-up visits in hospital. The system includes real-time remote monitoring via mobile devices and web-based analytics and care

management, with automated alerts for doctors and electronic health records (EHR). (IBM, 2015a)

Cisco's telehealth technologies are used in locations with lack of extended health services. Cisco reported that more than 6900 children have received medical consultations using their video technologies in Cisco's healthcare programs. The technology enables remote patient visits with health clinics and hospitals for rural families and supports digital picture archiving and PACS communications system (PACS). There were both health clinics that accessed hospitals and specialists, and also a roving team that used mobile technology to extend support to even more remote areas. Cisco Health Presence technology has been used in USA, UK, Brazil, China and Kenya in Connected Healthy Children CSR programs, dedicated to improve children's' access to specialized pediatric care. In the United States 15 million children live in regions with less than 22 pediatricians for every 100 000 children. A 1-year pilot program enabled 266 health visits, including 117 new consultations, 87 established patient visits, 49 postoperative visits and 13 preoperative virtual exams with Cisco Health Presence. The percentage of patients waiting for consultation more than a month fell from 53 to 37 percent. After the successful pilot, the hospital decided to expand the program by adding the same capabilities to other regional clinics. Year 2014 Cisco also launched partnership with Virtual Pediatric Network to pilot high-definition video collaboration possibilities for children with cancer. Five medical centers and a genomics research institute in the USA are involved in this pilot where effectiveness will be measured. TelePresence, WebEx, and HealthPresence®1 technologies can be used to provide remote healthcare in underserved regions. Local health workers can use handheld cameras and stethoscopes to send information to doctors and specialists. The technologies were also reported to been used in occupational health services with employees in remote locations. In disaster struck areas, Cisco's communication infrastructure has been used. Tactical Operations team provide communication channels in disaster relief efforts and the trained volunteers in the Disaster Incident Response Team provide satellite and 4G communications channels for agencies. Other mobile innovation, not directly health related, was Labor Link tool, created with not-for-profit organization to increase transparency in supply chain by getting feedback directly from the workers. In Labor Link the workers can comment on working conditions anonymously using mobile phones. It can also be used to send useful information on labour issues, health and education. Another program using mobile application was Water For People, which uses Field Level Operations Watch (FLOW) application to improve data collection and

analysis. Cisco has used its assets and expertizes to expand global access to information while working for open global standards. As they state, “by making our products interoperable, we strengthen the Internet’s capacity to be a positive force for society.” (Cisco, 2014)

Ford had Sustainable Urban Mobility with Uncompromised Rural Reach (SUMMUR) program to improve women and children’s access to health programs through the use of Ford vehicle. This vehicle has been modified to allow transmit data through Ford SYNC® system, which enables turning vehicles into mobile medical labs. Using the vehicles, Ford reports 100 doctor visits have been completed and 10 000 kilometers traveled. The program has also helped in deliveries of high-risk pregnant women and in raising people’s awareness about maternal and child health care. (Ford Motor Company, 2014b)

Hewlett-Packard develops cloud computing solutions and creates platforms for mobile applications. In India Hewlett-Packard have enabled access to affordable healthcare through eHealth Centers (eHC), equipped with diagnostic tools that allow on-site nurses and paramedics to test and consult with doctors and specialists in hospitals. Each center is connected via HP cloud technology to data-sharing systems that aid treatment and teleconsulting services. In India healthcare infrastructure is in cities although 73% of the population lives in rural areas and have to travel long distances to access basic health services. eHealth Centers were opened also in Bhutan and Philippines and in partnership with Asian Development Bank and Philippines Disaster Recovery Foundation to regions recovering from the Typhoon Haiyan. E-Health Centers help to overcome challenges in connectivity and electrical supplies, but they also can be used to analyze big data and identify patterns affecting wide population to provide information to healthcare policy makers. In China, through collaboration with UNICEF and Chinese government, Hewlett-Packard piloted Maternal and Child Health Management Information System with integrated health management information systems to store information about newborns and provide information to healthcare organizations. The system allowed newborns to be registered within days of their birth. In collaboration with BSR’s Health Enables Returns (HER) Project Hewlett-Packard also provided personal health training to female workers, and health awareness to 27 suppliers across China, Malaysia, Thailand, and Mexico. (HP, 2014)

5.5 Conclusions

The objective of this study was to assess the visibility of health efforts and health promotion in the firms CSR reports, and if the practises relate to technological innovations, especially in the form of eHealth and mHealth, and if they resulted product innovations.

The overall level of CSR adaptation of the companies in the sample was good. Many companies had worked years to build the CSR practises and goals, and the KPI's to assess effectiveness. Some companies which had earlier suffered from reputation hits, had built CSR expertise and integrated it to the company's business model. There were also companies with substantial brand but less visible efforts either in CSR adaptation or in its communication. All companies found benefits in their CSR efforts; good publicity, company trustworthiness, increased intellectual property, and the beneficials themselves, either larger population or for example satisfied workforce.

This study found that CSR initiatives to support education, basic human needs and basic health were common. Initiatives beyond this, to support community or public health, were less common but when deployed, the variety of operations was broad. In addition to mobile and cloud applications, the companies had offered their expertise and assets for big data analysis and in versatile ways to increase access to healthcare. 7 out of 17 companies had contributed in access to healthcare and 4 in the fields of data analysis, data mining and clinical decision support. eHealth and mHealth by definition in health creation and disease prevention was used by 5 companies. The capabilities of mobile applications were also used in other CSR purposes, like in educational efforts, healthy life-style promotion, health education, physical activation and cessation treatment. Both mobiles and cloud applications were used in disaster response, and mobile applications were also developed to control human rights in the supplier premises. Data analysis was used in pharmaceutical research as well as to help authorities to evaluate population health and to detect epidemics. Clinical decision support applications were developed both for mHealth and eHealth.

The value of co-operation; private-public collaboration, as well as the use of NGO and academic expertise for effective outcomes was well understood. The companies taking part in collaborative initiatives reported added value in terms of added stakeholder value, in increased employee satisfaction, decreased employee turnover, improved gov-

ernmental relations and increased company intellectual properties. CSR was reported as agent for innovations. Companies also described CSR's importance in stabilizing the business environment and producing healthier workforce, especially in the merging business environments. Technology adaptation, by nature, was better with technology companies but also the companies in other sectors had entered this field by participating in innovative collaboration programs with expert organizations or with pure funding. Companies which developed technologies had used them also in commercialized purposes, which demonstrate that CSR can be used as platform for development and a gate towards commercialization. Innovation was sometimes created with seemingly modest funding, for example by supporting employee volunteerism and innovation competitions. New operation models were also used successfully afterwards, by companies themselves in other regions, or by for-profit small entrepreneurs. Collaboration generally created win-win situations; for local entrepreneurs, for local governments and for the CSR performing companies.

CSR model is being used for many deeds; nature preservation, social well-being and basic human needs, which may also be one of its pitfalls. It may make it difficult for companies to direct company assets for maximum output. More quantitative studies should be made for the benefits versus efforts to justify the CSR acts, especially with companies with shareholder responsibility. The perceptions of investors and shareholders could be studies, and how much weight they give on the social responsibility actions and how much they are willing to pay with no immediate measurable pay-backs. On further studies it also would be interesting to study the quantitative correlations between CSR and company innovations, and the pay-back of innovations, the different ways of supporting stakeholder dialog and the effectiveness of standardization in mobiles and application platforms. Other interesting field of study would be methods to enable easier reporting practices so that the actual efforts could be directed more on acts than on communication; for example a scripting language could be used to gather CSR performance indicators directly from the CSR reports. Also, as this study did not contain medical device suppliers, a study could be drawn to investigate inhibitors and promoters of medical device manufacturers for providing affordable and accessible mHealth and eHealth applications.

5.6 Limitations and Validation

This study was qualitative and explorative using public company reports. The level of reports was not homogenous although the sample plan tried to eliminate the variance, so this study would have gained from the insider interviews or questionnaires. The companies' CSR reports differed in breadth and it might be that some companies do promote health in their efforts but it is not visible in the published annual materials. Not all researched CSR reports were validated by third party so the material may be subjective or gaining from good communication skills.

Need to be noted that the interests of this study was not in social impacts at large, although social improvements do contribute to people's health. Nor did this study consider companies' efforts on environmental issues even though they also have in-direct link to people's health. The subject area was health; only if mobile applications were used in other CSR activities than health, are they mentioned as a general interest.

The author tried to avoid bias by researching the material strictly on the perspective of research questions, but the study would had profited from triangulation or validation by another researcher. Validity of the study gained from structured detailed research questions, and even though the sample plan was targeted for diversified material, it was formed directly from the clearly defined public lists, which eliminates biased sampling and therefore contributes positively to the validity. The previous research and literature of phenomena behind the subject was thorough, which increases the mastering of subject therefore contributing positively to the credibility. Taking all this into account, the validity of this study is probably fairly good.

Repeatability would have better been achieved with keyword searches, but as the idea was rather to "explore" the phenomena than to form or validate hypothesis, the keyword method did not suit for this study. Saturation and generalizability may be relatively good in big sized public companies, but the results do not qualify for small or medium-sized enterprises. The deployment of CSR is currently in an era of fast evolution so what was discovered today may not necessarily qualify in the fore coming years.

6 Afterword

Good deeds need supporters. Even though the deep-dive was in profitable business, not all of CSR actions are targeted for higher profits. CSR requires support from higher management. CSR as built-in process enables value-sharing with long-term business profits. It is recognized that companies are capable of creating social well-being in regions often more effectively than the local governments and policymakers. Global ethics plays significant role when it contradicts with local practices. Global codes of conduct help to determine the acceptable behavioural norms. In the globalized world with social media and press, news travels fast, taking the role of judge without a courtroom. In the fast paced world, the companies being first in the CSR frontier get the PR benefits. They may also get the head-start with innovative CSR technologies. As Microsoft (2014) described: “We are entering a world where there will soon be more than 3 billion people with Internet-connected devices — from a farmer in a remote part of the world with a smartphone to a professional power user with multiple devices powered by cloud-based apps spanning work and life.” The global efforts, of United Nations and of the individuals and NGO’s working to decrease poverty and to secure sufficient living conditions for all, will need technology and collaboration to succeed. We do have the technology, we still need the distribution.

As an afterword the author wants to express that exploring the world of corporate social responsibility, in the angle of health and health technologies, was most interesting. It was comforting to notice how much individuals, NGO’s and companies do for the well-being of fellow-man, evidently also motivated by the act of good, not only the measurable business benefits. Author believes that there will be more social entrepreneurs and new kinds of mixed business models which act responsibly, both in terms of social inclusion and in terms of ecological footprint. The new generation has different way of thinking of business and the responsibilities we all have for the future generations.

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