

Issues and Challenges of Corporate Social Responsibility and Sustainability in the ICT Sector

Maja Stupalo¹, Rumen Dimitrov², Tomas Koctur³, Andris Erdos⁴, Lutz M. Buechner⁵

Faculty of Electrical Engineering and Computing, University of Zagreb, Croatia¹

University of Telecommunications and Post, Bulgaria²

Faculty of Electrical Engineering and Informatics, Technical University of Košice, Slovakia³

Faculty of Informatics, University of Debrecen, Hungary⁴

Hochschule für Telekommunikation Leipzig, Germany⁵

maja.stupalo@fer.hr¹, r.dimitrovv@abv.bg², tomas.koctur@tuke.sk³,

erdos.andris@gmail.com⁴, l.m.buechner@t-online.de⁵

Abstract

In this paper, a brief executive summary of sustainability principles in ICT sector is proposed. The main goal is to show that the profit can't overcome environment (planet) and society (people). The purpose of this article is to point to problems which are related to sustainability in ICT sector. The another goal is to raise awareness to people and whole science society which aim to convince and motivate them to help with this topic. The third goal is to propose solutions which are now available or are in development or plans for future. This paper is made of findings from the case study done by authors of this paper by blended mobility, which consist of 2 months of virtual (online collaboration) mobility and physical mobility. The team of authors together gathered resources from various sources and publications to acquire enough knowledge for the case study.

As a result of case studies, there have been found that a lot of engineers are not motivated to help with sustainable technologies, governments do not make a good environment for companies to motivate them for corporate social responsibility. Also, Greenwashing or environmental marketing which is not based on truth is proposed in this paper. A government should set big penalties and fines to force companies to stop to do Greenwashing. Nowadays a lot of engineers does not care about this topic and by this paper we would like to address our case study findings to motivate or convince them to help in this topic.

Keywords – ICT, SUSTAINABILITY, CORPORATE SOCIAL RESPONSIBILITY, CSR, GREENWASH.

Paper Type – Case study report.

Introduction

This paper aims to increase awareness and understanding of the most important issues and challenges of Corporate Social Responsibility (CSR) and Sustainability in the Information and Communication Technologies (ICT) Sector. First, it is very important to understand what is meaning of ICT in today's world. ICT refers to technologies that provide access to information through telecommunications [1][2] ICT is very important in our daily lives in many respects such as education, jobs, business, health, banking and of course our private life. The ICT sector is a major driver for growth and innovation in Europe.

It is very difficult to define what is a real meaning of sustainability because every culture, organisation or person have a different view of the meaning of that word. For example, developments talking about development sustainability, ecologist about sustainable land use, and food companies about supply chains sustainability. Sustainability could be defined as an ability or capacity of something to be maintained or to sustain itself.[3]

Corporate Social Responsibility is defined as the responsibility of enterprises for their impact on society. CSR is important for the interest of enterprises, in the interest of the EU economy and in the interests of society. [4]

Case Study Questions

In this case study, it is necessary to answer questions like what is the meaning and the importance of ICT in today's world and why is sustainability a key issue in the ICT sector in general. It is important to mention which key elements of ICT play which role in the sustainability debate and what are the challenges and risks of innovative ICT. It is very important to mention which role plays social responsibility for the actors involved in ICT and how and which ICT tools can help to solve social problems in the Europe and also in globally. And for the end, it must mention the Corporate Sustainable and Social Responsibility of ICT companies and what is a meaning of it – is it Sincerity or Greenwashing.

Methods

Firstly we've been collaborating through the Internet. Students are communicated with the supervisor via e-mails, and between each other using social network Facebook, e-mail and collaborate over Google Drive. From the reason that we are from 4 differ nationalities we get along pretty good and really fast.

With our supervisor we didn't had any kind of problems, he was always helpful and he was giving us the exact orders what we should do and how to improve our work even more.

Most of the researchers that we've done were partly discussed from all of us in our Google Drive and in our Facebook group. After we had the ability to see each other in personal we continue to work on our case even further without any problems and no barriers like a language or time.

For this study, we used other published scientific articles, books and others sources that we found on the Internet.

Results

The most significant elements which create this case study are four, the human being by itself the planet which is our only home and the profit for which most of the people are aiming for. And at last but not least sustainability, see Figure 1. To be able to achieve and continue living on this earth we need to think not only for ourselves but also for the mankind and the Earth. So we need to rethink how exactly everything can be done. Social and environmental issues are more important nowadays than ever. Doing good is not anymore about sackcloth and frugality, but it can feel and taste good too. The difference between to have, to do, or even must do is bigger than ever. Simply engaging in the business field is a combination of aspects of how we do our job, in what way we're thinking about the planet and how exactly we can manage to get trough with the people who are working on one side just to achieve not only profit but also and operational improvement and competitive advantage.

The companies which are engaging in sustainability are those that define sustainability as management of issues related to the environment (for example, greenhouse gas, emissions, energy efficiency, waste management and etc.)

On the other hand, Corporate Sustainability is a business approach that creates long-term shareholder value by embracing opportunities and managing risk deriving from economic, environmental and social developments. What companies are doing is called CSR reports - where it is possible to find information for the interests of the enterprise or even the interest of the EU economy and also of the society. ICT can be implemented with sustainability without a problem. Ideas, like reducing waste, low energy consumption, moving bits rather than legs, the variety of using the best transportation, are really something which can show us that the aim is to explore even wider implications of working with ICT, and linking the business benefits to other socially desirable considerations. [6]

Figure 1. Connection between people, planet and profit [5]

The footprint, even though the fact of just knowing that word and forgetting about that the humanity is the key element destroying his own planet. Limited resources like tantalum, gold etc. which we're not using as we need to, or simply worried about the sea level and above all said till here we should mention also the global warming. And now is the moment to use the word sustainability and connect it with ICT. Let's imagine a "paperless office", where instead of paper we can use all of

the technologies we can work collaboratively online as sharing electronic files rather than passing on paper files. Also, in that case, we can reduce the amount of paper used.

More connected with ICT term awareness is one of the important things. It can be built into business plans as well as making the organisational and consumer behaviour more sustainable. In the end, after the sustainability targets are set the outcome of a sustainability project are reports in which we can read for example how one company is not working anymore only for profit but also for the humanity and planet.

There are several key players which can help with proposed problems. Government plays important roles in social responsibility. There are many roles which should be done by a government. For example, Government should educate or explain to public meaning of social responsibility. It might be done through education focusing on children from very early age. There is also room for explanation of the importance of social responsibility through advertisements, lectures, discussions.

The second role of Government is to “push” people and companies for social responsibility by making regulations and laws in the nation, union or global scope. Without the laws and regulations would profit overcome social responsibility.

Besides of laws and regulations may Government motivate ICT companies for social responsibility. It could be done by several ways. One is by explaining the meaning of corporate social responsibility and the second one is by making tax deductions or other benefits for companies which are socially responsible.[7] [8]

Another players in corporate social responsibility are ICT companies. ICT companies are very innovative. They are capable of bringing new technologies or incorporate them into existing processes or workflows. Firstly ICT companies should treat their employees nicely. That principle should be applied also for employees of their suppliers, such mineworkers in precious metal mines in central Africa. Another way is to develop and implement technologies which help to society and public. There is also the way for a development of “Smart Sustainable Cities”, which has, for example, intelligent transportation system, street lighting, and other technologies which can seriously reduce energy consumption or CO₂ respectively. One part of Smart Sustainable cities are Energy Efficient Buildings which are designed with respect to energy efficiency. This can be achieved by simulation, modelling , and visualisation in the design process. [9][10]

Another research topics for ICT companies are Smart Grids. Energy transportation is a very complicated topic. It is also very complicated to incorporate renewable power sources to the grid because of their instability (not always is sunny out there or windy). Smart solutions in this field would make energy distribution very efficient and it would allow to automatically incorporate renewable power sources to the smart grid. [11]

Implementation of new technologies in ICT requires also to solve challenges of ICT such as security. The communication technology between peoples and between M2M takes a lot of challenges until these days. Basically, everyone wants to send their own message on the same channel, which brings certain security questions. The recently used encryption methods based on the idea, that doesn't have enough computing capacity to descript the message. Because the ICT sector developing by leaps and bounds, greater and greater computing power at our disposal. If the users want to provide the safety of the messages, they need to change greater and greater encryption keys. This process' result should be to be able to handle bigger messages, meanwhile, the message content shouldn't increase. Currently, must be able to find the way, how can reduce the messages length, how can reduce the traffic on the common communication channel.

Another strongly developing part is the cloud base storage and server virtualization. When we upload our documents, we ask from the certificate authority (which guarantee a safety channel for the communication) and we encrypt with it. When the cloud storage got our cipher text, encrypt it with the own secure key. The key moment is the encryption. Our messages are stored as unencrypted texts. We need to find a solution to handle this situation, meanwhile, the opportunities offered by cloud hosting is not worsened. Cloud services are very popular nowadays and become a very big part of our social life.

The ICT plays big roles in social life, there is has also a social implication. What freedom to share and with whom? Who can store my data? Violates my rights of privacy, when the street surveillance cameras capture some images about me? We need to able to solve these social questions too. When to continue to talk about sustainability, we should exclude the human impact on our world

or make it so little that it is almost invisible. Hand by hand nowadays are word like focusing on waste reduction, recycling and finding more environmentally-friendly components for products.

Briefly, sustainability can be connected with different various ways of reducing traffic in the big cities. Or new devices manufactured from well-known companies in order to reduce the energy consumptions. Nonetheless also is important to reduce the waste from all of the kinds such as food, water, supplies and electricity. Also, there is the possibility for transport substitution through a use of the new information and ICT.

However after saying this, we should mention something really important called greenwashing. The absolute practice of promoting environmentally friendly programs in order just to deflect attention from an organization's environmentally unfriendly or less savory activities.

Or with other words, we can say: This is a huge different between the commercials for a company compared to what she's really doing. Nonetheless, to minimize the negative effects we are aiming for better sustainability produced technologies which are going to consume lower amount of energy used in an efficient way and after it disposed of responsibly. Green is not enough to prevent from poverty, problems with the human rights and local communities. The business needs to do more than just to improve themselves, they should think a different way. What is really important for the society is the transparency business from the companies instead of just greenwashing which will lead to lost trust and no longer willingness to cooperate with it. [12]

Discussion

In the previous chapter, main topics in corporate responsibility and sustainability in ICT sector were described. The governments should educate young people at first and public in general in order to achieve goals. Our planet is in serious danger. Climate changes are very actual as long as the last year 2015 was the hottest year in our history. Reducing carbon footprint is one way to stop (or suspend) climate changes. Energy efficiency, water management, waste management renewable energy sources are related topics [13]. The most important fact is that there are a lot of technologies already developed but they are not integrated yet. There is also a room for new development to achieve goals. Engineers (people who are only capable of developing technologies) should be more convinced to help with development. They should be innovative, creative and motivated to do that. Also, public opinion and subsequent pressure to the government can drive changes more fastly.

And the last but not least revealed Greenwashing should be punished, in order to convince filthy companies to stop doing it. Although, when we detected that company lies and were doing greenwashing, they have financial damage as well as damage to reputation, but it is not enough. When some scandal is come out, big companies only apologize, pay the required penalty and continue to do the same things with damaging everyone around and only sees their profits. It is not enough only to pay a lot of money because a big companies have a lot of money and it is not a big problem for them. Maybe the big company should get a some penalty such as, really improve the situation in the world and some even ban the business or stop licence for a while, and maybe then the large companies will consider what they are doing.

Understandably for this case the process by itself is the most important thing from all four of them. The differ methods which can be used to implement the sustainability inside the corporations and even in the small business is crucial. Sustainability is not an easy thing and must be addressed to all of the people to redesign supply chain but on the bottom, we need to focus on the people. For example, why there is Green ICT ? - to address how the use of smart technology could make many processes more efficient. How simple things like our devices, houses, cars and etc can be more efficient than just consuming electricity. We need to understand that to be a sustainable person nowadays we should focus on what we're doing and how we're going to do it. There is slightly differ between profit and profit done in a sustainable way. To rethink over the technologies to address them to the publicity, to implement them in our bustling life is just one long process.

Conclusion

Issues and Challenges of Corporate Social Responsibility and Sustainability in the ICT Sector are proposed in this paper. As a case study results show, there is the need to educate society, but mostly children, force a government to continue with laws and regulations which force companies to

be more socially responsible and make strong regulations for sustainable future. Also, a government should be more serious in discovering Greenwashing and set stronger penalties for unveiled Greenwashing affairs.

References

- [1] ICT (Information and Communications Technologies) Definition (2010, Jan. 4), Available: <http://techterms.com/definition/ict> , 16.03.2016.
- [2] What is ICT?, Available: <http://www.tutor2u.net/business/reference/what-is-ict> , 16.03.2016
- [3] Supply Chain Sustainability, Available: http://www.bsr.org/reports/BSR_UNGC_SupplyChainReport.pdf, 20.03.2016.
- [4] Corporate Social Responsibility (CSR) - European Commission, Available: http://ec.europa.eu/growth/industry/corporate-social-responsibility/index_en.htm, 10.04.2016.
- [5] Triple Bottom Line, Available: <http://fixourfood.info/triple-bottom-line>, 05.04.2016.
- [6] Corporate Sustainability | Sustainability Indices, Available: <http://www.sustainability-indices.com/sustainability-assessment/corporate-sustainability.jsp>, 15.04.2016.
- [7] Sustainability and Corporate Responsibility, Available: <http://www.ericsson.com/thecompany/sustainability-corporateresponsibility/report>, 17.03.2016
- [8] Deutsche Telekom: Corporate Coresponsibility, Available: <http://www.telekom.com/corporate-responsibility>, 17.03.2016
- [9] Höjer, Mattias, and Josefin Wangel: "Smart Sustainable Cities" [Online], Available: https://www.kth.se/social/upload/53ff4266f27654379a3be2c0/2014_H%C3%B6jer_Wangel_Smart_Sustainable_Cities_AAM.pdf, 09.03.2016.
- [10] Guan, Xiaohong, Zhanbo Xu, and Qing-Shan Jia. "Energy-efficient buildings facilitated by microgrid." [Online], Available: <http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=5628267&url=http%3A%2F%2Fieeexplore.ieee.org%2Fiel5%2F5165411%2F5629465%2F05628267.pdf%3Farnumber%3D5628267>, 10.03.2016.
- [11] Clastres, Cédric. "Smart grids: Another step towards competition, energy security and climate change objectives." [Online], Available: https://halshs.archives-ouvertes.fr/halshs-00617702/PDF/CR2_CC_Smart-Grids_EnerPol_2011.pdf, 25.03.2016.
- [12] About Greenwashing | Greenwashing Index, Available: <http://greenwashingindex.com/about-greenwashing/>, 17.03.2016.
- [13] Smart Sustainable Cities | ICT for Sustainable Growth | Europa - Information Society, Available: http://ec.europa.eu/information_society/activities/sustainable_growth/cities/index_en.htm 17.03.2016