Corporate social responsibility as new challenge for the IT industry

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ABSTRACT

Corporate social responsibility (CSR) has become a relevant topic for enterprises offering products and services on a global scale. International organizations provide for guidelines and private associations publish codes of conduct requiring businesses to integrate social, environmental and ethical aspects, human rights as well as consumer concerns into their operations. Not at least the EU is promoting CSR through an Agenda for Action 2011–14. The implementation of CSR is a multidimensional ethical process and gains particular importance for the IT industry which by its nature is global. Therefore, IT enterprises are invited to conduct a CSR assessment, to develop a CSR strategy and to implement CSR commitments. These tasks are to be done by introducing specific CSR processes and compliance measures for risk assessment and risk mitigation.

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1. Introduction

"Did you ever expect a corporation to have a conscience, when it has no soul to be damned and no body to be kicked? (And by God, it ought to have both!)".[1] This exclamation made two centuries ago is rarely supported anymore these days; corporate social responsibility has become an important issue of legal and management literature.

1.1. International business models in the IT segment

Globalization is a buzzword in many industries. The fact, however, that economic activities and communications are not anymore limited by national borders is particularly relevant for IT markets. The Internet is a global network per se; virtually all business activities need the electronic infrastructure in a cross-border way. Furthermore, certain business models very much rely on the availability of global IT infrastructures.

The most prominent example is the Internet of Things (IoT) having the purpose of providing an IT-infrastructure which facilitates the exchange of "things" in a secure and reliable manner; through the IoT, everyday objects (such as cars, refrigerators, etc.) will be able to interact and communicate.

Another important IT market is the business outsourcing process industry: Many enterprises of different market segments prefer to have the IT infrastructure and the IT services provided by an experienced specialist, potentially even from abroad if costs are lower in case of a cross-border delivery.

1.2. Notion and importance of corporate social responsibility

In short, based on the newest international developments, corporate social responsibility (CSR) can be understood as the responsibility of enterprises for their impacts on society.[2] This definition is mainly based on the pillars as established in the

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[1] The First Baron Thurlow (1731–1806), Lord Chancellor of England, cited in J. Poynder, Literary Extracts, Vol. 1, London 1844.

[2] European Commission, Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, A Renewed EU Strategy 2011–14 for Corporate Social Responsibility, 25 October 2011, COM(2011) 681 final, p. 6; see also International Institute for Sustainable Development (iisd), Corporate Social Responsibility, An Implementation Guide for Business, Winnipeg 2007, p. 24.

context of the so-called Ruggie-Framework and taken over by the OECD and the EU.[3]

The responsibility exceeds the anyhow required respect for applicable regulation (legal obligations) and encompasses the integration of social, environmental, ethical and human rights as well as consumer concerns into the business operations in order to comply with the society's expectations of corporate behavior.[4] CSR means to have a (risk-based due diligence) process in place which allows to interact with all stakeholders of an enterprise and the society at large, thereby identifying, preventing and mitigating possible adverse impacts from business operations.[5]

CSR is not a completely new issue, but was first coined by Bowen in 1953, arguing in a normative way that "it refers to the obligations of businessmen to pursue those politics, to make those decisions, or to follow those lines of actions which are desirable in terms of the objectives and values of society".[6] During the following decades, the notion of CSR has been deepened, but its validity was also contested (for example by the Nobel Prize winner Milton Friedman).[7] The foundation of the CSR approach can be seen in the stakeholder theory focusing on the enterprise's external environment.[8]

During the last twenty years, the concept of CSR has been taken up by many international organizations issuing guidelines on CSR. Thereby, the scope and extent of CSR was broadened and adapted to new needs of the overall society. For example, the World Business Council defines corporate social responsibility as "the commitment of business to contribute to sustainable economic development working with employees, their families, the local community and society at large to improve their quality of life".[9] A major topic remains the legal quality of CSR guidelines; in order to strengthen the "soft law" nature of guidelines, the European Union (EU) has become active by submitting CSR proposals.

2. Legal framework of CSR

2.1. Multilevel activities

(i) Many international organizations as well as private actors have worked out guidelines containing CSR principles; in particular the following guidelines are noteworthy:

- *United Nations Global Compact*: This initiative calls on the private sector to embrace a core set of ten principles having been derived from existing international law and addressing human rights, labor, environment, and anti-corruption.[10]
- *United Nations Human Rights Instruments*: Even if the Universal Declaration of Human Rights of 1948 does not directly address CSR, the general goals of the fundamental rights can be interpreted toward business-related responsibilities.[11]
- *United Nations Guiding Principles on Business and Human Rights*: These principle are based on the far-reaching work done by the UN Special Rapporteur for Human Rights, John Ruggie, and implement the framework of "protect, respect, remedy" principles of human rights in the private business field.[12]
- *OECD Guidelines for Multinational Enterprises*: These Guidelines, first established in 2000, now in a version of 2011, introduce non-binding principles and standards for responsible business.[13]
- *International Labor Organization (ILO)*: The *Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy* encompasses a wide range of rights at work, including social rights; originally adopted in 1977, this Declaration has been revised several times and adjusted to the new needs. Furthermore, the ILO adopted the *Declaration on Fundamental Principles and Rights at Work* in 1998, focusing on core labor rights, for example related to child labor, forced labor, non-discrimination and collective bargaining, and the *Declaration on Social Justice for a Fair Globalization* in 2008, addressing (i) social protection, social dialog, etc. and (ii) recognition of the indivisibility of these objectives.[14]
- *International Finance Corporation (IFC)*: Being a member of the World Bank Group, the IFC released Environmental and Social Standards in April 2006,[15] having been updated

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[3] For further details see below No. 2.1 (i).

[4] European Commission, Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Green Paper – Promoting a European framework for corporate social responsibility, 18 July 2001, COM(2001) 366 final.

[5] European Commission, Communication, supra note 2, p. 6; see also M.E. Porter/M.R. Kramer, Creating Shared Value, Harvard Business Review, Vol. 89, 2011, pp. 62–77; A.G. Scherer/G. Palazzo/ D. Matten, Globalization as a challenge for business responsibilities, Business Ethics Quarterly, Vol. 19, pp. 327–347.

[6] H. Bowen, Social Responsibility of the Businessmen, New York 1953, p. 6.

[7] O. Falck/St. Heblich, Corporate Social Responsibility: Doing Well by Doing Good, Business Horizons, Vol. 50, 2007, pp. 247, 248/49.

[8] See also E. Freeman, Strategic Management: A Stakeholder Approach, Boston 1984.

[9] World Business Council for Sustainable Development, Corporate Social Responsibility: Meeting changing expectations, 2005, p. 6; see also S.B. Banerjee, Corporate Social Responsibility: The Good, the Bad and the Ugly, Critical Sociology, Vol. 34/1, 2008, pp. 51, 60.

[10] See http://www.unglobalcompact.org.

[11] See http://www.un.org/en/documents/udhr/.

[12] United Nations, Guiding Principles for the Implementation of the UN "Protect, Respect and Remedy" Framework, Resolution 17/4, 16 June 2011, see http://www.ohchr.org/Documents/ Publications/GuidingPrinciplesBusinessHR_EN.pdf. For a detailed analysis and concretization of the Ruggie Framework see United Nations Human Rights Office of the High Commissioner, The Corporate Responsibility to Respect Human Rights, An Interpretative Guide, New York 2012.

[13] See http://www.oecd.org/dataoecd/43/29/48004323.pdf.

[14] See http://www.ilo.org/public/english/bureau/leg/declarations. htm; for more details see Ch. Kaufmann, Globalisation and Labour Rights, Oxford/Portland 2007, pp. 67–77 and R. Weber, Transnational Corporations and Child Labor, Lausanne 2011, pp. 116–125.

[15] Performance Standards on Social and Environmental Sustainability, see http://www.ifc.org/ifcext/enviro.nsf/ AttachmentsByTitle/pol_PerformanceStandards2006_full/$FILE/ IFC+Performance+Standards.pdf.

in 2012,[16] defining the roles and responsibilities of IFC and its borrower companies.

- *Montreux Document Framework*: The Montreux Document of September 2008 introduces the responsibility of the states to implement their obligations under international human rights law, incl. corresponding good practices, related to operations of private military and security companies during armed conflicts.[17] In 2010, the Montreux Document has been complemented by an *International Code of Conduct for Private Security Service Providers*.[18]
- *ISO 26000*: These international guidelines provide directions on "how businesses and organizations can operate in a socially responsible way […] that contributes to the health and welfare of society".[19]
- *Equator Principles*: The IFC and private financial institutions agreed on common social and environmental principles for the management of project financing in June 2006.[20]
- *Principles for Responsible Investment*: Private investment professionals have issued these Principles, worked out in 2005/06, in order to comply with environmental, social and corporate governance standards.[21]
- *Voluntary Principles on Security and Human Rights*: This set of standards of behavior has been developed by the US and UK governments in 1999/2000; later other countries also signed on.[22]
- *EU Agenda for Action*: Since 2001, the European Commission is involved in the promotion of CSR; the newest Action Plan stems from 2011.[23]

(ii) On the international level, the generally worded Global Compact and the more specific OECD Guidelines for Multinational Enterprises are the most influential legal documents.[24] The Guidelines contain general policies requesting from the enterprises to take fully into account established ethical policies in the countries in which they operate, and to consider the views of other stakeholders. In addition, the Guidelines address nine specifically important areas, namely disclosure, human rights, employment and industrial relations, environment, combating bribery, bribe solicitation and extortion, consumer interests, science and technology, competition, and taxation. Looking at the broad scope of issues it stands out that, apart from economic and environmental topics, human rights and consumer interests are specifically mentioned. This fact is of importance for the IT industry, particularly IoT enterprises.

(iii) The European Commission tried to play a pioneering role in the development of the promotion of CSR. The topic of CSR has been dealt within the Green Paper 2001 addressing basic issues of CRS, followed by the establishment of the European Multistakeholder Forum on CSR.[25] Later, in 2006, the European Commission published a new policy whose centerpiece was strong support for the business-lead initiative with the name of "European Alliance for CSR"[26]; the respective Communication identified eight priority areas for action. The European Commission has taken up the CSR topic again in fall 2011 with the Communication "A Renewed EU Strategy 2011–14 for Corporate Social Responsibility"[27]; the main purpose of this Agenda for Action consists in the concretization and implementation of the Ruggie Framework.

2.2.   EU strategy for CSR in particular

As mentioned, the European Commission is of the opinion that CSR should be more strongly promoted; therefore, the Communication of 25 October 2011 contains an Agenda for Action 2011–14. The respective Agenda outlines suggestions for Member States, enterprises, and other stakeholder groups. The Agenda encompasses the following issues:

- *Enhancing the visibility of CSR and disseminating good practices*[28]: Critical social and environmental issues are to be observed by enterprises and other stakeholders which makes it recommendable to increase the awareness of the importance of CSR in the business world. Therefore, the Commission intends to create in 2013 multistakeholder CSR platforms in a number of relevant industrial sectors, and to launch from 2012 onwards a European awards scheme for CSR partnerships between enterprises and other stakeholder.
- *Improving and tracking levels of trust in business*[29]: According to the Commission, the European business community should aspire to be amongst the most trusted groups of organizations in society since trust is crucial for citizens.
- *Improving self- and co-regulation processes*[30]: In order to design the respective processes appropriately with the support of many stakeholders and in an efficient way, self- and co-

[16] See http://www1.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/publications/publications_handbook_pps.

[17] The Montreux Document on pertinent international legal obligations and good practices for States related to operations of private military and security companies during armed conflict, see http://www.icrc.org/eng/assets/files/other/icrc_002_0996.pdf; see also R.H. Weber, Shift of legislative powers and multistakeholder governance, International Journal of Public Law and Policy, Vol. 1, No. 1, 2011, pp. 4, 11/12.

[18] See http://www.news.admin.ch/NSBSubscriber/message/attachments/21143.pdf.

[19] See http://www.iso.org/iso/home/standards/management-standards/iso26000.htm; see also F. Haines/K. Macdonald/S. Balaton-Chrimes, Contextualizing the Business Responsibility to Respect: How Much is Lost in Translation, in: R. Mares (ed.), The UN Guiding Principles on Business and Human Rights, Leiden/Boston 2012, pp. 107, 116/17.

[20] See http://www.equator-principles.com/resources/equator_principles.pdf.

[21] See http://www.unpri.org/principles/.

[22] See http://www.voluntaryprinciples.org/principles/introduction.

[23] See below No. 2.1 (iii).

[24] See supra notes 10 and 13.

[25] European Commission, Communication, supra note 4.

[26] European Commission, Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee, Implementing the Partnership for Growth and Jobs: Making Europe a Pole of Excellence on Corporate Social Responsibility, COM(2006) 136 final.

[27] European Commission, Communication, supra note 2.

[28] European Commission, Communication, supra note 2, pp. 8/9.

[29] European Commission, Communication, supra note 2, p. 9.

[30] European Commission, Communication, supra note 2, pp. 9/10.

regulation are to be considered as good means of the regulation agenda; therefore, the Commission intends to launch a process in 2012 with enterprises and other stakeholders to develop a code of good practice for self- and co-regulation exercises which improves the effectiveness of CSR processes.

- *Enhancing market reward for CSR*[31]: The positive impacts of CSR on competiveness should be better recognized; therefore, an improved integration of social and environmental considerations into business processes needs to be facilitated.
- *Improving company disclosure of social and environmental information*[32]: The Commission envisages to support disclosure of such kind of information.
- *Further integrating CSR into education, training and research*[33]: The Commission intends to provide further financial support for the respective activities on CSR.
- *Emphasizing the importance of national and sub-national CSR policies*[34]: The Commission proposes to create a peer review mechanism for national CSR policies.
- *Better aligning European and global approaches to CSR*[35]: The Commission intends to promote European interests in international CSR policy developments and to ensure the integration of internationally recognized principles and guidelines into its own CSR policies which makes it advisable to establish improved monitoring processes.

The actual adoption of the objectives proposed by the European Commission in the legislation of EU Members only realizes their actual implementation. Furthermore, the Agenda for Action 2011—14 is of a general nature and applies to industries in all sectors. As far as the IT industry is concerned, specific issues need to be taken into account.[36]

2.3. Multidimensional ethical process

The CSR compliance is a behavioral process having close connections to ethics. The rationale and assumptions behind the CSR discourses are that[37]:

- Corporations should comply with social and environmental issues;
- Corporations should behave in an ethical manner and demonstrate the highest level of integrity and transparency in their operations;
- Corporations should enhance social welfare.

Therefore, CSR commitments encompass internal mechanisms which intend achieving the following purposes through the respective behavioral processes[38]:

- *Values*: Corporate procedures should not only delineate rules, but also basic sets of ethics.
- *Reputation*: Negative externalities could cause serious problems making it advisable to promote greater corporate citizenship.

Notwithstanding the elements of "values" and "reputation" the management literature hast not yet clearly and scientifically identified that compliance with CSR makes a long-term business case,[39] even if most recent research seems to indicate that a positive correlation could exist between CSR and the enterprises economic value.[40]

The word "responsibility" is linked to a category that describes the conduct of the company in the markets and generally in the environment, encompassing its relationship to its consumers and its commitments to an ethical behavior.[41] However, the ethical dimension does not correspond to the traditional altruism since it supports the enterprise's reputation and constitutes an element of good public relations.[42] Therefore, looking from this angle of a values-based culture the CSR principles could include the following[43]:

- *Respect*: Objective to foster mutual respect with communities and stakeholders being affected by corporate actions.
- *Integrity*: Evaluation of positive and negative impacts of the business on the society in general and the human, health, social and environmental surroundings in particular.
- *Communication*: Improvement of transparent communication to stakeholders and measurement of communication performance.
- *Excellence*: Encouragement of business partners and suppliers to adhere to CSR standards.

The major issues of CSR are covering human rights, labor and employment practices, environmental issues (such as biodiversity, climate change, resource efficiency, life-cycle assessment, and pollution prevention), combating bribery and corruption, and protection of consumer interests including privacy.[44]

2.4. Legal character of CSR codes

The implementation of CSR principles can be based on internal and external codes. As far as internal codes are concerned, the legal quality is obvious; they are part of the corporate and/or contractual framework of the concerned

[31] European Commission, Communication, supra note 2, pp. 10/11.
[32] European Commission, Communication, supra note 2, pp. 11/12.
[33] European Commission, Communication, supra note 2, p. 12.
[34] European Commission, Communication, supra note 2, pp. 12/13.
[35] European Commission, Communication, supra note 2, pp. 13/14.
[36] See below No. 3.3.
[37] Banerjee, supra note 9, p. 62.
[38] J. Levis, Adoption of Corporate Social Responsibility Codes by Multinational Companies, Journal of Asian Economics, Vol. 17, 2006, pp. 50, 52.

[39] See for example M. Weber, The business case for corporate social responsibility: A company-level measurement approach for CSR, European Management Journal, Vol. 28, 2008, pp. 247—261.
[40] See Y. Cai/H. Jo/C. Pan, Doing Well While Doing Bad? CSR in Controversial Industry Sectors, Journal of Business Ethics, Vol. 108, 2012, pp. 467—489.
[41] E. Béthoux/C. Didry/A. Mias, What Codes of Conducts Tell Us: Corporate Social Responsibility and the Nature of the Multinational Corporation, Corporate Governance, Vol. 15/1, 2007, pp. 77, 81.
[42] Béthoux/Didry/Mias, supra note 41, p. 81.
[43] Banerjee, supra note 9, p. 63.
[44] European Commission, Communication, supra note 2, p. 7.

enterprise (private law character). More difficult is the qualification of external codes, prepared by international organizations or business associations. Such kinds of CSR codes are not (hard) law in the traditional sense since the respective principles are not introduced by legislative bodies.[45] Over time, this situation could change, mainly if the European Commission proceeds with the CSR Agenda for Action[46] and would request the EU Member States to implement certain standards on the basis of a CSR Directive.

Therefore, CSR codes as an alternative to regulation are to be qualified as "soft law" having a special legal character. In various fields of the society and economy the term soft law is now acknowledged as valuable notion even if some uncertainties relating to its enforceability do remain; in fact, soft law can entail several functions previously tied to hard law, for example the notion of coordinating device and the objective of reaching a minimal level of ethical behavior.[47] Consequently, the term soft law does not mean that compliance with CSR codes is completely voluntary. During the last few decades, manifold types of instruments based on informational-lawmaking have been developed which are centered between hard law and no law.[48] These new forms are implemented by institutions, procedures, analyses and reflections based on a complex exercise of power in a political economy.

In legal theory, the introduction of economics into political practice is called governmentality, producing a particular form of political rationality, a technology of power that becomes a process which isolates the economy as a specific sector of reality and political economy as the science and technique of intervention into business processes.[49] Furthermore, compliance with CSR could become a matter of acting "state of the art"; non-observance of CSR would then have to be considered as lack of diligence.[50]

3.   Implementation of CSR in the IT industry

3.1.   Overview

An overview of CSR implementation in the IT industry cannot be done on the basis of a "one size-fits-all" method; moreover, each enterprise has unique characteristics and is confronted with different circumstances in the market. Nevertheless, some general principles based on a systematic structure can be outlined, being part of a well-designed CSR implementation framework which integrates economic, social and environmental issues. As an example, the following framework could be considered[51]:

- Conduct a CSR assessment;
- Develop a CSR strategy;
- Concretize CSR commitments;
- Implement CSR commitments;
- Measure performance and report on progress;
- Evaluate results and improve CSR strategy.

Such kind of general framework structures must be adapted to the needs of the concerned enterprise.

3.2.   Concretizations and procedures of CSR implementation

(1) The efforts of an enterprise should start with a CSR assessment of the values and ethics of the enterprise, the internal and external drivers motivating the implementation of CSR, the key CSR issues, the key stakeholders to get involved in the CSR framework, the human resource and budgetary implications of CSR, the identification of the legal requirements, etc.[52] The CSR assessment process should encompass the topic of assembling a CSR leadership team, developing a working definition of CSR, identifying legal requirements, reviewing corporate processes and activities as well as identifying and engaging key stakeholders. The results are to be assessed, eventually based on available tools, in a reality check.[53]

(2) Based on the CSR assessment, the CSR strategy needs to be developed (overall direction, relevant stakeholders, specific priority areas, time line of action): The strategy could be concretized by a matrix of proposed CSR actions including environmental, social, and economic activities which are to be established in a step by step approach.[54] Thereby, priorities are to be determined and the different CSR actions must be consistent.[55]

(3) Using the CSR strategy as a foundation, specific CSR commitments must be developed, ensuring that the corporate culture of the enterprise is consistent with the CSR values that the business strategy (objectives and goals) are aligned to and integrated into the CSR strategy, and that a transparent informational environment gives guidance to employees and business partners how to assess the importance of the CSR strategy.[56]

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[45] For an overview see R. H. Weber, Overcoming the Hard Law/Soft Law Dichotomy in Times of (Financial) Crises, Journal of Governance and Regulation, Vol. 1/1, 2012, pp. 8, 10/11; see also R. Mares, Business and Human Rights after Ruggie: Foundations, the Art of Simplification and the Imperative of Cumulative Progress, in R. Mares, supra note 19, pp. 1, 22/23.
[46] European Commission, Communication, supra note 2.
[47] Weber, supra note 45, p. 11.
[48] See Weber, supra note 45, pp. 11/12.
[49] M. Foucault, Governmentality, in: G. Burchell et al. (eds.), The Foucault Effect: Studies in Governmentality, Chicago 1979, pp. 87/92 and 102.
[50] See also R.H. Weber, Regulatory Models for the Online World, Zurich 2002, pp. 82/83.

[51] See iisd Guide, supra note 2, p. 19. An alternative could consists in implementing the more recent Guiding Principles developed by the UN Human Rights Office, supra note 12, pp. 26 et seq., which, however, are quite generally phrased and give less clear guidance to the IT industry.
[52] See iisd Guide, supra note 2, pp. 22/23.
[53] See a list of available tools in the iisd Guide, supra note 2, p. 28.
[54] See iisd Guide, supra note 2, pp. 33 and 36/37.
[55] See iisd Guide, supra note 2, pp. 40/41.
[56] See iisd Guide, supra note 2, p. 42; to the involvement of the most senior level of the enterprise see also UN Human Rights Office, supra note 12, pp. 29/30.

(4) The CSR commitments are to be implemented,[57] for example by developing an integrated CSR decision-making structure, by preparing and implementing a CSR business plan, by setting measurable targets and identifying performance measures, by engaging employees and others to whom CSR commitments apply, by designing and conducting CSR training, by establishing mechanisms for addressing problematic behavior, by creating internal and external communications plans, and by making commitments public. Measurable targets are to be set and performance measures identified, thereby following the well-known "SMART" guidelines (simple, measurable, achievable, reliable, time-bound).[58] Furthermore, CSR-related goals are to be included in the job descriptions of board members and important members of the management in order to improve their accountability.[59]

(5) CSR reporting and verification processes must be implemented in order to evaluate the success with or the problems of the CSR commitments. This step has to include an appropriate process-oriented system[60] as well as due diligence procedures.[61] The rapid developments of the information technologies make it also easier to digitally "tag", collect and organize all kinds of business data and stakeholder reactions.[62]

(6) Finally, the compliance with the CSR commitments must be evaluated by determining what is working well and investigating what is not working well and why not. Based on the results, improvements are to be designed and established.[63]

3.3. Special requirements for the IT industry

In the IT industry and in the IoT segment in particular the enterprises have to take care of risk design issues in various respect. Mainly privacy risks and consumer protection topics as part of CSR can occur; both issues play an important role. Risk assessments should be run at an early stage prior to taking the decision of definitely implementing certain systems; furthermore, measures susceptible to malicious attacks should be avoided and applications already configured in an appropriate way should get a special preference.[64]

The risk assessment has to deal with the uncertainties and complexities inherent to risk analyses; usually, three aspects

are taken into account in the evaluation[65]: (i) Balancing categories of evidential reasoning, (ii) judging data and theories, and (iii) considering desiderata of rationality. Apart from the balancing categories, available data and rationality elements (methodology, reliability relevance, etc.), experience must be gained with new CSR strategies and commitments. Notwithstanding some uncertainties related to the evaluation methods it can be said, that the better the precautionary measures comply with the envisaged CSR policies, the less likely an enterprise is confronted with problems in the actual implementation of CSR commitments.[66]

In addition to the generally mentioned risk analysis topics the following aspects should be taken into account in view of a successful implementation of CSR policies[67]:

- Scheduling of an IT process in a way to plan the necessary actions and adjustments in time and in compliance with industries' state of the art;
- Internal review of established processes and implementation of a sophisticated reporting regime;
- Compilation of supporting art effects (for example results of security reviews, control designs) as evidence that the processes are executed in a proper way;
- Determination of the persons and/or functions within the organization who have the authority for the relevant actions;
- Provision of criteria of how to evaluate and document whether the actual applications are ready for deployment consistent with the CSR strategy;
- Consideration/identification of factors that would require a new or revised CSR process;
- Stakeholder consultation in order to receive the appropriate feedback from all directly or indirectly involved persons/organizations/authorities.

As mentioned, enterprises offering products and services by means of the Internet of Things are particularly exposed to privacy and consumer protection concerns. Both (legal) topics have been discussed to a certain extent, but the "results" seem still to remain in their infancy. Therefore, good reasons have led to the decision of the European Commission and the appointed Expert Group to submit a survey to all stakeholders enabling them to respond to a couple of questions asked in the questionnaire.[68] Indeed, the responses have shown that privacy and consumer protection are sensitive issues. Furthermore, a majority of respondents are of the opinion that it is necessary to establish an "IoT ethical charter" to be followed by any entity involved in the design, development and deployment of IoT technologies and applications. In addition, the majority of respondents also pleads for the involvement of the public sector in the supervision of compliance by IoT enterprises with the ethical principles of a charter.

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[57] For further details see iisd Guide, supra note 2, pp. 57–64.

[58] See iisd Guide, supra note 2, p. 59.

[59] See iisd Guide, supra note 2, p. 64.

[60] See iisd Guide, supra note 2, pp. 67–69.

[61] See UN Human Rights Office, supra note 12, pp. 32–35.

[62] See iisd Guide, supra note 2, p. 70.

[63] See iisd Guide, supra note 2, pp. 73/74; UN Human Rights Office, supra note 12, pp. 36–68 and pp. 48–51.

[64] See also R. H. Weber, Information Infrastructure Protection as Legal Topic, Computer Law Review International (CRi), Vol. 1, 2007, pp. 13 et seq.; R. H. Weber, Legal Framework for Risk Management in Information Infrastructures, in: S. Kierkegaard (ed.), Business, Law & Technology, Present and Emerging Trends, Vol. 1, Hamburg 2006, pp. 470 et seq.

[65] See D. Crawford-Brown/J. Pauwelyn/K. Smith, Environmental Risk, Precaution, and Scientific Rationality in the Context of WTO/NAFTA Trade Rules, Risk Analysis, Vol. 24, 2004, pp. 461, 465.

[66] See also R. H. Weber, Privacy Impact Assessment – A Privacy Protection Improvement Model? Goethe University, Frankfurt, 25th IVR World Congress, Law, Science and Technology, 2011, Paper Theories No. 039/2012, p. 9.

[67] See also Weber, supra note 66, p. 7.

[68] See http://ec.europa.eu/yourvoice/ipm/forms/dispatch?form=IoTGovernance.

Consequently, in the future the compliance with CSR standards will become imperative for the IoT enterprises in order to make business models acceptable to the public and the consumers getting involved in IoT transactions. An increased attention to CSR seems to be in the interest of all involved stakeholders; the earlier enterprises are taking up the CSR compliance requirements and implement adequate CSR commitments, the more likely the IoT business model will be convincing in the long run.

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