

# CSR in the Information Society – A Case of Web Accessibility in Europe and Japan

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## Key words

Web accessibility, the Web, WCAG, Information Society, Corporate Social Responsibility (CSR), Information and Communications Technologies (ICT), the elderly, people with disabilities, aging of society, Europe, Japan, voluntary standards

## Abstract

Ongoing changes in society towards the Information Society have given rise to new challenges with reference to Corporate Social Responsibility (CSR). This paper focuses on web accessibility as a responsibility of corporations and discusses practical ways to ensure that websites, “the Web” hereafter, be made accessible to all the readers, including the elderly and people with disabilities.

The United Nations (the UN) recognises Web access as a basic human right in the Information Society, and Governments in major economies endorse it. On the technical side, a set of high quality voluntary standards has been established by a group of experts. Despite this backing, implementation of web accessibility has been slow in practice. There is a gap between what *should* happen and what it *is happening*. Why are good ideas adopted slowly?

To gain a better insight into today’s reality, its barriers and opportunities, the author interviewed web owners and experts, who are promoting web accessibility in Europe and in Japan, which has led to a number of recommendations for action to all stakeholders.

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## Table of Contents

### Abstract

<b>1. Introduction.....</b>	<b>4</b>
1.1 The issue.....	4
1.2 Scope of the paper.....	5
<b>2. Web accessibility in the context of CSR.....</b>	<b>6</b>
2.1 Definition and history.....	6
2.2 Relevance of web accessibility to CSR.....	8
2.3 Business benefits and costs of web accessibility.....	11
2.4 Political drive – equal rights for everyone .....	12
2.5 Reality gap.....	14
<b>3. Survey of web policy makers and accessibility promoters.....</b>	<b>14</b>
3.1 Overview of the survey.....	14
3.2 Summary of results: Web policy makers.....	15
3.3 Synthesis.....	24
<b>4. Recommendations - Bridging the gap .....</b>	<b>25</b>
4.1 Summary.....	25
4.2 High level actions .....	25
4.3 Practical actions and stakeholders owning actions .....	27
<b>5. Challenges of CSR in Information Society.....</b>	<b>30</b>
5.1 Three Game-changers.....	30
5.2 Social obligations of private properties .....	31
5.3 Corporate ethics.....	32
5.4 Perception .....	32
<b>6. Conclusion.....</b>	<b>33</b>
<b>Annex .....</b>	<b>35</b>
I. Acronyms .....	35
II. Some examples of accessible web sites .....	35
III. Summary of interviews: Web accessibility experts .....	35

## 1. Introduction

### 1.1 The issue

The evolution of society to the so-called “Information Society<sup>1</sup>” is driven by information and communication technologies (ICT) and has given rise to new challenges in the context of Corporate Social Responsibility (CSR). For example, the right to access information, computer ethics, information filtering, open-source vs. proprietary software, information security, business ethics of Internet service providers. These are but a few examples of the areas that are deeply affected by the paradigm shift as we use ICT systems more and more.

Scholars involved in CSR-related domains are aware of the emerging CSR challenges in the Information Society. For example, Donna J. Wood and Adele Santata have taken Wikipedia to alert us to lack of transparency of its authors<sup>2</sup> of the online encyclopaedia, and Torsten Busch, on access to knowledge and corporate citizenship<sup>3</sup>.

This paper addresses the accessibility to web sites (“the Web”, hereafter), as one of a number of emerging CSR issues in the Information Society. The Web has become indispensable to our lives and work in modern society. We

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NOTE: All the web sites cited in the paper are as of May – June, 2011.

<sup>1</sup> “Information Society” is a generic term. In this paper, it refers to a society where Information and Communications Technologies (ICT) and ICT-based systems are used as an integral part of social activities, e.g. communication by e-mails, finding communities of interests in social network systems (such as SNS, examples include LinkedIn and FaceBook) and purchasing services and things using online systems via the Web, such as booking flights online.

<sup>2</sup> Donna J. Wood and Adele Santata (2009), “Transparency and social responsibility issues for Wikipedia”, *Ethics and Information Technology*, vol. 11, pp.133 – 144  
Donna J. Wood and Adele Queiroz (2008), “Information vs. Knowledge: Transparency and social responsibility issues for Wikipedia”, in Antonino Vaccaro, Hugo Horta, and Peter Madsen (Eds.), “Transparency, Information, and Communication Technology” (pp. 261–283). Charlottesville, VA: Philosophy Documentation Center.

<sup>3</sup> Thorsten Busch (2010), “Capabilities in, capabilities out: overcoming digital divides by promoting corporate citizenship and fait ICT”, *Ethics and Information Technology*, vol. 13, published online (31 December, 2010), <https://posgrado.escom.ipn.mx/biblioteca/Capabilities%20in,%20capabilities%20out%20overcoming%20digital%20divides.pdf>

use it to receive and provide information, and most importantly, to interact with society. For example, booking flights and hotels via the Web is an interaction with society by means of a commercial transaction. Thus it is essential that the Web be accessible to everyone, including the elderly and people with disabilities, who may have a low level of computer literacy. Given the fact that our society is rapidly aging, one should include such populations in standard web reader profiles.

The accessible web is not simply a dream of technologists. A set of high-quality standards to facilitate web accessibility has been established and is constantly being up-dated by a group of voluntary experts. The standards are voluntary in nature, but widely recognised as *de facto* standards for their high quality.

Despite all potential benefits and quality standards, implementation of web accessibility has been slow in practice. There is a gap between what *should* happen and what *is actually happening*. Why are good ideas not so quickly adopted in practice?

This paper discusses the history and definition of web accessibility, and its relevance to CSR. Results of the interviews conducted by the author with web owners and creators will be discussed and analysed in an attempt to identify reasons of the current gap. Based on analysis of the survey results, a list of recommendations to a variety of stakeholders in the form of actions for long- and short-term solutions are presented together with an analysis of the global context that has given rise to new challenges to CSR strategists and practitioners.

## **1.2 Scope of the paper**

The paper examines those web sites created and owned by companies and organisations that offer information to the public. While the importance and

necessity of web accessibility also applies to sites owned by individuals, these are excluded from the analysis, as they are not relevant to CSR.

The paper does not make a distinction between people with disabilities and the elderly. In terms of disabilities affecting access to the Web, the difference between these two groups lies largely in the level of disability, such as with visual and auditory issues. As our vision and hearing prowess generally diminishes with age, the difference between people with and without disabilities is a matter of degree, rather than a clear distinction.

The terms *accessibility* and *usability* often appear in discussions and literature on web accessibility. *Accessibility* is generally referred to the access to a web site itself, and *usability*, the level of facilitation within the web site<sup>4</sup>. Definitions of these concepts are however largely conceptual, and some professionals use them interchangeably. The author will primarily focus on *accessibility* in this paper, though *usability* is inherently included in some parts of the analysis.

## **2. Web accessibility in the context of CSR**

### **2.1 Definition and history**

The author takes the definition of web accessibility to be as described by a group of experts that have created a set of voluntary standards of web accessibility guidelines, the Web Accessibility Initiative (WAI) of the World Wide Web Consortium (W3C):

*“Web accessibility means that people with disabilities can use the Web. More specifically, Web accessibility means that people with disabilities can perceive, understand, navigate, and interact with the Web, and that*

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<sup>4</sup> “Accessibility” refers to a level of easiness to *understand the contents* by reading, viewing or listening for a wide variety of readers, notably for people with visual and auditory impairments. Major examples of accessibility criteria include; font size, alternative text attached to graphics, contrast between font and background colours and hearing aid,. “Usability” refers to a level of easiness to *use the web within* a web site. For example, the way to navigate users to find how to contact the company is evaluated as *usability*.

*they can contribute to the Web. Web accessibility also benefits others, including older people with changing abilities due to aging.*<sup>5</sup>

Major examples of functions of accessible web sites are; Alternative Text for Images, a web site that provides all the functionalities via a keyboard without a mouse, and functionalities that allow selection of a set of colours to provide sufficient contrast between colours of texts and background on web pages<sup>67</sup>.

The idea of web accessibility was born at the birth of the World Wide Web (WWW) in 1989<sup>8</sup>. Tim Berners-Lee, the inventor of WWW advocated the universality of the webs, which naturally included access by people with disabilities.

*“The power of the Web is in its universality. Access by everyone regardless of disability is an essential aspect.”, Tim Berners-Lee, W3C Director and inventor of the World Wide Web*<sup>9</sup>

The Web accessibility guidelines have been developed by a voluntary group of web technology experts through the Web Accessibility Initiative (WAI) of the World Wide Web Consortium (W3C)<sup>10</sup> and are widely recognised as the *de facto* standard. The first version of WCAG, WCAG 1.0 was published in May 1999, and the second and latest version, WCAG 2.0, in December 2008.

The guidelines are comprised of three sub-guidelines; *Authoring Tool Accessibility Guidelines (ATAG)*, *Web Content Accessibility Guidelines (WCAG)*, and *User Agent Accessibility Guidelines (UAAG)*. WCAG is mostly referred to by promoters of web accessibility and web developers<sup>11</sup>. Hence,

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<sup>5</sup> Source: <http://www.w3.org/WAI/intro/accessibility.php>

<sup>6</sup> For more information, see <http://www.w3.org/standards/webdesign/accessibility#examples>

<sup>7</sup> For examples of accessibility features of browsers and OS, see <http://www.w3.org/WAI/users/browsing.html#optimize>

<sup>8</sup> See consolidated articles on the birth of the Web at <http://www.scientificamerican.com/report.cfm?id=web-20-anniversary>

<sup>9</sup> Source: <http://www.w3.org/standards/webdesign/accessibility>

<sup>10</sup> See Web Accessibility Initiative (WAI) portal at <http://www.w3.org/WAI/>

<sup>11</sup> “Essential Components of Web Accessibility”, <http://www.w3.org/WAI/intro/components.php>

this paper uses WCAG to mean a set of these three web accessibility guidelines.

The major targets of the WCAG are web site owners, content designers and developers, and web authoring tool developers. To these professionals, WCAG provides concrete means to create accessible webs.

It has been recognised that the wider public benefit from accessible webs, especially the aged<sup>12</sup>. The number of web readers with age-related cognitive impairments, such as weakening eyesight, is substantial and increasing. These people often are not computer savvy and are called, “Digital immigrants (the elderly)” as opposed to “Digital natives (the young)”. The importance of web accessibility will increase as aging of society progresses. Improved web accessibility also helps people with temporary disabilities, for example as a result of an accident or an illness.

## 2.2 Relevance of web accessibility to CSR

A web owned by a company or an organisation is a part of the company or the organisation. Hence, the Web is an institution, that has stakeholders. The Web’s stakeholders are its viewers, who have critical interests in its accessibility. Thus one should examine web accessibility in light of CSR.

Stakeholders’ interests in the Web may be elaborated as follows:

**The Web is infrastructure:** In the Information Society, the Web is one of the principal infrastructures where all members of society may obtain information and undertake social and economic activities. While companies and organisations may create each web site for their own purposes, the enormous collective volume of sites on the Web has attained a level whereby the Web has significant influence on lives of users. In other words, companies and

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<sup>12</sup> For Examples of other people who benefit from the accessible web, see <http://www.w3.org/WAI/bcase/soc#groups>



organisations carry responsibility to society for their web sites, hence CSR of the Web.

**Human rights:** The United Nations (UN) has established that access to information and communications via ICT and ICT-based systems are human rights. The following three events are particularly important in that context:

- Universal Declaration of Human Rights, UN (1948)<sup>13</sup>, especially Article 19 on the Right to Freedom of Opinion and Expression
- The Convention on the Rights of Persons with Disabilities (2006)<sup>14</sup>, especially Article 9 on Accessibility<sup>15</sup>. The Convention even obliges Governments to implement these principles.
- The Special Rapporteur's Report on the Promotion and Protection of the Right to Freedom of Opinion and Expression on the Internet reported to the UN Human Rights Council (May 2011)<sup>16</sup>. In his report, the Special Rapporteur argues that the Internet should remain as open as possible as it is an essential means for all people to exercise their basic right to freedom of expression<sup>17</sup>.

**Population of potential beneficiaries:** Web accessibility is not an issue of a small number of people. Though comprehensive statistics are not available for many reasons<sup>18</sup>, some indicative data from past research allows taking a calculated guess<sup>19</sup>:

- Among US computer users in 2003 ranging from 18 to 64, 57% (74.2 million) are likely to have benefitted directly or indirectly

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<sup>13</sup> <http://www.un.org/en/documents/udhr/index.shtml>

<sup>14</sup> <http://www.un.org/disabilities/default.asp?navid=14&pid=150>

<sup>15</sup> The UN states in a note on accessibility attached to the Convention that the UN websites in the future will include functionalities to ensure access by people with disabilities. See <http://www.un.org/disabilities/convention/note.shtml>

<sup>16</sup> [http://www2.ohchr.org/english/bodies/hrcouncil/docs/17session/A.HRC.17.27\\_en.pdf](http://www2.ohchr.org/english/bodies/hrcouncil/docs/17session/A.HRC.17.27_en.pdf)

<sup>17</sup> <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=11108&LangID=E>

<sup>18</sup> For example, definition of disability is different from a country to another, some may not disclose their disability, other people do not consider age-related impairments as disability.

<sup>19</sup> Source: "Statistics on People with Disabilities and Web Use", <http://www.w3.org/WAI/bcase/resources#statecom>

from the use of accessible technology as a result of difficulties and impairments that might have had impact on computer use<sup>20</sup>.

- 71% of UK disabled people have probably used the Internet to find information on goods and services. In addition, 54% of them probably consider Internet access essential, compared with only 6 per cent in the general population<sup>21</sup>. (Sourced from a report in 2004)
- About 44% of population in Japan was over 50 years old in 2010<sup>22</sup>.
- By 2050, population of those over 65 years old will have increased by about 20 % to 40 % in the developed countries alone, with Spain quite likely leading the pack. Developing countries will likely follow<sup>23</sup> follow this trend.

**Companies could do much:** It is estimated that about 93% of domain names have been taken by commercial organisations by the end of 2009<sup>24</sup>. Thus one might reasonably assume that companies create the majority of web sites. Hence companies will likely contribute significantly to global accessibility to the Web, if each of them makes their own web site accessible.

Web accessibility is a typical issue for which the private sector's conduct has significant public implications. In future those who develop and design the web might be required to fulfil certain obligations to facilitate web access by the widest possible population, namely those with disabilities. Accessibility might become a socially required norm for the Web.

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<sup>20</sup> <http://www.microsoft.com/enable/research/phase1.aspx>

<sup>21</sup> Source: "Realising potential", <http://www.realising-potential.org/case-studies/industry/e-commerce.html>, cited from "Disabled People and the Internet:- Experiences, Barriers and Opportunities", Piling, Barrell & Floyd, Joseph Rountree Foundation, 2004

<sup>22</sup> Source: Japan Aging Research Center (JARC), "Estimation of the future population of Japan", 2006, <http://www.jarc.net/?p=55>

<sup>23</sup> Source: Ministry of Health, Labour and Welfare, "White Paper on Health and Welfare, 2000", Japan, [http://www1.mhlw.go.jp/wp/wp00\\_4/chapt-a5.html](http://www1.mhlw.go.jp/wp/wp00_4/chapt-a5.html) (in Japanese)

<sup>24</sup> The sum of the numbers of registered general Top Level Domain (gTLD) names of ".biz" and ".com", sourced from <http://www.zooknic.com/Domains/counts.html>

Companies creating web sites that are to be viewed by the public have the moral obligation to make these sites equally accessible to those with and without disabilities. This should apply even though companies might not have thought of readers with disabilities as their clients. This kind of thinking in itself limits opportunities for social interaction of some people. This also limits a market opportunity of the company itself. For example, a retail shop may lose customers if its online shopping web site is not designed in a user-friendly way for the vision-impaired elderly.

Ignorance of web accessibility could be considered as an act of complacency of a given company. By doing nothing or little to enhance web accessibility, such a company potentially discriminates against people with difficulties and thus abuse their human rights.

### **2.3 Business benefits and costs of web accessibility**

Companies and organisations might also draw material benefit from improved accessibility to their web sites. While the return on investment (ROI) of improved accessibility needs to be measured on a case-by-case basis, promoters of accessible webs have found concrete evidence of positive impact on businesses when accessibility to their websites was improved. By way of illustration<sup>25</sup>;

- Some companies in Japan started implementing accessibility functions on the Investor Relations pages of their web sites to improve communications with their major shareholders.
- Two top department stores in Tokyo have revamped online shopping pages of their web sites to serve to their wealthy clients, who are over 50 years old and who require an easy and user-friendly online shopping site.
- A survey by the COOP supermarket chain in Tokyo found that customers with limited mobility purchase more than people without

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<sup>25</sup> Source: Interviews by the author with experts of accessible webs.

mobility constraints do, thanks to their user-friendly online shopping web site<sup>26</sup>.

The costs associated with web accessibility depend on many factors. For example:

- Are we creating a new Website or
- Are we modifying an existing one
- What are the design requirements and
- What web authoring tools will be used by the designers? etc.

According to WAI experts, WCAG has been designed to guide web developers to identify the most essential items for accessibility so that they do not spend resources on items with relatively low benefit. The cost for integrating accessibility is negligible or minimal. Particularly, if it is done from the beginning or when existing web sites are refreshed<sup>27</sup>.

## **2.4 Political drive – equal rights for everyone**

Governments in major economies endorse the integration of accessibility functionalities on the Web. Governments' interests are to promote equality and social justice with respect to accessing ICT and ICT-based systems by people with or without disabilities. At the time of writing this report, Governments in 18 countries and regions (the European Union, EU) of the world have taken clear positions with reference to accessibility policy by means of new legislation, speeches, regulation guidelines and the like<sup>28</sup>.

The US Rehabilitation Act Amendments of 1998, Section 508 is the first law in the world that mandated that the Government provide equal access to electronic and information technologies<sup>29</sup>. All Federal agencies, when they develop, procure, maintain, or use electronic and information technology,

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<sup>26</sup> Ibid.

<sup>27</sup> "Costs involved in implementing Web Accessibility", excerpt from "Statement of Judy Brewer before the US House of Representatives Subcommittee on the Constitution, February 9th", 2000. <http://www.w3.org/WAI/References/200002-Statement.html>

<sup>28</sup> For detail, "Policies Relating to Web Accessibility" at <http://www.w3.org/WAI/Policy/>

<sup>29</sup> The US Government, "Resources for understanding and implementing Section 508", <http://www.section508.gov/#>

must ensure that these technologies are accessible to employees and members of the public with disabilities to the extent access does not pose an "undue burden".

The impact of US public procurement went beyond domestic suppliers. Non-US suppliers are now obliged to adhere to the law and align themselves with US accessibility policies when responding to US public procurement bids. This has drawn attention to web accessibility by a number of non-US companies, including ICT vendors.

The EU has been supporting accessibility to public webs for more than ten years. In particular, the Riga Ministerial Declaration (2006) stipulates that all public websites should be accessible by 2010, though it was found later that overall progress has been much slower than expected. In mainstream EU policy-making circles, accessibility has been included in the « e-Inclusion »<sup>30</sup> initiative, which is an EU initiative that promotes accessibility to ICT-based systems and services. This is one of the major policy initiatives of the Digital Agenda for Europe<sup>31</sup> that was launched in 2010. As a policy incentive, the EC has been working since 2007 on Standardization Mandate M376 to include accessibility in public ICT procurements<sup>32</sup>. It is expected that adoption of the Mandate will urge the Industry to improve accessibility to corporate web sites.

In Japan, the Ministry of Internal Affairs and Communications (MIC) has been promoting "Barrier-free web sites" since early 2000s. Mandated by the Basic Act for Persons with Disabilities, which invites national and local governments to facilitate web access for people with disabilities the MIC has been urging other Ministries to improve accessibility to their web sites through various measures, such as issuing recommendations. Despite these measures, progress of implementation by Ministries still needs to be faster.

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<sup>30</sup> For example, EC, "Web accessibility", [http://ec.europa.eu/information\\_society/activities/einclusion/policy/accessibility/web\\_access/index\\_en.htm](http://ec.europa.eu/information_society/activities/einclusion/policy/accessibility/web_access/index_en.htm)

<sup>31</sup> For detail, [http://ec.europa.eu/information\\_society/digital-agenda/index\\_en.htm](http://ec.europa.eu/information_society/digital-agenda/index_en.htm)

<sup>32</sup> For detail, [http://portal.etsi.org/stfs/STF\\_HomePages/STF333/STF333.asp](http://portal.etsi.org/stfs/STF_HomePages/STF333/STF333.asp)

## 2.5 Reality gap

There is a significant gap between the ideas of those who are promoting web accessibility and the reality. High quality voluntary standards have been established and Governments in major economies support web accessibility. Despite these favourable initiatives, accessible webs are far from the norm on the Web. Recognition that web accessibility is part and parcel of CSR is low or non-existent. Why is there such a gap between reality and recommendations? What is obstructing progress?

The author has undertaken a survey of web owners and web accessibility experts in selected companies and organisations to investigate the reasons for this gap. The interviewees are located in Europe and Japan. While acknowledging that there are significant differences in cultures and societies between these economies, it is not the main objective of this analysis. Rather, it makes more sense to allow for a notion of shared challenges, a kind of unity in diversity with reference to approaches and issues of web accessibility across geographies.

## 3. Survey of web policy makers and accessibility promoters

### 3.1 Overview of the survey

Date: Obtained from May to June 2011

Survey methods: Interview by phones and e-mail exchanges

A. Web owners of companies and organisations, N=10<sup>33</sup>

<b>Organisation</b>	<b>Country of interviewees</b>	<b>Industry</b>
Fair Trade International	Germany	Labelling of fair trade goods worldwide
Fair Trade Deutschland	Germany	Labelling of fair trade goods in Germany
Fujitsu	Japan	ICT

<sup>33</sup> These companies are selected among those that claim that they care for CSR.

IKEA	Sweden	Retail of furniture
NEC	Japan	ICT
Nestlé	Switzerland	Food
NTT Docomo	Japan	Mobile telecommunications
SHISEIDO	Japan	Cosmetics
Company A	N.A.	ICT
Company B	N.A.	Petroleum

B. Web accessibility promoters at national and international levels, N=5

Organisation	Country of interviewees	Activities
Netscouts <a href="http://www.netscouts-ggmbh.de/">http://www.netscouts-ggmbh.de/</a>	Germany	Creation of accessible web for the disabled
UDIT <a href="http://www.udit.jp">http://www.udit.jp</a>	Japan	Promotion of accessible web, consulting on accessible web, Web auditing service
The Japan Web Accessibility Consortium (JWAC) <a href="http://www.jwac.or.jp/">http://www.jwac.or.jp/</a>	Japan	Promotion of accessible web in Japan
Harmony-I <a href="http://www.harmony-i.org/">http://www.harmony-i.org/</a>	Japan	Promotion of accessible web for people with visual impairment
Web Accessibility Initiative (WAI) of World Wide Web Consortium (W3C) <a href="http://www.w3.org/TR/WCAG20/">http://www.w3.org/TR/WCAG20/</a>	The US, Austria	WAI: Creation, up-dating and promotion of Web Contents Accessibility Guidelines (WCAG)

### 3.2 Summary of results: Web policy makers

#### Q1. Roles and organisations

Most people in charge of a company's web site policy are part of a corporate communication department, with notable exceptions of Fujitsu, SHISEIDO and NTT Docomo. Fujitsu offers consulting services of accessible web, drawn upon experienced experts who have acquired know-how over time. Fujitsu is an early adopter of integration of Universal Design in its product concepts, which includes web accessibility. For SHISEIDO, CSR has been

an integral part of the company norm since its establishment in the 19<sup>th</sup> century. It should be seen as a natural evolution for the company that created a separate function to ensure that web accessibility is part of Strategic Corporate Planning, and not an additional issue for the communications department to deal with.

<b>Q1</b>	<b>Your roles and organisation?</b>
Fair Trade International	<ul style="list-style-type: none"> <li>▪ Web master, responsible for contents</li> <li>▪ Communication department</li> </ul>
Fair Trade Deutschland	<ul style="list-style-type: none"> <li>▪ Online communication manager</li> <li>▪ Communication Department</li> </ul>
Fujitsu	Fujitsu Design Inc., a subsidiary of Fujitsu. The company is instrumental for Universal Design, including web accessibility
IKEA	<ul style="list-style-type: none"> <li>▪ Global webmaster: Global web strategy, tactics and to support country web team</li> <li>▪ Communication Department</li> </ul>
NEC	<ul style="list-style-type: none"> <li>▪ In charge of web communication for Japan national market</li> <li>▪ Communication Department</li> </ul>
Nestlé	<ul style="list-style-type: none"> <li>▪ Responsible for establishment and implementation of policies on corporate web sites to ensure coherency in corporate web sites worldwide, except web sites of marketing divisions</li> <li>▪ Communications Department at the Global Headquarters.</li> </ul>
NTT Docomo	<ul style="list-style-type: none"> <li>▪ Responsible for guidelines for internal web creators and harmonising web designs and specifications of all the web sites of NTT Docomo.</li> <li>▪ Marketing Department. Moved from Communications Department</li> </ul>
SHISEIDO	Digital Strategy Group, Corporate Planning Department
Company A	Marketing and communication addressed to the Governments in Europe, including East & West Europe and Russia
Company B	<ul style="list-style-type: none"> <li>▪ Online communication coordinator</li> <li>▪ Communication department</li> </ul>

## **Q2 Awareness of web accessibility guidelines (WCAG)**

Most of the people know of WCAG. It is interesting to observe that personal motivation matters with reference to web accessibility improvement. Fair Trade International and Fair Trade Deutschland are both examples of organisations where individual initiative made a difference. In fact, if not interested in (or not aware of) accessibility issues for the elderly and the disabled, a web site manager won't take accessibility for these segments of



the population into account, even though their target readers may well include seniors and other visually or hearing-impaired (e.g. the case of the web site for Government relations). Several people pointed out the large volume of WCAG as a reason for the lack of motivation to become more familiar with the recommendations. Those who are supporting web accessibility recognise that there is always a need for balancing design and accessibility considerations.

Q2	Awareness of web accessibility guidelines
Fair Trade International	<ul style="list-style-type: none"> <li>▪ Neither WCAG or WAI. Interested in user-friendly web sites in general.</li> <li>▪ Recently improved the FLO web site, and changed colours for better views.</li> </ul>
Fair Trade Deutschland	<ul style="list-style-type: none"> <li>▪ Learned a little at school (Online journalism) but became aware of its importance through the director of the external web agency, who is a web accessibility (WA) specialist</li> <li>▪ I fought to convince a web designer to improve accessibility to our web site</li> <li>▪ We don't have internal guidelines, but I ask web agents to align with WA. For example, I ask to avoid using <i>Flash</i><sup>34</sup>, which is not barrier free though it allows cool designs.</li> <li>▪ There is always compromise between design and accessibility.</li> </ul>
Fujitsu	See the answer to Q3
IKEA	<ul style="list-style-type: none"> <li>▪ Yes, but not in detail</li> <li>▪ WCAG is too extensive for practitioners. We are creating "IKEA Web Guidelines" for the first time in IKEA</li> </ul>
NEC	<ul style="list-style-type: none"> <li>▪ Yes, but not thoroughly. WCAG is too bulky and we can't follow them all</li> </ul>
Nestlé	<ul style="list-style-type: none"> <li>▪ Yes, and implement it at the AA level<sup>35</sup></li> <li>▪ Marketing web sites do not include accessibility because; Visual property is important, it costs about 30% more to create accessible web pages, whereas there is not clear benefits that offset the costs.</li> </ul>
NTT Docomo	Yes. WCAG has been taken into account in our internal web guidelines since 2003.
SHISEIDO	Yes, and we adhere to JIS X 8341-3 : 2010 <sup>36</sup>
Company A	No. During the web renewal project, web accessibility was not considered, because people with disabilities and the aged were not our target readers
Company B	<ul style="list-style-type: none"> <li>▪ Yes. Our web site is at AA level</li> </ul>

<sup>34</sup> A group of software developed by Adobe Systems to create graphics, video and animations. Flash is widely used to create web contents.

<sup>35</sup> Success criteria of WCAG set by WAI, see <http://www.w3.org/WAI/WCAG20/quickref/Overview.php>

<sup>36</sup> A version of WCAG adapted to Japanese language context. This standard is official.

	<ul style="list-style-type: none"> <li>▪ In regions, web editors are aware of accessibility but not very active in its implementation, due to limited time for projects, lack of personal interests and demand</li> </ul>
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**Q3 Do you promote web accessibility? Do you draw attention to business benefits, undertake user testing and see any challenges with in-house promotion?**

Some companies have internal web guidelines, which include web accessibility, while others do not. Even without guidelines, some web owners try to adopt web accessibility in their company webs based on their personal values.

Corporate web owners pointed out the importance of human work needed by web developers to create a accessible web site with quality. While web authoring tools and standard templates, in which web accessibility are embedded may be useful, nevertheless, it has been empirically proven that human work is indispensable to create accessible webs. In other words, to make manual and codes work in the way as intended, web developers must put themselves in the shoes of web viewers.

Lack of interest and demonstrable benefits of web accessibility were mentioned as constraints to promoting accessibility in their companies.

Above found, it is worth noting that Fujitsu obliges all employees to follow an e-Learning course on Universal Design<sup>37</sup>, which includes web accessibility.

<b>Q3</b>	<b>Do you promote web accessibility in your company? Business benefits, user testing, challenges?</b>
Fair Trade International	<ul style="list-style-type: none"> <li>▪ Interested in Web accessibility in general. For example, we don't use flash.</li> <li>▪ Makes business sense, i.e. wider readership</li> <li>▪ Want to do usability testing</li> <li>▪ (Challenge) Time and budget to dedicate to WA. Lack of</li> </ul>

<sup>37</sup> A design concept of products and environment that allows all the people to use them without their own adaptation or specialised modifications. See, for example, Universal Design Alliance Inc., <http://www.universaldesign.org/universaldesign1.htm>

	resources keeps web accessibility a low priority.
Fair Trade Deutschland	<ul style="list-style-type: none"> <li>▪ We don't have a particular policy. I am <u>personally promoting</u> WA in areas of work that I have influence.</li> <li>▪ Lack of knowledge and products to facilitate improvement of accessibility to our web site. For example, I wish we'd have a low-cost and easy solution for the audio aid (such as screen readers).</li> <li>▪ We do user surveys and monitors include those of more than 60 years old.</li> </ul>
Fujitsu	<ul style="list-style-type: none"> <li>▪ Fujitsu has been promoting web accessibility since the end of the 1990s. We have created an internal guidance manual, "Fujitsu Accessibility Guidelines" in Japanese and in English. Originally, it was for internal use, but presently it is available to the public on our public web site, too.</li> <li>▪ Offer WA free checking tool "Fujitsu Accessibility Assistance" for free since 2004. Available in 4 languages (Chinese, English, Korean and Japanese)</li> <li>▪ (Training) We also provide <u>e-Learning program on Universal design, which is compulsory for all employees</u> and we organise workshops on information sharing.</li> </ul>
IKEA	<ul style="list-style-type: none"> <li>▪ Yes, we promote web accessibility. It comes from IKEA's business idea; <i>Market for many people</i>. I wish to give our clients a good beginning with IKEA, and this is the first moment for them to click the web!</li> <li>▪ (Business benefits) Online retail trend is increasing for IKEA. It will continue to increase in future. (The Web is an important sales channel for IKEA)</li> <li>▪ We do user testing.</li> <li>▪ Some long-lasting retailers don't think that on-line business is for IKEA, although their attitudes are changing in favour of on-line retail business models.</li> </ul>
NEC	<ul style="list-style-type: none"> <li>▪ Yes. We organise awareness-raising activities <ul style="list-style-type: none"> <li>• Although our web designers tend to create nice-looking sites, they don't meet WA requirements.</li> </ul> </li> <li>▪ NEC has created "Web guidelines" and made a web template for NEC employees who assist external customers in creating web sites/pages, <ul style="list-style-type: none"> <li>• The web template is designed to achieve a minimum level of WA integration.</li> <li>• Challenge with the template is that it <u>does not automatically create a sufficiently accessible web site. Much is still left up to individual web creators.</u></li> </ul> </li> </ul>
Nestlé	<ul style="list-style-type: none"> <li>▪ I promote the accessible webs as it is the right thing to do and I anticipate future legislation (to oblige companies to make their webs accessible)</li> <li>▪ (My challenge) Lack of internal interests in accessible webs</li> <li>▪ We have internal web guidelines, which includes accessibility. There is no enforcement of the guidelines</li> <li>▪ We test usability. Before talking about accessibility, we must acknowledge that a major problem for the elderly, especially</li> </ul>

	those above 60 years old, is low computer literacy.
NTT Docomo	<ul style="list-style-type: none"> <li>▪ Our corporate web guidelines provide minimum rules for internal website creators.</li> <li>▪ Re. “Guideline patrol”; we check compliance of various web sites of NTT Docomo every 1 – 2 years, by engaging external experts for web auditing. This is because application of the internal web guidelines to web sites becomes compromised over time or forgotten as the people in charge change.</li> <li>▪ Besides accessibility, we regularly maintain the web site; correct wrong characters, etc.</li> <li>▪ <u>Benefits of WA are not clear</u>. This explains our lack of persistence when incited to try “Fancy images“ on the web while compromising accessibility.</li> <li>▪ We do user testing of the web. Various age groups are included in the surveys.</li> </ul>
SHISEIDO	We use an automatic accessibility checking software for our corporate site.
Company A	In the next round of the web improvements, we may take web accessibility into account.
Company B	<ul style="list-style-type: none"> <li>▪ I check WA and usability of other internal sites.</li> <li>▪ We use a Content Management System (CMS) to create web pages, in which WA functions are embedded. That said, automatic function is not enough to maintain good WA. Additional human checking is needed.</li> <li>▪ I personally think WA important, as we must ensure that readers navigate across our web without difficulty. Country legislation or EC endorsements to adopt WA functions help me to promote WA within the company.</li> <li>▪ Our internal Web guidelines include WA and are posted on the Intranet.</li> <li>▪ We do user testing before refreshing our web site. We pick up monitors randomly, though we do not intentionally include the elderly or people with a disability.</li> </ul>

**Q4 Obstacles and challenges ahead for your organisation to including / increasing adoption of Web accessibility**

Web owners listed various challenges, ranging from the need to enhance sensitivity to WA among web developers and web page owners, a major development gap in web technologies and WCAG, to limited time for web owners to work on their webs. To overcome these obstacles, some think that legislation to enforce WA would significantly change the attitude of many of web developers and owners.

Some feel compliance to WCAG beyond a certain level incurs too high a cost. The issue of design vs. accessibility appears to be a commonly shared perception by all web owners.

<b>Q4</b>	<b>Obstacles and challenges ahead for your organisation to include/increase adoption of Web accessibility</b>
Fair Trade International	N.A.
Fair Trade Deutschland	<ul style="list-style-type: none"> <li>▪ Technology is moving fast, and there is a lot to catch up with in order to maintain WA.</li> <li>▪ I need cheap and easy ways to improve WA.</li> <li>▪ In our organisation, while the idea of accessible web is accepted, we don't know much about the needs of people with disabilities. This is a point for improvement.</li> </ul>
Fujitsu	<ul style="list-style-type: none"> <li>▪ Understanding variation in web use, including how it is used by those with disabilities</li> <li>▪ Legislative requirements, such as the Article 508 of the US Rehabilitation Act</li> <li>▪ Development of technologies so that a development gap between web technologies, such as Ajax, and screen reader would be minimised.</li> <li>▪ To promote the above, <u>close cooperation between users, the governments and ICT companies</u> is needed.</li> </ul>
IKEA	See the answer to Q3
NEC	We continue awareness raising of web creators. I want to communicate that what's a fancy web site to some people may not be so for others.
Nestlé	<ul style="list-style-type: none"> <li>▪ Lack of sensitivity to others, and difficulty in maintaining the accessibility. Web sites change daily. Adding accessibility to on-going changes is often forgotten.</li> <li>▪ Solutions for these challenges are; training and to make WA mandatory.</li> </ul>
NTT Docomo	<ul style="list-style-type: none"> <li>▪ Striking the right balance between appearance and accessibility/usability is always difficult. I allow using Flash while trying not to undermine accessibility too much. It's difficult to say WA is definitely more important than fancy appearance.</li> <li>▪ Our web site contains old pages created before WA was taken into account. It costs too much to include WA functions in these pages, though we can't get rid of them for various reasons.</li> <li>▪ In the future when a new WCAG is published, we might not be able to have all web sites comply with the guidelines. It is a cost issue.</li> </ul>
SHISEIDO	Even though we do our best to ensure accessibility, we had to use dark grey, instead of black, for the colour of the text. It is

	needed to align with the soft and elegant image of our company. We are aware that this colour may not allow colour inverse <sup>38</sup> but we had to compromise.
Company A	N.A.
Company B	<ul style="list-style-type: none"> <li>▪ Due to limited time allowed for work, WA is often ignored, especially at local levels</li> <li>▪ Lack of awareness of the importance of WA</li> <li>▪ Sheer size of the company. In a big company, it is difficult to change anything quickly</li> </ul>

## Q5 Points of improvement in WCAG

All web owners who were aware of WCAG felt it necessary to make it more user-friendly and easy to understand intuitively. A suggestion by Global Web Master of IKEA summarises this requirement well; “We wish to have ‘Five steps to follow before doing anything else to achieve minimum web accessibility’”. Some other web owners pointed out the need for WCAG to catch up with web authoring technologies.

Q5	Points of improvement in WCAG
Fair Trade International	N.A.
Fair Trade Deutschland	N.A.
Fujitsu	N.A.
IKEA	<ul style="list-style-type: none"> <li>▪ Wish to have “Five steps to follow before doing anything else to achieve minimum web accessibility”, i.e. manageable WCAG for users</li> <li>▪ The present WCAG is bulky and difficult to digest. Therefore, people end up with either too shallow an understanding or they become too deeply involved. There is nothing in between.</li> <li>▪ Wish to know how to set the priorities. The AAA rating is too ambitious for the moment.</li> </ul>
NEC	<ul style="list-style-type: none"> <li>▪ For WCAG, the AAA rating is not realistic goal in our current business environment. It takes too much time and resources. We should start by aiming for the AA level of fulfilment.</li> <li>▪ It would help if WCAG contained a summary table with examples of “Dos and Don’ts”. The present WCAG offers only text and is difficult to understand when creating web sites.</li> </ul>
Nestlé	N.A.

<sup>38</sup> To switch colors on screen, e.g. From “Black fonts on white background” to “White fonts on black background”. This function helps people with a certain vision impairment.

NTT Docomo	Not in particular, as our internal guidelines are not so strict regarding WA.
SHISEIDO	There are some points regarding accessibility and usability that appear to be incompatible. On our site, we favoured usability over accessibility.
Company A	N.A.
Company B	<ul style="list-style-type: none"> <li>▪ Quick catch-up with CMS. WCAG is not adapted to the ever-developing functions of CMS</li> <li>▪ WCAG makes for dry reading. You must be passionate about it. It would be better if there were guidelines or animated tools, that would intuitively offer examples of accessible webs and functions, via embedded video clips, for example.</li> </ul>

### Q6 Any other points

Organisations show a degree of difference in the level of interest in WA . In some companies, WA is largely dependent on a web owner’s personal values and efforts, while other companies have a set of internal web guidelines that includes WA. In the latter case, web owners may legitimately urge web developers and other departments to include a degree of WA, but in the former, building up organisational knowledge of WA and its continued implementation cannot be guaranteed.

The case of Fujitsu is remarkable. The company has substantial internal resources for web accessibility and even offers business consulting services on accessibility. Fujitsu Design Inc., a subsidiary of Fujitsu, works on Universal ICT Design, including web accessibility.

Q6	Any other points
Fair Trade International	N.A.
Fair Trade Deutschland	I will continue to care about accessibility. It is an ongoing challenge to work with people who are just in love with ICT but who do not care about web readers with disabilities.
Fujitsu	We continue to work on WA in our activities with reference to Universal Design for ICT. For this reason, we share our internal web accessibility guidelines with the public since 2002 <sup>39</sup> . Fujitsu

<sup>39</sup> For English version, see <http://www.fujitsu.com/global/webaccessibility/>

	has also made its 'home-grown' free web accessibility checking and learning tool available to the public. <sup>40</sup> .
IKEA	N.A.
NEC	It is important to include "Usability" in web-creating processes that aim to develop user-friendly web sites
Nestlé	N.A.
NTT Docomo	N.A.
SHISEIDO	N.A.
Company A	N.A.
Company B	<ul style="list-style-type: none"> <li>▪ Web editors need to feel that they want to improve accessibility; not that they're being told to do so.</li> <li>▪ We include WA in web editor training s, though its impact largely depends on the individual.</li> </ul>

### 3.3 Synthesis

A typical day in the life of a web owner with regard to web accessibility could be characterised as follows:

"We know about web accessibility. We include it in our web guidelines. I know it's a good thing to do."

"Is web accessibility CSR? Maybe, but I do it anyway because I think it important."

"That said, web accessibility is not simple to implement in a business environment."

"I always encounter never-ending conflicts between preferences for fancy design over accessibility. It often happens with a marketing team whose priority is having an impressive appearance, or web designers who are passionate about technology. Investor Relations professionals are people who like accessible web sites, as many of their viewers are senior citizens."

"I manage to create work around solutions to live with "Flash" or sometimes relax the limitation of its use as a trade-off for competitive impact on viewers."

"My challenges are:

- Return on Investment (ROI) of web accessibility is unclear, though I think there may be many.

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<sup>40</sup> Fujitsu Accessibility Assistance (English),  
<http://www.fujitsu.com/global/accessibility/assistance/>



- We are happy to implement WCAG on our web sites but WCAG is difficult to master. We would like to have a straightforward explanation of WCAG in simple language, with illustrations and examples.”

There are motivated web owners and developers; however, they face several constraints with reference to integrating web accessibility. Noteworthy examples of these constraints are; lack of a convincing business model for web accessibility, i.e. ROI, lack of recognition of the need for web accessibility by web designers and the public in general, as well as lack of measures to facilitate digestion and utilisation of the WCAG.

While the status of web accessibility progress appears to be similar in Europe and in Japan, some difference was observed in terms of motivation. In Japan, pressure from an aging population appears to be driving businesses to pay more attention to their clients’ requirements. In Europe, aging populations are apparently not a strong motivation except for policy-makers. Nevertheless personal awareness of the needs of people with disabilities seem to be driving implementation of web accessibility measures.

#### **4. Recommendations - Bridging the gap**

##### **4.1 Summary**

High level and practical actions are needed to incite and facilitate companies and organisations to include web accessibility as part of their CSR strategies. The exact nature of actions to be taken should vary widely from policy-making to technical levels. However, regardless of the levels, integrating WA will involve some form of consultative process across all the stakeholders in society.

##### **4.2 High level actions**

- i. To establish recognition that web accessibility is a part of CSR

- ii. To include WA in CSR voluntary standards, e.g. Global Reporting Initiative (GRI)<sup>41</sup>. It will raise interests and awareness in companies.
- iii. To include WA in requirements for public procurement.

Promotion of web accessibility requires endorsement by a “super power” of a company. The “super power” must be the prime promoter of CSR, such as CEO. An external power with authority, such as GRI, may help.

Web accessibility needs to be established as a norm, not a choice, as the Web is an indispensable information infrastructure. In reality, web owners cannot push accessibility forward when they encounter different values that appear to be contradictory. Sometimes fancy appearance is favoured at the expense of accessibility. While it is not a black or white question, and there are web owners who continue to work on developing innovative ways to strike the right balance between web appearance and accessibility, web owners should see significant improvement in facing WA dilemmas, if they were to be guided by the leader of the company as a part of a CSR initiative. In other words, web-owner objectives should be clearly aligned with CSR corporate strategy and objectives.

Regarding the inclusion of the Web in CSR, the survey found that web owners perform better when encouraged by their management to comply with accessibility requirements. In those companies, where they are part of the corporate planning division or another department with similar functions, WA requirements are more often taken into consideration. SHISEIDO and Fujitsu are examples of these companies. In contrast, in companies, where the communication department is in charge of corporate webs, the level of corporate support varies, and compliance is largely dependent on the personal ethics of web owners. The evidence suggests that WA would not happen without clear corporate guidance and support.

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<sup>41</sup> A set of voluntary standards for CSR reporting most widely used by companies worldwide. <http://www.globalreporting.org/AboutGRI/WhatIsGRI/>

The US successfully legislated accessibility for all to ICT, including the Web, as an obligation for public procurement suppliers. To take web accessibility forward, the EU should accelerate the completion of the Standardization Mandate M376. If successful, this, in return, should have a positive impact on other economies, including Japan.

### **4.3 Practical and stakeholder actions**

#### **i. To work with people**

Stakeholders: People with disabilities, the elderly and their supporters

- a. To empower people with disabilities and the elderly to voice their opinions: Attitudes of people with disabilities and the elderly may have been rather passive regarding access to ICT equipment and systems in the past. It is recommended that those populations be encouraged to make their needs known and to request improvements.
- b. To facilitate training on accessibility tools: The elderly, people with disabilities, and other potential beneficiaries should be assisted in their quest for WA. Helping them to become familiar with key accessibility tools, such as screen readers, etc. will allow these populations to become competent users of web tools and as such they will become key contributors to improve the tools.

#### **ii. Web creation technologies**

Stakeholders: Creators of web authoring tools

- a. To develop web authoring tools that allow web developers to include accessibility functions in the Web without additional work. Most web sites are created on ready-made platforms of web sites. Hence similarly ready-made complementary web authoring tools would ensure that accessibility be built into web sites, as they are created.

- b. To develop web technology that allows accessibility as well as fancy design, e.g. those created on Flash<sup>42</sup>.

It should be noted that WAI has released a draft of the technique used in the WCAG. It includes descriptions on how to overcome the present problems between Flash and WCAG<sup>43</sup>. To evaluate whether this description is easily understood by web developers, who are not familiar with WCAG, is beyond the competence of the author.

### iii. WCAG

Stakeholders: WAI and its supporters

- a. To improve communication on costs of implementing WCAG. WAI offers explanations on the costs, but many web owners would appreciate more information and data.
- b. To create a guidebook for web developers to achieve WCAG standards on a step-by-step basis, from A to AAA rating levels<sup>44</sup>. For this purpose, ongoing activities of WAI Education and Outreach Working Group (EOWG) might prove to be helpful<sup>45</sup>.

### iv. Training

Stakeholders: Trainers of web engineers

To make web accessibility awareness and ethos a standard component of educational programs in schools and in vocational trainings for web masters and developers. This should significantly raise awareness of the need for web accessibility. It might enhance sensitivity and empathy to the

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<sup>42</sup> For example, Fujitsu offers software that allows Flash contents with web accessibility. <http://jp.fujitsu.com/accessibility/casestudy/pdpflash/>

<sup>43</sup> In fact WAI has been developing such technology. For the full draft, see <http://www.w3.org/WAI/GL/2011/WD-WCAG20-TECHS-20110621/flash.html>

<sup>44</sup> Levels of conformance of WCAG. <http://www.w3.org/TR/UNDERSTANDING-WCAG20/conformance.html#uc-levels-head>

<sup>45</sup> The author has learned that EOWG developed several explanatory and educational resources on WCAG to help learning. The group also plans to develop a simpler version of the guidelines for casual developers. <http://www.w3.org/WAI/EO/>

plight of people with disabilities of our future web developers in the spirit of the universality of the Web.

To this end, WAI is developing resources for training and educational material to address various situations, including universities and vocational training programs<sup>46</sup>. Collaboration between web trainers and WAI experts is expected to enrich the process and as well as the resources.

#### **v. Web accessibility support organisations**

Stakeholders: Web professionals and policy makers:

- a. To establish associations in charge of awareness raising and training on web accessibility. Such entities would serve web-owning organisations, such as companies and Governments. The Japan Web Accessibility Consortium (JWAC)<sup>47</sup> could provide a model for such organisations.
- b. One of the tasks of these entities would be to collect concrete evidence of benefits of accessible webs and share them widely with the public.

#### **vi. Promotional events**

Stakeholders: Web industry, promoting organisations and policy makers

- a. Web accessibility survey
- b. Good web sites contest

These may be one-off or annual activities, and their impact might not have lasting effects. These events, however, often help raising the level of motivation of web owners and in doing so, they provide useful references. In fact, various web accessibility surveys were undertaken and published in Japan. These surveys ranked the accessibility to web sites of Ministries, local governments, NGOs and the private sector.

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<sup>46</sup> <http://www.w3.org/WAI/training/>

<sup>47</sup> <http://www.jwac.or.jp/english/index.html>

For example, one NGO organises an annual contest of accessible web sites and the event is obtaining ever-increasing attention.

## 5. Challenges of CSR in Information Society

### 5.1 Three Game-changers

**ICT** is a major game-changer for CSR professionals in the Information Society. The technology largely enhanced potential access to information via the Web for people with disabilities and the aged. This has given rise to new groups of stakeholders with whom companies have not had to reckon in the past.

In the age of the printed media, people could not listen to what was printed on paper. With the Web, a voice browser, such as *Home Page Reader* or *VoiceOver*, allows for *reading* texts and graphics on the Web. There are many other functions enabled by ICT designed to overcome constraints of the printed media. In CSR context this means that companies should be aware that they might have to improve accessibility to their web sites for people with various disabilities. In other words, companies exclude these readers, if their webs are not accessible. Hence revisiting a company's CSR framework and actions is needed in light of our transition to an Information Society for the benefit of all the public.

Another game-changer is **the aging of global population**. Placed in a CSR context, aging is a process in which the number of stakeholders with some level of physical disorder increases. For example, vision and hearing impairments are generally experienced with increasing intensity by the elderly in society. Japan is the country where the process of aging is advancing fastest, followed by Europe and other regions of the world. This has serious economic implications. It means to business that ratio of customers with physical impairments will continue increasing. The aging of society is irreversible. Companies inevitably have to design access to their own Web to serve these new and rapidly growing segments of the population in the near

future. Hence companies are advised to take web accessibility more seriously; as a “must have”, and not as a “would like to have” option in their CSR strategies.

The third game-changer is **economic globalisation**. Many companies own web sites adjusted to local markets and languages for customers overseas. Though these country web sites should be made accessible as much as corporate web sites for their home countries are, it is, in reality, largely left as a future task of web owners. Web owners often do not have control on these sites for local markets, or may not have resources to work on foreign language web sites to improve their accessibility. Hence this action is mostly left aside as a future task for web owners. Many of corporate web owners see this sort of adjustment a future challenge rather than an immediate need. Although working on accessibility to corporate web sites in native languages is undoubtedly already a good start, it is expected that in future global corporations will apply their ethos, standards and WA principles to all web sites across the Company, regardless of languages of their web sites.

## **5.2 Social obligations of private properties**

Companies are major players in creating the information environment. Given that the majority of Web sites are created and owned by companies, they are collectively in charge of information infrastructure for society. Though each web site may be created upon individual initiative, work of all web owners add up to create the information environment in society. Web owners may not notice such a consequence, but this is a phenomena in the Information Society in which the Web is an indispensable information infrastructure. Companies should take social consequences of the impact that their web sites have into consideration in the same way that they must keep track of their carbon footprint on Earth. Just like companies that admit to generating a certain amount of pollution and who consequently have to take responsibility for cutting the volume of CO<sub>2</sub> generated from their activities, so should Web owners accept responsibility for the impact and accessibility to their web sites.

### **5.3 Corporate ethics**

Awareness of and creating accessible web depend on corporate ethics. Companies usually take responsibility for establishing clear information security and privacy policies. These policies are then usually published and become accessible via a link in their portal. This act demonstrates that they are ethical in assuming responsibility for security and privacy on their web sites. Web accessibility should be treated similarly, as accessibility is just as pertinent to human rights as security and privacy considerations are.

### **5.4 Perception**

Our perception of the Web and ICT may be another factor that hinders development of accessible webs. The Web and ICT systems are largely associated with young people often referred to as digital natives, who grew up with PCs and smart phones from birth, and who are typically seen as the main users of Social Networking Systems (SNS). While it is true that the growth of SNS was initially driven by them, they are no longer the only users

Why did we allow ICT vendors to continue targeting the young market while closing their eyes to the accessibility needs of “not-so-young” users and people with disabilities? Have we subconsciously accepted that ICT is merely for the young and that the rest of us should simply adjust to preferences and needs of the young? Do we think it not smart to request that web owners make web adjustments for the needs of the rapidly increasing segment of “not-so-young” users?

How have we managed to underestimate the market potential and needs of aging populations with respect to WA?

Subconsciously we, non-digital natives, may have collectively chosen to deny our own aging. We might not like having to adjust to decreasing physical functionality or refuse admitting that our ability to quickly learn smart ICT has altered over the years. However, the accessible Web will become the norm



as soon as a critical mass of people in society request it. We have to admit that accessible web is ultimately to everyone's benefit.

## **6. Conclusion**

To improve accessibility to the Web in practice, every stakeholder should take action to fill the gap between the ideal world and reality to the best of their ability. The above-mentioned suggested actions require ongoing consultation and collaboration with each other, and they are interdependent upon one another too. One action taken by a stakeholder will inevitably influence actions of others. All stakeholders will learn from consequences of their actions and improve them over time.

The concept of CSR accompanied by well-defined actions will help to move web accessibility forward in the day-to-day environment of web owners and creators. To do so, CSR professionals should revisit CSR concepts in the context of new needs created by our on-going transformation towards the Information Society.

Accessibility is not merely an issue of web sites. We should take web accessibility as one component of environment around information in the Information Society. To make the environment accessible, we should work on many other components as well, such as ICT equipment, web content, how to organise information on the Web, improve browsers, web design, to name a few items for consideration.

Implementing web accessibility may bring large business opportunities with it, such as new educational and training opportunities for future web users and owners, consulting on conformity to WCAG as well as targeted user training for special needs.

CSR professionals should continue working on emerging issues in the Information Society. CSR is a moving target as the environment surrounding companies and organisations changes. In order for companies and

organisations to be held accountable for their actions to society, CSR professionals must remain open-minded and curious so that they may proactively spot and take up new challenges as the Information Society evolves.

## Annex

### I. Acronyms

CMS	Contents Management System
W3C	World Wide Web Consortium
WA	Web accessibility
WAI	Web Accessibility Initiative
WCAG	Web Contents Accessibility Guidelines

### II. Selected examples of accessible web sites

Fairtrade Deutschland	<a href="http://www.fairtrade-deutschland.de/">http://www.fairtrade-deutschland.de/</a>
Netscouts	<a href="http://www.netscouts-ggmbh.de/lang-de.html">http://www.netscouts-ggmbh.de/lang-de.html</a>
SHISEIDO	<a href="http://www.shiseido.co.jp/">http://www.shiseido.co.jp/</a>
Tottori Prefecture (Japan), The First Award of the accessible Web contest in 2011	<a href="http://www.pref.tottori.lg.jp/">http://www.pref.tottori.lg.jp/</a>
Web Accessibility Initiative (WAI)	<a href="http://www.w3.org/WAI/">http://www.w3.org/WAI/</a>

### III. Summary of interviews: Web accessibility experts

**Q1 Status of the awareness and implementation of WA in your country. What makes some companies/organisations adopt Web accessibility, while others don't?**

Netscouts	<ul style="list-style-type: none"> <li>▪ There is a gap. There is a law that obliges public organisations to have their web sites accessible, but the progress is slow in practice. There is no enforcement of the law.             <ul style="list-style-type: none"> <li>○ Large companies are doing good, but not the case for small and medium-sized enterprises (SMEs).</li> </ul> </li> <li>▪ Major reason of the difference in WA awareness is in <u>education of web designers and developers</u>. Those who were trained at schools are aware of WA, while who are self-educated are not.             <ul style="list-style-type: none"> <li>○ Cost is not a problem. To create the new web, costs for accessible webs are the same as those without.</li> </ul> </li> <li>▪ Web accessibility will improve if companies engage web creators with disabilities, as my company does.</li> </ul>
UDIT	<ul style="list-style-type: none"> <li>▪ WA is not really known in Japan yet, though increasing.</li> </ul>

	<ul style="list-style-type: none"> <li>▪ Public organisations, such as prefectures are aware of it as the Ministry of Internal Affairs and Communications (MIC) promotes WA of web sites of national and local Governments, since the establishment of the Japanese standards on web accessibility (JIS X 8341-3:2010).             <ul style="list-style-type: none"> <li>• WA level varies. Some prefectures are doing good, others are not.</li> </ul> </li> <li>▪ Web accessibility is not compulsory for web sites of Governments. It's a problem in promoting WA.</li> <li>▪ Motivations of the private sector             <ul style="list-style-type: none"> <li>• (Marketing and IR) Those who are aware of the aging of Japanese society are highly interested in WA. Examples: Large department stores with aging clients, web pages of Investor Relations</li> <li>• (Trade with the US) In the private sector, awareness is lower, except for some ICT companies having trade with the US, such as Fujitsu and Toshiba. This is because of US procurement policy. <u>The Article 508 of the US Rehabilitation Act obliges suppliers to the US Government to comply with WA. This applies to Japanese suppliers, too.</u></li> </ul> </li> </ul>
The Japan Web Accessibility Consortium (JWAC)	Progress is still to be made. Promotion is the mission of JWAC.
Harmony-I	<ul style="list-style-type: none"> <li>▪ In the past ten years, Government sites have been improved, while private sectors sites were not.</li> <li>▪ Companies don't demand web developers to create accessible webs. WA is taught at schools but not much, due to small demand.</li> <li>▪ Standardisation of WA can't catch up with rapid changes of web technologies, such as CMS.</li> <li>▪ Funding agents don't help the accessible webs as they don't think the Web essential in life.</li> </ul>

**Q2 Some people say WA is too big, too time consuming while we have to work with limited resources. Any comments?**

Netscouts	<ul style="list-style-type: none"> <li>▪ All the technical standards are inevitably voluminous and detailed. Due to the nature of the text, it has to suppose every possible situation. WCAG is for technical people like me.</li> <li>▪ <u>We need a guidance of WCAG, which are simple to read and easy to implement.</u> Such guidance will take web developers to walk through from the basics to various higher levels.</li> </ul>
UDIT	<ul style="list-style-type: none"> <li>▪ It does not take time if one is willing to do.</li> </ul>

	<ul style="list-style-type: none"> <li>▪ It largely helps if WA is included in CSM, and included in <u>education of web developers</u>.</li> </ul>
The Japan Web Accessibility Consortium (JWAC)	<ul style="list-style-type: none"> <li>▪ Organising seminars and training sessions for web developers, starting with municipalities as WA is their obligation.</li> <li>▪ Wish to have checking tool, which is easy to use.</li> <li>▪ Working to raise awareness that WA needs to be included in the web design process from the very beginning. Incorporating WA standards in established web is a lot of work.</li> <li>▪ Started awareness raising activities with municipalities and banks, i.e. those web sites which users need strongly for their day-to-day lives.</li> </ul>
Harmony-I	<ul style="list-style-type: none"> <li>▪ Companies think that they should create the perfectly accessible site at once. No need to do, just start from what they can do, but ...</li> </ul>

**Q3 Interests in WA in your country – Are the elders and web-site policy makers interested in WA?**

UDIT	See the answer to Q1
The Japan Web Accessibility Consortium (JWAC)	<ul style="list-style-type: none"> <li>▪ Some web developers started having interests, but user interests are still to be grown.</li> <li>▪ That said, some <u>users started requesting improvement of web</u> to meet their requirements. They have started to voice their opinions, as they definitely need the web improvement.</li> <li>▪ In background of the user participation, a general change in society that people have less hesitant to talk about their opinions in public.</li> </ul>
Harmony-I	No. It is a big mistake to pick-up voice from those with ICT literacy! e.g. SNS – People with disabilities can't use it, due to heavy use of the graphics

**Q4 Do companies and Governments in your country take WA as a part of CSR?**

Netscouts	Large companies do, as their stakeholders include the elders. SMEs don't.
UDIT	<ul style="list-style-type: none"> <li>▪ Not really taken as CSR, but rather WA awareness is <u>needs driven</u>. For example, Investor Relations (IR) people make IR section of their company web easy to use for aged shareholders.</li> <li>▪ Empowerment of the elders and people with disabilities is needed. I am working to guide them to talk about their problems and requirements to company web sites.</li> <li>▪ Need to establish WA as <u>corporate ethics</u>. As companies place a link to security and privacy in their portal, why not</li> </ul>

	<p>putting WA on the portal as well?</p> <ul style="list-style-type: none"> <li>▪ <u>WA is for all the people</u>, with and without disability.</li> <li>▪ User testing is very efficient to convince business value of WA. If companies witness business opportunity lost in reality due to lack of WA, they immediately change their attitude to WA.</li> </ul>
The Japan Web Accessibility Consortium (JWAC)	<ul style="list-style-type: none"> <li>▪ Not necessarily CSR but other motivations.</li> <li>▪ An initiative by the Ministry of Internal Affairs and Communications (MIC) for the WA promotion with prefectures (46 in Japan).</li> <li>▪ For the private sector, the improvement of corporate image. Examples: Investor Relations (most of major shareholders would be over 50 years old), Public Relations/Communications, and increase in sales due to an increase in web access by clients.</li> </ul>
Harmony-I	No. Companies should take WA as responsibility to create information environment.

#### Q5 What are three major challenges ahead?

Netscouts	<ul style="list-style-type: none"> <li>▪ <u>Tools</u>: Need to develop to facilitate people who create web pages. For example, one may add a function on Adobe <i>dreamweaver</i> to automatically remind to add accessibility functions if the web creator forgets any.</li> <li>▪ <u>Training</u>: To include web accessibility in curriculum for students learning how to create webs at schools and to organise seminars on WA for web developers. Presently, there is no organisation that takes this task in Germany.</li> <li>▪ <u>Web design guidelines</u>: To provide sub steps to make advance in accessibility. From the basics to middle to advance levels. Such guidelines need to be written in Simple actions to implement.</li> </ul>
UDIT	<ul style="list-style-type: none"> <li>▪ <u>Establishment of EU mandate</u>. Wish to use this move to drive Japanese Government to legalise to make WA compulsory in requirements for procurement (such as Article 508 of the US Rehabilitation Act)</li> <li>▪ <u>Empowerment of the elders</u>. The definition of “the elders” in Japanese laws is people above 65 years old. I’d think this should be at lower age for WA promotion, as people start having some impairments long before 65, as early as 40 years old!</li> <li>▪ <u>Improvement of accessibility checking tools</u>. Web auditing software that companies (web owners) may use.</li> </ul>
The Japan Web Accessibility Consortium (JWAC)	<ul style="list-style-type: none"> <li>▪ To produce supporting materials of JIS X 8341-3:2010 or WCAG2.0 to facilitate web developers to use the standards.</li> <li>▪ To improve awareness of WA among website owners and developers.</li> <li>▪ To make the WA adopted in the requirements of public procurement</li> </ul>

	<ul style="list-style-type: none"> <li>▪ To create a system to approve WA compliance</li> </ul>
Harmony-I	<ul style="list-style-type: none"> <li>▪ <u>Empowerment</u> of the people with disabilities and to raise <u>user literacy</u> to new services on the Web. Then people will make voice to request improvements of new services.</li> <li>▪ Companies (= Web owners) should <u>recognise that they participate</u> in creating the information environment through corporate webs. Think beyond cost-performance.</li> </ul>

**Q6 Any other important points**

UDIT	<p>Practical suggestions:</p> <ul style="list-style-type: none"> <li>▪ To work on education of web developers to include WA</li> <li>▪ To work on CMS to include WA. Most web sites are created on ready-made platforms of web sites.</li> <li>▪ To interpret WA in practical languages easily understood by web developers and designers. = Not philosophy or Human Rights, but easy terms in the To Do list.</li> </ul>
Harmony-I	<ul style="list-style-type: none"> <li>▪ WA and information equipment are inseparable. We should work on all of them to improve accessibility; Web sites, equipment, contents of the web, browser.</li> <li>▪ Companies are not confident with their web site. They don't participate in the Daremo ga Tsukaeru Web (Web which everyone can use) site contest.</li> </ul>