Public procurement and ICT accessibility

Gunela Astbrink
GSA Information Consultants, g.astbrink@gsa.com.au

William Tibben
University of Wollongong, wjt@uow.edu.au

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Abstract
Government purchasing of ICT products and services is termed public procurement. Including accessibility criteria in the procurement process may improve employment opportunities in government for people with disabilities and could have flow-on effects for increased accessibility of products in the marketplace. This paper outlines a research project investigating the current status of legislation, regulation and policy of ICT accessibility criteria in public procurement in OECD countries. The research finds that voluntary government schemes were not successful. Mandatory processes based on uniform global standards coupled with compliance will have an impact.

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ict, public, procurement, accessibility

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Public procurement and ICT accessibility

Gunela Astbrink  
GSA InfoComm  
PO Box 600  
Ballina NSW 2478, Australia  
Ph. +61 417 715738  
g.astbrink@gsa.com.au

William Tibben  
University of Wollongong  
Wollongong NSW 2522  
Australia  
+61 2 4221 3768  
wjt@uow.edu.au

ABSTRACT
Government purchasing of ICT products and services is termed public procurement. Including accessibility criteria in the procurement process may improve employment opportunities in government for people with disabilities and could have flow-on effects for increased accessibility of products in the marketplace. This paper outlines a research project investigating the current status of legislation, regulation and policy of ICT accessibility criteria in public procurement in OECD countries. The research finds that voluntary government schemes were not successful. Mandatory processes based on uniform global standards coupled with compliance will have an impact.

Categories and Subject Descriptors
K.4.1 [Computers and society]: Public policy issues - Regulation

General Terms
Standardization

Keywords
Public procurement, ICT accessibility, web accessibility, people with disability, accessibility.

2. BENCHMARKING OF OECD COUNTRIES

1.1 Benchmarking of OECD countries
Benchmarking, completed in 2012, was undertaken to provide a global perspective on the ways ICT accessibility criteria are applied to the purchase of ICTs by national governments that are members of the OECD.

Table 1 summarises the findings. The findings include the monitoring mechanisms as this has a significant bearing on the application of accessibility criteria in public procurement. It can be seen from Table 1 that only two countries, the USA and Japan, were found to have comprehensive accessibility criteria that are mandatory in public procurement. Comprehensive accessibility criteria based on detailed standards were used. In the case of the USA, the application of these laws extend only to federal authorities while in Japan it appears that all levels of government are required to apply these laws. Further, it can be seen that the monitoring of the application of these laws yields two different scenarios. In the case of the USA, the use of an online procurement system called the Buy Accessible Wizard enables ICT purchases by federal government authorities to be tracked and checked. In the case of Japan, it is not possible to find an official mechanism for monitoring compliance with their procurement laws. Indeed, Yamada comments that the Japanese market is flooded with inaccessible ICTs and related services as a consequence [15].

The second category of ICT accessibility criteria includes more countries; Italy, Norway, Sweden and Spain. ICT accessibility criteria in these instances were not prescribed by detailed standards or criteria but were more generally described. By way of example, Spain and Italy have broadly followed the Section 508 provisions but have not adopted the standards in their entirety. Norway has used the principles of universal design to describe ICT accessibility criteria. In Sweden’s case, ICT accessibility concepts are laid down in equal opportunity law. These countries have also chosen different means by which to monitor compliance with these laws. In Italy, monitoring is the responsibility of equal opportunity authorities. In the case of Sweden and Norway, public administration authorities are responsible for monitoring the application of accessibility criteria in public procurement. It was not possible to find evidence of monitoring in Spain.

1. INTRODUCTION
The primary aim for including accessibility criteria in ICT public procurement is to provide more equitable access to ICT office equipment such as phones and computer systems for government employees with disabilities. It can also have flow-on effects for increased ICT accessibility in the broader community.

Government, by virtue of its spending power, can influence the availability and costs of goods and services by virtue of the various roles it plays in the economy as: buyer of goods and services; supplier of services; and regulator [3], [8].

By drawing on the experiences of OECD countries, the authors provided a comprehensive assessment of the use of ICT accessibility criteria in public procurement.
Table 1. The application of ICT accessibility criteria in public procurement law in the OECD

<table>
<thead>
<tr>
<th>ICT accessibility criteria</th>
<th>USA</th>
<th>Japan</th>
<th>Italy, Norway, Sweden</th>
<th>Spain</th>
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<td>comprehensively described</td>
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<td>in public procurement law</td>
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<td>Internal monitoring regime</td>
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<td>publish results</td>
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<td>Evidence of monitoring</td>
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<td>regime was not found</td>
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ICT accessibility criteria **broadly** described in public procurement law

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<th>ICT accessibility criteria</th>
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<td>described in public</td>
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<td>procurement law</td>
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<td>Internal monitoring regime</td>
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<td>regime was not found</td>
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ICT accessibility criteria **acknowledged** in public procurement law

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<thead>
<tr>
<th>ICT accessibility criteria</th>
<th>Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Luxembourg, Netherlands, Poland, Portugal, Slovakia, Slovenia, Switzerland, United Kingdom</th>
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</table>

ICT accessibility criteria **not found** in public procurement law

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<thead>
<tr>
<th>ICT accessibility criteria</th>
<th>Australia, Canada, Israel, Republic of Korea, New Zealand, Turkey</th>
</tr>
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</table>

The third category of ICT accessibility criteria comprises countries in which ICT accessibility is merely acknowledged in public procurement. This category has the largest number of countries. This is primarily by virtue of a European Union (EU) Directive on Public Procurement issued in 2004 that has been adopted by EU member countries. EU Directive 2004/18/EC requires EU member countries to adopt, along with other clauses, the following clause (29): “Contracting authorities should, whenever possible, lay down technical specifications so as to take into account accessibility criteria for people with disabilities or design for all users” [1].

The OECD countries that had not adopted ICT accessibility criteria in their public procurement laws were in the minority. As will become clear in the following cases, some of these countries’ governments have opted for voluntary strategies to encourage the use of accessibility criteria when procuring ICTs.

It is anticipated that the rankings of countries in Table 1 will change over the coming years, particularly in Europe, where considerable preparatory work has been undertaken to develop ICT accessibility standards for eventual implementation.

In the course of the research it became obvious that web accessibility criteria had been applied in many countries [13, pp. 18-19]. This was seen in the variety of ways that web accessibility guidelines have been codified in administrative regulations (particularly e-Government strategies) as well as equal opportunity law. These were almost universally based on W3C’s Web Content Accessibility Guidelines (WCAG) 1.0 or 2.0. While it is encouraging to note that a majority of countries had embraced web accessibility standards they are but a limited subset of the full range of criteria required for ICT to be fully accessible.

1.2 In-depth case studies

The in-depth study of contrasting cases provides a more detailed analysis of the different approaches countries had taken to ICT accessibility criteria. While the initial research analysed the United States of America, Canada, Japan, the European Union, Ireland and the United Kingdom, this paper will focus on USA, Japan, the Republic of Korea (South Korea) and the European Union.

United States

The United States is still considered a pre-eminent example of a country that has legally enforceable ICT accessibility standards as reflected in their so-called Section 508 legislation. The relevant legislation from which Section 508 is drawn is the Rehabilitation Act of 1973. In 1998, amendments to Section 508 saw the creation of a set of enforceable accessibility standards that were embedded into federal procurement regulations in 2001 [4, p. 98].

In 2006, the realisation that Section 508 standards were being challenged by new technologies led to a review called the ‘Section 508 Refresh’. This was done by the US-government supported Telecommunications and Electronic and Information Technology Advisory Committee (TEITAC). TEITAC’s brief was to review and update the standards that underpin both Section 508 of the Rehabilitation Act and Section 255 of the Telecommunications Act 1996, the latter relating to accessible telecommunications equipment for people with disabilities. TEITAC also considered new and converging technologies. These included:

- self-service machines and kiosks
- the growing market of gesture-based interfaces, such as touch screens
- the emerging trend in digital or biometric identification as an alternative to password protection
- hand-held devices and access for people with limited dexterity and refreshable Braille
- access for people with cognitive disabilities

TEITAC ensured that standards better address rapid technological changes by moving from specific product
categories to product characteristics. This means that an Apple iPhone is not forced into a category such as mobile phone, computer or PDA but is described by characteristics that have accessibility requirements attached to them [7]. These new standards have not been adopted yet by the US Government. In recognition of the need for increased compliance by procurement officials, the Office of Management and Budget in the Executive Office of the President issued a strategic plan in early 2013 to strengthen the management of accessible ICTs in the Federal Government. The key aims of this directive are: increasing transparency; strengthening accountability and improving collaboration between Federal agencies [9].

**Japan** This is the only country, apart from USA, that has ICT accessibility criteria comprehensively described in public procurement legislation. These criteria apply to all levels of government throughout Japan. When government entities procure products and services, they are required by law to address accessibility criteria along with other standards available from the Japan Industrial Standards Committee (JISC). There are seven parts to JIS X 8341 relating to accessibility of various types of products. This series of standards has been influential in the harmonisation of standards such as the International Electro-Technical Commission’s (IEC) Guideline 71 and the Web Content Accessibility Guidelines (WCAG) v. 2.0. Despite the impressive work of the JISC to develop accessibility standards, it is doubtful if the mechanisms used have been effective. Yamada reports that, in practice, all that is required, when procuring ICT, is to include a sentence on accessibility [15]. Yamada explains that the onus of responsibility is on suppliers to explain how their products meet accessibility standards. Checking for compliance with accessibility standards is then left to individual departments as there are no uniform compliance guidelines and no sanctions are made [14].

**Republic of Korea (South Korea)** The Republic of Korea is an example of a country that does not mandate ICT accessibility criteria in their public procurement process but have developed a range of initiatives that encourage adoption of ICT accessibility criteria. South Korea leads the region in relation to their online procurement system called KONEPS-Korea On-line E-Procurement System, but there is no specific requirement to address ICT accessibility when government procures ICTs [10]. The Korea Telecommunications Technology Association (TTA) has developed a set of national accessibility ICT standards akin to Japanese JIS 8341 [5]. Overseeing this work is the Telecommunications Accessibility Promotion Standard Forum (IABF). The work of this body aims to facilitate knowledge exchange between industry and academia as well as interact with international agencies. Voluntary compliance is a key feature of South Korea’s efforts to bring about greater inclusion for people with disabilities using ICTs.

**European Union** The European Union favours the introduction of ICT accessibility criteria in public procurement across member countries due to the fragmentation of markets that can occur because of multiple standards and the resultant inefficiencies [3]. The EU’s Mandate 376 has directed European standards bodies to develop a detailed standards framework that can be applied in public procurement [2]. This is to be harmonised with Section 508 standards as much as possible. The European Accessibility Act is under consideration by the EU and this may have an impact on the adoption of ICT accessibility criteria in future [3].

## 2 DISCUSSION

The case studies along with the data in Table 1 reveal a variety of approaches designed to improve the availability of accessible ICT products and services. The question as to which is the most preferred method is not a simple distinction between ‘carrots’ in the form of market-based incentives and ‘sticks’ as demonstrated in the mandatory application of standards.

From the outset, the analysis of case studies finds that voluntary incentives to encourage the adoption of ICT accessibility criteria ultimately lead to little change to the status quo. Many governments have set for themselves a relatively low bar of web accessibility; and even that has proved a challenge. The exception to this appears to be South Korea where government has achieved over 90% compliance with their KWCAG 2.0 web accessibility standards [5] [6]. The research indicates that the mandatory use of accessibility criteria in public procurement of ICTs provides an impetus that manufacturers and vendors respond to. While manufacturers and suppliers may initially believe that improving accessibility to their products will be an added cost with limited returns, the combined factors of ageing populations in countries such as Japan and the need to find new markets means that industry is slowly starting to see the commercial benefits in addressing the needs of individuals who have disabilities. With the mandatory use of accessibility criteria in public procurement of ICTs all manufacturers have a common set of criteria that they must address. The commentary from industry indicates that this level playing field is much preferred to a situation in which accessibility criteria have not been clearly defined or are not uniformly enforced.

The downside risks of making ICT accessibility standards mandatory in public procurement relate to the complexities of developing and implementing new standards. Yamada describes it as the tension between setting broad functional criteria as opposed to detailed quantitative criteria [14, p.7]. Add to this the rapid changes in technology, which challenge many of the assumptions about the technologies that the standards refer to. Is a smartphone, a telephone or a computer or personal assistant device or all three?

Yamada advises that the first response is to institute a lead-time to the introduction of mandatory accessible ICT procurement to give manufacturers and suppliers time to adjust [14]. As Thoren argues, rather than requiring manufacturers to respond to tender criteria on a one-by-one basis, the application of accessibility criteria is best achieved through a strategic relationship between government and industry [12].

The complementary issues of monitoring and compliance were found to be of significant importance. The case of Japan reveals that the absence of a transparent and effective monitoring regime with effective sanctions leads to poor adoption of accessible ICTs by governments. The latest developments in the United
States that will see increased transparency and accountability being applied to Section 508 standards indicate the importance of effective compliance processes.

Therefore, a combination of both ‘carrots’ and ‘sticks’ appears to be necessary to encourage compliance with ICT accessibility criteria.

Given a global market, the commercial impetus for innovation in accessible ICTs will increase significantly if global accessibility standards are agreed upon. Steiner looks to the World Trade Organization’s Government Procurement Agreements (GPA) as one possible way of promoting social goals through international treaties [11]. Such a development may lead to less complexity for smaller countries if the hard work of standards-setting occurs elsewhere. In being able to piggyback on the efforts of the United States, Japan or the EU, the economies of scale and improved knowledge development that is enjoyed there will be extended to all countries that choose to adopt such standards.

4. CONCLUSION

Mandatory ICT accessibility criteria in public procurement signal a government’s commitment in working towards universal access for people with disabilities. It is anticipated that increased adoption of such by the public sector will help to increase employment opportunities for people with disability and should gradually lead to the widespread availability of accessible and affordable ICTs.

While mandatory ICT accessibility criteria provide the strongest incentives for compliance, it is recognised that negotiated change with cooperation from industry at the various stages of implementation will be the key to future success. Consistent and uniform accessibility criteria will provide greater certainty for vendors and manufacturers to invest and compete thereby creating a sustainable commercial context for the supply of accessible ICTs.

5. ACKNOWLEDGMENTS

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6. REFERENCES


