

ICT Accessibility Criteria in Public Procurement in OECD Countries – The Current Situation

Gunela Astbrink¹ and William Tibben²

¹ GSA InfoComm,
P.O. Box 600, Ballina NSW 2478, Australia

² University of Wollongong,
Wollongong, NSW 2522, Australia
g.astbrink@gsa.com.au, wjt@uow.edu.au

Abstract. Public procurement is the process by which government bodies purchase their Information and Communication Technology (ICT) products and services. 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. Various methods of incorporating accessibility criteria in public procurement need to be assessed to ascertain the most effective processes to achieve e-inclusion. 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. Using mixed-methods research to gather information, the paper draws on contrasting cases for comparative analysis. The research finds that voluntary schemes contributed to the failure of these programs. It is apparent that lack of understanding about ICT accessibility plays a key role. Mandatory processes based on uniform global standards coupled with compliance will have an impact.

Keywords: Public procurement, ICT accessibility, web accessibility, people with disabilities, accessibility.

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 market in numerous ways. Government is able to influence the availability and costs of goods and services by virtue of the various roles it plays in the economy as a:

- buyer of goods and services
- supplier of services and
- regulator [1][2].

The use of public procurement to singularly create additional demand for accessible ICTs is relatively new [3][4]. The paper reports on a study conducted by the authors that explores the connection between public procurement of accessible ICTs and improving e-inclusion outcomes for people with disabilities [5]. By drawing on the experiences of OECD countries, the authors provided a comprehensive assessment of the use of ICT accessibility criteria in public procurement.

A mixed methods research design was employed to collect up-to-date information about accessibility in ICT government purchasing in OECD countries. Four principal methods were applied to the research design: systematic review [6]; benchmarking [7][8]; case study; and focus groups [9].

The paper begins by reporting the findings of the comparisons made between OECD countries in their use of ICT accessibility criteria in public procurement. This comprised the outcomes of the benchmarking exercise and in-depth case studies. The paper concludes with a discussion about a suggested course of action to more successfully implement ICT accessibility criteria in public procurement processes.

2 The Study

2.1 Benchmarking of OECD Countries

Benchmarking 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. ICT accessibility policies from these countries were systematically reviewed in order to determine key attributes of each. Information searches for Chile and Mexico yielded insufficient information to reasonably include these two countries in the benchmarking.

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 indicate that 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 [10].

Table 1. The application of ICT accessibility criteria in public procurement law in the OECD

ICT accessibility criteria comprehensively described in public procurement law	
External monitoring regime that makes a commitment to publish results	-
Internal monitoring regime that makes a commitment to publish results	USA
Internal monitoring regime – but no commitment to publish results found	-
Evidence of monitoring regime was not found	Japan
ICT accessibility criteria broadly described in public procurement law	
External monitoring regime that makes a commitment to publish results	-
Internal monitoring regime that makes a commitment to publish results	Italy, Norway, Sweden
Internal monitoring regime – but no commitment to publish results found	-
Evidence of monitoring regime was not found	Spain
ICT accessibility criteria acknowledged in public procurement law	
Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Luxembourg, Netherlands, Poland, Portugal, Slovakia, Slovenia, Switzerland, United Kingdom	
ICT accessibility criteria not found in public procurement law	
Australia, Canada, Israel, Republic of Korea, New Zealand, Turkey	

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.

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” [11].

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. For example, the federal government in Canada has sponsored the development of an online toolkit designed to guide purchasers through procurement decisions that are based on ICT accessibility principles. However, the final decision to adopt such principles is left to individual federal departments [12]. In the Republic of Korea, a set of national ICT accessibility standards have been developed but these are not mandatory in public procurement.

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 [5, 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.

2.2 In-Depth Case Studies

There are a number of challenges that make the mandatory adoption of accessibility criteria when purchasing ICTs (or related services) less than straightforward. The in-depth study of contrasting cases provides a more nuanced appreciation of these challenges in the different approaches countries had taken to ICT accessibility criteria.

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 [13, 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 [14]. These new standards have not yet been adopted 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 [15].

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 harmonisations of standards within the international standards bodies 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 [10]. 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 [16].

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 [1]. The EU's Mandate 376 has directed European standards bodies to develop a

detailed standards framework that can be applied in public procurement [17]. 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 [1].

Ireland. The public procurement system in Ireland does not require, but rather, encourages a pro-active approach to the purchase of accessible ICTs as reflected in the EU Directive 2004/18/EC on public procurement. It is disability discrimination legislation in the form of the Disability Act 2005, and associated regulations, which impose statutory duties upon public bodies to make their services and information accessible to people with disabilities (where practicable and appropriate).

The National Disability Authority (NDA) that administers the Disability Act 2005 has initiated a number of actions to support this encouragement. The NDA's Centre of Excellence on Universal Design (CEUD) has produced an excellent range of resources that assist government purchasers to consider the inclusion of accessibility criteria in their requests for tender. These comprehensive toolkits are written in a user-friendly manner and are designed to both educate and assist purchasers. However, there is no compulsion to use these resources nor to apply accessibility criteria to purchasing policy, thus resulting in limited impact on improving accessibility to ICT.

United Kingdom. The UK's procurement regulations are consistent with the EU Directive 2004/18/EC on public procurement. The promotion of accessible ICTs has been occurring within the eAccessibility Forum and Action Plan under the auspices of the Department of Culture Media and Sport [18]. Stakeholder-led processes that draw on a broad range of knowledge and experiences are considered preferable to government regulation.

The Business Taskforce for Accessible Technology (BTAT) has promoted ICT accessibility criteria as a key component of future productivity. The business benefits that they cite are improved interactions with new and existing customers, greater loyalty and productivity from employees, improved business processes within the organisation and improved financial outcomes [19]. Initial support of the BTAT Accessible Technology Charter has been obtained from companies such as Cisco, Microsoft, SAP, Oracle and Logica. This Charter includes accessibility in procurement practices. Notably, the Taskforce has developed a toolkit that enables businesses to assess their level of accessibility readiness through an Accessibility Maturity Model.

Canada. Canada's selection as a case study presents a number of interesting contrasts. The reliance of the Federal Government on the market to deliver accessible ICTs to people with disabilities has been a source of ongoing criticism [12].¹ The stance of the Federal Government has been one that encourages the adoption of

¹ Evidence from the Council of Canadians with Disabilities (CCD) website indicates continuing criticism of this policy.

See <http://www.ccdonline.ca/en/technology/> Retrieved 11 March 2012.

accessible ICTs based on its endorsement of the US Section 508 standards but does not mandate such provisions. Encouragement is found in the availability of an online toolkit that guides potential purchasers of ICTs through a number of steps that enables appropriate choices to be made. However, use of the online toolkit is not mandatory.

Provincial governments in Canada are able to regulate in many areas of social and economic life. For example, The Accessibility For Ontarians With Disabilities Act, 2005 imposes binding conditions on all organisations (public and private) and individuals when dealing with people with disabilities within Ontario.² The publication on 7 June 2011 of the *Integrated Accessibility Standards* makes explicit the conditions under which greater accessibility for people with disabilities in Ontario occur.

Australia. In Table 1, Australia is grouped with countries that do not make specific reference to accessibility criteria for ICTs in their public procurement procedures. This applies to federal, state and territory governments.

The federal government provides assistance under its JobAccess program to employers for workplace modifications for employees with a disability. Focus group research revealed that the current system suffered from a number of inefficiencies. The two most significant criticisms that emerged was the time it takes for changes to be implemented and the expertise of IT staff in accessibility. For example, screen-reading software was not installed properly.

3 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 contentious given the different modes of application of these criteria by governments in their procurement regimes and the ability of industry to respond to these changes. These questions are often reduced to a simple distinction between ‘carrots’ in the form of market-based incentives and ‘sticks’ as demonstrated in the mandatory application of standards. However, such a simple distinction does not do justice to the complexity of the challenge, which ultimately will require a judicious mix of both.

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. In the case of Canada, use of their online toolkit has declined over time rather than increased. Even in Ireland, where the government has world-class expertise in universal design at their disposal, compliance with national disability regulations by government departments fell far short of general compliance. Many governments have set for themselves a relatively low bar of web accessibility; and even that has proved a challenge.

² See ‘Accessibility for Ontarians with Disabilities Act, 2005’ available from: http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_05a11_e.htm
Retrieved 20 April 2012.

In order to achieve greater commitment, stronger measures in the form of mandatory requirements for ICT accessibility criteria appear necessary. 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 adding 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.

Mandatory accessibility criteria in ICT public procurement will likely lead to greater awareness among ICT professionals of the needs of people with disabilities. Yamada makes the point that mandatory accessibility requirements in public procurement play an important role in educating designers about the challenges and limitations of current products [16, p.8]. This will ideally set them on a path to develop innovations in accessibility features. Given support from professional bodies, the teaching of accessibility principles should also find its way into university and technical training curricula.

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 [16, 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 [16]. 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 [20]. These issues are given more detailed attention in this study's report and are ripe for further investigation through ongoing research.

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.

The work of various agencies to develop toolkits and build educational resources has been of significant value in advancing learning and conceptual developments in accessible ICTs. The work of Ireland's Centre of Excellence on Universal Design (CEUD) is a good example of this where they have been establishing important milestones in improving the profile of education and research in this area. Unfortunately, through focus group research and evidence from the countries studied,

there is still a significant gap in understanding of ICT accessibility by government procurement officials, IT systems staff and suppliers.

Therefore, a combination of both ‘carrots’ and ‘sticks’ appears to be necessary to encourage compliance with ICT accessibility criteria. Carrots are required to facilitate learning of accessibility concepts. Sticks are required to emphasise the importance of ICT accessibility and the need for commitment by government officials to ensure that accessibility criteria are widely used in public procurement.

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 [21]. 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.

Acknowledgements. The funding for this study was provided by the Australian Communications Consumers Action Network (ACCAN) Grants Scheme.

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