

United Nations Global Audit of Web Accessibility

November 2006

The United Nations contracted Nomensa to conduct this audit on Internet accessibility for persons with disabilities. The audit, the first of its kind, investigated the accessibility of 100 leading websites from 20 countries from around the world.

The aim of the survey, which was not intended to be exhaustive, was to obtain an indication concerning the existing status of accessibility of websites that people with disabilities might access as part of their daily lives.

This snapshot produced stark results: most of the leading websites around the world do not meet international standards for accessibility. Some of the sites investigated could be easily upgraded to remove the obstacles that prevent many people with disabilities from using the sites. However, the majority of sites need considerable work.

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Audit Report

Nomensa were commissioned by the United Nations (UN) to conduct a global audit of web accessibility. The UN Convention on the Rights of Persons with Disabilities¹ upholds the rights of people with disabilities around the world. One of the areas covered by the convention is the right to access information and services online.

Inclusion is a powerful social concept. Whether people want to join the same club, wear the same clothes or surf the same Internet, everyone wants to be part of something. The growth of the Internet has seen an explosion of information and services made available to an extraordinary number of people. Yet there is an increasing divide between those who are able to participate in the digital revolution and those who are not.

Economic and social factors play a strong role in creating what is known as the “digital divide”, placing obstacles in the way of people owning the requisite technology to get online and having the necessary knowledge to operate it. There is an additional aspect of the digital divide however; access to online information in its purest sense.

This report does not address the social, economic and financial factors that contribute to the digital divide, to do so is far beyond the scope of a single report. Instead, it addresses the problems facing people with disabilities when they get online and try to access information which is important to their lives.

The 20 countries selected for the audit encapsulate a wide variety of economic structures and consequently a diverse range of social landscapes. The audit, and subsequent report, makes no assumptions about the technology available to people, the standards of education or the level of skill that people might have. It does however concentrate on the human need to participate and investigates some of the digital obstacles that stand in the way.

¹ <http://www.un.org/disabilities/convention/>

Methodology

An initial list of 20 countries was drawn up by the UN, representing nations from every continent except Antarctica. The countries included in the report were:

Argentina	China	Kenya	South Africa
Australia	France	Mexico	Spain
Brazil	Germany	Morocco	United Arab Emirates
Canada	India	Russia	United Kingdom
Chile	Japan	Singapore	United States

Table 1: the 20 countries included in the web accessibility audit.

Five sectors were selected, which would represent key points of interaction for people on the Internet:

- Travel (airlines);
- Finance (banking);
- Media (newspapers);
- Politics (central government representative);
- Retail (shops).

A Uniform Resource Locator (URL) matrix was developed, which selected a website from each country to represent each sector. A full list of URLs can be found in Appendix A: full list of URLs.

Taking place in October 2006, the testing used a combination of manual and automated techniques used to evaluate the homepage from each website. Although automated testing techniques have their place in testing for web accessibility, a strong manual input is required in order to ensure that the results are pertinent to people. For example, an automated test can determine whether an image has been provided with an alternative text description, but it cannot confirm whether that description is accurate, helpful or relevant to a human being.

Each page was measured against the Web Content Accessibility Guidelines version 1.0 (WCAG 1.0), up to Triple-A level, using a combination of automated and manual testing. Each checkpoint was given a pass, fail or not applicable status.

Web Content Accessibility Guidelines

The Web Content Accessibility Guidelines version 1.0 (WCAG 1.0) form the globally recognised basis for accessibility on the web. They are not the only way that accessibility can be applied or measured, but, as their name suggests, they form a guide from which accessibility can be built into a website.

The WCAG are published by the Web Accessibility Initiative (WAI), a working group of the World Wide Web Consortium (W3C).

<http://www.w3.org/TR/WAI-WEBCONTENT/>

WCAG 1.0

Version 1.0 of the WCAG was published in 1999, and is comprised of a series of checkpoints based around fourteen design principles or guidelines.

Each of the fourteen principles focuses on a core theme of accessibility. For example, Guideline 1 looks at the need to provide information in alternative formats, such as transcripts for audio material, or text descriptions for visual content.

In order to clearly define acceptable levels of accessibility, these checkpoints are divided into three distinct categories:

- Priority 1 – meeting all Priority 1 checkpoints achieves Single-A accessibility;
- Priority 2 – meeting all Priority 1 and 2 checkpoints achieves Double-A accessibility;
- Priority 3 – meeting all Priority 1, 2 and 3 checkpoints achieves Triple-A accessibility.

Using this priority system means that a website that has met all the appropriate Priority 1 checkpoints, has therefore achieved Single-A status, and succeeded in providing the most basic level of accessibility for its users.

A website that has met all the appropriate Priority 1 and 2 checkpoints, has therefore achieved Double-A status, and has succeeded in providing an intermediate level of accessibility to its users.

A website that has met all the appropriate Priority 1, 2 and 3 checkpoints, has therefore achieved Triple-A status, and has succeeded in providing a high level of accessibility for its users.

Audit Results

Overview

Of the 100 homepages evaluated during the audit, just three websites achieved Single-A accessibility status under WCAG 1.0.

- German Chancellor's site;
- Spanish President's site;
- British Prime Minister's site.

The performance across different sectors was varied, with central government, retail and banking offering the strongest (or joint strongest) performance across all countries.

Priority 1 Overview

Several more websites were close to achieving Single-A accessibility, but encountered difficulties with just a few checkpoints. On average for the 100 websites, each page contained three Priority 1 issues. Australia, Germany, Singapore, South Africa and the United Kingdom all encountered the lowest number of Priority 1 issues, with an average of two per page. China failed the greatest number of Priority 1 checkpoints, with an average of five per page.

The key Priority 1 issues that this report focuses on are detailed below.

Checkpoint 1.1: alternative text descriptions

Providing text descriptions for content that is not text based, for example audio presentations or graphics, is one of the most important components of accessibility. Text is the most basic form of digital information. People who use

access technologies², such as screen readers³ , can access text based information very easily.

Content that is not text based should always have a text alternative. For example, the purpose and content of an image should be clearly indicated through the provision of an alternative text description.

For more information on writing helpful and appropriate alt text, please see the Nomensa article '*This Isn't Just Alt Text, It's Really Great Alt Text*' (<http://www.nomensa.com/resources/articles/accessibility-articles/this-isnt-just-alt-text-this-is-really-great-alt-text.html>)

Of the 100 sites evaluated, 93% contained images that did not have helpful and appropriate alternative text descriptions for all images.

² An access technology is a device, tool or software application that someone with a disability will use to help overcome the obstacles presented to them by their disability

³ A screen reader is a software application that converts on-screen content from a computer into synthesised speech or electronic Braille

Good example

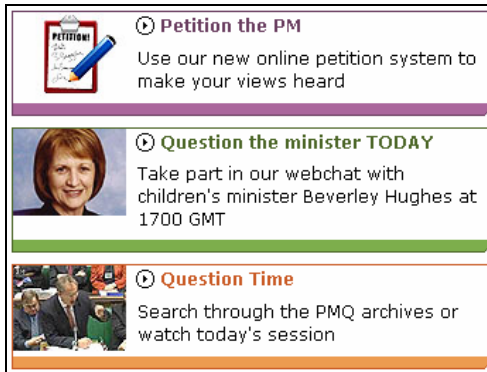


Figure 1: Images on the Number 10 website.

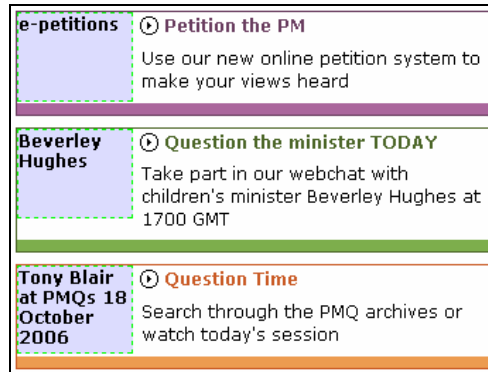


Figure 2: Images replaced with their alternative text.

Bad example



Figure 3: Images on the Bank of Argentina website with missing alternative text highlighted in red.

Checkpoint 6.3: Do not rely on scripts or applets

Certain technologies such as JavaScript, Style sheets or Flash may not be supported by people's own technology. For example, current figures suggest that

10% of people on the Internet are not able to access JavaScript driven content in their browser⁴.

This does not mean that these technologies should not be used, but rather, when they are used the functionality of the page should not rely upon them. In other words the website should function when they are not enabled.

Of the 100 sites evaluated in the audit, 73% had content that relied on JavaScript to function.

Bad example

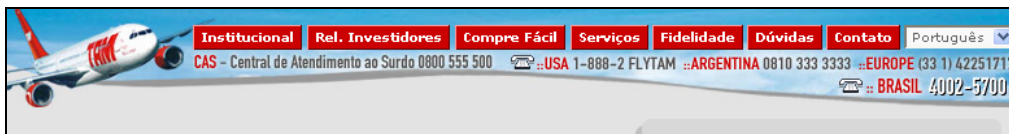


Figure 4: TAM airlines navigation with JavaScript enabled.

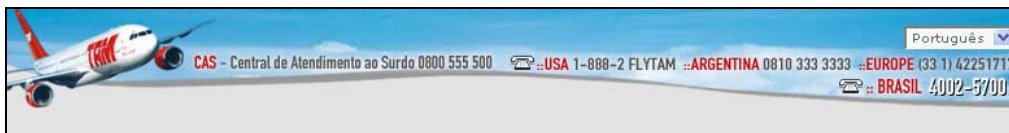


Figure 5: TAM airlines navigation with JavaScript disabled.

A screenshot of the TAM Airlines flight search form. It has two radio buttons at the top: 'Somente Ida' (unselected) and 'Ida e volta' (selected). Below are dropdown menus for 'Data de retorno' (set to 2), 'Período' (set to Novembro), and 'Período' (set to Todos). There are three input fields for passenger counts: 'Adultos' (1), 'Crianças' (0), and 'Crianças' (0). The second and third 'Crianças' fields have sub-labels '2-11 anos' and '0-1 ano' respectively. A 'Consulte e Compre' button is at the bottom.

Figure 6: A form on the TAM airlines website with JavaScript enabled.

A screenshot of the TAM Airlines flight search form, identical to Figure 6. However, the 'Somente Ida' radio button is selected, and the 'Ida e volta' radio button is unselected. The rest of the form, including the dropdown menus, input fields, and button, remains the same.

Figure 7: A form on the TAM airlines website with JavaScript disabled.

⁴ <http://www.thecounter.com/stats/2006/October/javas.php>

Priority 2 Overview

Of the three websites that achieved Single-A, the homepage of the British Prime Minister came closest to reaching Double-A with just four Priority 2 issues. On average across the 100 websites, each page measured during the audit contained 14 Priority 2 issues. Australia and Japan encountered the lowest number of Priority 2 issues, with an average of 11 apiece. Mexico failed the greatest number of Priority 2 checkpoints, with an average of 17 per page.

The key Priority 2 issues that this report focuses on are detailed below.

Checkpoint 2.2: Colour contrast

Ensuring that there is sufficient difference between foreground and background colours is of particular benefit for people with colour blindness or partial sight, but it also affects the ease with which most people can read page content. Colours that are close in shade or hue can cause problems, as can colours that are both similar in brightness.

Of the 100 websites evaluated in this audit, 78% used foreground and background colours that did not provide a good level of contrast.

Good example



Figure 8: A graphic on the Number 10 website.

Bad example



Figure 9: Text on the Societe Generale website.



Figure 10: Text on the Societe Generale website.

Checkpoint 3.2: Valid code

Whether it is Hypertext Markup Language (HTML), XHTML or Cascading Style Sheets (CSS) it is important to use valid code so that past and future Internet devices can show the content in a way most suitable to their requirements. Using W3C technologies such as valid HTML and CSS code can also be of benefit because they include built in accessibility features which are considered whilst the technology is being developed.

Of the 100 websites evaluated, 98% did not use valid code to form the basis of the page. This figure matches exactly the result for another closely related checkpoint, 11.2 (avoid deprecated features of W3C technologies). In the latter case, 98% of homepages were found to be using code that was old and out of date.

Checkpoint 3.4: Use relative units

When units of measurement are defined on a website it is important to use measurements that are flexible. For example, the use of percentages, rather than pixels. Doing this enables people to resize the page in their browser, increase or decrease the size of the font or view the page on a small screen device such as a mobile phone without difficulty.

Of the 100 homepages evaluated during this audit, 97% used units of measurement which restricted the flexibility of the page layout, the font size or both.

Good example



Figure 11: The Globe and Mail website in a 1024px wide window.



Figure 12: The Globe and Mail website in a 1024px wide window with large text.



Figure 13: The Globe and Mail website in an 800px wide window.



Figure 14: The Globe and Mail website in an 800px wide window with large text.

Bad example



Figure 15: The New York Times website in a 800px wide window.



Figure 16: The New York Times website in a 1024px wide window.

Checkpoints 3.5 and 3.6: Convey document structure

Using the correct code to convey document structure, for example lists and headings, provides the information that access technologies such as screen readers need to interpret the page. Unless these structural elements are defined within the code itself, what appears visually to be a list, may in fact not be interpreted as a list to someone using an access device.

Users of assistive technologies may use the adaptive strategy of using the tab key for rapidly scanning through links, headers, list items, or other structural items on a web page.

Of the 100 sites evaluated, 89% did not use headings, or did so in a way that did not accurately convey the basic structure of the page. In addition, 86% of sites contained lists of information which were displayed visually, but not defined in the code of the page.

Checkpoint 10.1: Do not use pop-up windows

Increasingly, technology is permitting more and more of us to prevent pop-up windows from appearing, so content that opens in a new browser window may not always be apparent to growing numbers of people. More importantly, the

sudden appearance of a new browser window can wrong-foot people using screen magnifiers, and can often cause disorientation in people with cognitive conditions such as short term memory loss.

Where pop-up windows are a necessity, best practice requires that a warning is given to people, ensuring they are aware that a new window will open when they activate the link.

Of the 100 websites evaluated during this audit, 87% used pop-up windows without first warning people about the impending action.

Checkpoints 10.2 and 12.4: Form labels

People who are not able to see the layout of a form may find it difficult to know what the purpose of each form field is. Correctly positioned text labels help to inform people properly.

Additionally, an association can be created in the code between a form label and the corresponding form field. This association ensures that screen readers can correctly interpret the form, indicating the purpose of each form field to the person using the access device.

Of the 100 sites evaluated, 80% had forms with poorly positioned text labels. A further 74% had not created adequate associations between the text label and the corresponding form fields.

Checkpoint 13.1: Clear link text

Some people, particularly those using access technologies, will move through a web page by tabbing from link to link without pausing to read the nearby page content. It is important therefore to ensure that the link text accurately reflects the target of the link, thus preventing the user from having to read content in order to understand where the link will take them. Common examples where reading the surrounding page content is necessary for understanding a link target include "Click here" or "more".

It is also important to use link text that is easy to understand. Complex phrases that may be difficult to interpret are likely to cause difficulties for all users, so sticking to clear language is best practice.

Of the 100 websites evaluated in this audit, 97% used link text that did not clearly indicate the target of the link.

Good example



Figure 17: Descriptive link text on the Spanish President website highlighted in green

Bad example



Figure 18: The Sears website with repeated, non descriptive link text highlighted in red.

Priority 3 Overview

Despite the wide variety of websites included in this audit, none achieved Triple-A accessibility. The attainment of accessibility targets is accumulative, meaning that unless a page has already reached both Single-A and Double-A, it cannot achieve Triple-A status. The British Prime Minister's website came closest to achieving Triple-A status, having only four Priority 2 issues and no Priority 3 issues.

Across the 100 websites, the average number of Priority 3 issues on each page was three, a marked drop from the number of Priority 2 issues. France, Germany, Japan and the United Kingdom all encountered the lowest number of Priority 3 issues, with an average of three per page. Chile, China, India, Mexico, Singapore, South Africa and Spain all failed the greatest number of Priority 3 issues, with an average of four per page.

The key Priority 3 issues that this report focuses on are detailed below.

Checkpoint 13.6: Skip links

Screen reader and keyboard-only users often jump from link to link looking for particular information. The navigation bar is often the first thing on a page, hence when a screen reader user arrives at each page on a site they will have to skip through all these links to arrive at the desired content, which is extremely frustrating for the user.

Providing a link which allows the user to jump, or skip over the navigation links and move directly to the page content can be a great asset for many people.

Of the 100 sites evaluated during this audit, 92% did not provide a skip link to enable people to move quickly over substantial blocks of content such as navigational links.

Good example



Figure 19: A skip link highlighted in red on the Marks & Spencer website.

Checkpoint 4.3: Define natural language

If the natural language of the document is defined correctly in the code of a page, assistive technologies such as screen readers and Braille devices can automatically switch to the new language making the document more accessible to multilingual

users. Speech synthesizers are able to speak multiple languages in appropriate accents with correct pronunciation.

Defining the natural language of a website will also help search engines such as Google return results in the most appropriate language.

Of the 100 homepages evaluated during this audit, 74% did not define the natural language of the page within the code.

Conclusion

Considering the wide selection of economic and cultural backgrounds this report is set against, the results are surprisingly consistent. Not only are they consistent, they are also disappointing.

Countries with disability legislation in place, such as the United Kingdom, returned poor results. Even nations where website owners have been taken to court under disability legislation, such as Australia and the United States of America, fared no better. In fact countries where web accessibility may be considered to be farther down the agenda, have produced results that are comparable with those who claim to be at the forefront of online accessibility.

It could be argued that a lack of financial resources lies behind the overall lack of online accessibility across these countries. However, one of the most widespread issues identified during the audit was the provision of alternative text descriptions for images. It is among the most simple accessibility checkpoints to meet and certainly requires no additional cost to implement, yet it is possibly the single most progressive step that website owners could take to increase the accessibility of their websites.

Many Priority 1 issues can be resolved with ease and little cost, making Single-A accessibility a possible reality for every website included in the audit. Achieving Single-A accessibility should be the short term goal for each website, taking small steps to provide a basic level of accessibility for all Internet users.

Priority 2 issues may take a deeper restructuring of each web page, meaning that a greater knowledge of accessible web development is needed. Resolving Priority 2 issues and reaching Double-A accessibility should be part of the longer term strategy for each of the 100 websites audited. As website designs are refreshed and as page content is updated, website owners should consider the improvements that an accessible website can bring.

Priority 3 represents the pinnacle of web accessibility under the Web Content Accessibility Guidelines. It should be the ultimate goal for every website, reached at the end of a journey that begins with meeting all the Priority 1 checkpoints.

The world gets smaller every day, but for some it becomes more remote. The Internet is the most vital tool to emerge in the last 50 years for enhancing the lives

of people with disabilities. It offers unprecedented access to information and services, overcoming many of the obstacles that people with disabilities previously experienced. It should be easier to shop online than choose clothes from a retail outlet that you can't see. It ought to be easier to bank online than manoeuvre a wheelchair up the steps to the bank building. It must be possible for people with disabilities to get online, because otherwise society will suffer.

The path forward is clear, web accessibility is a journey and this report provides the first global signpost to point the way. As countries ratify and implement the Convention on the Rights of Persons with Disabilities, the state of web accessibility around the globe cannot be ignored. Each country, each company, each website owner, must take the first steps along the way to providing world class accessibility, ensuring that every individual is able to participate in the greatest revolution of our time.

Analysis by Country

The chart in each country section below shows the number of issues for each site at each priority level. The percentage represents the issues on that page out of the total number of checkpoints that were relevant to the page.

Argentina

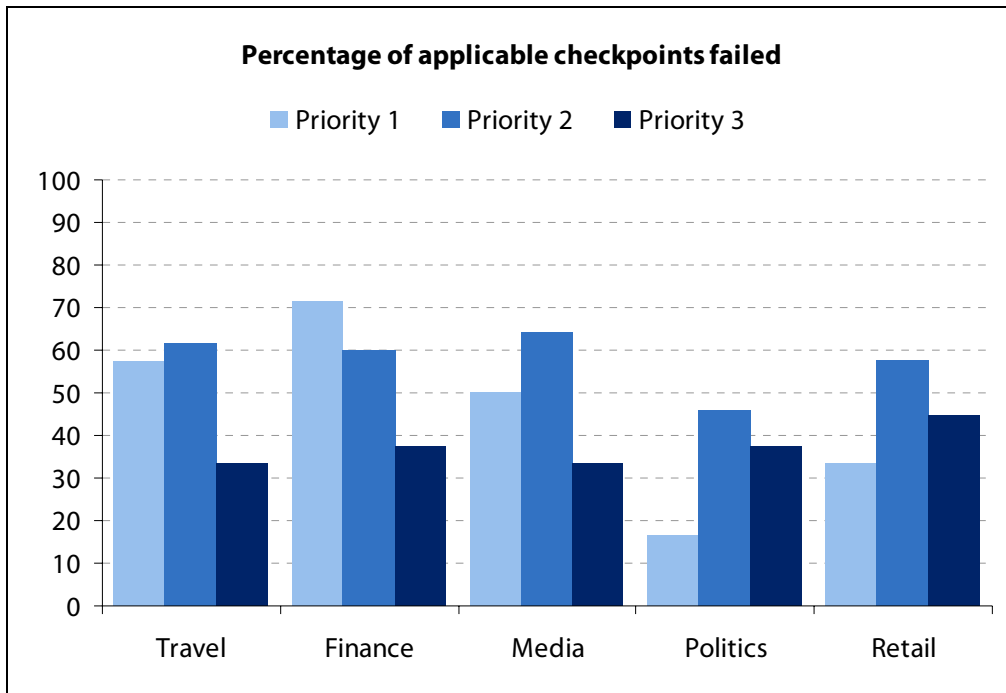


Chart 1: the Argentinean websites results

None of the five sites tested for Argentina achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 3 issues;
- Priority 2 – 15 issues;
- Priority 3 – 3 issues.

Travel	http://www.aerolineas.com.ar/ar/index.asp?idi=es&vtn_residente=si
Finance	http://www.bna.com.ar/default.asp
Media	http://www.clarin.com/

Politics	http://www.presidencia.gov.ar
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Retail	http://www.altocity.com/
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The Argentinean President's website came the closest to achieving Single-A accessibility, encountering problems with just one Priority 1 issue. Altocity, the Argentinean retailer, fell just behind with two Priority 1 fails.

None of the Argentinean sites provided alternative text descriptions for all images. In the case of the airline, Aerolineas Argentinas, no text descriptions were provided, making browsing impossible for people with severe visual impairments. The remaining four sites provided some alternative text descriptions, but these were not always helpful.

Four of the five sites relied heavily on JavaScript for functionality. People without JavaScript support would not be able to select a flight destination on the Aerolineas Argentinas website or access many of the links and drop down menus on the banking, newspaper or retail sites.

None of the sites used valid code as a basis for the page, creating poor foundations for accessibility. The clarity of link text was poor across all five sites. Both Aerolineas Argentinas and Banco de la Nación Argentina, an Argentinean bank, used the same link text to point to multiple different pages, causing confusion for anyone using the site, but particularly for people with learning difficulties.

Only Clarin, the Argentinean newspaper, attempted to use both headings and lists to convey document structure. None of the remaining four included any headings or lists. All of the sites caused pop-up windows to appear, with the Aerolineas Argentinas site producing a pop-up automatically as the homepage loaded.

Just three of the five sites included forms on the homepage and of these none provided text labels. Colour contrast problems were identified for both images and text, causing likely problems for people with mild visual conditions such as colour blindness.

Just one site, Clarin, had defined a natural spoken language for the site. Aerolineas Argentinas included text in a foreign language (English), but did not acknowledge the change of language within the code of the page.

Australia

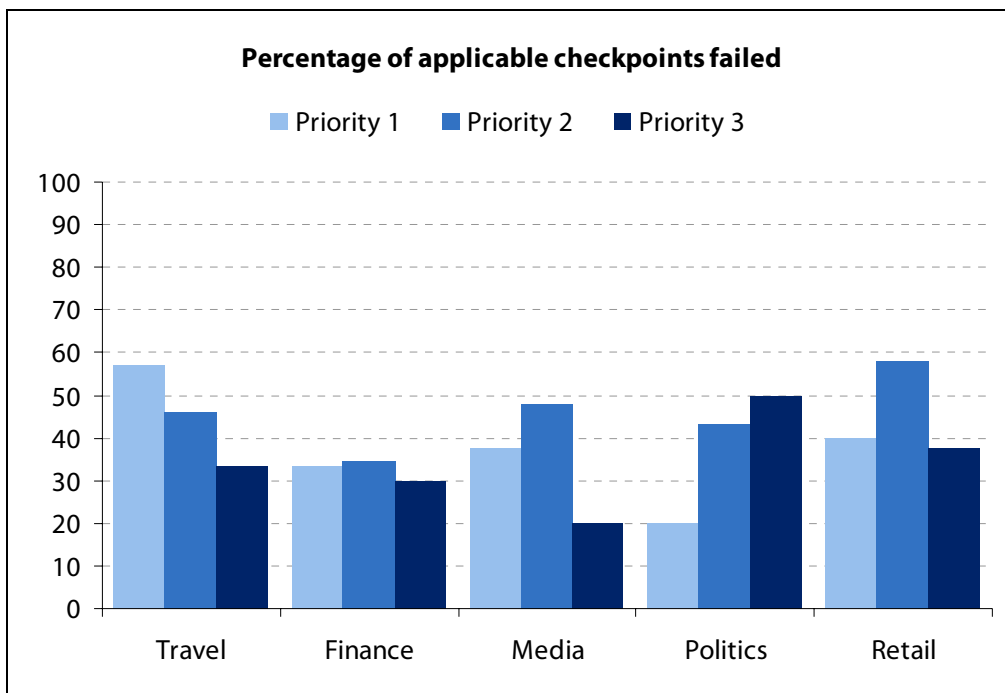


Chart 2: the Australian websites results

None of the five sites tested for Australia achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 2 issues;
- Priority 2 – 11 issues;
- Priority 3 – 3 issues.

Travel	http://www.qantas.com.au/regions/dyn/home/qualifier-region-au
Finance	http://www.national.com.au/
Media	http://www.smh.com.au
Politics	www.pm.gov.au
Retail	http://www.coles.com.au

The Australian Prime Minister's website came closest to reaching Single-A, failing just a single Priority 1 checkpoint. Qantas brought up the rear with four Priority 1 issues, highlighting Australia as a country that had Single-A accessibility within its grasp.

All of the Australian sites, with the exception of National Australia Bank, did not provide useful alternative text descriptions for all images. Those graphics missing descriptive texts ranged from functional images in the content, to those in the template of the page.

Two websites did not rely on JavaScript for important functionality. Of the three that did, Coles posed the most difficulty for people unable to use JavaScript, as the homepage would not load properly without it.

Three websites, from the retail, newspaper and central government sectors, had problems with insufficient colour contrast and none of the five sites used valid code to construct the page.

National Australia Bank was the only site to offer resizable text and layout, whilst Qantas and the Prime Minister's site did not allow either to be altered by the user. Coles permitted the page to be resized, allowing it to adapt to any screen size, but did not enable the text to be altered by the user. The Sydney Morning Herald allowed people to change the size of text, but not the size of the page. They also made a good attempt at using headings and lists to convey document structure, whilst the remaining four sites did not.

Two websites, National Australia Bank and the Sydney Morning Herald both specified the natural language of the homepage and only National Australia Bank had foreign language links which had not been coded to represent the change in language.

Neither Coles nor the Prime Minister's site used pop-up windows, whilst Qantas and the Sydney Morning Herald did. The National Australia Bank did not use pop-up windows in the strictest sense, but did use JavaScript to display an extra layer of content on the homepage the first time the page loads. It is a feedback form implemented in such a way that it only ever appears the first time the homepage is visited, whilst not best practice, it is not as disruptive as a conventional pop-up window.

The Prime Minister's homepage contained no forms and of the remaining four sites, only National Australia Bank had included form labels that were correctly

positioned and associated properly with their form fields. Coles, the Sydney Morning Herald and Qantas all had forms with either no labels, incorrectly positioned labels or labels which had not been associated with the corresponding form field. In each case, people relying on access technologies to understand what information should be entered into the form field would have encountered problems.

Both Qantas and the Prime Minister's site used clear link text, helping people understand where a link will lead. The banking, newspaper and retail sites did not offer the same degree of clarity in their link texts. For example, the Coles website used phrases such as "Click here", which give no indication of where the link will lead.

Neither Coles nor the Prime Minister's site provided skip links for keyboard users to make use of, but both Qantas and the Sydney Morning Herald did. The National Australia Bank did provide a skip link to bypass the navigation, but had not done so correctly, causing the link not to work.

Brazil

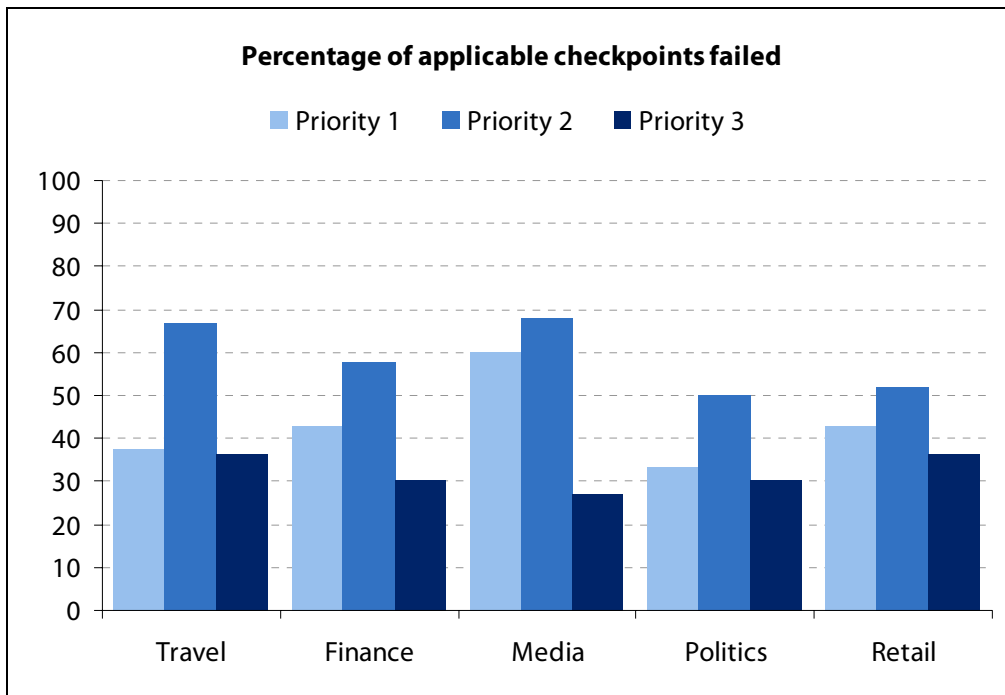


Chart 3: the Brazilian websites results

None of the five sites tested for Brazil achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 3 issues;
- Priority 2 – 16 issues;
- Priority 3 – 3 issues.

Travel	http://www.tam.com.br/b2c/jsp/default.jhtml
Finance	http://www.bb.com.br/appbb/portal/index.jsp
Media	http://www.folha.uol.com.br/
Politics	http://www.presidencia.gov.br/
Retail	http://www.americanas.com.br/cgi-bin/WebObjects/AcomHome.woa/wa/default?chave=lasa

The President's website came closest to reaching Single-A, failing only two Priority 1 checkpoints. The airline, bank and retailer came next, each with three issues at Priority 1 level and the newspaper, Folha de Sao Paulo, brought up the rear with six Priority 1 issues.

Most of the Brazilian sites did not provide helpful alternative text descriptions for images, but the President's site was the exception. The homepage included appropriate text descriptions for informative graphics and correctly used empty text descriptions⁵ to "hide" purely decorative images from screen reader users.

All of the sites had problems with JavaScript. Banco do Brasil and the President's site both had drop down menus that would not work without JavaScript. The main newsfeed on the newspaper site did not display at all when JavaScript support was turned off and most concerning of all, the main site navigation on the site belonging to Tam, the airline, would not work at all without JavaScript enabled.

Retail site Americanas, used headings very well to convey document structure, helping screen reader users understand how information was laid out on the page. They also made good use of lists, although best practice would have been to code the main navigation as a list as well. Folha de Sao Paulo and the President's site both included some lists, but as with Americanas, fell a little short of best practice. Folha de Sao Paulo did include a single heading; however a heading on its own doesn't convey a great deal of information about the way the page is structured.

Of the five Brazilian sites, three used colour combinations for both images and text that were poor in contrast. Tam did well in colour contrast for images, but failed to provide excellent colour contrast for all text, whereas Americanas used good colour contrast for text, but insufficient contrast in image colours.

None of the websites used valid code and in all but one case did not allow people to alter the size of the text. Only the President's site enabled people to increase or decrease the size of the text, to make the content easier to read. The site did not however allow people to resize the page to fit comfortably on any screen. Conversely, Americanas site would adapt to fit into any screen, but did not permit the change of text size.

⁵ An empty, or null, alternative text description is not the same as an absent text description.

Each of the five sites used pop-up windows, either as the homepage loaded or as the result of activating a link. Link text also presented a problem for all sites, with the airline, banking, newspaper and retail sites all containing graphical links which were not equipped with a text description for the benefit of people unable to see the graphics.

The President's site made good use of form labels, providing clearly labelled form fields. Although the four remaining sites all included forms, Tam and Banco do Brasil did not provide any labels at all, whilst Folha de Sao Paulo and Americanas had used some labels, although not correctly positioned or associated properly in the code.

Only the President's site provided a skip link and the homepages of all five Brazilian sites encountered problems with adequate colour contrast.

Canada

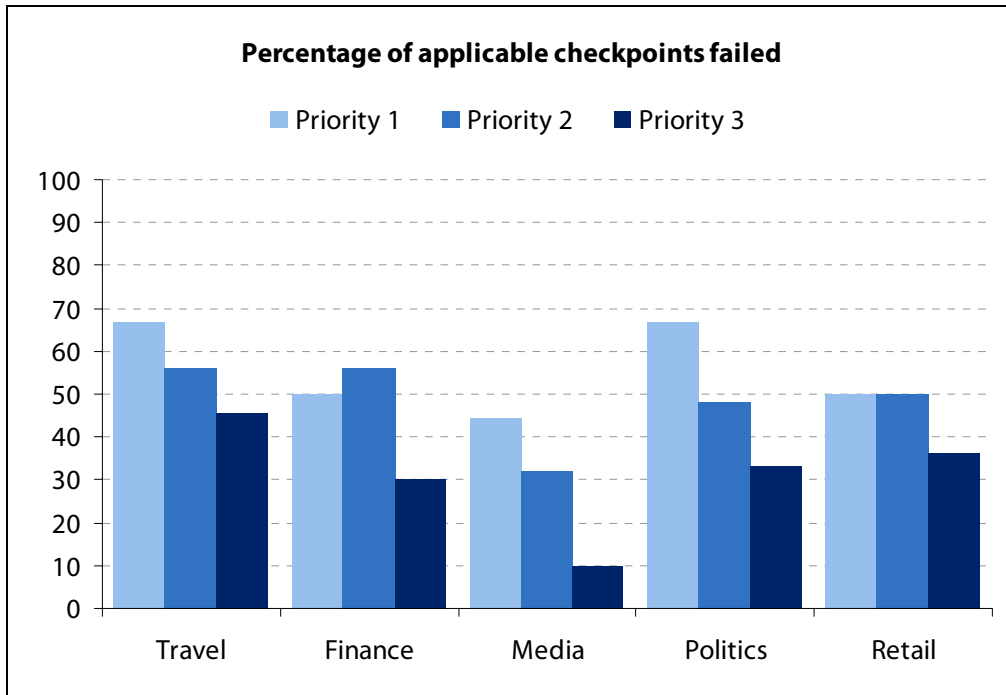


Chart 4: the Canadian websites results

None of the five sites tested for Canada achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 4 issues;
- Priority 2 – 12 issues;
- Priority 3 – 3 issues.

Travel	http://www.aircanada.com/
Finance	http://www.royalbank.com/
Media	http://www.theglobeandmail.com/
Politics	http://www.pm.gc.ca/eng/default.asp
Retail	http://www.sears.ca

The Royal Bank of Canada came closest to achieving Single-A accessibility, encountering problems with three Priority 1 checkpoints. All of the four remaining sites returned a consistent result, each with four fails at Priority 1 level.

All of the Canadian sites relied on JavaScript to some extent. The main navigation on the Seers site would not display without JavaScript. The navigation for Air Canada would display, but would not function. The search facility for Air Canada also did not work without JavaScript and the news ticker on the Globe and Mail site was also disabled. With as much as 10% of the Internet population unable to access content that relies on such technology, these sites demonstrate a significant negative impact on the browsing experience for many people.

Although none of the sites provided text descriptions for all non-text elements, the results were varied. Air Canada, the Royal Bank of Canada and the Prime Minister's site all contained some images without alternative text descriptions. Taking a slightly different perspective, both Seers and the Globe and Mail sites included Flash content which had not been equipped with suitable text alternatives.

The Globe and Mail provided well positioned and properly associated labels for all form fields, whilst Air Canada, the Royal Bank of Canada and Seers did not. Only the Prime Minister's site contained no forms at all. The airline, newspaper and central government sites all used pop-up windows, leaving Seers and the Royal Bank of Canada to demonstrate best practice in this area.

Only the Prime Minister's site used colour combinations for both text and images that would present no difficulty for people with mild visual impairments. Of the remaining four sites, all used poor colour contrast in some images and both Seers and Air Canada used poor colour combinations for text content.

None of the Canadian sites were built using valid code and the majority did not use flexible units of measurement on the page. Only the Globe and Mail allowed both text and the page to be resized.

The Globe and Mail also provided a great example of document structure, using both lists and headings effectively. Across the rest of the Canadian sites, only Seers used any headings at all, but did not follow best practice in doing so.

In a bi-lingual society, it is expected that foreign language text will appear on many pages, however only the Globe and Mail defined the natural language of the page correctly. None of the sites used the correct code to identify a change in the

natural language, except Seers, who correctly coded the links to the French language site.

Both Seers and the Royal Bank of Canada avoided using pop-up windows, all five sites used link text that was unclear or unhelpful and only the Globe and Mail provided a skip link.

Chile

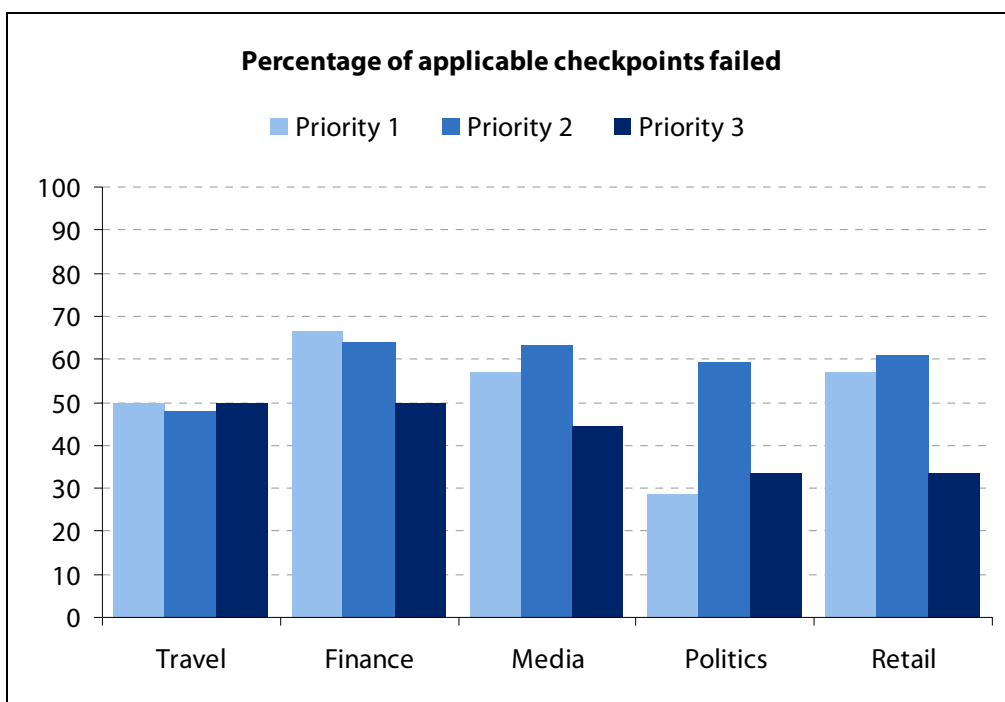


Chart 5: the Chilean websites results

None of the five sites tested for Chile achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 4 issues;
- Priority 2 – 16 issues;
- Priority 3 – 4 issues.

Travel	http://www.lan.com/index.html
Finance	http://www.bancochile.cl/webchile1/institucional/default.html
Media	http://diario.elmercurio.com/2006/10/26/_portada/index.htm
Politics	http://www.presidencyofchile.cl/view/homepage.asp
Retail	https://www.ripley.cl/webapp/wcs/stores/servlet/StoreCatalogDisplay?storeId=10051&catalogId=10051

The President's site continues the strong trend from central government, coming the closest to reaching Single-A with only two Priority 1 issues. Banco de Chile encountered the most Priority 1 problems, with six fails.

None of the Chilean sites included skip links, making things awkward for people who rely on the keyboard to navigate around pages. Clear link text also proved problematic for all five homepages. The airline, newspaper and central government websites all used the same link text to point to different web pages and every site contained graphical links with no text descriptions.

Alternative text descriptions for images were also missing on most graphics throughout each page. The airline, Lan Chile, did provide a better level of text descriptions, but did not include helpful descriptions for Flash content. Colour contrast was again problematic for the Chilean sites, although Lan Chile came very close to success with the Flash banner causing some minor problems.

The negative trend for sites failing to use valid code continued throughout each of the sites for Chile. None of the five sites had pages that could be resized to suit any screen, although Lan Chile did permit the size of text to be changed by the user. Mild eye conditions, which can be fixed by wearing glasses, are probably the most common in the world, yet the great majority of sites do not permit the size of text to be altered.

Four of the sites failed to use headings at all, and whilst Lan Chile did include headings, the site did not follow best practice. Lists too were barely used, but again Lan Chile provided the exception with very good use of correctly coded lists.

The natural language of each site was not correctly defined in the code of any of the homepages and in the case of Banco de Chile and the President's site, neither correctly denoted the change in language at the point where links to English sites were located.

The navigation links on the Ripley site stop working when JavaScript is disabled, making it impossible for some people to navigate through the site. Significant portions of the homepage on the Lan Chile and Banco de Chile Sites do not display unless JavaScript support is turned on.

Neither Lan Chile nor Banco de Chile contained any forms and of the remaining three sites, none included any form labels at all. None of the Chilean sites provided skip links, but all made use of pop-up windows.

China

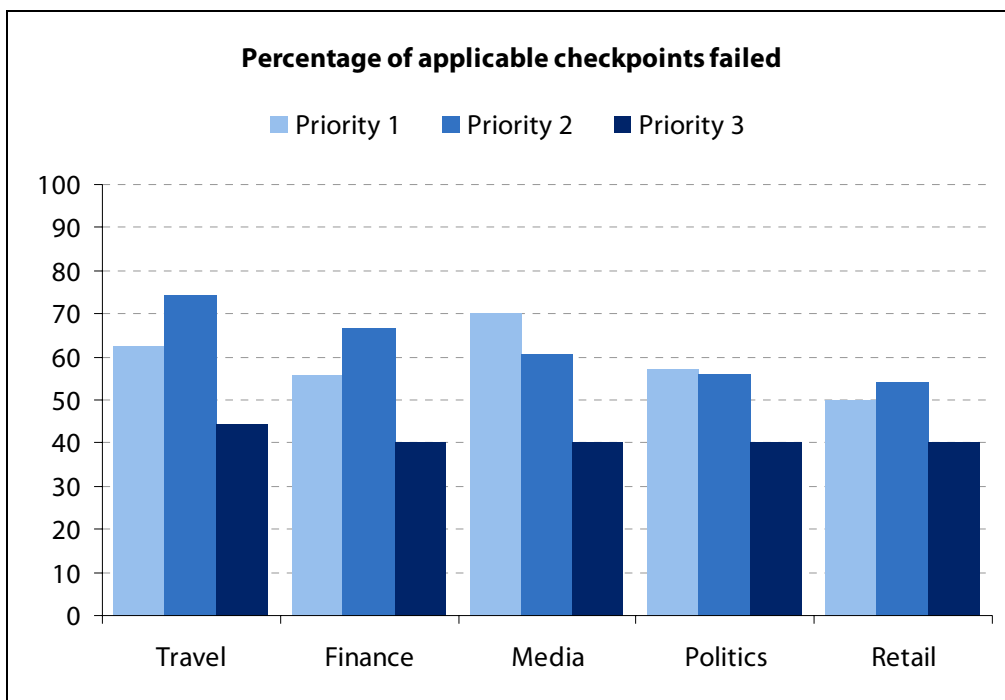


Chart 6: the Chinese websites results

None of the five sites tested for China achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 5 issues;
- Priority 2 – 16 issues;
- Priority 3 – 4 issues.

Travel	http://www.airchina.com.cn/index.jsp
Finance	http://www.icbc.com.cn/index.jsp
Media	http://www.people.com.cn/
Politics	http://www.gov.cn/
Retail	http://www.alibaba.com/

Alibaba, the retail site, came the closest to reaching Single-A, encountering problems with three Priority 1 checkpoints. The People's Daily newspaper was farthest away, with seven Priority 1 fails.

The Chinese sites proved no exception to the trend of difficulty with colour contrast. Only the President's site used good colour contrast for all images, whilst none of the sites did so for text. Although none of the five sites provided text descriptions for all images, Alibaba was missing descriptions for only three images. Curiously, the text descriptions provided on the same site were in English, despite the images themselves containing Chinese characters.

Skip links were not provided on any site, and all sites used unhelpful or confusing link text. For example, Alibaba used multiple links with the text "More..." which provides no useful information to someone who simply tabs on to the link for information.

Despite every page containing a form, none of the sites used form labels to help people interpret the purpose of individual form fields. China again followed the trend of using pop-ups with frequency. The President's site is particularly notable as almost every link opens in a new browser window, causing potential problems for users of screen magnification software.

Occasional links and drop down menus across the banking, newspaper and retail sites do not work when JavaScript is disabled. The most significant concern lies with the Air China website, which requires JavaScript in order to display the main site navigation. None of the Chinese websites identified the natural language of the page, particularly remarkable for those sites using a different character set. Each of the homepages contained English content, but the change in language was not written into the code of the page. Screen readers are in development around the world and whilst most support English language pronunciation, many include simple Chinese and other synthesised language modules.

Standing out from the remaining four sites, Alibaba made good use of headings to convey document structure to people with visual impairments. The site also attempted to use lists and with a few exceptions, did so very well.

Although most of the Chinese sites did not cater for either the text or size of the page to be changed by the user, Alibaba once more demonstrated good practice. Aside from a few links at the top of the page, all of the text and the page itself could be resized to suit the user's needs. None of the sites however used valid

code, following an almost global trend for using poor foundations upon which to build accessible content.

France

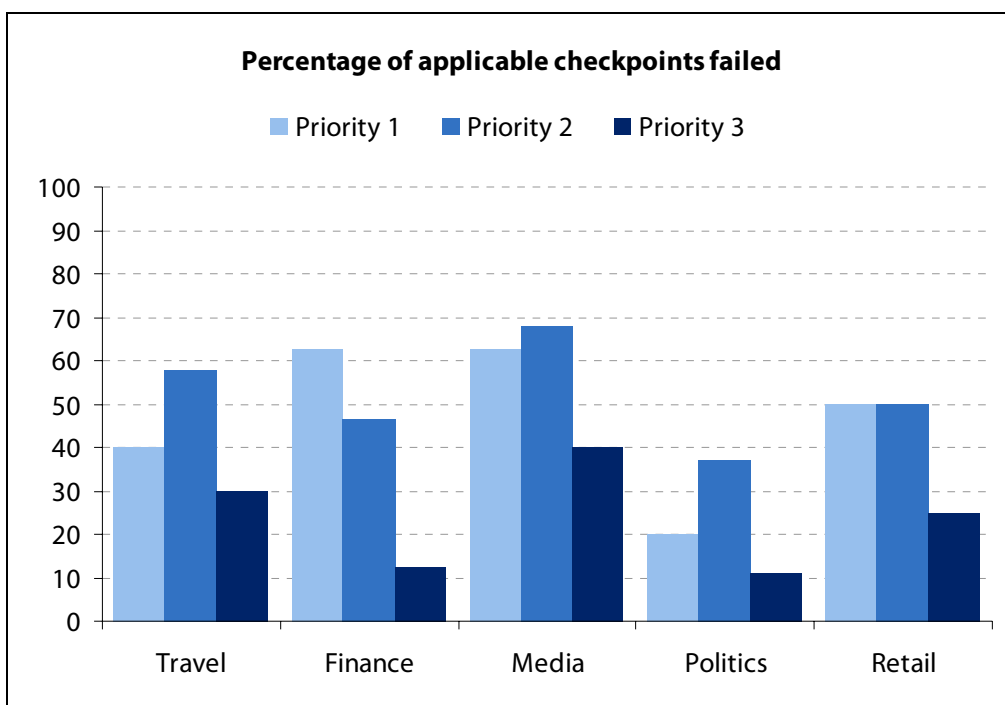


Chart 7: the French websites results

None of the five sites tested for France achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 3 issues;
- Priority 2 – 14 issues;
- Priority 3 – 2 issues.

Travel	http://www.airfrance.fr
Finance	http://www.socgen.com/
Media	http://www.lemonde.fr/
Politics	http://www.premier-ministre.gouv.fr/fr/
Retail	http://www.carrefour.fr

The Prime Minister's website came closest to reaching Single-A, finding problems with just one Priority 1 checkpoint. Le Monde, the newspaper, and Société Générale, the bank, encountered the most Priority 1 problems, with five issues apiece.

None of the French sites provided helpful text descriptions for all images, although the Prime Minister's homepage came extremely close with only one graphical link missing an alternative description. The Air France site was the only one to use good colour contrast in images and with the exception of Société Générale, all sites failed to use good colour combinations for all text content.

Only the Société Générale created a website that could be collapsed or expanded to fit any screen size, but along with the remaining four sites which did not, it used fixed font sizes that could not be changed by the user. None of the sites used valid code to construct their pages.

The Prime Minister's site was the only one to use headings properly, but the use of lists was more prevalent. Neither Air France nor Le Monde used lists at all, but Société Générale followed best practice. Carrefour, the retailer, and the Prime Minister's site made good attempts to define lists correctly in the code of page, just missing a few instances where proper lists would have been useful.

Société Générale, Air France and the Prime Minister's site all correctly defined the natural language of the page in the code. Of the two sites that included foreign language text on the homepage, only the Prime Minister's site used the correct language identifier in the code of the page.

With the exception of the Prime Minister's site, which did not use JavaScript at all, each site required JavaScript to be enabled in order to operate properly. All sites however used pop-up windows without warning people of their presence.

The Prime Minister's site again stood out as evidence of good practice, by providing clearly positioned and correctly associated labels for all form fields. In all other cases across the selection of French sites, labels were absent.

France followed the trend for using unhelpful link texts. All sites, with the exception of Air France, used the same link text to point to different web pages, causing difficulties for everyone, but particularly people with learning difficulties. Each site also contained graphical links with no alternative text descriptions, making it impossible for people with image loading turned off in the browser to know where the links would lead.

With a universal result, not a single French website provided skip links for the benefit of physically or visually impaired people.

Germany

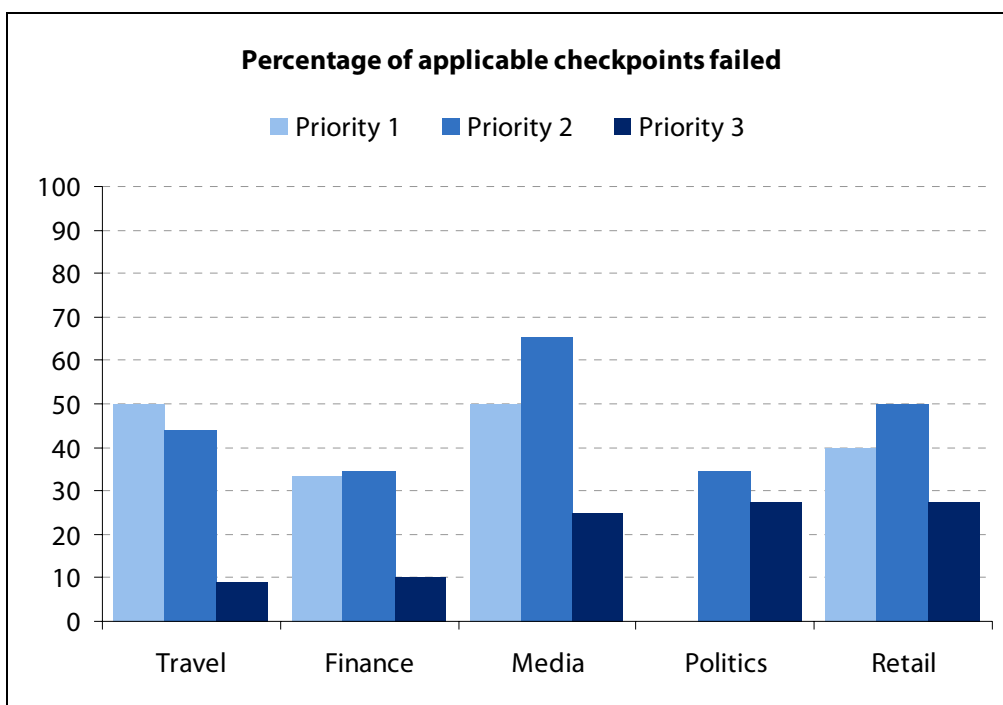


Chart 8: the German websites results

One of the five sites tested for Germany achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 2 issues;
- Priority 2 – 12 issues;
- Priority 3 – 2 issues.

Travel	http://www.lufthansa.com/online/portal/lh/de/homepage?tl=1&l=en
Finance	http://www.dresdner-bank.de/privatkunden/index.html
Media	http://www.bild.t-online.de/
Politics	http://www.bundestkanzlerin.de/Webs/BK/DE/Homepage/home.html
Retail	www.karstadt.de

The Chancellor's site achieved Single-A accessibility, one of the few to do so across all 20 countries. The site was some way off reaching Double-A however, with nine Priority 2 issues standing in the way. The remaining sites all performed well, coming close to reaching Single-A, with the Dresdner bank and retailer Karstadt encountering only two Priority 1 issues. Lufthansa, the airline, and Faz, the newspaper, brought up the rear with three Priority 1 issues apiece.

None of the German websites provided skip links and all used link text that failed to clearly indicate where the link would lead.

Although each of the sites contained a form, none were equipped with correct labels, except Lufthansa, which did provide labels for all form fields except the search box. All five sites used pop-up windows. Ironically, given the fact that people who need to use screen magnification to enlarge content are the most prone to problems with pop-up windows, the Chancellor's site has a link entitled "Vergrößerung", which means "enlarge" or "larger".

The Dresdner Bank and Chancellor's sites both functioned perfectly with JavaScript support, but the remaining sites all encountered problems when JavaScript support was turned off. Both Karstadt and Lufthansa both had drop down menus that relied on JavaScript, whilst Faz used JavaScript to control link activation.

The airline, banking and central government sites all correctly identified German as the natural spoken language of the page. Only Lufthansa and Dresdner Bank included foreign language text, but neither site had correctly written the change of language into the code of the page. The German sites demonstrated a good attempt at structural coding, but fell short of best practice in most cases. Only the Chancellor's website made good use of both lists and headings and although Lufthansa made excellent use of lists, they did not fair so well with headings. Dresdner Bank also used lists well, but along with the remaining sites, did not implement headings satisfactorily.

Three websites, Dresdner Bank, Lufthansa and the Chancellor's site all used flexible units of measurement for text, meaning people could easily resize the text. None of the sites however permitted the page layout to be resized, causing potential problems for people with mild or moderate visual impairments. The nearly universal global trend towards invalid code was continued, with none of the German sites using code that conformed to W3C standards.

Going against the common trend however, three German sites succeeded in using colour combinations with good contrast. Faz and Karstadt were the exception, as they used poor colour combinations for both text and images.

The Chancellor's website have provided very good text descriptions for all images, the airline, banking and retail sites also attempted to provide text descriptions, missing out on just a few instances on each page.

India

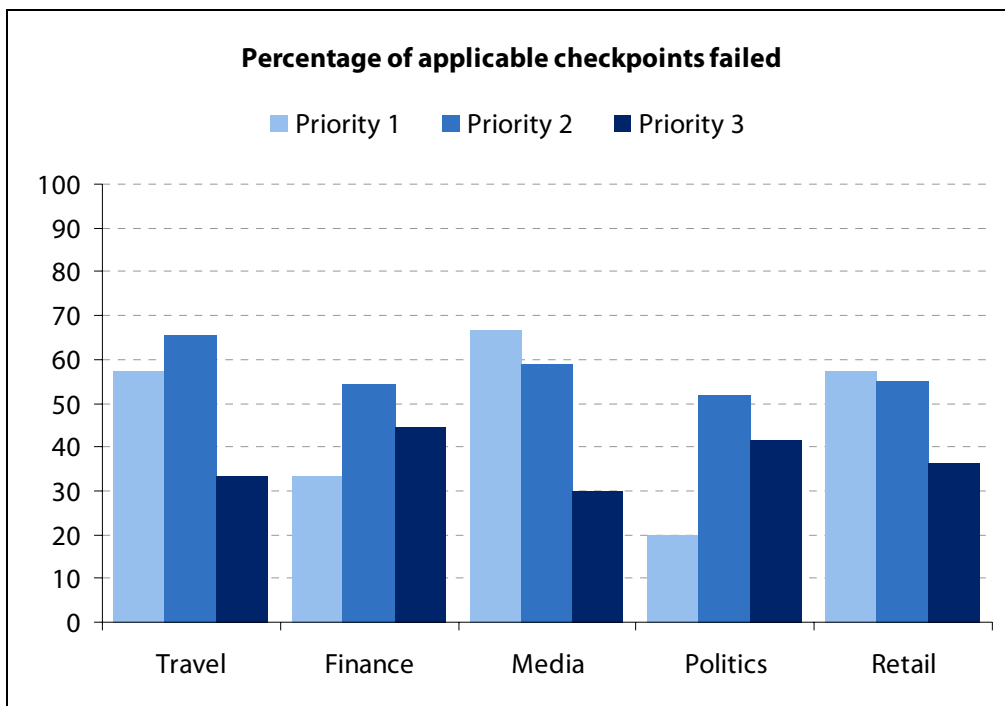


Chart 9: the Indian websites results

None of the five sites tested for India achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 3 issues;
- Priority 2 – 16 issues;
- Priority 3 – 4 issues.

Travel	http://www.airindia.com/
Finance	http://sbi.co.in/viewsection.jsp?lang=0&id=0,1
Media	http://in.indiatimes.com/
Politics	http://pmindia.nic.in/
Retail	http://www.pantaloon.com/html/index.htm

The Prime Minister's website came closest to reaching Single-A, with only a single Priority 1 fail. The India Times encountered the most problems with six Priority 1 issues.

All of the Indian sites used a fixed size for the page layout, which can make it awkward to view at some screen and font settings. Text size was also restricted on each of the five sites, although the India Times and the State Bank of India did allow the text in certain portions of the page to be resized.

None of the sites used valid code, laying down sub-standard foundations for the website to be built around. In a far more surprising result, not a single Indian website used headings or lists to convey document structure. People who rely on the correct code being in place would find it time consuming and frustrating to navigate through information on any of these homepages.

Air India used good colour contrast for both text and images. The retailer, Pantaloon, used good colour combinations for images, but not for text and both the India Times and the Prime Minister's website provided sufficient colour contrast for text but not images. Only the State Bank of India used problematic foreground and background colours for both text and images.

Each of the five sites failed to provide text descriptions for some or all images, following the negative trend towards this most basic of accessibility requirements. Although none of the sites included foreign language content, in each case the natural spoken language of the page was not correctly coded into the page either.

Problems for people unable to use JavaScript varied, from the navigation not displaying on either the Air India or Pantaloon sites, through to Flash content and drop down menus not working on the India Times and State Bank of India sites respectively. Only the Prime Minister's website was not reliant on JavaScript for functionality.

Pop-up windows were plentiful across the Indian sites. For example, the India Times website opens a new browser window when a form is submitted. In terms of forms, neither Air India nor the State Bank of India contained any forms, whilst the remaining three sites did. In each case, no labels were supplied for the form fields on the page.

Link text was confusing and unhelpful right across the board and none of the Indian sites had provided skip links for keyboard users.

Japan

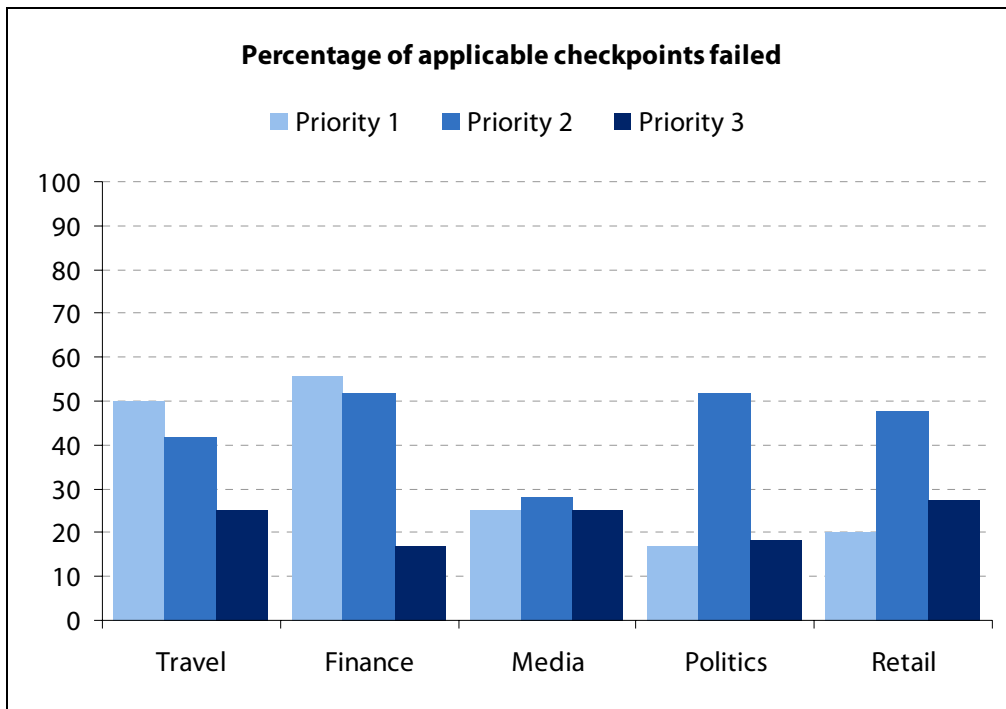


Chart 10: the Japanese websites results

None of the five sites tested for Japan achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 2 issues;
- Priority 2 – 11 issues;
- Priority 3 – 3 issues.

Travel	http://www.jal.co.jp/
Finance	http://www.bk.mufg.jp/
Media	http://www.yomiuri.co.jp/
Politics	http://www.kantei.go.jp
Retail	http://www.sogo-gogo.jp

The Prime Minister's website came the closest to reaching Single-A accessibility, strengthening the central government trend, with just a single Priority 1 fail. Mitsubishi Tokyo Financial Group website was farthest away, with five Priority 1 issues.

The newspaper, Yomiuri Shimbun, was the only website to provide labels for all form fields, although it was not displayed visually, presenting little practical help for sighted people. The Prime Minister's website did include labels, but did not insert any text into the label, rendering it meaningless for many people. The remaining three sites did not provide labels for form fields at all.

Yomiuri Shimbun stood out as the only Japanese site to use valid code. Both the HTML and CSS complied with W3C standards, making it one of the few websites included in the audit to take a common sense approach to web development.

Yomiuri Shimbun continued to demonstrate good practice using flexible units of measurement for both page layout and text size, creating a fluid environment for people to choose the way they most prefer to view the page. The Mitsubishi Tokyo Financial Group and the Prime Minister's website allowed the text to be resized, but not the page itself, leaving Japan Airlines as the only site to restrict movement in both areas.

Both the newspaper and airline sites made good use of headings. The Prime Minister's website did include headings, but did not follow best practice in implementing them. Japan Airlines made good use of lists and Yomiuri Shimbun also included some lists, but did not follow best practice across the whole page.

All but one of the Japanese websites correctly defined the natural language of the page; however none of the sites that included English content on the page acknowledged the change in language. Bucking the general trend for sites that rely on JavaScript, Yomiuri Shimbun, Sogo and the Prime Minister's site all functioned without the need for JavaScript. On the Mitsubishi Tokyo Financial Group site, the Flash did not work properly without JavaScript and it was not possible to choose the Domestic or International tabs from the Japan Airline site.

Various links open content in a new browser window from all five Japanese homepages.

All five sites used confusing link text, either using the same link text to point to different pages, providing graphical links with no alternative text or using different link text to point to the same page. Link texts are very much like

signposts, they should always provide a clear indication of the destination they point to. None of the sites provided a skip link for keyboard users.

Kenya

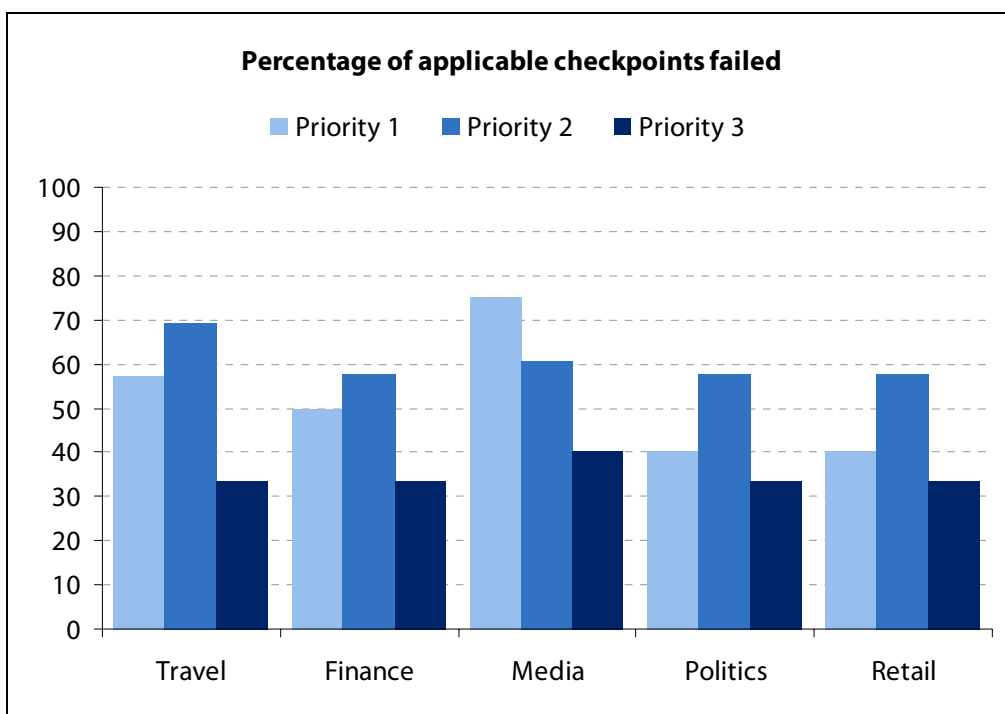


Chart 11: the Kenyan websites results

None of the five sites tested for Kenya achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 3 issues;
- Priority 2 – 16 issues;
- Priority 3 – 3 issues.

Travel	http://www.kenya-airways.com/kq2/default.aspx
Finance	http://www.kcb.co.ke/
Media	http://www.nationmedia.com/dailynation/nmgindex.asp
Politics	http://www.e-government.go.ke/index.php
Retail	http://www.nakumatt.net/

The President's website and the retailer, Nakumatt, both came equally close to achieving Single-A accessibility, with two Priority 1 issues apiece. Farthest away was the newspaper, Daily Nation, with six Priority 1 fails.

Most of the Kenyan sites failed to provide text descriptions on most of their images. However, Kenya Airways came very close, only failing to provide empty text descriptions for tiny place holding graphics. Although a little way short of best practice, it doesn't seriously impact the accessibility of graphical information for people with visual impairments.

None of the sites used contrasting colour combinations for images, but Kenya Airways did provide a good level of contrast for colours used for text. Falling in line with common global trends, none of the Kenyan sites were built using valid code.

Nakumatt stood out as the only site to offer a flexible layout and none of the sites allowed the text size to be increased or decreased by the user across the whole page. Kenya Commercial Bank came the closest, permitting some text on the page to be resized, but did not extend this flexibility to cover all text content on the page.

Of the five Kenyan sites, Nakumatt again proved the exception, as it attempted to use both headings and lists. Although both headings and lists could have been implemented more effectively, their presence suggests a degree of understanding about structural code. None of the five sites defined the natural language of the site in the code of the page; however none of them included foreign language content, excluding the need to identify changes in the spoken language.

All of the sites relied on JavaScript to function properly. For example, Kenyan Airways and Nakumatt both failed to display navigational links correctly when JavaScript was disabled. As with all sites that encounter problems displaying navigation, people are effectively prevented from moving throughout the website.

With the exception of the President's website, each page included links that caused a new browser window to open. In each case, the user was not warned that the unexpected action would take place, leaving many people completely unaware that a new window was open.

Forms featured on every one of the Kenyan sites, yet they were all missing labels. Without labels of any kind, many people will find filling in the information more complicated than it need be, particularly if they are new to Internet forms.

None of the sites provided skip links and all used link text that was unclear or which relied on the surrounding text for clarification.

Mexico

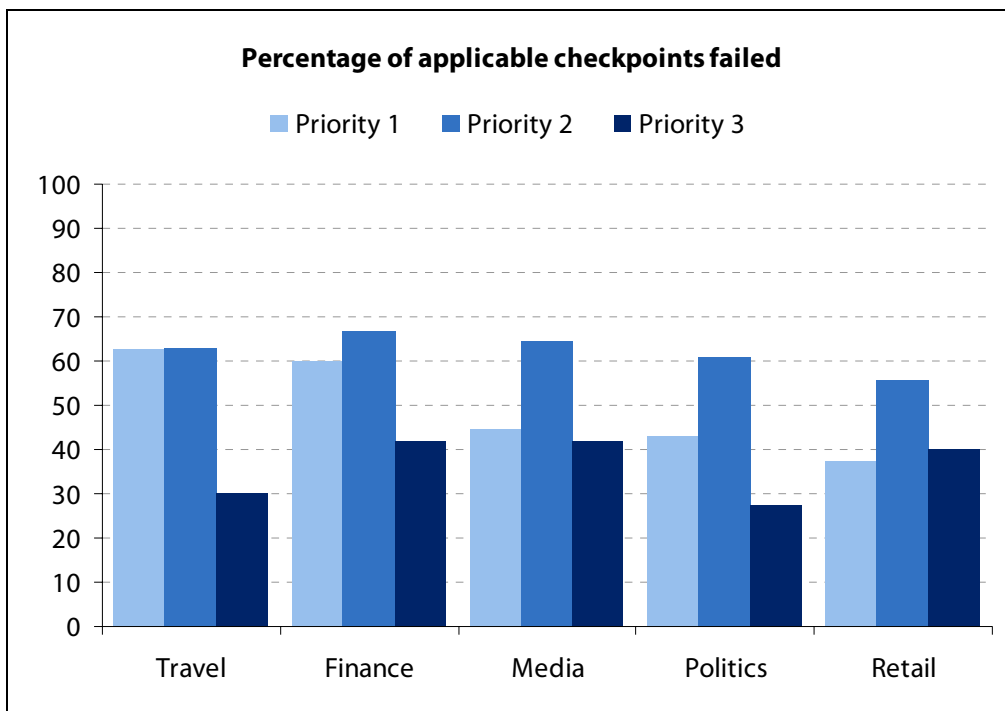


Chart 12: the Mexican websites results

None of the five sites tested for Mexico achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 4 issues;
- Priority 2 – 17 issues;
- Priority 3 – 4 issues.

Travel	http://www.aeromexico.com/usa/english/index.html
Finance	http://www.banamex.com/eng/
Media	http://www.reforma.com/
Politics	http://www.presidencia.gob.mx/
Retail	http://www.comercialmexicana.com

The President's website and the retailer, Commercial Mexicana came equally close to achieving Single-A with three Priority 1 issues each. Banco Nacional de Mexico encountered the most problems, with six Priority 1 fails.

All of the Mexican sites contained images without alternative text descriptions, following the negative global trend for this checkpoint. Similarly, they all used foreground and background colour combinations in images that would cause people with mild eye conditions, such as short or long sight, to have difficulty reading content. The result was the same for colour pairings for text content, with only the President's website using clearly contrasting colours.

None of the Mexican websites were built using valid code and all prevented the size of both the page and text from being changed by the user. The Banco Nacional de Mexico site did allow certain areas of the page to be resized, but not the main content area, effectively restricting the page from resizing fluidly.

Whilst none of the five sites used headings to define the structure of the page, only one did attempt to use lists. People using screen readers can often access shortcut keys that allow them to move quickly around a page. Shortcut keys exist for both headings and lists, enabling a screen reader user to jump from one heading or list to the next. Only the newspaper, La Reforma, attempted to provide lists that were correctly written into the code of the page, although they weren't applied consistently.

Aero Mexico, Banco Nacional de Mexico and Commercial Mexicana all included foreign language content on their pages, but none had switched languages correctly in the code of the page. All of the three, along with the President's website and La Reforma did not identify the natural spoken language of the page within the code either.

Going very much against the global trend, few of the Mexican websites relied on JavaScript for functionality. La Reforma did use JavaScript, but did not rely on it for important functionality and only Banco Nacional de Mexico had links that relied on JavaScript in order to display correctly.

All of the sites used pop-ups to some extent, with only the President's website and Commercial Mexicana using them with any frequency. Every one of the Mexican websites contained at least one form, but labels were missing from some or all of them, meaning that many people would find it difficult to correctly complete the form.

Graphical links with no alternative text descriptions were the most common cause of poor link text and none of the sites provided a skip link to allow people to bypass large blocks of content.

Morocco

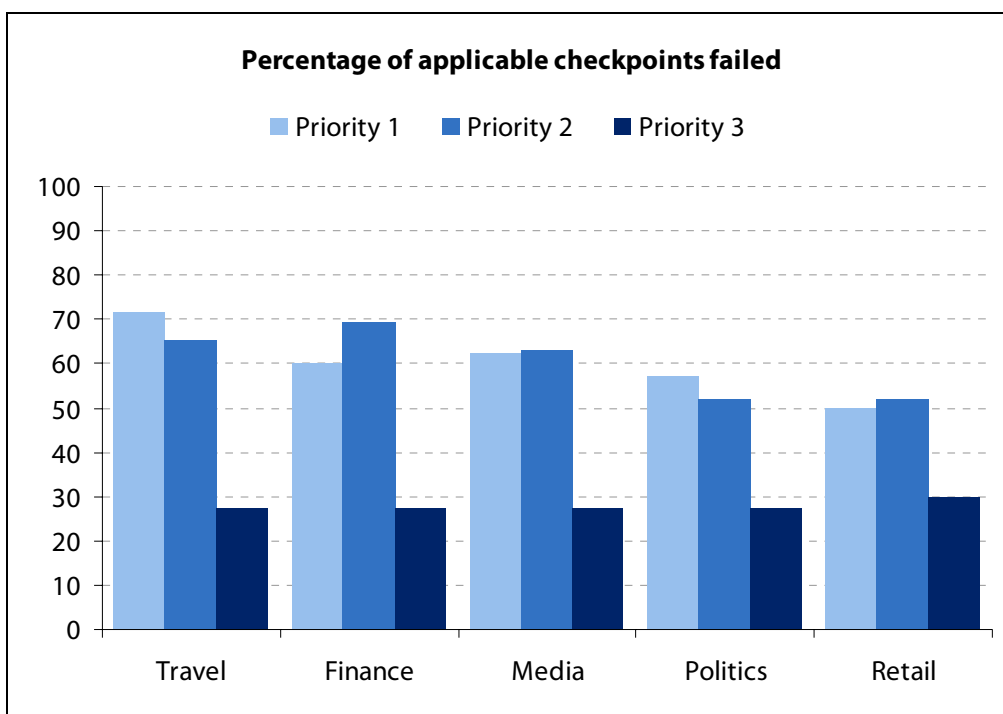


Chart 13: the Moroccan websites results

None of the five sites tested for Morocco achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 4 issues;
- Priority 2 – 16 issues;
- Priority 3 – 3 issues.

Travel	http://www.royalairmaroc.com/ENG/
Finance	http://www.wafaonline.com/wafapart/home.asp?WOL=Particuliers
Media	http://www.lematin.ma/
Politics	http://www.maroc.ma/PortailInst/An/home
Retail	http://www.kitea.ma/home.php

Breaking the trend of central government websites being closest to Single-A in most countries, Kiteat, the retailer, came closest to Single-A accessibility with three Priority 1 fails. Newspaper, Le Matin, and the travel website, Royal Air Maroc brought up the rear with five Priority 1 issues apiece.

None of the Moroccan websites provided skip links for keyboard users, despite this being one of the easiest accessibility techniques to implement. Graphical links with no alternative text descriptions were again the root cause of poor descriptions for link targets, again a simple situation to remedy.

All of the five websites contained forms, but labels were missing from some or all form fields. Every homepage contained a link that caused a new browser window to open when it was activated. Ranging from the Royal Air Maroc website, which used this technique in a drop down menu, to the Attijariwafa Bank, which used only a single pop-up window. In all cases however, no warning was given to the user that indicated a new window would open when the link was activated.

Each of the Moroccan websites relied on JavaScript for important functionality. In the case Attijariwafa Bank, the search facility failed to work without JavaScript. The Royal Air Maroc encountered so many problems when JavaScript was turned off that the page effectively became unusable.

Of the five websites evaluated, none correctly identified the natural spoken language of the page. Only Royal Air Maroc and the President's website included content in a foreign language, but neither acknowledged this change in the code of the page. Neither headings nor lists were used on the majority of the Moroccan sites. The only exception being the President's website, which did make some use of headings, although did not do so consistently.

All of the websites used fixed units of measurement, meaning that text could not be resized and the page itself could not be adjusted to fit into any screen dimension. Kitea came closest to allowing text size to be increased or decreased, but did so in a way that is not supported by the most popular browser – Microsoft Internet Explorer.

Every website encountered problems with colour contrast, either images, text or both. Images continued to be a problem, with the vast majority of graphics on every website not being accessible to people with visual impairments because no alternative text descriptions had been provided.

Russia

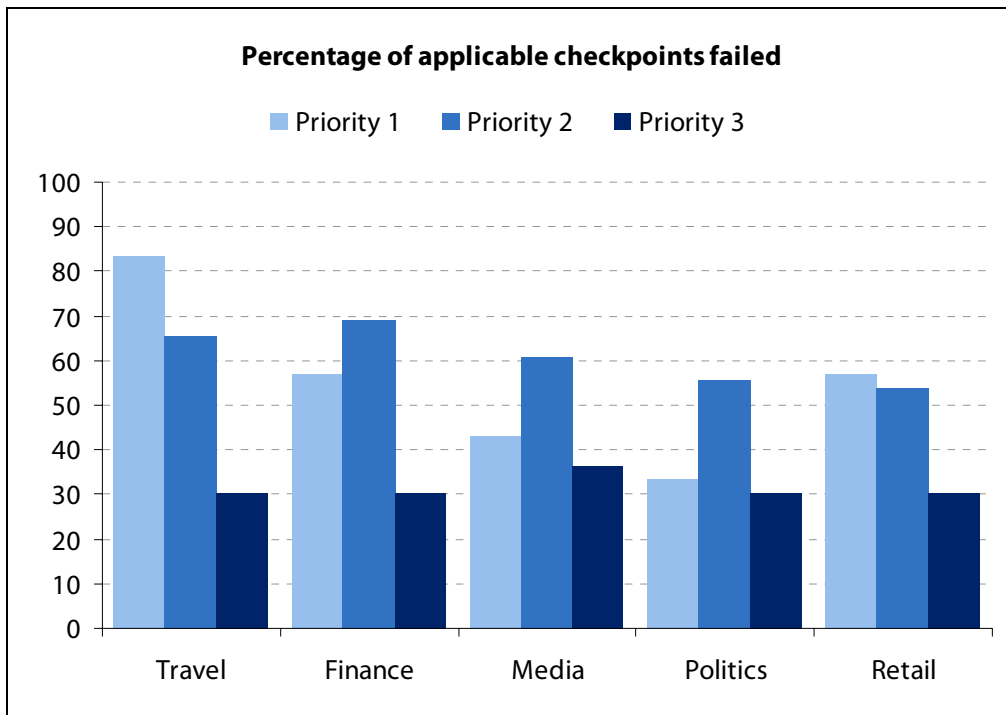


Chart 14: the Russian websites results

None of the five sites tested for Russia achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 4 issues;
- Priority 2 – 16 issues;
- Priority 3 – 3 issues.

Travel	http://www.aeroflot.ru/eng/
Finance	http://www.sbrf.ru/
Media	http://www.mk.ru/
Politics	http://www.kremlin.ru/eng/
Retail	http://www.gum.ru/

The President's website came closest to achieving Single-A accessibility, encountering just two Priority 1 issues. Russian airline, Aero Flot, came farthest from reaching Single-A, failing five Priority 1 checkpoints.

None of the websites were built using code that complied with W3C standards. Both the newspaper, Moskovsky Komsomolets, and the President's website, could be resized so that the content would fit comfortably into most screen sizes. However, both they and the remaining three sites all restricted the resizing of text, making it difficult for certain people to read text based content.

Moskovsky Komsomolets did include one list on the page, but neglected to correctly code all the lists on the page.

None of the other four websites used lists at all and along with Moskovsky Komsomolets, none made use of headings to convey document structure.

Many images on each page were not provided with alternative text descriptions, making it difficult for people with image loading turned off in the browser to understand much of the information contained on the page. In terms of colour contrast, only the President's website managed to use colour combinations for both images and text that provided sufficient contrast to make reading easier. All of the remaining websites found colour contrast problems for images, text or both.

Clear indication of where a link will lead continued to be a problem for the Russian websites. The same link text was used to point to different web pages and conversely, different link texts were used to point to the same web page. Ensuring that the same link text is always used to point to the same web page, and that only that particular link text is used, makes browsing much more straight forward for everyone. None of the sites provided skip links to act as a shortcut around large blocks of content and all five websites caused pop-up windows to open when many links were activated.

Following a very strong trend throughout the majority of countries, none of the Russian sites provided labels for their web forms. Each of the sites relied on JavaScript for functionality. A notable example being the Sberbank of Russia, which relied on JavaScript to display the main navigational links. In other cases, drop down menus, links and content failed to function correctly without JavaScript.

Singapore

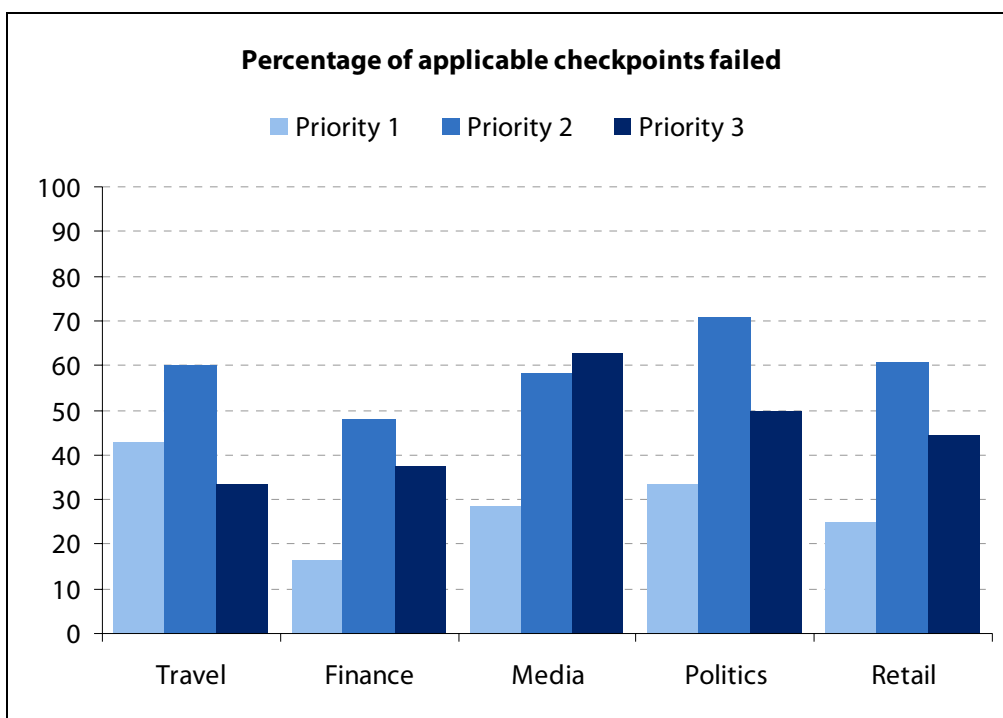


Chart 15: the Singapore websites results

None of the five sites tested for Singapore achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 2 issues;
- Priority 2 – 14 issues;
- Priority 3 – 4 issues.

Travel	http://www.singaporeair.com/saa/en_UK/index.jsp
Finance	http://www.dbs.com/sg/personal/
Media	http://straitstimes.asiaone.com/
Politics	http://www.pmo.gov.sg/
Retail	http://www.coldstorage.com.sg/mall/

Singapore returned some of the most promising results, with the Development Bank of Singapore coming closest to Single-A with only one Priority 1 issue. Singapore Airlines encountered the greatest number of Priority 1 issues, with just three Priority 1 fails.

The Prime Minister's website demonstrated good practice in providing alternative text descriptions for images that were both helpful and informative. Looking closely at the text descriptions provided, in two instances the alternative text didn't exactly match the text contained within the image, but overall this was a very positive result. The remaining four websites were all missing text descriptions for multiple images.

All of the Singaporean sites had problems with colour contrast, using foreground and background colours with insufficient contrast. Every site was built using code that did not conform to W3C standards and in all cases used fixed units of measurement to define the page layout. Results for flexibility of text size were more varied, with the Straits Times allowing about half of text to be resized, through to Singapore Airlines and the Development Bank of Singapore, neither of which allowed the text to be resized at all.

Whilst almost all websites used lists to show a relationship between a group of items, none did so consistently. For example, both the retailer, Cold Storage, and the Prime Minister's website used lists, but did not do so for the group of main navigation links. With the exception of one website, none of the Singaporean sites used headings at all. Singapore Airlines did attempt to write headings into the code of the page, but did not implement it correctly, causing more potential problems than not using headings at all.

The natural spoken language for each website was not identified, putting obstacles in the way of natural search engine functionality and causing problems for people relying on synthesised speech to interact with web pages. None of the sites included foreign language content, so there was no need for changes in the language to be identified.

Results for dependency on JavaScript were varied. Cold Storage and the Development Bank of Singapore both functioned perfectly when JavaScript was disabled. However, people without JavaScript enabled in their browsers would not be able to log into the Singapore Airlines homepage, book a flight or search for information.

The website belonging to the Development Bank of Singapore stood out as one of the few included in the audit which did not cause pop-up windows to open. All of the remaining Singaporean websites did use pop-up windows and did not give the user advanced warning that the action would take place. The Straits Times demonstrated best practice for forms, providing labels that were correctly positioned and clearly associated with their corresponding form fields. Neither Cold Storage nor the Development Bank of Singapore included web forms on their homepages, whilst both Singapore Airlines and the Prime Minister's site did, although neither site used form labels correctly.

All of the websites used poor and unhelpful link text. For example, the Prime Minister's website and Cold Storage both used the link text "Here..." which is meaningless without knowing the surrounding page context. In terms of skip links, none of the five sites included a means of bypassing blocks of content on the page.

South Africa

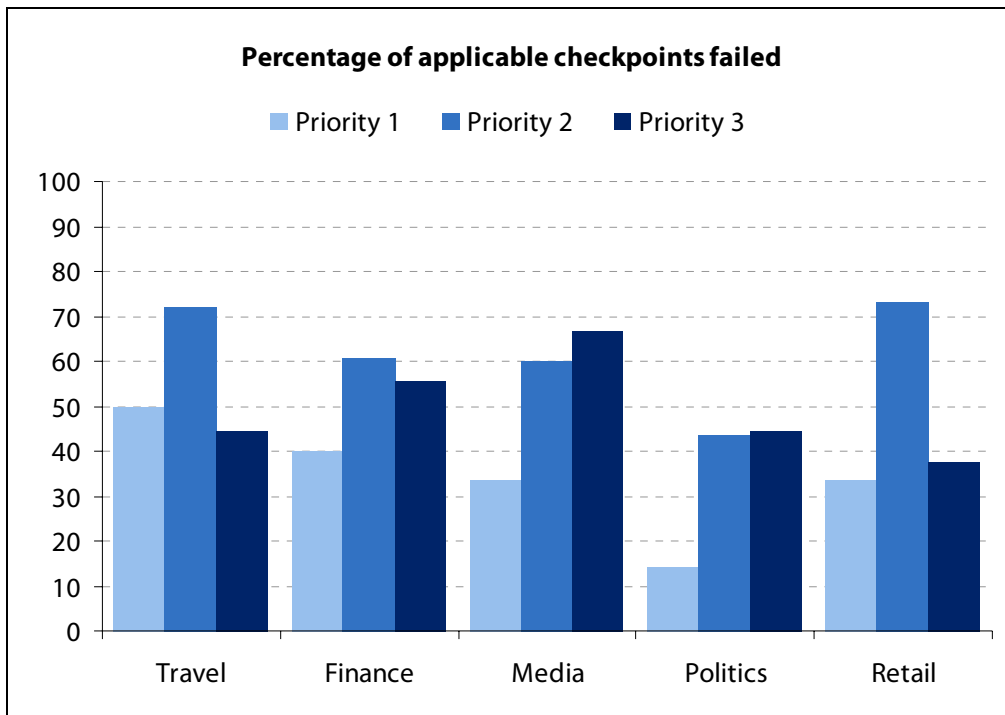


Chart 16: the South African websites results

None of the five sites tested for South Africa achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 2 issues;
- Priority 2 – 15 issues;
- Priority 3 – 4 issues.

Travel	http://ww1.flysaa.com/saa_home.html
Finance	http://www.absa.co.za/absacoza/
Media	http://www.sundaytimes.co.za/Home/Index.aspx?Page=ST6P250&Menuitem=ST6P250
Politics	http://www.info.gov.za/leaders/president/index.htm
Retail	http://www.digitalmall.com/

The President's website came the closest to reaching Single-A, with only a single Priority 1 issue. All of the remaining sites encountered two Priority 1 issues, with the exception of South Africa Airlines, which failed four Priority 1 checkpoints.

None of the South African sites provided skip links for keyboard users, and all used link text that was confusing and unhelpful.

Only the President's website did not include a web form and for the four sites that did include web forms, all failed to provide labels for all form fields. The Digital Mall site did provide labels for some form fields and where this happened; they were positioned correctly and associated with the appropriate form field in the code. However, they did not provide labels for every form field on the homepage.

All of the websites used pop-up windows, mostly without warning the user that a new window would open. The exception was the President's website, which did attempt to warn the user that a new browse window would open, but did so in a way that was not accessible to people using a screen reader.

Significant JavaScript problems were identified on each website except the President's. For example, people without JavaScript would not be able to search for products or add them to the shopping cart on the Digital Mall website, the top story was not visible on the Sunday Times site and without JavaScript enabled, people could not log in to their services on the banking site Absa.

Although none of the South African websites included foreign language content, they did not identify the primary natural spoken language of the website. South Africa Airlines, Absa and Digital Mall did not use lists within the code to help people understand the nature of the information they were viewing. The President's website and the Sunday Times both used lists, but did not do so consistently across the page. Only the President's website used headings in any way, but did so in a way that suggests the purpose was visual styling, rather than conveyance of document structure.

Both Absa and the President's website used flexible units of measurement, allowing pages to be resized to fit any screen size. None of the websites permitted the text size to be altered however and none were built using W3C standards compliant code.

Absa, South Africa Airlines and the Sunday Times all used colour combinations with good levels of contrast, leaving the President's website and Digital Mall as the only two South African sites to use poor colour contrast for images or text.

Text descriptions were missing for many images across all websites. Where text descriptions had been included, for example on the Digital Mall website, they were inappropriate and unhelpful to the person viewing the site.

Spain

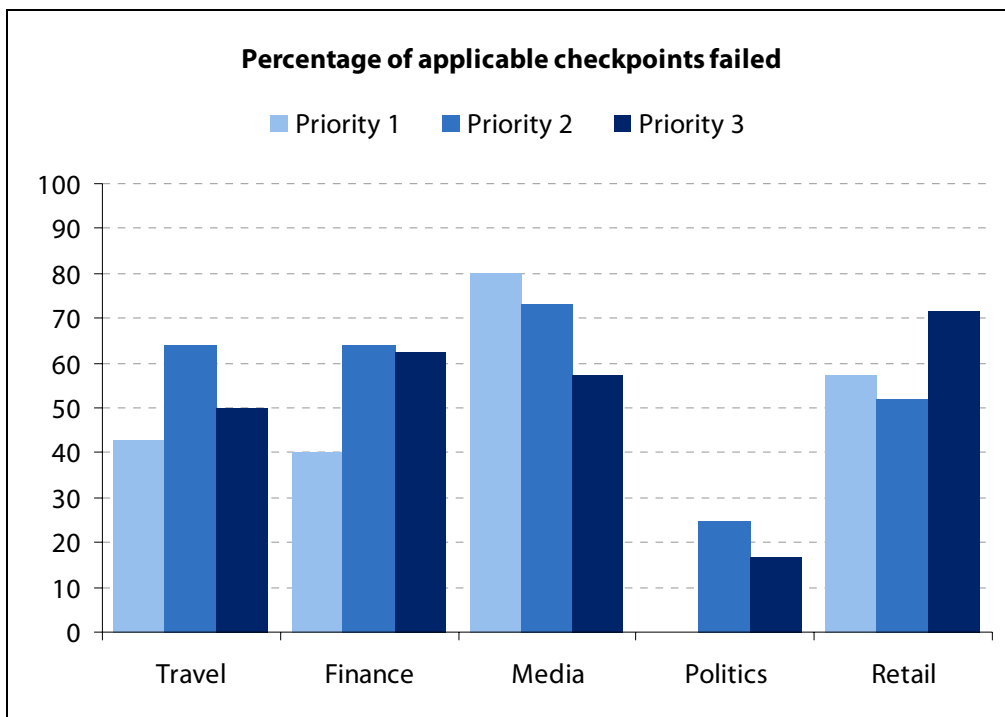


Chart 17: the Spanish websites results

One of the five sites tested for Spain achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 3 issues;
- Priority 2 – 14 issues;
- Priority 3 – 4 issues.

Travel	http://www.iberia.com/OneToOne/v3/Home.do
Finance	http://www.bbva.es/TLBS/tlbs/jsp/esp/home/index.jsp?rf=
Media	http://www.elpais.es/
Politics	http://www.la-moncloa.es/default.htm
Retail	http://www.elcorteingles.es/

The President's website achieved Single-A accessibility and was six Priority 2 issues away from reaching Double-A. The bank, DBVA, was otherwise closest to achieving Single-A, encountering problems with just two Priority 1 checkpoints. Newspaper, El Pais, and retailer, El Corte Ingels, both brought up the rear with four Priority 1 fails apiece.

The President's website was among the few included in the audit to provide alternative text descriptions for all images. In every case, the text descriptions were appropriate, explanatory and helpful. The remaining four websites all failed to provide descriptions for multiple images. In another demonstration of best practice, the President's website did not rely on JavaScript to function. Unlike the other four websites, the 10% of people on the Internet without JavaScript capability would have no difficulty in accessing functional content on the President's website.

All of the Spanish websites used foreground and background colour combinations that would be problematic for people with mild visual conditions such as colour blindness.

None of the five websites used valid to code to construct their homepages. Iberia did allow a limited amount of flexibility in resizing the page, but along with DBVA, El Pais and El Corte Ingles, did not allow text to be resized. Only the President's website allowed complete flexibility for both page and text.

Most of the sites did not define lists correctly in the code. El Pais and the President's website did use lists, but did not do so consistently. The results were similar for headings, with only the President's site using headings to correctly convey the structure of information on the page.

The President's site again stood out as best practice by defining the primary spoken language as well as any switches to foreign language content, within the code of the page. None of the remaining sites managed either.

Overall the quality of link text was poor across all five sites. Links that caused pop-up windows to appear were also common across all five websites and with the exception of the President's website, none provided a warning to the user. The technique used to provide the pop-up warning on the President's website would not be accessible to people using screen readers however. Skip links were also absent from every homepage from the Spanish selection.

Forms were present on all of the Spanish websites, but Iberia, El Pais, DBVA and El Corte Ingles did not provide labels for each form field on the page.

United Arab Emirates

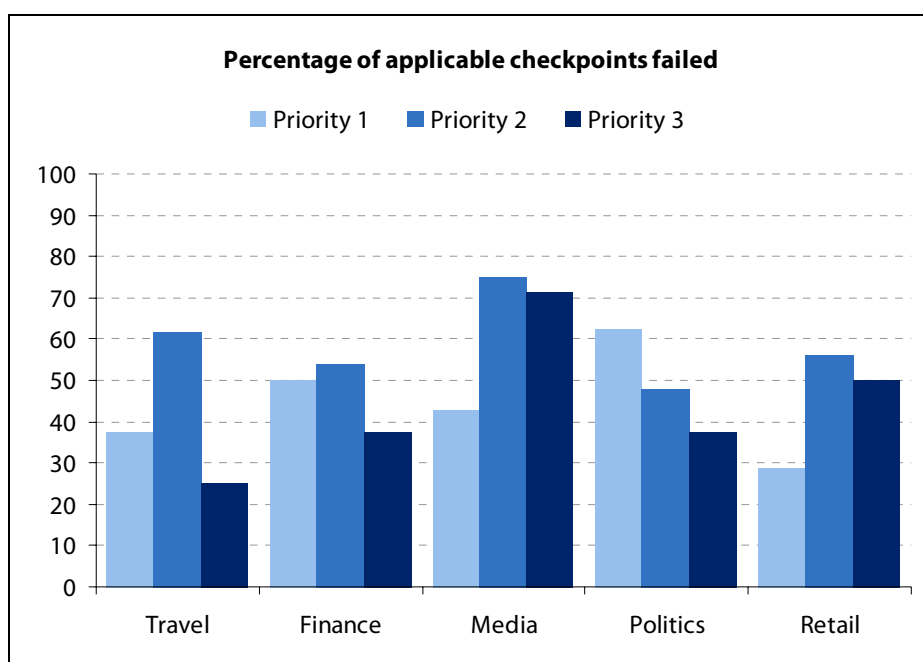


Chart 18: the United Arab Emirates websites results

None of the five sites tested for the United Arab Emirates achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 4 issues;
- Priority 2 – 15 issues;
- Priority 3 – 3 issues.

Travel	http://www.emirates.com/uae/index.asp
Finance	http://www.nbad.com/default.asp?language=1
Media	http://www.alkhaleej.co.ae
Politics	http://www.government.ae/gov/en/index.jsp
Retail	http://www.uaemall.com

The United Arab Emirates Mall came the closest to reaching Single-A accessibility, encountering only two Priority 1 issues. The National Bank of Abu Dhabi and the

President's site were both farthest away from Single-A, with five Priority 1 fails apiece.

None of the United Arab Emirates websites provided skip links for keyboard users and all defined the target of links in a confusing way. Emirates, the airline, and Al Khaleej, the newspaper, both used graphical links without alternative text descriptions, making it impossible for screen reader users to move successfully through the site. The United Arab Emirates Mall used the same link text to point to different web pages and vice versa, whilst the President's site and the National Bank of Abu Dhabi both used link text such as "More..." and "Click here...".

The National Bank of Abu Dhabi did not include a web form on the homepage, but the remaining four websites did so without providing appropriate labels for all text fields. For someone unable to view the graphical layout of a form, the provision of accurate form labels is essential. All of the United Arab Emirates sites caused pop-up windows to appear, causing irritation for almost all users and problems for some.

The United Arab Emirates Mall was the only website not to rely on JavaScript at all. The remaining four websites all relied on JavaScript, but in the case of the National Bank of Abu Dhabi, only cosmetic changes took place when JavaScript was disabled.

Emirates, the National Bank of Abu Dhabi and the President's website all correctly identified the natural language of the page. This helps people using synthetic speech as well as facilitating more accurate search engine results. All of the sites, with the exception of United Arab Emirates Mall, contained foreign language text, but none had correctly identified the change in language within the code of the page.

The President's website was the only United Arab Emirates website to attempt to use headings, but did so in such a way that suggests visually styling rather than document structure. Of the websites that used lists, none did so in a consistent manner. Particularly notable was the absence of coding for lists of navigational links.

With the exception of United Arab Emirates Mall, all sites prevented text from resizing and the page from being adjusted to suit any screen size. United Arab Emirates Mall provided a flexible layout and, but only minimal adjustment for text

size. None of the sites used valid code, failing to build solid foundations for the website.

Only the President's website managed colour combinations for both images and text that provided a good level of contrast. Each website also had a number of images without alternative text descriptions. Most notable was the National Bank of Abu Dhabi, which did not provide a single text description for any non-text content.

United Kingdom

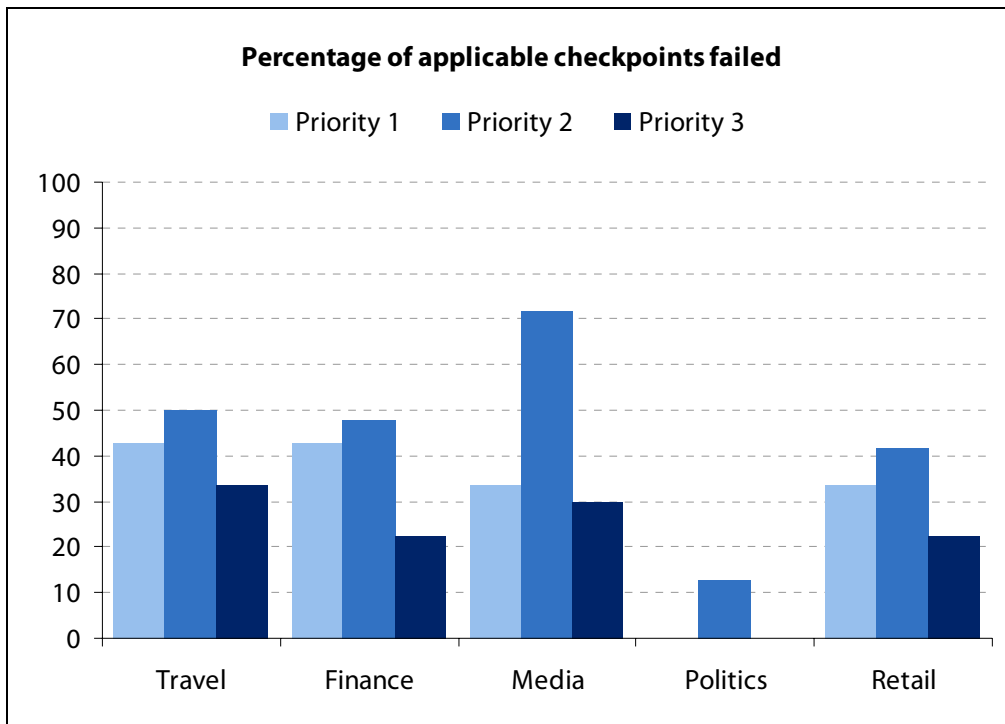


Chart 19: the United Kingdoms websites results

One of the five sites tested for the United Kingdom (UK) achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 2 issues;
- Priority 2 – 12 issues;
- Priority 3 – 2 issues.

Travel	http://www.britishairways.com/travel/home/public/en_gb
Finance	http://www.lloydstsb.co.uk/
Media	http://www.guardian.co.uk/
Politics	http://www.primeminister.gov.uk/
Retail	http://www.marksandspencer.co.uk/

The Prime Minister's website achieved Single-A accessibility and came close to reaching Double-A with four Priority 2 issues. Uniquely, the Prime Minister's website would have reached Triple-A accessibility by default, had the Priority 2 issues been resolved, as no Priority 3 issues were identified. British Airways, LloydsTSB and The Guardian newspaper were all farthest from reaching Single-A accessibility, with just three Priority 1 fails apiece.

Although the Prime Minister's website provided alternative text descriptions for all images, three other websites also came close to succeeding with this checkpoint. The banking website, LloydsTSB, British Airways and The Guardian websites provided text descriptions for all except a few place holding graphics. With the exception of the Prime Minister's website, all of the UK websites used foreground and background colour combinations that would cause people with mild visual conditions potential problems in reading content.

None of the five websites used valid code to act as a solid foundation for accessibility. Results for flexible design were varied however. All websites, except the Prime Minister's, used fixed units of measurement to define the page layout, preventing it from being comfortably resized to fit onto a small screen, for example a mobile phone. Each website enabled content text to be resized, but British Airways and The Guardian both prevented text in the main navigation from being altered.

Although all UK websites made use of headings, Marks & Spencer, British Airways and The Guardian did not use them to effectively convey the structure of information on the page. Conversely however, Marks & Spencer and British Airways were the only UK websites to effectively define all lists in the code.

In a rare result, every one of the five websites defined the natural language of the homepage. Following on from this, none of the sites included foreign language text precluding the need for changes in the language to be identified.

Just two websites relied on JavaScript for functionality. People without JavaScript capability would not be able to choose the "Hotel" or "Cars" tabs on the British Airways site and would not be able to access the drop down menu on the site belonging to LloydsTSB.

Only the Prime Minister's website did not cause pop-up windows to appear when links were activated without informing the user. The remaining four websites all

used pop-up windows and did so without warning the user that the action would take place.

Every UK website included a web form, but Marks & Spencer, British Airways, The Guardian and LloydsTSB did not provide adequate labels for all form fields. Descriptions of link targets were poor throughout the UK sites. The most prevalent problem being the use of context dependent phrases such as "Find out more..." or "More options...". On the Marks & Spencer site, the link phrase "Home" was used to point to two different pages, causing significant confusion for all visitors to the website.

Both Marks & Spencer and the Prime Minister's website provided a skip link for keyboard users, bucking the almost universal lack of such links across sites included in the audit. British Airways and The Guardian attempted to provide skip links, but did so in a way that renders the link invisible to some recent screen readers.

United States of America

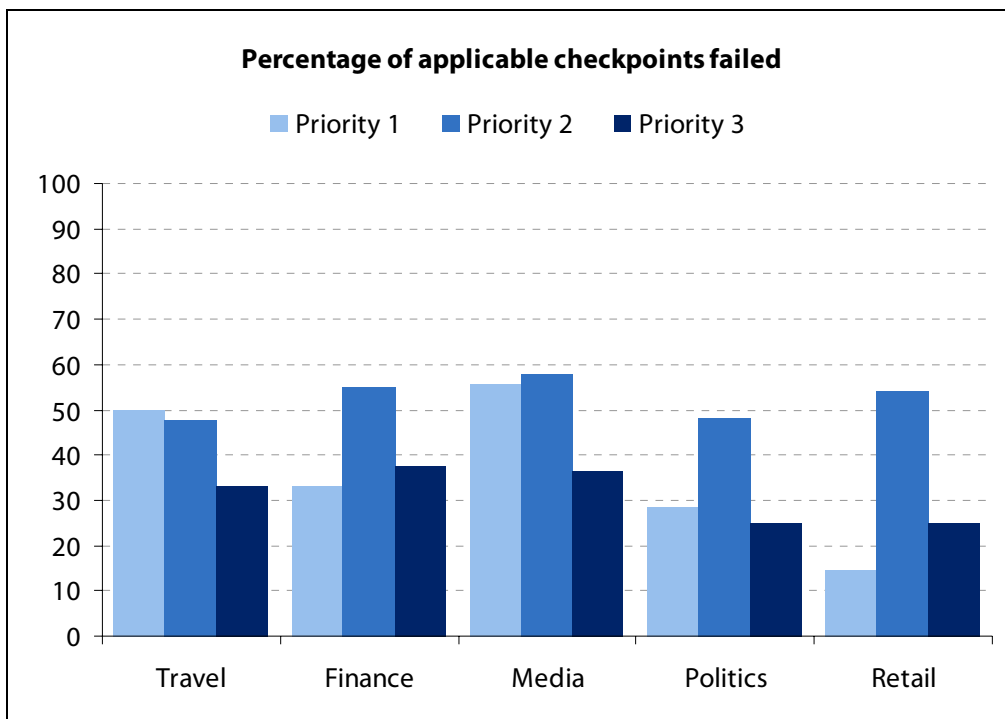


Chart 20: the United States of America's websites results

None of the five sites tested for the United States of America (USA) achieved Single-A accessibility. The average number of issues across all five pages was:

- Priority 1 – 3 issues;
- Priority 2 – 12 issues;
- Priority 3 – 3 issues.

Travel	http://www.aa.com/
Finance	http://www.citibank.com/
Media	http://www.nytimes.com/
Politics	http://www.whitehouse.gov/
Retail	http://www.walmart.com/

The retailer, Wal-Mart, came the closest to reaching Single-A, with just a single Priority 1 issue. Farthest away was The New York Times, which encountered problems with five Priority 1 checkpoints.

Only the President's website provided a skip link to assist keyboard-only users in navigating through the page. None of the American sites provided good quality link targets. The President's website being a notable example, by including graphical links with no alternative text descriptions. A person using a screen reader would not understand the destination of the link and would find navigating through the site almost impossible.

Citibank was the only website not to include a web form and of the remaining four websites, none provided labels for all the form fields on the page. Neither Wal-Mart nor the President's website relied on JavaScript for functionality. Out of the remaining three websites, Flash content would not appear on the New York Times site unless JavaScript was enabled and multiple links on the American Airlines site also failed to work.

The President's site and Wal-Mart again proved to be the exception to the American rule, by correctly identifying the natural spoken language of the site. Speech synthesizers are also capable of determining the difference between different dialects of language, making the American pronunciation different from the English. Only the President's website included foreign language text, but failed to acknowledge the change in language in the code of the page.

The New York Times homepage did make good use of lists, to help people appreciate the structure of information. Along with the President's website, it also attempted to use headings, but neither did so in a way that would be practically useful to people using access technologies.

The New York Times was the only website to allow the page to be resized to fit the user's preferences. The other four websites all used fixed units of measurement to define the page layout and along with the New York Times, provided little or no flexibility for text size. Following the almost total global trend, none of the American websites were built using valid code.

American Airlines and the President's website both provided foreground and background colour pairs that had sufficient colour contrast, whilst the remaining three websites did not. Text descriptions were missing throughout every one of the American websites. The most notable example being a graphical link on the

President's site showing a picture of the White House. The link does not include an alternative text description, so not only is the destination of the link not apparent, it is not possible for many visually impaired people to understand what America's most famous building looks like.

Appendix A: full list of URLs

Argentina

http://www.aerolineas.com.ar/ar/index.asp?idi=es&vtn_residente=si

<http://www.bna.com.ar/default.asp>

<http://www.clarin.com/>

<http://www.presidencia.gov.ar>

<http://www.altocity.com/>

Australia

<http://www.qantas.com.au/regions/dyn/home/qualifier-region-au>

<http://www.national.com.au/>

<http://www.smh.com.au/>

<http://www.pm.gov.au/>

www.coles.com.au

Brazil

<http://www.tam.com.br/b2c/jsp/default.jhtml>

<http://www.bb.com.br/appbb/portal/index.jsp>

<http://www.folha.uol.com.br/>

<http://www.presidencia.gov.br/>

<http://www.americanas.com.br/cgi-bin/WebObjects/AcomHome.woa/wa/default?chave=lasa>

Canada

<http://www.aircanada.com/>

<http://www.royalbank.com/>

<http://www.theglobeandmail.com/>

<http://www.pm.gc.ca/eng/default.asp>

<http://www.sears.ca>

Chile aka Republic of Chile

<http://www.lan.com/index.html>

<http://www.bancochile.cl/webchile1/institucional/default.html>

http://diario.elmercurio.com/2006/10/26/_portada/index.htm

<http://www.presidencyofchile.cl/view/homepage.asp>

<https://www.ripley.cl/webapp/wcs/stores/servlet/StoreCatalogDisplay?storeId=10051&catalogId=10051>

China

<http://www.airchina.com.cn/index.jsp>

<http://www.icbc.com.cn/index.jsp>

<http://www.people.com.cn/>

<http://www.gov.cn/>

<http://www.alibaba.com/>

France

http://www.airfrance.fr/cgi-bin/AF/FR/fr/local/home/home/homepage.jsp?BV_SessionID=@@@@0730906768.1161681272@@@&BV_EngineID=cccfaddjeffemfhcefecekedgfnflh.0

<http://www.socgen.com/>

<http://www.lemonde.fr/>

<http://www.premier-ministre.gouv.fr/fr/>

<http://www.carrefour.fr>

Germany

<http://www.lufthansa.com/online/portal/lh/de/homepage?tl=1&l=en>

<http://www.dresdner-bank.de/privatkunden/index.html>

<http://www.bild.t-online.de/>

<http://www.bundeskanzlerin.de/Webs/BK/DE/Homepage/home.html>

www.karstadt.de

India

<http://www.airindia.com/>

<http://sbi.co.in/viewsection.jsp?lang=0&id=0,1>

<http://in.indiatimes.com/>

<http://pmindia.nic.in/>

<http://www.pantaloon.com/html/index.htm>

Japan

<http://www.jal.co.jp/>

<http://www.bk.mufg.jp/>

<http://www.yomiuri.co.jp/>

<http://www.kantei.go.jp>

<http://www.sogo-gogo.jp>

Kenya

<http://www.kenya-airways.com/kq2/default.aspx>

<http://www.kcb.co.ke/>

<http://www.nationmedia.com/dailynation/nmgindex.asp>

<http://www.e-government.go.ke/index.php>

<http://www.nakumatt.net/>

Mexico

<http://www.aeromexico.com/usa/english/index.html?>

<http://www.banamex.com/eng/>

<http://www.reforma.com/>

<http://www.presidencia.gob.mx/>

<http://www.comercialmexicana.com>

Morocco

<http://www.royalairmaroc.com/ENG/>

<http://www.wafaonline.com/wafapart/home.asp?WOL=Particuliers>

<http://www.lematin.ma/>

<http://www.maroc.ma/PortailInst/An/home>

<http://www.kitea.ma/home.php>

Russia

<http://www.aeroflot.ru/eng/>

<http://www.sbrf.ru/>

<http://www.mk.ru/>

<http://www.kremlin.ru/eng/>

<http://www.gum.ru/>

Singapore

http://www.singaporeair.com/saa/en_UK/index.jsp

<http://www.dbs.com/sg/personal/>

<http://straitstimes.asiaone.com/>

<http://www.pmo.gov.sg/>

<http://www.coldstorage.com.sg/mall/>

South Africa

http://ww1.flysaa.com/saa_home.html

<http://www.absa.co.za/absacoza/>

<http://www.sundaytimes.co.za/Home/Index.aspx?Page=ST6P250&MenuItem=ST6P250>

<http://www.info.gov.za/leaders/president/index.htm>

<http://www.digitalmall.com/>

Spain

<http://www.iberia.com/OneToOne/v3/Home.do>

<http://www.bbva.es/TLBS/tlbs/jsp/esp/home/index.jsp?rf=>

<http://www.elpais.es/>

<http://www.la-moncloa.es/default.htm>

<http://www.elcorteingles.es/>

United Kingdom

http://www.britishairways.com/travel/home/public/en_gb

<http://www.lloydstsb.co.uk/>

<http://www.guardian.co.uk/>

<http://www.primeminister.gov.uk/>

<http://www.marksandspencer.co.uk/>

United Arab Emirates

<http://www.emirates.com/uae/index.asp>

<http://www.nbad.com/default.asp?language=1>

<http://www.alkhaleej.co.ae>

<http://www.government.ae/gov/en/index.jsp>

<http://www.uaemall.com>

USA

<http://www.aa.com/>

<http://www.citibank.com/>

<http://www.nytimes.com/>

<http://www.whitehouse.gov/>

<http://www.walmart.com/>

Appendix B: about Nomensa

Nomensa is the digital agency which specialises in perfecting online user experience.

Nomensa bridges the gap between usability and creativity, with full accessibility as standard. Combining psychology, visual design and technology, Nomensa produces award-winning websites and provides user experience consultancy to both private and public sector clients.

Founded in May 2001, Simon Norris, Managing Director, had the vision that the Internet could be more inclusive and the industry a more accountable profession. Nomensa cares passionately about making technology easier to use, for everyone. From this passion follow two advantages for clients: notable business benefits and happier customers.

Realistic and results-driven strategies are created to help clients achieve their online business strategies and reap considerable commercial benefits. Nomensa ensure that user experience strategies meet clients' long-term goals and ensure that projects are delivered on time, on budget, and exceed expectations.

Nomensa works with FTSE 250 companies, Central Government Departments, Local Authorities and Councils, as well as other organisations within the education, finance, IT, travel and charity sectors.

The company was founded on a research based methodology that puts people at the centre of its activities. Nomensa creates websites that are developed from understanding clients and their users' requirements; therefore based on fact and evidence rather than guesswork and assumption. Nomensa's proven approach to improving the user experience is based upon extensive research and expert knowledge – it's all about humanising technology.

Nomensa's success is not only down to a proven methodology and experience but also down to highly specialised teams of usability analysts, accessibility experts, designers and application developers. Sound academic knowledge is combined with extensive commercial experience and stringent project management to ensure success is delivered every time.

Services

Accessibility

Nomensa designs creative and accessible websites that deliver measurable return on investment. Everybody has the right to access information on the Internet, and with government legislation making accessibility a legal obligation; organisations can no longer afford to ignore the accessibility of their website. Nomensa's Accessibility Services ensure websites meet legal obligations; from auditing a current website to identify current accessibility levels, to building an ongoing online delivery experience strategy to ensure a website remains accessible.

Usability

Nomensa bridges the gap between digital creativity and usability, to improve user experience and conversion rates. Technology can be frustrating. Slow web pages, confusing shopping carts, and forms that don't identify errors correctly can simply annoy their users and depending on their online goal, go elsewhere. Nomensa's Usability Services create user experiences that engage users and provide enjoyment out of using a website. The results? Happy customers and increased conversion rates.

Web Design

Nomensa creates websites that are easy to use, fully accessible and put the client in control of their content. Nomensa's Web Design Services combine visually creative commercial concepts with technical excellence and expertise to improve online user experience. The outcome is a visually engaging website that meets the requirements of the client and their users to improve experience delivery.

Through extensive user-research, Nomensa in 2004 launched the first ever fully accessible front and back end content management system to the market. Called Defacto, the system combines Nomensa's experience with accessibility and usability research to produce a user-friendly system that doesn't limit anybody from creating and maintaining the content of a website.

Training

Nomensa provides training in usability and accessibility to share its expertise and improve industry standards. Nomensa's interactive training courses are run by Human-Centred Interaction experts and help organisations learn and implement methods to improve the user experience of their websites.