HM Revenue & Customs

Research report

Digital Accessibility Testing

Self Assessment, Identity Assurance and company car change

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Behavioural Evidence & Insight Team

About PT Change

PT Change is a “Directorate” within HMRC’s Personal Tax (PT) line of business and is principally concerned with overseeing and bringing together for PT a Portfolio of Programmes that will help transform HMRC business, led by customer understanding.

The PT Change Portfolio will deliver all the changes to processes, structure and systems needed to deliver better services to our customers and enable savings from within PT.

Contents

Research requirement (background to the project)

In 2010, following a report from the UK Digital Champion, the Government announced its 'Digital by Default' strategy whereby as many services as possible are moved online and designed to be so straightforward that those who can access them will choose to do so, while those who cannot are offered alternatives so that they are not excluded. This multi-stranded research programme explored how HMRC's customers are likely to respond to digital services and why, and to understand their needs so that services can be designed to be as effective as possible.

HMRC wished to identify the level of accessibility compliance of three prototype online services against the W3C WAI WCAG 2.0 guidelines. This report focuses on Accessibility Audits conducted on these prototype services: 'Digital Self Assessment', whereby Self Assessment customers will be able to opt in to receiving communications digitally rather than on paper; Identity Assurance (IDA) and reporting a company car change.

When the research took place

Accessibility testing took place in February 2014, with analysis and reporting in March.

Who did the work (research agency)

The testing was conducted by the Digital Accessibility Centre, managed by TNS BMRB.

Method, Data and Tools used, Sample

The prototype services were measured against the Web Accessibility Initiative's (WAI) Web Content Accessibility Guidelines 2.0 (WCAG 2.0) to give an accurate feedback on any non-compliant issues. Two differing testing processes were used:

A manual technical audit using automated tools, including:

- The WAVE toolbar
- The Web Accessibility toolbar (IE)
- The Accessibility toolbar (Firefox)
- W3C validator

Manual accessibility checking by a team of disabled individuals, using a range of adaptive technologies (hardware and software designed to facilitate the use of computers by people with disabilities):

- NVDA: a screen reader and application used by those who are blind
- ZoomText: a magnification application used by those with low vision
- JAWS: a screen reader used by blind people to access Web pages
- Dragon Naturally Speaking: voice activated software used by those that do not use a conventional input device such as a keyboard or mouse.
- Switch Access: used by those with severe mobility impairments to input commands to a computer.
- Keyboard Only: some users with mobility impairments have difficulty making precise movements required by pointing devices such as a mouse; therefore a keyboard is used as the exclusive input device
- Readability: Manual checks were made to assess the suitability of a Web page for those with colour-blindness and dyslexia
- Deaf/Hard of hearing: Manual checks were made to assess the suitability of a web page for those with hearing impairments
- Learning difficulties: Manual checks were made to assess the suitability of a web page for those with learning difficulties

This combination of subjective pan-disability user feedback and comprehensive technical auditing was used to measure how the website performed technically and practically. The findings of both testing teams were then combined to produce the final results.

Main Findings

Digital Self Assessment (SA) services

The general feeling from all user groups was that the accessibility of elements such as form fields for adding an email address is very good. While many users felt that they would not have been able to complete this task without assistance when encountering the journey for the first time, most felt that it could have eventually been completed. Some suggestions for improvement from these users included clearer link descriptions and explanations of what types of tasks could be undertaken – for example ‘On this page you can…..’

Some users found that merging two Government Gateway accounts (SA and VAT) was difficult due to the presence of non-descriptive links and lack of instruction on how to do this; many errors were made in trying to locate the correct links to complete this task.

The main concern that users had about completing the tasks unaided included getting figures wrong, especially as having some help/assistance when doing this would result in sharing personal details, which most users would not opt for. This is an area where 'icons' at the end of certain questions would have been useful for users, in order to give them a hint.

After confirming their email, users were confused as to why they were taken to a different page in order to continue accessing their account. A simple link on the 'Thank you' page to 'Go to your tax account' would have provided a much better user experience for all users.

With regard to the wording of the tax account, it was felt that 'Your tax account' would be more descriptive than tax account, most users were aware that they had signed up for Self Assessment during the task.

Issues encountered by users were categorised as high, medium or low priority, with 'High' being the most critical. These are summarised below.

High priority

Users who navigate using the keyboard alone and screen reader software rely on skip links to enable direct access to the primary content of the page. A skip link had been implemented, but it did not function correctly on all pages visited. Users felt that they would have benefited from a functioning link within each SA page to help them to progress to the next step. The 'Sign up for email reminders' screen is an example.

An additional method of navigation for screen reader users is via headings, so it is important that headings are structured in a logical and hierarchical manner.

Medium priority

Some instances of colour contrast ratios not meeting the 4.5:1 criteria caused problems for low vision users as well as colour blind and dyslexic users. These were found with links and buttons where focus was received and highlighted, but was difficult to appreciate due to the poor contrast between foreground and background colours. An example is when the user inputs the wrong log-in details at the point of sign-up for the Government Gateway.

There were instances that required instructions on how to navigate certain areas; in a couple of cases users were left unaware of where to go next or whether a task had been successfully completed.

Screen reader users encountered many links that opened in new windows; this can be confusing and disorienting as the user cannot return to the previous page, but can be easily overcome by adding a small amount of text within the link.

Screen reader users are able to navigate both in and out of context. In context, the user reads through the content of the page semantically, in a logical manner; out of context, the elements of the page are exposed to the user – for example links, buttons or headings. When navigating this site out of context, some links were not clearly descriptive and users were unable to interpret their meaning or purpose. In these cases, hiding further descriptive information off screen would mean that users are informed while the visual appearance of the page remains unaffected.

Low priority

These issues included the style of font used, which caused difficulties for dyslexic users when reading certain parts of pages. The ZoomText user had difficulties when colours were inverted and it became difficult to differentiate between the buttons and text. However, this issue is relating to an AAA requirement for WCAG 2.

In relation to the main navigation tabs at the top of the page, it was felt that users would benefit from having the current page/stage of journey highlighted within the menu to help establish their location within the site.

The deaf user's first language was BSL (British Sign Language); she encountered issues that related to a lack of instruction on how to complete the tasks. She suggested that a video containing BSL would help her to understand this. The heading for the video would also need to inform users that BSL was available.

Identity Assurance (IDA) and Reporting a Company Car Change

IDA

In general, users found the IDA process quite difficult for a number of reasons, including the lack of clear link highlighting on links and buttons, tooltips being mouse driven and content not being available to NVDA users.

Navigating external websites as part of the IDA process entailed a change in context which some who did not easily perceive the change or were easily distracted by changes found confusing. There is therefore a need to be clear that the change will happen in response to the user's action or instruction. Examples included navigation of the Experian site and the Post Office login form, which was difficult via keyboard alone as it was not clear where focus was placed.

Users felt that the video instructions on the IDA area should be provided in BSL, or at very least, provide synchronised captions associated with important speech or sounds on the video itself. The heading for the video would also need to inform users that BSL was present, if at all provided.

Reporting a Company Car Change

Users found the ‘Replace your car’ process lengthy and would have liked to have had the option to ‘save’ their current positions within the process to return at a later time. Being re-directed to different sites with different layouts and structures proved confusing to users as well.

Most users felt that they would have benefited from instructional tooltips within the ‘replace and remove your car’ forms. Screen reader users also had some difficulties completing the forms when replacing a car due to the way in which some of the form fields had been marked up within each of the questions.

During the process of replacing a company car, many of the users were slightly confused at the point where they were requested to fill in the CO2 emissions. As the links to DVLA and VCA took a user off to different sites, this caused extra accessibility issues not currently present on Gov.uk.

General issues

Users encountered a lack of clear link highlighting (which low vision and keyboard only users especially rely on when navigating around an application or site) in some areas. These areas, missing in certain parts, affected the browsing experience for mobility-impaired users. Further to this there were small areas where the tab order did not follow a logical sequence; this added to users’ frustration – particularly those with low vision or when navigating by keyboard alone.

As with Digital SA, skip links, heading structure and colour contrast issues caused some users difficulties.

The form fields encountered had been marked up and labelled well, but there was one instance where a field requiring a user’s National Insurance Number did not inform the user that this was required to be able to continue; this is an important feature for all users.

Some users noted that their session expired after a period of inactivity during testing; enabling users to extend the log out time or forewarning of this could be provided to prevent users from felling frustrated or confused and having to re-navigate to their previous position.

The forms also contain tooltips that benefit users whilst filling out the forms. These were accessible to most user groups, but keyboard only and screen reader users found that they did not appear when tabbed to. Upon investigation it was discovered a tab index setting had been applied to the tooltip that resulted in the tooltip being removed from the tab order of the page and therefore inaccessible; when this was removed the elements behaved as expected and offered an enhanced experience for all users.

Voice activation software is unable to update dynamic content, which was present on a couple of areas in the site. Currently there is no support for dynamically updating content for this user group, so instructions on navigating using keyboard commands is advisable.