



Usability Testing for Accessibility with Disabled People

G-Cloud 14

Service Definition Document

We believe that the best experiences are inclusive. Over 1.3 billion people worldwide live with a disability, yet many face unnecessary barriers online. Inclusive design, focusing on accessibility, empowers everyone - fostering equality, independence, and connection. Inclusive design isn't just about compliance - it's about unlocking opportunities, ensuring dignity, and enabling participation for all. User Vision have been at the forefront of digital accessibility for over 25 years and have helped hundreds of clients to create digital spaces that are welcoming, usable, and fair. When accessibility is prioritised, technology serves people of all abilities, driving innovation and social impact and creating a more equitable future for everyone.

The team at User Vision



Why Usability Test with Disabled People?

Testing products and services with disabled participants goes beyond technical accessibility audits and offers several benefits

- ▶ **Real-world feedback:** Gain direct insights into the challenges disabled users face when interacting with digital products, including issues that may not be detected during audits, as accessibility guidelines can't cover every unique scenario or interaction.
- ▶ **Identify usability issues:** Discover accessibility-related usability issues that automated tools or non-disabled testers might miss.
- ▶ **Effective accessibility features:** Based on feedback from actual users, ensure that accessibility features are effective and user-friendly for those who need them most.
- ▶ **Promote inclusive design:** Consider the diverse user needs from the outset, leading to better products for all users.
- ▶ **Compliance and reputation:** Comply with accessibility regulations more effectively, reducing legal risks and improving your reputation for inclusivity.



Usability Testing for Accessibility with Disabled People Overview

Specialised usability testing involving people with diverse disabilities to evaluate the usability and accessibility of your products & services. In moderated sessions, participants perform tasks using assistive technologies to reveal accessibility barriers. Our experts facilitate sessions and report with recommendations to improve accessibility and inclusivity.

Features

- ▶ Tests with real world users with varied disabilities, assistive technologies
- ▶ Captures empirical evidence from actual users and realistic scenarios
- ▶ We perform recruitment, test planning, moderation and reporting
- ▶ Sessions moderated face to face, on location or remotely
- ▶ View sessions live or full and highlight recordings provided
- ▶ Participants from our disabled participants panel or your own sources
- ▶ Moderated by experienced Accessibility and User Research consultants
- ▶ Task scenarios customised to your requirements and key user journeys
- ▶ Detailed report identifies positive experiences and opportunities for improvement
- ▶ Presentation of findings and recommendations to your team

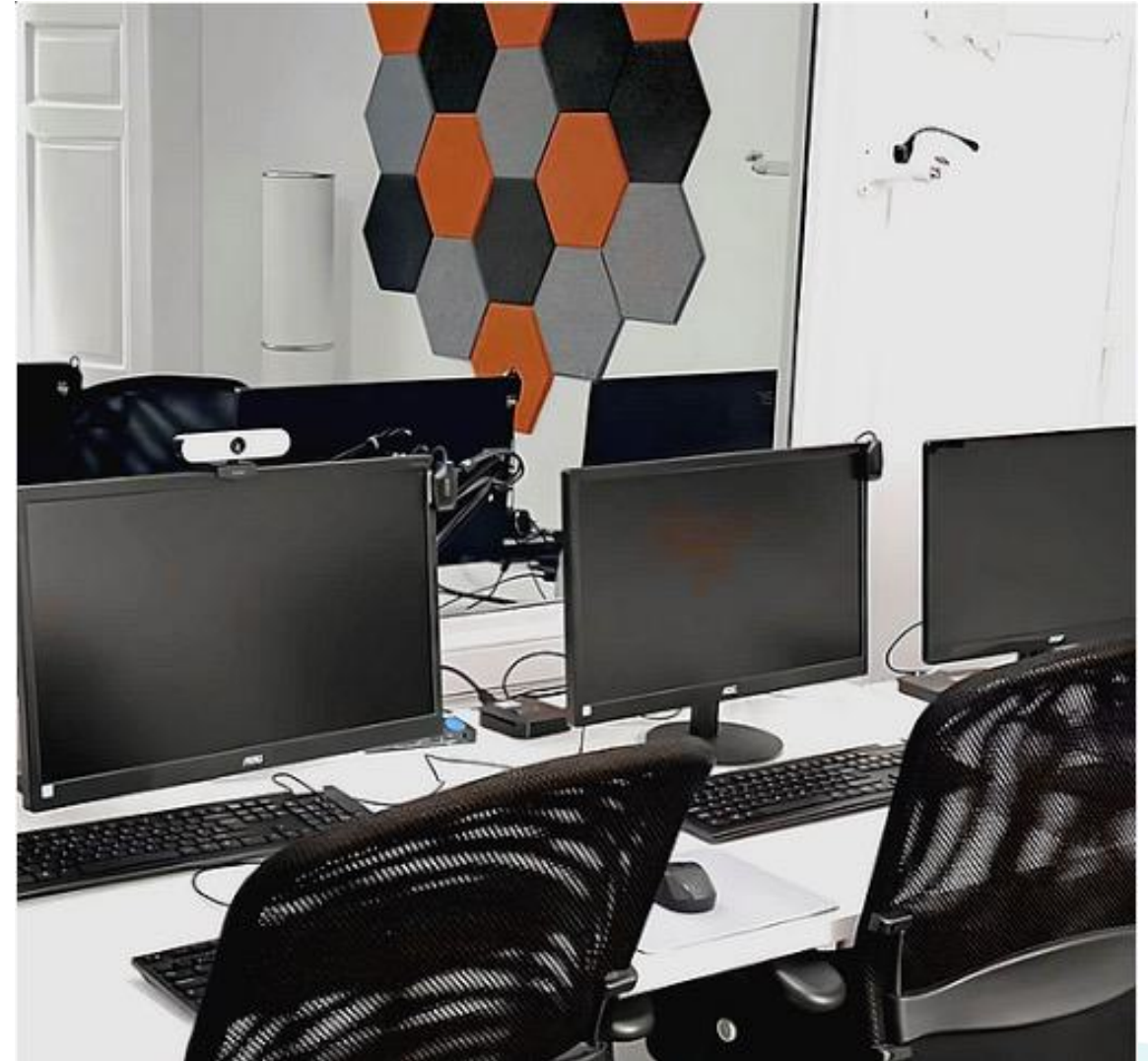
Benefits

- ▶ Independent evaluation of digital services tested by disabled users
- ▶ Gain usability and accessibility insights based on actual user feedback
- ▶ Empirical user insights to exceed WCAG 2.2 technical testing requirements
- ▶ Assists for passing the GDS service assessments
- ▶ Highlights where services are usable and where accessibility barriers exist
- ▶ Comprehensive report with actionable, prioritised recommendations to enable implementation
- ▶ Provides objective evidence based on user needs for better decision-making
- ▶ Vetted panel includes disabled users with assistive tech experience.
- ▶ Code-level recommendations and mock-ups enable effective accessibility remediations
- ▶ Our accessibility experts available for further help and remediation

Our experience in accessibility and testing with disabled users

We've worked with clients from various sectors to achieve positive outcomes based on insights from our user research with people with disabilities. Our consultants are experts in learning about people's first-hand experiences and turning these insights into clear recommendations that will improve accessibility compliance and the experience for disabled users.

Usability testing with people with disabilities presents several additional challenges to those from standard usability testing. The assistive technology used, and the participant's personal settings can impact the presentation and interaction with the site. To allow for this, our [state-of-the-art research facilities](#) support the use of a wide variety of assistive technologies. We can also perform both in-person and remotely moderated usability tests with disabled throughout the UK and internationally.



Our approach to Usability Testing for Accessibility with Disabled People

We prepare, recruit for and conduct usability testing with users with a variety of disabilities and using assistive technologies.

We can recruit from our panel of disabled users or alternatively can recruit from your sources as required. Test tasks are carefully designed to explore most relevant and high-risk tasks and final test plan approved by the client. Sessions moderated by our accessibility experts can be observed and conducted face to face at our labs, your offices or remotely. Our analysis and recommendations are presented in a comprehensive report and a concluding findings and actions workshop ensures effective remediation.

Our approach includes:

- ▶ **Recruitment of diverse participants:** Ensuring a representative sample of users with various disabilities.
- ▶ **Task analysis and test preparation:** Designing tasks that reflect real-world usage scenarios and journeys through the areas with potential accessibility risks.
- ▶ **Moderated testing:** Facilitating sessions where users provide real-time feedback.
- ▶ **Expert results analysis:** Our experienced consultants analyse the findings to identify improvement areas.
- ▶ **Detailed deliverables and actionable recommendations:** Offering clear, actionable recommendations to enhance accessibility and usability.

Accessibility test reporting

Following our testing, we summarise our findings in a comprehensive report.

Reports include a list of WCAG criteria identified during the test that the service has passed and failed. We also summarise the severity of impact of the issues as discovered during the sessions.

As with all our usability testing, we can offer full videos of all sessions or highlights of the most informative and instructive findings.

We typically conclude projects with a workshop describing findings and our recommendations.

5.2.1 WCAG 1.3.1 (A), 4.1.2 (A) - Desktop, Mobile, iPad

The forms on the 'Before You Leave' page consist of questionnaires that users need to fill out, such as the 'Complete Exit Questionnaire'. Not only are the form elements completely inaccessible to keyboard and screen reader users, as outlined in [Tasks on Before You Leave page are inaccessible \(High\)](#), but also the input fields are not associated with a label. Hence, even on forcing focus into the form, screen reader users would not be able to complete the tasks since they are not informed of the purpose of each field.

While sighted users would be able to identify the purpose of each field because of the visually displayed label (such as 'How would you rate your overall experience', 'Do you feel a strong personal attachment', etc.), screen reader users are not provided with this same experience. On each field, screen readers only announce "edit blank". Users would not know the purpose of the form field, which renders the page completely inaccessible when navigating using standard screen reader operations.

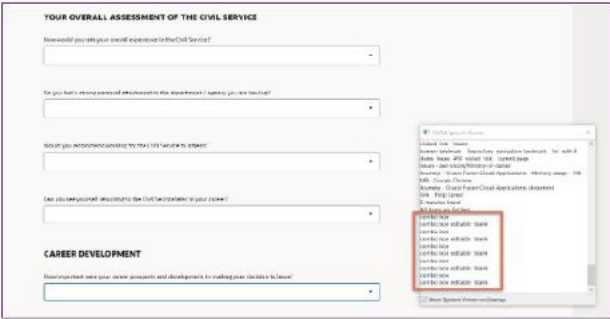


FIGURE 5.3: Complete Exit Questionnaire with NVDA speech viewer activated

5.2.2 Code Snippet

```
<div>  
<input autocomplete="off" type="text" tabindex="-1" role="combobox">  
</div>
```

5.2.3 Recommendation

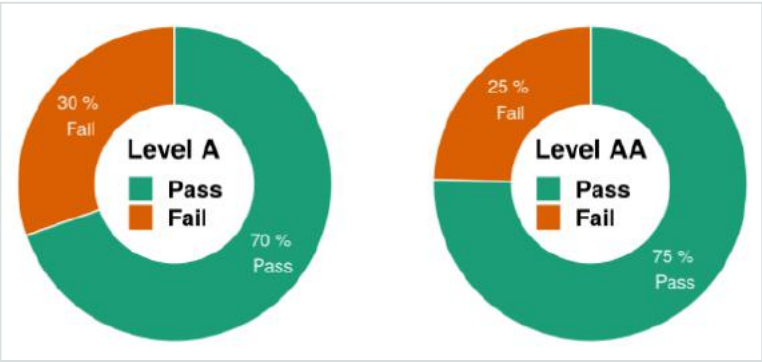
Programmatically associate the visual label with the input fields using the `for` and `id` attributes. This will enable screen readers to understand what the form field relates to.

For instance,

Example from a deliverable of a WCAG failure and our code level recommendation

WCAG Guideline	Level of web accessibility conformance
WCAG 2.2	Level A (lowest), AA, AAA (highest)
Ranking	Definition
Positive (P)	An example of good practice which should be maintained
High (H)	An issue which would prevent one or more disability groups from being able to use the site as intended.
Medium (M)	An issue which would cause one or more disability groups significant difficulty using the site as intended.
Low (L)	An issue which would cause one or more disability groups some inconvenience when using the site as intended.
Observation (O)	Not necessarily an accessibility concern, but an area on the site which could cause a usability issue.

Severity Ratings table from 'Understanding our findings' section



Example of WCAG 2.2 Compliance rating

Remediation support

After completing an accessibility audit or usability test with disabled participants, we can assign one of our accessibility consultants to support your team in implementing our recommendations.

This remediation support allows you to ask follow-up questions, seek clarification on issues raised in the audit, and get practical advice on how to resolve them effectively.

Benefits

- ▶ Expert guidance on implementing audit recommendations
- ▶ Clarification on complex accessibility issues
- ▶ Faster, more accurate remediation
- ▶ Reduced risk of rework or non-compliance
- ▶ Confidence your changes meet accessibility standards

This support ensures your team can move from findings to fixes with confidence.



Spot-check

Once teams have implemented the accessibility improvements identified in the accessibility audit, we will undertake a swift spot check to ensure that:

- ▶ All issues have been captured
- ▶ All issues have been rectified effectively to comply with WCAG 2.2 level AA
- ▶ Compliance is on both desktop and mobile (a requirement for WCAG 2.2)
- ▶ The design remains usable for all, as well as meeting the accessibility requirements

This spot check provides independent confirmation that your website or app fully meets WCAG requirements and GOV Service Manual, strengthening its accessibility compliance.

By ensuring adherence to these standards, you mitigate risks associated with accessibility legislation, such as the UK's Public Sector Bodies Accessibility Regulations (PSBAR), making your website more robust and aligned to GOV Service Manual guidance. In line with UK Government advice, User Vision recommends periodic review of accessibility due to ongoing content changes.



Accessibility statement

We provide an accessibility statement conforming to gov.uk guidance.

This statement offers visible and referenceable proof that the site has been audited by independent experts, outlines achievements and areas for improvement. This statement:

- ▶ Enhances brand reputation and customer experience.
- ▶ Demonstrates transparency and commitment to accessibility best practice and Diversity, Equality and Inclusion (DEI) initiatives.

As an option we can also provide accreditation which includes:

- ▶ Independent verification summarising the results of the comprehensive audits to assess compliance with WCAG 2.2 AA.
- ▶ Recognised accreditation badge: Displayable badge linking to your Accessibility Statement.



About User Vision



Insight that **transforms** experiences



We help clients apply **customer insights** to empower their innovation and creativity in developing propositions, interfaces & digital solutions.

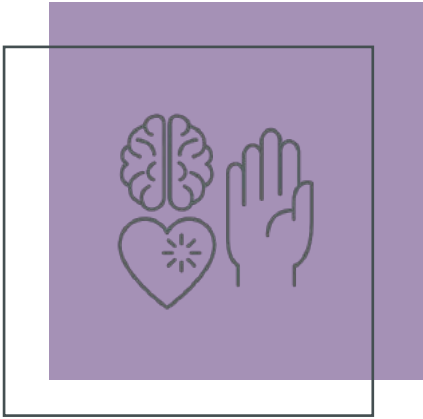


Our services span the spectrum of **user-centred design**, from strategic UX thinking, through research and design, to deep evaluation of the resulting experience.



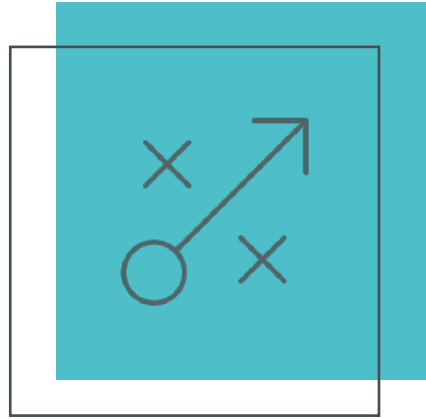
We are leaders in **digital accessibility and inclusive design**, ensuring inclusive design for all.

What we believe



Human-centred

We believe that the best experiences are shaped by a deep understanding of human behaviour, with customer insight at the heart of product & service design.



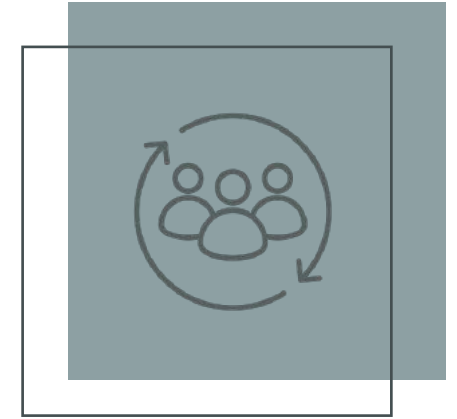
Intentional

We believe that the best experiences are intentional, thinking about the customer experience first and foremost, rather than as an afterthought.



Measured

We believe that the best experiences are measured, defining what “great” looks like and devising the best way to continually monitor and optimise it.



Inclusive

We believe that the best experiences are inclusive, building an understanding and appreciation of the diversity of users, to inform design so that no-one is left out in the cold.

About **uservision**

- ▶ Research-led human-centred design consultancy, shaping great customer experiences since 2000
- ▶ Specialists in User Research, UX Strategy, Service Design and Accessibility
- ▶ Offices in Edinburgh, London and Dubai
- ▶ Working with clients across the globe (more than 50 locations across 5 continents)
- ▶ Experience spanning multiple key sectors
- ▶ Team of full-time, qualified, consultants – all experts in this field and passionate about what they do
- ▶ Commitment to quality and excellence, recognised through ISO 9001 quality process accreditation and multiple awards



Some of our Public Sector clients.



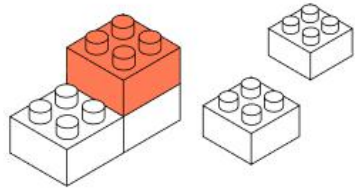
Insight that Transforms Experiences

We support organisations to better understand their customers and create products and services that are useful, easy to use and accessible to the widest possible audience.

We do this through a range of human-centred solutions



Our core service areas



UX Strategy

Successful customer experiences happen when a project is based on a shared vision, defined goals and robust approach.



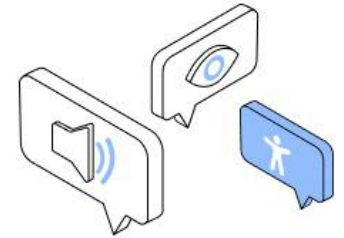
User Research

We don't assume to know what your customers think, or how they behave. We employ robust research methods to discover who they are and what they need.



Service Design

Excellent design is a careful blend of art and science. Our evidence-based approach to service design ensures your customers have positive end to end experiences.



Accessibility

We are leaders in the area of accessibility and inclusive design, ensuring that products and services are designed for the widest possible audience.

Our accessibility services

We offer a range of accessibility services to help ensure an inclusive and usable user experience

6. Accessibility Training

A range of courses, run by experts, designed to enhance accessibility skills across different roles, helping organisations create more inclusive digital experiences.

5. Maturity Assessment

A comprehensive assessment of your organisation's progress in embedding accessibility across all areas — from client-facing services to internal practices that support your employees.

4. Empathy Labs

Hands-on workshops in your offices allowing attendees to experience accessibility challenges through impairment simulations and assistive technology demonstrations.



1. Accessibility Assessment

Thorough independent accessibility audit of your digital products, aligned with evolving accessibility standards and legislation, and communicated through a transparent statement and accreditation badge.

2. Testing with Disabled People

Carefully moderated sessions with disabled people using assistive technology that help ensure products are both inclusive and usable.

3. Consultant support

Accessibility expertise available on-hand to support you as you implement accessible designs and practices into your organisation.

| Examples of our work



Ensuring Inclusive Digital Experiences



As Scotland's national tourism organisation, VisitScotland is dedicated to showcasing the country's breathtaking landscapes, rich culture, and warm hospitality to a global audience. However, they faced a significant challenge: promoting sustainable tourism that benefits all regions while preserving Scotland's natural and cultural heritage. Achieving this goal required a digital presence that was not only visually stunning but also accessible to users of all abilities.

Our approach

VisitScotland sought a comprehensive accessibility audit and usability testing of their corporate website. They engaged User Vision, experts in inclusive design, to ensure accessibility for users with visual, motor, and cognitive impairments. Our team conducted an in-depth audit using automated tools and manual evaluations, assessing compliance with WCAG 2.2 Level AA. This rigorous process identified key accessibility gaps.

To capture real-world experiences, we carried out extensive usability testing in our state-of-the-art studios. Participants with diverse impairments completed tasks on the site, enabling us to observe barriers firsthand and provide actionable insights to enhance accessibility and usability.

Results

User Vision provided VisitScotland with a clear roadmap to enhance website accessibility and usability, ensuring an inclusive experience for all visitors. We also created an accessibility statement to foster transparency and guide future improvements. Our ongoing collaboration helps VisitScotland optimise its digital platforms, supporting its commitment to responsible, inclusive tourism.



Improving inclusion for Registers of Scotland's digital services



Registers of Scotland (RoS) wanted to ensure their public website worked effectively for everyone, including disabled users. To achieve this, they partnered with User Vision to go beyond a technical accessibility audit and understand real user experiences through usability testing with people who use assistive technologies. The goal was to remove barriers and create a more inclusive, user-friendly service.

Our approach

We recruited participants with a wide range of disabilities, including visual, cognitive, and physical impairments, who used their own assistive technologies, such as screen readers, magnifiers, and adaptive input devices. In a series of in-person and remote sessions, users completed common tasks like ordering property deeds, updating ownership details, and applying for development plans while thinking aloud. This revealed how real-world challenges impacted access and usability.

The impact

The research identified key opportunities to enhance the experience for disabled users, such as simplifying complex language, improving navigation, and increasing the visibility of important actions. RoS used these insights to prioritise changes that would deliver the greatest benefit to users.

As a result, RoS significantly improved the inclusivity and accessibility of their digital services, empowering more people to complete tasks independently and confidently. The work helped ensure that all users, regardless of ability, can access vital property services with ease.



Accessibility Audit of the COVID-19 Antigen Testing Website



Digital

In September 2020, User Vision conducted a comprehensive accessibility audit of the COVID-19 Antigen Testing website—an essential national service and part of the UK Government’s strategy for COVID-19 testing. This high-traffic platform enabled users to order and register home tests, book drive-through appointments, and contribute to the collection and analysis of testing data. Given the urgency of the pandemic response, we needed to ensure the site’s accessibility for all users, including those with disabilities.

Our approach

We applied a rigorous, multi-faceted methodology to assess the site’s accessibility:

- Manual Audit: Evaluated representative templates and user flows against WCAG 2.1 AA
- Cross-Platform Testing: Assessed compatibility with assistive technologies across desktop (NVDA, JAWS), iOS (VoiceOver), and Android (TalkBack).
- End-to-End Evaluation: Reviewed both public and secure sections to ensure consistent accessibility throughout the user journey.
- User Testing: Conducted moderated usability sessions with 12 disabled participants, representing visual, auditory, motor, and cognitive disabilities. All used their preferred assistive technologies which revealed real-world barriers and usability challenges.
- Actionable Reporting: Delivered a structured, prioritised remediation report to guide development teams in implementing effective fixes.

The results

Our work enabled NHS Digital to enhance the accessibility and usability of a vital public health service under intense time pressure. The live site had minimal accessibility issues reported, despite extremely high usage. Between May 2020 and



Creating accessible teaching resources and platform



Oak National Academy provides free, high-quality digital resources to support teachers across England. While the platform is widely used, the team wanted to better understand if disabled teachers encounter any usability challenges that impact their ability to efficiently navigate, adapt, and implement Oak's resources in their classrooms. To ensure the platform is truly accessible, a research study was conducted to identify barriers and opportunities for improvement.

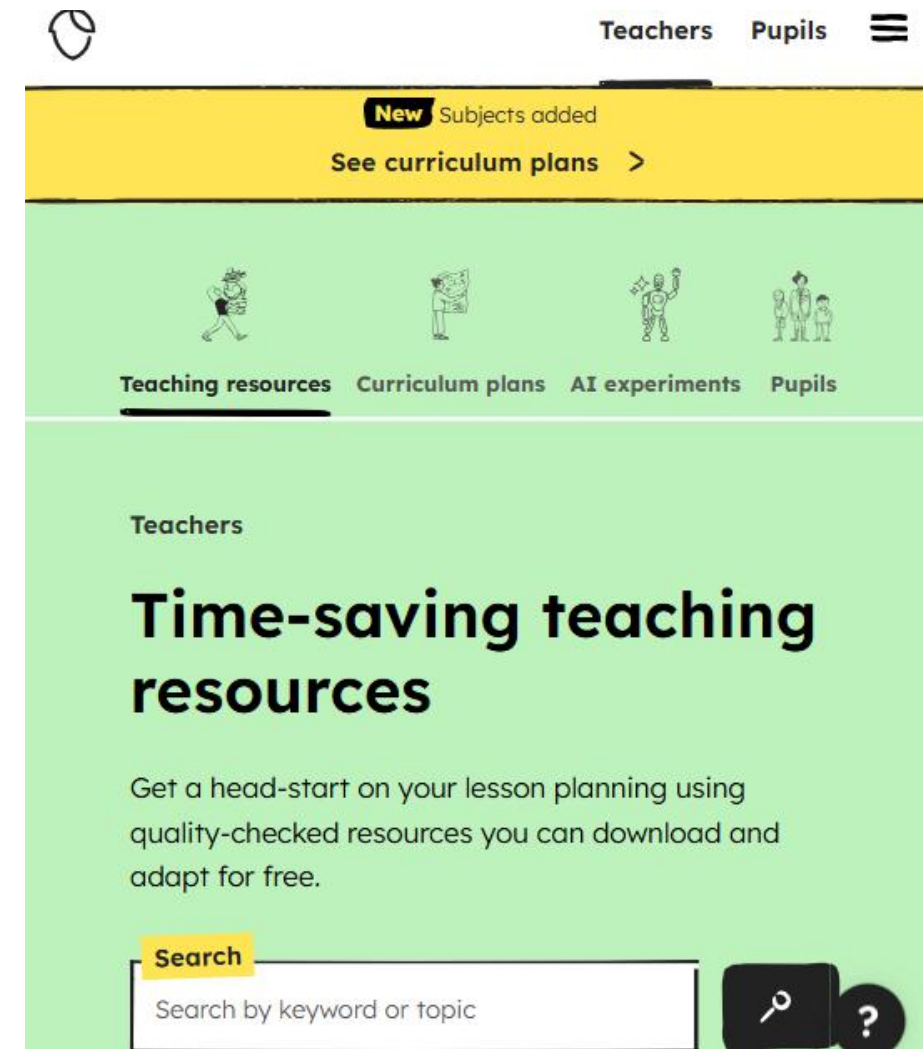
Our Approach

A three-phase accessibility research project was carried out, involving interviews, usability testing, and real-world implementation feedback from disabled teachers. Participants included teachers with visual impairments, dyslexia, autism, hearing impairments, and motor disabilities, providing a diverse range of accessibility perspectives. Testing focused on key usability areas such as navigation, search functionality, content readability, and customisation. Teachers were asked to use Oak's platform in their daily workflow and provide insights into barriers they faced, workarounds they used, and improvements they needed.

Impact

User Vision provided Oak National Academy with clear recommendations to enhance accessibility and usability, ensuring a more inclusive experience for disabled teachers. Key recommendations included improving search functionality, reducing visual strain through alternative colour options, and expanding subject coverage. Addressing these issues will enable Oak to better support teachers with diverse needs, making its platform more adaptable and accessible for all users.

As our research contact at Oak National Academy said, "I was very impressed by the smooth delivery of the project, the collaborative method used to define the research scope and the comprehensive and insightful final report that will enable us to make beneficial changes to our website and resources."



Driving patient-centred support services



NHS 24 commissioned User Vision to conduct comprehensive research on their 111 service, aiming to understand user experiences and shape the service's future. User Vision employed a mixed-methods approach to provide a holistic view of the current service landscape.

Our approach

The research began with contextual observations at a 111 call centre, offering insights into the behind-the-scenes operations. This was complemented by qualitative remote interviews with call handlers and clinical supervisors, providing an insider perspective on service delivery. User Vision also conducted qualitative telephone interviews with recent 111 callers, capturing first-hand user experiences. A quantitative survey of recent callers rounded out the data collection, ensuring a broad representation of user feedback.

User Vision's analysis yielded a set of valuable deliverables for the 111 team. A detailed research report offered a deep dive into the gathered insights and actionable conclusions. Behavioural archetypes were developed, providing rich visual descriptions of typical 111 service users. Finally, comprehensive journey maps were created, outlining the end-to-end service experience and highlighting pain points and improvement opportunities.

The results

This multi-faceted approach allowed NHS 24 to gain a nuanced understanding of their service from both provider and user perspectives. The insights and recommendations provided by User Vision are now informing NHS 24's new organisational strategy, paving the way for enhanced service delivery and improved user experiences in the future.



Trusted partner

As recognised leaders in Accessibility, User Vision has a proven methodology and an outstanding track record, working with clients such as Emirates Airline, Aegon, Student Loans Company, NHS, Gov.uk, and more. Our expertise extends beyond accessibility, with wider UX services provided to leading brands like Salesforce, Slack, and Vodafone.

We take pride in delivering an exceptional level of service, reflected in our 90% client retention rate and long-standing relationships, with many clients partnering with us for over 18 years. Much of our business now comes from word-of-mouth referrals—further testament to the quality of our work and the trust we build.

Our clients see us as an extension of their team, often seeking our advice beyond active projects—support we are always happy to provide. We are a focused, professional, and engaging team, as reflected in these client testimonials.

“User Vision has become part of our extended team and we rely on them to ensure that we are getting it right when it comes to accessibility and user experience. Their prompt friendly service means that they can be relied upon to fit in with project deadlines and their comprehensive reports and presentations allow us to easily incorporate recommended enhancements into our service design.”

Student Loans Company

“The redesign has transformed the usability and accessibility of the website. The work of User Vision was integral to this success both in terms of guiding the work of the team during the development phases and in demonstrating that targets have been met. What made their input so valuable was an ability to understand our requirements and give valuable and practical recommendations for improvements.”

Aberdeenshire Council

“We found this to be a really valuable process for identifying the priorities of our users and enabling us to focus on what matters to them. The various techniques used were very different to anything we had ever been through before, but the support and guidance from User Vision was excellent.”

Law Society of Scotland



Contact us

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