



The Complete Guide to Accessibility UX Research

In this guide, you'll find resources and tools to help you build accessibility into your UX research roadmap.

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Why Accessibility UX Research?

Accessibility research enables us to build better, more inclusive products by ensuring they're usable by all people regardless of age or ability. According to the CDC, [up to 1 in 4 Americans have some form of disability](#), whether mobility, cognitive, auditory, or visual. By failing to consider accessibility in your product development cycle, you're excluding 25% of Americans by default.

Building accessible products isn't just a legal requirement -- it's the right thing to do. But across the U.S. companies are now confronting an increase in lawsuits levied against them for inaccessible digital assets. [A recent Wall Street Journal article](#) stated that

these types of lawsuits increased 64% in the first half of 2021 from the year prior.

A few companies have tried to take these cases to court. Some of the most high-profile ones included [Target \(settled in 2008\)](#) and [Domino's \(decision in 2019\)](#). In each of these cases, these companies did not prevail and wound up with a black eye in the court of public opinion.

Now, you might ask yourself, "What could have been done to prevent these types of lawsuits?" The answer lies in building a comprehensive program to ensure that accessibility is included in the design and development of all digital products and experiences, preventing missteps like these.

Take the Next Step with Us

If you're looking to build out an accessibility program in your organization, we've got your back. To support you, we created this Guide to Accessibility Research with strategies, tips, and recommendations on how to get started.

Our Research and Research Operations experts understand the intricacies of accessibility research, with targeted expertise across platforms, industries, populations, and accessibility tools. AnswerLab has conducted over 100 accessibility research projects to date for a range of industries. In addition, we have over 20 UX researchers who are experts in accessibility and inclusivity. And we've collected some of our best tips in this guide, including:

- The basics of accessibility research
- Advice on how to conduct accessibility research
- Assistive technology to focus on (i.e., screen readers, braille displays, etc.)
- Our most frequently asked questions
- And more...

With all of the competing priorities companies have, it's easy to postpone accessibility research. However, by choosing to take steps toward addressing accessibility you'll enable your teams to factor it in as early as possible and create more inclusive experiences for all your users.



Getting Started

Defining Accessibility

The Accessibility.digital.gov website [defines the role of accessibility for UX teams](#) as:

“Accessibility is usability for people who interact with products differently. Your role is to help the team approach accessibility as a facet of user experience rather than a checklist of requirements.”

Towards this goal, user researchers work to help highlight the issues, both positive and negative, that people with disabilities have when they use your digital products.

Questions Accessibility Research Helps Answer

Accessibility research can help you answer a range of questions, including:

- How can we better design our app experience for people with disabilities?
- How can we make our website more accessible for people with visual and mobile impairments?
- How do people with motor impairments use our voice assistant?
- How can we improve our voice-to-text function for people with hearing impairments?
- How can we best create an out-of-box experience with our product?
- How does our mobile website stack up with the WCAG 2.1 guidelines? How should our mitigation approach be to the areas where we fall short?
- Are there areas of the new context navigation that are challenging or easy to use for participants with disabilities (esp. those with low vision)?

How to Approach Accessibility Research



Step 1: P.O.U.R Assessment

At the beginning of an engagement, our preferred approach is to conduct a P.O.U.R. assessment of the digital asset. The four P.O.U.R. principles are outlined in the internationally recognized WCAG 2.1 standards, and they include: Perceivable, Operable, Understandable, and Robust.

This assessment is similar to a heuristic or expert review but focuses on potential accessibility issues. This type of review focuses on the interface and code of the digital assets and how they are either in or not in compliance with WCAG 2.1 standards.



Step 2: Mitigation

At the close of the P.O.U.R. assessment, researchers identify the accessibility shortcomings and share them with design and development teams. Plans are made to address critical or high-priority items in a timely fashion.



Step 3: Usability Testing

Once design and development teams have completed their digital assets' mitigation efforts, we can start usability testing. For this stage in the process, participants with a variety of disabilities are recruited, and these individual interviews can be conducted either in person or remotely.

These three steps provide the most efficient use of time and resources since critical and high-priority issues can often be quickly identified via the initial assessment. In turn, the usability testing serves as a validation of the mitigation efforts by the design and development teams.



• Reaping the Benefits of Accessibility Research

As we've already said, building accessible products isn't just a legal requirement, but also simply the right thing to do for your users. However, there are more benefits to accessibility that often go unsaid.

First, many accessibility efforts include simplifying code and page design. These steps often result in a less cluttered experience which is beneficial for everyone. These same measures towards simplification often result in better Search Engine Optimization (SEO). For example, when an accessibility audit reveals a lack of clear page titles, heading structure, or a site map, SEO experts often recommend similar steps. The end result is that search engines are able to easily find the information they need to accurately access the pages of a site.

Our Accessibility UX Research Best Practices

As we've been conducting accessibility research at AnswerLab, some of the things that we're learning include:

1. Start with an audit

Designing for accessibility includes meeting standard accessibility guidelines around keyboard navigation, screen reader compatibility, color contrast, captions, alt text, and more. Many of these are simple pass/fail metrics that can be easily assessed with a heuristic review prior to conducting research with actual participants. By starting with an audit and fixing the technical pass/fail issues, you can save precious research time with participants digging into higher level, richer insights. Learn more about this approach.

2. Prioritize a more limited scope to ensure success

Once you start planning for research with participants, remember to keep your research plan flexible and open. Lower expectations with your internal stakeholders and project team on how many tasks can be completed and how much content can be covered in a session. With the complexities of assistive technology, you'll want to leave extra time and build in flexibility. As a result, the research plan or guide must be prioritized with higher importance items first.

3. Include a range of proficiencies

We've found that it is a best practice to recruit participants with a range of proficiency levels with their assistive technology. For example, we do not want to base our findings solely on the experience of someone with a low to moderate experience level with their screen reader while using a website. It is often best to include expert level participants as well to determine if the same issues are uncovered. In addition, these expert level participants are often better at explaining the challenges that they encounter.

4. Leave the speed to the participant

Let the participant set the pace of how quickly or slowly they complete tasks or respond to questions. More than ever, ask them to describe what they are experiencing when navigating the product.

5. Use people-first language

Everyone is going to identify differently, but as researchers, a good rule of thumb is to use “people-first language.” For example, instead of saying “a blind person,” use “a person who is blind.” Put the person ahead of the disability, and if your participant feels strongly in another direction, let them correct you.

6. Focus on mental models

The expectations of how a feature should work are influenced by the experience that participants with disabilities have had on other websites and apps. For example, when encountering a video player on a website many participants with disabilities hope that it will work the same way that YouTube’s player works. When a video player deviates from the ubiquitous YouTube experience, participants with disabilities are now faced with a new learning experience that they may or may not want.



• Turning to Research Ops

Who should you talk to and how do you get them in the room?

First, start by understanding who is critical to talk to. We often focus research on participants with visual, auditory, cognitive, or motor impairments to better understand how they experience a product. Depending on the goals of the study, the product you're testing, and the facets of the experience you want to focus on, these audiences can be narrowed and focused to meet your needs. For example, you might want to test a new hardware product with users with mobility impairments to understand if it's accessible to them. Or you may want to dive deep into how screen readers and screen magnifiers work with your website for those with a range of vision impairments.

When creating a recruiting screener, it is best to focus your criteria on the specific assistive technology that the participant uses and how often they need it when using a computer or mobile device. From our experience, this approach works best as there's a wide range

of disabilities and the severity of them. By focusing on the type of assistance they use (for example, either assistive technology like screen readers or an interpreter), the screening process becomes much more focused.

Always think carefully about the best way to conduct your sessions based on who you're trying to reach. If your studies can be done remotely, it opens up a larger population geographically who you can reach. It may also make it easier for those with mobility issues to participate. However, for those with hearing or vision impairments, the technology accommodations required for them to join a remote session might be limiting. Lastly, you could consider testing in a convenient location for participants, whether that's at their school or home. Ethnographies can offer deep insights on accessibility as you get to observe their at-home set-up, see what assistive technologies they're using, and witness how they would actually interact with your product.



Accessible Research Ops Best Practices

1. Take a grassroots approach to recruiting

Often, participants with disabilities aren't included in your typical panel and sometimes they need some additional accommodations to help them participate in your sessions. Instead of going through a traditional recruiter's panel, contact local community groups, nonprofits, and community advocates to see if they can spread the word. Referrals from existing or previous participants can also be a great strategy.



2. Make it as easy as possible for participants to take part in research

Depending on your population, there are a number of things you can do to make participating in research more feasible. For instance, pay for transportation with a travel stipend to help them get on site, offer to bring in an interpreter, or allow them to bring a friend who can assist or interpret for them. Having an open-ended question in your screener is a great way to ask participants if they need special accommodations.

3. Always conduct walk-ins for remote research

When conducting sessions remotely, we recommend conducting walk-ins, which entails calling each participant 15 minutes before the session start time to make sure they are able to join the meeting successfully. This allows time to overcome any technical hurdles and ensures the participant is ready for research at the session start time.

4. Remind participants to use the right device

When joining sessions remotely, participants must use the device that has their assistive technology already installed. For example, if the participant says during recruiting that they use JAWS, they need to join the research session on the computer that already has JAWS installed and configured. Reminding them of this during the scheduling and confirmation process can save some headaches!



What is Assistive Technology?

Screen Readers

[AbilityNet defines a screen reader](#) as, "A screen reader is a technology that helps people who have difficulties seeing to access and interact with digital content, like websites or applications via audio or touch. The main users of screen readers are people who are blind or have very limited vision."

A recent [WebAIM Survey on screen reader user preferences](#) reported the following insights:

- The two most common types of screen readers **for desktop** use are JAWS and NVDA.
- **Chrome and JAWS being used together** is the most common browser and screen reader combination.
 - 91% use Windows as their primary operations system for desktops and laptops
 - 71.9% use iOS as their primary mobile device
- The two most common screen readers **for mobile** are TalkBack for Android and VoiceOver for iOS.

Screen Magnification

[AbilityNet defines screen magnification](#) as, “For people who have impaired vision but still have some sight, a screen magnifier can help them to access and interact with digital content such as websites or documents. Screen magnification works by zooming in on the whole screen or sections of a screen as if you are looking through a magnifying glass.”

- The common types of screen magnification **for desktop** use are built into the operating system of Windows (Narrator) and Mac (VoiceOver). In addition, ZoomText is a popular software title that offers more features.
- Common types of screen magnification **for mobile** are those that are built into the operating system of Android and iOS.

Braille Displays

[American Federation of the Blind defines braille displays](#) as, “Braille displays provide access to information on a computer screen by electronically raising and lowering different combinations of pins in braille cells.”

Alternative Keyboards

[AbilityNet describes a host of alternatives to the standard keyboard](#) that include smaller, compact keyboards, keyboards with large keys, head / mouth stick keyboard, etc.

Speech-to-Text

[George Mason University](#) lists out several options for speech-to-text assistive software. These options range from built in features to the Mac or Windows operating system to Dragon Naturally Speaking.



Frequently Asked Questions

We get a lot of questions about accessibility research from our clients and the UX community. Here are some of the most frequently asked ones



How does a company incorporate accessibility into its research roadmap?

- **Timing:** Teams produce artifacts such as prototypes or initial sketches early in the design process. At this point, it can be helpful to include participants with cognitive impairments and low vision. Once near-production-level code has been produced, it makes sense to include participants that use screen readers to provide input.
- **Major Pathways:** Thinking about how to make every one of your digital properties accessible can be overwhelming. Because of this, we typically recommend starting by focusing on the most-used paths to establish clear standards and then move on to those with less user traffic. This helps keep your scope focused, prioritized, and manageable.

After our company has conducted some initial accessibility user research steps, what comes next? Where would we focus our efforts?

- Training
 - **Onboarding new staff:** Every organization experiences turnover. To ensure new team members get up to speed on accessibility, it's essential to develop internal educational materials. This can take the form of online self-guided courses, lunch and learns, or a collaborative guide for them to read through during onboarding, etc. Getting the accessibility onboarding experience right ensures everyone is on the same page and helps avoid gaps in accessibility testing.
 - **Enlarge the circle of responsibility:** Make sure accessibility does not fall to just one team. We've seen how helpful it can be to have as many team members well-versed in accessibility as possible so every team views their work through an accessibility lens. Everyone in the organization should have a high-level understanding of accessibility, and you should make sure each team has ownership over the accessibility of their work.
- **Engaging with the RFP process:** Most companies have a formal request for proposal (RFP) process when looking for a new software vendor or services partner. We recommend your organization include an accessibility review of any new products your company is considering purchasing. To accomplish this, you will need to engage your vendor management team and seek time to review products under consideration as part of the purchasing process.
- **Combine efforts for greater impact:** Seek to join forces with others at your company that have a shared interest in accessibility. These others could include quality assurance or marketing, for example. By meeting and working together on the accessibility of your products and services, you will find new ways to increase the impact of your efforts.

How can researchers convince product teams and product owners of the importance of accessibility and include it in our research?

Consider all the benefits accessibility research brings to your design process and advocate for those when discussing research plans with stakeholders and product teams. Try tying the benefits to your company's goals, brand, and values. We find accessibility research can help you:

- Uncover issues with early testing to avoid added development and design costs
- Identify areas that interfere with any users' ability to use a product
- Gather data that accurately represents your entire user population
- Improve your product for not only those with disabilities, but all of your users
- Provide critical insights to help innovate your products, not just fix existing issues

Building team alignment around what accessibility efforts mean can be a challenge. Start by creating some clear definitions and shared language. It's not the most exciting part of research and design, but defining how teams consider different populations and subsequently getting everyone on the same page is an important step. Host a workshop or working session to help create definitions, discuss them with your team, and brainstorm how you'll move forward. It'll set the scene for accessibility research and build alignment you can build on later.

What's a low effort way to get started?

As a very first step, we recommend expanding your recruitment criteria and processes to ensure a diverse group of participants in every study you run whether or not it's accessibility focused. If you're struggling to get stakeholder buy-in for dedicated accessibility research, try including someone with disabilities in every study to get lightweight accessibility insights more regularly.

If you're running surveys, for example, include a question or two at the end to see if your users are using any assistive technologies with your product. You might surface a few gems in an existing survey that can help convince stakeholders why follow-up accessibility-focused research could be beneficial.



Tools and Resources

There are many resources and tools out there you can use when working on accessibility projects. Here are just a few of our favorites:

[WCAG 2.1 Guidelines](#) - This is a set of international standards that most companies are held accountable for with their digital assets (i.e., websites, mobile apps, etc.).

[POUR Principles](#) - A widely recognized framework for addressing website accessibility.

[American Foundation for the Blind's Resource on Screen Readers](#) - A great overview of this assistive technology from the National Federation for the Blind.

[WAVE Evaluation Tool Chrome Extension](#) - This helpful tool provides users with a quick overview of what is working well and what issues exist with website accessibility.

[Guidelines for Writing about People with Disabilities](#) - Great overview, from the ADA National Network, of using people-first language when creating content about people with disabilities.

[Colorblindness Simulator](#) - A color blind webpage filter that shows how your site displays to individuals with color blindness.

[AnswerLab Accessibility Articles](#) - Resources and articles from AnswerLab experts on accessibility research and building accessible experiences.

About the Author



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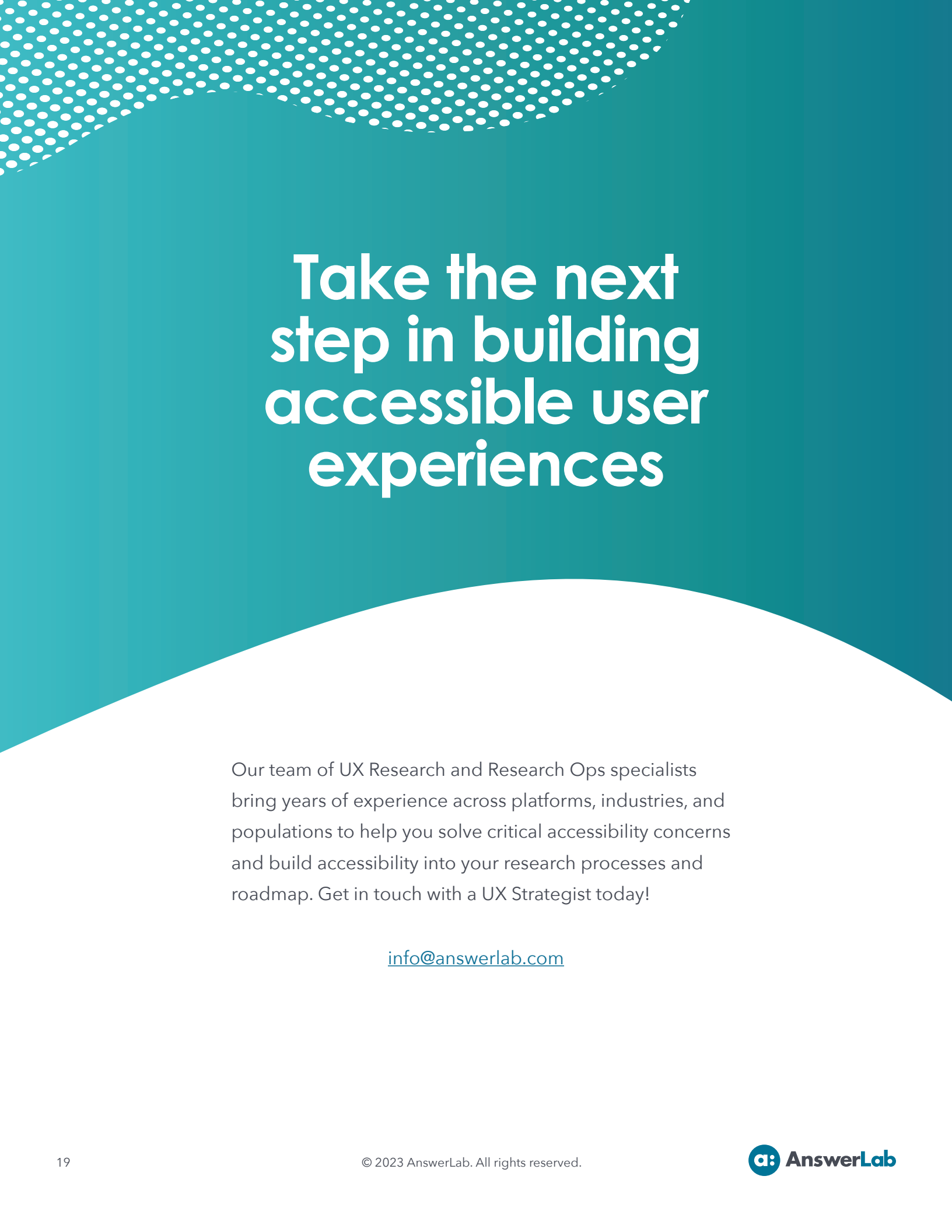
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Richard Douglass is a Principal UX Researcher at AnswerLab. For over 20 years, he has helped create engaging experiences in a variety of verticals, including financial services, software, healthcare, and retail. His clients have included State Street Global Advisors, JPMorgan Chase, Google, IBM, and American Express. In addition, he has worked for agencies such as Razorfish and PwC. Richard has expertise with different methodologies, including co-creation and strategy workshops, usability testing, journey maps, accessibility, and persona development.

About AnswerLab

AnswerLab is a full-service user experience insights firm. With our suite of research methods, consulting services, and flexible engagement models including large-scale centers of excellence, we enable companies to apply a human-centered design process to every product they launch. Our research experts deliver insights that the world's leading brands need to create digital products and services that people love and want to use. We help digital experience leaders scale their impact, influence, and make the right decisions for their end users and businesses.

Learn more about us at [AnswerLab.com](https://www.answerlab.com).



Take the next step in building accessible user experiences

Our team of UX Research and Research Ops specialists bring years of experience across platforms, industries, and populations to help you solve critical accessibility concerns and build accessibility into your research processes and roadmap. Get in touch with a UX Strategist today!

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