Washington State Department of Transportation

Transforming Government –
Paving the way for a better digital experience

State: Washington
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Executive Summary

The Washington State Department of Transportation's website, wsdot.wa.gov, is critical to the agency's accountability, transparency and community engagement efforts. With an average of 75,000 daily users – and over 400,000 daily users during major weather events – WSDOT has the most visited website in Washington state government.

With 14,000 webpages and 15,000 documents, the site had become a storage cabinet of outdated, redundant, and poorly organized content that was impossible to manage and maintain. It had been more than 15 years since the site had a major update – a long time to not keep up with users' ever-changing expectations for a digital experience.

WSDOT partnered with Anthro-Tech Consulting to complete a redesign and overhaul of content from 2019 to 2022. The website redesign had several objectives:

- Identify who our customers are and what they need to accomplish on our site.

- Improve our customer's ability to find what they are looking for and to understand what they find.

- Remove old, outdated content that few people use.

- Downsize the website to a much smaller, manageable footprint and improve the search function.

- Ensure the website is accessible to all users, from any device.

- Consolidate, create and maintain a highly trained team of web editors.

Working closely with various technical and communications teams at WSDOT, we used a user-centered design strategy of discovery and research, design and development, evaluation and iteration, and finally, launching the product. Throughout the course of the project, over 20,000 users provided feedback to the evolving website, driving design, content, and accessibility changes resulting in a website that provides an enhanced and positive user experience.

Our new website radically changes the way the site is organized and how people find information – taking it from an organizational-centric structure to a user-centered design, focused on what the four primary users, the traveler, the watchdog, the rule seeker and business partner, want and need. The product is a complete overhaul of the design of the site, a reduction of content to less than 2,000, and clear content layout. Anthro-Tech improved the website system usability score by 27 points, from grade F to A. The new website is accessible on any device and users can find the important travel information they need quickly and efficiently without frustration. The full redesigned website launched in November 2021, just in time to support Washingtonians traveling through the holidays and navigating impacts of winter storms.

IDEA

Resize, revamp and redesign

When WSDOT's website first launched in 1996, our philosophy in the spirit of transparency was to put everything we did as an agency on the website. The result after all those years was that our customers were overwhelmed with information. Our content was old, outdated, and irrelevant. The site inadvertently became a library and storage device for our own staff. Our website had over 14,000 webpages and 15,000 documents. We couldn't maintain a site that large, and our users simply couldn't find what they were looking for.

In addition, we had discovered that our website documents were not accessible or compliant with federal laws related to accessibility. Since that time, we invested significant time and effort into making new additions to the website accessible to all users. The website redesign project ensures that all webpages are accessible and reiterates our standard going forward for accessibility of documents.

Users demand a customer-centric digital experience

It is critical that our users can find the information they need, especially when they need it most. It's also important to note that despite being the most visited website in state government, our website was not user centric. The last major update to WSDOT's website had been more than 15 years ago – too long to keep up with user's needs and expectations for a positive digital experience. The pandemic placed increased importance on the role of easy-to-use digital information and this website redesign project does this much needed work for WSDOT's customers.

Data-driven to maximize user-centered design

A baseline study of the website revealed more than 72 percent of visitors were return users and more than 60 percent accessed the site from a mobile device. For 90 percent of the users who visited the site most frequently, the top task was to get travel-related information. The study also pointed out some significant shortcomings:
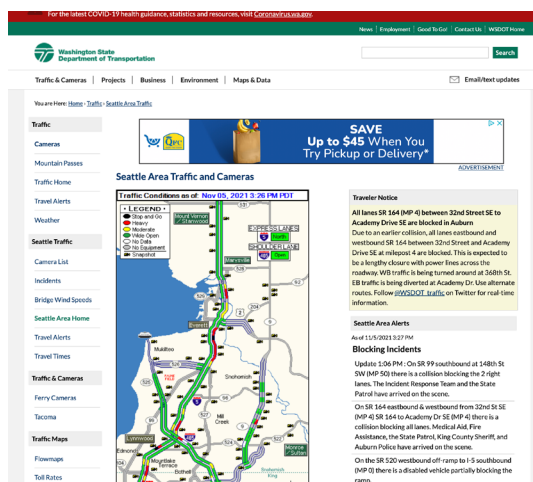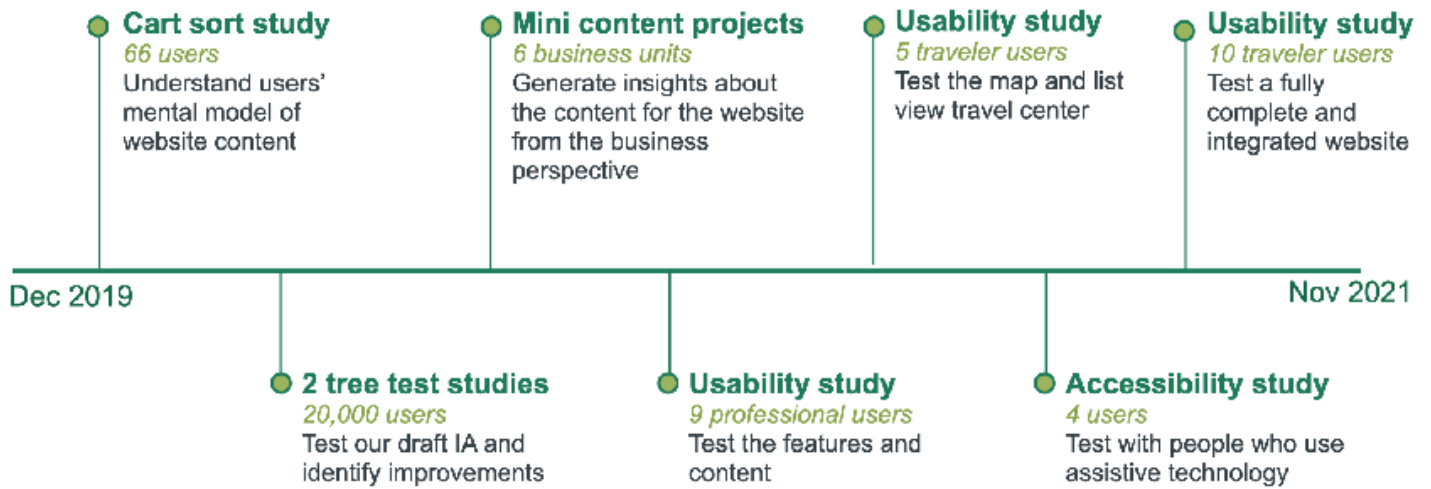

• Users struggled to find information and had to piece it all together from multiple webpages.

• Pages were often link-heavy with no consistency of hierarchy, categories or map design.

• The website failed to prioritize content for a user's top task, and it was not responsive or mobile-friendly.

• Much of the content was not accessible.

Screen shot of travel map before redesign

We set out to create a new, data-driven site structure based on how users organized the content, including user-centered plain language. Our new website radically changes the way the site is organized and how people find information – taking it from an organizational-centric structure to a user-centered design, focused on what our customers want and need.

In addition, we understood that our agency's employees were also an important audience and that we needed to bring them along during this major redesign. We anticipated some staff resistance due to the change in structure to a user-centered focus – this would mean not all offices and divisions would have a presence on the website. It also meant, content that did not serve our target audiences would have to be stored and shared in some other way. To continue building on the strong foundation that got us through website launch and stabilization, we are building a trained team of web content editors and contributors who will maintain the redesigned website. This governance structure is supported by agency leadership and will ensure that content remains user focused.

Cart sort study
66 users
Understand users' mental model of website content

Mini content projects
6 business units
Generate insights about the content for the website from the business perspective

Usability study
5 traveler users
Test the map and list view travel center

Usability study
10 traveler users
Test a fully complete and integrated website

Dec 2019

Nov 2021

2 tree test studies
20,000 users
Test our draft IA and identify improvements

Usability study
9 professional users
Test the features and content

Accessibility study
4 users
Test with people who use assistive technology

Building a 21st century platform for a better digital government experience

To successfully improve our website, we needed to know our customers and what they need on wsdot.wa.gov. Throughout the project, we engaged more than 28,000 users through activities such as surveys, usability tests and studies on the way our website information is organized and categorized. As a result, we learned a lot about what our users need the website to do for them, and it helped us identify our four primary users:

The traveler – this includes visitors, residents, commuters and commercial drivers. By far our largest audience; they need real-time, accessible information to learn about travel conditions, view roadway and airport cameras, access their tolling account and get permits.

The rule seeker – these are people looking for rules, regulations and policies. This includes environmental planners, government employees, contractors, commercial vehicle drivers and aircraft owners. They want to stay in compliance, find accurate, accessible, curated information and meet requirements for grants and contracts.

The business partner – this includes contractors, consultants, job seekers, government employees and grantees. They look for open positions; ads; contracts and grants; find clear, accessible requirements; and learn who got awarded various projects and grants.

The watchdog – this includes concerned citizens, the legislature and media. They want to find accurate, accessible, curated information, ensure that WSDOT is transparent, understand state and federal requirements and be involved in decision-making opportunities.

With this knowledge, we began our project work with these overarching website design principles:

- Focused on users and their top tasks
- Usable and accessible on any device
- Clear and direct
- Systems and standards maintain consistency and quality

IMPLEMENTATION

Advancing digital government

For this transformation to be successful, we needed to first build support for the project within our executive level, then bring staff along with frequent and regular communication about the project and what was expected of them.

We also needed to engage members of the public who use the site. Throughout the project, we engaged more than 20,000 users through activities such as surveys, usability tests and studies on the way our website information is organized and categorized. To ensure accessibility of our website, we conducted research and testing with people using a variety of assistive technologies and made design and content improvements specific to that feedback.

We used a user-centered design approach for the redesign of our website:

- **Goal-driven and user focused**: we identified who the target users are, how they work and what their goals are. We aligned user goals with business goals to lay the foundation for a successful project.
- **Empirical**: usability, usefulness and value were measured by target users' behavior and data, not opinions.
- **Iterative:** we tried out ideas with users in a low-risk format, creating prototypes and mockups prior to coding; any problems encountered could be resolved prior to the application being launched.
- **Collaborative:** we used a team approach for project management, technical developments, content analysis and rewrite, and governance.

Stakeholders in the driver's seat

By spreading awareness and adoption of the user-centered approach with teams at WSDOT, we modeled how to understand customer needs and better serve information and tools that support safe travel and business with the agency. We completed outreach to internal and external audiences including dozens of presentations to almost 2,000 employees, employee emails, legislative outreach, and social media outreach.

Our presentations reviewed the changes that would affect employees and users, educated employees what actions were needed and the expectations of them, and facilitated buy-in by soliciting feedback.

Groups who were key to the success of the project included:

- **Executive Sponsors** – provide direction, final decision authority, final approval
- **Project Steering Committee** – provide business oversight and resources, resolve escalated issues, set priorities and ensure alignment with other priorities
- **Core team** – execute project tasks, involve stakeholders and share milestones
  - *IT development and GIS development teams*
  - *Washington State Ferries IT development team*
  - *Content leads from various WSDOT divisions*
  - *WSDOT web team*
  - *Content governance council*
  - *Anthro-Tech Consulting*

Regular and frequent project updates were delivered to share information about progress, issues and resource needs. These included monthly briefings to the steering committee, weekly team meetings and high-level messages to employees to keep them engaged and aware of project work. Concerted meetings with management resulted in 100 content contributors being identified for the ongoing support and maintenance of web content. In addition, we reached out and engaged with stakeholders, legislators and their staff, and social media audiences along the way.

By transitioning to Drupal 8 web content management system, the web team gained more flexibility and control to manage the accounts for content contributors as well as standard design templates that, depending on training, certain contributors were provided access to. The GIS and IT development teams leveraged ESRI basemap technology and modernized the single page application to an API based framework.

IMPACT

Innovating to meet the needs of travelers

Our research told us travel-related information was the top task for 90% of the visitors who came to our site. The old site required users to piece information together from several pages. The new website prioritizes this information in our innovative Travel Center. It gives users the ability to view, customize and save a map with clickable layers, or use a "list view" to inform travel from point A to point B, regardless of mode. This supports users who regularly travel the same route as a quick reference. Making sure that the information is available in a map and list view also supports accessibility.

We analyzed nearly every page and reformatted them to use plain, consistent language. We implemented a clear hierarchy for content, formatted with headers to improve the user's ability to scan for information. We utilized large fonts, above standards for low-vision users and selected colors to meet the highest level of contrast standards. All images and accessible visual elements now include alternative text.

Investing in digital accessibility

We designed the website with the mindset of mobile-first as our research showed that is how many users were initially arriving to the content.

> *"Congrats on the new website!!! The new seamless mapping program is especially useful. To anyone who envisioned this, approved it and worked on it - a big thank you."*
>
> *-- General public*

> *"I'm loving the new map, especially being able to see mileposts and to save locations. I've also played with the new map on my phone. Love the user interface!*
>
> *-- General public*

![Washington State Department of Transportation logo]

Data and feedback validates the outcome

After months of content clean-up, rewrite, organization and tweaking, we successfully launched our website as planned on Nov. 7, 2021. The success of our web redesign can be measured in the following ways:

- Our public website system usability score improved by 27 points – from grade F to A
- We right-sized our content, which was reduced from 14,000 pages to 2,000, an 86% reduction
- The Travel Center, created for our most frequent visitors, saw a 6% increase in the number of visitors using a mobile device to access the site
- Created a series of advanced training courses for more than 100 staff with responsibilities for web content – 75% met training requirements to maintain access to the website
- We solicited feedback and responded to more than 1,600 comments, which helped set priorities for post-launch enhancements

Establishing strong governance for sustainability

We built a strong foundation for our new website using an effective project team that got us through launch and stabilization. Our focus now is maintaining a user-focused website:

- We launched our new website with 2,000 pages and have a process in place for updating and adding new content in the future – the work of maintaining a website is never done.
- Our web governance will ensure we maintain a centralized approach to:
    - *Creating and maintaining WSDOT's online presence*
    - *Achieving a unified look and experience across all webpages*
    - *Ensuring accessible and findable content*
    - *Representing the WSDOT brand through standard processes, roles, responsibilities and practices*
    - *Ensuring document retention is managed separate from what's on the website*
- We have identified the right people with the right skillsets to do the work and have empowered them to make decisions.
- We are being intentional about what goes on the website and making sure it serves our customers.
    - *Everything that goes on the website will be accessible and meet Section 508 standards.*
- Content will be reviewed regularly to ensure every piece is helping our user groups complete a task and if not, it will be removed.

Screen shot of travel map after redesign

"Congradulations on getting a new site in place for WSDOT. I like it! Navigating around is simple and the layering on the map function is great."

-- General public