

## E-Government Program Phase III Report:

### Experiences of the business community with the State of Oregon's online resources

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## EXECUTIVE SUMMARY

This study represents the third phase in an ongoing project to support and improve the user experience of Oregon.gov. This phase focused on the Oregon business community's experiences using Oregon.gov for business-related tasks and builds on Phase I's work to identify and remove barriers and Phase II's work to support underserved communities. To collect feedback, the Portland State research team developed and implemented a mixed-methods approach utilizing a quantitative survey, focus groups, and interviews. Once the data were collected and analyzed, key themes emerged around:

- Site navigation
- User-experience
- Search & technical performance
- Quality of information
- Access to support

For each of these finding areas, there are also associated recommendations provided.



### Site Navigation

#### **Recommendation: Streamlined website integration**

Improve the integration and organization of Oregon.gov and its sub-sites. A unified sign-on system and more direct links across state websites would help with better navigation.

#### **What participants found useful:**

- The individual state sites themselves, for the most part, were viewed positively.
- The Secretary of State website, in particular, was noted as easy to use and respondents reported a generally positive experience with navigating this site.
- Respondents reported that their experience with the website was navigable using tools that improve accessibility, such as keyboard navigation or through screen reader use.

#### **What participants found challenging:**

- While the quality of information was generally good, users found the volume of content overwhelming. The website was seen as cluttered, making it hard for users to find and identify the most relevant information. Only 8.4% of respondents reported that they could quickly find resources they needed (p. 30 of the full report).
- Many respondents felt that a more streamlined structure across state websites would improve their experience and reduce the amount of time spent trying to locate specific information across multiple agencies.
- The integration between various state sub-sites (e.g., Oregon.gov, Secretary of State, OregonBuys) was confusing, with many respondents unsure if they had left a State of Oregon website when formatting changes took place and not understanding why the same or similar information was presented on multiple pages.



## User-experience

### Recommendation: A more guided user-experience

Participants indicated that a more guided, step-by-step onboarding process for new users would be helpful, similar to services like an Install Wizard. This would help businesses complete registration and compliance tasks more easily. Additionally, automatic population of previously entered data would improve the user-experience.

### What participants found useful:

- Participants that regularly used the website or had been operating a business for many years, knew where to find the resources they need.
- Respondents appreciated the communications from the State when an upcoming deadline was approaching or something needed to be amended.

### What participants found challenging:

- A lack of guidance through various processes often confounded business owners, especially new and small businesses. At times, the complexity of certain processes acted as barriers to entry.



## Searching & Technical Performance

### Recommendation: Enhanced search and technical performance

Invest in improving search engine optimization (SEO) and technical performance, ensuring faster load times, fewer broken links, and enhanced search functionality. Streamlining the site to direct to a single page rather than maintaining pages with duplicate information may assist in the volume of site maintenance.

### What participants found useful:

- Most participants found the speed of the website adequate and did not experience delays.
- Participants appreciated the use of search engines and AI search to help them locate the information they sought.

### What participants found challenging:

- When respondents experienced technical issues (e.g., broken links or unresponsive back buttons), these issues compounded user frustration and hindered effective navigation.
- Users commonly faced challenges in finding and accessing information. Search engines occasionally led to incorrect or incomplete pages, and the internal search was difficult to use without knowing the specific search terms required.
- OregonBuys was frequently cited as difficult to search.



## Quality of information

### **Recommendation: Clearer information & plain language**

Simplify information presentation by organizing it by audience type and incorporating plain language to reduce confusion. Provide glossaries or hyperlinks to definitions for complex terms.

### **What participants found useful:**

- Participants generally felt that the website provided accurate and helpful information when they found the resources they needed.
- The state's online resources were trusted and perceived as secure among members of the business community.

### **What participants found challenging:**

- Participants from communities that used a language other than English found the information more challenging to understand.
- The information was overwhelming at times with some participants not sure which information applied to their business situation, leading to anxiety and doubt.



## Finding help when needed

### **Recommendation: Additional support and outreach**

Improve avenues for support by ensuring timely, knowledgeable assistance is available via phone and email. Consider expanding the use of personal business support services for those who need help navigating the website

### **What participants found useful:**

- When participants got stuck, they reached out to program staff for help. In general, respondents found the staff knowledgeable and helpful for their situation.

### **What participants found challenging:**

- Respondents felt that the website reflected a prioritization of larger businesses, leaving small business owners to struggle with unclear instructions, technical issues, and a lack of personalized support. This perception contributed to frustration, as users felt undervalued by the State.
- Long call wait times (sometimes with calling over multiple days/times) and email response times (sometimes as long as a month) created barriers to conducting business when business administrators and owners were unsure how to proceed.

## CATEGORIZATION OF FINDINGS

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The data for this study was gathered from the business community through surveys, interviews, focus groups, and trade organizations. As a result, the information provided by these groups were provided as they experience the State of Oregon website – as an interaction with a single entity rather than a collection of agencies, programs, and third-party vendors. When reading the report, the information and the quotes provided by participants may cross boundaries of responsibilities. This section provides a brief overview of the findings categorized by interest group.

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### INDIVIDUAL STATE AGENCIES AND PROGRAMS

The most direct feedback from participants related to State agencies and interacting with the elements of the website managed by agencies and programs (rather than the web framework provided by the e-Government program). Some of the primary findings that may be helpful to share with agencies directly include:

- **Navigation and communication:** Navigation was a challenge for participants who did not know exactly what they were looking for, often new business owners. Where navigation of the site was unsuccessful, businesses often either waited for direct communication from the agency when a compliance issue was involved (via mail or email) or called the agency directly. At times, the time required to reach a knowledgeable staff member exceeded reasonable expectations, taking months to get a question resolved.
- **Streamlining information:** Business owners and operators described searching for information on the State of Oregon website and finding a link that looked promising. When clicking on that link, it often brought them to a secondary page before directing them to the resource itself (or, at times, was a broken link). Participants would appreciate more direct linkages across state websites.
- **Search functionality for OregonBuys:** Respondents expressed frustration with the navigability of OregonBuys. The time required to navigate this site was often seen as a drain on limited resources, resulting in many small businesses giving up on this resource.
- **Perception of favoring large businesses:** Some respondents felt that required fields on forms as well as information available on the website was targeted at large businesses. As small business owners, they occasionally got stuck or felt less valued because of this perception, resulting in either stopping or delaying a necessary process.

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### FINDINGS RELEVANT TO THE STATE OF OREGON DIGITAL EQUITY PLAN

Business Oregon and the COBID program were particularly helpful in informing our data collection related to digital equity and our data collection process. For example, we utilized their list of distressed areas and emerging industries to inform our recruitment of participants. Areas of interest for this particular plan may be:

- **Level of access:** Use patterns (described on page 24) indicate that the primary reason businesses access the State of Oregon website is to perform ongoing business registration

requirements (79% of respondents), followed by paying taxes (63%) and obtaining a business license, permit or registration (62%).

- Access point: Unlike private citizens, businesses did not favor using their cell phone to complete tasks online with the State of Oregon. The majority of respondents indicated that they either used a laptop or desktop computer at home or work to complete tasks related to their business (95.9% of respondents).
- Improved access: Among the business community, more affordable business internet was identified as the primary way to make their online access better (23.2% of respondents chose this response). Increased internet speeds (15.5%) and better reliability (12.9%) were also cited as important for access. Similar to past phases of research, access for technical support was also important for older respondents (55 or older).
- Software and hardware needs: When asked what software or hardware would help increase access to online services, respondents most frequently chose access to software that enhances internet security and privacy (14.0% of respondents). Additionally, related to the access challenges, the second most frequent selection was use of hardware that provides stronger and more reliable internet connections (12.7%). The frequency of these selections was greater among communities of color (32.1% selected software that enhances internet security and privacy and 26.4% selected use of hardware that provides stronger and more reliable internet connections).

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## E-GOVERNMENT PROGRAM & CONNECTIONS ACROSS AGENCIES AND PROGRAMS

Feedback related to the E-Government Program was primarily related to long term planning. The structure of the website was generally well-received and perceived as accessible. In our conversations, study participants expressed that once they found the information they were looking for, completing the required action (e.g., registration, tax payment) were easy to complete. As a result, the specific findings related to the E-Government program are related more to long term planning and strategic goals rather than current web accessibility issues:

- Identity management: Respondents in both this phase of investigation as well as in Phase II reported frustration with having to remember multiple user names and passwords across state websites. A single sign-on across state web platforms would streamline this process for participants.
- Integration of web applications and search functionality: Although suited for more of a longer-term strategy, rather than immediate change, businesses found it important to be able to access multiple applications through a single access point (e.g., through a business set-up wizard or an online portal). Having to track requirements across multiple agencies and provide the same information to each agency was seen as a burden for small businesses with limited time available.
- Training for staff on existing resources: Americans with Disabilities Act (ADA) guidance is provided to agencies through the E-government program. While the existence of this guidance is helpful, it is unclear if all agency staff are aware of the guidance. Continued emphasis of this material along with the roll-out of updated ADA guidance can continue to support agencies in providing quality and equitable resources to the public.

## INTRODUCTION

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### WHY THIS STUDY WAS CONDUCTED

The E-Government Program supports the web resources for the State of Oregon, including business resources. Businesses in Oregon can register with the State as well as conduct ancillary requirements such as licensure, permitting, taxes, etc. through the State website, Oregon.gov.

Oregon has an interest in E-Government services being user friendly, convenient, and accessible. As a result, the program seeks to continually evaluate the web platform and improve it. This study supports that effort through soliciting feedback from Oregon businesses about how the E-Government program can better suit their needs.

The study places a special emphasis on businesses in rural communities and ones owned and operated by women, communities of color, veterans, and other historically marginalized groups. This project, through a mixed-methods approach, describes the business operators' perspectives on how well E-Government services address their current needs and on how future changes could improve and further support their experience, such as the potential implementation of artificial intelligence.

### BRIEF OVERVIEW OF THIS PHASE OF THE STUDY

This study represents the third phase of a three-phase process. The [first phase](#) was concluded in June 2022 and included a benchmark analysis of the needs of Oregonians in terms of online services; it also highlighted groups experiencing barriers to online services.

The [second phase](#) used focus groups to explore and contextualize the experience of the underrepresented race and ethnicity groups identified in phase one; this phase was concluded in September 2023. This study highlighted the importance of language accessibility, raising awareness of existing resources, and continuity across different state websites.

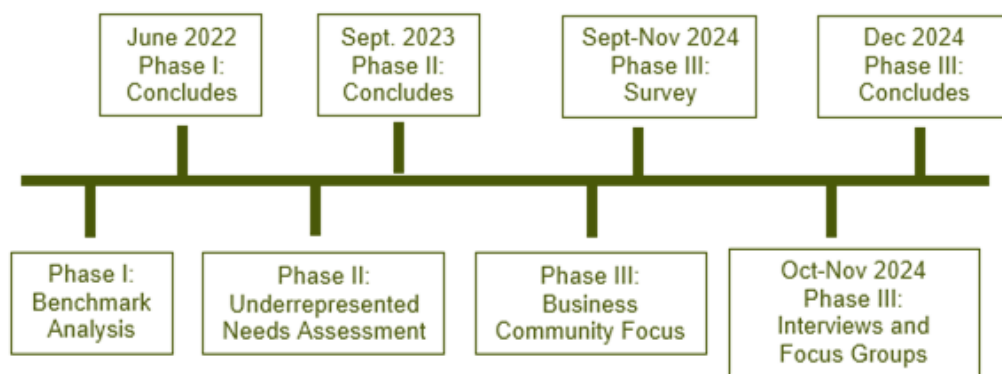


Figure 1: Timeline of the study phases

This third phase refines the understanding of E-Government users gathered in phases one and two by focusing specifically on the business community. Three methods are used to gather data in this study: key stakeholder interviews, surveys, and focus groups. Access to Oregon business owners and operators was sought through organizations that support Oregon businesses, such as chambers of commerce, culturally specific resource groups, and groups that support businesses owned by rural and historically marginalized groups. These organizations assisted in disseminating the survey and finding participants for focus groups. A visual representation of the project timeline is presented in Figure 1, above.

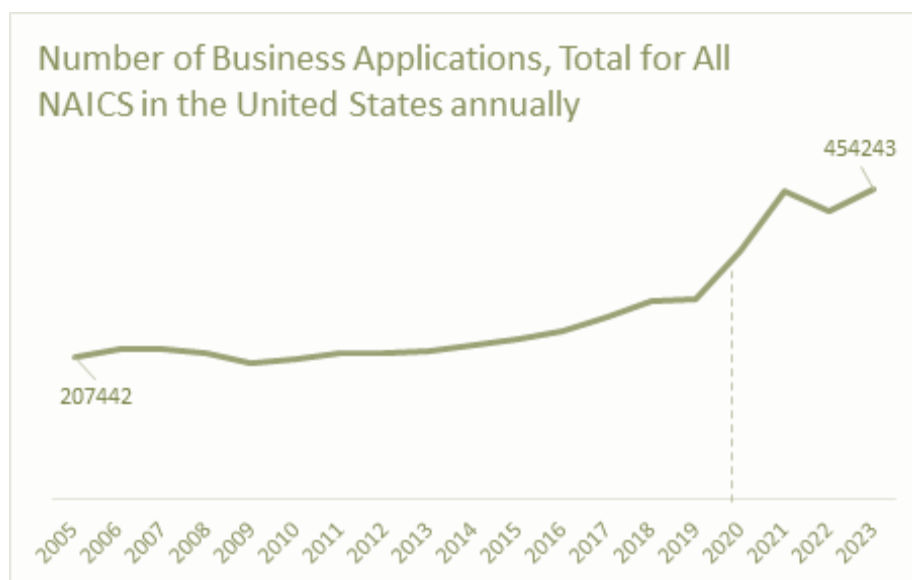
## BACKGROUND: STUDY FORMATION & DEVELOPMENT

At the outset of the project an in-depth literature review was conducted to better understand promising practices for businesses accessing government websites. In addition to reviewing sources of information external to the State, past reports related to the E-government Program, State of Oregon resources for individuals with disabilities (Oregon Department of Human Services), including online accessibility considerations, and reports on the State of Oregon's economic outlook (Department of Administrative Services) were also included in this review. From the review of these resources, a number of ideas emerged that informed the study design.

### UNDERSTANDING CURRENT EXPERIENCES WITH THE EXISTING RESOURCES

Overall, we found few recent studies that documented user experiences with government websites specific to business needs. Despite this lack of information, important changes for businesses have occurred, especially in the time since 2020.

First, the number of business applications across the United States for all classifications (based on the North American Industry Classification System, *NAICS*) increased in 2020 and has stayed elevated (U.S. Census Bureau 2024), shown in Figure 2. However, the composition of businesses has also shifted toward increasing applications for non-store retail as well as services (personal, scientific/technical, and administrative/support) - indicating a restructuring of as well as expansion of businesses nationwide (Haltiwanger 2022). A wide representation of industries was sought in the survey based on this background knowledge.



**Figure 2** Number of North American Industry Classification System Business Applications in the United States, 2005 - 2023

Second, purely online businesses and the use of online services for business, has also expanded during this same period. Almeida, Santos, & Monteiro (2020) have described the “digital acceleration” that has occurred during this recent time period and questioned the preparedness of businesses for this acceleration. An important consideration for the preparedness of businesses is the accessibility of these services and the awareness of their availability and function. With the changing platforms used by businesses, access and availability concerns already embedded may be further exacerbated. For example, the internet connection speed differences across the state and in rural areas as discussed in Oregon’s Digital Equity Plan (Business Oregon, 2024) may result in different needs and challenges among diverse businesses. As a result, an important aspect of this study was being able to break down the results by business demographics such as geographic area and business size as well as ask questions explicitly about accessibility of existing resources.

Documenting the existing user experiences with different types of online business activities offered through the State of Oregon website was critical to our understanding and could be helpful for other governments trying to better understand how to better serve business communities.

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## INQUIRY ABOUT NEW AND EMERGING IDEAS

Resources about promising practices in e-government were also helpful in the development of the research questions. There were a number of new areas to explore with business owners that were identified as promising practices or were emerging technologies in which the perspective of the businesses would be helpful to understand.

Increased connectedness of existing resources was one documented promising practice that was viewed as beneficial for businesses by providing “backend connections across state agencies that reduce redundancies and simplify the process of applying for and receiving help” (National Governors Association 2022). Connectedness of resources was discussed in several ways in the literature, such as guided questions to help with navigation and the ability to view personalized, centralized information through a portal.

Additionally, in comments from participants from Phase II of the e-government project (2023), non-business users of the State website brought up the idea of a single sign on for all their interactions with the State agencies. This was an idea that was also considered relevant for business users and is perhaps an additional way of increasing connectivity across state agencies.

Artificial intelligence is an emerging technology that is expected to have vast implications for business and society (Marr, 2024). Due to the topical nature of artificial intelligence and the greater adoption of this technology in the business world, we also wanted to better understand how businesses perceived this technology. For example, in what ways did businesses view this technology as helpful for navigating state resources? And, what were the concerns businesses had around using this technology to navigate state resources?

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## THE IMPORTANCE OF OUTREACH TO A DIVERSE RANGE OF BUSINESSES

In addition to business identities (e.g., industry, age of business, size of business, etc.), the research from prior phases of this research highlights the importance of considering personal demographics (e.g., age, race, and gender). In addition to our own research in previous phases, it has been well documented that not all social groups have the same access to business resources (see for example Montgomery, Jacobson, Wakar, Cody 2021; Mota, Marques, Sacramento 2020; Sithas & Surangi 2021). Barriers frequently cited include less access to capital, more limited networks, and less familiarity with processes and requirements. Accordingly, not only did we want to include questions about potential barriers to access across all respondents, but we also wanted to break down the results based on personal identities that may be related to experience.

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## RESEARCH QUESTIONS

Based on this background information the research questions were:

1. What resources are being used & what is people's experience with these resources?
2. Are the resources broadly accessible, including language and disability considerations?
3. How do business owners and operators view future opportunities for new technologies (e.g., artificial intelligence) and what would be helpful for them in the future?
4. Are there significant differences based on both business and personal demographics?

## METHODOLOGY

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### APPROACH TO THE RESEARCH: INDUCTIVE PATTERN SEEKING

This study employed the use of an inductive (open) approach. An inductive approach begins by making observations and identifying patterns that emerge (Nishishiba, Jones, & Kraner, 2014). In this approach, the researcher stays open to discovering new or surprising things that may challenge preconceived notions of the topic and allows us to explore new ideas as they arise. This runs counter to a closed (deductive) approach where researchers are primarily interested in confirming or denying previous assumptions.

An inductive approach does not entail a preexisting hypothesis. Despite the lack of hypothesis, the study's measurement tools such as survey and focus group questions can be framed based on past theories and findings. In the case of this phase III study, past findings were used to discern which topics and areas were most important to study. Phase I and II findings suggested that business participants from historically underserved populations may have greater barriers when navigating the State of Oregon E-government, so questions were developed with this in mind.

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## POPULATION OF INTEREST: BUSINESS COMMUNITY

The Oregon business community covers a vast range of characteristics and circumstances that can make generalizing their needs and experiences difficult. Oregon businesses are separated by distinct geographic regions, urban and rural, prospering and less prosperous, established and new businesses. Similarly, the business owners have a variety of personal backgrounds, some with limited English proficiency, and some new to the State or here on a temporary basis.

The previous phases of this study identified sections of the community that have been historically underrepresented. This phase of the study; therefore, sought to target specific populations that reported higher levels of barriers in accessing state resources in Phase I. The outreach schema for solicitation of business perspectives and feedback falls into six main categories.

1. Small businesses are the target due to the potentially more limited resources of those enterprises.
2. Rural businesses were targeted due to their potential barriers in accessing crucial entrepreneurial resources, such as fast internet speeds.
3. Areas of economic distress as identified by Oregon Code: ORS 285A.020(5) and described in Oregon Business Development Department Chapter 123, Division 24 (Oregon Secretary of State, 2024)
4. Business owners from communities of color as they may face additional barriers to accessing state resources. Spanish speakers were a particular focus. This is also relevant to the work completed in Phase II (The experiences among communities of color with the State of Oregon's online services: A qualitative analysis)
5. Agricultural business, often coinciding with rural and distressed areas.
6. Nonprofit organizations, a focused effort was made to connect with nonprofit organizations that may not see themselves as a "business" but still need to utilize Oregon.gov

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## OUTREACH APPROACH (METHOD OF SAMPLING)

### SURVEY (QUANTITATIVE)

The researchers conducted non-random purposive sampling for the quantitative data collection, meaning that the outreach was conducted in a targeted rather than random manner. This approach was chosen to get higher representation of the targeted populations.

Outreach was performed by researching individuals and organizations who have a role in supporting Oregon businesses. Emphasis was placed on targeting organizations that serve veterans, employees of color, individuals with disabilities, and businesses in counties and cities that have been designated as being economically distressed by the State of Oregon. The survey link was sent to key individuals from those organizations with a request that they forward it on to relevant parties on their mailing lists.

Surveys were also distributed via culturally specific newspapers by placing advertisements with a link to the survey as well as a scannable QR code. The team explored advertising with Chinese, Vietnamese, Arabic, Slavic, Korean, Indian, and Spanish publications. Ultimately an ad was placed with Latino, Chinese, and Indian publications, along with a publication with targeted readership among the Asian community.

## FOCUS GROUPS & INTERVIEWS (QUALITATIVE)

Non-random purposive sampling was also used when conducting interviews of key individuals who work for organizations that support business participants. These individuals belonged to the same organizations targeted for survey outreach.

Chambers of commerce were a primary type of organization used to solicit for focus groups. Their close working relationship with their member businesses and geographic spread around the State made them an ideal connection point. Chambers of Commerce were also used as a springboard for quantitative sampling when they were willing to share the survey with their members.

Snowball sampling was also used to recruit for focus groups. Snowball sampling entails starting with a small group of participants and asking them if there is anyone within their network who would be available and willing to speak to the researchers.

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## DATA COLLECTION INSTRUMENTS

This study employed a mixed-methods approach to data collection. This entails the collection of both quantitative (numeric) and qualitative data (non-numeric). Quantitative data is generally collected via asking close-ended questions, which specify a set of pre-defined response options from which to choose. Qualitative data is collected by focusing more on responses that frame an individual's experience in their own words.

The mixed-methods approach of this study allows the two data sets, quantitative survey and qualitative interviews/focus groups, to support and validate each other. Validation of each data source comes from methodological triangulation, where a second source of data from an alternative method reinforces the findings of the first (Flick, 2018). In this case, the survey is the primary source of data. The size of the sample allows it to be a statistically valid and reliable source of data. However, its construction of closed-ended questions limits the ability of participants to express their thoughts and perspectives which could lead the team to misinterpret their responses. By triangulating the findings with the open-ended qualitative data, the team can validate the survey perspectives by soliciting participants' perspectives with an in-depth and robust method and analyzing how the two sets of data compare.

## SURVEY (QUANTITATIVE)

Quantitative data was collected via an online survey that asked close-ended questions about a business participant's experience with the State of Oregon online platform. The data collection instrument is included in Appendix 1. In an effort to further widen outreach, the survey was available in English, Arabic, Hindi, Korean, Chinese, Russian, Spanish, and Vietnamese (5% of respondents decided to fill out the survey in one of the languages other than English). The survey was sent to organizations, individuals, and media outlets via an anonymous survey link and/or QR code. The link allowed participants to select the language in which they would prefer to take the survey.

Respondents were asked questions related to their organization, the State of Oregon business resources, and how they access information related to their business requirements. They were also asked questions about how to improve the online platform. Many questions asked respondents to provide a rating of 1-5. In other questions, they were prompted to choose a statement that most aligned with their thoughts.

## FOCUS GROUPS & INTERVIEWS (QUALITATIVE)

Qualitative data was collected via interviews and focus groups. Interviews were conducted one-on-one with individuals from organizations that serve business participants in Oregon. This was done to gather knowledge of challenges business participants may face with Oregon's online platform. Interviews lasted approximately 50 minutes and consisted of broad open-ended questions about what works well with the online platform in addition to asking what improvements could be made.

Focus groups were conducted over Zoom. A focus group protocol guided the meeting, starting with introducing the project to the participants and reading a consent form (protocol included in Appendix 2). Each participant affirmatively consented to participating in the focus group and having the session recorded. Zoom recorded a live transcript of the meeting along with video. If there were any issues with the Zoom transcript, the recording transcribed using a secondary transcription service.

Focus groups consisted primarily of individuals who had direct experience navigating Oregon's online platform. The goal of the focus groups was to go deeper into each topic in order to provide a holistic understanding of issues business participants may face. At times, a business representative asked to participate, but could not make a scheduled focus group. In which case, an individual structured interview was performed using the same questions as were asked in the focus group setting.

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## DATA ANALYSIS APPROACH

### SURVEY (QUANTITATIVE)

Quantitative data was analyzed using a descriptive and inferential approach. The analysis entailed describing the most common response (mode) for categorical responses and average (mean) responses for scaled questions. Responses were also analyzed using statistical approaches to discern what differences, if any, exist between groups. For example, if there a difference in experience based on disability status.

Results were identified as statistically significant at the .05 level, which indicates that we are highly confident that the result is valid and not a result of random chance. In addition to the tests to determine if group differences exist outside of random chance, tests were also conducted to determine the strength of the difference (if the group difference is small, medium, or large in effect).

### FOCUS GROUPS & INTERVIEWS (QUALITATIVE)

Focus groups were coded in an inductive manner using a grounded approach, in line with the overall inductive strategy of this project. Once the data were collected, the team conducted a qualitative analysis process of reviewing, coding, interpreting, and validating the focus group responses. The coding was performed on transcriptions of the focus group recordings. Observational notes were also taken during the sessions. The transcripts were analyzed using Atlas.ti software.

To generate codes, the team first reviewed the quantitative survey to ensure that the qualitative analysis would complement and support the survey's areas of inquiry. The second step of coding was reviewing all of the focus group transcripts and interviews along with the team's notes and memos. At this point, the goal was to become familiar with the data to brainstorm potential codes, but not code itself.

Reading through the transcripts, the team noticed several common themes relating to participant experiences of using the website such as: navigation, technical performance, organization, ease of use, perceptions of strengths and weaknesses, and thoughts on how to improve. These themes were refined into a set of codes around 14 primary themes. The codes were developed into a codebook which has a description, explanation, and lists examples of the code's uses. An "Other" code was also included to capture themes not otherwise covered in the codebook and which were fairly unique (not frequently stated ideas).

To validate the code book, a second team member used it to code several of the interviews, to the point where both team members were using the codes consistently. Two individuals coded the responses to ensure intercoder agreement and reliability. The full codebook is included in Appendix 3: Codebook.

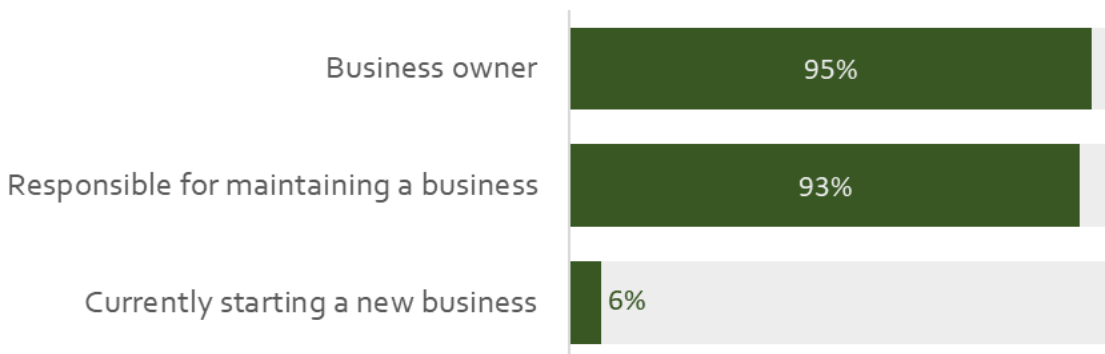
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## DESCRIPTION OF PARTICIPANTS

### SURVEY (QUANTITATIVE)

In total, 251 individuals responded to the survey. Three screening questions were asked: 1) Are you currently an owner of a business operating in Oregon? 2) Are you currently in the process of starting a business in Oregon? And 3) Does your current job include maintaining a business with the State of Oregon (e.g., filing taxes for a business, maintaining business certifications, or business registration)? (responses shown in Figure 3). Only 5 of the responses were invalid due to the individual not having knowledge of business services through the State of Oregon's website (responded 'no' to all screening questions) and only 1 individual did not fill out any additional questions beyond the screening questions, resulting in a total sample of 245 valid responses. However, slightly fewer of these respondents (n = 221) also provided their personal demographics.

**In response to the screening questions, most respondents were both business owners (95%) and responsible for maintaining a business (93%):**



**Figure 3 Business role of survey respondents**

Based on the estimate of over 530,000 businesses in Oregon (IBISWorld, 2024), this is approximately a 5% margin of error across the survey. The margin of error varies slightly from question to question based on the specific number of people who responded to each question and the variability of the responses. However, the margin of error for each question fell between 6.2% and 4.2% - with most falling closely to the 5% margin that is commonly used as a benchmark for analyses with a 90% confidence level.

The personal demographics of respondents revealed that the majority were female (55.7%) and had a college degree (85.0%). Respondents also came from a diverse background based on race and ethnicity (30.8% selected a race other than white), language use (17.9% use a language other than English at work), and immigration status (10.0% identify as an immigrant, refugee, or asylee). Additionally, 11.8%

of respondents identified as having a disability or disabilities. Additional information about respondents' personal demographics is shown in Table 1.

**Table 1: Personal Demographics of Respondents**

<b>Gender (n = 221):</b>	
Female	55.7%
Male	23.1%
Non-Binary	1.4%
Prefer not to answer/No response	19.9%
<b>Educational Attainment (n = 180):</b>	
High School Graduate or GED	2.8%
Some College	12.2%
2- or 4-Year College Degree	40.6%
Graduate or Professional School	44.4%
<b>Age (n = 181):</b>	
25 - 24 years of age	1.1%
35 - 54 years of age	58.6%
55 - 64 years of age	26.5%
65 or more years of age	13.8%
<b>Race and Ethnicity (n = 172):</b>	
American Indian or Alaska Native	1.7%
Asian	8.1%
Black or African American	9.3%
Hispanic, Spanish, or Latino	9.7%
Multiracial	1.7%

Native Hawaiian or Pacific Islander	0.6%
White	69.2%
Other	1.7%
<b>Regularly use a language other than English at work:</b>	
Language	17.9%
<b>Immigration status:</b>	
Immigrant, Refugee, or Asylee:	10.0%
<b>Identify as having a disability:</b>	
Disability	11.8%

The majority of respondents were associated with businesses that took the form on a Limited Liability Corporation, LLC (60.6%) and were generally considered small businesses with 5 or fewer employees (69.7%). Many respondents had also been in business for at least 10 years (41.6%) and did business in the tri-county area (71.9%). The industry groups with which respondents identified are also shown in Table 2.

**Table 2: Business Demographics of Respondents**

<b>Business structure:</b>	
Sole Proprietorship	14.0%
General Partnership	0.5%
Limited Liability Corp (LLC)	60.6%
Business Corporation	19.9%
Nonprofit	1.8%
Prefer not to answer/No response	3.2%
<b>Business size:</b>	
No Employees	38.5%
1-5 Employees	31.2%

6-9 Employees	10.4%
10-19 Employees	9.5%
20-49 Employees	5.9%
50-99 Employees	1.4%
100 or More Employees	0.5%
Prefer not to answer/No response	2.7%
<b>Business length of operation:</b>	
Less than 12 months	4.1%
1-2 Years	8.6%
3-5 Years	22.2%
6-10 Years	19.5%
More than 10 Years	41.6%
Prefer not to answer/No response	4.1%
<b>Business service area, respondents could select multiple areas:</b>	
Tri-County Area	71.9%
Willamette Valley	17.1%
Other areas of Oregon	16.6%
Prefer not to answer/No response	6.5%
<b>Industry Group:</b>	
Agriculture, Fishing & Forestry	1.8%
Business Services & Support <ul style="list-style-type: none"> <li>• Communication</li> <li>• Financial Services</li> <li>• Information Technology</li> <li>• Business Services</li> </ul>	28.1%

<ul style="list-style-type: none"> <li>• Real Estate</li> <li>• Research &amp; Development</li> </ul>	
Construction, Manufacturing, Transport	26.7%
Consumer Market <ul style="list-style-type: none"> <li>• Entertainment</li> <li>• Food and Beverage</li> <li>• Hospitality</li> <li>• Retail</li> </ul>	6.3%
Education & Social Services (including healthcare)	4.1%
Government or Politics	1.8%
Other (Self-Selected Option)	27.1%
Prefer not to answer/No response	4.1%

#### FOCUS GROUPS & INTERVIEWS (QUALITATIVE)

Four focus groups and additional structured interviews were conducted with 22 participants (representing approximately 9% of survey respondents). Participants were asked questions related to their experience, including questions about accessibility of the online platform. They were also asked if they could provide feedback about potential changes or improvements.

The team did not select focus group participants to represent any particular demographic as participants had to opt-in; however, outreach was targeted at recruitment of smaller businesses, businesses in rural areas, and business owners from historically marginalized groups. In the end the participants represented a diverse cross section of Oregon small business owners. There was representation of rural, veteran, communities of color, and LGBTQAI+ business owners. In terms of the businesses the participants owned, there was diversity of new businesses and established family run operations. This was informed by the findings from Phases I and II, which indicated greater barriers to access among these groups.

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## STUDY LIMITATIONS

Like any study, there were limitations related to the methodology of this project. The primary challenge of the study was encouraging participation in the feedback process. The study's goal was to collect data from under-resourced and distressed regions which meant potential participants had a number of barriers to participate. Some potential survey participants had technical limitations, such as the required internet speeds to participate in Zoom focus groups (although the research team also reached out via telephone to reduce this barrier).

Distressed and rural areas were the most difficult from which to recruit. These areas had the fewest chambers of commerce and other supporting organizations to partner with. When the team could connect with a rural chamber, most had limited professional staff to participate in the project. The volunteers who staffed the many joint county chambers and welcome/information centers often did not feel like they had the perspective to answer questions. Many chambers had a sole executive director who indicated that they felt they had too many other priorities to participate.

The disparity in density of business supporting organizations was clear between the Portland metro area and rural Oregon. A Portland metro organization may have many connections with similar business-centered organizations and the local community, conversely a rural organization may be the sole provider of services in the county. Similarly, agricultural organizations frequently represented the entire state, whereas urban business advocates tended to have a much more limited scope and could focus and foster direct connections with businesses to solicit participation. Cultural support organizations as well were mostly located in the Portland area, limiting their ability to provide a statewide perspective.

The study's purposeful sampling of reaching out to specific organizations represents a non-random method. A non-random sample of businesses could reduce the generalizability of the findings; however, this tradeoff was made because the goal of this phase was to address the barriers businesses faced and a more targeted, non-random sampling was more appropriate to these aims.

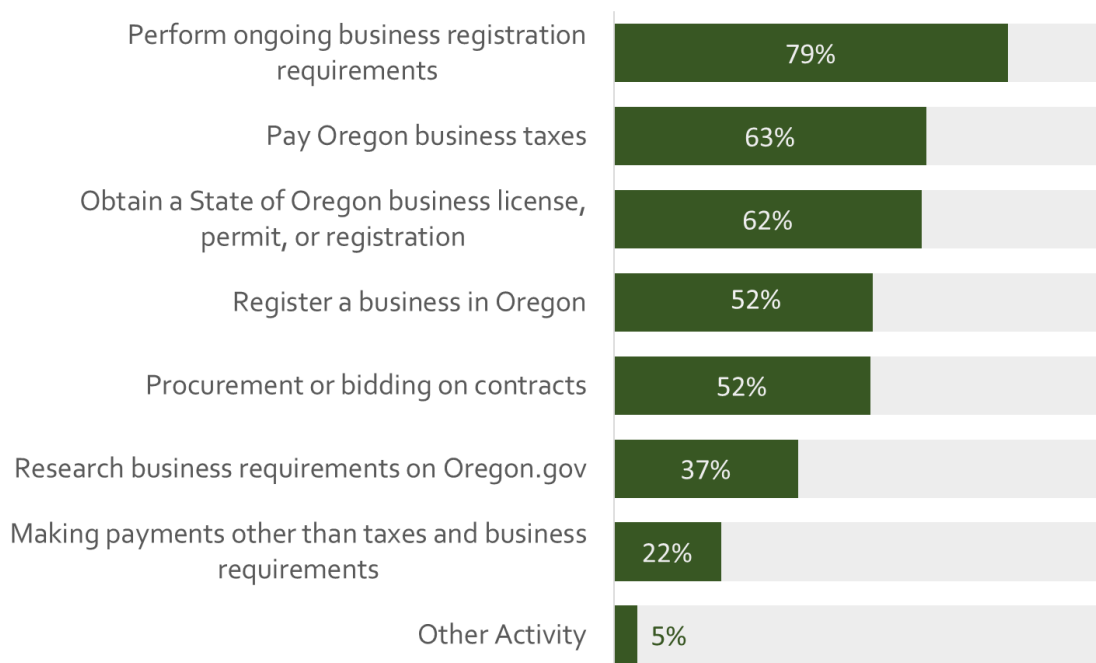
## FINDINGS

The findings integrate both the quantitative and qualitative data. Some findings include sections of text from the interviews and focus groups with edits for clarity and readability, e.g., removing gap phrases like huh and umm.

### USE PATTERNS ACROSS WEB RESOURCES

Near the beginning of the survey, respondents were asked which activities they had completed online with the State of Oregon. This information helped us understand what activities businesses frequently engaged in as well as enabled us to ask follow-up questions among those respondents who had participated in that activity (i.e., if a respondent indicated that they had paid their taxes online, then follow-up questions about experience were also asked. However, if they did not complete this task online no additional follow-up questions were asked). The activities and percentage of respondents who participated in that activity are shown in Figure 4. Each activity is described in more detail in the following sections.

**The most frequently used services were those that many businesses are required to complete: maintaining ongoing registration requirements, paying business taxes online, and obtaining a business license, permit, or certification:**



**Figure 4: Online business activities completed by respondents on State of Oregon websites (respondents could select multiple activities).**

Based on the business and personal characteristics of respondents, there were some differences regarding who was more likely to engage in the specified activity. Some of these patterns are relatively straightforward. For example, businesses less than 5 years old were more likely to report that they had registered their business through the State of Oregon website. However, other patterns were less expected and may highlight important considerations for targeted improvements.

## ONGOING REGISTRATION REQUIREMENTS

As a business matures and grows over time, it may become increasingly aware of the steps required for maintaining their business. This is evidenced by the high proportion of businesses between 3-10 years stating that they use Oregon.gov to maintain their ongoing business registration requirements (88.9% have used the website for this purpose). By comparison, for businesses between 1 and 2 years in operation, only 68.4% said that they used the website for this purpose.

A small but important difference was found for Hispanic, Spanish, or Latino respondents with fewer respondents from this group indicating that they use the State website for ongoing registration requirements. For Hispanic, Spanish or Latino respondents 64.7% reported using the website for this purpose (compared to 84.1% for all other respondents and 80.8% for people of color who are not Hispanic, Spanish, or Latino). It was hypothesized that this difference may be related to a higher proportion of new businesses within this community sample, however this was not the case. Targeted information about the requirements for ongoing business registration for Hispanic businesses may be helpful to alleviate this disparity.

## PAYING TAXES

Newer businesses (2 or fewer years in operation) were less likely to report paying taxes online. This is logical for businesses under 1 year in operation who may not yet have passed a tax deadline, however this also held true for businesses operating for 1-2 years. There were also lower rates of paying taxes online among respondents from outside of the Tri-County area. Whereas 82.1% of respondents operating businesses in the Tri-county area paid taxes online, only 15.7% of respondents from the Willamette Valley paid online and 16.4% from other areas paid online.

Similarly, there was a difference in who paid taxes online based on the form of the business - with business corporations much more likely to pay online than LLCs and sole proprietorships, especially small LLCs. This may indicate that there is a lack of awareness about how to pay taxes online or differences in the preference for doing so, particularly among small businesses that operate as a sole proprietorship or LLC. Differences were not seen when comparing different industry groups.

## BUSINESS LICENSE, PERMIT, OR CERTIFICATION

Obtaining licenses, permits, and certifications are, to some degree, tied to the type of business operated. As a result, there was a higher likelihood of businesses in the construction, manufacturing, and transportation sectors completing this activity on Oregon.gov. There were no significant differences seen across other business attributes (e.g., number of employees) or personal demographics (e.g., use of a language other than English at work).

## REGISTERING A BUSINESS

Registering a business was a common activity cited by respondents to the survey, with over half reporting that they had engaged in this activity (52%). Based on the age of the respondents, the rate of people registering a business dropped off after age 55 - which may align with expectations of career longevity (67.7% of those who registered a business were between 35 and 54 years of age). Among survey respondents, there were not significant differences based on personal characteristics other than age, such as race or disability status. However, that does not mean that there are no barriers to starting a business for these groups since we did not solicit responses from people who would like to start a business but have not yet started the process.

## PROCUREMENT AND BIDDING

The procurement and bidding process was used primarily by respondents from businesses in industries that provide business services (32%) and those operating in the construction, manufacturing, and transportation industries (31.2%). Beyond the difference by sector, there were no significant differences due to personal identities or other business attributes, such as time in operation or business size.

## RESEARCH BUSINESS REQUIREMENTS

Respondents from areas outside of the Tri-county and Willamette Valley areas were more likely to say that they used Oregon.gov to research business requirements (Percent who engaged in the activity: Tri-County = 35.1%; Willamette Valley = 40.5%; and Other Areas = 58.3%), representing a high proportion of construction, manufacturing, and transportation respondents. One of the findings that emerged from the outreach process for this study was that there were far fewer business organizations in rural areas, often business organizations that did exist had very few staff and served a very large geographic area. It may follow that, in addition to industry differences, businesses in rural areas spend more time researching business requirements themselves compared to areas that have a higher availability of supporting organizations (e.g., chambers of commerce).

Larger businesses (with 10+ employees) were also more likely to say that they researched business requirements online, potentially related to the additional complexity of their organizations and having to maintain compliance with employment and other relevant laws.

#### MAKING PAYMENTS OTHER THAN TAXES AND BUSINESS REGISTRATION FEES

Making payments other than taxes and business registration fees was the least frequent activities among business owners (n = 46), other than 'other'. There were no significant differences found for business related characteristics in regard to who is using Oregon.gov to make other forms of payments. However, people who regularly use a language other than English at work were more likely to report using the State website for this function (36.4% indicated that they used the website for this purpose compared to only 18.1% of people who do not use a language other than English at work). A similar pattern was found among respondents who identified themselves as an immigrant, refugee, or asylee (38.9% of immigrants, refugees, and asylees compared to 19.4% of people who did not identify as an immigrant, refugee, or asylee completed this task online). The reasons behind this finding are only speculative, but there was some discussion of fewer language options available outside of the website in the Phase II study. So, for those that want to complete tasks in a language other than English, the website may provide the best option.

#### SUMMARY OF USE ACTIVITIES

Based on the overall pattern of use there may be opportunities to provide businesses with more targeted information throughout their lifecycle (Table 3):

**Table 3: Use patterns by year of business operations**

Summary of Key Business Needs by Year of Operation:		
Year of Operation	Key Services Needed	Common Issues & Barriers
<b>Year 1 (Startup)</b>	Register a business, Obtain business licenses/permits, Research business requirements	Lack of knowledge about state requirements, Difficulty navigating the website, Language barriers for non-English speakers

<b>Year 2–4 (Early Growth)</b>	Pay taxes, Ongoing registration requirements	Tax payment confusion, Registration renewals, Limited awareness
<b>Year 4+ (Established)</b>	Procurement & Bidding, Ongoing registration, research business requirements	Complexity of bidding, Complexity in ongoing compliance for growing businesses

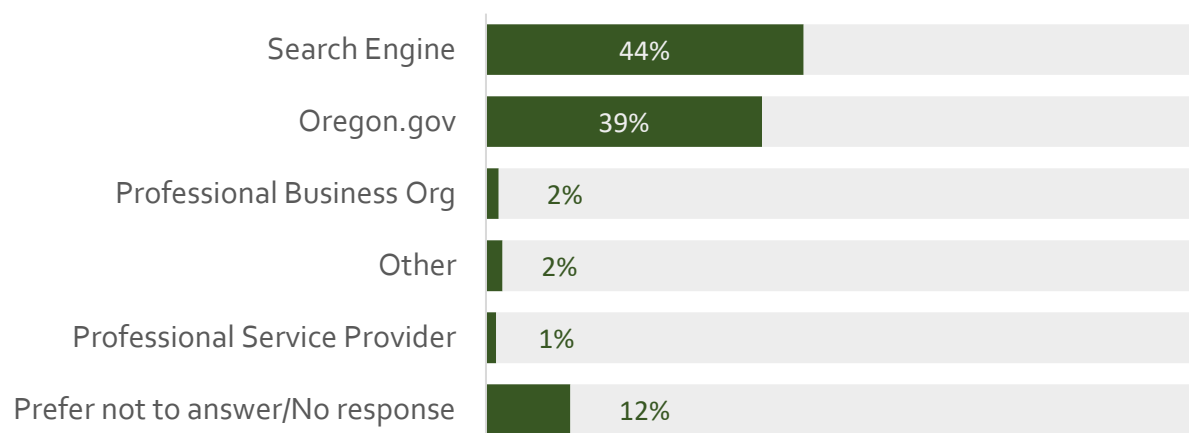
The state’s digital services could cater to each phase by offering guided assistance, simplified instructions, and language accessibility features to reduce the barriers for all business types, particularly those that are small, sole proprietorships, or owned by underrepresented groups.

## SITE NAVIGATION

This section details the respondents’ feedback on navigating to and within the website. This was a common concern from respondents that could derail the process of using and accessing information on the website before it even begins.

Focus group participants most commonly cited search engines as a way to get to the website. Figure 5 shows the ways in which respondents choose to begin their search when looking for information about Oregon business requirements:

### Most respondents started their search for business requirements by using a search engine:



**Figure 5: Responses to the question, "When looking for information about Oregon business requirements, where do you primarily begin your search?"**

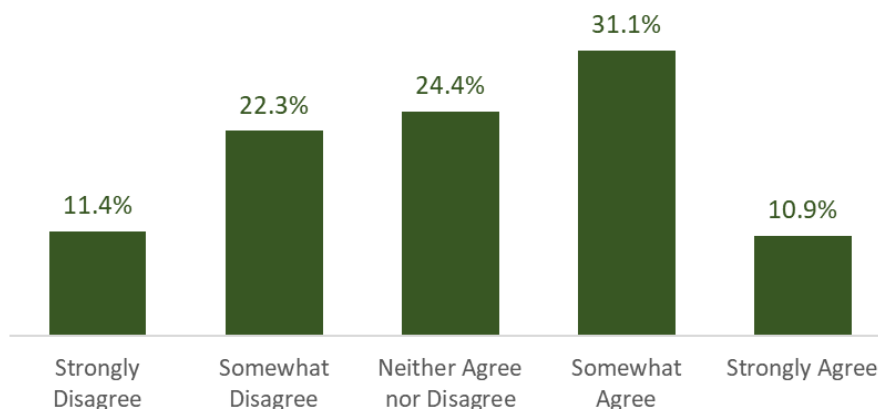
Relying on search engine results to get to the correct page came with difficulties for participants. On some searches, the Secretary of State website and other Oregon.gov sites are listed highly in search results, but others expressed issues of ads appearing before legitimate state sites - confusing the search process. One participant noted...

"And if you're not in the top 10 [search results], or even in the top 5, you're in trouble, you're not going to be found."

There were two cited alternatives to using search engines or starting on Oregon.gov – personal support and direct communication from the State. When participants worked with a business support professional, such as an attorney or accountant, they were able to avoid the search process and let somebody with specific knowledge find the information they needed. Similarly, direct correspondences with the State through mail or email that included a direct hyperlink helped participants avoid the issue of navigating to the site, "I don't think we really need to do that through the website...we get a notification in our email."

Once respondents got to Oregon.gov, they encountered issues navigating between the various state sites. This was an area of concern for respondents, as moving directly to the correct web page from search engines was difficult and they often needed to rely on internal navigation. This proved difficult for some who felt that a baseline level of knowledge is required to know what search terms to use, as one respondent put it, "You can search for it, but you have to know what to search for." Survey responses supported these comments from participants in the focus groups and interviews, indicating navigation as a more challenging activity (Figure 6). Respondents who said they began their search on Oregon.gov expressed higher agreement that the online resources from the State of Oregon are easy to navigate (average of 3.30 on the 5-point agreement scale) compared to those that began their search using a search engine (average of 2.98).

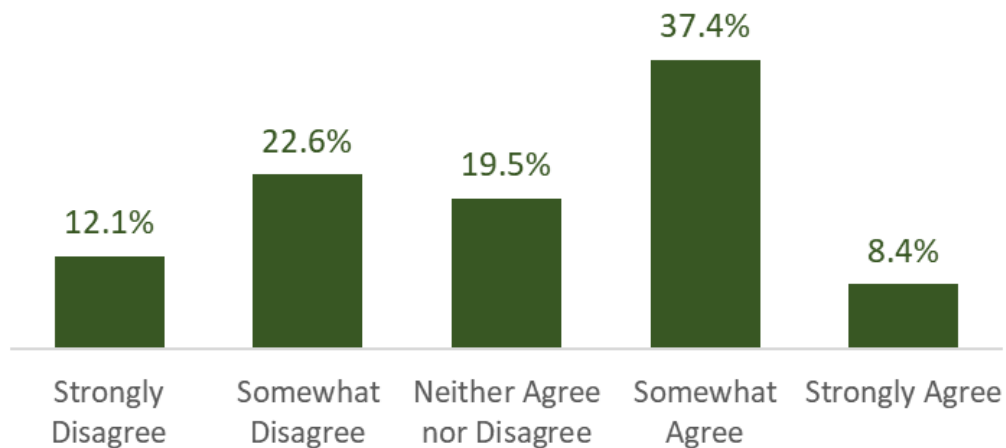
**Navigation was one of the more difficult tasks for respondents, particularly for those who used a search engine.**



**Figure 6: Responses to the Statement, "The online resources from the State of Oregon are easy for me to navigate."**

Additionally, when asked about their level of agreement with the Statement, "I am able to quickly find the resources I need for the business on the State of Oregon website," only 8.4% of respondents indicated strong agreement (Figure 7). One related finding is that immigrants, refugees, and asylees, were more likely to strongly agree with this statement (35.3%). This could be due to a variety of factors, including drawing on their experiences in other countries with starting a business or looking for information online through a government website.

**Few respondents strongly agreed that they were able to find the resources they need for business quickly:**



**Figure 7: Responses to the Statement, "I am able to quickly find the resources I need for the business on the State of Oregon website."**

Other challenges resulted from the organization of the information on state websites and of the relationship between the different sites. For example, one respondent expressed frustration with being directed to intermediate pages, rather than the page of interest, such as being sent to a page explaining what needed to be done to register a business on the Secretary of State's website, instead of being sent to the Secretary of State website directly. Having to search unguided leads to mistakes and frustration. One participant stated, "I click on something that says something and it's something different than what I think it's going to say."

For the business community with disabilities, improved navigation of State websites may also improve accessibility. Participants shared that some of the navigation challenges may be improved by increasing font size, utilizing plain language, providing alt text for images and videos, ensuring PDFs are marked up appropriately, and altering color contrast of pages (specifically, they noted the contrast when text is used over images and when the dark search button is placed on a dark background, making the button edges difficult to differentiate).

Through this search process, technical barriers also appeared. Some links and features do not respond the way participants expected:

On the navigation experience:

"it's like so difficult sometimes if you click on one link, and if you want to go back to the previous one, it basically, it [goes] to the, to the homepage. And again, you have to navigate through." Multiple respondents reported times when the "back button" did not work the way they expected.

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## TECHNICAL ISSUES

As stated in the previous section, there were technical difficulties with the navigation of the site. This section focuses on general technical performance of the site rather than navigational impacts. Respondents were mixed on the website's performance, some thought it responded slowly, but others felt it worked well. "I've stumbled around on the website. I can't tell you exactly why or how, but I know that it's clunky." Some respondents noted broken links "I've seen that too...dead end links...Click here for help. Then you get a 404 error."<sup>1</sup>

The speed and responsiveness of the site seemed to be exasperated by the navigation issues. As more and more searching through the site was required, even small delays were magnified. Speed can be influenced by many factors, such as internet provider and type of internet. The OregonBuys pages were highlighted as being particularly difficult to navigate due to issues with the search function and moving between searches. One respondent said they had to log out of their account before being able to search on the OregonBuys.

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## STRUCTURE & ORGANIZATION

Another issue of concern that was confusing for many of the respondents was the overall organization of the Oregon.gov sub-sites and understanding how they worked together. "Why do we have 3 websites? ...It makes no sense to me...why, there's so many different websites. It should all be centralized into one."

While navigation was generally noted as technically feasible for respondents with disabilities, the site structure remained unclear:

For example, one respondent stated, "One of the first things I do note is that you have a wide variety of different categories - that's great because it's centralized, but I noticed when I was navigating, I would potentially move to another section or subsection of a site and a couple things happen. First, the visual cues and structure are slightly different.

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<sup>1</sup> 404 Error is used when a requested page is not available. Also referred to as a broken link.

I understand it might be a direct link to a different entity's website - but it's not clear as an end-user if I have left the State site. I'm now on ODOT and I still see the logo but there is a color, format, and layout change. So, have I completely transitioned or am I just on a sub site?" The participant also pointed out that some of these cues would be difficult to pick up while using a screen reader.

The previously addressed navigation issues seemed to be connected with the organization and interaction of the various business supporting sites and pages. In one exchange, a respondent praised the Secretary of State's website, but after considering their comment, thought that was a different website from Oregon.gov.

There was a general misunderstanding about the connection between sites as respondents did not understand the function of one site over another. One respondent relayed an issue attempting to pay their business taxes:

On duplicate information on multiple pages:

"Typically, I've been directed to The Secretary of State website when I need to go do that stuff. So. I'm not sure. Why is the Business Oregon site even there? For that? Because, that's not where I'm directed to pay my bills or to pay my taxes. So. That's a little confusing. Why is it in 2 places, you know?"

This confusion makes it difficult to navigate between sites. Some respondents felt the sites could be streamlined for better organization:

On streamlining site navigation:

"Well, I think that if things would click straight through... Maybe it just goes straight to the Secretary of State... Instead of going to another page explaining that you need to go to the Secretary of State. Just streamlining things make it faster to get to where you need to go..."

"I am a business owner and employer but maybe also be needing to make a payment (or file and make payments), however there seems to be multiple avenues to get to the proper (or ultimately the same) web page and it could help if more categories were organized by a click through, 'yes or no' type wizard on the main page. I would be curious to look at examples of government web pages that organize and access this information more effectively."

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## RESEARCHING BUSINESS REQUIREMENTS & INFORMATION

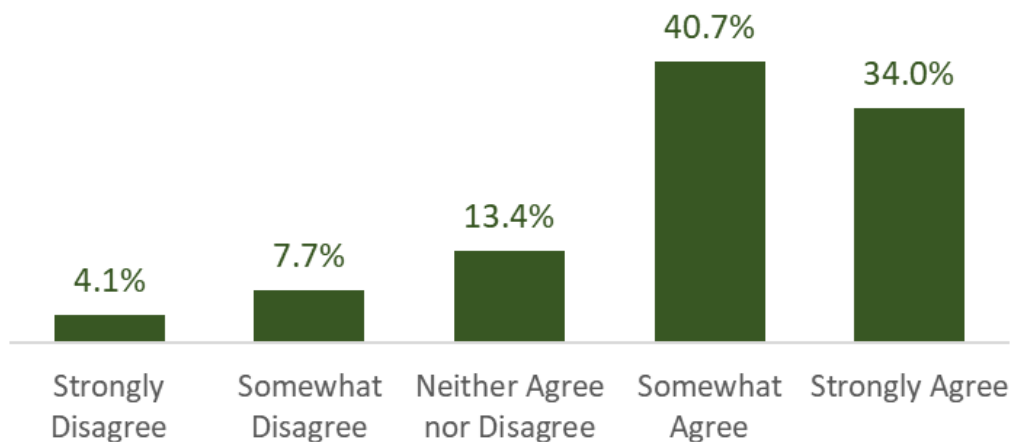
Despite navigation, organization, and technical issues, the information on the site was generally well regarded by respondents.

Respondents commented about the quality of usefulness of the published information:

“...it's a wealth of knowledge, wealth of resources in there.”

A high proportion of respondents also somewhat or strongly agreed that the online resources from the State of Oregon use words that are easy for me to understand (74.7% agreement, Figure 8).

### Many respondents found the resources easy to understand:



**Figure 8: Responses to the Statement, "The online resources from the State of Oregon use words that are easy for me to understand."**

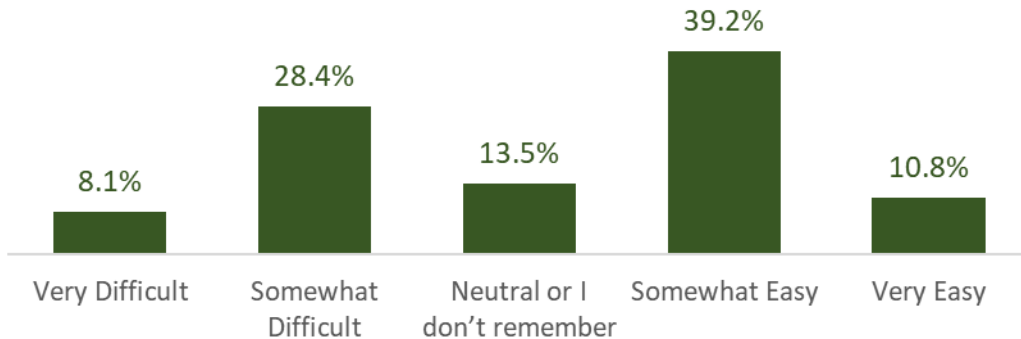
The downside of the published information is that the quantity can be overwhelming for the participants. The usefulness of the information is confined by the aforementioned difficulty of arriving at the information. One respondent made a connection between the organization and information of the site saying:

On potential changes to organization of information:

“It's all information versus sectioned by the audience, and the user. And that's what I think is missing from the navigation. You want to go read about small business policies. Here's all these links versus starting your business... It's too cluttered.”

This dichotomy between having quality information and the overwhelming amount of that information is also reflected in the survey findings. When asked about the ease of researching business requirements, the majority of respondents selected options in the middle of the scale, rather than one of the more extreme responses of very difficult or very easy which can indicate a dual perspective of good, but difficult to find, information (Figure 9).

### Agreement about the ease of researching business requirements was mixed:



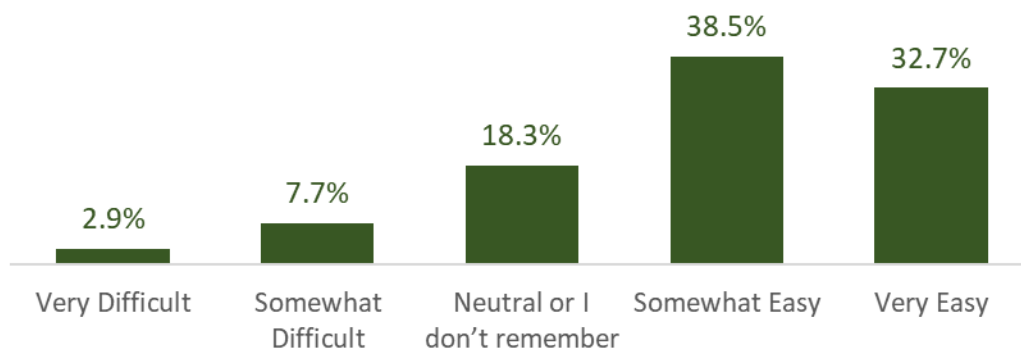
**Figure 9: Responses to the question, "How would you describe your experience researching business requirements on the State of Oregon's website?"**

Experience with Online Services: Respondents share their experiences with various online activities related to business registration, tax payments, obtaining licenses, and navigating the State's website.

The breadth and quality of the information on the site was frequently referenced as one of the positives of interacting with the website. When respondents could find what they needed, it was generally useful information. The Secretary of State's site was a standout in terms of usefulness, as one respondent stated, "The Secretary of State stuff works..."

The Secretary of State website is frequently used to register a business, and we asked respondents about their experience with business registration on a scale of very easy to very difficult (Figure 10). Similar to what we heard in focus groups and interviews, respondents tended to find this process easy (71.2% found the activity somewhat or very easy).

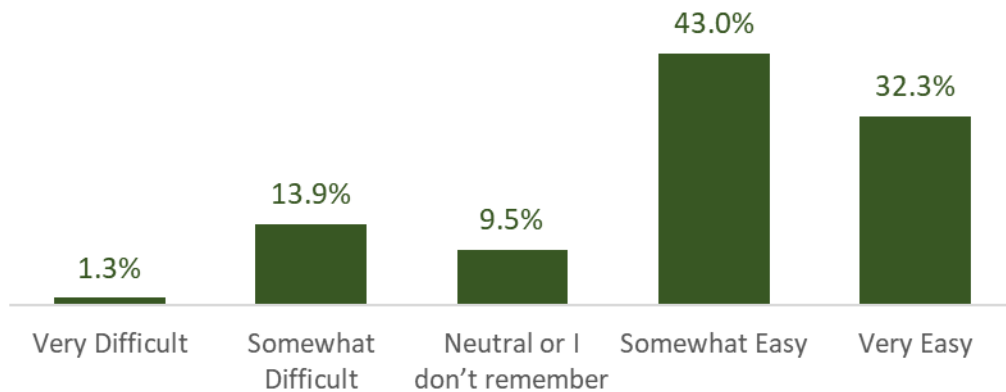
### Registering a business was reported as one of the easier tasks to complete:



**Figure 10: Responses to the question, "How would you describe your experience registering a business through the State of Oregon's website (Oregon.gov)?"**

Aligned with the initial registration of the business, 75.3% of respondents found maintaining their business registration somewhat easy or very easy (Figure 11). In general, the initial business registration as well as completing the ongoing registration requirements were some of the easier tasks for respondents to complete online.

**Similarly, maintaining ongoing business registration requirements was also perceived as relatively easy:**



**Figure 11: Responses to the question, "How would you describe your experience maintaining ongoing business registration requirements through the State of Oregon's website (e.g., renewing a business registration)?"**

However, this experience was not uniform. Hispanic, Spanish, and Latino respondents were more likely to respond that they found registering a business somewhat or very difficult (37.5% disagreement; compared to 11.6% for non-Hispanic respondents). There was not a difference found related to maintaining their ongoing business registration, indicating that the challenge is at the outset of the business setup rather than ongoing compliance.

Hispanic, Spanish, and Latino respondents (18.8% disagreement; compared to 3.9% for non-Hispanic respondents) as well as respondents who regularly use a language other than English at work (15.6% disagreement) and immigrants, refugees and asylees (18.8% disagreement) were also more likely to express disagreement that they are able to find the resources they need in their preferred language. Additional information provided in a variety of languages about the business registration process, in particular, may help alleviate some of the difference in experience.

**Table 4: Percent of respondents who disagreed (somewhat or strongly) that they are able to find the resources they need in their preferred language.**

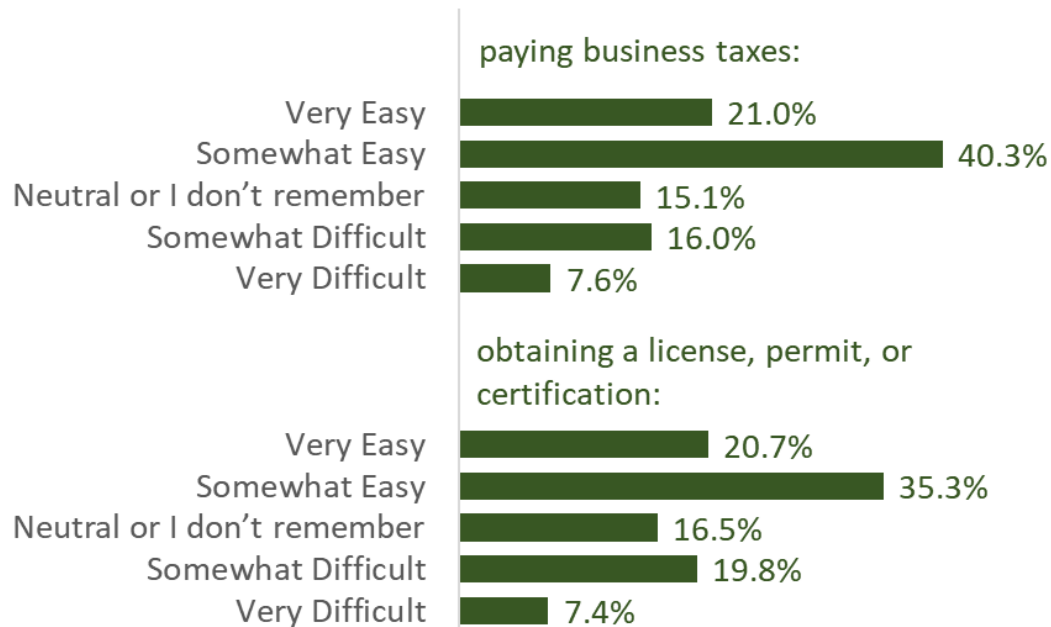
<b>Respondent group:</b>	<b>Percent disagreement:</b>
Overall percent of respondents who selected somewhat disagree or disagree to the statement, "I am able to find the resources I need in my preferred language on the State of Oregon website."	<b>5.8%</b>
Percent disagreement among Hispanic, Spanish, and Latino respondents.	<b>18.8%</b>
Percent disagreement among respondents who use a language other than English at work.	<b>15.6%</b>
Percent disagreement among immigrants, refugees, and asylees.	<b>18.8%</b>

When a barrier was encountered, a lack of knowledge was a commonly cited barrier in the registration process. When starting their businesses, respondents reported not knowing all the necessary steps. Beginning the process and then reaching a bottleneck often forced them to go back and make adjustments to their applications or stop to locate needed information. New businesses may not be aware that they can make changes and this may lead to unnecessary stress and delay.

In addition to the experience with business registration and ongoing registration requirements, we also asked about the online experiences related to paying taxes (Figure 12), obtaining licenses, permits, and certifications (Figure 12), and making payments other than taxes and registration. Relatively few people made payments other than taxes or registrations ( $n = 41$ ), but those that did found this process relatively easy (31.7% indicated somewhat easy and 26.8% very easy).

However, for the other two inquiries - paying business taxes and obtaining licenses, permits, and certifications - respondents tended to feel more neutral about these processes, with high proportions of respondents saying they are "somewhat easy". In the focus groups, participants did not voluntarily discuss them as good or bad, with little to add when explicitly prompted.

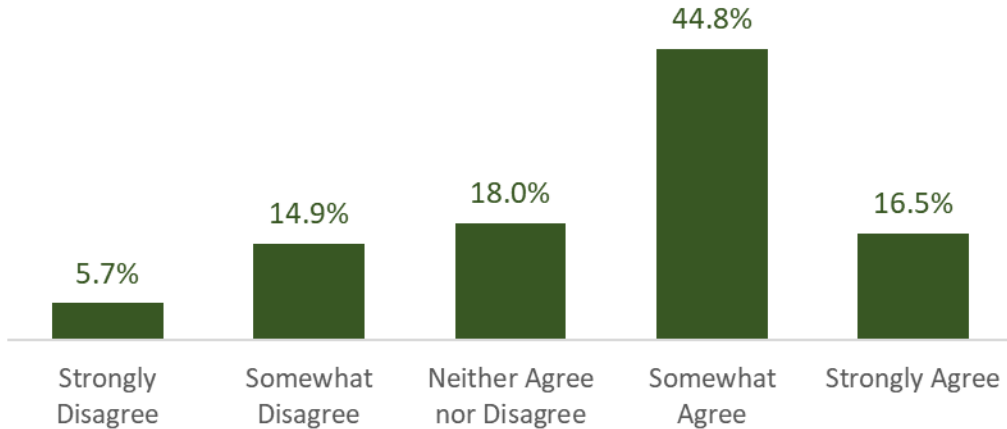
**Respondents expressed similar level of ease with paying taxes and obtaining licenses, permits, and certificates online, with most saying these processes were somewhat easy:**



**Figure 12: Responses to the questions, “How would you describe your experience registering a business through the State of Oregon’s website?” and “How would you describe your experience of obtaining a business license, permit, or certification through the State of Oregon’s website?”**

Some related comments from participants indicated that business owners knew about these types of requirements and were alerted when they needed to act. However, participants also suggested that they do not always have a clear understanding of all the requirements and although they are completing each step somewhat easily, they are in a position of being reactive rather than proactive. In response to the Statement “I am confident that I know the State requirements that are relevant to the business,” relatively few respondents selected the response option of strongly agree (16.5%), shown in Figure 13.

**Respondents felt reactive rather than proactive about understanding State requirements, reflected in high proportion of respondents who somewhat agreed they are “confident they know the State requirements related to the business.”**



**Figure 13: Level of agreement with the Statement, “I am confident that I know the State requirements that are relevant to the business.”**

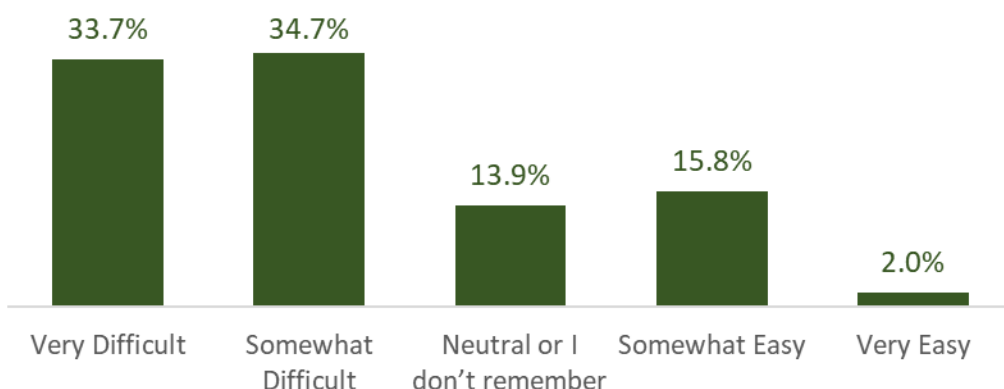
Participants also mentioned that they relied on mailed information when they were unable to complete these tasks online, for example:

On waiting for state instruction about requirements:

“...something didn't go right with a payment through my QuickBooks, and I - I didn't know what to do immediately to rectify the situation on the State of Oregon's website. So, I almost had to wait...I knew I would receive a letter in the mail, you know, a month or so later about a failure to pay a State of Oregon withholding tax from payroll...What would happen is, I would receive a letter in the mail, and then through that letter, it would direct me to the appropriate website to make that payment. I didn't necessarily know what type of payment I needed to make until I got that letter. And that's just a little bit of a confusion of mine...”

Finally, we asked respondents about their experiences with procurement or bidding on contracts. This area presented the highest amount of difficulty for respondents, with 68.4% of respondents finding this process somewhat or very difficult (Figure 14). This finding also overlaps with business industry since some industries utilize this process much more frequently, such as construction, manufacturing, and transportation.

**Procurement and bidding was one of the more challenging processes for respondents:**



**Figure 14: Responses to the question, "How would you describe your experience using Oregon.gov to assist with procurement or bidding on contracts (e.g. OregonBuys)?"**

Two areas of particular concern that presented barriers to respondents were the OregonBuys and COBID certification programs. Participants felt that to successfully engage with the OregonBuys system they required knowledge and connections that were not available to everyone who used the website. Similarly, for businesses applying, it was unclear what benefit their businesses received from the COBID certification.

Some participants only found out that the certificate was not beneficial to them after going through the whole application process. For example, one respondent stated in response to their certification...

On not understanding the purpose of certification programs:

"What? How can I use it? I don't know. I mean, I've done webinars on leveraging your certifications, but they don't give you tangible examples. [They tell you], 'now, with your COBID certification, go register on OregonBuys.' Okay? I did that. Now, what?...we really need to be handheld and helped out after a point of time... I just can not do it. It's just too hard, and I have to procrastinate because I don't have the time. I will come back to it later..."

The time and effort required to navigate business requirements on the website was a hurdle to beginning a business expressed by many participants. When recalling their experiences starting their businesses, participants reported a perception that the high level of work required to complete forms combined with the uncertainty in the process leads to stalling application processes. Any time they were not sure how much information was actually necessary or if they were completing the form correctly presented an opportunity to give up and delay their application process.

The COBID process especially stood out as a time-consuming process that delayed business owners, as one participant said, "...it's just so time consuming for founders, and it's really not fair to ask us to get on this workshop and learn and do this and also run a business and manage our families."

Although there were relatively few significant differences based on personal characteristics of the respondents<sup>2</sup>, there was an important finding related to the procurement and bidding process. Among those respondents who completed procurement or bidding activities online with the State of Oregon, people of color were more likely to find these activities somewhat or very easy (37.9%, compared to 12.8% among White respondents). This finding may be related to the efforts of COBID to outreach to communities of color.

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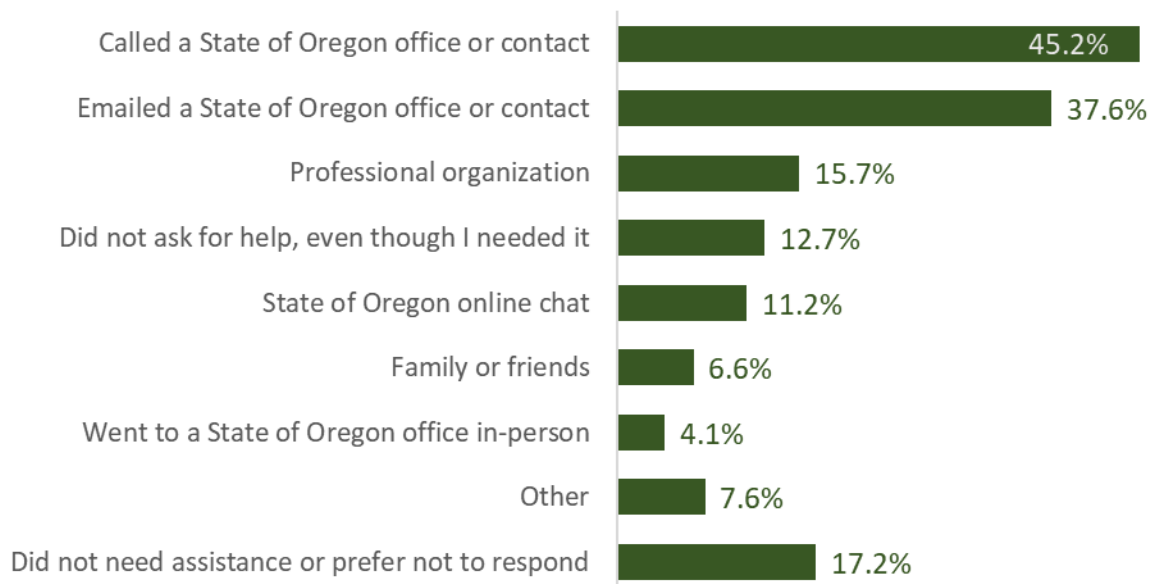
## SEEKING ASSISTANCE

When participants encountered issues finding what they needed on the website there were two common ways that they sought assistance, phone contact or working through a business professional, shown in Figure 15. Phone contact was viewed positively by many participants. Many felt that a knowledgeable person provided superior support to the website instructions. As one respondent put it, "you try to figure it out on your own via the website. And if you can't, you make a call." One drawback of relying on phone calls was the time and attempts it would take to connect, "Nobody was there, and he would call every day for like 4 to 6 hrs."

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<sup>2</sup> Note related to all questions about online experience: We had relatively few responses from non-binary respondents to the survey ( $n < 10$ ). However, across all questions related to the ease of completing tasks online, the non-binary respondents selected disagreement more frequently. Although we were unable to perform a meaningful statistical analysis based on the number of respondents, the descriptive difference still provides some insight.

### Where did you go for assistance?



**Figure 15: Responses to the question, “Where did you go for assistance if you needed additional help? (Select all that apply).”**

Some businesses avoided interacting with the website by working through a hired professional. Respondents noted that their accountants handled taxes and lawyers set up their business. Other institutions and agencies that supported businesses were also mentioned such as Micro Enterprise Services of Oregon, The Small Business Administration, and Chambers of Commerce from various counties.

The importance of personal connections and guidance was an emergent theme that was not anticipated at the beginning of the coding process. When coding, if a respondent mentioned finding support through an avenue outside of the website, such as a supporting organization or state employee, that comment was coded as “Other”. At the end of the coding process, “Other” was a very commonly used code and de facto represented the idea of the use of person-to-person contact. Respondents both appreciated external business supporting organizations and State staff assigned to assist business processes, for example:

On getting help and assistance:

“Basically, the Small Business Development center was instrumental in answering questions that I had.”

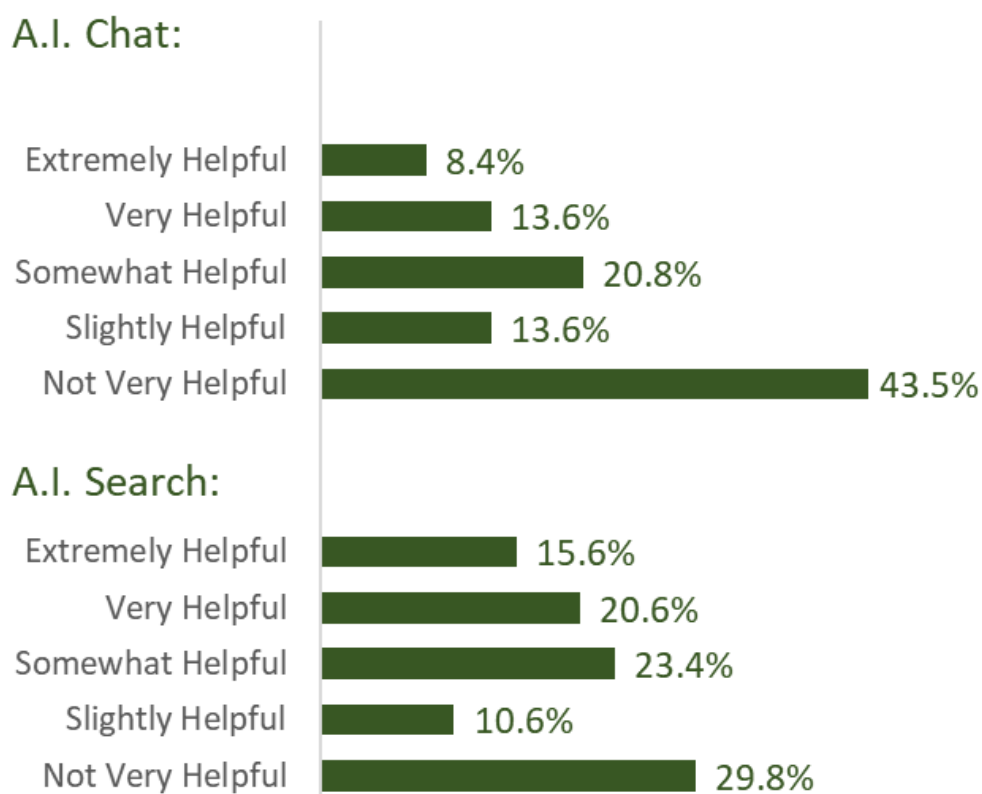
“I’ll tell you that at one point when I was having major problems with how revenue was dispersing my quarterly tax payments to the other bureaus. I ended up calling directly on the phone. I called the ombudsman the taxpayer Ombudsman, who I didn’t know

existed, but I Googled it and I found out that such a person existed and I called that office and I could not believe what a great experience it was."

## DESIRED CHANGES

Participants had several pieces of feedback on the topic of possibly incorporating artificial intelligence (AI) into the State website. Initially, participants were not enthusiastic about AI. Respondents generally felt that AI chat or search functionality would not be useful (Figure 16), although search was preferred to chat. When participants viewed AI favorably, it was often in regard to the OregonBuys search function or, more generally, being able to search for business related information without knowing the specific search terms.

**Artificial intelligence (A.I.) integration was not strongly favored by respondents, but search was more preferred:**



**Figure 16: Respondents perception of helpfulness of "Artificial Intelligence (AI) chat functionality" and "Artificial Intelligence (AI) search functionality."**

However, in conversations during focus groups and interviews, when probed further about the utility of AI rather than their initial 'gut reaction', participants speculated that the website could benefit from AI integration to improve search functions within the site. Respondents thought an AI search function could better autocomplete queries to direct them to the right term or topic they were looking for, even

if they didn't search the exact phrase that may be highly technical or specific. Some respondents felt AI could also improve the searching process on OregonBuys.

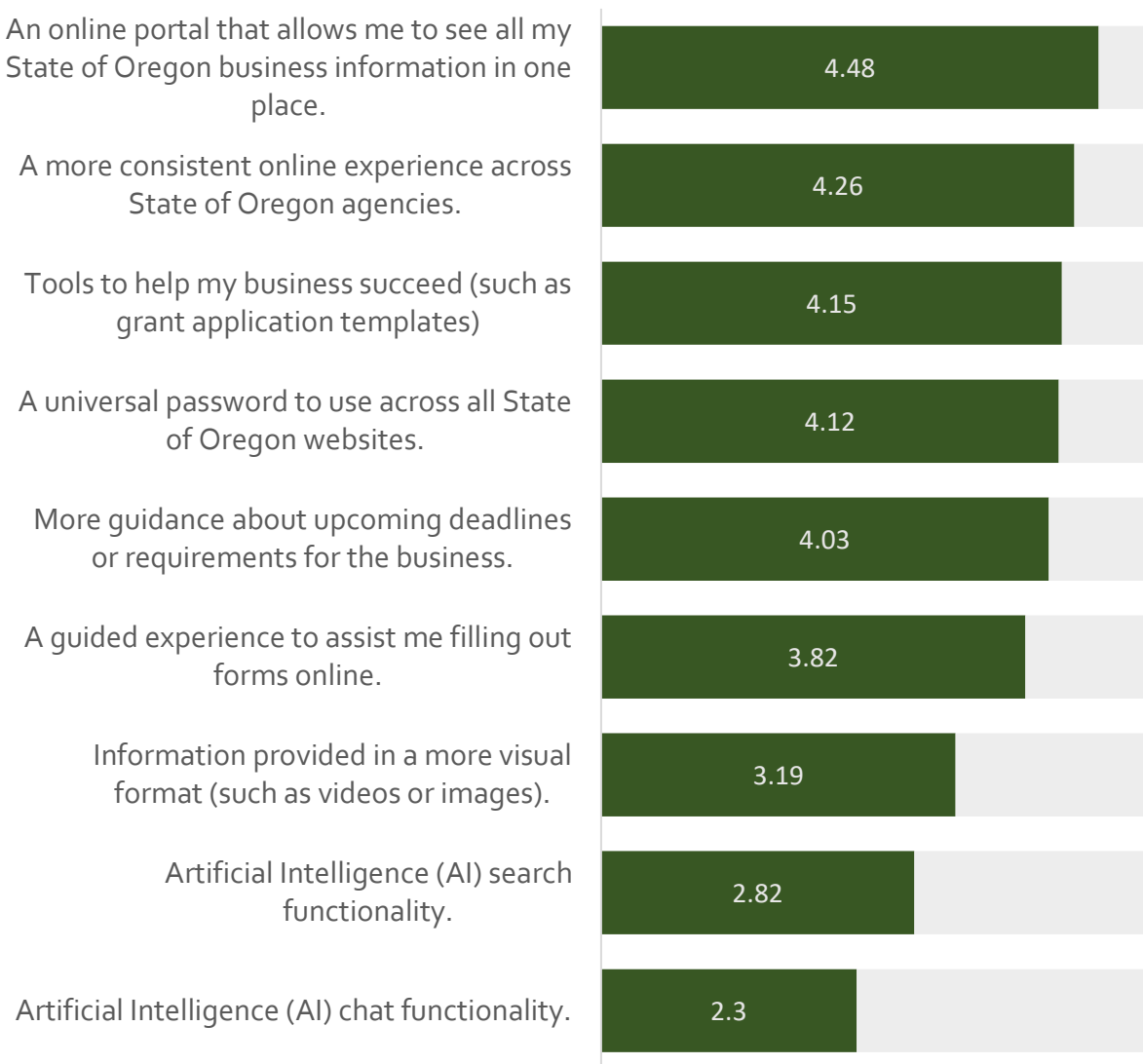
We also asked respondents about what changes they would like to see and participants had suggestions for several improvements the website could make. These requests often accompanied complaints about navigation, organization, and usability of the website:

Other suggestions shared by participants:

- Create a guided new user experience based on the industry of interest, e.g., if you are a new business in the food and beverage industry, these are the links you may need.
- Invest in search engine optimization for Oregon.gov with plain language support so that searchers are directed to the correct webpage.
- Add PDFs attachments to emails if required a document to be printed (One respondent noted that they were asked to print an email, which is more technologically challenging than printing a PDF).
- Conduct a plain language review of important documents and provide a glossary of important terms, perhaps with hyperlinks to definitions of key terms within important forms.
- Support a more guided experience so that when information is entered in one form, that same information can be automatically filled for related documents (with a review step).
- Similar to the diffusion of AI, respondents thought navigation with the search function could be improved by adding autofills for common search topics.
- Notifications to alert business owners to opportunities, especially for OregonBuys.
- Better connection between the different sites. This was expressed in a couple different ways - one being a unified account so that different log-ins and passwords were not needed for each site and second was better linking different sites, so the end-user experiences the State as a single entity rather than disparate websites without a clear connection.

In addition to any organic suggestions about changes they would like to see expressed during the focus groups and interviews, respondents to the survey were asked about the perceived utility of particular changes. The average response for each of the potential changes is shown in Figure 17. Overall, the most preferred change was an online portal, followed by a more consistent experience.

### Perceived helpfulness of potential website updates (5 point scale):



**Figure 17: Average helpfulness of potential changes on a scale of 1 - not very helpful to 5 - extremely helpful (n = 175).**

However, there was also variation in perception of the proposed changes based on both business and individual characteristics. For example, sole proprietors were slightly more likely to prefer a change that

resulted in a more guided experience and those in the construction, manufacturing, and transportation industries were more likely to find a more consistent experience helpful.

For personal characteristics, there were also some differences across groups. Respondents from communities of color were more likely to say that a more guided experience would be very or extremely helpful (76.9%) and more visual information would be very or extremely helpful (65.4%). Respondents from communities of color (53.5%) and immigrants, refugees and asylees (62.5%) were more likely to say that an AI search function would be very or extremely helpful compared to white respondents (29.2%). Additionally, respondents who regularly use a language other than English at work (40.7%) and those with some college (44.4%), as opposed to 2- or 4-year degree or higher, also responded that they would find an AI chat function helpful.

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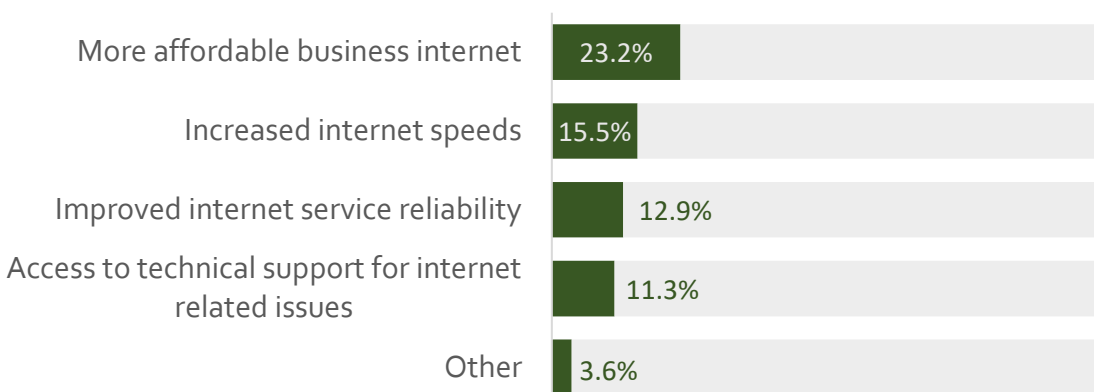
## SOFTWARE, HARDWARE, AND INTERNET ACCESS

For background information, respondents were asked about where and what type of device they used to access the State of Oregon's online resources for business. The majority of respondents said they accessed the resources primarily at home (40.3%) or work (43.0%), rather than using public Wi-Fi or Wi-Fi through their cellphone. Unlike the findings from Phase I, in which many respondents used their phone (43.1%) to access state resources, the respondents using the website for business more frequently stated that they used a laptop or desktop computer (95.9%). However, there was higher occurrences of respondents from the consumer market using a cell phone for business (16.7%) compared to other industry groups (0.9%).

While the majority of respondents felt their online access was satisfactory (49.5%), those who experienced barriers reported that offsetting the cost of business internet would have the greatest impact on their access. New businesses and sole proprietors in particular were likely to select this option, as were people from communities of color and immigrants, refugees, and asylees.

In addition to internet affordability, those working in consumer market industries were more likely to select increased internet speeds as helpful. Respondents from communities of color; immigrants, refugees and asylees; and those with disabilities were more likely to select improved internet service reliability. Respondent from older age groups (55 or greater) were more likely to select access to technical support for internet related issues.

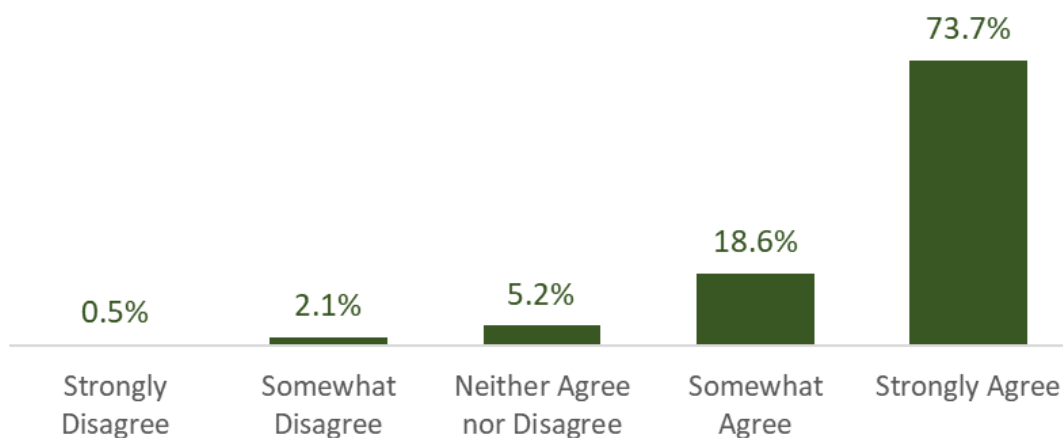
### What would make your online access better?



**Figure 18: What would make your online access better? (respondents could select multiple options) (n = 194).**

Respondents were also asked about their overall access to technology resources needed to access online state services. The majority of respondents agreed that they "have the technology available that I need to access the State of Oregon's online resources" (Figure 19).

### Most respondents strongly agreed that they have the technology available that they need to access the State of Oregon's online resources



**Figure 19: Agreement with the Statement, "I have the technology available that I need to access the State of Oregon's online resources."**

However, there was also a significant difference between white respondents (0.9% somewhat or strongly disagreed) and respondents from communities of color (6.5% somewhat or strongly disagreed), shown in Table 5. There was also a higher proportion of respondents who disagreed among those without a college degree (8.0%) and businesses operating in areas of Oregon outside of the Tri-county and Willamette Valley areas (6.0%).

**Table 5: Average response to the Statement, “I have the technology available that I need to access the State of Oregon’s online resources.” Scale: strongly disagree - 1 to strongly agree - 5 (n = 194):**

<b>Group:</b>	<b>Average (1-5 scale):</b>
Overall Average	<b>4.63</b>
Average among respondents from communities of color (n = 51); compared to 4.73 for white respondents	<b>4.45</b>
Average among people with high school or some college education (n = 27); compared to 4.70 with at least college education	<b>4.41</b>

We also asked respondents what technological resources would be most helpful to them. Among respondents from communities of color, the most selected responses were ‘options to help improve access to technology or software that enhances internet security and privacy’ (32.1%) and ‘use of hardware that provides stronger and more reliable internet connections’ (26.4%), shown in Table 6.

**Table 6: Responses to the Statement, “Thinking about software and hardware, what would help increase your access to the online state resources?” among respondents from communities of color (respondents could select multiple options) (n = 53).**

<b>Group:</b>	<b>Percent of Responses among communities of color:</b>
Use of hardware that provides stronger and more reliable internet connections (compared to 12.7% of all survey respondents)	<b>26.4%</b>
Assistive technologies (compared to 2.7% of all survey respondents)	<b>7.5%</b>
More affordable modems for faster internet speeds (compared to 8.1% of all survey respondents)	<b>13.2%</b>
Software that enhances internet security and privacy (compared to 14.0% of all survey respondents)	<b>32.1%</b>

Apps for a better managed internet network (compared to 7.7% of all survey respondents)	<b>13.2%</b>
Other (compared to 4.1% of all survey respondents)	<b>3.8%</b>
Don't know or prefer not to respond (compared to 11.3% of all survey respondents)	<b>9.4%</b>

Although the selections of 'access to technology or software that enhances internet security and privacy' and 'use of hardware that provides stronger and more reliable internet connections' were the most frequently selected options for all respondents, respondents from communities of color were even more likely to select these options. Additionally, Black or African American respondents and respondents who identify as Hispanic or Latino were more likely to select the option indicating that 'assistive technologies' would help them better access the online state resources.'

The other groups that expressed greater disagreement that they have the technology available to access the State of Oregon's online resources were respondents with an educational level of less than college and those businesses operating in an area outside of the tri-county and Willamette Valley areas.

Respondents with an educational level of less than high school, high school or GED, and some college also selected, 'options to help improve access to technology or software that enhances internet security and privacy' and 'use of hardware that provides stronger and more reliable internet connections' most frequently, but at levels that were similar to the overall responses across all survey respondents. The businesses operating in an area outside of the Tri-county and Willamette Valley areas were slightly more likely to select 'use of hardware that provides stronger and more reliable internet connections' (16%) more frequently than those within the Tri-county and Willamette Valley areas.

Beyond those groups that were more likely to disagree with the Statement, 'I have the technology available that I need to access the State of Oregon's online resources,' respondents with disabilities were more likely to select the response option 'Apps for a better managed internet network' (28.6% selected this option) when asked what would help increase access to the State of Oregon online resources.

## CONCLUSIONS & RECOMMENDATIONS

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After reviewing the findings from both the qualitative and quantitative data, the research team synthesized several conclusions and recommendations. This section will first focus on our conclusions to make improvements on the current state of Oregon.gov and how the website could be used to improve accessibility for Oregon businesses. Following that discussion, we present broader feedback received from many of our participants concerning their perspective on how Oregon is supporting small businesses. Finally, we conclude our report by making concrete recommendations and proposing a direction for future inquiry. In addition to information on the State of Oregon website, participants also provided insights into related processes. While outside of the scope of this project, these comments are summarized in Appendix 4.

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### FURTHER INTEGRATION ACROSS STATE WEBSITES

Respondents expressed a desire to see improved integration between the various state services and their corresponding websites. One proposed area for this integration was streamlining the various accounts needed to use the Oregon.gov websites. Participants felt a unified or single sign-on could make using the website easier. Integration between the sites could also provide additional benefits.

Respondents were hopeful that having the various web pages share information could reduce the amount of time they had to spend filling out forms with the same information. Unified accounts may be able to automatically populate information that they had already entered. Participants also suggested that integration between the sites could carry over into the user experience. They suggested adopting a consistent state branding between the various sites and programs. This would include consistent graphic design elements and an overall state aesthetic. One respondent quipped that Oregon is too creative and artsy a state to have an ugly, boring website.

Beyond a single password and more unified look, respondents also stressed the importance of perceiving the State as a single entity. When the information related to their business is distributed based on agency responsibilities, there is some apprehension that they could be missing critical information. Businesses perceive the State as a single entity, but the website does not reflect this perception. Rather than the business owners having to understand how the State agencies relate to each other and why there is often duplicative information on various pages, they would like to see a more unified experience that is directed toward their business needs in a clear and concise format.

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### ACCESSIBILITY & NAVIGATION

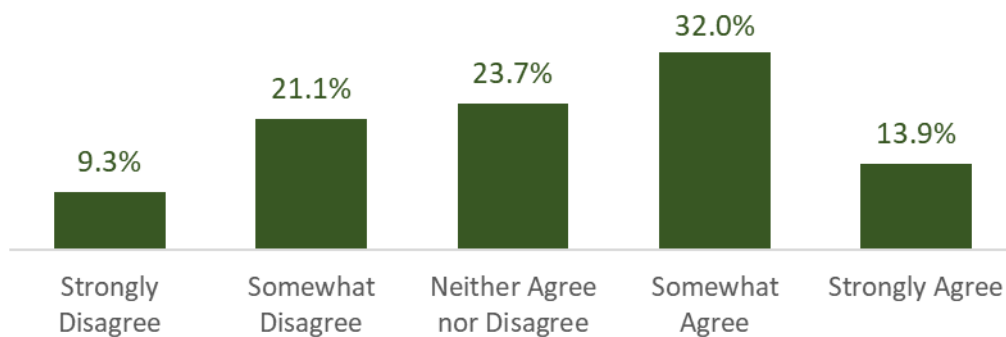
The importance of improving accessibility for various groups was a clear takeaway of the data. The disparity of accessibility between a business owner new to the website and an experienced business owner were stark. New business owners had difficulty navigating the website and knowing what they needed to do. Many respondents expressed a desire to be guided through the process and alerted to requirements they would otherwise not know about. Concern for making a mistake was itself another

barrier to accessibility. New business owners worried about fees and increased processing times if they made mistakes on the website, which increased costs for them and stalled their businesses.

Small businesses were another group that found navigating the website challenging. Some respondents had been using the website for years but still found completing recurrent tasks challenging. Many worried about missing upcoming deadlines, especially if something changed in their business and there was a new requirement to meet. Interactions with the website resulted in personal, as well as financial, impact. Many respondents felt they wasted time on the website completing paperwork that was redundant or putting a bid on a contract they would not win. The uncertainty of completing tasks correctly or missed deadlines leads to anxiety and worry. One respondent expressed dread waiting to get a letter in mail telling them they made a mistake on the website. Respondents that represented larger, established businesses did not have these issues, as they often had other support professionals handle interactions with the website.

The study also considered accessibility issues faced by historically marginalized businesses owners and entrepreneurs with disabilities. The survey results showed that people who regularly use a language other than English at work were more likely to face challenges when looking for resources in their preferred language as well as found that immigrants, refugees, and asylees were less likely to say they are confident that they know the State requirements that are relevant to the business. Additionally, one participant noted that it was difficult to print materials sent directly via the body of an email rather than as an attached PDF. When asked if the resources from the State of Oregon are formatted in a way that is easy to access (including visually or through the use of assistive software), about a third of respondents somewhat agreed (32.0%), shown in Figure 20. Additionally, a more streamlined web experience and a regular, systematic review of ADA compliances and State of Oregon accessibility guides across business related websites would help individuals with disabilities better access these resources (Commission for the Blind).

**Many respondents somewhat agreed that resources were formatted in a way that is easy to access:**



**Figure 20: Agreement with the Statement, "Resources from the State of Oregon are formatted in a way that is easy for me to access."**

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## PERCEPTION OF STATE PRIORITIES

All the challenges of using Oregon.gov, especially faced by new and small businesses, has culminated in respondents expressing frustration and a belief that the State is not making their businesses a priority. Respondents felt that more time and attention was associated with catering to big business and that the website reflected this priority. While experiences with Oregon.gov are not wholly responsible for this perception, it follows that the functions and state of the website could be seen as an extension of the State's priorities.

The team's findings indicate that more established businesses had an easier time getting what they needed from the website, where newer businesses struggled. Respondents felt the website was not designed with the user experience in mind, instead believing its design and organization were reflective of internal state structures and siloes.

Many respondents found that they could better answer questions by seeking personal interactions and connections, whether through knowledgeable state employees or other business supporting organizations. Personal connections reflect a desire for small business owners to feel valued. A website, even a good one, may be a poor substitute for knowledgeable and supportive human interactions. Overall, while respondents felt the website was a repository of useful information, more attention could be paid to alternative avenues of supporting Oregon small business owners.

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## POTENTIAL NEXT STEPS: STUDY PHASE IV

After considering what Phase III of the study suggested and providing recommendations, our research team considered what the next step in this investigation could entail. We reviewed the findings of this phase of the study along with the findings from Phases I (Benchmark Survey) and II (The experiences among communities of color with the State of Oregon's online services: A qualitative analysis). There were a number of ideas that stood out as feasible for next steps:

1. **Consolidation of existing knowledge.** After completing three phases of research (the benchmark survey, the qualitative analysis with communities of color, and the mixed-methods research with Oregon businesses) – we have learned a lot. One potential next step would be to aggregate this information and share it more broadly. This might include a media campaign, white papers, and/or academic papers to share at conferences and across jurisdictions. Internally, this might help align these findings with the strategic goal of increased outreach. In our surveys and conversations with community members, one of the requests that has been made is to better understand the resources available. By providing the findings of these studies to a broader audience, the public could build a better understanding of the State's online resources. Beyond this public impact, there could also be an internal benefit of making employees more aware of the resources available to them in providing accessible information to the public (e.g., advisory guidelines to comply with ADA requirements).
2. **A revisit of the benchmark survey data in 2026.** The benchmark survey provided us with broad understanding of a representative sample of 1200 Oregonians. This survey is important to repeat so

that change over time can be tracked as well as to identify new challenges as they emerge. Due to the average pace of change for the topics covered in the survey (internet access, user experience, communication preferences, etc.), it does not warrant updating annually as very little change is detected at that interval. As a result, this survey is proposed to be repeated every four years to allow for updated information at regular intervals, but at a frequency of data collection that accounts for the pace of change.

**3. Continued understanding of the barriers to access for people living in rural areas.** The benchmark survey conducted in 2022 as well as research conducted on broadband access (State of Oregon Digital Equity Plan, 2024) suggests that there are challenges with internet access in rural communities. We additionally found in the course of this research, that the business organizations in rural areas were more likely to have more limited resources and cover a very large geographic area. So, not only is access potentially more limited, but so are the support services for businesses operating in the area. Access issues reported included not having access to internet, having to travel long distances to seek in-person help, and slow internet speeds.

## REFERENCES

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- Almeida, F., Santos, J. D., & Monteiro, J. A. (2020). The challenges and opportunities in the digitalization of companies in a post-COVID-19 World. *IEEE Engineering Management Review*, 48(3), 97-103.
- Business Oregon. (2024). State of Oregon Digital Equity Plan. Business Oregon. <https://www.oregon.gov/biz/Publications/Broadband/ORDigitalEquityPlan.pdf>
- Commission for the Blind. (2024). Resource Guide for People with Vision Loss. <https://www.oregon.gov/blind/resources/Documents/OCB-Resource-Guide.pdf>
- Department of Administrative Services. (2024). Oregon Economic and Revenue Forecast. <https://www.oregon.gov/das/oea/Documents/OEA-Forecast-1224.pdf>
- Fairlie, R., Robb, A., & Robinson, D. T. (2022). Black and white: Access to capital among minority-owned start-ups. *Management Science*, 68(4), 2377-2400.
- Flick, U. (2018) Triangulation. In N. K. Denzin & Y. S. Lincoln (Eds.), *The SAGE handbook of qualitative research* (5th ed., pp. 600–630). Sage.
- Freepik. Icons by Creative Stall Premium. <https://www.freepik.com>
- Haltiwanger, J. C. (2022). Entrepreneurship during the COVID-19 pandemic: Evidence from the business formation statistics. *Entrepreneurship and Innovation Policy and the Economy*, 1(1), 9-42.
- IBISWorld. (2024). Oregon - State Economic Profile. IBISWorld. <https://www.ibisworld.com/united-states/economic-profiles/oregon/>, November 18, 2024.
- Marr, B. (2024). Artificial Intelligence 101: Its Evolution, Implications and Possibilities. Forbes. <https://www.oregon.gov/biz/Publications/Broadband/ORDigitalEquityPlan.pdf>
- Montgomery, S., Jacobson, Z., Wakar, B., & Cody, S. (2021). Millennial veteran entrepreneurship: Research on the next generation of veteran entrepreneurs. *Insight policy research*.
- Mota, I., Marques, C., & Sacramento, O. (2020). Handicaps and new opportunity businesses: what do we (not) know about disabled entrepreneurs?. *Journal of Enterprising Communities: People and Places in the Global Economy*, 14(3), 321-347.
- National Governors Association (NGA). (Jun. 30, 2022). One-Stop Portals Help Businesses Navigate State Regulations. Retrieved from <https://www.nga.org/publications/one-stop-portals-help-businesses-navigate-state-regulations/>
- Oregon Department of Human Services. (2024). Oregon Disabilities Commission. <https://www.oregon.gov/odhs/agency/Pages/odc.aspx>

Oregon Secretary of State. (2024). Oregon Business Development Department.  
<https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=161>

Sithas, M. T. M., & Surangi, H. A. K. N. S. (2021). Systematic literature review on ethnic minority entrepreneurship. *Journal of Ethnic and Cultural Studies*, 8(3), 183-202.

U.S. Census Bureau, Business Applications: Total for All NAICS in the United States [BABATOTALNSAUS], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/BABATOTALNSAUS>, November 10, 2024.

## APPENDICES

### APPENDIX 1: SURVEY INSTRUMENT

You are being asked for feedback about your experience using the State of Oregon's online resources for your business(es) or a business you work with. This study is being conducted by Portland State University's Center for Public Service in order to better understand the needs of Oregon businesses.

#### About this survey:

Participation in this study will take approximately 15 minutes.

Your participation in this study is completely voluntary. You have the right to choose not to participate or to withdraw your participation at any point in this study. You can also skip any question you don't want to answer.

Results will only be reported in aggregate (group form) and no individual responses will be published. Personally identifiable information, such as email address or name, will NOT be asked about in the survey.

If you have any questions, concerns or complaints at any time about this survey, please contact Jillian Girard at [jgirard@pdx.edu](mailto:jgirard@pdx.edu).

Question	Question:	Listed Responses:
	The following questions will ask you your experience using the State of Oregon's online business resources. We are	

	interested in hearing from both for-profit and nonprofit businesses.	
Q1 (screen)	Are you currently an owner of a business operating in Oregon?	1 - Yes 2 - No 99 - Don't know or prefer not to respond
Q2 (screen)	Are you currently in the process of starting a business in Oregon?	1 - Yes 2 - No 99 - Don't know or prefer not to respond
Q3 (screen)	Does your current job include maintaining a business with the State of Oregon (e.g., filing taxes for a business, maintaining business certifications, or business registration)?	1 - Yes 2 - No 99 - Don't know or prefer not to respond
	<p>[If no to Q1, Q2, and Q3 (terminate survey)]:</p> <p>Thank you for your participation in this survey. We are interested in hearing more from the Oregon business community. If you know of somebody from your organization or in another organization who might be interested in providing feedback about the experience using the State of Oregon's online business resources, please share this link with them:</p> <p>[LINK]</p>	
	<b>For the following questions, if you own multiple businesses or perform business activities for multiple</b>	

	<b>businesses, please choose one business to think about during your responses.</b>	
Q4	In which county does your business operate? (Select all that apply)	[List of Oregon Counties]
Q5	What is the business structure?	1 - Sole proprietorship 2 - General Partnership 3 - Limited Liability Corporation (LLC) 4 - Business Corporation 5 - Nonprofit Corporation 99 - Don't know or prefer not to respond
Q6	On average, how many employees does this business have aside from the owner?	1 - No employees 2 - 1 - 5 employees 3 - 6 - 9 employees 4 - 10 - 19 employees 5 - 20 - 49 employees 6 - 50 - 99 employees 7 - 100 - 249 employees 8 - 250 or more 99 - Don't know or prefer not to respond
Q7	For approximately how long has this business been operating?	1 - Less than 12 months 2 - 1 to 2 years 3 - 3 to 5 years 4 - 6 to 10 years

		5 - More than 10 years  99 - Don't know or prefer not to respond
Q8	In which sector does the business primarily operate?	1 - Agriculture 2 - Communication 3 - Construction 4 - Education 5 - Entertainment 6 - Financial Services 7 - Fishing & forestry 8 - Government or politics 9 - Healthcare 10 - Hospitality 11 - Information technology 12 - Manufacturing - food & beverage 13 - Manufacturing (other than food and beverage) 14 - Mining & quarrying 15 - Outdoor gear and apparel 16 - Business services (e.g., accounting, legal, customer support, etc.) 17 - Real estate 18 - Research & development 19 - Retail 20 - Transportation

		21 - Utilities (electricity, water, gas) 22 - Other 99 - Don't know or prefer not to respond
	<b>The next set of questions will ask about your experiences using the State of Oregon's online business resources.</b>	
Q9	Which, if any, of the following activities have you tried to complete <b>online with the State of Oregon</b> in the past 3 years? (select all that apply)	1 - Register a business in Oregon 2 - Pay Oregon business taxes 3 - Obtain State of Oregon business license, permit, or certification 4 - Research business requirements on Oregon.gov (such as ADA compliance or employment rules) 5 - Ongoing State of Oregon business registration requirements (such as renewing a business registration) 6 - Making payments other than taxes and business registrations on Oregon.gov (e.g. registering for a workshop, ordering materials, paying fines) 7 - Other 99 - Don't know or prefer not to respond
Q10	[Only those services selected will be shown to respondent]	1 - Very difficult 2 - Somewhat difficult 3 - Neutral or I don't remember

	How would you describe your online experience registering a business with the State of Oregon?	4 - Somewhat easy 5 - Very easy 99 - I was unable to complete this task online
Q11	[Only those services selected will be shown to respondent]  How would you describe your experience paying Oregon business taxes online?	1 - Very difficult 2 - Somewhat difficult 3 - Neutral or I don't remember 4 - Somewhat easy 5 - Very easy 99 - I was unable to complete this task online
Q12	[Only those services selected will be shown to respondent]  How would you describe your experience obtaining a State of Oregon business license, permit, or certification?	1 - Very difficult 2 - Somewhat difficult 3 - Neutral or I don't remember 4 - Somewhat easy 5 - Very easy 99 - I was unable to complete this task online
Q13	[Only those services selected will be shown to respondent]  How would you describe your experience researching business requirements on Oregon.gov?	1 - Very difficult 2 - Somewhat difficult 3 - Neutral or I don't remember 4 - Somewhat easy 5 - Very easy 99 - I was unable to complete this task online

Q14	<p>[Only those services selected will be shown to respondent]</p> <p>How would you describe your experience performing ongoing business registration requirements with the State of Oregon, such as renewing a business registration?</p>	<p>1 - Very difficult</p> <p>2 - Somewhat difficult</p> <p>3 - Neutral or I don't remember</p> <p>4 - Somewhat easy</p> <p>5 - Very easy</p> <p>99 - I was unable to complete this task online</p>
Q15	<p>[Only those services selected will be shown to respondent]</p> <p>How would you describe your experience making payments other than taxes and business registrations on Oregon.gov (e.g. registering for a workshop, ordering materials, paying fines)?</p>	<p>1 - Very difficult</p> <p>2 - Somewhat difficult</p> <p>3 - Neutral or I don't remember</p> <p>4 - Somewhat easy</p> <p>5 - Very easy</p> <p>99 - I was unable to complete this task online</p>
Q16	<p>Where did you go for assistance if you needed additional help? (Select all that apply)</p>	<p>1 - I did not ask for additional help</p> <p>2 - I reached out to family or friends</p> <p>3 - I went to a professional organization (e.g., lawyer or chamber of commerce)</p> <p>4 - I called the State of Oregon</p> <p>5 - I used the online chat feature through the State of Oregon</p> <p>6 - I emailed a State of Oregon office or contact</p> <p>7 - I went to an office in-person</p>

		<p>8 - I did need additional assistance, but was unable to find it</p> <p>9 - Other</p> <p>98 - I did not need additional assistance</p> <p>99 - Don't know or prefer not to respond</p>
	<p><b>The next set of questions asks about accessing information on the State of Oregon website. Please rate your level of agreement with the following statements:</b></p>	
Q17	<p>I am able to find the resources I need for the business quickly.</p>	<p>1 - Strongly disagree</p> <p>2 - Somewhat disagree</p> <p>3 - Neutral or I don't remember</p> <p>4 - Somewhat agree</p> <p>5 - Strongly agree</p> <p>99 - Don't know or prefer not to respond</p>
Q18	<p>I am able to find the resources I need in my preferred language.</p>	<p>1 - Strongly disagree</p> <p>2 - Somewhat disagree</p> <p>3 - Neutral or I don't remember</p> <p>4 - Somewhat agree</p> <p>5 - Strongly agree</p> <p>99 - Don't know or prefer not to respond</p>

Q19	The online resources from the State of Oregon use words that are easy for me to understand.	1 - Strongly disagree 2 - Somewhat disagree 3 - Neutral or I don't remember 4 - Somewhat agree 5 - Strongly agree 99 - Don't know or prefer not to respond
Q20	I am confident that I know the State requirements that are relevant to the business.	1 - Strongly disagree 2 - Somewhat disagree 3 - Neutral or I don't remember 4 - Somewhat agree 5 - Strongly agree 99 - Don't know or prefer not to respond
Q21	The online resources from the State of Oregon are formatted in a way that is easy for me to access (including visually or through the use of assistive software).	1 - Strongly disagree 2 - Somewhat disagree 3 - Neutral or I don't remember 4 - Somewhat agree 5 - Strongly agree 99 - Don't know or prefer not to respond
Q22	The online resources from the State of Oregon are easy for me to navigate.	1 - Strongly disagree 2 - Somewhat disagree 3 - Neutral or I don't remember 4 - Somewhat agree

		5 - Strongly agree  99 - Don't know or prefer not to respond
Q23	I have the technology available that I need to access the State of Oregon's online resources.	1 - Strongly disagree 2 - Somewhat disagree 3 - Neutral or I don't remember 4 - Somewhat agree 5 - Strongly agree  99 - Don't know or prefer not to respond
Q24	Where do you normally use the internet to access the State of Oregon's online resources?	1 - At home 2 - At the business location 3 - At the library or a public location with free wifi 4 - At various locations through my mobile network (cell phone) 5 - Other  99 - Don't know or prefer not to respond
Q25	Thinking about internet access, what would help increase your access to the State of Oregon's online resources? (select all that apply)	1 - increased internet speeds 2 - the ability to use a different internet browser 3 - more affordable business internet 4 - other  99 - Don't know or prefer not to respond

Q26	Thinking about software and hardware, what would help increase your access to the online state resources? (select all that apply)	1 - language translation software 2 - assistive technologies (such as screen readers) 3 - an additional device (such as a laptop or tablet) for the business 4 - other 99 - Don't know or prefer not to respond
Q27	What type of device do you most frequently use to complete tasks online with the State of Oregon?	1 - Cell phone 2 - Tablet 3 - Laptop or desktop computer 4 - other 99 - Don't know or prefer not to respond
Q28	When looking for information about Oregon business requirements, where do you primarily begin your search?	1 - Oregon.gov 2 - Search engine (e.g., Google, etc.) 3 - A friend or family member 4 - A professional business organization (e.g., chamber of commerce) 5 - A professional service provider (e.g., attorney or accountant) 6 - Other 99 - Don't know or prefer not to respond
	Thinking about what changes the State of Oregon could make to their online	

	platforms, how helpful would the following changes be for you?	
Q29	More guidance about upcoming deadlines or requirements for the business.	1 - Not very helpful 2 - Slightly helpful 3 - Somewhat helpful 4 - Very helpful 5 - Extremely helpful 99 - Don't know or prefer not to respond
Q30	A universal password to use across all State of Oregon sites.	1 - Not very helpful 2 - Slightly helpful 3 - Somewhat helpful 4 - Very helpful 5 - Extremely helpful 99 - Don't know or prefer not to respond
Q31	A more consistent experience across State of Oregon agencies.	1 - Not very helpful 2 - Slightly helpful 3 - Somewhat helpful 4 - Very helpful 5 - Extremely helpful 99 - Don't know or prefer not to respond
Q32	A guided experience to assist me filling out forms.	1 - Not very helpful 2 - Slightly helpful

		3 - Somewhat helpful 4 - Very helpful 5 - Extremely helpful 99 - Don't know or prefer not to respond
Q33	Artificial Intelligence (AI) search functionality.	1 - Not very helpful 2 - Slightly helpful 3 - Somewhat helpful 4 - Very helpful 5 - Extremely helpful 99 - Don't know or prefer not to respond
Q34	Artificial Intelligence (AI) chat functionality.	1 - Not very helpful 2 - Slightly helpful 3 - Somewhat helpful 4 - Very helpful 5 - Extremely helpful 99 - Don't know or prefer not to respond
Q35	Information provided in a more visual format (such as video or images).	1 - Not very helpful 2 - Slightly helpful 3 - Somewhat helpful 4 - Very helpful 5 - Extremely helpful 99 - Don't know or prefer not to respond

Q36	An online portal that allows me to see all my State of Oregon business information in one place.	1 - Not very helpful 2 - Slightly helpful 3 - Somewhat helpful 4 - Very helpful 5 - Extremely helpful 99 - Don't know or prefer not to respond
Q37	Tools to help my business succeed (such as grant application templates)	1 - Not very helpful 2 - Slightly helpful 3 - Somewhat helpful 4 - Very helpful 5 - Extremely helpful 99 - Don't know or prefer not to respond
	<b>The following questions are optional, but help us better understand the needs of the business community.</b>	
Q38	Do you identify your sex as female, male, or non-binary?	1 - Female 2 - Male 3 - Non-Binary 99 - Don't know or prefer not to respond
Q39	What is your age in years?	1 - 18 - 24 years 2 - 25 - 34 years 3 - 35 - 54 years 4 - 55 - 64 years 5 - 65+

		99 - Don't know or prefer not to respond
Q40	Do you identify as Hispanic, Spanish or Latino?	1 - Yes 2 - No 99 - Don't know or prefer not to respond
Q41	Which group most closely describes your race?	1 - American Indian or Alaska Native 2 - Asian 3 - Black or African American 4 - Hispanic or Latino 5 - Multiracial 6 - Native Hawaiian or Pacific Islander 7 - White 8 - Other  99 - Don't know or prefer not to respond
Q42	What is the highest level of education you have completed?	1 - Less than High School 2 - High School Diploma 3 - Some College 4 - College Degree 5 - Graduate or Professional School 99 - Don't know or prefer not to respond
Q43	Do you identify as having a disability?	1 - Yes 2 - No 99 - Don't know or prefer not to respond
Q44	Is a language other than English regularly spoken or used at work?	1 - Yes 2 - No 99 - Don't know or prefer not to respond

Q45	Are you an immigrant, refugee, or asylee?	1 - Yes 2 - No 99 - Don't know or prefer not to respond
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## APPENDIX 2: FOCUS GROUP PROTOCOL

Hello,

Thank you for being here today. We greatly appreciate the time and being able to learn from you and your experiences. My name is [NAME] and I am from a team of researchers at Portland State University's Center for Public Service. We have been asked to provide the State of Oregon information about how to make their website better for business users in Oregon. We will ask you a series of questions about your experiences interacting with the state of Oregon online - that includes all state websites such as Secretary of State, Business Oregon, or OregonBuys for example.

We will be together for about an hour today and I will ask a series of questions. There may be times when I jump in and move us to the next question to ensure that we have time to cover all the topics, but for the most part I will be listening and learning rather than talking.

I'd really like to hear from all of you. There may be times when your experiences differ from others in the room and that is great. If you experienced something differently, please let me know so that we can better understand the varieties of experience.

We are recording this session so that we can focus on the conversation rather than taking too many notes (although I will be taking some). Only the Portland State team will have access to this recording and the recordings or any transcripts will not be shared directly with the State. We will compile the results and only share the grouped themes with the State of Oregon. While we will not be sharing any identifying information with the State of Oregon, we may share some stories among ourselves in this space. Please do not repeat what you hear in this space in order to protect confidentiality.

Feel free to keep your video on or off. You can answer verbally or in chat. You can also take breaks as you need or leave the call at any time. Are there any questions?

If you do not agree to the recording of this session, we thank you for your time and you can leave the call before we start the recording... I am starting the recording now...

[Start recording of the focus group]

### **About the business**

Q1: First, do you want to introduce yourself and tell us a little bit about how you're involved with business in Oregon?

Prompts:

- Such as how long the business has been around or what types of businesses you serve
- How many employees the business has or where it is located

### **Common business tasks and related feedback**

Q2: What are some of the activities you have had to complete online with the State of Oregon or that you frequently work with businesses to complete? I'll share my screen so we can look around the website if you want. Is there anything on the screen that you have done online for the business?

[Share screen: <https://sos.oregon.gov/business/Pages/default.aspx>]

Prompts:

- Register a business
- Pay business taxes
- Obtain a business related license, permit, or certification
- Research business requirements (such as ADA compliance or zoning rules)
- Learning about how to hire employees
- Ongoing business registration requirements (such as renewing business registrations)

Q3: Let's start at the beginning, and some of you may not remember this very well, but when the time came to register your business or to look up information about starting a business - were there any challenges to using the website? Anything that was confusing or could be made more clear?

Prompts:

- Did you reach out to anybody for help completing the task?
- What type of device were you using at the time?

Q4: Now thinking about ongoing work you do for business on Oregon.gov - such as maintaining certifications or paying business taxes - what challenges do you face when using the website? Anything that is confusing or could be made more clear?

Prompts:

- Did you reach out to anybody for help completing the task?
- What type of device were you using at the time?

Q5: What could be done to make these tasks easier for you or other businesses in the future?

Prompts:

- Accessibility around language, plain language, visibility
- Too many graphics or colors?
- Clarity of information

[might be a good place to stop sharing screen depending on flow of the focus group]

Q6: How do you generally look for information related to business requirements with the State of Oregon?

Prompts:

- Are you ever concerned about missing information?
- What would make this process easier for you?
- Are you able to find what your are looking for?
- Do you generally find the information confusing or is it generally pretty clear?
- Would more communication and outreach be more beneficial?

Q7: Can you describe the experience of navigating to the page on Oregon.gov that you need?

Prompts:

- How easy was it to get to the right part of the site?
- Which search engine do you use?
- Do your searches get you to the page you need?
- Did you notice any non-State websites that tried to sell you services?

Q8: Was there anything that seemed to work really well for you, that you would like to continue to see offered?

### **Future possibilities**

Q9: AI is a big topic in the news at the moment. How would you feel about AI technology on the State website, such as an AI search or chat function?

Prompts:

- Do you have any concerns about the use of AI?

Q10: In the future what tools would you like to see from the State of Oregon website? What other ideas do you have for improvements?

Prompts:

- Dream big - what would you change?

Q11: This is our opportunity to provide the state with direct information that will inform the changes they make to the website in the future. What is it that you want to make sure we tell them? Is there anything we missed earlier?

Thank you so much for your time today, that is all the questions I have for you.

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APPENDIX 3: QUALITATIVE ANALYSIS CODEBOOK

Descriptor	Code	Explanation	Examples
Technical performance	TechPer	Thoughts and commons on the technical performance of the website	Loading speed, responsiveness, function of buttons and links
Design and user interface	DesUI	The appearance of the website, design elements, readability	Color choices, font, text size, directing user to right place
Organization within a sub-unit	OrgSubU	Thoughts on the logical connections between the web pages within a subunit (for example SoS)	I can find tax information on the taxes page of the Secretary of State website
Organization of the entire Oregon.gov	OrgEntOR	Thoughts on the logical organization of the entire Oregon.gov website	I understand that the Secretary of State programs are a part of Oregon.gov
Navigation within/between websites and pages	NavBetWP	Thoughts on ability to find correct webpage once within Oregon.gov	I have trouble finding the business licensing page once in Oregon.gov
Navigation to website	Nav2Website	Thoughts on ability to find correct webpage when outside of Oregon.gov	I have trouble getting a search engine to take you to the right page within Oregon.gov

Published information	PubInfo	Thoughts on the quality of published information	The business line information was easy to understand
Future Ability/Improvements	Future	Features/improvements participants would like to see	Better search function, updated information
Artificial "Intelligence"	AI	Thoughts using AI to improve Oregon.gov	I don't want to talk to a robot
Ease of use OR.gov services	EaseOR	Usability of website functions	It was easy to pay my taxes online
State Programs/Functions	StaProFun	Thoughts on Oregon business program outside of website context	I don't think the State bidding process is fair or equitable
Working well	WorkWell	Participants thoughts when asked what is working, may coincide with other codes	Quality of posted information, graphical design of site
Desire to Improve	Improve	Participants thoughts when asked what should be improved, may coincide with other codes	Site consuming to navigate, hard to find the correct page with needed information
Other	Other	Recurring idea or theme not captured by other code	

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#### APPENDIX 4: ADDITIONAL CHALLENGES DISCUSSED DURING INTERVIEWS AND/OR FOCUS GROUPS

A significant amount of feedback from the focus group participants did not pertain to the website directly, but to how the website fit into the larger relationship small business owners have to the State. Although this appendix may cover topics outside of the initial inquiry for this project, the research team thought it was important of the board to understand what role participants see the website in their business.

From the comments of the participants, the research team surmised that participations viewed the Oregon.gov website as a proxy to interact with government services. Therefore, frustrations and issues with government services was often attributed or mentioned in conjunction with the website, even though in these instances the website's function itself was not the issue.

This section details state programs and functions administered through the website that frustrated participants.

The COBID certification was a common sore spot for participants. Many felt the certification process was cumbersome and confusing. Some new business did not understand how the certification related to their registration process and felt the website could have better facilitated that process. "I don't understand why, if you register your business. Why they can't ask you the questions to get you, Covid. At the same time. And register you for the organized portal. Like, why do you have to do 3 separate registrations." Once the process was complete, many participants were left feeling uncertain about what to do with the certification. Overall, few participants expressed positive feelings about the COBID program, "I'm still looking to see where it even brings any value".

OregonBuys process was also a source of contention for some participants. Along with technical frustrations of searching the proposals, participants questioned the legitimacy of the process. "It's almost a trap, I think, to get someone. Getting into this thinking they're gonna do a bid..." Participants speculated that decisions on bids had already been made prior to posting and that the posting process and notification did not leave small businesses a chance to compete to win a bid. Although the perceptions of inequity are not wholly based on experiences with the website, how the website presents the OregonBuys program is reinforcing negative beliefs.

These two programs are an example of a perspective expressed by multiple participants that Oregon has not done enough to prioritize supporting its small businesses. Many participants went to the website seeking guidance that it was not able to provide. The website is success as a repository of information and facilitates business functions, but it is a poor liaison and guide for new business.

Website design seems to be a symptom of perspective. It works best for participants who know exactly what they need and where to go for it. The participants that had the least issues with the website were the ones who circumvented it through personal connection or hired professionals to leverage those tasks. While the website can be improved and this report offers concrete improvements, the focus groups portrayed a desire for changes with how the State works with businesses beyond the website.