

How To Create an Accessibility Resource Index for Teaching and Learning

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Preamble

In this how-to guide, we share the process and guidelines for institutions to create a centralized accessibility index. At many institutions, accessibility and accommodations resources are decentralized, making it difficult for campus community members to locate the information they need and find the answers to their questions around policies, procedures, and effective practices. This decentralization results in barriers to effective and equitable teaching and learning. Providing the campus community with a centralized, easy-to-navigate hub or index of relevant and quality resources can help individuals find the information they need, while also enriching their knowledge.

At the University of Guelph, the Office of Teaching and Learning (OTL) is working toward creating a centralized hub of accessibility resources. The idea of an “accessibility hub” to centralize accessibility resources and information was outlined by a task force on pedagogical innovation, led by the Office of the Provost, in 2021. OTL has been leading the initiative to create an accessibility hub based on our relationships with other campus units responsible for accessibility and our mandate to support teaching and learning at our institution. In line with our mandate, OTL is developing an accessibility hub centered on teaching and learning. One may take a broader or more narrow approach to creating an accessibility hub, depending on the needs of the institution and the individuals leading and involved in the initiative.

eCampus Ontario funded the creation of this how-to guide for centralizing accessibility resources into what we call an “**Accessibility Resource Index**” (ARI, which we pronounce as *ah-ree*). ARI is an accessible web-based interface that centralizes existing accessibility and accommodations resources at an institution. The goal of ARI is to help instructors, students, and staff better understand accessibility and accommodations and find answers to their questions. ARI will enhance accessibility at our institution and respond to post-secondary updates to the Accessibility for Ontarians with Disabilities Act (AODA). We call this resource an “index” because the goal is to include all the best, most up-to-date accessibility resources that our institution has created, alongside high-quality external resources.

This how-to guide outlines how a post-secondary institution can centralize accessibility resources into a comprehensive ARI. There are 11 steps outlined in this guide, which will take you from creating a development team through the ongoing review and evaluation of ARI.

These steps are presented in the order that worked best for our context and collaborators. The steps do not have to be accomplished in the order suggested. For some institutions with established groups or processes or the beginnings of a centralized resource, the process might start at Step 3 or 4. Some steps or specific parts of the process may not be relevant to your context or goals for ARI.

Many of the steps outlined in this guide are likely to be repeated as ARI is developed and improved. We suggest scanning through the steps to determine what might work best for your context and goals. Highlight what you're most drawn to. Comment on ideas that stimulate new thoughts.

Some questions that might guide your scan include:

- What's your starting point?
- Which of these steps will be key for your process?
- Which steps have already been considered in your work, and what existing work can be drawn upon?
- What is your timeline?
- What resources/capacity do you have to engage in this process?

This guide might help you to initiate conversations among senior administrators and key stakeholders about creating a centralized index or develop new strategies to complement existing accessibility hubs at your institution.

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We welcome your thoughts, experiences, and feedback using this guide. You can e-mail us at otl@uoguelph.ca with ARI in the subject line.

Step 1: Establish a Development Team

Goal: Determine who will be involved in the development of ARI

Establishing a development team requires thoughtful planning. Depending on your context and the goals for your ARI, the team might involve individuals from multiple units or departments with a variety of roles, such as staff, students, and instructors, as well as people with disabilities.

Step 1 helps to:

- Determine who will be involved
- Establish the collaborative process
- Distribute leadership and responsibility in the development and maintenance of ARI
- Consider a memorandum of understanding for interunit collaboration

Determine who will be involved

Accessibility is typically included in several units' mandates at an institution. In developing ARI, partnerships between relevant units can strengthen the capacity to gather and update accessibility resources for a centralized index. Creating partnerships also ensures that similar processes and workflows are not duplicated across units.

Identify all units that provide accessibility services or resources, for example, in relation to:

- Accessibility and wellness services for students, instructors, and staff
- Equity, diversity, inclusivity (EDI), and human rights
- Teaching and learning
- Digital accessibility
- Learning technologies and resources, e.g., library, computer/IT services

If accessibility and accommodations information and resources are decentralized at your institution, we recommend establishing a development team of collaborators and stakeholders to navigate through the steps in this guide and develop ARI. Depending on your context, this development team might arise from members of existing accessibility committees. It may also be effective to establish a new team to develop and implement ARI, informing existing committees of its progress and launch along the way, and seeking their input where relevant.

Involve people with a variety of disabilities, as they will have the most direct insights based on lived experiences and knowledge of systemic barriers, ableism, and what is needed in accessibility resources. It is important to include ARI's key user groups, such as instructors, students, or staff. They will have valuable perspectives on the current challenges, gaps, and

strengths of accessibility information, and their aspirations and needs for a centralized index. Involving students in this process is beneficial, regardless of whether they are a key user group, as described in **Step 2: Students as Partners (SaP) Approach**. The development team could also involve administrative staff, IT professionals, and external accessibility experts. Their insights could enrich ARI's development by ensuring it meets a broader range of needs and adheres to effective accessibility practices.

When creating the development team, continue to ask: "Whose voices are we including? Whose voices are being excluded? Who could bring new perspectives?"

Establish the collaborative process

Questions the development team should consider include:

- What level of collaboration are we envisioning for developing this resource?
- What are the main motivations driving each of the members of the development team to participate in this process?
- What principles or values should guide our collaborative efforts throughout this process?
- How do we envision fostering open communication, mutual respect, and inclusivity among the group?
- What strategies can we employ to ensure that everyone's voice is heard and valued in the decision-making process?
- How can we hold ourselves accountable for achieving our goals and following through on our commitments?

Distribute leadership and responsibility in the development and maintenance of ARI

At the outset of developing ARI, it is important to have conversations within the development team and with key stakeholders about ongoing work. When multiple campus offices have a shared role in creating ARI, each unit will continue to create and provide resources and services within their mandate.

Resources within ARI will need to be reviewed, updated, added, and removed based on user feedback, changes in institutional policy, changes in provincial or national policies, and an evolving socio-cultural landscape around disabilities.

When thinking about the ongoing maintenance and improvement of ARI, ensure that discussions about distributing leadership and responsibility include:

- Who will lead and host ARI? Where might ARI reside on the institution's website? At this stage, make note of which institutional websites might link to ARI.
- What resources, supports, or structures are needed within each unit to develop and maintain ARI? What is the feasibility of developing and maintaining this resource?
- What policies can we establish around who, or which units, are responsible for creating new resources and reviewing and updating existing resources?
- What approval processes are needed at the institution to create a centralized resource, and what are the associated costs? Make sure to involve key stakeholders from the institution who might be involved in approving ARI for funding and release.

Consider a memorandum of understanding for interunit collaboration

When several units and individuals are involved in a shared project, creating a memorandum of understanding or similar document between involved units, departments, and people can establish the roles and responsibilities of each individual or unit. A memorandum of understanding should include details about:

- Distributed leadership
- Shared responsibilities
- Ongoing documentation and where to share it
- Clear communication
- Sustained commitment

Step 2: Students as Partners (SaP) Approach

Goal: Engage students in meaningful collaboration and contributions to create ARI

The Students as Partners (SaP) pedagogical approach fosters a collaborative environment where all participants can engage equally in development, implementation, analyses, or decision-making processes. Even if students are not key users of ARI, students' perspectives on the teaching and learning environment at your institution and the specific needs and challenges they face are key drivers to how ARI might be organized, and what topics are highlighted and included. For instance, if anecdotal evidence or data suggests student dissatisfaction with how assessment accommodations are handled, that area could become a focal point within ARI.

Step 2 helps to:

- Contemplate practical considerations in integrating SaPs in creating ARI
- Involve and learn from students as key collaborators

Practical considerations

Contemplate the following practical considerations when integrating SaPs into the creation of ARI:

- What incentives are available to compensate SaPs for their work? Students should be compensated for their time and efforts, for example through formal employment.
- How many SaPs would be involved in the development team or as collaborators? Where in the development process would SaPs offer the greatest value?
 - From our experience, SaPs are essential when visioning ARI, conducting the environmental scan, and identifying and filling gaps. SaPs could also be helpful in creating ARI, user interface and experience testing, outreach, and evaluating ARI's impact.
- Who will train and mentor the SaPs for them to effectively contribute to the project? What will be involved in mentorship, guidance, and creating belonging?
- How will the SaPs be involved with the development team and other key stakeholders?
- How can feedback mechanisms during and after the project be integrated as a reflective learning process for students that enhances the overall project?

Involve and learn from students as key collaborators

For the SaP model to work effectively, the approach must be founded on three guiding principles of respect, reciprocity, and shared responsibility. SaP values research-informed practices to achieve the following:

- **Inclusivity:** Embrace students' different talents, perspectives, and experiences to minimize barriers
- **Empowerment:** Distribute power appropriately within the team
- **Trust:** Take time to understand each other through transparent, honest dialogue
- **Challenge:** Constructively critique and challenge practices and approaches along the way, actively encouraging risk-taking to enhance the collaboration
- **Community:** Work toward achieving a sense of belonging where everyone feels valued for their contributions

Involving students from different academic stages, disciplinary backgrounds, and identities will bring valuable perspectives and institutional experiences to ensure ARI meets the needs of the campus community. Embodying the concept of “nothing about us without us,” students with a variety of disabilities should be involved. Their lived experiences will help the development team understand the barriers encountered by students at your institution and their experience of the accommodations process. You may also consider involving students that have interest or a background in:

- Pedagogy, learning, or inclusive teaching
- Educational technology, website creation, or educational resource creation
- Educational research or the scholarship of teaching and learning
- Universal Design for Learning or Universal Instructional Design

Collaborative work with SaPs has a variety of potential benefits for them and the development team:

- Fostering deep, impactful relationships between students and staff
- Encouraging a sense of community and collaboration
- Encouraging students to engage in inquiry, develop research questions, think critically, and, produce tangible outcomes
- Preparing students for real-world challenges through the practical application of knowledge
- Enhancing active learning, promoting student ownership, and fostering a greater sense of responsibility

- Enriching the learning experience for all participants by promoting a culture of knowledge exchange and mutual learning from diverse perspectives and experiences
- The potential for this work to make positive change, particularly as many students bring forth values to make society more equitable and inclusive, with efforts contributing to reducing stigmas and ableism

Speaking from experience

We identified students by directly contacting instructors involved in educational research and research on accessibility, inclusivity, or educational technology. We shared the project and asked instructors if they knew of any students who may be interested. Before officially joining the team, we had discussions with each interested student to outline the project goals and their potential role, aiming to build trust, transparency, and clarity from the start.

Once part of the team, the student partners actively contributed to all aspects of ARI, from visioning and development to research and implementation. More specifically, the students led various efforts, including environmental scans, comparative analyses, content creation, visual design, and the building of ARI. With two to four dedicated student partners at a time, we formed a dynamic team, each bringing their unique skills and experiences. We hired students as undergraduate and graduate research assistants to compensate their work.

Step 3: Visioning and Needs Assessment

Goal: Determine your institution's vision and needs for accessibility and accommodations resources

The process of visioning and conducting a needs assessment creates a foundation for strategic planning in that it identifies the current state of accessibility at your institution and the needs and goals of the community related to accessibility and accommodations resources. Visioning and the needs assessment should include students, staff, and instructors with disabilities to ensure ARI authentically addresses accessibility needs.

Step 3 helps to:

- Develop a visioning and needs assessment approach
- Gather information for the needs assessment

Develop a visioning and needs assessment approach

Consider the following conversations within the development team, as well as among other stakeholders and groups, to determine the potential scope, content, and design of ARI. Work through mutual understanding during this step to ensure successful collaboration in the creation of ARI.

At this stage, the needs assessment should take a big-picture perspective of the goals, aspirations, and opportunities for accessibility resources at your institution, as well as the existing challenges. The specific needs will become further clarified as you move through the steps that follow, particularly **Step 4: Environmental Scan**, where the accessibility resources available at your institution will become clear, and **Steps 5 and 6**, where you review resources and identify and fill gaps in information.

Consider the following prompts as you vision the possibilities and discuss goals:

- Would a centralized Accessibility Resource Index (ARI) for accessibility and accommodations resources be valuable for our unit/institution?
 - In what ways would it be valuable or useful?
 - Who would be the primary users? Centre ARI on its users and on people with disabilities, who will benefit most from it.
- What key questions do we have about accessibility resource needs for our unit and/or institution?
- What are the key challenges or gaps that a new centralized resource could address?
- What are our goals and aspirations for this resource?

- How will we know if we have been successful in achieving our goals?
- How do our goals align with the strategic priorities and mission of our institution? In what ways might this resource contribute to advancing our institution's goals? What discussions around accessibility and accommodations are happening at our institution?
- What other elements of our institutional culture or standards should be considered in the development of ARI? What is the landscape we are working within? How do the values expressed in institutional accessibility policies and/or commitments inform ARI? How are these values aligned with achieving equity, diversity, and inclusion?

Consider the following prompts to begin outlining the project:

- What core values and principles should guide the development of ARI?
- What do we hope to achieve in the short- and long-term? What specific outcomes or deliverables do we envision as a result of this process?
 - What is our timeline to complete ARI?
 - How will we determine the scope of the project and keep the project on track? Consider using project planning and project management tools, as well as assigning a project manager or team lead.
- What human and technological resources would be needed to create ARI?
- How will we engage in institutional communication about ARI in the beginning stages to ensure buy-in and support?
- What resources, barriers, or constraints do we need to consider when developing ARI? What are the anticipated challenges that we may encounter, and how might we address them?
 - Beyond the cost of labour, although ARI can be completed at no additional cost using existing institutional tools (e.g., website platforms, Learning Management Systems, Microsoft or Google products), creating a digital resource index could also involve cost-incurring software. In this step, it is important to discuss potential budgetary opportunities and boundaries that will inform your process.

Gather the information

Gather information from the development team. Other individuals that may be involved in this process include: members of relevant key offices/units, campus leaders (e.g., Deans, Vice-Presidents, Provosts), and the intended audience of existing campus resources (e.g., instructors, staff, students).

Gather information through multiple means:

- Review key literature and resources on accessibility in higher education, including engagement with disability scholarship to help identify gaps that may not be apparent within the development team or key stakeholders.
- Conduct brainstorming and visioning sessions with key campus accessibility offices and groups.
- Review existing data from the intended audiences, including their current habits and knowledge concerning accessibility resources.
- Surveys, interviews, and/or focus groups with intended audiences and people with disabilities. Focus groups can be an especially effective way to gather in-depth data without the time commitment of several individual interviews.

Speaking from experience

Our collaborative process started by initially engaging in discussions with our institution's office of student accessibility services. We met with a director and senior student accessibility advisor to understand the issues and needs around accessibility resources. Our main question was: "How can we help instructors better understand accessibility and accommodations?"

Other campus offices that have been involved in visioning and goal setting for the development of our institution's ARI include the library, Office of Diversity and Human Rights, other campus unit directors and staff members, higher administration, deans, and instructors. We have also partnered with students, as explained in **Step 2: Students as Partners (SaP) Approach**.

We've consulted with accessibility committees at our institution on visioning ARI. The accessibility steering committee, led by the Office of Diversity and Human Rights, includes managers and staff from units that offer a variety of accessibility and accommodations provisions. The accessibility steering committee develops multi-year plans to ensure compliance with the Accessibility for Ontarians with Disabilities Act (AODA) and to enhance accessibility and accommodations at our institution.

Numerous folks involved in our development process identify as people with disabilities.

Step 4: Environmental Scan

Goal: Identify all existing accessibility and accommodations resources hosted online at your institution along with useful external resources

The environmental scan is a major component of understanding existing internal resources, starting to recognize where they could be strengthened, identifying helpful external resources, and organizing the resources to begin a critical review.

Steps 4 through 7 in this process will involve a lot of fluidity and interconnectedness, so we suggest scanning through these steps first to get a sense of the recommended tasks and potential processes that will work best for you. For example, when identifying internal resources, you may have some ideas about the quality of that resource, which should be recorded as part of **Step 5: Review Resources and Identify Gaps**.

Step 4 helps to:

- Conduct an environmental scan of internal resources
- Identify internal resources that need updating or improvements
- Conduct an environmental scan of external resources

Conduct an environmental scan of internal resources

Start with identifying accessibility information that has already been centralized at your institution, if anything (e.g., an accessibility resource hub). As you consider whether this centralized resource is effective at meeting its goals and the potential broader goals of ARI consider:

- How up-to-date and comprehensive is this information?
- Do people know about this resource? Is this resource being accessed?
- How might ARI complement or enhance the centralized resource?
- What required or optional training around accessibility and accommodations do instructors, staff, and students have access to? What is the content? How accessible is this training (e.g., does one need to register for the course or is it publicly available)? What percentage of the campus community has completed this training? Access or completion data may provide further clues about the campus' needs for accessibility resources.

If accessibility resources appear to be decentralized, find out if someone at your institution has already conducted a scan of internal accessibility resources. If a scan does not exist, the steps below will help create an environmental scan or update an existing one.

When searching for internal resources, potential resources you might find include:

- The Accessibility for Ontarians with Disabilities Act (AODA) information (or equivalent legislation where you are based).
- Information from units working on accessibility, equity, diversity, inclusion, and human rights, identified in **Step 3: Visioning and Needs Assessment**.
- The Ontario Human Rights Commission (OHRC) information (or equivalent legislation where you are based).
- Institutional policies pertaining to accessibility and accommodations.
- Institutional commitments to accessibility.
- Strategic plans for or including accessibility and/or findings in internal studies or reports related to accessibility.
- Student accessibility services resources, including information on accommodations.
- Accessibility, mental health, and wellness resources for students, instructors, or staff.
- Information on Universal Design for Learning, Universal Instructional Design, etc.
- Writing accessibility statements for course outlines/syllabi.
- Accessible course design resources (in different modes, e.g., in-person, online, hybrid).
- Accessible assessment resources (in different modes).
- Accessible educational content (e.g. learning materials, library materials, etc.).
- Accessibility and learning technologies (including common technological tools used at your institution, such as Microsoft 365).
- Accessibility and web design (including Web Content Accessibility Guidelines, or WCAG).

It is important to note that this scan may only capture public content, and not content that is shared internally in units' document management and storage systems.

While creating the list of resources, you may wish to include additional data to classify the resources, for example:

- A brief one-sentence description of the resource (if the title is not representative)
- Date that the resource was created to help assess whether it might require updating
- Format of the resource (e.g. webpage, PDF pamphlet or guide, infographic)
- Intended audience for the resource (e.g. instructors, students, staff, a combination)
- Specific categories related to types of disabilities, types of services or provisions, etc.
- If the resource meets accessibility standards

Address internal accessibility resources that appear out of date or need improvements

While conducting the internal environment scan, you likely will find resources that could use updating or improvement. Flag the resource as needing attention so that you can address the issues in **Step 5: Review Resources and Identify Gaps**.

Conduct an environmental scan of external resources

External resources are particularly helpful to identify and fill gaps in your institution's internal resources, something we'll touch more upon in **Steps 5 and 6**. The external scan will gather external resources that are currently linked by internal resources, and other useful external resources that could enhance your institution's existing resources.

As you scan internal resources, you are likely to find links to resources from outside of your institution, particularly around legislation (e.g., legal acts such as AODA, human rights policies such as by the OHRC, industry-standard accessibility guidelines such as WCAG) and strategies to make education accessible (e.g. Universal Design for Learning).

You may also be aware of other useful websites outside of your institution, including those at other post-secondary institutions or organizations. External resources will be useful in the creation of ARI but should be treated in ways that will be further explained in **Step 6: Filling Gaps**. Be sure to highlight external resources that exemplify the qualities you seek to achieve in your internal resources.

- Explore accessibility resources from other post-secondary institutions, including universities and colleges. One strategy is to start with regional institutions and work your way outward.
- Look for “accessibility hubs” or centralized collections of resources, which may have a broad or narrow focus (e.g., human resources-related accessibility resources).
- Organizations outside of post-secondary institutions also centralize accessibility and accommodations resources for higher education, such as:
 - [eCampus Ontario's Digital Accessibility](#) resource with essential information on accessibility, best practices, templates, guidelines, and resources.
 - [The Council of Ontario's Universities Accessible Campus](#) website features tools and resources directed to instructors and staff (see Educator's and Administrator's Accessibility Toolkits)
 - [CAST's UDL On Campus](#) website dedicated to providing strategies, suggestions, and resources so that post-secondary instructors can incorporate UDL into their teaching

There are many approaches to organizing data collected during your scans. Seeing how external resources are organized and categorized can help inform your approach. Our approach is outlined in **Step 7: Categorize Resources**.

Speaking from experience

Our environmental scan was conducted primarily by two student researchers – one of the students conducted the internal scan while the other focused on the external scan. The student researchers then met with the development team to review and compare resources, which was an efficient strategy to complete the scan. In our internal environmental scan, we noted 76 accessibility and accommodations resources hosted by a variety of units at our institution.

Our institution has a centralized accessibility webpage through the Office of Diversity and Human Rights that points to some key resources, as well as how to contact units around specific accessibility needs. Combining both internal and external links to online resources, the centralized page covers:

- Crucial policies, protocols, and regulatory information
- AODA resources
- Some key resources hosted by different units at our institution
- How to contact those units offering accessibility provisions

However, this webpage is not a centralized place to find answers to all questions about accessibility and accommodations. Most resources are decentralized and unconnected, found on specific units' web pages, including student accessibility services, student wellness, library, distance learning, and information technology units. In our case, we considered how ARI could complement and enhance the information already centrally provided.

We initially catalogued and linked internal resources in a Microsoft Word document, and identified the specific questions that each resource answered to get a better sense of what information was covered internally.

In our external scan, we noted that some institutions had received funding that enabled them to effectively update their resources and create innovative accessibility hubs, which were especially inspirational in this work to centralize accessibility resources.

The types of data we gathered on each external resource included:

- The unit or department that created the resource
- The URL of the resource
- Contact information associated with the resource

- Synopsis of the resource
- Intended audience for the resource
- Any notes on how the resource would be helpful to the intended audience
- If the resource was interactive, searchable, or static, noting any special features

Step 5: Review Resources and Identify Gaps

Goal: Review the existing internal resources to critically examine their quality and identify gaps in resources

This step brings together the development team and additional reviewers to evaluate resources from different perspectives, expertise, backgrounds, user groups, and lived experiences. Collaborate with the reviewers to create clear review criteria, documentation processes, and timelines. Reviewers can focus on their areas of expertise and offer fresh perspectives on areas around which they're less familiar.

Step 5 helps to:

- Determine what can be accomplished in the review
- Include diverse perspectives when developing review criteria and reviewing resources
- Create the review process
- Consider continuous review and improvement processes for the resources and for ARI

What can be accomplished in the review?

With the internal resources collected in **Step 4: Environmental Scan**, review the resources to:

- Identify which resources are the strongest and most useful to include in ARI
- Identify which resources may need updating. Prioritize which of those resources are crucial to ARI, and therefore need timely updating.
- Identify what major areas or categories are missing. **Step 6: Fill Gaps** involves seeking external resources or creating new resources to fill gaps.
- Organize the internal resources in a logical way to identify important gaps, for example:
 - By what's initially perceived to be the strongest, most useful up-to-date resources; then by those which appear outdated and need reviewing; and by making notes on areas where gaps are apparent.
 - By doing a preliminary categorization of the resources, a process outlined in **Step 7: Categorize Resources**.

Include diverse perspectives when developing review criteria and reviewing resources

This step is a crucial area in which students, instructors, and staff with disabilities or expertise in accessibility in higher education are best situated to conduct the review. From their lived experiences and their knowledge of accessibility and accommodations, these individuals will help ensure that the resources are inclusive, relevant, and reflect a broad spectrum of needs.

It may be helpful to involve students, instructors, and staff with various levels of experience and from different disciplines in this process. Beyond campus community members who champion accessibility in higher education, consider including individuals who are at the beginning stages of learning about and integrating accessibility into their work. Being involved in this review could help shift campus members' perceptions toward fostering a more inclusive educational environment.

Also, consider how to incentivize your reviewers and what training they might need to conduct the review.

Create the review process

Develop a realistic timeline for the reviewers to get the work completed, considering the number of resources to be reviewed and the capacity of reviewers. Ensure that reviewers are included in the processes of developing the review criteria and timeline. The combined process of identifying gaps and, in **Step 6** that follows, filling those gaps should be well-documented, including decisions made about the selection or creation of resources, ensuring transparency and accountability.

Consider the following:

- How would we like to divide the review, considering the number of resources? Who would be most helpful for each part of the review considering their lived experiences, knowledge, and capacity?
- What kind of scoring criteria (e.g., checklist, rubric) would be useful in conducting the review?
- How will we create, distribute, gather, and store feedback from reviewers (e.g., online forms/questionnaires, shared documents, or individual documents)?
- What criteria or prompts should reviewers use in the review? For example:
 - Who is the intended audience for the resource, e.g., students, instructors, staff, others? Is it specifically intended for people with disabilities?
 - Does the resource accurately address the need(s) it covers? What are its strengths? How could it be improved?
 - Does the resource share practical insights or applications? What are the strengths of these insights? If it could do better, any ideas on how so?
 - Are there elements of the resource that appear out of date? If so, what are they?
 - Does the resource effectively utilize inclusive language? Are there any biases or stereotypes apparent in the resource? Is there inclusive language that could be added or improved upon?

- Does the resource effectively address the lived experiences of persons with disabilities associated with the need(s) being addressed? Are there views that are outdated or stereotypical?
- Does the resource effectively address legal compliance and meet accessibility standards, e.g., with the Accessibility for Ontarians with Disabilities Act (AODA) and WCAG?
- Is any technology cited in the resource up to date? Are there new technologies that should be included?

After gathering reviewer feedback, consider how the feedback can be integrated across reviewers to categorize resources based on revisions needed. Categories might include:

- Appropriate for ARI, no revisions
- Needs minor revisions
- Needs major revisions
- Not appropriate for ARI

Consider using generative AI to help summarize and organize reviewer feedback.

The discussion of the internal resources overall should also consider what needs, content, or topic areas are absent or underdeveloped in the internal resources.

Consider continuous review and improvement processes for the resources and for ARI

As part of this process, you might ask reviewers for their ideas on a continuous improvement process for the institution's accessibility and accommodations resources, as well as for ARI. See **Step 11: Ongoing Evaluation and Review of ARI** for further guidance.

Step 6: Fill Gaps

Goal: Identify external resources, enhance internal resources, and create new resources to increase the comprehensiveness of ARI

In conducting **Step 4: Environmental Scan** and **Step 5: Review Resources and Identify Gaps**, it will become apparent that there are ways to enhance your institution's resources by improving or creating new resources or including links to helpful external resources.

The external environmental scan is a great opportunity to see how other post-secondary institutions are creating and organizing accessibility resources. When the strengths of numerous institutions are considered together, you can get a sense of what a more ideal set of resources could look like.

Step 6 helps to:

- Prioritize gaps to address
- Search for quality external resources
- Enhance existing internal resources using external resources
- Consider creating new resources

Prioritize gaps to address

After identifying gaps or areas for improvement in your internal resources (in **Step 5**), you will need to prioritize the gaps to address. It is an important caution that **Step 6** could be endless. Filling one gap typically highlights another. When prioritizing gaps to be filled, keep in mind the outcomes of the needs assessment, the scope of your project, the values of your institution, and the workload of the development team. Some gaps may need to be addressed later. There might also be cases where there is an important gap to fill, but no external resource is suitable. In this case, you will want to discuss this gap as a development team – is it essential to fill now? You may consider creating a new internal resource or leaving this as a gap for the short- or long-term.

Find quality external resources

Adding quality external resources to ARI can make ARI more relevant and useful to its intended audience, while reducing the workload for the development team and offices responsible for creating resources. Please revisit **Step 4: Environmental Scan** for suggested locations of quality external resources.

Web-based searches remain crucial to the process of finding quality online resources from other post-secondary institutions and organizations. Search across different resource types,

including websites, webinars, peer-reviewed publications, infographics, etc. Also, consider connecting with experts on accessibility. What resources do they value? What sources do they find to be reliable and useful?

Develop a list of guiding questions or standards when exploring new resources, as members of the development team might have different standards of what is considered a valuable or credible resource. These guiding questions might also include a note about any contingencies or boundaries to selecting external resources, such as the source. Consider the following questions when assessing the validity, effectiveness, and trustworthiness of external information:

- **Relevance to institution's specific needs** related to both the internal gaps being prioritized and the vision and goals of ARI (see **Step 3: Visioning and Needs Assessment**).
- **Accessibility:** Does the resource effectively address legal compliance and meet accessibility standards, e.g., with the Accessibility for Ontarians with Disabilities Act (AODA) and Web Content Accessibility Guidelines (WCAG)?
- **Credibility of the source:** Does the source come from a credible institution or organization? Does it require fact-checking?
- **Currency and relevance:** Much online information is undated, so it's hard to tell when it was published. Does the content and language align with current knowledge and perspectives on accessibility and disabilities, or does it require updating?
- **Alignment with internal resources and information:** External information will connect with different values and perspectives on accessibility and disabilities. The development team will need to consider which perspectives, frameworks, and models are aligned with their institution's approaches and values toward accessibility to determine which resources are better suited.
- **Clarity:** Is the information and organization of the resource clear, straightforward, and easy to navigate?
- **Inclusion of different perspectives and lived experiences:** Does the information draw from different perspectives that should be included in your resources? For example, those with lived experiences might use person-first (a person with a disability or disabilities) or identity-first (a disabled person) language.

Enhance existing internal resources using external resources

Compare existing internal resources that would benefit from improvement with a few external resources on the same topic. This comparison can help you generate ideas about how to enhance and update internal resources.

If incorporating information from external resources into content you are creating for ARI, be aware of the source:

- Be sure to cite the original sources where required, including any sources where no copyright information is noted.
- Creative Commons-licensed materials may allow various levels of reuse; note the specifications of the license when making use of those resources.
- You may also choose to link external resources to supplement information you have provided in ARI, for example as further reading.

Create new resources

Establish guidelines for ensuring that new resources meet accessibility standards and align with the institution's and development team's goals and values. Consider developing partnerships with content creators or experts to develop or adapt resources that can be used across institutions.

Speaking from experience

In collaborating with a senior accessibility services advisor while also conducting an external scan, we began to quickly identify gaps. Our institution needed more firsthand perspectives and data from people with disabilities, disability studies, and organizations advocating for accessibility. Furthermore, it was clear there were many mental health resources developed by other post-secondary institutions and organizations that would benefit our campus community. Identifying these gaps set in motion the task of filling those gaps in ARI.

In gathering feedback on this how-to guide, peer reviewers suggesting additional categories to address misconceptions about disability, ableism, and models of disability. They also noted it would be helpful to highlight the overlaps between accommodations and Universal Design for Learning (UDL).

The inclusion of additional resources aims to enrich the resource with a broader spectrum of topics related to accessibility and education, reflecting a comprehensive approach to understanding and addressing accessibility in teaching and learning.

Step 7: Categorize Resources

Goal: Develop logical, easily navigable categories for the resources gathered, and collect them into a central document for review

Our guidance in this step is based on our own experiences focusing on teaching and learning resources. There are many ways in which you could arrange resources, but we hope this provides a helpful starting point. We look forward to learning about other institutions' categories to gain a more comprehensive perspective of how accessibility resources can be organized and the influence of our institutional context on these categories.

Step 7 helps to:

- Determine which categories will be useful to lead users to resources they are seeking

What categories might be useful?

We organized our data into categories that will lead users to the resource(s) they are seeking.

Category 1: Basic accessibility information

This is a main category that leads users to essential information on accessibility and accommodations, with subcategories as follows:

- **Student experiences with disability:** What resources help frame students' lived experiences with disabilities in post-secondary education in a way that tangibly conveys the purpose of accessibility and accommodations?
- **Accessibility principles:** What resources convey the principles of accessibility?
- **Basics of accessible education:** What resources provide essential information about making education accessible?
- **Accommodations principles:** What resources convey the principles of accommodations for students with disabilities?
- **Institutional policies and committees:** What are the policies and committees on accessibility and accommodations at the institution?
- **Accessibility services information:** What accessibility services are available at the institution for students, instructors, staff, and visitors?

Category 2: Interacting with students

To maintain a disability-centered resource, continue with information that proactively educates about interactions with students with disabilities to make accessibility and accommodations a tangible process:

- **Interacting with students with disabilities:** What resources offer insights into interacting with students with disabilities in educational environments?
 - **Varieties of disabilities:** Are there resources that address specific types of disabilities concerning teaching and learning and other accessibility information? Do each of these resources have helpful tips on maximizing learning for different disabilities (for example, how to apply Universal Design for Learning or Universal Instructional Design guidelines, as noted in Category 3 below, to minimize barriers for students)?
- **Best practices when barriers arise:** What resources offer helpful advice around common scenarios in which barriers arise? What resources help explain both systemic and spontaneous barriers? What resources best address alleviating barriers around temporary disabilities?
- **Student mental health for educators:** What resources specialize in offering guidance for instructors on supporting students' mental health?

Category 3: Accessibility in teaching and learning

This category focuses on instructors' work in making course design, assessments, and teaching practices accessible:

- **Accessible course design:** What resources guide instructors to design accessible courses?
- **Universal design principles:** What resources show instructors how to apply Universal Design for Learning, Universal Instructional Design, and related principles that aim to minimize barriers to maximize learning?
- **Accessible assessments:** What resources guide instructors to design and evaluate assessments in accessible ways?
- **Accommodating students:** What resources guide instructors to accommodate students (both registered with accommodations and those who make direct requests)? Relate this to the section on Accommodations Principles above.

Category 4: Making accessible learning materials and content

This category focuses on the work to make documents, multimedia, web content, and websites accessible:

- **Creating accessible documents, multimedia, and web content:** What resources provide information about the creation of accessible media?
- **Creating accessible websites:** What resources provide information about the creation of accessible websites?

Step 8: Create ARI

Goal: Choose a platform to create and host ARI

The right platform and interface ensure that all users can access and benefit from ARI. Thus, it should embody the accessibility principles and standards that ARI seeks to promote. In selecting a platform, ensure that ARI complies with relevant laws (e.g., AODA) and institutional policies related to accessibility, reducing legal risks, and promoting policy alignment. Keep in mind that ARI can exist in many forms depending on institutional capacities and resources, from a shared word processing document to a highly interactive web interface (e.g., using decision tree frameworks or chatbots that guide users to the answers to their questions).

Step 8 helps to:

- Address institutional considerations on how to select a platform
- Consider features for the platform

Key institutional considerations for selecting a platform

- What flexibility do I have in making this decision? Within my institution, who makes final decisions about platforms and locations for centralized resources?
- How will ARI integrate with other institutional systems or platforms (e.g., websites, learning management systems, library databases)?
- Should ARI be hosted centrally by the institution or by a specific unit?
 - Who will be responsible for maintaining and updating ARI?
 - Who can gather and communicate feedback on ARI to other units?
 - If hosted by a particular unit, which units will have administrative or login privileges? This will become important as resources are reviewed, updated, and added.
- If costs are associated with the software/technology, who pays the initial fee and any subscription/annual costs?

Features to consider when selecting a platform

- Accessibility of information and ensuring all content meets accessibility requirements (e.g., AODA, WCAG compliance)
- Engagement and interaction options (e.g., use of multimedia)
- Ease of navigation to the information needed (e.g., wayfinding links, glossary, library)
 - Consider the potential structure outlined in **Step 7: Categorize Resources**
- Digestibility of information (concise, include estimated reading time for each page or resource)

- User interest (do they feel intrigued to learn more through the resource?)
- Ability to accommodate growth and the addition of new resources or functionalities
- Adherence to the principles of UDL/UID
- User privacy and data security, especially when gathering feedback
- Ability to integrate web analytics tools to monitor how ARI is used
- Ability to incorporate a mechanism for collecting ongoing user feedback directly within ARI, which can help identify issues, gauge user satisfaction, and gather suggestions for improvement (see **Step 11: Ongoing Evaluation and Review of ARI**)

We also recognize the future opportunities and challenges of incorporating generative AI capabilities into ARI. For example, a chatbot can be incorporated to guide users to ask a question or choose a relevant scenario, and deliver resources, institutional policies, and summaries of effective practices based on the specific resources on which it is trained.

Step 9: User Interface/Experience (UI/UX) Testing

Goal: Create a working demo of ARI containing content that will be adequate for stakeholders to test and offer feedback on its navigability, quality of information, and relevance

Before launching ARI, develop a demo of ARI that includes content for stakeholders to evaluate. This demo should accurately represent how the final product will operate, allowing users to interact with its features, navigate through its pages, and assess the information provided. The goal is for users to provide detailed feedback on the ease of use, the quality and accuracy of the content, and its relevance to their needs. This feedback will be invaluable in making necessary adjustments to ensure ARI meets its intended goals and serves its users effectively.

Step 9 helps to:

- Design the ARI demo
- Select the UI/UX testing group
- Consider UI/UX testing options
- Develop a testing and feedback loop

Design the demo

- Design intuitively for straightforward and easy navigation.
- Aim for a simplified, yet high-quality, initial version of ARI that provides essential and valuable information to enhance users' understanding and is representative of the overall planned design and experience.
- Prioritize accessibility to ensure ARI is usable for everyone and all content meets accessibility requirements (e.g., AODA, WCAG), including:
 - Selecting colour schemes with high contrast for users with visual impairments
 - Ensuring compatibility with screen readers and other assistive technologies
 - Choosing fonts that are easy to read
 - Enhancing keyboard and mouse navigation
 - Enabling the user's ability to resize the text
- If relevant to the goals of ARI for your context, integrate interactive elements, such as clickable buttons, interactive quizzes, or expandable content sections. These features engage users and encourage them to explore, leading to deeper knowledge.

Select the UI/UX testing group

Invite individuals to be part of the testing group. Consider offering incentives, if available, to increase participation, especially among individuals and groups who are essential to this stage.

This group should include a diverse range of users from each intended audience, including users with different:

- Campus roles (e.g., students, instructors, staff, admin)
- Disabilities
- Levels of experience in their roles
- Levels of technological expertise or comfort
- Levels of experience and awareness with accessibility

Consider UI/UX testing options

Conduct UI/UX testing to ensure ARI is functioning as intended. Set clear expectations for the testing group related to the types of tasks they should test and what type of feedback is most valuable at this stage. For feedback ideas, see **Step 11: Ongoing Evaluation and Review of ARI**. Ask testers to use the ARI demo in typical scenarios or tasks that arise in their work. Some common types of tests include:

- Visual consistency check
- Responsiveness test
- Accessibility evaluation
- Usability testing
- User journey mapping
- Heatmaps tracking
- Feedback surveys and interviews
- Focus groups

Part of this stage should include gathering user feedback about information they were searching for but couldn't locate, and the language they used to search for that information.

Develop a testing and feedback loop

- **Seek feedback:** Establish ongoing feedback mechanisms from users, ensuring ARI remains responsive and continues to meet needs as users and content evolve.
- **Review and share feedback:** Identify strengths and areas for improvement from the feedback. Share with the development team and with campus units responsible for updating the specific resource to decide on next steps.
- **Use feedback:** Design iteratively and address gaps with ongoing improvements.

Once ARI is complete, include UI/UX testing to identify additional issues and improvements. You may also consider launching ARI as a “public beta” to the institutional community, allowing for additional feedback on a larger scale before finalizing ARI.

Step 10: Communication and Education on ARI

Goal: Develop a communication plan to share ARI and educate users on how ARI will help them find answers and information about accessibility and accommodations

Raise awareness about ARI throughout this process, building interest and the potential user base as the project unfolds. Once ARI is complete and ready to be shared, the following suggestions will provide guidance around raising awareness at your institution and providing training and support opportunities for users.

Step 10 helps to:

- Develop an institutional marketing and outreach plan
- Develop an institutional training and support plan

Develop an institutional marketing and outreach plan

- Engage the development team and key stakeholders who have been involved from the beginning to help spread the word about ARI.
- Identify and empower community champions within various stakeholder groups who can advocate for ARI and assist in communication and training efforts.
 - Gather quotes from users who have positive experiences with ARI. Include these quotes in communication materials and, if relevant, ARI itself.
- Focus messaging on the value and usefulness for the intended audience and the importance of an institutional approach to valuing and prioritizing accessibility.
- Consider the timing of communications within the typical instructor, staff, and student schedules, avoiding busier or more stressful times of the semester.
- Integrate multiple pathways of communication between instructors, staff, and students, as well as from upper administration to these audiences. If possible, collaborate with your institution's communications office to support the internal promotion of ARI.
- Develop a communication plan for sharing ARI across the institution, raising awareness among potential users. Strategies for communication include:
 - Engagement campaigns
 - Social media campaigns
 - ARI launch event
 - Sessions to introduce ARI to senior administration, deans, and department chairs
 - Sessions to introduce ARI to staff, instructors, and students
 - Request colleges, faculties, and departments share ARI in existing communication processes

- Integrate ARI into orientation materials for new students, staff, and instructors
- Give a 15-minute overview and demo of ARI during scheduled meetings (e.g., department meetings, student group meetings, unit staff meetings, deans meetings)
- Link ARI from multiple institutional websites
- Plan for continuous promotion to share with new employees and students (e.g., at the start of every academic year).
- To enhance visibility, consider creating a logo for ARI to include on institutional websites that will link to ARI.

Also consider sharing ARI with other institutions. If available, offer to include your ARI in future versions of this guide to exemplify how post-secondary institutions are building their own ARIs.

Develop an institutional training and support plan

Users will require training and support to help them effectively navigate and use ARI. Training and support options should be flexible, convenient, and tailored to meet the needs of different user groups. Training should focus on how people can integrate ARI into their existing workflows, including demos of practical and typical scenarios for each user group. A balance of online resources and live sessions can ensure that individuals have access to important information and opportunities to ask questions, receive guidance, and provide feedback. Consider how the institution can encourage participation in training. Also make sure to incorporate feedback gathering during and after the training sessions to improve ARI.

Options for training include:

- Integrate training into existing professional development opportunities (e.g., onboarding, orientations, or required training for instructors, staff, or students, as well as ongoing professional development programs)
- In-person or virtual workshops or webinars
- Online, asynchronous learning modules (could be integrated within ARI)
- Host "hands-on" ARI Playground or ARI Sandbox sessions to guide individuals through exploring ARI, focusing on common questions relevant to their group
- A video intro on the landing page of ARI explaining how to use it effectively
- A Frequently Asked Questions (FAQ) section on ARI
- A news or announcements feature on the landing page of ARI noting regular updates and highlighted resources, relevant to the timing within the academic year or the most searched resources.

Step 11: Ongoing Evaluation and Review of ARI

Goal: Implement measures to evaluate the success of ARI and develop an ongoing evaluation plan to ensure continuous review and improvement

Ongoing evaluation of the usefulness and effectiveness of ARI is essential to maintain and enhance the value of ARI. Gathering feedback from users on ARI's strengths and areas for improvement will also help you to demonstrate ARI's value to the institution and key stakeholders, securing ongoing support and resource allocation for its maintenance and development.

Step 11 helps to:

- Decide what feedback to gather
- Use feedback to make improvements
- Create an ongoing review process

Decide what feedback to gather

What measures of success will be used to evaluate ARI? What mechanisms should be in place to gather feedback for continuous improvement and adapt and respond to evolving accessibility needs, trends, and challenges?

Data can be gathered from a variety of sources, including web analytics, embedded surveys or questions within ARI, surveys sent to user groups, focus groups or interviews, focused feedback from key campus offices, and feedback from external experts. Ensure feedback is gathered from all user groups within the institution to provide a comprehensive view of ARI's impact. Data should be used to inform decisions about ARI updates, highlight popular resources, and identify underutilized sections that may need increased visibility, better organization, or improved naming or categorization.

Referring to **Step 3: Visioning and Needs Assessment**, what goals were set for ARI's performance? Now that ARI is developed, does the development team or the institution's key stakeholders have additional goals or metrics in mind?

Possible data sources and feedback include:

- User engagement and web analytics
 - Most frequently accessed resources
 - Navigation patterns
 - Bounce rate and engagement rate
 - Timing of increased and decreased visits

- How individuals found ARI (what website did they come from or did it originate from a browser search)
- Patterns in user behaviour over time and within specific situations, such as after introducing new or revised resources or categories
- Potential usability issues
- Surveys, focus groups, and interviews with users can be used to gather data on the impact of ARI on:
 - Users' understanding or awareness
 - Changes in users' behaviour or practices (e.g., changes made to teaching practices or assessments; changes in how users get their questions answered)
 - Units whose primary work is in accessibility (e.g., are staff receiving fewer questions or requests for information or consultations around certain topics)

Gather success stories or case studies demonstrating how ARI has positively impacted individuals or groups and use these within your **Communication and Education Plan (Step 10)**.

Use feedback to make improvements

- Establish a clear mechanism for integrating feedback into ARI's ongoing development and refinement process.
- Determine who is responsible for reviewing feedback and sharing with the relevant units or stakeholders. What feedback should be brought back to the development team for discussion? What types of feedback should result in revision or updates?
- Keep your vision, goals, and needs assessment in mind when determining your approach to feedback.

Create an ongoing review process

Focusing on the long-term maintenance and evolution of ARI is important for its continued relevance and effectiveness. Plan for an ongoing cycle for continuously reviewing feedback, communicating feedback to key units, and updating ARI in response to identified gaps or issues. This will include routine review of feedback gathered within ARI, as well as annual **UI/UX testing** (see **Step 9**) and regular accessibility audits. Solicit more in-depth feedback through surveys, focus groups, or interviews from users on an annual basis. Specific opportunities for review include:

- When new resources are added
- When a new structure is created (e.g., changes to categories or new categories)
- When new institutional or provincial/national policies are introduced

Model Accessibility Resource Indexes

In future versions of this guide, this section will include practical examples and case studies from institutions that have created their own ARI.

The development of the University of Guelph's ARI is ongoing. A [demo](#) is currently available for public viewing.

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Contact / Feedback

If you would like to contact The Office of Teaching and Learning with any questions or to offer feedback on this guide, please e-mail otl@uoguelph.ca with ARI in the subject line.

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