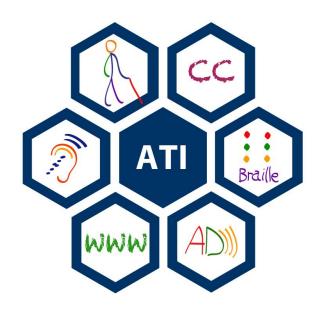# ASSISTIVE TECHNOLOGY INITIATIVE STRATEGIC PLAN:

FY20 – FY22:

Enhancing and Sustaining Access to
Information and Communications Technology at Mason

(Updated 10/10/2019)

EXECUTIVE SUMMARY

An effective and responsive university depends on student and citizen engagement as well as a diverse, well-prepared workforce; both of these require access to information and communications technology (ICT). The Assistive Technology Initiative (ATI) is committed to developing and guiding the university's ICT accessibility plan; maintaining a diverse and inclusive academic community, where all students are afforded the opportunity for a transformational learning experience. This commitment must and does include individuals with disabilities.

An essential component of such access is ensuring that ICT developed, procured, maintained, or used within George Mason University is accessible to all University employees, students, and members of the public; ensuring conformance to the accessibility standards specified in Section 508 of the Rehabilitation Act (*revised January 2018*), appropriately tailored to the specific circumstances of the University.

In the last decade, the U.S. Department of Justice (DOJ), the U.S. Department of Education's Office of Civil Rights (OCR), and national advocacy organizations like the National Federation of the Blind (NFB) and the National Association for the Deaf (NAD) confirm that inconsistencies exist in how universities and colleges implement and manage ICT resources. To address these issues at Mason, the ATI has focused on strategically integrating with existing university programs/services and developing proactive strategies to address the ICT accessibility needs of the Mason community. This includes, but is not limited to, focusing intently on supporting the needs of individuals with sensory impairments enrolled in Mason courses and working closely with the Office of Digital Learning to integrate accessible design practices into the online course development process.

This report highlights the ATI's next steps in streamlining the delivery of ICT accessibility services to the Mason community. From FY19 – FY21, the ATI will focus on the following: (1) Strengthening our team of accessibility specialists; (2) Developing a comprehensive web accessibility strategy for the university; (3) Partnering with DE to expand our document remediation strategy; (4) Identifying the gaps, as it relates to accessibility, in the ICT purchasing and procurement process; (5) Improving access to library programs and services for individuals with disabilities; and (6) Improving our office's marketing and communications strategy within the Mason community. Additionally, we will start to compile ICT accessibility policy and procedure documents with the goal of providing greater transparency with respect to the management of specific ATI projects and services.

It is our belief that the goals outlined in this report will greatly improve access to ICT resources for individuals with disabilities within the Mason community, as well as visitors.

STRATEGIC PLANNING REPORT

WHAT WE DO

The ATI ensures equivalent access to ICT resources for students, faculty, staff, and visitors with disabilities and/or different learning styles in the Mason community. This includes supports for video captioning/transcription, alternative formats for textbooks and assessments, web accessibility, document remediation, and assistive technology supports/services.

We accomplish this by working collaboratively with Disability Services (DS), ITS, ODL, academic and administrative departments/units, instructional faculty, as well as library personnel to develop, coordinate, and implement a university-wide ICT accessibility plan that ensures conformity with the technical standards outlined in Section 508 of the Rehabilitation Act. This includes training and technical assistance regarding the appropriate use of assistive technology, web compliance, document/media accessibility, procurement, and software applications testing. Additionally, we coordinate directly with the DS and the ADA Coordinator to address the technology accommodation needs of students, staff, and faculty with disabilities.

FY16 – FY18 RECAP

Between FY16-FY18, the ATI focused on strategically integrating with existing university programs/services and developing proactive strategies to address the ICT accessibility needs of the Mason community. Some of our more successful efforts are listed below:

1. ATI staff conducted accessibility reviews for GMU's main website (www.gmu.edu) overhaul, as well the main websites of GMU's colleges and schools. This involved collaborating with both outside contractors and staff within the Communications and Marketing Office.
2. ATI staff conducted successful document remediation pilot during FY17 academic year. This service focuses specifically on the remediation of Word, PPT, and PDF documents used in the classroom. Forty faculty/staff members participated in the pilot and just under 500 documents were processed. In second year of the service (FY18), there was a 47.5% increase in the number of faculty/staff using the service and a 41% increase in the number of documents processed.
3. ATI staff developed strategies to quickly create tactile graphics for blind/low vision students enrolled in STEM courses. These efforts resulted in quicker turnaround times for students actively taking courses and a significant costs savings for DS.
4. ATI staff collaborated with 11 colleges and schools to negotiate and implement statewide post-production captioning and transcription contracts with 3 vendors: Cielo24, Verbit.ai, and 3Play Media. These contracts will result in significant costs reduction over the next 3 – 5 years.

5. ATI collaborated with DS to implement the Clockworks client management database. This solution has streamlined the sharing of student case notes with DS staff and AT equipment inventory and loan tracking.

During this cycle, the ATI adequately supported students requiring assistive technology assessments, supports, and training, as well as those making requests for alternate formats for textbooks, tests, and quizzes. Additionally, we made improvements with respect to the scalability of the captioning/transcription and document remediation services.

Additional improvements are necessary, however, as the university continues to make significant investments in the growth of our online programming. Most notable would be the expansion of online course accessibility reviews. Moreover, we currently lack the ability to expand web accessibility testing, monitoring, and support beyond technology purchases initiated through the ASRB, technology purchases flagged by IT purchasing staff, and accommodation requests for assistive technology users actively enrolled in Mason courses. The ATI will focus considerable resources on these areas during the FY20-FY22 academic cycle.

FY20-FY22 SWOT ANALYSIS

STRENGTHS

- Delivery of core services (assistive technology, accessible text, accessible media, document remediation, and web accessibility testing)
- Ability to meet production and service deadlines
- Flexible and responsive work environment
- Knowledgeable staff with diverse skillsets and backgrounds
- National recognition has opened up opportunities to improve service delivery through participation in technology pilots, beta testing, research opportunities, committee service work, etc.

WEAKNESSES

- Ability to expand web accessibility testing, monitoring, and support
- Database tracking (document remediation, accessible text, trainings/workshops)
- Communications and marketing

OPPORTUNITIES

- Explore avenues to grow direct services (i.e., partnerships with DS, academic units teaching STEM)
- Explore 3D printing as a possible resource for students with visual impairments
- Explore partnerships with vendors for beta testing products
- Explore partnerships with students for providing feedback on ATI services, needs/issues with respect to campus services, accessibility testing, etc.

- Remaining comfortable
- Scalability of service delivery as demand increases
- Lack of comprehensive web accessibility plan

FY20-FY22 STRATEGIC FOCUS

The *ATI's Strategic Focus* spotlights some of the major issues, opportunities, and threats from the SWOT analysis. We will focus on the following areas:

- Communications and Marketing
  - Improve campus-wide marketing and communications
  - Update ATI's web-based resources (i.e., accessibility.gmu.edu, ati.gmu.edu);
- Web Accessibility
  - Integrate feedback from assistive technology users into the web and applications testing process;
  - Acquire space for development of web accessibility and assistive technology testing lab;
- Document Accessibility
  - Improve scalability of document remediation service;
- Alternate Formats
  - Procure technology that would aid in creation of 3D-printed tactile graphics;
- Purchasing and Procurement
  - Develop public database/resource for tracking web and applications testing results;
- Library Accessibility
  - Work with library staff to develop clear guidelines for access to library programs and services;

During the FY17-FY19 cycle, staffing shortages in the ATI's core service areas resulted in communications and marketing taking a back seat to more pressing student, staff, and/or faculty accommodation concerns. Consequently, the ATI still lacks a coherent marketing strategy with respect to educating the broader Mason community about the types of services that our office provides. As the university community grows (i.e., digital resources, mobile accessibility, online course offerings, etc.), it is critical that ATI's communications and marketing strategy adapt to meet these changes.

We will address the following areas:

1. **The ATI Office will improve efforts to acquire and integrate user feedback**

Over the past 10 years or so, the ATI has intermittently sought feedback from students, staff, and faculty as a means to evaluate the effectiveness of our services. This included following up on the success or failure of ATI-hosted events, surveying students, staff, and faculty at the end of each semester to identify gaps in our services, and eliciting feedback during individual/small-group trainings or meetings. To date, those strategies have been ineffective. As a result, we have relied heavily on evaluating growth in a particular service area as a means of evaluating success. While effective in some ways, it is not a comprehensive measure of the success of a particular service (e.g., captioning/transcription vs. accessible text).

2. **The ATI Office will seek to work directly with academic departments/units.**

The ATI has done an effective job working with and through some of our non-academic partners (e.g., ITS, ODL, University Libraries, Disability Services, and Learning Services). This success, however, has not extended to academic departments/units. While there have been some individual successes (e.g., Nursing, English, Information Sciences, etc.), most were born out of our relationship with ODL. Developing key academic partners would serve as incubators for potential new communications and marketing initiatives, technology pilots (e.g., Glean), service offerings (e.g., 3D printing), etc.

3. **ATI Websites will be updated to meet current needs of our university partners.**

There has not been a comprehensive overhaul of the ATI's website in approximately 5-6 years. While no major changes are required, it is necessary to start streamlining the number and types of resources shared on these websites. This includes, but is not limited to, support videos for creation of accessible documents/media, AT resources to support students accessing university resources remotely, documenting the ATI's policies and procedures, new photos/images, etc.

IMPROVE SCALABILITY OF WEB COMPLIANCE SERVICE

The ATI's existing web accessibility compliance strategy is reactive; focusing primarily on the evaluation of technology purchases initiated through the ASRB, technology purchases flagged by IT purchasing staff, and accommodation requests for assistive technology users actively enrolled in Mason courses. Staffing limitations affect our ability to respond and plan proactively.

Going forward, we will improve scalability by addressing the following areas:

1. **The ATI Office will hire assistive technology users to aid in the integration of user feedback into the web accessibility testing process.**

DS has more students with disabilities registered with the office than at any point in Mason's history. This includes the largest number of students with sensory impairments (i.e., blind, low vision, deaf, hard of hearing) enrolled at the institution.

This offers the ATI Office a unique opportunity to identify potential challenges for these populations. For example, we could seek out student wage staff or potential volunteers from this population to help us ensure that our Priority I and II resources are in line with the needs of the community that we primarily serve.

2. **The ATI Office explore ways outside of increasing staff to integrate user feedback from assistive technology users with disabilities.**

Similar to our communications and marketing goals, it is imperative that we develop additional ways to understand the experience of assistive technology users at Mason. This could include surveys post service or at the end of each semester, user-testing focus groups, the development of an app to make it easy to report issues, etc.

3. **The ATI Office will seek space to create an *ICT Accessibility and Assistive Technology Testing Lab*.**

It is necessary for the ATI Office to have a space focused primarily on web and applications accessibility testing initiatives. In addition to creating a showcase for the demonstration of assistive technology, it would create a collaborative space where the IT Accessibility Coordinator could engage with testers. The space would also serve as a place where staff and faculty could come to understand how the technology resources that they put in place could affect the user experience of individuals in the Mason community who rely on assistive technology to access those technology resources.

IMPROVE SCALABILITY OF DOCUMENT REMEDIATION SERVICE

In the second year of our document remediation service, requests increased by over 40% and the number of faculty/staff users increased by 48%. Forty-nine out of 59 users were unique to the service, demonstrating that faculty have an interest and need for this type of support. With that said, however, present staffing supports our ability to handle hundreds of request not thousands of them. It is critical in this early phase of the service, and with the university continuing to expand its online offerings, that we explore strategies for making document remediation scalable.

Going forward, we will improve scalability by addressing the following areas:

1. **The ATI Office will develop a plan that improves the scalability of the document remediation service.**

Document accessibility support (beyond the provision of training resources) is a critical area of need for instructional faculty (i.e., adjunct faculty) who are supporting students with print disabilities and those needing to develop compliant online courses. At the present date, CommonLook, Adobe Acrobat, and MS Office's built-in accessibility tools are the backbone of the document remediation process. We are in the process of working with ANSR Source to beta test a document management

solution (*Invicta*). If successful, this solution would enable us to receive document remediation requests directly from the LMS, remediate directly within the tool, integrate faculty member's input into the alternative text description part of the workflow, and send the completed files back into the faculty member's course within the LMS. Such a workflow would greatly improve the scalability of the service.

EXPAND ALTERNATE FORMAT OFFERINGS

In the previous cycle, we improved upon the existing accessible text service by developing in-house strategies for the provision of tactile graphics and STEM content using Adobe Illustrator, TactileView, EquatiO, and MathType. Prior to acquiring these resources, the ATI Office and Disability Services combined spent thousands of dollars outsourcing these projects to outside vendors. These changes have allowed us to repurpose these funds internally and greatly reduce barriers to STEM content for students with visual impairments.

To continue these improvements in the future, we will address the following areas:

1. **The ATI Office will acquire technology to support the creation of 3D-printed tactile graphics.**

   While some academic units and the *MIX* (Fenwick Library) have these technologies available, we are limited in our ability to access and make timely use of them for student accommodations. Acquiring our own unit would allow us to supplement 2D tactile graphics with 3D-printed models when they would prove more effective accommodations for students in STEM courses.

IMPROVE ICT ACCESSIBILITY IN PURCHASING & PROCUREMENT PROCESS

ICT accessibility is a critical part of the ASRB's purchasing and procurement process; however, challenges remain.

Going forward, we will address the following areas:

1. **The ATI Office will develop a strategy for reporting out information on previously tested technology solutions.**

   The ATI requires a database of sorts to track and make publicly available the testing results of websites and/or applications that have previously undergone accessibility testing as part of the purchasing and procurement process. This would empower individuals making technology purchases on our campus with just-in-time information relating to the accessibility of a particular solution and any potential workarounds. Furthermore, this would serve as a repository for not only those solutions evaluated during the purchasing and procurement process, but those evaluated for student, staff, and/or faculty accommodation purposes as well.

In previous years, the ATI Office has partnered with the library's Accessibility Coordinator to improve access to the library's programs and services. This has resulted in improved communications between the two offices, improved access to ATI labs, and more opportunities for training with library staff on EIT accessibility-related issues. Recent staffing changes within the library has placed us in a position to revisit existing library accessibility policies and procedures (*expressed* and *documented*) to determine where improvements could be made.

We will address the following areas:

1. **The ATI Office will work with the library to establish formal policies and procedures for ICT accessibility.**

   Over the years, the library's policies and procedures regarding ICT accessibility have shifted with along staffing changes within the ATI and the library system. With the ATI now fully staffed and the library hiring a new Accessibility Coordinator, we will work to formalize procedures around ICT accessibility and equivalent access to the library's resources.

2. **The ATI Office will work with the library on a purchasing and procurement lifecycle.**

   The library is still not subject to the ASRB review process. However, the university's Purchasing Office does flag some of their purchases. They then submit those requests to the ATI Office for a more formal accessibility review. What this means is that some of the library's ICT purchases do not undergo a formal accessibility review. Library resources play a critical role in the instructional process and it is essential that these resources be reviewed to ensure equivalent access for students, staff, and faculty with disabilities.

3. **The ATI Office will develop a database accessibility testing process.**

   In the past, the library shared the top 20 most used databases at the university. This information is invaluable as it allows the ATI to focus accessibility-testing resources on those areas that are of critical need for students with print disabilities, particularly those with vision impairments. We will restart this process, using existing web accessibility testing procedures to evaluate the accessibility of library databases and publish findings that will improve access to these resources for Mason students who use assistive technology.

OPERATIONS PLANNING

- Manager
  - *ATI Manager,* Korey Singleton
- Coordinators
  - *Accessible Media*, Robert Starr
  - *Accessible Text*, Nancy Borck
  - *IT Accessibility*, Kristine Neuber
- Specialists
  - *Assistive Technology Program Support*, Tiffany O'Neal
  - *Accessible Text*, Jennifer Little Brown
- Support
  - *ATI Office Assistant*, Gabby Macari
  - *ATI Office Assistant*, Gerson Galicia

CURRENT ATI PROJECTS

Project Title	Description	Project Lead(s)	Projected Timeline
Accessible/alternative texts and instructional materials (Accommodations)	Conversion of instructional materials (i.e., PPTs, PDFs, textbooks, exams, quizzes, etc.) into Braille, readable PDFs, Word, etc.	Nancy Borck	As needed
ANSR Source Pilot (*Invicta*)	Beta testing of potential document management and remediation solution	Robert Starr/Korey Singleton	Fall 2019
ASRB Committee (Procurement)	Work with ITS to review new software and web application purchases for accessibility and conformance with Sect. 508 and WCAG.	Kristine Neuber	As needed

Assistive Technology Assessments, Support, and Training (Students)	Provide informal AT assessments, training, and support for students registered with DS and LS	Tiffany O'Neal	As needed
Assistive Technology Assessments, Support, and Training (Faculty/Staff)	Provide informal AT assessments, training, and support for staff/faculty referred by the ADA Coordinator	Korey Singleton	As needed
ATI Training	Coordinate, conduct, and schedule ongoing ATI trainings and training locations.	ATI Staff	As needed
ATI Websites	Ongoing maintenance of *Accessibility@Mason* and *ATI* Websites	ATI Staff	Fall 2019
AT Labs Image Updates (Libraries)	Maintain existing library workstations. Facilitate access to library workstations. Work with ITS to update library AT Lab images (annually).	Tiffany O'Neal	Fall 2019
Campus Mapping Plan	Investigate existing campus mapping solutions and develop plan for offering a more accessible solution to individuals in the Mason community	Kristine Neuber	Dec. 2021
Captioning and Transcription	Coordinate delivery/production of accessible media (i.e., captioning, audio description) to support individuals with disabilities in Mason community and ensure compliance with relevant disability laws.	Robert Starr	As needed
Clockworks Client Database	Oversee maintenance of Clockworks client management database	Robert Starr	As needed

Coordinate conversion of textbooks and instructional resources to braille/tactile graphics	Coordinate quotes, conversion, and delivery/pick-up of braille/tactile graphics resources for blind students in STEM courses	Nancy Borck	As needed
Document Remediation (Compliance)	Develop strategic plan for ensuring accessibility of instructional resources (i.e., Word, PPT, and PDF) used in Mason.	Robert Starr	As needed
High speed scanning stations	Oversee maintenance of high-speed scanning stations in Fenwick and Gateway library AT Rooms.	Tiffany O'Neal	As needed
ICT Accessibility Working Group	Work with key stakeholders (i.e., ITS, Legal, CDE, DS, Library, etc.) on university's ICT accessibility plan.	Korey Singleton	As needed
Library Accessibility	Partner with Library's Accessibility Coordinator to develop strategic plan for library accessibility.	Korey Singleton	Fall/Spring 2019
Mason LIFE	Conversion of instructional materials for students enrolled in Mason LIFE program.	Jennifer Brown	As needed
Office of Digital Learning	Coordinate integration of ICT accessibility planning with ODL.	Korey Singleton	As needed
Sonocent Pilot (*Glean*)	Beta testing potential notetaking solution for DS students.	Tiffany O'Neal/Korey Singleton	Fall/Spring 2019
Supplemental Application Reviews	Review and test 3rd-party applications for accessibility and usability (i.e., Mathematica, MyMathLab, etc.).	Kristine Neuber	As needed

Web Accessibility	Develop and maintain university guidelines for conformance of websites and web-based documents with Section 508 and WCAG 2.1.	Kristine Neuber	As needed