Accessible Technology and our Changing Workforce

About this module
Goal: In this module, we will review the statistics around how accessible technology can impact the workforce. Our goal is to identify the workforce trends that will lead to an increased demand for accessible technology in the coming years.
Format: PowerPoint Presentation
Time: About 20 Minutes
Potential audience: Employers/business people, human resources staff, higher education administration

Facilitator’s Tips for this Module

Here are a few “Do’s” and “Don’ts” to consider when facilitating this module:

Do:
- Move somewhat quickly through these slides, spending just a minute or so per slide.

Don’t:
- Read the notes verbatim; they are meant for your reference to help give you the information to provide a context for the audience.
Facilitator’s Notes for this Module

Accessible Technology and our Changing Workforce

Facilitator’s Notes (Slide 1)
This module presents evidence of the need for accessible technology in the workplace.
Disclaimer

Information, materials, and/or technical assistance are intended solely as informal guidance, and are neither a determination of your legal rights or responsibilities under the ADA, nor binding on any agency with enforcement responsibility under the ADA.

The Northeast ADA Center is authorized by the National Institute on Disability and Rehabilitation Research (NIDRR) to provide information, materials, and technical assistance to individuals and entities that are covered by the ADA. The contents of this document were developed under a grant from the Department of Education, NIDRR grant number H133 A110020. However, those contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government.

Facilitator’s Notes (Slide 2)

Change this slide to reflect your regional information.

Trainers, be sure to advise participants that this training is not intended as legal advice.
Facilitator’s Notes (Slide 3)

This slide presents some statistics about our aging workforce. The aging workforce is important because as we age, we are more likely to acquire disability or to work differently (as our bodies change with age, it may be more difficult to read small print, or to hear in a meeting, we may also experience more pain when we work). Employers need to be aware of the challenges that their workforce may face. Consider the following statistics:

- The baby boomer generation is made up of people born between 1946 and 1964. By 2018, almost all the baby boomers will be in the 55-years and older age group (Toosi, 2009).
- According to the current population survey (2000). There were 18.4 M workers age 55+ in the labor force. The BLS forecasts that this number will grow to nearly 32M by 2015.
- The work force over 55 is estimated to grow by 4% per year, this growth rate is four times faster than the entire work force
- Many workers are reaching retirement age and cannot afford to retire. A report completed by AARP says that 44.1% of survey respondents had decided that they will likely continue to work at least part-time after retirement and another 33.4% are delaying retirement (Rix, 2011)
• The Council for Disability Awareness (2010) presents some interesting data about the chances that the American Worker has of becoming disabled. They state that the odds for a worker entering the workforce today has of becoming disabled are about 30%.

• For a significant number of older workers, being in a workplace with effective disability inclusiveness practices will determine whether or not they can remain engaged in their jobs.

Read more about the information on this slide:


Facilitator’s Notes (Slide 4)

This slide reinforces the point made on the previous slide about the prevalence of disability increasing as the age of the work force increases. Visual, hearing and arthritis and other physical impairments occur most frequently among working age individuals. These are all impairments that can potentially impact an individual’s access to technology.
Our Aging Population

In 2010, the majority of the US population will be 45 years and older

Facilitator’s Notes (Slide 5)

This slide makes light of a common problem with our eyes as we age, it points out that in 2010, the majority of the population in the United States will be over the age of 45 and that is when we tend to require the use of reading glasses or larger displays for us to see effectively.

For audience members with visual impairments, describe the graphic.

The graphic on this slide shows a man with a cup of coffee in front of a laptop computer. He has to sit so close to the screen to be able to read it that his nose is making an indentation in the screen.
Facilitator’s Guide
ADA Trainer Network, Module 7a

Facilitator’s Notes (Slide 6)

The majority of people in today’s workforce are used to having technology available to them at all times. This is true of everyone from those just entering the work force to those of us who have been working for some time. As we become more technology savvy, easy to use technology should become more commonplace if we are thoughtful about how we apply technology in the workplace. Employers can access many solutions for things like organization and work place efficiency because everyone is also using these solutions in their daily life. Remember that very few jobs do not rely on technology in some way, shape, or form. Whether its taking orders for customers at a landscaping service or restaurant, billing in a medical office, or sitting at a computer all day – most of us use technology. If we ensure that the technology we put in place is accessible, it makes it easier to make accommodations in the future.
Facilitator’s Guide
ADA Trainer Network, Module 7a

Why make technology accessible?

Technology offers unprecedented opportunities and independence for people with disabilities and offers increased market share for online business and services.

Facilitator’s Notes (Slide 7)

Accessible technology promotes independence through access to online services:

- Personal uses of online services, banking, shopping, online newspapers, email
- Work-related uses of online services and information
- Email communications, online forms and processes, research and information gathering
- Accessible Technology enhances opportunities to pursue careers in science and technical fields such as computer programming, but also allows people to access a number of other jobs in a variety of fields that use computers in completing daily tasks. In addition to access to work for people with disabilities, accessible sites can create opportunity for businesses to make money from people with disabilities who access their goods and services using those sites. Think of how many people do much of their banking online or shop via the internet whether or not they have a disability. To ensure that as many people as possible can access your goods and services, it is important to make them usable by as many people as possible.
Facilitator’s Notes (Slide 8)

Accessible technology provides an on-ramp for people with disabilities to use your businesses technology infrastructure. If that infrastructure was designed to work with specialized technology for people with disabilities, workplace solutions will be much easier to implement. There are 3 important components of an accessible technology environment. Universal design, accessible electronic and information technology, and assistive technology. We will discuss these in greater detail in the next few slides.
Universal Design

- Universal design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

  – Ron Mace, Center for Universal Design, 2008

Facilitator’s Notes (Slide 9)

The principles of universal design include equitable use. Flexibility in use, simple and intuitive design, includes perceptible information, a tolerance for error, low physical effort to use, and sufficient size and space for approach and use. The concept initially came to us from the building trades, but it can be applied in any number of contexts. The important point is that Universal Design means accessible to most.

Windows 7 is an excellent example of Universal Design in action. Let’s look at the next slide.
Facilitator’s Notes (Slide 10)

This is a screen shot of Windows Ease of Access Center that is accessible through your computer control panel. The Ease of Access Center allows the user to set up accessibility features in the windows operating system. This is an excellent example of universal design at work. The user has the option of turning on features such as a magnifier to enlarge the icons on your screen, an on-screen keyboard if you are unable to use a standard keyboard, a narrator that can read the screen to you or an option to change the contrast on the screen for easier viewing if you have low vision. You can optimize a computer for use if you are blind, if you have a cognitive impairment, if you don’t use a mouse to operate the computer and many other tasks. Windows offers these features, and it also allows for users to connect assistive technology when these options are not sufficient for their needs.
What is Accessible Electronic & Information Technology

• Accessible electronic and information technology can be used by people with a wide range of abilities and disabilities. It incorporates the principles of universal design. Each user is able to interact with the technology in ways that work best for him or her. Accessible technology is either directly accessible...or it is compatible with standard assistive technology.

University of Washington, 2008

Facilitator’s Notes (Slide 11)

This slide provides a definition of Accessible Electronic and Information Technology. Examples of accessible electronic and information technology include:
• Computer software that can be entirely controlled using keyboard commands
• Accessible web pages
• Videos that are captioned and/or narrated
Facilitator’s Notes (Slide 12)

This definition is from the Assistive Technology Act of 1998 and has been repeated in IDEA and other laws. Assistive technology is a device (software or hardware) which is selected specifically to meet the particular needs of the individual. Remember that assistive technology does not have to be something that is specifically designed for people with disabilities. Many of the products available at office supply stores could be considered AT if it helps someone perform a task more easily. For example, an electric stapler may be a convenience for some, for others it allows them to complete a simple task easily and efficiently where it may have been difficult or impossible without the technology.

**Assistive technology services include:**

- An evaluation of the AT needs of an individual, including a functional evaluation of how AT would help the individual
- Purchasing, leasing, or otherwise providing an AT device
- Selecting, designing, fitting, customizing, adapting, applying, maintaining, repairing, replacing, or donating an AT device
- Coordinating and using therapies, such as occupational therapy or physical therapy, with AT devices under an educational plan or rehabilitative plan
- Training or technical assistance for an individual with a disability, or his or her family members, guardians, advocates, or authorized representatives
• Training or technical assistance for educational or rehabilitation professionals, manufacturers of AT devices, employers, providers of training and employment services, and others who help individuals with disabilities

• A service that expands access to technology, including email and Internet, to persons with disabilities.

Facilitator’s Notes (Slide 13)

Accessible Technology can play a critical role in providing reasonable accommodations, but to ensure success, all pieces of the technology environment must work together. The technology used generally by the organization should be a universally designed or designed to provide access to as many people as possible. The goal of the company should be a universally designed electronic and information technology environment that will allow for the addition of assistive technology where necessary for someone with a disability. For example, Microsoft Word is a good example of universally designed technology as it features a built in accessibility wizard, a magnifier (2x to 9x magnification), a text to speech program and an on-screen keyboard – however it may not be sufficiently accessible for someone with extremely low vision who may need an assistive technology such as Zoom Text (which offers magnification up to 36x). Microsoft Word allows the person with a disability to install this specialized technology and seamlessly interface with the features and functions of the program – the user can do anything that someone who uses the program without technology can do, they just do it in a different way.
Facilitator’s Notes (Slide 14)

Not all technology is complex. Simple solutions are often just as effective for many people with disabilities. It is important to provide the most effective solution for someone seeking an accommodation, but start with simple technology and work your way up. For example, there are computer interfaces that allow you to access the computer by looking at a point on the screen for a certain period of time (called eye gaze technology). While this is fascinating technology, it is also quite expensive! If the person is able to effectively access the computer using a different keyboard or mouse, you will find this solution to be both less costly and easier to teach the person to use and maintain in good working condition. No matter what solution is put in place, remember that technology can be a critical piece of the puzzle for many people with disabilities to lead full lives.

Example of a practical low to high technology solution:
A person with limited use of his hands had a job as a billing clerk for a small business. He was responsible for entering all payments into a excel spread sheet to track who had paid and who still needed to be billed. As part of this job, he opened all mail addressed to his department. He was unable to open the envelopes in a traditional manner so a technology solution was necessary. Solutions to this task might include a low tech option of using a letter opener that allows the person to slide a protected blade along the edge of the letter or a slightly higher tech solution of an electronic letter opener. In this case, the persons limited hand strength required the use of an electric letter opener.
Computer-related Assistive Technology

- Adaptive keyboard
- Screen-reader software
- Screen magnification software
- Pointing device

Facilitator’s Notes (Slide 15)

There are several pieces of AT pictured in this slide, including an enlarged keyboard, a refreshable Braille display, an adapted workstation, and a mouth stick. The final picture illustrates how someone would use a mouth stick to select keys on a keyboard. We will discuss various AT devices in more detail later in the program.
Presenters Notes (Slide 16):

National Network: Please insert your centers contact information into this slide.

Conclude by reminding participants that the training materials were produced by the Northeast ADA Center in collaboration with the National ADA Network. Remind them of the free and confidential technical assistance and other services available from your local ADA Center and from the ADA Centers throughout the country. Mention the ADA TA line: 800-949-4232.