

JAN

Job Accommodation Network

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Accommodation and Compliance Series

Accommodation and Compliance Series: Assistive Technology

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Introduction

According to the Merriam-Webster dictionary, technology is the use of science in industry, engineering, etc., to invent useful things or to solve problems. Assistive technology (AT) refers to technology that is specifically designed for and used by people with disabilities. The following steps are helpful when choosing AT to meet the specific accommodation needs of an employee with a disability:

Step 1. Define the Situation

The first step in choosing AT to accommodate an individual with a disability is to define the situation. An effective way to do this is to determine what job functions need to be accommodated by evaluating the individual's work site, work station, and work activities. Answering the following questions will assist with defining the situation:

- What are the individual's functional limitations? A functional limitation involves difficulty in performing one or more specific work activities (e.g., difficulty communicating during meetings, using a telephone, reading print material, lifting boxes, and using a keyboard).
- What is the extent and type of impairment? Determining whether a condition is progressive or stable may not always be a factor to consider. However, knowing how the individual's condition will improve or worsen over time can be important when choosing AT (e.g., an employee with progressive vision loss may benefit from screen magnification now, but may need screen reading software in the future as his condition worsens. In some cases, it may make more sense to go ahead and purchase the screen reading software now).
- What job tasks are difficult to perform as a result of the impairment? This may be a good time to study the individual's job description to determine the essential and marginal functions of the position (e.g., distinguishing color, entering data, lifting materials, and tolerating stress).

Step 2. Explore Available AT Options

Once the situation has been defined, the next step is to explore available AT options. A good starting point is consulting with the individual who needs the accommodation. Often the individual knows what AT is available. Also, talking with the individual can help determine whether the individual is proficient in using a certain type of AT, which can save research and training time. Another way to explore available AT options is to contact JAN directly to speak with an AT specialist and/or access JAN's [Searchable Online Accommodation Resource \(SOAR\)](#), which lets users explore various accommodation options for people with disabilities in work settings.

Other resources that can help employers explore available AT options include the following agencies:

- [State Vocational Rehabilitation \(VR\) agencies](#) provide services to ensure gainful employment for people with disabilities. In addition to job placement, services may include, but are not limited to counseling, vocational evaluation, assessment, on-the-job training, rehabilitation technology services, and possible assistance with funding accommodations.
- [State AT Projects](#) provide technical assistance on AT, consultation, product demonstrations, equipment borrowing, and low-interest loans for individuals with disabilities.
- The [Rehabilitation Engineering and Assistive Technology Society of North America \(RESNA\)](#) provides information on Assistive Technology Practitioners (ATP) or Rehabilitation Engineering Technologists (RET).

A final option for exploring available AT is to consult with the computer technician or IT team at the individual's workplace. Compatibility and feasibility issues should be addressed and it may be possible for an IT representative to download trial versions and test free demos of AT.

Step 3. Choose AT

Once steps 1 and 2 are completed, an informed choice can be made about the AT. When choosing AT, consider the following:

- Is there technical support available?
- Is there a money back guarantee and warranty?
- Is there an option to upgrade with newer versions?
- Is the product compatible with other technology used?
- Is training available?
- Does the electronic infrastructure support interoperability with the AT?
- How will the AT be funded?

Tax incentives, vocational rehabilitation services, and local civic organizations may assist with funding AT. For more information on funding options, go to [JAN's A to Z by Topic: Funding](#).

Step 4. Implement AT

Once a potential AT solution is chosen, the next step is to implement the AT, which involves purchasing the product or service, providing appropriate training, and ensuring that the individual with the disability can successfully use the AT.

Step 5. Monitor and Upgrade AT

Providing AT as an accommodation is an ongoing process between an employee and his/her employer. It is important to keep the lines of communication open, to monitor the effectiveness of the accommodation to ensure that the AT is meeting the needs of the employee and employer, and to upgrade the AT as needed. Some questions to consider include:

- If training was provided, was it effective?
- Is the AT being used properly?
- Is the AT being maintained?
- Should other accommodations besides AT be considered?

Take into account any changes in the individual's functional limitations or job duties that would alter current accommodation needs and the effectiveness of the AT. When changes occur, an employer may need to communicate with employees who use AT in the workplace.

Situations and Solutions:

The following situations and solutions are real-life examples of accommodations that were made by JAN customers. Because accommodations are made on a case-by-case basis, these examples may not be effective for every workplace but give you an idea about the types of accommodations that are possible.

A social worker with Type 2 diabetes was experiencing vision loss. The individual requested a reduced workload.

The employer contacted JAN looking for alternatives to lowering productivity standards. JAN suggested stand magnification equipment for reading print materials and screen magnification software for reading from the computer screen.

A clerk at a local government was experiencing weakening speech due to Lou Gehrig's disease.

Her job required her to communicate to coworkers and the public. Following a JAN consultation, the employer ended up providing the employee with a portable text communication device along with an Augmentative and Alternative Communication (AAC) Device which enabled her to communicate effectively in the workplace.

A customer service representative with arthritis had difficulty typing for long periods.

The individual was accommodated with an ergonomic keyboard and tablet computer.

A federal employee who needed to work around hazardous materials needed to identify hazardous materials by means of color coded labels.

He also needed to respond appropriately to colored lights. A JAN consultant discussed use of a handheld color identifier to identify the labels and also suggested that the employee could check with an ophthalmologist to see if they were a candidate for special lenses designed to help with improved color detection. The employer purchased a handheld color identifier and ask the employee if they would be willing to check with an ophthalmologist to see if color enhancing lenses or another solution could assist them in responding appropriately to colored lights. He was temporarily excused from the task involving lights until he could check with his ophthalmologist.

A secretary with muscular dystrophy was restricted from typing information into her computer due to fine motor limitations.

She was accommodated with speech recognition.

A teacher with multiple sclerosis was having difficulty communicating with students because his speech became soft and slurred when he was fatigued.

He was given a personal speech amplifier so he would not have to strain to project his voice, and he was allowed to schedule his classes so he could take periodic breaks.

A phlebotomist who is deaf was provided a text to speech device to communicate with patients.

He was also given a vibrating pager with visual display so he could be contacted while in remote locations of the hospital.

An individual employed as a patient rights advocate had carpal tunnel syndrome and fibromyalgia.

She had difficulty keyboarding, writing, and transporting supplies to presentations. The employer installed speech recognition software for word processing, provided her with writing aids, and gave her lightweight portable carts to assist with transporting materials.

An office assistant with cerebral palsy had difficulty typing due to mild spasticity in her upper extremities.

Her employer purchased a keyguard to go over her keyboard to help her hit the right keys and forearm supports to help stabilize her arms.

A scientist on the autism spectrum was able to speak at times but also experienced episodes when she found it difficult to speak and needed to use a speech device or speech generating app.

She was preparing to present her research at a conference. She pre-recorded audio to go with her slides and brought a tablet with a speech generating app with her in case she needed it during the question and answer portion of her presentation.

A receptionist who was recovering from vocal surgery had difficulty speaking loudly enough for customers to hear her when she greeted them.

She also experienced vocal fatigue when speaking on the phone. Her employer purchased a voice amplifier for face to face use and one designed for telephone use as well, so that she did not have to strain her voice to speak more loudly.

An applicant for an administrative position only had the use of one hand.

The employer requires all employees to be able to type at a certain speed or higher. The applicant states that she is unable to meet this speed with a traditional keyboard, but can with a keyboard designed for one hand use. The employer purchased a one-handed keyboard as an accommodation.

A delivery person with AD/HD had difficulty with time management.

She spent excessive time making deliveries and would forget to return to the warehouse between daily runs. The employer provided a personal organizer watch that could be programmed to beep and display a written message many times throughout the day. This auditory and written prompt helped the employee move quicker from task to task, and helped remind her to return to the warehouse to gather her next load.

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