

# JAN

Job Accommodation Network

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## Fact Sheet Series

# Universal Design and Assistive Technology In the Workplace

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A service of the U.S. Department of Labor's Office of Disability Employment Policy

# JAN'S ACCOMMODATION FACT SHEET SERIES

## UNIVERSAL DESIGN AND ASSISTIVE TECHNOLOGY IN THE WORKPLACE

### Introduction

In the labor market, employers strive to stay competitive by attracting and maintaining a diverse workforce. While a diverse workforce brings a wealth of experience and stability to the workplace, at the same time, a diverse workforce means different and unique needs among employees. One way employers can meet these needs is by using equipment that includes universal design (UD) features. UD is the process of creating products that are usable by as wide a range of people as possible. UD features are integrated into devices, environments, processes, and systems such as architecture, kiosks, telecommunications, restrooms, and workplace elements. Specific examples include door handles, keyboards, telephones, and transportation features that are more inclusive.

Equipment that has UD features can help employers attract and maintain a diverse workforce that includes employees with disabilities. Such equipment, by its nature, is going to be useful for a larger number of employees and often has built in accessibility features, which can reduce the need to purchase additional equipment for employees with disabilities. In addition, many product manufacturers have begun to integrate principles of UD into the newest available technologies and using the newest technologies can give employers an advantage over competitors.

Although employers may see the advantages of purchasing equipment with UD features, some may not know how to find it. In addition, even with UD built in, some equipment may not be usable by employees with disabilities and employers may need to consider purchasing assistive technology (AT) as an accommodation. AT is any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of individuals with disabilities.

A key consideration in purchasing any type of equipment, especially electronic and information systems, with UD features is the concept of interoperability. Interoperability means that the system is compatible with other technologies and has features that support the integration of AT. Without interoperability, it may be very difficult and time consuming to make changes, increase accessibility, or integrate AT. Working to make interoperability a part of the initial purchasing phase can help eliminate these problems.

This publication provides helpful tips for choosing equipment that includes UD features, a process for choosing AT for employees with disabilities, and resources for additional information.

## **Tips for Choosing Equipment that Includes Universal Design Features**

The following provides ideas for employers to consider when purchasing equipment for the workplace.

- 1) Consider equipment that has UD features integrated into its design. For example, many computer operating systems have display options that enable users to increase font size. Purchasing software that is compatible with these features will meet the needs of many users.
  
- 2) Assess new and emerging electronic and information systems for interoperability with AT. For example, implementing a database tracking system without considering interoperability with AT can result in compatibility problems if screen reading software is installed. Considering interoperability when the tracking system is purchased will prevent delays in implementing AT.
  
- 3) Evaluate whether the equipment can be maintained easily. For example, some evacuation devices are powered by batteries to assist those individuals who are evacuating people with mobility impairments. Whether the battery will be available and working during an emergency is an important consideration.
  
- 4) Evaluate whether the equipment can be upgraded easily. For example, speech recognition software is available to individuals who cannot use a keyboard to enter information. Upgrades of software typically require additional computer memory. Whether a new system has the capability to be upgraded should be evaluated.
  
- 5) Determine if the system can be used by a majority of the workforce. For example, if an employer provides cell phones to employees, determine whether the service provides alternative communication such as text messaging.
  
- 6) Include the disability program manager, as well as representatives from information technology, purchasing, management, and safety departments when considering purchases that affect many employees. For example, if a Web conferencing system is under consideration for training activities, consider options that make materials accessible to screen readers and captioning services.

## A Process for Choosing AT for Employees 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. SOAR is available at: <http://askjan.org/soar>

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. For a list of state VR agencies, go to: <http://askjan.org/cgi-win/TypeQuery.exe?902>
- State AT Projects provide technical assistance on AT, consultation, product demonstrations, equipment borrowing, and low-interest loans for individuals with disabilities. For a list of state AT Projects, go to: <http://askjan.org/cgi-win/TypeQuery.exe?735>
- The Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) provide information on Assistive Technology Practitioners (ATP) or Rehabilitation Engineering Technologists (RET). To access a Directory of ATPs and RETs from RESNA, go to: <http://www.resna.org>
- Disability specific organizations can also be helpful resources. For a listing of organizations by specific disability, go to: <http://askjan.org/links/disspec.htm>

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: <http://askjan.org/links/Funding/Generalinfo.html>

### **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.

Authored by Beth Loy, Ph.D., and Linda Carter Batiste, J.D. Updated 3/24/10.

## Resources

### **Job Accommodation Network**

West Virginia University  
PO Box 6080  
Morgantown, WV 26506-6080  
Toll Free: (800)526-7234  
TTY: (877)781-9403  
Fax: (304)293-5407  
jan@askjan.org  
<http://askjan.org>

### **Office of Disability Employment Policy**

#### **US Department of Labor**

200 Constitution Avenue, NW, Room S-1303  
Washington, DC 20210  
Toll free: (866)633-7365  
Direct: (202)693-7880  
Toll free TTY: (877)889-5627  
TTY: (202)693-7881  
Fax: (202)693-7888  
infoODEP@dol.gov  
<http://www.dol.gov/odep/>

### **ABLEDATA**

8630 Fenton Street  
Suite 930  
Silver Spring, MD 20910  
Toll Free: (800)227-0216  
TTY: (301)608-8912  
Fax: (301)608-8958  
ABLEDATA@macroint.com  
<http://www.abledata.com>

### **Assistive Technology Industry Association**

401 N. Michigan Avenue  
Chicago, IL 60611-4267  
Toll Free: (877)OUR-ATIA or 687-2842  
Direct: (312)321-5172  
Fax: (312)673-6659  
Info@ATIA.org  
<http://www.atia.org>

**California State University Northridge  
Center on Disabilities**

18111 Nordhoff Street  
Bayramian Hall Room 110  
Northridge, CA 91330-8340  
Direct: (818)677-2578 (V/TTY)  
Fax: (818)677-4929  
<http://www.csun.edu/cod/>

**Center for Universal Design**

NCSU College of Design  
101 Leazar Hall, 2230 Katherine Stinson Drive  
Campus Box 8613  
Raleigh, NC 27695-8613  
Toll Free: (800)647-6777  
Fax: (915)515-7330  
Phone: (919)515-3082  
[cud@ncsu.edu](mailto:cud@ncsu.edu)  
<http://www.design.ncsu.edu/cud>

**Computer/Electronic Accommodations Program  
Department of Defense**

511 Leesburg Pike, Suite 810  
Falls Church, VA 22041  
Direct: (703)681-8813  
TTY: (703)681-0881  
Fax: (703)681-9075  
[cap@tma.osd.mil](mailto:cap@tma.osd.mil)  
<http://www.tricare.osd.mil/cap/>

**Rehabilitation Engineering and Assistive Technology Society of North America**

Technical Assistance Project  
1700 North Moore Street, Suite 1540  
Arlington, VA 22209-1903  
Direct: (703)524-6686  
TTY: (703)524-6639  
Fax: (703)524-6630  
[resnaTA@resna.org](mailto:resnaTA@resna.org)  
<http://www.resna.org>

**Rehabilitation Engineering Research Center for Wireless Technologies**

Crawford Research Institute, Shepherd Center

2020 Peachtree Road, NW

Atlanta, GA 30309-1465

Direct: (404)367-1288

TTY: (404)367-1347

Fax: (404)350-7596

[merc@wirelessrerc.org](mailto:merc@wirelessrerc.org)

<http://www.wirelessrerc.org>

**Rochester Institute of Technology**

National Technical Institute for the Deaf

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