

# UNIVERSAL DESIGN

*"Our vision is to create innovative technology that is accessible to everyone and that adapts to each person's needs."*

— Bill Gates, Chairman, Microsoft Corporation

## Universal Design Defined

According to the Center for Universal Design, North Carolina State University, Universal Design (UD) is defined as the design of products and environments that are accessible and usable by all people to the greatest extent possible, without the need for adaptation or specialized design. Its key principles are simplicity, flexibility and efficiency. And whether we realize it or not, most of us benefit from UD on a daily basis.



Originally developed in response to the needs of the aging population and people with disabilities, UD has a much broader applicability. It means that facilities, programs, and services take into account the broad range of abilities, ages, reading levels, learning styles, languages, and cultures.

Businesses that embrace UD principles attract a greater diversity of customers and employees including, but not limited to, individuals with disabilities. This is because UD offers a lens through which every aspect of a business can be viewed and a set of tools through which products, services, customer satisfaction, and employee recruitment and retention can be improved. In the workplace, it is especially beneficial as applied to the physical environment, communications, and technology.

## Physical Environment

Nearly everyone encounters UD in the physical environment every day. For example, where sidewalk curbs used to be sharp drop-offs to the street, they are now usually cut to a sloping grade. These “curb cuts” were originally designed to allow people who use wheelchairs to get on and off sidewalks. However the true benefit of UD is that they are also routinely used by people pushing baby strollers, using crutches, riding bicycles, etc.

## Communication

UD in communication means that workplace practices or systems are useable by a majority of job candidates and employees. Consider the hiring process. Application forms and pre-employment tests can be made available in various formats, including large-print, which helps not only candidates with

low vision but also many senior workers. Similarly, a mixture of visual, auditory, and written learning opportunities ensures that training is inclusive of not only employees with disabilities, but also individuals with different learning styles or language proficiencies.

## **Technology**

Technical equipment with UD features also helps create a welcoming workplace. For example, cell phones with voice recognition technology help those who have difficulty using standard buttons—and those who simply find it more convenient. More and more, manufacturers are integrating UD into new products, and using these products can give employers a competitive edge—by increasing efficiency and attracting top talent seeking to use state-of-the-art technology.

## **Universal Design in Action**

Accessible automated teller machines (ATM) exemplify the transformation and benefits of adopting UD principles into products and services. The initial design and installation height of ATMs did not take into consideration little people or individuals who use wheelchairs. ATMs were usually installed to accommodate individuals of average height, featured a monochromatic screen with a smaller text size that did not consider visual acuity, and keypads developed without consideration of individuals' dexterity capability.

Today, most ATMs are designed with UD features and the capability to use assistive devices. ATMs provide voice and enhanced listening capabilities through speakers and audio jacks, standard lower interface heights, and screens with universally designed features to benefit all individuals. Additional features such as Braille instructions and large-print keys improve their universality by allowing users who are blind or who have low vision to independently operate an ATM.

The advent of telework is another example of UD in action. Many businesses are finding that employees are equally effective in their offices or homes and, as a result, have a higher level of productivity and job satisfaction—factors that ultimately result in increased profitability and success.

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