

## **The Principles of Universal Design**

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

The **Principles of Universal Design** were collaboratively authored by a working group of architects, product designers, engineers and environmental design researchers as a guide for a wide range of design disciplines including environments, products and communications.

### ***Principle 1: Equitable Use***

The design does not disadvantage or stigmatize any group of users.

#### Guidelines for Principle 1:

- A. Provide the same means of use for all users: identical whenever possible; equivalent when not.
- B. Avoid segregating or stigmatizing any users.
- C. Make provisions for privacy, security, and safety equally available to all users.
- D. Make the design appealing to all users.

### ***Principle 2: Flexibility in Use***

The design accommodates a wide range of individual preferences and abilities.

#### Guidelines for Principle 2:

- A. Provide choice in methods of use.
- B. Accommodate right- or left-handed access and use.
- C. Facilitate the user's accuracy and precision.
- D. Provide adaptability to the user's pace.

### ***Principle 3: Simple & Intuitive Use***

Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

#### Guidelines for Principle 3:

- A. Eliminate unnecessary complexity.
- B. Be consistent with user expectations and intuition.
- C. Accommodate a wide range of literacy and language skills.
- D. Arrange information consistent with its importance.
- E. Provide effective prompting and feedback during and after task completion.

#### ***Principle 4: Perceptible Information***

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

##### Guidelines for Principle 4:

- A. Use different modes (pictorial, verbal, tactile) for redundant presentation of essential information.
- B. Maximize "legibility" of essential information.
- C. Differentiate elements in ways that can be described (i.e., make it easy to give instructions or directions).
- D. Provide compatibility with a variety of techniques or devices used by people with sensory limitations.

#### ***Principle 5: Tolerance for Error***

The design minimizes hazards and the adverse consequences of accidental or unintended actions.

##### Guidelines for Principle 5:

- A. Arrange elements to minimize hazards and errors: most used elements, most accessible; hazardous elements eliminated, isolated, or shielded.
- B. Provide warnings of hazards and errors.
- C. Provide fail safe features.
- D. Discourage unconscious action in tasks that require vigilance.

#### ***Principle 6: Low Physical Effort***

The design can be used efficiently and comfortably and with a minimum of fatigue.

##### Guidelines for Principle 6:

- A. Allow user to maintain a neutral body position.
- B. Use reasonable operating forces.
- C. Minimize repetitive actions.
- D. Minimize sustained physical effort.

#### ***Principle 7: Size & Space for Approach and Use***

Appropriate size and space is provided for approach, reach, manipulation, and use regardless of the user's body size, posture, or mobility.

##### Guidelines for Principle 7:

- A. Provide a clear line of sight to important elements for any seated or standing user.
- B. Make reach to all components comfortable for any seated or standing user.
- C. Accommodate variations in hand and grip size.
- D. Provide adequate space for the use of assistive devices or personal assistance.

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