

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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