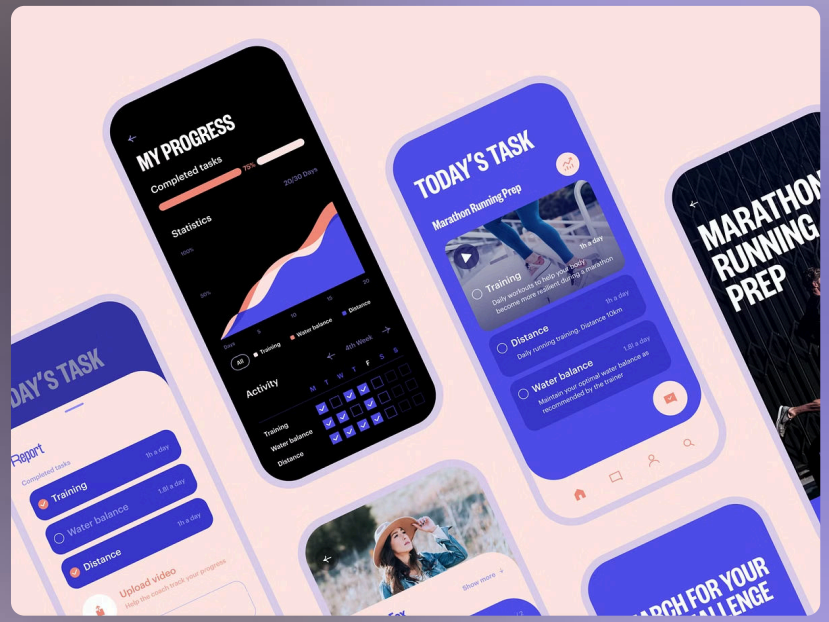


Introduction to Usability of Interactive Systems

Usability is a critical aspect of modern interactive systems, from websites and mobile apps to software and hardware interfaces. It encompasses the ease with which users can understand, navigate, and accomplish their goals within a digital environment. This introduction will explore the key concepts of usability, including its goals, measures, and motivations, as well as the importance of universal usability and the professional responsibilities involved in managing usability efforts.

Usability Goals and Measures

Usability Goals

The primary goals of usability are to ensure that interactive systems are efficient, effective, and satisfying for users. This includes making tasks easy to complete, minimizing errors, and providing a positive user experience. Usability also aims to improve accessibility, ensuring that systems are inclusive and usable by people with diverse abilities and backgrounds.

Usability Measures

Usability can be measured through a variety of metrics, such as task completion rates, error rates, user satisfaction, and learnability. These measures provide valuable insights into how well a system meets the needs of its users and inform ongoing improvements and refinements.

User-Centered Approach

Effective usability design requires a user-centered approach, where the needs, preferences, and behaviors of the target audience are deeply understood and prioritized. This involves user research, iterative design, and continuous evaluation to ensure that the final product meets the users' needs and expectations.

Usability Motivations

1 Improved User Experience

Usability is essential for creating interactive systems that are intuitive, engaging, and satisfying for users. By prioritizing usability, designers and developers can ensure that users can accomplish their tasks efficiently and effectively, leading to increased user satisfaction and loyalty.

2 Competitive Advantage

In today's crowded digital landscape, usability can be a key differentiator for businesses. Products and services that offer a superior user experience are more likely to attract and retain customers, giving organizations a competitive edge in the market.

3 Cost Savings

Investing in usability can lead to significant cost savings in the long run. By identifying and addressing usability issues early in the development process, organizations can avoid the time and expense of fixing problems later on, as well as reduce support and training costs for users.

4 Regulatory Compliance

In some industries, such as healthcare and government, there are legal requirements and regulations related to the accessibility and usability of interactive systems. Adhering to these standards not only ensures compliance but also demonstrates a commitment to inclusivity and accessibility.

Universal Usability

Inclusive Design

Universal usability aims to create interactive systems that are accessible and usable by people of all abilities, including those with physical, cognitive, or sensory impairments. This involves incorporating inclusive design principles, such as providing alternative input/output options, clear and intuitive interfaces, and support for assistive technologies.

Diverse User Needs

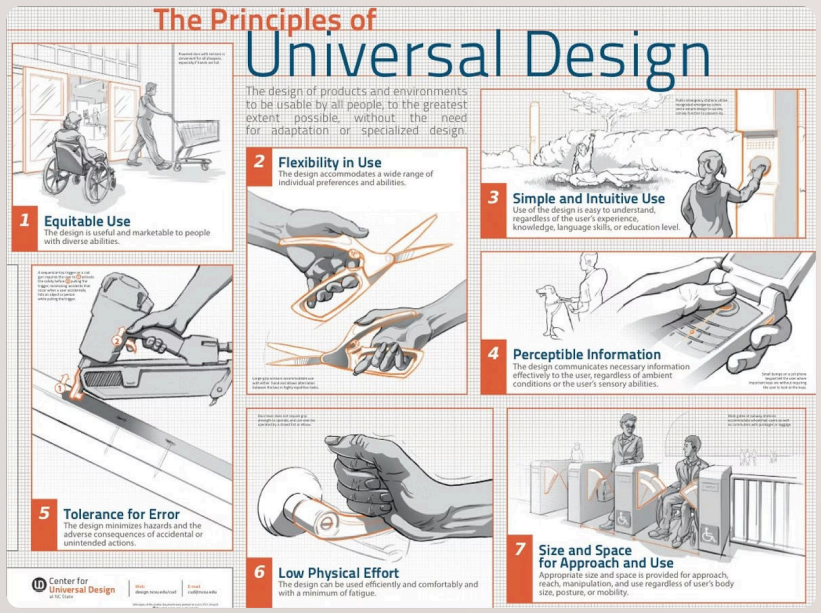
Achieving universal usability requires a deep understanding of the diverse needs and preferences of users, including factors such as age, language, cultural background, and technological proficiency. By considering these diverse user characteristics, designers and developers can create more inclusive and accessible interactive systems.

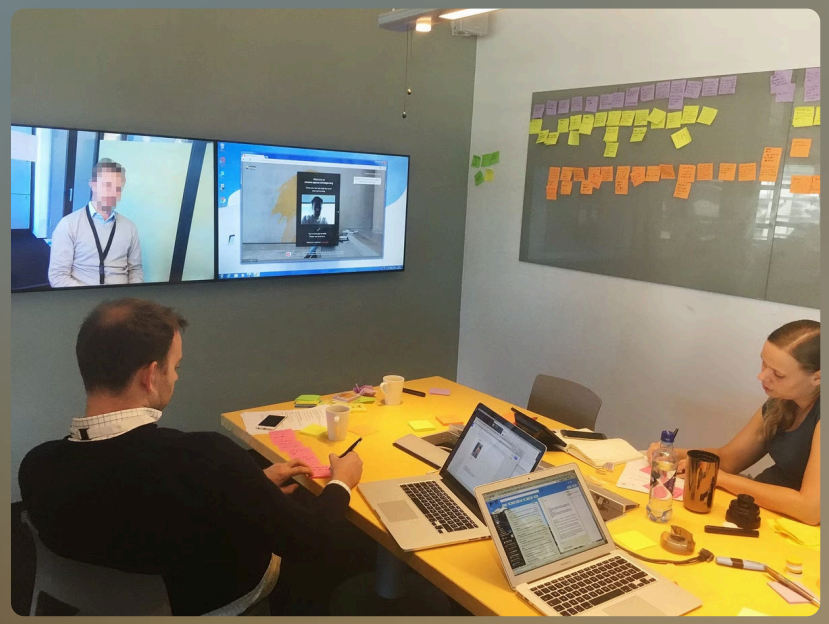
Iterative Evaluation

Ensuring universal usability is an ongoing process that requires iterative evaluation and testing with a wide range of users. This process helps to identify and address any barriers or challenges faced by users, ensuring that the final product is as accessible and inclusive as possible.

Collaboration and Advocacy

Achieving universal usability often requires collaboration between designers, developers, accessibility experts, and user advocates. By working together, these stakeholders can ensure that the needs of all users are considered and that accessibility is a priority throughout the design and development process.





Goals for Our Profession Managing

1

Educate and Advocate

As usability professionals, we have a responsibility to educate our organizations, clients, and the broader community about the importance of usability and accessibility. This involves advocating for the integration of user-centered design principles and best practices throughout the development lifecycle.

2

Establish Standards and Guidelines

To ensure consistent and high-quality usability, we should work to establish industry-wide standards and guidelines that define best practices for interactive system design. These standards can help organizations and professionals align on a common framework for delivering exceptional user experiences.

3

Foster Collaboration and Interdisciplinary Partnerships

Effective usability management requires close collaboration between a wide range of professionals, including designers, developers, project managers, and user researchers. By fostering interdisciplinary partnerships, we can ensure that usability is integrated into the entire product development process.

Introduction to Guidelines, Principles, and Theories

Guidelines

Usability guidelines are specific recommendations and best practices that can be applied to the design and development of interactive systems. These guidelines cover a wide range of topics, from interface layout and navigation to error handling and accessibility, and provide a framework for creating user-friendly and intuitive experiences.

Principles

Usability principles are high-level, overarching concepts that inform the design and evaluation of interactive systems. These principles, such as visibility, feedback, and consistency, serve as guiding lights for designers and developers, helping them to create products that are intuitive, efficient, and satisfying for users.

Theories

Usability theories are research-based frameworks that explain how users interact with and perceive interactive systems. These theories, such as the Fitts' Law and the Norman's Stages of Action, provide a deeper understanding of human-computer interaction and can inform the design and evaluation of user interfaces.

Usability Guidelines

Visibility

Ensure that the system's functionality and options are clearly visible and accessible to users, reducing the cognitive load and improving overall usability.

Feedback

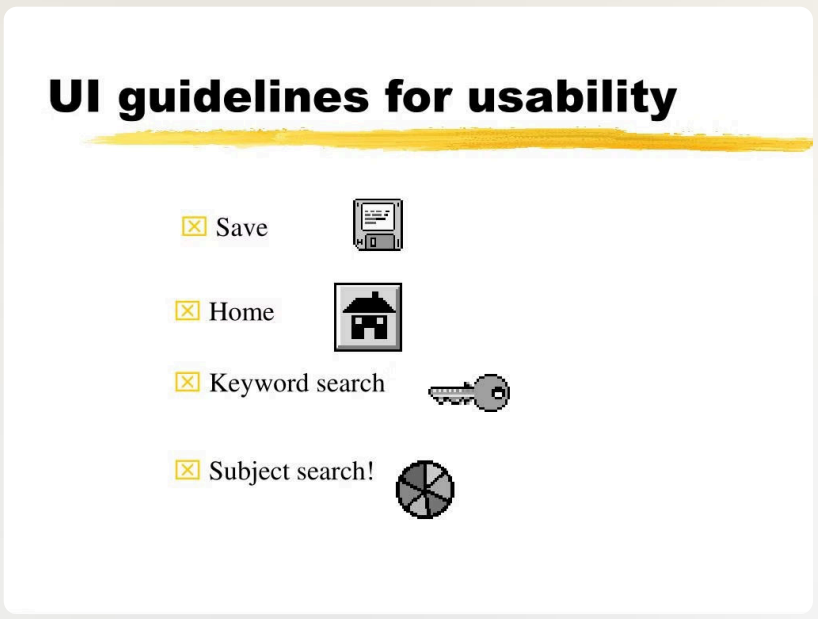
Provide clear and timely feedback to users about the status of their actions, helping them understand the system's behavior and maintain a sense of control.

Consistency

Maintain consistency in the design and behavior of the system, making it easier for users to learn and navigate, and reducing the likelihood of confusion and errors.

Error Prevention

Design the system to prevent or minimize user errors, and provide clear and helpful error messages to assist users in recovering from any mistakes.



Usability Principles

1

User-Centered Design

Place the user's needs, goals, and behaviors at the center of the design process, ensuring that the system is tailored to their requirements and preferences.

2

Simplicity and Efficiency

Strive for simplicity in the design, minimizing the cognitive load on users and enabling them to accomplish their tasks with ease and efficiency.

3

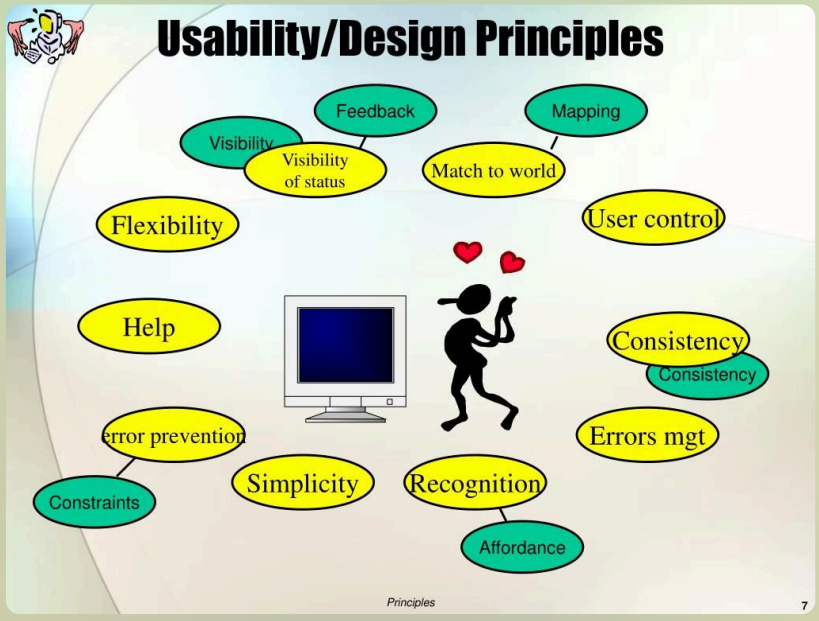
Flexibility and Adaptability

Ensure that the system is flexible and adaptable, allowing users to customize and personalize their experience to fit their individual needs and preferences.

4

Learnability and Memorability

Design the system to be easy to learn and remember, reducing the time and effort required for users to become proficient and reducing the likelihood of errors.



Usability Theories

Fitts' Law	Describes the relationship between the size and distance of a target, and the time required to acquire it, informing the design of user interfaces and input devices.
Norman's Stages of Action	Explains the cognitive process users go through when interacting with a system, providing insights into designing intuitive and user-friendly interfaces.
Theory of Affordances	Suggests that the perceived affordances of an object or interface element can influence how users interact with it, guiding the design of intuitive and self-explanatory systems.
Information Foraging Theory	Applies concepts from animal foraging behavior to understand how users navigate and search for information within digital environments, informing the design of effective information architectures and navigation systems.