

Summary of Design Lessons from *The Thoughtless Design of Everyday Things* by Karl Weigers

General

- #1. Focus design on usage, not on product features.
- #2. Design demands iteration.
- #3. Involve real users.
- #4. Certain combinations of design-for attributes present inescapable trade-offs.
- #5. Usability design should accommodate both novice and expert users when relevant.

Design Principle #1: Make the product easy and obvious to use.

- #6. Small design problems can interact to yield unexpectedly significant results.
- #7. Present the user only with unambiguous and useful options.
- #8. When choosing among design trade-offs, provide the maximum benefit to the maximum number of people.
- #9. Understand your target audience well enough to anticipate what they will consider to be intuitive.
- #10. Ensure that the user won't be surprised with unexpected and undesired behavior.
- #11. If you change the state of the user's system, restore the original configuration when appropriate.
- #12. Use context to activate relevant functions.
- #13. A new and unobvious design for a familiar device can frustrate users.
- #14. Let the user take necessary actions in context.
- #15. Provide customers with specific documentation for a particular product.
- #16. Have your documentation reviewed by a fluent speaker of the language in which it's written.
- #17. Provide detailed indexes and rich search capabilities for user manuals.

Design Principle #2: Consider realistic usage scenarios.

- #18. Design the product to perform well in a wide range of realistic usage contexts.
- #19. Override default construction patterns based on actual anticipated building usage
- #20. Select appropriate user interface controls based on the number of user-selectable options
- #21. Make common operations easy to perform.
- #22. Consider the full spectrum of both deliberate and accidental usage when positioning components.
- #23. Design to protect against harmful, dangerous, or destructive users and usage scenarios.

Design Principle #3: Consider a wide range of usage environments.

- #24. Ensure the design's usability and safety in a wide range of environments and conditions.
- #25. Provide multiple forms of sensing to accommodate diverse lighting conditions.
- #26. Understand the capabilities and limitations of the operational environments to ensure the product can be used in them.

Design Principle #4: Make it hard to make a mistake.

- #27. Make products easy to use correctly and hard to use incorrectly.
- #28. Detect unsatisfied preconditions and erroneous inputs early so the user doesn't waste time on a task they cannot complete.
- #29. Notify users of invalid input immediately, clearly describe the problem, and guide them to correct it.
- #30. Employ physical or logical constraints to make it impossible for the user to make a mistake.
- #31. Provide input controls and processing to minimize the need to report errors.
- #32. Make it very hard for a user to take a destructive action by mistake.
- #33. Give the user options to exit from a task or to return to a previous step.
- #34. Anticipate errors that users might commonly make, assess the user's intent when possible, and help users recover from the errors.
- #35. Design device controls that the user can easily distinguish by both sight and touch.

Design Principle #5: Provide meaningful feedback.

- #36. Instructions, help displays, and error messages should all match the product.
- #37. Communicate input instructions and constraints up front.
- #38. Don't waste the user's time and attention with meaningless feedback.
- #39. Phrase dialogs to ensure the implications of all options are clear.
- #40. Craft messages both to inform the user of a problem and to help them solve the problem.
- #41. Trap software errors and provide meaningful descriptions with recovery guidance.
- #42. Let the user decide when to clear a message.

Design Principle #6: Don't waste the user's time.

- #43. Make it easy for users to access the tasks they perform most frequently.
- #44. Let the user take the fewest possible actions to perform a task.
- #45. Do not offer the user inapplicable options.
- #46. Try using your own product before you inflict it on others.
- #47. Make complex user interfaces quickly usable by novices, who can then gradually increase the functionality they exploit.
- #48. Provide the user with task options early and in context to minimize the steps required.

Design Principle #7: Design for the user's convenience.

- #49. A product that is used as intended should never cause the user harm.
- #50. Watch users employ current products to learn how to make them easier to use and more effective.
- #51. Let the user customize as much of the product's behavior as they wish.
- #52. Have the computer do as much work as possible to enhance the user's convenience.
- #53. Provide all pertinent information to the user.
- #54. Provide reference points to make indicators meaningful.
- #55. Design products to tolerate both technical faults and unexpected, imprecise human behavior.
- #56. Digital isn't superior to analog when it reduces the user's control.
- #57. Design packaging that customers can open easily and safely.
- #58. Design for the benefit of the consumer over that of the business.
- #59. Be clear and honest about fees and commitments associated with offers you make to customers.

Design Principle #8: Accommodate the range of human variation.

- #60. Design to accommodate the range of characteristics, capabilities, and limitations of the product's users.
- #61. Use multiple sensory channels to enable usage by people of all abilities.
- #62. Consider ergonomics and human anatomy, including size and strength, when designing physical products.
- #63. Any item that must be turned should depart from a circular shape and have a textured surface.

Design Principle #9: Place the minimum mental burden on the user.

- #64. Minimize user perplexity.
- #65. Conform to established standards and conventions.
- #66. Make functionality shared by members of a product family consistent.
- #67. Use consistent labels for analogous functions.
- #68. Make controls logically fit the words and conventions we use to describe device behaviors.

Practices for thoughtful design

- #69. Identify the individuals who will provide the voice of the customer for each user class.
- #70. Design systems as integrated wholes.