

1 Visibility of System Status

Designs should *keep users informed* about what is going on, through appropriate, timely feedback.



Interactive mall maps have to show people where they currently are, to help them understand where to go next.

2 Match between System and the Real World

The design should *speak the users' language*. Use words, phrases, and concepts *familiar to the user*, rather than internal jargon.



Users can quickly understand which stovetop control maps to each heating element.

5 Error Prevention

Good error messages are important, but the best designs *carefully prevent problems* from occurring in the first place.



Guard rails on curvy mountain roads prevent drivers from falling off cliffs.

8 Aesthetic and Minimalist Design

Interfaces should not contain information which is irrelevant. Every extra unit of information in an interface *competes* with the relevant units of information.



A minimalist three-legged stool is still a place to sit.

Nielsen Norman Group

Jakob's Ten Usability Heuristics

3 User Control and Freedom

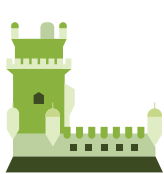
Users often perform actions by mistake. They *need a clearly marked "emergency exit"* to leave the unwanted action.



Just like physical spaces, digital spaces need quick "emergency" exits too.

6 Recognition Rather Than Recall

Minimize the user's memory load by making elements, actions, and options visible. Avoid making users remember information.



People are likely to correctly answer "Is Lisbon the capital of Portugal?".

9 Recognize, Diagnose, and Recover from Errors

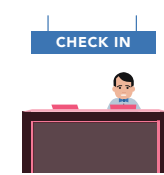
Error messages should be expressed in plain language (no error codes), precisely indicate the problem, and constructively suggest a solution.



Wrong-way signs on the road remind drivers that they are heading in the wrong direction.

4 Consistency and Standards

Users should not have to wonder whether different words, situations, or actions mean the same thing. *Follow platform conventions*.



Check-in counters are usually located at the front of hotels, which meets expectations.

7 Flexibility and Efficiency of Use

Shortcuts — hidden from novice users — *may speed up the interaction* for the expert user.



Regular routes are listed on maps, but locals with more knowledge of the area can take shortcuts.

10 Help and Documentation

It's best if the design *doesn't need* any additional explanation. However, it may be necessary to provide documentation to help users complete their tasks.



Information kiosks at airports are easily recognizable and solve customers' problems in context and immediately.

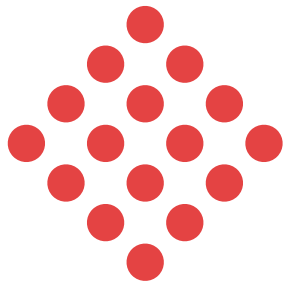
Gestalt Principles

Enclosure

visual border

Common Fate

elements that move together



Good Figure

Objects grouped together tend to be perceived as a single figure. Tendency to simplify.

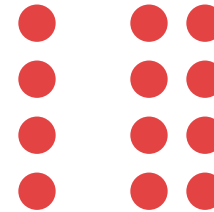
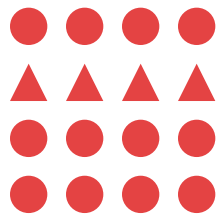


Figure / background

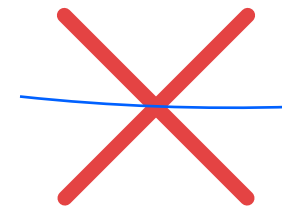
Proximity

Objects tend to be grouped together if they are close to each other. [in space](#)



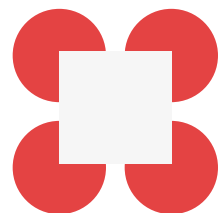
Similarity

Objects tend to be grouped together if they are similar.



Continuation

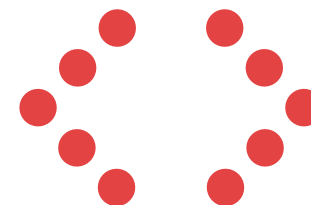
When there is an intersection between two or more objects, people tend to perceive each object as a single uninterrupted object.



Closure

Visual connection or continuity between sets of elements which do not actually touch each other in a composition.

[People will fill in with familiar shape](#)



Symmetry

The object tend to be perceived as symmetrical shapes that form around their center.