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The field of human-computer interaction (HCI) has developed a wide variety of methods, processes and guidelines that have been shown to be successful at helping teams create successful user interfaces (UIs). Probably the easiest path to success is to hire and empower a well-trained HCI professional, since there are now many degree programs that teach HCI skills.

If you want a highly usable and successful UI, the first requirement is to integrate HCI concerns and methods into the development process. For example, an important HCI method is contextual inquiry, which requires watching target users performing their real activities using the system or an analog, and helps teams understand the real requirements for the system from the user's point of view. HCI professionals next recommend iterative design using low- and high-fidelity prototypes, to repeatedly test design ideas with the target population, exposing barriers and problems early before they are too expensive to fix. Target users are asked to articulate what they are thinking while testing the prototype, so that testers can understand why users are confused or stuck and what they want instead. The HCI mantra is that if the user can’t use it, it doesn’t work. Testing for usability is just as important as any other kind of quality assurance.

These and other kinds of user tests are necessary for a UI to be successful, but they are not enough; you also need a good design. The most successful companies have a culture where design and usability requirements are given equal or even higher priority compared with engineering and marketing. HCI professionals also use guidelines to evaluate and improve the UI design. These cover everything from general information architecture issues, including the need to have a clear and consistent navigation scheme across the whole UI, to low-level design choices including which fonts and colors to use.

A FEW GUIDELINES

Consistency: Throughout the interface, use the same words, navigation scheme, colors, etc.

Prevent errors: Design the interface so that users are unlikely to make errors. For example, gray out or remove unavailable choices.

Easy error recovery: Users will still make errors, so error messages should give specific and clear instructions on how to recover.

Make status visible: For example, it should be obvious whether the user is logged in or not, what media is playing, etc.

Easy for novices and efficient for experts: First-time users should be able to figure out what to do from the displays, whereas experts should be able to skip directly to the desired operation.