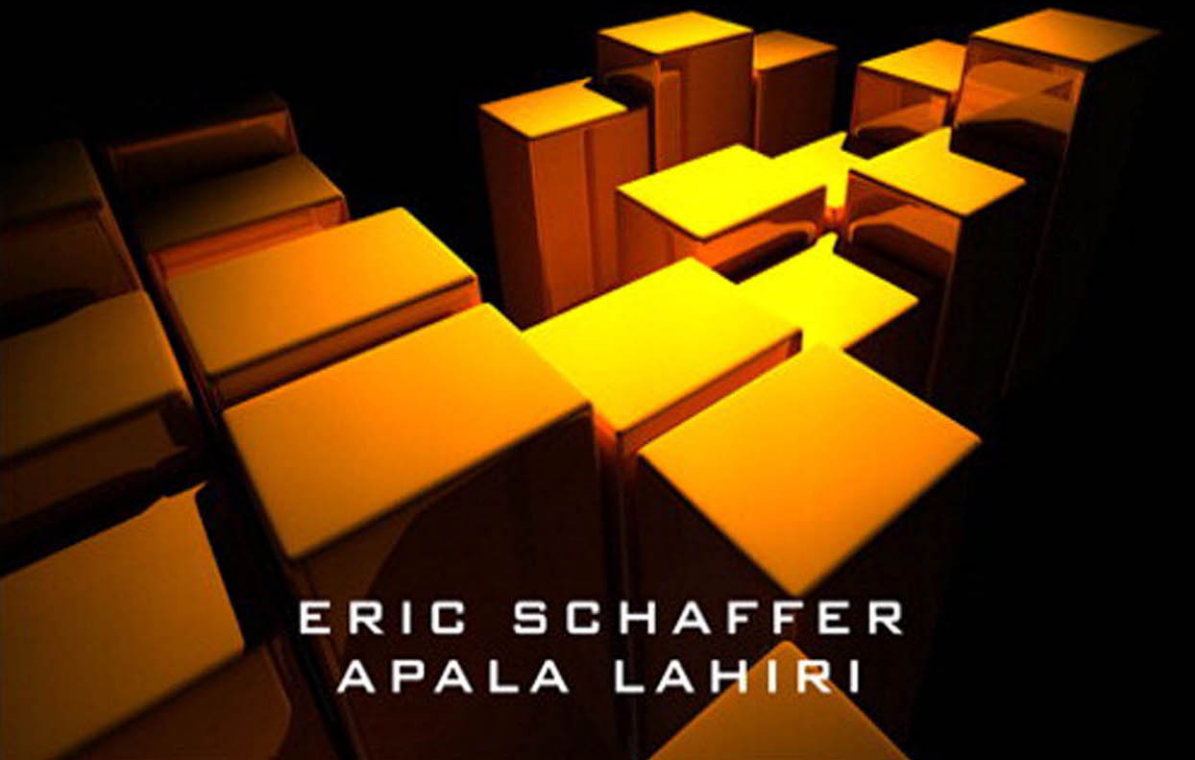
Second Edition

Institutionalization of UX

A Step-by-Step Guide to a User Experience Practice



Eric Schaffer
Apala Lahiri

Institutionalization of UX

Second Edition

of building a software product, as they should. They do not make engineering the user experience and associated tasks the primary focus of development, which means they build applications from the technology and data, inside out. User-centered design is a different way to approach development: it concentrates on the user and the user tasks, rather than on technical and programming issues. Following a user-centered design process is the only way to reliably create practical, useful, usable, and satisfying technology products. In a user-centered process, you design the user experience first, and then let it drive the technology (as shown in Figure 4-1).

Almost all practitioners in the field agree on the general steps required to follow a user-centered design process. You can document these steps yourself and build your own user-centered design process. Accomplishing this feat, however, may be slow, expensive, and time-consuming. You should undertake this task only if you have senior usability staff with many years of experience, as that

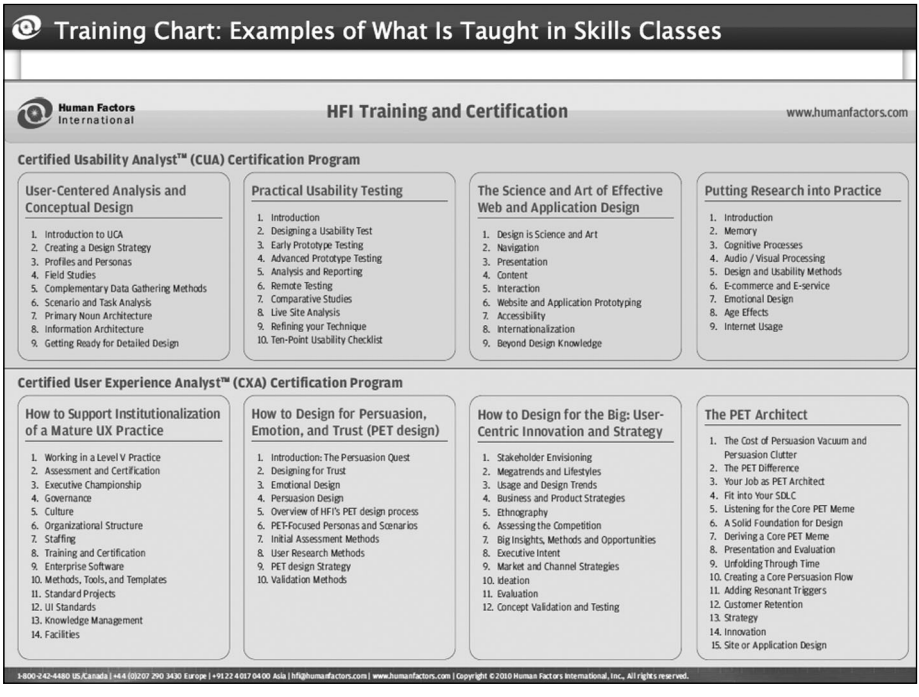


Figure 4-1: *The "old" technical-centered solution needs to be replaced by the "new" user-centered solution*

approach will ensure you are following industry best practices. In most cases, however, you are far better off buying a process and then customizing it for your organization.

Your user-centered process affects the way functional specifications are created. For example, you will craft the user taskflows before you worry too much about the database structures. The user-centered process will mostly bolt onto the front of your technology process. Then throughout the software development process, steps connect the user-centered process to the work that the technical staff is doing as well as to the documents that serve as input to the programming staff. In addition, many linkages ensure that the methods stay coordinated. Document handoffs need to be identified at a detailed level.

This is not to say that technical limitations are ignored in the early design phases. Interface designers need to know about the technical issues for a particular project. They need to understand what the technology can and cannot do to ensure that they have used the technology to the fullest extent and without designing something that will prove difficult to implement. The primary concern here, however, is meeting the customers' needs. You need to engineer the user experience and performance and derive the user interface structure to support this user taskflow. At that point, the technical staff can design the software to support the user interface design. This effort might require pulling together data from a dozen servers to provide a summary view when entering the site, using graphic preloads to shorten the download time on a website, or using cookies so that users get book offers that relate to their needs. The technology has a huge role to play, but it needs to remain focused on the needs of the users.

Select a user-centered methodology that meets the following criteria:

- *The methodology must be comprehensive.* It is not acceptable to have a process that relies on usability testing alone—it must address the whole life cycle.
- *It must be user-centered.* The methodology must be firmly grounded in designing for an optimal user experience and

performance first, and the interface design and technology must be based on user needs. It must take those user needs into account and must actually access representative users to obtain data supporting the design and feedback.

- *It must have a complete set of activities defined and deliverable documents required.* The methodology should not be a loose collection of ideas but rather a specific set of activities with actual documentation throughout the process.
- *It must fit with corporate realities.* Ill-defined or changing business objects are by far the most important cause of feature creep. The user-centered design process needs to include steps that bring together the diverse strategic views and ideas of your organization's stakeholders. There need to be activities in the process to ensure that all key stakeholders contribute and feel heard.
- *It must include more advanced user experience design activities, if appropriate.* Today, methods that simply ensure usability are usually no longer sufficient. As UX practitioners, we need to deal with the complexities of cross-channel alignment and integration—so there needs to be a UX strategy. We are often asked to participate in systematic innovation programs—so we need innovation methods and not just a general intention to be innovative. We need to design for conversion by applying persuasion engineering methods. For most organizations, all of these capabilities must be part of the current methodology.
- *It must be a good fit for your organization's size and criticality of work.* Large organizations that build large and critical applications should have a more thorough process and more detailed documentation.
- *It should be supported.* While it is wonderful to have a process described in a book, implementation requires much more. It requires training, templates, tools, and a set of support services. It is a daunting challenge to create all of these components or cobble them together from a diverse set of sources. You might find a pretty good user-centered design methodology—you might get it from the Web or from a friend. Then, of course, you need

to determine what is required to support that methodology. Expect to devote a good half-year of work to this process if you have to create all the deliverable document formats, questionnaires, tools, and standards, and another half-year to develop training to support the standard.

- *It must be able to work with your current development life cycle.* This is no small task, and is discussed later in this chapter.
- *The methodology must have a cross-cultural localization process* through which the design is evaluated for language and culture issues (if you are doing cross-cultural or international development).

Integrating Usability into the Development Cycle

Janice Nall, Managing Director, Atlanta, Danya International
Former Chief, Communication Technologies Branch,
National Cancer Institute

We really want usability to be so integrated into the development cycle that it's just like graphics: It's just a process, and it's where you insert it into the process that matters. It's not at the end—when it's ready to go out the door—but rather at the very beginning. We just want to make usability mainstream and not constantly have to argue the cause. We are still in that mode; we feel like we have to prove ourselves every day.

If we can get it into the next realm where we can take it to the next step, where we are not spending all the time justifying why we need to do it, we can pursue research to get answers to the questions that don't have answers. I think there is a huge interest in really pushing the science—from our end certainly, but from across the federal government as well. We must make better-informed decisions and start advancing the field, sharing that knowledge and really disseminating what all of us are learning effectively.

An Outline of The HFI Framework

To give a sense of what a user-centered methodology should include, this section outlines The HFI Framework, a methodology based on the practices that have evolved at HFI over the last 30 years. Driven by cycles of data gathering and refinement, this method pulls in the knowledge and vision of the organization and harmonizes them with user needs and limitations. This solid process for ensuring quality design includes designing screens by using templates (instead of "reinventing the wheel" each time) and supports deployment and localization to different cultures. It covers the whole thread of user experience design work that starts with executive intent, and runs through UX strategy, design, and continuous improvement. If the thread is broken in an organization, sound executive ideas about what is needed for success will eventually fall to the floor, and the design will become nothing more than a set of functions only roughly associated with the intended organizational direction. We follow this process consistently at HFI and have integrated it in practice with almost every commercial system development process and hundreds of bespoke methods.

The technical part of our ISO certification is based on following this process.

Figure 4-2 shows an overview of The HFI Framework. The first column lists needs that are fulfilled, and the second column lists engagements we use to fulfill those needs. The last column outlines the business need that is being fulfilled. Not every type of engagement gets completed on every program. Instead, what is important is a coherent set of engagements ensuring that the thread between executive intent and design is unbroken.

Strategy and Innovation

The input into this work is the executive intent. Executives have various types of intent statements, as the following examples suggest:

- Reduce service calls and return of tickets in error
- Migrate customers to digital self-service channels

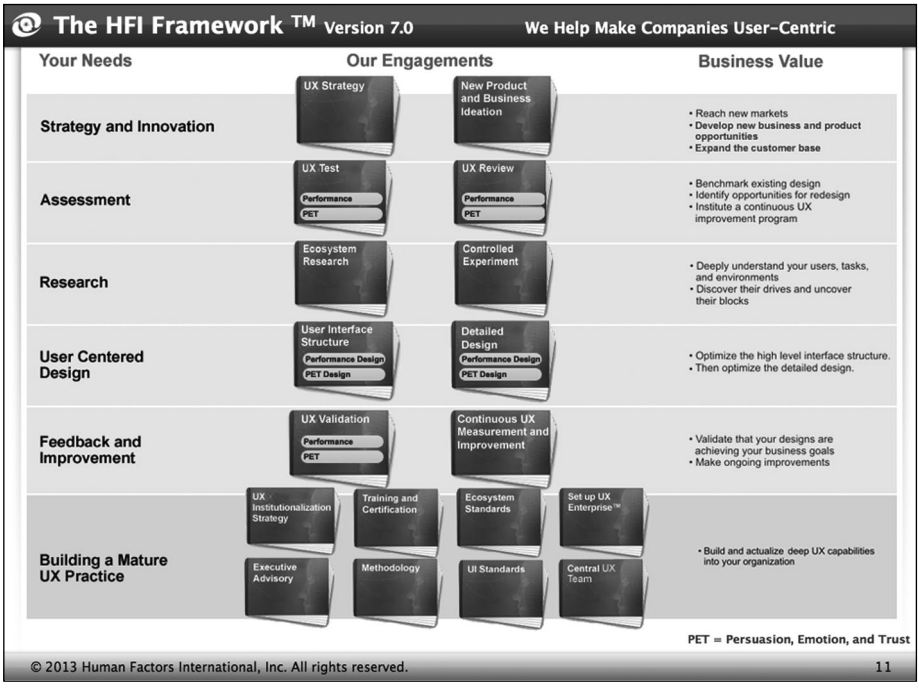


Figure 4-2: *The HFI Framework*

- Increase conversion and market share by 40%
- Gain a 20% share of the mobile market in Kenya

It is the executive's job to come up with these types of desires. But then as we start our **UX strategy** program, we must ask the hard question: "How is that going to happen?" We might want to migrate customers to digital self-service. But that won't happen by just creating a self-service facility. Nor will it happen—on a large scale—by just making the self-service website easy to use. First, we need to determine how to motivate customers. Where a decade ago the journey of a major development program might start with a discussion of the technological framework for the development, today it starts with work on the customer's motivation. Once the customer's motivation is understood, then we need to see how that target motivational experience can be supported with the wide range of available channels (Figure 4-3). Success generally requires coordination of applications, across various channels. There may be a physical