

*RVI/Rutt Video Interactive Attract Loop Sequence*

User-Centered Design and the “Vision Thing”

The Paradox of “Vision”

User-centered design (UCD) offers a comprehensive vision of an alternative design process, involving different activities, practices, and methodologies appropriate for different phases of system development. In our experience, despite the growing awareness of such things as the importance of good user interface (UI) design, usability, and UCD practices, it is extremely rare that companies adopt a fully integrated UCD approach in one grand strategic shift. Rather, companies tend to adopt UCD practices and methods in stages or adopt a particular method or practice only when a complex set of factors align to create readiness. Usually, a company’s motivation results from a combination of painful lessons and glimpses of possible solutions. Furthermore, it is difficult to tell in advance whether a methodology adopted by a particular development team will be a one-time

event, or whether it will serve as a precedent within the company, moving it along a progression towards a UCD culture.

This can be frustrating to UCD enthusiasts. Like all visionaries, UCD believers see clearly the weaknesses of isolated problem-solving efforts that are not tied together by an overall guiding strategy: difficulty coordinating separate actions, a tendency to reinvent the wheel, and a “putting out fires” mentality. Plus, of course, they see the beauty of their own grand vision. There is no question that vision is one component of effective leadership and change management. However, overemphasis on vision can get in the way of change when corporate activities that focus on vision are disconnected from the current work in progress. Unfortunately, this situation is all too common.

What Happened at Very Big Industries

Imagine the following scenario at Very Big Industries, Inc. (VBI).

As they struggle with their day-to-day tasks and challenges, a group of workers at VBI hear about the importance of UI and start to learn about UCD. They read a book, they go to a conference, perhaps CHI, or they browse *interactions*, and they begin to form ideas that go beyond the immediate problem of getting the current release of their product out by the end of next quarter. They perceive their current difficulties in designing UIs as embedded in the development process they are using for the UI. They try to locate the source of their problems with design, identify patterns of behavior in the organization that they feel contribute to them, and imagine ways in which things could be different and better in a general sense. They talk at lunch about how it could be (or how they hear it is at another company).

After discussing these patterns and envisioning changes for a period of time, during which they risk being perceived as complaining, they come to the attention of someone in VBI’s management who organizes them into a task force. The task force devotes a great deal of time to formulating its assessment and proposing changes. Although the group is not necessarily sure who their customer is (i.e., who is seeking their input in order to take

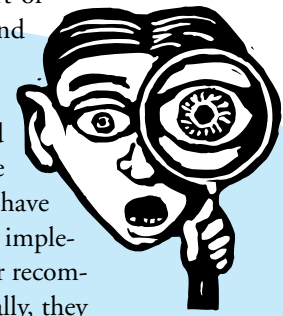
action), some time after the original deadline has passed they offer their conclusions.

While they have been hard at work identifying ways that UI work could be done differently using UCD, things have not exactly been put on hold elsewhere at VBI. Their coworkers have continued their work on current projects, including designing UIs without the benefit of the task force’s findings. Meanwhile, because redesigning the organization or the work process was not part of the task force members’ core jobs and their own projects had lagged as they spent time doing work for the task force, their “productivity” has suffered and the original pressures to produce have only increased. Because they have neither the authority nor the time to implement the changes they proposed, their recommendations are not acted on. Eventually, they are pulled back to their “real” jobs of designing the next release, feeling somewhat irrelevant, and with the perception that nothing has changed except their own morale.

The Relationship between Vision and Change

The workers’ experience may not reflect any pathology in the company so much as it reflects an inherent difficulty of managing the relationship between developing a vision and the concrete changes it calls for. A vision is not a substitute for a strategy. By itself, a vision does not tell you what to do next. The process of considering changes and proposing new patterns of behavior (or new ways of designing) is not the same as the actual migration to a new work process. These are fundamentally different activities, and they do not tend to get along that well.

When people are devoting the bulk of their time and energy to solving immediate problems, time spent focusing on vision can be seen as a distraction. Even when the vision advocate thinks that the vision, if implemented, will make life easier for everyone, other workers, the ones who have to implement changes, are rarely as excited about the changes. They know that shifting to a new way of working while maintaining current





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production likely means more work, at least in the short term. It's hard to hop on the bicycle while you're pushing it uphill.

Corporate activity that focuses explicitly on a general vision disconnected from current work can arouse suspicion, because it seems to get too far away from solving "real" problems and starts to sound like another buzzword, management enthusiasm, or fad. If other workers feel as though the changes they are being asked to make are driven more by the visionaries' passion for their own ideas than by any specific, objective benefit, it is natural for them to mistrust the change. What is worse, they may fear that the promoters of the change will be blind to the objective data as they attempt to implement change and therefore may mismanage it. Many people have had experiences of well-intended corporate initiatives that take time from their current work without producing recognizable benefits or that make life more difficult, even if they sounded great. Some people have even left the corporate world to devote themselves to writing comic strips about the phenomenon.

Using Vision to Bring About Change

People experience the strongest motivation to implement change not because it fulfills an elegant new vision, but because at a particular time they perceive that a specific new method or approach may solve a pressing, immediate problem. We would not dream of suggesting that vision is unimportant. What we are suggesting is that the test of a vision is twofold. A successful vision is one that facilitates solving specific problems and helps bring about specific improved results, at the same time that it shows how these separate problem-solving efforts can build on each other and cumulatively move the company in a new direction. When people perceive that the emphasis is placed too heavily on the "new direction" and not on what will help them now, they naturally balk. The key is to link vision to actual current practice. While this seems obvious, it is amazing how infrequently it is actually done.

To this point we have focused on the relationship between vision and change, irrespec-

tive of content area. But what about the specifics of UCD? The challenge of connecting vision and concrete changes tends to arise at a particular point in the progression to UCD.

Steps to UCD

We have found that there are some common sequences of steps that the companies have made in their move toward UCD. Some companies, such as VBI, do start their formal efforts with attempts to articulate an overall UCD process. Others start with training. Perhaps more commonly others begin on the UCD path by trying to deal with a problem or disappointing results with a particular product. Perhaps the customer has refused to accept a customized product because of usability concerns, or sales of a commercial release have been lagging. Sometimes, there are disputes about the UI within the development team as a new product approaches release. Concern grows over time and at some point becomes urgent and something must be done.

This is the point at which many companies call in a consultant to look at the system. They may ask for an expert or heuristic review. Or, they may do their first usability evaluation. It is often the case that this first experience with usability evaluation happens too late in the development process to actually have much influence on design. Things are too far along, and roll out may be literally next week.

But even if the evaluation is too late to have a significant impact on design, this experience often opens management's eyes. They begin to see not only the problems with the current UI but many also become aware of the problems with the development process that resulted in this UI. They begin to move from trying to fix a particular product to seeking general changes in their overall process that will reduce the chance that similar problems will occur in the future. Although this is clearly a progressive step, it is at this point that the pitfalls of abstract vision arise.

Common activities at this point include the development of tools intended to be applied broadly, such as guidelines about UI or a corporate UI standard. Others activities include the delineation of a UCD process or

the incorporation of UCD principles into a standardized, corporate system development methodology. These activities inherently shift attention to a more abstract level. They all involve looking at UCD in an idealized manner and detached from development work in progress in the company. They therefore can be experienced as irrelevant and create the resistance we described above. The separation between the activities focused on change and current work in progress may even be institutionalized as a matter of corporate policy. We are aware of situations in which studying the development process and proposing general process changes are considered to be R&D. Funds are budgeted for R&D separately from project funds and cannot be used to support projects. In this situation development teams working on current projects may not even know that work potentially of interest to development is occurring in R&D.

What Can You Do?

Fortunately there are a number ways to link UCD vision and practice, to keep the change process grounded in reality and increase the chance of success. Below are examples of ways that some companies have found to do this in their own organization. There is definitely not a “one size fits all” solution. These approaches had to fit the specific organizational environment. The key is understanding both UCD and the culture of the organization to find a strategy that will effectively work in the reality of a particular company. Note also that, in each case, a combination of strategies was used. Here are some of the approaches that we have seen work at different companies:

✕ One successful company we worked with made it a point to pay careful attention to selling not necessarily the whole UCD vision but particular methods that help solve particular problems at particular times. They used “just-in-time training” to make sure that developers had the tools they needed at the moment they needed them so they could use them immediately. This ensured that the tools were both useful and used. In addition, they paid careful attention to selection of ripe

demonstration projects and provided as much hands-on, practical support as possible to ensure that the projects were successful. As a result of the successes, there was a natural spread to other projects. In time, the process became so “institutionalized” that it was written down as a formal process, but only after it was standard operating procedure on projects.

✕ At another company, UCD visionaries identified and connected with projects, but not just as demonstration projects. Instead, they treated the UCD process task force, with its attendant development funds, as an extra resource to help a particular key project and delegated UI design for a project to a committed team. This had the effect of actually lightening the burden on the project team, rather than trying to get them to “change their spots” at the same time they were producing a system. Meanwhile, the project served as a laboratory and showcase for UCD methods.

✕ Yet another UCD visionary at another company looked for synergies by enlisting new allies who were already doing something related (e.g., training, technical publications, system test, marketing). The visionary used these allies to help spread the word while supporting mutual efforts in their own areas. Using the UCD vision to stimulate and integrate their separate user-related activities increased their impact and gave wider publicity to UCD successes. They focused on specific tools that could be used for specific problems and often worked cross-functionally to leverage information across disciplines. For instance, marketing staff worked closely with UI designers to share information about users.

✕ Another company modified its “official” development process, but only slightly: It added usability goals as the key hurdle for final sign-off. This one “small” change led to a large change in the way developers viewed usability evaluation. It was no longer a nicety, it was a requirement that became a focus of attention earlier in the

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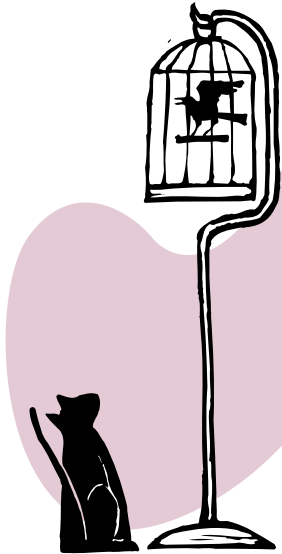


design process. Usability goals were written with an understanding of the users and the users' tasks and therefore reinforced many of the key concepts of UCD without a formal process.

Certainly, it is often important to insulate people from the day-to-day pressure of production in order to allow them to think as creatively as possible. Some of the most innovative, far-reaching ideas may emerge from an internal think tank. Just remember that the vision that emerges from the think tank, such as a proposal for a new development process, is only part of the change map. It may define an ideal target, but strategic management and leadership are still needed to pick the appropriate change intervention at the right time. Be aware that your next step will have to be development of a migration plan. If your company is one of the few with the resources and sustained focus to conduct a multiphase UCD planning process, great. But for most

companies, it is more realistic to try to find ways to make the change process overlap and synergize with development work in progress.

It can also help to remember that the essence of UCD is highly iterative contact with the user. Just as UCD of a UI requires that developers be in close contact with their users, the design of an improved UI development process requires close, ongoing involvement of users of the process, that is, developers. This does not just mean including developers on a task force (any more than UCD of UIs should be reduced to just including users on development teams). It does mean finding high leverage roles in the change process for principal stakeholders and finding ways to introduce new methods into current work in progress. Ensuring a connection between the vision of change and work in progress will make it more likely that the changes will in fact be useful and realistic, that they will be accepted, and that UCD will move beyond an abstract concept to become "standard operating practice." ☺



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