Strategies to make e-business more customer-centered

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Abstract

Building user-centered business and experience design practices in the unpredictable world of digital business requires diplomacy, flexibility and, above all, creativity. In this chapter, we share our experiences of working within small and large organisations which were trying to add customer experience research and testing to e-business design and engineering. Working in leadership positions in four professional services firms and a digital startup, we have found that transforming e- business development practices requires understanding the specifics of each organisation-- and also stretching the methods and principles of human-computer interaction (HCI).

A constantly changing backdrop

Within four digital business service firms and a digital startup, we have found that our work has included traditional usability projects but has often gone beyond those boundaries. We have contributed to strategy, design and technology projects where usability is not important at all. If usability is understood as standardized interfaces, ease of learning, or efficiency in finding information, many real world web projects intentionally violate these practices. For audiences like early adopters and youth markets, uniqueness and newness are often essential brand ingredients.

We believe that experience captures the concept of user interaction with digital media better than usability though there are shortcomings even with that term. We not only design experiences and interfaces, but also apply user-centered methods and principles to create new businesses and products. It is equally uncertain that user is always the

best word for us; sometimes we have found other terms more appropriate, including customer, experiencer, consumer and actor. As we stress throughout this chapter, organisation and context affect everything, including the very terms we use to describe our work and its audiences.

Changing market conditions as well as the specific core expertise and cultures of our organisations determine the context of what we do as advocates for the end user. From the web s boom to its recent bust, we have encountered changing opportunities and obstacles. In a period of rapid acquisitions and spin-offs, we have been fortunate to gain the perspective of working at small, medium and large organisations. While all these organisations have played leading roles in creating and transforming the web, they differ markedly in expertise and culture. Many professional service firms rightly claim expertise in design, strategy, and technology, but their histories are often weighted greater in one area than others.

Both time-to-market pressures and large scale web sites requirement for multidisciplinary teams challenge old-style, purist approaches to usability. The pressure of Internet time demands flexibility and creativity in crafting research plans and implementing findings. Multi-disciplinary teams can include information architects, graphic designers, product managers, functional analysts, business strategists, technologists, marketers and engineers. Creating new online experiences requires heterogeneous skills and perspectives. We have found that customer advocacy is most effective when we or our perspectives inform teams from the initial formulation of business strategy through concept, design and development. Gone are the guru critiques of bad usability, with long lead times for research and comfortable distance from the product. Instead, we find ourselves simultaneously changing how organisations build e-businesses and bringing customer focus to our clients and products. At the e-business organisations where we have worked, we find that collaboration, compromise, and longer-term perspectives are imperative.

In today s climate where the path to profitability has become the key e-business metric, we find continued and even increased interest in HCI principles and observational research to uncover customer behavior, site shortcomings and innovative solutions. While e-business leaders increasingly come to professional service firms dedicated to usability, an equal number come with misconceptions about the value and role of research-based customer experience. Whether through focus groups or quantitative log analysis software, some e-businesses feel they already know their customers and have designed for their needs. Others consider usability something to address only in the design phase, after business plans and strategies are already set in place.

In e-business, the "political" challenges for usability and customer advocacy vary greatly. Our intent in this chapter is to describe strategies and practices that worked, and allude to some that didn t work. We also provide some insight about how to make the most out of diverse organisations and shifting market conditions for e-business.

A Variety of Organisations and Contexts

It has been a wild ride in the world of the Web from boom, where business models and profitability didn't matter, to bust, where the opposite became true very quickly. During the late 1990s boom, e-business user experience was championed almost exclusively by a small number of brand and design visionaries. With the downturn, usability and user experience is far more widely seen as critical to increasing revenue and business success. During the boom, service firms could pick and choose clients since demand far outpaced supply for e-services. Post-boom, service firms have been forced to look for and uniquely appeal to clients, increasingly through claims of customer focus. This rapid shift has affected the politics of usability dramatically.

We have worked for five e-business organisations with unique histories and challenges. One was just six months old, while two firms were long established and pre-dated the rise of e-business by roughly ten years. Our organisations core expertise ranged widely from strategy to engineering, and from systems integration to design. The tremendous shift in market conditions has affected all of the companies, their clients and end users. And since designing clients business offerings dramatically reveals their organisational structures, we have an even broader understanding of the changing context of e-business.

(Note that we have chosen to use pseudonyms rather than the actual organisation names in order that the reader identify with the range of organisational types rather than the specifics of any company.)

High Design

High Design is our code name for a very successful, mid-sized Internet brand and design firm with offices in three cities, international projects, a highly respected design guru, and over 200 employees when we began work with them in the late 1990s. High Design s history and practice were solidly rooted in effective communication and branding, an expertise that enabled it to make a successful transition from highly praised print to digital design firm.

High Design carried over key elements of its design practices from print to digital. After rigorous internal critiques, High Design teams routinely presented three design directions to its clients for input and choice. Involving actual users was not a natural step, though its leadership and practitioners believed and touted their process as highly user-centered. In fact when we arrived, information architects, graphic designers and brand strategists already considered themselves champions of the user experience .

The challenge was adding customer research and testing to an organisation that already believed it was providing for the user experience and had already been successful for many years. The nature of the organisation encouraged us to partner with and support designers and the design process. Rather than look strictly at efficiency and tasks, we brought a holistic approach to user experience in specific, unique projects. And we took a gradual approach to incorporating the desirable involvement of users.

The Integrator

The Integrator is a successful web consultancy, with offices in more than fifteen cities on four continents and approximately 2500 employees. It offers full-service Internet strategy, design, and implementation services. Prior to the late 1990s, the Integrator provided information technology services as a systems integrator, and acquired its design competency through the acquisition of mid-sized design firms.

We became part of the Integrator through one such acquisition. We faced the challenges of shifting from a design to a technology core expertise in an organisation that also had already been successful with its previous practices. Its culture offered everyone equal say in a consensus model. The customer face of technology was a novel challenge for the Integrator, and our role involved educating and scaling for what appeared at the time to be limitless growth. Ultimately, the Integrator s leadership chose to increase its user research department through yet another acquisition, and we chose to join many of the designers in leaving.

Aqua Studio

Aqua Studio is a flourishing, one city web design firm founded and staffed with seasoned professionals, many of whom had left larger consultancies. Aqua Studio focused on design excellence and found a niche working on boutique projects under the radar of larger global web services firms. Aqua Studio weathered the economic downturn in part

by its portfolio of unique and compelling designs and in part by articulating a customer-centered strategy at all stages of site design and re-design.

One of us joined Aqua Studio in its first year and helped it grow and double in size. Fluctuating client demand and its small size made it imperative to train others in conducting research and testing when projects swelled. Conversely when business waned, the focus shifted from direct research to business development, contributing to the design of Aqua Studio s own site and working with the principals to articulate its experience design vision.

The E-Business Builder

The E-Business Builder is a successful, full-service Internet strategy, design, and implementation firm similar to the Integrator, but smaller and younger. Its e-business approach derived from different roots, a combination of technology and business strategy, with strategy leading most client engagements. Whereas the label experience design is compelling in design cultures, experience strategy more accurately reflects the emphasis needed to bring customer perspectives and involvement to the earliest stages of e-business plan and strategy development. And in contrast to the Integrator, the E-Business Builder did not plan to add a separate user experience department. Multiple roles, few boundaries and sharing are key cultural values; everyone is empowered. In this environment, providing discipline leadership was not readily supported by announcements of responsibility or the granting of resources and authority. Improving attention to customer experience initially involved coaching, advising and educating, and making it clear how business success relies on the involvement of customers and target users in the process.

The Digital Startup

The Digital Startup is a well-funded young company weathering the financial market s embrace and skepticism about consumer oriented e-businesses. Its core expertise lies

in engineering, networks, storage and databases. Nonetheless, in its first two years there was executive commitment to customer experience in terms of site performance, ease of use and product development.

The Digital Startup was fortunate to have a talented in-house interaction, design and web development team in the products groups working with engineers, product managers, the founders, marketers, and database specialists. It also hired an outside firm to help with rebranding the site. Becoming the client provided a different perspective on the agency-client relationship. The outside agency s lack of customer-centered design practice required in-house elaboration of a functional spec detailing each screen, which was the result of in-house iterative testing of paper sketches, wire frames and designed pages. In addition to written documentation, alliances with key internal marketing directors ensured that the agency corrected problems identified in testing with the home page, the new customer experience and multi-step applications.

Making it easy for tech novices to order products means removing obstacles to transactions, and is a frequent case of our role aligning customer and business goals. One strives to engineer simplicity and fun for the customer, and at the same time design experiences that contribute to business revenue. In addition to customer s subjective evaluations, computer and family press awards, we are also accountable for conversion rates, product sales goals and growth metrics.

Unfortunately, the Experience Design/User Interface group did not survive its venture capitalists demands and was eliminated in the second round of layoffs in 2001. This unexpected change raises two questions. Can the Digital Startup s profit targets be met with engineer-driven products? And how, in a technology-centric organisation, can you convince executives and investors that customer-centered product development is of equal importance to engineering, databases, networks and storage?

Starting in the Middle and Working Our Way Backward and Forward Simultaneously

What do you do when called into a large scale project mid-way through web site development? How can you transform imperfect situations into opportunities to teach internal teams about ideal HCI practices throughout the product cycle, while still delivering greater customer focus for your client?

At High Design, the obstacles were many minimal precedent, considerable resistance from designers who were comfortable with earlier work processes, challenges with business development not adequately scoping our work, and demands from clients to rush web sites to launch. The result was being called into projects after discovery and definition phases were completed, and being asked to do something. We responded with creativity, flexibility, and a long-term strategy for building an HCI practice.

Designers were unanimous in seeking concept testing, but did not have a clear idea about what that would entail. Some account managers viewed our role as preference testing (i.e., asking customers which one of three alternatives do they prefer). Team by team, we educated within High Design about our role, the insights and design opportunities that could be derived from observational research, the importance of understanding current online and offline customer behavior, and the need for iterative prototyping.

In an early situation, despite assurances that a giant Printer client knew its customers, we designed tests that evaluated three concepts and the three segment, target audience s purchase and decision-making behavior. Despite the Printer s Marketing Department s assurance that its customers are in fact segmented into soho, mid sized company and enterprise, we found that no printer purchasers, whether at large or small businesses, wanted to be categorized by market type in order to view products. Forcing

upfront identification with marketing categories, in fact, made customers think that they were being outsmarted and limited in what they could see. Customer research allowed us to revise the web experience and focus not on customer segment but on customers needs for sorting and comparing products based on functions like printing, scanning, copying and faxing. And the team learned that future projects should engage our expertise and the clients customers earlier in the process to shape rather than validate concept formation.

Working within the same organisation over time facilitates the process of improving attention to user experience, with customer discovery shifting to occur parallel to initial business analysis, followed by iterative development of concepts and designs. At the E-Business Builder, the success of an experience design project that involved customers via in-home visits and paper prototyping sessions made it easier to introduce rapid ethnography into a project focused on developing business strategy. At the Integrator, a client content with conventional market research methods wanted more up-front discovery research in future work after they observed some of our customer research sessions on the same day they observed their conventional focus groups. At the Digital Startup, what began as a disaster check two weeks prior to the launch of the original site developed into a full-fledged and highly integrated experience design practice that helped determine product roll-out schedules, onsite interactions and customer experience with a complex application.

Developing Organisational Strategy & Capability: Departments or Distributed Expertise
What do you do when you are given responsibility to develop an organisation's strategy and capability for involving users in the process, but that responsibility is not adequately supported? Is what you do much different than if that responsibility is accompanied by organisational support? How might organisational culture affect the strategy you develop?

At the E-Business Builder, a culture emphasizing collaboration, full participation and minimal hierarchy, responsibility for developing organisational strategy was not supported with a designation of resources, authority, or even an internal announcement of the role. Despite an increasing awareness within the company of the need to involve customers much more extensively, the role remained unofficial and largely unarticulated until the economic hi-tech downturn began to prompt high-level steps to publicize it and make experience strategy a key platform for attracting clients.

At High Design, responsibility was accompanied by explicit organisational support, but another unique obstacle remained. One of us was invited to bring his expertise into the company and to form, staff, and develop a new discipline, and that leadership role was announced not only internally but also externally via press release and the firm s web site. However, becoming effective meant challenging the organisation s firm belief that it was already user-centered. The commitment to delivering high quality user experience was already enshrined in its marketing materials and the company s own brand. Designers felt strongly that they thought hard about users and tried to take their perspective into their designs; however, their work practice rarely involved customers well or at all.

Despite disparate situations, the approaches taken were very similar. Initial progress was achieved by working with teams project by project. Ongoing formal and informal sessions were arranged with large numbers of individuals and roles, in addition to project teams, to discuss their work and ways greater attention to customer experience might affect it, and to contrast this with how previous project work had involved users, if at all. Closely working with personnel in the context of project and daily work was key to the development of longer-term strategy.

At the E-Business Builder, the early focus included coaching existing teams to create it works here success cases while highlighting previous project work that involved users in desirable ways, even if only in small ways. (Excluding any interested parties or not referencing others' past related work proved to be politically inadvisable.) Personnel who were members of coached project teams then went on to other projects and proceeded to coach their new team members themselves. These and related efforts evolved into the generation of an organisational strategy focused on the evolution of existing roles via continued coaching and other support activities.

At High Design, we built a mid-sized department of cultural anthropologists, usability specialists, and information designers, and faced the challenge of integrating a new role into existing teams and work processes. Because our discipline shared the user experience with other disciplines, our new activities involving customers were designed to provide guidance, direction and inspiration to previously existing roles without threatening to take control.

At both firms, divergent experience strategies led to full integration of research, strategy and design, with variations appropriate to each context.

Whether an organisation chooses to create a department of specialists or a more distributed expertise, an evolutionary strategy for changing e-business strategy, design and decision making will often be a necessity [2]. Even with executive commitment, it takes time to change established work practices; lots of complex factors need to come together [3]. Developing an effective organisational strategy ultimately requires patience and learning about the culture and existing work practices of your organisation.

Collaborating with Peers and Clients

In the wild world of digital business, collaboration with peers and clients has been critical to our success. Unlike some who have argued to the contrary, attending to user needs and desires must be the responsibility of all team members, not just a subset. Ownership of all components of the process should not be equally shared, since not all share the necessary expertise. But all need to play roles in user research, participate in the analysis and experience modeling activities, and apply what is learned to the businesses and business offerings we design. Approaches that prevent collaboration and require handoffs of findings between disciplines or combining independently generated deliverables at the end do not work well.

At High Design, a couple of design directors were initially resistant to our involvement, fearing the loss of their ability to be creative and in control. At The Integrator, one group of highly independent business consultants was particularly resistant, preferring to do things on their own and as they had done them in the past. On another project, a user research specialist was resistant to alternative interpretations of user data from team members, arguing that only she could interpret user behavior properly. In yet another, a final client decision maker who did not participate in the work overruled results despite unanimous buy-in by the team of consultants and client personnel who did participate in the work. At the Digital Startup, the outside agency working on site re-branding refused to participate in test sessions and initially sought to attribute unwanted findings to bad users. Obstacles can be formidable.

Successfully "evolving" established work practices requires ongoing learning of other participants perspectives, ongoing tailoring of activities in view of these perspectives, and ongoing education of all involved. The alternative is to risk being misunderstood by or insulting those you work with or for, which is not at all conducive to effective process change. There is no universal language or translator, only particular environments,

teams and organisations. However, collaboration in a process involving users is usually the most powerful communicator.

At High Design, designers were eager to participate in up-front ethnographic research, and their active participation in these early stages made them more open to later concept and design testing. Designers became active researchers observing teenage boys at home playing video games for one project, extreme sports enthusiasts at surf shops and skate parks for another, busy professionals at home and at work attending to meal planning and preparation in yet another. And we insisted that designers input and interpretation were critical to forming character profiles. Since the profiles were collaboratively created, it was easier to use them later in the project as a guide to design and as an evaluation tool for site strategy and implementation. Active participation in research, interpretation and analysis helped overcome designers fears that testing is about polling and taking away control and creativity. Training non-experts distributes the work involved and recasts experience research from constraint to inspiration.

At the E-Business Builder, everyone on select multi-disciplinary teams was declared to be a "cultural anthropologist." Teams were split up, equipped with guidance, cameras, and tape recorders, and sent into homes to learn how people relate to their personal media, into workplaces to learn how employees collaborate or try to, etc (project foci varied). Participation dramatically changed team members' perceptions of target user behavior and needs, generated key insights for online opportunities, and dramatically increased hunger for expanding research activities on future projects. Related effects were achieved via involving most members of multi-disciplinary teams in concept and design development sessions involving users. An added benefit: roles that had previous difficulty working together were able to work together much more effectively and efficiently.

Anderson, Richard and Jared Braiterman, Ph.D. 2001. Strategies to Make E-Business More Customer-Centered. Chapter in *Usability: Politics and New Media*, London: Verlag-Springer. Forthcoming.

Note that bringing clients and inexperienced teams into direct contact with customers must be managed well. In informal testing without the benefit of a lab s two-way mirror separating observers from the action, we have had to train and at times correct clients when they have behaved improperly. Under pressure to produce desirable results, clients can make research participants uncomfortable. More often, we have seen clients eager to educate and instruct customers in how to use their products. Making effective use of client and non-expert participation requires upfront education about research roles, especially the idea that communication and learning should always be from the customer to the team, along with occasional interventions to keep research on track.

Shifting Tactics from Boom to Bust

Our leadership roles in experience strategy have spanned the "new economy" boom and the "next economy" bust. In addition to specific constraints and opportunities unique to every organisation, market conditions greatly affect the politics of usability. During the boom, many traditional companies and web startups hurried to get in on the action. Being first to market led to a rush to launch and became a mantra for e-business leaders and their venture capital funders. Working in Internet time meant that anything that could slow launch was often suspect. In some cases, that made attention to customer experience prone to be chopped, despite a few loud voices about the perils of ignoring customer experience. Visionary designers and organisations sought to fully integrate experience strategy into their process. And, to protect this added expertise from being sacrificed, some service firms -- including Aqua Studio -- sometimes omitted customer research and testing from project scope and instead carried it out below the radar. Fast, integrated and flexible approaches were most valued.

During the bust, clients have become very conservative. Getting it right before getting it out there matters more, and clients now use the word usability before we do -- some even have processes that service firms must adhere to. But conservatism means smaller

budgets, so we still face enormous pressure to do things quickly. We must also negotiate with and persuade clients who come to us with a usability plan that a checklist or generic program may not be best suited to their business problem.

In short, we have gone from "hide it" to "expose it" in terms of how "usability" becomes integrated in e-business strategy and product development. Yet challenges remain in educating our organisations and our clients about best practices throughout the business development cycle. The present atmosphere of shrinking budgets and limited resources make the hiring spree of past years seem a distant memory and reinforces the need for flexibility, collaboration and creativity.

Lessons Learned

What are the basic lessons to be distilled from these experiences in the wild world of digital business?

1) Go beyond old-style purist approaches to attending to usability.
Standard recipes of attending to "usability" will often be inadequate to specific organisations, projects and contexts. Plus, some of our most valuable work extends beyond usability - including using customer-centered activities early so that we contribute to business strategy and plans, and extending concept and design research to attend to brand experience and self-directed exploration.

Attending to customer experience in the wild world of e-business presents challenges to traditional HCI methods. Unlike productivity applications, e-commerce sites frequently involve new or novice computer users, voluntary participation and unfamiliar ways of shopping, trading, sharing and forming community. Earlier HCI specialists, influenced by experimental and cognitive psychology, emphasized controlled variables and specified

tasks. Unlike conventional office productivity, web customer experience is often user-driven, open ended and unpredictable. In place of labs, observational research now happens in customers own environments, including homes, offices and leisure venues. Flexible methods are needed to address existing offline behavior and to evaluate possible online interactions.

2) Respect and value the perspectives of your colleagues and clients.
The multidisciplinary nature of large scale web development highlights the need for user-centered design activities to be carried out with the active participation of the whole team, including visual designers, information architects, business strategists, product managers, marketers, engineers and executive leadership. Including non-researchers in planning studies, interviewing and observing prospective users, and analyzing research findings fosters greater acceptance of research findings and sparks unique insights brought by team members with diverse expertise.

3) Be willing to be creative.
Specific organisations, changing market conditions, and limited resources suggest that there will always be a gap between ideal practice and possible practice. A cookie cutter approach ignores specific challenges and opportunities unique to all of our situations. In addition to what you bring to your organisations, solicit ideas from others in your company and create an environment that fosters idea generation. Be willing to experiment.

4) Make attention to user experience a key part of your organisation s brand.
It s easy to spend all of your time working at the team level, educating, training and creating success stories. You also need to convince your organisation s leadership that customer experience is an essential brand attribute. Such corporate branding will smooth your path, both in working internally and in selling your company's offerings.

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5) Develop an understanding of the culture of your own organisation.
To really know how to handle its political issues, you must understand what drives your organisation, its values and goals [4]. Just as important as gathering a full understanding of customers for new e-businesses experience design and business strategy, you need to conduct research in your own organisation and understand how your work can contribute to its business objectives. As Rohn argues, you must practice user-centered design on your own organisation [1]. Fortunately, the techniques we use to understand customers can also help us understand our organisations.

6) Develop an understanding of yourself and your own biases.
Your success or lack thereof will emerge from the interaction of your background, expertise and limitations with those of your organisation. Don't exclude yourself from the process of understanding your organisation. Depending on your situation, you may find that in addition to usability know-how, you ll also need to learn more about information visualization, or merchandizing, venture capital funding, field research methods, and the path to profitability. And learn how to invite productive collaboration that maximizes the potential of experience strategy experts and non-experts who bring complimentary skills and know-how.

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