

Collaborative Design for Strategic UXD Impact and Global Product Value

James Nieters, 255 W Tasman Ave, San Jose, CA 95134- jnieters@mac.com

David Williams, PhD, 934 Nanjing West Road, Suite 505, Shanghai, 20041 China-
david.williams@asentio.com

Abstract.

Experts in the field of HCI have spoken at length about how to increase the strategic influence of User Experience Design (UXD) teams in industry [2] [5]. Others have talked about how to build a usability or user experience team in industry [3], and others have offered courses in managing HCI organizations [1] [7]. At the same time, other experts have spoken about the importance of making products usable and desirable for international audiences [9] and the value of “offshoring” their usability efforts [8].

Few though have discussed the value and process for an embedded UXD Group functioning as an internal consultancy to different product teams within their organizations. This paper presents both how the consultancy model can increase the strategic effectiveness of UXD inside a company, and how, by leveraging partners internationally, such groups can broaden the usefulness, usability, and desirability of their products to a more global audience.

Keywords: User Experience Design, Organizational development, User Experience Teams, Management, Internationalization.

1 Introduction

The Cisco UXD Group grew from a single person to almost 60 people. As this group increased its scope, it evolved through several traditional funding and organizational models (central funding, client-funding, distributed teams). In the more traditional organizational model, UXD resources are typically spread across multiple projects in order to support the design of all (or most) products across the company [1] [5] [7]. Most recently, this team has settled on the consultancy model. In this model, cross-functional teams of UXD experts combine to deliver an exceptional experience on just a few projects. The traditional models, their benefits, and challenges include:

- **Centralized funding model**, with a large budget from one centralized organization. In this model, one senior leader can manage the entire organization, which permits consistency of practice and process, as well as flexibility of UXD resources across the organization. The major challenge is that a central

organization becomes a target for reduction or elimination, because it is such a large cost center. Also, in a highly decentralized organization (such as Cisco), leaders in each division may request that UXD resources working on their project report directly to them.

- **Client-funded model**, where individual business units fund a central team that provides UXD resources to their teams, and one central UXD organization manages these people. The benefits of this model are similar to the central model. In addition, the central organization does not become a cost center because other divisions pay for UXD resources. However, managers in each division may feel that UXD practitioners who are not part of their organization are not core or central to their business—and they can decline to pay for the individuals at any point. This challenge becomes more likely when managers need to reduce headcount and do not want to eliminate the individuals whom they “own” (who report to them).
- **Distributed model**, where there is no central UXD group, but UXD practitioners (and smaller groups) report directly to the divisions for the products on which they work. One benefit of this model is that such people are viewed more as “insiders,” as part of the team. While an increasing number of companies are using this model, it poses many challenges for the UXD groups and their influence. There is often no explicit sharing of resources or processes across UXD groups, and destructive competition can arise. Unless each UXD group is large enough, practitioners can end up reporting to a manager who does not understand the value of the UXD function. In addition, without a central UXD group, there is no team responsible for UXD process, standards, or infrastructure.

At Cisco, these more traditional organizational structures met with some success. One group within the centralized model was able to show a ROI of more than 10x, or \$50 Million USD annually. However, \$50 Million in a company that grew from \$4 Billion to >\$30 Billion from 1999 through 2006 was barely noticed. Attempting to improve the usability, usefulness, and desirability of too many products at one time diminished the Cisco UXD group’s ability to gain the sustained support of senior executives. The Cisco UXD group needed a different model.

Senior leaders at Cisco, and other companies, both in mature and emerging markets, are held responsible for steep revenue growth. As such, they are in search of the next “advanced technology” (AT). AT’s are disruptive innovations [6] that differentiate one company from its competition, resulting in large revenue increases. To become strategically relevant, the Cisco UXD team needed to deliver disruptive innovation that changed the way people thought about and interacted in a domain.

Therefore, these executives want to invest in groups that can drive radical differentiation. They may also invest in groups that incrementally increase revenue or decrease costs (such as prior Cisco usability teams), but they are likely to invest the most in groups who prove that they can stimulate disruptive innovation [6].

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support of senior executives. The Cisco UXD group needed a different model, so it could increase revenue geometrically instead of incrementally. To influence a complex-systems company [6] such as Cisco, the UXD Group needed an ROI of 100x to 1000x.

2 Enter the ‘External Consultancy Model’

Within the areas of product and interaction research, design and testing, independent design studios have flourished in mature markets such as the US, Europe and South Korea (IDEO, Fitch, Razorfish).

Now, a new breed of international and cost-effective design studios such as Asentio Design are developing business from bases in emerging markets such as China or India.

Asentio Design flourishes due to its ability to allocate multi-function design teams to chosen client projects without being constrained by processes and corporate politics experienced by design teams within companies. By capitalizing on its geographic and linguistic context is also able to act as a design bridge between clients in mature markets and ODM/OEM design teams in emerging markets. This model has been referred to as “Collaborative Design.” [9]

With such companies in mind, the Cisco UXD Group is able to act like an external design firm. Instead of assigning one UI designer to one or even multiple projects, the Cisco UXD Group now assembles highly focused teams comprising multiple cross-functional experts to support speedy innovation on carefully selected products. These experts include user researchers, interaction designers, visual designers, developers, and industrial designers as necessary to deliver a superior user experience in a very short time. The consultancy model has the additional advantage of placing the UXD group outside of the organization, allowing freedom of decision-making and objectivity when selecting projects to pursue. Following this model, the group can focus intensively on the five or six most strategic products, and work with teams truly interested in their expertise.

Since converting to the Focus Team model, senior leaders recognize that the UXD Group’s contribution to revenue increased to more than \$2.5 Billion! Such impact has been difficult to ignore; one result is that Cisco’s new motto is “Lead the Experience.” Cisco executives now recognize that the experience itself is the next “advanced technology.”

2.1 Engagement Model for Successful Focus Teams

The Internal Consultancy Model is not ideal in every environment. For it to succeed, UXD management must:

1. Only choose worthwhile projects where measurable opportunity exists for demonstrable impact, and where management is willing to give credit to the UXD Focus Team.
2. Merge each UXD Focus Team into the Product Development Team with clearly delineated roles.
3. Adhere to best practices by following a clearly defined process, with well-defined entry and exit criteria.
4. Choose Focus Team members carefully.
5. Follow through to demonstrate impact.

2.1.1 Choosing Worthwhile Projects

While it is a shame to forego UXD on smaller projects, the point is to dedicate resources where they will have the most effect—we must pick our battles wisely. To take this metaphor a bit farther, a classic military strategy is to focus overwhelming resources on a single target. Then, when success has been achieved, move to the next target. This model can apply to UXD efforts: Shouldn't any UXD manager make sure that critical projects are fully resourced, even if it means neglecting other projects? The alternative is to be spread desperately thin, resulting in average improvements on most projects, rather than disruptive innovation [6] on a few projects.

Choosing the right projects also includes:

1. **Conducting an Opportunity Review** before agreeing to commit resources, to ensure that the product team is receptive and executives recognize the problem. The product team must agree that their success requires a UXD Focus Team.
2. **Generate a Project Brief**, a statement of work that describes:
 - Statement of value (summary)
 - Challenges (such as competition)
 - Solution (typically broken into multiple phases)
 - Deliverables to be provided
 - Resources (people) required on UXD team
 - Detailed schedule
 - Costs
 - Assumptions and risks
3. **Concept and Execution Commitments**, in which managers from the different organizations agree to supply people and money
4. **The UXD Focus Team is embedded** and integrated with the product development team.
5. **The project has clear start and stop points**, with clear exit criteria, and is not open-ended.
6. **Focus team members love to collaborate, and excel at working in teams.**

When UXD Group leaders decide which projects to accept, they consider the following factors:

- **Product team receptivity.** The product development team itself has requested support from UXD, rather than had it “pushed” upon them by management. If a product team is ambivalent, the UXD group disengages.
- **Potential revenue or cost savings.** The UXD group seeks projects on which they anticipate a minimum revenue increase of \$25 Million in the first year.
- **Advanced technology**—a new technology that has not yet been introduced to the market, so the UXD Group can make a larger impact than on legacy products (preferable, but not required).
- **Leveraging the Cisco UE Standards** (UI guidelines and tools). If a product team does not intend to adopt the UE Standards, the UXD Group will not assign resources. These standards include component libraries to help engineers quickly create code that is accessible, usable, internationalized, and branded.
- **High visibility.** If a project is a “pet project” of a cross-functional or highly visible organization within the company, the UXD Group is more willing to accept it.
- **Point in the product lifecycle.** If design has already begun, it is often too late to impact a product’s overall experience at a fundamental level. There are times when the UXD group agrees to work on a project through multiple iterations, starting late in one cycle to impact a subsequent release.
- **Realistic time-to-market demands.** The Cisco UXD Group delivers value rapidly. However, if project schedules make delivering a high-quality user experience impossible, the UXD group is less likely to accept the project.

While there are other factors, this list represents the most salient ingredients used in deciding to work on a project.

2.1.2 Merging the UXD Focus Teams into Product Teams with Clearly Delineated Roles

UXD Focus Teams must integrate completely with the product development team during a project. They cannot function as the “icing on the product team’s cake.” In the centralized and client-funded models, product teams can more easily treat UXD team members like outsiders. In the focus team model, management and product team members have all committed to a stellar user experience.

UXD Focus Teams need to be viewed as true partners with product teams, and they must treat each product team like the paying customer it actually is. The roles of the UXD Focus Team must be specifically defined, just as the roles of the product team members are. Cisco’s UXD management created a role grid that explicitly defines UXD roles and skills. The UXD Focus Team functions as the architect who provides

the blueprint for the elements of the product that define the user experience, and the developers function as the carpenters who deliver to the specifications. If the product team does not agree in advance to these roles, the UCD group does not accept the project.

2.1.3 Choosing Focus Team Members Carefully

To win the trust and respect of product teams, members of the UXD Group must demonstrate world-class user experience design skills. Of equal importance, UXD practitioners must have the business, teamwork, technical, communication, and advocacy skills to ensure that product teams will choose to work with the UXD Focus Team. We must understand the larger business context of our work rather than drive single-mindedly toward an ideal design goal. By approaching the design role as though the product team is a customer with a revenue target that we need to help meet, we become more strategically relevant in our organizations.

Despite their underlying focus on business goals, corporate executives need to trust you to understand their requirements, to trust that you can help them succeed. Personal trust and accountability can be more important than ROI. UXD Focus Team members must be able to build this credibility.

2.1.4 Following Through to Demonstrate Impact

As any consultancy would do, it is essential to make all successes visible. Future business requires such demonstrable impact. No one would engage a consultancy without a fine reputation and portfolio, and the same rules apply to internal consultancies.

To achieve this visibility, the Cisco UXD Group tracks impact and records case studies on its website, as you would find on the websites of design firms in industry. The stories in this portfolio describe:

- The Problem
- Our Solution
- The Impact

If the UXD Group cannot calculate the financial impact and managers do not provide a quote attesting to the value of the UXD Group activities, that project does not appear on the portfolio website. Other managers can refer to these examples of impact and trust that the group can deliver the same value for them.

2.2 Extending UXD with a Partner Ecosystem

Since Cisco's UXD Group now behaves as an internal consultancy, it has been able to increase its influence by subcontracting to external consultants. To the customers of the UXD Group (Cisco's product teams), there is little difference. Such collaboration with external design firms such as Asentio Design in China not only increases the internal UXD team's capacity. It also injects emerging and global perspectives on research, design, technology, partnerships, and the connection between these domains. Such fresh perspectives are critical to stimulate the innovation required in such a company.

The UXD Group soon realized it needed an ecosystem of partners who could augment staff, drive entire projects, and introduce ideas that stimulate disruptive innovation. Using external consultants has become a natural extension of the group's engagement model. The UXD partner ecosystem includes different types of design firms for different types of design projects.

Asentio Design, through its international team can provide dedicated support in all areas of the design lifecycle as well as specific market knowledge and partner relationships from its base in China.

As product experiences are increasingly designed to support emerging and mature markets, models such as Asentio Design's are crucial in allowing Cisco to collaborate with manufacturers in, and develop new products for, emerging markets.

A partner ecosystem therefore provides opportunities for innovation between internal and external consultancies as well reducing cost and providing design "bridges" between markets.

Many Western companies now leverage a global network of partners [4]. Should we as designers, not also leverage this business model to deliver rapid, low-cost, and globally relevant products?

2.3 Leveraging Intact Design Firms is Not Offshoring

It is important to distinguish "offshoring" from leveraging intact global partners. In the consultancy model, as companies hire work with external design firms, they are seeking rapid, high-quality and globally relevant engagements. This process differs from "offshoring," which in this paper we define as a company hiring its own resources in another country in order to decrease costs. One of the key value propositions for hiring an intact design team (international design firm) is that they have already performed the hard work of seeking and hiring trusted researchers and designers. These teams have also already gone through the hard work of teambuilding. Developing an ecosystem of partners prevents leaders of UXD organizations from having to attract, hire, and retain talent, which can be even more difficult across international boundaries.

3 Examples of Impact

Asentio Design and Cisco are currently working on some joint projects that we hope will change market dynamics, but because these products have not yet reached market, we look forward to reporting on these in subsequent years.

From a Cisco perspective though, the company is attempting to enter emerging markets in which they have less experience to cultural expectations, norms, and challenges from a user perspective. As such, it is critical that they partner with design firms in four areas:

- Design of personal experiences, which encompasses physical products, application user interfaces, out-of-box experiences and retail environments.
- Consumer Research in markets where Cisco does not have a UXD research or design present. The costs of leveraging a company such as Asentio Design are significantly cheaper than setting up a presence in each such emerging market.
- Globalization. As Cisco has focused more on Internationalization and Localization as they enter new markets, they need partners in-country to help test their products for these international audiences.

Asentio Design has many examples of working with US and European companies and delivering world-class and culturally appropriate designs at a much lower cost than if US or European-based companies had designed them. The following case studies show examples of such international collaboration.

Case-Study 1 (US/China): Commercialization of a Military Product

The client had a long history in developing products for military customers. However, they now wished to take their advanced image processing technology into the commercial market place. While building sourcing relationships in China the client was introduced to Asentio Design as a possible design partner. In order to develop their first consumer product, the scope of the client's requirement was broad, covering consumer research, feature planning, retail & packaging, user interface design and industrial design. Asentio Design, through its international team and position in shanghai (allowing rapid travel to the client's west coast US headquarters) conducted consumer research on the US East and West coast and personal experience strategy planning through two design workshops at the client's US-based office. Research and Strategy work was followed by a user interface and product design phase where teams in Shanghai and US worked in close collaboration with frequent face-face meetings.

Case-Study 2 (Europe/China): Research into Digital Imaging Lifestyles in China and Europe

A European mobile phone OEM wished to research and compare the usage of high-end camera phones in Europe and China. The company approached Asentio Design because of the latter's partners' long experience in researching and designing mobile personal experience across global markets, their location in China and their lower cost base compared to European design consultancies. Asentio Design, through its multilingual team was able to conduct diary studies, one-one interviews and on-line surveys in 4 languages (Mandarin, Cantonese, English, German) in Shanghai, Hong Kong, London and Germany. The on-going results of the research were presented to client teams in Europe and China, allowing wide-dissemination, and providing the stimulus for subsequent more focused research

4 Choosing a UXD Organizational Model

The Focus Team model is not right for every company. Perhaps the most important factor in deciding what UXD structure to adopt for your group is management that understands what business model is appropriate for your company's unique environment. The Focus Team or Internal Consultancy model, is best when:

- The organization does not have enough UXD practitioners to support every project.
- When cost is an issue. Working with a reputable design firm, such as Asentio, who knows how to deliver excellent results, provides highly qualified resources at a much lower cost.
- You need to design products for international markets and need a partner who can design a culturally appropriate product.
- Your team's survival or reputation depends on delivering excellence on every project (you cannot afford to assign one designer to multiple projects, thus diluting their impact)
- Product teams can "opt out" from working with you. If your company does not require every product team to follow UCD practices and work with a UXD staff, then working only with motivated teams can optimize your resources.
- You can "opt out" of minor projects and focus on the highest-priority projects in the company. Trying to make small improvements on all (or most) products can dilute a UXD group's impact.

Summary

Personal experience design is now a truly global activity. In order for companies such as Cisco to effectively support product teams and innovate in global markets, their UXD groups must look increasingly to the new breed of international design studios located in these markets. Companies such as Asentio Design can offer local knowledge allied with western design processes and experience.

Citations

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