Moving from Usability Oblivion to a Thriving Offshore Usability Practice

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Abstract: This paper describes the process of establishing a Usability Engineering (UE) practice within an offshore software development company. This paper details the essential ingredients needed to establish a well rounded, high quality UE practice and team, and enumerates the lessons learnt and successes achieved within a short period of time.

1. Introduction: Offshore Usability in India is where Offshore Software Development was around 10 years ago, as the back office of the western software industry. Usability awareness in general is far lower than within the counterpart western organizations and usability is assumed to be the same as Graphic Design. It is built in products as an afterthought and the way to create ease of use is assumed to be through making screens "pretty". Therefore, when Usability Engineering (UE) was initiated at our organization as a strategic approach true to the Human Factors Engineering methodology rather than a reactive approach, it was an antithesis within the Indian software industry. Proving that a quality and holistic practice as envisioned is possible against such a backend outsourcing culture was to be an uphill task.

The true success of an offshore usability practice is ultimately in its ability to stand on its own and make business sense, as well as integrate with a software development practice without sacrificing on the holism of usability. From a business perspective, the timeframe to establish a successful practice was set at two years. Initial ingredients for the establishment of the venture as well as success criteria were defined upfront. Success criteria were defined both from the outward industry and business perspectives as well as from the internally appointed quality perspectives. These criteria were set to push the envelope for ourselves as well as for the organization that a quality, strategic, holistic usability work on par with the best in the world is possible by an offshore Indian organization.

2. Ingredients for Building an Offshore Usability Practice

Through the journey of bringing this vision to successful fruition, there were several ingredients that needed to be added at the right time and in the right proportions to realize and shape this practice. Some of the essential ingredients were known upfront (1), while some were fallout of the way we shaped this practice. We will now review the ingredients. We will examine them as strategized, as they evolved and as finally adapted for practical hands-on implementation.

Ingredient 1: CEO Faith and Lone Evangelist

The coming together of these two conditions was the trigger for initiating Usability Engineering at our organization. Just faith however would be inadequate. The remarkably open attitude of the CEO towards an uncharted (for the organization) area of expertise, coupled with a free hand to seed, shape and grow the practice created the right beginning. The model of the practice envisioned upfront was an outcome of the evangelist's experiences working in industry in the US and also in the offshore industry in India, both of which included consulting responsibilities. It was thus a fusion and the best of each of these models. Thus was the successful start to an idea. It is important to understand the usability environment among software organizations in India at this time–

1. extremely low awareness where even some of the large Indian service providers did not have established practices based on a lifecycle approach to Usability Engineering
2. usability was unheard of in this and many similar technologically focused companies
3. no formal Human Factors /Usability training program existed in the industry
4. usability engineering models mainly existed based on 'prettying up screens'

Ingredient 2: Champion with Clout and Vision and Top Management Buy In

A champion to own and spearhead the vision, get it off the ground and nurture it in its vulnerable period (1) was a critical next step. The champion had to believe in the long term view and envision it within a short term organizational focus of offshore development. It was important to balance between setting it up for success within the organizational culture but without diluting the principles of usability. And the champion was instrumental in this. The early direction, support and internal seeding enabled usability to gradually create the envisioned space and firm footing for itself. The key role of being a connector between usability and software development was also fulfilled by the champion. During the early days, while vision and faith are critical, they are inadequate without the clout to be heard. The champion also being the head of a business unit (BU) was an impetus for usability to be heard by other top management peers and clients. Many presentations were made to other BU heads, members of top management, and a sizeable number of clients and prospects. The pitch evolved with each interaction to fit the culture as well as

to gradually shift internal as well as prospect's mindsets. Despite the challenges, holistic usability was uncompromisingly pitched as a high value service and enabler up the value chain. Initial service offerings spread across the lifecycle were created. The business planning and networking support provided at this stage erected the structure of the UE practice.

Ingredient 3: Technical Manager and Team Builder

The first signal of top management buy in and acceptance was an official commitment by the organization to invest in a Technical Manager to formalize and expand the efforts thus far. A clear upfront requirement was for this key person to believe in and align with the Human Factors based vision and model defined. Another key requirement was to be able to work in an offshore development setting where ongoing end user and client interactions were not just unheard of but also considered out of bounds. The person also needed to be the pragmatist and practitioner to build and grow the team and practice, in keeping with business expectations of bottom line/ top line metrics that were being set and were key to consolidate the service. Top Management buy in achieved, it was now time to initiate grass root level awareness building through team by team awareness sessions. These began at an elementary level, to address fundamental questions and objections like 'Why Usability?' and 'But it takes too long and costs too much', that the more mature western profession has often moved past. Key account managers were pitched the concept of usability, its value and most importantly, what's in it for them. The focus now was to impress upon experienced software development mid-managers, how UE can benefit them and their customers. The awareness sessions always concluded with offers and requests for sample projects at no cost, to prove the concept and serve as collateral for our slim project portfolio. The idea of connecting with users always ended with a resounding 'but we are offshore, we do not speak to users'. The role of the Technical Manager now was to build credibility and establish trust amongst this group to generate not just pilot projects but facilitate introductions to the large established base of its existing clients.

Ingredient 4: Credibility and Brand Building
With all the organizational support, it was now time to demonstrate potential value with existing metrics. Internal presentations in the form of company wide seminars, exhibits for technology day, white papers and internal technical documents were designed to communicate the value of this "intangible" service. These sessions addressed basic questions like 'What is usability?' and 'You mean you spend time on it?' Alongside began external efforts of trying to build a name and brand in usability for an 'unlikely' organization like ours to address client questions like 'Usability? At 'your organization'?
Clients were pleasantly surprised and pleased to note the presence of this capability. Having design under the same roof as development as an optional service, they could access if they so chose. Presentations to local chapters of computer professionals and to usability enthusiasts as well as a paper presentation at a national technical conference were made to seed the organizations Usability Engineering brand in India.

Ingredient 5: Process/Methodology, Positioning and Service Definitions
A key requirement was a version of the user centered design (UCD) methodology that fit this organization. After several iterations a methodology that 'looked' appealing and suitable emerged with implementation support as a key extension to the traditional methodology. See Figure 1.
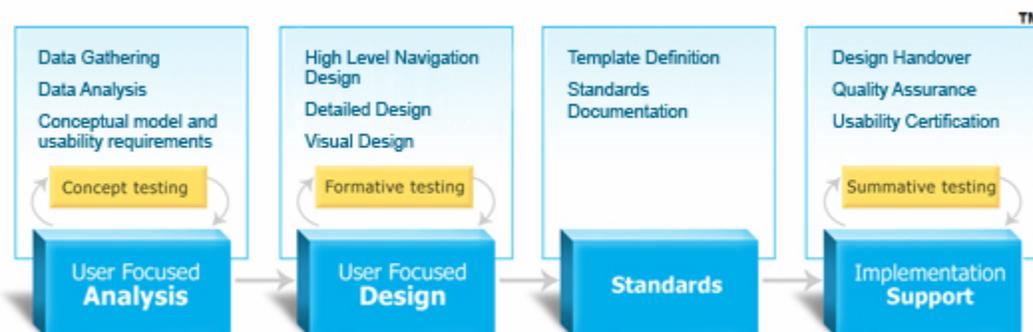

Figure 1 Our User Centered Design Methodology™

Since we believed in the 'consulting' model for long term success, our UCD methodology had to align with the product development lifecycle (PDLC) as shown in Fig 2. In parallel, it was also important to define usability services that were standalone as well as easy to incorporate into mainstream projects. The services stemmed directly out of the evolved methodology and its phases. Services aligned with the PDLC showed that usability can be effective at various stages of the lifecycle. See Fig. 3.
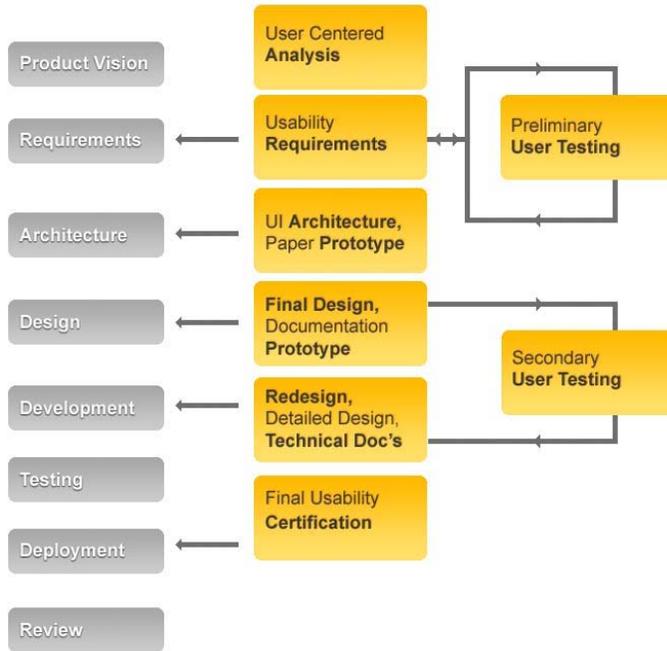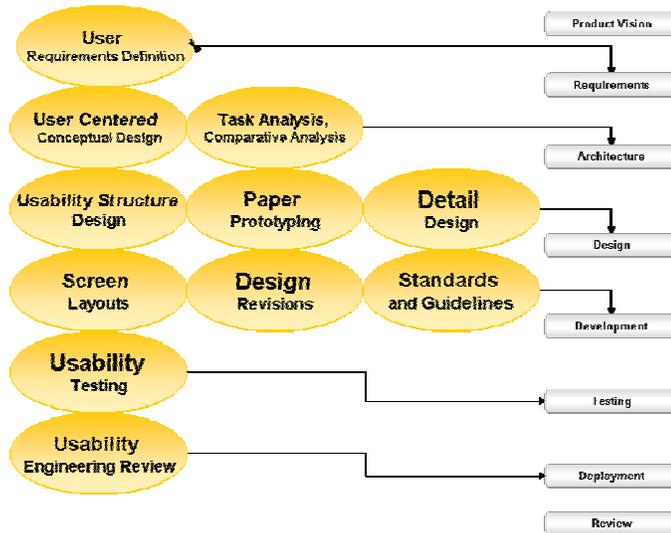

Fig 2. Our UCD Methodology fit with PDLC™

Fig 3. Service Offerings fit with PDLC™

Usability was positioned as a high-value, high ROI generating practice. This created a mismatch and misalignment with the standard cost arbitrage based practices of the typical Indian offshore model. A lot of client (internal and external) education was

needed to establish the difference between low cost / low end usability support (basically "prettying" screens) and providing high-end, high-value capabilities (providing full life-cycle usability services).

Ingredient 6: Pilot Projects, those Precious First Customers and 'Local' Marketing
The first few pilot (proof of concept) projects were completed meticulously and with the rigor of a complete lifecycle project. Particular care was taken to demonstrate specific and tangible 'value' for the client, not just for the project but more importantly for our business portfolio. Out of the first 10 pilot projects, 8 resulted in follow-up consulting projects, shows that the value we were providing was indeed being accepted by clients.
Apart from customers who had to be sold pilot projects, there were also those first couple of 'aware' customers who came with an understanding and vision, that for a usable product, UE needs to drive the project. Though we came upon such clients by chance and not by design, they helped tremendously to kick-start the practice and provide a strong validation and testimonial to the value of usability in the real world. They were our high points as we continued the struggle to overcome the major internal barriers in the adoption of usability.
Beyond the regular challenges of integrating a new practice into a product company, we were also challenged with the conceptual, geographical and methodological, culture and time zone separations between the end user and their development environment (5). We therefore established an offshore UCD methodology (Overlap Usability) that continues to evolve as we gain more experience. Overlap Usability specifically addresses the distribution of user centered design activities in an onshore-offshore working model (Fig. 4). It further attempts to customize the working model to organizations at various levels of maturity (not shown here).
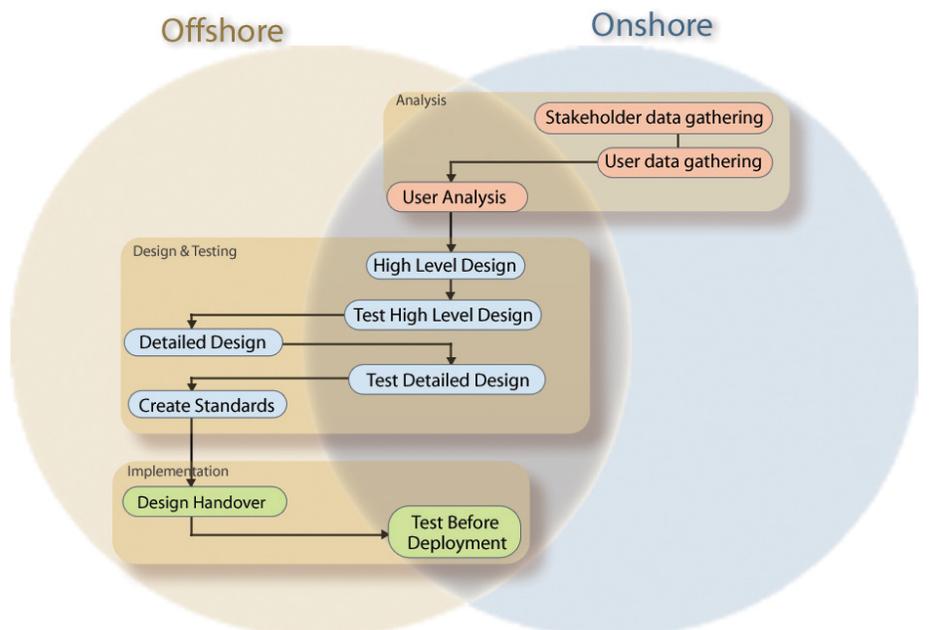

Fig 4. Overlap Usability ™

Ingredient 7: Team Building and becoming Employee Worthy
In building a team worthy of the high-value centralized consulting model, we recognized the need for high caliber individuals who could credibly step into the shoes of a competent usability consultant from offshore, while also being able to work within a development environment. Initially, mismatches in skill sets, backgrounds, market value, remuneration approaches and other factors were stumbling blocks between team members and the rest of the organization. Here we faced another paradoxical situation in the need for holistic professionals on the one hand, and no ready source of such individuals, not even a formal Human Factors/HCI program in India. We had to rely on the couple of design schools from where graduates came with an orientation in usability but nowhere close to consulting expertise we were looking at. So as real projects started trickling in, it became essential to quickly empower existing team members to not just walk and talk the same philosophy as envisioned by its

leaders but also to maintain the quality, holism and research orientation that made this a unique and distinguished practice. Each individual was painstakingly mentored through hands on projects, tailored and focused to offset their absence of adequate experience and to complement and supplement the varied backgrounds. This was workable within the small team size.

As the team grew, we needed to reach out to the handful of strong candidates in the market that we run a usability practice with a difference. We had confidence that candidates schooled in the usability life cycle are thirsting for opportunities to practice it. We also knew that those opportunities are a rarity in offshore software development companies. And we also believed that quality candidates will value a quality practice. As we talked the talk, candidates were able to discern this easily. But with our limited track record, it was still a stretch expecting that leap of faith for them to place their career in our hands.

Ingredient 8: Press and Community Credibility and Internal Sales

At this time, we had the opportunity to create awareness through the press about a Human Factors based practice and its value. The press got interested in this new field and also recognized that we were pioneering a trend in India. In addition, we wrote articles for the public, explaining usability to the lay person. Another important initiative was successfully leading and launching e-governance projects as a part of the organization's community service responsibility. It also created an opportunity for the team to get exposure to usability life cycle projects. Presentations at international conferences continued along with presentations to the professional community.

Recognizing the need now for a market push, we launched an active marketing effort through internal Account Managers, trying to aggressively tap the large existing customer base. However, due to a lack of maturity to fully understand the 'intangible' value of usability and a mismatch with the operational model of offshore software development, this met with limited success initially. Our success with clients however began to slowly trickle inwards and make an impact internally. With clients recognizing that the organization has something of value to offer, a buzz began. Usability started being exposed to many clients visiting us and written about in more proposals. The major hurdle however was that it was being pitched like offshore development, as a disconnected activity after design.

Ingredient 9: Sales and Marketing Machinery for Launch and Continual Growth

With limited marketing success internally, we reached out to the sales team, through a visionary head of sales willing to venture into this uncharted area. We recognized that for the practice to leap forward and grow, the support of the marketing and sales arm was critical. The typical client contact in an offshore engineering setup is the VP of Engineering who we believed was not the right target. We needed to connect ideally to a CTO/VP Marketing/VP Business Development to whom we had no access or visibility from offshore. In Sales we found the right launch pad. We also capitalized on their proximity and access to customers as well as their willingness to take risks and try different approaches.

During the initial stages, sales did not know what to sell, how to sell and whom to approach. To add to this, the concept of high rate differential between traditional coding and usability was viewed as a major hurdle. Awareness building sessions, very different from developer awareness building was done through presentations and dialogs. Intensive and hard selling to the sales team, backed by strong collateral and quick customer wins helped in increasing the interest levels of sales personnel. Working collaboratively with marketing to create pitches, proposals, collateral and campaigns worked well to move us towards becoming a 'real' practice.

Ingredient 10: That First Big Customer

To grow further and create high visibility for the now young UE practice, it was essential to 'show' the top line/ bottom line potential. It was important to win that 'first big customer' who would not only bring the required revenue and visibility but also be a door opener for other non-UE practices. We specifically targeted a customer for who UE was driving the business. This meant an opportunity for our high-value UE practice to contribute to their designs and lead the technology solutions. Working with Sales, we managed to win this large customer as a standalone usability contract, surpassing more established and mature services. This gave usability the fillip needed to now move into an operational model and rapidly build up the practice. Joint definition of a successful onsite/offshore partnership model with this client further consolidated our practice.

Ingredient 11: Consolidation of Engagement Model and Maturation of Value Proposition

Until this point, while the UCD methodology was holistically professed it was practiced with modifications as needed. Each project was a case by case engagement, sometimes compromised to suit the offshore software development model. The opportunity to pitch the holistic approach was never missed however, regardless of the structure of the engagement. As the service matured and became 'established', the need for compromises decreased. We could now position ourselves to define project engagements and client relations on par with market trends. In conjunction with Sales, a strategy was defined for engagement models henceforth and was communicated organization wide. The usability engineering service had matured to a landmark point where our model could now be reflected on the engagement and revenue models as envisioned originally.

Ingredient 12: Integration and Institutionalization
When trying to bring design into an organization, it's important to realize that you're not just changing a process—you're attempting to change the company's culture and dearly held beliefs (2). Integration and institutionalization is a process in itself and it takes a while to mature the practice and methodology. The process continues for us, and given the variety of engagements, projects, domain and technology types, we envision the creation of a continually adapting model.
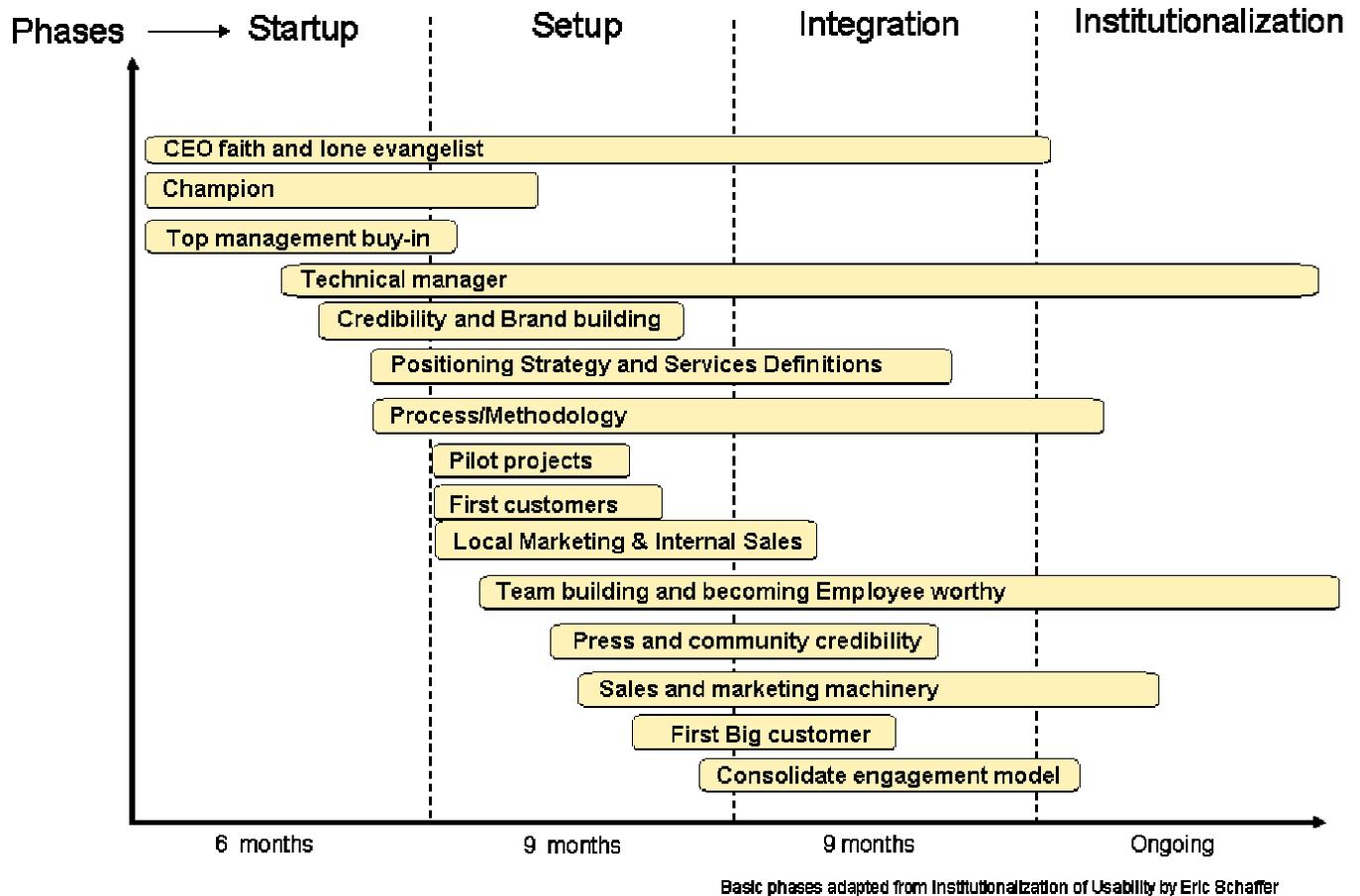
The journey has been summarized in Fig. 5.

Fig 5. The evolution of a holistic offshore usability engineering practice

3. Success Criteria and Measures of Success

There are various visible and quantifiable measures of success within the organization as well as from the outside. These must be met for the continued success of the service.
In addition to these, a practice aligned with the rigors of human factors engineering must measure themselves by certain inward criteria as well to maintain allegiance to the principles of the profession, regardless of the direction of the market.
We will review the success criteria that were defined and met.

3a. External Success Criteria

E-1: Growth in Revenue
Usability as a stand-alone service had to make business sense. This was of paramount importance while selling this to management in early stages. A revenue generation and staffing plan was built separately for this practice from the initial year. Operational breakeven happened remarkably in the second year. Revenues thereafter increased multifold and naturally created the desired visibility, support and growth. Figure 6 shows the percentage growth in revenue over previous years from the first year of operation.
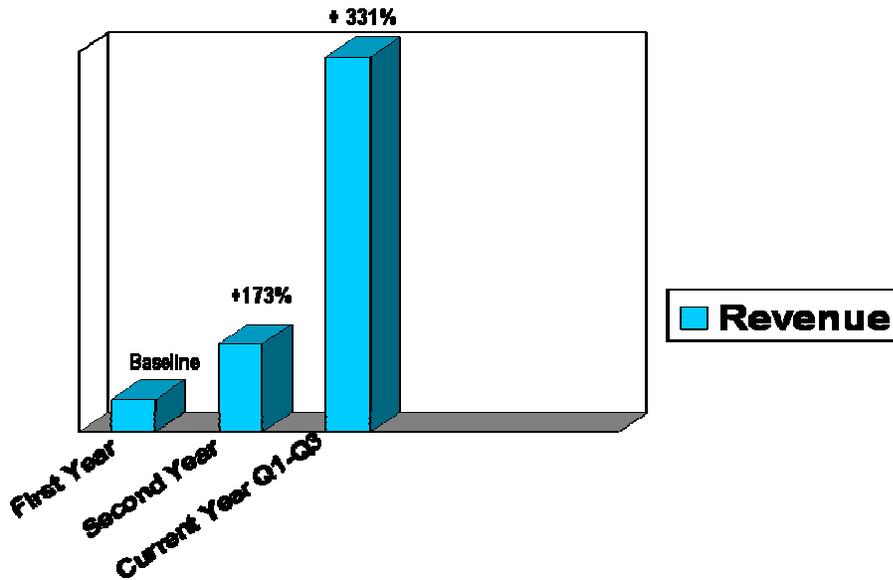

Fig 6. Growth in Revenue

E-2: Growth in Customers
The initial strategy was to get a small group of customers and then shift our focus to further expansion with some big brands. Fortunately, after the first few customers there was repeat business. This kept the practice going and growing at a healthy pace. The number of customers grew from 4 to 20 in the second year alone!

E-3: Growth in Projects
Since our organization is a product development company, customers are from varied domains like life sciences, telecom, identity management and e-commerce etc. Many of these customers have products in the web domain (websites and applications) and desktop domains and use a variety of technologies. UE therefore needed to showcase expertise by working on a wide number of projects to cover this variety. This is so because customers are often unable to discern that usability based on a solid methodology is domain and technology independent. Including a few pilot projects, we worked on around 50+ projects, which is twice as many as the previous year and tenfold of the first year of operation.
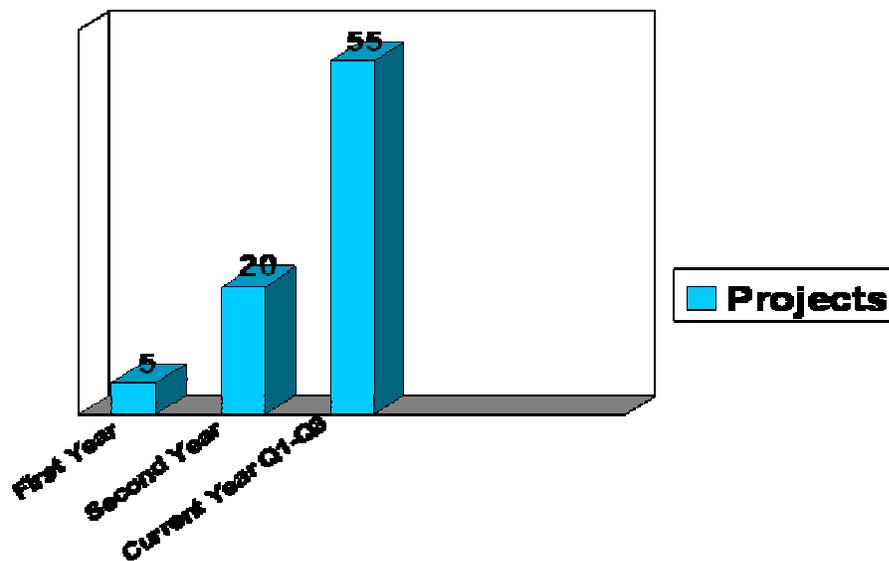
Fig. 7 Growth in Projects

E-4: Growth in Team Size
To support the revenue growth, team size had to increase proportionally. A major impediment to this was the availability of quality usability engineers in India. Nevertheless, by recruiting candidates trained overseas in Human Factors, and training/mentoring local candidates, this team grew 5 fold in 15 months and continues to grow 30-40% every quarter.

E-5: Quality Customer Centric Practice
There are several components to a high quality customer centric practice that we considered:
1. Feedback from customers: right from the start, our focus on quality paid off and we got positive customer feedback on the quality of our work in all cases. They typically requested consultants with similar skill sets on follow-up projects.
2. Repeat services: customers in their second engagement asked for services that need more strategic and mature thinking, in areas like conceptual design, product innovation rather than prototyping and detailed design.
3. Providing more than just projects: We helped customers setup their internal usability processes and onshore/offshore design practice in several engagements, and continue to do so.

E-6: Recognition of the organizations' usability brand
In addition to the quality of practice, we were recognized as delivering high value in standalone usability engineering projects not yet engaged in development. This, along with other satisfied customers contributed significantly to the brand recognition. Presentations made locally and in global conferences added to the brand recognition.

3b. Internal Success Criteria

I-1: Centralized Consulting Model initiated and continues to date
While a centralized consulting model is a desirable start to a UE practice that needs to establish itself, a decentralized model with members being a part of development teams is the easier organizational model. Despite major adversities, the centralized and holistic model was never diluted and continues to get consolidated every day. Our success is in maintaining focus on user-centeredness by maintaining this model.

I-2: Early Integration into PDLC offering diagram
This was one of the first successes and acceptance within the organization. The company's PDLC diagram made room early in the initiative, to not just include usability, but also to position it early in the cycle as shown in Fig. 8. We considered this a major success towards establishing our practice.
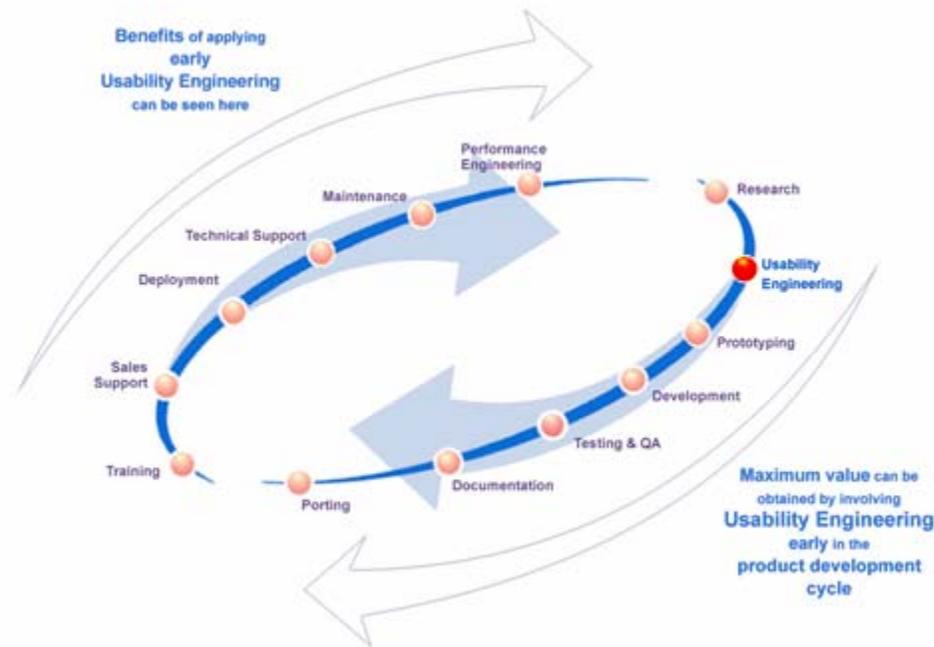
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Fig. 8 PDLC Offerings

I-3: Maintain Research and Human Factors basis amidst demands of a fast growing market
While the practice grows commercially making demands on its ability to fulfill project delivery, it takes a conscious effort to keep sight of research, publications and participation in a bigger professional as well as academic community. Activity in this area started from day 1 and continues.

I-4: High Value 'Undiluted' Practice
Though the practice started out as a high value practice, it had an obstacle filled path on its journey and made compromises along the way because of being a part of an offshore development organization. However despite all odds, it has managed to remain undiluted in its operational and revenue model and consolidated itself as a high value practice.

I-5: Internal Market Penetration
Far and wide reach has happened within the company. People are not just aware but they have begun recognizing the need for UE in their projects and come to UE for its expertise. It is now a 'regularly talked about' practice from its initial days of oblivion.

I-6: Ongoing Project Flow, based in Holistic Practice
We now execute projects in a setup where project demands exceed our capacity. That this has happened on our foundation of a usability life cycle based practice while maintaining our core focus is a major success factor.

4. Setbacks and Recipe for Success

Some of the setbacks the effort underwent were:

- Losing the champion early in the course of the effort due to an organizational restructuring, dampened the original vision significantly as new approaches were suggested. However, this setback was managed and the initiative continued as planned. This was possible with the right set of team leadership that filled in for the individual champion, continuing to drive the vision, being watchful to not degrade it as is typical when such a shift in gears occurs.
- Establishing a technical manager to uphold the vision as well as transform it into a practice went through an iterative process that also pushed back the momentum. However this again, with the right set of people to realign, overcame the hurdle.

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- In the successful business of offshore development, a strong focus on revenues, profitability and growth is a facet of daily operations. For a usability practice with value rather than cost basis, quality rather than volume basis and initial investments rather than profit basis were challenges as well. With patient and persistent awareness building, the organizational awareness built up for the two approaches to coexist and gradually complement each other.
- There were periods in the practice when the unavailability of quality talent in the market of the caliber that we aimed, seemed like an insurmountable struggle. This was particularly significant when establishing the core team which needed strong self-driven professionals. However, with the right grit, this hurdle was overcome too and the success of the practice is a testimonial of the team behind it. Though talent continues to be a challenge, we view it as an indicator of success.

The recipes we offer for the successful establishment of a holistic offshore usability practice are:

- A combination and balance in leadership of both the longer term consulting view and the short term delivery and practitioner views. This was maintained through a combination of a part time consultant and a full time manager. This proved very powerful for the continued success of the venture.
- If the value of a usability life cycle based practice true to user interests is not supported and understood by the head of the organization, then it is better not to plan a usability practice. It is better then to build a graphic design practice that works in enhancing the appearance and salability of user interfaces.
- Associate with and establish credibility with the Sales team, as they maybe an easier and more able channel to help launch a usability practice than engineering. The effort invested in awareness building of a sales team maybe less than that required for engineering.
- Establish a practice that can stand on its own and makes business sense, rather than a support function (investment) approach. If the practice can show value through top line/bottom line numbers the cycle of establishing the practice reduces considerably.
- Believe in holistic offshore usability. Offsite usability is increasingly being practiced today to address distributed work teams and to take advantage of collaboration and remote usability tools. View offshore as a work site that is at a greater but not at an insurmountable distance. There are barriers and hurdles to be overcome but it is part of the global business practice today. To demonstrate high-value practice, take a partnership approach with the client rather than service approach. This helps boost client confidence in offshore practice.
- For a practice like this, hire staff capable of holistic and a higher level of thinking and decision making. Some usability skills can be taught but holistic thinking and self starting cannot. Also, give room to usability team members to practice what they train for. Minimize allocating low grade work to staff schooled in holistic thinking. Allocate routine work to different talent.
- Understand and evolve a clear understanding of the value of offshore usability for the client. Keep in mind that this value is the most important criterion. There is often a fine balance between being client centric and user centric. Compromise as needed but wisely, without compromising on basic principles and philosophies of usability.

5. Concluding Remarks

In the global business world today, offshore product development is a given and offshore usability has to follow. The best way to make this happen will evolve. Presented here was one extremely challenging path to establishing an offshore usability practice that also honors the principles of usability, and that met with success. The entrepreneurial and open spirit of the organization made it conducive to establish and integrate this practice. Similar establishments will need to and will evolve as offshore usability evolves in global business.

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