

Your ROI Depends on UX

The Secret to Enterprise Software Success



An Enterprise Mobility Agency | ChaiOne.com

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Introduction

Typical software development methodologies waste money and too often produce ineffective products. To compete and maintain market leadership, companies need solutions that are effective [1]. This is currently the exception, not the norm. It is estimated that 25% of software development efforts fail outright and 60% produce substandard or ineffective products [2]. On average, delivered projects are 187% over budget and 222% behind schedule [2]. When looking at enterprise specifically, 51% of enterprise resource planning (ERP) projects worldwide are considered failures with 30% exceeding their budget and completion dates [3]. These failures should be taken seriously because ineffective and over-budget software debilitates businesses [4, 5]. For instance, FoxMeyer Drug Co., a 5 billion dollar wholesale drug distribution company in Carrollton, Texas, attributes its bankruptcy to poorly implemented resource planning software [4].

Ineffective software hinders user adoption and productivity, which is why companies track user adoption as a key performance indicator (KPI) and credit it as one of the core drivers in software value realization [6, 7]. Indeed, over half of enterprise software users rate the effectiveness of their software as below average [6]. Difficult to use, ineffective, cumbersome software leads to low user adoption which accounts for about 70% of failed projects [8-10].

When software is effective, it gives companies an edge over competition by automating processes in a way that supports users in the actual context of their work [6, 7]. Successful software hastens user adoption, increases productivity, drives revenue and user, employee, and customer satisfaction [6, 7]. Effective software results from focusing on the users and their work during all development efforts. The stakes are higher than ever as employees are now demanding enterprise software to be as appealing and user-friendly as the technology they use at home. Companies are beginning to realize that adopting strategies for software development that place the user at the center of the project is financially advantageous and is the reason why 93% of executives now focus on User Experience (UX) as a top strategic priority [11].

Emphasizing UX requires considering all aspects of the users' interaction with a product. Doing so boosts user adoption, ensures the product meets users' needs, is user-friendly and aligns with business objectives [2]. Developing software with a User-Centered Design (UCD) methodology protects companies from failed projects and provides returns to the business that extend beyond the initial investment.

“The biggest tragedy is that software failure is for the most part predictable and avoidable. Unfortunately, most organizations don't see preventing failure as an urgent matter, even though that view risks harming the organization and maybe even destroying it.” [4]

Business Success Depends on UX and UCD

Excessive costs and outright failures in software development are predictable and avoidable [4], especially with UX and UCD methodologies. Neglecting user input during the development process means that software requirements are formulated solely from assumptions about users and their needs; often, those assumptions are incomplete or incorrect, leading to poor user experiences and failed projects. Incorporating UX strategy into the software development lifecycle addresses these factors by determining requirements directly from the current workflow of users or employees. This results in products that are user-friendly, quickly adopted, and ultimately successful in the business.

Seventy percent of executives agree that the number one driver in enterprise software value realization is user adoption of the product, while only 1% believe that software functionality and features determine its value realization [6]. Even if features are the critical factor of a software solution, its benefits fail to be realized if it is not adopted by employees. Software adoption is directly related to its value proposition, usability, and overall users' satisfaction with the product.

Value proposition is how much users desire the product. For example, if software is very easy to use, but provides little or no value to the person using it, the product will have a low value proposition and will not be used.

Alternatively, if software is valued by a user because it facilitates accomplishment of certain tasks in specific contexts, it will have a high value proposition and be quickly adopted. Understanding users' characteristics, environment, goals, task flows, bottlenecks, and pain-points of the work will ensure that the software is valued and desired. Establishing software requirements with this in mind removes assumptions development teams have about users, their work and needs.

Software usability is another critical factor that determines user adoption. Even if software has a high value proposition, users resist products that are complex or too difficult to use. Furthermore, software that requires additional training inflates the total cost of ownership by exacerbating down-time and the need for technical assistance [2]. Usability issues in software include a wide range of factors: confusing language, features that are not working as expected, non-intuitive interactions, excessive time required to learn how to use software, input errors, poor readability, cumbersome navigation and so on. Focusing on UX with a UCD methodology safeguards the final design from these issues; user input ensures that teams create products that are valued, usable, quickly adopted and supports users in the context of their work. Done correctly, UX and UCD give businesses an edge over their competitors [1, 6, 7].

Every dollar spent on UX brings two to a hundredfold in return, and companies that invest in UX perform better financially than companies that do not. [9, 12-17]

ROI of Investing in UX and UCD

Emphasizing UX with a UCD framework reduces software development time and maintenance costs, increases adoption and user satisfaction, and grows revenue [6, 7]. NASA estimates that every dollar spent on UX brings two to a hundredfold in return [9, 12-17]. Additionally, companies and organizations that invest in UX perform better financially than companies that do not [15, 16]. The top ten UX-focused companies celebrated close to triple returns, at a cumulative total of 43%, while the bottom ten companies collected a negative cumulative total return of -34% [9, 15, 16]. How exactly does emphasizing UX transform into such profits? The UCD framework defines and refines project requirements, decreases development time and costs, which allows faster time-to-market delivery, and improves user satisfaction.

Software requirements extend from technology constraints and needs (e.g., platforms, current IT environment) to specific functionality, features, and UI specifications. Formulating these user-related requirements as personas for whom software is developed at the launch of the project prevents businesses from losing out on up to four times of investment return [18]. Additionally, the user interface typically takes up 47-66% of total code and 40% of the development effort [19], and users use 5% of features

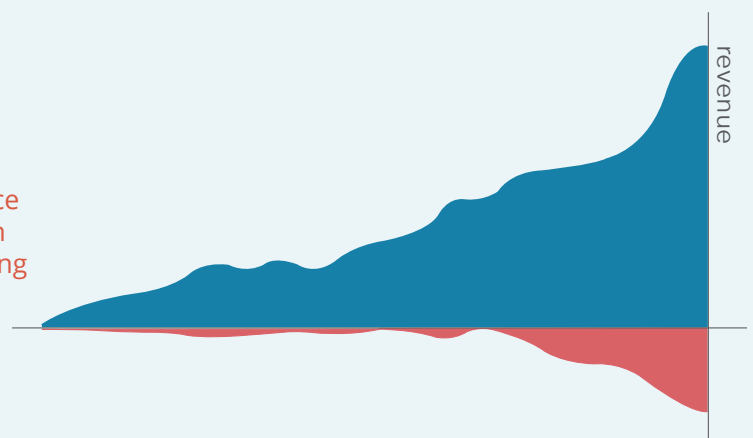
95% of the time [19]. Therefore, establishing usability requirements early on focuses priorities and reduces time needed to fix errors at later stages of development [9, 10]. Moreover, 80% of the unanticipated fixes during development are issues stemming from the UI, while the remaining 20% are actual bugs [19]. These issues are avoidable by putting users at the center of the development efforts. Without clear requirements, software re-work can take up 40-50% of development time that could be better invested in new, value-added work [4]. Fixes after software launch can cost as much as 100 times more as it would have cost to address errors during development [4, 9, 10]. Clearly defined requirements, on the other hand, can reduce product development cycles by as much as 33-50% [19].

Saved time and costs can be measured directly; however, less tangible ROIs such as user performance and satisfaction are equally important [4, 9, 10]. The UX and UCD framework produces software that requires less training, reduces the number of user errors, increases ease of use, and makes it less likely that changes to the UI will be needed after deployment. Additionally, functional and effective software ensures high value proposition of the product, increased user adoption, and higher overall user satisfaction.

Revenue trajectory for companies with & without UX strategy

Good usability
User adoption
High value proposition
Easy to learn
User-friendly
Intuitive
Aesthetically appealing

Complex user interface
Low value proposition
Requires lots of training
Low user adoption
Poor usability



[9, 15, 16]

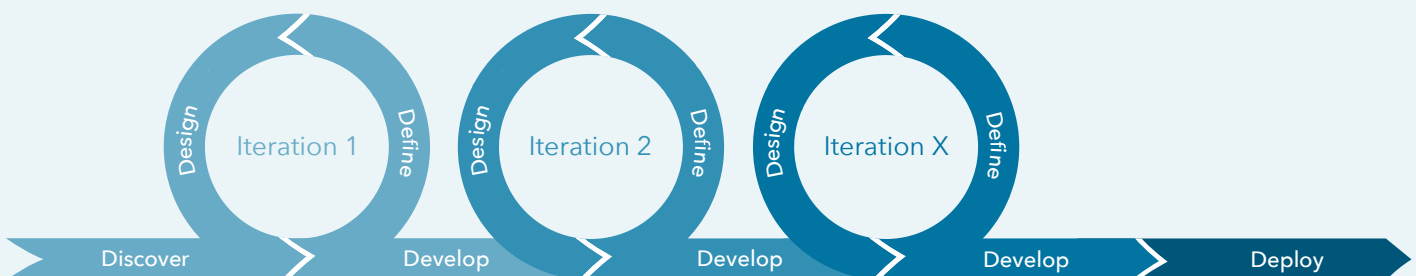
Conclusion

As technology continues to evolve, companies will explore different solutions that can give users an edge over the competition. Given that user adoption of software is a critical factor in business success, companies should seek enterprise technology solutions developed from UX and UCD principles. Not only will employees enjoy using the software, but the organization as a whole will be able to reap the benefits of emphasizing UX such as reduced project costs and improved user performance and satisfaction. This will in turn affect the revenue and reputation of the company. Now is the time to focus on UX in the enterprise world as employees are beginning to carry their expectations

for well-designed and intuitive products from their personal to their work lives. These expectations will intensify as user intimacy with mobile, contextually-aware and wearable technology increases. Begin emphasizing UX and UCD on your next project and enjoy the returns to your business that extend beyond the initial investment.

As an enterprise mobility agency, ChaiOne helps companies transform their business by leveraging mobility at scale. ChaiOne combines UX, UCD, and a data-driven approach to create elegant mobile experiences with proven results for oil and gas, energy, retail, financial, and technology clients.

ChaiOne 5D Phase Descriptions



Discover:

- Internal & external research
- Competitive analysis
- User interviews findings
- Business objectives
- Success criteria
- Discovery findings

Define:

- User requirements & user stories
- Personas
- Pencil sketches
- Ecosystem map
- High level visual explorations
- Information architecture
- Content management strategy & taxonomy
- Technical requirements
- Functional and non-functional requirements
- SEO/SEM requirements
- Data analytics requirements

Design:

- Wireframes
- Prototypes
- Usability evaluation
- Visual comps
- Technical architecture
- Data modeling

Develop:

- Daily scrums
- Code iteration cycles (sprints)
- Usability evaluation
- Release management
- Unit testing
- Feature & regression testing
- Code refactoring
- Integration testing
- Velocity metrics & retrospectives

Deploy:

- User acceptance testing
- Release management
- Data conversion/migration
- User training
- Final documentation
- Project closure
- Measurement

Authors



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