

Elegant MicroWeb
Delivering the Value of Technology

WHITE PAPER

The Importance and Benefits of a Well-Conceived User Experience (Ux)

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ISO 9001:2008



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Whitepaper

ElegantMicroweb.com
info@ElegantMicroWeb.com

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Abstract

Today's users are more sophisticated than ever before. Whether users are using software applications, mobile apps or a website for enterprise use or to purchase a product or service, get information, make a reservation, or take action to accomplish a corporate goal, usability is critical to success for both the user and the business. If a business employs expert Ux knowledge and skills and takes the time to plan and execute the project appropriately, it can better target and retain customers, improve user adoption, achieve objectives and goals and optimize its budget, infrastructure and resource investment.



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Introduction

User interface design or Ux Design is also known as user interface engineering, and it is, perhaps the most important aspect of application and software design. Today, software and applications provide users the ability to interact with computers, machines, appliances, websites, and mobile communication devices. Ux is more important than ever in creating and optimizing the user experience and simplifying user interaction and the completion of tasks.

In the early days of computing, the user interface was something understood only by IT professionals and, hence, computers were used by a select few. However, computing - and software interface design have come a long way and that is largely due to the demands of users.

With the consumerization of technology, today's users are more sophisticated and they demand business and consumer applications and software that are intuitive, and easy to navigate and make purchasing, working, browsing and finding information a quick and simple task. Today's savvy users have no patience for applications and software that lead them down dead end paths, throw error messages without telling them what to do, display half of a screen on a mobile device or demand that they use convoluted or restricted workflows and processes to accomplish a task.

The major components of Ux design are:

- Theme – This aspect of design is comprised of the look and feel of your application and should accurately represent your branding, philosophy and the general standards and guidelines of your applications
- Layout – This component considers the organization of the various elements of your user interface
- UI Controls – UI controls factor heavily into the use, navigation, and workflow and user interaction with your application
- Screen Elements and Design – This aspect of design considers screen design for the various type(s) of screens and the placement of UI controls within these screens
- Navigation and Depth – This includes menus, navigation and levels of navigation to ensure consistency and effectiveness to help users easily find their way through applications
- Accessibility – User accessibility must align with application guidelines, compliance, standards and regulations
- Personalization – This component of design includes interface personalization and the type of data the users need as well as how that data will be presented for a particular user interaction
- Adaptability for Target Devices – To successfully address the market and user expectations, the application must effectively, and quickly, adapt to various devices and screen sizes with seamless interoperability



Designing and developing a new Ux, or upgrading or migrating to a new Ux, must include technology, framework and platform research, as well as thorough testing, and user involvement in prototype phases. These factors will ensure that the Ux is flexible, intuitive and meets the requirements of the targeted users and the environment in which the application, software or site are used - followed by multiple iterations to 'get it right'.

The optimal user interface is:

- Flexible enough to accommodate changes in business or user processes or needs
- Intuitive enough for the 'average user' to adopt and use with ease
- Comprehensive enough to anticipate the twists and turns of user navigation and provide messages and paths through the system to get the user back to where they want to be
- Appealing to the eye and familiar to users within their technology paradigm
- Inclusive to all user perspectives, with UI controls, navigation and tasks that will help them to accomplish a task in a way that is meaningful and makes sense to them
- Suitable for all types of target devices and screen sizes with mouse or touch-driven navigation

In considering the various requirements, factors and aspects of Ux design, many businesses conclude that they will require the services of an expert in Ux - to ensure that all aspects of this critical component of site, software and application design are effectively addressed, including standards and regulations for UI design, Ux techniques and knowledge of domains, frameworks and platforms. If a business takes the time and focus to truly **understand** human interface and the psychology of use and understands how underlying technology can positively affect this process, the design, development and adoption of the application will be seamless and successful.

User Interface Design for Today's Work Force and Consumers

Today's users are more demanding than the users in the old technology world. Consumers are used to mobile applications and sites that allow them easy access using any device and screen size, and enable them to move easily among desktops, tablets, laptops, and smart phones. Consumers want to browse, find, buy, get information, make reservations, and use social media, and networking, and more from any device they use, in the minimum possible time. Business users want applications and software that will make them more productive and allow them to take swift action, collaborate and find and share information.

Software and applications used to be restricted to the office and to business applications designed to support businesses and capture and report on data within the walls of the enterprise. But, today, every home, office and mobile device runs software and applications, and the demand for new, faster, and more intuitive user interface is ever changing and growing.

With this greater exposure to IT and devices, and a culture of mobility and social media, user expectations have changed for both business and consumer solutions, and the trend is moving toward simplicity, effectiveness, accessibility and personalization.



It may seem like a daunting task to create a Ux that will satisfy all of these expectations as well as offer the flexibility and personalization to enable expanding or changing usage habits and patterns. With the right planning and execution, businesses can satisfy these sophisticated user expectations and improve the user adoption, productivity, customer base, competitive positioning and revenue of the company.

The Business Benefits of Great Ux Design

When your business engages in Ux improvement, software re-engineering or new Ux design, the focus is truly on the user, but the benefits of good Ux design far outweigh the user experience. If the business undertakes a comprehensive, well-conceived Ux design, the benefits to the bottom line, application investment and ROI, customer and user satisfaction, and competitive positioning are significant and measurable.

- Error reduction, improved ease-of-use, reduced training and implementation time
- Improved customer targeting and sales conversions
- Increased site, application or software usage by existing customers
- Improved customer satisfaction and resulting customer conversion and retention
- Improved internal user adoption with minimal training requirements, improved productivity, empowerment and ROI.
- Expanded, improved branding via word of mouth and referrals
- Reduced development costs and time
- Reduced redesign and support costs
- Reduced training resources and time
- Reduced help and documentation design costs
- Improved ROI and TCO
- Optimized performance and utilization of hardware, network and systems
- Optimization of resources, resulting in reduced acquisition, training and compensation expenses
- Increased product and service usage and market penetration



Envisioning and Achieving a 'Picture Perfect' Ux Design

We will discuss the components and considerations of Ux design in this White Paper. Remember that each of these project steps, components and considerations must be informed by the overall goals and specific perspective and vision sustained by the project team throughout the Ux design process. Consider these aspects of design and user interaction and apply them to your vision to achieve a picture perfect, practical Ux design.

- Always involve the user in requirements planning, testing prototypes and design iterations. Keep tweaking until you get it right.
- Focus on designing for suitable user skill levels so that you don't leave anyone out.
- Focus on the tasks and actions the users must complete and create a workflow and systematic, logical approach to navigating through the system.
- Be sure that the team considers technical, security, standards, regulations, infrastructure, and architectural IT policies during the requirements phase.
- Consider performance, speed, availability and downtime
- Create a design that is flexible and suitable for target devices from desktops, laptops and tablets to smart phones.
- Create a solution that is truly self-service and self-guiding and allows users to learn and use the solution without a lot of training, manuals or help.
- Provide easy-to-use 'Help' access so users can find what they need and keep going without waiting for someone to help them.
- Focus on efficiency and provide a solution that enables users to perform tasks with less effort, fewer clicks and less navigation, and with minimal complications, minimal input of data, and a logical flow that allow for and anticipates errors.
- Use intuitive, familiar terminology, labels, messages, and error messages, and provide simple navigation and informational notes that are easy for users to follow.
- Focus on historical, current and standard user expectations and add these to the equation when considering the specific requirements of your business or consumer user to ensure that the application, software or site matches user the user paradigm and feels familiar and user-friendly.
- Consider flexibility and personalization and allow for future changes in business or consumer processes or expectations.



Ux Improvement Components and Processes

When a business undertakes Ux design or re-design, there are numerous components and steps in the project and process. Skipping any one of these steps is likely to reduce the success of the project and possibly result in project failure. For most businesses, failure is not an option!

The investment in a software project, application or site development is not to be taken lightly. If, and when, a project is deemed a failure, the management team and investors may not be inclined to provide funding for the business to try again. As with any technology project, user and management expectations are high and the budget and timeline are tight. So, it is important to do it right the first time.

Ux process components must include:

Design

- Functional requirements – Determine initial requirements and goals for the application and the potential needs of users.
- User analysis – Identify user scenarios, understand the needs and expectations of users, understand technical competency and experience of users with software system.
- Information flow design – Page/Screen flow and data flow within the application.
- Branding and theme design – Design branding, themes, and color preferences.
- Graphical sketch – Outline and sketch drawing for the various Page/Screen templates.
- Choose Interface Elements – Input controls (buttons, text fields, check boxes, drop down lists, date field, etc.), as well as navigation components (breadcrumbs, sliders, search fields, pagination, sliders etc.), and informational components (tooltips, progress bar, notifications, message boxes etc.), and containers (Tabs, accordion etc.).

Implementation

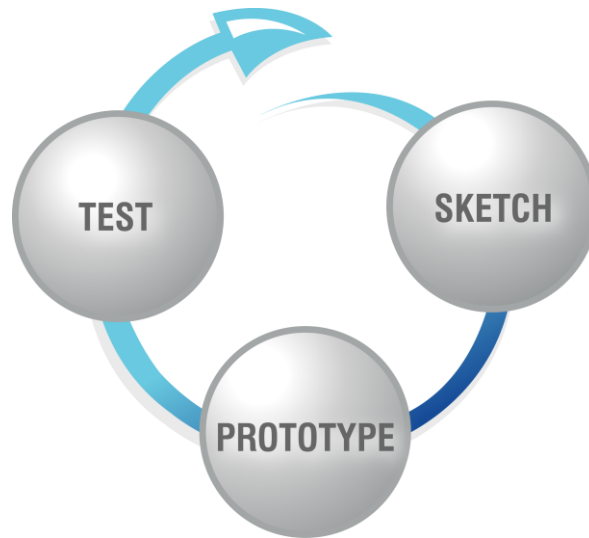
- Choose design frameworks – Select a design frameworks like bootstrap, Zurb, etc.
- Prototype – Create a working prototype, e.g. HTML for web applications, for Page/Screen templates.
- Prototype Usability review – Execute iterative reviews and revisions of prototype with stakeholders.
- UI design – Create a working design for all Pages/Screens based on the final prototype.
- UI design review – Execute iterative reviews and revisions of UI design with stakeholders.

Testing

Test Processes – Execute comprehensive test phases and techniques for cross browser/cross device compatibility on target devices and platforms.



Using the Agile Software Development Processes will ensure success, rapid ROI and low TCO, as well as improved customer and stakeholder satisfaction.



The Agile Software Development Processes

Conclusion

The importance of Ux design cannot be denied. Businesses that give little thought to the user experience are likely to lose consumer market share, customers and revenue or for internal applications, sites and software, will lose crucial productivity, return on Investment (ROI) and Total Cost of Ownership (TCO) as well as erosion in user adoption. The cost of extensive training and implementation negatively affects the bottom line. When a business focuses on the user experience, and gives appropriate attention to requirements, design, development, testing and prototyping, the user experience - and the business benefit - will be significantly improved.

Today's users are more sophisticated than ever before and, whether they are using software, applications or a site to purchase a product or service, to accomplish a task as an enterprise user, to get information, make a reservation, or take action to accomplish a corporate goal, usability is critical to success for both the user and the business. If a business employs expert Ux knowledge and skills and takes the time to plan and execute the project appropriately, it can better target and retain customers, ensure user adoption improve enterprise performance, achieve objectives and goals and optimize its budget, infrastructure and resource investment with exemplary ROI and TCO results.



About Elegant MicroWeb

Elegant MicroWeb is a software products and services company with an overarching vision that supports 'Delivering the Value of Technology'. We have a successful record of accomplishment of serving our customers around the world, with clients in the U.S., U.K., Europe, Japan, Southeast Asia, Middle East and India. With more than 10 years of experience working with customers across all time zones, we have refined our delivery models and product development practices.

Elegant MicroWeb provides an array of software outsourcing services including Application Development, Maintenance and Support, Product Re-Engineering, Ux Design and Improvement, Mobile Applications Development, Product Development, Staff Augmentation, and IT Consulting. Our portfolio of product includes Java Development tools and components, and a comprehensive Corporate Performance Management and Business Intelligence suite of products. We are certified in ISO 9001:2008 Quality Management Systems, and espouse and practice the key pillars of QMS, namely, Innovation, Learning, Improvement, Optimization and Customer Satisfaction.

We invite you to visit the Elegant MicroWeb website (www.elegantmicroweb.com) to review our capabilities, experience, delivery models, and services, and browse our case studies, whitepapers and testimonials.



Elegant MicroWeb

A-305, Shapath IV, Opp. Karnavati Club,
SG Highway, Ahmedabad-380051 India

Email: contact@ElegantMicroWeb.com

URL: www.ElegantMicroWeb.com

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