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The Mindful IT Company
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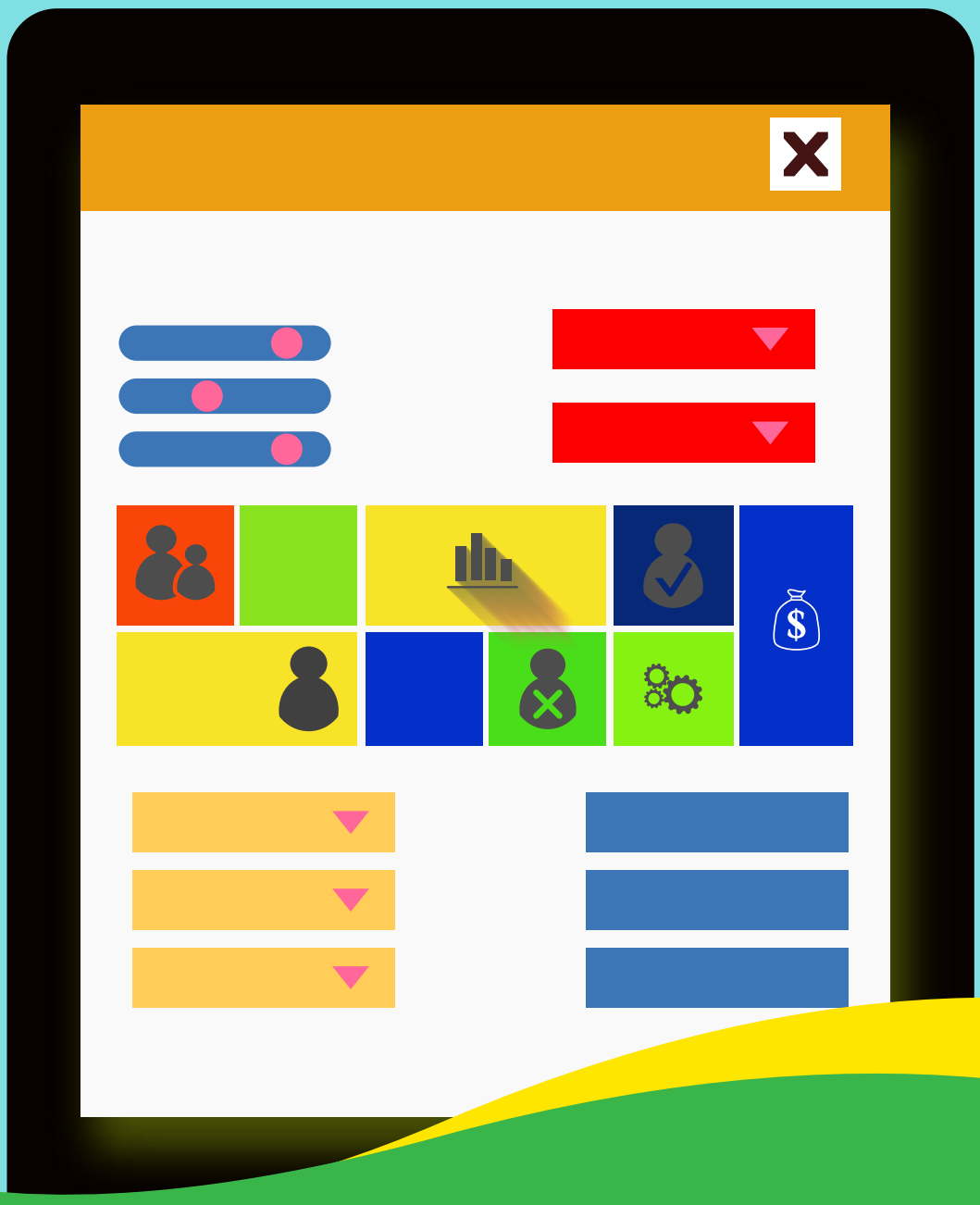
Significance of User Experience, User Interface and Usability Testing in the Digital World



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Contents

Introduction....3
What is User Experience (UX)?....3
Significance of UX in the Digital Transformation Age....4
Difference between UX (User Experience) and UI (User Interface)....4
Elements of UX....5
Usability Testing: What you need to know?....6
How to Approach Usability Testing?....7
Happiest Minds UX, UI and Usability Testing Expertise....7
Conclusion....8
About the Author....9

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Introduction

Digital transformation has made the smart phones and tabs an extension of the human body. Be it for shopping, banking, learning or entertainment - handheld devices are playing an inevitable part of human life. The ease of use or the sophistication of the access makes an app unique among multitudes of mobile/ web apps getting released each moment. Gone are the days when customer just wanted to access a service, finish the job and move on. Along with what they want to achieve, the current population is keen towards the feel good factors of the application. The customer experience is the key to the success of any product or service in this digitalized world. In other words, a clear understanding of user interface and the user experience is the key to stick to the top in market. The combination of a good mobility solution and great user experience can increase the business efficiency.This document will help you understand the difference between UI and UX, process of designing an application and to finally conduct the usability testing.

What is User Experience (UX)?

User Experience is the quality of overall experience and satisfaction a user has while using a specific app or a website. This can happen when the need of the user is aligned with the goal of the organization and the application flows are made smooth-with better features.

A good UX enhances the customer satisfaction and brand loyalty by improving the usability, ease of use, and pleasure, provided in the quality interaction between the consumer and the product. Remember the cassette players? We had to listen to the songs in a sequential order or had to fast forward or rewind to listen to the particular song. Now the music players are advanced enough to play the particular song you want, directly from where you want to play. Without any doubt, we can say that this feature makes the digital music players better than old cassette players.

On another instance, when you do online shopping you had to enter the card details every time. Now the simple and secure feature of saving your card details makes it easy and convenient for the shoppers. On merchants' side too this feature has earned a lot, that they have started promoting it and providing incentives for those who save their card information for faster checkout.

Overall to say, the recipe of User Experience is to blend the business goals with the end user's needs using a good interface and the right technology.

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Significance of UX in the Digital Transformation Age

In this fast moving digitally connected world, users have become intolerant and impatient, as they have millions of apps to choose from for accessing and achieving what they want. Users expect the app to be simple. If you make the flows complex, the users have to spend more time in figuring out how to use the app and tend to lose their patience. In such cases, there won't be any second thought to delete the app from their ecosystem and install a new app, which satisfies their requirements. This could lead to business loss. In the case of mobile apps the aim is to achieve 5 star ratings in the market. We all think twice to install an app that is rated even 4 and anything less than that will get a lower download count. Isn't it true?

ROI of UX

A good UX gives a user higher satisfaction and builds the brand perception in the users. In the case of mobile apps, this can lead to loyalty to the apps and the users might even recommend them by giving better ratings. A well designed UX can help the users to achieve their goals with less effort using their intuition and considerably reduce the cost of support. It helps the customers in higher conversion rates and also in the reduction of the training costs.

Difference between UX (User Experience) and UI (User Interface)

UX is often confused with the term User Interface or UI. UI is only one part of many components of the user's overall experience. UX includes visual design, information architecture, interactive design, human-computer interaction, and the likes and preferences of the user.

UI is all about visual pleasing part

UI counts on how pleasant the application looks- which comprises of the colors, fonts, image quality used and objects' alignment- to the user.

This BMW is visually pleasing to anyone. However, apart from the visual appeal, the buyer would think of the performance of the engine, mileage, speed, road grip of the tyre and comfort of the seats. With visual appeal, the UI part of the car is taken care of. If the looks of the car was not that great then it would have failed to get the attention of the buyer.

On similar thoughts, would anyone be interested to use an application with an unimpressive UI? Definitely not.

UX is all about the performance and simplicity

UX is UI + performance (response time), design, features of an application. Most used features should be easily accessible in an app and size of the objects should be big enough to access through fingers in case of app on devices. Overall it is about the quality of the experience user have while using the application.

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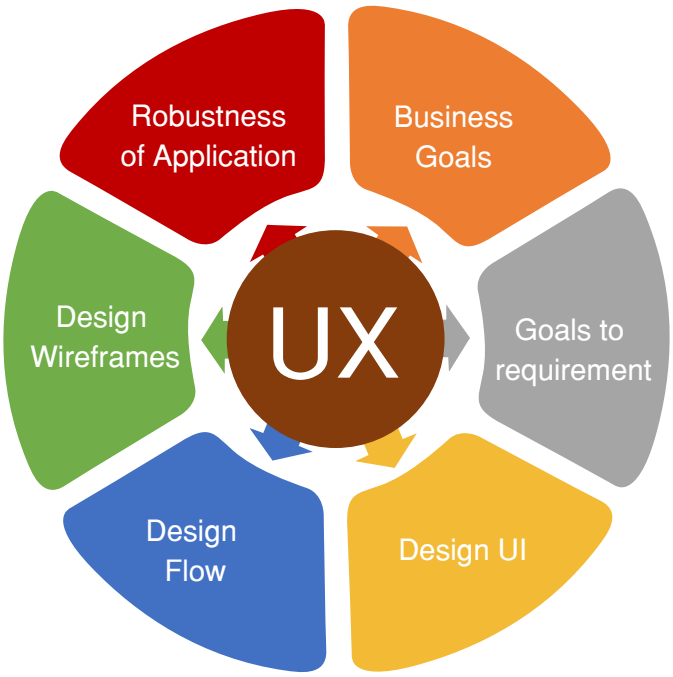
Look at the inside of the same BMW car. Even if the dash board and tyre look convincing, the buyer would consider to test drive and check the performance, before making a purchasing decision. Isn't it?
Imagine the dash board looking as complex as a cockpit. This will create greater difficulty for the driver to get used to driving and using the features of the car. Here in the case of this BMW, the dash board is so intuitive to identify the music player and the button to operate them in the player. Since it is a frequently used feature the controls are incorporated in the steering wheel itself, which will be highly convenient for the driver.

On similar lines, any application has to be simple and intuitive and also the user should achieve what he wants effortlessly.

Elements of UX



The most appealing User Experience comes from iterative designing and testing throughout the development cycle. The key principle for any UX project is that you must ensure the involvement of the user. It will not only improve the experience but will also help in avoiding delays for the UX projects.

How to approach the UX designing of a mobile/ web app.

Defining the Business goals

- Understand the purpose of the application
- Finalize on what the user wants to do with the application
- Finalize on what business wants the customer to do

Draw the boundaries

- Convert the finalized goals to requirements
- Know the user circle of the application
- Define the user types and their roles

Organize the screen and objects in it

- Create the wireframes of the app to decide what feature is placed where
- Apply the usability thoughts on the same and arrange the objects accordingly

Design the flows

- Break the requirements to different modules
- Group and organize the flows to achieve the specific tasks (it could be tree structure or flow diagram)
- Make the flows intuitive enough and simple for the targeted users
- Design the flows to do the tasks in limited number of steps

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User Interface

- Check on the colors, fonts and size of the objects
- Make the frequently used features easily accessible
- Arrive at the meaningful validation messages, tool tips in required places

Robustness

- Make the performance of the app robust enough to meet the standards

Usability Testing: What you need to know?

Usability is a combination of many factors in an application including design, ease of learning, efficiency, memorability, error prevention and satisfaction of the user. It assesses how easy the interface is for the usage. An application whether it is for mobile or web has to work for the user and it needs to work without any roadblocks in the flow or access. Various studies say that an average user takes only 50 milliseconds to arrive at an opinion regarding an application in their device. The initial judgment shapes the user perceptions and it has the power to impact the user adoption decision of the application. Without considering usability, there is no point in developing applications that are intended for people. Here comes the relevance of usability testing of an application.

Usability testing is the best way to find out how the actual users experience an application. It measures parameters like actual performance, areas of improvement in an app. The only way to achieve high-quality user experience is to start user testing early in the design process and to keep testing every step in the whole development lifecycle.

The test can be conducted on the prototype or beta version of the app or the live app itself.

You must first nail down on the group of end users which can be of more than one group of users. This can be done through analysis or analytics. One of the best practices is to record the user flows while they use the app. Their usage pattern and frequently visited page or used feature need to be identified. For this, there are various applications available. You can define in App analytics, to track a specific event, and can track the interaction of the user with the device when he/she views the app in a specific view mode (Landscape or portrait) also. It also helps in tracking the gestures like tap, pinch, zoom and even navigation to different screens of the apps. You can collect the information about the crashes and time spent on each screen and the user reaction to the notification (Appsee is one of the mobile analytics platform that can help you on this) You can even ask for a review from the user.

Once all the data is collected, you can redesign the app based on the needs to improve the user experience. Testing flows needs to be stressed on the following areas.

Areas of Testing	What to do?
Wireframe - A rough sketch of the pages using some tool	Tested to finalize on the components of the page as to what all should a page should contain
Prototype - A rough sketch of the pages using some tool	Mock tested to check the flow to achieve scenarios with keeping usability point of view
Alpha Version - This term is more applicable to products. This is a real, dynamic application with logical code	Tested by the testers in the organization to find all the defects possible. Once the targeted quality is reached this will be released to the end users
PBeta version - More applicable to products. This is a real, dynamic application with logical code but not the final release to end user	Tested by the end users and their reviews are collected via various means of communication channels. Data is also collected using the analytics portal as well

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How to Approach Usability Testing?

Once all the requirements of usability are nailed down, test scenarios need to be decided or designed to ensure that user has a good experience with the app. You need to consider the usability aspects such as –

- **Size of the objects on the screen** (if it is mobile app then should be easily accessible with fingers)
- **Placement of the objects** (It should look good when the screen is zoomed in or out)
- **Color usage** (Choice of the text and background should be chosen well. Ex: Grey text on blue back ground USABILITY is not a good choice)
- **The font size** (The fonts should be big enough to read conveniently)
- **Simple and intuitive workflows** (minimal clicks of taps)
- **Language usage:** Meaningful easily understandable content (Jargons should be avoided in the validation and success messages.)

Test scenarios should be designed based on the above points. Some of the requirements will come as part of NFR (Non Functional Requirements) and will be taken care of, but if they are not mentioned, these aspects should be a suggestion from the testers.

Once you have the beta/final release in market and once all the data through analytics or feedback is collected, you can test based on the severity of the feedback. For example, the crash info can tell you which screen you need to fix and test. Frequently visited screen or used feature can help you in prioritizing your scenarios. These practices can help you to understand what and where to focus more in User Experience testing. There are tools to measure the object precision on the screen to pixel level. VMN toolbox is a freeware that can be used for this process.

For beta/final version of the app, we can ask the users to key in their feedback and ratings. If the test is conducted in the lab then there has to be an observation from a team to see how users use and then take a call on to the focused areas. This can be split into different cycles and in between each cycle, the app can be improvised to meet the needs of users or to make it more user friendly.

Happiest Minds UX, UI and Usability Testing Expertise

At Happiest Minds, we focus on analyzing customer data collected from social platforms, campaigns, surveys and loyalty programs to understand the customer requirements and provide personalized and tailored user experience for their customers. Our UX, UI and Usability Testing teams keep a tab on the latest trends in the market in terms of technology and solutions, and provide the right solutions for our clients to achieve what they want and to make their presence significant in the market. Our proficient testing team thoroughly checks and uncovers usability issues, checks whether the design is at par with the UX design principles and standards and helps in identifying common problems that users encounter with the app. Our usability testing services are rendered with a lean, smart and holistic flavor therefore reducing cycle time and compressing the overall time to market for our clients.

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Conclusion

A smart UX is an enabler of the digital transformation in any business. As we move into an Internet of Things era, where more and more devices get connected and communicate with each other, the significance of user experience will also witness many shifts. At a time when people use multiple devices to communicate, it will be challenging to provide a seamless brows-ing experience for users across all platforms. More than the fancy design elements, small factors like the placement of a button or its color, response to a click etc. might matter more while considering a robust UX experience in the future.

The distinction between the physical world and the digital world is gradually blurring away. Delivering physical experience in digitalized platforms, optimizing the user experience based on the context, human oriented designs rather than technology oriented ones, are some of the upcoming trends in the area of User Experience which we can expect in the near future itself. A more holistic User Experience design and Usability Testing strategy can bring in a much engaging and intuitive UX, capable of luring your customers in to your product or service and drive your sales to new heights.

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About the Author

Sreekrishna N.

Sreekrishna N. is a Test Manager at Happiest Minds Technologies. He has an overall experience of 12+ years in the IT industry. He manages the complete test life cycle of Mobility and Desktop application testing projects. He has expertise in Test Planning and strategizing the Test Execution, Process tailoring, API Testing, Customer Relationship Management (CRM) and Business Process Management (BPM) Applications Testing. He is also passionate about Trekking and organizes Trekking for his colleagues at Happiest Minds.

About Happiest Minds Technologies

Happiest Minds, the Mindful IT Company, applies agile methodologies to enable digital transformation for enterprises and technology providers by delivering seamless customer experience, business efficiency and actionable insights. We leverage a spectrum of disruptive technologies such as: Big Data Analytics, AI & Cognitive Computing, Internet of Things, Cloud, Security, SDN-NFV, RPA, Blockchain, etc. Positioned as “Born Digital . Born Agile”, our capabilities spans across product engineering, digital business solutions, infrastructure management and security services. We deliver these services across industry sectors such as retail, consumer packaged goods, edutech, e-commerce, banking, insurance, hi-tech, engineering R&D, manufacturing, automotive and travel/transportation/hospitality.

Headquartered in Bangalore, India; Happiest Minds has operations in USA, UK, The Netherlands, Australia and Middle East.

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