

# DESIGN



NIC Webinar- Knowledge Sharing among peers PAN INDIA  
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# WHAT IS USER INTERFACE?

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- How people interact with applications and services.
- A bridge between a Human and the System.
- process of designing the visual look of the application and the functionality of the interaction.
- This can include display screens, keyboards, a mouse and the appearance of a desktop.



# User Interface elements

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## Input Controls:

- Buttons
- Text fields
- Checkboxes and radio buttons
- Dropdown lists and list boxes
- Toggles
- Date field

## Navigational Components:

- Breadcrumb
- Slider
- Search field
- Pagination
- Tags
- Icons

## Informational Components:

- Tooltips
- Icons
- Progress bar
- Notifications
- Message boxes
- Modal windows

## Containers:

- accordion

# WHAT IS USER EXPERIENCE?

What UX actually mean, let's break it down :

- When we interact with an applications or a service we get an experience out of it.
- What makes the above experience 'good' and 'effective', is how the users are able to reach their goal effortlessly using the respective application or service.
- **User Experience** is not about good industrial design, multi-touch, or fancy interfaces. It is about transcending the material.



*The extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use.*

*- ISO 9241-11*

# WHY USER EXPERIENCE MATTERS?

## Reduces Development Time



An estimated 50% of engineering time is spent redoing work to fix mistakes that could have been avoided

## User Satisfaction



Successful user experience and design provide a competitive advantage.

## Lower Support Required



An app that is intuitive and easy to use puts less stress on application developers and support team.

## Improving Users' Quality of Life



The user always expects the application to serve the intended purpose and benefit the user.

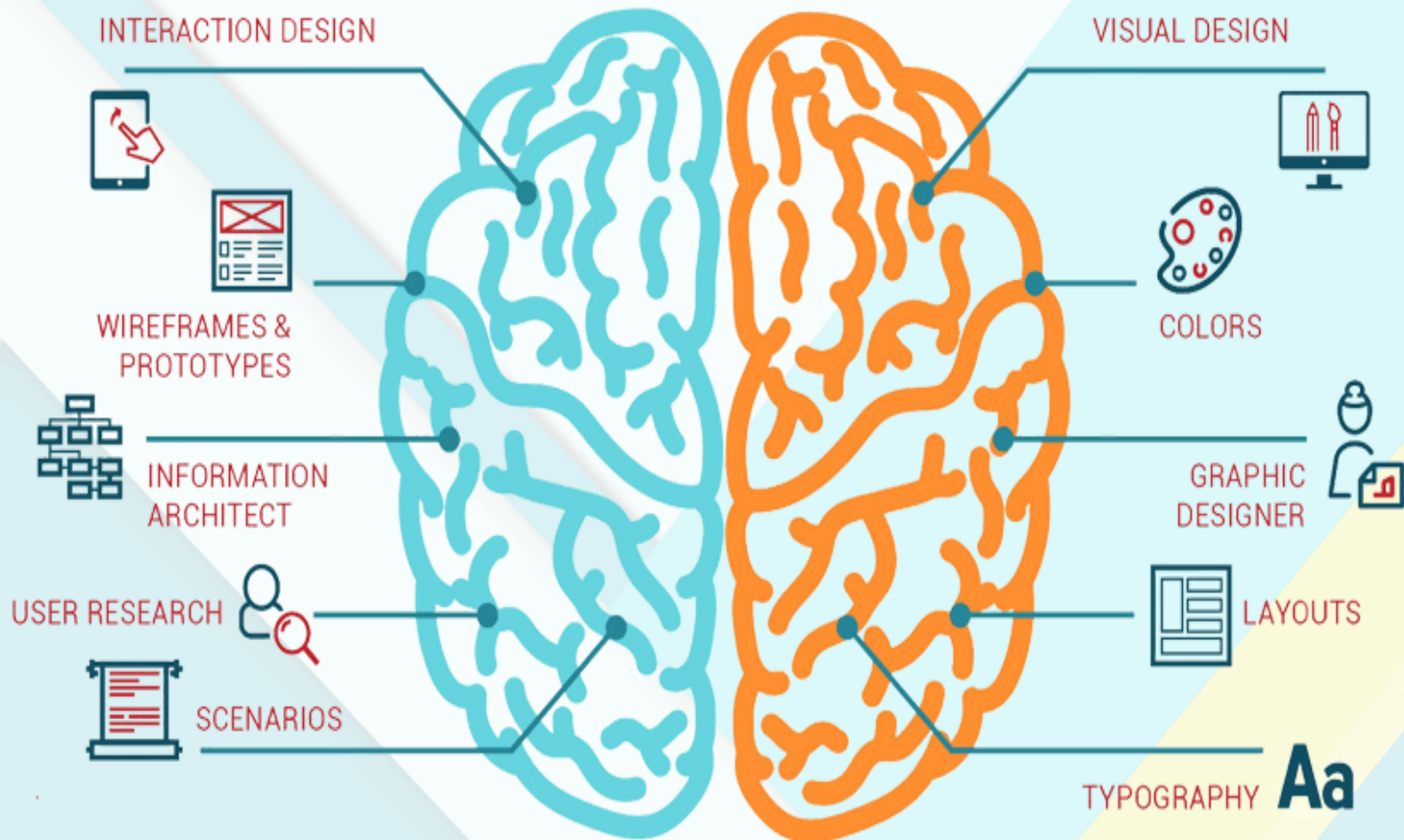
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*Design is not just what it looks like and feels like. Design is how it works.*

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*— Steve Jobs.*

# UX & UI DESIGN

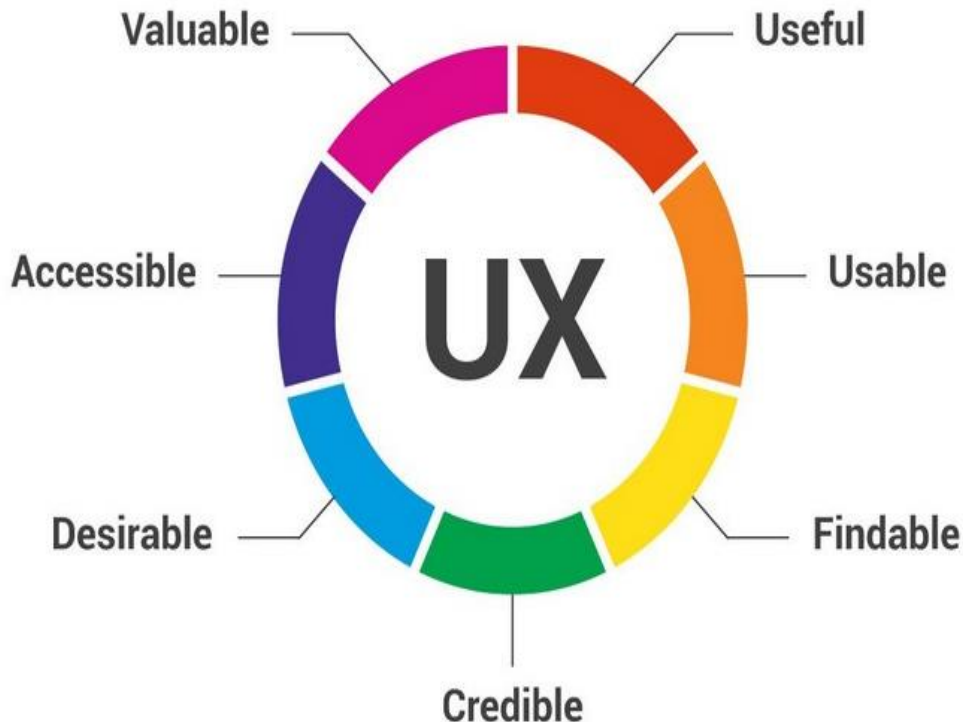


# FACTORS INFLUENCING UX

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So, User Experience is critical for an application. Now let us look at the factors that need to be taken care of while designing and developing application.

According to Peter Morville a pioneer in the UX field, there are seven factors that describe user experience :



# FACTORS INFLUENCING UX

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## Useful

Content should be original and fulfil a need

## Usable

Site must be easy to use

## Desirable

Image, identity and other design elements are used to evoke emotion and appreciation

## Findable

Content needs to be navigable and locatable onsite and offsite

## Accessible

Content needs to be accessible to people with disabilities

## Credible

Users must trust and believe what you tell them

## Valuable

Application should be able to accomplish the goal with minimum resources



# USER INTERFACE GOLDEN RULES

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## Strive for consistency

- Consistent commands should be employed throughout.
- **To Achieve this, Use Master Pages and CSS Design**

## Enable frequent users to use short-cuts

- Abbreviations, function keys, hidden commands, and macro facilities are very helpful to an expert user.

# USER INTERFACE GOLDEN RULES

## Offer informative feedback

- **These are the three types of Feedback/Alert messages that can be integrated:**
- **Error** : Informs a user that a problem or error has occurred
- **Warning** : Informs the user that a problem or error may occur in future
- **Information** : Provides information that is useful to the user

## Design dialog to yield closure

- Sequences of actions should be organized into groups with a beginning, middle, and end.

# USER INTERFACE GOLDEN RULES

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## Offer simple error handling

- Design the system so the user will not make a serious error.

## Permit easy reversal of actions

- Easy reversal of actions encourages exploration of unfamiliar options.

# USER INTERFACE GOLDEN RULES

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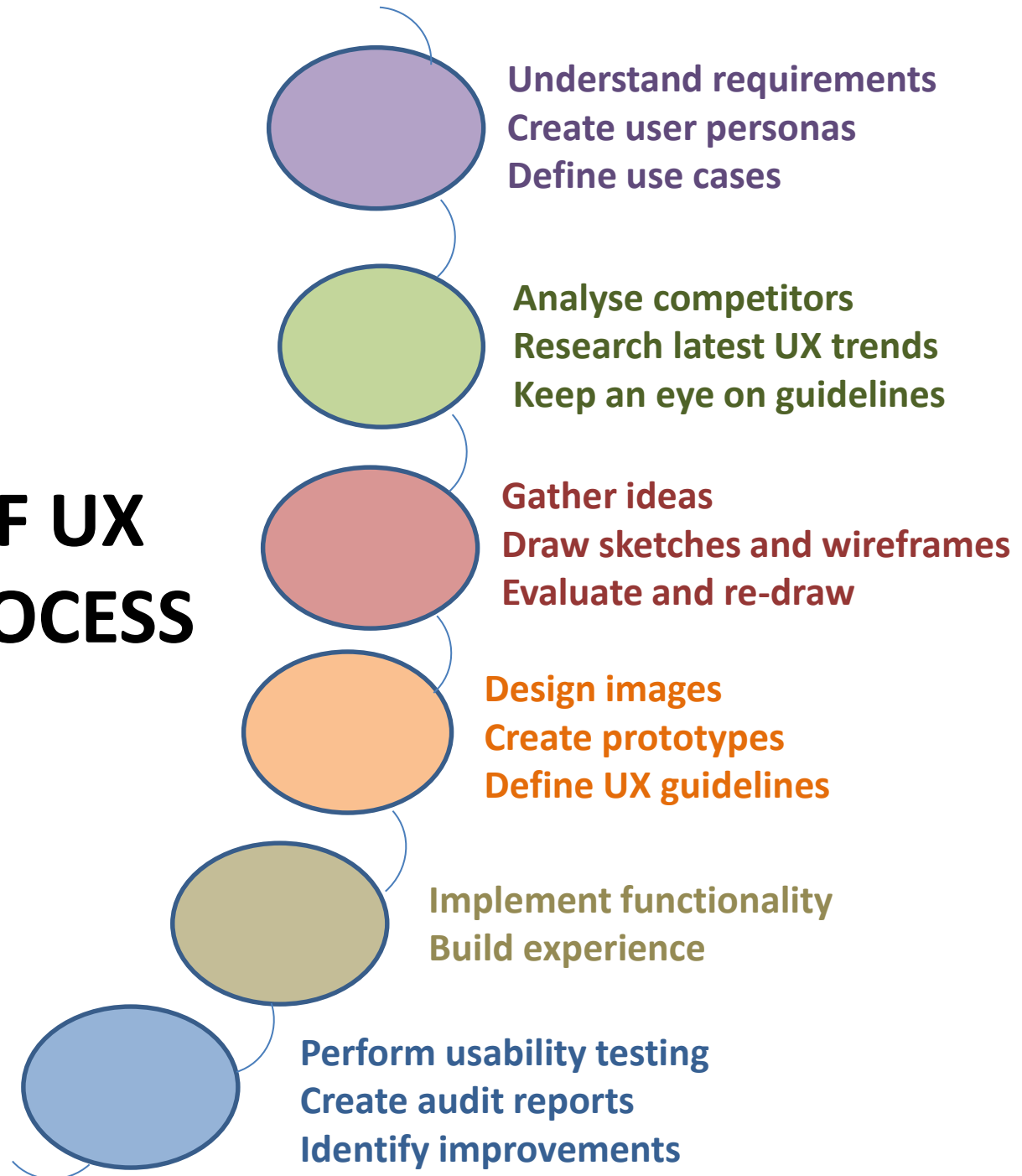
## Support internal locus of control

- Design the system to make users the initiators of actions rather than the responders.

## Reduce short-term memory load

- The limitation of human information processing requires the displays to be kept simple, multiple page displays be consolidated and window-motion frequency be reduced

# STAGES OF UX DESIGN PROCESS



# ACTIVITIES INVOLVED IN STAGES



## UNDERSTAND

- Meet, talk, observe and understand users in their environment
- Analyse requirements to understand and clarify them
- Define user personas and use-cases



## RESEARCH

- Study of competitors' approaches
- Research on similar features in the world
- Analysis of latest UI/UX trends, design principles and rules
- Keep an eye on your own UX guidelines



## SKETCH

- Generate ideas and work on basic sketches
- Brainstorming sessions with stakeholders to get their feedback from technical perspective
- Re-draw sketches and re-test them with stakeholders

# ACTIVITIES INVOLVED IN STAGES

## DESIGN



- Design UI images
- Define final theme, specs, and guidelines required for implementation
- Design icons to display on screens
- Sessions with stakeholders to get their feedback from business & technical perspective

## IMPLEMENT



- Implement back-end functionality and front interface

## EVALUATE



- Go through the flow and feel the experience
- Perform a comparison of implementation and defined interface

# UX/UI TOOLS

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## Prototyping Tools

- Gravit
- Pencil
- InVision
- Fluid UI
- Axure

## Design Tools

- Akira
- Inkscape
- Figma
- Vectr
- InVision



## Tools for Mind Mapping & Flow Charts

- MindMapple
- NovaMind
- Coggle
- Blumind
- Sketchboard

## Usability Testing Tools

- Google Analytics
- ClickHeat
- Simple Mouse Tracking
- Usabilla
- Website Grader








# Do's of UI/UX design

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# Don'ts of UI/UX design

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-  **DON'T** Play It Safe
-  **DON'T** Include Non-Related Content
-  **DON'T** Use Too Much Animation
-  **DON'T** Sacrifice Readability
-  **DON'T** Create Longer Loading Periods

# TAKEAWAYS FOR EFFECTIVE UX DESIGN

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- ✓ The application allows to optimize or make changes to meet user specific needs and priorities by configuring layout, content, or system functionality
- ✓ User is able to View and interact with every page of the application on any device with a minimum of resizing, panning or scrolling.
- ✓ Dashboards are designed and implemented in the application to display exactly what is relevant to different users based on either user role or any other criteria.
- ✓ Alerts, Notification, Exceptions can be configured to notify user of events that require attention.



# TAKEAWAYS FOR EFFECTIVE UX DESIGN

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- ✓ Depending on user requirement, language preference and display mode of error messages can be configured.
- ✓ Use black text on a plain, high-contrast, non-patterned background so that users can rapidly read and understand prose text.
- ✓ Ensure Visual consistency of the content across pages. Visual consistency include typography, layout, colors, icons, navigation, images, and backgrounds.
- ✓ If you are using any color coding in the UI make sure that the coding can be quickly and easily understood.



# Thank you !

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[support-sgg@nic.in](mailto:support-sgg@nic.in)

IP No: 5748