KPMG

User experience design in the digital world

For KPMG in India

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KPMG In India Foreword

In today's digital age, businesses and organisations must prioritise their digital presence to stay competitive and meet the evolving needs of their customers. Digital experience design plays a critical role in ensuring that a company's digital platforms are not only functional but also engaging and intuitive.

Digital experience design encompasses a wide range of elements, from website and app design to user interface and user experience. By crafting a seamless digital experience, companies can increase customer satisfaction and loyalty, while also improving their bottom line.

A well-crafted digital experience can make all the difference in how a customer interacts with a brand. It can provide a sense of ease and convenience, making it easier for customers to navigate a company's digital offerings. At the same time, a poor digital experience can lead to frustration, confusion, and even abandonment of a company's platforms.

In addition to customer satisfaction, a strong digital experience can also drive business results. For example, a streamlined e-commerce platform can lead to increased sales, while an engaging social media presence can help build brand awareness and attract new customers.

The importance of digital experience design extends beyond just customer-facing platforms. Internal digital systems, such as employee portals and enterprise software, also benefit from thoughtful design. A well-designed system can improve employee productivity and satisfaction, leading to a more efficient and effective workforce.

In this point of view (PoV), we explore the principles and practices of experience design in the digital world. We cover topics such as mediums of digital design and the latest trends and technologies shaping the field, including artificial intelligence, virtual reality, and augmented reality.

KPMG in India's Design Thinking practice is engaged in making efforts to evangelise design led thinking and support organisations in their design journey.

We hope you find the contents of this PoV insightful, and this helps you observe your customers closely to capture their changing motivations and needs. We would welcome the opportunity to discuss how you can capture these insights for customers specific to your organisation or your industry to build a resilient business.

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Digitalisation has a far-reaching impact across major economies and multiple industries, with the recent pandemic further catapulting its demand. There were more than five billion internet users worldwide, which is 63.1 per cent of the global population.

> As customer digital adoption and interaction has grown multi-fold, the organisations are forced to accelerate their digital transformation journey and evolve new business models to get closer to customers and increase their interaction level.

The report also suggested that the global adoption of digital solutions for customer interactions has advanced by almost three years attributable to the pandemic.

With such heavy internet usage in today's world, no sector or industry functions without the application of digital solutions. Encompassing healthcare, manufacturing, entertainment and delivery services among others, technology has transformed these to be more efficient and organised. One such sector is education, wherein courses/study materials are being offered online by leading universities and are working continuously towards making the learning experience more interactive and student friendly. The E-commerce industry across the globe has grown tremendously, permanently changing the way people shop as consumers prioritise convenience. For instance, one the prominent media houses in India, has reported a significant growth in its digital subscription revenue. New verticals including beauty, apparel, and grocery have significantly contributed to increasing digital sales with companies competing in the same-day and 10-minute delivery segments owing to the evolving consumer demands. Another concept, which is on the rise, is super-apps that follow a platform-mediated business model offering a comprehensive mobile-friendly experience with multiple mini-apps running within a single application to provide payment services, transport, e-commerce, and more to the user as a one-stop solution. According to Gartner[1], by the year 2027, 50 per cent of people across the globe will be daily active users of multiple super apps.

To keep pace with the rapid advancements in the digital world, legacy companies have either started or are planning a digital transformation of their businesses to unlock new capabilities and opportunities. A global personal care company has undergone a digital transformation to provide Augmented Reality (AR) based experience to try out products at home using the smartphone camera. It has installed 'magic mirror' devices in stores to expand the AR experience to its legacy offline retail stores. According to the IDC[2], by 2026, global digital

transformation spending is expected to reach USD3.4 trillion with a five-year CAGR of 16.3 per cent. The transformation includes companies spending on moving data to the cloud, tools for collaboration and communication, automating processes, and increased use of advanced devices.

In the current world, the use of digital design is growing at an accelerated pace given the massive dependence on technology and being surrounded by products having some element of digital design from development to the usage stage.

> Digital design does not stop at just creation of websites and applications but the focus on user interface (UI) and user experience (UX) takes centre-stage.

UX enhancement is pivotal for gaining a competitive edge in the market through increased customer acquisition and retention, better brand reputation and easy accessibility to new users. Companies risk losing significant revenue owing to even minor interruptions during their journey through the product or service. It is imperative for organisations to focus on UX design with average returns of USD100 on every USD1 invested in it. User experience helps empathise with the user to understand the needs along with the exact problem that the solution is trying to solve. It focuses on value creation which would influence users to engage with the product or service that is designed for a wholesome customer experience. Moreover, companies are employing modern digital mediums leveraging innovations such as augmented reality and virtual reality to level up consumer interactions.

> The evolution of existing user-friendly digital mediums such as web and mobile applications into highly personalised comprehensive experiences is playing an equally important role in shaping the future of UX across multiple industries.

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1. Super app, Gartner
2. IDC Worldwide Digital Transformation Spending Guide, 2022,

02
Delivering digital experience

User interaction with digital products is growing rapidly owing to the exponential increase in the availability of mediums of digital experience. Organisations are using innovative and modern channels/devices to create a digital experience that can access consumer's data for personalised interactions. The customer-centric digital experience results in higher user engagement, improved return on investment and transformation. But is the medium of digital experience only limited to applications and websites? The answer is No.

The medium could be from a simple digital design that allows users to interact with modern-age designs using real-time data to provide relevant recommendations and access to products and services. Here are a few examples of digital medium from today's world:


Web and mobile applications — Web and mobile applications have become an undetachable part of human lives in this digital world. For almost every task or service, an application is available, hence becoming the constantly available digital medium for interaction. For instance, AI-based B2B accounting mobile applications are capable of scanning receipts to capture expenses and generate relevant reports on overall accounting parameters on the go. Applications are smart enough to build personalised presentations and write content in more than 25 languages intended for multiple purposes, on demand. Additionally, businesses are using smart chatbots (more recently generative AI) that leverage Artificial Intelligence (AI) models and Natural Language Processing (NLP) to efficiently understand customer questions and provide automated responses simulating human conversation.
A good example of this would be an app which allows contactless identification, thereby saving time at airport entry points, security checkpoints, and boarding gates.
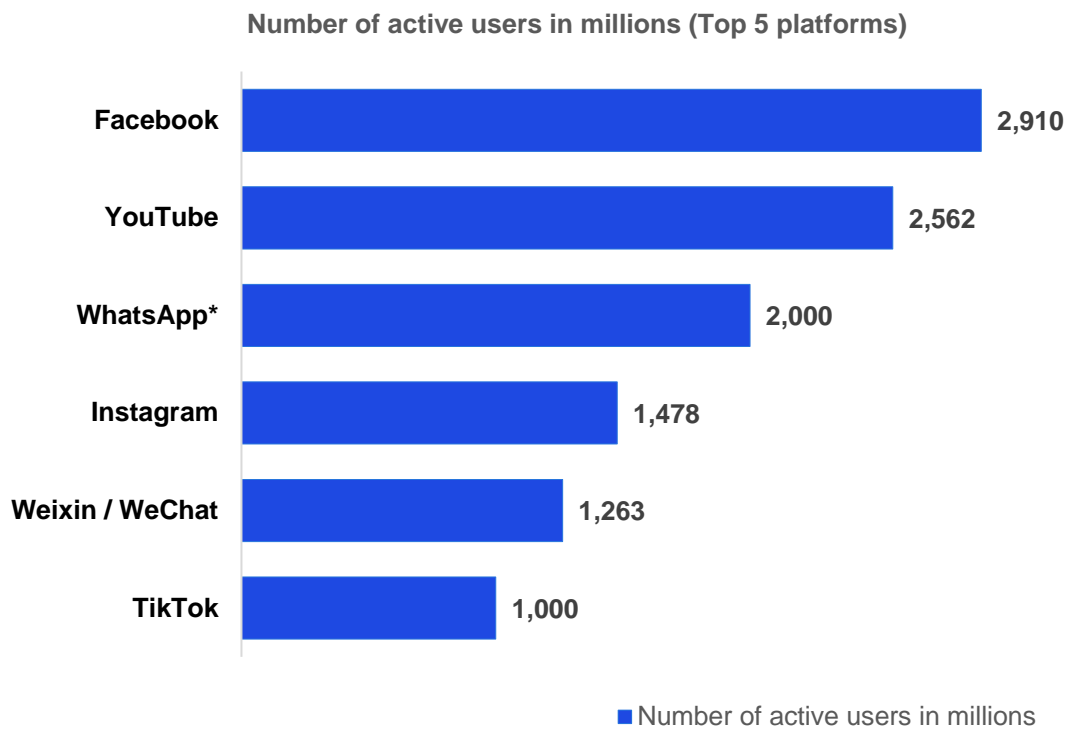

Digital display boards — Display boards have evolved to become highly interactive, offering users a personalised experience with complete control over the screens. The user has options ranging from basic touchscreen digital boards to motion and gesture-controlled display boards. For instance, an American airline offers its passengers parallel reality-equipped display boards at Detroit airport that allow passengers to see only their personalised flight information on that board with up to 100 passengers able to look at their version of information at a time. This is made possible by tracking the scanned boarding pass to detect the passenger's presence. Moreover, an advertising company in Singapore installed a 3D display board at Changi airport. The 3D display board displays anamorphic content to show the wildlife of Southeast Asia with immersive sound.
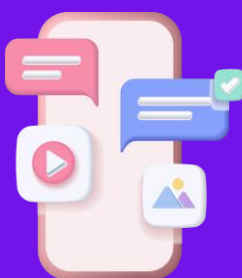
Social media and messaging – These are the most widely-used applications across the globe for being socially connected and efforts have been made by companies such as Meta to create a user experience that is highly intuitive and personalised using Artificial Intelligence and Machine Learning. Snapchat, Instagram, WhatsApp, and Telegram among others are also able to provide an intuitive user experience with each new product update. Instagram enables interactive brand campaigns using stickers, filters, effects, and polls. For instance, a leading snack food company displayed an Instagram advertisement with the chips packet dissected into two flavours. The centreline kept sliding playfully from side-to-side drawing the user's attention towards the polling sticker and encouraging engagement. Similarly, WhatsApp for business allows users to digitally access the complete product catalogue instead of only messaging the business owners. B2B segment is utilising social media platforms such as LinkedIn and Instagram to strengthen its market position. For instance, a technology provider shares its photos and videos of past products from the last hundred years to enhance credibility with current and potential customers showcasing a history of repeated **success.**

Figure 1: Global social networks ranked by number of users

Number of active users in millions (Top 5 platforms)

Platform	Number of active users in millions
Facebook	2,910
YouTube	2,562
WhatsApp*	2,000
Instagram	1,478
Weixin / WeChat	1,263
TikTok	1,000

■ Number of active users in millions

Metaverse – This technology merged the physical and virtual world that can provide a three-dimensional digital experience to users. There is a sea of use cases of metaverse from virtually travelling the world to selling or buying products in the virtual world. According to a KPMG in India Metaverse[3] survey, more than half of the adults in the US are satisfied and open to virtual experiences for immersive learning, engagement, and work collaboration. As similar interest and awareness across metaverse is growing, newer application areas have started to emerge. These include product design and engineering, social networking applications, virtual services, surgery planning and support, virtual onboarding, and training.

Personal assistants – The voice activated devices are creating a niche for themselves in the digital industry, allowing the transition towards voice activated command instead of typing to generate results. The technology is highly anticipated for home automation, hence, pushing electronic home products manufacturers to integrate personal assistants into their devices. Intelligent personal assistants are helping businesses instantly schedule meetings and appointments without the hassle of manually managing the overlaps. It also provides step-by-step guidance to new employees joining the organisation apart from providing end-to-end planning of official trips saving significant time and efforts.
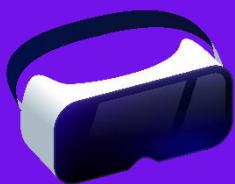
Augmented reality — The technology amalgamates the real and virtual world by allowing users to visualise products by integrating them into real-life environments and objects. For instance, a global furniture brand lets users project furniture from its application into their homes.

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3. Beyond gaming: The real metaverse opportunity by KPMG on September 2022
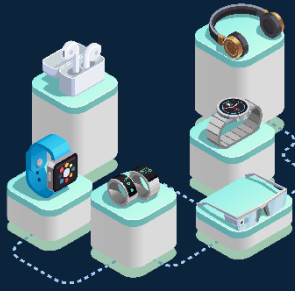
Wearable technology – The wearable technology falls under the broad spectrum of usability that is generally embedded with sensors to track bodily movements or parameters. The categories of wearables have a wide range of use including in entertainment, health monitoring, gaming, and virtual traveling. For instance, smart glasses, VR headsets, smartwatches, and smart jewellery among others. Engineering reviews at many automotive companies involve Virtual Reality (VR) headsets to check the visual design and object obscuration of the vehicle, well before spending any money on physically manufacturing the parts.

The rising dependency on internet and smart products compels users to indulge in digital interactions as mentioned in the previous sections. The capability of making time-consuming and onerous tasks simpler and wrapping things in a few clicks on digital platforms has increased the demand for mobile applications among users for regular tasks.

Snap and shop — E-commerce has enabled customers to search/shop using images and pointing their phone cameras toward a product they see. For instance, a widely used global image-sharing service has launched a shop tab and partnered with eCommerce websites through which customers can buy using photos. A European furniture retailer offers AR applications that allow consumers to shop numerous furniture products online and virtually preview and place the item in their home before purchasing.

Chatbots — The companies on their websites and applications are integrating personal assistants to provide personalised results to the users in real time. The technology runs on artificial intelligence/machine learning, which helps boost user engagement. For instance, a global mobility service provider allows booking rides via its official chatbot on WhatsApp. ChatGPT, more recently, is an example of how AI is penetrating our daily lives.

Influencer marketing — The companies are collaborating with a real audience to create tangible influence to boost sales. According to the influencer marketing Hub report 2022, the influencer marketing has increased from USD1.7 billion in 2016 to USD16.4 billion in 2022.
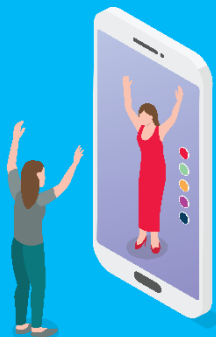
Virtual reality stores — The technology will allow consumers to interact with the product virtually. This will also cut down the operating costs and offer an immersive experience to the buyers. For instance, home decor companies are offering virtual showroom shopping experience to the users.

> **An intuitive, interactive, and personalised interaction are common elements across all the digital mediums seeking to offer a memorable and enjoyable journey to the user**

UX designers introduce positive, quantifiable, and qualitative changes to products and services. The product or service must entail an equitable design that benefits individuals of all skills and backgrounds that form a part of the respective audience. Design clearly improves revenues, customer retention, customer satisfaction, and customer loyalty. Businesses whose foundation is design thinking can always make more of a mark on branding than those relying on corporate business tactics alone. Hence, brands should increase their focus on building a user experience that is more useful and desirable in the long run.

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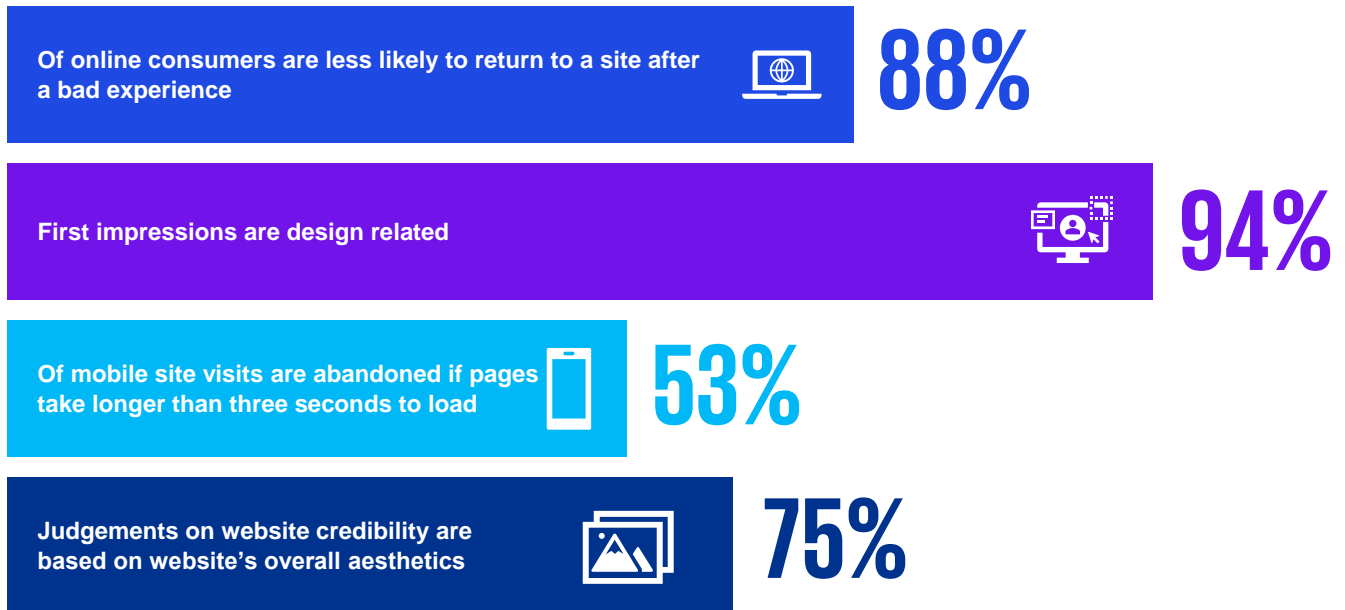# Making of a great user experience
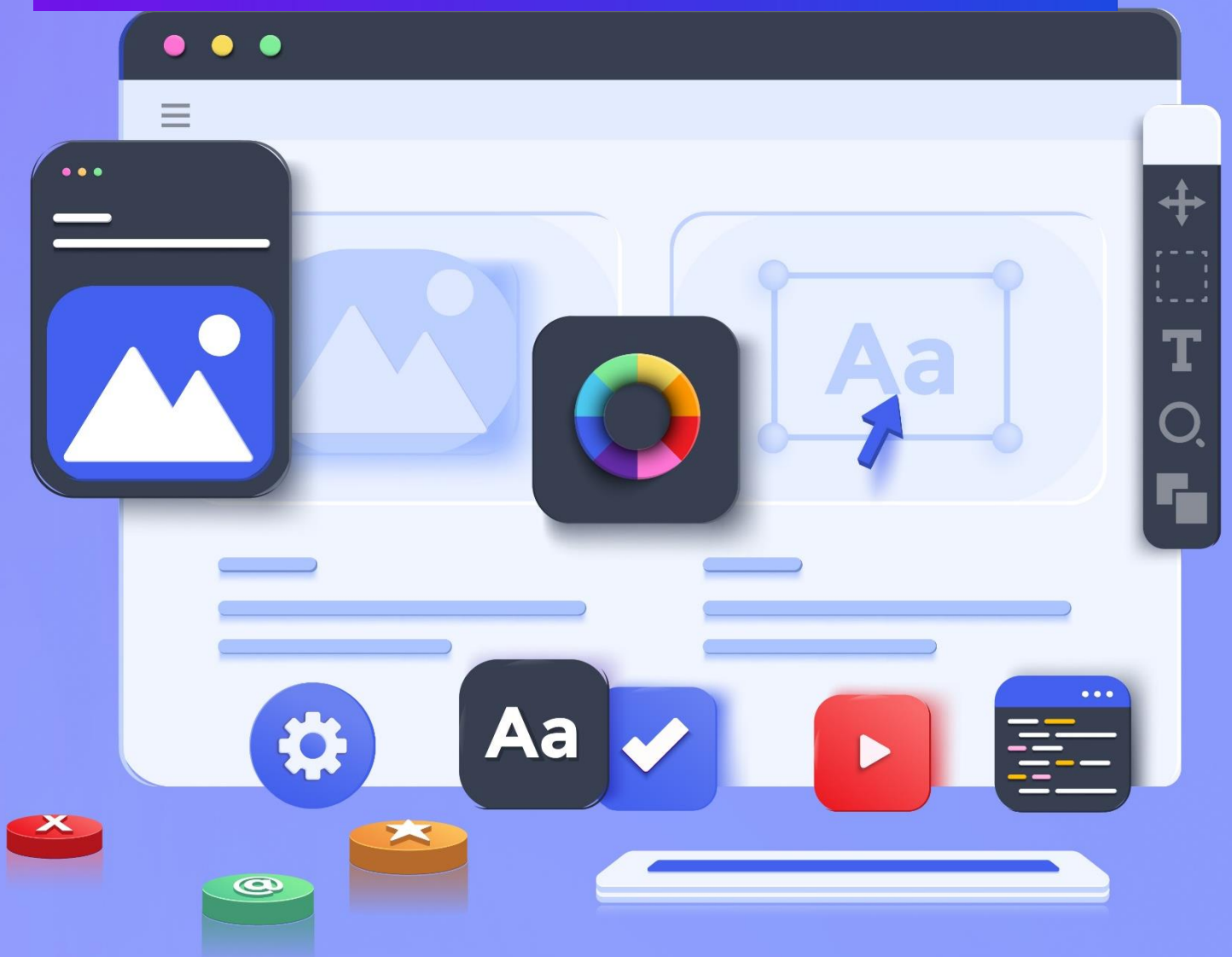
The development of applications, software and websites requires to go through multiple stages before reaching the end client. Among these, user experience designing has become one of the core elements that captures psychological and behavioural patterns of user interaction with the product. Companies have sharpened their focus on making the user experience seamless, which is now enumerated as a deciding factor for any product's success and focuses on the importance of delivering a great user experience by businesses.

A good user experience focuses on a deep understanding of users, their requirements, limitations, and values with an amalgamation of business goals and objectives. The interaction between machine and human is bridged by the design that not only makes the product visually attractive but also enhances simplicity and accessibility.
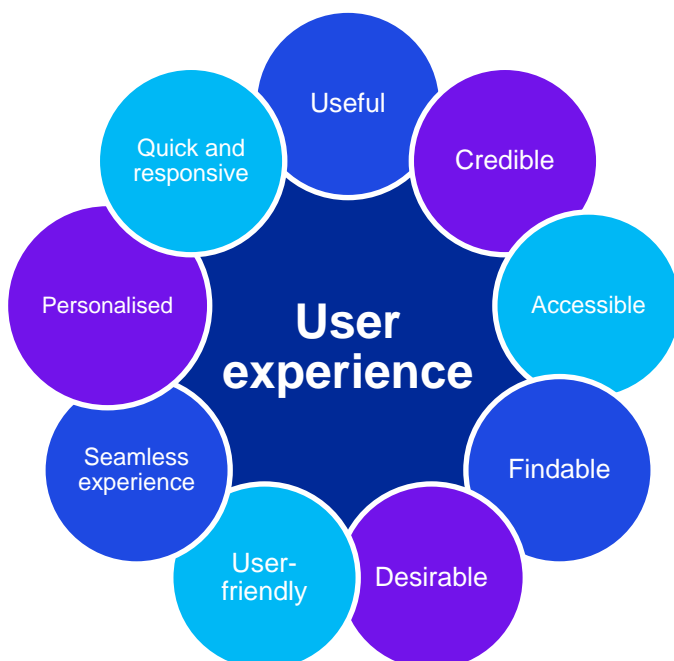
As Steve Jobs said, "Design is not just what it looks like and feels like. Design is how it works."

Figure 6: UX statistics and insights[4]

Of online consumers are less likely to return to a site after a bad experience	**88%**
First impressions are design related	**94%**
Of mobile site visits are abandoned if pages take longer than three seconds to load	**53%**
Judgements on website credibility are based on website's overall aesthetics	**75%**

The user experience honeycomb shown below explains various aspects of design to educate designers on better understanding the areas of good user experience. Here are the seven essential components of a model that influence user experience:

Figure 7: A few key user experience characteristics (UI and UX)

User experience honeycomb: Useful, Credible, Accessible, Findable, Desirable, User-friendly, Seamless experience, Personalised, Quick and responsive — surrounding central **User experience**

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4.   Know Your User – UX Statistics and Insights by Miklos Philips in 2018

Useful/usability: If a product or feature isn't useful, it has no purpose; there's no reason to build it in the first place. The efforts that go into designing certain aspects of user experience in a product should have a purpose to cater to the target audience. The solution should fulfil the requirements of the user to have a real purpose, and a useful solution must present simple ways to tackle a complex problem that the user is dealing with. A good UI should be consistent across multiple platforms to make it easy for the user to navigate.

For instance, a music streaming application enables people to stream music of their preference owing to the personalised content generated for each user.

Desirable: This aspect helps attract users with focus on keeping them constantly engaged so that they retain the service. Crafting a visually aesthetic product or service builds a brand identity backed by quality.

For instance, a global cloud storage service provider has a dynamic colour scheme-based responsive design that takes the user on a journey of discovery with every page seemingly having its own unique colour palette.

Valuable: The service should create value for the user for the time they invest. The value could be saving time, bringing joy, and achieving goals.

For instance, a few food delivery applications attained high popularity during the pandemic. Also, the applications helped partner restaurants to operate when restaurant dining was restricted.

Accessible and inclusive: The product and service should be accessible to all types of users, irrespective of their abilities. The service should have user-friendly designs for people with disabilities, and teams should constantly run accessibility audits and adhere to accessibility standards.

For instance, a widely used voice assistant allows users with disabilities to operate devices using their voice. The application helps in basic navigation, dictation, controlling the current screen, and text editing using voice commands.

Findable: The information required by the user should be easy to navigate and findable for providing a good user experience. Information architecture, search, and navigation are vital for making a product more findable. Designers must prioritise navigation according to user needs and business goals. User can lose its interest while completing a task owing to the illogical structuring of a user interface. Such instances can impact the business of the respective product or service provider.

For instance, an app-based mobility service makes it easy for its users by promptly providing a list of recent destinations by just entering their location based on the rider's historic destination data.

Credible: To build trust among users, the service should be consistent and coherent in terms of ethics, accuracy, and durability, which eventually leads to a great user experience. This also means handling user data with privacy, enabling end-to-end secure transactions at the same time providing frictionless authentication is a non-negotiable factor in building trust.

For instance, a widely used Indian OTT platform offers a consistently smooth and seamless streaming experience giving users reasons to continue with their subscription services. In a highly competitive market, consistent failures can impair credibility.

User-friendly: The product can be useful but if it's not user-friendly, it loses value for users. The product or service should be easy to use and understand, driving designers to focus on intuitive user interfaces and information architecture.

For instance, an Indian short-term homestays and experiences business has a highly user-friendly application with curated wish lists, great onboarding, and a streamlined checkout experience. A European mobile service provider offers a unique web application which helps user build and manage presentations provides a user interface that walks the user through an example of what their journey would be like if they were using the application.

Seamless frictionless experience/interoperability: A seamless experience involves focusing on creating continuity including the continuity in a specific activity or the entire process such as making a payment. This also involves continuity of the higher level such as the complete customer journey from landing on the site, browsing the online shop, to making a purchase and receiving the item.

For instance, an Indian multinational financial technology company, that specialises in digital payments and financial services. The company provides money transfer, ticketing services, brokerage products, and online games in addition to bill payment and money transfer.

Hyper-personalised/contextual: UX hyper-personalisation involves analysing large volumes of unstructured customer data leveraging ML models and infusing the generated insights into multiple points in the customer engagement journey providing a more personalised experience along with anticipating future customer behaviour.

Visual factors – As we are spending more time on our smartphones and as screen sizes are shrinking, bold visual factors i.e., typography, minimalistic content layout, sophisticated scrolling experience, immersive content, creative error notifications, voice control, gesture control, etc. are all necessary in keeping up with the latest trends to ensure longer user engagement, higher brand recall and conversion

Sensory delight – An exciting and elegant combination of user interface elements and overall user experience that engages all five senses i.e., touch, hearing, sight, smell, taste is the new trend that truly makes physical meet digital.

Emotional design – Digital experiences today are all about evoking an emotional response, building a deeper connection by enabling a delightful interaction. More and more organisations are recognising the need for building positive association between digital experiences and emotions of excitement, sense of achievement, security, etc.
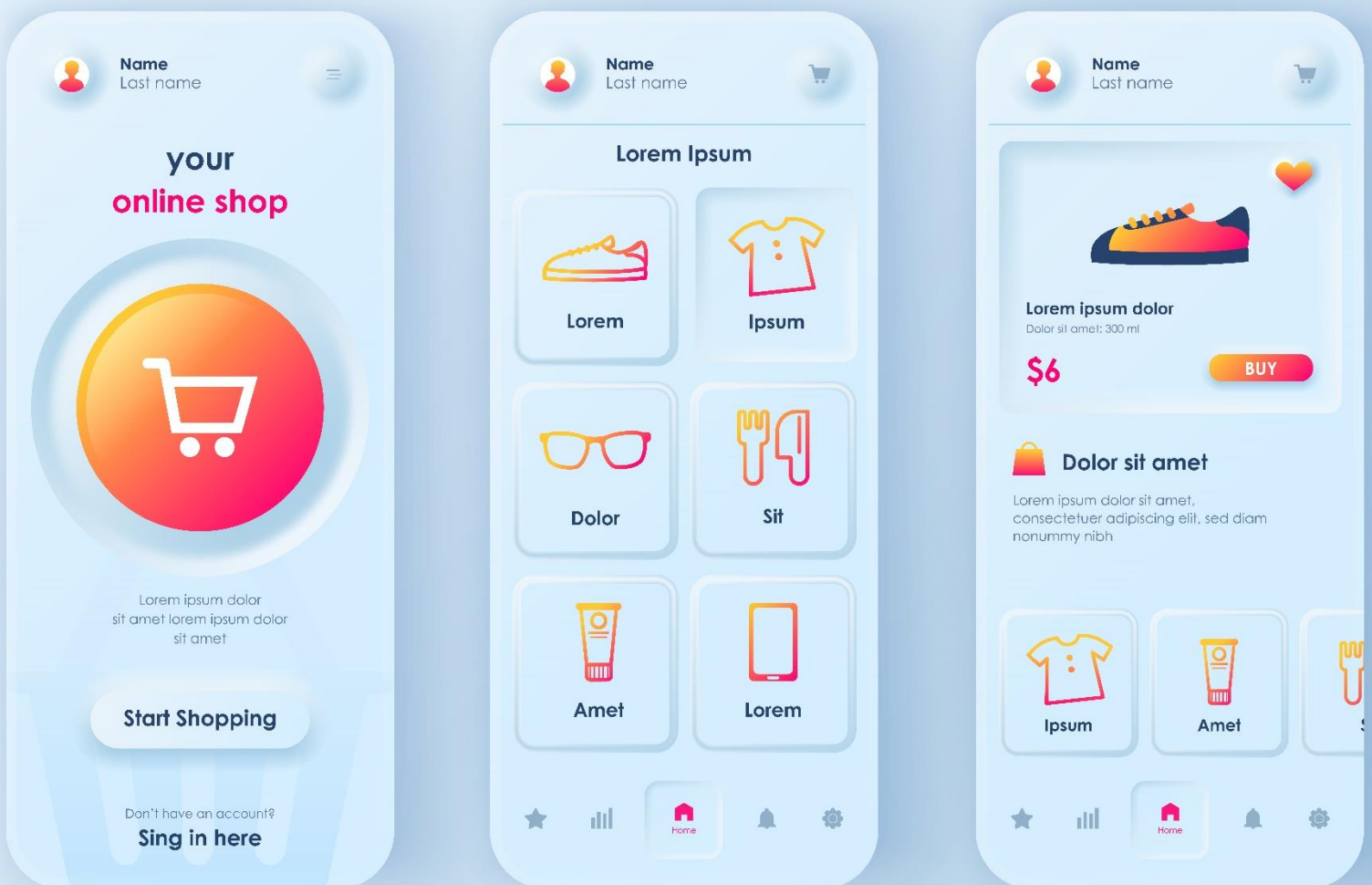
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Adapting principles for good user experience design of enterprise applications
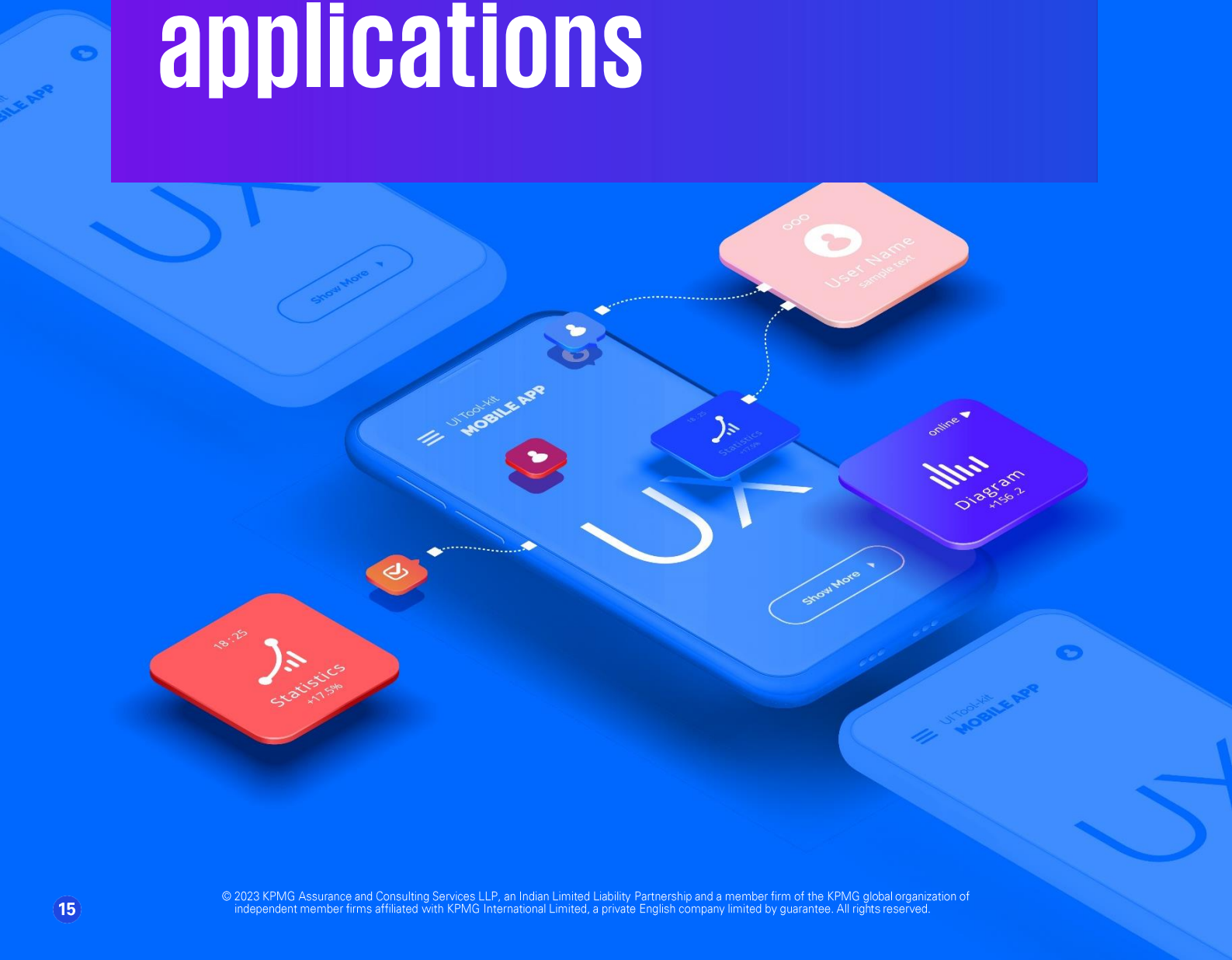
The enterprise user experience is equally important as customer user experience, but a few design parameters are considered differently as far as the design aspects of enterprise applications are concerned. The enterprise applications may be used as an internal software or for external businesses to model the entire business process for improving efficiency and productivity across the enterprise. These applications enable the integration of business processes across the upstream and downstream application streams enabling seamless sharing of information across the systems and enterprise. The designing of enterprise user experience involves user empathy research, frictionless user flows addressing different personas and collecting feedback for iterations. The good user experience can help an enterprise on several levels as mentioned below:

Productivity: The easy-to-use corporate software and applications aid employees in performing their regular tasks in a few clicks, contrary to investing longer working hours with bad user interface, leading to higher productivity and eventually higher revenue generation for the business.

Simple internal cooperation: Coordination among a working group is the key requirement for any organisation to run its business effectively. Multiple software is being used by organisations to communicate ideas, to chat, and maintain efficient collaboration between employees and broader teams. Good software design leads to teamwork efficiency and barrier-free operations.

Cost reduction: The investment on good user experience in enterprises leads to employee-friendly applications/software that saves time and money. It allows hassle-free interaction within the organisation for services such as human resourcing, payroll, and project management among others.

The consumer user experience has a boundary-less audience to serve where heavy testing and use cases are done to serve every type of user. Whereas for enterprise applications, the end users are the internal employees, and their expectations from the product can be gauged based on the business-defined purpose. Therefore, designing customer and enterprise user experience requires different strategies as per the end user usage capabilities. The major focus of enterprises for building a great user experience are:

User-friendliness: A good user experience incorporates user-centric values in the design process to fulfil user needs and resolve pain points. The software and applications should be designed to complete a task in minimum steps.

Simplicity: Enterprise applications do not need to lure employees for usage or engagement the way customer applications are designed — such as social media applications. The purpose of enterprise applications is to resolve tasks associated with business needs. Hence, designers and companies try to keep designs simple and easily understandable.

Captivating: Like customer user experience, the enterprise user experience is designed to give users a sense of achievement or task accomplishment. Enterprise software and applications are designed to show task progress and keep users informed about their work completion.

The key challenges that enterprises face while designing a user experience are:

Legacy to modern systems: Enterprises have a host of legacy systems which the users have become accustomed to in terms of ease of use, navigation, simplicity, and UI. The challenge faced by the service providers now is to develop and design systems, which are aligned to the existing user perception and fall in line with the existing design system the users have already adopted.

- **Recommendation:** The suggestion is, before designing the future state solution, to conduct an extensive user research with different stakeholders and user groups to understand and align to the needs and expectations of the user group. User workshop would help jointly co-create the future state design and solution application that would be well adopted across the enterprise.

Integrating business purpose: The designer should be aware of the business purpose and goals and integrate that with user experience while designing. The gap between user and business needs can harm the productivity of the employees and impede business revenues.

- **Recommendation:** To address the challenge, proper user and business research will help define the direction for building a great user experience.

Simple, engaging, and intuitive UI: The making of a simple user interface is not easy when an enterprise requires to provide many features to their employees in a single software or application. The corporate software could face complaints such as poor landing processes, slow responsiveness, and a confusing interface.

- **Recommendation:** Domain research and prioritising the features can help design a good user experience. Through domain research, one can communicate with engineering teams and customers in a similar language.

In summary

To summarise, digital experience design is crucial for businesses looking to create engaging, user-centric digital experiences that are intuitive, easy to use, and visually appealing. By carefully considering user needs and preferences, businesses can create digital products and services that improve customer satisfaction and loyalty, increase engagement and conversion rates, and promote accessibility and inclusivity. As technology continues to play an increasingly important role in our daily lives, the importance of digital experience design is only going to grow.

We invite you to partner with us on this journey of creating compelling digital experiences. By working together, we can leverage our expertise in digital experience design to help you achieve your goals and provide your users with the best possible experience.

Through our human centred approach of designing experiences, which is:

EXPLORE	IDEATE	CREATE	EVOLVE
Discover Insight into the user pain points across the current experience	**Develop** potential solutions for new design taking inspiration	**Create** rapid prototypes and test the new design	**Deliver** Solutions that work

Value Creation

Value Delivery
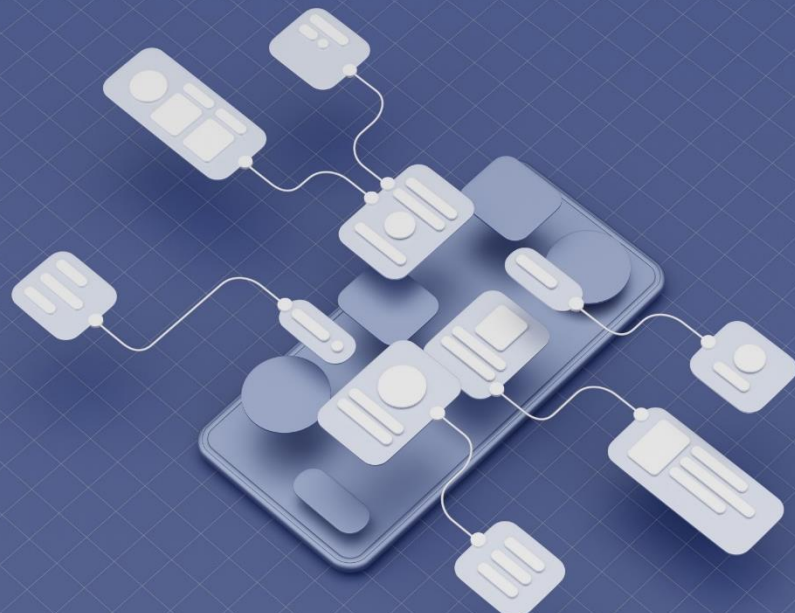
Value Optimization
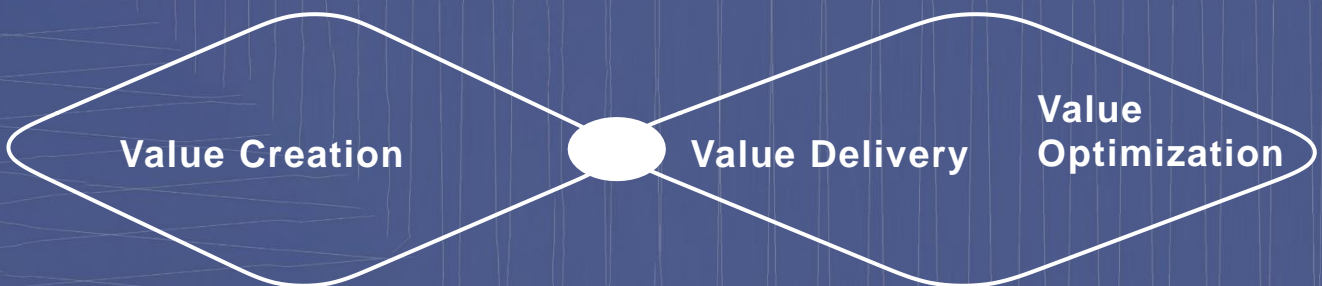
- User Experience Research
- User Experience Evaluation

- Brainstorming
- Idea canvas
- Design Inspiration

- User Experience Design
- User Experience Testing

- User Experience Build and Deployment

Together, we can build digital experiences that are not only functional but also aesthetically pleasing and emotionally resonant.

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30 **years**
and beyond