



REIMAGINING ONLINE EXPERIENCES WITH DIGITAL EXPERIENCE PLATFORMS



Introduction

Digital is reshaping human lives and redefining the way users go about doing work, business, and play. Digitally powered organizations constantly strive to optimize digital experiences to attract, engage, convert, and retain their customers for long-term business success. Enterprises are looking at ways to capture the customer at the right moment where the customer is sure to convert. Enterprises are looking at ways to becoming super-agile to respond to market dynamics and empower their digital users.

Most of the customer-facing businesses are in the middle of a digital transformation journey or have a digital transformation in their priority list

A survey finds that more than 45 percent senior executives want to increase the revenue through digital transformation. Another digital transformation survey finds that 63 percent of organizations want to improve user experience through digital transformation. Digital transformation is used as a ticket to the future for almost all business-to-consumer (B2C) enterprises to enable digital capabilities.

Digital technologies such as portals, content management system (CMS), search, and analytics are at the forefront of developing online platforms for quite some time. Enterprises have built digital landscapes and leveraged them for digital transformation to build the required capabilities. With the increasing popularity of social platforms and the explosion of various digital touchpoints (such as mobile apps, social media channels, wearable devices, call centers, and more) and proliferation of devices, digital customers expect a seamless experience. Digital ecosystems built using a conglomerate of assorted products and technologies would face challenges in providing a seamless omnichannel experience and the right levels of engagement. Digital technologies such as horizontal portals, CMS, search, and others would not be able to answer questions such as 'How do I track customers across channels?', 'How to launch campaigns across various touchpoints?', or 'How do I use customers' social activities for personalized recommendations?'

To summarize, traditional digital technologies would not be able to effectively optimize each step in the user's digital journey across all channels. Additionally, the integration of various digital products is time-consuming and impacts the time to market. Let us consider a campaign management use case in digital marketing: A digital marketing executive wants to create the campaign content and launch campaigns personalized for users' context across various channels and, the marketing team also needs to track the effectiveness of the campaign. With the traditional digital products, the marketing team would end up using multiple products — portals for creating campaign pages, CMS for creating content, campaign manager to manage campaigns, and analytics for tracking. In this scenario, the digital marketing team needs high involvement of the IT support team, and it would be challenging to launch omnichannel campaigns quickly and monitor their effectiveness. Besides this, the campaigns are not personalized for the user and access channels.



Digital experience platforms (DXP) — a key enabler to digital transformation

Today's enterprises need to have a deeper understanding of customer behavior and their needs and wants. Personalized experience and active engagement are essential to customer-centric design as we can see from these surveys: A majority of the B2C customers believe that customer experience is the key component of digital transformation. The buying experiences are based on how the customer feels they are being treated. Organizations need to take the outside-in approach, starting with customer engagement to create superior and customer-relevant experiences.

Digital experience platforms (DXPs) are designed to redefine digital engagements across digital touchpoints and to address the changing dynamics of market needs, technology ecosystem, and to match customer expectation. DXP is the latest entrant in the journey of digital transformation. DXP provides a platform with an integrated set of services for

enterprises to develop, manage, and optimize personalized experience across various digital touchpoints. At the heart of DXP lies customer engagement. DXPs provide a compelling, immersive, persuasive, inspiring, and engaging experience across channels and digital touchpoints. DXP, being a platform, provides all the needed digital capabilities through its inbuilt modules and services. DXPs come bundled with pre-integrated services such as portals, content management, analytics, forms, commerce, collaboration, mobility management, campaign management, search, integration, cloud, and such. Besides this, DXPs also provide inbuilt integration plugins to popular social channels. Enterprises could use these features to establish deep engagements with its customers and bring agility into their operation models.

DXPs are also referred to as customer experience platforms (CXPs) and user experience platforms (UXPs). Most of the

traditional digital product vendors are now promoting their DXP offerings, and many of these vendors are providing platform as a service (PaaS) with DXP on the cloud. As DXPs take a platform-based approach, enterprises can easily build the capabilities needed for their enterprises quickly and use pre-integrated products and technologies. Some of the DXPs focus highly on business services such as finance, insurance, and such. The campaign management use case discussed earlier can be easily implemented in DXP with flexible business controls that can manage the end-to-end campaign content with zero dependency on IT teams; Business users could use the inbuilt omnichannel analytics to understand the effectiveness of campaigns across various channels. Insights drawn from cross-channel analytics can be used to create highly personalized campaigns to deliver targeted content.



Motivations for DXP

We will look at the key drivers for selecting DXPs to build future digital platforms. We have identified drivers belonging to various categories such as user experience, technology, business, and operations.

- **Experience**

Seamless omnichannel access, lightweight / lean presentation, responsive, interactive, rich and personalized content, and user-

centric design

- **Technology**

Modular component design, extensible architecture, future-ready platform, relevant information discovery, information consolidation, common standards, and development toolkit

- **Business**

Information consolidation, business self-service, single customer view,

delivery agility, reduced time to market, influencing users' decision making, process automation, full insights into customer journey, increased customer loyalty, increase in conversion rate

- **Operations**

Reduced maintenance cost through customer self-service, productivity-improving tools, cloud enablement, faster release cycle

Key features of DXP

DXP provides differentiated digital experience and offers salient features listed below:

- **Platform, not just products**

DXPs are built on the philosophy that provides all capabilities needed to develop personalized digital applications on a single platform to developers, administrators, and business stakeholders. DXPs offer various digital capabilities in a pre-integrated stack and provide integration services to enhance capabilities. They are easily extensible using plugins and extensions to cater to evolving business needs. They also provide common standards and reusable components.

- **Solution, not just tools:**

DXPs enable developers to build solutions for business verticals. This includes ready-to-use configurable business widgets, pre-integrated technology stack, and

business controls specifically targeted for a particular industry vertical. For instance, Backbase has a robust customer experience platform for the finance sector.

- **Customer-centric user experience**

DXPs use analytics-driven insights to provide personalized and relevant user experience and actionable content based on user's context. They empower the user with all decision-aiding tools, predictive recommendations, and relationship-enhancing experience.

- **Personalized, context-aware information**

Tailor-made content delivery is the quintessential feature of DXP. DXPs use context parameters such as location, time, device, user preferences, and transaction history to provide hyper-personalized rich content.

- **Agility**

DXPs bring agility to solution development, business operations, and solution

maintenance. Having all the needed capabilities on a single platform with enterprise-ready business components and ready-to-use integrators accelerates solution development and helps organizations to create better digital experiences.

- **Lean model**

DXPs are built with lean architecture concepts. They enable enterprises to build lean portals (using web-oriented architecture), develop light-weight integration models (using REST-based services) and offer flexible deployment options (such as cloud deployment requiring minimal in-house investment for hardware resources).

- **Pre-integrated stack**

DXPs bundle all the core digital capabilities such as content, commerce, workflow, campaign, analytics, and presentation that are seamlessly pre-integrated.



Value differentiators of DXP

Let us look at use cases and digital capabilities where DXP can add value. DXPs would enable the following transformation scenarios:

- **Technology and information silos to unified view**
DXPs would not only consolidate disparate systems, technologies, and standards, but also provide an integrated view of data and content. Through DXPs, we can get a single view of customer data and transactions across all channels and touchpoints.
- **Converting a visitor to a brand advocate**
Through personalized content and

seamless omnichannel access, DXPs could develop deep engagements with customers. DXPs can convert a short-term transaction-based customer interaction to a long-term strategic relationship through user engagement features.

- **Reactive responses to proactive recommendations and predictive insights**
Omnichannel analytics-driven insights can be leveraged to provide personalized recommendations. Business stakeholders can predict future trends, such as seasonal traffic spike, holiday traffic size, etc., based on trend analysis, and be prepared to handle the scenarios.

- **Single customer view**
DXPs provide a 720-degree view of customer interactions across various applications and social channels such as blogs, wikis, communities, forums, etc.
- **Differentiated branding**
Enterprises can create a differentiated branding experience across all channels and various digital touchpoints.
- **Digitization of business processes**
Enterprises can digitize their processes such as user registration through responsive forms, virtual banking offices, virtual assistants and more.

Business scenarios for DXP

Business functions such as digital banking, digital marketing, e-commerce, campaign management, and financial services can greatly benefit from DXPs. Given below are typical business scenarios where DXPs could play a major role:

- **Digital transformation and consolidation** of various enterprise applications and technologies to a modern, forward-looking digital platform. A US apparel major consolidated seven different brands / online stores onto a single scalable digital platform and helped achieve faster time to market through an accelerated development model (24 releases per year) and faster time to market, resulting in 30 percent online business growth.
- **Development of a responsive, engagement platform** built on lean architecture that provides digital touch optimization, customer engagement, and self-service features. A leading US-based high-tech manufacturer used DXP to

completely redesign its support channel to engage actively with its customers and converted its static site into a robust dynamic delivery platform. As a result, the site traffic increased by 23 percent.

- **Unified experience through the dashboard** and consolidated views for all business and customer data across all channels and devices. A US-based telecom major unified all web applications into a unified consumer experience platform. This unification led to increased user traffic and a 43 percent increase in sales.
- **Develop a robust next-generation digital platform** that addresses pain points such as process complexity, lack of user engagement, inconsistent branding, lack of agility, costly development, and high maintenance cost. A major UK-based bank digitized and simplified their customer acquisition process by translating into a four-step straight-through processing (STP), resulting in better consumer experience and a

30 percent increase in new registrations. Digital customer engagement has also increased cross-selling / upselling efficiency by 30 percent for the bank.

- **Explore various customer engagement avenues through emerging digital technologies** such as gamification, collaboration, analytics, personalized recommendations, and such. An insurance major developed a gamification platform that utilizes game theory, clinical strategy, and social networking features to engage users with the right type of healthcare tools, services, and products for improved and sustained engagement, and positive behavior change. A consumer electronics major has enhanced its brand recall and customer engagement through a partnership with popular games. The customers of a leading retailer can earn loyalty points by sharing recommendations online. A leading fashion retailer filters fashion recommendations based on user's purchase data and social media profiles.

DXP implementation road map

Successfully implementing a DXP involves four basic steps:

- **Digital platform planning**

We need to plan for a digital platform that would fulfill strategic business goals and lay the foundation for future needs. This phase includes digital platform requirements elaboration, capability assessment, gap analysis, business process analysis, organization maturity assessment, competitive assessment, and experience road map definition. Based on the solution requirements, we will select one of the commercial off-the-shelf (COTS) DXP products, or we could plan to build a custom DXP.

- **Devising customer engagement strategy**

As DXP is essentially an engagement platform, it is important to understand the digital touchpoints and design optimization strategies for active engagement. This phase involves design aspects such as experience design, personalization, omnichannel delivery, decision influencer design, collaboration strategy, social strategy, A/B testing and such.

- **Digital platform development**

Develop the digital capabilities using the chosen DXP product. Responsive design and adaptive content are the main techniques used for creating a consistent personalized experience. We could use an agile methodology to develop the business capabilities in iterations. Enterprises can

also choose to build their own custom DXP using open-source technologies and best-of-breed products.

- **Continuous monitoring and measurement**

Once the digital platform is live, we need to monitor it continuously to gain a complete understanding of customers. We could leverage built-in analytics to track customer engagement metrics, calculate return on investment (ROI) and leverage A/B testing, web analytics, social analytics to continuously test the effectiveness of the experience. The insights drawn from metrics can be further used to improve user experience and to take informed decisions.





DXP case studies

DXPs are used across various industries. Listed below are some of the use case scenarios and examples:

- A leading US-based healthcare provider created a DXP-based digital health platform that provided a single view of all information and services needed by customers (such as a unified view of benefits, doctor finder, preventive care, notifications and care alerts), healthcare providers (such as clinical data integration, access to personal health information, real-time claim processing / payment). The platform also provides virtual care and video consultations and aims to sustain long term relationships with customers through gift certificates, sponsored insurance offers, loyalty discounts, wellness seminars, and financial planning tools. The digital health platform provides proactive recommendations for preventive healthcare, active parenting, and more. Based on the member history, the platform provides targeted campaign content such as health check-ups, vaccination camps, and such.
- UK-based leading credit card company developed an e-servicing platform to consolidate 17 own / co-branded credit card brands. The organization was able to achieve front-end code reuse across various channels using the DXP platform. The flexible content management offered by the DXP enabled business users to create and publish campaign content and web content on their own without any dependency on IT teams.
- One of the leading Indian banks, developed its omnichannel banking experience platform using DXP for its retail customers. The lean banking portal is developed based on web-oriented architecture (WoA) that uses widgets for all major functionalities. The platform provided a dashboard view of all functionality needed by customers. The banking portal used robust middleware with lightweight / REST-based services to integrate with back-end systems.



Conclusion and future outlook

DXPs are now the quintessential elements of a digital transformation exercise. They enable enterprises with all the needed capabilities to build a compelling engagement platform. As more and more capabilities are getting

added to DXPs, we see a significant role of DXPs in the digital journey of customers. Most of the product vendors are enhancing the capabilities of their DXP offerings and aim to provide an 'all-in-one' platform. Cloud

is becoming the de facto deployment platform for most of the DXPs. Vertical-specific and domain-specific DXPs that offer core domain capabilities with pre-integrated components are emerging.

About the Author



Shailesh Kumar Shivakumar

Senior Technology Architect, Digital Experience, Infosys

Shailesh has 15 years of industry experience. He is currently working as a Senior Technology Architect, Digital Practice, at Infosys Technologies. His area of expertise includes enterprise Java technologies, portal technologies, web technologies, and performance engineering. He has published three technical books related to enterprise web architecture, enterprise portals, and content management and search. He also has four patent applications. He has published several papers and presented talks in IEEE conferences in the areas of web technologies and performance engineering. He has successfully led several large-scale enterprise engagements for Fortune 500 clients.

He can be reached at shailesh_shivakumar@infosys.com

For more information, contact askus@infosys.com



© 2018 Infosys Limited, Bengaluru, India. All Rights Reserved. Infosys believes the information in this document is accurate as of its publication date; such information is subject to change without notice. Infosys acknowledges the proprietary rights of other companies to the trademarks, product names and such other intellectual property rights mentioned in this document. Except as expressly permitted, neither this documentation nor any part of it may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, printing, photocopying, recording or otherwise, without the prior permission of Infosys Limited and/ or any named intellectual property rights holders under this document.