Platforms Based Approach and Strategy for Fintech applications

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October 31, 2023

Abstract

Digitization has changed the way and ease of doing business which affects almost everything in today's enterprise organization. Digital Experience platforms (DXPs) are unified approach to integrate all technology stacks available in the market across every touchpoints such as Wearable devices, WEB, IVR, and Mobile etc. US Banking & Finance Industry have lot of potential to transform, digitize their banking and finance (Fintech) applications using unified approach such as DXPs. In this article, we have evaluated many digital strategy from various stakeholders in the industry. Enterprises uses various technology, tool, techniques and concepts to develop digital capabilities whereas DXPs has integrated approach to develop, implement and digitize the strategy to transform banking and finance industry. DXPs is gaining momentum & it is now used by banking & finance sector, such as Standard Bank, Citizen Bank, TP Bank etc.

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Digitization has changed the way and ease of doing business which affects almost everything in today's enterprise organization. Digital Experience platforms (DXPs) are unified approach to integrate all technology stacks available in the market across every touchpoints such as Wearable devices, WEB, IVR, and Mobile etc. US Banking & Finance Industry have lot of potential to transform, digitize their banking and finance (Fintech) applications using unified approach such as DXPs. In this article, we have evaluated many digital strategy from various stakeholders in the industry. Enterprises uses various technology, tool, techniques and concepts to develop digital capabilities whereas DXPs has integrated approach to develop, implement and digitize the strategy to transform banking and finance industry. DXPs is gaining momentum & it is now used by banking & finance sector, such as Standard Bank, Citizen Bank, TP Bank etc.

What is DXPs? Gartner defines a digital experience platform (DXP) as an integrated set of technologies designed to enable the composition, management, delivery and optimization of contextualized digital experiences across multiexperience customer journeys [9]. A DXP can provide optimal digital experiences to a variety of constituents, including consumers, partners, employees, citizens, students and other audiences, and help ensure continuity across the full customer lifetime journey. It provides the presentation orchestration that binds together capabilities from multiple applications to form seamless digital experiences. A DXP forms part of a digital business ecosystem via API-based integrations with adjacent technologies. DXPs are applicable to business-to-consumer (B2C), business-to-business (B2B) and business-to-employee (B2E) use cases [1].

It is unified platform based approach to develop & digitize enterprise application. Digital experience platforms are the need of the hour to develop & implement the digital solution for an organization because it has more benefits such as DXPs have single point of control for everything to do, flexible architecture to integrate applications such as Content management system (CMS), Web experience platforms (WEP). DXP's Open Integration Architecture approach has capabilities to integrated emerging technologies such as Blockchain based framework, IoT based frameworks. It has true Omni channel capabilities. Developers can

easily connect the DXP with new emerging technologies and touchpoints. It has faster time to market, as a developer we don't have to develop on many different platforms for different touchpoints, development is done on one unified platform which gives seamless experience across all the touchpoints such as WEB, Mobile.

Evolution of DXPs

In early 2000s, Content Management Systems (CMS) are the initial approach to manage business, business uses them to create static content and establish web presences but it lacks in personalization, web analytics and integration of different touchpoints [2].

As technology evolved, Web Content Management (WCM) or Web Experience Management (WEM) evolved after the expansion of social media applications, now business started looking for the presence on multiple channel where OMNI Channel capabilities derived, business wants to unified & integrated approach seamlessly on social media, messaging platforms, email, web applications, mobile applications. Business started gathering customer insight data from across all touchpoints but it still lacks in integrating heterogeneous software solutions such as CRM, ERP. WCM was designed for marketing teams to generate leads & insights of the customer which further used to show personalized content & product to customers.

In recent years, DXPs enable business to create, deliver and optimize the customer experience across all platform. DXPs are designed to overcome the problems of CMS & WCM. It is the integrated approach to drive business across channels including customer portals, wearable devices, social media apps, mobile apps, and websites. It uses machine learning & AI to personalize web pages, emails, products & content. It get easily integrated with other applications across enterprise such as Banking & Fintech applications using enterprise service bus (ESB) along with DXPs Open Integration Architecture.

Digital transformation

Digital transformation involves transforming the customer experience by understanding customers better and optimizing the touchpoints; improving the operational process through process digitization, worker enablement and performance management; and redefining the business model by digitizing the business and introducing the new digital capabilities. Digital transformation transforms outdated legacy technologies and adopts the new technologies. The digital transformation is an all-inclusive transformation of the processes, customer experience, operations, tools, technologies. Digital technologies enable the end users, employees and the business. Gartner survey reveals that 42 percent of CEOs say that digital transformation is at the core of their business. The main drivers of digital transformation are profitability, customer satisfaction, and increased speed-to-market. Organizations aim to redefine the customer experience, improve the revenues, reduce costs and improve the differentiation. In the post pandemic era, 88% of business leaders are looking for scalable and agile IT environment. The main advantages of digital transformation are renewed customer experience, data-backed decision making, easier collaboration and better market penetration. Digital transformation has impacted infrastructure (from data center to hybrid cloud), applications (from monolith to microservices), and processes (from waterfall to DevOps).

Digital transformation & DXPS

Digital Transformation and Digital Experience Platforms (DXPs) are closely related concepts, with each playing a significant role in the other. Digital Experience Platforms (DXPs) are the outcome of the Digital Transformation Strategies. DXPs are designed so that enterprises can leverage DXP's out of box transformation capabilities. Digital transformation is the process of integrating digital technologies into all aspects

of a business or organization to fundamentally change how it operates and delivers value to customers. It is driven by the need to adapt to changing market conditions, customer expectations, and the opportunities presented by technology. Shifting the focus to meet customer expectations and providing seamless, personalized experiences across digital channels. Streamlining processes, automating tasks, and using data analytics to make informed decisions. Encouraging a culture of innovation to create new products, services, and business models. Leveraging data for insights, forecasting, and optimizing operations. A Digital Experience Platform is a software solution that enables organizations to manage, deliver, and optimize digital experiences across multiple channels, such as websites, mobile apps, social media, and more. DXPs are designed to provide a unified, consistent, and personalized experience for customers and other stakeholders.

Digital transformation StrategY

Digital Transformation Strategies are at Infrastructure, Applications and, processes. It start by clearly defining your organization's goals and what you aim to achieve through digital transformation. Common objectives include improving customer experiences, increasing operational efficiency, and driving innovation. Take stock of your current technology infrastructure, processes, and digital capabilities. Identify strengths and weaknesses, as well as areas that require improvement. Prioritize understanding and meeting customer needs. Identify the key touchpoints in the customer journey where digital improvements can make a significant impact. Develop a data strategy that outlines how you will collect, store, analyze, and utilize data to make informed decisions and improve customer experiences. Evaluate existing and emerging technologies that can support your objectives. Consider cloud computing, IoT, AI, and data analytics, among others. Determine the budget, staff, and other resources required for your digital transformation initiatives. Allocate resources according to your priorities. Foster a culture of innovation and adaptability within your organization. Encourage employees to embrace digital tools and new ways of working. Establish measurable KPIs to track the progress and success of your digital transformation efforts. These KPIs should align with your objectives and should be regularly monitored. Develop a detailed roadmap that outlines the specific projects, milestones, and timelines for your digital transformation initiatives. This will help ensure a structured approach to implementation. Recognize that digital transformation often involves significant changes in processes and roles. Implement effective change management strategies to help employees adapt to these changes. Ensure that cybersecurity measures are integrated into your digital transformation plan to protect sensitive data. Also, comply with relevant regulations and industry standards. Collaborate with technology vendors, consultants, and partners who can provide expertise, resources, and solutions that align with your digital transformation goals. Understand that digital transformation is an ongoing process. Continuously assess the impact of your initiatives and be ready to adapt to changing market conditions. Develop a communication plan to keep all stakeholders informed about the progress of digital transformation efforts. Transparency is key to gaining buy-in and support. Pilot digital solutions and test them with a select group of users before full-scale implementation. Use feedback to iterate and refine your digital offerings. Continuously monitor the performance of your digital transformation initiatives and make adjustments as needed. Regularly review your KPIs to ensure you are meeting your objectives.

TOP DXPs

Figure 1. Shows the Top DXPs in the market as per the Gartner's 2023 Report. Each DXP has its unique feature set.

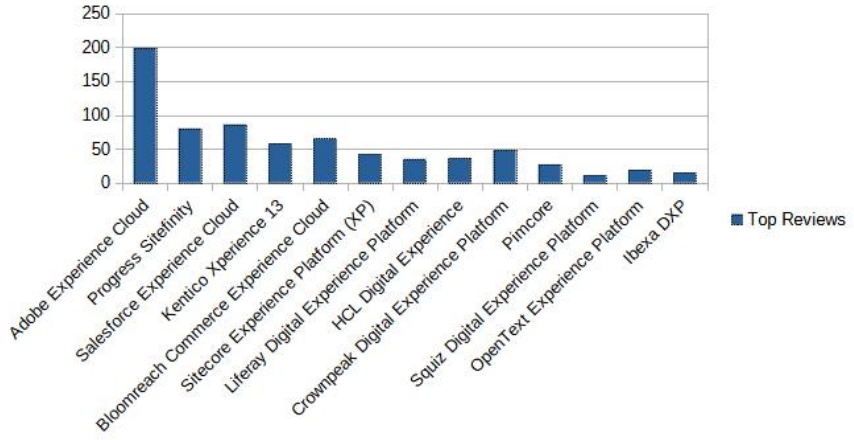

FIGURE 1. Top DXPs & Review.

Adobe's DXP provides robust capabilities for content management, digital asset management, and marketing automation. It's known for its integration with Adobe's Creative Cloud and Marketing Cloud, making it a comprehensive solution for digital experiences. Sitecore is a highly customizable DXP that's popular for its personalization and customer experience management capabilities. It's known for its flexibility in creating tailored digital experiences. Salesforce Commerce Cloud focuses on e-commerce and provides a comprehensive platform for online retail, including features for product management, personalization, and customer engagement. SAP's DXP is a comprehensive suite that covers various aspects of the customer experience, including e-commerce, marketing, and customer service. Liferay is an open-source DXP that offers a wide range of features for building intranets, portals, and customer-facing websites. It's known for its flexibility and scalability [6]. Kentico is a user-friendly DXP that offers content management, e-commerce, and online marketing capabilities. It's often chosen by businesses seeking an all-in-one solution. Oracle's CX Cloud includes a wide array of tools for marketing, sales, service, and e-commerce. It's designed to help businesses deliver a consistent and personalized customer experience. HCL Digital Experience provides tools for content creation, management, and publishing. It allows organizations to easily manage and deliver content across multiple channels, including websites, mobile apps, and other digital touchpoints. Pimcore offers robust PIM capabilities, allowing businesses to centrally manage product information, including product descriptions, attributes, images, and pricing. This is particularly valuable for e-commerce companies and organizations dealing with extensive product catalogs.

FeaTURES OF DXPS

Figure 2. List the features supported by DXPs. X-Axis are top DXPs available in the market where as Y-Axis are feature support score for respective DXPs. DXPs provide features for moderating user-generated content on social media, ensuring that content aligns with the organization's guidelines and policies. DXPs provide tools for managing and publishing content on various social media platforms, including text, images, videos, and links. They often offer content scheduling and automation features for posting content at optimal times. DXPs include social media analytics and reporting tools to track the performance of social media campaigns and content. DXPs often support social login options, allowing users to log in or register using their social media credentials, which can improve the user onboarding process. Organizations can integrate third-party services and tools, such as analytics, marketing automation, social media, and payment gateways, through open APIs. With open APIs, DXPs can support omnichannel experiences by connecting with various devices, websites, mobile apps, and IoT devices [5]. DXPs with well-documented open APIs make it easier for developers to create custom solutions, integrate with other systems, and build unique features. Some

DXPs provide built-in API management tools to control access, monitor usage, and secure API endpoints. Organizations can use open APIs to collaborate with partners, allowing them to access and share data for joint initiatives.

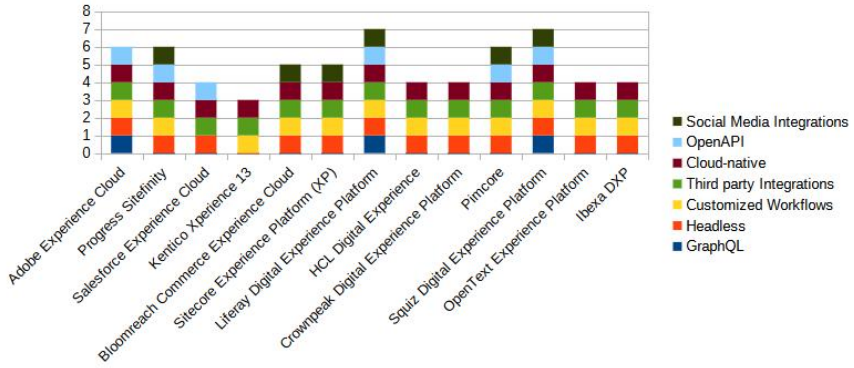

FIGURE 2. DXPs Features.

Digital Experience Platforms (DXPs) often offer open APIs (Application Programming Interfaces) to facilitate integration and customization. Open APIs provide flexibility for organizations to customize and extend the DXP to meet their specific needs and use cases. DXPs with open APIs can seamlessly connect with other systems, applications, and data sources, including CRM, e-commerce platforms, databases, and third-party services [7]. pen APIs allow for the exchange of data between the DXP and external systems, enabling the flow of information for content, user profiles, and transaction data. Data stored in external databases can be synchronized with the DXP's database through open APIs, ensuring data consistency. Cloud-native DXPs leverage cloud infrastructure to scale resources up or down based on demand. This ensures optimal performance during traffic spikes and cost-efficiency during quieter periods. Many cloud-native DXPs are built using microservices architecture, where various components of the platform are decoupled and run as independent services. This promotes flexibility, scalability, and easier maintenance. Containerization technologies like Docker and Kubernetes are used in cloud-native DXPs to package and manage applications and services. This makes deployment and scaling more efficient. Cloud-native DXPs take advantage of cloud platform tools for monitoring, logging, and observability to ensure the health and performance of the platform. Integrating GraphQL with Digital Experience Platforms (DXPs) is a powerful approach to enhance data access, content delivery, and flexibility within the digital experience ecosystem. GraphQL allows developers to request only the specific data they need, reducing over-fetching and under-fetching of data. In a DXP, this means that content and information can be retrieved efficiently. DXPs often involve content management for websites, mobile apps, and other digital channels. GraphQL can be used to query, create, and update content in a more precise and streamlined manner. GraphQL serves as a unified API that can be used to deliver content to various digital channels, ensuring consistency and making it easier to maintain and manage content. DXPs using GraphQL can deliver content to websites, mobile apps, IoT devices, and other platforms, offering a seamless and consistent user experience across all channels. In a DXP, you can define customized workflows to suit your organization's specific needs. These workflows outline the steps, roles, and processes that content or digital experiences must go through before being published or updated. Within the customized workflow, you can assign roles to individuals or teams responsible for each step of the process. Common roles might include content creators, editors, reviewers, and approvers. Content creators or authors initiate the workflow by creating new content or making updates. They submit their work for review and approval. Content is then sent to reviewers and editors who assess its quality, accuracy, and adherence to brand guidelines. They may suggest revisions or approve the content for the next stage. Approvers are responsible for giving the final go-ahead. They can either approve the content for publication or send it back for further revisions. If revisions are needed, the content is sent back to the relevant team members for adjustments. This iterative process continues until the content meets the required standards.

FINTECH Applications

Digital Experience Platforms (DXPs) play a significant role in the FinTech (Financial Technology) industry, enabling financial institutions and companies to create engaging and efficient digital experiences for their customers, streamline operations, and innovate in the financial services sector. DXPs can power digital banking portals, offering customers a unified and user-friendly platform for managing their accounts, making transactions, and accessing financial services. In the world of personal finance apps, DXPs can be used to create user-friendly interfaces that allow individuals to manage their finances, budget, invest, and track financial goals. For payment service providers and gateways, DXPs can facilitate a seamless and secure payment experience for both consumers and businesses. In the wealth management sector, DXPs can enhance robo-advisory platforms, providing users with personalized investment advice and portfolio management. DXPs can be used to create digital insurance platforms that simplify the purchase of insurance policies, claims processing, and customer support. Peer-to-peer lending platforms can leverage DXPs to create user-friendly interfaces for borrowers and investors to connect, transact, and manage their lending activities. DXPs are valuable for stock trading and investment platforms, offering tools for trading, portfolio management, real-time market data, and research. DXPs can help FinTech companies manage regulatory compliance by providing secure, auditable, and transparent digital experiences that meet industry standards. DXPs can integrate with chatbots and virtual assistants to enhance customer support, answering common queries and providing assistance around the clock. DXPs equipped with data analytics tools can help financial organizations gain insights from customer data, enabling data-driven decision-making and personalized financial recommendations. In the lending and credit industries, DXPs can assist with credit scoring and risk assessment by integrating data sources and providing real-time evaluations. DXPs ensure a consistent and responsive experience across various digital channels, including web, mobile apps, and even emerging channels like smart speakers and wearables. DXPs enable FinTech companies to identify cross-selling and upselling opportunities by analyzing customer behavior and preferences. Some FinTech companies offer white-label solutions to financial institutions. DXPs can help create customizable and branded platforms for banks and credit unions. For regulatory compliance and enhanced security, DXPs can be integrated with digital identity verification solutions, ensuring the authenticity of users. In the FinTech sector, where digital experiences are integral to user engagement and trust, DXPs serve as a foundational technology to deliver seamless, secure, and customer-centric services. By creating efficient and user-friendly digital experiences, FinTech companies can attract and retain customers in a competitive landscape.

MARKET TRENDS

Digital Experience Platforms (DXPs) are continually evolving to adapt to emerging market trends and changing consumer preferences. Staying aligned with these trends is crucial for organizations aiming to create competitive and engaging digital experiences. Consumers expect personalized digital experiences tailored to their preferences and behaviors. DXPs are incorporating advanced personalization features, leveraging data analytics, AI, and machine learning to create highly personalized user experiences. Users engage with brands across multiple digital channels, including websites, mobile apps, social media, and IoT devices.

DXPs support multi-channel experiences, ensuring consistency and responsiveness across diverse touchpoints. The rise of voice-activated devices and chatbots is changing the way users interact with digital content and services. DXPs are integrating voice search, voice commands, and chatbots to enhance conversational interactions. The demand for content to be flexible and reusable across various platforms and devices. Some DXPs offer headless CMS capabilities, allowing organizations to manage content separately from the presentation layer. Increasing concern and regulations related to data privacy and security. DXPs are enhancing data protection features, ensuring GDPR [3] and other compliance standards are met. The adoption of microservices and containerization for flexible, scalable, and resilient digital solutions. Some DXPs are designed with microservices architecture, enabling modular, scalable, and easily maintainable digital experiences. The

demand for real-time data analysis and insights for making informed, data-driven decisions. DXPs are incorporating advanced analytics and data visualization features to provide real-time insights into user behavior. The growth of PWAs, which combine the best of web and mobile apps for faster loading and enhanced offline capabilities. DXPs are optimizing for PWAs to provide an improved mobile and web experience. The increasing use of AI and machine learning for automation, personalization, and predictive analytics. DXPs are integrating AI and machine learning capabilities to enhance content recommendations, chatbots, and predictive analytics. Growing interest in blockchain technology for enhancing trust and transparency in digital transactions and data management. Some DXPs are exploring blockchain integration for secure and transparent digital experiences. The use of AR and VR to create immersive digital experiences. DXPs are incorporating AR and VR capabilities for interactive and engaging content. The importance of sustainable practices and eco-friendly initiatives in digital experiences. DXPs are being used to promote sustainability efforts, such as green web hosting and energy-efficient content delivery. By adapting to these market trends, DXPs enable organizations to create more engaging, relevant, and efficient digital experiences. Keeping pace with these trends can be a key differentiator in a competitive digital landscape and help organizations meet evolving user expectations. DXPs are incorporating no-code and low-code development capabilities, enabling non-technical users to build and customize digital experiences. DXPs are increasingly focusing on supporting multilingual and multiregional content delivery to cater to global audiences effectively.

CONCLUSION

Digital transformation disrupts the industries, organizations, processes. More organizations are embracing the digital transformation to modernize processes, reduce costs, improve user experience, become competitive, drive innovation and efficiency and become more agile.

ACKNOWLEDGMENTS

I would like to thanks Dr. Shailesh Kumar Shiva Kumar for doing extensive research in Digital Experience Platforms & in the field of Digital Portals, I would like to thanks all the developer who helped us in completing case studies on different DXPs available across market.

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