MODERNIZATION OF CARD MANAGEMENT PLATFORMS: AN INFOSYS ROADMAP FOR CARD ISSUERS

Abstract

Innovative payment methods, customer demand for faster and convenient transactions, a dynamic regulatory landscape, and the emergence of digital-first players are making it imperative for card issuers to modernize their legacy card management platforms and introduce cutting-edge functionalities. However, embarking on such a transformation program requires careful planning and a strategic approach. This paper outlines the key features of next-gen card management platforms and describes three actionable transformation approaches. It also recommends a three-step transformation framework that assists card issuers in selecting the right approach towards adopting modern card management platforms with powerful features that drive business growth.

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Introduction

The cards industry – comprising card issuance, merchant acquisition, and card networks – is undergoing rapid disruption due to pressure from new-age competitors, regulators, and customers. There is a slew of digital-first companies as well as fintech and big tech players such as Google and Apple that leverage digital channels to acquire and service customers, which appeals especially to the millennial audience. Moreover, millennials prefer buy now, pay later (BNPL) loans due to the closed-ended nature instead of open-ended loan balances in credit cards. Emerging regulations such as mandates for on-soil storage of payment data, preference for in-country players, as well

as changes in cardholder fees, merchant discount, and interchange rates also have far-reaching implications for the cards industry ecosystem. Further, innovative payment rails, such as real-time account-to-account payments, are creating a shift in customer behavior in ways that significantly impact this sector.

What this industry needs is a transformation from legacy card management platforms to modern ones that can scale to handle dynamic market demand, high-volume transactions, and changing regulations. This requires an understanding of must-have features, the key assessment criteria in deciding the right transformation approach, and the target architecture of the new platform.

Challenges of Legacy Card Management Platforms

Card issuers, saddled with legacy card management platforms, struggle to keep pace with the latest trends, market changes, and customer preferences. Legacy technology is limited in its ability to support application programming interfaces (APIs), digital enablement, real-time data access, and timely insights for internal users such as customer service representatives, back-office personnel, and business users. Legacy platforms also incur higher costs for maintenance and rolling out new products and features. Poor modularity and lack of functionality parametrization lead to greater effort being spent for platform enhancements.

Legacy systems have limitations in integrating with surround systems and collaborating with external systems. Further, business rules are typically embedded within the platform code, resulting in inflexible workflows. Such platforms depend on batch processing for transactions and struggle to adapt to changing regulatory norms. All of this delays time to market for innovation initiatives, adversely impacting the customer experience.

Next-gen Card Management Platforms: Solution, Features, and Architecture

Next-gen card management platforms address these challenges and equip the cards industry with smarter, modern, and flexible solutions that drive business growth. Such platforms have higher uptime, easily integrate with all ecosystem players, and generate insights for data monetization. They eliminate dependencies on technology teams, allowing business users to launch new products and features on time. Moreover, in-built flexibility prevents vendor lock-in across hardware and system software while providing best-of-breed solutions for all aspects of card management activities. These capabilities deliver an enhanced employee experience, a personalized and digital-first customer experience, and reduced operational costs for the bank.

Key features of a next-gen card management platform

A modern card management platform contains several important features that enable industry players to offer best-in-class card products and services to customers.

The infrastructure is cloud-native and portable, with open-source components and commodity hardware in an environment that is scalable, available, and reliable. This allows processing of large transaction volumes with greater resilience, fault tolerance, and throughput. It also supports event-based processing with minimal dependency on batch processing.

With a modular and microservices-based architecture, these platforms are decoupled and headless with real-time data access and webhooks. All functionalities are parameterized. Business rules are also decoupled from platform code, allowing the use of domain-specific language (DSL) and rule engine capabilities. Moreover, product features are composable and defined through a low-code/no-code approach, which goes beyond product parameterization.

Modern card management platforms have a robust API layer, simplifying integration with surround systems and external systems. They also offer support for open banking APIs, enabling seamless collaboration with ecosystem players. From a compliance perspective, these platforms ensure high data security, adherence to data privacy mandates, and compliance with on-soil data storage protocols. It also simplifies platform enhancements to meet regulatory and card network mandates.

Such platforms offer platform as a service (PaaS) for fraud management, credit risk management, customer onboarding, collections, disputes, loyalty programs, customer service, and more. They provide robust data analytics and reporting capabilities, visualized through user-friendly, customizable screens. Workflows are also configurable and flexible. Further, they leverage a unified book of records for all card-related products such as credit cards, debit cards, prepaid cards, wallets, BNPL, retail loans, and commercial business cards, among others.

With these powerful features, modern card management platforms deliver a digital-first experience for customer acquisition and customer servicing with personalized services and offers. Additionally, they empower cards industry players to confidently leverage advanced technology capabilities such as generative AI (GenAI), augmented reality/virtual reality (AR/VR), and the Internet of Things (IoT) for unprecedented innovation and growth.

Target state architecture for a modern card management platform

The target architecture for a modern card management platform is designed to create a robust, flexible, and functionally rich platform that can support a variety of card products, product features, card schemes, and an extensive surround ecosystem. Such architecture is essential as industry players are under pressure to innovate in order to meet customer demand and keep pace with aggressive competition. Figure 1 depicts the target state architecture of a modern card management platform, consisting of the key features outlined earlier.
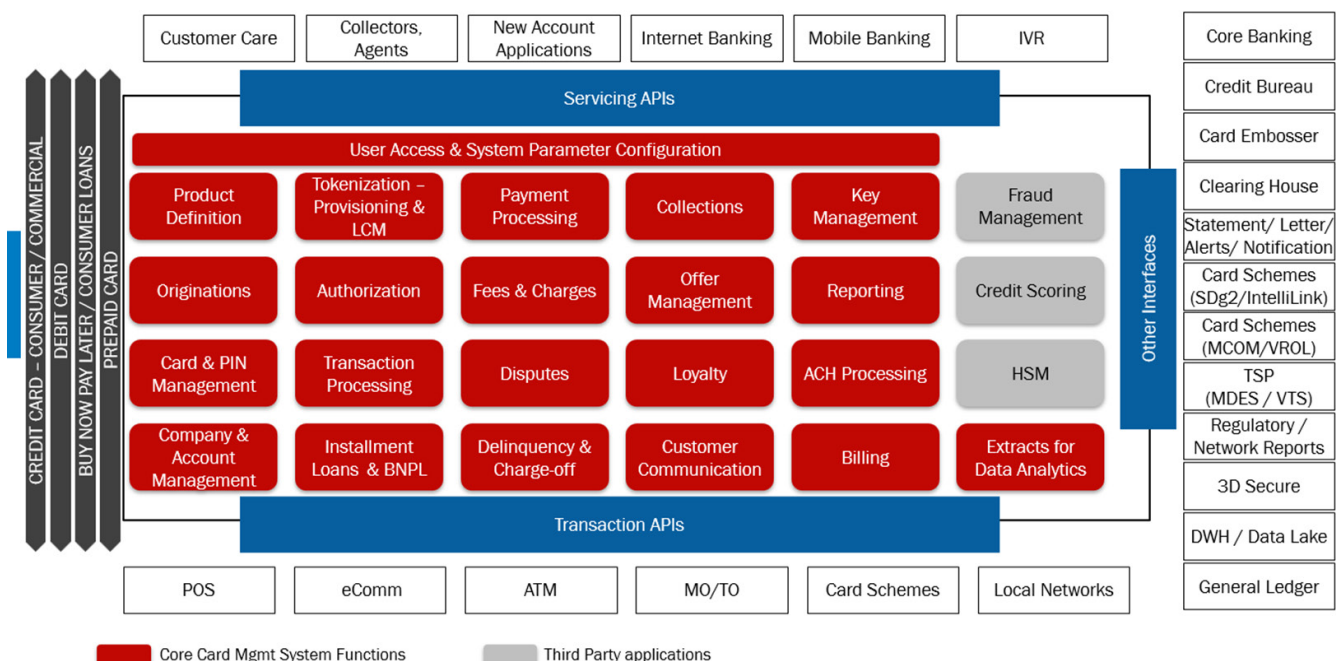

Fig. 1: Reference architecture for a modern card management platform

Key Assessment Criteria when Choosing the Right Transformation Approach

There are some critical criteria that banks must consider before modernizing their card management platforms. Clear knowledge and assessment of these parameters helps select the right implementation approach to ensure a successful transformation journey that aligns with the bank's unique environment and business goals.
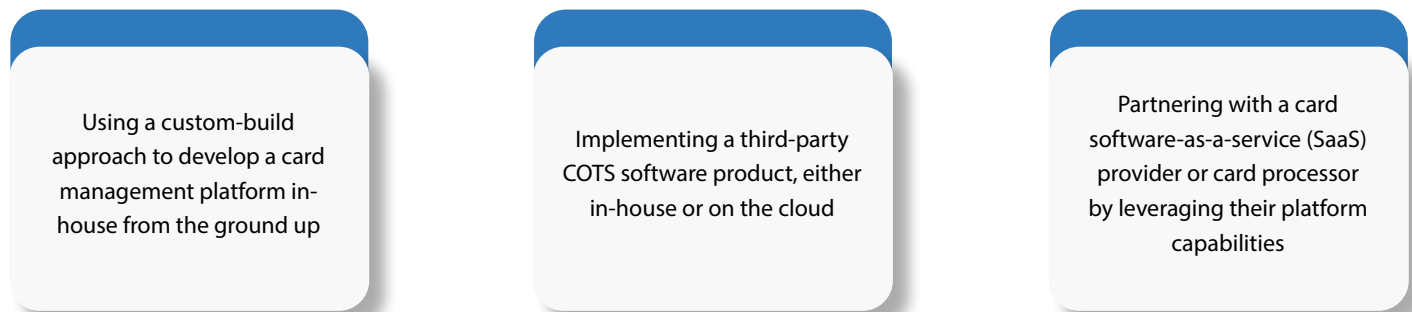
The key assessment criteria can be divided into three broad categories:

Cost of the project:

This takes into account the costs of infrastructure, application software licenses, hardware, data center networks, hardware security module, and software development, depending on whether the product is custom-built or a customized commercial off-the-shelf (COTS) solution. Other cost factors include integration development and testing, card platform user testing, and card portfolio migration. It also covers costs for platform enhancements to meet regulatory and card network mandates, as well as costs to run the bank. This includes costs from annual maintenance contracts (AMCs) for the software licenses, cloud infrastructure, and processing fees levied by the card processor.

Time to market for launch:

This considers the overall project timeline, including initial assessment, approach selection, design, development, integration, testing, implementation, launch, and card portfolio migration.

Platform-related specifications:

This includes criteria like platform functionality, platform roadmap, infrastructure, as well as delivery ownership and responsibility. For instance, the platform must offer rich functionality to support the complex business requirements, including card product features, accounts receivable, and business functions related to customer onboarding, credit decisioning, authorization, collections, disputes, and payment processing. Stakeholders must have appropriate control over the implementation roadmap and enhancements. Further, the technology team must maintain and enhance the platform to ensure scalability, availability, high performance, and adoption of the latest trends and technologies.

Choosing the Right Transformation Approach: A Comparison of Three Methods

Card industry enterprises can choose from three different approaches to launch a next-gen card management platform. Each approach has its advantages and drawbacks, and industry players should carefully consider these before making a selection.

The three implementation approaches are:

Using a custom-build approach to develop a card management platform in-house from the ground up	Implementing a third-party COTS software product, either in-house or on the cloud	Partnering with a card software-as-a-service (SaaS) provider or card processor by leveraging their platform capabilities

Since all three approaches are prevalent within the industry, it helps to understand the different scenarios where each is applicable. Table 1 provides a comparison of how each approach performs against the key assessment criteria.

Table 1: Comparison of custom-build, third-party COTS, and card SaaS approaches to card management platform transformation

Assessment criteria	1. Custom-built approach	2. Third-party COTS product approach	3. Card SaaS provider or card processor approach
Cost of the launch	• Very high • Platform capabilities must be built from the ground up	• Medium to high • Software customizations and integration with in-house surround systems are needed	• Low to medium • The existing capabilities of the card SaaS provider/card processor can be leveraged • Integrating in-house surround systems with the external platform will require effort and time
Cost to run the bank	• Low to medium • The primary costs include infrastructure hardware, software, and software maintenance	• Medium to high • The primary costs include AMC for COTS software along with infrastructure hardware and software costs	• High • Card SaaS providers/card processors levy ongoing fees based on card and transaction volumes • Card issuers with large portfolios may negotiate for favorable pricing
Time to market for launch	• Very high • Platform capabilities must be built from the ground up	• Medium to high • Software customizations and integration with in-house surround systems are needed	• Low to medium • Card issuers can leverage the existing capabilities of the card SaaS provider/card processor • Integrating in-house surround systems with the external platform may require effort and time
Ongoing platform enhancement for regulatory and card network mandates	• Platform enhancements for regulatory and card network mandates must be handled by the card issuer; involves cost and effort • Failure to implement enhancements on time can impact business continuity	• Software updates for card network mandates are provided by the COTS software provider • Region-specific regulatory mandates may require customizations or enhancements to be done by the COTS software provider	• Card SaaS provider/card processor ensures that card network and region-specific regulatory mandates are implemented on their platform
Rich platform functionality	• Building rich platform functionality requires enormous amount of effort and time	• Leading COTS players typically have rich functionality, which is parameterized	• Leading players typically have rich platform functionality that is parameterized • Players with multiple card issuers as clients in that country/region tend to have optimal coverage for market-specific functionality

Control over platform roadmap	• Provides full control over the platform roadmap and business prioritization for platform enhancements	• Offers limited to no control over product roadmap	• Provides limited to no control over platform roadmap
Platform enhancement ownership and responsibility	• Supports complete ownership and responsibility	• Allows shared ownership and responsibility for go live and 'run the bank'	• Enables shared ownership and responsibility for go live • Run the bank is fully owned by the card SaaS player/card processor
Adopting latest trends and emerging capabilities that require platform capability uplift	• Can quickly adopt latest trends and emerging capabilities owing to full control over the platform roadmap	• Relies on the COTS player product roadmap for adopting latest trends and emerging capabilities	• Relies on the card SaaS provider/card processor's platform roadmap for adopting latest trends and emerging capabilities
Infrastructure, Scalability, Availability, and Reliability (SAR)	• Allows complete ownership and responsibility for infrastructure and SAR metrics	• Dependency on the COTS provider to fix performance issues in the COTS software product	• Infrastructure and SAR metrics are fully owned by the card SaaS player/card processor

Framework for Launching a Next-gen Card Management Platform

Infosys recommends using a three-stage framework to help card issuers decide on the most effective approach to modernize their card management platform. This blueprint assists in building a strong business case for the platform transformation. The recommended execution roadmap accelerates business value by enabling enterprises to prioritize strategic change programs based on complexity, value, and interdependence.

The proven Infosys framework, outlined in table 2, addresses the critical build-versus-buy question when implementing such a platform. It also enables the launch of diverse card offerings with rich product features. Our framework allows decision-makers to rationalize the effort and cost of upgrading the surround systems based on key business needs.

Table 2: A three-stage framework for modernizing card management platforms

Stage 1: Discover	Stage 2: Evaluate and envision	Stage 3: Formulate a roadmap
• Run voice of customer/empathy sessions with key stakeholders to understand the main challenges.	• Build the future-state blueprint covering functional capabilities, technology architecture, data capabilities, and user experience.	• Create a business case for platform transformation.
• Conduct workshops and interviews with key stakeholders to align transformation goals with business objectives.	• Leverage existing capabilities, platforms, and applications, and identify the legacy capabilities to be replaced.	• Identify the best-fit approach for the organization's needs.
• Organize workshops with key stakeholders on desired future-state capabilities and experience.	• Rationalize the platform landscape and define the scope for platform modernization.	• Develop an implementation roadmap with prioritized initiatives, grouped into a phased implementation plan.
• Build a desired future capability catalog with stakeholders in a co-creation workshop.	• Identify market players with product/platform offerings.	
• Research industry trends to obtain insights and fine tune strategy.	• Prepare evaluation parameters to assess the product/platform solutions.	
	• Assess offerings from different players.	
	• Conduct a build-versus-buy analysis.	

Conclusion

It is imperative for card issuance businesses to modernize their card management platforms in order to handle competitive pressures from demanding customers, strict regulators, emerging fintech companies, and innovative payment rails. Next-gen card management platforms offer powerful, parameterized functionalities, advanced data capabilities, modular architecture, robust API capabilities, and resilient infrastructure that can scale with business growth. Modernizing legacy systems to next-gen platforms requires a strategic approach grounded in key assessment criteria. With this analysis, card issuers can choose the approach that best aligns with their organizational goals and deploy the target architecture using a three-step phased implementation framework. Such a transformation roadmap can deliver tangible benefits such as personalized customer service, enhanced user satisfaction, faster time to market for new products and features, as well as improved platform availability, thereby sharpening the competitive edge of today's cards industry players.

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