

# Empowering the Future of Digital Payments

Brillio's cutting-edge payment solutions that enable seamless operations, compliance, and innovation

**brillio**



# Drivers for Payments Transformation

The landscape of digital payments is undergoing a transformative revolution, reshaping how financial institutions operate and how consumers and businesses conduct transactions. As we move deeper into the digital age, financial institutions are strategically positioning themselves through a series of key priorities to maintain competitive advantage and meet evolving customer expectations.

- Leading the charge, 77% of institutions identify real-time payments as their top focus, followed closely by enhancing infrastructure resilience and accelerating solution deployment (68%).
- Cost reduction remains critical for 59%, while half of all institutions are aligning with cloud and microservices strategies. Collaborative partnerships with fintechs are also gaining momentum, with 45% emphasizing this approach.
- Additional priorities include simplifying payment architectures (41%), meeting regulatory requirements like open banking (32%), and unlocking new revenue streams through payments data monetization (18%). Together, these priorities underline how speed, resilience, and innovation are reshaping the digital payments landscape.



# Redefining Innovation in the Payments Ecosystem

## Brillio's Payments Offerings

- **Payments Hub:** A robust solution for managing end-to-end payment processes.
- **Payment Scheme Connectors:** Seamless integration with various payment schemes.
- **Open Banking:** A future-ready platform for open banking compliance and innovation.

## Strategic Payment Solutions

- **Open Banking Platform**  
Brillio's Open Banking platform is built on a ready-to-use reference architecture, making it easy for organizations to implement and scale. It includes a self-service Open Banking Sandbox, allowing developers to test and innovate with ease, ensuring regulatory compliance with advanced API management and consent management capabilities.
- **Payments Hub**  
Our Payments Hub streamlines operations through seamless integration with messaging systems and workflows. It offers automated reconciliation and transaction lifecycle management, reducing manual intervention and errors. Key features include MT-MX translation services, comprehensive regulatory reporting, and automated exception handling.
- **High-Value Payment Systems**  
Brillio excels in supporting high-value payment systems, including SWIFT CBPR+, FedNow, FedWire, TARGET2, and CHAPS. Our expertise ensures organizations can navigate the complexities of these systems with ease, enabling efficient and secure high-value transactions.



# Transforming the Payments Value Chain

While navigating this fast-paced financial ecosystem, organizations must adapt to meet growing demands for secure, efficient, and innovative payment solutions. Our comprehensive approach encompasses everything from product development to regulatory compliance, ensuring seamless integration of digital and physical payment experiences while maintaining the highest security standards.

## Brillio's Payments Offerings

### Payments Product Development

Develop PoC for scalable products that integrate physical touchpoints with digital experiences. Design custom payment ecosystems using W3C specifications to enhance customer checkout experiences.

### New Payment Channels

Integrate payment gateways to process local payments and introduce new methods like QR and UPI payments. Enhance capabilities with ACH integration, wire transfers, and interbank fund transfers.

### Platform Engineering

Enable banks to uniformly adopt ISO 20022 messaging standards with standardized platform components. Deliver a complete payroll transformation solution using Salesforce.

### Architecture Modernization

Create an API orchestration layer to optimize P2P services in mobile payment ecosystems. Develop microservice-based orchestration and message translation services for ISO 20022 XML/MT formats.

### Product Engineering

Enhance payment security and fraud detection by integrating payment partners. Design intuitive interfaces, reducing cart abandonment for a secure and seamless checkout experience.

### Fraud and Risk Management

Implement CART models and decision trees for fraud detection, analyzing gateway variables and transaction data for proactive risk management.

### Regulatory Compliance

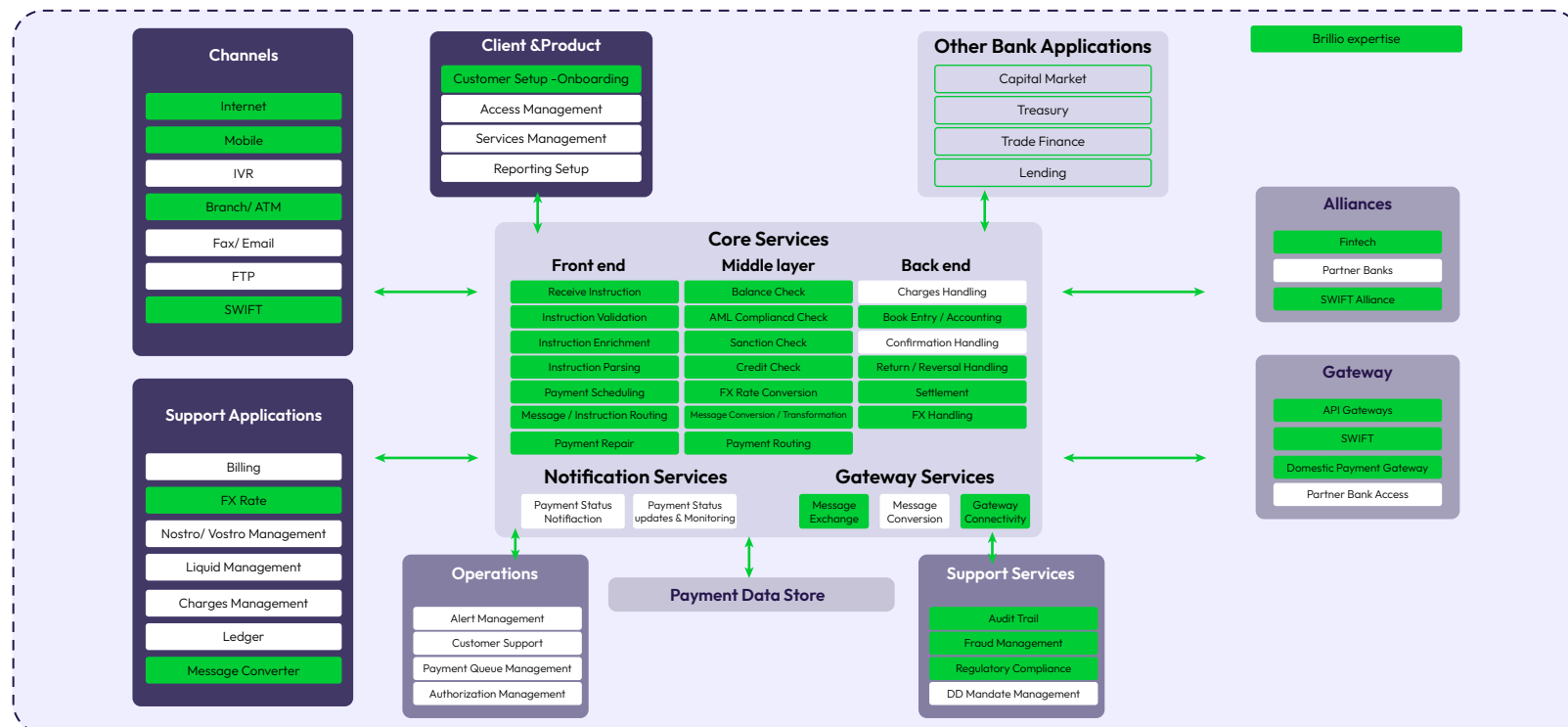
Ensure secure transactions with network tokenization. Conduct vulnerability assessments to enhance compliance and mitigate risks, ensuring clients meet stringent regulatory standards.

# Blueprint: Brillio's Expertise Across the Payments Architecture

Brillio's comprehensive expertise in the payments architecture encompasses end-to-end solutions across various components of the ecosystem. From **Channels** such as internet, mobile, and branch/ATM to **Core Services** including payment validation, routing, and compliance checks, Brillio's capabilities span the entire lifecycle of payments.

The framework integrates seamlessly with **Client & Product Applications, Other Bank Applications, Gateways, and Alliances**, ensuring interoperability and scalability.

With robust **Support Applications and Operations** services, Brillio delivers secure, efficient, and innovative solutions tailored to meet the needs of modern financial institutions, ensuring an optimized and future-ready payments infrastructure for global businesses.





# **Real-World Results:** **Our Payments Success Stories**

# Revolutionizing NGP for Secure Transactions at Merchant Kiosks

## Addressing Data Discrepancies and Fraud Risks

A global payments leader faced a critical challenge: transaction data discrepancies at merchant kiosks led to significant fraud risks, eroding trust and operational integrity. To tackle this, Brillio partnered with the client to develop a proof of concept for the Next Generation Point of Interaction (NGP) system.

This enterprise-scale solution created a secure bridge between kiosk terminals and customer payment credentials during checkout, establishing an unbreakable chain of transaction authentication.

## Elevating the Shopping Experience

The NGP platform transformed retail interactions by merging loyalty enrollment with checkout, offering a seamless blend of digital and physical touchpoints for personalized experiences. Checkout **times decreased by 75%**, boosting efficiency and customer satisfaction.

Advanced authentication protocols **established unparalleled security**, effectively mitigating risks for both merchants and customers. Additionally, the integrated **loyalty program** enhanced retention and purchase frequency, driving meaningful customer engagement. The result: a robust, secure payment ecosystem that strengthened merchant-customer relationships.

- **75%** checkout time reduction
- Unparalleled Security
- NGP-Integrated Loyalty Program

# Elevating Buyer Experiences with Smoother Checkouts and Payments

## Personalized, Secure, and Streamlined Payment Experiences

A U.S.-based global commerce leader sought to revolutionize the customer experience by streamlining checkouts, offering diverse payment options, and providing hyper-personalized shopping experiences. Brillio engineered a solution focused on creating immersive buyer experiences to enhance CSAT scores throughout the purchase journey, integrating secure payment protocols aligned with federal regulations.

The architecture featured a payment gateway optimized for local transactions, innovative region-specific methods, and intuitive purchase flows and checkout designs that significantly reduced cart abandonment rates. Custom workflows enhanced security for high-value transactions, while integration with federal systems ensured compliance and trust.

## Transforming Payment Systems with Market-Leading Features

This solution achieved a **10% uplift** in customer satisfaction, reflecting the impact of a streamlined process. Notably, **60% of its features** were deemed market-leading innovations, enhancing the system's competitive edge.

With a **34% improvement** in spend-to-revenue alignment, the solution optimized operations and boosted financial returns, cementing its role as a transformative force in the payments industry.

- **10%** Uplift in CSAT
- **60%** Market-Leading Innovations
- **34%** Improved Spend-to-Revenue Alignment

# Seamless Merchant Integration with W3C Payment Specifications

## Revolutionizing Payment Infrastructure

A leading payments technology provider aimed to transform their payment infrastructure by adopting W3C Payment Specifications to deliver a secure, sophisticated, and user-friendly framework for partner merchants and banks.

Brillio engineered an innovative payment ecosystem by leveraging deep expertise in W3C specifications and emerging technologies. The team delivered multiple proofs of concept demonstrating seamless integration across web and mobile platforms. The solution's architecture centered on advanced API development and middleware optimization, ensuring flawless communication across browsers, devices, and platforms.

## State-of-the-Art Technical Solutions for 25% Purchases Boost

The NGP system introduced groundbreaking solutions, overriding default payment specifications by Google, Firefox, and Apple to tailor experiences for business needs, enhancing security, scalability, and usability, and addressing gaps in traditional processes.

The business impact of this innovative solution was substantial: a projected **25% boost** in purchase completions, a **5% increase** in gateway adoption, and a **5% revenue** uplift for merchants, underscoring the system's ability to reduce checkout friction, foster loyalty, and drive repeat purchases.

- **25%** Surge in Purchase Completion
- **5%** Revenue Enhancement
- **5%** Increase in Payment Gateway Adoption

# Enhancing Point-of-Sale and Payment Systems for Restaurant Merchants

## Transforming Merchant Operations

The largest U.S. cloud-based Android PoS platform, managing \$133 billion in annual card transactions, sought to rapidly introduce innovative PoS and payment features for restaurant merchants while integrating with a new gateway for local payment processing.

Working closely with the client, Brillio introduced new payment methods, such as QR payments, no-card-present transactions, and UPI payments, tailored to regional requirements. A robust three-tier architecture ensured scalability and feasibility. Additionally, microservice containerization and orchestration using Minikube streamlined features like auto-gratuity and reporting enhancements. Design-driven development further improved the display system, enabling seamless interaction between end customers and merchants.

## Empowering Merchants with Enhanced Functionality

Brillio's solution introduced over **30 advanced features**, equipping merchants with flexible payment options and operational tools to handle peak demands efficiently. **Robust API integrations** supported diverse local payment methods, ensuring broad market compatibility.

These enhancements drove a projected **20% revenue increase**, empowering merchants to reach more customers and deliver superior payment experiences, solidifying their competitive edge.

- **30** New Features
- Seamless Support for Local Payment Methods
- **20%** Increase in Potential Revenue

# Simplifying Peer-to-Peer Payments with API Orchestration

## A Scalable and Secure Solution for Seamless Consumer Experiences

A global leader in payments and technology sought an orchestration layer for P2P payments to enhance security and streamline consumer experiences across its mobile payment ecosystem.

Brillio developed a comprehensive Service Manager layer to support end-to-end P2P use cases, simplifying the payment flow from account retrieval to transaction completion. The solution featured an API-led, microservices-based architecture for seamless system integration, while DevOps automation ensured scalable, maintainable pipelines for smooth SDLC operations and efficient updates.

## Driving Global Adoption

The API Orchestration Layer enabled scalable **P2P payment** solutions globally, adapting easily to country-specific requirements. By accelerating the transition from cash to digital transactions, the NGP system **modernized payment** ecosystems, offering secure, convenient alternatives to consumers.

This innovation introduced a **new revenue channel** for merchants, expanding their reach to diverse customer needs. The platform's global adoption showcased its ability to deliver secure, compliant, and scalable payment experiences with minimal localization efforts.

- Scaled P2P Payment Solutions
- Modernized Payment Ecosystem
- Augmented Revenue Streams

# Designing a Secure, Future-Proof Wallet for High-Risk Transactions

## Enhancing Security and Cost Savings

An India-based fintech startup with over 150 million customers, specializing in real-time micropayments and remittances, faced significant losses from fraudulent wallet recharges via credit and debit card transactions.

To address this challenge, a sophisticated fraud detection system tailored for high-risk transactions was engineered by Brillio. Using a CART – Classification and Regression Tree –model, frequent fraud patterns were identified by analyzing payment gateway and aggregated transaction variables. The solution actively monitored transactions, flagging suspicious activities at the first instance of fraud. A confusion matrix was constructed to validate and refine the accuracy of the model, ensuring robust fraud detection capabilities.

## Empowering Fraud Prevention

Brillio's solution reduced fraud-related losses, safeguarding wallet transactions and enhancing platform trust. With **70% accuracy** in detecting suspicious activities, the system set a new benchmark for payment security.

The system unlocked **\$3.2 million** in potential savings for merchants, blocking **2.3% of high-risk** transactions and demonstrating its proactive, efficient approach to maintaining a secure transaction environment.

- **\$3.2m** Unlocked in Potential Savings
- **70%** Model Accuracy
- **2.3%** of Transactions Flagged and Blocked

## ABOUT BRILLIO

Brillio is one of the fastest growing digital technology service providers and the partner of choice for many Fortune 1000 companies seeking to turn disruptions into competitive advantages through innovative digital adoption. We help clients harness the transformative potential of the four superpowers of technology: cloud computing, Internet of Things (IoT), artificial intelligence (AI) and mobility. Born digital in 2014, we apply our expertise in customer experience solutions, data analytics and AI, digital infrastructure and security, and platform and product engineering to help clients quickly innovate for growth, create digital products, build service platforms, and drive smarter, data-driven performance. With 17 locations across the U.S., the UK, Romania, Canada, Mexico and India, our growing global workforce of nearly 6,000 Brillians blends the latest technology and design thinking with digital fluency to solve complex business problems and drive competitive differentiation for our clients. Brillio was certified by Great Place to Work in 2021, 2022 and 2023.



<https://www.brillio.com/>

Contact Us: [info@brillio.com](mailto:info@brillio.com)

