



Enabling seamless checkout with Next-Gen APIs for a Global Payment Leader

Developing Customer Enrollment and Check-In
APIs to Streamline Payments for Future
Transactions and Provide Frictionless CX



As a global payment technology leader, this company serves hundreds of millions of clients worldwide, facilitating electronic fund transfers across the globe. A crucial intermediary between banks and merchants, it processes payments via credit, debit, and pre-paid cards.

However, despite its large-scale adoption of advanced technologies, the company encountered challenges with an inefficient checkout process at Retail Kiosks/Point of Sale, as well as the limited portability of information between physical and digital realms.

Recognizing the need for a solution, the organization embarked on a search for a strategic partner. Their objective was to render the checkout process seamless and invisible to end customers by seamlessly retrieving saved payment credentials. Additionally, they aimed to provide merchants and shoppers greater flexibility in how, when, and where they interact in-store by breaking down the barriers between physical and digital environments.

With an established partnership with the company, a track record of successful project deliveries, and a swift turnaround time for complex projects, coupled with a remarkable proficiency in handling next-generation solutions, Brillio emerged as the ideal choice to spearhead the project.

Developing Advanced APIs for Customer Enrollment and Check-In

In a collaborative effort, Brillio and the client's team crafted a comprehensive new product featuring a range of solutions aimed at empowering partners to expand their on-premise digital payment capabilities for Card-on-File experiences.

At the heart of this revolutionary technology lay the creation of two pivotal APIs - Customer Enrollment and Check-In, engineered to deliver a seamless and frictionless customer experience, transforming how users interact with merchants.

The enrollment solution streamlined the user journey, simplifying the process of saving payment credentials for future use after an on-premise physical payment.

To exemplify the user journey, upon arrival at the merchant's on-premise device, the user would initiate the process by accessing the merchant app and completing the authentication steps. Subsequently, the merchant's app, installed on the consumer's device, would seamlessly engage with the merchant's trusted devices, facilitating the addition of items to the order and confirmation of the amount. As the transaction progresses, the consumer can effortlessly finalize the payment, with an option presented towards the end of the process to store the payment card for future use. Upon the consumer's agreement, a strong cardholder authentication is completed, after which the card details are securely stored, simplifying future purchases.

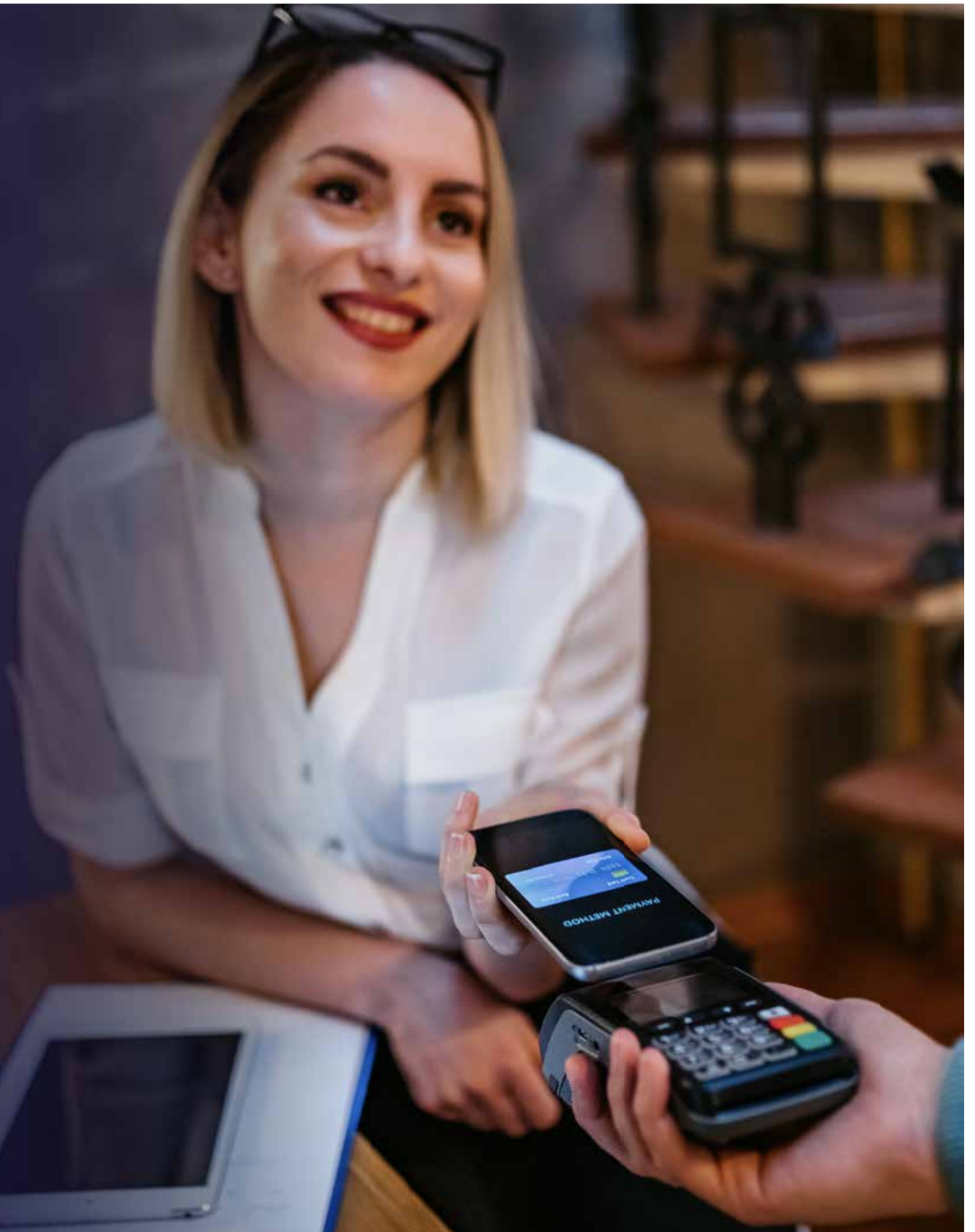
By alleviating technical complexities, the solutions ushered in a new era of convenience for consumers, facilitating effortless transactions and enhancing overall satisfaction.

This solution was leveraged to facilitate various use cases, including signing up for recurring payments in-store, activating payment functions within a loyalty program, implementing issuer push provisioning flows, and beyond.

The check-in solution was developed to distinguish between financial card-not-present payment transactions carried out on-premise versus remotely, enhancing the efficiency of the payment ecosystem. This solution provided visibility into cardholder presence data, refining risk, and economic models.

Upon the consumer's arrival at the merchant's trusted device, they simply launch the merchant's app on their own device and initiate interaction. The consumer then proceeds to view the payment card, add items to the order, confirm the amount, and finalize the payment, thus completing the order seamlessly.

This method provided partners with a reliable means to assert that card-not-present transactions were indeed conducted on-premise, ensuring accuracy and confidence in transaction processing.



Creating Production-Grade APIs: From Design to Testing and Security

The API development endeavor started as a proof-of-concept initiative owned by Brillio. The teams embarked on a thorough 4-month discovery phase aimed at crafting an immersive customer experience tailored to capture enrollment and check-in at a merchant kiosk. Additionally, this solution was showcased to potential retail merchants in Germany and the UK. For demonstration purposes, a dummy POS machine was configured to facilitate customer enrollment while shopping at a retail merchant's store.

Collaboratively, the teams underwent a thorough process, beginning with the selection

of APIs and culminating in the creation of diagrams and Swagger files during the Design phase. Subsequently, APIs using JAVA were constructed, leveraging PostgreSQL and Redis for Data Storage.

Furthermore, stringent measures were implemented to guarantee the performance and security of the APIs. This involved a comprehensive regimen of Functional and Performance testing, coupled with PCI Certification of the solution. Additionally, the teams evaluated edge cases, ensuring their integration into the implementation process.

After the discovery phase, Brillio collaborated with the client's R&D Labs to develop production-grade APIs for enrollment and check-in.

Streamlined Checkout Process Cuts Kiosk Time & Boosts Merchant Operations

Together with Brillio, the client pioneered a next-generation system that revolutionizes the consumer-merchant interaction process. From enrollment to check-in, enhancing the overall merchant experience, and streamlining the check-out process, this innovative technology caters to end consumers while empowering merchants to actively engage in the evolution of retail payments.

After the successful implementation, the client witnessed a remarkable surge in consumer spending and shopping frequency. By simplifying the payment process, customers found it more convenient to complete transactions, resulting in increased sales volumes and higher customer satisfaction rates.

Addressing the merchant's imperative for efficiency, the solution effectively reduced the time spent at the Kiosk per customer. This optimization not only enhanced the overall operational efficiency of the merchants but also contributed to a smoother and more expedient shopping experience for consumers.

Moreover, beyond the immediate benefits of enhanced checkout efficiency, the solution catalyzed growth across various facets of the client's services. By seamlessly integrating with existing systems and workflows, the solution paved the way for broader operational improvements and revenue generation opportunities.

Notably, the scalability of the solution emerged as a key asset, capable of adapting to evolving business needs and covering a multitude of scenarios. Leveraging advanced data analytics and insights derived from consumer interactions, the solution empowered the client to make informed strategic decisions and drive sustained growth across their retail ecosystem.



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 disruption into a competitive advantage 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 has been certified by Great Place to Work since 2021.



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