

Case Study

Transforming card-present payments through a scalable, cross-platform mPOS solution

Enabling a top-five U.S. payments provider to compete in an increasingly mobile and contactless payments landscape



Client Background

One of the top five payments companies in the United States, with a long-standing presence in check-based payments and digital commerce solutions, recognized the need to expand its product portfolio with a mobile point-of-sale (mPOS) offering amid an increasingly competitive payments landscape and the rapid adoption of mobile and contactless acceptance models.

To support this initiative, the company partnered with ThoughtFocus to design and deliver a comprehensive card-present (CP) mobile payments solution capable of serving both direct merchants and Independent Software Vendor (ISV) partners.

Business Challenge

The client's existing payments capabilities were primarily centered on online and card-not-present (CNP) transactions. However, a significant segment of small businesses and field service merchants continues to rely on in-person payments as a critical component of daily operations.

As the market became increasingly crowded with mobile-first and contactless card-present solutions, they identified the need to expand into card-present payment acceptance. This included enabling Tap to Pay and device-based transactions through a mobile application designed to operate seamlessly across both Android and iOS platforms.

To address these requirements, the client needed a solution that could:

- Support EMV contact and contactless transactions
- Enable Tap to Pay on iPhone
- Integrate with a low-cost mobile card reader
- Provide a cross-platform mobile application for iOS and Android
- Deliver an extensible SDK for ISVs
- Meet stringent certification requirements such as Worldpay L3
- Maintain consistent release quality and operational stability

Building these capabilities internally would have required specialized payments expertise and significant engineering investment. As a result, they engaged ThoughtFocus to lead the initiative end to end.

Why ThoughtFocus

ThoughtFocus was selected for its combined strength in:

- Deep payments domain expertise, including EMV, card-present transaction flows, and processor certifications
- Enterprise-scale mobile engineering for both iOS and Android
- Building native Software Development Kits (SDKs) and cross platform applications
- Proven experience delivering regulated payment solutions for US based clients
- Capability to support certification, DevOps, QA automation and production operations
- Hands-on experience delivering payment solutions across diverse global payment environments

These capabilities positioned ThoughtFocus as a strategic partner capable of delivering a full-stack mobile payments platform.



Solution Delivered

ThoughtFocus delivered production-grade SDKs that serve as the core transaction engine for the client and its ISV partners.



Native iOS and Android SDKs



iOS SDK

- Built in Swift
- Supports EMV contact, contactless & keyed entry
- Integrated with Ingenico Moby 5500 card reader
- Implements Apple Tap to Pay on iPhone
- Compatible with Swift and Objective C environments



Android SDK

- Built in Kotlin
- Supports EMV contact, contactless & keyed entry
- Integrates with Ingenico Moby 5500
- Works with both Kotlin and Java based applications

These SDKs enabled them to extend its payments capabilities across different applications and ISV solutions without duplicating engineering work.

DLXPay Cross Platform Mobile App (.NET MAUI)

ThoughtFocus built the mobile point-of-sale application using .NET MAUI, allowing the client to maintain a unified codebase across iOS and Android.

The application is live on both Apple's App Store and Google Play Store. Notably, the iOS version has maintained a perfect approval record with zero store rejections.



Key Capabilities Include:

- Card-present acceptance through Tap to Pay and Ingenico device
- Product catalog management
- Transaction history
- Biometric login
- Optimized UI for small business workflows



EMV L3 Certification

ThoughtFocus managed and completed the Worldpay L3 certification process, including:

- End to end EMV Certification process including in-take form submission, test execution and validation
- Managing troubleshooting cycles
- Working with Worldpay's certification teams

This certification was essential to bring the solution to market

ISV Enablement Through SDK Distribution

To support the client's ISV ecosystem, ThoughtFocus modularized key components of the mobile payments solution into a standalone SDK package. This enabled ISV partners to integrate the client's payment capabilities into their own mobile applications without rebuilding device integrations for the Ingenico Moby 5500 or Apple Tap to Pay.

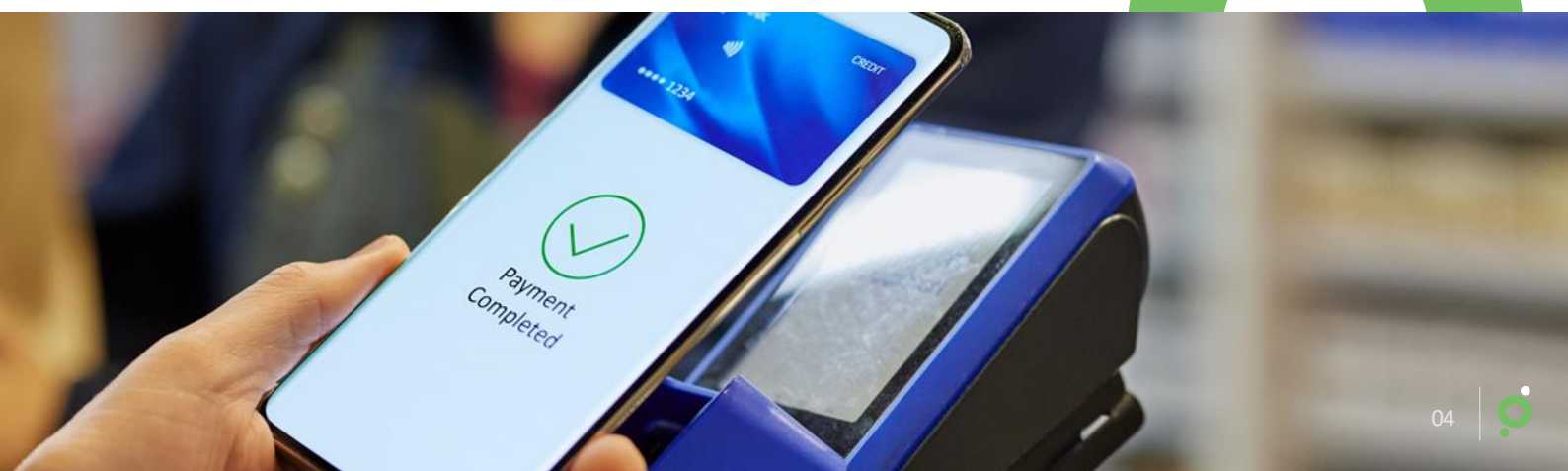
This approach significantly reduced integration effort, accelerated time to market, and expanded the overall reach of the client's payment solution.

Continuous Enhancements and Production Support

ThoughtFocus continues to support the client through:

- Regular SDK and application releases
- Migration from .NET 8 to .NET 9
- Crash monitoring and analytics using Dynatrace
- Production incident support
- New feature additions aligned with the roadmap

This ensures ongoing stability and modernization of the mobile platform.



Business Outcomes

The partnership enabled them to:

01

Launch a competitive mobile point of sale offering for under-served small merchants

02

Reduce dependence on hardware by enabling Tap to Pay on iPhone

03

Provide a dual strategy through both hardware EMV readers and device based contactless acceptance

04

Accelerate partner integrations through SDK distribution

05

Improve operational visibility through modern monitoring tools

ThoughtFocus delivered a robust and scalable mobile platform that allows the company to innovate confidently and expand its merchant base.

Conclusion

This engagement demonstrates ThoughtFocus's ability to deliver enterprise-ready mobile payment solutions that combine technical rigor with deep payments domain expertise. By developing native SDKs, delivering a cross-platform mobile application, and completing critical certification requirements, ThoughtFocus enabled the client to strengthen its competitive position and offer modern card-present payment acceptance to both merchants and ISV partners. The result is a future-ready platform designed to support continuous innovation and sustained business growth.

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