



CASE STUDY

Using React Native to Build  
Two Native Apps & Increase  
Paid B2B Subscriptions for Itemize

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*Offering an engaging, intuitive mobile experience to customers can have a serious impact on a brand's bottom line, especially when mobile application sales are an important source of revenue for a business. For Itemize, a payment data extraction company with an expense management business, whose groundbreaking application captures and categorizes 'Receipt Data in the Snap of a Photo,' the challenge was not only improving its iOS offering, but developing a native Android application for the very first time.*

Partnering with EPAM for its proven cross-platform mobile application development expertise, Itemize sought to transform its existing web-based Android and native iOS applications with quick time-to-market on a start-up budget. Itemize and EPAM agreed to use React Native as a solution to develop both applications with a shared codebase, and the result has been over 2,500 new customers on Android alone since launching in the fall of 2017.



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## SELECTING THE REACT NATIVE FRAMEWORK AS A CROSS-PLATFORM DEVELOPMENT SOLUTION

At the outset of the project in early 2017, Itemize was struggling with a hybrid application solution implemented by a former vendor, which included a web-based Android application that was not optimized for mobile and an iOS application that, while serviceable, had considerable design flaws and bugs. Itemize wanted to offer a better, bug-free customer experience through its mobile applications, but was unsure how given the cost constraints of fixing existing iOS bugs and developing an Android app from scratch. Itemize also wanted to reduce the forward-looking maintenance costs of maintaining two mobile apps and a web app.

EPAM suggested the React Native framework as a cross-platform development solution to save time and budget on the project. EPAM began by supporting the existing iOS app to identify key areas for improvement and then execute a working proof-of-concept to prove the viability and performance of applications developed in React Native. Seeing the potential and power of developing two different native applications – one Android, one iOS – with a shared codebase, Itemize agreed to move forward.

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## DEVELOPING THE NATIVE APPLICATIONS WITH A SINGLE CODEBASE

With React Native technology pinpointed as the quick and maintainable way to build both iOS and Android apps, EPAM organized and engaged its geographically distributed, cross-functional team. Throughout the process, the EPAM and Itemize teams utilized an iterative approach and collaborated to pin down UX requirements for new features and rebuild existing functionality for the reimagined apps:

- Ingestion of image files through a camera
- Use of Itemize API to access the machine learning core engine to read images and return structured data in 15 seconds
- Receipt storage and presentation screen
- Receipt detail and photo editing
- Expense categorization, coding and tagging
- Mileage management and reporting
- E-mail OAuth Integration
- Major accounting software integration
- User settings management
- User requests and chat support
- Facebook and Google single sign-on authorization
- Venmo integration to enable Pay-Me-Back feature

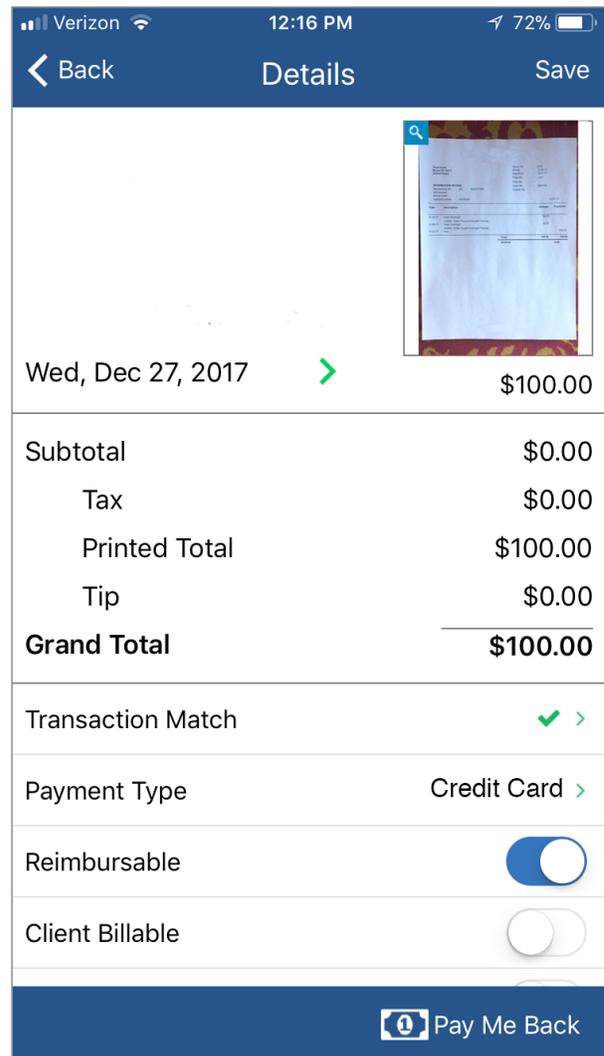
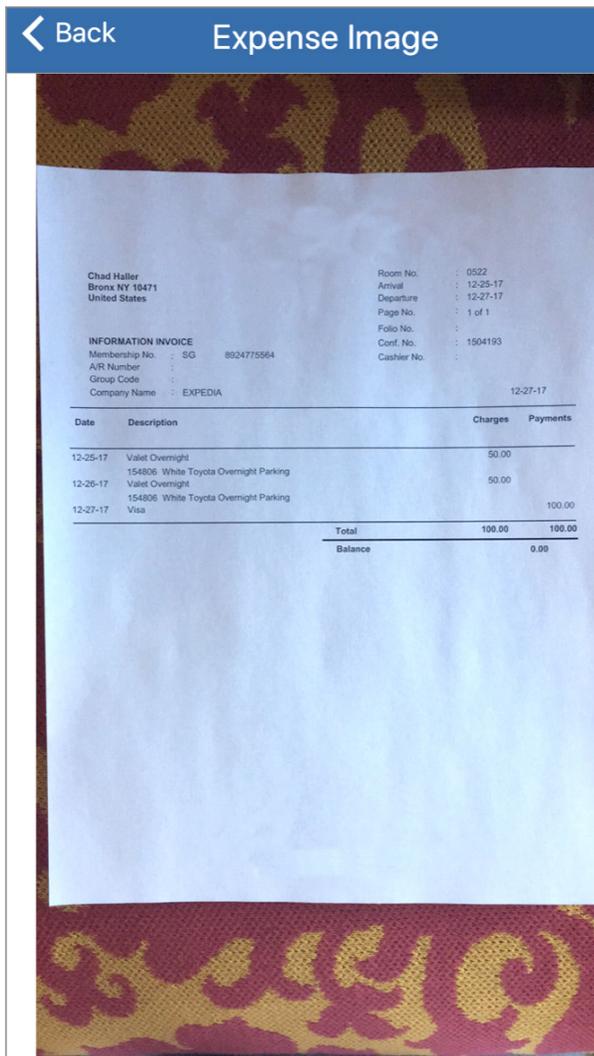
Underlying the above features, EPAM worked to truly customize the application by installing and adjusting an MIT-licensed React Native library to enable camera functionality. This library was then tailored to work with Star Micronics SDK to recognize QR codes and support all makes and models of user devices.

Furthermore, EPAM introduced a React Native implementation of a marketing automation service, which allows Itemize to keep track of revenue and gather statistics on end users about the most common actions performed and screens visited.

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### HOW IT WORKS: ITEMIZE IN ACTION

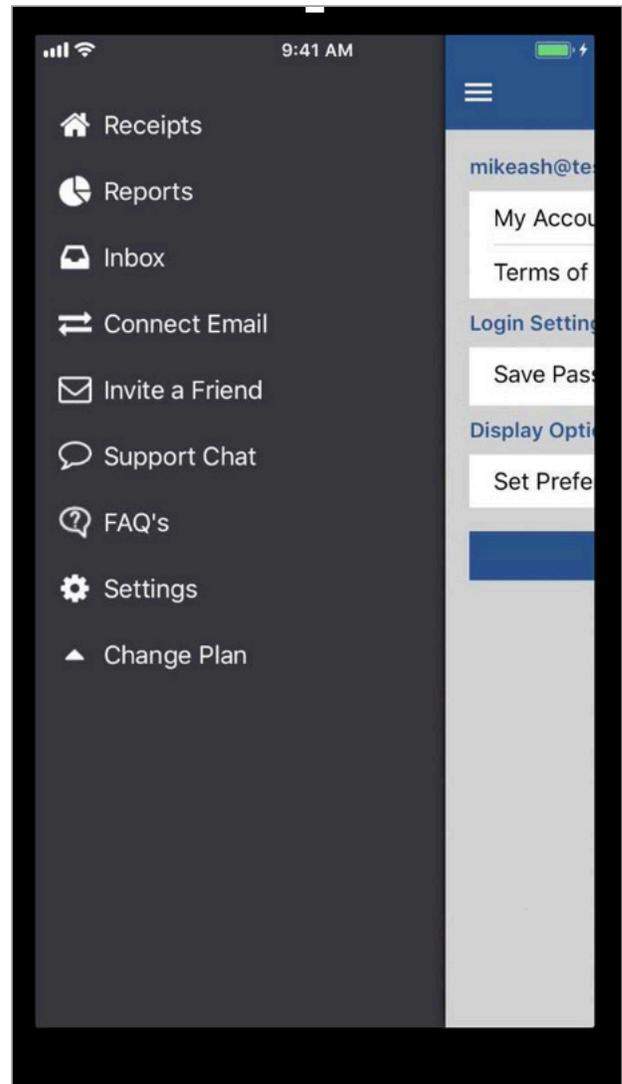
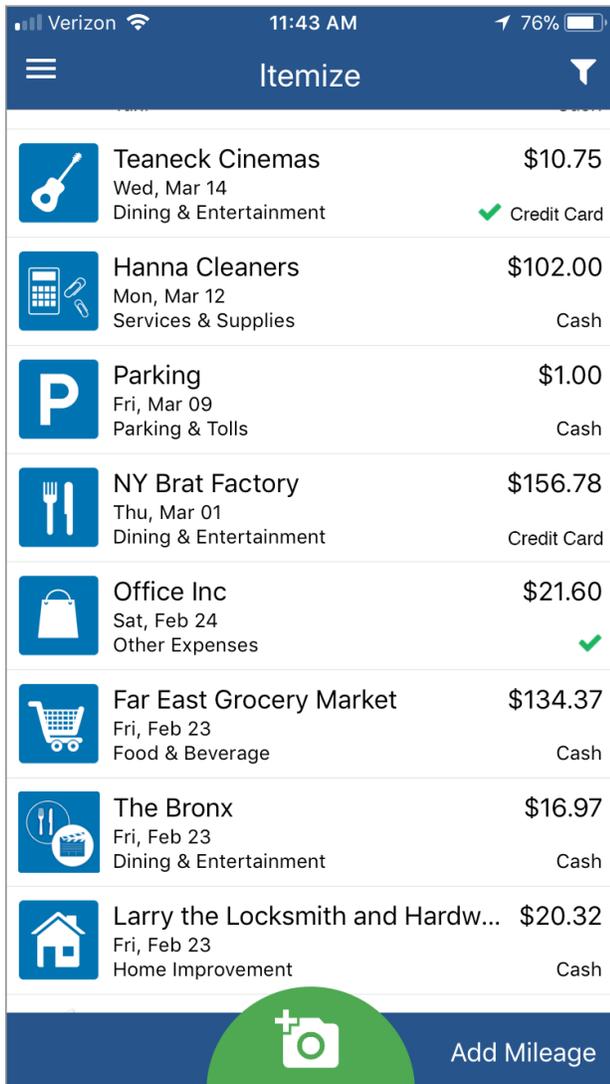


Itemize automatically captures data from receipts “in the snap of a photo.” Extracted data is then used for transaction matching, pay-me-back, reporting, expense management and integration to accounting software.

Capable of identifying any payment type, Itemize gives users an easy run down of the expenses they wish to bill for, or be reimbursed for; and it give them the ability to add mileage for reimbursement.

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With its simple-to-navigate menu and features, the Itemize app makes reporting expenses easier than ever.

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## INCREASING BRAND RECOGNITION & REVENUE WITH A NEW & IMPROVED CUSTOMER EXPERIENCE

In the first quarter since launching the transformed applications in the fall of 2017, Itemize increased its overall brand recognition, sales and revenue in the following ways:

- Gained over 2,500 new customers on the Android platform alone, which is expected to result in over 250 paying subscribers
- Earned a two-star increase up to 3.9 stars on the Itemize Google Play app listing
- Received a top-10 ranking from Gartner on its list of Expense Management solutions

Itemize can now easily maintain its mobile and web apps in house with a single developer while continuing to develop new features. Now, the Itemize Expense Management app is the basis for white label banking and payments applications, tailored to institutional needs.

### TECHNOLOGIES USED

- JavaScript, ES-6, JSX, React Native, React Native router flux, React Native camera, Star Micronics SDK, WebStorm;
- Swift 2.3, Xcode 8.2.1, CoreData (to support legacy code)
- Objective-C, Xcode 8.3, iOS Simulator, TestFlight, AppsFlyer Analytics

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*"Working with EPAM made this project possible. EPAM reached into their very talented pool of developers, testers, managers and UX experts to staff our project as needed and to fit our budget. What was helpful to me, was their ability to augment our strong technical team with resources that we could not find on our own. I also feel like working with EPAM enabled us to fly the plane and fix the engine at the same time – a difficult feat!"*

– Jessica Haller, Chief Strategy Officer and Project Sponsor, Itemize

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## ABOUT ITEMIZE

Itemize is disrupting the enterprise OCR and offshore data entry space with leading-edge tech. Itemize harnesses cloud technology and artificial intelligence to turn receipts and similar documents into useful intelligence for business financial systems through its API and expense management apps. Built in NYC.

## ABOUT EPAM'S MOBILE PRACTICE

EPAM's mobile practice helps clients create superb digital experiences. With 50+ solution architects and 500+ mobile developers, the mobile practice offers a full range of services, including strategy and consulting, architecture, UX and design, development, QA and automation, submission and deployment, as well as analysis and support.

### QUESTIONS?

Contact us at [Sales@EPAM.com](mailto:Sales@EPAM.com)  
or visit us at [EPAM.com](http://EPAM.com)

