

An abstract illustration on a purple background. A central smartphone is shown in a 3D perspective, tilted upwards. It has a pinkish-purple frame and a screen displaying a light purple and white abstract pattern. A large, blue, rounded square UI element with a white rectangular slot is floating above the screen. Several other smaller, light blue rounded squares are floating around the phone, some connected by dashed lines. Three green circles with white centers are also floating in the upper left area. The overall style is modern and tech-oriented.

# Mobile product success in finance & banking, 2022

How the mobile product and engineering  
teams at the world's best finance apps win



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# Introduction

By offering a **first-class user experience**, firm control over various aspects of money management, and extensive **security features**, modern fintech apps are setting a new standard for handling our personal finances. Thanks to a continued influx of new fintech challengers, **the number – and the quality – of competing apps continue to grow with time** and increasingly redefine our relationship with money.

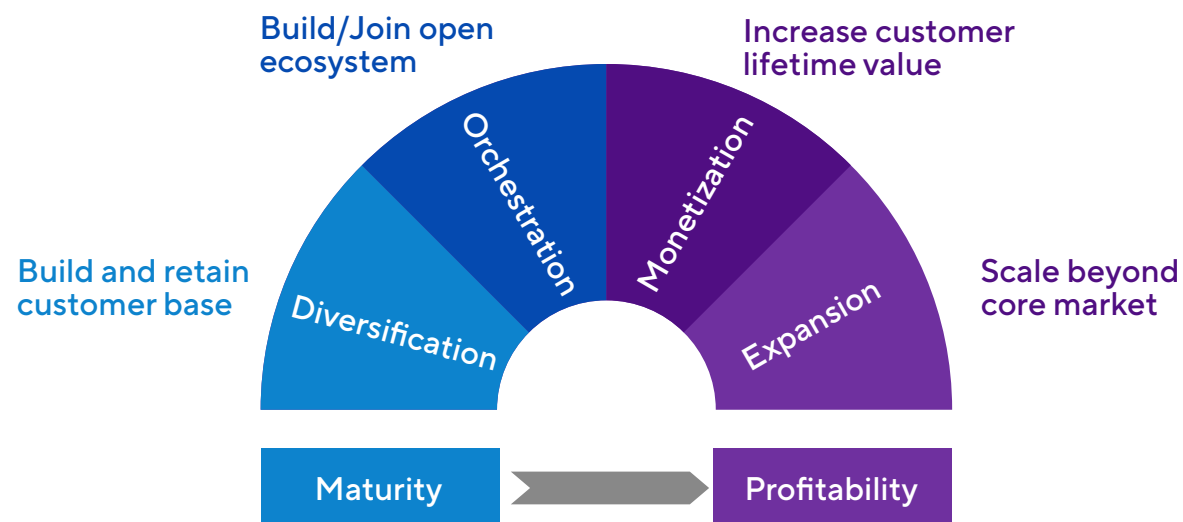
With the proliferation of sophisticated fintech apps, teams in traditional finance and banking will soon have no choice but **to rethink mobile development practices** and adopt new technologies.

In this report, we'll discuss the state of finance and banking apps in 2022 and present our key findings about **how and why fintech is disrupting the industry**. We'll dive into product learnings, engineering best practices, and how apps in this heavily regulated environment can balance security and innovation.

We also provide business-, product-, and technology leaders in finance and banking with **the key trends they need to consider when crafting strategies going forward** – such as partnering with innovators, launching digital-first products, and adopting **mobile-specific tools for better quality and user experience**.

## Successful fintechs follow a phased profitability journey

Disruptive fintech apps usually follow a similar trajectory: they enter the industry either by creating new demand or joining the open ecosystems of traditional banks. Their monetization strategy is built on providing future-forward, competitive services with a digital edge, thereby increasing customer lifetime value. As a result, they are able to scale beyond their core market and expand their user base – often exponentially.



Source: Capgemini Financial Services Analysis, 2021

## Finance vs. banking: industry outlook

Fintechs are rapidly gaining market share thanks to a mobile-first mindset

When analyzing the performance of finance apps in the App Store and Google Play, we found a strong correlation between the age and ratings of applications in the category: the more recently a finance app was initially launched — and the younger the company developing it — the higher ranking it achieved in app stores.

As of January 2022, **8 out of the 10 most downloaded finance apps in the US were developed by companies that were founded around or after 2010** — in the era of mobile's expansion. In the App Store in particular, companies that were founded after the emergence of mobile released new versions 40% more often and averaged a 4.8 out of 5 star rating or a full 20% higher than the average for the top 50 apps in the category.

There might be a number of underlying reasons for these findings: either younger companies have a better grip on customer expectations, or they rely less on outdated tools and infrastructure, which allows them to iterate and release faster.

“The payments part of the mobile process is a particularly expensive place to be slow. Outpacing competitors in that process is what's creating the winners in this space.”

Sujit Unni, Paysafe

## Digital transformation fuels hyper-growth and the gap is widening

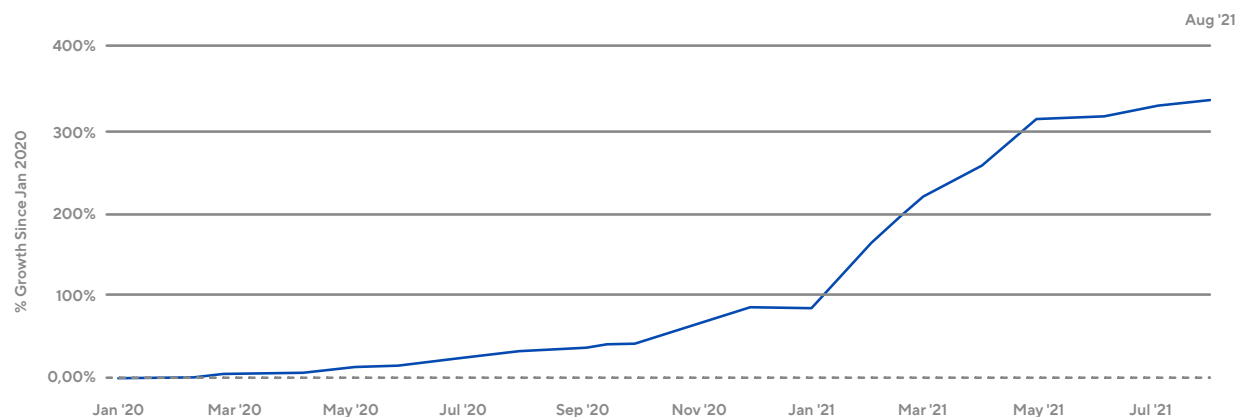
Digital transformation brings substantial benefits for the challengers of the finance and banking industry. Top fintech apps have surpassed traditional banking apps in user base growth, with breakout finance apps seeing the greatest yearly increase in downloads.

According to a report by Amplitude, the number of **daily active users of fintech apps has grown 337%** from January 2020 to October 2021.

For the coming years, analysts forecast further growth in the number of fintech apps and the range of services they offer, especially in mobile payments, which is projected to reach a revenue of 4.6 trillion USD.

### Growth of Fintech

Percentage growth in daily active users of fintech products



Source: Amplitude

## Incumbents that transition away from outdated methods and tooling likely to win going forward

Many banks are still lacking the agile infrastructure needed for rapid iteration. This becomes increasingly limiting as **customers demand applications and services that provide real-time access and capabilities.**

Looking into the top-performing finance apps, there appears to be **a noticeable difference in how traditional banks and fintechs release on mobile.** Those financial institutions **whose existence predates the mobile revolution** release **roughly half as many times** as those that were founded after the 2000s.

Sooner or later, traditional banks will realize that the outdated technology programs they use are not sustainable and will start to take after fintechs by adopting new tools.

“We’ve just scratched the surface on capabilities of mobile finance. Open banking has a long way to go in the US, and as we expand our digital footprint across IoT, seamless integration across channels will be pivotal.”

Linda Walton, Synchrony

Expert interview

## Dama Damjanovic, Principal Engineer at N26

***Which new or upcoming technology do you think will add the most value to mobile finance and banking and why?***

Biometric security. With the increase of fintech products and trust on the market, the amount of money and assets people hold in digital-first companies has increased, and with it, digital financial crime. It's a constant struggle between the criminals wanting to scam people and companies securing their products. More often than not, the increase in security comes at an expense of user experience and simplicity. I believe biometric technologies have the chance to bring the best of both worlds.

***How do you adapt agile methodologies in a way that they fit into the constraints and regulations of the finance and banking industry?***

There is a common misconception that regulations make development much slower and discourage innovation. Regulations in finance and banking are there to protect the users, and make sure the companies handling user's sensitive data and money are held to the highest of security standards. In a way, they are there to ensure companies are using the best of practices, in favour of the users. Agile methodologies do exactly the same: help bring practices that bring value to the users in the most efficient way possible. And in most cases, regulations go hand in hand with agile methodologies and good engineering practices. One of the most commonly known regulations is the four eyes principle. From a regulation standpoint, it's there to ensure no single bad actor can do damage. From an engineering standpoint, it's a way to share knowledge and increase quality of the code. Win - Win.

# N26





Expert interview

## Dama Damjanovic, Principal Engineer at N26

***What processes have you implemented to ensure that you maintain a rapid release frequency? Do you think there is an optimal frequency?***

We've made sure our main branch is always releasable using trunk based development, feature flags, and extensive automated testing. The pipelines we use to build, test and release the apps are all automated using Bitrise, and we run a full regression suite prior to each release. For frequency, I think one week is optimal, though it will depend on the scale of the company. In companies with a lot of engineers contributing, you want to release as often as possible to make the changes more incremental, give more opportunities to ship new features, and enable experimentation.

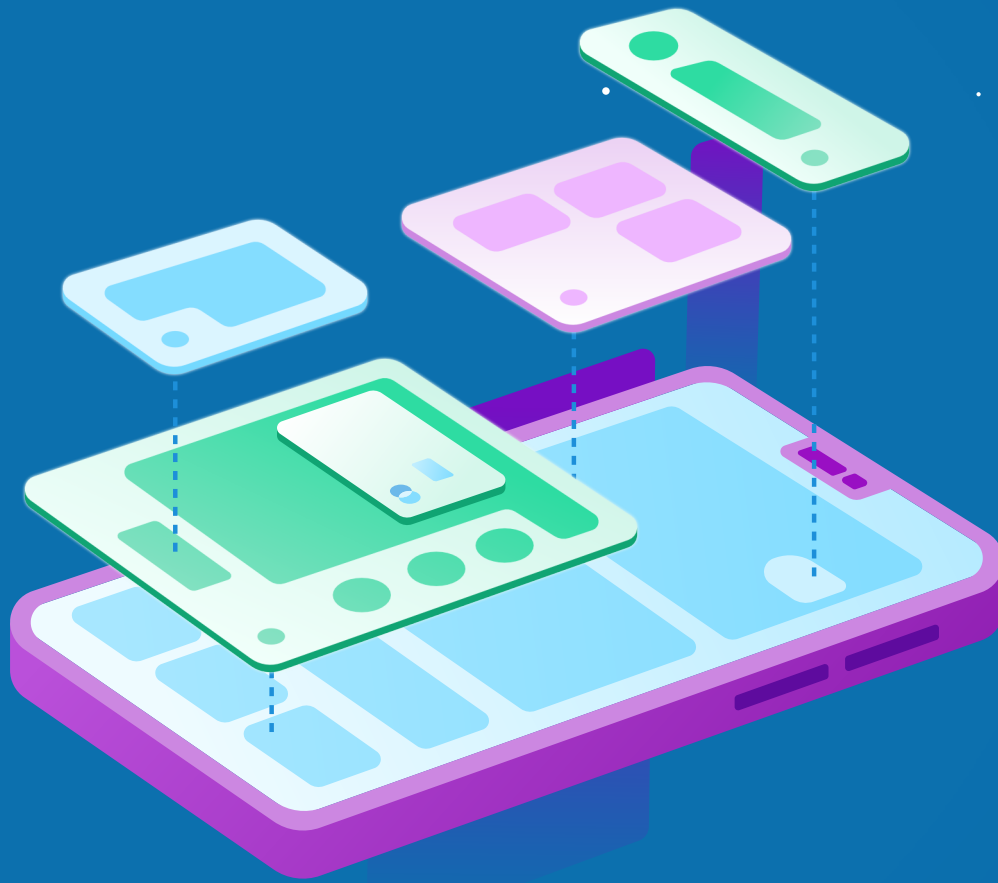
On the other hand, each app update requires a new download — and we need to be mindful of the potential "limited data" scenarios in which the users are downloading our app. A one-week release frequency fits well in both aspects. We integrate DevSecOps processes and have a team of Security Engineers making sure our apps are always secure.

***What does the future of mobile finance and banking look like?***

I think we're just getting started: the future is bright, with more financial products, more secure than its offline counterparts, and more interconnected than ever.

# N26





# Fintech, UX, and the perfect finance app

How tech-forward fintechs build engaging mobile experiences

## To build a successful fintech app, you need both sides of the coin: not only great app developers, but a deep understanding of finance as well.

Dovetail designs and develops the Afterpay mobile app on Bitrise since early 2017. The result of this partnership is one of the biggest tech success stories of the decade: their mobile application reached the No. 1 position in the App Store with a 4.9-star average within 48 hours after launch, making it the highest-rated app in Australia. Bitrise also helped them manage the increasing complexity of an app with an exponentially growing user base and launching it to three new markets around the world within only 16 months.

“When you’re building one of the fastest-growing fintech apps in the world, you cannot afford downtime or mistakes.”

Nick Frandsen, Co-founder and Managing Partner of Dovetail

This is an excerpt of a Bitrise customer case study. Read the full story about Dovetail’s experiences with using Bitrise for optimizing their mobile CI/CD pipeline.

[Read the full Story](#)

## Finance and banking customers are increasingly mobile, and increasingly mobile-first

As banking customers go increasingly digital and adopt intuitive, seamlessly integrated solutions that are easy to use, they no longer rely on visiting the nearest branch to access most of the services they need.

Due to their brick-and-mortar nature, legacy banks inherently deal with a slower operating speed, reduced flexibility, higher fees, and unnecessary paperwork, all of which are decisive attributes for efficiency and user experience when it comes to conducting personal finances.

To establish true differentiation from competitors, both fintechs and progressive incumbents need to tap into consumer insights and equip themselves with the right tools to deploy advanced solutions for their customers. **Optimizing release strategy and ensuring great user experience are the best ways to achieve these goals.**



## User experience is a main decision-making factor when choosing a finance app

One of the main reasons fintech app companies revolutionized the financial services sector was due to their strong focus on a customer-first approach.

A research paper on Global FinTech adoption by EY found that when choosing a finance and banking app, the **top decision-making factors** for customers are **attractive fees, ease of setting up an account, access to innovative products or services, and the quality of user experience.**

Keeping app users happy isn't just about customer satisfaction, however: a decrease in ratings usually results in an increase in user acquisition costs. Investing in the right developer tools considerably improves on your ability to acquire and retain users.

### Reasons for using Fintech challengers

Percentage of adopters that chose each answer as the primary reason for using a FinTech challenger



Source: Ernst and Young

## Balancing UX and security with biometric technologies

Innovative, digital-first finance apps aim to simplify the end-user experience, but they raise unique security concerns. The extra security steps needed to assuage these concerns often result in a longer, more complicated user experience – but sophisticated biometric tech may hold some of the answers.

"With the increase of fintech products and trust on the market, the amount of money and assets people hold in digital-first companies has increased, and with it – digital financial crime. It's a constant struggle between the criminals wanting to scam people and companies securing their products. More often than not, the increase in security comes at an expense of user experience and simplicity.

**I believe biometric technologies have the chance to bring the best of both worlds."** Dama Damjanovic, Principal Engineer at N26

## Ratings have a significant impact on user-acquisition and conversion

A benchmark report from app store optimization tool AppFollow revealed that the conversion rate of ads from impression to app install in the finance category ranges from 1.6% to 38.4%. This large difference can be attributed to the fact that users' decision-making processes are largely based on app store ratings – making app owners vulnerable to faulty releases and their consequences.

Conservatively, a **2-star drop in ratings results in a 50% lower conversion rate** – meaning that a \$250,000 user acquisition budget would need to double to \$500,000 to maintain the same growth.

Having an app that rates lower than the competition increases the risk of customer churn, especially when competing with mobile-first banks and service providers, who often put tremendous effort into creating quick and efficient new customer experiences.

The flipside is that a highly-rated, well-reviewed app can supplement your active user acquisition efforts, by adding a stream of churned users who move away from apps that have less favorable reviews.



## Do this

### ★★★★★ 5.0 | User Friendly

This Banking app has definitely helped me upgrade the way I am able to handle all of my daily financial responsibilities. I cannot believe this app has been here I would have opened this bank along time ago.

## Not that

### ★☆☆☆☆ 1.0 | Not Impressed

Won't let me log in at all. I type in my login information and hit login and nothing happens. All my bills and banking is done through the app. Will be switching banks if this doesn't get fixed ASAP.

## The challenger

- 6 releases in 2 months
- Releases regularly introduce functionality
- 88%+ of ratings are 5 star
- Current average rating 4.8 out of 5

## The incumbent

- 6 releases in 2 years
- 4 releases described as minor bug fixes
- 40%+ of ratings are 1 star
- Current average rating 2.9 out of 5



Expert interview

# Lina Walton,

## VP & Mobile Senior Software Development Engineering Manager at Synchrony

***Which new or upcoming technology do you think will add the most value to mobile finance and banking and why?***

Wider API integrations, since the digital acceleration accelerated by the pandemic requires digital footprint expansion.

***How do you adapt agile methodologies in a way that they fit into the constraints and regulations of the finance and banking industry?***

One really important thing is remembering to document everything that we do.

***What processes have you implemented to ensure that you maintain a rapid release frequency? Do you think there is an optimal frequency?***

Every app and team is going to be different in its optimal frequency. The key for optimizing that frequency is to automate testing and deployment and make smaller incremental changes.

***What does the future of mobile finance and banking look like?***

We've just scratched the surface on capabilities of mobile finance. Open banking has a long way to go in the US, and as we expand our digital footprint across IoT, seamless integration across channels will be pivotal.



# Learning from fintech's mobile dev teams

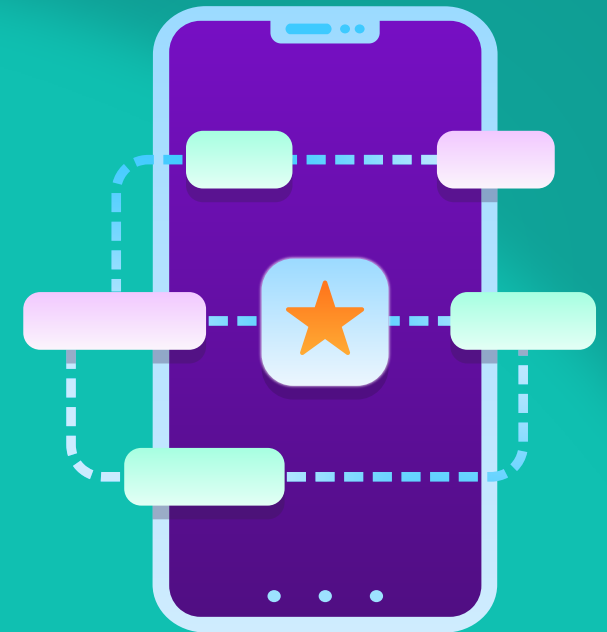
How Mobile DevOps allows mobile dev teams to deliver fast and with confidence, in regulated environments



## Mobile DevOps allows fintech disruptors to move fast and with confidence

Mobile is unrivalled in its potential to **create billion dollar companies in record time**, but is also famously **challenging to develop** for. With rapidly changing customer expectations and industry requirements, mobile teams need to iterate in an extremely fast pace.

Delivering this speed, while safeguarding the quality of applications is an ongoing challenge for development teams. Unfamiliarity with mobile's unique challenges can then lead to frustration in business and product teams, while developers struggle with **tooling that's outdated** and a **platform very unforgiving of mistakes**.



“The main goal of DevOps is to enable your team to execute fast in the long run, to keep your tech debt in check, while striking a nice balance between delivering features and moving quickly.”

John Sundell, former Lead iOS Developer at Spotify

The **specific environment in which finance and banking apps operate** introduces additional challenges. Organizations are often uncomfortable with the type of **cloud-based services** designed to assist mobile developers' work, while **strict checks and procedures** can prevent important releases from going out on time.

For many of the world's leading fintech businesses, **adopting Mobile DevOps** and **deploying the right tooling** address many of these issues. Often considered the lifeline of the DevOps process, CI/CD is able to automate and standardize recurring processes to **align** with the checks and procedures required by the business.

## With the right tooling, mobile teams in finance and banking deliver more value

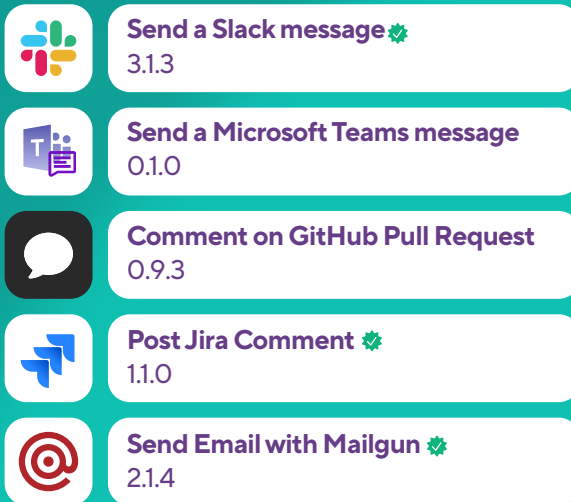
**Source control systems** like **Git** still form the backbone of development. Now, they are being **integrated with other tools** to improve traceability, increase speed, and reduce friction between processes and development stages.

If source control is the backbone, **CI/CD** is the **heart** of sophisticated mobile development teams. By connecting source control systems to a CI/CD tool, teams **eliminate** or **reduce** many **manual aspects of app development**.

A continuous integration and delivery tool can automate processes from **planning**, **dependency management**, to **integration** and **UI testing**, as well as **deployment** to testers or even directly to the app stores.

“We use CI/CD pipelines combined with automations, hooks, and scripts, and feature flags. The goal is to remove as much toil as possible so developers can focus on tasks that matter the most.”

Sudeep Sidhu, Lead Mobile Developer at Neo Financial



For years, 'Send a Slack message' has been Bitrise's most popular notification integration, closely followed by Microsoft Teams since 2020.

In addition to source control and CI/CD, tools that facilitate communication play an increasingly important role in mobile development.

**Real-time communication and collaboration** platforms like **Slack** or **Microsoft Teams** that were already popular before the COVID pandemic became indispensable in today's increasingly remote work culture. High-performing teams foster a culture of **transparent** and **direct communication**, which presents an important cultural shift in many organizations, especially those in **highly-regulated environments, like the finance and banking sector**.

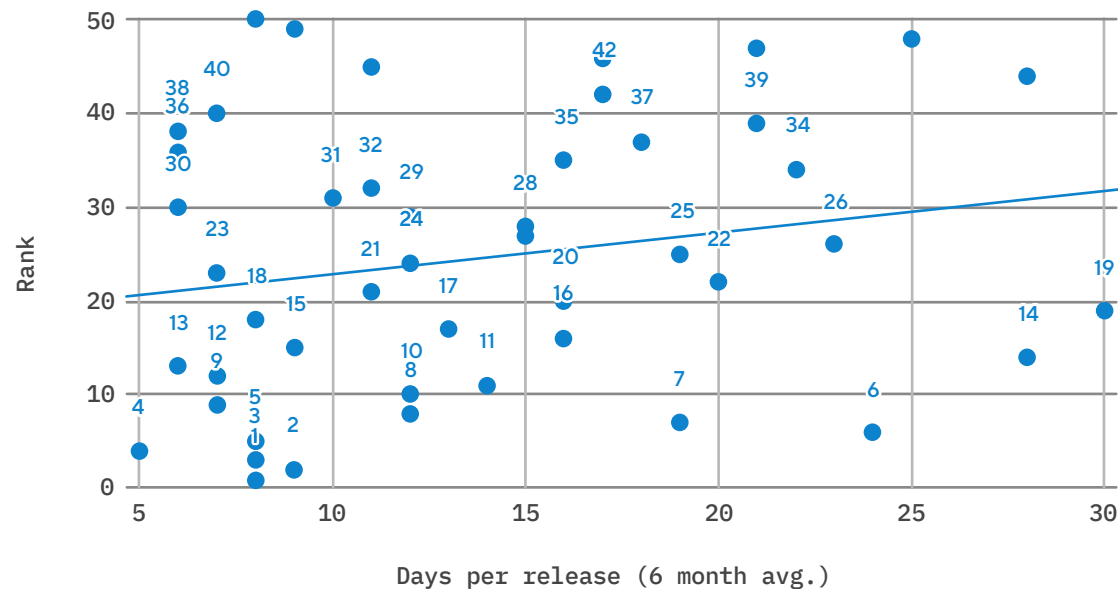
Connecting real-time communications to CI/CD tooling can further increase velocity and **reduce friction** in handovers.

# Optimizing your app release strategy provides a competitive edge on mobile

Our research on the performance of apps in the finance category found that frequent app releases correlated with higher app store rankings.

The average release frequency for the top 10 iOS finance apps in the US is just 11 days. And as the graph shows, the more slowly an app releases new updates, the lower it will rank.

iOS App Store rank vs release frequency



“We've adopted a two-week mobile release cycle and that has been the sweet spot for us. I don't think there's one optimal frequency that will work for everyone. Teams should work towards a cadence where they're able to release a meaningful set of changes without one problematic feature risking the entire release.”

Sudeep Sidhu, Lead Mobile  
Developer at Neo Financial

Depending on whether the goal is fixing bugs or releasing new features, **the right type of release strategy can turn around a negative app rating trend or build up a positive app rating trend.**

According to a research paper from Peking University, Towards release optimization for apps in Google Play, the frequency of new app releases has a causal impact on user feedback, and ultimately, the rating and success of the application. The research — conducted with almost 50 thousand apps — suggests that **developers should take app ranking, rating trend, and the purpose of the update into account before deciding on the update interval and pushing a new version to app stores.**

The study found that initially high-ranking apps had the potential to score even higher after subsequent updates, while ratings of already low-ranking apps often decreased further from too frequent updates.



## Cloud-based CI enables engineering teams behind finance and banking apps to build more securely

While it won't magically make it easier to lower fees, the benefits of cloud-based CI/CD are immediate and significant. Shifting the **responsibility of hardware maintenance** alone removes a **massive burden** on the organization, but many cloud vendors can also prove a **benefit to security-conscious teams**.

Most cloud-based CI/CD services will create virtual machines to facilitate a build. When that build is finished, the virtual machine is **discarded, erasing every file used and change made** during the build. The practice of continuously creating and destroying virtual machines on the same hardware ensures that data isn't just destroyed, but also overwritten, **reducing the risk of remanence to zero**.

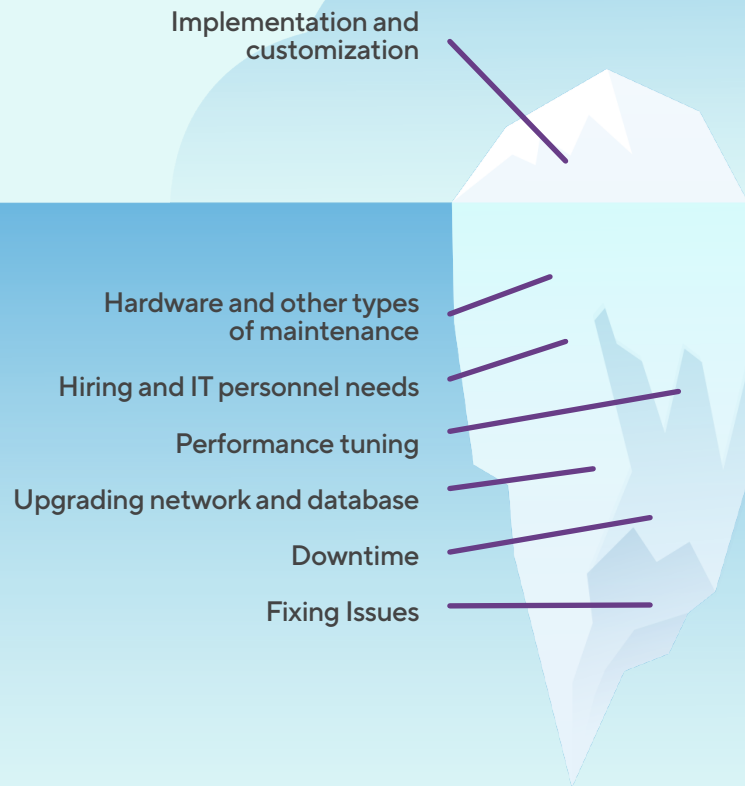
"Since they also had issues with running emulators for UI and screenshot tests, they started to look for a low-maintenance, cloud-based platform with on-demand scalability that would offer an all-in-one solution to these problems."

 **wise**

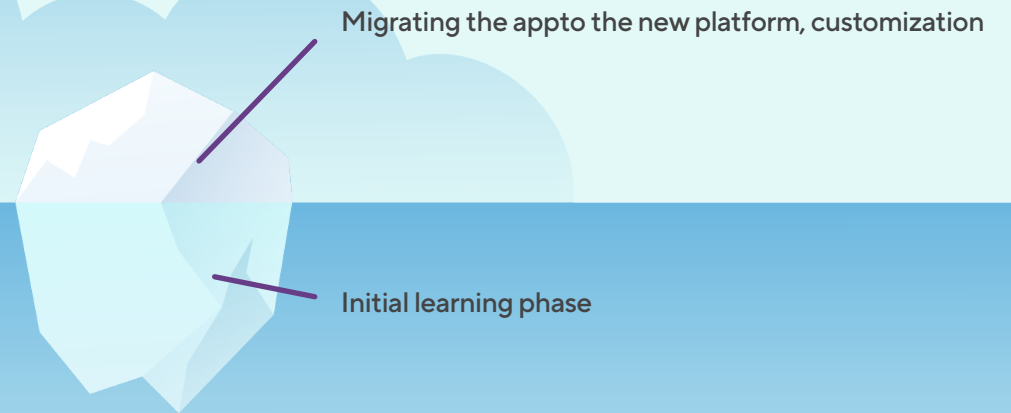
Discover how Wise benefited from switching to the cloud in our customer story

[Read the full Story](#)

## Self-hosted CI/CD



## Cloud-based CI/CD



Expert interview

## Sujit Unni, CTO at Paysafe

Speed is a function of many factors, and there are a number of processes that power the payments experience. We work with Bitrise to increase the speed of all of the mobile processes that power the user experiences leading up to and including payments, as well as the behind-the-scenes operational processes that influence our ability to release updates to the app stores more frequently and faster.

The payments part of the mobile process is a particularly expensive place to be slow. Out-pacing competitors in that process is what's creating the winners in this space. On the technology side, our mobile engineering teams use Bitrise to test all new code, reduce build times from hours to minutes, identify issues that might interfere with the user experience, and so on, before submitting releases to the app stores.

This is an excerpt of an exclusive interview with Sujit Unni, Chief Technology Officer at Paysafe. Check out the full story to learn more.

[Read the full Story](#)

## Paysafe:



Expert interview

## Sudeep Sidhu, Lead Mobile Developer at Neo Financial

***Which new or upcoming technology do you think will add the most value to mobile finance and banking and why?***

Open Banking: customers want insights into their spending and being able to look at data across various banks, lenders, financial products. Having this ability lets them make better choices when it comes to their finances.

***How do you adapt agile methodologies in a way that they fit into the constraints and regulations of the finance and banking industry?***

We focus heavily on iterations, bringing in stakeholders as early as possible. Solving problems instead of implementing solutions pushes us to deliver smaller scope changes that we're aligned on as a team. And pushing smaller scope changes makes for a fast feedback loop and de-risks releases. We use CI/CD pipelines combined with automations, hooks, and scripts, and feature flags. The goal is to remove as much toil as possible so developers can focus on tasks that matter the most.

***What processes have you implemented to ensure that you maintain a rapid release frequency? Do you think there is an optimal frequency?***

We've adopted a two-week mobile release cycle and that has been the sweet spot for us. I don't think there's one optimal frequency that will work for everyone but teams should work towards a cadence where you're able to release meaningful set of changes to the users but not so many changes that one problematic feature risks the entire release.

neo





Expert interview

## Sudeep Sidhu, Lead Mobile Developer at Neo Financial

*In finance and banking, data security is crucial. Do you have DevSecOps practices in place to ensure that user data is always protected, and that you comply with the highest security standards?*

We have regular DevSecOps trainings. Beyond that we use automation, and code and image analyses to ensure we're not using any vulnerable software. Developers and product teams regularly engage our in-house Security and Compliance experts to make sure we're not offside while handling user input, data, authentication. As a financial institution we have to take part in regular audits and occasionally will bring in an external team to help test the security, integrity, and availability of all our systems.

*What does the future of mobile finance and banking look like?*

Visibility and transparency when it comes to personal finance will be key. Banking technology for the most part has not kept up with the needs of the modern user when it comes to managing personal finances. Education will also be important. Financial products are becoming more complex and the people selling them to you are also the ones educating you about them, which poses a conflict of interest. Clear and concise language without the use of industry jargon not only helps convey the value of your product but also ensures you're not going to put undue financial burden on your users.

neo



## Case studies

### Wise (formerly Transferwise)



The company that helps you save on transaction fees – simply by using an app

[Read now](#)

### Dojo by Paymentsense



Meet Dojo's app – empowering businesses with real-time transactions insights, accessible anywhere

[Read now](#)

### Afterpay by Dovetail



Dovetail: the company that builds Australia's fastest-growing fintech app

[Read now](#)



Bitrise is a **cloud-based, secure, and scalable CI/CD solution, built for mobile**. Our mission is to help companies create game-changing apps by enabling their development teams to deliver consistent quality fast, while maintaining control and awareness of the full mobile development lifecycle.

Today, many of the world's most sophisticated mobile teams rely on Bitrise to **streamline their build-, test-, and deployment processes, and outperform their competition as a result**. By providing hundreds of integrations for **native and cross-platform development**, we automate repetitive manual tasks, ensuring consistent results and freeing up engineering resources better used to **create real business value**. We help our customers iterate faster, achieve higher app ratings, and increase their competitiveness on a crowded mobile marketplace. With customers ranging from centuries-old financial institutions, to some of the youngest, most innovative new fintechs around, applications built, tested, and deployed through Bitrise have made their way to **billions of end users around the world**.



Learn more about how  
you can start releasing  
with confidence at

[www.bitrise.io](https://www.bitrise.io)

Mobile engineers behind some of the most popular apps rely on Bitrise to streamline their build, test, and deployment processes. By eliminating manual tasks like maintenance, fixing errors, and performance upgrades, we help customers iterate faster, release with confidence, and build apps that are used and loved by millions of users around the world.

### Trusted by the world's most sophisticated mobile teams

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**Virgin**  
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**Paysafe:**