

The State of App Testing 2020

Commerce & Retail

| Fall 2020

This report uncovers key insights and benchmarks for Commerce & Retail app engineering and QA teams. Testlio conducted this analysis, leveraging both industry data as well as anonymized client data, in order to define important benchmarks for web and mobile app producers. Some key questions we asked were:

- **App Ratings.** What are average ratings of top Commerce & Retail apps across both iOS and Android?
- **Release Cadence.** How often are top apps updated? Is there a correlation between release cadence and ratings?
- **Device Coverage.** How many devices do top Commerce & Retail apps test? How many testers do they utilize and where are testers located?

By reading this report, you'll learn about app development and testing processes used by the leading Commerce & Retail brands in the world, as well as how to measure against them.

Methodology

To offer a unique source of industry insight, we leveraged six years of anonymized test records from Testlio's Commerce & Retail clients. These span a diversity of global enterprises and emerging growth companies with a variety of B2C and B2B web and mobile applications. Several of them rank in the top 15 iOS apps in the Commerce & Retail industry. Application types include eCommerce, brick-and-mortar retail, residential real estate, quick-service restaurants, and online marketplaces.

To broaden our data set, we've also incorporated data from AppAnnie, benchmarking averages from their top 30 retail apps.

Top Trends in Commerce & Retail App Development

Due to the COVID-19 pandemic, consumer behaviors are changing at a break-neck pace: we are skipping the gym for live-stream yoga classes; teaching our kids online at home, dating virtually, and video chatting with doctors. For retail and commerce companies, enhancing or maintaining digital experiences is paramount. A real-time tracking of consumer attitudes around COVID-19, conducted by [Deloitte](#), shows that 54% of people are not comfortable going into a store for fear of COVID-19 as of early August, 2020. Moreover, a recent CNBC report claims that curbside pickup at retail stores has surged 208% during the coronavirus pandemic.

Across industries, organizations are accelerating their digital initiatives to meet the demand for safety, experience, and convenience. For Commerce & Retail organizations, several key trends stand out:

- **Quickly Improving Digital Experiences**

Retail companies are enhancing the digital shopping experience to meet dramatic growth in online shopping. For example:

- › **Etsy** recently updated their iOS app with augmented reality features to help consumers shopping for wall art, in response to consumers' desire for more home decor.
- › Big-box retailers like **Target**, **Home Depot**, and **Walmart** have enhanced the end-to-end app-driven experiences to make it easier to shop, order, and pick up purchased items curbside without entering the store.

- › Some brick and mortar retailers are experimenting with reservation-like appointments, leveraging other apps like **OpenTable** and **Resy**.
- › Restaurants too, are quickly adapting. **SONIC's** Drive-In app, currently lets you order ahead and offers extra discounts (½ price drinks) when ordering via the app.

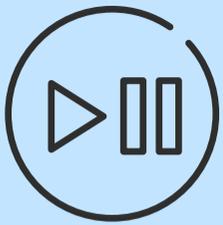
- **Faster Releases**

In 2017, the average free app was updated every 18 days or 1.66 / month. In 2020, the top 30 retail apps update 2.54 / month¹. Many development teams deploy continuously, shipping new releases daily or multiple times per day. An oft-cited statistic is that Amazon's engineers deploy code every 11.7 seconds.

- **QA Teams Shift to Remote Work**

Work-from-home realities have shifted how software development teams communicate and collaborate. With COVID-19, in-house QA teams may have lost access to a device lab, forcing a reliance on other forms of testing. From our vantage point, organizations are increasingly leveraging remote testing and distributed QA approaches. Approaches such as networked testing and distributed testing, which enable QA teams to tap into a global network of testers, are enabling this shift.

¹ Average of Top 30 Commerce and Retail apps ranked in AppAnnie



How are teams keeping up with the accelerating pace of software development? In our recent webinar, Testlio's CEO, Steve Semelsberger, and Engagement Managers dive into how companies are using Networked Testing approaches to improve quality, release faster and reduce costs. Topics covered include how to match agile QA to sprints and how to reduce testing costs by tapping into flexible, on-demand testers to meet surges in testing demand.

→ [Watch Webinar: Networked Testing: Quality Assurance for a Distributed World](#)

Insights for App Developers

Faster Releases are Correlated with Higher App Store Ratings

Research by [Apptentive](#) shows that 50% of mobile users won't consider an app with a 3-star rating. With 2-stars, 85% of users will skip it. The impact of ratings on business metrics is stark: Higher ratings lead to greater discoverability, downloads, and revenue. Ratings and reviews also channel customer feedback, allowing product teams to refine the product. How can dev teams influence ratings?

Testlio's research shows that release cadence -- the frequency in which apps are updated -- is correlated with higher app store ratings. For iOS, apps with 3 or more updates per month average 7% higher rating on the app store².

iOS Commerce Apps See Higher Ratings vs Android

Another key finding was that iOS apps have higher ratings than Android apps on average in the Commerce & Retail space. Having tested thousands of apps on both platforms, Testlio's QA Engagement Managers have a few hypotheses to explain why:

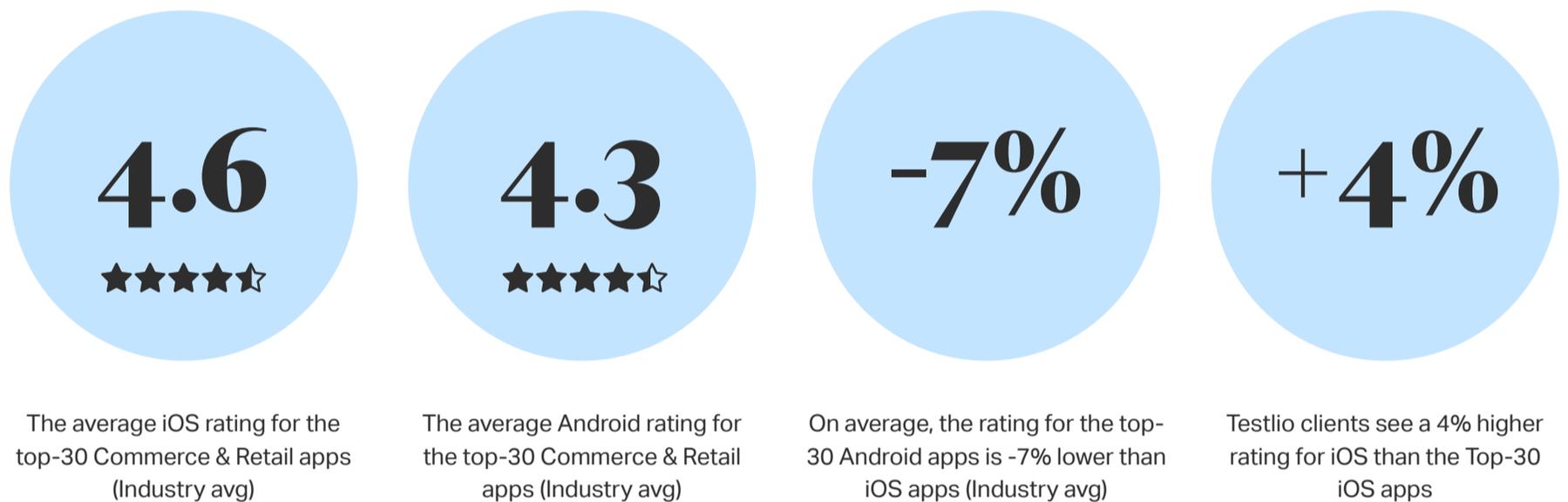
1. The diversity of Android devices make complete coverage a challenge for many app producers. In 2015, the London start-up OpenSignal reported its app had been downloaded on over 24,000 unique Android devices. In comparison, there is typically a finite number of iOS device/OS combinations, making testing faster and more straightforward.
2. Another factor is that the iOS app acceptance and review criteria are stricter. New versions with issues are more likely to be rejected. This higher standard leads to fewer overall releases, but ensures bugs are more likely to be identified and fixed before release. Fewer bugs equate to better user experiences and higher ratings.
3. A final hypothesis is apps on the App Store benefit from the Apple's overall reliability and loyalty. It could be that iOS apps are seen as an extension of the brand and benefit from Apple's 'halo effect.'

² Analysis of top 30 commerce and retail apps on iOS and Android, using AppAnnie to inform release cadences.

Key Benchmarks for Commerce & Retail Apps

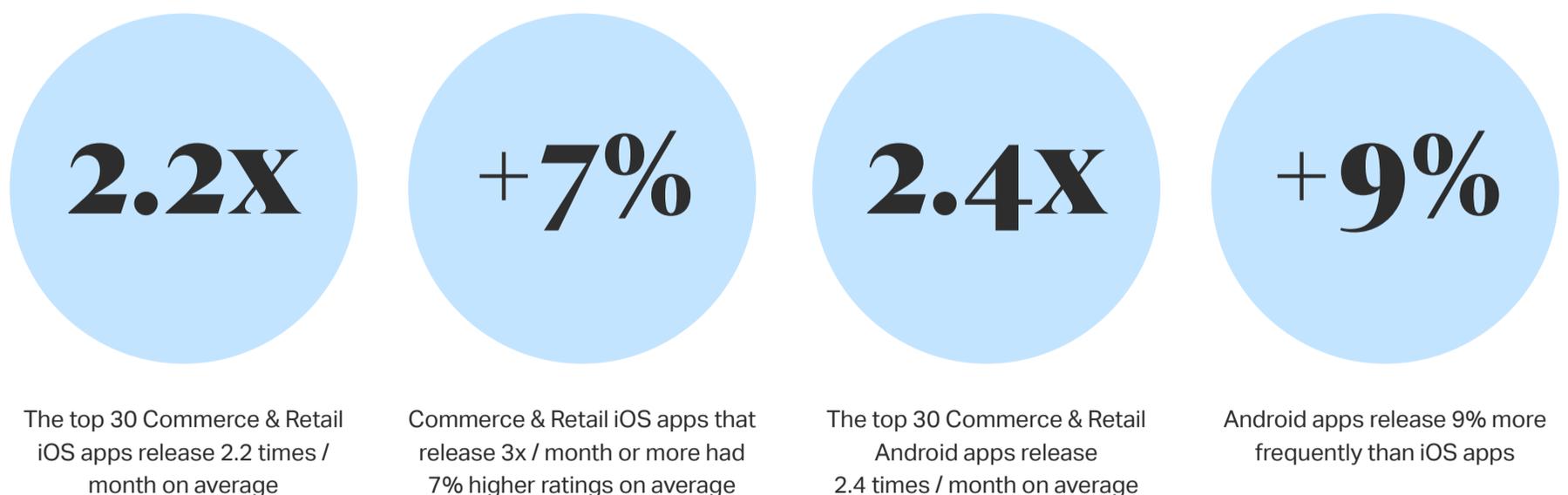
Ratings

App Ratings Benchmarks



Release Cadence

App Update Frequency Benchmarks



Device Coverage

We live in a world of increasingly diverse and personalized digital experiences. Users access mobile and web apps through devices that offer thousands of combinations of screen sizes and operating systems, leaving QA managers to decide how many and which devices to prioritize. With employees working from home, in-house device labs are inaccessible to teams accustomed to testing on real-world devices before a release.

Cross-platform testing — testing across multiple devices and operating systems — is essential to ensure a quality customer experience across numerous mobile environments. This type of

coverage is also necessary due to frequent updates to the Google Play and Apple App stores.

Based on a comprehensive analysis of client release data and device-OS configuration tests, Testlio found leading mobile app companies in most industry segments follow a best practice of testing 24 or more unique device-OS combinations before each update. In the Commerce & Retail category, a Testlio client that tests 41 unique device/OS combinations per update ties with three other shopping apps for the highest rating (4.9) within the top-30 shopping apps.

Number of Devices Benchmark

24
devices

Average number of devices tested per run among Testlio top-15 iOS shopping app clients

41
devices

Average devices tested per run for a top-8 iOS shopping app (Testlio client)

Number of Testers

Distributed testing addresses the need for speed and quality within agile software development. Looking at the number of testers utilized by Testlio's Commerce & Retail clients, we find that companies use a general range of 10-20 testers per major run, with an average tester team size

of 24. With a distributed testing approach, the quantity of experienced testers adjusts to match surges in testing demand and the magnitude of a release. Testers flex in and out of assignments, helping add extra coverage during key product releases, live events, and more.

Number of Manual Testers Benchmark

24
testers

Average tester team size (Testlio Commerce & Retail clients)

10-20
testers

General range of testers per major run (Testlio Commerce & Retail clients)

4
times

This eCommerce client releases 4 times per month on average

Industry Use Case: Ranked in the top-15 iOS shopping apps, a global eCommerce client paired two distributed testers for each of their 10 target countries. They were expanding their marketplace and needed to test the functionality and in-app payment experience for both shop owners and consumers. Each country had unique currencies, symbols, terms, and other country-specific nuances to test for accuracy and user experience.

Their engineering team in New York uploaded builds to the distributed team of on-demand testers before heading home. The network of remote personnel in other time zones worked in short bursts to test as either a shop owner or buyer persona. Testing occurred overnight in the US -- while the engineers slept -- so that issue reports arrived first thing the next morning. The New York-based development team could fix the bugs the next day, and release with confidence.

→ [Read Full Case Study](#)

Tester Location

Turning agile software development into a 24/7 endeavor is possible with distributed testers who work in multiple time-zones. They also work in concert with automated testing by filling in

the gaps missed by automation scripts. Testlio's Commerce & Retail clients utilize on-demand testers in 16 countries, on average, with most testing in 12-21 countries.

Number of Manual Testers

16
countries

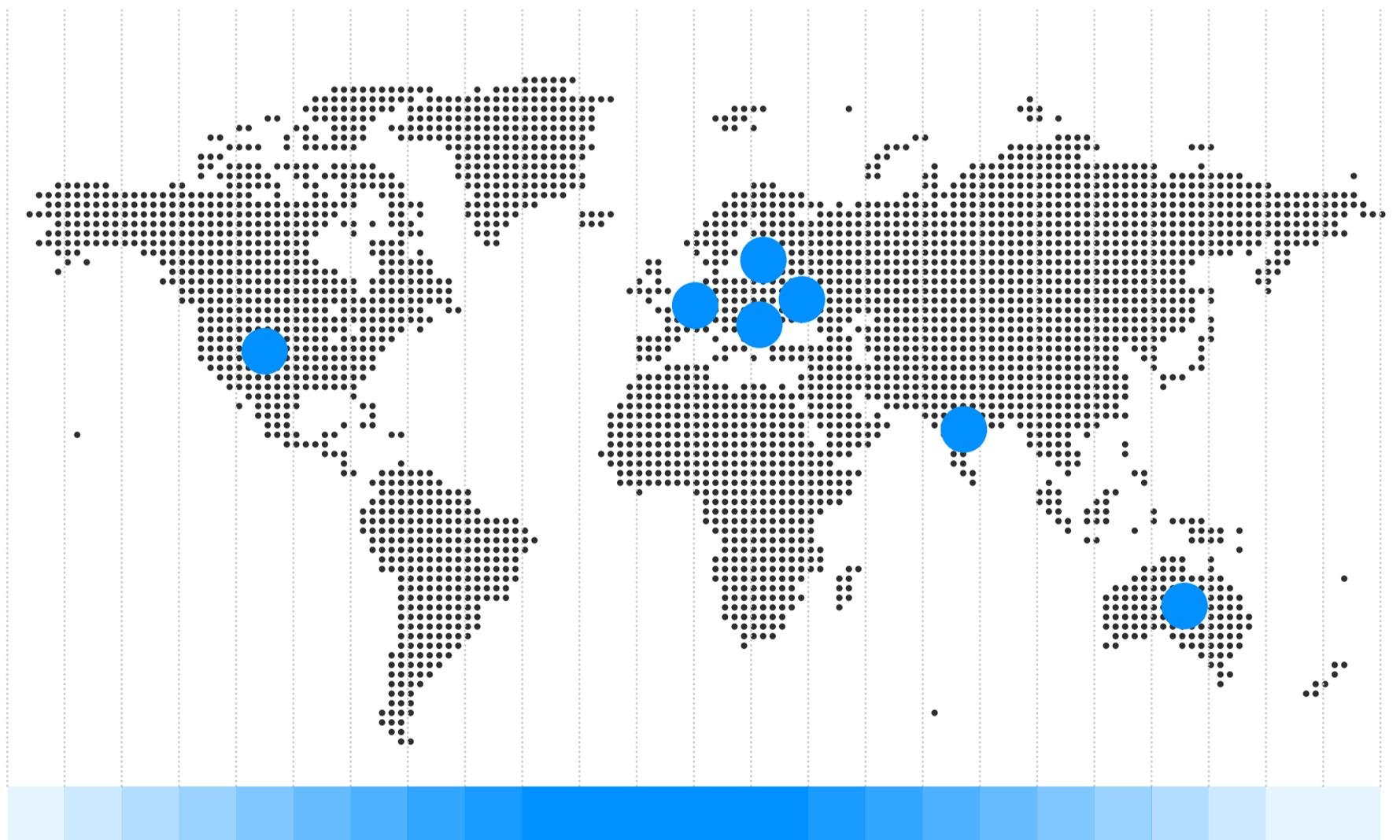
Average number of testing countries for Testlio Commerce & Retail clients



Multiple time zones enable testing to happen overnight, over weekends or in between development work, facilitating fast, agile software development

Top 7 testing locations for Testlio Commerce & Retail clients:

US | Ukraine | Estonia | India | Romania | Germany | Australia



Summary

The COVID-19 pandemic has affected consumer behaviors worldwide. As time passes, many of today's consumer practices will become tomorrow's long-term habits. Similarly, a rapidly evolving remote-only workstyle alters how we build and test software. Organizations have had to rethink their approach to coordination, iterative work, meetings, and cross-team coordination. Moreover, to maintain sprint cycles and release

efficiencies in a remote environment, teams must adapt to new forms of communication, additional flexibility, and an openness to partnerships.

Digital transformation is at the forefront of our changing shopping behaviors and Commerce & Retail app engineering and QA teams are challenged to meet the needs of today's consumer with world-class, end-to-end app-driven experiences.

[Learn How Testlio Helps Commerce & Retail Companies](#)



About Testlio and Networked Testing

Testlio is the leader in managed app testing. With robust client services, a global network of expert testers, and a comprehensive software platform, we provide a suite of burstable, flexible, and on-demand testing solutions: end-to-end, usability, localization, functional, payments, and more.

Testlio clients include Amazon, American Express, CBS, Hotels.com, Microsoft, the NBA, and Sonic. Collectively, our clients power over 1.6 billion users. When apps must perform brilliantly, Testlio helps ensure world-class customer experiences. In any location. On any device. In any language.

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