



## 5 Ways to Get a Dream App

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## Introduction

With nearly [2.5 billion people](#) set to own a smartphone by 2017, the already flourishing app market is exploding as new hardware technologies open up what is possible to achieve on a mobile device. Where a number of developers have already experienced the power of the App Store, thousands more are tweaking their apps to mimic the success of Flappy Bird, [Candy Crush Saga](#), [Angry Birds](#) and [Shazam](#).

Essentially, apps need to be unique to sell. Some of the most successful apps are not necessarily new apps, doing something different, but are doing something BETTER. According to a survey by [Flurry](#), the average user has 65 apps installed on his or her phone, but only uses an average of 15 apps per week. Moreover, according to a recent [‘App Attention Span’](#) study, 65% of participants confirmed that their expectations of app performance were increasing over time – with almost half stating they are less tolerant of problems with apps or websites than they used to be.

The bottom line is today’s organizations need to deliver a reliable and high-quality mobile experience to protect increasingly important mobile device revenue streams and customer interactions – no matter how demanding. The ‘app attention’ study revealed that smartphone and tablet owners will reward businesses that get it right: 30% will spend more money with an organization that has a good mobile app and 29% would pay more for a product or service if an organization’s app performed better than its competitors.

With that in mind, what can you do to make sure that your app is used time and time again? Is there a recipe to get that dream app?

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## 5 Ways to Get a Dream App

### 1. Extreme App Performance

In an [article](#) about why mobile apps are here to stay, CEO of Front Row Solutions, Etien D’Hollander said, “the best apps are the fastest apps. If you can get in and out of the app with the information you need in seconds, chances are you’ll have a successful app.” While content is important, people are impatient. They want precise, specific information and they want it now. Delays only encourage a user to close the app, and not return.

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#### Should Your Industry Care?

**eGaming:** Your app works, but with the unpredictability of how sports events will end, odds are forever changing and your app cannot keep up. Bettors end up spending more time looking at their device (phone, tablet, etc.) than watching the game; they get frustrated and give up.



**Retail Banking:** Speed is critical in the financial industry. Consider financial trading apps. How will a broker consult with a client if the figures are wrong? Does your employee have the information they need, and in real-time? What about real-time consumer budgeting apps like [Mint.com](#)? If the app cannot aggregate data, in real-time, from other sources, it’s going to get a bad review.

75% of mobile shoppers take action after receiving location-based messages.



**Healthcare:** In the UK, the NHS is calling for an increase in IP-enabled devices to improve efficiency<sup>1</sup> and increase patient care. Here, the issue won't be lost money, but people's lives at stake if healthcare apps cannot work fast enough



**Retail:** [75% of mobile shoppers](#) take action after receiving location-based messages. Do you know what your customers are doing with your application? Can you take advantage of this new way of interacting and market to them? Is your app able to respond **immediately**? If you know what your customer is doing, you can target them more appropriately based on how they are interacting with your app. Timeliness and relevance of data is vital to your success.



**Travel:** Is your app REAL real-time? Take the [BA app](#), for example. Customers are making bookings on the app, but the app can't keep up. The flights are visible on the web, but not on the app. Where does this leave your customers – frustrated, annoyed and not afraid to share it – just take a look at [flyertalk.com](#). Maybe you have an app like BA, or maybe you're thinking about one. If your app doesn't have the capability to support two way communication in real-time, what revenue are you missing out on now and in the future?



**Media and Broadcast:** Examining the viewing habits of 6.7 million Internet users, people couldn't wait more than [two seconds for a video to load](#). Research [Ramesh Sitaraman](#), a computer science professor at UMass Amherst said that "After [two seconds] they started abandoning. After five seconds, the abandonment rate is 25 percent. When you get to 10 seconds, half are gone." These results offer a glimpse into the future. As Internet speeds increase, people will be even less willing to wait. So for broadcasters, how will you gain revenue from second screen apps if the TV and mobile device are not in sync?

### What Do You Need to Do?

You need to deliver fast, real-time access to the information your customers want and that requires extreme data management.

**Extreme data management.** You need to deliver fast, real-time access to the information your customers want and that requires extreme data management.

- Model data in an intuitive, hierarchical structure based on topics
- Define what's delivered, when and where at a granular level with advanced publish/ subscribe model
- Gain data insights—who is connected, what are they looking at and where are they?
- Send deltas only; not data that hasn't changed
- Automatically remove out-of-date and stale messages

Manage your data so you won't slow down the app or worse, cause it to crash.

<sup>1</sup>Part of [Nicholson Challenge](#) to find £20 billion in efficiency savings by 2015

## 2. Apps for the Extreme Masses

Telegram, a free and secure messaging app, added close to 5 million people to its service one day after WhatsApp went down for several hours.

According to [adadapted.com](http://adadapted.com), the average iOS developer has five apps on iTunes, approximately 40,000 downloads per app. Android developers also average five apps, with approximately 60,000 downloads apiece. Build an app with these figures in mind, and remember that if your app is more successful and goes viral, you could suddenly have hundreds of thousands of users hitting it simultaneously. For example, [Telegram](https://www.telegram.com), a free and secure messaging app, added close to 5 million people to its service one day after WhatsApp went down for several hours! An app not built with scale in mind can have a huge impact on a business, from negative impact on your brand reputation to loss of customers. Organizations must have the toolset to develop web and mobile applications that can scale quickly to meet large numbers of concurrent users. Most organizations tend to focus on how the cloud can help, rather than looking at improving scale at the application level through data.

### Should Your Industry Care?

-  **eGaming:** It's the FIFA World Cup Final and suddenly the match takes a turn... it looks like Argentina will actually beat Germany. Bettors are hitting your app; you've gone from 1,000 users to 100,000 and you can't handle this number of connections. Your app crashes and bettors are left angry and frustrated.
-  **Retail Banking:** You've deployed your app, it's up and running and suddenly there is an event that is driving usage – you have issues with your credit card security and consumers want to monitor transactions in real-time. Of course you can fire up servers in the cloud to support demand, but what about the bandwidth capacity and the load balancing? This won't solve the problem of intelligently getting the right data to the right person in real-time.
-  **Healthcare:** Healthcare organizations need to work with vendors of devices and software, insurers and other healthcare professionals to ensure accurate patient information is delivered at speed, over potentially unreliable networks. This is vitally important. Take medical devices that gather a lot of data – time of day, administration of treatment activity, body temperature, and body vitals such as heart rate. This information needs to be carefully considered and distributed based on when that specific patient is at risk. The key to achieving this is the ability to intelligently understand data, send only what needs to be reviewed and to do so at speed if a patient is at risk.
-  **Retail:** Let's say, for example, that your store has an app that offers in-store discount vouchers and promotional codes to shoppers. It's a busy Saturday afternoon (or worse, the pre-Christmas mad rush) and suddenly your app is hit with hundreds of thousands of users simultaneously all wanting the voucher you are offering. Your app can't handle this number of connections, the voucher won't load and customers are faced with the spinning wheel. Customers are left frustrated. Your app's inability to scale has annoyed your customers - you've lost an opportunity to create loyalty.



**Transport:** Train and bus companies need to cope with huge numbers of customers connecting with their app to check live departure and arrival times (especially at the end of the working day), as well as which platform or bus stop they need. Without the ability to scale quickly to meet this surge in concurrent users, the risk is the app will crash or perform so poorly that customers will become frustrated and delete the app. You've lost an opportunity to upsell and cross sell via your app.



**Media and Broadcast:** What happens if your app goes viral? A TV programme becomes hugely successful and suddenly on a Saturday night, your app goes from 1,000 users to 1 million<sup>2</sup>? According to [mobilenewscwp.com](http://mobilenewscwp.com), during peak-time TV hours (6:30-10:30pm), 40% of UK tweets are about TV shows. In the US, hit shows like Scandal promote second screen engagement with hashtags like #SaveOlivia. Today the conversation is the event: the high of the show is what happens simultaneously on another screen. Everybody is there, and everyone wants to be connected as the show happens. Can you handle this type of scale? And can you do it without adding expensive infrastructure?

You need to have a technology that can help you scale your existing infrastructure by scaling linearly with incredibly low latency.

### What Do You Need to Do?

**Extreme scale.** You need the ability to rapidly scale if users suddenly increase, to make sure you can offer up-to-date, relevant data. You need to have a technology that can help you scale your existing infrastructure by scaling linearly with incredibly low latency.

Make sure your app is developed in a way so that it can handle a flash crowd, because if you don't, if your app goes viral and you cannot cope, you've lost business.

### 3. Network Problems? Get Extreme about Data

As end users are increasingly making mobile devices their primary connection point, and as home broadband and mobile network technology have improved (both in performance and price), expectations on usability, capability and performance of apps has correspondingly increased. However, the Internet has several issues, especially relating to consistency and capability. With network pressures and constraints, users can experience slow load times or dropped connections, varying greatly by geographic location. Major metropolitan hubs typically have great performance, but suffer from saturation. More rural areas are struggling to catch up, often still supporting 3G at best. However, end users expect to receive the same slick and responsive experience using an app when they're out on the road connected over a 3G network as they do when they're using their laptop at home and at work. Given these constraints, developers have been forced to become more intelligent about the quantity of data that is sent, resulting in a focus on data quality. Put another way, developers are now struggling to provide the best "bang for your buck" data, making app development slower and more tedious. Using technology that manages this intelligent data distribution saves countless development hours and cycles, bringing those performing applications much more quickly to market, with lower development costs.

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<sup>2</sup>A very likely event considering X Factor, for example, has seen an average of 9.1 million viewers this series and had 1 million downloads for its app last series.

## Should Your Industry Care?



**eGaming:** Network pressures are particularly relevant for eGaming companies, especially when it comes to in-play betting. Users are constantly struggling with network issues when they are sitting in a stadium with thousands of others all trying to use their betting apps. These delays aren't restricted to stadiums though, as any major event can lead to more traffic, meaning more delays and waiting. Loading icons or even app crashes due to poor service is frustrating to users and will thwart revenue opportunities for betting companies.



**Retail Banking:** According to a report by the [Independent Community Bankers of America](#), millennials represent the greatest lifetime value of any banking customer and 74 percent of millennials believe mobile banking to be very important. What does this mean? More and more consumers are out and about using their smartphones to bank (on their schedule!) and if the network is poor, their experience will suffer, they will get frustrated and look for an alternative bank with better services. Considering the growing importance of these young consumers to the banking industry, it's vital your app can deal with the unpredictability of network connections.



**Healthcare:** In the modern world of health, queues at the GP have become long and unwieldy. Often, users are going to the Internet to get more rapid answers to questions. Add in the growing consumption of wearables, measuring everything from steps taken to heart rate and blood pressure and the amount of data that is purely medical is growing in leaps and bounds. Medical devices typically are lower power and less performance than other mobile devices, necessitating great amounts of efficiency in data distribution. Without these efficiencies, user experience will be damped with shorter battery life-cycles as well as delays to seeing real-time data.



**Retail:** According to [MDG Advertising](#), a whopping 72% of consumers say they will respond to calls-to-action in marketing messages they receive within sight of a retailer. With only 23% of retail marketers using some type of geo-targeted data in their mobile marketing, there is a huge opportunity to give customers what they want when they want it. However, this information is useless if retailers can't offer deals to consumers because of network issues or unreliable location data. Providing real-time, accurate geo-location data and having the ability to respond real-time is key for targeted advertising. Retailers must catch users before they have passed the point of optimal messaging, not after they have passed.



**Transport:** Consider live travel updates. These updates (or event-driven data) require real-time information to the thousands of concurrent users hitting an app. Give end users the ability to use the app, regardless of network constraints, or failure to do so will result in a poor service for users and will drive customers to competitor apps that can deal with network connectivity issues. Travel hubs imply a large number of people connecting and sharing the same bandwidth. The ability to manage the added latency that goes with these networks is key to ensuring that travel updates are provided in a timely manner. After all, it would not be in an airline's best interest to update a user that a flight is ready to depart ten minutes after it's gone!

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**Media and Broadcast:** Failure to deal with the challenges of the network means delivery can become a quality of service nightmare, especially when today’s user intensive social, mobile, media and business applications command unprecedented data volumes. That’s before we consider spikes and peaks in demand during popular viewing and second screen experiences – any failure in service responsiveness risks losing revenue, brand reputation and all those users. Users won’t want to interact with what they saw 30 or even 10 seconds ago, they want to interact with what they are viewing, now.

### What Do You Need to Do?

**Extreme quality of service.** When developing your app you must keep in mind that Internet connections can be unreliable and disconnection and reconnection can occur without warning. Internet connection speeds can vary between different clients and devices and different Internet-connected devices vary hugely in performance, form factor and technology speed. What’s required is a way to efficiently distribute data to employees, machines and customers through web and mobile applications without affecting your organization’s application performance. The aim of the game is to minimize the volume of data you need to serve your customers and lessen the strain on the network, all while ensuring you’re able to respond efficiently to volatility in demand. Sending the data that matters (typically only the data that has changed) becomes critical to a successful user experience. That means addressing the challenges of the network – bandwidth and network availability – head on. Ensure you develop your app with:

- Live data model cached at the edge of the Internet
- Continuous monitoring—and adjustment—to Internet roadblocks: your “air traffic controller”
- Continuous monitoring—and adjustment—of every connection (i.e. device)
- Instant reconnection when connectivity is lost

## 4. Support All Platforms and Devices

Are you able to support the numerous devices, brands and smartphone apps entering the market every day? Developers are constantly trying to create more innovative apps across many app stores and devices. But to do this, you need developer resource and that can get expensive, fast impacting your profits. It might not be necessary today to support customers across all platforms, but it will be tomorrow if your app goes viral.

“Multi-channel customers are inclined to spend more, and if we get this right, it’ll mean higher yields, higher retention.... We’re starting to use technology to drive multichannel”.  
James Henderson, CEO of William Hill



### Should Your Industry Care?

**eGaming:** New CEO of William Hill, James Henderson, [discussed](#) the main goal of his company – to have a “one customer proposition” where consumers can enjoy the same experience via any product or outlet. He said, “multi-channel customers are inclined to spend more, and if we get this right, it’ll mean higher yields, higher retention.... We’re starting to use technology to drive multichannel”. You are building or improving an app for bettors. What device do you develop for? And on what platform? Or you’ve already got an app but you’ve developed it for a particular platform and one device. Now you’re restricted to who can use your app, limiting your success.

-  **Retail Banking:** Apps focusing on one or two platforms/devices, rather than supporting all devices are missing a trick. [‘Banking on the go’](#) is becoming the norm and consumers want to be able to bank on their tablet on the train to work, or grab their smartphone at lunch to deposit a check or check up on their bank balance at home on their laptop. Your customers want to see their bank details in multiple places every day and the app shouldn’t restrict them.
-  **Healthcare:** The number of healthcare devices is on the rise. Patients and families are using smartphones, but hospitals and healthcare providers are using a multitude of other devices. Sensor costs are dropping and other low cost products, like [smartphone adapters for detecting eye disease](#) are on the rise, which is resulting in an explosion of devices. How flexible is your app? Can you handle any way that users want to monitor health?
-  **Retail:** Today a customer might open an email on his or her desktop at work, tomorrow on a smartphone and later that night on a tablet. Can that customer have the same experience across all devices? Is your app flexible enough to deliver data to whatever platform is in use regardless of how new or old it is in the market?
-  **Transport:** Platforms and devices are not limited to just smartphones and operating systems, but also bespoke devices, for example that an airline crew, train conductor or baggage handler uses. You now need to consider smart watches even. According to the [Evening Standard](#), Londoners can now book a cab on their watch! How flexible is your app at working on a multitude of ‘things’. People are getting connected from a vast amount of devices – you have to make sure your app works for all.
-  **Media and Broadcast:** It’s critical that users are given the same experience, no matter the device. A user watching a particular program and ‘second-screening’ should be able to easily jump back and forth between different versions of the same apps on different devices, without feeling like they have missed out.

### What Do You Need to Do?

**Extreme support for all devices.** Your business needs to ensure that your app is open to all platforms. To avoid expensive development projects per app, your developers should have an environment that enables them to write once and deploy anywhere, whether it’s for the browser, a hybrid mobile application or native applications for iOS, Android or Windows phones or tablets. Make sure that integrated with your development platform is the technology to cope with scale, performance and data efficiency to solve the other challenges.

## 5. Extreme Innovation and Differentiation

Great app design is key, but data is the make-or-break. Data comes from dozens, sometimes hundreds of systems and can change at dizzying intervals. It needs to be useful and needs to be as close to instant as possible. Give consumers an easy-to-navigate app that delivers a suite of key functionalities and mobile services through an intuitive, engaging user interface that delivers the right data.

Great app design is key, but data is the make-or-break.

## Should Your Industry Care?



**eGaming:** More and more eGaming companies have been buying ‘complete packages’ from software suppliers rather than building their own platforms. However, some are starting to realize that this is hugely expensive, involves costly upfront licensing models and ongoing revenue share. Many competing vendors are using the same platform - essentially white labelling the application - which hinders innovation and differentiation. And because some have a monopoly on the market, how can you differentiate as a company? Smart eGaming organizations are opting to build their own platforms because this model is not sustainable. With many people on the same platform, customers see the same features and user experience so obtaining customer loyalty becomes harder. As a result of the monopoly, eGaming organizations are held hostage when wanting new features because the whole market is reliant on innovation from one main vendor. Ideally, use a different model – build your own platform so you can innovate and differentiate and get the tools you need to get the right data to your platform.



**Retail Banking:** Retail banking organizations or divisions of a business need to transform the customer experience because of the ‘mobile mind shift’ - the expectation that any desired information or service is available on any appropriate device in context at your moment of need. Consumers expect simplicity and context. This all equals convenience for the end user. When you think about banking customers, the simpler an app, the easier it is to use and in the right context will quickly translate into better engagement and loyalty to help stay ahead of competitors.



**Healthcare:** Know your audience. Your patients will range in all age groups so the simpler the better. Success will be in terms of quality of service and ease of use, and data quality.



**Retail:** Success in retail is all about customer service. Consumers are increasingly using their mobile devices to shop, so it is the responsibility of businesses to get it right and offer a seamless experience to shoppers. Businesses need to think about their mobile app as the virtual equivalent of the physical store. You need to delight your customers by offering a high quality user experience and an app that complements your store; the look and feel of the app needs to be part of the brand. You want your customers to be ambassadors of your store – and your app should be part of this strategy.



**Transport:** Similarly to healthcare, the important point here is know your strategy and understand your audience. Develop an app that is easy to use and delivers essential information as painlessly as possible.



**Media and Broadcast:** As the sophistication of mobile and web applications become smarter, multi-screening or second-screening is one area where broadcasters and companies as a whole need an aggressive and profitable strategy. Apps used for second screen can work for many kinds of content, including sport, news and reality programming – but users are only going to use it if it’s ‘ground-breaking.’ What do we mean by this? Delivering a mobile app that users actually want to use, time and time again. You need to ensure that viewers are involved in a rich application experience, an app that enhances the viewing, because user loyalty will soon become a major factor in repeat earnings.

Consumers are increasingly using their mobile devices to shop, so it is the responsibility of businesses to get it right and offer a seamless experience to shoppers.

You need the ability to develop apps that are different and innovative, have the right look and feel, navigation and engaging interface and the right data.

## What Do You Need to Do?

**Extreme innovation and differentiation.** You need the ability to develop apps that are different and innovative, have the right look and feel, navigation and engaging interface and the right data. Your development team shouldn’t use templates that dictate the look and feel of the user interface and the flow of the user experience. Instead, the development environment should be built on top of open, standards-based technology such as Eclipse and Apache Cordova so it’s entirely flexible, allowing the developer freedom to design for a high-quality user experience.

Push Technology delivers the Internet data fabric needed for systems and apps to exchange information and data while dealing with all the unknowns of the inherently unreliable Internet.

### Push Past Boundaries

Developing apps is no easy task, and developing them to offer extreme data management, extreme quality of service and extreme speed and scale is not easy. Consumers and employees complain most about the speed of an app and the information available when using that app.

The Internet is a world of unknowns – what is the speed of the connection, reliability, available bandwidth, what’s the device, operating system, browser or app version? Moving data across this to get a dream app requires a solution that removes this burden from you, so you can stay innovative.

Push Technology delivers the Internet data fabric needed for systems and apps to exchange information and data while dealing with all the unknowns of the inherently unreliable Internet. The Push Data Network globally delivers data at scale and speed for apps critical to revenue growth, customer engagement, and business operations. It gives your data intensive apps a performance edge and is architected and deployed in the way that works for your business.

<p><b>Diffusion™</b></p>	<p><b>{Reappt}™</b></p>
<p>Internet Messaging with the power to stream data at extreme speed and scale.</p>	<p>The only enterprise-grade Internet Messaging available in the cloud.</p>

### About Push Technology

We make the Internet work for our mobile-obsessed, everything-connected world. Leading brands like 888 Holdings, DAB Bank, IBM, and William Hill leverage our technology to power applications critical to revenue growth, customer engagement, and business operations. Learn how to deliver apps at scale and speed at [www.pushtechnology.com](http://www.pushtechnology.com)