Millennials and mobility: how businesses can tap into the app generation

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A reality check on app use by millennials

There's no denying the relevance of mobile apps to today's population. Smartphone, tablet, and phablet adoption around the world continues to pick up steam – last year alone 1.2 billion smartphones were sold, a 23 percent rise compared to the year before[1]. In parallel, an explosion in the development of apps is empowering people to make the most of these devices.

The age group that is arguably most plugged into the era of connected devices is the so-called millennial generation. Recent research suggests that 85 percent of people aged 18 to 34 own a smartphone[2], and the effect on businesses globally has been dramatic in a relatively short period of time. For example, recent research from PayPal reveals that the mobile commerce market is now growing three times as quickly as the traditional e-commerce market, driven largely by millennials' preference for using smartphones over traditional computers[3]. At the same time, the adoption of larger screen phablets, such as the iPhone 6 and Samsung Galaxy Note, among this generation also continues to rise.

While this trend is well documented, Oracle Mobile's latest report builds on these findings and explores how and why millennials today use apps across their connected devices. For this research we polled young people between the ages of 18 to 34 working at global organizations in Europe, the Middle East and Africa (EMEA), Asia Pacific nations (APAC) and North America. The findings reveal some compelling realities for businesses looking to better engage with millennials through their mobile devices.

To begin, while tablet use may indeed be on the rise, smartphones remain millennials' platform of choice when it comes to app usage, due largely to considerations around convenience as well as the introduction of larger form devices into the market. That said, this leaves the market for tablet apps more open for companies to develop a compelling proposition and to build a strong presence in the market.

Next, this report explores the fine line between delivering app-based services that improve the overall user experience and those that are too intrusive or pushy, so to speak. Millennials are happy to receive support in the form of value-added communications, but are turned off by wholly unsolicited communications in the form of push-notifications that aren't relevant to their individual needs.

Tellingly, the research also demonstrates that millennials equate the experience they get via a mobile or tablet app with the quality of the brand behind it. The design, functionality, performance, and security of apps today have become the new weapons in the battle to attract and retain millennial customers, and businesses that do not arm themselves appropriately have little chance of coming out on top.

Finally, findings from the report point to a noted discrepancy in how heavily young people in APAC use mobile and tablet apps, especially when compared to millennials in EMEA and North America. A healthy appetite for apps for both personal and professional use in APAC points to a real opportunity for businesses in the region to engage millennials, both in their personal lives and in the workplace, although high expectations around quality and service will demand a very compelling value proposition. That said, customers in APAC are merely early adopters when it comes to value-added apps, with EMEA and North America soon to follow-suit. Continued advances in handset design and network capabilities in these regions will help drive demand for high performance apps among Western customers as well.

Recent research suggests that 85 percent of people aged 18 to 34 own a smartphone, and the effect on businesses globally has been dramatic in a relatively short period of time

[1] *GFK 2015*
[2] *http://www.nielsen.com/us/en/insights/news/2014/mobile-millenials-over-85-percent-of-generation-y-owns-smartphones.html*
[3] *http://www.paymentscardsandmobile.com/mobile-commerce-growing-three-times-faster-than-e-commerce/*

Millennials are even using apps for a wide range of services that until recently many companies did not even have a mobile offering for

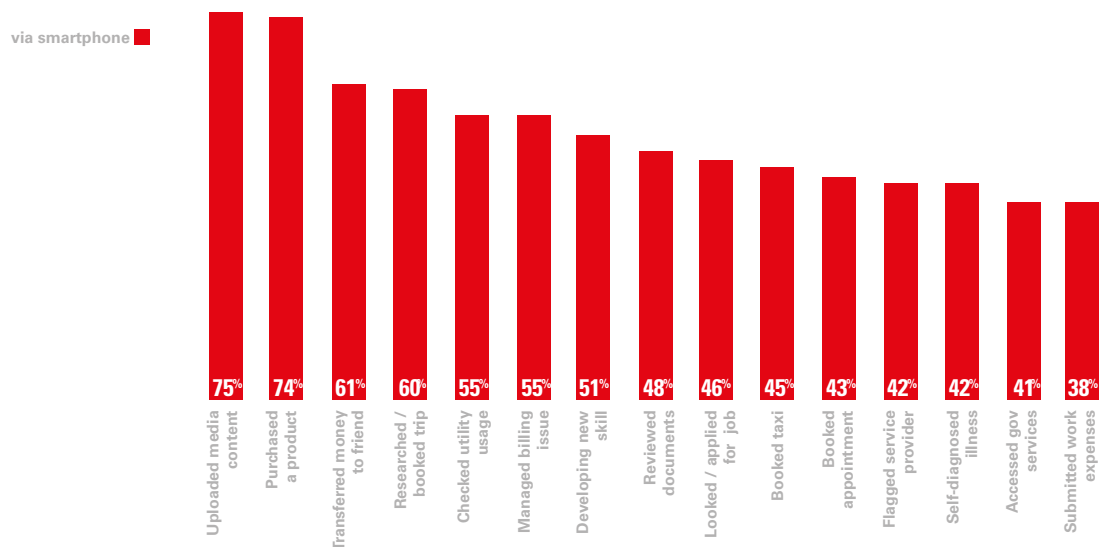## Millennials still favor mobile phones for app use, for now

While the growing popularity of all forms of connected devices has seen more businesses offer applications suited to smartphones and tablets alike, it appears the smartphone remains the device of choice when it comes to app use among millennials for virtually all the tasks they were asked about.

A quick glance at the results in Table 1.1 reveals that millennials are even using apps for a wide range of services that until recently many companies did not even have a mobile offering for, from transferring money to monitoring home energy use. Across both smartphones and tablets, app use is relatively high with 75 percent of respondents saying they have uploaded media content from a mobile device in the past two months, and 61 percent saying they have transferred money to a friend using a smartphone or tablet app.

That said, a close look at Table 1.2 reveals a telling split between what percentage of millennials completed these tasks via smartphones versus tablets. In some cases, the smartphone app form of a service is roughly twice as popular as its tablet counterpart. When it comes to uploading media content, for example, 61 percent of millennials have done so using a smartphone app, while only 35 percent have done this via a tablet. In the case of transferring money to a friend, the split is ever more pronounced, with 48 percent favoring a smartphone app over a tablet-based offering.

TABLE 1.1   TASKS COMPLETED VIA SMARTPHONE/TABLET APP*

via smartphone ■

Task	%
Uploaded media content	75%
Purchased a product	74%
Transferred money to friend	61%
Researched / booked trip	60%
Checked utility usage	55%
Managed billing issue	55%
Developing new skill	51%
Reviewed documents	48%
Looked / applied for job	46%
Booked taxi	45%
Booked appointment	43%
Flagged service provider	42%
Self-diagnosed illness	42%
Accessed gov services	41%
Submitted work expenses	38%

*Within the past two months

Clearly, smartphones remain the dominant connected device among millennials when it comes to app use. Admittedly, they are more convenient to carry around than tablets, and for some individuals tablets may only serve as a "second" connected device. To add to this, many tablets cannot work online without a WIFI connection, which limits their functionality on the move. On the other hand, with tablet ownership still high and phablet ownership on the rise, and with the screen size of these devices allowing for simpler, more convenient app interactions, the time has come for businesses to develop apps that tap into these factors.
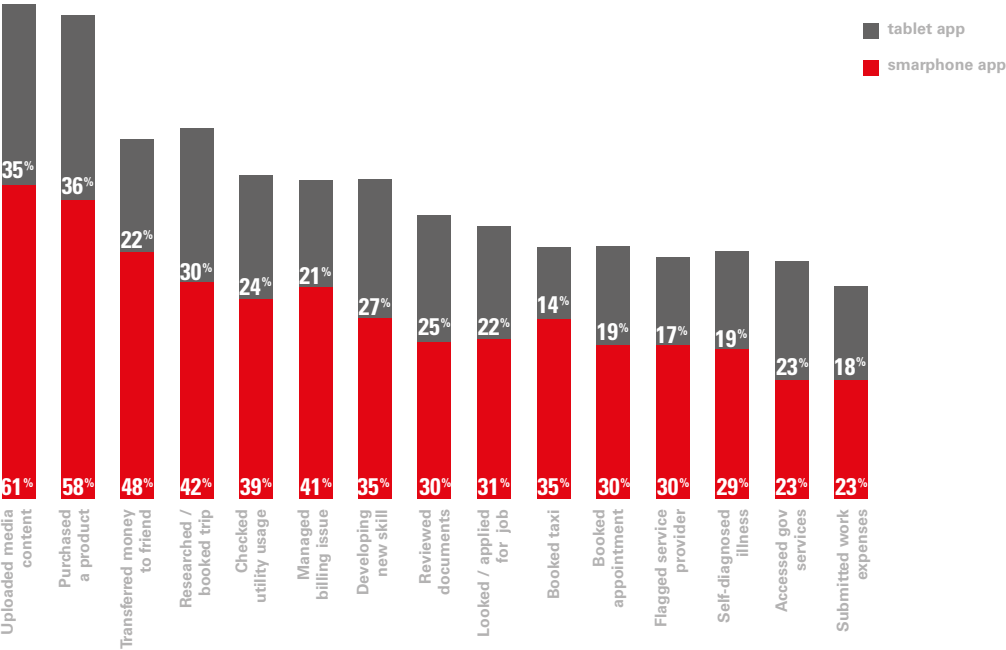
There remains much room for innovation when it comes to tablet apps, and companies that can develop applications which tap into the advantages tablets offer will be well-placed to capitalize on a still maturing market. It will be interesting to see how companies take advantages of the relative merits of tablets and smartphones to develop applications for each.

Of course, applications for smartphones and tablets should not be developed independently from each other – having a cross-channel approach and a common platform that delivers a high level of functionality for people using both devices will be crucial for companies that want to best serve millennials, many of whom own and use more than one connected technology on which they will want to access their applications.

There remains much room for innovation when it comes to tablet apps

TASKS COMPLETED USING AN APP*- PHONE V. TABLET

TABLE 1.2

- ■ tablet app
- ■ smarphone app

Task	tablet app	smarphone app
Uploaded media content	35%	61%
Purchased a product	36%	58%
Transferred money to friend	22%	48%
Researched / booked trip	30%	42%
Checked utility usage	24%	39%
Managed billing issue	21%	41%
Developing new skill	27%	35%
Reviewed documents	25%	30%
Looked / applied for job	22%	31%
Booked taxi	14%	35%
Booked appointment	19%	30%
Flagged service provider	17%	30%
Self-diagnosed illness	19%	29%
Accessed gov services	23%	23%
Submitted work expenses	18%	23%

*Within the past two months

The best apps are intuitive and reliable, and are developed with a view of who will ultimately be using them

To illustrate the importance of allowing users to engage with a company using their preferred device, consider an individual who wants to research a retail product on their PC or tablet in the first instance, and complete the purchase later in the day using the retailer's app on their smartphone. In this scenario, maintaining the same consumer context across all three devices is essential to a seamless experience.

The best apps are intuitive and reliable, and are developed with a view of who will ultimately be using them; consumers, employees, and business partners will all expect a very different experience from their applications. In the case of enterprise apps, for example, these should connect seamlessly with back-end systems so employees can always have access to the information they need. Importantly, security is – and should be – a concern for all users. Businesses will need to integrate measures such as single sign-on across all their apps, both mobile and web-based. When it comes to enterprise apps, they will need to take this one step further and apply advanced data protection measures to employees' mobile devices.

For companies to address all these issues, they will first need to transform the core of their business to embrace mobile as the way forward. Mobile is a way of life (for lack of a better term) among millennials. For organizations to truly engage with this generation, they will need to make mobility a core part of their business, and the primary channel by which they engage with customers. The truth is that businesses will need not only the technology required to deliver robust and compelling mobile apps for all millennials' devices, but also to adopt a modus operandi that prioritizes a mobile-first approach.

A majority of respondents (72 percent) say they "like" the ability to purchase a company's product or service using a mobile app

Share, but don't push

The race to engage prospective and current customers and business users via smartphones and tablets is a worthy one, but sometimes companies lose sight of what makes applications on these devices attractive and they can overstep the boundaries with the people they serve. Case-in-point: push notifications, which in many cases are viewed by millennials as equivalent to spam mail.

Millennials appreciate the ability to increasingly do more via their mobile apps when it comes to interacting with and receiving updates from the companies they do business with. Table 2.1 reveals that globally, a majority of respondents (72 percent) say they "like" the ability to purchase a company's product or service using a mobile app. Likewise, 71 percent say they like the ability to manage billing for services, and 65 percent like being able to flag issues or complaints to a business via an app. Further findings point to similarly high affinity for the ability to automatically receive consumption updates and advance notice on upcoming offers from brands and service providers.

TABLE 2.1

% OF MILLENNIALS WHO LIKE THE ABILITY TO COMPLETE TASKS VIA AN APP

72% Being able to purchase products or services via a company's app

71% Being able to manage billing for services via a company's apps

67% Being able to receive regular usage updates via a company's apps

65% Being able to flag issues or raise complaints via a companys's apps

62% Receiving advanced notice of upcoming offers via a company's apps

60% Receiving advice on how best to manage th services I use via a company's apps

On the other hand, there is a limit to what millennials want in terms of proactive outreach from the organizations they interact with via their mobile apps. The services and features in Table 2.1 all imply some sort of agreed-upon relationship between customer and brand, or between user and service provider. In the case of location-based services, and in particular push-notifications, the story is completely different.

With millennials using their connected devices for so many functions today, a number of brands have concluded that proactively approaching them via push-notifications on these devices is the best way forward. In truth, however, these push-notifications are often unsolicited and can add unwanted noise to millennials' mobile experience if the content being shared is not relevant to their needs or doesn't add value in some way.

The figures in Table 2.2 quite convincingly bring this reality to life. While 66 percent of millennials do use location-based services via a tablet or smartphone, nearly as many (56 percent) would prefer not to receive push-notifications. The same percentage of respondents says they rarely act on the push-notifications they do receive, even though nearly 50 percent admit these are personalized to them. Looking back at location-based services, however, 55 percent of millennials say these enhance their experience with a particular brand or business - clearly, young people do not equate these with push-notifications.

% OF MILLENNIALS WHO LIKE THE ABILITY TO COMPLETE TASKS VIA AN APP	TABLE 2.2

66% I regularly use location-based services via a mobile or tablet app

56% I would prefer not to receive push notifications for location-based services

56% I rarely act on push notifications for location-based services

55% I find location-based enhance my mobile experience with a particular brand

48% I find push notifications for location-based services are personalised to my needs

Where companies
will bring value to
this generation is by
developing apps that
enable interactions
through the entire
service delivery
process

Ultimately, millennials want services that empower them to take control of the dynamic between themselves and a business or service provider. While proactive guidance from companies today is appreciated, it must be highly tailored and relevant to the needs of their customers.

In the case of location-based services, there is clearly a gap between what potential these hold for millennials and what businesses today are offering. Peoples' aversion to push-notifications is therefore not irreversible, but companies need to ensure their notifications are appropriate to their audience and make their lives easier. In other words, organizations will need to provide app-based services that deftly tread the line between helpfulness and overbearingness if they wish to tap into young peoples' affinity for using mobile and tablet apps without alienating them.

It's also worth underlining that while it may seem this way in many cases, a mobile approach is not just a vehicle for marketing. If anything, this insight into millennial sentiment towards push-notifications makes it clear businesses must avoid thinking of the mobile channel as just a vehicle for self-promotion and advertising. From seeking expert advice from a product expert to being able to change their billing structure with a service provider, millennials see their mobile app as resources that will better their lives and make them more productive wherever they are. Where companies will bring value to this generation is by developing apps that enable interactions through the entire service delivery process.

> Where companies will bring value to this generation is by developing apps that enable interactions through the entire service delivery process
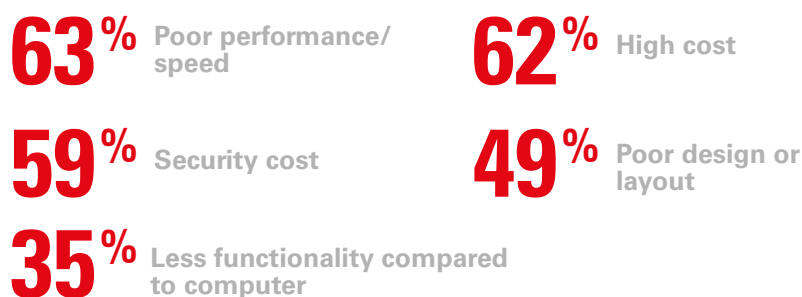
Put your best face forward

In this digital age, smartphone and tablet apps have become must-haves for almost any modern business that aspires to reach and attract millennial customers and, it's worth noting, people in almost any other demographic as well. As a result, for many young people these applications are becoming the de-facto face of the companies they interact with. With that in mind, when developing their apps for smartphones and tablets, it is essential that businesses put the requisite effort into delivering an effective and appealing experience to the people they serve.

Indeed, 54 percent of millennials globally say that after a poor mobile experience with a company, they would be less likely to use any of its other products or services. Just as crucially, 39 percent said it would make them less likely to recommend the company's products or services to others, while 27 percent admit it would even give them a negative view of that organization's products or services altogether. In APAC, this sentiment is even stronger, with 43 percent of millennials saying a poor mobile experience would give them a negative view of a company's products or services.

The importance for businesses to make a positive, lasting first impression on customers through their mobile apps cannot be overstated. In addition to the above concerns about staying on the right side of customer sentiment, organizations should be aware that a significant proportion of millennials would actually stop using a company's app for a number of reasons. See Figure 3.1, below.

TABLE 3.1

WHICH OF THE FOLLOWING FACTORS WOULD STOP YOU FROM USING AN APP?

63% Poor performance/speed

62% High cost

59% Security cost

49% Poor design or layout

35% Less functionality compared to computer

Looking at this data, poor app performance and speed are clearly deal-breakers for a company when it comes to their apps. While some businesses would argue that part of this lies out of their hands – as the strength of data networks is of course not their responsibility in most cases – it will fall to them to develop apps that fulfill customers' requirements for functionality without being so clunky as to always require above average network connectivity to work. This may extend to providing users with some offline functionality or background synchronization options in instances when network performance is lacking.

For companies, integration with back-end systems will be critical to delivering on millennials' expectations around relevant in-app content and functionality, as well as performance. Developers will require access to business assets to develop high quality applications for end-users. Today, this is made possible by a variety of solutions, some of which grant developers access to business assets via a mediation layer, others via a carefully managed access interface. And then there's the cloud; by abstracting back-end functions in the cloud, businesses can free up their resources to simultaneously focus on front-end development and develop strong mobile business models.

Cost is also a major consideration for millennials today. Young people are accustomed to access; in many cases, to free access, and their expectation from apps is no different. With the exception of pure developers whose only source of income is the apps themselves, businesses should treat their applications as portals connecting them with customers rather than as merely another direct source of income – and price them accordingly. Their real payout will not come from app sales directly, but rather as a result of the more meaningful relationships these apps will help them build with their customers.

One more important point raised by Figure 3.1 is that data security is a major concern for nearly half of millennials. For businesses, addressing this will come down to adopting a more modern security culture throughout the enterprise. With people accessing information and sharing personal details rather indiscriminately today via smartphones, tablets, and their personal computers, companies will need to take proactive measures to protect their data. No longer will simple encryption, firewalls, and network security controls alone do the trick. Companies will need to control access from the inside out and at every layer of their IT, from the database that processes data to the mobile devices tied to the system.

The opportunities
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how to effectively
develop and
implement a mobile
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good indeed

All these considerations admittedly add up to a tall order for many businesses, particularly those that may be tied to a way of working that has been adequate for more years than mobile technology has even been around in its modern form. However, if companies cannot provide current and prospective customers/users with an exceptional app experience that also accurately reflects the values of their brand, they risk alienating the millennial generation and seeing their competition pull ahead with a more convincing mobile offering.

That said, the opportunities for organizations that do understand how to effectively develop and implement a mobile strategy are very good indeed. Although 66 percent of millennials say the functionality of companies' websites is superior to what is offered via apps, 62 percent of them admit smartphone and tablet apps are more convenient to use. In addition, 52 percent conduct the majority of their online tasks via their mobile apps. Even more encouragingly, 76 percent of millennials reveal they would use their mobile apps for even more if their functionality were improved.

In light of these findings, there is clearly a healthy appetite among millennials for innovative, functional apps from the companies they want to interact with. What solutions businesses put forth in the imminent to near future will in large part be the key to their success with this generation.

Young people in APAC are miles ahead in their app usage across the board
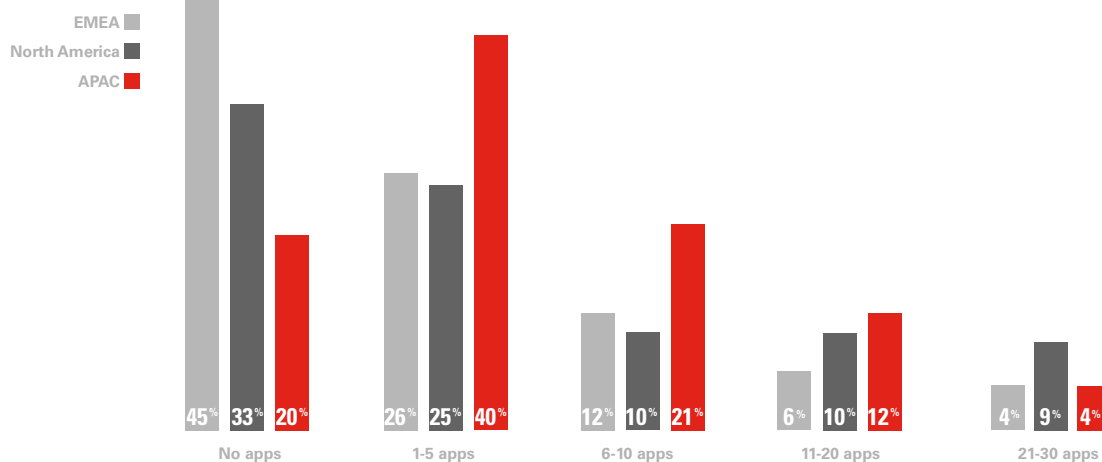
Eastern promise

A further breakdown of millennials by region of residence reveals an interesting divide between countries in APAC and those in EMEA and North America in terms of mobile app use. Young people in APAC are miles ahead in their app usage across the board, most notably so when it comes to applications for work and more "serious" functions.

The first thing to note is the high importance millennials in APAC seem to place on a quality app experience, with people in the region more inclined to pay for their apps than their European and North American counterparts (see Table 4.1). While on average millennials around the world have each downloaded between 20-25 apps onto their mobiles, 40 percent of those in APAC have paid for as many as five of these, compared with roughly 25 percent of millennials in EMEA and North America. Likewise, roughly one-fifth of millennials in APAC have paid for as many as 6-10 apps, compared with roughly one-tenth of those in EMEA and North America.

Looking at this data, poor app performance and speed are clearly deal-breakers for a company when it comes to their apps. While some businesses would argue that part of this lies out of their hands – as the strength of data networks is of course not their responsibility in most cases – it will fall to them to develop apps that fulfill customers' expectations. Moreover, a higher percentage of young people in APAC say their

TABLE 4.1

PROPORTION OF PAID-FOR APPS

EMEA
North America
APAC

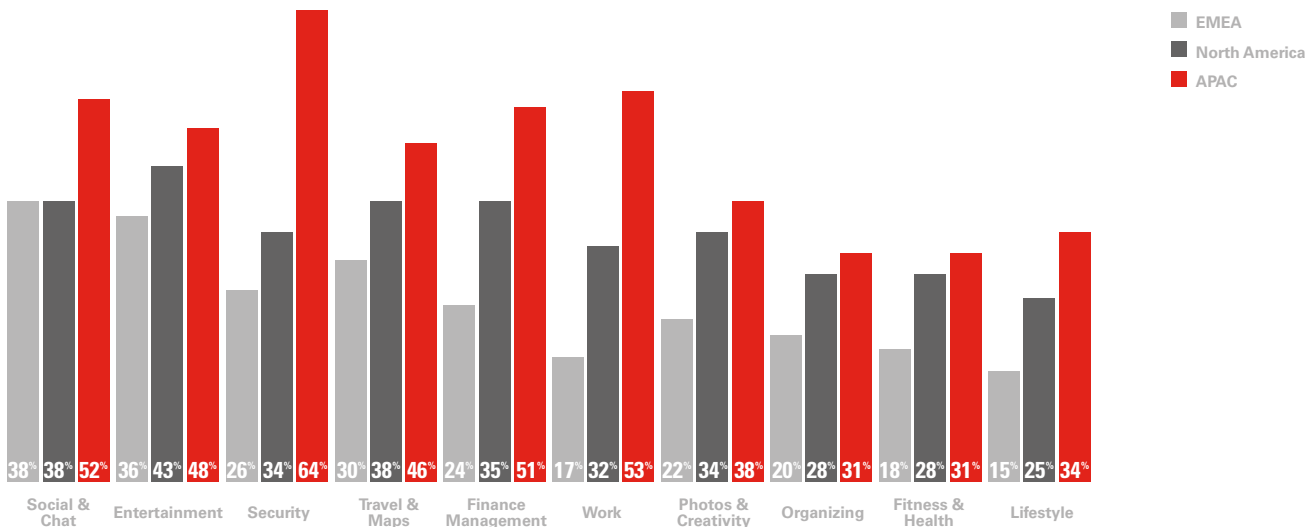|	No apps	1-5 apps	6-10 apps	11-20 apps	21-30 apps
EMEA	45%	26%	12%	6%	4%
North America	33%	25%	10%	10%	9%
APAC	20%	40%	21%	12%	4%

apps are must-haves than in EMEA and North America. Perhaps most interestingly, this sentiment extends to apps for work and "serious" functions. The figures in Table 4.2 bring this to life. Roughly three times more millennials in APAC than in EMEA say work apps are must-haves. Similar ratios hold true for security apps when comparing results from APAC to those from EMEA and North America. A slightly more balanced but still significant discrepancy exists when it comes to applications for finance management.

From these findings, it can be surmised that millennials in APAC rely more heavily on smartphone and tablet applications than young people in EMEA and North America. That's not to say they use these devices more often, but rather that for them apps are less so "nice-to-haves" and more so necessary resources in their day-to-day lives. Millennials in this region are constantly on the look-out for new innovative apps and, encouragingly for businesses, are willing to pay for applications that deliver an exceptional experience.

It is worth raising the point that it's likely the advanced state of app use and demand in Asia comes, at least in part, from the fact that people in these regions favor smartphones and mobile internet over PCs to such an overwhelming degree. In China, for example, 557 million people use smartphones and tablets to connect to the internet, almost twice as many as five years ago. With mobile device adoption following a similar trend in the Western World (although of course not quite on the same scale), application development in this region will likely follow suit. As this happens, millennials in EMEA and North America will also begin to expect more from both their personal and enterprise apps.

APPS MILLENNIALS CONSIDER A MUST-HAVE AND ARE ULTIMATELY WILLING TO PAY FOR

TABLE 4.2

- ☐ EMEA
- ☐ North America
- ☐ APAC

Social & Chat	Entertainment	Security	Travel & Maps	Finance Management	Work	Photos & Creativity	Organizing	Fitness & Health	Lifestyle
38% 38% 52%	36% 43% 48%	26% 34% 64%	30% 38% 46%	24% 35% 51%	17% 32% 53%	22% 34% 38%	20% 28% 31%	18% 28% 31%	15% 25% 34%

The Oracle Viewpoint

We are now in the age of the digital business; one in which mobile, social, and the cloud have converged and put companies in a position to build themselves around a fully digital platform – and better serve both their customers and employees. Some businesses, such as Uber, Airbnb, and Starbucks, have taken advantage of these technologies to completely disrupt their markets, largely driven by their mobile presence.

For millennials, mobile devices are at the very heart of how they interact with companies and with each other. Unless they can tap into how this generation actually uses these devices, then organizations will struggle to differentiate themselves in the era of all-things digital. For those that do get things right, the mobile opportunities are plentiful indeed.

Flexibility will be key. While smartphones remain millennials' preferred device for app use, young people today do not use these independently of their other connected technologies. Companies must keep in mind that variations in screen size, keyboard functionality, and convenience make app use on smartphones and tablets very different to computers. A unified experience across smartphones, tablets, PCs, and even the latest wearable devices lies at the heart of their mobile lifestyle, and businesses need to ensure the apps they deliver work equally well across all these platforms. Just as importantly, they need ensure their back-end systems allow users to access the data and functionality they need when using an app on any of their devices, at any time.

The practice of moving mobile back-end services to the cloud is now emerging as an effective way for organizations to achieve this. It allows devices that are already outside the firewall to access data both in the cloud and on-premise, without mandating that businesses actually host data in the cloud. This hybrid approach allows businesses with varying mixes of cloud and on-premise resources to benefit from the agility and flexibility of a mobile-first approach.

With their databases, applications, and platform services all tied together in this way, companies will ensure that relevant data and services are easily accessible to everyone that needs them – including customers, partners, and employees – whenever they need them.

Access, convenience and added-value are the primary requirements of the millennial generation, and a successful digital business will define itself and its services based on these principles. Putting mobile first is crucial to this endeavor, and to being truly disruptive in the digital age.

A unified experience across smartphones, tablets, PCs, and even the lastest wearable devices lies at the heart of their mobile lifestyle, and businesses need to ensure the apps they deliver work equally well across all these platforms

Conclusion

It comes as no surprise that millennials' use of mobile apps is on the rise. What companies today must realize is that it's becoming increasingly important – if not crucial – for them to reach out to this age group via the devices they favor. For all businesses, even those that already offer customers a smartphone or tablet app, this should no longer be treated as merely an afterthought or nice-to-have.

In addition to offering people innovative services, companies must understand that their mobile apps now serve as one of the most important extensions of their business when it comes to engaging customers. Mobile apps have become the new conduit between modern companies and the millennial generation, but this will only hold true if organizations can deliver something of value.

There are several tips that organizations should bear in mind in order to build a successful business relationship with the millennial generation:

Rethink how mobile apps are developed

Mobile apps are not just a nice-to-have for millennials; they have become indispensable. Businesses need to rethink how they develop apps to make sure it is theirs – and not their competitors' – that prove most engaging for young people. A major component of this will be to what extent organizations can tailor the app experience to the wide range of connected devices that millennials use each day.

Integrate back-end systems with apps

Access to data is integral to an exceptional app experience. Whether they want to monitor their monthly mobile data consumption or enjoy a seamless shopping experience, millennials will – knowingly or not – rely on the fact that their data is on-hand and easily accessible at all times. For businesses, a constant link between their back-end systems and their apps will be essential to delivering this level of service.

Protect data everywhere it matters

The perimeter of data security has moved. Protective measures at the edge of the network, such as firewalls and network switches, are not suited to the app generation. Part of becoming a mobile enterprise means making mobile security a part of the organization from the inside out. Companies need to ensure they implement protection around their database, around the devices people use to access their valuable data, and around the apps themselves.

Be more efficient with the cloud

Moving some (or all) of their back-end systems into the cloud will allow businesses to free up resources for front-end development and building disruptive mobile business models. This will make them more agile and put them in a better position to jump ahead of competitors that do not operate as efficiently.

Put mobile first

The end-game for organizations is to make mobility a natural part of their company culture; to integrate it into the very fabric of their organizational DNA, and to make it a central focus when developing products and services for the mobile generation. Many companies have already begun to appreciate the value of a mobile-first approach – applications from the likes of Uber, Spotify and Airbnb are not only nice to look at; they are intuitive, and most importantly they seamlessly deliver services that are well-suited to young peoples' mobile lives.

The end-game for organizations is to make mobility a natural part of their company culture

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