



PREVIEW

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2016 Trends in Enterprise Mobility

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In the year ahead, mobile will continue its march into the enterprise on its way to becoming a first-class citizen. All future projects supporting employees or customer engagement need to include mobility, as a larger percentage of enterprise computing is taking place on mobile devices. This report details the mobile technologies and trends that will impact IT and end users in 2016.

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Trends

Trend 1: IT Decision-Makers Will Shift to a Mobile-First Mindset

Implication: IT decision-makers are increasingly interested in mobilizing general internal business processes, to the point that it exceeds interest in mobilizing the traditional primary target for mobile apps – field service and sales. This will drive mobile into all IT projects, where support for smartphones and tablets will be considered from ideation to deployment.

Trend 2: Culture, Not Costs, Will Be the Biggest Barrier to Wider Enterprise IoT Adoption

Implication: The overall level of hype and interest in the IoT is at or near peak levels. The latent potential of virtualizing the assets and objects of the physical world and connecting them via the Internet holds dramatic transformation potential. That transformation potential applies to nearly every type of enterprise operation from agriculture to healthcare while opening up the doors to completely new experiences and conveniences in the consumer market. The alignment of resources to meet this opportunity from the IoT supply side has driven the marginal costs of connecting ‘things’ to the Internet and managing IoT data closer and closer to zero. But with this killer combination of potential and falling costs, industry-level adoption is still in its infancy – so what gives? While the majority of industry discourse on the IoT to date has been about standards, chipsets, security and IT vendor strategies, 451 Research contends that the risks associated with wholesale business process changes, which are very expensive and disruptive, are holding back wider adoption and warrant closer attention from supply-side vendors.

Trend 3: Technology Boundaries Will Increasingly Blur Across the Enterprise Mobile Application Lifecycle

Implication: Almost a decade into the era of mass smart mobility, and with 64% of employees using a smartphone at work, a range of technology, organizational and regulatory obstacles are nevertheless still preventing the meaningful integration of mobile into businesses’ processes and workflows. With a mismatch between existing infrastructure and tooling and mobile’s newness, businesses are caught between the rock of big vendor consolidation and the hard place of significant fragmentation in a long tail of aspirational vendors. In 2016 both product definition and marketing nomenclature will continue to blur, however, with vendors building and becoming somewhat less self-conscious about partnering their way to new mobile cloud infrastructures.

Trend 4: Ecosystem Partnerships Will Drive Further Consolidation in the EMM Space

Implication: The EMM space is maturing; this has resulted in market consolidation as vendors seek to expand their capabilities to address a growing market. Mobile developers can only support so many EMM vendors at one time. Mobile penetration in the workplace will continue to grow and BYOD will become more prevalent; this will impact the adoption of technologies for managing BYOD such as split billing and mobile messaging. These technologies will become more relevant in 2016, making vendors attractive targets for acquisition by EMM incumbents and driving further consolidation in the space.

Trend 5: SMB Mobility Issues Will Gain Heightened Operator Focus

Implication: Mobile operators have overhauled how they deliver mobile devices and services, and now those changes are coming to the enterprise – in particular smaller enterprises where many of the mobility dynamics closely mirror those in the consumer sector. As a result, small and medium enterprises will get better devices (and device terms), cheaper mobile data rates and greater access to value-added apps and services – all delivered with gold-plated customer support their family back at home will envy.

Trend 6: Strong Apple Pay Adoption Will Further Distance iOS from Android in Mobile Payments

Implication: As the number of Apple Pay-enabled devices in the market has increased, so too has consumer interest in the service. Growing momentum is widening the mobile payments gap between iOS and Android, driving a need for organizations of all types to not only prioritize Apple Pay support, but develop unique, value-added payment experiences in the iOS ecosystem.

Trend 7: Businesses Will Need To Plan for Rapidly Increasing Mobile Commerce Demand

Implication: Our data clearly shows an increase in mobile commerce transactions conducted by average users between 2014 and 2015. While only 27% of average users have actually shopped via their mobile device, almost half of advanced users have embraced mobile commerce. While the trend for early adopters remained steady for two years, as more mainstream consumers turn to their mobile devices for mobile search, coupons and mobile shopping apps, the behavior will become more widely adopted.

The complimentary excerpt contains the full text of two of the above trends - contact our sales team to learn more about this report and how you can get full access.

Executive Summary

INTRODUCTION

Mobile continues to gain traction in the enterprise, as both IT and line of business need to contend with how they will serve employees, partners and end-user customers. Today, IT faces considerable challenges dealing with today's technologies, with additional responsibility for protecting the enterprise as new devices and technologies such as the Internet of Things (IoT) are on the near-term horizon. IoT will be a game changer for the enterprise, but the concerns about the significant risks that come with business transformation enabled by IoT will be a significant barrier that IT needs to overcome. As the front end of the enterprise software environment evolves rapidly with regular mobile OS and hardware updates, the back end of the enterprise continues to lag, leading to a stalled enterprise mobile app market. iOS continues to lead in the enterprise, and when it comes to engaging consumers, the Apple OS remains a key platform for the enterprise. Nowhere is this more apparent than in the mobile payments space. A key indicator of the future of enterprise mobility is the use of this technology by consumers. More and more consumers are dependent on mobile for commerce. A strong user experience is a key driver for adoption here. A strong experience for enterprise mobility technologies and services will drive future success for IT. Unlike any other enterprise technology, mobility is in the hands of users. Because of this, employees get to decide what they will use, adopt and shelve.

This report presents the trends we see shaping enterprise mobility in the coming year.

451 Research's 2016 Enterprise Mobility Trends

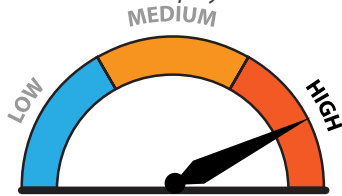
Source: 451 Research, 2015

	Winners	Losers
IT Decision-Makers Will Shift to a Mobile-First Mindset	IT vendors that enable the movement of workflows to mobile devices as a core capability; mobile-first and mobile-only vendors	Mobile laggards and companies that don't engage their customers through mobile
Culture, Not Costs, Will Be the Biggest Barrier to Wider Enterprise IoT Adoption	Vendors that can put the IoT into the proper business context for the vertical markets they serve with solutions and partners that can enable their customers' digital transformation of data into business insights	Pure-play IoT technology companies
Technology Boundaries Will Increasingly Blur Across the Enterprise Mobile Application Lifecycle	Vendors that place data at the heart of their product	Pure plays that decide to go it alone
Ecosystem Partnerships Will Drive Further Consolidation in the EMM Space	Emerging vendors with proven solutions and market traction	Stand-alone solutions with limited capabilities for integration
SMB Mobility Issues Will Gain Heightened Operator Focus	Mobile operators willing to discount – but also understand SMB customer concerns	Mobile software providers pushing enterprise solutions onto unwitting SMBs
Strong Apple Pay Adoption Will Further Distance iOS from Android in Mobile Payments	Apple Pay partners; iOS-first commerce companies	Vendors that don't hedge their bets and those that haven't developed contactless-compatible solutions
Businesses Will Need To Plan for Rapidly Increasing Mobile Commerce Demand	Vendors that offer mobile engagement tools for line-of-business users	Web commerce providers that only provide responsive design strategies for mobile

TREND 1: IT DECISION-MAKERS WILL SHIFT TO A MOBILE-FIRST MINDSET

Implication: IT decision-makers are increasingly interested in mobilizing general internal business processes, to the point that it exceeds interest in mobilizing the traditional primary target for mobile apps – field service and sales. This will drive mobile into all IT projects, where support for smartphones and tablets will be considered from ideation to deployment.

Impact to the Market



With nearly every knowledge worker and most task workers sporting a smartphone, there is a need for IT to offer the ability to get work done on these devices. Regardless of ownership model (bring-your-own-device [BYOD] or corporate-liable), employees are actively searching for third-party apps that will help them be productive on mobile devices. Not providing an app for employees, contractors or partners means two things: first, IT is left out of the loop when it comes to deciding which app will be used; second, without IT’s guidance or input, security for corporate data

is not considered. The employee will prioritize capabilities and usability, but with IT in the loop, consumer-grade apps can live within a secure world.

According to 451 Research’s June 2015 Enterprise Mobility: IT Decision-Maker Survey, for those that have deployed or plan to deploy mobile apps, 40% will prioritize general internal business processes (see Figure 1). At the same time, only 29% will prioritize the development of mobile apps for the traditional mobile audience in the enterprise, sales and field service. This is dramatically different from one year ago, when our June 2014 survey showed that only 28% of these companies would prioritize general internal business processes. Last year, 35% were prioritizing apps for sales and field service. This change in priorities signals a dramatic change in the mentality of IT when it comes to mobility.

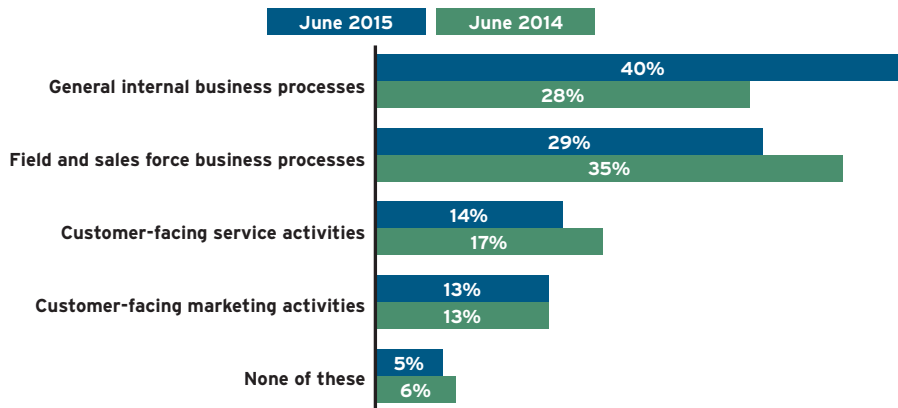
IT and the business units it supports are increasingly seeing a need to expand the ability for employees to access corporate data from mobile devices. This shift from supporting some employees and partners – or just those that can be most directly tied to revenue or customer satisfaction – signals a shift in future IT budgets. IT vendors need to ensure that all their offerings play well in the mobile space. Mobile cannot be a check box; it needs to be built to consumer standards. User experience will be considered to ensure it meets the demands and needs of users.

Figure 1: IT Decision-Makers Are Taking a Broader View of Mobility in the Enterprise

Source: 451 Research’s 2014 and 2015 US Enterprise Mobility: IT Decision-Maker Surveys, June

2014 Reporting and Analytics Revenue

Which two of the following are most important to mobilize in the next two years? (n=517)



RECOMMENDATIONS

- **IT leaders need to look for vendors that are mobile-first ready.** Having a mobile app is not enough. In evaluating providers, look for integration with partners that provide enterprise mobility management (EMM) capabilities, specifically mobile application management (MAM).
- **IT vendors need to prioritize mobile use cases, while keeping in mind that they may find it hard to monetize mobile specifically.** Providing mobile capabilities is more about flexibility for customers to use enterprise apps and services from any device. That said, with IT budgets remaining relatively flat, it will be hard to squeeze additional revenue from buyers expressly for mobile.

WINNERS

- **IT vendors that enable the movement of workflows to mobile devices as a core capability.** Technology providers can no longer just pay lip service to mobile. They need to provide a wide set of services that monitor, secure and enable the use of mobile applications across iOS and Android.
- **Mobile-first and mobile-only vendors.** With a growing need to support mobile user productivity, which we see in our IT Decision-Maker surveys, IT will increasingly look at best-of-breed technologies rather than default to a set of services that are tightly integrated for the sake of integration.

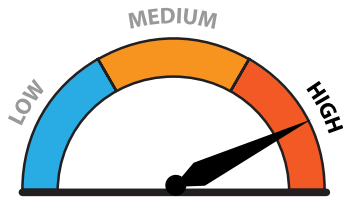
LOSERS

- **Mobile laggards will only become more apparent.** IT vendors that have stayed on the sidelines have avoided the risks of building businesses around technology that has been commoditized, but these savings will soon be overshadowed by missed opportunities when it comes to providing necessary mobility tools.
- **Companies that don't engage their customers through mobile will lose those customers.** These companies are missing a key opportunity to increase loyalty and better understand their customers. Buyers will increasingly make decisions based on the degree to which, and ease with which, they can connect with companies via mobile.

TREND 2: CULTURE, NOT COSTS, WILL BE THE BIGGEST BARRIER TO WIDER ENTERPRISE IOT ADOPTION

Implication: *The overall level of hype and interest in the IoT is at or near peak levels. The latent potential of virtualizing the assets and objects of the physical world and connecting them via the Internet holds dramatic transformation potential. That transformation potential applies to nearly every type of enterprise operation from agriculture to healthcare while opening up the doors to completely new experiences and conveniences in the consumer market. The alignment of resources to meet this opportunity from the IoT supply side has driven the marginal costs of connecting 'things' to the Internet and managing IoT data closer and closer to zero. But with this killer combination of potential and falling costs, industry-level adoption is still in its infancy – so what gives? While the majority of industry discourse on the IoT to date has been about standards, chipsets, security and IT vendor strategies, 451 Research contends that the risks associated with wholesale business process changes, which are very expensive and disruptive, are holding back wider adoption and warrant closer attention from supply-side vendors.*

Impact to the Market



The generally accepted vision for the IoT boils down to transforming entire industries through unprecedented connectedness at massive scale to deliver valuable data insights. The value in this market will accrue for those enterprises that can put IoT data to the best use with results to show for it, and for the suppliers that enable those results. 451 Research contends that the technical challenges facing the IoT in areas such as standardization will be overcome

much faster than business-related challenges given the amount of innovation and investment IT suppliers have bet on the IoT. The general concept driving the IoT is simple: Connecting the physical world to the Internet enables the objects themselves to become 'smart,' or allows us to become smarter about our physical environments. Armed with this intelligence, enterprises will derive benefits in the form of more efficient and reliable systems, new or enhanced business models supporting connected products, and increased quality of life by tightly integrating the physical and digital world so they can be logically managed together in a cohesive system.

Given the far-reaching potential, it is no surprise that IoT has been identified as a strategic area of investment for thousands of IT suppliers, distributors, systems integrators (SIs), cloud service providers, network operators, device makers, crowd funders, financiers and application providers. Governments around the globe have made IoT a central component of strategic initiatives that focus on competitiveness, energy and eco-efficiency policies, public safety, quality-of-life and citizen services.

Despite the hype and potential, it's still early days for the IoT. Figure 2 shows the last 12 months of results from our US Corporate IT spending survey related to IoT adoption. While the data tells us that every quarter we've seen a strong overall uptick in the percentage of enterprises currently using, planning to deploy or planning to evaluate/test IoT technology, a majority of respondents are still either considering or not planning to use IoT. We think this result is a symptom of a market that is still in desperate need of education about not only how IoT can or should be deployed, but more importantly, why now. Nearly every type of business should at least be considering how IoT can be applied to its operations – as such, these survey results should serve as a stark reminder that there is still work to do.

Figure 2: Planned Usage of IoT Has Increased in Past 12 Months

Source: 451 Research's ChangeWave Research 4Q 2015 Corporate IT Spending

Base: 1,533 respondents involved in IT spending in their organization

Which of the following best describes your company's plans for the use of "Internet of Things" technology?

	CURRENT SURVEY AUG '15	PREVIOUS SURVEY FEB '15	PREVIOUS SURVEY AUG '14
ALREADY USING INTERNET OF THINGS (IOT) TECHNOLOGY	9%	8%	7%
PLAN TO BEGIN USING IOT TECHNOLOGY IN NEXT 6 MONTHS	3%	2%	2%
PLAN TO EVALUATE/TEST IOT TECHNOLOGY IN NEXT 6 MONTHS	7%	6%	6%
CURRENTLY HAVE NO PLANS TO USE IOT TECHNOLOGY BUT CONSIDERING FOR FUTURE	24%	25%	15%
CURRENTLY HAVE NO PLANS TO USE IOT TECHNOLOGY BUT NOT CONSIDERING FOR FUTURE	29%	29%	34%
DON'T KNOW/NOT APPLICABLE	28%	30%	36%

SUPPLIER RECOMMENDATIONS

- **Ramp up IoT market education focused on business context.** For IoT suppliers, the challenge is to educate potential customers on what is possible with the IoT in the business context. This will require a deep level of understanding of the vertical industry dynamics, including the regulatory environment around IoT data handling, security and privacy. 451 Research suggests focusing go-to-market effort on the mid-sized enterprise market, which represents fertile ground but has been historically underserved.
- **Actively build an ecosystem to fill skills gaps.** A truism of the IoT is that it will be nearly impossible for one vendor to serve in an end-to-end capacity. Suppliers will be required to develop the internal skills and ecosystems to fill gaps in key areas such as data sciences and business process change management. Understanding how the IoT can be applied to solve business problems while bringing expertise in areas of weakness for customers, such as data sciences, will be critical to achieve wider market adoption. IoT suppliers that are effective in bridging the skills gaps will differentiate themselves against technology-centric propositions.

ENTERPRISE RECOMMENDATIONS

- **Start planning for the IoT now.** The IoT will be disruptive to nearly every industry. CXOs need to be asking what is possible with the IoT – the competition certainly is or will be. Our latest IT Decision-Maker survey results indicate a majority of enterprises have not yet added IoT to their strategic planning process; we think that picture needs to rapidly change as the technical hurdles surrounding the IoT fall.

WINNERS

- **Suppliers that effectively answer 'Why IoT now?' for customers.** The IoT market landscape is complex and diverse with all manners of hardware, software and service participants large and small. While technology choices are critical for the IoT, the vendors that can put it into the proper business context for the vertical markets they serve with solutions and partners that can enable their customers' digital transformation of data into business insights will have a leg up on technology-centric propositions.

LOSERS

- **Pure-play IoT technology companies.** Successful deployment of the IoT will require several functional layers. The vendors supporting layers that sit farthest from business processes, such as edge connectivity or bandwidth, will struggle to sell into this current environment without a strong set of partners focused on solving the business process challenges associated with IoT adoption.



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