Wearable devices have some potential use cases, but they aren’t quite ready for the enterprise.
I bucked the smartphone trend for as long as I could. When Apple’s iPhone 4s came out in 2011, I caved and never turned back. The same thing happened with tablets; now I own three. Sometimes, you can just tell that the world will leave you behind if you don’t ride the wave. For many of us, something similar will happen with wearables.

Wearables are by no means ubiquitous. In 2014, one in five Americans owned some kind of wearable device, and only 10% wore it daily, according to PricewaterhouseCoopers’ Health Research Institute. That was before the Apple Watch hit the scene in April 2015, but the Watch wasn’t an overnight success; market research showed its sales dropped dramatically after the first month.

Today, the majority of wearables that consumers buy are fitness and health trackers such as Fitbit, Jawbone, Moov and Garmin wristbands. About 30% of U.S. households currently have a wearable health device, whereas only 5% use a smartwatch for health tracking, according to market research firm The NPD Group. But investment firm Piper Jaffray expects overall sales to grow from 21 million units in 2014 to 150 million units in 2019.

From The Editor’s Desk | ALYSSA WOOD
So it seems we’ll all be wearing technology in the near future—and not just for counting steps. Enterprise use cases are becoming more viable, and last month’s International Consumer Electronics Show highlighted some of the latest wearables with business potential.

Two of the most unique products were MC10’s BioStamp Research Connect System and the ili wearable translator. BioStamp is a stick-on medical monitor the size of a Band-Aid that tracks vital signs and muscle activity—useful features for hospitals and healthcare research organizations. Ili’s translation device is a small necklace that you can speak into and choose a translation language. The device then speaks your new message aloud, all using a built-in dictionary of words—no Internet connection needed, ideal for international business travelers.

News writer Ramin Edmond explores more about the state of the enterprise wearables market in this month’s cover story. One thing is for sure: Wearable computing is a quickly growing market. Whether it’s for work or play, I already know I won’t be able to avoid it.

**ALYSSA WOOD** is senior managing editor of *Modern Mobility*. Follow her on Twitter: [@AlyssaLaura22](https://twitter.com/AlyssaLaura22).
Where are the Wearables?

Smartwatches and other new device types have plenty of enterprise potential, but they haven’t lived up to it. RAMIN EDMOND

If enterprise wearables are going to take off, they need to develop clearly defined roles—and that just hasn’t happened yet.

The draw of wearables is that they’re small, lightweight and convenient mobile devices that often allow users to perform tasks hands-free. Smartwatches in particular pack powerful sensors that collect and analyze data, then feed it back to a computer or other device.
wirelessly. These capabilities give wearables the potential to be great tools for work, but that has yet to come to fruition, said Mehran Basiratmand, CTO of Florida Atlantic University in Boca Raton, Fla.

“We are only scratching the surface of the technology,” he said. “But I see [potential for] tremendous growth in a business setting.”

Wearables today range from smartwatches and smartbands to virtual reality headsets, which are all gaining traction among consumers. The market, valued at $7.1 billion in 2015, will hit $12.6 billion in 2018, according to research firm Statista. Health and fitness bands such as the Fitbit have played a major role in its growth, but the Apple Watch has also seen success, with an estimated 61.3% share of the overall wearables market, according to IDC.

SO MANY USE CASES …

Many organizations are already using some types of wearables, said Patrick Moorhead, president and principal analyst of Moor Insights and Strategy, an analyst firm in Austin, Texas. Employees often use key cards or fobs to enter their offices or access their computers, and they hook those onto their belts or carry them in their pockets. The logical next step for those cards is to become smartbands that users wear on their wrists, or apps they install on their smartwatches. IT could even use these bands to track when employees are in the office for timekeeping purposes.

As smartwatch vendors continue to innovate, sensors on these devices will become more advanced, the applications more robust...
and the battery life more proficient, said Michael Oh, CTO and founder of TSP LLC, an Apple reseller in Boston. Those improvements will lead to the technology becoming more useful in many different industries.

“In healthcare, wearables are going to take off for sure,” said Stephen Monteros, vice president of business development and strategic initiatives at SIGMA.net, an IT consultancy in Ontario, Calif. “It’s in the early days where customers ask us to write code [to better enable] some sensors. We are experimenting right now.”

Smartwatches and other wearables appeal to the healthcare industry because they can track a wide range of health metrics, including steps, heart rate, sweat, movement, sleep patterns and more. Omron’s Project Zero smart wristband, for example, is a medical device that tracks and constantly displays users’ blood pressure on its screen for patients and their doctors to monitor. These kinds of devices would be useful for physicians, physical therapists and trainers.

“Wearable devices could benefit nearly any industry where workers need to have their hands free to complete tasks, said Blake Brannon, vice president of product marketing at enterprise mobility management (EMM) vendor AirWatch.

Construction or oil rig workers might need their hands free for safety reasons, such as to hold themselves up on a high-rise building or to work with flammable materials. But they also need access to instructions, measurements or blueprints to do their jobs, which they could access by giving a voice command to a smartwatch.

“Those are the areas where the technology will take off first,” Brannon said.

Warehouses are another big use case, because higher-ups need to track employees’ locations and send them real-time information.
about orders, product inventory and equipment issues. Wearable devices are valuable in tourism, where travel companies can feed tourists information on sites to see and meeting times. A well-known example is Walt Disney World’s MagicBands, which let guests enter theme parks, pay for food and souvenirs, and unlock their hotel room doors.

…SO LITTLE APPS
But for enterprise adoption to truly go mainstream, wearables need more business apps, Monteros said.

“There is a place for wearables, but it isn’t defined yet,” he said.

The problem is not uncommon among mobile devices. Even Apple’s wildly popular iPhone took a similar path. At first, IT pros did not view it as a tool for business, but that changed when developers built the right apps for it. Wearables—particularly smartwatches—need apps that make users more productive by solving problems they didn’t even know they had, Oh said.

That may be more difficult to do for a smartwatch than it was for the iPhone, he said.

The Security Issue
WEARABLES PRESENT unique management and security challenges, especially because they have advanced connectivity features. Smartwatches, for example, can sync with users’ smartphones and may transfer personal information to those other devices.

Unlike most operating systems on laptops and smartphones, smartwatch OSes do not have built-in security tools, so IT needs to be wary of the content traveling to and from these devices, said Sean Ginevan, senior director of strategy at EMM vendor MobileIron.

“We need to take care of security because these things will go off road to places that smartphones and tablets never really went,” said Jack Narcotta, industry analyst at Technology Business Research Inc., in Hampton, N.H. “IT needs a game plan to handle it.”

“It’s a bit harder to imagine an app relevant to the enterprise that can change the world on any wearable,” he added. “It’s likely that the apps and development that takes place in business will be small and incremental.” ●

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Biometrics Are the Future of Mobile Security

It’s time to face the facts: Biometrics technology is poised to change the way IT secures and monitors mobile devices.

It’s either an awe-inspiring technological opportunity, or your worst nightmare: A computer with the ability to read people’s thoughts. With growing interest in biometrics—where a device can use an individual’s physical or physiological attributes to authenticate that person’s identity—that’s where the market is headed.

Biometrics scan a person’s fingerprint, face, retina, ear and even DNA, using a sensor or camera. Either a complete image of the scan or a code-based representation of the image is stored in a database or locally on the device. When a user attempts to gain access to a biometrics-protected device or application, it rescans their physical attribute(s), and underlying software analyzes and compares it to the stored image data. If the software verifies the user’s identity, it then grants the appropriate level of access.

This technology is becoming a more prevalent way to control access to mobile devices, thanks primarily to the popularity of Apple’s Touch ID fingerprint sensor on the iPhone and iPad. Eventually, we could even see biometrics able to identify people by their brain waves. Since as early as 2013, researchers have been
studying a way to record brain signals using an electroencephalogram, a monitoring test historically used to diagnose epilepsy, tumors and other disorders.

Smartphones, tablets and laptops are inherently more portable than desktop PCs, making them more liable to be lost or stolen, and therefore susceptible to corporate data loss. So for IT departments managing employees’ personal or corporate-owned mobile devices, biometric authentication can greatly improve security. Passwords and numeric PINs can be easy to guess, but it’s highly unlikely a hacker or other unauthorized user could access or replicate a person’s unique fingerprint.

Still, biometric data isn’t 100% secure. Just last year, 5.6 million federal employees’ fingerprint images were stolen. Many biometric technologies transfer images over a network and store them in databases, both of which are potential attack surfaces. Encryption can make that process more secure, and IT admins should make sure database servers are regularly patched. To more easily manage biometric data, IT can also integrate its storage with existing directories such as Active Directory.

Other variables also reveal biometric technology’s weak spots. Scanner hardware can malfunction if it gets smudged or scratched. Recognition software has yet to mature, so it can misread an image and block access to the authorized user, for instance.

Vendors that offer biometric analysis software, scanner hardware and industry-specific authentication suites include M2SYS Technology, Bio-Key, Animetrics, Visidon, ImageWare Software, plus larger tech vendors such as Samsung and Fujitsu. Fingerprint authentication will make up the large part of mobile biometrics for now, particularly on smartphones, according to Juniper Research. But the market is slowly maturing beyond that. Touch ID is only a couple years old, so it’s sure to see advancements in the coming years. Android offers some app-level biometrics, and users can download biometric authentication apps such as AppLock to implement face- or voice-recognition features.

Annual revenue from mobile biometrics will jump from $1.6 billion in 2014 to $34.6 billion in 2020, according to a June 2015 Acuity Market Intelligence report. As the next decade nears, and if biometrics vendors can work out some functionality kinks, more IT shops will surely consider biometric authentication as a way to lock down employees’ mobile devices.

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The Wonderful World of Web Apps

Web apps are often left out of the application conversation, but they can actually be quite handy—with the right setup.

LOVE THEM OR hate them, Web apps are here to stay. Unlike native mobile apps, Web apps run in an Internet browser and don’t live on an endpoint device. In this age of “app-ification,” where IT shops are trying to turn every business process into a native app for smartphones and tablets, it’s almost strange that we even have Web apps.

But there are plenty of ways to make Web apps useful for employees and customers. They work across any mobile platform, help overcome local device storage limitations and give IT free reign over deployment and update schedules.

GOT STORAGE?
Any application that’s designed for a large amount of people is a great example of when to use Web apps. Mobile storage is notoriously overpriced, and many users spend a lot of time managing the preciously small amount of storage on their phones.

Web applications are helpful here because businesses can reach their customers easily without having to drop a storage payload onto their mobile devices. For enterprise developers, this approach would be especially useful in environments where users have lower-level phones or other devices with minimal storage available.
TOO MANY PLATFORMS, TOO LITTLE TIME
These days, it’s tough for app developers to keep up with all the mobile OSes and their different versions. Some organizations have large mobile development staffs. Some use write-once, deploy-many tools. Some use zero-code or application refactoring offerings. And others just lock onto one or two platforms (usually Apple iOS and/or Google Android). But whatever your most carefully laid plans are, it’s sure that your users will bring in a variety of OSes and device types.

Web apps are a great solution to the problem of too many platforms, because they are inherently platform neutral. Fully responsive Web apps can make business processes accessible to people regardless of what device and OS version they have. This approach can significantly cut down on development costs, because developers only have to code the application once.

FREE TO DEPLOY
One of the other big advantages to Web apps is that IT doesn’t have to rely on third party processes such as Apple’s App Store approval that might dictate the release schedule. Plus, when you update Web apps, there’s no action needed on the part of the user; they’re webpages, and the most recent version just appears when a user visits or refreshes them. Of course, IT does need to agree upon some sort of release schedule together with its counterparts in other areas of the business.

Additionally, if you provide the same Web app to both your employees and customers, you can deploy and update it internally and externally simultaneously. In some cases, the two versions can be markedly different for some time if customers don’t update their apps frequently on their own.

THE TRADE-OFFS
There are some trade-offs to consider before deciding to go the Web app route. First, with most Web apps, you won’t have any native capabilities. Some HTML5 Web apps allow for native integrations, such as the ability to scan a barcode with the device’s camera, but HTML5 is not yet universal. Thirty-nine percent of developers are using HTML5 to design Web apps, but only 14% in 2015 said it was their primary Web app development technology, according to a Strategy Analytics survey.
So in general, if you are looking to design an app that uses voice or video capabilities built into a device or OS, for example, then Web apps are not the way to go. One example of this type of app would be sales reporting. Salespeople travel a lot, so it’s much easier for them to make a quick voice note and send it to the office rather than taking the time to fill out forms. With a Web app, this isn’t nearly as feasible as it is with a native voice-recording application.

Second, Web apps require constant Internet connectivity. This means that there is no local caching capability, and it is tricky to use a Web app in an area with intermittent Wi-Fi and/or 4G like a moving train. Also, these apps tend to be data hogs because they are constantly transmitting information back to the data center server. Before deploying a Web app for use outside the office, consider those mobile users who don’t have high-capacity data plans.

Third, it is very easy for Web apps to be out of sight, out of mind. One of the advantages to having a native app is that the icon is always visible to the user on their phone’s home screen. With Web apps, users can create a home screen icon for a specific webpage from their browser, but that only works with the mobile device’s native browser (Google Chrome on Android and Safari on iOS). Because of that inconvenience, you risk losing much of the repeat usage that is paramount to application success. IT has to find a way to establish and maintain a strong user loyalty to get them to keep coming back.

In today’s “app-ify everything” mindset, it is very easy for Web apps to get lost in the shuffle; they’re not something you can just download from public app stores. But for certain types of apps and users, they can bring a tremendous amount of value to your organization.

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What’s Next for EMM?

The enterprise mobility management market has matured and consolidated quickly, but EMM has a lot more up its sleeve.

Enterprise mobility management, or EMM, is easily the most visible segment in the enterprise mobility software industry—but also one of the most competitive. The global market for EMM is healthy and gaining momentum in 2016. Its compound annual growth rate is 17.7%, growing from $1.27 billion in 2014 to $2.85 billion by 2019, according to VDC Research’s forecast.

EMM has to be a group effort

Competition in the EMM market has led several vendors to alter their business strategies. Good Technology shelved the IPO it had planned in 2015, and BlackBerry ultimately acquired the company. Dell reorganized its software group and saw little traction with its EMM suite. SAP’s enterprise mobility offerings also appeared to stumble; the company...
rebranded its legacy Afaria mobile device management tool as Mobile Secure and merged its mobility team into its telecommunications organization.

Other tenured technology vendors are making progress in the EMM market, however. IBM and Microsoft, for example, are figuring out how to work closely with device manufacturers, security vendors and other partners, all while expanding their research and development budgets and shortening their product innovation cycles.

As a result, IBM and Microsoft get their respective MobileFirst and Intune products to market more quickly than other vendors and have firmly established themselves in the EMM market. Incidentally, both companies are gradually blending their traditional endpoint

Global EMM Market Growth

management products (IBM’s Endpoint Manager and Microsoft’s System Center Configuration Manager) with their EMM platforms. This trend is important to watch in the coming years as differentiation is becoming difficult for EMM vendors to achieve—mainly because there are only two mobile OSes IT shops typically have to manage, and not a lot of room for diversifying the features that do so.

Going forward, it will be critical for EMM vendors to continue to partner with value-added resellers and systems integrators to grow their global market share.

**NEXT UP: CROSS-PLATFORM CAPABILITIES**

Although iOS and Android are dominant, it’s common for most organizations to have a diverse range of devices—making it critical for IT to implement tools that can flexibly manage multiple OSes and device types.

In this vein, I expect to see EMM vendors focus on developing capabilities to support an increasing range of endpoints, even including ATMs, kiosks, vending machines, parking meters and cash registers. The transition will not be easy for smaller, EMM-focused vendors that will find themselves in direct competition with much larger next-generation endpoint management vendors.

To better manage mobile access and maintain compliance, identity management will be an important part of EMM going forward. Mobile data regulations in sectors such as healthcare and government will require that companies know exactly where their data is stored, who is transferring it and what its level of encryption is.

The Health Insurance Portability and Accountability Act, for example, mandates strict security requirements for electronic protected health information (ePHI). Unauthorized disclosure of ePHI is a big risk with mobile devices because they are portable, sometimes lack password protection, and sometimes connect to unauthorized Wi-Fi networks.

EMM vendors have relied on identity management vendors such as Centrify, Okta and Ping Identity to augment their own platforms’ security, but I expect they will abandon this strategy and develop built-in capabilities to provide better identity and access control.

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Three Steps to Mobile Success

To realize mobility’s true potential, organizations must prioritize initiatives that support business objectives.

IT’S 2016. The world is mobile. Most companies offer email access and a handful of other apps. But few have taken the plunge to become truly mobile enterprises, where employees can consume a majority of their companies’ applications and services on their devices of choice.

Why is getting there so hard? In the past, mobility was a second-class citizen. Devices didn’t offer the processing power, screen size or input mechanisms to get real work done. But today, the lines between PCs and mobile devices have blurred. There are still differences between PC and mobile operating systems that require companies to write separate versions of applications for mobile use, but even this challenge will slowly fade away.

At least one company, Microsoft, presents a vision in which developers can write once for the Universal Windows Platform and the applications run on all Windows 10 device types, including smartphones, tablets, PCs, XBox and HoloLens.

What’s really holding organizations back is that a successful mobility initiative requires changes to overall business processes. It’s about moving beyond replicating or extending PC apps and instead taking advantage of all the new features and functions that mobile devices provide, such as location awareness, messaging and image capture.

Here are three steps companies should take to get started:
1. **Identify how mobility can affect the company’s key performance indicators (KPIs).**

   Every organization has a set of quantified annual goals regarding operating costs, revenue and other metrics. IT and the app development team should work with each business unit to understand how mobilizing apps and workflows can better support these goals. Examples include better collateral distribution for sales, updated field service apps to increase productivity and improved billing software to reduce the number of customer service calls.

2. **Prioritize mobility projects.** Once IT identifies the projects that could potentially move the needle for the company, it must rank them on these criteria: effect on KPIs and business value, technical feasibility and organizational readiness.

   For example, it’s a great idea to improve the customer experience (and therefore drive business value) by enabling mobile point of sale. Doing so requires upgrades to certain systems, however, so IT must then assess its readiness for these tasks. If the company doesn’t have the budget or a scheduled project to make those upgrades, the work won’t happen.

3. **Don’t get hung up on app development.**

   There’s no one-size-fits-all way to build and deploy mobile apps. A company can adopt mobile versions of vendors’ software, purchase software-as-a-service apps or build its own, which could be native, cross-platform or responsive Web apps. Most organizations will use a combination of off-the-shelf and in-house apps.

   What’s important is figuring out what each app’s tasks are and what data needs to be accessible. These answers make it easier to select the right model for each type of application. For example, viewing a static schedule might be a reasonable experience to offer on the mobile Web, but an application that requires data from several back-end systems should be a native experience.

   These are just a few steps that a company should complete to become a truly mobile enterprise. The keys to success are defining how mobility will offer business value, building a few quick wins to drive user interest and constantly iterating on apps to support KPIs.

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Unified Endpoint Management

A new approach to managing mobile devices and PCs is gaining momentum, but it relies heavily on how the EMM market shakes out.

**WITH TODAY’S TRENDS** of device proliferation, platform heterogeneity and cloud computing growth, it makes sense to use one platform to control as much of the end-user computing experience as possible. Enter unified endpoint management.

Unified endpoint management is the process of configuring, controlling and securing mobile devices and traditional PC clients all from one platform. It’s just beginning to emerge, and we have to consider the technology in the context of enterprise mobility management (EMM) offerings, because those tools are the natural building block for unified management and are still in their early days. IT departments want to consolidate their management tools, and vendors that offer EMM capabilities want to bring PC management into the fold to meet those needs.

**HOW UNIFIED ENDPOINT MANAGEMENT CAME TO BE**

Soon after Apple iOS and Google Android opened up to third-party mobile device management (MDM) software, it became apparent that managing mobile devices is quite different from managing desktops. Mobility brought new challenges, particularly around corporate and personal content coexisting on the same devices, which were often owned by employees. IT needed a way to secure corporate data...
without limiting personal usage of devices, all while keeping track of multiple operating systems and potentially risky apps.

As a result, comprehensive EMM now goes beyond MDM to include application management, enterprise file sync and share and more complex capabilities, such as containerization technologies that separate work and personal data on managed devices. By adding PC management, the unified endpoint management approach can help IT handle everything from mobile device data and apps to traditional desktops and laptops.

More recently, another trend has helped enable unified endpoint management: Mac OS X and Windows 10 now have built-in MDM APIs. With this development, even EMM vendors that don’t provide traditional desktop management still have a way to manage PCs. The caveat with the MDM APIs in desktop OSes, however, is that they can only manage the simplest desktop applications and cannot provision complex legacy apps. For most enterprise use cases, IT still needs traditional client management for PCs.

WHERE UNIFIED MANAGEMENT STANDS

The challenge is clear: An ideal unified endpoint management vendor would provide all the traditional client management features companies have used for PCs for years, as well as provide a reasonable range of more advanced EMM features.

Today there are many vendors that provide at least some form of management for both PCs and mobile devices, but often they’re stronger in one or the other. For example, many EMM vendors can only manage PCs with basic MDM APIs, and many PC management vendors can’t support more advanced mobility scenarios like containerized apps on unmanaged devices. There are only a few vendors, such as Microsoft and IBM, that are strong in both categories.

This disparity may not be a huge problem, however. Again, consider the context of overall EMM adoption: It’s still early days, so there’s plenty of time for unified endpoint management offerings to mature. Plus, there
are practical limitations to how much management can really converge. There are many specialized tasks that only apply specifically to either mobile devices or PCs.

As more work takes place on an array of different mobile devices and cloud applications, companies also need to deal with several other technical challenges. IT administrators have to ensure they can provide users with the right apps for different platforms, including mobile apps, Windows apps, Mac OS X apps, and Web apps, so admins will need unified endpoint management to push apps to all of a user’s devices at once. Companies will also have to get data to all these devices at once, using enterprise file sync and share. Most importantly, IT will need to manage when and how users access all of their resources, using identity and access management software.

The key to making all this work is getting all these layers to be aware of each other and work together as much as possible. Unified endpoint management is one step in that direction.

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Microsoft Surface Book

This laptop could give other manufacturers a kick in the rear when it comes to making killer hardware for Windows 10.

**WHY BUY:** The Surface Book is simply the best 2-in-1 laptop money can buy. It’s powerful, and nobody will beat Microsoft when it comes to display and build. Think of the device as a 13.5-inch Surface Pro 4 tablet mounted on a full, detachable keyboard that includes an extra battery and a dedicated Nvidia GeForce GPU on most units. That makes it ideal for editing 4K video, 3D modeling and even gaming. The well-crafted hinge attaching the keyboard to the removable screen is perhaps the Surface Book’s defining trait, and it raises the bar for future PCs.

**PRICE:** The laptop starts at $1,499 for a sixth-generation Core i5 unit with 8 GB of RAM and 128 GB of storage. The GPU costs at least an extra $400 and includes a 256 GB solid-state drive (SSD). The most expensive Surface Book sports a Core i7 processor, 16 GB RAM, dedicated GPU and 1 TB SSD—for a whopping $3,199.

**SPECS:** The Surface Book has a 13.5-inch display built on Microsoft’s PixelSense platform, which provides a multiuser, multi-touch screen. The 3000 x 2000 resolution display results in a density of 267 pixels per inch, which is slightly more than Apple’s iPad Pro. The laptop measures 12.3 x 9.14 x .51-.9 inches and starts at 3.34 pounds, including the keyboard.

**ENTERPRISE PROS AND CONS:** The Surface Book may be fancy, but it’s still a PC—utility and all. It runs Windows 10 Pro, features two USB 3.0 ports and a full-sized SD card reader, and it ships with the excellent Surface Pen. The screen can detach and operate as a standalone tablet, or it can fold directly onto the keyboard, making for a thicker and more stable tablet. The added keyboard battery should power the Surface Book for a full day of use. Plus, enterprise IT will like the Surface Book’s support for Windows Hello, Microsoft’s facial-recognition camera for user authentication and access control.

Still, most business users don’t need a dedicated GPU for day-to-day tasks, and a Surface Book without one is really just a larger and pricier Surface Pro 4. Businesses should also be cautious adopting a first-generation product before Microsoft works out all the kinks. Look past its ambitious specs, and businesses will find cheaper options that function just as well.

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Stop Trying to Make Refactoring and VMI Happen

App delivery methods such as refactoring and virtual mobile infrastructure are still niche, and they’ll probably stay that way.

**APP REFACTORING, VIRTUAL** mobile infrastructure and desktop virtualization all appear to be candidates to help IT administrators deliver traditional PC apps to users on their mobile devices.

The reality, according to Matt Kosht, an IT manager based in Alaska, is that none of them is really a viable option for large-scale deployments. App refactoring is not mature enough yet, and virtual mobile infrastructure (VMI) is very niche. Desktop and app virtualization on mobile devices can’t hold a candle to what enterprise mobility management (EMM) tools can do, either.

Here, Kosht dishes on these app delivery techniques, including why most simply aren’t practical despite a few potential use cases.

**What does modern mobility mean to you?**
Being able to get to your data wherever you happen to be.

**What is the current state of app refactoring?**
It’s just one of those things that sounds awesome on paper, but the reality is pretty different. It’s got some appeal with the one or two legacy apps you’ve got laying around that you really want to push out in the field and not
have to completely rewrite. I don’t know how much it’s really going to result in the actual uptake of people saying, “I’ve got a 20-year-old app I want to make mobile.” At that point, maybe it’s just time to rewrite it.

What do you think is the best use case for app refactoring?
A [desktop] app you’ve written in house [is] really important, and you want to get it out there without having to pay an iPhone or Android developer [to rewrite it as a mobile app].

The other one is … you’ve got this Windows app you’d like to put out there, and you only need a couple of [features] on it. You only need to take a sales order, [for example]. You literally just carve out the one thing you need and not the entire application.

What’s the current state of virtual mobile infrastructure?
You ever see the movie Mean Girls? Remember how the queen bee says, stop trying to use that word, it’s never going to be a thing? VMI is like that. It’s a niche in a niche in a niche.

Just because you’re remoting an Android [app] in the data center, it doesn’t make it more secure. In fact, it might make it less secure because you’re giving someone a direct path to your data center if you’re not planning [app security] carefully.

What about Windows desktop and application virtualization on mobile devices?
The arguments for app virtualization on other platforms like Windows desktops are it’s easier to deploy, there’s less regression. That isn’t really much of an issue on a mobile platform. Maybe Android, because there’s a lot of fragmentation with the OS. But for the most part, apps are already running in containers on Android and iOS anyway. They’re already effectively isolated from each other.

As far as desktop virtualization … EMM has pretty much ended the need for that. You can pretty much isolate app by app now, and to me that’s a lot more attractive than having to take the whole phone and draw a line down the middle of it and say, ‘here’s your personal VM, and here’s your work one.’ I just don’t see the

LISTEN to the full interview on the Modern Mobility Podcast.
appeal with EMM tools being at the mature level they are.

What is your favorite movie?
2001: A Space Odyssey, because a computer is one of the central characters.

What is the best dish you can cook?
I make a mean spaghetti and meatballs.

If you could travel one place in the world, where would you go?
Munich for Oktoberfest. Beer and food: Those are my hierarchy of needs. Beer, food and technology. I’ll let you arrange them.

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Don’t Get Left in the Cold in 2016

It’s hard to keep up with everything that’s going on in the quickly expanding universe of enterprise mobility, but these four conferences in the first half of the year can help.

● **IBM InterConnect**
  Feb. 21-25
  Las Vegas

IBM’s cloud and mobility event offers sessions on app development, mobility management and security using the MobileFirst Platform. The company left attendees puzzled last year when it glossed over its big partnership with Apple; now that the vendors have more than 100 business apps, they may get more attention when the conference returns to Vegas.

● **Mobile World Congress**
  Feb. 22-25
  Barcelona
  [mobileworldcongress.com/](http://mobileworldcongress.com/)

Mobile World Congress drew more than 94,000 attendees in 2015, and 40% of them came from outside of Europe. The event includes 20 keynotes, with talks from the CEOs of Cisco, Huawei and Ericsson. Sessions on enterprise wearables and the Internet of Things are sure to pique the interest of IT pros.

● **Mobile First**
  May 16-20
  Location TBA

MobileIron’s annual user conference gives customers a good chance to get better acquainted with the enterprise mobility management (EMM) vendor’s latest updates. CEO and founder Bob Tinker stepped down in January, so this year’s event will be an opportunity for the new leadership to unveil its strategy.
Desktop virtualization and mobility are crossing paths more than ever, as IT administrators look for secure ways to deliver apps to mobile devices. At Citrix Synergy, attendees will learn about everything from desktop as a service to file sharing to mobile-friendly workspace management.