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White Paper
The Mobile (R)evolution
Choosing the right road to mobile enablement

Executive summary

Mobility is a technology that has quickly become an intimate part of daily life, with adoption and popularity going nowhere but up. Though mobile's roots may have started in the consumer world, its uses have been spilling over into the business environment for some time now and show no signs of slowing. Employees increasingly expect the technology in their work and personal lives to mirror each other, and companies are anxious to exploit the benefits of mobile enablement. The research firm IDC predicts that worldwide IT spending will be up 5.7% in 2013, with investments in smart mobile devices accounting for nearly 57% of that growth.[1] An executive survey of CIOs by Gartner also showed that mobile will be a priority. Fully 70% of CIOs cited mobile technology when asked which digital technologies would be most disruptive (the latest industry buzz-word for game-changing).[2]

But what started as a revolution is now transitioning to an evolutionary phase. Capabilities like mobile access to email and even to some core systems, such as travel and expense management, have become an assumed part of doing business. However, that certainly doesn't mean the time has come to "tick the mobility box" and move on. In fact, many companies are viewing mobility in the exact opposite light. With technological advancements throwing fuel on the fire of what's possible, they are instead looking to take the next step on the mobile evolutionary scale.

What remains less than clear for many is what that next step should be. As the use of smart devices has grown, CIOs have focused more on issues such as security, fragmentation, and cost versus savings. While these efforts are clearly legitimate, they ultimately make only a small dent in the larger goal of using mobility in transformational ways. And vendors within the mobile technology landscape for the most part aren't making things any less complex. Following the recent Mobile World Congress show in Barcelona, one blogger noted "a sense of panic, chaos and bewilderment in an industry that seems befuddled by conflicting standards."[3]

Table of contents

1   IDC Press Release, "IDC Predicts 2013 Will Be Dominated by Mobile and Cloud Developments as the IT Industry Shifts Into Full-Blown Competition on the 3rd Platform", November 29, 2012. http://www.idc.com/getdoc.jsp?containerId=prUS23814112#.UUi67RyG16w

2   Gartner Press Release, "Gartner Executive Program Survey of More Than 2,000 CIOs Shows Digital Technologies Are Top Priorities in 2013", January 16, 2013. http://www.gartner.com/technology/pressRoom.do?id=2304615

3   The chaotic world of mobile, February 28, 2013; www.evilplans1.worldpress.com

So is the key to success with mobility essentially tied to betting on the right horse? In part, yes. Clearly, choosing standards that will stand the test of time and working with vendors who have the resources and vision to support your goals over the long haul are important factors. However, building a mobile strategy certainly should not be left to chance. To transform mobility from a convenience technology into one capable of changing the game, companies need to put the power of mobile in the hands of business users.

In this white paper, we'll examine some of the new capabilities resulting from a rapidly advancing mobile technology ecosystem, what factors are most critical to consider when building a mobile strategy, and how you can get the greatest return on your mobile technology investments.

Understand the destination

There's an old saying that goes: "It's better to have travelled hopefully than to have arrived." The idea that the possibilities are endless—and that imagining them is almost half the fun—is very applicable to the mobile industry, as it stands today.

It was the early part of the 2000s when mobile began to take hold in the business world, with convenience as the driving factor. Employees who were previously tied to desks could now carry email in their pockets, and employers could create an environment where people were rarely completely out of touch. There's little question that these initial forays into mobile-enablement have gradually built up a tolerance to constant connectivity.

Truthfully though, we haven't really come as far as one might think. For the most part, employees are still tied to a desktop or laptop when it comes to performing the core tasks required to get their jobs done. That's because although mobility has fully permeated our methods of communicating with each other, it has yet to breach in any wholesale way the walls around the heart of most businesses—core organizational systems like enterprise resource planning (ERP), supply chain management (SCM), human capital management (HCM), and financials. While there have been good reasons for approaching this concept with caution (security, technological limitations), the barriers are quickly falling away, making the integration of mobility with core systems the next frontier of mobile-enablement in a business environment. In research on the potential of mobility, McKinsey & Company noted:

"Mobility—rising from its humble beginnings—is on a roll, driven by ever-higher-performing smartphones, tablets, and other devices enabled by 3G and 4G networks, as well as an explosion of innovative applications. Indeed, we believe that enterprise IT is on the brink of a revolution that promises to boost productivity by expanding office functionality beyond the brick-and-mortar location."[4]

The extension of core systems to mobile devices is creating compelling new efficiencies. Increasingly, companies are mobile-enabling their core business systems and allowing employees to perform a wide-range of tasks using their mobile devices. Everything from approving purchase orders to making decisions about production can be done from the palm of one's hand. Businesses are also turning to concepts from the consumer world, with efforts to develop mobile applications (or apps) that integrate with and extend the value of existing organizational systems growing rapidly. These apps marry core business functions with mobile devices to provide untethered connectivity, allowing people to work in ways that were previously not possible.

4   Mobility Disruption, a CIO Perspective, September 2012, McKinsey & Company, www.mckinseyquarterly.com

These trends are changing the very foundation of the way work gets done. Below are just a few examples of how companies are using mobility to develop potentially game-changing capabilities:

- **Location**—Location is beginning to define mobile experiences, with users' back drops now providing the context for the way they interact with data. Location and mapping technology is now being combined with data from core systems to deliver capabilities unique to mobile devices, such as mapping all customers within a sales rep's physical location or interacting with public sector assets through their location, as opposed to asset ID.

- **Alerts**—Mobile devices redefine the way we receive and take action on alerts. Gone are the days where alerts and tasks would pile up while away from the office. Now, mobile devices are able to distribute pressing information in the moment, allowing users to remain informed on daily business processes and increase response times. The combination of mobile applications and alerts allows users to go from knowing something to doing something.

- **Design**—Mobility has sparked a revolution in software user experiences that is providing lean, efficient, and interactive interfaces suitable for even the most novice of users. Because of bandwidth limitations for wireless networks and the minimal amount of real estate on smart phone screens, mobile apps are designed to be minimalist, showing only the most critical information and functions. This user-driven approach has resulted in a number of benefits, like lower training costs and a wider audience of potential users, but has also made it possible to mobile-enable functions previously thought too complex for mobile devices. Analytics is one example. BI tools are becoming more user-friendly and sophisticated at the same time that mobile devices are increasingly able to deliver the information they provide in a digestible way. The result is a greater ability for employees to analyze issues and take action wherever they are, making decisions based on accurate, up-to-the minute information.

- **Field-empowerment**—The ability to marry actions that take place in the field with back office systems is an imminent reality that represents a shift in mobility's purpose. Originally thought to be primarily a vehicle for delivering existing business data, mobile devices are quickly becoming a vital channel for enriching it as well. The potential applications are vast and cut across a wide variety of industries and job types. From insurance adjusters who can take pictures and upload them into claims systems, to manufacturing production managers who can input data from the floor, work is changing. Productivity stands to make the most siginificant gains.

- **Social business**—The use of social concepts, another area experiencing rapid growth, is also accelerating business collaboration through mobile devices. Drawing on a concept from the world of social media, employees can "post" information from any point in their day, capturing events as they occur and adding rich media for more detail. For example, a field service technician can post a product defect while on-site with a client, capturing a photo or short movie to provide valuable insight to the engineering team in the office. Or a sales rep can "follow" a top customer, receiving notifications when sales orders are placed, support issues are logged, etc.

Plan your route

If there's little doubt about the potential of mobility, there's a great deal of debate about the best way to get there in terms of being mobile-ready. Much like using Google Maps™ or taking your chances with Apple's Maps, there is more than one suggested route, and various factors will dictate which is best for your business.

Both software vendors and consumers of this technology have visions of creating App Store℠-like environments where apps can be downloaded and deployed with the touch of a button. While downloading a mobile app for your business will likely never be as simple getting the latest version of Angry Birds™, the marketplace model for business is beginning to take hold, with many startups attempting to deliver enterprise-grade solutions. As this continues to advance, software vendors will provide simple, pre-configured apps through the major marketplaces to provide customers with basic mobile functionality on-demand.

In the face of such a rapidly changing mobile marketplace, most businesses begin their mobile journey by crafting a mobile app strategy for relevant lines of business, with apps typically separated into two distinct categories. The first is the licensed, pre-packaged variety, with apps that are fixed in function and delivered out of the box by software vendors. Often deployed by companies with a limited ability to undertake custom mobile app initiatives, these applications typically offer stable integration and pointed functionality to solve a specific business problem. Because they must appeal to a large enough base of customers to be commercially viable, the functionality they deliver must also be reasonably generic in nature. If you need "a little extra air in the tires" to extend the app's functionality to fit for your business, you'll likely find that the enhancement is either not possible or is cost prohibitive. Further, some businesses require customization in their mobile app strategy, so they can more closely align with niche business processes.

For these reasons, companies with more mature mobile strategies are increasingly employing apps that fall into the second category—custom mobile apps developed to align with specific business needs and processes. The benefits of this approach are clear. Custom mobile apps are better able to meet specific business needs and timelines, which results in greater agility, increased responsiveness, and more opportunities to generate ROI. In a recent study about mobility, Forrester Research noted:

"eBusiness professionals with more experience are more likely to build in-house. They understand that mobile services cannot be one-off projects. Mobile services are assets, touchpoints, channels, and more that require infrastructure and ongoing maintenance and improvements. They also use consultants or agencies but lean toward custom builds to get the most out of the medium."[5]

Where the rubber meets the road with customized mobile apps is with supporting the integrations and complex security scenarios required to make them viable. The technology infrastructure, expertise, and resource requirements can be difficult for organizations to take on initially and should be viewed holistically as a business transformation to be done over time.

Certainly, both the customized and packaged app options have merit, with the optimal approach often coming from a middle of the road strategy based on the following guiding principle: Mobility should not disrupt the IT ecosystem of a business. Rather, it should expose the value that already exists within it.

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5   "How sophisticated is your approach to mobile?," Julie Ask, Forrester Blog, November 2, 2012. http://blogs.forrester.com/julie_ask/12-11-02-how_sophisticated_is_your_approach_to_mobile

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The key to unlocking that value is achieving the necessary collaboration between business unit leaders, field-level users, and IT enablers. Mobile apps will only be able to deliver the greatest value once the intersection between mobile capabilities and the problems a company is trying to solve are clearly understood.

Choose the right vehicle

Integration has long been the fly on the dashboard of the enterprise software market. Evolving capabilities and a rapidly changing software vendor market have left most companies with incredibly complex technology landscapes. Finding an organization with software systems all developed using the same vendor and/or platform is about as likely as a Yugo winning the Grand Prix. The integration question is, therefore, one of the first that needs to be addressed when building a mobile strategy, as your ability to support integrations between mobile apps and your core systems will be a key determining factor in both the types of apps you deploy and your overall success. According to research firm IDC:

"Though mobility brings immense opportunities, the complexities of deployment and integration cannot be trivialized. Dealing with multiple operating systems, providing secure access to enterprise data, developing and integrating mobile enterprise applications across multi-form devices are just a few of the many challenges that the IT organizations are grappling with."[6]

Just as advancing technology has caused many of the integration challenges that companies now face, it also offer options for solving them. Commonly known by the term middleware, integration technologies are designed to eliminate the borders that exist between disparate software systems, allowing them to exchange data and work together. Key benefits include streamlining disparate information sources and reducing the costs of engineering, implementing, and maintaining mobile apps. This means that IT can spend more time building solutions that align to business processes, while software vendors provide the integration technology necessary to make systems work together.

The problem is that middleware often comes with serious limitations. Complex coding requirements result in integration cycles that are lengthy, inflexible, and prone to failure when existing systems are upgraded or new ones introduced. Middleware solutions are also frequently viable only for a single vendor's applications, allowing for connection among the provider's solutions, but not extending out to third-party systems. This limitation, once again, simply does not reflect the reality of most companies' technology landscapes.

Recently, however, middleware technology has experienced a significant period of acceleration, eliminating many of these barriers. This next model of middleware uses an open architecture approach that relies on industry-standards like XML, rather than vendor-based ones, to create technology that is flexible and lightweight. Using this approach, disparate systems are loosely-coupled so they become compatible but not co-dependent. New technologies can be introduced and existing systems can be upgraded or even fail without taking other applications down with them.

The ease of integration delivered by this brand of middleware creates a much more open road for the development and deployment of custom mobile apps. With integration simplified and streamlined, companies are free to create apps that address their specific needs in a sustainable, cost-effective way.

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6 IDC Press Release, "IDC Finds Australian CIOs Preparing for the Mobility Integration Challenge with Security Top of Mind", March 5, 2013. http://www.idc.com/getdoc.jsp?containerId=prAU23988213#.UUi-nxyG16w

Get there safely

Another question that is top of mind for most CIOs when it comes to mobility is security—and with good reason. Protecting data exchanged through communications like email is one thing. Now businesses are making company information, previously secured by a firewall, available via mobile devices on the public Internet. Concerns about keeping this data safe have caused many companies to put the brakes on large-scale mobile initiatives, causing them to forfeit gains in productivity and information capture.

Software vendors understand that security is essential to making mobile technology viable, and their commitment to effectively addressing the security issue is demonstrated through the rise of multiple mobile security and management solutions, such as Mobile Device Management (MDM) and Mobile Application Management (MAM). While MDM solutions provide policy control of the end user's device, they risk being too generic when it comes to application-specific features that are often provided by a third party. MAM solutions offer the opposite, with a narrow focus on applications, but less richness in controlling the overall device. A mobile-ready business will ideally employ a mixture of both concepts, which means using device management tools that align to corporate data governance, while also using app-specific controls for a deep, functional level of control for line of business apps. The safest bet is to work with vendors who have the flexibility to embrace this type of hybrid approach.

In a recent article on building a mobile strategy, Deloitte recommended focusing on "likely incidents, rather than the full range of imaginable risks."

"The ability to authenticate users, control devices, provide end-to-end encryption, and run content filtering/malware protection, while also monitoring events based on pre-defined rules, is also cited as essential."[7]

One capability that will simplify security-related tasks is the ability to manage all permissions and view related alerts from a single location. Having this single view across the organization will consolidate management efforts, while helping to ensure consistency in a heterogeneous mobile app environment.

This is critical as businesses begin to rely heavily on best of breed solutions that incorporate multiple software vendors.

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7   6 Building Blocks for Enterprise Mobile Strategies, March 8, 2013, Deloitte, www.deloitte.wsj.com

Build your own map

Ultimately, constructing a plan and roadmap for mobile enablement must be viewed as an overall business transformation. It will require both time and input from various stakeholders, whether suppliers or consumers of mobile services. From identifying which business areas to target first to choosing a mobile platform and security provider, there are a host of critical decisions that will determine your direction. Taking the following steps can help make sure you find the right road.

- **Identify your objectives**—Setting clear goals for your mobile strategy will help determine your direction. Consider complex needs that are highly specific to your business and industry, and look to incorporate executive feedback as a starting point. Also, examine your device ecosystem (bring your own device, iOS, Android™) and assess impact as you proceed. You should also evaluate packaged apps from current software vendors, as they can fast-track your mobile strategy, offer a quick return on investment, and help demonstrate the power of mobile technology to business leaders who may be having difficulty understanding its value.

- **Examine the integration question**—Integration is the foundation of your mobile strategy, so evaluating your options for supporting mobile integrations to core systems is critical. If custom mobile apps are a priority, you'll want to ensure you can support the integrations required to make them successful. Exploring ways to more easily make your systems work together will likely have benefits that extend beyond mobile-enablement, as well.

- **Put security first**—Without a comprehensive, thorough, and proven approach to security, mobile initiatives are doomed to fail. You should start by examining current corporate governance around business data and factor in likely challenges, such as lost or compromised devices. You already have data security policies in place, and those should be used as a starting point. Doing so will put you on the right road and also help ensure that all compliance-related requirements are met. You are most likely to end up with a mixed approach using a combination of vendors providing best of breed functionality than to identify a one-size fits all solution from a single provider.

- **Focus on the user**—From a user perspective, mobile apps are all about convenience and usability; and thanks to our experiences as consumers, businesses now have to meet a high standard. Mobile apps only succeed if people adopt and use them. The top driver for usage will be the app's ability to align to real business problems and provide value-added functions that are only made possible on a mobile device. User experience is also critical, and design should be a driver in any packaged app's selection or custom app's construction.

- **Start small**—There are so many areas of your business that can benefit from mobile-enablement—from sales and production to operations and finance—that it can be difficult to know where to start. Consider the most frequent tasks that one particular set of key users perform every day and test the waters by mobilizing one or two of those tasks. Whether it's sending alerts or pulling up and modifying orders, a little can go a long way with mobile enablement.

- **Stay focused**—Once your mobile initiative is off the ground, expand your efforts, but focus on areas where mobile makes sense. Often, businesses confuse mobile-relevance with the needs of those who work outside the four-walls of the company. In fact, the best way to judge mobile relevance is to ask "who in this organization moves regularly?" Mobility, in essence, is providing data and backend services to those who are not stationary. If you continue with this thought, you may find that the nurse, the plant foreman, or the facilities engineer happen to be the most likely candidates for increased efficiency by way of mobility.

- Stake out your spot in the winner's circle—The biggest benefits of mobility are achieved when companies go beyond tasks to true business process reinvention, meaning that you must look beyond the data and processes that are currently automated and understand those that exist outside of existing software solutions. What are your mobile workers doing on paper? Could a simple and focused mobile app replace that manual process? Do you stand to capture key intelligence by mobile-enabling a particular task? Can you more easily collaborate around a given topic by making it an app? By focusing on those areas where mobile is likely to have the greatest impact, you'll begin to see real changes to the way work is done.

How Infor delivers on the promise of mobility

Infor is proud to deliver a unique combination in the enterprise software arena—solutions backed by decades of practical application and continually enhanced with the latest technological innovations. Infor's on-going investments in mobile technology are part of our commitment to extending the back office to any connected device—and changing the way work is done as a result.

Infor Motion is a mobile platform for deploying, managing, and building mobile applications that keep your company on the move. You get technology that lets you easily build and deploy custom mobile apps, as well as packaged mobile solutions that put information at your fingertips and increase the value of existing technology. We also offer mobile-enablement across major product categories like enterprise resource planning (ERP), enterprise asset management (EAM), expense management (XM), and financials. Some of our mobile offerings include:

- Infor Motion Road Warrior
  Act faster and work smarter with this specialized application that lets you take full advantage of your mobile device's capabilities. You can access critical customer information with embedded businesses intelligence anytime, anywhere, as well as capture information while out in the field.

- Infor Motion ActivityDeck
  Prevent bottlenecks in your business process through mobile alerts, approvals, and tasks delivered right to your smartphone or tablet device. You'll be able to take action on pending items and keep business moving.

- Infor Motion Shop Floor
  Manage production as it happens around you with untethered access to information via mobile devices. Give supervisors fingertip control of every point—whether it's materials, people, or resources—that touches a job on its way to completion.

- Infor Motion Warehouse Director
  Get real-time access to inventory information and drill down to details using your mobile device. You'll be able to make updates on the fly and manage warehouse operations while you are on the floor.

- Infor Motion Query & Analysis
  Approve transactions, drill down to transactional details, and monitor business performance anytime, from anywhere.

- Infor Motion Dashboards
  Get the information you need to monitor key performance indicators in a consolidated, user-friendly dashboard format that can be accessed on the go.

- Infor Motion Customer Lifecycle Management (CLM)
  Get real-time access to your Infor M3 CLM solution so you can collaborate with co-workers and work with prospects, customers, activities, and opportunities from the road.

The Infor Motion technology foundation—Infor ION

The foundation supporting Infor Motion is Infor's intelligent open network (ION) technology. Infor ION is purpose-built middleware that makes connecting disparate systems simple and straightforward. By drawing on open standards and widely supported data formats, this technology delivers integration out of the box, along with the ability to use information from many different systems simultaneously.

With Infor ION, you can implement a mobile strategy as a natural extension of your integration technology. You won't need to integrate mobile apps as yet another, unconnected technology because you'll have a seamless technology platform that encompasses the desktop, web, office, shop floor, field, and your favorite mobile device.

Infor ION generates value through a collection of interrelated technologies that combine to form a platform for faster growth and better performance across the enterprise. The elements of the Infor ION platform include:

- **Enterprise connectivity**—The connective technology behind Infor ION draws on a completely new approach to integration. In the past, enterprise integration took a hard-wired approach, similar to the old, analog telephone network. It was appropriate for systems of an earlier era but is too expensive and inflexible for today's requirements. Infor ION connectivity technology builds on the kind of freedom and agility represented by Internet technologies—flexible connections, open formats, and industry standard protocols. As a result, Infor ION supports advanced capabilities right out of the box for rapid integration, top performance, and easy scalability.

- **Business process workflow**—Because Infor ION communicates through an industry-standard, publish-and-subscribe process, the information it transmits can be harnessed to support advanced workflow and business process management. You can design and implement workflows in Infor ION to fit your business process so that you can standardize, monitor, and document the tasks that make the biggest difference to your business.

- **Event management**—Infor ION solutions can send alerts and route approvals to your desktop or to a mobile application to keep you fully informed and involved in your business process, no matter where you're located at any time of day.

Conclusion

Mobile technology has grown to be the most prevalent computing force in business today and is impacting the way people work at an unprecedented pace. With potential this great, but still largely untapped, mobile-enablement warrants the close attention of CIOs looking for ways to differentiate from competitors and achieve productivity gains that go beyond incremental. Mapping out your route and proceeding with a cautious but forward-thinking approach will ensure that your company doesn't get left behind at the new and continuously shifting starting line.

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Gold
Channel Partner

G⚙DLAN

641 Avenue of the Americas
New York, NY 10011
800-260-2640
infor.com

Godlan, Inc.
15399 Canal Road
Clinton Township, MI 48038
586.464.4400
info@godlan.com
www.Godlan.com

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