

For: CIOs

Wanted: Mobile Engagement Providers

by Ted Schadler and John C. McCarthy, August 6, 2013

KEY TAKEAWAYS

Desire And Complexity Will Create A \$32.4 Billion Mobile Services Market

Delivering a great mobile experience is among the most complex programs in your firm: Engagement technology, program execution, skills, and project fragmentation combine to generate huge complexity. CIOs and CMOs increasingly turn to vendors for help, thus triggering a new market for mobile services that will grow to \$32.4 billion in 2018.

Mobile Engagement Providers Need End-To-End Competencies

No single vendor can overcome the complexities of mobile engagement programs today. But after interviews with 79 firms and vendors, Forrester has spotted the outlines of a new category of supplier we call “mobile engagement providers” with the capacity and capability to be the long-term engagement partner you require.

No Vendor Has All The Skills Today, But Many Are Building The Core

Digital agencies, management consultancies, mobile specialists, product development specialists, systems integrators, and telcos all strive to deliver end-to-end solutions. No vendor does it all today, but hundreds of vendors are expanding their portfolios to win the chance to serve both business and IT owners with mobile engagement expertise.

Vendors Have An Opportunity To Be A “Provider Of Record” For CIOs

CMOs designate an “agency of record” to cultivate a long-term partnership with an agency. CIOs and their vendors don’t have this. To turn today’s project-led relationship into a “provider of record,” both CIOs and vendors must change: CIOs to expect and trust a partnership and vendors to adopt new approaches to staffing, managing, and monetizing.

Wanted: Mobile Engagement Providers

Tools And Technology: The CIO's Mobile Engagement Playbook

by [Ted Schadler](#) and [John C. McCarthy](#)
with [Khalid Kark](#) and Nancy Wang

WHY READ THIS REPORT

Building and delivering great mobile experiences will be the beating heart of your customer engagement strategy for the next 10 years. The challenge of making a simple, intuitive app that fronts a complex system of engagement will stretch the abilities and swamp the resources of most firms. For help, firms increasingly turn to vendors that possess a connected portfolio of engagement competencies and management skills. The result will be a new market for mobile engagement providers that will grow to \$32.4 billion by 2018. No vendor can do all of this today, but suppliers from six categories — digital agencies, management consultancies, mobile specialists, product development specialists, systems integrators, and telcos — are chasing the prize. The payoff for vendors that make this investment will be to earn a seat at your table as a long-term partner in your engagement success.

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Forrester interviewed 79 vendor and user companies, including Cynergy, Deloitte, HCL, and Razorfish.

Related Research Documents

[The Mobile Mind Shift Index](#)
April 19, 2013

[The Business Impact Of Mobile Engagement](#)
December 18, 2012

[Great Mobile Experiences Are Built On Systems Of Engagement](#)
November 16, 2012



DESIRE AND COMPLEXITY CREATE A \$32.4 BILLION MARKET FOR MOBILE SERVICES

Version one of your mobile app was just a standalone pretty face. But in versions two, three, and four, your mobile app will be the new face of a system of engagement, with a goal of helping people “take action in their immediate context and moments of need.”¹ This means solving a much bigger problem than shrinking down your website or screen-scraping your SAP system. It means serving customers and employees whose minds have shifted to expect anything, anywhere, at any time.² If version one of the app cost \$250,000, it’s not unusual for version two to cost \$2 million.

Most CIO and CMO organizations lack the skills and resources to do this well, so business and IT leaders turn to vendors to fill the skills and execution gaps. For example, in Forrester’s recent survey of mobile eBusiness leaders, 41% say that they will use a vendor to build apps.³ This call for help will trigger a new market for mobile service providers that will reach \$32.4 billion by 2018 (see Figure 1). Four dimensions of complexity fuel the need for this new market:

1. **Technology: Systems of engagement require a complex mix of technology components.**

Mobile engagement requires the most complex blend of technology that firms have ever had to deal with. To accomplish anything meaningful, a good mobile app must make use of device sensors as well as tie directly into your transaction and content systems of record (see Figure 2). A great app uses analytics to tailor the mobile experience to the specific context and needs of the person — on any device or platform they choose. Great mobile apps also incorporate information and services like mapping from Esri or payment processing from Square.

2. **Program execution: The shift of business, process, and technology means new requirements.**

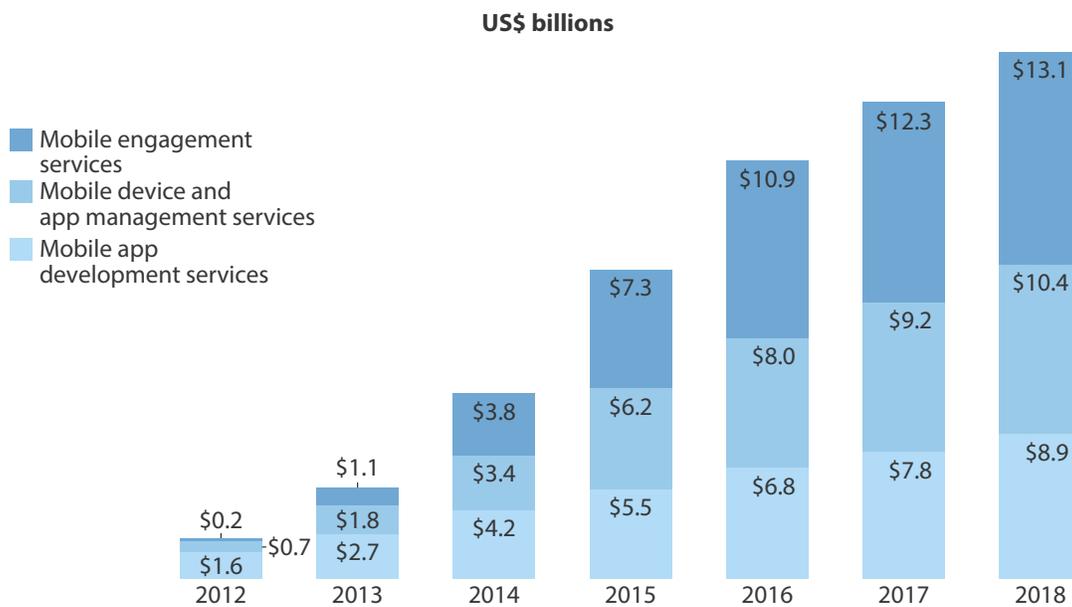
Mobile programs are complex and continuously evolving (see Figure 3). Change management starts with getting your business strategy and processes properly aligned to deliver the mobile service. From there, it leads to designing a great user experience, which requires task-oriented analysis and design-led development. Next is building secure, high-performance links to back-end systems and external services. Lastly, the app must work on the latest operating system releases at global scale. All these elements need to be managed individually and as an integrated mission as Cynergy did recently with an application for Verizon Wireless retail store staff.

3. **Skills and processes: The new requirements demand an integrated portfolio of skills.**

Building mobile apps is no longer a simple web-porting exercise. Good app development and delivery require a comprehensive set of proficiencies, including industry and process strategy, experience design, Agile development, systems integration, and testing and release practices (see Figure 4).⁴ These skills need to be clearly connected so that, for example, an experience designer doesn’t create an app interface that takes 10 seconds to load. This requires Agile development processes and linked skills. Most firms have only a smattering of these skills or processes today.

4. Vendor fragmentation: Buyers in every role turn to their favorite providers. CMOs turn to digital agencies like Razorfish and Ogilvy, while CIOs look to systems integrators like HCL and Accenture. Process owners use mobile specialists like field-service-focused TOA Technologies or Cynergy with its experience in retail. The result is a confusion of suppliers and technologies with little connection between them and often conflicting approaches. One global bank found it had 135 mobile projects in flight, with dozens of vendors involved. Chaos reigned. For the bank, the solution was to charter a mobile organization to rationalize budgets, projects, and vendors.⁵

Figure 1 Mobile Services Will Soar To \$32.4 Billion Globally By 2018



Mobile engagement services: This includes the complex services for building a full system of engagement: ethnographic research, experience design, mobile strategy, business process re-engineering, redesigning middleware, analytics, system consolidation, and upgrades to back-end services. Cloud delivery, third-party services, and platform operations are not included.

Mobile device and app management services: This includes the per-device fees for managing devices and the apps that run on them: mobile device management and mobile app management. It could include the setup and management of a corporate app store to manage app and policy updates. It does not include monthly telecom or wireless broadband expenses.

Mobile app development services: This includes developing and maintaining native and hybrid apps for smartphones and tablets as well as mobile websites, including responsive design. It also includes using existing APIs to provide connections to the back-end systems. It does not include experience design.

Figure 2 The Technology Of Mobile Engagement Is Complex, Interconnected, And Powerful

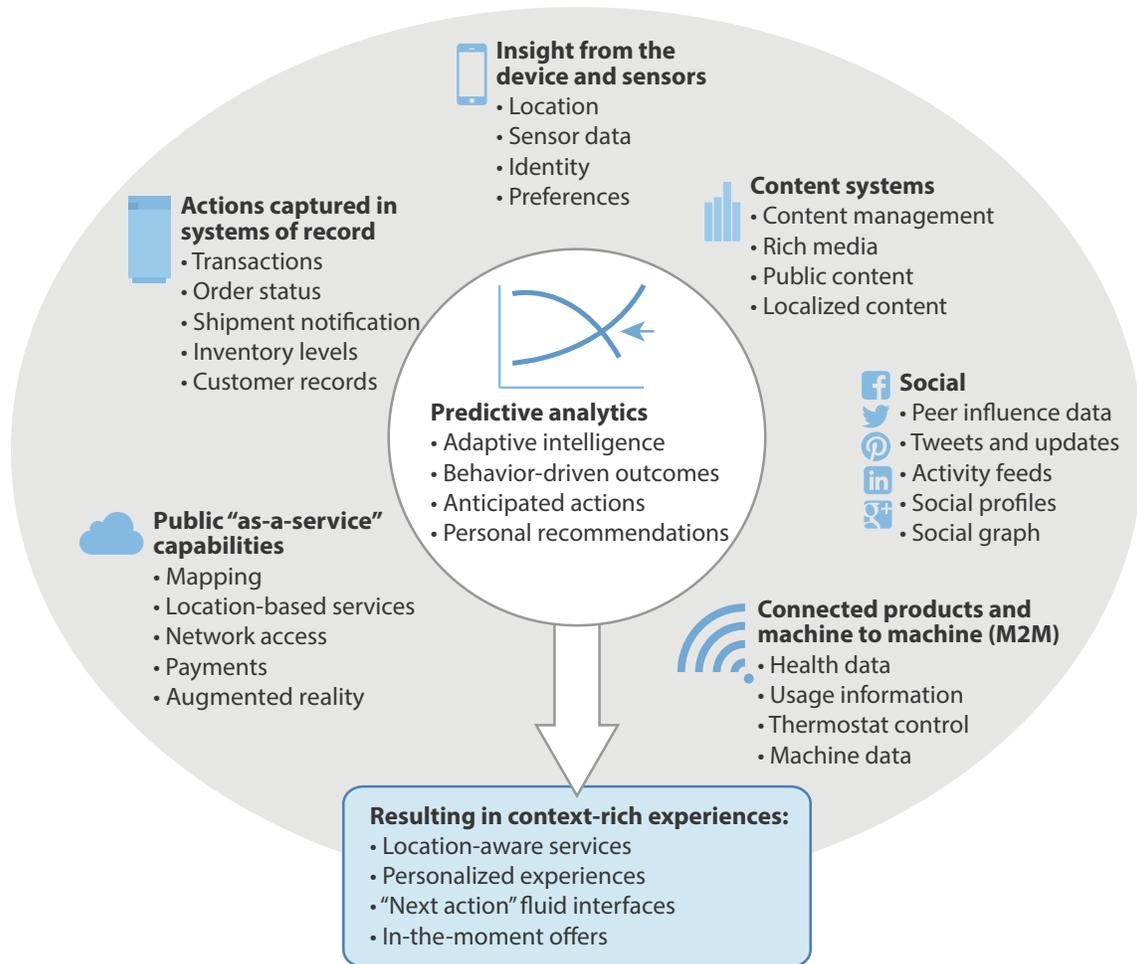


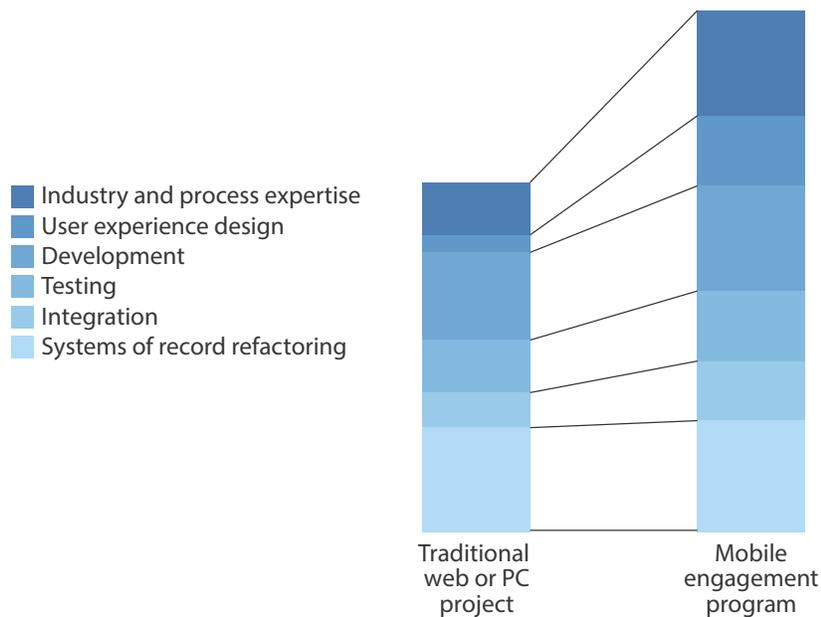
Figure 3 Mobile Engagement Programs Have New Requirements

Develop new business strategies and task-oriented processes.	<ul style="list-style-type: none"> • Determine how the app affects your business model and service strategy. • Identify how business processes are “atomized” to serve mobile users. • Understand the profiles and goals of different mobile constituents.
Deliver a compelling end-to-end user experience.	<ul style="list-style-type: none"> • Model the goals and tasks of users on smartphones and tablets. • Use device sensors to automate and accelerate manual data entry. • Rework back-end systems to meet users’ performance expectations.
Incorporate a rising number of internal and external service integrations.	<ul style="list-style-type: none"> • Choose cloud and SaaS providers to improve the mobile experience. • Build a four-tier engagement platform to handle the complexity. • Create, manage, and operate APIs to integrate external services.
Embed instrumentation and analytics to guide the next most likely action.	<ul style="list-style-type: none"> • Monitor apps for performance; track usage to fine-tune the interface. • Analyze content usage to optimize the use of images and video clips. • Build predictive models to translate context into custom experiences.
Support an escalating set of platforms, releases, and geographies.	<ul style="list-style-type: none"> • Implement the security and compliance requirements globally. • Improve development processes to accelerate global deployments. • Test on enough networks and platforms to cover your primary market.

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Source: Forrester Research, Inc.

Figure 4 Project Teams Will Need An Expanded Portfolio Of Skills



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Source: Forrester Research, Inc.

WANTED: A NEW BREED OF MOBILE ENGAGEMENT PROVIDERS

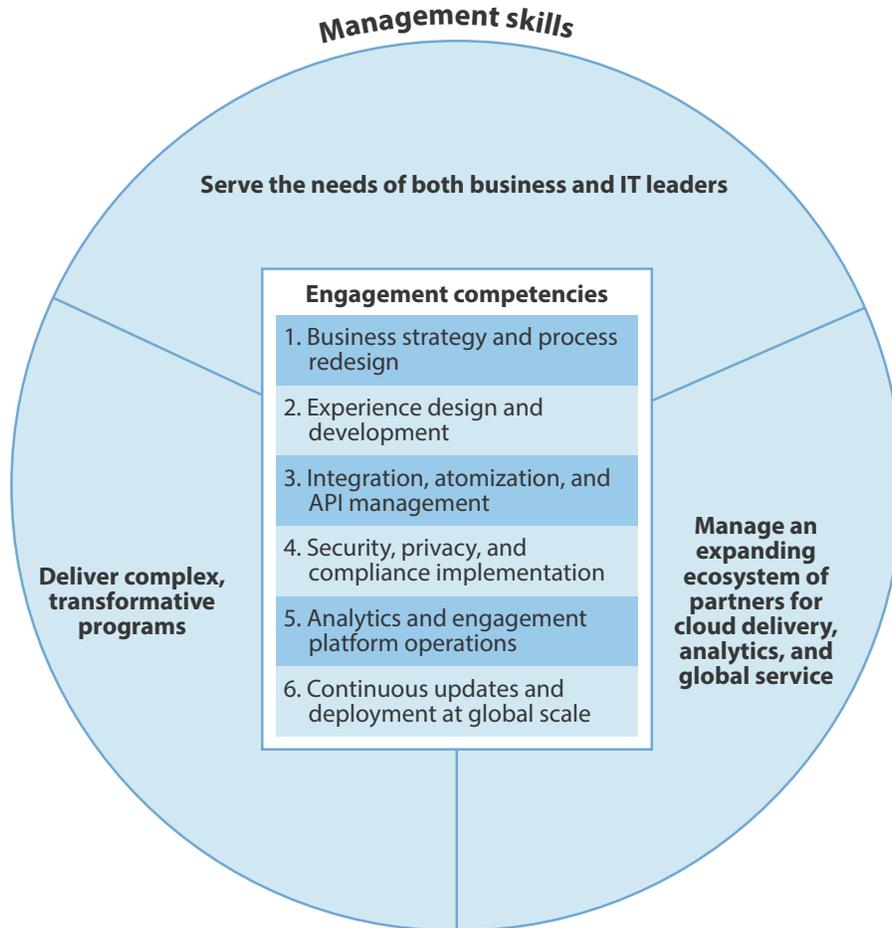
No single vendor can overcome the complexities of mobile engagement programs today. Each kind of vendor comes with its own baggage and biases, hard-earned in the pre-mobile era, complete with single-channel skill sets, waterfall development processes, and a focus on one buyer, either IT or the business. But firms need something more. After interviews with 79 firms and vendors, Forrester has spotted the outlines of a new category of supplier we call “mobile engagement providers” with the potential to be the long-term engagement partner that CIOs and CMOs require.

A mobile engagement provider has a complete portfolio of engagement competencies and management skills to help you build and deliver great mobile experiences at global scale.

Building and delivering great mobile experiences will be the beating heart of your engagement strategy for the next 10 years. Only in that way will your company earn permission to be present in someone’s pocket. To help you get there, you need mobile engagement providers with (see Figure 5):

- **Engagement competencies: spanning business, technology, and user experience.** To deliver simple experiences on complex systems of engagement, these providers need to stitch together a portfolio of competencies. From strategy through design to integration and analytics, mobile engagement providers will manage this expanded set of competencies end-to-end.
- **Management skills: for clients, programs, and partners.** Mobile engagement is not a project. It’s a long-term program of activities, operations, and releases. So CIOs and CMOs need a provider for the long haul, one that can serve the needs of business and IT stakeholders, manage a complex program, and serve as a general contractor for an ecosystem of subcontractors.

Figure 5 Mobile Engagement Providers Need Deep Competencies And Management Skills



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Source: Forrester Research, Inc.

Engagement Competencies: Spanning Business, Technology, And User Experience

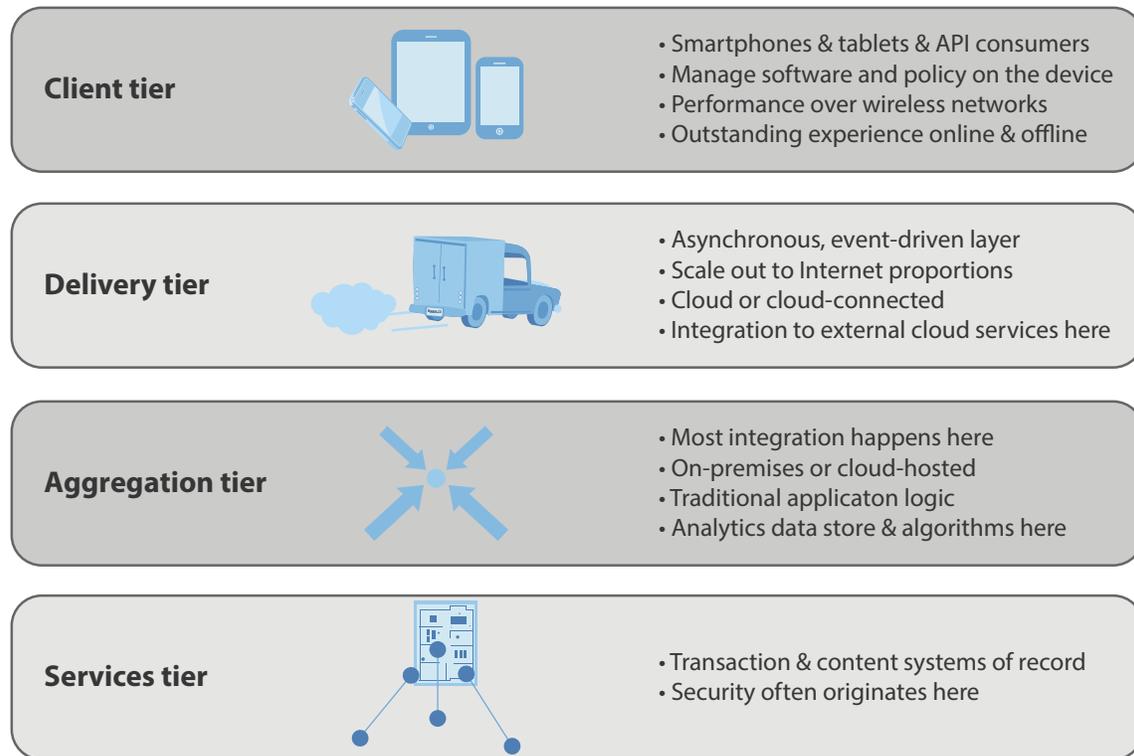
Mobile engagement programs require a multifunction competency model that is more akin to a multidiscipline liberal arts degree than the technical-track model of engineering. Successful mobile engagement providers will stitch together six core competencies end to end, with no holes or gaps.

1. **Business strategy and process redesign.** A mobile engagement vendor should be able to help you with an execution strategy for an area like multichannel selling, field service, or connected products and possibly with a corporate strategy to redefine your products, processes, or organization. Having a track record in the client's industry is important, but it's not enough. The solution team must have the right combination of domain expertise, technical skills, process re-

engineering skills, and solid intuition about the user's goals and context. IBM brings its Global Business Services consultants into its mobile strategy and solution workshops to help.

2. **Experience design and development.** The goal is a simple, intuitive app, not just a pretty user interface. To achieve this, mobile engagement providers will master four user experience competencies: 1) ethnographic research to analyze how different personas accomplish tasks; 2) task mapping to define how the mobile app will help; 3) user interface design, encompassing the look and feel and the interaction experience; and 4) integration skills to make sure the app links to back-end APIs that deliver a great experience over any network. Vendors like Cynergy rely heavily on ethnography expertise when interviewing and observing users in the design phase.
3. **Integration, atomization, and API management.** Mobile engagement providers need a special mix of technical development skills to build "RESTful" interfaces that deliver great performance over the last wireless mile, back-end APIs that serve up discrete tasks, and API-to-API integrations to handle interconnections with third-party services.⁶ This combination of integration skills, modern app architecture thinking, and mobile IQ is rare. SapientNitro accomplishes it by bringing "craft skills" developers into the project with clear handoffs between the front-end app team and the back-end integration team.
4. **Security, privacy, and compliance implementation.** Mobile apps take advantage of location data to deliver proactive experiences over wireless networks to consumer devices. Personal and corporate data is flowing everywhere. The risk of scaring customers, losing control of data, and attracting the ire of regulators is high. Mobile engagement providers must help their customers build applications that adhere to the security, privacy, and compliance requirements of the firm as well as meet personal and industry norms such as PCI or HIPAA or German or Singaporean laws. Cognizant and Deloitte make security and compliance a cornerstone of their capabilities.
5. **Analytics and engagement platform operations.** Predictive analytics is the brains of context-fueled mobile experiences: putting the right thing in front of someone before they know they need it. But analytics is hard. And so is scaling to serve millions of devices over wireless networks. Forrester believes that mobile experiences and the analytics engines behind them will be deployed on a new four-tier engagement platform, not a traditional three-tier web model (see Figure 6).⁷ Mobile engagement providers will need to possess both an analytics capability and an engagement platform delivery or operations expertise as Atos does today.
6. **Continuous updates and deployment at global scale.** Between app improvements, OS releases, and multiple platforms, companies are juggling 20 or more releases per year. Each app should be tested on every combination of device and network. Testing on Hungary's Pannon network might reveal flaws that don't show up on a UK-based O2 test bed. And a growing number of releases are global, requiring support in every part of the world. Suppliers need the right blend of scale, Agile development, and DevOps skills to keep up.⁸ HCL has created a mobile engineering workbench of Agile product development processes to handle this pace of releases.

Figure 6 Mobile Experiences Are Delivered On A Four-Tier Engagement Platform



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Source: Forrester Research, Inc.

Management Skills: For Clients, Programs, And Partners

Finding a provider with the right combination of mobile engagement competencies is not enough. The provider also needs the right combination of management skills to:

- **Serve the needs of both business and IT leaders.** When we ask clients what best predicts the success of a mobile initiative, they invariably answer: “It’s when businesspeople and IT people sit at the table working together.” A mobile engagement provider must be able to address the needs and be a trusted partner of a marketing or business owner as well as a CIO. Accenture brought 25 management consultants into its mobile practice to help engage businesspeople in the mobile strategy. Sourcebits, a vendor focused on field service, can go deep on service design and optimization — a business skill — in the cable industry.
- **Deliver complex, transformative programs.** Mobile apps touch business processes, technology systems, and the work and life of people. That ranks them among the most complex and interconnected efforts any company will tackle. A mobile engagement provider needs the

experience and skills to help you coordinate changes across every part of your organization and technology stack. Cloud Sherpas rode around with drivers of trucking company Quality Distribution and worked with headquarters-based staff to anticipate the impact on deliveries and dispatch before building the app and then adjusted as needed to overhaul the delivery process.

- **Manage an expanding ecosystem of partners for cloud delivery, analytics, and global service.** No one vendor has all the skills or technologies for mobile engagement programs today. Instead, like the general contractor on a construction project, a mobile engagement provider must source and manage an ecosystem of partners to deliver the full experience. This can include cloud services or software-as-a-service (SaaS) applications, app stores, analytics tools to track clicks and response times, and localization and deployment services around the world. That orchestration makes vendor management a core competency of a quality mobile engagement provider.

A MARKET OF MOBILE ENGAGEMENT PROVIDERS IS COMING INTO FOCUS

Forrester has recently interviewed vendors from the major provider categories to learn how they help global companies build and operate mobile applications. In these interviews, we have spotted the rise of mobile engagement practices growing at 40% to 100% a year. When you analyze the vendors from the six main camps, they each bring something to the table, but none has the complete set of engagement competencies and management skills today (see Figure 7):

1. Digital agencies and agency practices like Atos, iCrossing, Mobile@Ogilvy, Razorfish, SapientNitro, and dozens of others are adding more digital skills — ethnographic research, analytics, and API development, for example — to tackle a bigger slice of the project budget.
2. Management consultancies like Bain & Company, Booz Allen Hamilton, Boston Consulting Group, and McKinsey & Company stop short of building applications, but they continue to flesh out their mobile strategy practices with an eye on the big prize: re-engineering the many processes that will be radically accelerated as mobile data capture and delivery starts to cut out process steps and systems.
3. Mobile specialists like Cynergy, Mobiquity, Siteworx, Sourcebits, and TOA Technologies demonstrate how a startup with a defined industry or process focus can win business and deliver end-to-end mobile transformations.
4. Systems integrators like Accenture, Capgemini, HCL, IBM, and Infosys are adding mobile design and business process re-engineering skills that let them call on business budget holders and work both sides of the house.
5. Product development specialists like 3Pillar Global, EPAM Systems, and Object Frontier have acquired digital and user experience agencies to help raise their design IQ.

6. Telcos like AT&T, BT, Deutsche Telekom, and Telstra are moving beyond their device and app management practices to add mobile development services. AT&T, for example, works with technology from Antenna Software and Kony to build and deploy mobile apps.

Figure 7 No Vendor Today Has All Necessary Competencies And Skills



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Source: Forrester Research, Inc.

How The Mobile Engagement Provider Market Will Evolve

The market for mobile engagement providers will grow from \$5.6 billion in 2013 to \$32.4 billion by 2018, a 42% increase year over year. Here's how we expect to see the mobile engagement provider market to change over the next 10 years:

- **2009 to 2012: initiation.** The demand for mobile engagement services kicked in when iPhones and Android phones reached critical mass. Companies scrambled to build mobile apps to deliver basic services, and vendors started ramping up their mobile practices, often through acquisition like Deloitte's purchase of Ubermind and GlobalLogic's of Method. Some smaller vendors like Cynergy and EffectiveUI saw their mobile projects double year-over-year as they quickly added designers, developers, and operations staff. This is also the time in which mobile back-end-as-a-service providers like Leapfactor and StackMob introduced their mobile platforms.⁹
- **2013 to 2016: partnering.** Few if any providers will have the complete set of competencies and partner skills in this period. And if they do, it will be limited to a single functional area such as field service or sales or to a handful of industries such as retail or transportation. So they will partner to plug the holes in their competency set, deliver at global scale, or build out their ecosystem of technology and delivery partners.

This is also the time during which vendors from different market categories will reach across marketing and IT roles and budgets to tackle bigger projects together. The recent deal that HP made with Cynergy is a sign of things to come as small vendors look for big-vendor channels and big vendors seek small-vendor skills. Acquisitions will accelerate in this time period as well, but Forrester believes the big success will lie with vendors that dramatically improve their ability to be general contractors for digital — not just mobile — projects with an ecosystem of partners.

- **2017 to 2022: consolidation.** Mobile is the most recognizable technology in systems of engagement, but it's not the only one. As the portfolio of digital technologies expands — in particular as predictive analytics, connected products, and machine-to-machine systems create new engagement opportunities — the market will consolidate into a smaller number of “providers of record” that serve both business and technology stakeholders. Most winners in this era will be well-known, but Forrester expects a handful of midsized vendors to join these giants in establishing long-term and personal relationships with business sponsors of digital projects.

RECOMMENDATIONS

CIOS: CULTIVATE A “PROVIDER OF RECORD” TO BE YOUR STRATEGIC PARTNER

Your marketing colleagues have learned something over the past 30 years that it’s now time for IT to master: They have identified and work with “agencies of record.” Agencies of record bring strategy assistance, creative skills, long-term personal relationships, and execution track records to their clients to become an integral part of the marketing team. That comprehensive expertise has earned them a seat at marketing management’s planning and execution table.

IT organizations — and the industry that serves them — have failed to make this transition. Instead, far too many IT organizations have looked for low-cost providers, arm’s-length assistance, and short-term staff augmentation suppliers. And to be fair, outsourcers and solution builders haven’t always tried to build a long-term strategic relationship with you. To fix that, the providers must think and work differently, and so must you. Successful mobile engagement initiatives require the CIO to:

- **Reward providers based on direct outcomes that your business cares about.** It’s not enough for a provider to build and ship a mobile app. The app has to be successfully adopted and even highly ranked in order to be successful. To create a much tighter alignment between your goals and the provider’s incentives, be prepared to pay for long-term operating and business-outcome-based relationships. For example, a bank could pay its provider a bonus if an app wins a 4.5-star rating.
 - **Invite providers into your strategy and planning process.** If you compile your requirements before seeking a provider, you will miss out on the experience and business motivation that a provider can bring. Instead, invite your provider of record to the table well in advance of the budgeting process in order to integrate the provider’s skills into your process. Its experience can help you avoid mistakes such as betting too soon on a new platform like Google Glass before it achieves critical mass.
 - **Ask how the provider will keep version three from costing \$10 million.** If version two of your app cost \$2 million, then make sure that you understand where those costs lie and how you will rein them in for version three. For example, you may need help standing up your own engagement platform that can handle multiple application categories. Your provider of record should be able to help you spec, source, and operate that platform.
 - **Lend your vendor sourcing and management skills to marketing.** In too many firms, marketing groups churn through digital agencies due to a lack of technology skills on both sides. As CIO, you can direct your vendor management organization to coach and consult with marketing and business buyers on the technical requirements and vendor management across the full mobile life cycle. In turn, ask for a quid pro quo with your marketing team to learn their best practices in managing their agency of record.
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WHAT IT MEANS

MOBILE ENGAGEMENT PROVIDERS: EARN YOUR SEAT AT THE TABLE

Both CIOs and vendors must adapt to gain the benefits of a long-term provider relationship. Business leaders must learn to trust the expertise and experience of vendors to deliver these solutions. Vendors need to work hard at building their competencies and earning customer trust. The result will be a strong partnership, where the vendor is invited to participate in the planning and strategy phases of mobile engagement projects and be instrumental in the ongoing collaboration in operations and extensions. To be seen as mobile engagement providers of record will require big changes in vendors’:

- **Program approaches: multiphase engagement outcomes, not just project completion.** It is the very nature of mobile experiences that they constantly expand. Devices are upgraded, expectations rise, and apps must offer new functionality. So when designing a program approach, vendors must match the immediate outcomes and delivery against the vision for this year and for the next three years. In that way, they will establish their relationship as a long-term thinker willing to spend time upfront on things like user design, process atomization, middleware overhaul, and platform hosting that provide a foundation for growth.
 - **Monetization models: recurring revenue, not just one-time fees.** Vendors will also have to think differently about how they make money on the project. SaaS integrators like Appirio, Bluewolf, and Cloud Sherpas are showing how this model works. Yes, companies pay vendors to get the system up and running, but they also pay to have someone else operate and maintain the system. The same payment structure can work for mobile engagement programs, where the long-term care and feeding of the app and systems of engagement will require continuous investment in the apps, middleware, and engagement platform.
 - **Staffing profiles: relationships and business intimacy, not just technology.** This is where management consultancies and marketing agencies can teach IT vendors what to do. The practice leaders and relationship managers in these vendors are highly visible, long-tenured, and dedicated partners to their clients. For mobile engagement programs, this kind of close link between a company’s goals and the partner’s contribution will pay off. SapienNitro uses this model to bridge the gap between business and IT stakeholders in their clients.
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SUPPLEMENTAL MATERIAL

Online Resource

The underlying spreadsheet detailing the forecast in Figure 1 is available online.

Companies Interviewed For This Report

Accenture	Eli Lilly and Company
AccuWeather	EvidencePix
Acision	Expert Travel Services
Adobe PhoneGap	Farm Credit Mid-America
Amtrak	Federal Reserve Bank of Philadelphia
Antenna Software	FirstBank Holding Company
Appsolute Value	FlightView
AT&T	FotoNotes
Avanade	Fujitsu
Banner Engineering	FullSix Group
Bausch & Lomb	General Electric
Brookdale Senior Living	Greater Toronto Airports Authority
Cantina	HD Supply
Capgemini	H.H. Barnum
Cisco Systems	iCrossing
Cognizant	IHG (InterContinental Hotels Group)
CopThis	Intel
CSL Behring	Interac Association
Cynergy	Intuit
Deloitte	July Systems
Eaton	Kayak.com
EffectiveUI	Kindred Healthcare

Kony	SapientNitro
Layer 7 Technologies	Sencha
Leapfactor	Siteworx
Mad Mobile	Skava
Merrill Lynch	Sloan Valve
MobileDay	Sourcebits
Mobiquity	Stop & Shop
Mutual Mobile	Sunbelt Rentals
Netbiscuits	TOA Technologies
Northwestern Mutual Life Insurance Company	Trane
NoshList	Tribal DDB
O.C. Tanner	T-Systems
Ogilvy & Mather	Usablenet
Perfecto Mobile	UST Global
Razorfish	Vail Resorts
Red Robin Gourmet Burger	Westminster City Council
R/GA	Xtopoly
SAP	Yammer

ENDNOTES

- ¹ By 2014, smartphones and tablets will put power in the pockets of a billion global consumers, including your employees and partners and customers. However, mobile is not simply another device for IT to support with a shrunken website or a screen-scraped application. Rather, mobile is the visible manifestation of a much broader shift to systems of engagement that marry physical context and digital intelligence to deliver service directly into a person's hands. This shift will add value and take cost out of every business service, workflow process, and business application. But mobile engagement will also require wholesale changes to your app design, service delivery, IT skills, technology assets, and even your business model. This report lays out a vision for mobile engagement and introduces the strategic elements developed further in The CIO's Mobile Engagement playbook. See the November 16, 2012, "[Great Mobile Experiences Are Built On Systems Of Engagement](#)" report.

- ² Six years into the smartphone transition, customers are making a mobile mind shift. The shifted customer expects that any desired information or service is available on any appropriate device, in context, at their moment of need. To analyze how far people have shifted, we created the Mobile Mind Shift Index (MMSI), which segments people into six categories: Disconnecteds, Dabblers, Roamers, Adapters, Immersers, and Perpetuals. Companies whose customers have above-average MMSIs and who have more than 35% Adapters, Immersers, and Perpetuals must move urgently to deliver on their customers' mobile expectations. You can use the tools in this report to analyze your own customer base and determine how much to invest, how quickly, in meeting mobile expectations. See the April 19, 2013, "[The Mobile Mind Shift Index](#)" report.
- ³ Mobile technology for both hardware and software is experiencing a frenetic pace of change. The definition of table stakes is constantly moving. eBusiness professionals have procured the budgets they need to migrate existing digital services to the smaller screen, but few are funding the bigger, longer-term opportunities associated with more sophisticated services. See the June 17, 2013, "[The State Of Mobile Technology Adoption: 2013](#)" report.
- ⁴ Customers and business partners expect that your app will work as soon as the new release of the operating system is out. According to Chitika.com, an online advertising network, "After its release on September 19th, 2012, iOS 6 notably achieved a 15% share of all iOS traffic in its first 24 hours, and saw an adoption rate of over 50% after only 2 weeks" Source: "iOS 6 Adoption Levels Out, Surpasses 60% One Month After Launch," Chitika, October 22, 2012 (<http://chitika.com/insights/2012/ios-6-adoption-one-month>).
- ⁵ Mobile touches every part of your business. Customers crave apps to access your core services. Employees keep work moving forward from any location — meeting room, kitchen table, or soccer field. Partners carry your product catalog and rich media product descriptions into customer meetings and then follow up to close the deal before pulling out of the parking lot. To marshal your skills and resources while keeping an eye on the user experience and a firm grip on the security model and brand experience, you need a mobile organization. Start with a steering committee and development team, but build toward a mobile center of excellence. This report lays out the organizational model, describes what to facilitate and what to govern, and presents a case study on how IHG builds mobile apps. See the April 12, 2013, "[Your Company Needs A Mobile Organization](#)" report.
- ⁶ CIOs will quickly master the new lingo of mobile app development. REST stands for "representational state transform," and it's the new flexible approach to integrating mobile apps and systems of engagement to handle Internet-scale workloads over wireless networks. Designing, managing, and operating REST interfaces between the mobile app and all the constituent systems will quickly become a core competency of the new application architecture.
- ⁷ Forrester believes that the 15-year-old web architecture is showing cracks around the edges. It is not well-designed to handle the occasionally connected, stateless interactions of a mobile app. We believe that over the next 10 years vendors will recognize the need for a four-tier engagement platform that is more naturally attuned to the requirements of mobile apps and machine-to-machine connections. In this architecture, the delivery tier scales out while preserving the back-end service integration and the new federated integration to third-party services that great mobile experiences require.

- ⁸ DevOps is “development operations,” a new approach to building and operating applications. Instead of the traditional approach, where one group builds the app, then hands it over for another group to operate, a DevOps approach blends building and operating the application so that developers make good operating decisions and operations experts help design good apps.
- ⁹ Successful mobile apps, especially enterprise mobile apps, typically need to interact with a well-architected set of back-end services, but most mobile app developers are more skilled at client-side front-end development. Enter mobile back-end-as-a-service (BaaS), a new set of hosted platforms that addresses the gap between front-end development proficiency and back-end infrastructure requirements. Enterprise-class back-end-as-a-service addresses scalability while providing an integration platform into existing enterprise services. Use this research as your guidebook to navigating the emerging BaaS landscape. See the September 5, 2012, “[Cloud Mobile Development: Enabled By Back-End-As-A-Service, Mobile’s New Middleware](#)” report.

About Forrester

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