Make Smart Mobile Development Decisions

Business Case: The Mobile App Development Playbook

by Michael Facemire and John M. Wargo
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Why Read This Report

Application development and delivery (AD&D) professionals are not usually the driving force behind creating the business case for mobile — but that doesn't mean they don't have a role to play. Business leaders define the expected business benefits and then look to developers and managers to determine the overall cost of these initiatives. To build a plan, AD&D pros must assess many factors and understand how they combine to deliver a cohesive mobile strategy. This report provides a comprehensive guide of the cost categories to consider in mobile initiatives.

This is an update of a previously published report; Forrester reviews and updates it periodically for continued relevance and accuracy.

Key Takeaways

Use POST To Bring Your Mobile Strategy Into Focus And Ensure Long-Term Success
Assessing the cost and planning resources for mobile projects without a well-defined mobile strategy virtually ensures that development organizations run short on resources sooner rather than later. Use the POST methodology to define a clarified strategy early on to minimize cost and resource overruns.

Look Beyond Project Development Costs As Mobile Drives The Bigger BT Agenda
A comprehensive mobile strategy affects many areas of a company. Work with business leaders, enterprise architects, and I&O to bridge traditional silos and determine where infrastructure modernization benefits the organization's mobile strategy. Mobile strategy is more than just the next mobile app project; it drives investments outside of its immediate scope.

Continuous Assessment Is Critical To Current And Future Mobile Projects
Ensure that success criteria can be determined for mobile projects by creating a set of well-defined KPIs that drive efforts. At the beginning of a project, decide if the objective is increasing revenue for a product stream or just reducing documentation errors by a field service team. Ensure that all development decisions create an upward trend in the selected indicators.

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Forrester interviewed seven development and consulting organizations: Accenture, KPMG, Mobiquity, Primacy, Siteworx, Skookum Digital Works, and Solstice Mobile.

Related Research Documents

Building High-Performance Mobile Experiences

Improving Mobile App Quality Testing

Measuring Mobile Apps

Put People, Not Technology, First In Your Mobile Strategy

Decisions have consequences, and successful developers in the age of the customer constantly revisit their past choices. When making decisions about mobile, the sheer number of available technologies makes it impossible to take a technology-first approach. Don't be a mobile technology lemming; simply because Facebook decided to move away from HTML5 doesn't mean that the rest of the market should do the same.[1] To broaden organizational thinking beyond letting yesterday's infrastructure dictate tomorrow's choices, use the people, objectives, strategy, and technology (POST) method:[2]

› **People: Who will be the primary users of this app?** What's the profile of the target audience? Is it composed of task workers who need access to specific point-in-time data to complete a given process, or field employees who need full read/write access to enterprise CRM systems to enable real-time decisions? Does the app need to address more than one user profile? Are you targeting the highest value customers? The most at-risk for churn? Personas can guide development cycles, but beware: Too many personas indicates a lack of upfront focus.[3]

› **Objectives: What are the objectives of this application?** Why are you creating this app? Is the goal increasing revenue, decreasing cost, increasing worker efficiency, or some combination thereof? How does that objective fit (or conflict) with the overall objective of the brand? Will sales reps use this app to increase brand awareness? Will the application use the user's location information? Detailed objectives simplify development decisions and stabilize project costs and will lay the groundwork for KPIs to measure ROI, crucial to developing a robust long-term mobile strategy.

› **Strategy: What are the short-term and long-term strategies for this app?** Will this app satisfy current business challenges but become obsolete in nine months by pending business or technical changes? How does this application fit long-term sales initiatives, field force use cases, and executive decision-making processes? How does this app impact the enterprise's infrastructure — and over what time period? What's the projected number of users and how will usage scale?

› **Technology: Which mobile technology meets the goals of this challenge?** Mobile technology is where the glamour is, but skipping any of the previous steps means the beauty will be only skin deep — ugly project failure will rear its head soon enough. As the VP of strategy at a global systems integrator told us: "Many clients come to us having already decided on a mobile technology without fully establishing the goals of the mobile app that they're looking to develop. If we don't solidify these decisions at the beginning of the project, it nearly always causes delays later on due to confusion in overall direction."
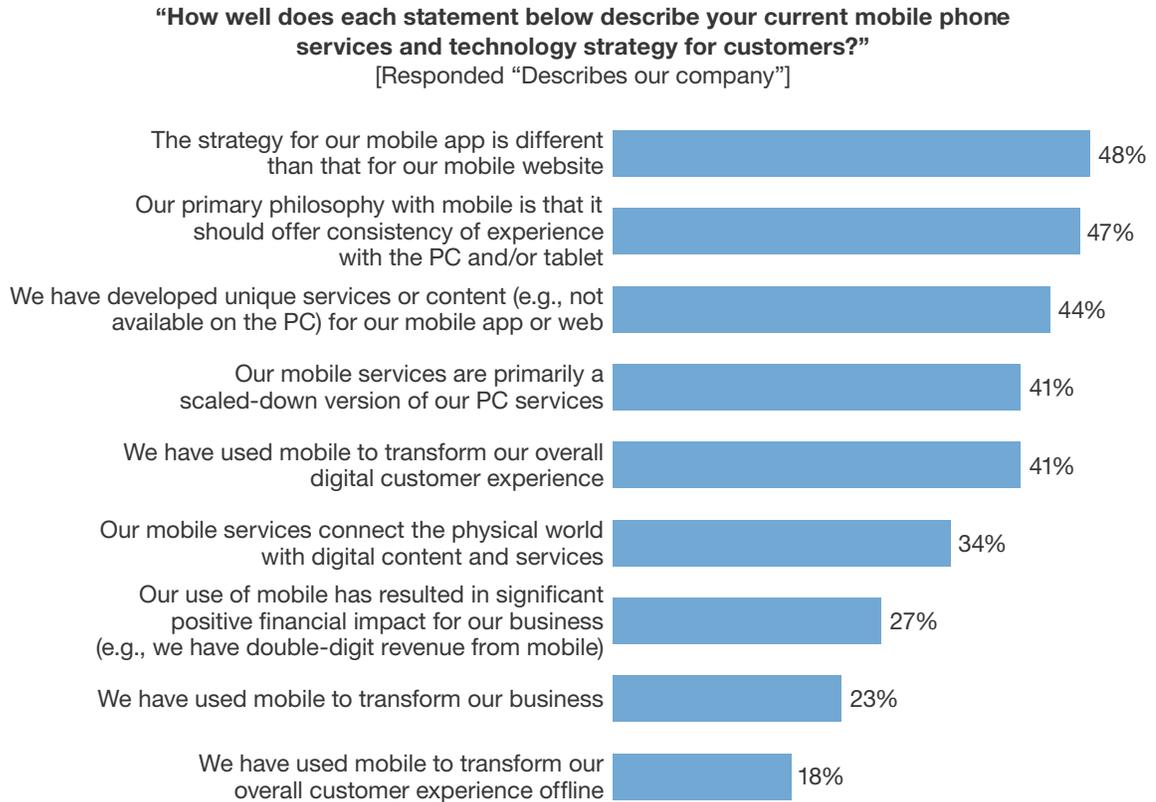
For Mobile Success, Define Criteria And Measure Them Continuously

Many businesses perceive mobile as something that just has to be done for its own sake and fail to grasp the potential that mobile has to actively drive broader digital transformation (see Figure 1). Several service providers we interviewed for this report indicated that mobile strategies usually fail to gain traction unless they're associated with measurable business gains. Business cases often contain ROI expectations or projections, but mobile initiatives often lack well-defined metrics on their expected returns.

Enterprise mobility challenges tend to present as "Our sales reps need to see sales forecast details on their mobile phones," and the development team's role is to derive detailed success criteria from that vague statement. This provides an incredible opportunity to clarify the request and lead the definition of the organization's success metrics. Is the initiative successful if the sales team can simply see this data, or does it need to use the data to model scenarios? Use the answers to these questions to create key performance indicators (KPIs) to quantify the success of the initiative. Technical leaders who follow the approach espoused here have a much better shot at getting a seat at the decision-making table for future mobile initiatives.

FIGURE 1 Few Use Mobile To Transform Their Business

"How well does each statement below describe your current mobile phone services and technology strategy for customers?"
[Responded "Describes our company"]

Statement	Percentage
The strategy for our mobile app is different than that for our mobile website	48%
Our primary philosophy with mobile is that it should offer consistency of experience with the PC and/or tablet	47%
We have developed unique services or content (e.g., not available on the PC) for our mobile app or web	44%
Our mobile services are primarily a scaled-down version of our PC services	41%
We have used mobile to transform our overall digital customer experience	41%
Our mobile services connect the physical world with digital content and services	34%
Our use of mobile has resulted in significant positive financial impact for our business (e.g., we have double-digit revenue from mobile)	27%
We have used mobile to transform our business	23%
We have used mobile to transform our overall customer experience offline	18%

Base: 131 executives who either own or have extensive knowledge of their mobile strategy and services

Source: Forrester's Q2 2015 Global Mobile Maturity Executive Survey

Use KPIs To Drive Development Decisions

People love praise; even children love being told how successful they are. Mobile development leaders are no different — but most mobile projects are already complete before anyone gives any thought to measuring their success. Don't fall into this trap. Instead:

› **Create detailed KPIs around identified business challenges or goals . . .** Create KPIs that are significant to the business. These may be technical, such as the number of hits to back-end pricing sheets or inventory numbers. Or they can be business-driven, such as the percentage increase in a brand's product mix among mobile sales teams or employee productivity measures such as deals closed, jobs logged, or time spent in-app.

› **. . . and ensure that all development decisions drive toward these KPIs.** AD&D pros must make and remake many priority-setting decisions during the course of development. Mobile is hot and exciting, so expect more individuals within the organization to provide input into these decisions. More voices create more noise, so base all prioritizations on agreed-upon and well-communicated KPIs to maintain a clear direction.

› **Focus on a minimum viable product (MVP) as the initial target for your efforts.** A minimum viable product is a design philosophy that strives to deliver only those features that are crucial to initial success criteria. Use the MVP to validate that the intended audience is even interested in what you're offering, then work from there. Fielding the MVP sets feedback loops in motion that will provide real, and vital, product feedback and guide future development efforts.

› **Use feedback loops and KPIs to prioritize new features or enhancements.** Feature creep is the enemy of MVP and stems from eager product managers who throw in every feature they can imagine. To combat feature creep, use the MVP to deliver app features as soon as possible and then let feedback loops, with data fed from post-release monitoring products, user reviews, app store ratings, and even ethnographic research, guide the features planned for the next app update. Prioritize all future product plans according to their impact on the KPIs that, by this point, have become well-established in the organization's mindset.

› **Base all project success reporting on KPI metrics.** If an app isn't used or if subsequent updates cause a drop in usage, KPI metrics will make that clear. Once you have real data driving development's efforts and proving results, publish it. Make that data the focal point of your app's success and use it to make the case for an appropriate level of budget allocation.

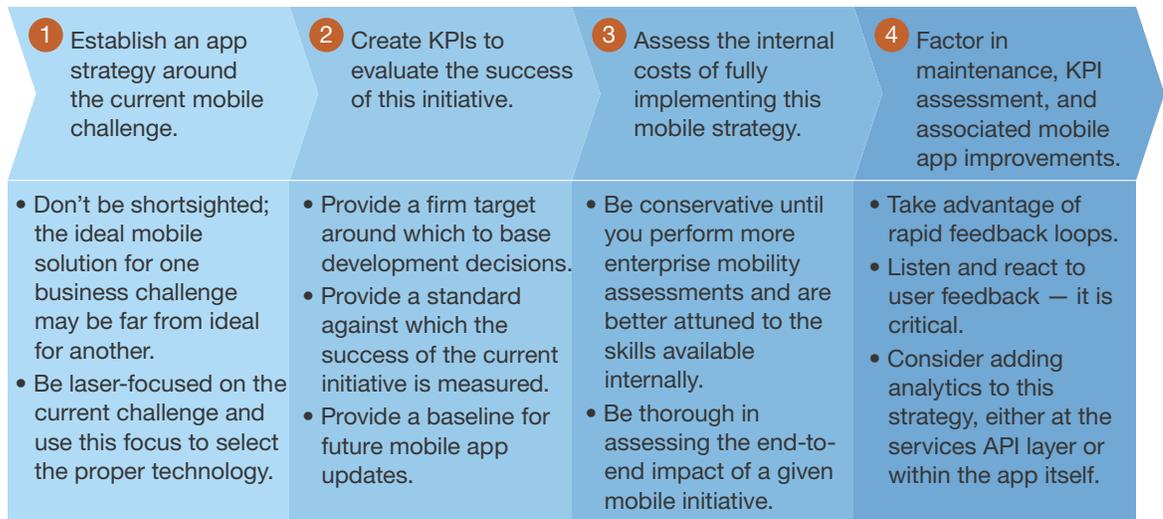## Fund Ongoing Mobile Product Development, Not One-Off Projects

The increase in mobile development creates a vacuum for certain internal skill sets and increases technology budgets to fund these activities. Additionally, mobile changes time-to-market expectations — the historical expectations of 12- to 18-month development cycles have shrunk considerably, down to two to three months for mobile apps. On the consumer side, a recent report showed that "Google Play apps are updated, on average, every 28 days, while in iTunes this occurs every 59 days."[4] In response, enterprises must (see Figure 2):

› **Develop a current mobile strategy.** The ideal mobile solution for one business challenge may be far from ideal for another. Everyone needs to start somewhere, but don't be so shortsighted as to think that the most recent solution will fit all future mobile enablement efforts. Instead, focus on the current challenge and use this focus to select the proper technology and development approach that makes the most sense for each app.

› **Assess the internal costs to fully implement your mobile strategy.** A thorough approach to assessing the end-to-end impact of a mobile initiative avoids potential shortfalls. Will it require additional design and user experience skills? Will the existing enterprise infrastructure support the technologies required for mobile? You built this app for a purpose, so plan for unmitigated success. Will existing systems and infrastructure scale, or should you consider cloud as an option?

› **Allocate ongoing budget to respond to the behavior and feedback from your users.** Delivery of the mobile app to the targeted end users is only the beginning of its cost. Listening and reacting to real-time user feedback, including analytics, will help monitor usage, define future features, and catch early bugs.[5] This is crucial to overall success but will consume resources.[6] Don't treat mobile as a one-off project. Allocate budget and resources to drive continual improvement.

› **Budget for the proper app security.** Avoid headlines and egg on your face due to app security issues. Use training to set the correct expectations and get the necessary skills in the developer's hands. Next, verify compliance through implementation of the necessary tools.[7] Proper app security is expensive, either upfront through developer initiatives or tool implementations, or afterwards, recovering from a breach. Security initiatives should be an important part of any mobile budget.

FIGURE 2 Evaluating The Costs Of A Mobile Initiative

① Establish an app strategy around the current mobile challenge.	② Create KPIs to evaluate the success of this initiative.	③ Assess the internal costs of fully implementing this mobile strategy.	④ Factor in maintenance, KPI assessment, and associated mobile app improvements.
• Don't be shortsighted; the ideal mobile solution for one business challenge may be far from ideal for another. • Be laser-focused on the current challenge and use this focus to select the proper technology.	• Provide a firm target around which to base development decisions. • Provide a standard against which the success of the current initiative is measured. • Provide a baseline for future mobile app updates.	• Be conservative until you perform more enterprise mobility assessments and are better attuned to the skills available internally. • Be thorough in assessing the end-to-end impact of a given mobile initiative.	• Take advantage of rapid feedback loops. • Listen and react to user feedback — it is critical. • Consider adding analytics to this strategy, either at the services API layer or within the app itself.

Mobile Will Strain The Resources Of An Unprepared Organization

Why bother with all of this? Because to do mobile right requires an investment. Mobile is different: It's much more than just a new delivery channel; it transforms the way your organization engages with your employees or customers, and requires adjustments:

› **Developers must keep their skills current.** Mobile adds a new twist to client platform languages, user experience design fundamentals, back-end enterprise data exchange, and testing and automation practices. For developers migrating from enterprise development, mobile requires a new mindset. Both Android's implementation of Java and iOS's versions of Objective-C and Swift present steep learning curves for developers learning the nuances of mobile. Mobile technology is constantly changing, so AD&D pros must keep their skills up to date in order to keep up.

› **Mobile forces enterprise infrastructure changes.** Most enterprise mobile apps require access to data housed in systems of record or systems of engagement. Existing systems may provide data in mobile-friendly formats, but many do not. Mobile apps may also need data pulled from multiple back-end systems. To manage this, we've seen development organizations implement an aggregation tier in the application stack that transforms or aggregates data. A marketplace of mobile middleware vendors have come along to meet the need to normalize and manage the enterprise data flows for mobile apps as well.[8]

› **Use external resources to meet time-to-market expectations.** The delivery expectations for mobile apps are strikingly different than those for enterprise applications. Organizations with weak or sparse skills may want to consider working with a digital agency on an initial implementation. Systems integrators may accelerate infrastructure improvements for mobile. Finally, if delivery skills and infrastructure are a concern, mobile middleware or backend-as-a-service offerings provide service integration/federation and tools that will benefit skills-challenged development teams.

Recommendations

Strategy And Accountability Are Key To Mobile Development Success

Business leaders often build the business case for mobile, but the burden of implementation then falls squarely on AD&D and I&O professionals. Attempting mobile development without a clear-cut strategy and quantifiable metrics is a recipe for cost overruns, project delays, and, ultimately, failure. To deliver an effective mobile strategy:

› **Don't let the first mobile apps dictate a myopic strategy.** A mobile app is the first step in a larger mobile strategy — treat it as such. Use this first app as an opportunity to update the organization's skills, solidify a mobile infrastructure, and establish the development team as the thought leader in mobile. Don't be shortsighted in a rush to deliver; ensure that the strategy behind this app gels with the larger mobile strategy. Invest to learn: Be ready to make some mistakes in the first few mobile apps and learn from them.

› **Get the right people engaged.** Engage the key stakeholders for this and other applications and work directly with them to establish the strategy and direction of the project. Create meaningful KPIs to measure the success of the project, leveraging the appropriate stakeholders and ensuring that the project has firm leadership and direction throughout development and delivery.

› **Use early apps as an opportunity to modernize back-end infrastructure.** Today's enterprise infrastructure is rarely robust enough for tomorrow's challenging mobile, cloud, and big data initiatives. Mobile provides the impetus to beef up lagging cloud and data capabilities and may serve as a unifying call to modernize these systems. Many organizations have made this request before — changes driven by mobile are often the same changes required when moving service architectures to the cloud.[9]

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Supplemental Material

Companies Interviewed For This Report

Accenture

KPMG

Mobiquity

Primacy

Siteworx

Skookum Digital Works

Solstice Mobile

Endnotes

[1] Source: Rachel King, "Facebook's Mark Zuckerberg knocks HTML5 in favor of native apps," ZDNet, September 11, 2012 (http://www.zdnet.com/facebooks-mark-zuckerberg-knocks-html5-in-favor-of-native-apps-7000004082/).

[2] Developing mobile applications used to be an arcane activity pursued by highly specialized developers, but no more. The first step in taking mobile development mainstream is defining the strategy. Learn from peers in consumer product strategy by applying Forrester's POST method to mobile development efforts. Begin by understanding what types of mobile users need to be supported; determine organizational objectives; and then build a strategy. Only once these three steps have completed should development organizations choose from among the six mobile development styles at their disposal and the vendors that offer mobile platforms and tools that can aid development efforts. See the "Define Your Mobile Development Strategy" Forrester report.

[3] Personas provide insight into user behavior. Several of the shops we talked to use explicit personas to guide their app design. A persona helps answer questions about a user's mobile app objectives and can provide clues to appropriate technology decisions. See the "Build Five-Star Mobile Apps" Forrester report.

[4] Source: "Updates Management in Mobile Applications. iTunes vs Google Play," Centre For Competition Policy (http://competitionpolicy.ac.uk/documents/8158338/8368036/15-4+CCP+Working+Paper+complete.pdf).

[5] For more information on the additional cost for upkeep and improvement of mobile apps, see the "Measuring Mobile Apps" Forrester report.

[6] There are millions of mobile apps out there, and they're all competing for the same mobile users. If the goal is to reach customers with a custom mobile app, then making sure the company creates one that will get high ratings is crucial. So what's the best way to structure a development shop to build a highly rated app? We spoke with more than a dozen leading mobile app developers about how they build, test, and release their top-rated mobile apps and abstracted out common development best practices that these shops use that should prove helpful in building a five-star mobile app. See the "Build Five-Star Mobile Apps" Forrester report.

[7] For more approaches for imparting the appropriate security awareness, see the "Brief: App Security Can't Happen Without Developers" Forrester report.

[8] For more information on the emergence of the aggregation tier, see the "The Engagement Platform's Aggregation Tier" Forrester report.

[9] After gaining an understanding of just how different cloud environments are from the traditional data center, developers start to examine the application portfolio for readiness, start adjusting enterprise architecture standards to accommodate this new environment, and start to build out new systems of engagement. With this disciplined approach, immediate gains are achievable with web-centric applications while building out new cloud-optimized capabilities. Over time, as legacy application functions are replaced with new cloud-enabled code, shrinking the legacy is feasible. See the "Don't Move Your Apps To The Cloud" Forrester report.

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