

Rethinking Enterprise Mobility Strategies

By embracing a persona-guided approach to mobile apps, organizations can challenge the status quo and ensure proper business relevance of all user profiles, both inside and outside the company's four walls.



Executive Summary

Many enterprises view mobility as an extension of desktop computing. And because they tend to approach the evolving mobile ecosystem more opportunistically than strategically, many organizations focus first on incorporating sales-related capabilities into their mobile apps. But mobility is much more than that.

Enterprises should start thinking of mobility as a holistic part of the IT infrastructure rather than as an add-on capability facilitated through an extended use case.

With the convergence of commodity clouds and seamless broadband, experts predict that by 2015 the Internet will be accessed more by mobile devices than desktops. Enterprises should, therefore, start thinking of mobility as a holistic part of the IT infrastructure rather than as an add-on capability facilitated through an extended use case.

This whitepaper offers a methodology for transitioning to this mindset. It first identifies business contexts for initially transforming key functional areas with mobility. Importantly, this methodology addresses a “user-centric business design” developed around unique user profiles, or personas, and developing new mobility interactions driven by mobile usage patterns.

Mobile User Paradigm Shift

Although desktop and mobile devices are key computing tools, they exhibit vast differences in terms of their applicability. Mobile devices are more personal, always on and always with the user, and they can detect location, movement, acceleration, orientation, proximity, environmental conditions and much more. They are multimodal and can operate with inputs that include gestures, camera, voice, barcodes, movement, etc.

To achieve business success, enterprises must deliver a seamless user experience that provides anytime enterprise user access. Figure 1 illustrates a sample of the computing behavior of a mobile sales force, which reveals longer work sessions conducted on desktop computers and shorter, more frequent bursts on tablets and smartphones.

Because mobile devices involve different behaviors and use cases, an enterprise mobility strategy will always fall short of meeting business requirements and objectives if it is treated as a simple matter of adding another computing device. Companies need to concentrate on creating a captivating user experience that is tuned to the functional needs and personal preferences of users (see Figure 2, next page).

The situation with mobility is not unlike the early days of the Web. In the year 2000, more Web sites were born than babies, setting off auction wars for catchy Web names and URLs. Consumer-facing businesses became caught up in transforming their branding from storefront to Web front.

The media business, for example, launched digital newspapers and published them with the frequency of daily newspapers. It was a migratory approach, moving traditional layouts, pages and fonts online rather than thinking about how the online medium could transform the business. It took a while for the publishing industry to truly realize the power of the Internet by becoming event-driven and posting news as it happens, in real-time and personalized ways.

Like the Internet, mobility requires a well-planned enterprise strategy. Enterprises need to focus on motivating successful human behavior with the intuitive guidance necessary for achieving both profile-specific and organizational goals. And because mobile devices are multimodal, several sensory inputs need to be integrated into the enterprise's functional requirements. Unless businesses rethink mobility, even those with an early-mover advantage will slip, and usage will decline.

Enterprises need to focus on motivating successful human behavior with the intuitive guidance necessary for achieving both profile-specific and organizational goals.

Different Devices, Different Behaviors

Mobile salesforce workers used their computing devices for about 4.2 hours of the workday and exhibited different types of behavior on each device.

Device	Number of Sessions	Duration
Laptop	4	36 minutes
Tablet	12	7 minutes
Smartphone	19	1.2 minutes

Source: David Willis, "iPad and Beyond: The Media Tablet in Business," Gartner webinar, April 2013, http://www.gartner.com/it/content/1586600/1586614/april_13_ipad_and_beyond_dwillis.pdf

Figure 1

Capitalizing on Mobile Personas

Personas have been used extensively by product research companies to analyze and understand the end user intent and behavior that drives successful product development. Personas are defined as groups with common goals, tagged with a name and a personality to understand their product needs. Persona stories are developed to include the mindsets, motivations, perceptions, measurable attributes, etc. for various classes of users. For example, a persona might be represented by the description, "John, a 46-year-old pharma sales professional whose specialty is selling cholesterol-reducing drugs to major hospitals."

Similarly, in the expanding mobile ecosystem, personas provide a very important business context. Mobile behaviors need to be re-analyzed and storyboarded in a way that enables them to fit into mobile business uses. This does not mean rebuilding the enterprise with new business functions but picking and choosing which existing functions are applicable to particular personas and how to serve users with specific entry points. In many scenarios, a subset of functions would be identified for serving the business through mobile but would be critical for driving service efficiencies.

Persona analysis and business context-building is, therefore, the first focal point for enterprises looking to get on the right path with knowledge workers and customers.

Persona analysis and business context-building is, therefore, the first focal point for enterprises looking to get on the right path with knowledge workers and customers. Enterprise-oriented personas need not be developed from scratch; rather, they can be recast into a mobile context.

Many mobile apps for consumers have built-in personas that are well targeted. These apps are successful because they address mobile functions for a typical user activity. Figure 3 (next page) shows consumers using iPad functions in various customer service environments. Each persona has a situational need and uses a mobile device as a visual aid (i.e., information lookup), integrated into their daily lives.

On close observation, none of these applications has a common user interface; instead, each has a screen design that approximates the persona's interface and interaction expectations. In this way, the app uniquely follows the user's touch behavior and mimics familiar standards of tablet computing interaction, creating a more intuitive way to deliver customer service.

The biggest eye-opener for this phenomenon is the music industry, in which the iPad performs better than a real instrument. For examples, there are apps that synthesize e-music, using a multitouch interface built around digital knobs that can produce music more quickly than music gadgets themselves.

Why Mobile Views Should Be User-Centric

Rather than mimicking the desktop experience, with its menu structures and lists to navigate, a mobile interface needs to provide contextual triggers generated from situations and events that lead to a specific action.

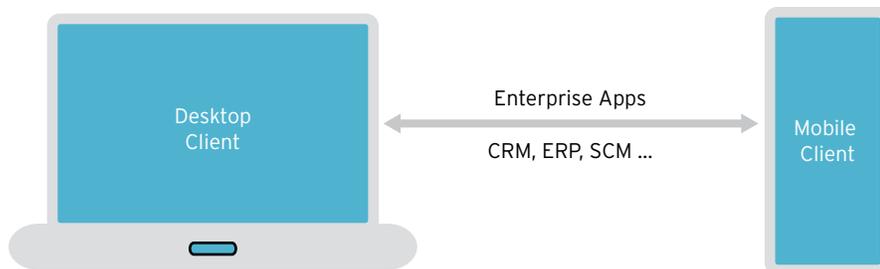


Figure 2

These experiences are examples of the multimodal combinations that can be stitched together in a variety of ways to bring an app to life. A smartphone has many input and output sensors (accelerometer, camera, GPS, voice, video, WiFi, Bluetooth, touchscreen, retina display) and built-in features (contacts, calendar, maps, alerts, YouTube access, music, compass, Webex, news feeds, browser, e-mail, barcode, Facetime, etc.) that can then be combined into various permutations and combinations. It is not about how UI design can repurpose existing mobile business applications; rather, it is about how a more intuitive design can deliver a more fine-tuned and valuable user experience.

It is not about how UI design can repurpose existing mobile business applications; rather, it is about how a more intuitive design can deliver a more fine-tuned and valuable user experience.

Building a Mobile Business Strategy

A successful mobile business strategy should be mobile-first in order for it to create serious organizational inroads that can provide new entry points for users alongside existing service offerings. The following three-step methodology (see Figure 4, next page) can help pave the way for discovering and validating future business scenarios, by reexamining how the business operating model can be improved by making changes to user work interactions.

Mobility Apps, Contextualized for Persona Expectations



Figure 3

Three-Step Approach for Developing a Functional-Specific Mobile Service



Figure 4

Step 1: Discovering Business Segments for Mobility

Core business processes across the enterprise provide the ways and means of the business. Multiple personas, such as employees, customers and partners, interact to fulfill service requests using various channels. One way to start creating persona-based mobile strategies is to closely inspect these processes and selectively identify process areas for improvement. Each process should be analyzed for its need to operate in an anytime/anywhere mode and its ability to extend to mobile devices.

The key question that needs to be addressed is: "Which business processes should be scoped for mobile use?" The answer should address two issues:

- Would mobile capability contribute to revenue or productivity gains?
- Could mobile capability and motivation improve the function?

Here are two examples of analyzing business processes for their mobility potential:

1. A patient's need for care management services.

Ambulance services, independent of time or place, are a type of application service that is "always on." Moreover, persona work patterns can be observed for this type of service. The needs of an ambulance worker's persona can then be characterized by on-call mobilization for on-demand routing, medical supplies management, patient mobilization, 911 call-handling, etc.

2. A traveler's need for airline flight services.

By addressing flight delay alerts on an "anytime" basis for a given airport, airlines can think about disruption management of a given flight while the

Assessing Persona-based Mobility Requirements

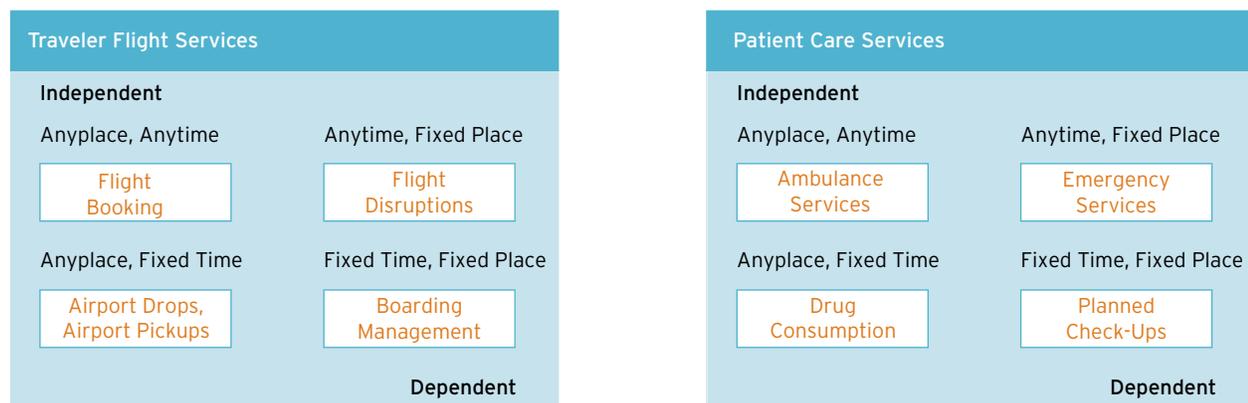


Figure 5

traveler is at or en route to the airport. Airlines can consider options for how notified travelers need to be, based on the extent of the flight delay and which alternate services should be suggested for the journey.

Figure 5 (previous page) illustrates how each process is analyzed for anytime-anywhere needs and examined for enterprise mobility interaction. By categorizing business processes in this manner, mobile-capable functions can be identified and further elaborated upon for mobile interactions.

Step 2: Analyzing Mobile Persona Characteristics

We live in a world of context, with continual fluctuations of location, time, relevance, environment, interactivity and human behavior. Because human actions are inherently situated in a particular context that frames the individual's behavior, understanding personal context is critical for capturing the nature of an interaction that is specific to the situation.

Depending on the dynamic nature of the dimensional changes, innumerable contexts arise in the daily life of a persona. Figure 6 depicts six different dimensions, as well as sets of activities in each dimension. Typically, a persona within any given context can include a combination of many activities across the listed dimensions. Hence, it is difficult to predict every variation of the context that could apply in a particular scenario.

Given that mobile devices function as a smart digital agent for many people, it is best to consider application interactions in two parts:

- User need-based information planning.
- Time sensitivity-based information delivery.

Because human actions are inherently situated in a particular context that frames the individual's behavior, understanding personal context is critical for capturing the nature of an interaction that is specific to the situation.

Connecting Context with Persona



Figure 6

Quick Take

Marrying Scenarios and Personas with Expectations: A 'Day in the Life' Narrative of a Mobile Persona

Creating a narrative involves walking through a scenario that encapsulates each persona. It can also be used to document the key interactions of both humans and systems that correlate with “at-the-desk” and “on-the-go” experiences. At-the-desk activity is predominantly governed by the desktop in planning and preparation activities. On-the-go activities include the various levels of mobile device and human interactions required to successfully fulfill a particular business scenario.

Figure 7 depicts the traveler persona using a day-in-the-life process flow, with activities performed at rest and in moving conditions. Persona characteristics are mapped so that the app design gives adequate consideration to an information architecture that provides the persona with just the right set of information to handle the situational need.

These traveler scenarios provide a glimpse into the motivation that drives real-life user expectations and the kinds of mobile features that can deliver services that fulfill consumer needs. The more persona dimensions that are explored within an individual app context, the richer the experience and usage that can be delivered.

Diagramming Persona Requirements

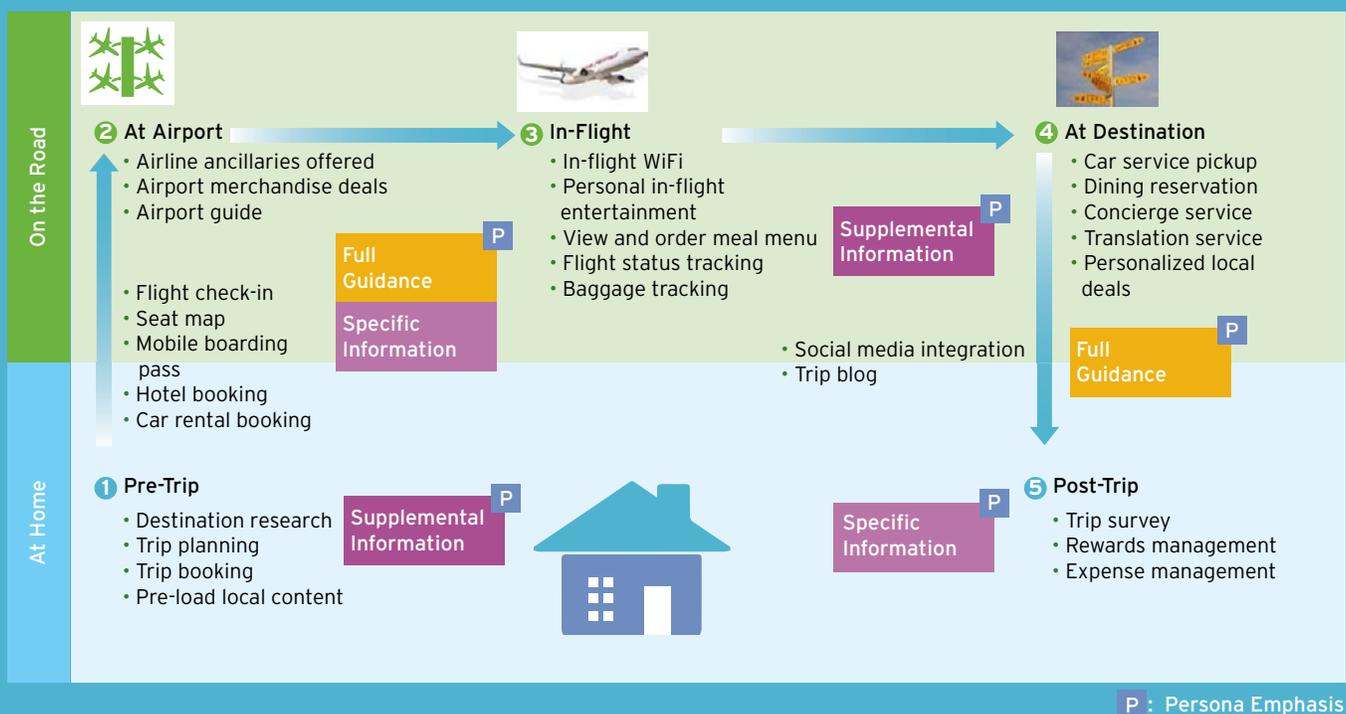


Figure 7

Step 3: Planning the Mobile Experience

It is critical to understand both how a traveler leverages flight services and the mobile capabilities necessary to deliver these services; what is more, the two must be considered as part of a holistic process. In fact, organizations should treat each touchpoint as a trigger with which to connect individual traveler personas across various business scenarios. Figure 8 (next page) depicts just that: how the airline can manage the flight disruption management process across personas. For example, once a flight delay event has occurred, an airline must be prepared with options delivered to mobile devices to guide travelers toward their destinations

Airline Traveler Persona: Flight Disruption Management

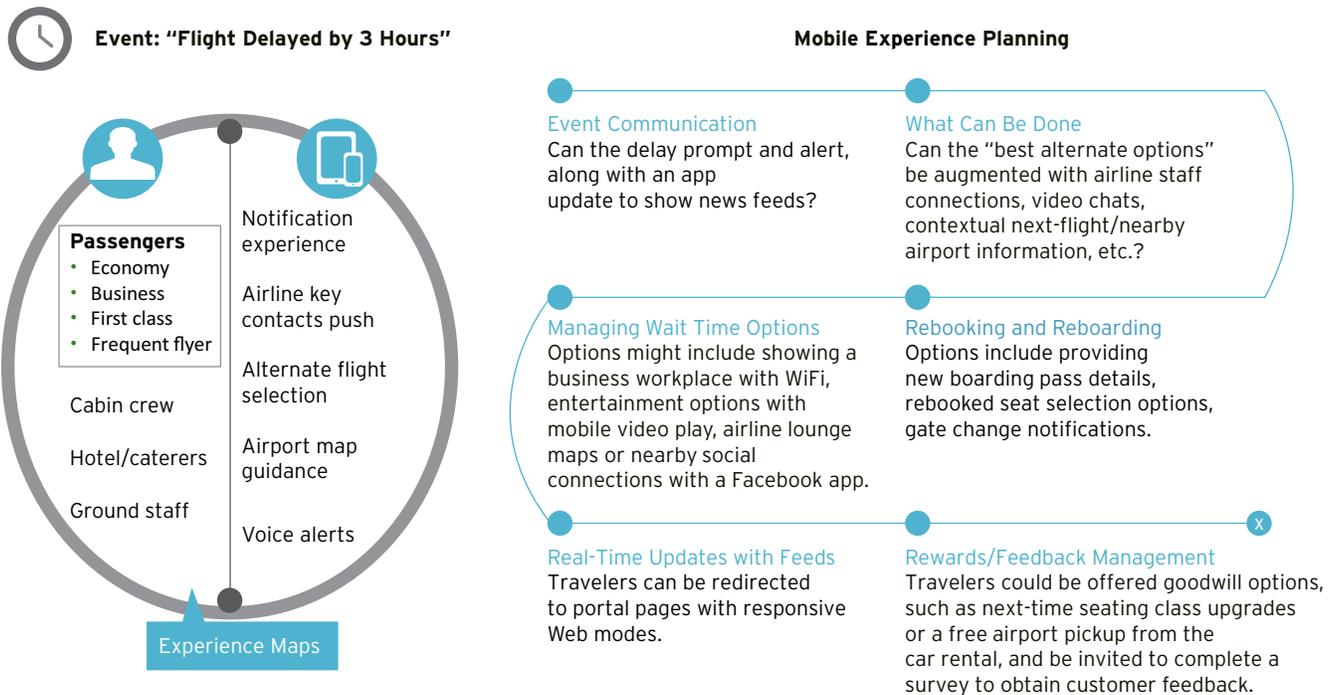


Figure 8

and minimize disruption and dissatisfaction. A flight delay of three hours is usually a frustrating event for travelers, no matter the reason; airlines, therefore, have to plan alternate options.

Given the uncertainty caused by the delay, the scenario should embrace how travelers are informed about the next steps, explore the various choices with travelers and connect with viable travel alternatives to satisfy this persona.

By creating an experience map, the airline can capture all the different personas that are impacted by a flight delay, enabling it to understand the options available for each activity. Mobility features are expressed through the mobile information interactions that can be applied in various contexts. Linking interactions at the activity level provides multiple solutions that can fit into the activity scenario. As they are aggregated, a larger app emerges to address the flight delay scenario.

Looking Ahead

Successful enterprise mobility strategies must be executed differently from traditional IT initiatives. Most enterprise mobile apps result from squeezing a Web application or a CRM system onto a mobile device. Loading 100-plus features into an app does not cut it for mobile users. The app should deliver laser-focused functionality with a true understanding of business objectives, resulting in high user satisfaction.

Personas are key to making the mobility strategy successful. Organizations must leverage various components of persona-driven mobilization to build and deliver business capabilities that meet if not exceed organizational objectives. As a final thought, mobile apps designed for the enterprise should be always-on, always alert and always able to help users in their individual contexts and with a personalized touch.

Acknowledgments

The author would like to thank Sowri Santhanakrishnan, Head of Cognizant's Mobility Practice, for his overall vision and Arun Moolchandani, Mobility Consultant, for his content reviews.

References

- "Mobilization Mantras," iPath Technologies Web site, http://www.ipathtech.com/Mobilization_mantras.html#.
- "Business Impact of the Proliferation of B2C Mobile Apps Preceding B2B Apps," App47, <http://www.app47.com/resource-center/whitepapers/>.
- Sarah Lawfull, "User-Centric Design and the Power of Personas," Methods & Tools, Spring 2011, <http://www.methodsand-tools.com/archive/archive.php?id=117>.
- Kevin Benedict, "Mobility Outlook 2012," InsiderResearch, 2012, <http://www.cognizant.com/InsightsWhitepapers/Mobile%20Outlook%202012%20-%20SAP%20Insider.pdf>.

About the Author



Saikumar Jagannathan is Senior Director of Cognizant's Mobility Practice. He is responsible for strategic advisory services that help organizations adopt mobility in their enterprises. Prior to this role, Sai was the head of technology consulting for Cognizant's Life Sciences Business Unit, driving next-generation solutions in clinical trial business processes across the molecule-to-market continuum. Sai can be reached at Saikumar.Jagannathan@cognizant.com | [linkedin.com/in/saikumar-jagannathan](https://www.linkedin.com/in/saikumar-jagannathan).

COGNIZANT

About Cognizant's Mobility Practice

In our experience, the most successful enterprise mobility strategies are built on a strong collaboration between business and IT. We call our approach "freedom within a framework," and it allows the business the freedom to innovate while providing IT the control to do it securely. Cognizant Mobility partners with clients to develop a strategic enterprise mobility approach - from strategy through implementation - and offers end-to-end support with our advisory services, delivery services, managed services and mobility products and solutions. This includes our TruMobi suite of enterprise app management and security solutions, mobility testing lab and BYOD service offerings.

About Cognizant

Cognizant (NASDAQ: CTSH) is a leading provider of information technology, consulting, and business process outsourcing services, dedicated to helping the world's leading companies build stronger businesses. Headquartered in Teaneck, New Jersey (U.S.), Cognizant combines a passion for client satisfaction, technology innovation, deep industry and business process expertise, and a global, collaborative workforce that embodies the future of work. With over 50 delivery centers worldwide and approximately 164,300 employees as of June 30, 2013, Cognizant is a member of the NASDAQ-100, the S&P 500, the Forbes Global 2000, and the Fortune 500, and is ranked among the top performing and fastest growing companies in the world. Visit us online at www.cognizant.com or follow us on Twitter: @Cognizant.

World Headquarters

500 Frank W. Burr Blvd.
Teaneck, NJ 07666 USA
Phone: +1 201 801 0233
Fax: +1 201 801 0243
Toll Free: +1 888 937 3277
inquiry@cognizant.com

India Operations Headquarters

#5/535, Old Mahabalipuram Road
Okkiyam Pettai, Thoraiakkam
Chennai, 600 096 India
Phone: +91 (0) 44 4209 6000
Fax: +91 (0) 44 4209 6060
inquiryindia@cognizant.com

Australia

Cognizant Technology Solutions
Australia Pty Ltd
Level 15
14 Martin Place
Sydney, NSW, 2000
Australia
Phone: +61 2 9223 3988
Fax: +61 2 9233 5315
inquiryaustralia@cognizant.com

Hong Kong

62/F, Suite 6201, The Center
99 Queen's Road
Central, Hong Kong
Phone: (852) 2273 5393
(852) 2273 5395
Fax: (852) 3965 3222
inquiryhk@cognizant.com

Singapore

Cognizant Technology Solutions
Asia Pacific Pte Ltd
80 Anson Road
#27-02/03 Fuji Xerox Towers
Singapore, 079907
Phone: +65 6324 6672
Fax: +65 6324 4383
inquirysingapore@cognizant.com

