

Key attributes of corporate mobility solutions



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Executive summary

The term “mobility” often evokes images of an endpoint device – a smartphone, a tablet, a laptop, or maybe even a home-based desktop PC – connecting in to a wide range of corporate and web-based resources.

These images aren't *wrong*...but they're backwards. Mobility solutions in a corporate context start with the network and its resources – corporate applications and data, and the networks that provide secure, managed connections between the endpoint devices and the corporate application and data resources – and work outward to the endpoints.

In a corporate context, mobility solutions need to address two distinct pools of requirement. They need to offer the technical capabilities that enable IT to exert control over corporate information assets, and they need to deliver the functionality needed by business management to translate mobility's potential into business benefit: increased productivity, improved interactions with customers, faster and more efficient workflow processes.

The research presented in this Viewpoint highlights two important issues. One is that there are a handful of attributes – the ability to support multiple device types, regardless of OS and form factor, and the ability to tie these supported devices into a managed network that spans the organization and extends to encompass customers and suppliers – that define mobility for a large proportion of Canadian organizations. The second is that the emphasis placed on various attributes changes with context. This is particularly true when we compare the priorities of *business decision makers* (BDMs) and *decision makers within the IT department* (ITDMs). The data illustrates how the increasing influence of these BDMs will affect solution priorities and composition, requiring IT management to take a user-focused view of the technologies they deploy.

Finally, in our expert commentary, we hear from two HP experts: Steve Brar, Global Product Marketing Manager for HP Networking, and Paul Ashwood, Worldwide Portfolio Marketing Manager, Mobile Applications Services, HP Enterprise Services. Brar provides insight into key requirements for a network that supports mobility, and Ashwood discusses ways of designing software to support the different displays, how to implement the network frameworks used to support managed mobility solutions. Together, their analysis of the mobility networking and development requirements provides guidance to organizations looking to align the needs of IT *and* business users with the solution components that deliver the greatest overall benefit.



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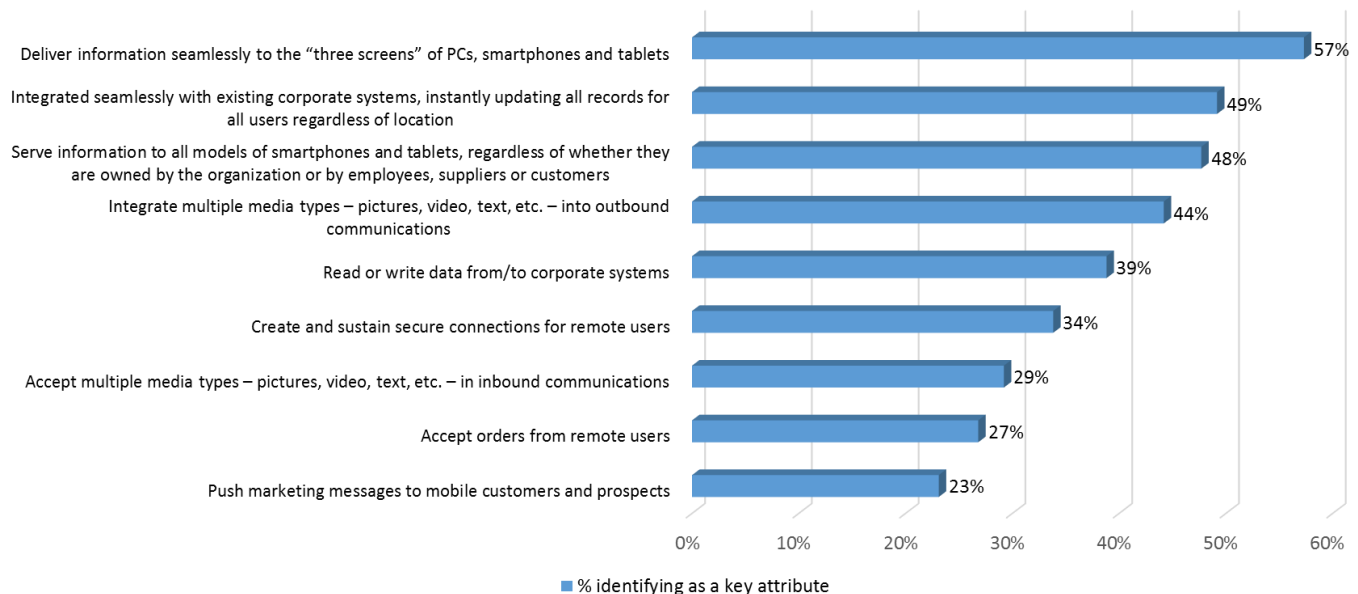
Attributes of mobility solutions

What are the key attributes of a mobility solution? Intuitively, we think about endpoint devices – smartphones, tablets, laptops – and consider how to enable them to better support productivity. But mobility solution planning and deployment doesn't start with a list of device enhancements. The best approach to building a mobility solution is to start with the objectives that need to be met – by IT professionals and by line of business management. Working from a set of key attributes, IT and business management can make informed decisions regarding the optimal alignment of technology infrastructure components (applications, security, access devices and the networking that enables these components to function as a system) with the technical and business processes needed to capitalize on the business benefits of mobility.



Leading global research firm Techaisle recently conducted an extensive survey of business decision makers (BDMs) and IT decision makers (ITDMs) in Canada – a total of 635 respondents representing companies of all sizes. During the survey, Techaisle asked these BDMs and ITDMs who have experience with mobility to identify the most important components of a mobility solution. As Figure 1 illustrates, support for multiple device types and integration with existing application systems top the list of attributes driving mobile business success.

Figure 1. Overall importance of mobility attributes



N=635 Canadian BDM and ITDM respondents. Source: Techaisle 360° Perspectives survey, November 2013

The results illustrate some important mobility issues that require attention in 2014. The first is support for the three primary form factors – smartphones, tablets and laptops – in use within the business world. According to respondents who have experience with mobility, the ability to deliver a consistent experience across these device types is a fundamental requirement of a mobility solution. In the eyes of nearly half of respondents, this requirement extends outside of the corporate device base, to delivering seamless support for smartphones, tablets and laptops owned by customers, suppliers, and/or staff using employee-owned “BYOD” access devices.

Respondents also highlight integration across multiple systems and media types as key attributes of successful mobility solutions. Seamless integration with corporate systems – in an environment that preserves information integrity by updating all users in real time, regardless of their location – is the second-highest rated attribute of a mobility solution. The ability to assemble multiple media types (pictures, video, text, etc.) into outbound communications, and the fundamental ability to read and write data from corporate systems to endpoint devices are also viewed as key features by a substantial proportion of current mobility users.

Taken together, these factors provide insight into why mobility solutions are not yet commonly deployed, despite near-universal demand. They demonstrate that the key attributes of a business-grade mobility solution are integration and cross-platform management – in both cases, including on-premise applications and data resources, endpoint devices, and the network that connects and controls access and information provision. Mobility solutions do not arise out of the



potential of smartphones or tablets; they address management business and technical requirements with systems that maximize the process advantages of delivering greater empowerment to remote workers, and to other users (such as customers) who are not located within company facilities.

The mobility network

What are the keys to a robust mobility solution? We asked two experts from HP for input...

InsightaaS: Why is it important to design a mobility solution from the network out?

Steve Brar, Manager, Global Product Marketing, HP Networking: The network is the lifeblood of mobility. Without the network, today's mobile devices become paralyzed. This fact highlights the importance of the network in designing a mobility solution.



Steve Brar, Global Product Marketing Manager, HP

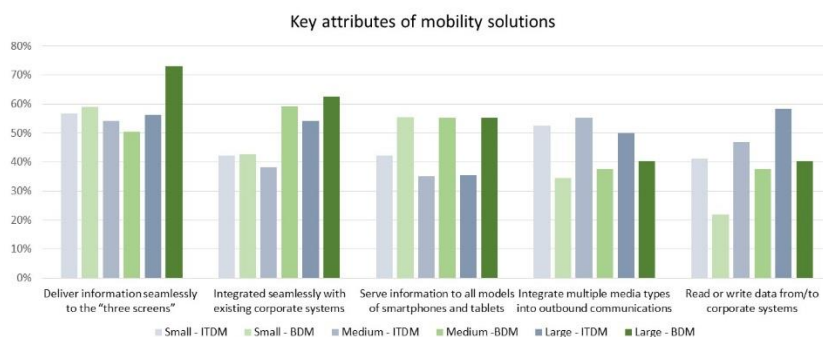
Legacy mobile networks were designed as a coverage-focused overlay solution, acting as a separate network across the wired LAN and requiring separate management tools while providing inconsistent performance for users. HP's approach is to provide a single, unified wired and wireless network, greatly simplifying IT operations and enabling a consistent user experience regardless of how the user is connecting or from where.

Users and requirements

If user requirements are the key to developing mobility solution strategy...how can we learn more about what is important to these users? The Techaisle survey provides insight into the points at which different kinds of users exhibit different preferences and requirements.

Consider Figure 2. Here, we are drilling down into the top five issues identified in Figure 1: support for three screens (smartphones, tablets, laptops), seamless integration with corporate systems to deliver real-time support to remote users, support for all models of devices regardless of whether they are owned by the organization, or by customers, suppliers or employees, support for integration of multiple media types in outbound communications, and enabling remote devices to read from and write to corporate systems. We've added two perspectives: we have divided overall responses by e-size (small businesses with fewer than 100 employees, medium businesses with 100-499 employees, and large enterprises with 500 or more employees) and by the respondent's role: business management (BDM) or IT department employee (ITDM).

Figure 2. Differences in perspectives



N=635 Canadian BDM and ITDM respondents. Source: Techaisle 360° Perspectives survey, November 2013

The results show that perspectives on mobility's key attributes change with both e-size and role. The 'three screens' issue is important to respondents in all categories (and especially so for enterprise BDMs). Seamless integration with corporate systems delivering real-time support to remote users is more of an enterprise issue, though business management in medium-sized organizations also call this out as a key attribute. Support for all device models regardless of ownership (customer, supplier, employee or corporate owned) is a 'BDM issue;' it is clearly more important to business management than to IT management across all e-sizes. Support for integration of multiple media types (pictures, video, text, etc.) in outgoing messages

The mobility network (continued from page 4)

InsightaaS: What are the key networking considerations in supporting mobility?

Brar: Bandwidth and performance. In order to ensure an optimized end-user experience for mobile users, ensuring there is sufficient bandwidth is key. Bandwidth becomes more critical as we move to denser client environments, more devices per user, and to new technologies such as 802.11ac.

Ensuring a reliable and consistent level of performance is critical for mobility. Granular quality-of-service policies, advanced radio resource management, client load balancing, interference mitigation, and airtime fairness – which HP delivers with HP Wi-Fi Clear Connect – are all key capabilities that should be considered when deploying a network to support mobility.

InsightaaS: What are the system-level complexities involved in supporting the integration of multiple data types in outgoing communications?

Paul Ashwood, WW Portfolio Marketing Manager, Mobile Applications Services, HP

Enterprise Services: From a mobile apps development perspective, the main complexity is understanding that you have these different form factors – 5" phone, 7" tablet, 10" tablet, portrait mode, landscape mode, laptops, desktops, etc.

and the technology needed to allow remote devices to read from and write to corporate systems, on the other hand, are both primarily of interest to IT management: the support for multiple media types is especially important to small businesses, while connections to corporate systems are of more interest to ITDMs in medium and large enterprises.

Plotting the journey

It is clear that each IT and business professional's perspective on the mobility journey is shaped by their context – by their business objectives, and by the requirements imposed by the size of their organization. What is the best way to select a starting point, and to 'connect the dots' from there?

In Figure 3, we have taken the results from the Techaisle survey and plotted them in three dimensions:

- On the Y axis, we have the relative importance of e-size: issues that are more important to small businesses are plotted nearer the bottom of the graph, and those that are more important to medium businesses plot nearer the top. Note that most of the points are nearer the top of the chart; small businesses sometimes struggle to establish the core infrastructure needed to enable business-grade mobility.
- On the X axis, we look at the interests of ITDMs and BDMs. Attributes that are primarily of interest to ITDMs are plotted to the left of the graph; those that are primarily of interest to BDMs are plotted to the right, and those that are of equal importance to both groups are plotted in the middle.
- The third dimension is the overall importance of the attribute. This is reflected in the size of each point: larger points score higher in overall importance in the Techaisle data.

The results confirm some of the insights contained in the Figure 2 data presented above. The 'three screen' support issue sits near the middle of the chart, demonstrating that it is important to both larger and smaller organizations, and important to both ITDMs and (in even greater measure) BDMs. The ability to integrate multiple media types into outbound communications is also of interest to both smaller and larger firms, but is shown here as a particular issue for ITDMs. The other three mobility solution attributes are of most importance within larger enterprises. Two – providing support for all device types, regardless of ownership, and delivering real-time updates to remote

The mobility network (continued from page 5)

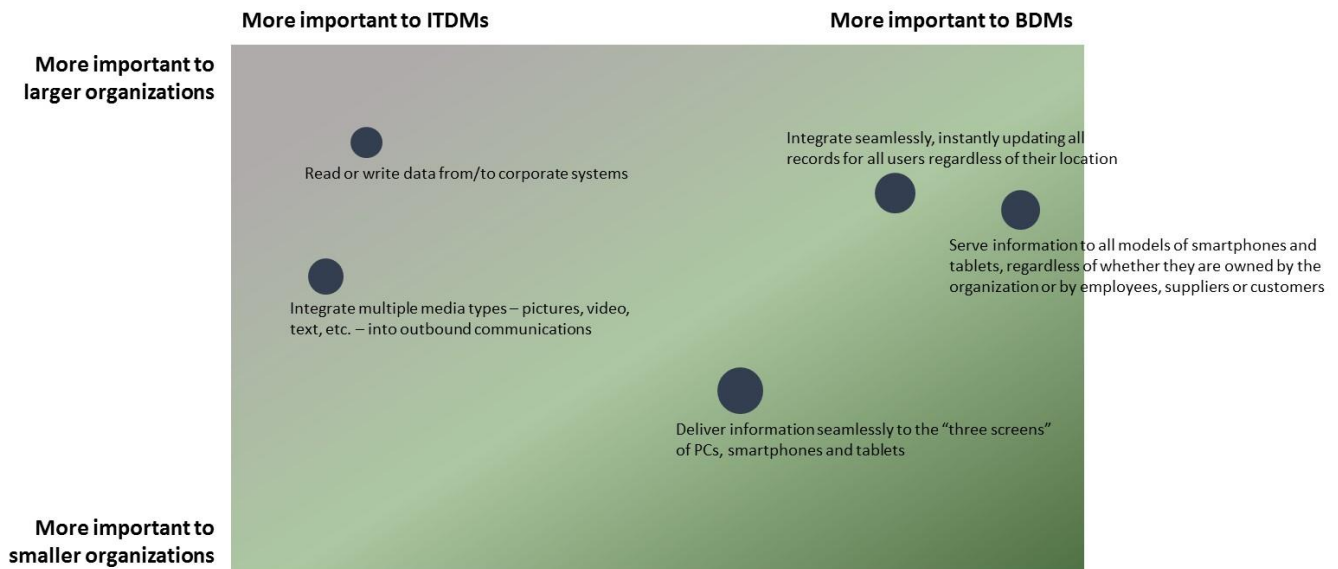
You need to create a *Responsive Design* that dynamically adjusts to the form factor being used. This will require you to design multiple layouts instead of the traditional one layout. Think about the example of a basic picture that is a banner image. The image I display on a 10" tablet in landscape mode, will look horrible on a 5" smartphone in portrait mode. It is a basic question of real estate – the solution is to have more than one image, to recognize the form factor being used, then to dynamically adjust the content to fit the form factor.

InsightaaS: What do organizations need to consider, when creating an approach that enables remote endpoint devices to read from/write to corporate systems?

Ashwood: Key mobile app considerations include: *Middleware services* (and an API gateway) to connect and manage the front end mobile apps that are connecting to the back end. *Offline vs. online mode:* don't assume that users are always connected. *End-to-end system performance,* and the ability to monitor that performance and diagnose problems. And *security of the devices and the app.* You need to have a secure container on the device, app security scans of the app, remote wide capability, and encryption of data, on the device and in transit over the network.

systems users – are especially important to BDMs, while the third – ensuring that mobile devices can read from and write to corporate systems – is again the province of IT.

Figure 3. Plotting key mobility attributes



Note: the size of each marker is proportional to the relative overall importance of its attribute

N=635 Canadian BDM and ITDM respondents. Source: Techaisle 360° Perspectives survey, November 2013

What does this mean to mobility strategy?

While it is generally true that most organizations – of all sizes – can derive business benefits from a mobility solution, it's equally true that each business is unique, and that a 'one size fits all' prescription is an inappropriate path to mobility success.

What we see in the chart, though, are five key attributes that correspond to five different starting points. Most organizations will need to address most or all of these issues, but each organization can select its starting point and evolution path based on a combination of its corporate needs, and the extent to which the solution is being driven by BDMs or ITDMs. Organizations where BDMs are providing the impetus for a mobility solution may want to start by understanding how to architect the solution to provide managed, secure access to all types of endpoint devices, regardless of ownership. In businesses where IT is responsible for driving the mobility strategy, there may be merit in beginning by deploying systems that provide for read/write capabilities from remote endpoint devices, and then expanding the scope of services to address business functionality requirements. In either case, or in other approaches that can be plotted across the graphic in figure 3, it is important to recognize that the mobility journey will require ITDMs and BDMs to work together to identify and address all of the key attributes required by a specific organization – and to build that solution from the network out. As HP's Brar observes, "The network is the lifeblood of mobility. Without the network, today's mobile devices become paralyzed."