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Rahul Basole
Georgia Institute of Technology

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Strategic Planning for Enterprise Mobility: A Readiness-Centric Approach

Rahul C. Basole, PhD

Tennenbaum Institute, Georgia Institute of Technology
rahul.basole@ti.gatech.edu

Abstract

Strategic planning for information and communication technologies (ICT) has been a topic of significant interest to both researchers and practitioners. However, the issues pertaining to emerging ICT have remained largely undeveloped. This article examines what enterprises must consider when planning for emerging ICT, with a particular focus on enterprise mobility solutions. Integrating firm-level theories from the strategic management, information technology adoption, and business transformation literature, we develop a framework that conceptualizes the overall implementation decision. We identify four motivating areas that drive adoptions of mobile ICT and reduce overall implementation risk: (1) justified business value, (2) strategic alignment, (3) reasonable cost/economics, and (4) an acceptable level of enterprise readiness. We discuss the importance of each of these areas, introduce and develop a multi-dimensional model of the relatively unexplored concept of enterprise readiness for mobility, and present findings from a global expert study. The article provides important theoretical and managerial insights to the strategic planning process and aids with the investment justification of mobile business solutions.

Keywords: Mobile Business, Strategic Planning, Enterprise Readiness, Transformation

Introduction

The logic for enterprise adoption of mobile information and communication technologies (ICT), such as laptops, smart phones and other handheld devices, is well recognized. Any technology that can deliver a tangible business benefit, by making information more accessible, is a good thing. The promises of mobile ICT certainly fall into this category (Brans 2003; Lyytinen et al. 2002). However, this was not always the case. In early 2000, when enterprises first began to evaluate and adopt mobile ICT, the technology was still fairly immature and often failed to deliver on the expected benefits (Gohring 2006; Worthen 2004). The predictable outcome was widespread disappointment. Many considered mobile ICT to be another hyped up technology with only little substance.

Today, much has changed. The underlying technology has improved significantly. The central pieces of the mobile data equation, which the author refers to as the *mobile DNA* (devices, networks and infrastructure, and applications), are all falling into place: devices are becoming more suited for mobile data use, wireless networks are maturing and becoming increasingly ubiquitous and capable of handling higher data throughput, and value-added mobile applications are rapidly emerging (Barnes 2003; Cosgrove 2005; Lattanzi et al. 2006). While the initial adoption growth of mobile ICT has primarily occurred on the consumer side, a similar trend is increasingly seeping into the enterprise domain. More and more organizations are realizing the tremendous potential that mobile ICT can offer (EBStrategies 2003; Faigen et al. 2002). Despite an increasing amount of published material (Scornavacca et al. 2006), most of which is practitioner oriented, there remains a lack of agreement of what value propositions enterprise mobility offers and how an appropriate strategy should be developed.

The lack of a common strategic planning approach can be attributed to the wide range of views of enterprise mobility (Zetie 2005). Some define enterprise mobility narrowly and tactically, where point-solutions dominate. These projects tend to focus on productivity improvements and costs savings (e.g. email). Others define the mobile enterprise more broadly and strategically. In this instance, the focus is on strategic and large-scale enterprise wide implementations (e.g. mobile CRM) that enable organizations to create new core competencies, gain and sustain competitive advantages, and define new markets.

The purpose of this article is to develop a conceptual model of core elements that can aid in the strategic planning for enterprise mobility. Our comprehensive synthesis of previous work identifies four motivating areas that drive adoptions of mobile ICT and reduce overall implementation risk: (1) justified business value, (2) strategic alignment, (3) reasonable cost/economics, and (4) an acceptable level of enterprise readiness. We discuss the importance of each of these areas, introduce, develop a multi-dimensional model of the relatively unexplored concept of enterprise readiness for mobility, and present findings from a global expert study. The article concludes with important theoretical and managerial insights to the strategic planning process and aids in the investment justification of enterprise mobility solutions.

Theory and Conceptual Model

Our conceptual model of strategic planning for enterprise mobility is rooted in the theories of innovation adoption, institutional behavior, resource-based organizations, and enterprise transformation (Barney 1986; King 1978; Porter 1980; Rouse 2005; Swanson 1994; Wernerfelt 1984; Zaltman et al. 1973). It builds on the notion that strategic planning for enterprise mobility requires an understanding of the internal and external drivers to adopt and implement it, the organizational means and capabilities to facilitate the overall process, and the evaluation of potential near and long-term value and impact (Basole et al. 2007; Ward et al. 2002). Drawing on these theories, we identify four strategic areas that need to be considered when planning for enterprise mobility and are illustrated in Figure 1. The following sections elaborate on each of these areas.

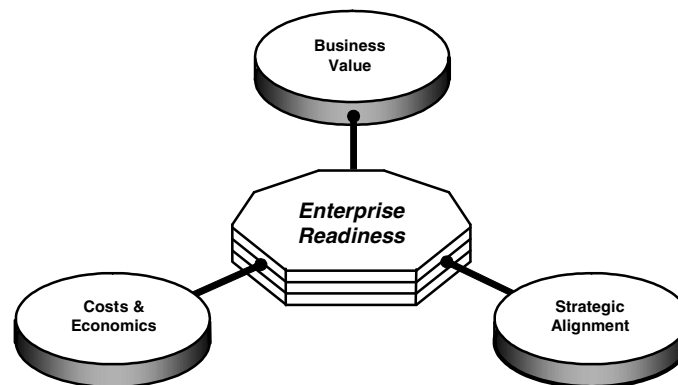


Figure 1. Critical Areas of Strategic Planning for Enterprise Mobility

Business Value

As with most technology investment decisions, a justified and observable business value is often considered the most prevalent criteria to adopt (Ward et al. 2002). This is particularly the case when strategically planning for emerging ICT, for which the business value has often not been clearly identified and in many instances is unknown (Barua et al. 2004; Melville et al. 2004). For enterprise mobility solutions, several intriguing value propositions have emerged (Basole 2004; Nah et al. 2005). The ability to access the corporate network and resources anywhere and anytime is clearly one of the main benefits and key drivers to adopting mobile ICT (Kalakota et al. 2001). Field workers are no longer tied to desktop computers to check mission- and task-critical data. The use of mobile ICT enables workers to receive timely answers, which in turn can lead to timely decisions. Enterprise mobility solutions also offer the potential of achieving significant cost savings. Expensive computing equipment can be replaced with smaller, more portable, and less expensive handheld devices. Field workers can use these devices to be immediately connected to all the sources they need. Furthermore, replacing paper-based processes

with mobilized applications reduces the potential for errors in transferring information to a call report or clinical chart, leading to a higher level of data accuracy and integrity, which in turn can be harvested for overall business intelligence use. Collecting data in real-time and transmitting it sooner to a back-office system can improve many processes like order shipping. Downstream benefits can be realized in areas like lower inventory and carrying costs; more efficient routing of multi-drop deliveries; and greater customer satisfaction, leading to overall business process improvement. Better access to corporate resources – both data and people – naturally leads to a higher level of productivity, as mobile workers are able to view data that allows them to respond and execute faster to changing market conditions.

An equally important value proposition of mobile ICT is its ability to provide greater insight and visibility into enterprises' resources and assets, creating an instrumented enterprise (Zetie 2005). Using RFID, GPS, and Wireless sensor technologies, for example, enterprises are able to monitor and manage a large number of assets and products. RFID tags can be used to improve the efficiency of supply chain or the reliability of baggage handling at airports. Even pharmaceutical companies are considering “tagging” drugs and apparel makers are “tagging” shirts to reduce counterfeits and illegal distribution. GPS can be used to monitor vehicle usage and manage fleet maintenance or to track workers' locations and enhance service technician scheduling. Wireless Sensor Technologies are used to rapidly detect or preempt failures and promptly schedule maintenance, as British Petroleum for example does for its pipeline operations.

The near-term benefits that mobile ICT can provide to enterprises are often labeled as convenience, efficiency, productivity, decision-speed, and process improvement. The long term benefits however can fundamentally transform organizations and create new competitive advantages and core competences that influence entire business models, strategies, and potentially markets and industries (Basole et al. 2006; Basole et al. 2007; Rouse 2005).

Based on this discussion, we can argue that the business value of mobile ICT can be defined as an overarching measure of different types of benefits. We argue that organizations can realize four types of benefits from enterprise mobility – informational benefits, strategic benefits, transactional benefits and enterprise transformation benefits.

Table 1. Enterprise Mobility Benefit Types

Type of Benefit	Details
Strategic Benefits	Strategic benefits include the ability to create competitive advantage, align business strategies to directly support organizational goals, provide new products or services, and improve relationships with customers.
Informational Benefits	Informational benefits include faster and easier access to internal and external information, more useful, accurate and reliable information, and increased flexibility for manipulation of content and format of information.
Transactional Benefits	Transactional benefits include operational and cost savings; supply chain management savings; staff cost savings; and improved business efficiency of employees, business processes, and financial resources.
Enterprise Transformation	Benefits associated with enterprise transformation include improved skill levels, new business plans and business models, expanded capabilities, and improved structure and processes.
Business Value of ICT	An overarching indicator of the value of ICT to the organization, which combines strategic benefits, informational benefits, transactional benefits and enterprise transformation benefits.

While most studies have attempted to operationalize the business value with economic and financial measures, we consider business value as a combination of both tangible and intangible metrics, thus taking into account the aforementioned types of benefits. In particular, we argue that business value for ICT can be measured by the extent with which decision makers agree

that the adoption and implementation of ICT will contribute to each benefit type. In other words, a higher business value means that decision makers more strongly agree that benefits will be achieved. Since most ICT investments are under extreme scrutiny today, understanding and justifying the business value is critical (Carr 2003; Gohring 2006). Based on our discussion above, we thus propose business value to be one of the key adoption drivers in the strategic planning model.

Costs/Economics

The costs and economics associated with ICT implementation projects are another important aspect of the overall technology adoption decision. Organizations planning to adopt ICT must not only consider the tangible and intangible benefits derived from adoption, but also justify the costs associated with its successful implementation (Kornak et al. 2004; Ward et al. 2002). Generally, the larger and more complex the scope and scale of the ICT initiative, the more resources must be deployed. Naturally, this leads to higher costs.

Many organizations, however, underestimate the true costs of ICT adoption and implementation projects. Often, decision makers merely include direct IT costs, such as the costs associated with the installation and configuration of hardware and software. However, indirect costs are also significant contributors. For example, indirect costs can arise from the transformation of existing to new work practices. At first, a temporary loss in productivity may be experienced. Additional costs may be experienced once the basic functions of the new ICT are in place. Training of employees must be provided. Costs can also increase when members of the company resist to the change. As such, enterprise transformation through ICT can become increasingly expensive. On the flip side, organization must also calculate the costs, or potential loss, of not implementing new ICT. By foregoing the implementation and adoption of an ICT, decision makers may face severe consequences that can be directly translated into monetary terms. Competition may intensify; organizations may lose valuable customers; the supply chain may become inefficient; or the corporate image may be tainted as consumers do not see the organization as a technological leader. All this may lead to a loss of potential near- and long-term revenue.

Proper evaluation of costs and economics can thus lead to a more successful mobile ICT adoption and implementation plan. As such it cannot be ignored as part of the overall strategic planning process. Careful assessment of costs can lead to other tangible outcomes, in particular greater buy-in by senior management and much more successful infusions of enterprise mobility solutions. Several assessment models have been used to determine the economic value and costs associated with ICT investments. Traditionally, models have been based on net present value methods. More recently, decision makers have used options-based framework to evaluate ICT investments. The latter approach allows decision makers to incorporate risk and uncertainty into the modeling process, thus reflecting reality more accurately.

Strategic Alignment

The third element of our model is the strategic alignment of mobile ICT with business objectives. Strategic alignment of business and ICT has been a topic of great interest in recent times (King 1978; Ward et al. 2002; Zetie 2005). Organizations considering the adoption and implementation of new ICT must evaluate how ICT will impact the overall strategy. Recent studies have shown that an alignment between business strategy and ICT is essential, particularly in times of organizational change and uncertain economic conditions (Basole et al. 2006). Indeed, strategic alignment of ICT and business is considered a key aspect in information systems planning and has become a central responsibility of the CIO. More recently, it has been argued that strategic alignment is particularly important when considering emerging ICT. If the emerging ICT under consideration does not fit with the long-term goals and objectives of the organization, it is likely that the organization will not benefit significantly from adopting it. Also, the adoption and implementation of an ICT that is not aligned with the business strategy will steer organizations away from their intended course. While a justified business value may generate a greater interest, it must be considered in conjunction with the overall strategy of the organization. An organization will not invest in a new technology if it does not align with its fundamental business objectives.

Enterprise Readiness

The first three elements of our model describe the most commonly investigated areas when planning for ICT. However, one element that was found relatively unexplored was the notion of enterprise readiness. Enterprise readiness represents an

organization's preparedness to adopt and implement new ICT. Even if the business value is there, the costs make sense, and the implementation of mobile ICT aligns well with the overall business strategy, it would not be wise to pursue adoption if the enterprise is not ready for it. In fact, many ICT implementations have failed due to a lack of enterprise readiness. A strong case in point is the sheer number of failed enterprise resource planning (ERP) implementations. The assessment of enterprise readiness enables executives and decision makers to identify organizational deficiencies, make appropriate changes and improvement, this reducing the risk associated with mobile ICT implementation. We therefore believe that enterprise readiness is a critical element in the strategic planning process for enterprise mobility.

A Readiness Framework for Enterprise Mobility

In order to minimize the associated risks and maximize the potential benefits of enterprise mobility solutions, organizations must thus not only understand the value and economics of enterprise mobility solutions, but also carefully evaluate and measure their level of "readiness" for enterprise mobility. Readiness assessment enables decision makers to become more knowledgeable about the characteristics of mobile ICT, form attitudes about it, and make a decision regarding the fit between the technology and the organization. Extending the ideas from the innovation adoption, strategic management, and resource-based theory literature, we define readiness for enterprise mobility to be an assessment of an organization's (1) preparedness, (2) potential, and (3) willingness to adopt and implement mobile ICT. We further argue that readiness for enterprise mobility is assessed along eight salient dimensions: (1) technology, (2) data and information, (3) process, (4) resource, (5) knowledge, (6) leadership, (7) employee, and (8) values and goals. A complete enterprise readiness assessment will thus involve an evaluation across the three layers - preparedness, potential, and willingness – and along all eight readiness dimensions (see Figure 2). Preparedness is assessed for all eight dimensions; potential is evaluated along the process, employee, and value and goals dimensions; and, willingness is assessed along the employee and leadership dimensions.

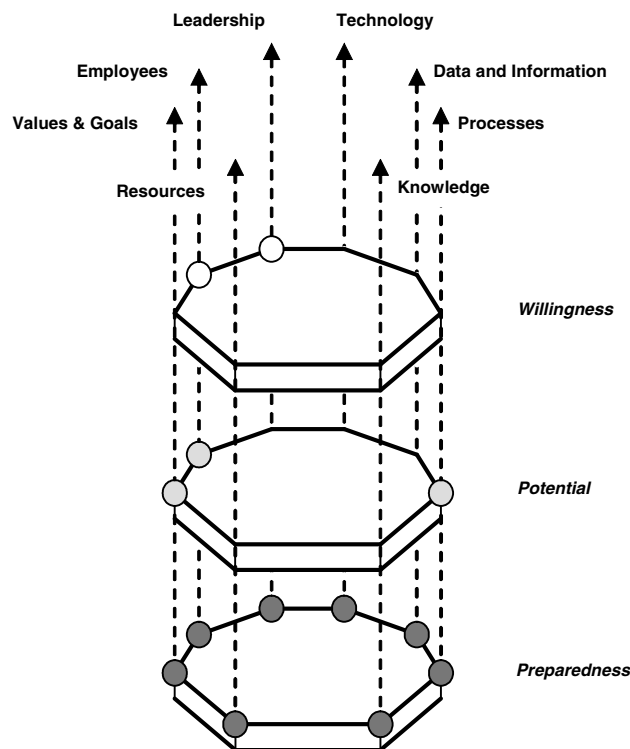


Figure 2. Model of Readiness for Enterprise Mobility

Theoretical and practical support for each of the eight dimensions and associated assessment indicators is provided as follows:

1. Technology Readiness. Technology readiness refers to the ability of the underlying technology infrastructure (network services, hardware, software, and security) to support the adoption and implementation of mobile ICT. A robust, comprehensive, and open-standards oriented technological infrastructure, flexible and scalable to accommodate any change and emerging requirements, leads to a higher level of technology readiness.
2. Data and Information Readiness. Data and information readiness refers to the ability to federate data from multiple sources, provide a single view of enterprise data, and make it available to any system at the time when it is needed. Higher levels of data and information readiness is achieved through a consistent, reliable, and secure data and information infrastructure that provides both synchronization and data recovery capabilities for highly disconnected and variable environments.
3. Process Readiness. Process readiness refers to the ability of organizational processes (e.g. human processes, information processes, organizational change processes, etc.) to facilitate the adoption and implementation of mobile ICT. Well-defined, documented, managed, repeatable and optimized processes indicate a high level of readiness along this dimension.
4. Resource Readiness. Resource readiness represents an organization's ability to support mobile ICT adoption and implementation. These resources may include (1) financial, (2) human, and (3) technical assets. The availability of resources for current and future plans is an important aspect in successful assimilations of mobile ICT.
5. Knowledge Readiness. Knowledge readiness reflects both the general and specific knowledge required by decision makers for mobile ICT adoption and implementation. General knowledge includes awareness and understanding of the state of emerging ICT, ICT-related decision-making processes, and previous experiences with ICT adoptions and implementations. Specific knowledge encompasses an awareness and understanding of the opportunities, challenges, barriers, and opportunities that come with the adoption and implementation of mobile ICT. This will include an understanding of mobile ICT characteristics, its potential impact on strategy, processes, and people, and the changing enterprise mobility market.
6. Leadership Readiness. Previous studies have shown that one of the most critical factors in technology adoption decisions is the support and vision of top management. Leadership readiness, hence, reflects an appropriate level of skills, innovativeness, knowledge, and risk orientation of top management. It also indicates the level of support and strategic vision that management offers in association to the adoption and implementation of mobile ICT. Leadership needs to ensure that mobile strategies fit with the way they are doing business rather than changing their ways of doing business to fit the strategy.
7. Employee Readiness. Employee readiness reflects the end-users attitude towards change, their level of skills, and perceived benefits by the end-users. A high level of employee readiness can lead to a faster adoption and diffusion of mobile ICT.
8. Values & Goals Readiness. Values and goals readiness reflects the fit between existing structural and nonstructural enterprise characteristics and mobile ICT characteristics. Structural characteristics may include organizational size, centralization, formalization, autonomy, specialization, functional differentiation, strategic objectives and goals. Nonstructural characteristics may include culture, bureaucracy, task environment, and political climate.

It should be noted that all of these dimensions have an influence on each other and must therefore be considered as a whole. A lack in one dimension may influence the overall enterprise readiness for mobile ICT. Similarly, a lack of readiness in one of the three layers will also result in a lower degree of enterprise readiness. As such, a comprehensive assessment of all dimensions on all layers should be conducted.

Research Methodology

Since the concept of enterprise readiness is not very well defined and the literature is relatively thin compared to the vast experience accumulated by experts and practitioners in adopting and implementing mobile ICT, we felt that it would be appropriate to use an exploratory, theory-building research approach to validate our initial theory of readiness for enterprise mobility. This article thus uses a mixed, two-stage qualitative and quantitative research approach to investigate the salient

dimensions of readiness for enterprise mobility and their associated assessment indicators. In the first stage, relevant readiness dimensions and assessment indicators were identified using a qualitative approach. Dimensions were primarily derived from the firm-level innovation, information systems, and strategic management literature and through a series of interviews with C-level executives. The second stage consisted of a two-phase expert study using a modified Delphi approach. The major modification consisted of seeding the Delphi with a set of carefully selected items – obtained from Stage 1 – to provide respondents with a context within which to consider their responses. The primary advantages of this modification to the Delphi is that it (a) typically improves the initial round response rate, and (b) provides a solid grounding in previously developed work, and (c) decreases the number of rounds required to achieve consensus.

To generate a fast turnaround of expert responses, we utilized a web-based data collection approach. This approach also enabled us to validate response completeness in real-time, receive a high response rate, and reduce data collection costs. The back-end and data collection logic of the web-based expert study was implemented using the scripting language PHP (Hypertext Preprocessor) and MySQL. The front-end design was designed using Macromedia Dreamweaver and Fireworks. After several rounds of design modifications, pre-testing, reliability checks, and instrument validation, a final version of the expert study was deployed to the Web.

Identification and Selection of Expert Panel and Participants

Since the information solicited for this study required in-depth knowledge and previous experience with strategic technology investment decisions and organizational decision making, we were looking to select a focused group of experts that could provide opinions on salient dimensions of enterprise readiness dimensions and their assessment indicators. We utilized the following selection criteria:

1. Practitioners and academics at senior levels that had extensive working and research experience in the information technology management and strategy domain.
2. Experts currently, recently or directly involved in the management of ICT projects.
3. Experts that have detailed knowledge of mobile ICT.

In order to obtain the most valuable opinions, only participants who met at least two of the three sampling criteria were selected. Based on a list of academic affiliates and industry members of the Tennenbaum Institute, we initially identified 28 potential participants for Stage 1. Eleven experts agreed to participate in our study, resulting in a net response rate of 39.3%. For the second stage of the expert study, we sought participation of experienced participants based on the same three criteria. For this stage, however, we expanded our pool of potential participants beyond the experts identified in Stage 1. This was accomplished by including executives of Cellular Telecommunications & Internet Association (CTIA) member companies, reviewers, committee members, and participants of the past three Mobile Business conferences (ICMB), and members of the Mobile Enterprise Alliance, a non-profit organization that exclusively deals with organizations involved and interested in enterprise mobility. Based on these sources, our potential list of participants for Stage 2 included 367 individuals. Eighteen invitations were returned due to e-mail delivery failure. While 342 participants read the e-mail invitation, only a total of 135 individuals created a login account, and only 109 participants completed the entire study, resulting in an overall response rate of 29.7%. The demographics of our sample generated excellent group comparisons, such as between academic and industry respondents, US and Global respondents, small and large firms, and organizations with and without mobile ICT strategies.

Instrumentation

After obtaining a final list of readiness dimensions and assessment indicators in Stage 1, the objective of Stage 2 was to assess the relative importance of each of the dimensions and associated assessment indicators. This was done in several steps. The first step asked experts to assess the importance of each validated dimension when planning for mobile ICT on a five-point Likert scale (1=Not Important, 5= Critical). The second step asked experts to consider organizations in their industry (or peer group) and indicate the extent to which they agreed or disagreed with a set of statements (on a five-point Likert scale) that related to assessment indicators levels to high dimensional readiness.

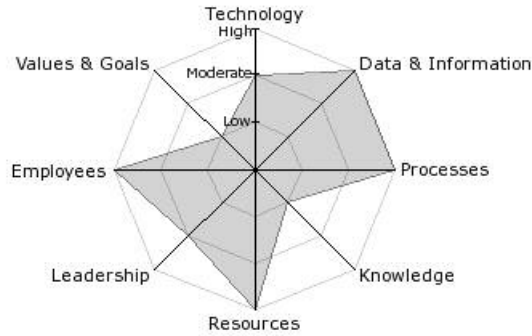


Figure 3. Sample Readiness Profile for Enterprise Mobility

The last step used a visual, radar graph assessment approach to determine the relative importance of each of the eight validated readiness dimensions. For the purposes of this study, we allowed a three-level assessment (“high”, “moderate”, and “low”) for each readiness dimension. In order to alleviate the problem of running a costly and time-extensive full factorial experiment (eight dimensions at three levels = 6,561 unique readiness profiles), we employed a fractional factorial experiment by determining the optimal combination of dimensions and levels using the minimum aberration method (Wu et al. 2000). Applying a $k = 8$, 27-run design with fraction and resolution of 3_{III}^{8-5} (Wu et al. 2000), experts then had to indicate their perceived level of overall enterprise readiness for only 27 profiles on a five-point Likert scale (1=very low, 5=very high). A sample enterprise readiness profile is shown in Figure 3.

Data Collection

Study participants were sent e-mail invitations to access the web-based study. The e-mail invitation indicated the purpose and procedures of the study. Invitees of both phases were made aware that participation was completely voluntary and that all information was kept confidential. The e-mail included the URL of the study and temporary login information. The use of a username and password to access the web-based study enabled participants to allocate time to complete the survey on their own terms. If users could not complete the survey in one sitting, they were advised to save their responses, logout, and return to their questionnaire at any time by signing in with their user ID and password. The expert study was administered for two weeks. One week after the initial e-mail invitation, a reminder e-mail was sent to those participants who had not responded yet.

Data Analysis and Results

The data obtained from our experimental design of the 27 readiness profiles for enterprise mobility was analyzed using several statistical tests. It is evident from a first glance at our results that all readiness dimensions proposed in our conceptual model play a very important role in determining enterprise readiness for mobile ICT.

Our main regression model (1) for the full sample reveals several important observations. First and foremost, it confirms that the leadership dimension contributes the most to enterprise readiness with 27%. It is followed by Technology (17%), Data and Information (13%), Resources (12%), and Processes (10%). While the other dimensions may not contribute as highly as the aforementioned dimensions, all readiness dimensions are significant at less than the 1% level. Our analysis also revealed a very high R^2 , leading to the conclusion that the dimensions included in the overall model describe readiness for enterprise mobility well. Further examination of the interaction plot does not reveal anything further, which is to be expected due to the high variance explained by the main effects.

Table 2. Key Results for Full Expert Sample

Results
Regression Equation Readiness = - 0.344 + 0.255 Tech + 0.226 DataInfo + 0.201 Proc + 0.199 Know + 0.221 Res + 0.330 Lead + 0.184 Empl + 0.0796 ValGoals
S = 0.0875818 R-Sq = 98.1% R-Sq(adj) = 97.2%

While the full sample model certainly provides insight to the salient dimensions of enterprise readiness and their relative importance, we gain a deeper understanding by examining the subgroups of our sample. In particular, we distinguished between the following five groups: (1) Academics vs. Industry, (2) US vs. Global-Based Firms, (3) Small vs. Large Firms, (4) Firms with or without Mobile ICT Deployment, and (5) Firms with and without a Mobile ICT strategy. The results are shown in Figure 4a-j. It should be noted that all subgroup regression models also have a very high R^2 leading to the conclusion that the dimensions included in the models explain a large percentage of the variance.

Discussion of Key Findings

Academics vs. Industry

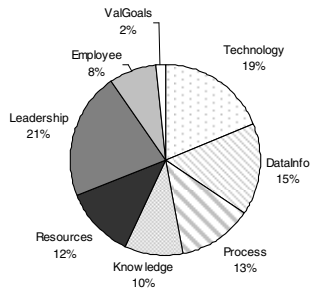
At the group level, we found no significant difference between academic and industry respondents. At the dimensional level, however, we did find a significant difference in leadership. Industry respondents tend to rate the contribution of leadership to enterprise readiness significantly higher than academic respondents. This result validates what has become a common observation in practice today; leadership and their ability to articulate the vision, manage, and execute on innovations has become an extremely important aspect of organizations today. According to the recent IBM Global Innovation Study, leadership is more involved in the innovation initiatives of organizations (IBM 2006). Indeed, most innovative organizations tend to have leaders that commit to and support innovations.

Another observation that can be seen between academics and industry respondents is that academic respondents tend to rate technology, data and information, and processes higher than industry respondents. This is also not a surprising result; in fact, it reinforces the knowledge that we already have of the academic perspective. Academics tend to think in conceptual terms; they often are more concerned on what tangible elements are important in facilitating the adoption and implementation of new technologies and improving its overall enterprise readiness. Indeed, technology, processes, and data and information are what most academics view as the infrastructure building blocks of enterprise readiness.

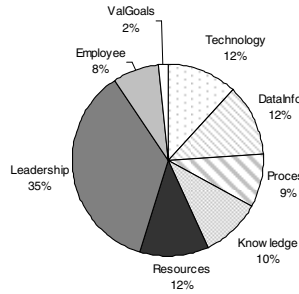
US vs. Global

At the group level, we found there to be a significant difference between US and Global respondents. We attribute this difference in enterprise readiness to varied views and approaches to leadership styles and importance of technology infrastructure. The significant differences in views on enterprise readiness tend to highlight the different approaches of preparing organizations for change. Whereas US organizations are concerned about leadership for change, global respondents place greater emphasis on other organizational aspects, such as technology infrastructure.

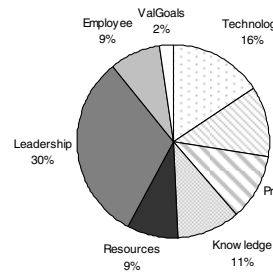
This proposition is indeed validated by the significant difference in technology readiness. Global respondents tend to rate technology readiness significantly higher than US respondents. It may also be attributed to the extensive diffusion of IT in US organizations in general and that technology has almost become a commodity. On the contrary, we can also hypothesize that most global companies may believe that technology is the distinguishing factor.



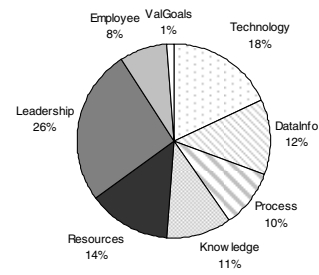
(a) Academics



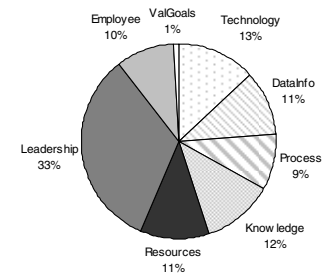
(c) US-Based Firms



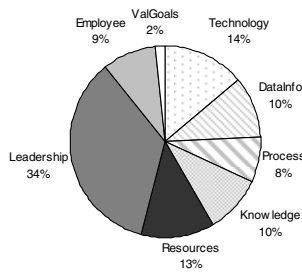
**(e) Small Firms
(< 1000)**



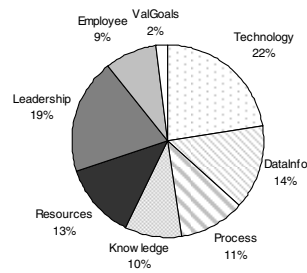
**(g) Firms with
Mobile ICT Deployed**



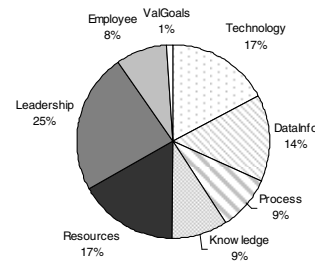
**(i) Firms with a
Mobile ICT Strategy**



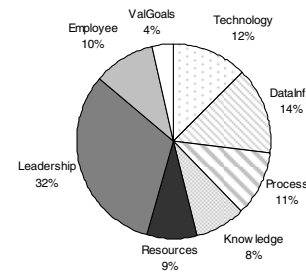
(b) Industry



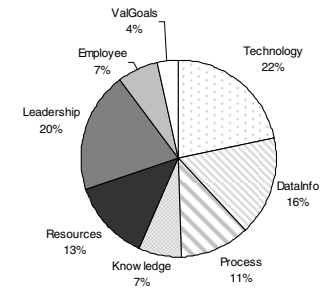
(d) Global Firms



**(f) Large Firms
(> 1000)**



**(h) Firms with
Mobile ICT Not Deployed**



**(j) Firms with
No Mobile ICT Strategy**

Figure 4. A Comparison of Dimensional Contribution on Enterprise Readiness by Sample Group Segments

An equally stark, but not significant, difference can be observed along the leadership dimension. US respondents (35%) tended to value leadership readiness much more important than global respondents (19%). This, to a certain extent, can be explained by Hofstede's view on differing leadership styles across the world (Hofstede 1980). While US respondents may see leadership to be the critical element in organizational readiness, global respondents believe that leadership is not as important as other aspects of the enterprises, namely technology and resources. This can be partially explained that leadership styles may vary significantly in the US and has become a distinguishing trait of US organizations in contrast to global companies. In order to understand why this significant difference in magnitude occurred, we examined the demographic distribution of our global respondents further. It shows that a majority of our global respondents come from Western European region. Here, mobile ICT technology has diffused significantly and is very mature. We hypothesize that global leadership has had more experience with integrating emerging technologies such as mobile ICT than leadership in the US, thus placing less emphasis on leadership and more on technology. This issue is certainly open to debate and requires further examination

Small vs. Large Organizations

While there is no significant difference between respondents from small and large organizations and the majority of dimensions have similar magnitudes in contribution to enterprise readiness for mobile ICT, it is interesting to observe the relatively large difference in contribution magnitude along the resource dimension. Respondents from large organizations tend to rate resource readiness much larger than respondents from smaller organizations. This may be attributed to the difficulties associated with managing and allocating resources in large enterprises. Deployments of ICT in larger organizations tend to be significantly larger in scope, size, and cost. As such more resources must be allocated to ICT projects in large organizations.

Another argument that can be made for this observation is that smaller organizations may find it easier to allocate resources for emerging ICT projects due to lower number of conflicting ICT projects. The business value can be justified easier in smaller organizations where the impact can be measured more accurately. The impact of mobile ICT in large organizations may also be substantial, however, the business value justification, particularly in existence with competing projects, is often more difficult to achieve.

Mobile ICT Deployed vs. Not Deployed

The comparison of organizations that have mobile ICT deployed versus that did not reveal any significant difference at the group level. Leadership was rated significantly higher by organizations that did not have mobile ICT deployed at the dimensional level. Given that organizations with mobile ICT did not rate leadership as high, it may be an indication that once organizations have deployed mobile ICT, leadership is not that important. Along the same lines, this highlights that prior to adoption and implementation, leadership is significantly more important. Other significantly different dimensions include technology readiness and resource readiness; both of these dimensions were rated higher by respondents from organizations with mobile ICT deployment. This is indication that organizations without mobile ICT deployment may underestimate the importance of having both adequate financial and human resources available, and place more emphasis on leadership readiness. One conclusion that can be drawn from this contradictory result is that dimensional readiness must be considered as a whole and not piecewise.

Mobile ICT Strategy vs. No Strategy

Similar to the comparison between organizations that have mobile ICT deployed and not, a comparison between organizations with and without a mobile ICT strategy reveals some interesting results. We found a statistically significant difference at the group level, indicating that organizations with and without a mobile ICT strategy tend to have varying views on enterprise readiness. In particular, we found that organizations that did not have a mobile ICT strategy tend to rate technology readiness and values and goals readiness significantly higher than organization with a strategy. This leads us to speculate that both technology and values and goals readiness may be overemphasized by organizations without a mobility strategy. The emphasis on technology readiness shows that organizations without a mobility strategy may view technology to

be the most significant challenge in the adoption of mobile ICT. Similarly, the emphasis on values and goals readiness indicates that organizations without a strategy view the implementation of cultural changes to be critical. Not surprising, and in line with our previous results, leadership readiness is clearly rated to be significantly more important by organizations with a mobility strategy. It shows that mobile ICT implementation and adoption requires top management support and buy-in. Leadership readiness ensures that the mobile ICT strategy set forth gets implemented and carried out properly. Based on these results, we can again draw the conclusion that companies that did not have a mobile ICT strategy focused more on the conceptually important aspects of readiness, instead on the “action and execution” dimension of leadership readiness.

Conclusions

Enterprise mobility is not merely a fad; it has become a reality in a wide-range of organizations and industries. Mobile ICT clearly offers a plethora of lucrative value propositions that will impact and fundamentally transform business processes, organizations, and supply chains. As mobile ICT continues to evolve and mature, enterprises must prepare themselves for a more “mobile” future.

This article developed a conceptual model of core elements that aid in the strategic planning for enterprise mobility. We identified four motivating areas that drive adoptions of mobile ICT and reduce overall implementation risk: (1) justified business value, (2) strategic alignment, (3) reasonable cost/economics, and (4) an acceptable level of enterprise readiness.

We discussed the importance of each of these areas and then developed a multi-dimensional model of the relatively unexplored concept of enterprise readiness for mobility. Our findings from a global expert revealed several important insights into the relative importance of each of the eight dimensions when planning for enterprise mobility. Across the sample, leadership was considered the most critical dimension when planning for enterprise mobility. This was followed by readiness along the technology, data and information, and process dimensions.

This article presents an important first step towards understanding the process of strategic planning for enterprise mobility and provides the basis for several interesting research opportunities. Potential extensions of this work include an empirical assessment of the business value of enterprise mobility solutions, an investigation of key assessment indicators for each of the enterprise readiness dimensions, and the development of analytical tool that can aid decision makers.

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