

How to realize the full potential of enterprise mobility*

Situation p. 4

The enterprise mobility (EMobility) market is on the verge of a fundamental shift. Industry consolidation and maturing technology have pushed EMobility products and services to the threshold of adoption by the business mainstream. As a result, competition among suppliers is increasing rapidly, openings for new market entrants are widening, and customers are confronting new opportunities and challenges. This transitional environment has created a window of opportunity in which both customers and suppliers can reposition themselves in order to maximize the potential of EMobility.

Our perspective p. 8

PricewaterhouseCoopers believes that an open, agile business model will be the most important capability for companies wishing to succeed in the new EMobility market. This market approach encourages innovation via alliances and partnerships, and values long-term growth above short-term control. The first step toward developing strategic openness and agility is understanding the ecology of the EMobility ecosystem, which includes the ecosystem's evolutionary model, value chain, competitive forces, customer concerns, and the dynamics created by varying levels of innovation and control among market participants.

Implications p. 32

Scenario analysis is an essential part of maximizing the potential of EMobility because the evolutionary path of the EMobility ecosystem is unpredictable. Accordingly, PricewaterhouseCoopers uses the dynamics of innovation and control to build four scenarios of likely potential market developments from 2007 through 2010 and to explore the strategic implications of each scenario. Based on these scenarios and implications, PricewaterhouseCoopers recommends the actions each market player should take to adapt successfully to the evolving EMobility ecosystem.

Methodology p. 54

Situation

A market is born.

The operating environment in which business users can interact with customers, employees, assets, products, and other businesses in real time, anytime, from any location is what PricewaterhouseCoopers defines as enterprise mobility, or EMobility. The EMobility industry is on the cusp of a fundamental shift that will lower barriers to market entry, drive growth, and require innovation to retain and grow market share.

PricewaterhouseCoopers estimates that by 2009 the annual value of the EMobility market will surpass \$100 billion in the US alone. And after 2009, the market may experience a more intense boom as standardized applications become widely available over high-speed networks.

Although enterprises are the primary customer in the EMobility market—an economic ecosystem that has emerged to help companies foster this operating environment—other members exchange a significant amount of revenue, goods, and services among themselves.

Until recently, this ecosystem displayed the fragmentation typical of many young markets. Hardware, software, and services varied significantly in quality, interoperability, and security across regions and providers. Vendors drove growth by focusing on niche markets, and where some leaders emerged, their products tended to be tightly focused on niche segments. Today, consolidation, standardization, and experience are fueling the harmonization necessary to offer enterprise-wide mobility solutions.

Larger market forces, particularly the desire for economies of scale, brought consolidation among US wireless carriers in 2004 and 2005. In February 2004, the consolidation wave began when Cingular announced it would acquire AT&T Wireless. Alltel then merged with Western Wireless in January 2005 and acquired Midwest Wireless the following November. In August 2005, Sprint and Nextel Communications completed their merger to form Sprint Nextel.

Separate EMobility market segments are also consolidating in order to offer holistic solutions to the enterprise. Infrastructure and device manufacturers, for example, have acquired EMobility software providers. The resulting end-to-end offerings will increase the power of EMobility products and services to drive revenue growth and enhance customer loyalty.

Other application vendors, both independent software vendors and mobile enterprise application pure plays, have been working toward EMobility platforms for years now, and finally the market as a whole is delivering the mobile data bandwidth, device form factors, middleware, and enterprise applications that will foster mainstream adoption of EMobility products and services.

“Many late adopters have now started to invest in these initiatives because they see the technology has reached a level of maturity,” says Indu Kodukula, vice president of the mobility, voice, and communications platform at Oracle. “There is much more widespread adoption of mobile devices than a few years back.”

Today, there is a window of opportunity for ecosystem customers and suppliers to reposition themselves in order to maximize the growing potential of EMobility. Both new and established players could emerge from the changes in the EMobility ecosystem to gain significant market share and establish first-mover advantage.

Our perspective
PricewaterhouseCoopers
believes EMobility will offer
business transformation.

Today's EMObility market is a web of multifaceted interactions in which leading products, services, providers, and customers are still emerging. Because of the complexity of the ecosystem, navigating its interactions and adapting to its market dynamics will be critical to maximizing the potential of EMObility.

PricewaterhouseCoopers believes the most successful EMObility businesses will have an open, agile model that encourages innovation via alliances and partnerships and also demonstrates a willingness to cede short-term control for the sake of long-term growth. For example, application developers may compete directly with each other in customizing a solution for an industry vertical, while simultaneously partnering closely to develop a high-volume, packaged solution offered through a carrier.

EMObility market participants already collaborate in numerous ways in order to develop products and offer simplified solutions to the enterprise. Carriers are important both as customers themselves and as channels to the enterprise for applications developers and hardware manufacturers. System integrators also are key partners because they select hardware and develop the software and service packages that become long-term licensing and service agreements for applications developers and carriers.

While revenue sharing does occur, there is currently a natural division of revenue between implementation services (hourly or project fees for integrators and consultants), software licenses, hardware purchases, and carrier services. As the EMObility market matures, however, the lines between these streams will blur. For example, more software will be delivered as a service by various players (including system integrators) and more hardware will be delivered preconfigured. In many cases, enterprises are already acting as their own system integrators, and in a few cases, such as in the utilities industry, as their own network operators.

Ultimately, PricewaterhouseCoopers believes the EMObility market will offer business transformation to a large customer base. Mature, standardized applications and pervasive high-speed connectivity to employees, vendors, customers, and other enterprises will impact a wider array of business processes than ever before and generate new mobile business models reminiscent of today's Enterprise Web 2.0.

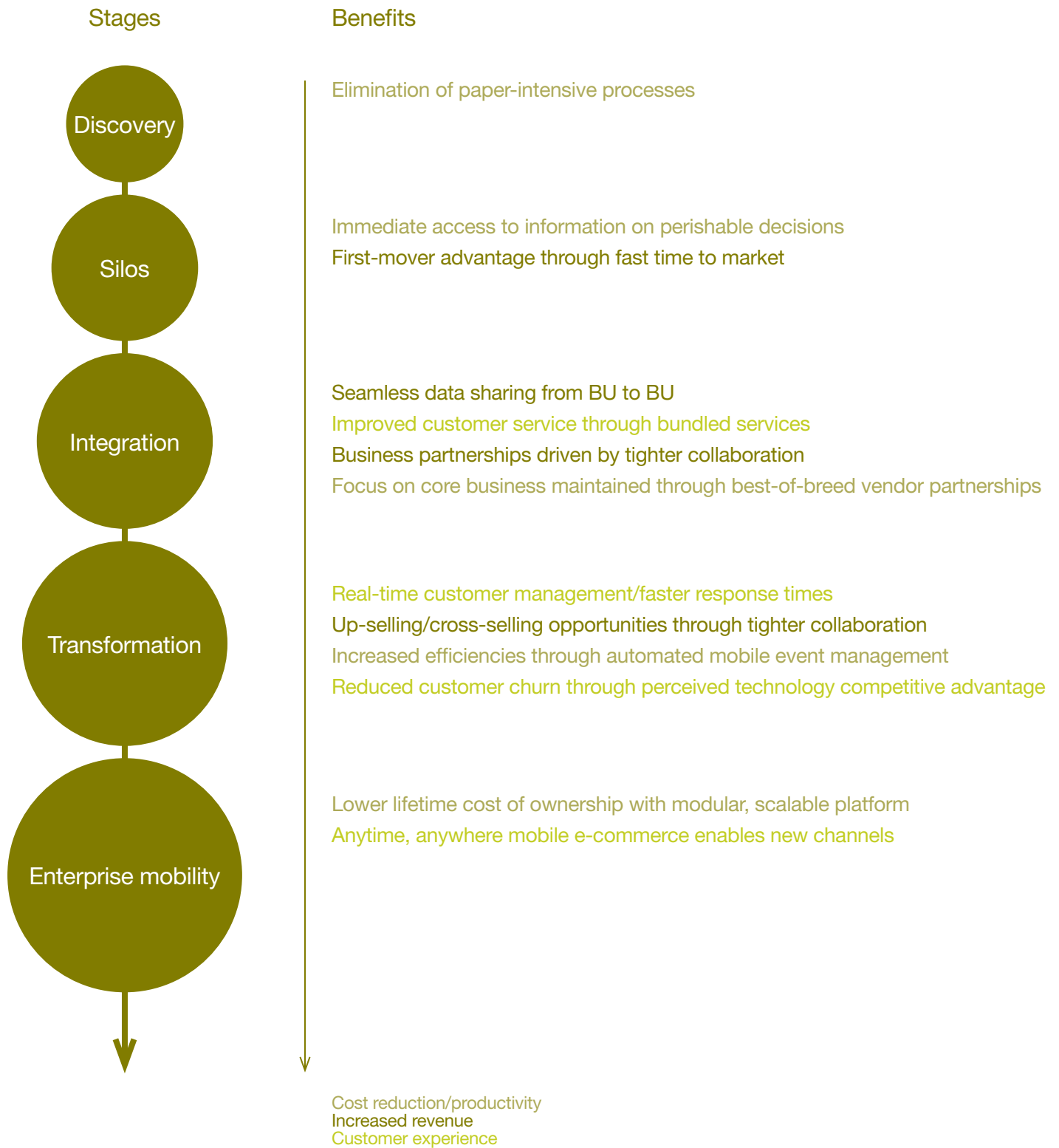
Widespread mobility will eventually compel enterprises to develop (1) a clear mobile strategy, (2) management functions around financial metrics and general project management, (3) policies and a governance structure that incorporate mobile solutions and their impact on the business, (4) technology solutions management and migration paths for growth that account for growing security concerns, and (5) business process definition and change management functions that address the effects of enterprise mobility.

These characteristics must be aligned in order to realize the transformational benefits of enterprise mobility, and businesses must understand and be agile enough to navigate the complex dynamics of the EMobility ecosystem if they're to maintain that alignment. In other words, the EMobility market will only become more fluid, and the business models of its participants must be agile enough to keep pace. Engaging in the ecology of the EMobility ecosystem—i.e., the study of evolutions in competition, business models, core competencies, and coordination—is the first step in developing this strategic agility.

Theory of mobility evolution

In developing EMobility, companies generally pass through five stages of evolution, although in practice some companies skip directly to more advanced stages. The maturity model on page 11 maps cumulative potential benefits to those stages. (Because benefits are cumulative, a company that skips to an advanced stage, e.g., integration, would still also enjoy the benefits of prior stages, e.g., silos and discovery.) Companies may use this maturity model to diagnose the evolution of their customers or their own enterprise, taking note that in the case of the integration and transformation stages, some benefits lie in a transitional space in order to reflect the fluidity of actual evolution.

EMobility maturity model



Three years ago, individual and organizational innovators drove the development of mobile technology. Enterprises were only beginning to explore the potential of mobile functionality beyond voice or e-mail, and many vendors were just beginning to package offerings. Mobile phones purchased either by employees or the enterprise were pervasive, but early-adopting industries, such as high technology and transportation/logistics, led the market in implementing mobile applications for specific business functions, such as handheld units for delivery personnel. Early-adopting employees also incorporated mobile applications into their personal lives—for example, through the use of PDAs.

In today's market, companies that have moved beyond the discovery phase deploy mobility solutions for individual business processes and functions, typically aligned to certain functional silos. Functional owners within business units have targeted EMobility solutions to increase productivity, reduce costs, and support employee satisfaction.

Despite early successes, many companies have not yet developed truly enterprise-wide solutions driven by a forward-looking, enterprise-wide mobility strategy. However, incremental benefits are driving more enterprises to the integration stage of evolution. Integrated EMobility solutions are based on company-wide mobile strategies that incorporate current infrastructure, demands from the business units, and IT strategy.

In the next three years, increasingly more consideration will be given to using mobility to innovate and re-engineer business processes to harness the full potential of legacy or concurrent IT investments. Vendors are already driving toward enterprise-wide solutions rather than bolt-on applications, and more core enterprise products will offer out-of-the-box mobility.

Sometime in the near future, the business transformation brought about by pervasive mobility applications, services, and connectivity will lead to true enterprise mobility.

Risks to the enterprise

On the path to enterprise mobility, enterprises face risks in a number of areas:

Strategy

- Mobility strategy that is not consistent with the overall stated corporate objectives or IT objectives could result in ill-fitting technology or technology that does not adequately support the underlying business issues and processes.
- Mobility initiatives may lack executive support, leading to unrealized benefits, cost overruns, and poor decision making.

Management

- Cost and return on enterprise-wide E-Mobility implementations may be difficult to quantify because processes have unclear performance indicators and demand is difficult to test until applications are implemented. As a result, inconsistent frameworks may be utilized to evaluate, monitor, and measure the performance of mobility solutions.

Policy and governance

- The company may inadvertently violate security, privacy, or regulatory policies because of a weak E-Mobility policy and governance structure.
- A focus on solutions for individual business units or functions may produce overlapping expenditures.

Technology

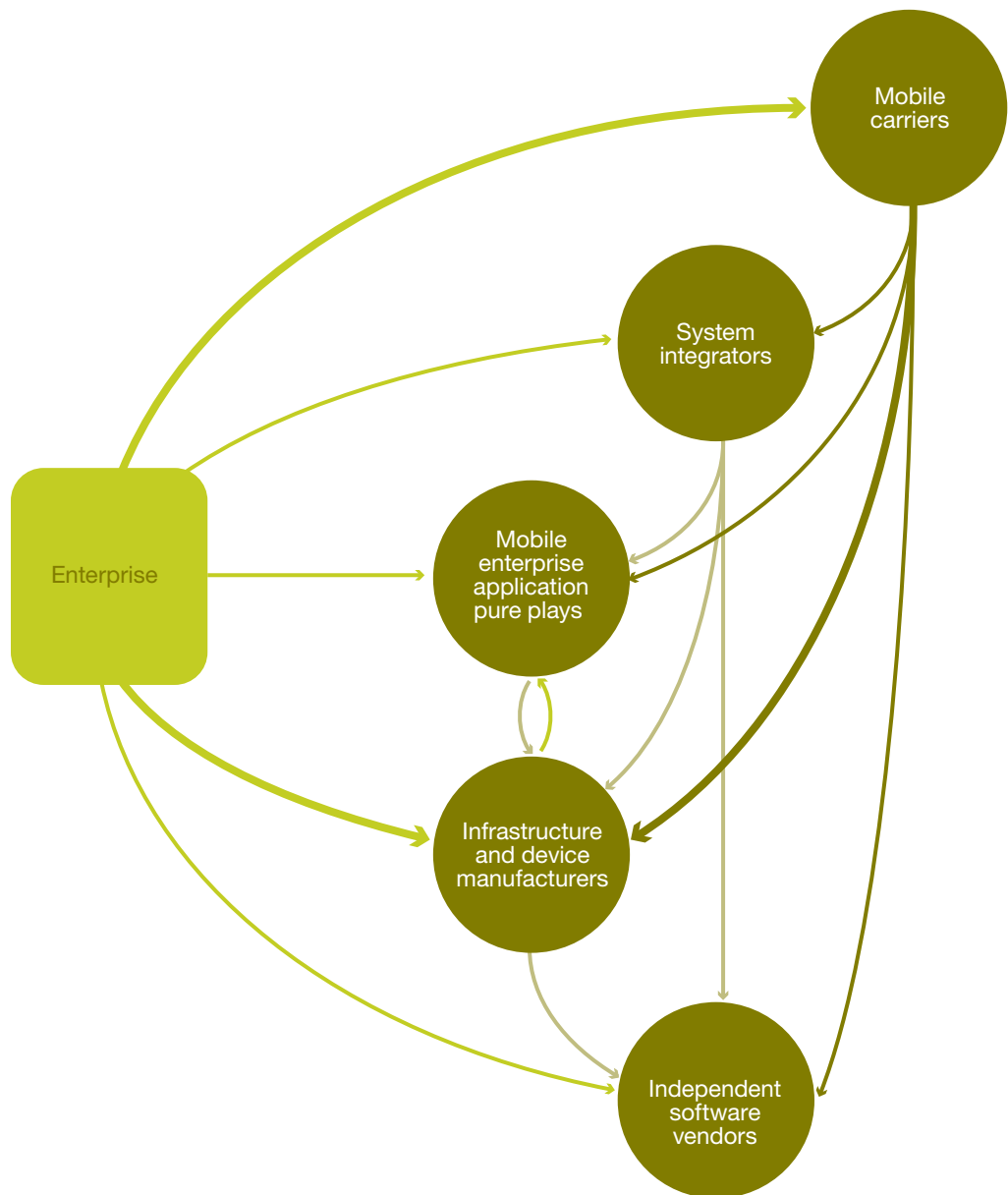
- Poor vendor selection and management practices may slow the success and adoption of new mobile solutions. For example, the selected vendors may not provide the necessary customization of applications and devices to meet business needs.
- If available technology is a driving force for adoption, the enterprise may lose its focus on business processes and purchase unneeded or ill-adapted technology.

Business process

- Integrating mobile processes with existing business processes, replacing existing business processes, and changing organizational structures require significant resources and commitment from the top down. As a result, the enterprise may under-support mobile initiatives and prevent a full realization of benefits that produce positive value, such as the creation of new business models, increases in operational effectiveness, or enhancements in customer experiences.
- Lack of strong project management may lead to deployment delays and cost overruns, and could inhibit benefits realization.

The EMobility value web

The main participants in the EMobility ecosystem are the enterprise and its employees, as well as the following providers of technologies and services: software providers (mobile enterprise application pure plays and other independent software vendors), infrastructure and device manufacturers, mobile carriers, and system integrators (including business consultants).



Note: The width of each arrow approximates its share of the total market value.

Source: PricewaterhouseCoopers LLP

In many cases, enterprises deal directly with all of the ecosystem's vendors. Those vendors in turn exchange products, services, and payments with each other. Many companies also play dual roles in the ecosystem, acting both as vendors and as significant consumers of mobility products for their own employees. Applications companies and hardware producers, for example, consume mobility products and services as they develop internal implementations, which serve as test cases for future offerings.

Telecommunications carriers command the largest share of the EMobility value web through subscription rates for mobile voice and data services. Not surprisingly, carriers aggregate the largest amount of enterprise value, despite operating in fewer markets compared to participants such as hardware and software suppliers, which compete globally. In many international markets—such as Latin America, Africa, the Middle East, and parts of Asia Pacific—carrier value is further supported by a local monopoly or government preference.

Roughly equivalent to the amount spent on carrier services is the total outlay for infrastructure and devices, including laptops, wireless cards, wireless LAN routers, industry-specific mobile devices, and handsets. Carriers also acquire a significant amount of hardware (e.g., handsets). System integrators and infrastructure and device manufacturers are also significant EMobility customers. During implementations, system integrators purchase hardware, software, and professional services. Infrastructure and device vendors and other participants also spend a significant amount on software, including middleware and wireless infrastructure and applications.

Market potential

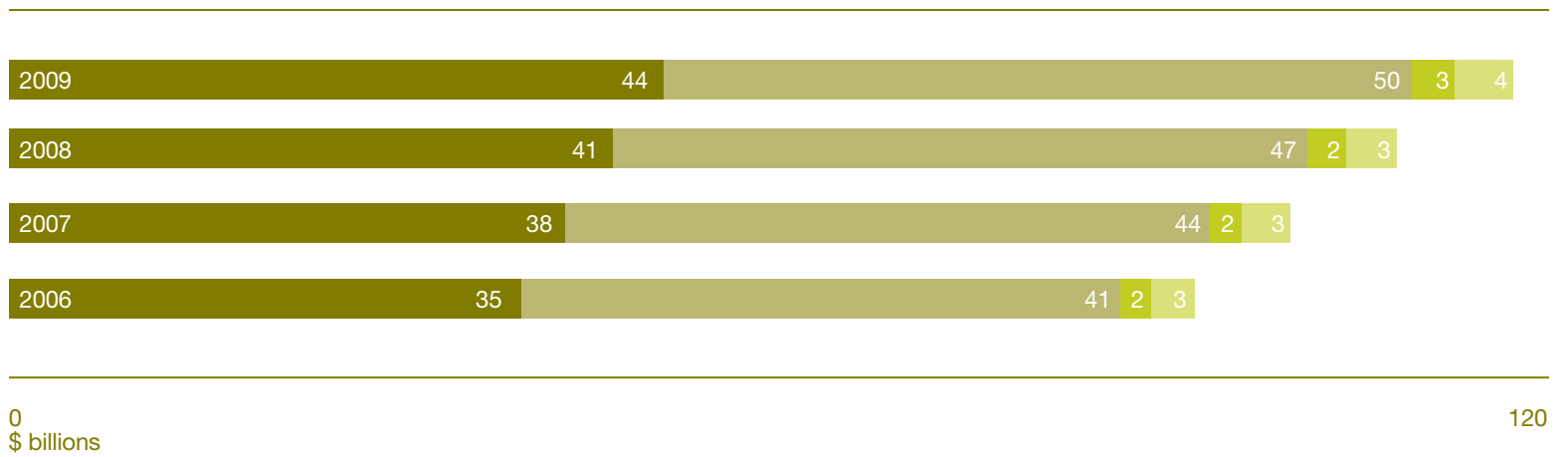
In estimating the size of revenue streams in the EMobility value web (see page 14), PricewaterhouseCoopers included operational spending on voice and data hardware, software, and services that are enterprise and mobile specific. This encompassed emerging technologies such as radio frequency identification (RFID) and wireless sensor networks. Capital spending in general, however, was excluded from PricewaterhouseCoopers' market definition. For example, the cost of network infrastructure that consumers, small and medium-sized businesses (SMBs), and enterprises share was omitted.

Based on these parameters, notebook PCs and cellular subscriptions made up the vast majority of dollars channeled into the US EMobility market in 2006. Approximately \$32 billion was spent on carrier services, which included not only voice and data access but also other value-added services, such as account management. Expenditures on EMobility software totaled less than \$2 billion.

Because of interoperability issues and industry-specific requirements, large enterprises rely heavily on system integrators for complex projects. But in the next three years, a handful of EMobility platforms will likely solidify their positions, creating more manageable options for enterprises and vendors alike. Anticipating the coming standardization and expansion of EMobility, enterprises and vendors are increasing EMobility spending. Carriers are seeing strong growth in the average revenue per user (ARPU) of data services, driven by high-speed wireless Internet access. Software developers are working aggressively to foster common platforms.

“If you go back to the early days of proprietary packet data networks primarily used for early handsets or mobile data terminals, they were quite unreliable in terms of the application programming interfaces,” says Joe Rymysza, president and CEO of on-demand applications provider Vetro. “Today you can deploy an IP-based application into every major economy on the planet via essentially three standards on the client development side—BlackBerry, Windows Mobile, and Java sitting on top of Symbian- or Linux-based operating systems. Through these three environments, we can now address a billion devices out in the field from a mobile software and computing perspective. In essence, the carriers have done a very good job of rallying around common denominators that allow you to deploy applications to multiple operating systems, and I imagine Darwinian selection will continue to weed out mobile standards.”

Projected US enterprise mobility spending



Wireless voice and data services

Hardware (includes notebook PCs, handhelds, and other dedicated hardware)

Dedicated software

SI and professional services

As the EMobility market matures, portions of software and non-carrier service spending will rise more rapidly, but expenditures on emerging technologies, software, and non-carrier services will remain quite small in comparison to spending on hardware and the carriers' voice and data services.

Through 2009, enterprises worldwide will continue to spend the majority of their EMobility budgets on hardware and carrier services, mainly for connectivity and basic voice and data services, such as e-mail and short message service (SMS). In the US, dedicated EMobility software is forecast to rise at a compound annual growth rate (CAGR) of 13 percent, from \$1.95 billion in 2006 to \$2.9 billion in 2009. In a total market valued at \$81 billion in 2006 and rising to \$101 billion in 2009 (a CAGR of 8 percent), dedicated software spending will have only a 3 percent share in 2009.

Competitive drivers

As with any complex ecosystem, there are many factors that drive competition in the EMobility market, but in the next three years integrated EMobility platforms, high-speed data access, and the development toward mobility software as a service (SaaS) will have the broadest effect on the market's evolution.

The EMobility platform

As carrier consolidation leads to improvements in third-generation (3G) infrastructure, both in the US and worldwide, opportunities in EMobility that had seemed distant as recently as 2005 appear closer at hand. Some vendors have reacted by integrating EMobility solutions into their operations through acquisitions or in-house development. As discussed above, hardware manufacturers in particular have begun to develop EMobility platforms, and in doing so have changed the competitive landscape.

“Prior to the acquisition of Intellisync, our engagement with enterprise customers around the adoption of mobility was primarily limited to our own business-optimized handsets running third-party software, through partnerships we've developed over the past several years,” says Thomas Libretto, Nokia's director of product marketing and management, enterprise solutions. “Post-acquisition, we've complemented our partnering approach by jumping headlong into the enterprise mobile software, or 'mobileware,' market with our own offerings, where we find ourselves in the competitive fray with the likes of Sybase, Good Technology (now Motorola), and even traditional software vendors like IBM and Microsoft, who are attempting to expand their desktop software base out to mobile. In many cases, and like many technology vendors, we both compete and cooperate with these same companies—a sign that this market is maturing to a point where such business models are accepted and productive.”

The lack of client hardware-software harmonization is both the primary inhibitor of and rationale for an EMobility platform, which would offer the enterprise a reliable, end-to-end solution. The level of cooperation between vendors in the ecosystem appears to be relatively low because competition is high, as expected in any emerging market. Today's operating system market, for example, is fragmented among a number of major competitors. As a result, today's software and service providers cannot guarantee that software will work properly on a given handset without requiring additional customization.

“We are getting to the point where the providers who were able to make very niche plays based on their ability to cut one specific cost or add one specific functionality into a customer’s network are seeing their advantage erode because our major customers are looking for a consolidated approach,” says Jay Behrens, director of emerging services product management at Verizon Business. “Customers don’t want to manage 18 different applications any more than they wanted to manage 18 different platforms.”

In the next three years, vendors will jockey for position to provide an integrated platform for mobility applications that blends the capabilities of a server and a client operating system with overall system interoperability and security. These vendors are already leveraging existing experience in mobility, acquisitions, and internal research and development in order to build horizontal infrastructure and application offerings. Competition will further intensify as more powerful mobile devices and mobile Web services reduce barriers to entry for vendors who have served the PC industry and the fixed Web.

The US market will be a key battleground for EMobility because strong, horizontal enterprise applications (beyond e-mail) may emerge first in the US, despite the advanced consumer offerings in Asia Pacific and Europe. RIM’s success with its BlackBerry service—which gained adoption initially in the US—supports this view, as does the fact that the US outspends other world regions on information technology by a wide margin and spends more on software in general by an even wider margin. With 4.6 percent of the world’s population, the US was responsible for 38.1 percent of IT spending in 2005, according to IDC. And 47.2 percent of the packaged software bought worldwide in 2005 was shipped to US buyers.¹

“There are so many people out there putting together SDKs and APIs that it would make your head spin,” says Verizon Business’s Behrens.

Over time, there will be a blending of desktop, Web, and EMobility applications delivered over a common EMobility platform. This will lower the barrier to market entry for companies from the fixed Internet. Users will interact with applications offline, and then synchronize with the server side of the application once they reconnect. Continuous Web access will therefore no longer be an absolute necessity for EMobility Web applications.

¹ IDC, “World Information Technology Market as of January 1, 2006.”

High-speed data connectivity

Despite leading in many areas of EMobility adoption, US carriers rank near the bottom of the developed world in the proportion of their total revenue that comes from data.

The high average revenue per user (ARPU) for data services outside the US is usually driven by consumer services such as text messaging, but the data ARPU gap still suggests that subscription fees for high-speed data connectivity represent a different opportunity for US mobile carriers than for their counterparts in Europe and Asia Pacific. The revenue potential from data connectivity in the US over the short term is much larger than that of consulting services that provide deep customization for individual EMobility projects. In the US market, enterprise-specific mobile system integration may garner less than \$2 billion in 2007, versus tens of billions in revenue potential from high-speed wireless data deployments, such as EV-DO and HSDPA. As a result, some mobile carriers plan to focus on repeatable solutions that raise ARPU for broad market segments.

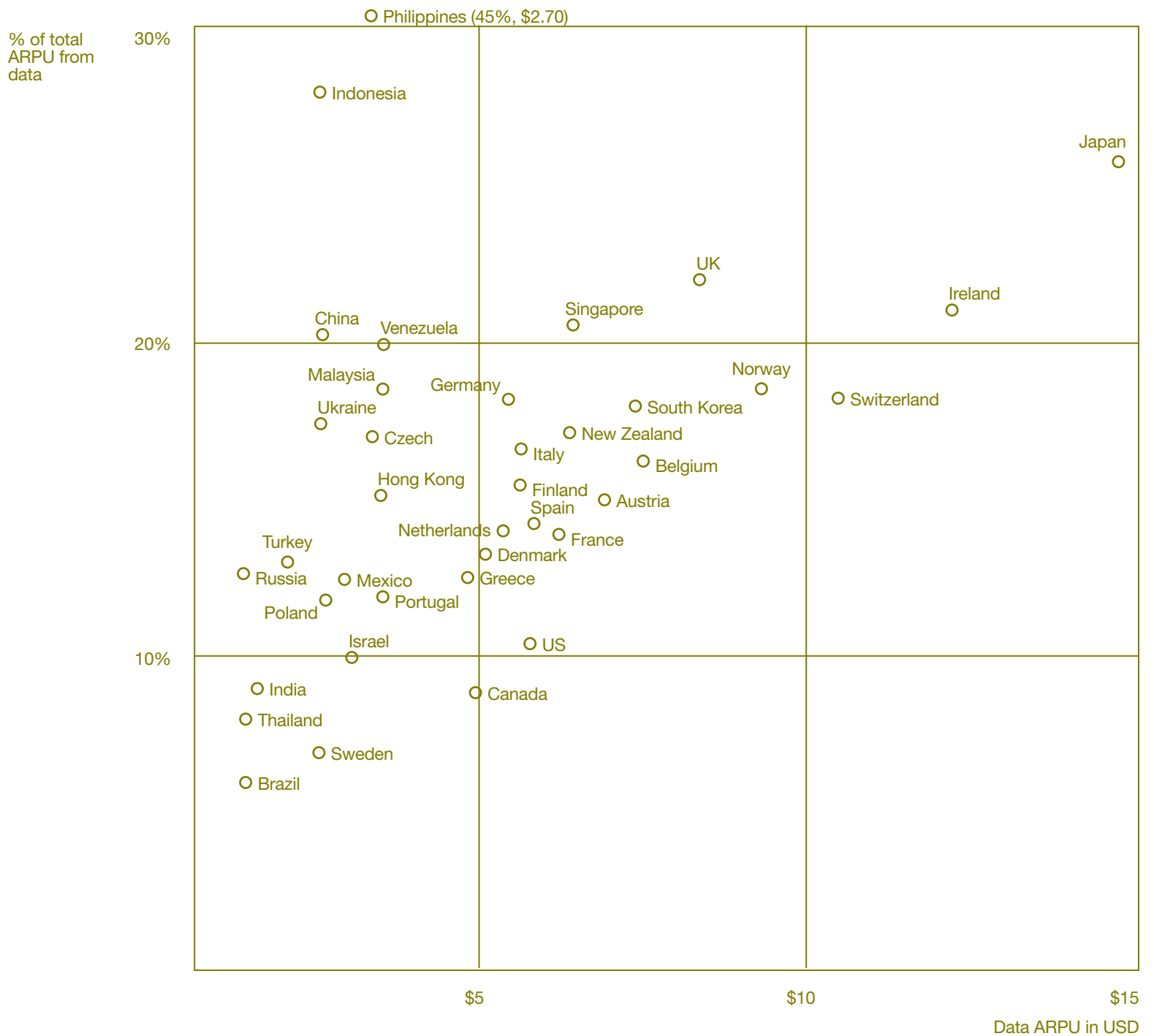
Software as a service

The development of EMobility platforms and high-speed wireless connectivity will facilitate the delivery of EMobility software as a service (SaaS). The market for all SaaS—also known as “on-demand” software—is growing at nearly five times the compound annual growth rate for on-premises software.²

As SaaS develops, enterprises may find less need to contract with system integrators for EMobility implementations, and carriers may not have to re-sell middleware. Instead, entire functionality bundles could be delivered as services hosted by a service provider. Embedded network intelligence will also allow systems to recognize and use hardware components automatically. Ultimately, because little specialist expertise may be required, IT generalists or even end users could be able to install and use EMobility hardware and software. Users of these plug-and-play offerings would pay a monthly fee and in return be able to demand quality service.

² Based on RBC Capital Markets data.

Average wireless data ARPU (USD) by country*



Source: Chetan Sharma Consulting, 2006

The role of the enterprise

Enterprise demand, along with technology push, drives the EMobility market. The types of products and services required by an enterprise vary widely according to its evolutionary stage. Early-adopting enterprises are now working on their third or fourth generation of EMobility solutions, while many later adopters are just considering mobile e-mail.

Not surprisingly, technology sectors, including telecommunications, have led the way as consumers of EMobility products, including voice over Internet protocol (VoIP) and security features such as encryption and remote device erasing. In most other industries, the first EMobility products were mobile voice and wireless e-mail access via laptop or PDA/BlackBerry, which were taken up quickly by financial services and professional services firms. Today, these industries are expanding mobile access to other types of applications and being joined by companies from the manufacturing, medical, pharmaceutical, utilities, and other sectors.

“In healthcare, since almost everyone is buying products from a limited group of commercial vendors, it is the availability of mobile commercial applications that drives mobility adoption,” says Steve Brown, CIO of Tenet Healthcare Corporation.

As EMobility demand expands, it competes with other IT demands as well as rising costs in some budget categories. Since the downturn of 2000–2003, the following budget pressures have increased:

- Continuing high maintenance and IT staff costs
- Rising security costs
- Growing wireless subscription costs for data services and high-speed connectivity, and the transfer of wireless fees from finance to IT department budgets
- Unnecessary hardware and high data center power costs resulting from low server and storage utilization and the lack of fully virtualized resources
- A large, inflexible installed base of legacy software
- The need to increase software spending to take advantage of more flexible and customizable service-oriented architecture (SOA), as well as new collaboration and information-sharing opportunities afforded by the read/write Web (such as enterprise RSS, wikis with workflow, online internal and industry communities, and content widgetization)

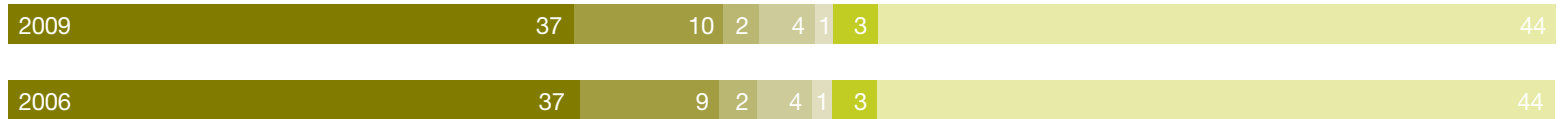
Even though operating enterprise budgets are not expected to increase radically over the next three years, EMobility demand will continue to rise steadily. These budget priorities, however, threaten to crowd out the kinds of ambitious EMobility implementations that would move enterprises beyond incremental investment increases.

Total IT budgets vs. EMObility budgets

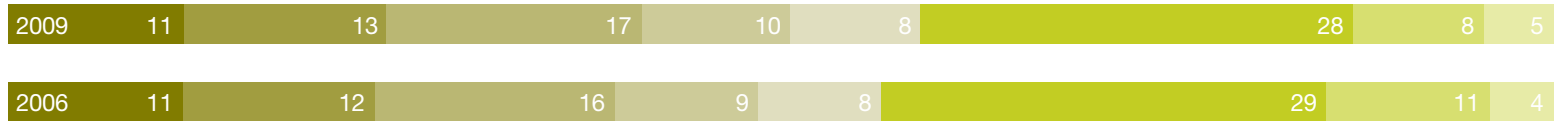
Through 2009, the majority of EMObility spending will be in the areas of wireless services, computers, and peripherals.

Enterprise mobility portion vs. overall average US enterprise IT operating budget composition

Overall average US enterprise IT operating budget composition



Enterprise mobility portion of average US enterprise IT operating budget composition



0
% of total

100

- Computers and peripherals
- Communications equipment
- Software
- IT services
- IT outsourcing
- IT salary and benefits
- Wireline services
- Wireless services

Source: PwC estimates based on Forrester, Gartner, IDC, VDC, D'ell Oro Group, and ID Tech Ex, 2005–2006

Key market dimensions: Innovation and control

The EMobility ecosystem can be analyzed using two critical dimensions: level of innovation and degree of control.

“Innovation” describes the extent to which market players build upon new creative or disruptive ideas to drive the EMobility market. “Control” describes the extent to which market players understand, coordinate, and, in extreme cases, dominate the activities of other players in the EMobility value web based on requirements that emerge from their own strategic roadmap, imperatives, and customers.

Attributes of high innovation and control

Innovative members of the EMobility ecosystem exhibit the following attributes:

- Formal, funded “innovation to operations” process
- A customer-centric approach to business
- Management of risk (versus intolerance of risk)
- First- or early-mover advantage strategies
- Acceptance and management of change
- Willingness to embrace new revenue and business models
- Management of partnerships, alliances, and business networks
- Knowledge management

Dominant EMobility ecosystem participants exhibit the following attributes:

Suppliers

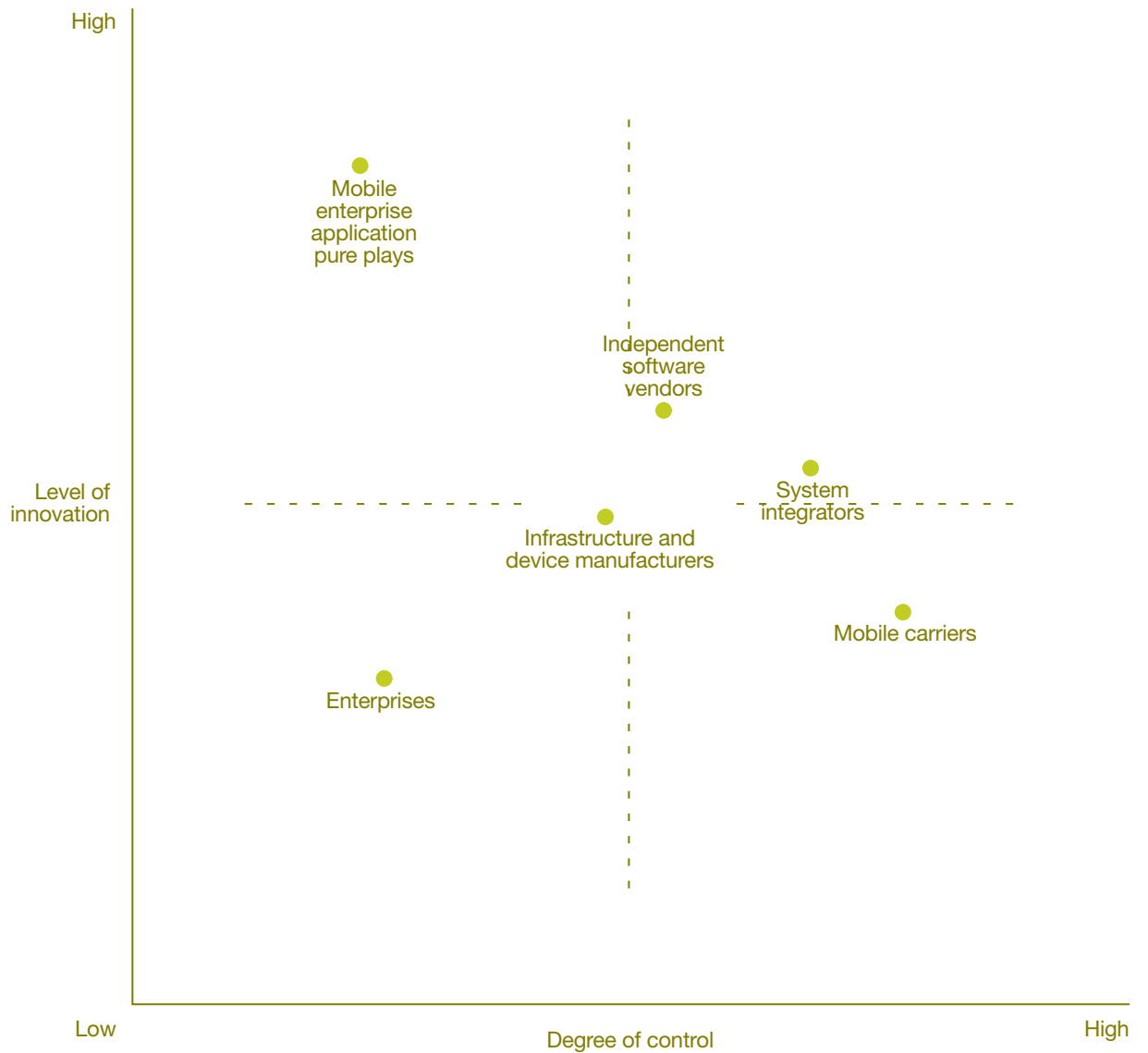
- Large base of existing enterprise customers
- High-quality relationships with enterprise customers (e.g., strategic versus transactional selling, direct versus indirect via alliance partner)
- Unique and exclusive product/service offerings
- Broad portfolio of product/service offerings
- Ability to coordinate with other suppliers through strong partnerships and alliances
- Strong EMobility brand (i.e., perceived in the market as a leader in mobility products and services)

Enterprises

- High-demand for EMobility products and services
- Direct, strategic relationships with vendors
- Ability to coordinate with vendors to offer end-to-end solutions

PricewaterhouseCoopers has graphically analyzed the dynamics of the current EMobility ecosystem by plotting each type of ecosystem player on a vertical axis (representing level of innovation) and a horizontal axis (representing degree of control).

Current state of the EMobility ecosystem



In this current ecosystem state, the high degree of control enjoyed by mobile carriers reflects the fact that wireless networks are the basis of the EMobility market. Carriers' ownership of this wide-area infrastructure allows them to exert control over the content and applications that perform well on those networks. The four major US cellular carriers form an oligopoly, while outside the US, carriers in the developed world may have even higher incumbency rates, less competition, and more power.

As a result, IT departments (in Canada and Europe, for instance) spend far more per user on carrier subscriptions than their counterparts in the US. At the same time, carriers do not tend to be innovators in middleware and application software, which is a key source of competitive advantage in the EMobility market. As the market has matured, many of the hardware problems have been solved, but software challenges remain in many cases. Over time, the lack of innovation in software and the commoditization of data connectivity could lead carrier control to decline.

Broadly focused independent software vendors (ISVs) try to address EMobility needs by adapting their conventional desktop applications. In the past, mobile enterprise application pure plays had more success developing EMobility offerings. Over time, however, large, independent software vendors, such as IBM, Oracle, and Microsoft, could build an abstraction layer that would enable them to extend multiple applications out to mobile devices, a method that would solve the interoperability problems noted earlier. Sybase, also working on an abstraction layer, is an exception in this category because it has worked on mobile-specific capability for years. Existing mobile runtime environments from suppliers such as Sun and Adobe, if widely adopted, could also enable enterprises to extend multiple applications out to mobile devices.

Mobile enterprise application pure plays tend to be the EMobility innovators. They are generally the first to introduce new software capabilities, and they are quite knowledgeable about the idiosyncrasies of wireless networks. However, mobile pure plays are small in comparison to many other players in the ecosystem and therefore lack control. For this reason, it is essential for them to form partnerships with others in the ecosystem, particularly system integrators and carriers.

Mobile infrastructure and device manufacturers command a large share of E-Mobility revenues and have a degree of control, but mature E-Mobility hardware is becoming a commodity. Future control for infrastructure and device providers may depend on who can provide an integrated hardware-software platform that supports multiple applications and is also scalable for both small and medium-sized businesses and large enterprises.

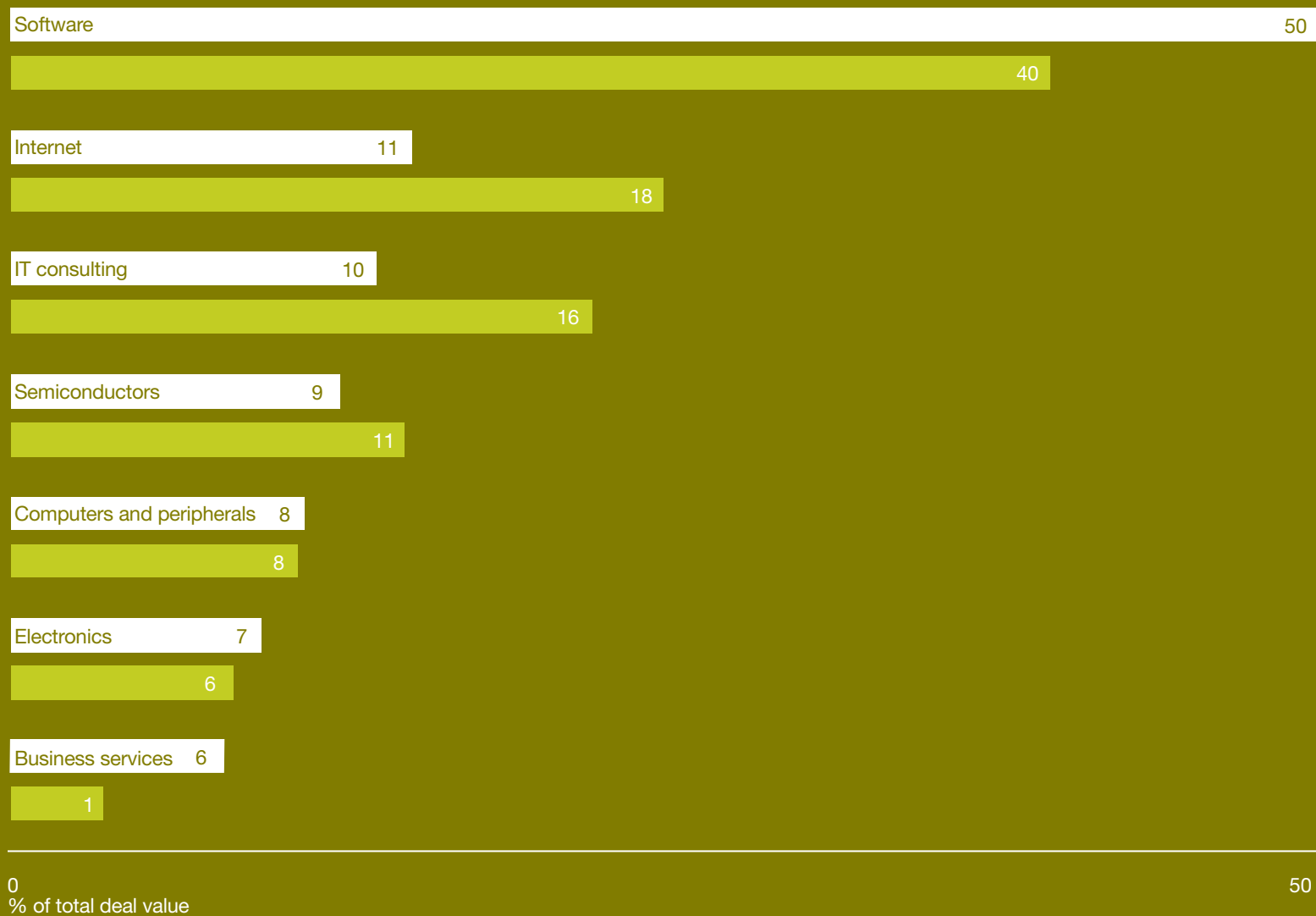
System integrators and business consultants work project by project, exerting influence through vertical industry expertise and business process knowledge. Despite small E-Mobility revenues, system integrators have a higher degree of control because they cooperate with both enterprises and carriers, and are able to rationalize the current variety of systems, software, and devices. As the market matures, more business process transformation will become possible and enterprises may see more value in mobile-specific applications. In that case, the influence of professional service providers would grow.

Mergers and acquisitions in the EMobility market are encouraged by high cash reserves among EMobility participants, which facilitates all-cash acquisitions, particularly between large and small firms. Many EMobility vendors have also established methods for acquiring and integrating smaller vendors, and some are in the habit of doing so as a substitute for internal technology and market development. Motorola's acquisition of Symbol Technologies, for example, gave it an established customer base in RFID, ruggedized devices, and vertically focused products in industries such as retail.

After the heated activity of 2004 and 2005, telecommunications deal flow ebbed and the momentum passed to the EMobility software sector, where companies are still repositioning themselves. Sybase's \$425 million purchase of Mobile 365, for example, was the third-largest technology acquisition in 2006.³ In fact, excluding the telecommunications sector, software deals accounted for twice the total value of other sectors in 2005 and 2006. Software may continue to see more deal activity than other parts of the EMobility ecosystem during the forecast period because of its clear growth opportunities vis-à-vis other technology industry sectors. However, analysts also continue to speculate about additional acquisitions among mobile carriers.

³ <http://www.sybase.com/detail?id=1043524> and http://www.forbes.com/lists/2007/99/biz_07midas_The-Midas-List_Jand.html.

Software vs. other technology deals in 2005 and 2006



2005
2006

Total value = \$306B in 2006, \$298B in 2005

Source: *Information Week* and Thomson Financial, 2007

Implications

Scenario analysis is essential to maximize EMobility.

PricewaterhouseCoopers believes that scenario analysis is an essential part of developing the strategic agility necessary to maximize the potential of EMobility, because the evolutionary path of the EMobility ecosystem is unpredictable in the near term. Using the current state of the marketplace as a starting point, companies should consider the following questions:

- How will each player evolve relative to the axes of innovation and control?
- What effect does a new position relative to the other players have on competitive forces, business models, end customers, core competencies, and coordination in the ecosystem?

Future scenarios

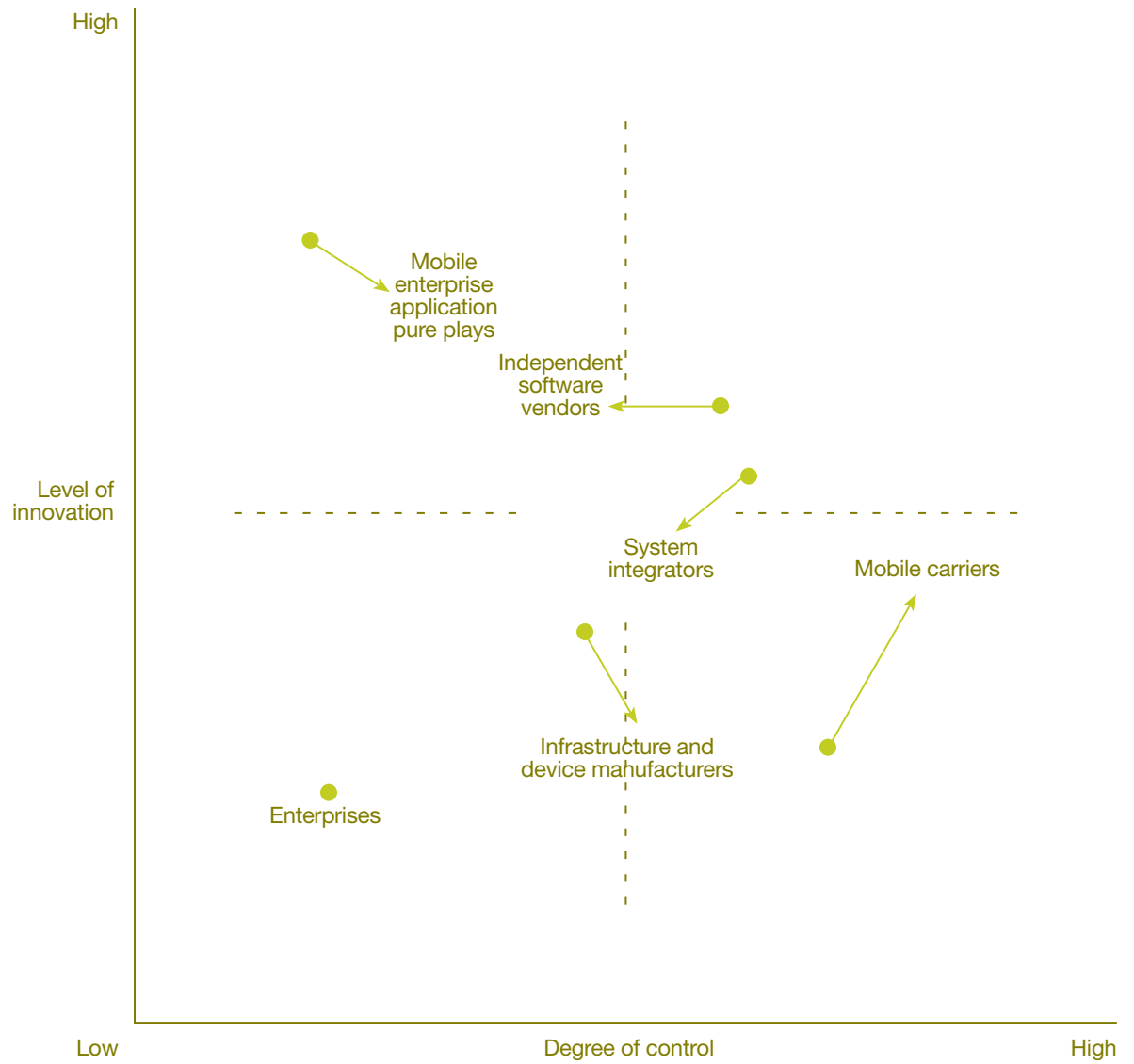
With these questions in mind, PricewaterhouseCoopers has developed four scenarios that use the innovation and control dynamics established above to explore market developments that may occur from 2007 through 2010.

Each potential scenario implies strategic adjustments for all market participants, who are encouraged to consider how to influence market dynamics, rather than just react to them. The actual evolution of the EMobility ecosystem is likely to combine elements from more than one of the scenarios explored here. Accordingly, companies should also consider how various scenarios may apply to different market segments, industry verticals, and individual companies.

Scenario 1: Carrier activism

Market trigger: Consumer mobility demand flattens

● Position in current market



When consumer mobility demand flattens, both carriers and vendors renew focus on the enterprise space, resulting in channel and service conflict. Carriers attempt to “own the enterprise space” by offering complete, packaged solutions that incorporate system integration and other in-house functionality. For more broadly used applications, carriers offer customers an unmatched combination of interoperability with a range of devices.

The lack of demand drivers to counterbalance carriers’ control of the value web leads enterprises to increasingly accept one mobile carrier as their primary service provider, further reducing competition and strengthening the carriers’ position. Carriers develop compelling hosted and managed E-Mobility services to reduce the operational burden on enterprise IT departments.

The carriers’ E-Mobility roadmap now drives developments from hardware and application developers, and system integrators and business consultants divide their efforts between carrier support work and highly specialized projects where competition is less intense. Because access to specific carriers is the primary route to the enterprise, partnerships with carriers become extremely important for other vendors and alliances form around efforts to assist carriers in developing enterprise offerings. Carriers respond by striking attractive—perhaps even exclusive—partnership and alliance deals with other market players.

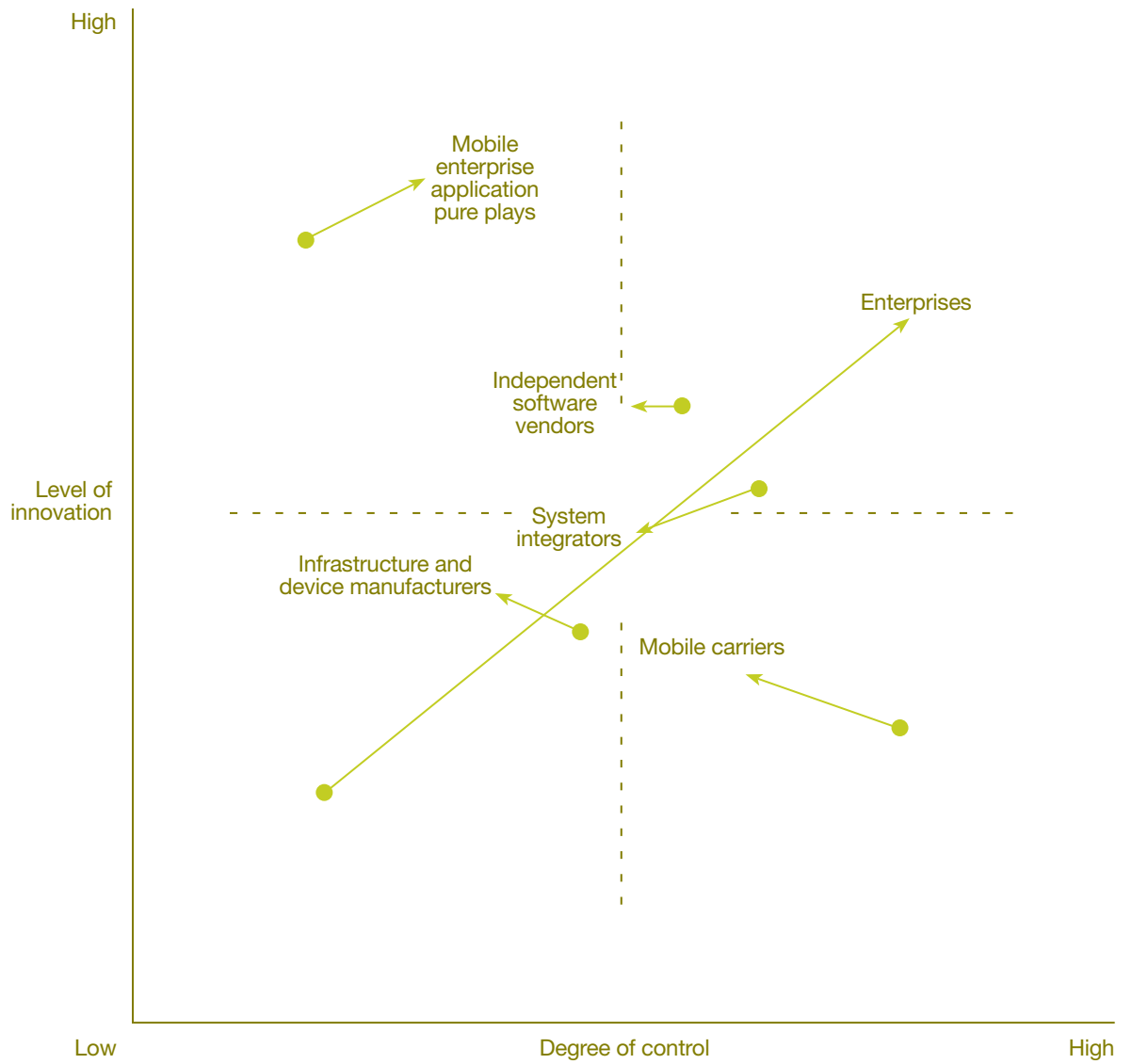
Strategic implications

- Carriers must ensure that their high level of control does not starve the supplier ecosystem. They must drive development and growth for complete enterprise-wide solutions and proactively manage alliances to monitor their partners’ financial and operational health and strategic incentives.
- Independent software vendors, mobile enterprise application pure plays, and infrastructure and device manufacturers will have to develop open standards, common architectural frameworks, and more integrated, less customized solutions. This mutual engagement will allow them to leverage research and development efforts across multiple carriers and provide a source of innovation.

Scenario 2: Enterprise activism

Market triggers: (1) Broad economic downturn, (2) widely recognized success of EMobility in early-adopting industries

● Position in current market



A broad economic downturn forces companies to seek new sources of productivity while leveraging existing investments in information technology. Early-adopting companies use EMobility to develop more productive business processes while maintaining budget discipline. Their success highlights the value of EMobility for enterprises and attracts broad market attention, eventually forcing the later-adopting companies to follow suit with the competition.

The proven value of EMobility products and services is championed by industry organizations such as CTIA and the Mobile Enterprise Alliance. EMobility is perceived as a competitive differentiator and a “must have” by large enterprises, stimulating the diffusion of EMobility services. Industry-specific alliances (e.g., healthcare and financial services) emerge to wield the collective power of customers in driving standardization and further development. To be able to accomplish mobility goals and at the same time meet their compliance objectives, enterprises develop and institute online security standards that have not previously existed. For example, enterprises drive the development of mobile systems to store, access, and transport electronic medical records.

Encouraged by the market potential, carriers invest in EMobility and fuel the growth of players across the value web. The carriers’ role in the value web is balanced by the sophistication of the enterprise customer. Enterprises demand multi-carrier service offerings to ensure they are able to exploit best-of-breed services. The carriers respond positively and constructively to this by collaborating on open EMobility standards that, in turn, further fuel software, hardware, and consulting innovation.

These market conditions create a boom in investment, M&A, and cooperation among various players. Using open interfaces and architecture standards, vendors focus innovation and alliances on customizing solutions according to the demanding needs of each sophisticated enterprise. Carriers exploit their ownership of the network and established service plans in order to package solutions for the enterprise in partnership with other vendors.

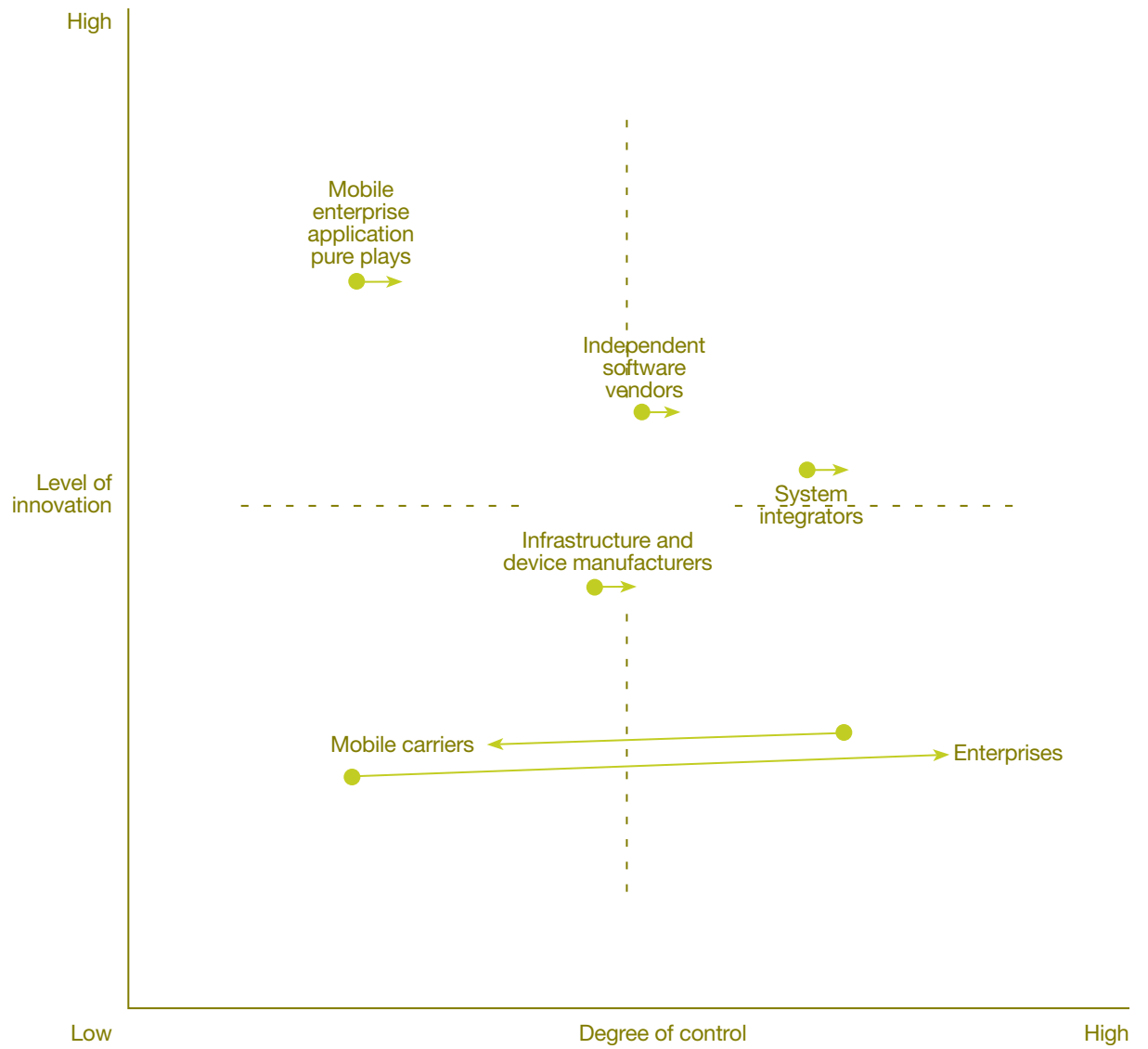
Strategic implications

- Enterprises are likely to take over some roles traditionally performed by the carrier—using device unlocking, for example, to exert control over the provisioning of mobile applications and branding of devices.
- Suppliers will have to form alliances in order to develop the industry-specific, highly customized solutions demanded by dominant enterprises. For example, software providers will have to align themselves by industry to meet the demand of the enterprise verticals.
- System integrators will have the opportunity to lead and coordinate supplier interactions with the enterprise, but carriers risk being marginalized as commoditized mobile connectivity providers. To be successful, carriers should consider driving standards and interfaces across devices and networks, since the enterprise will purchase from multiple carriers and device manufacturers.

Scenario 3: Carrier withdrawal

Market trigger: Simultaneous spikes in consumer and enterprise mobility demand

● Position in current market



Consumer market developments, such as convergence, quad plays, and new mobile user interfaces (e.g., the iPhone), align to drive a resurgence of mobile consumer content. Carriers' success with mass-market consumer products and services draws their attention away from the complex, relatively customized world of EMobility. Meanwhile, sophisticated mobility end users reach sufficient numbers to force enterprises to control their activities through corporate policies and governance.

Demand is strong due to the proven benefits of EMobility, but competitive forces create a vicious circle for mobile carriers. Carriers sideline advanced in-house EMobility service offerings and focus on the majority of their subscriber base: consumers. Driven by the need to control their own employees, who are quickly adopting consumer mobility offerings, enterprises enter the power vacuum left by the carrier withdrawal and increasingly drive other players in the ecosystem according to their own EMobility policies and roadmaps.

Seeing the affordability of mass-market solutions in the consumer space, enterprises are reluctant to take on the increased costs and risks of in-house innovation and continue to rely on experts (other than carriers) to light the way forward. Enterprises and vendors work together to set standards and ensure that new products and services developed by suppliers meet enterprise needs.

A new independent service integrator emerges to deal directly with the enterprise, resulting in carriers often being relegated to a subcontractor position, providing only mobile connectivity via their networks. The service integrator works with the enterprise to define open standards and impose them on the carriers. This stimulates a free, open, and fast-growing market for carrier-independent EMobility services from other players in the value web. Commoditized carrier services and the pervasiveness of open standards and transmission control protocol (TCP/IP) for wireless networks enable enterprises to devote more of their existing IT budgets to innovative solutions offered by software developers, device manufacturers, and system integrators.

Given the high demand for EMobility products, even enterprise mobile devices are now distributed, provisioned, and billed independent of the carrier. Infrastructure and device vendors, in fact, are positioned well to become independent service integrators. Existing relationships with enterprise IT departments combine with the acquisition of software applications to allow them to offer many integrated solutions to the enterprise.

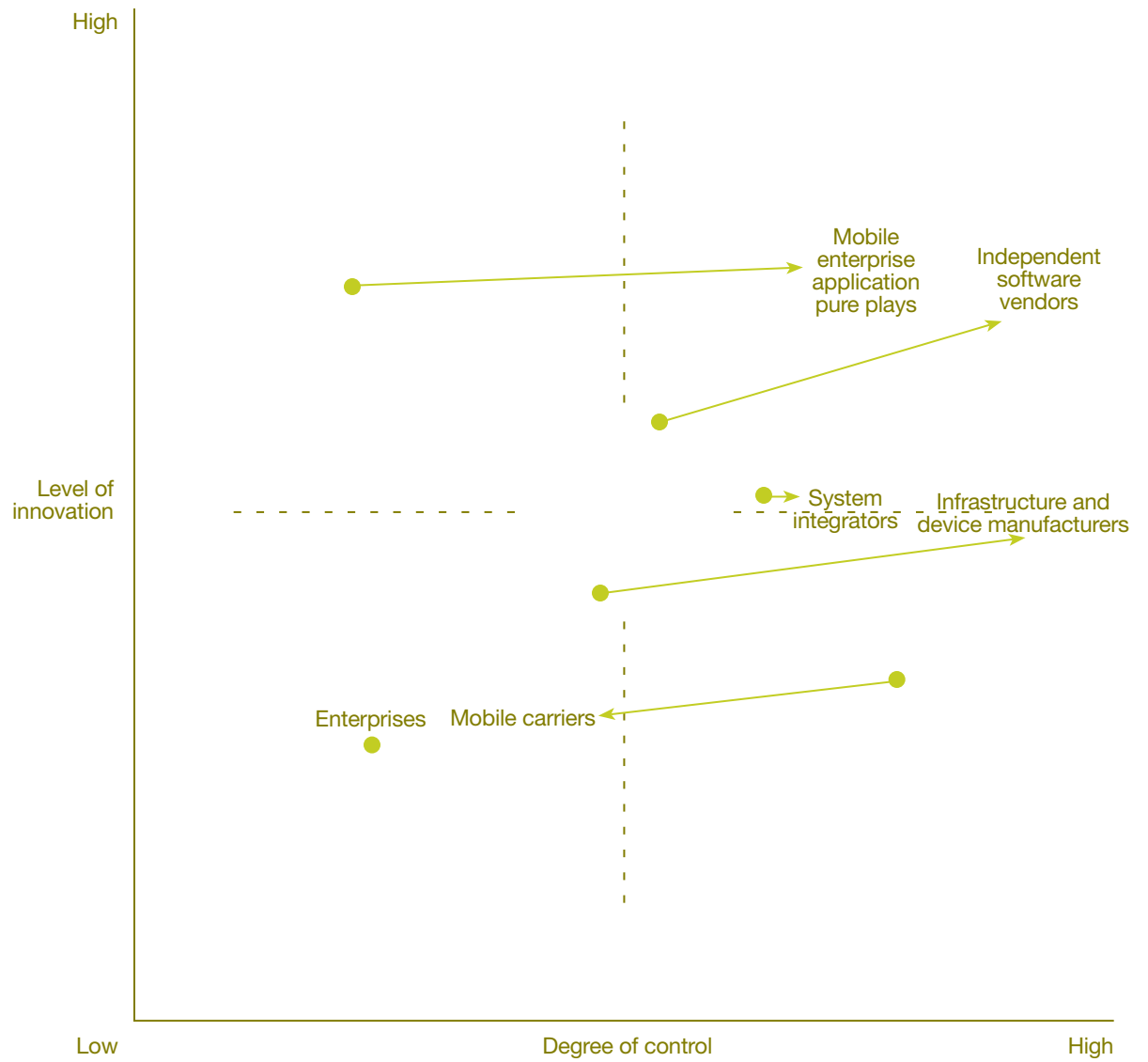
Strategic implications

- To promote overall growth in the marketplace and increase use across their networks, carriers should standardize their potential facilitator or EMobility wholesaler role, further encouraging system integrators, manufacturers, and software companies to drive the supply side of the Emobility market.
- For the enterprise, strong vendor management and application-evaluation skills will be required to differentiate among innovations from suppliers. There will be no single dominant member of the value web to offer “one-stop shop” enterprise-wide solutions.
- Software and hardware companies will need to spend additional funds to develop, test, and market their products to all enterprise customers as they try to differentiate themselves in a potentially fragmented supplier market. These same companies could need more integrated interfaces with the carriers for provisioning, billing, and customer-relationship management.
- The vendor-independent system integrators could lead harmonization efforts across the industry and develop standardized architecture and EMobility frameworks.

Scenario 4: Supplier activism

Market trigger: EMobility demand flattens

● Position in current market



EMobility deployments fail to fulfill their productivity promises to the enterprise. Benefits remain intangible and elusive to quantify, while end users have reached connected saturation. Negative results begin to surface from employees being “always on,” anytime, anywhere, and the backlash further reduces EMobility demand.

While carriers remain an important facilitator in the value web, they focus on increasing enterprise subscriber numbers rather than providing complete EMobility solutions to the enterprise. As such, carriers do not dominate the value web, creating a vacuum on the supply side for other players to fill.

Even though they may see a need to take action, enterprise customers cannot guide service providers to develop products and services that deliver the greatest benefits. Due to well-publicized failures, enterprises are paralyzed by a lack of commitment to EMobility. As a result, only a few enterprises recognize the true opportunity of EMobility, and even fewer assemble the holistic solutions necessary to realize it.

Weak enterprise and carrier influence combined with convergence creates the opportunity for other participants to develop market demand.

Software, hardware, and consulting vendors improve their focus on enterprise needs and increase R&D capacity. The result is increased leverage with the enterprise customer in a way that has not happened yet in mobile and handheld computing, but echoes what has occurred in enterprise computing historically. Vendors generate demand among consumers with innovative products and services, causing workers to demand similar services and devices inside the enterprise.

As carriers recede, cable operators could step into the breach by leveraging the strength of their superior plants and triple-play offerings (wireline voice, data, and video) to home and virtual offices. Through alliances and perhaps acquisitions, cable companies continue to add wireless service and expertise in developing business solutions, in order to deliver an EMobility quad play—in effect becoming new carriers for the enterprise. For example, a company such as Avaya could add extensive knowledge of wireline and wireless systems for enterprises to a cable/wireless conglomerate.

Strategic implications

- Because attractive, relatively standard software solutions could drive growth, software suppliers should continue to invest in innovation while adopting a key industry leadership role not seen in other scenarios.
- Software companies should also increase their understanding of the business process needs of the enterprise in spite of the challenges posed by market fragmentation.
- Enterprises will have to focus on revising their EMobility strategy as they will not be able to rely on any single provider in the marketplace for a holistic solution.
- System integrators will only be able to serve a role if they can conclusively demonstrate quantifiable value to the enterprise, perhaps via business process reengineering aligned to EMobility solutions.

Recommendations for individual players

Considering the above scenarios and their strategic implications, PricewaterhouseCoopers recommends that enterprises and suppliers take the following actions in order to maximize the potential of EMobility.

The enterprise customer: Take control of business transformation

A marketplace further along the maturity curve favors those who provide end-to-end services over those who provide only pieces of a solution. Accordingly, enterprises used to facing “buy or build” decisions will find it increasingly unnecessary to build, and therefore desirable to pay closer attention to vendors. Depending more heavily on vendors will require enterprises to gain a deeper understanding of and exert more influence in the EMobility market, to ensure the market serves its strategic goals. Taking the following actions will help enterprises be agile enough to make this adjustment smoothly.

Strategy

- Understand the ecosystem and the role of the various players.
- Develop a stable EMobility vision that is immune to the rapid transition and disruption likely in the technology environment. For example, create an EMobility roadmap that outlines operations, technologies, architectural frameworks, and their effect on business processes.
- Anticipate technological developments outside the current mobile environment—for example, from the PC industry and Web services.

Management

- Seek out vendors that provide high levels of technology integration out of the box and also focus on the broader business operations impact.
- Structure EMobility contracts with careful consideration of the implications to other players (subcontractors), ensuring performance incentives not just for the implementation but also the ongoing operations.
- Use budget discipline and negotiating leverage to lower costs and allow for transformative EMobility initiatives. Enterprises should be fully aware of current voice and data pricing trends and negotiate knowledgeably on the subscription fee front. For example, converged voice and data platforms and streamlined infrastructure should help enterprises reduce spending on commoditized applications and free up budgets for new, converged EMobility functionality. Wireless carrier average revenue per user (ARPU) trends in the US demonstrate how voice is being commoditized, implying the ability to establish a lower voice cost structure over time. Pricing that’s tied more closely to actual enterprise-wide utilization could facilitate this effort.

Policy and governance

- Seek transparency in the supply chain for EMobility.
- Seek counsel with other enterprises to provide guidance to the EMobility ecosystem, especially to harmonize technology standards and interfaces.
- Initiate programs to ensure that the uniqueness of mobility is considered and the risks associated with it are managed. The movement of data outside the walls of the enterprise creates more risks regarding how the data can be accessed and used, along with the device itself.

Technology development

- Refuse to accept solutions from suppliers that do not offer high levels of scalability, manageability, and interoperability.
- Establish a core EMobility infrastructure that supports experimentation and innovation. Look beyond established EMobility initiatives to business processes and business transformation. For example, smart metering technology allows utilities to offer customers lower prices because utilities can save money by managing the volume of power delivered to the home on a minute-to-minute basis. And Wal-Mart has mandated that all its suppliers use RFID in order to enable its own just-in-time inventory.

EMobility suppliers: Cultivate a portfolio of alliances

All suppliers need a clearly articulated EMobility strategy, both for internal guidance and, as far as possible, for external communication. PricewaterhouseCoopers believes that this strategy should include an open and preferably transparent business model. Such a model requires a different way of doing business. In addition to engaging in alliances, partnerships, and acquisitions with disparate parts of the ecosystem, EMobility suppliers must also carefully consider their impact on the evolution of the ecosystem.

For example, suppliers that involve multiple partners in deployments are better able to manage risk for themselves. Simultaneously, the decision to work with partners as opposed to going it alone also positively affects the ecosystem as a whole. The team approach is more likely to produce the “best of breed” projects that build enterprise confidence, deliver true value, and sustain EMobility demand. Companies should, therefore, take a portfolio approach to alliances as opposed to placing too much reliance on a few partners.

Cultivating a portfolio of alliances will require suppliers to monitor the performance of partners and to regularly review their existing portfolio and potential new partners among the competitors, in order to adjust for changing ecosystem dynamics. Companies should also extend portfolio management to their range of EMobility solutions, applications, and equipment. For example, a solution portfolio might include packaged off-the-shelf, software as a service (SaaS), and customized solutions.

With these general guidelines in mind, each EMobility supplier can develop a more agile, open business model through the following actions.

Mobile carriers: Balance depth and breadth

Carriers face difficult choices among a number of technologies that are competing to become industry standards. To stay competitive, they must support multiple combinations of devices, operating systems, and applications, without losing the opportunity to generate the economies of scale that drive profitability. The following actions will allow carriers with agile business models to balance the opportunity of industry- and company-specific products with the sales potential required to make those offerings profitable:

- Encourage interoperability and favor combined hardware and software solutions that provide end-to-end capability and ease of use for the enterprise. A new identity management layer and a best-in-class runtime environment designed to enable mobile SaaS may deliver this convenient and holistic approach in the long-term.
- Look for partnering opportunities outside the usual circles, across the traditional boundaries of the mobile and fixed Internet. As the maturing marketplace develops end-to-end platforms, suppliers will be compelled to sell to each other, integrate, and either become service providers or ally closely with those who are. For example, a carrier could bring together a specialist in location-based services with a sales force automation (SFA) vendor in order to host a mobilized SFA application that incorporated real-time, company-specific geographic information.
- Be open to nontraditional roles as enterprises develop more complex purchasing models and strive to drive down cost. For example, a carrier could help enterprises drive down minutes of usage (MOU) costs by creating a data layer that standardizes all carrier feeds to the enterprise and allows for easier data analysis. The result would be a stickier customer relationship and an opportunity for more data sales.
- Maintain focus on infrastructure (network and IT) improvements to improve connectivity and enable the functionality necessary to increase average revenue per user (ARPU) for data services.
- Continue to adjust product and service pricing to encourage the adoption of EMobility offerings. For example, European carriers are beginning to adopt “unlimited use” tariffs in order to remove barriers to data subscriptions.

Infrastructure and device manufacturers: Manage risk through collaboration

Mobile manufacturers face constant pressure to innovate as product lifecycles shorten, but carriers—their primary customers—can be slow to accept new products, significantly lengthening the time necessary to recoup high research and development costs. An open business model, facilitated by EMobility platforms, will help infrastructure and device manufacturers manage these significant risks through the following actions:

- Focus investment on higher levels of standardization aimed at supporting a securable, manageable, multi-application platform that presents the greatest near-term opportunity in the ecosystem. For example, recent acquisitions by EMobility players have anticipated the need for a software platform to extend a full range of enterprise applications to mobile handhelds. In November 2005, Nokia added to its wireless e-mail, application synchronization, and mobile device management capabilities with the acquisition of Intellisync, Inc., and a year later, Motorola acquired Good Technology, a developer of wireless messaging, data access, and handheld basis for applications delivered as a service or hosted by manufacturers.
- Anticipate disruptions from outside the conventional mobile environment and more entrants from the world of the fixed Internet. For example, as mobile WiMAX expertise in Asia Pacific grows and the standard becomes well understood, Taiwan- and China-based local area networking (LAN) equipment vendors with no previous wireless wide-area networking background may have the opportunity to begin building inexpensive mobile WiMAX equipment.
- Leverage relationships with enterprise IT departments and collaboration with software vendors to sell end-to-end EMobility integration directly to enterprises. More direct sales to enterprises may also require more industry specialization, either through in-house development or partnerships. For example, Motorola spent \$3.9 billion to purchase Symbol Technologies, whose data capture terminals and other enterprise data equipment have penetrated industry verticals such as government, healthcare, manufacturing, retail, and transportation and logistics.

Software providers: Collaborate to exploit horizontal opportunities

Common EMobility platforms and software as a service (SaaS) will create great risks and opportunities for EMobility software developers as both their markets and competition widen. By taking the following actions, EMobility software providers can collaborate with various market players to address changes in their financial, delivery, and architecture models:

- Work more closely with other providers in the ecosystem to resolve interoperability issues and set new standards, whether they be proprietary or open. The development of SaaS and platforms implies more complexity behind the scenes in order to deliver ease of use and quality of service to the end user. As a result, software providers will be compelled to work together more closely on standardization and perhaps sell more to each other than to end users.
- Develop applications that manage intermittent connectivity and attack horizontal markets. As the market matures, more capabilities will emerge that cut across industry verticals to serve the broad mobile workforce. The market potential for horizontal applications is at least an order of magnitude larger than that for vertical applications.
- Develop applications that enhance enterprise business processes in new ways. Mobile enterprise application pure plays, for example, will find it necessary to create new application capability that has not previously existed as their markets mature and larger vendors move in.
- Evaluate the possibility of disintermediation of mobile enterprise application pure plays by entrants from the fixed Internet. Once lower layers of the mobile software stack become more standardized and reliable, it will be possible for an ISV with less mobile experience to rapidly begin mobilizing its full suite of applications. That ISV will offer the mobilized suite to its existing customer base, undermining the opportunity for pure plays to sell to those same customers.
- Monitor the overall software market for developments that will speed the advent of utility computing, service-oriented architecture (SOA), and pay-per-use models. SOA, for example, has yet to have a major impact on the software market, but it could easily be a disruptive force in the future. SOA breaks apart software into components that do specific business processes. These components, called “services,” can be combined to create on-the-fly applications as needed. This ability could allow enterprises to add specific mobility functions without replacing whole application suites, thus reducing maintenance costs, which often account for three quarters of an IT budget. Business models based on SOA would differ radically from those for traditional packaged software. Software hubs, for example, would act as access providers for the services, or software components, that they offer.

System integrators and business consultants: Focus on business processes

End-to-end solutions, EMobility platforms, SaaS, and a significant reduction in interoperability issues will significantly impact the types of implementations that require system integrators and business consultants. Developing the strategic agility necessary to respond to these changes will involve the following actions:

- Ensure that the need to change a business process drives the implementation. To avoid the mistakes made with large operation support service/business support service (OSS/BSS) implementations, EMobility technologies must avoid creating an artificial need to change business processes. To achieve the business transformation that companies seek, business process innovation must instead be closely aligned to corporate strategic objectives.
- Anticipate the need for increased integration and simplification of many promising emerging technologies (such as service-oriented architecture and other Web technologies), including their application in the mobile environment. Within a few years, ecosystem participants are likely to agree, at least tacitly, on runtime environment, operating system, and handset criteria. Sophisticated Web applications will also appear on handhels, and intermittent connectivity will become less of a problem as devices develop the ability to maintain session states between signals. All of these factors will increase the viability of software being delivered as a service to handhels. In response, the business models of system integrators will shift toward large-scale complexity, business processes, and applications not yet addressed in the mobile Web environment. For example, wireless carriers and mobile SaaS providers (such as Salesforce, Google, and eBay) will turn to system integrators for assistance with the increasingly complex data centers and IT infrastructures necessary to provide sophisticated mobile capabilities.
- Emphasize generalized carrier integration and specialized enterprise integration capabilities. Carriers have many ambitious upgrade plans over the next few years, while enterprises may be content to wait.
- Extend existing fixed capabilities into mobile environments by managing intermittent connectivity rather than building new mobile capabilities from scratch.
- Monitor developments closely for improvements in off-the-shelf products and services, and plan for business model shifts to accommodate these improvements.

- Remain relevant with industry, business process, and technology expertise. As the line between business process and application begins to blur, system integrators will need to increase their understanding of business processes in industry verticals. Retailers, pharmaceutical companies, and rail carriers, for example, currently require custom RFID solutions because of the low level of standardization and the high level of complexity in warehouse, manufacturing, and other supply chain environments. As RFID solutions become more standardized, system integrators will need to focus on how business processes must change in order to maximize the benefits that RFID should bring to the supply chain. Because the nuances of these processes will be industry and company specific, many services that tie directly to business process improvement will resist commoditization.

The agile EMobility ecosystem

Despite the difficulty of predicting outcomes for the EMobility ecosystem, it is clear that the status quo will change significantly by 2009. The industry is on the cusp of a shift that will lower the barriers for new products, services, suppliers, and customers. This fact has different implications for each member of the ecosystem, but one implication applies universally: There is a limited window of opportunity for market participants to reposition themselves.

To maximize this opportunity, EMobility participants need to move quickly and open their business models to alliances and innovation that may appear to reduce market share in the short term. In the long term, the ecosystem dynamics of the EMobility market will reward the collaborative approach because it fosters agility, resilience, and growth in the ecosystem as a whole. As the EMobility market grows, so will the shares of all suppliers.

The rapid rise of software as a service (SaaS) is a good example of an innovation that requires new openness by suppliers and customers if it's to realize its full potential. Carriers, traditional application providers, middleware, and pure-play service providers are all potential mobile SaaS hosts. Hosts, however, will need to develop a significant level of integration among networks, applications, and devices in order to deliver mobile SaaS with an acceptable quality of service. In other words, EMobility SaaS will be a multi-vendor environment by nature, requiring new alliances and more open financial, delivery, and software models. Just as they have overcome concerns about data protection with fixed Internet SaaS, EMobility enterprises will likewise have to deepen relationships with suppliers as they move more critical business processes to mobile environments.

Methodology

This white paper is the culmination of study and analysis of the enterprise mobility market on a global basis. PricewaterhouseCoopers consulted financial and industry analysts and interviewed executives specializing in enterprise mobility at the following companies: AES, Cingular, Cisco, Nokia, Oracle, Sybase, Sprint, Tenet Healthcare Corporation, Verizon Wireless, Verizon, and Vetro.

In order to estimate the size of the US EMobility market, PricewaterhouseCoopers reviewed numerous third-party IT research sources. To arrive at the spending forecasts in this publication, PwC assembled an aggregate forecast based on a variety of third-party sources. PricewaterhouseCoopers used a report by Forrester Research's Andrew Bartels, "Global IT Budget Composition: 2006" (#39632), as a baseline for the estimates of total IT budgets and EMobility budgets. PwC modified Bartels' overall composition breakdown to include telecommunications and recalculated the percentages with our own analysis and information from other third-party sources. We then estimated EMobility operational IT budget composition based on the overall IT budget analysis, its earlier EMobility spending analysis, and interviews with US enterprise IT executives.

This paper builds on a series of white papers previously published by PricewaterhouseCoopers. These papers include:

Breaking Down Walls: How an Open Business Model Is Now the Convergence Imperative (May 2006)

How to Capitalize on Lifestyle Advertising in a Customer-centric World (January 2007)

Global Entertainment and Media Outlook: 2006–2010 (June 2006)

The Rise of Lifestyle Media: Achieving Success in the Digital Convergence Era (January 2006)

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