Nokia for Business

The Route to True Competitive Advantage:

Today's Evolution of Workforce Mobility

NOKIA
Connecting People

Executive Summary

The promise of working on the go is here. However, harnessing the power of today's mobile technology takes more than the mere acquisition of IT tools—whether they are PDAs, smartphones, or Wi-Fi enabled laptops. Realizing the potential of mobile technologies requires that organizations carefully architect how they leverage the power of a new and expanding breed of mobile solutions. Done right, an organization can gain advantage over its competitors by improving speed and quality of service, while encouraging collaboration and communication between employees, customers and partners.

Think about it, business often presents situations when decisive action is required and success is based on the information available to the employee. These are instances that can make or break a major deal—decisive moments companies can't afford to lose. But many moments in business are more commonplace. For example, when a team is gathering to discuss a project, but every team member is in a different building or country.

When a business is empowered through mobile technology, conversations and information flow more freely. As a result, employees and teams are more in the know and more responsive. They can take the necessary action, inform the people who need to know and interact directly with the back-end systems to see what the rest of the team is seeing. By being more agile, productive and cost-efficient, this new-found power helps their company create a competitive edge and leverage their people and information more opportunistically.

Critical to the success of true workforce mobility is the involvement of the IT organization. By taking a tiered, holistic approach, IT can mobilize processes and operations to meet the ongoing needs of the entire organization. Doing so is relatively easy and cost-effective, leveraging the existing IT infrastructure and business applications and extending those resources to the mobile workforce.

The Phases of Workforce Mobility

As knowledge workers, such as consultants, sales and marketing staff, spend greater lengths of time away from their desks, they find themselves increasingly reliant on their ability to remotely access critical applications to remain effective. It is predicted that by 2007, more than 60 million people will telework in the U.S., and more than 66 percent will use mobile and wireless computing.[1]

The principal drivers for working on the go include both technology and organizational change, including the growing availability of broadband connectivity, increasing competitive pressure to exploit mobility, and innovation in mobile devices.[2] Organizations must begin assessing and preparing for the short- and long-term impact of mobile technology on their workforce. The key to success can be found through the implementation of a phased approach.

The Phases of Enterprise Mobility

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Mobility moves to the IT Department	**Work life is more convenient for employees**	**Employee productivity improves**	**Companies gain competitive advantage**	**Industry changes on a large scale**
• Business strategy drives IT strategy • Now both traditional and mobile access methods are centrally planned • Strategy Sanity	• Users communicate using methods common today: voice, SMS & email • User satisfaction	• Their ability to manage improves resulting in cost savings • They experience rich push email and calendar and begin to use other vertical applications relevant to job function • Cost savings	• Employees ability to perform routine business processes while mobile results in improved sales, customer satisfaction, loyalty and service • Market share, revenue growth	• Employees ability to perform routine business processes while mobile results in improved sales, customer satisfaction, loyalty and service • Market share, revenue growth

Phase 1: Mobility Strategy

In this first phase, workforce mobility moves from being an ad hoc IT consideration, to an integrated part of an organization's IT strategy and planning. Few companies have come to mobility with a strategic vision from the outset. With nearly 47 percent of companies having deployed mobile solutions by May 2005, it is becoming increasingly important to evolve from tactical mobility projects to a consolidated, managed, enterprise-wide approach to limit operational costs and security risks.[3]

Business goals and objectives frequently drive IT strategy. In a typical scenario, mobile devices are adopted by executive level personnel, eventually leading to productivity and efficiency gains. Soon this technology influences the organization's business strategy because of its potential value to other areas of the company.

As IT decision makers look to support their organization's mobility objectives, their role as central planners becomes crucial. For example, as smartphones and PDAs are adopted across an organization, IT decision makers recognize that standardization will be critical so that workers will be able to exchange information in a centralized manner. In this way, efforts to mobilize workforce processes influence business strategy, which drives IT strategy.

In pursuing the implementation of mobile technologies at work, a "strategy sanity" approach is clearly warranted. While a revolutionary vision for the adoption of mobile technologies may be appealing, the reality of such a strategy might wreak havoc on an organization's infrastructure and operational processes. A more reasoned approach is to leverage the organization's existing infrastructure, while targeting mobility goals in a phased manner. In this regard, IT decision makers serve as a critical reality check on the process.

1 Source: Management Update: Managing the Mobile & Wireless Workforce, Gartner, April 2004

2 Source: Trends 2005: Enterprise Mobility, Forrester, October 2004

3 Source: The Mobile Enterprise: Defining Your Strategy, Forrester, March 2005

Phase 2: Mobilizing the Workforce

As mobilization becomes more mainstream, the impact on organizations and the work-life of employees continues to evolve. Many organizations focus initial mobilization efforts on those workers who stand to gain the greatest benefits, both in terms of work processes and life balance.

For example, implementing a mobility strategy among field and sales personnel can change the entire dynamics of this segment of the workforce. With instant information suddenly available at their fingertips as they are on the go, they no longer need to return to the office to look information up or log an item. In addition, the customer stands to benefit by receiving the quote or necessary data instantaneously from the worker empowered with information on the go.

But it's not just the "road warriors" and field employees who benefit from mobility. Commuters and office-bound workers, commuting to and from the office and going from meeting to meeting, are just as mobile and can also greatly benefit from mobile technology.

In fact, Nokia has discovered that a "hidden mobile workforce" exists at most companies. A recent global survey by Simpson Carpenter showed that while business decision makers think just 24 percent of their employees use mobile phones for work, in fact, 50 percent of employees actually do. And many of these employees are clamoring to leverage the built-in power of many phones today, for example, to manage their company email.

In this second phase, workforce mobility moves beyond the planning stages, and mobile technology is strategically deployed throughout the organization to enable improved connectivity for employees in the form of voice and applications such as email.

Phase 3: Improving Productivity

Once the most commonly used methods of mobility are in place, such as voice, corporate e-mail and SMS, the next phase can be implemented. In phase three, it's no longer about putting the right pieces in place—the foundation for a mobile workforce should already be built. The fact that employees can now connect to information from anywhere is a given, and it is at this point that organizations focus on what type of information is now most important in order to drive productivity. Individual processes and daily work routines should be evaluated as potential areas in which mobile applications can deliver productivity improvements. Mobile technologies can be employed to streamline work processes, reduce dependence on paper, and encourage and enhance automation.

So, instead of requiring workers to come into the office to fill out time and expense reports, they can perform these functions directly on their mobile device from a remote location. The net result is an increase in the speed of transactions and information exchange. By providing workers with access to rich push email and calendars for scheduling, in addition to other collaborative applications, efficiencies can be achieved that will yield measurable productivity gains. And along with these productivity improvements come critical cost savings.

Ultimately, successful mobilization depends on how workers interact with their mobile devices and how information is processed. Once again, IT decision makers are tasked with supporting these mobility objectives, and will be responsible for the central planning necessary to make this type of connectivity and information exchange seamless and effective.

Phase 4: Gaining A Competitive Advantage

As mobile technologies are effectively integrated across an organization, workers are able to carry out routine business processes remotely, which leads to an overall improvement in performance. This results in a compound effect as the company starts to operate more efficiently, and is able to react far more quickly to market dynamics.

Mobility leads to increased sales and service, which leads to greater customer satisfaction and increased loyalty. Because it can move faster and react more quickly than its competitors, the mobile business gains a significant competitive advantage. And with that advantage comes increased market share and revenue growth. In phase four, impact on the bottom line results from proper, sustained use of mobile technologies.

Phase 5: Paradigm Shift

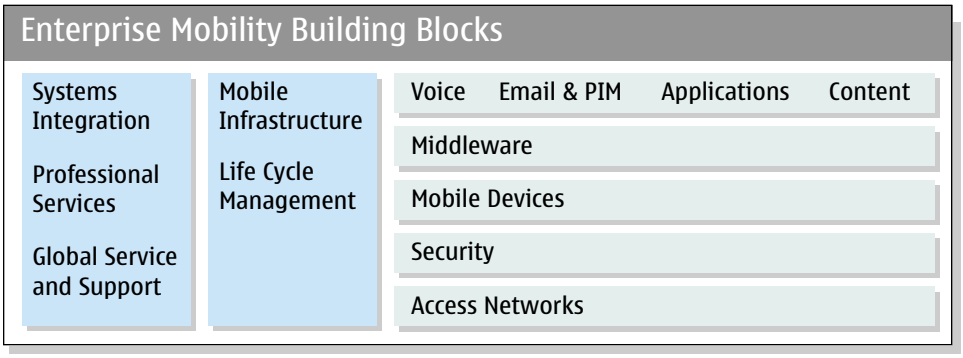
Following the example of the successful mobile business, soon competitors adopt similar mobile strategies just to remain on par. In this final phase, a paradigm shift occurs and the overall industry makes a holistic change to working on the go. New mobility-enabled business models establish common processes for greater profitability and cost savings.

These phases of mobility don't represent a strictly linear progression, as leading-edge companies will develop business transformation strategies that prove most effective in reaching their goals.

Addressing Unique User Needs

One of the challenges for both business and IT decision makers when implementing mobile technologies is accounting for all of the major variations and commonalities of worker needs, and then prioritizing them in a way that yields the biggest impact for the organization.

However, business and IT often view employee work style requirements through vastly different prisms. The business decision maker is generally more focused on work style, as it relates to increasing productivity, profit, customer satisfaction and ultimately market share. IT decision makers tend to focus more closely on mobility issues surrounding standards, platforms, consistency, continuity, adaptability and flexibility.



In order to establish the right mobility priorities, it's important to first understand the ways in which the workforce operates—what their personal preferences are, and where their primary needs lie. This information can then be analyzed to establish a set of common needs and key focus areas that help guide how mobility should be deployed to best impact business productivity.

Building Mobility from the Ground Up

As an organization adds mobility, it is imperative that the correct building blocks are put in place, so the organization can achieve maximum benefits. The building blocks of an effective mobile infrastructure have distinct interdependencies, which often affect different aspects of an organization and must be considered as part of a larger whole in order to avoid costly missteps and failures.

In developing an effective mobility strategy, IT decision makers must look at the overall impact of mobilization from a business perspective. Access networks, security, devices, voice and data applications, and service and support all require a thoroughly planned and carefully integrated approach.

From Mobile Voice to Full Mobilization

As more workers are able to take technology on the road, ranging from Wi-Fi enabled laptops through increasingly capable PDAs to powerful smartphone designs—the variety of applications that they demand access to is broadening beyond specific vertical functionality. However, with this rapid evolution, organizations need to understand the essential building blocks of a mobile solution, and to take a holistic approach in order to achieve true competitive advantage.

Starting with existing voice investments, organizations can look to replace fixed lines with mobile voice for those employees who are more often on the road than in the office. As the workforce begins to benefit from greater mobility, business email and collaboration capabilities can be added to drive increased productivity. Mobile email is just in its infancy, with only a small fraction of the 650 million corporate inboxes currently mobilized. Enterprise voice is a more mature market when it comes to mobile deployments. Today it makes up the largest portion of IT and communications spend representing 25 percent of companies' costs.

Once communication tools are in place through voice and email, mobile access to Intranet and corporate data, such as customer databases and financial reports, can be provided. Finally, applications that can truly enhance business processes, such as enterprise resource planning applications, CRM packages, and supply chain information, can offer real-time visibility and substantial operational efficiencies.

Nokia can mobilize a business' existing software applications by extending the functionality of key third-party business applications to mobile devices. Then, of course, there are the applications to consider that we can't even imagine today.

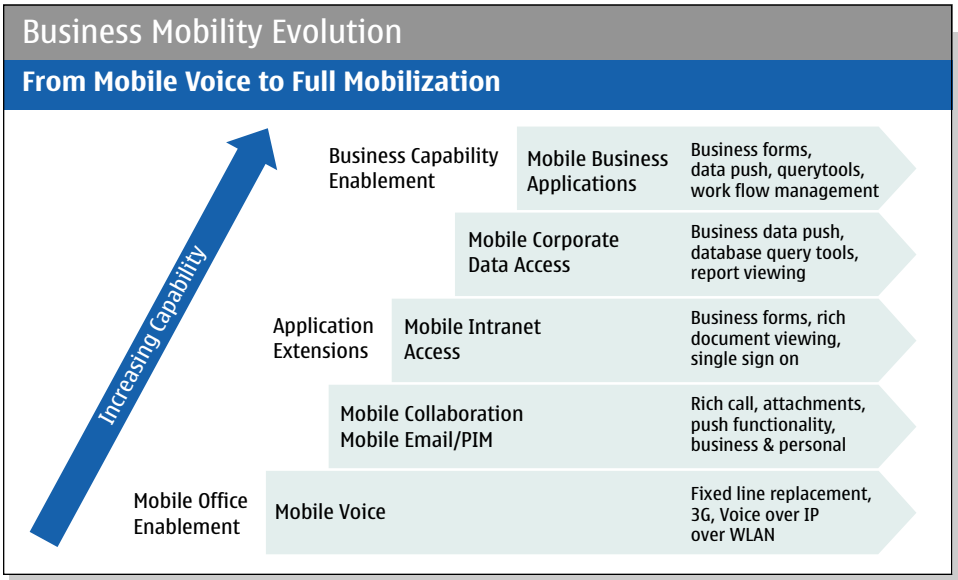
Enabling New Business Processes

Once mobile device hardware and software is determined, middleware to connect the different applications on the device to an organization's network has to be standardized. Middleware is significant in ensuring the interoperability between voice, business email, calendar and contacts, rich messaging, voice, applications and content. Improving efficiency and enabling new business processes is the goal, which becomes possible when diverse applications and content needs drive platform thinking.

One example of a mobile application platform is Nokia Business Center, a software solution built to support collaborative applications such as push email and enterprise voice. The platform is intended to grow over time, integrating enterprise applications, making them available on mobile devices.

Choosing the Right Device

Employing the right mobile devices is key to providing workers with the tools they need to achieve business objectives. Form factor and functionality will impact how useful and readily accepted mobile solutions will be by the workforce. One size does not fit all, which is why it is important to select the right device for the right task and time.



Decision makers need to look at the primary tasks surrounding the use of a mobile device to ensure that it fits workers' needs, and is sufficiently user-friendly to provide the greatest value. Usability, connectivity, durability, quality, personalization and style factor into which devices will be best suited for an organization's mobile workers.

As mobility is integrated across the enterprise, many organizations face an inevitable struggle between employees wanting to select their own devices and IT dictating which solutions they can provide the most support for, those that fit best within the operational systems in place.

Nokia mitigates this conflict, offering a full range of business-optimized, open standards-based mobile devices complete with applications and enhancements (e.g. push email and hands-free calling) that meet a rapidly growing array of employee needs from messaging and web browsing to document editing and virtual meetings, all well suited to both the voice and application experiences. From its vast mobility experience, Nokia knows that it's not good enough to repurpose a consumer device with software, that the software and applications must drive the design of a device.

Security

For the IT decision maker, security is one of the most critical elements to be considered when building mobility into your organization. Before an organization begins to fully integrate mobile solutions into their

infrastructure, stringent, standardized and comprehensive security measures must be put into place. Because of the diversity of systems used in any organization, the right type of gatekeepers and security measures should be implemented before putting corporate information at risk. Whether it involves fixed or wireless communications, desktop or mobile devices, corporate or personal applications, on or off campus usage, it is vital to ensure security within the devices and the connectivity itself.

Key considerations in creating a secure mobile infrastructure include:

- Diverse mobility usages introduce security policy enforcement challenges
- Mobile connectivity must be flexible, secure, transparent, and adaptive

Nokia offers a range of hardware and software solutions to provide security from the device endpoint through the network infrastructure. Organizations have a choice of Secure Sockets Layer (SSL) or IPSec Virtual Private Network (VPN) offerings to address their diverse security needs.

The Nokia IP VPN family provides a platform for organizations to deploy mobile applications. Ideally, individuals with mobile devices can intuitively connect to any application by simply clicking on the application icon on their phone. For IT, Nokia IP VPN streamlines administration and maintenance.

SSL VPNs are useful because they allow access from any device with a browser and are a very cost-effective way to manage remote and mobile access to a great number of people. The SSL VPN solution from Nokia customizes access levels on the fly according to who the user is, what device they are using, and more importantly, how secure that device is.

Device security is also an important component of a secure mobile infrastructure. Basic security for Nokia business devices includes keypad and device locks, a password for memory card, and remote locking ability, for example locking the device via an SMS message. In addition, the information on the device can be encrypted. Nokia is aligned with the leading file encryption provider, PointSec, to provide true device security in high-end mobile phones like Nokia business devices. For anti-virus and personal firewall software on business devices, Nokia collaborates with Symantec. These technologies coupled with the Nokia

Mobile VPN Client, used to secure remote connections, offers a comprehensive solution to protect data.

Access Networks

The foundational building block of working on the go is the access network. Nokia believes that a holistic approach to connectivity, from a technology, as well as an application design and device specification perspective is critical. IT decision makers should examine the different connectivity environments that a worker will encounter, both in and out of the office. Whether fixed or wireless, voice or data, IP will be the common denominator. Once an organization's connectivity is seamless and secure, workers will no longer have to be concerned with what network domain they are in, but instead can focus on getting a task done or achieving information access.

Key considerations in establishing a connectivity platform include:

- Transparent, seamless access to the fastest most cost-effective network
- Security methods leveraged across all types of networks

Support Systems

After an organization has deployed its mobile infrastructure, overall support systems should be put into place. Beyond security, lifecycle management becomes IT's biggest challenge due to the diversity of devices, software environments, ownership, usage cases, networks and standards.

Effective lifecycle management provides a means to monitor the overall maturity of an organization's technology as it attempts to meet the demands of the mobile workforce. It is important to have a review process in place to examine how systems are working, where improvements can be made, and where future technology investments should be applied.

Given the complexity of the mobility value chain, organizations are increasingly placing a high value on end-to-end support and service. Nokia's professional services organization helps companies understand the business challenges of mobile technologies. Through its world-class global services, Nokia assists decision makers in transforming their business, helping them to prepare their infrastructure to be mobilized, and installing and implementing the most secure and effective solutions to meet their ongoing business objectives. Few local organizations can match the breadth and depth of Nokia's service offering.

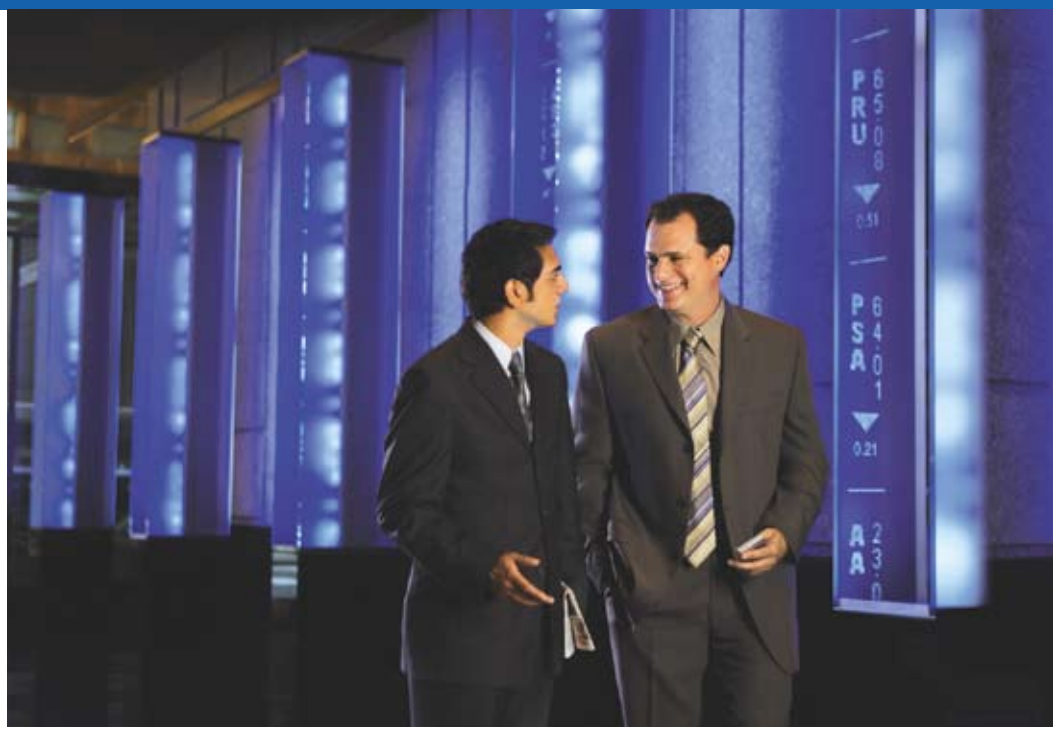
Where to Turn?

It is fair to say that businesses wanting to go mobile today have encountered a patchwork of possibilities—a collection of admittedly worthwhile and interesting horizontal and point solutions—but nonetheless, a do-it-yourself jigsaw puzzle which has left many businesses wondering where to turn.

Nokia saw this jigsaw problem as the biggest hurdle to overcome. So, the company brought together the essential components of business mobility, drawing from both within Nokia and from its channel and partners.

In the real world, few companies can or should, work in isolation. That's why Nokia has strong alliances and working relationships with hundreds of other businesses. Some partners help craft Nokia solutions through specialized hardware or software.

These are important industry players who know the enterprise space inside and out, including IBM, Oracle, BlackBerry, Good, PointSec, CheckPoint, Symantec, Avaya,



Cisco, and the over 400 partners within Forum Nokia who are today developing enterprise applications. Still other partners help us bring our solutions to market by incorporating our solutions into their business offerings.

So, acknowledging the scope of a business' needs, Nokia acts as an orchestrator of solutions, reaching out to the industry and delivering business with the best combination of skills, resources and innovation.

Truly Unified Business Solutions for Specific Business Needs

The Nokia for Business Solutions Portfolio strives to ensure four criteria are always met in its mobile technology business solutions:

- Simple—easy to deploy, manage and use
- Connected—always makes the best connection possible
- Intelligent—does more work behind the scenes, easily dovetailing with other systems
- Trusted—enables secure communications and our business customers discover Nokia and our partners are trustworthy

In addition, business mobility solutions can be applied to address specific business needs. For example, a business might just need to be more **informed**, wherein employees and teams need email, calendar, contacts and voice at their command wherever, whenever. Another business needs to be **interactive** with back-end systems and processes, working back and forth with field service employees wherever, whenever. Yet another business needs to be **accelerated**, with orders instantly entering the processing system from employees selling wherever, whenever. Finally, a business might need to be **optimized**, requiring that all business calls take the most cost-efficient route wherever, whenever they need to be made.

Conclusion

The opportunity to effectively mobilize an organization's workforce is here. Nokia is serious about the business mobility market and, with the help of its partners, is able to bring businesses of all sizes a truly integrated mobile business solution. With the involvement of the IT organization, mobilization is relatively easy and cost-effective.

Nokia believes that by taking a phased approach, building upon one area of mobility after another, organizations can begin to capitalize on the real value of mobilization and quickly realize the tremendous benefits of a workforce on the go. Benefits such as greater employee flexibility and improved productivity, resulting ultimately in an organization's competitive advantage. And by taking this phased approach, organizations will be able to leverage existing investments, and ensure their IT infrastructure continues to be manageable—and mobile.

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