

The Wireless Advantage

Business Scenarios for Mobile Solutions

Introduction

Public and private sector enterprises are always in pursuit of ideas that can make them more efficient and flexible, qualities that have a direct effective on both profitability and performance. As wireless networking moves into the mainstream, many organizations find that the addition of mobile network components offers undeniable business benefits, both direct and indirect.

Seen directly, wireless solutions can improve the connectedness of a workforce and enhance decision-making by providing faster access to more current information. They can also be easier to maintain and configure, reducing the need for IT staff. Indirectly, mobile solutions can improve worker satisfaction by providing easier, more flexible access options. They can even improve public perception, and introduce new, “cutting edge” mechanisms for customer interaction.

This paper considers how the addition of wireless technology can lead to more efficient workflow, enhance productivity and improve communications in six different business scenarios. These brief overviews consider wireless solutions in several industries, including manufacturing, financial services and health care. Thinking through the possibilities is a good way to determine how the wireless advantage could be exploited for the benefit of your enterprise.

Wireless Enhancements for Manufacturing Facilities

Business Scenario

Consider an aerospace production facility, involved in the remanufacture of aircraft engines. Engines arrive at the facility, are logged in, and disassembled. Some parts are replaced, others are refurbished and the engines are reassembled and sold as factory-overhauled products.

On the shop floor, workers use light pens to read and enter data on progress, parts used and time worked, uploading the information via a hardwired network.

Process efficiency is heavily dependent on real-time information flow; parts can be physically moved many times between download cycles, when workers feed the information from their scanners to the data collection system. That can mean countless hours wasted searching for the right part.

Data verification can also be a problem, since workers have no way to verify the accuracy of their information at the time of data entry.

Mobile Solution

Moving to a wireless infrastructure would let the facility establish two-way data movement and continuous information flow, speeding up communications, eliminating the lag between data entry and upload and letting the workers keep on top of day-to-day business from the production floor.

It would also simplify the inventory process, replacing a paper-based system with a more secure, wireless approach. The facility could add wireless bar code readers and – to provide even greater mobility and allow for real-time transactions – handheld computers could be added to the mix. Then, the workers could take advantage of browser-based applications to provide workflow support for standard processes.

Business Benefits

- Increased productivity through real-time tracking of the parts and labor associated with each order, with verification at the time of data entry
- Improved communications with control personnel, who can remain on the production floor without being out of reach
- More accurate analysis of product costs, with better tracking of labor details against work orders
- Significant reduction in parts retrieval time

Mobile Advantages for Retailing

Business Scenario

A large retailer, with multiple locations around the globe, will have a small army of buyers. The buyers need to travel extensively, often to other countries, and must connect to the retailer's individual stores, as well as to corporate systems, regardless of their physical location. These traveling employees also need to be easily accessible by phone. In addition, the individual stores will need to exchange information with each other, on inventory, sales status and other issues.

ISDN dial-up connections can be problematic for remote access, since buyers will often need access late at night, when no technical support is available. The retail outlets also need sales and distribution information, with reliable connections, 24 by 7.

The key to establishing dependable communication and increasing productivity is a stable and predictable way of accessing distributor data, product information and sales figures, especially if the business is to expand into new markets and new territories.

Mobile Solution

Relying on traditional land-line networks can put a real drag on a highly mobile workforce. The more mobile the workers, the greater the demand for the seamless communications that can be offered by wireless connectivity. For a retailer, equipping all buyers with wireless PDAs and smart phones could be a good solution, letting employees communicate quickly with headquarters and branch offices. It would reduce the time employees spend troubleshooting wired connection issues, and let them concentrate on the job at hand.

Upgrading the general infrastructure to in-store wireless networks will also encourage mobile device use, whether on the road or inside the company's own facilities. Establishing a Wireless LAN will give employees tremendous flexibility, and reduce potential service interruptions.

Business Benefits

- Improved productivity through better communications
- Efficient access to business-critical data
- Faster product delivery times
- Increased employee and customer satisfaction
- Reduced connection costs

Better Patient Care in a More Flexible Environment

Business Scenario

A modern medical center involves a team of physicians, physician's assistants and specialized support staff, working as a team to provide the best possible health care, convenient access and cost-effective service delivery. In a typical day, health care providers need to juggle patient appointments, medical records and emergency situations, perhaps on a 24 by 7 basis. They are continually challenged to fit complex tasks into an unpredictable schedule.

It's a given that providers can't be tied to physical workstations – they need to be where the patients are, and have easy access to up-to-the-minute information. Wireless devices can therefore help increase overall efficiency, and enable better patient care.

Mobile Solution

Mobile tablet PCs can provide instant access to patient information from anywhere within the center, or from anywhere the device can obtain an Internet connection. With a medical record system, with added security in the background, providers can access and update records anytime, anywhere.

Tablet PCs provide a more portable and less cumbersome option than laptop computers, particularly for personnel who need to interact with patients. They also provide the advantage of easy-to-read screens, and the ability to enter data without keyboards. The tablets can be equipped with docking stations that will turn them into full, desktop PC workstations, supporting multiple monitors and all the usual PC software tools. Providing this kind of technological assist can improve job satisfaction, letting patient-facing staff find time in their workday for things they'd otherwise need to do after hours.

Business Benefits

- More complete and up to date patient documentation, with better access to same, even for on-call physicians
- Better information delivery, without compromising the provider-patient relationship
- Improved patient care and a more efficient, flexible work environment
- Improved provider working conditions with the flexibility offered by remote information access

Increased Competitiveness for Financial Services

Business Scenario

In an industry as competitive as banking, innovation can be the key to survival. Changes in the business of banking have brought an increasing need for mobility, as traditional office concepts become obsolete. Employees who depend on PC tools may actually spend only a small portion of their time at their workstations.

The broad adoption of wireless networks has proven that wireless technology can greatly increase efficiency, while still preserving the security and reliability of a wired platform. Ubiquitous connectivity and new architectural solutions enable organizations to increase productivity. They can let employees and customers alike connect using PCs, wireless devices or even mobile telephones.

Mobile Solution

The right wireless infrastructure will deliver on two main objectives. It will create a flexible platform that can support different security and access rights for different groups of users, and provide remote access from many different locations.

A wireless network will do more than eliminate cables in the office. It can bring significant improvements in productivity, employee performance and customer satisfaction. It can also lay the foundation for even further improvements, with a converged IP network.

Business Benefits

- Improved customer service and customer perceptions, with flexible service delivery
- Enhanced security, with role-based access and encrypted transmissions
- "Guest" connection options to support consultants and vendors
- Session-level authentications that provide transparency and accountability
- General increase in the acceptance of network-based tools and applications, supporting a move toward more cost-efficient service vehicles

Improved Decision Making with Mobile Email

Business Scenario

In a typical Board of Education, executives need to spend a lot of their time in meetings, and are often in travel mode. That creates a situation where it's difficult for them to check email or access business information until the end of the day, which means reading and responding to eight or more hours of email in one sitting.

It also means that education executives may be unable to respond to critical issues, and may not even be aware of changes that could directly affect day-to-day decision making.

Mobile Solution

A mobile solution, based on a hand-held device, can address this situation very effectively. There are a number of technology options available, and some can be configured to work with an organization's existing infrastructure. The less need there is to change the current platform, the more time will be saved in employee training. Email messages can be pushed to mobile devices automatically, in a rules-based fashion. That means important updates can come with audible alert warnings and lower priority messages can just be sorted and queued. IT staff can be equipped with similar devices, letting them stay on top of network events wherever they may be located.

Such a wireless solution can help boost executive productivity through more efficient use of email, improved communications and an enhanced ability to respond to critical situations.

Business Benefits

- Improved communications through better information sharing and collaboration
- Improved email response, supporting faster and better decision making
- Better information sharing and collaboration, integrated with normal software tools and systems

Field Data Capture for Insurance Underwriters

Business Scenario

Large insurance underwriters can have thousands of agents working in dozens of states, supporting millions of customers. However, writing insurance policies has traditionally been a paper-based business, requiring the manual transfer of account data from field agents to headquarters systems. It's slow, redundant and potentially error prone.

What's needed is a way to let field agents connect directly to data capturing systems, regardless of their current location. Whether in the office or at a client's home, the insurance agents need easy, universal access.

Mobile Solution

This is a case where hand-held computers, rather than laptops, could be the answer, since they would let agents continue to work with pen-based input based on digital versions of existing forms. A well designed hand-held system could automate collections, customer service and many other routine transactions. Signatures can even be captured on screen, just as they can on paper forms.

Ideally, the hand-held would be integrated with the agents' total field kit, which would also include a portable printer and other materials needed for day-to-day business. Workflow applications can be added to help agents manage their time during the business day. At night, the computers are programmed to automatically connect to the corporate systems and upload their transaction records.

Business Benefits

- Elimination of duplicate data entry and transcription errors
- Improved efficiency so agents can concentrate on sales and service, not paperwork
- Improved customer service with faster customer response time
- Better information sharing, and better management insight into agents' activities and performance

Summary

These six scenarios show how wireless technology can be applied to achieve tangible benefits in a variety of different applications. In many situations, a wireless network can improve organizational performance, as well as individual productivity.

The advantages are most obvious with a highly mobile workforce, but that doesn't necessarily imply a force of road warriors. Even within a single manufacturing plant, or a corporate office tower, wireless solutions can free people from the chains of their workstation, while letting them stay connected. That can mean an increase in direct human interaction, which is itself an important vector in efficiency and innovation.

Most any business could benefit from the intelligent application of wireless technology. It's worth considering how the wireless advantage could be applied to your organization.

For more information visit AT&T's Networking Exchange, at www.att.com/networkingexchange.

