

## Business Process Mobilization with AT&T

By Ralph Rio

### Summary

Wireless technologies provide the capability to connect both people and mobile assets with your standardized business processes. With wireless

Include mobile employees in your automated business processes for greater operational effectiveness. Apply Business Process Mobilization (BPMo) with maintenance mechanics, plant operators, material handlers, supervisors, and engineering support.

technology, electronic devices and the people who use them can move freely during their work, enhancing both visibility (decision support) and execution (implementation). Smoothly integrating these mobile resources with the business processes embedded in your stationary IT systems provides "Business Process Mobilization" (BPMo). Several key benefits include:

- Business processes become more inclusive and responsive
- Mobile resources (people, equipment, inventory) are better managed
- New opportunities to remove waste (lean manufacturing)
- Access to data (six sigma)

AT&T services fully integrate wireless mobility with wired systems. This goes beyond improving the productivity of the people who are mobile as part of their job function (maintenance, supervisors, technicians). It offers new opportunities for business process automation.



Dashboard on an Apple iPhone  
Source: AT&T

### Real-time Management of Mobile Resources

By applying wireless technologies, manufacturers can better manage their mobile assets and people. Wireless technologies allow access to information from the mobile resources in real-time, rather than having to wait for an update at the end of a shift or via a periodic report. With real-time data communications,

wireless technologies help ensure the right materials get to the right place, at the right time, and in the right quantity. The flow of mobile resources is enhanced, while providing new opportunities to reduce waste and avoid defects.

BPMo also enables companies to be more customer-centric and competitive. With improved, real-time access to information from mobile resources, related business processes achieve faster execution. Manual business processes can be automated, or even totally eliminated, by transactions using mobile devices. The overall business, including the mobile resources, becomes more responsive and adaptable to changing conditions. This, in turn, improves the competitive strength of the company.

### Applications for Wireless Mobility

Manufacturing tends to lag in technology adoption and wireless is no exception. While other vertical markets have experienced earlier growth spurts, ARC Advisory Group's recent market study "*Wireless Technology in Process Manufacturing Worldwide Outlook*," forecasts a compound annual growth rate of a very robust 30 percent. Manufacturing is quickly adopting wireless technologies that have been developed for the IT, telecom, consumer, or military markets.



**Maintenance Rounds  
and Data Collection**  
Source: Motorola

Mobile technologies used in manufacturing cover the full range of devices. These include laptop and tablet computers, handheld mobile computers, PDAs, mobile handsets, smart phones, sensors (for parameters such as pressure or temperature) and other rugged electronic devices that are enabled with wide-area wireless networks such as EDGE and HSDPA, as well as Wi-Fi or Bluetooth. The human interfaces for these devices are moving away from text towards graphics. To ensure that you select a serviceable and scalable wireless infrastructure that can be supported and expanded, it is a good idea to involve both your company's IT organization and seek mobility application consulting and engineering support from the wireless technology supplier.

Real-time communications with mobile assets provides an opportunity to improve workflow. Elimination of the wired tether enables faster and easier relocation of any devices connected to a network.

For example, while maintenance technicians are often asked to update screens in an enterprise asset management (EAM) system at the end of a shift, this seldom happens, since this creates extra work for which the technician does not see the value. Updating compliance is much higher when technicians have a mobile device that enables them to enter information as they perform their function, since here, the data entry is part of the workflow. Also, the device provides the maintenance person with relevant information that helps him or her perform their function.



**BPMo: Recording Damage via AT&T Wireless Network**

**Form Completion in One Step**

*Source: Intermec Technologies*

### **Applications for Wireless Technology**

There are many additional applications for wireless technology in manufacturing. Perhaps one of these can provide an entry point for applying wireless in your business processes.

Data entry and display for maintenance management, ERP, process control, and other applications:

- Maintenance management with access to inventory status, equipment documentation, and nearby work orders
- Visibility to manage exceptions faster
- Inventory management particularly in large stockrooms

Data collected with wireless sensors or networked instruments:

- In-process quality management in real-time
- Tracking product genealogy and traceability
- Data collection for a six sigma DMAIC project

Business Process Optimization:

- Improved scheduling and dispatching through enhanced visibility of work order and equipment status
- Combine with location technologies for asset management

Machine-to-Machine (M2M):

- Intelligent device “pings” another device, for the machines to communicate directly without a central controller managing the polling
- Applications include data collection, remote monitoring, and remote diagnostics

## Last Word

With today's dynamic business conditions, no one can afford to be disconnected or isolated. Mobile employees are critical to the success of your operations. These employees include maintenance mechanics, plant operators, material handlers, and others who, by the nature of their work, need to move around your plant. They also include first-level supervisors and engineering support personnel who are often on the move to "go and see" issues in manufacturing operations.

Seek information from your wireless provider about how real-time information can help and application examples, but be careful to avoid becoming too enamored with cool technology. Be sure to establish the business value before attempting to apply the technology.

Architecture is important, since it can enable you to start small and subsequently build on the success. Successful projects tend to create additional follow-on projects. You do not want a short-term decision to limit your future. Involve IT people and mobility application consulting support from your wireless technology supplier to choose a wireless infrastructure that you can build upon. Create a foundation for further investment.

Wireless technologies provide an opportunity for improving business performance by moving applications closer to the manufacturing operations, i.e., Business Process Mobilization - BPMo. Corporate continuous improvement programs (like lean manufacturing and six sigma) can be extended to encompass both people and mobile assets.

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