

Maximizing Your Investment in J.D. Edwards with Wireless from Novarra



Executive Summary

- A major customer order is delayed due to unexpected inventory shortages.
- A field service technician cannot complete a requested service order because he could not identify the correct replacement part to order.
- A field sales representative cannot place an order on behalf of her customer until she gets back to the office. The order ships a day late and incomplete, disappointing the customer.

Sound familiar? Inaccurate inventory, poor customer service, and lost revenue opportunities occur when there is a critical information gap between a company's ERP (enterprise resource planning) system and employees who must access and update mission-critical business information.

Companies that have implemented J.D. Edwards WorldSoftware and OneWorld applications have the systems to substantially improve employee access to information – and thus, improve operational efficiencies and create new revenue opportunities. However, most companies have been unable to fully leverage this potential of their ERP systems.

The solution: Real-time wireless access to ERP systems available to employees whether they're in front of customers, within the warehouse, out in the field, or on the shop floor.

Although many companies recognize the value of wireless ERP, they are hesitant to deploy a wireless solution for several reasons:

- Companies do not want to endure lengthy and costly periods for application development, integration, and testing of wireless applications – delaying an immediate return on investment.
- They do not want to expend resources for on-going maintenance of these customized wireless applications.
- Many solutions lack flexibility and support for multiple wireless networks and devices.
- Traditional ERP solutions companies do not have wireless technology as a core competency.

Novarra understands the dilemma companies face. With Novarra InstantWireless for SupplyChain, companies can empower their employees at the point of activity with real-time access to critical business information using wireless handheld devices. Because InstantWireless for SupplyChain is a complete solution that seamlessly plugs into a company's existing ERP environment, companies do not have to devote significant resources to a lengthy or risky implementation. The result: No changes to existing applications, minimal up-front costs, faster time to wireless, and a more empowered and knowledgeable workforce.

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Introduction

Companies using J.D. Edwards WorldSoftware and OneWorld ERP software have not yet fully tapped into the power of their systems. Although these systems can process information in real-time, reliance on paper-based processes, and the inability for employees to access and update information when they are away from a desktop computer or terminal, have resulted in inaccurate or outdated information. Business decisions and promises to customers are being based on inaccurate ERP sources, resulting in costly errors, lost productivity and poor customer retention.

Typical ERP Accessibility

Lack of real-time access to ERP information results in lost sales opportunities, degraded customer relations, and lost productivity.

The reason why employees do not have access to real-time information is based on how information from ERP systems is accessed by employees:

- **Companies with Field Sales Representatives**
Most companies that have a remote sales workforce generally have a support structure made up of call centers or inside sales support to keep sales representatives apprised of sales and inventory information. Sales representatives need to periodically call their support structure to get the information they need (i.e., appointments, sales figures, inventory), often resulting in delays in retrieving time-sensitive information needed to complete a sale.
- **Companies with Field Service Representatives**
Like field sales, field service representatives rely on a vast support structure to provide them with the information they need to do their jobs. Because of delays in retrieving information, service representatives often do not have complete customer information before arriving on site – resulting in poor quality of customer service.
- **Manufacturing & Warehousing**
On the factory floor or in warehouses, employees access information via terminals or desktop workstations placed around the plant floor. To access or update data, employees must: (1) Stop what they're doing and write down information to be entered into the system; (2) Search for a terminal that is available; (3) Manually update data at the terminal; (4) Access data from the terminal and print it out; and (5) walk back to their place on the floor, by which time the data may be outdated. This type of deployment significantly increases the possibility of errors due to outdated or inaccurate information.

These three scenarios show that lack of real-time access to ERP information can result in lost sales opportunities, degraded customer relations, lost productivity, and decreased accuracy based on human error and outdated information. For companies to make their operations more efficient, they must give employees access to real-time ERP data to make smart, time-critical decisions.

New Ways to Connect Employees to ERP Systems do not Measure Up

Several solutions exist today which provide mobile workers with improved access to their company's ERP system compared to the scenarios described above. However, many of these new solutions lack real-time access to ERP systems, which is critical for mobile workers to make sound business decisions. The one solution that does allow for real-time access is costly to develop and implement. Solutions that extend ERP systems to employees include:

- **Device Synchronization**
Device synchronization solutions, in which employees place handheld computers in docking stations to synchronize data between the handheld device and the ERP, provide important information to employees in the palm of their hands. However, the data stored on the handheld is not real-time information, and can become outdated quickly – leading to decisions based on potentially inaccurate information with negative impacts to the ERP planning system and shop floor and field service operations.
- **Laptop Synchronization**
Like device synchronization solutions, employees can synchronize data between their laptops and the ERP system. The benefit is that companies do not have to develop a custom handheld application, as most ERP data is already formatted for

PCs, laptops, or terminals. However, laptops are expensive, particularly for field service organizations that often outsource to local contractors.

- **Call Centers or Inside Sales Support Departments**
Call centers and internal support departments for sales and field service representatives provide the information sales and field representatives need to do their jobs. However, support is subject to the availability of the internal resources, and the information they provide is not in real-time, but only up-to-date at the time of the call. Plus, staffing a call center or internal support department requires significant expense and training.
- **Custom Wireless Application Development**
Many companies offering solutions for real-time wireless connectivity between handheld devices and ERP systems often require costly programming development and lengthy integration times delaying a company's return on its investment. For instance, developing a custom wireless application can take many months to develop and cost hundreds of thousands of dollars, not including additional maintenance and upgrades. Plus, inflexible or limited support for current and future network protocols and wireless devices does not guarantee against obsolescence.

Novarra InstantWireless for SupplyChain: Real-Time Supply Chain Management

With Novarra InstantWireless for SupplyChain, companies can maximize their existing investments in ERP, and harness previously untapped power of, their J.D. Edwards software. Novarra InstantWireless for SupplyChain is a complete software solution that enables companies to seamlessly extend their current ERP systems to wireless handheld devices in days, not the months required by other wireless solutions.

Novarra InstantWireless for SupplyChain enables companies to extend their current ERP systems to wireless handheld devices in days.

Novarra InstantWireless for SupplyChain enables companies to experience the benefits ERP systems were built to deliver, such as:

- Improved operational efficiencies
- Increased productivity
- Reduced costs
- Greater customer satisfaction

Employees, meanwhile, gain real-time access to existing ERP systems at the point of activity, whether they're in the field or on the factory floor. Armed with wireless handheld devices, employees can access real-time information of their company's inventory, sales, and operations wherever they are – improving productivity and enabling them to make sound decisions and create new revenue opportunities based on accurate information.

Below are four scenarios in which employees were able to complete their tasks more efficiently and reduce errors thanks to wireless handheld devices connected to the company's ERP system.

Scenario 1: Field Sales

Increase Sales with Real-time Access to Inventory, Order Status & Customer Information

To be effective representatives of their company, sales representatives in the field need to spend time in front of customers to address concerns and uncover more business. To meet customer needs and uncover new business, field representatives on the road must have a support structure in place within the organization that can provide them with up-to-date sales, customer and inventory information.

Without a support structure in place, sales representatives may lack access to pertinent information making them appear clumsy, uninformed, and slow to react – exactly the opposite of why companies invest in J.D. Edwards enterprise applications.

Companies today typically utilize inside sales representatives or a call contact center to provide the necessary support. Although this type of structure provides sales representatives with much needed information, it does not provide real-time access to information and is expensive to maintain. This lack of real-time access creates *information bottlenecks* between the organization and the sales representative. Moreover, if the sales representative cannot communicate with her company (i.e., spends time on 'hold', mobile phone is dead, no access to email), the support organization might as well not even exist.

Companies can solve these problems by providing their sales organizations with *real-time access to customer and company information*. Real-time information can help a company's field sales team more accurately assess inventory levels, access order status, improve service levels and close sales on-site at customer locations – and most importantly, eliminate the information bottleneck between the organization and sales representatives. The ability to react to new customer needs and concerns also further reduces competitive pressures and shortens sales cycle times.

Novarra InstantWireless for Supply Chain complements a company's existing support infrastructure by seamlessly extending J.D. Edwards applications to wireless handheld devices. With wireless, real-time access to sales, customers, and inventory data, representatives can spend more time with customers, and thus close more business. For instance, a sales associate can check order status in real time with her PDA at the customer site. With real-time access to her company's ERP system, the sales representative can find discount pricing information for the customer, and find out if that product is available for immediate delivery.

Scenario 2: Field Service

Improve Customer Relationships by Providing Field Service Representatives with Real-time Access to Customer Data

Good field service can make the difference between a customer sale and a loyal customer generating repeat business. A well-run service organization impacts service levels, productivity, and profitability by resolving problems quickly, arriving to client sites on time, and providing consistent technical service. As a complement to a product sales organization, field service representatives deepen relationships between a company and its customers, and provide a recurring revenue stream.

Companies have made significant investments in enterprise applications that automate and formalize business processes for field service organizations. A company's field service organization uses its own applications to tie into ERP, CRM (customer relations management), and knowledge management systems.

Ideally, field service representatives arrive at customer sites fully informed, and with the proper service equipment, skill set, and parts to service the customer's equipment. Closing work orders and ordering parts should be quick and immediate. Work scope and scheduling changes should be adapted to quickly, with all necessary parties informed of the changes.

The reality is that field service is complex and requires the support of a company's entire organization - warehousing, manufacturing, customer support, sales and finance. Often service representatives do not have complete customer information before arriving on site, or information is delayed or incomplete. This leaves representatives and dispatchers helpless in spite of previous investments in infrastructure, and results in erratic levels of service across the organization.

Novarra InstantWireless for SupplyChain extends the power of J.D. Edwards system to a company's field service organization. Using any wireless handheld device, representatives have access to the tools and customer data they need to improve service levels, increase productivity, and reduce costs.

With real-time access to customer data, representatives can improve service levels, increase productivity, and reduce costs.

Imagine a service representative servicing a client. From the field, the service representative can connect to his company's J.D. Edwards ERP system using a handheld device, and access critical customer information, such as work order details, contact information, equipment listings, and historical information. The representative can also quickly access work procedures and checklists that help ensure consistent service. If the customer requires replacement parts, the representative can view the customer's service level agreement (SLA), and see that the customer has purchased a "premium level" SLA. The field representative can then check inventory at his company, and order any replacement parts as needed. If an add-on module is

available, the representative can notify the customer of this new feature, transforming the service representative into a potential mobile profit center. When closing the work order, the service representative can capture all costs associated with the order, including hours, mileage, miscellaneous parts, and expenses. The company dispatcher is immediately aware of the status and can update the system.

Scenario 3: Warehouse Management & Factory Floor

Leverage Existing ERP Systems in the warehouse and on the Factory Floor with Real-time Data Collection and Reporting

The baseline of efficient operations in manufacturing begins at the warehouse and on the factory floor, where workers move materials from inventory through production into finished goods to fulfill customer orders. Access to up-to-date information is required for plant managers to maintain efficient business operations, and to deliver production service levels that ensure customer satisfaction.

Manufacturers understand the benefits of an ERP system. To make critical planning decisions and drive effective decision-making, manufacturers recognize that the data they collect must be an accurate depiction of inventory, work order status, materials handling, and overall operations. As a result, manufacturers have made a significant investment in implementing ERP systems to gain immediate visibility into their supply chain, improve operational efficiencies, reduce costs, and improve productivity.

Most ERP systems today, however, rely on one of two methods to collect data:

- **Paper-based processes**

Imagine that a factory worker picks up a paper work order to deliver materials to the production line. After picking the necessary materials from inventory and delivering the work order and materials to the production line, the worker must locate a terminal and make note of the status of his order. Should he make an error in notating the quantity or type of materials delivered to production, a chain of critical miscommunication has begun. Similarly, without real-time access to updated information, if a work order is suddenly updated to decrease the size of an order, there may be a need to scrap product that was produced unnecessarily. Inefficiencies such as these occur daily on plant floors where data collection methods are out-of-date and inaccurate.

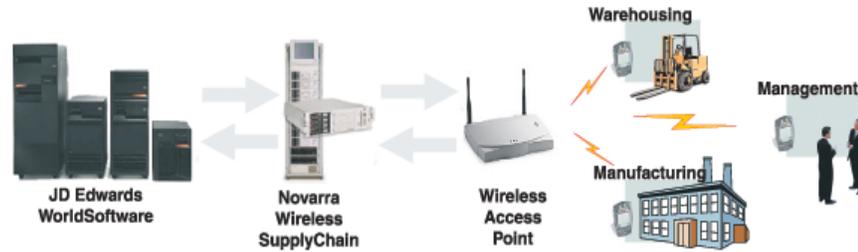
- **Docking-based handheld devices**

Some advancement has been made to deliver data collection to the point of activity through wireless devices that capture information. However, these wireless devices must be synchronized with the ERP system at a docking station before the system is updated. The result: The data captured in these docking-based devices is immediately out-of-date with the real-time operations leading to inaccurate and costly planning decisions.

Manufacturers who implement real-time data collection on the floor experience productivity gains of up to 20 percent.

In order for managers to make critical decisions based on real-time inventory and status information, data collection must occur in real-time. Studies indicate that manufacturers who have implemented real-time data collection on the shop floor have experienced productivity gains of up to 20 percent, with increased efficiencies leading to greater cost controls, lower inventory levels and more on-target budget projections.

Novarra InstantWireless for SupplyChain enables real-time data collection and reporting at the point of activity, so companies can experience the powerful benefits their existing ERP system was built to deliver. By deploying Novarra InstantWireless for SupplyChain as part of a wireless ERP strategy, employees and management throughout a company become directly linked to the company's J.D. Edwards system. Information from the plant floor and warehouse can be captured and processed in real-time so the ERP system accurately reflects a manufacturer's operation at any given moment. Additionally, supervisors and managers can benefit from real-time access to ERP information, enabling them to better manager operations from anywhere in the facility.



- Figure 1: Novarra InstantWireless for SupplyChain is an integral part of a wireless strategy that enables employees throughout a facility to make up-to-the-minute, fact-based decisions.

Reduced Cost & Quick Implementation

Novarra InstantWireless for SupplyChain enables companies to save time and money by enabling real-time, wireless supply chain management without having to redevelop their existing applications for wireless handhelds. In addition, companies can maximize their existing investments in J.D. Edwards systems by bringing employees real-time access to critical operations information.

Quick Implementation in Days

Novarra InstantWireless for SupplyChain accelerates a company's time-to-wireless by plugging right into its existing J.D. Edwards environment. To enable wireless connectivity for their employees, companies do not need to change their existing applications or redesign their business logic. Companies simply install the InstantWireless for SupplyChain solution on a server configured to maximize the functionality of their J.D. Edwards system. J.D. Edwards systems are then seamlessly extended over wireless networks, so employees can quickly take advantage of ERP applications on their wireless handheld devices.



- Figure 2: InstantWireless for SupplyChain is a complete solution that does not require companies to change existing ERP applications, or redesign their business logic.

To further reduce integration and development time for companies, Novarra designed its software to instantly extend J.D. Edwards WorldSoftware and OneWorld applications to wireless devices in a presentation format that is easy to navigate on small-screened devices. Novarra's patent-pending software automatically re-organizes data in a meaningful way for handheld devices so companies do not need to expend effort developing new handheld applications. Simple, yet powerful configuration tools enable companies to further optimize the wireless experience even if the source data is located in different JD Edwards modules.

Complete, Integrated Solution

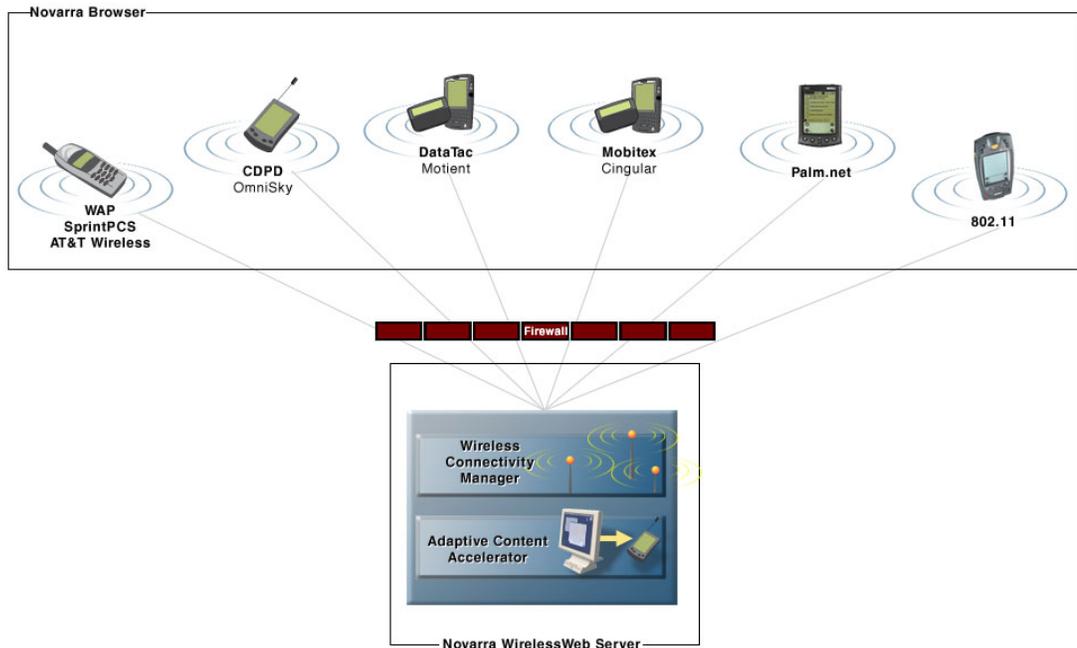
Novarra InstantWireless for SupplyChain is a complete, end-to-end solution that incorporates end-to-end security and enables companies to interoperate with multiple wireless handheld devices and networks. The three components of our software are:

- **Adaptive Content Accelerator**
This component instantly adapts content designed for a desktop computer or terminal, and organizes it for optimal presentation on handheld devices without requiring a significant development effort.

- **Wireless Connectivity Manager**
The Wireless Connectivity Manager manages connectivity with wireless networks, regardless of whether they are local area networks (LAN), such as 802.11; or wide area networks (WAN), such as cellular and data networks.
- **Wireless microBrowser**
Novarra's wireless microBrowser is client software installed on handheld devices such as RIM, Palm, and Symbol devices. The wireless microBrowser connects employees to their company's ERP systems via a standard, easy-to-use interface.

Single Solution for Multiple Devices and Networks

Novarra InstantWireless for SupplyChain further reduces a company's costs because it enables ERP systems to interoperate with multiple wireless handheld networks. There is no need to build a separate, custom wireless application. The Adaptive Content Accelerator formats data for nearly any mobile device (i.e., Symbol, Palm OS, PocketPC, RIM, or a WAP phone). Other wireless ERP solutions require months of development time to develop just one wireless application, and are up to four times more expensive to integrate into existing environments.



▪ Figure 3: InstantWireless for SupplyChain optimizes data for any device using any language.

Real-Time Information Planning & Decision Making

By deploying InstantWireless for SupplyChain, companies can link employees and management directly to their ERP systems at the *point of activity*. Employees on the plant floor or in the field can capture information in real-time, and have an accurate picture of the company's ERP system and inventory at any given moment. The result is that employees can make critical business decisions based on accurate, up-to-the-minute information.

High quality user experience

Novarra InstantWireless for SupplyChain utilizes patent-pending technology to tailor information for small-screened wireless devices. Because the Adaptive Content Accelerator optimizes data for every device, the user experience is improved, and employees can easily view and modify data without strain or frustration.

The wireless microBrowser is an easy-to-use browser for handheld devices that fully takes advantage of each handheld device, whether it's a simple WAP phone or a full-function PocketPC device.

Conclusion

In today's business climate, companies are searching for every competitive advantage that helps them close more sales, improve operational efficiencies and workplace productivity, and maintain close customer relationships. Companies with significant investments in J.D. Edwards WorldSoftware and OneWorld applications can achieve this by providing employees with real-time wireless access to ERP systems anytime, anywhere, whether they're on the plant floor or at customer sites.

Novarra InstantWireless for SupplyChain enables companies to maximize their investments in J.D. Edwards software. Novarra InstantWireless for SupplyChain is a complete solution that seamlessly plugs into a company's existing ERP environment at a fraction of the cost of a complex development project – and without intrusive application integration or data-delayed synchronization solutions. Once installed, employees have unparalleled access to mission-critical business information at the point of activity using wireless handheld devices.

For more information on Novarra's InstantWireless for SupplyChain solution, contact a sales representative at sales@novarra.com.

About Novarra

Novarra, Inc. provides enterprises the fastest speed-to-wireless, empowering the mobile workforce with wireless access to critical business applications. Novarra's patent-pending software offers a complete solution that adapts web-based applications to handheld devices, manages wireless connectivity and delivers end-to-end security. Novarra's software solutions are specifically designed to plug into an organization's existing enterprise infrastructure, including web-based and AS400 applications, to deliver instant wireless interaction with handheld devices. With Novarra, enterprises leverage their existing investments while gaining the competitive advantage of an always-connected mobile workforce. For more information, visit www.novarra.com.

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