

## Introduction

How important is for your company to access or send critical information anytime, anywhere in order to reduce cost and increase productivity across your organization?

It is now clear that this type of access is not just a matter of convenience but also a significant financial gain.

We will discuss several examples to show how the "mobile factor" will result in a real increase in revenue and at the same time a cost reduction.

This is achieved by having access to information like e-mails, legacy systems, databases, etc. over the Internet, no matter where your employees could actually be. We will present several realistic examples of Return on Investment (ROI) in different environments.

## Wireless network vs. Wired network

Many companies have employees that travel to remote offices, conferences, or meetings, away from a corporate or home office. Invariably, the end user carries a laptop or other mobile computer (such as a PDA), in order to have access to critical information and ensure they are able to receive and reply e-mail.

However, e-mail access is limited to finding a traditional wired access point (a phone line or network connection) for the user to plug their computer in to retrieve their e-mail remotely. Once the user is able to access a phone line, dial-up access is usually via an ISP (Internet Service Provider), that provides dial-up access charged at a higher rate than local dial-up access. Replacing dial-up with wireless network access, provides the same level of access to a server. All of the current "next-generation" wireless networks now support data transmission rates of 30–80 kbps and higher, so connection speeds are similar or faster than existing dial-up access.

Added to this is the convenience of being able to access your data anywhere, anytime (such as at the airport, at a client site, in a hotel room). Most wireless network providers offer this network access at a flat rate for unlimited data service.

In Table 1, a comparison of the cost of deploying this solution with a laptop or a PDA, shows (as a result of cost savings) a return on investment of 360% and 1350%, respectively. This is a significant return that can easily be achieved by looking at your organization and identifying those employees who travel significantly, or who rely on remote dial-up access regularly. Replacing their current dial-up access with high-speed wireless access, with either a laptop or a PDA, will reduce your organization's expenses and give employees more convenient access to their data and information.

This ROI is a direct result of cost savings, and does not consider the additional benefit of having access to information in locations where dial-up access does not exist [airport (except VIP lounges), remote customer site, taxi, and so on].

Table 1: ROI of Mobile personnel model

You should replace the values shown with the ones that reflect your individual case.

	Dial Up	Wireless w/laptop	Wireless w/PDA
Wireless access hardware	0	\$ 300 *	\$ 80 **
Monthly cost ISP Cellular	\$ 20	\$ 80	\$ 80
Telephone access	\$6 per hour 25 hrs/month Total \$ 150	0	0
Total monthly charges	\$ 170	\$ 80	\$ 80
Saving per user per month		\$ 90	\$ 90
Break even point		3.3 months	26 days
ROI during the first year		360 %	1350%

\* Cost of wireless modem

\*\* Cost of connection to cell phone

## Field service effectiveness

There are many organizations that have employees working in a field service role that could directly benefit from the use of wireless data. Examples of these groups are organizations like utilities or public safety organizations such as police forces or ambulance services.

Any organization with employees that work in the field responding to issues that require communication with a dispatch center, can benefit from using wireless data to keep their field employees in touch with the latest data and information.

This increases productivity, which translates into increased cost savings for the organization.

Using a wireless data solution in a field service organization can increase productivity in the following ways:

### **1. Saved travel time:**

- When a technician arrives at a site, but cannot access the premises
- For rescheduled or cancelled work orders
- Work is not properly assigned (incorrect skills or lack of equipment)
- When duplicate jobs are assigned and more than one technician attends

### **2. Time spent recording/reporting details of verbally dispatched orders**

### **3. Waiting for a dispatcher to respond to voice requests.**

By using PDA with a wireless access, work orders could be dispatched throughout the day, and the field worker could update work orders from the field. The organization could increase the efficiency and productivity of their field service employees.

Table 2 illustrates an example of a field service organization deploying a wireless data solution and the resulting ROI achieved.

As can be seen from this figure, the total cost depends on the number of employees that use the wireless data solution. Some of the assumptions made in this example include employees getting new computers, salary estimates, and vehicle usage.

Using wireless data, the dispatch center can now get information from the field service representatives while they are in the field. This instant access to data and information can save a significant amount of time each day, due to the issues mentioned above.

Assuming only 30 minutes time savings per day, the resulting cost savings are significant to the organization. By saving time and travel every day, the employees become more productive, and save over \$50,000 every month. The resulting payback occurs just over five months, with an ROI of 232.4% in the first year.

Table 2: Field service effectiveness

Number of field service employees	200
Cost to deploy wireless solution	
Cellular Phone (\$299 each)	\$ 59,800
Field service software application (\$25,000 server + \$350 per user)	\$ 95,000
PDA (all users get new hardware @ \$500 each)	\$ 100,000
Implementation cost (Systems integration, installation, and training 2 hrs/user @ \$100 / hr)	\$ 40,000
<b>Total cost of wireless solution</b>	<b>\$ 294,800</b>
Cost per user	\$ 1,474
Monthly costs and savings	
Average employee cost per hour (\$60,000/yr, 20 workdays/month, 8 hrs/day)	\$ 31.25
Average vehicle cost per hour (\$40,000 over 4 yrs, 100 km/day, 8 hrs/day)	\$ 5.20
Time saved per day due to wireless connection (reduced travel, reporting, and dispatch time)	30 minutes
Monthly savings due to productivity increase (daily savings times 20 workdays per month)	\$ 72,900
Monthly wireless airtime costs (\$79/month per employee)	\$ 15,800
<b>Total net monthly savings of wireless solution</b>	<b>\$ 57,100</b>
Monthly saving per user	\$ 285.50
<b>Break even point</b>	<b>5.16 months</b>
<b>ROI in first year</b>	<b>232.4%</b>

## Increasing direct sales force productivity

A company with a sales force (large or small) that travel regularly to visit customers can benefit by having wireless data access, both by reducing costs and by increasing productivity, while at the same time increasing customer satisfaction.

A sales force that uses wireless data will have immediate access to up-to-date information about inventory levels and pricing from corporate databases and e-mail. This will result in reduced travel time back to the office to gather data or time wasted while trying to find a wired connection to get this information. Saving this time will increase the amount of time that a sales representative will be able to spend in front of customers. More time spent in front of more customers will give the ability to close more sales. This makes the sales force more productive and increases revenue.

Access to e-mail, and corporate and customer information while out in the field, will also allow the sales representatives to be much more informed when sitting in front of a customer.

This will allow the sales representative to potentially increase the sales order based on immediate access to this information.

In figure 3, a Return on Investment is calculated for a sales force saving just 15 minutes a day and increasing order size by only 1%, based on having access to the latest information while in front of a customer. Based on these calculations for a sales force of 80 people, the ROI resulting from increased revenue is 673%.

Table 3: Increasing direct sales

<b>Number of sales employees</b>	80
<b>Cost to deploy wireless solution</b>	
Cellular phone (\$299 each)	\$ 23,920
Sales Force Automation Software (\$25,000 server + \$350 per user)	\$ 53,000
PDA (all users get new hardware @ \$ 500 each)	\$ 40,000
Implementation cost (Systems integration, installation, and training 2 hrs/user @ \$100 / hr)	\$ 16,000
<b>Total cost of wireless solution</b>	<b>\$ 132,920</b>
Cost per user	\$ 1,662
<b>Monthly costs and savings</b>	

Monthly sales revenue per person	\$ 25,000
Increased ability to visit more customers (15 min/day saved not returning to office or finding wired connection)	3.125%
Increased ability to increase order size (access to inventory and pricing)	1%
Increased revenue per person	\$ 1,031
Increased sales revenue per month	\$ 82,500
Monthly wireless airtime costs (\$99/month per employee)	-\$ 7,920
<b>Total monthly revenue increase</b>	<b>\$ 74,580</b>
Increased revenue per user	\$ 932
<b>Break even point</b>	<b>53 days</b>
<b>ROI in first year</b>	<b>673%</b>

Increasing the productivity of a sales force, and ensuring their immediate access to information, allows them to use this time and information to increase sales and thus increase revenue for an organization.

## Conclusion

These three examples are designed to illustrate the effect that wireless data access can have on an organization. The actual figures used will differ considerably for different applications, but the basic thought behind each one is the same: having wireless access to data for you or your employees can increase productivity and reduce costs, making a significant return on the original investment.