



Overview

Country or Region: South Africa

Industry: Utilities

Customer Profile

Energywise is an energy service company commissioned by utility company Eskom to help customers reduce their power usage.

Business Situation

Using paper-based processes, Energywise engineers found data capture to be time-consuming and occasionally error-prone.

Solution

The company approached Microsoft® Gold Certified Partner Digital Matter to implement a mobile solution based on Windows Mobile® 5.0, the Microsoft .NET Framework, and the Symbol MC70 device.

Benefits

- Reduced data-capture process.
- Improved engineer accuracy.
- Easy-to-use technology.
- Greater transparency of activities.
- Better relationships with customers and partners.

Energy Service Employees Streamline Audit Process with Mobile Solution

“It used to take three engineers a week to perform a complete audit of lighting data. Now, it takes just one day for one person to capture all the information required.”

Andrea Barausse, Lighting Engineer, Energywise

Energy service company Energywise, based in South Africa, advises customers about how they can reduce their power usage. Its engineers visit companies around the country, auditing energy consumption and recommending energy-efficient alternatives. In the past, engineers used paper-based processes to capture data onsite, but they found the process time-consuming and prone to error. In 2006, Energywise chose to implement a mobile solution based on Windows Mobile® 5.0 and the Symbol MC70 device. With the help of Microsoft® Gold Certified Partner Digital Matter, Energywise reduced the data-capture process from one week to one day. With the new solution, engineers can capture information more accurately, helping the company avoid penalties for errors. With a standardised approach to recording data, Energywise now projects a more professional image to partners and customers.



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Andrea Barausse, Lighting Engineer for the Energy Efficiency Programme at Energywise

Situation

Power companies in South Africa are under pressure to meet growing energy demands. Eskom, the South African power utility company, has adopted a demand-side management approach to the challenge. This ensures that the introduction of any new power facility is offset by reducing energy consumption at existing sites. Energywise helps Eskom increase efficiency without adding to consumption levels by helping South African companies reduce their energy emissions.

Energywise engineers visit sites around the country and audit light fittings. They record information, including room temperature, wall colour, equipment in the room, height from floor to ceiling—all of which affect how light works. In the past, a team of around five engineers visited each site and recorded this information on paper. They then returned to the office to enter their findings into a database.

Andrea Barausse, Lighting Engineer for the Energy Efficiency Programme at Energywise, says: “We followed a strict process of information recording. We had to take note of hundreds of details onsite. Because we were using paper to record this information manually, our engineers found it time-consuming and occasionally prone to human error. When they returned to the office, it would take a number of days to decipher their handwriting and enter the disparate pieces of data into our database.”

Energywise must ensure that it minimises any inaccuracies because, if it exceeds a 10 per cent error benchmark enforced by Eskom, it faces heavy penalties. Barausse says: “We needed to ensure we could deliver consistently accurate reports so we could avoid any penalties and, more importantly, build customer and partner confidence in our professionalism.”

Solution

After evaluating the market, Energywise approached Microsoft® Gold Certified Partner Digital Matter in July 2006. Digital Matter suggested a solution based on Microsoft Office Professional Edition 2003, Windows Mobile® 5.0, Microsoft SQL Server™ 2000, the Microsoft .NET Framework, and the Symbol MC70 handheld device.

The .NET Framework includes built-in support for XML and Web services, making it easy for devices based on Windows Mobile to integrate with the Energywise back-end system. The new solution also helps Energywise engineers communicate with each other and the head office through Microsoft Office Outlook® from their Symbol devices.

Jeremy Williams, who heads up the Mobility Division at Digital Matter, says: “We developed an application to run on the touch-screen Symbol device. Now, onsite engineers can capture large amounts of data in pre-defined fields and forms directly onto a handheld device. This data is synchronised with a database running on SQL Server 2000 through a general packet radio service (GPRS) connection and can then be exported into a Microsoft Office Excel® spreadsheet using XML. Energywise staff then create reports based on the data and have a clear view of the next steps each company should take to reduce energy consumption.

“Once the solution has been up and running for a while, the engineers will also start to perform further tasks, such as using Windows Mobile 5.0 to e-mail colleagues and customers or update their schedules remotely.”

Now, Energywise engineers can record vital lighting information in a series of sequential steps. The Windows Mobile handheld device presents the engineers with a number of

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Andrea Barausse, Lighting Engineer,
Energywise

check boxes and drop-down lists to minimise the amount of information they need to type in. Business rules are also built in to the application so engineers cannot progress from one step to another until they have entered all of the required information.

Security is one of the most important aspects of mobile devices. With the security features of Windows Mobile 5.0, Digital Matter was able to set up a permissions system. This ensures that each team member has a different level of access based on their level of authority. Team leaders, for example, have access to the administration module, while other engineers only have access to perform data-entry tasks. As a result, Energywise can be confident that its business-critical data remains protected.

Benefits

Energywise engineers can now conduct their auditing and data-capture activities quickly and accurately and take on more clients each year. With enhanced productivity, Energywise employees can concentrate on innovation as they strive to help their clients reduce energy consumption and costs.

Solution Simplifies Data-Capture Process

By eliminating its paper-based processes, Energywise has improved the accuracy of its data-capture process, while reducing the amount of time it takes its engineers to perform their day-to-day tasks.

Barausse says: “It used to take three Energywise engineers a week to perform a complete audit of lighting data. Now, it takes just one day for one person to capture all the information required.”

Greater Efficiency Increases Profitability

One Energywise project can take up to 18 months to complete. Because the company only gets paid after each project is finished, financing its operations can be a struggle.

Now that the engineers have improved their day-to-day productivity, Barausse is confident the company can take on more clients, thereby increasing overall profitability.

Barausse says: “The time we’re saving has a direct effect on our bottom line. The more clients we can take on, the more money we make. In addition, the improvement in the accuracy of our reports ensures we avoid any expensive penalties from our regulator. We expect to see a significant improvement in our profitability as a result of this implementation.”

Employees Enjoy Easy-To-Use Technology

Digital Matter adopted a “train-the-trainer” approach to the project. Once Barausse was fully briefed on how to use the handheld solution, he was able to pass his knowledge on to the rest of his team.

Barausse says: “I expected a lot more resistance to the new technology. But once all of the engineers had got to grips with the basics of using the touch-screen device, there was genuine excitement among the team. Everyone was delighted with how easy it was to use and how quickly their jobs were going to be simplified. I would say that ‘the wow factor’ was almost immediate.”

Engineers Improve Understanding of Projects

The new solution helps Energywise engineers to keep track of the progress of each project. Barausse says: “In the past, we often found that people recorded things in different ways. If someone was off work, it could be difficult for another engineer to pick up their workload. They might find it difficult to interpret their handwriting or notation style.

“Now that we’ve standardised our audit and data-capture processes, we have a clearer understanding of who was working on each project and the information they have gathered. With our new infrastructure, we can

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avoid any of the traditional difficulties associated with a workload handover.”

Transparency Improves Relationships

Energywise needs to be accountable to a range of parties. In addition to producing results for its individual customers, the company has to meet the expectations of utility company Eskom and ensure that its business activities are transparent to researchers from the local university.

Barausse says: “The new technology ensures that our audits and recommendations are more accurate and accessible to everyone. Now that we are no longer reliant on paper-based processes, we can project a far more professional image to our customers and stakeholders, while also ensuring that they receive our recommendations in a timely manner.”

Solution Helps Lower Power Consumption

South African government legislation demands that utility companies serve the energy needs of the country without increasing power usage. Energywise can now help more customers reduce their energy consumption, the cost of which is assumed by Eskom.

As a result of the improved productivity of its engineers, Energywise can now help more South African companies reduce their power usage. Barausse says: “This solution has been such a big success that we expect many other energy service companies around the world to adopt a similar approach to their processes. But, of course, a project such as this isn’t just limited to the energy industry. Lots of workforces are being held back by their paper-based processes. Any company that employs remote workers should definitely consider implementing this type of mobile solution.”

For More Information

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For more information about Digital Matter products and services, call +27 (0) 11 840 5280 or visit the Web site at: www.digitalmatter.co.za

For more information about Energywise products and services, call +27 (0) 31 764 2345 or visit the Web site at: www.energywise.co.za

Windows Mobile

Windows Mobile brings the power of the Windows® operating system to mobile devices, helping businesses and their mobile employees stay connected while on the go. Windows Mobile runs mobile versions of Microsoft programs, including Microsoft Office Outlook® Mobile, Internet Explorer Mobile, Pocket MSN®, Windows Media® Player Mobile, and Microsoft Office Word Mobile, PowerPoint® Mobile, and Excel® Mobile. With Windows Mobile, information workers get powerful software combined with the familiarity of Windows. Combined with available service plans and connectivity options, Windows Mobile-based devices, available from 48 device makers and 125 mobile operators in 48 countries, can be used to make calls, send e-mail and instant messages, surf the Web, and access critical business information, even when users are away from the office.

More information about Windows Mobile can be found at: www.microsoft.com/windowsmobile

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