

Owens Corning Goes Mobile with TCS

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Summary

At this early stage in Owen Corning's "mobility journey," the company's vision encompasses a diverse set of mobility applications. Productivity improvements come from having information available when and where

Mobility has everyone's interest. Owens Corning shares insights from its own "mobility journey." Practices include involving employees to identify applications, and use a partner who brings a broad set of technology skills.

people need it. Involving its employees in the initial discussions enabled Owens Corning to take advantage of their natural inventiveness. This helped identify a number of practical applications with real business benefit. Key findings for this leading global manufacturer include:

- Balancing the reduced cost when using employee-owned devices against the corporate security issues these mobile devices introduce
- Mobility applications involve a diverse set of technologies and the development partner must provide its client with access to a broad set of skills to implement and support the applications

Improved Visibility Needed

Owens Corning produces residential and commercial building materials, glass fiber reinforcements, and engineered materials for composite systems. With operations in 28 countries, Owens Corning had sales of \$5.3 billion in 2011 for its glass fiber technologies.

Mobility and Core IT

Owens Corning uses SAP for enterprise resource planning (ERP) and enterprise asset management (EAM). It also uses AspenTech's Aspen InfoPlus.21 software to collect, store, analyze, and report real-time and historical process data. Jim Beilstein, Director, Manufacturing and

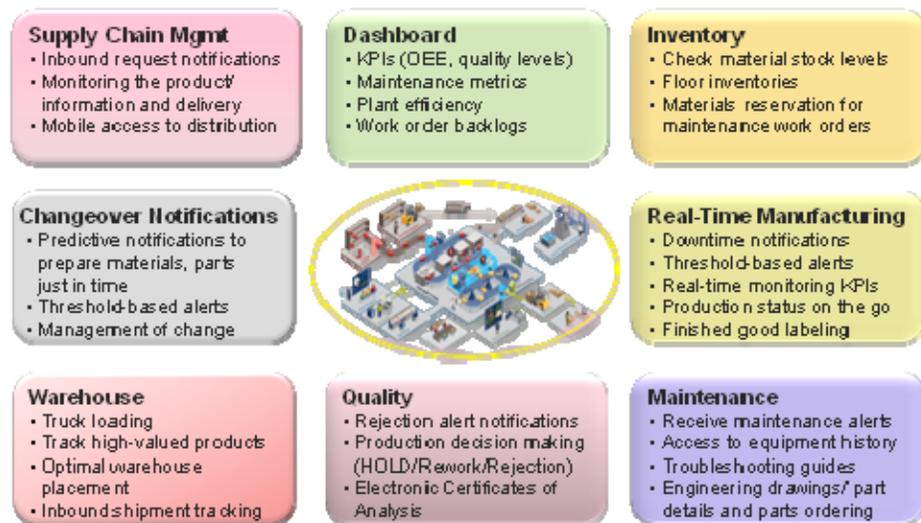


Information Technology Operations at Owens Corning presented at the recent ARC World Industry Forum and provided a follow-up interview that explained the company's need for improved visibility.

Early on the Mobility Journey

The rapid adoption of mobile devices in consumer IT has captured the attention of the company's executive management. To explore how mobility technology can be applied in Owens Corning's business, corporate and manufacturing IT developed a strategy that starts with a few applications. This enables both groups to fully appreciate the technical ramifications of mobility solutions and obtain feedback from employees to be able to determine those deployments with the potential to deliver real operational benefits. The strategy continues with a plan to build out the manufacturing technology needs into a set of core platforms and technologies. This strategy builds on the existing IT infrastructure provided by the SAP and AspenTech applications.

Wide use of mobile devices for consumers drove interest in practical business applications in corporate and manufacturing IT. Strategy started with pilots to gain a technical understanding and user feedback.



Owens Corning Vision for Mobility in Manufacturing

Mobility Solutions for Real-time Business Intelligence

Owens Corning studied many different areas to identify potential uses for mobility and specific candidates for starting a program. It assessed each candidate area from multiple perspectives – ROI, risk, user acceptance, etc.

– and identified a couple of good targets to start. This review also led the company to focus on both iOS- and Android-based mobile devices.

Management Visibility with Mobile KPI Dashboard

Predominately, the Owens Corning production processes are continuous in nature with very little work-in-process (WIP) inventory. With high-speed operations, a problem can quickly escalate into a major issue. Management needs real-time visibility to prevent small disturbances from turning into major issues. To be able to deliver the needed visibility, the company developed a real-time KPI dashboard accessible from smartphones and tablets. The users include plant managers, and leaders for operations and other functional areas. The dashboard contains KPI data for the last 24 hours with a set of screens to drill-down into the process data. To alleviate security concerns, the company incorporated VPN technology.

Operator Visibility with Production Line Displays

Another Owens Corning business benefit comes from evaluating displays containing data from AspenTech’s historian using the Transpara Visual KPI. OPC communications transfers data into the visualization displays for the production lines. Each cell and shift has a specific KPI visual dashboard display in its area. Initially, Owens Corning noticed some “gamification,” with different production lines competing against each other and significant productivity increases. This continues today to a certain degree now that people see how their line performs against targets while monitoring progress.

Mobile Video Provides Experts Remote Access to Plants

Owens Corning has a continuous improvement program based on lean manufacturing principles. A core lean practice, “go and see,” calls for managers and technical experts to go the location of a problem to help the operating staff identify and resolve the issue. When the experts and problem are located in the same facility, they can provide support in a timely manner. In Owens Corning’s case, corporate engineering support is primarily in the US with regional centers in EU and China. For the highly complex plants located around the world, “go and see” often requires an airplane ticket and long travel time.

The Mobile Video application now enables corporate engineers in the regional centers to “see what I see” with a local person while trouble-

shooting. Initially, Owens Corning experimented with Skype and FaceTime on the iPad. Security became a big concern and the company now uses secured lines. Also, success required high-quality video, which drove the need for good network bandwidth and a specialized application.

One example of success with the Mobile Video solution involved remote experts helping personnel at a plant in China. After a product changeover and setup, yield declined to an unacceptable level. Via video, the corporate engineers provided the plant detailed setup instructions that fixed the problem. The equipment supplier also became involved in the same way. Avoiding travel to China saved days of delay. It also circumvented the temptation to make sub-standard quality product while waiting.

Role of Tata Consultancy Services

At first blush, smartphone technology looks easy. But, when you follow the path of a transaction from the phone through a network, to a host, and back

Often it's critically important for a company looking to implement mobility applications to identify an application development partner that can support it with the full range of technical skills.

again, you identify a diverse range of technologies. Each requires expertise in the application environment, networking protocols, security, various interfaces, cellular network anomalies, and more. Often it's critically important for a company looking to implement mobility applications to identify

an application development partner that can support it with the full range of technical skills.

According to Owens Corning, Tata Consultancy Services (TCS) mapped-in the needed technical resources from concept design through commissioning. The range of activities included:

- Mobile application concept design support
- Prototyping each mobile application which included product labeling, KPI dashboards, and energy management
- Application design, development, and deployment on tablets
- Back-end connection support for pulling data from other systems

Last Word

By drawing on the inventive nature of its employees, Owens Corning was able to identify a practical set of mobile technology-enabled applications

with real business value. This suggests that other companies would also do well asking its employees for transformative ideas and suggestions.

For mobility, companies must carefully consider the balance between the attractions of the “bring your own device” (BYOD) model vs. the very real security threats this model introduces. BYOD offers equipment cost savings and higher employee satisfaction. But companies need to consider how they will protect intellectual property against a stolen feed or lost device. In Owens Corning’s case, the company implemented VPN security for the feed and relies on encryption to provide security for the IP on a mobile device.

The BYOD approach also raises employees’ expectations. After bringing a highly functional consumer device into the IT environment, they become hungry for new applications to be more effective while on the go. This drives the need for added capabilities in the backend IT systems.

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