



COMMENTARY

1/18/2018

02:00 PM



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Commentary

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Use IoT to Accelerate Digital Transformation

The Internet of Things can drive change in an organization, providing data into a wide range of operational activities. But that change can require integrating that data into the systems used for key decisions.

Experts have predicted that the world will have up to [50 billion connected devices](#) by 2020. While much of the industry conversation has revolved around consumer applications, like the smart home, the Internet of Things (IoT) has a surprisingly long history in the enterprise.

Sensors on industrial equipment, transportation equipment and other critical assets are central to industrial automation, modern equipment diagnostics, and condition-based maintenance systems. As we edge toward 2020, companies are planning to make more sophisticated use of this data to drive business value – potentially transforming their operations. Enterprise software is at the precipice of evolution to facilitate this inexorable trend.

Why? IoT data on its own can provide insight into equipment health, asset status, the current location of a connected device, and other individual data points. But in order to deliver the benefits of digital transformation, it must be integrated with operational systems, and in most businesses, that means enterprise resource planning (ERP) software.

According to Cambashi Ltd Analyst Alan Griffiths, there are a few reasons for this. First, the availability of these technologies is enabling entire new business models, which naturally would impact the operational system of record like ERP.

“IoT projects can offer whole new business models such as ‘product-as-a-service’ or ‘power by the hour,’ so the right people need to be involved to assess the opportunity and develop ideas to fit their organization’s priorities, timescales, budgets and culture,” Griffiths said. “The IoT can also be a catalyst for digital transformation.”

Yet, according to a recent survey of 200 IoT decision-makers in North America, [84 percent of](#) respondents said their ERP was not integrated with IoT data in their organization. In fact, for many organizations running legacy ERP applications, there may be no logical place for IoT data to reside in the ERP system, or the ERP system just might not be flexible enough to utilize the data in a meaningful way.

Another nontechnical barrier is that organizations have not been able to identify how to interpret IoT data points in ways that are meaningful to their business processes; or indeed, which business processes are best positioned to be transformed by IoT. And once there is clarity on these points, the amount of systems integration work in IoT-ERP integration can also be cost-prohibitive for many companies, particularly those running older ERP applications based on older architectures. But solving these problems will deliver significant advantages, according to Griffiths.

“Large opportunities exist in the use of IoT potential for new information flows,” Griffiths said. “For example, feedback from in-service products will help designers to tune simulation models, production engineers to improve manufacturing processes, and service engineers to improve the approach to maintenance.”

IoT in the enterprise: Not a new concept

That's not to say that enterprises are not using IoT in some unique and productive ways already. Take a look at some examples of IoT-ERP integration in action today:

- Industrial automation technology provider [Rockwell Automation](#) uses IoT to help its customers connect their industrial equipment to the cloud. As a result, these customers are able to better analyze their operational data – improving decision support for both operational technology and IT users.
- A major aerospace OEM integrates systems health information from individual aircraft with systems used by the grounds crew. This diagnostic information can be transmitted in near real time to both maintenance and supply chain systems, and each of those systems operationalize that data to better plan maintenance and maximize the time that critical asset is in the air.
- International midwater drilling contractor, [Songa Offshore](#), is using features of its enterprise application to capture a multitude of sensor data from many different assets on offshore oil rigs. By integrating this data with its operational systems as opposed to simply using it for diagnostics, Songa is able to reduce unplanned downtime along with the amount of time each rig needs to stay in repair yards.

As is clear from the examples above, enterprise software will increasingly include functionality and architectural systems designed to make IoT integration a larger part of the product, as opposed to a development project.

How to harness IoT for digital transformation

Companies intent on harnessing IoT for digital transformation have a lot to learn from some of the deployments that already exist. What are the best pieces of advice that your organization should receive before delving in to IoT?

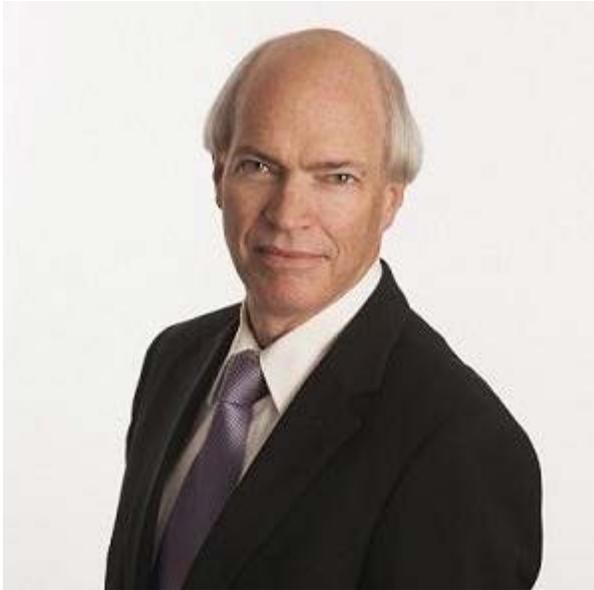
- **Lower your barrier to entry.** If the underlying enterprise application that your organization uses as a system of record is designed specifically to incorporate IoT data, it will be easier for your organization to proceed.
- **Minimize risk.** A commercial-off-the-shelf solution will reduce total opportunity cost while lowering the overall risk profile of an IoT transformation process.
- **Focus on incremental results.** The most successful companies will look for specific use

cases where IoT data can be harnessed to achieve a measurable business benefit, quickly and reliably.

Going forward, IoT and ERP integration will become more important for a number of industrial sectors. Cambashi's Griffiths points out, for instance, the disruption that is already happening for manufacturers of capital equipment.

"It is no surprise to find 'connectivity' in the form of an Internet socket, or WiFi capability, in consumer electronics devices – TV, audio, games consoles, light and heating controls, phones, computers, printers, security cameras, and so on," Griffiths said. "The same will apply to industrial equipment. Enterprise systems will be able to automatically discover, link to and manage these devices ... Field service and asset management are the low-hanging fruit. The transformation can be due to the connectivity of the machines the manufacturer sells to its customers rather than the connectivity of the machines it uses in its own factories."

Success transforming the enterprise with IoT is a journey, and choosing the right starting point is critical.



As Chief Technology Officer of IFS in North America, Rick Veague has overall responsibility for the product and industry solutions offered to IFS customers and partners in the United States and Canada. Rick joined IFS in 1999, and has held various pre- and post-sales positions developing, marketing and delivering high-value business applications including ERP, FSM, EAM and MRO solutions. He holds a degree in Computer Science and Mathematics from Knox College.

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