The Internet of Things: a boost for the economy

IMS Evolve helps its customers reduce the resources they consume, which in turn could have a huge positive effect on the U.K's power grid

The Internet of Things (IoT) is often touted for its potential applications. No mention of it is usually complete without eye-watering figures of billions of devices being connected by some date in the near future. However, many industries have been quietly – and successfully – using such systems for a decade or more, long before IoT became a buzzword.

Since its foundation in 1999, U.K.-based IMS Evolve has delivered cloud connectivity to machines in data-rich environments, helping companies give customers a better experience. These environments include the cold chain – the refrigerated food supply chain – cash-machine networks, and petrol stations. On behalf of its clients, IMS Evolve collects 28 billion data points a day and manages almost 79,000 sites across 12 countries.

Jason Kay, Chief Commercial Officer at IMS Evolve, explains the company's philosophy. "Our vision – better choices made possible – reflects the fact that we help our customers make sense of the big data coming from their environments, and contextualise it with other data both within and outside their businesses."

Cool savings for leading retailer

One of IMS Evolve's largest customers is a major supermarket with more than 3,000 stores in the U.K. and Ireland, and a complex infrastructure of old and new equipment. IMS Evolve collects and manages the data from refrigeration and building management systems, enabling the supermarket to unlock a new seam of data within its existing environment. This allows them to pinpoint opportunities to reduce waste – for example, automatically setting refrigerators to store foods at the correct temperatures.

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>
> *Jason Kay, Chief Commercial Officer, IMS Evolve*

Business need
IMS Evolve needed a partner that shared its Internet of Things (IoT) vision of harnessing the untapped data from legacy infrastructures to benefit business and the wider economy.

Solution
The company enables its Internet of Things solutions with the intelligent Dell Edge Gateway 5000 with Intel® Atom™ processor E3825. This processes data at the edge of the network, and then sends high-value information to be stored and processed centrally.

Benefits
- Major U.K. supermarket saves on thousands of degrees of refrigerator over chill, while improving food quality
- Incorporation of "demand-side response" into the solution could lead to relief for U.K.'s ageing power grid
- Real-time, automated decision-making capabilities allow customers to respond rapidly to events
- Partnership with Dell opens doors to large customers worldwide

Solutions at a glance
- Internet of Things
- Big Data
- OEM Solutions

The supermarket is also on track to further reduce wasted maintenance time on track and stock loss due to machine failure.

The cutting edge of IoT
The solution requires no overhaul of existing systems, but can collect real-time operating data from any device, translate it into a common protocol, and present it, contextualised, to decision makers.

Because it works with such data-rich environments, IMS Evolve aggregates information at the edge of its networks. "Processing all that data in the cloud simply isn't viable," explains Kay. "We deploy our software onto devices like the Dell Edge Gateway 5000 and place these close to the source of data. The devices translate the different protocols in machine environments, filter out a lot of unnecessary data, and only then push up useful data for analysis in the Cloud. This analysed data is then integrated into customer process to manage risk and waste."

A meeting of minds
Kay explains why IMS Evolve chose to partner with Dell OEM Solutions for its IoT projects. "We saw a great potential partner with the same vision and architectural approach to IoT. Dell's supply chain, its existing relationships with prospective customers, and its ability to deploy and support environments at massive scale opens doors for us," he says.

For example, IMS is currently delivering an extended pilot of its monitoring solution with a major U.S. retailer, with Dell in a good position to collaborate on a large-scale rollout. "Our innovation combined with Dell's scale adds up to a joined up thought process about how IoT should work," says Kay.

Macroeconomic benefits
Kay is keen to point to the macroeconomic benefits its services can bring. "Cooling alone is thought to consume up to 14 per cent of the U.K.'s electricity production," he says. "By further leveraging the data from refrigerator networks of large food retailers, we can change the profile of energy consumption across their estates. This way, we can benefit not only the businesses, but also the ageing National Grid."

In fact, IMS Evolve was recently awarded joint funding for a feasibility study with the University of Lincoln, Tesco and Innovate UK – the government body responsible for funding technology projects to boost the national economy. This explored how the solution could facilitate grid level "demand-side response" – where consumers are financially incentivised to shift electricity use at peak times – across the retail and food production industries. "This is when we really see the potential of IoT," says Kay. "Not just for one or two companies, but for the whole economy."

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