Using data to help avoid food waste

IMS Evolve helps customers save millions of dollars in refrigeration costs while improving food quality with Internet of Things (IoT) solutions built on powerful and scalable platforms

IMS EVOLVE
BETTER CHOICES **MADE POSSIBLE**

Technology | United Kingdom

Business needs

Cold supply chain operators and grocery retailers needed to reduce costly food spoilage and improve compliance.

Solutions at a glance

- Internet of Things
- OEM Solutions

Business results

- Reducing food waste and improving quality
- Delivered £5.5 million (US$7 million) in power savings across a single functional application delivery
- Guaranteeing compliance through automated temperature control
- 80% savings in central resourcing for maintenance functions
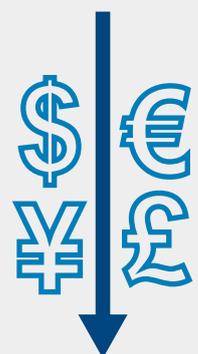- 28 billion data points collected for customers daily

49%
reduction in downtime on customers' assets

40%
reduction in reactive maintenance expenditure

The Internet of Things (IoT) is heralded for its potential applications, and no mention of it would be complete without reference to the billions of devices that will be connected to the internet one day. However, many industries began quietly, and successfully, using this kind of technology 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. The results have enabled customers to make significant savings and efficiency improvements. The IMS Evolve solution has been proven at scale predominantly in food retail and throughout the cold chain. Jason Kay, chief commercial officer at IMS Evolve, says, "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 from within and outside their businesses."

A meeting of minds

On behalf of its clients, IMS Evolve collects 28 billion data points a day and manages more than 92,000 sites across 12 countries. For some time, IMS Evolve has chosen to partner with Dell EMC IoT Solutions for its IoT projects. Kay says, "We saw a great potential partner with the same vision and architectural approach to IoT. Companies know their networks are safe with Dell EMC devices because of the brand's IT credibility. Dell EMC also provides opportunities for us with potential customers because of its ability to deploy and support environments at massive scale."

IMS Evolve is delivering its monitoring solution to a major U.S. retailer, with help from Dell EMC IoT Solutions. "Our innovation combined with the scale of Dell EMC IoT Solutions creates a joined up thought process about how IoT should work," says Kay.

Cool savings for leading retailer

One of IMS Evolve's biggest customers is a major supermarket with more than 3,000 stores in the U.K. and Ireland. On behalf of the customer, IMS Evolve collects and manages data from refrigeration and building management systems. It provides the supermarket with a stream of data that helps executives cut waste and ensure food is in perfect condition when it reaches consumers. Take yoghurt, for example. It needs to be chilled, but if for any reason it gets too cold, the liquid separates and goes to the top of the yoghurt pot. While it's still okay to eat, it's not a great experience for the consumer. With IMS Evolve IoT Solutions, the supermarket can keep its yoghurts and other foods at just the right temperature at all times. In the case of this particular supermarket, it has reduced refrigeration needs across the business by millions of degrees, delivering savings of £5.5 million (US$7 million) back to the business.

This also has a significant and positive effect on food-spoilage savings for customers. If refrigeration levels are optimised, it can reduce the amount of spoiled foods that can't be sold. This has the potential to save a retailer anything from tens of millions to hundreds of millions of pounds/dollars, depending on the scale of their business.

The cutting edge of IoT

For customers, the IMS Evolve IoT solution, which features the Dell Edge Gateway 5000, can collect operating data in real-time from any device. The solution translates the data into a common protocol and presents it to decision makers in a way that is fully contextualised. The IMS Evolve Solution, which can operate in a customer's on-premise data centre or in a cloud environment, aggregates information at the network edge. Kay says, "Processing all that data in the cloud simply isn't viable. We deploy our software onto devices such as the Dell Edge Gateway 5000 with Intel® Atom™ processor E3825 and place these close to the data source."

IMS Evolve has a range of Dell Edge Gateway devices to choose from, depending on the needs of the customer. Kay comments, "We may select a Dell Edge Gateway 5000 for a static location or a Dell Edge Gateway 3000 for a refrigerated vehicle, thereby ensuring compliance throughout the supply chain."

One customer, a performance manager at a leading U.K. engineering firm, praised the way the technology fits in with the company's existing environment: "The IMS Evolve solution is so flexible it allows us to support any of the electronic feed requirements from our customers' machines and databases."
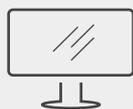
Downtime slashed by 49 per cent

One IMS Evolve IoT Solution customer has successfully improved the efficiency of its maintenance processes through the Dell EMC–enabled solution. With real-time data on performance, the availability of critical assets has increased to 99.98 per cent and stock losses from downtime have been reduced by 49 per cent. For other customers, the same system has cut the annual maintenance bill for new stores by 40 per cent and reduced call-outs by 40 per cent.

80 per cent saving in maintenance resourcing

Customers of IMS Evolve IoT Solutions have also gained a highly scalable global solution with proven capabilities. These organisations are actively managing thousands of alert volumes per minute and as many as 250,000 automated transactions per minute. They have seen an 80 per cent cut in resources to manage incidents, allowing them to focus on value-adding activities.

Greater sustainability

Kay is keen to point out the macroeconomic benefits of IMS Evolve IoT. "Cooling alone is thought to consume up to 14 per cent of the U.K.'s electricity production," he says. "By leveraging the data from refrigerator networks of large food retailers, we can significantly reduce energy consumption. This way, we can benefit not only businesses, but the wider community." IMS Evolve was recently awarded funding for a joint 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."

Learn more about Dell EMC IoT solutions

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