Using IoT smartly, turning data into decision making

The Internet of Things (IoT) has been creating a buzz in the industry for years now, with companies operating fleets of vehicles already using IoT to track goods from receipt to delivery, minimise fuel consumption, identify underutilised assets, forecast personnel requirements, etc.

Morne Janse van Rensburg

According to Morné Janse van Rensburg, CEO of VSc Solutions, "The information from many IoT devices across their operations offers companies an incredibly accurate picture of what's happening in their businesses and supply chains."

Collect the data

“The technologies to dramatically improve business and supply chain performance – based on reality rather than assumptions – are readily available,” says Janse van Rensburg.

“You’re most probably already using at least a part of it. The remaining challenge is to do it well and use it to your advantage.”

IoT is simply the ability of devices to connect to the internet and share their sensor data with other devices, online services, or people, all of whom can put that information to good use. Every smartphone and tablet owner already has an IoT device. The same technology can be fitted to equipment and vehicles to obtain their performance data while they’re in operation.

“Think of refrigerated vehicles fitted with IoT devices that transmit not only their geolocation through satellite feed but also internal conditions,” explains Janse van Rensburg. “For example, a vehicle that’s opened in transit could relay the change in light to indicate a change in security status, while refrigerated vehicles could report a significant rise in temperature due to a part malfunction. This would provide valuable real time insight into issues of cargo security and product safety.”

Drivers can also use linked devices to help them do their jobs faster and safer through mobile apps for task management, training on the go, and trend reporting to business intelligence dashboards.

Data security once it’s been collected and used by various elements and parties in the supply chain is usually a great concern,” admits Janse van Rensburg. “ A defined integration strategy and capability – such as our Knowledge Integration Network – however, connects it all with complex business rules over issues like user access, visibility, and data transfers.”

If a system is designed with the right technology partner, IoT and the related integrations can provide a customised way to operate in a seamless fashion by empowering decision making with advanced and timeous access to information.

Use the data

Smart as it is, the value of IoT is quite impractical if not paired with a technology that provides automated security and reporting capabilities. “Only by analysing trusted data can businesses make immediate optimisations,” explains Janse van Rensburg.

An automated system that produces real time insights and warnings can add a layer of efficiency to existing tracking tools. Delivery vehicles – many of which already have satellite navigation and engine performance sensors – can be more proactively monitored for possible breakdown conditions and trip efficiency.

The data relayed by the IoT devices installed can be transformed by the analytics component of the system into insights that make time-intensive jobs that have a direct impact on cost – such as route planning and preventative maintenance – much faster and more efficient.

Integrate the data

The next step in supply chain optimisation is the ability of all participants to share selected data with each other. IoT is meaningless if you can't integrate the data into logistics operations. Companies using smart devices to collect business and supply chain data from a variety of sources and partners must find a way to turn the data into decision making drivers and do so easily.

"Effective business is a team sport, and each player depends on the others to win the game," says Janse van Rensburg. "Collective IoT data can help companies understand the dynamics across the supply chain and collaborate to improve the flow and quality of goods to the benefit of all."

Today, centralised online services help companies easily share data with one another, giving them complete visibility across their supply chain. "We advise our clients to design their systems to connect all the multiple parties and bring together the data in order to facilitate collaboration and build an ecosystem," says Janse van Rensburg.