Understanding Industry 4.0

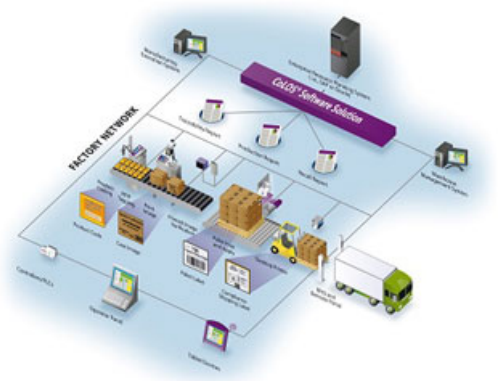Issued by Pyrotec   20 Jul 2016

Have you been wondering what Industry 4.0 is and what it means for the manufacturing industry?

The term Industry 4.0 refers to the combination of several key innovations in digital technology, all maturing now and all set to transform the energy and manufacturing sectors. The idea is that these technologies – robotics, cloud computing, the Internet of Things (IoT), data capture and analytics, smartphones and mobile devices, to name a few – will connect to become powerful systems that are able to process huge data sets and quickly translate this information into intelligent courses of action.

While these technologies are often considered separately, when combined they integrate the physical and virtual worlds. This change enables a powerful new way of organising global operations.

For the packaging sector, Industry 4.0 can increase packaging speeds, making the manufacture of more individualised products effective, while also enabling scalable production and high variations in control of production processes. Industry 4.0 is basically where information technology, the internet, and the physical world of manufacturing machines align to become one.

Smart equipment will interconnect to communicate and collaborate – independent of human involvement. The advantage is a seamless, automated manufacturing system that significantly increases speed and scale, leading to higher profit margins.

A good example of this integration and collaboration is CoLOS® software from Markem-Imaje, locally distributed by Pyrotec PackMark.

"CoLOS® software allows our customers to integrate equipment networks throughout the production line into one central system. By standardising data input, human error is reduced. This saves time, improves production flow, and drastically reduces long-term costs," explains Brandon Pearce, Pyrotec PackMark's General Manager.

"CoLOS® consists of a number of software options to meet every end-of-line production requirement. These include options for packaging coding, message design, the management of complex labels and codes, and the ability to operate multiple printers from one platform," Pearce adds.

What's more, CoLOS® provides real-time data about production processes by linking production plans to individual printers on the line. It also monitors the productivity and efficiency of each machine, and automates the selection of data for printing, reducing the need for human intervention. In turn, this reduces the risk of operator errors and provides accurate performance reports.

"At Pyrotec PackMark, we understand that our industrial customers need to stay ahead of the technology curve to be competitive in terms of speed and volume. To do this, we offer the most cutting-edge machinery and software available internationally to ensure our solutions provide the best return on investment now and into the future," explains Pearce.

By 2020, the IDC predicts there will be 212 billion 'things' on the internet. These could potentially be your fridge, oven, mobile phone, car and possibly even your lawn mower and door locks. Compared to 2009, when there were only 2.5-billion connected devices in use, Industry 4.0 could completely transform the way we live and do business.

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