Contrary to what many believe, UK manufacturing is strong with the UK currently the 11th largest manufacturing nation in the world. The sector makes up 11% of UK GVA, 54% of UK exports and directly employs 2.6 million people. Underpinning these statistics is an average annual productivity increase of 3.6% – two and a half times greater than the UK economy as a whole. This would suggest that UK Manufacturers have adopted a strategy of continuous improvement in order to remain competitive in the global and European markets. Naturally, many improvements are made by technological investments, such as automating and by connecting the manufacturing systems, devices and people that drive manufacturing operations. By automating production processes workers are freed up to meet increased demand without sacrificing quality.

According to recent research by IDC, the worldwide Internet of Things (IoT) market is expected to grow in manufacturing operations from $42.2 billion in 2013 to $98.8 billion in 2018, a five-year compound annual growth rate (CAGR) of 18.6%.

Growth will be driven by ongoing efforts to increase efficiency and link so-called ‘islands of automation’. That would therefore suggest that some form of IoT is already in existence, else how could you link these islands? IDC also indicates that during that same timeframe, manufacturing companies that take advantage of their data have the potential to raise an additional US$371 billion in revenue over companies that don’t.

So what does a manufacturing company need to have in place to benefit from the IoT promise? In it’s simplest form, you need devices that are worth monitoring, and these need to be IP addressable. Then you need some kind of integration platform that can monitor these devices and from the data harvested, create analytical reports. Let’s face it, this has been done for years. The only ‘new’ bit is that more and more devices, especially mobile ones, can be connected to the internet. To be more precise, nearly 8 billion people, and more than 75 billion devices could be connected in order to radically transform business processes. What we used to call Machine-to-Machine (M2M) communications is now much more fashionable under the term IoT.

IoT and Big Data in Manufacturing – or is it business as usual?

As usual, IT buzz words go round the houses once more in the UK manufacturing world. Recognize these: Y2K compliance, Integrated Supply Chain e-Commerce, Enterprise Mobility, Collaborative Systems, RFID, Cloud Computing, Server Virtualisation, etc. And so the list goes on. Today the hot topics appear to be ‘Internet-of-Things’ and ‘Big Data’. A lot of hype in the market place with many people not exactly being able to explain what this actually means. Not surprising that confusion exists, but is that really necessary? Let’s take a look.
That doesn’t mean it is not interesting. Far from it. Let’s just take a barcode printer in your production facilities. Typically, they play a pretty essential role. The label produced could be the shipping label, product identification label, hazardous information label etc. Without the label being applied at the right time in the production process could stop the production line at extreme costs. So, the better the devices are monitored, the lower the chance on downtime.

Naturally, the barcode printers from old were pretty ‘unintelligent’ whereas today they can send all sorts of information out such as ribbon is getting low, media is nearing its end, parts are breaking down etc. Collecting this information with intelligence can turn it into proactive uptime management rather than a reactive one.

Barcode printer manufacturing companies are stepping up in line with the industry trends. For instance Zebra Technologies has launched Zatar, an application enablement platform that enables you to create apps, on-board devices and easily collaborate between them. But in the printing world you could of course also look to the mainstream players such as Print Audit that come from the copier and laser printer world. Integration into their platform allows you to not only monitor the ‘system health’ but also route print jobs based on their costs. And when you start to link multiple devices such as these we are suddenly in the world of IoT and Big Data.

In today’s manufacturing world the challenges haven’t changed: increase productivity, innovate and eradicate errors. Technology keeps advancing, and integration of systems and data continues to provide significant opportunities to meet these challenges. If you want to call that IoT and Big Data, then that’s fine. Or perhaps, it is just business as usual…

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