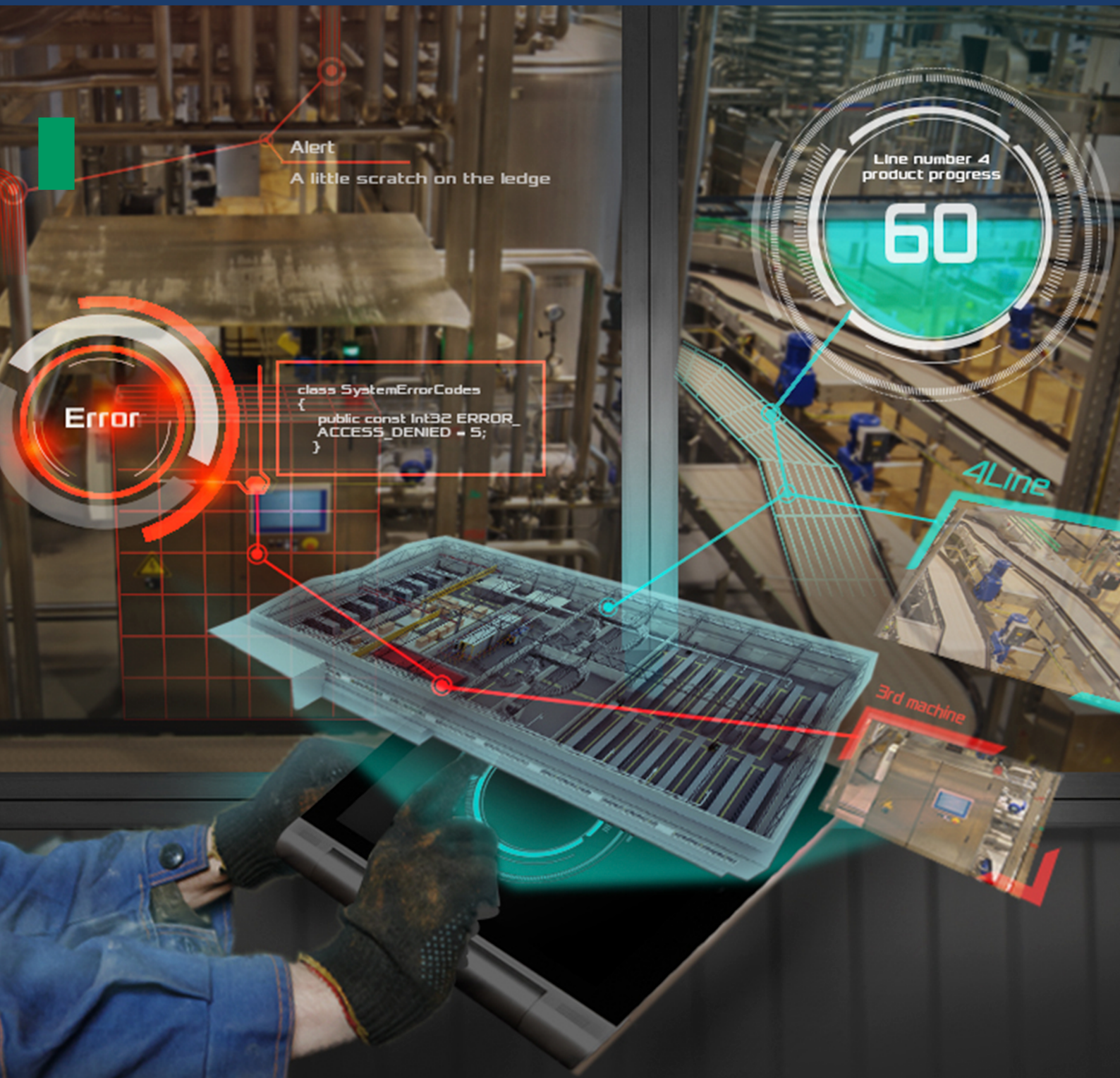


HOW TO MANUFACTURE A SMARTER FACTORY

CHAPTER 1: THE FUTURE OF MANUFACTURING





CHAPTER 1: The Future Manufacturing business model

For the visions of Industry 4.0 to become reality, manufacturing companies need to begin by looking at their existing business model. It's no longer enough for manufacturers to operate to a Just In Case business model. The age of manufacturing products in bulk and waiting for customers to buy them, are becoming lost in the past as consumerisation changes demands and increases individualisation of customer needs. Breakthroughs in technology and regulatory changes, together with the convergence of sectors, are forcing manufacturers to rethink their business model to become more responsive, lean, and productive.

For a while, the concept of servitization has been considered a megatrend that will significantly impact manufacturing. Instead of just selling products, businesses are beginning to wrap services

around those products to deliver maintenance and support agreements, track product performance out in the field and benefit from long term rental agreements rather than one-off purchase fees. This enables businesses to provide greater customer service, increase customer retention, potentially increase the customer spend and boost profitability by acting as a partner in the servitization of customers themselves.

As new technologies lead the industry towards Industry 4.0, you need to make sure that your business model facilitates a better technological impact, rather than having the technology dictate your business model. Start analysing the results of your ERP data collection to see where you can improve your processes and streamline your business model, in order to improve

your capacity, your responsiveness and your customer service levels.

JARGON BUSTER

Servitization

Servitization is the term used to describe the transformation of a manufacturing business model from a product-focused orientated approach, to a more service-focused strategy. It involves businesses developing the capabilities they need to provide services and solutions that supplement their traditional product offerings so that customer stop purchasing products and instead, purchase the outcomes that the product provides. Key to servitization is the adoption of advanced services – services developed to deliver added value to customers, based upon in the field research. For example, installing sensors into a product and measuring performance in the field can highlight an opportunity to deliver advanced services through preventative maintenance contracts.

TOP TIPS

1 Ask your customers what they want. Do they want support agreements, or do they see value in consultancy and training? There's no point changing your business model if your customers don't want to join you on the journey, or will not see the value at the end of it.

2 Do the numbers. Switching to a 'pay per use' business model can affect cash flow for some businesses so make sure you can sustain a potentially challenging interim period. Speak to your bank manager or specialist lenders to ensure your financial forecasts are robust.

3 Invest in technology. For a business model such as servitization to be successful, technology such as sensors and 3D printers is hugely beneficial. Intelligent devices can enable products in the field to be monitored to schedule agile service intervals or Big Data algorithms which help you predict future service issues to prevent customer downtime, making your servitization strategy successful.

4 Don't forget what you already have. Analysing the business critical data held in your ERP can help you on your new business model journey. For example, calculating how much inventory is wasted each month can help you cut down on raw materials purchasing and by forecasting orders by looking at historic trends, you can start to move from a just in case purchasing strategy, to a just in time strategy, accelerating production and saving overhead costs.

Why embrace it?

Your competitors already are! The UK Government's Future of Manufacturing report in 2013 highlighted that 39% of UK manufacturers employing over 100 people in 2011 included services in their business model, up from 24% in 2007. What's more, in The Manufacturer's 2016 Annual Manufacturing Report, only 18% of people thought their business was purely about product sales. A product-service hybrid can be more difficult for your competitors to replicate than linear process manufacturing. It's often possible to re-engineer a product to make improvements on the original, but when that product is embedded in a longer term contractual relationship including servicing, training, consultancy, and payment, the overall system is more difficult

for competitors to replicate.

Your customers demand it! The immediacy and convenience of products and deliveries in the consumer world is becoming an expectation in the business world. As new generations come up through industry, their expectations about the purchasing experience, how things are paid for and product customisation differ greatly from the one size fits all philosophy of the past. Manufacturers need a business model which creates value through every stage of the supply chain; one which creates new sources of revenue, retains customers over long term agreements and boosts innovation at the same time. Trends such as servitization respond to this need.



JARGON BUSTER

K3 Dataswitch

K3 DataSwitch is a purpose built systems integration and data manipulation tool which enables businesses to become more efficient through automating processes. It provides the missing link to standardise the flow of information between unconnected or disparate software systems. The tool is developed in house by integration experts at K3 Syspro and is compatible with any ERP application, including SYSPRO ERP.

In Practice

G&B Electronics is a 35-year old contract electronics business, which previously specialised in design and development, with a low volume manufacturing service. However, upon noticing a change in market demand for a complete turnkey electronics solution, the business has utilised its existing SYSPRO ERP solution, together with K3 DataSwitch to transform its business model to become an electronics manufacturing business with test development and post sales non warranty product support services.

The company's previous main line of business application was effective for design, but lacked in manufacturing functionality. The business required greater data collection capability, Advanced Planning and Scheduling (APS), and

wanted to integrate its financial package into its manufacturing execution system. A fully integrated SYSPRO ERP solution provided G&B Electronics with a single source of information for all mission critical business information.

As part of the drive towards transitioning the business model from design to manufacturing, the company has had to implement new processes for dealing with warranty support, re-calibration and product re-configuration. SYSPRO's Serial Number Tracking functionality is making it possible for the business to effectively track the movement of all manufactured items through the production line and the wider supply chain. Many of its customers' products are rented out, but calibrated and configured by G&B in order to keep them operating to full capacity. This is part of the company's transition

to a servitized business model, and makes it important that all items can be tracked and accounted for at all times.

By automating individual processes through SYSPRO and DataSwitch, the company is making small steps towards big changes in its overall business model, enabling it to win more business from the defence and aerospace markets, and support their customers throughout the product life-cycle journey.

Leading Practice

With the mission statement of "making office work a little simpler, a little less tedious and a little more productive," Xerox, a global seller of business services and document technology products, started exploring the printing environment from a holistic perspective rather than assuming that customers simply wanted cheaper equipment and supplies.

Instead, the business began to adopt a service-led business model for its product offering, as an attempt to gain greater control and ownership of its products, whilst providing greater customer value, Xerox developed and implemented its Managed Print Services (MPS). This is a unique service led business model which offers Xerox customers 'pay per-click' scanning, copying and printing of documents.

Instead of owning the products that Xerox manufactures, the customers rent the products over a period of time, paying instead for the services the products provide. The company continues to develop capabilities in document management business process and information technology outsourcing in line with its wider business objective today.

Useful references

[2016 Annual Manufacturing Report](#)

- The Manufacturer's annual look at the UK manufacturing industry and predictions for the future of the sector.

[MSTLN](#) - The Manufacturing Services Thought Leader's Network.

[Aston Business School's Advanced Services Group](#) - A servitization centre of excellence.

[Xerox](#) - Servitization Story.

SNEAK PEEK

CHAPTER 2: Supply Chain Integration - OUT 21st Oct

Integrating the supply chain is critical to the success of a manufacturer if they want to be part of the fourth industrial revolution. In this chapter we will cover the benefits of an integrated supply chain, such as reduced costs, and also a few tips on successfully integrating your supply chain. K3 customer and world leading axle supplier, BPW, provide our case study for how K3 are helping UK manufacturers integrate the supply chain. While our leading practice looks into how global computer technology company, Dell, integrated its suppliers into the ordering process for a seamless configure to order approach.



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