

# HOW TO MANUFACTURE A SMARTER FACTORY

## CHAPTER 5: MEGATRENDS



# MEGATREND CATEGORIES

- ▶ GLOBALISATION
- ▶ DEMOGRAPHIC CHANGES
- ▶ URBANISATION
- ▶ TECHNOLOGY CHANGES
- ▶ CLIMATE CHANGES
- ▶ SUSTAINABILITY

## CHAPTER 5: Megatrends

If your business is busy planning its route to, and through, Industry 4.0, you're going to become quickly accustomed to all the perceived changes and revolutions affecting the manufacturing industry, so you can plan how to best take advantage of them. These challenges and opportunities, like everything covered in our Industry 4.0 guide, often fall under the umbrella of megatrends.

A megatrend is a pattern or a movement which is predicted to have a major impact on business and society as a whole. In the past, robotics has been considered a megatrend and servitization, which we cover in our chapter about transforming the manufacturing business model, is predicted to be a megatrend for the next few years at least. But a megatrend is not always something that you can confine to your particular industry,

there are also external megatrends that could affect the way you plan your growth strategy for Industry 4.0.

The PwC categorises megatrends into six different areas:

- globalisation
- demographic changes
- urbanisation
- technology changes
- climate change
- sustainability

A lot of the chapters in this guide introduce megatrends that fall under technology changes, often brought about by globalisation and urbanisation. For your organisation to really thrive during the fourth industrial revolution, and even be among the first to prepare for the fifth, you'll need to be aware of, and continually plan for, megatrends.

### JARGON BUSTER

#### Globalisation

Globalisation is the process by which the world is becoming increasingly interconnected as a result of massively increased trade and cultural exchange. This trend has increased the production of goods and services globally.

#### SYSPRO ERP

SYSPRO Enterprise Resource Planning software is a specialist manufacturing and distribution application, which can empower businesses in these sectors to streamline efficiencies, automate processes and extract more value from simple, linear manufacturing processes. The application successfully automates and integrates core business processes, such as taking customer orders, scheduling operations, and keeping inventory records and financial data. K3 Syspro is the UK and European partner of SYSPRO.

## TOP TIPS

**1** Make identifying and analysing megatrends part of your strategic review, so that you can follow the impact of these trends closely early on to see if their impact is accelerating or shrinking before you commit to any action. Keep an eye on what the big consultancies such as PwC, McKinsey, and Ernst and Young have to say about megatrends.

**2** Don't try and keep up with every megatrend. Focus on trends that are relevant to your business, your customers, your supply chain and the markets that you serve. Weigh up the opportunities of megatrends against the threats to make an informed decision on whether or not to take action.

**3** Identify your own megatrends. Keep an eye on what your competitors and adjacent sectors are doing to see if you can identify a new industry trend early on. This way, you can start to embrace a new trend early and take advantage of opportunities before it becomes a bandwagon for jumping on, setting your business up as an industry leader.

## Why embrace it?

**M**egatrends help your business to remain competitive over a long term period, and continually keeps you relevant to your customers. By keeping abreast of current and future predicted megatrends, you can learn to understand the future challenges and opportunities your business will face, and identify opportunities to disrupt your industry and give you a competitive advantage. Don't just take megatrends at face value though, think about how they are relevant to you, how they can help to improve your business strategy, and discuss them with colleagues and the rest of your supply chain.

Failing to acknowledge, or plan for megatrends, can affect previous capital investments you have made. For example, new updates to ERP systems are often brought about by megatrends. The next version of your business system may have additional functionality to cope with an overwhelming increase in mobile device usage, providing new mobile functionality for remote locations. If you're not

aware of this change, or what has influenced it, you could be paying for an update that you will never properly utilise and any hesitation to have the update could render your systems legacy, voiding the initial investment.

## 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.

## In Practice

**T**here are a number of megatrends that can affect manufacturing businesses today, which include, but are not limited to the following:

**Information as the new currency.** We've mentioned the need for manufacturers to integrate their supply chains in a previous chapter in this guide and this is never more important than in a world where data is fast becoming the new currency. Today's buyers have unparalleled access to information on pricing and profitability, meaning that they have never been more informed of the total cost of

ownership of a product. As a result, customer loyalty is becoming harder to win, and new business opportunities are becoming more competitive. This is why everything that is mentioned in this guide about connecting systems, unifying the supply chain and adding greater customer value is key to helping your business stand out from the rest of the market.

### **The new workforce.**

The world's manufacturing labour market is transforming. The workforce is aging and women and minorities are starting to increase their share of the workforce. Manufacturing businesses need to introduce new strategies to attract

and retain the next generation of talent in order to remain successful.

### **Global market risks and opportunities.**

The UK is facing a future away from the European single market and needs to begin forming trade partnerships with the rest of the world in order for the manufacturing sector to thrive. At the same time, businesses are still battling cheaper labour markets and steel prices in countries such as China, and fighting to retain its position as a global economic force. There are risks and opportunities presented by evolving global markets, but businesses need to understand what these are, and

what impact they will have, if they are to enjoy growth.

### Regulatory changes.

The ever changing regulatory requirements are making it increasingly difficult and expensive for manufacturers to succeed globally, affecting employees, customers and taxpayers. This makes it even more important for manufacturing businesses to have agile and flexible business models which enable them to react quickly to regulatory changes.

### The opportunities and threats of technology.

Connected devices and integrated systems are key to the success of Industry 4.0, but as manufacturing organisations start to collect, store, and use more business critical data, they become more vulnerable to attacks on their IP. Any investment in new technology must be made with additional investments in security and data protection for businesses to take advantage of technology opportunities.

### Useful references

[Rolls Royce](#)  
Power by the Hour article

[PwC](#)  
Megatrends Analysis



## Leading Practice

The importance of keeping abreast of megatrends is highlighted by Rolls Royce and its servitization journey. Over fifty years ago the business stopped selling aero engines as individual products and instead began to charge customers for the power that the engines delivered. The customer started to pay for the outcome of the product and Rolls-Royce provided all of the support and maintenance to ensure that its aero engine continues to deliver this power, whilst retaining ownership of the engine itself.

This strategy, today known as servitization, has become hugely successful because it aligns the interests of customers and the supplier. Previously Rolls-Royce earned money through time and materials, selling and repairing

engines. Typically, the worse the engine was, the more maintenance it required, and the more money Rolls-Royce would make. But customers do not want unreliable engines that are always going off for repair, they want reliable products which allow their aircraft to perform to their maximum potential, a demand that Rolls Royce responded to through servitization.

Servitization was recently cited as a megatrend to affect manufacturing, but Rolls Royce has already cemented its history as one of the first businesses to take advantage of this trend. As a result, the company has trademarked its “power by the hour” strapline, and has continually been looking at ways to continue to advance its servitization strategy, while other businesses begin to take the first steps on their own servitization journeys, fifty years later.

## SNEAK PEEK

### CHAPTER 6: Pulling it all Together - OUT 16th Dec

All good things must come to an end and sadly, our Industry 4.0 guide book is no exception. Arguably the most valuable chapter, pulling it all together, is the culmination of the previous chapters on how to manufacture a smarter factory with SYSPRO ERP. We summarise why you should be embracing Industry 4.0.



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