TREND DOCUMENT

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A future-proof ERP as differentiator in the manufacturing industry

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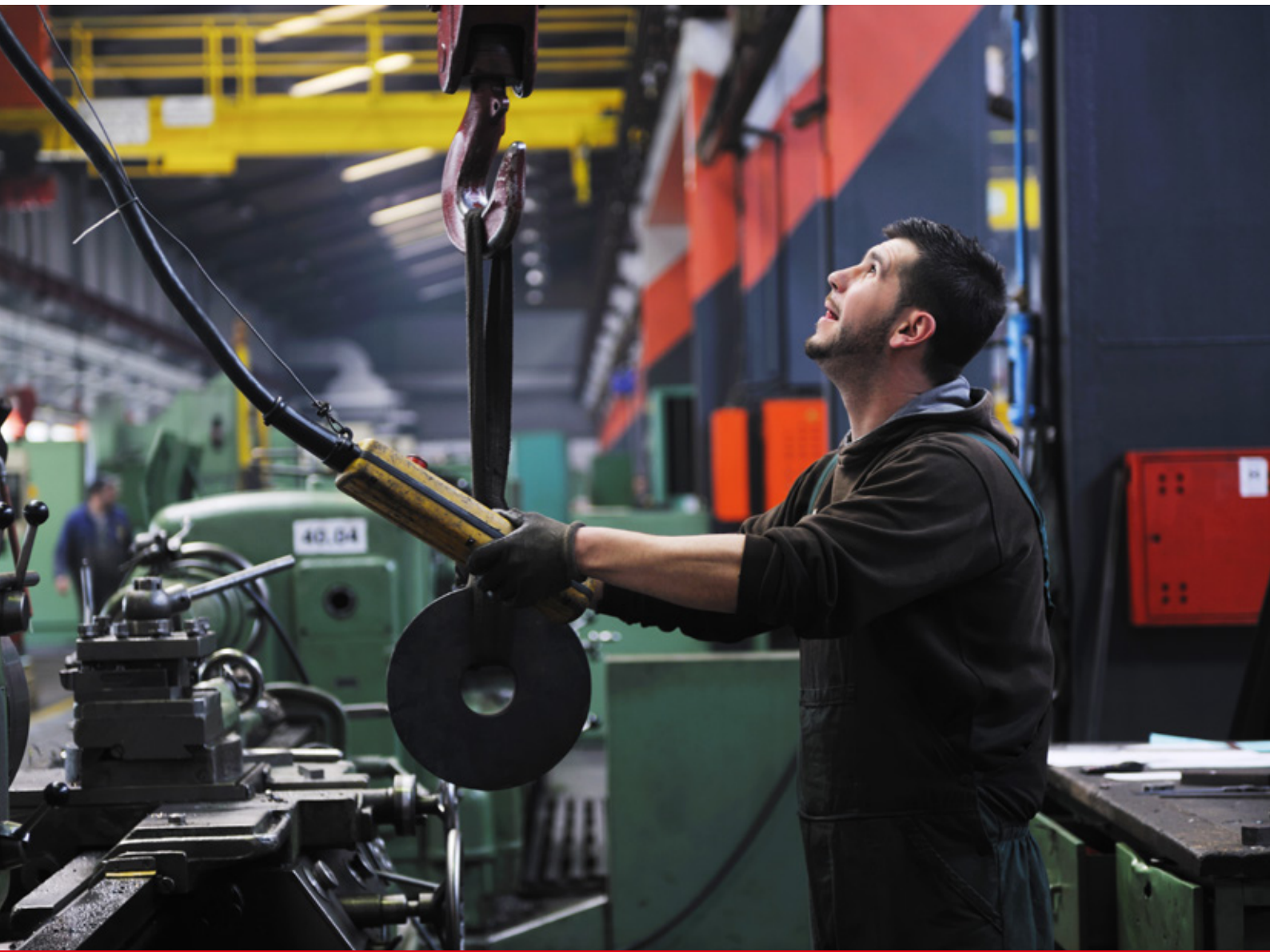
ORACLE Platinum Partner



A future-proof ERP as differentiator in the manufacturing industry

7 Trends and developments in Industrial Manufacturing that manufacturing companies should respond to.

'Bring new products to market faster'

According to a number of studies, including the one by Gartner[1] and McKinsey & Company, manufacturing companies revolve around bringing new products onto the market as quickly as possible in order to remain competitive. While cost reduction used to be the most important argument for a modern supply chain management (SCM) system, an extremely rapid 'time to market' has now been added. Technological developments today are the drivers for new trends in the field of supply chain management. Only those manufacturing companies that keep investing in their ERP systems by upgrading them and enriching them with new functionality, or stepping over to a complete new system where necessary, can win from their competitors. The rest will see over the course of time how their outdated ERP places too much of a burden on their overall IT budget, while this could be better spent on innovation.

7 Trends that have an effect on ERP for the manufacturing industry

The 7 trends and developments mentioned below are topical at the moment for companies in the Industrial Manufacturing sector, and have a significant impact on the supply chain. Either directly or indirectly, they can contribute significantly to the acceleration of innovation and time to market, and must therefore be supported by the ERP system used. These trends are:

1. **Nearshoring & Reshoring**
2. **Mergers & Acquisitions**
3. **Cloud Computing**
4. **Internet of Things**
5. **Actionable Big Data**
6. **Mobile**
7. **Additive Manufacturing**

[1] *'De drie belangrijkste Supply Chain-trends volgens Gartner voor 2015' ('The three most important Supply Chain-trends for 2015 according to Gartner'),* Marcel Bron, Oracle.
'Excellence in Supply Chain Management', Christoph Glatzel and Alex Niemeyer, McKinsey & Company.

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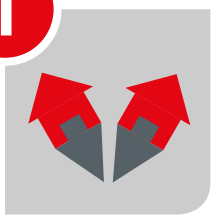

Nearshoring & Reshoring

According to several studies[2], there is a certain trend among manufacturing companies to bring production units back to their own countries or to regions in the vicinity (including Poland and Romania). The most important motivation for this is the increasing costs – particularly labor costs – in areas in Asia and South America, due to which the competitive advantage is shrinking. A lack of the required quality in high technology machines and equipment is also a reason. In addition, the argument of the shorter 'time to market' with a production facility in the vicinity is a key factor in decision-making around 'Value of Sales' versus 'Cost of Production'.
This nearshoring and reshoring trend means an entirely different raw materials and goods stream for the supply chain. An ERP system that can deal flexibly with the setting up of new entities, multi-site locations, and support the changed supply chain, is of decisive importance in the implementation of this strategy.

2

Mergers & Acquisitions

Another observable trend in the Industrial Manufacturing sector is the increase in mergers and acquisitions within the total goods chain. This is because connections are formed with few but good and reliable suppliers in order to realize shorter lead times, lower costs and higher quality. This development means that the underlying ICT systems must be able to connect simply and rapidly with each other. For the acquiring party, it is important that the ERP system can interface simply with other systems, can perhaps take over parts of other ERP systems, or can serve as a consolidation system for financial reporting.

3

Cloud: public, private or hybrid?

Almost all companies now run applications in the cloud. It is an unstoppable trend, and one with many advantages. But which cloud are we talking about? There is a choice between the public cloud, the private cloud or a combination of the two, that is, the hybrid cloud. There are important differences, especially with regard to ERP systems. Companies would probably be very hesitant to run their ERP systems in a public cloud, particularly if it concerns SCM. They are distrustful of the many new releases they would have to go along with. Furthermore, they fear losing control over server performances and backup systems. In practice, it appears that companies in the manufacturing industry adopt a 'follow the leader' strategy where the public cloud is concerned, in which the leader is the company at the head of the chain. The situation is different when we talk about the private cloud or hybrid cloud. More and more companies make use, partially or fully, of these two forms. Due to the complex management and stricter safety requirements of an on-site ERP system, moving core applications to the private or hybrid cloud is a first step towards full cloud adoption[3].

4

Internet of Things and the self-learning ERP

The Internet of Things (IoT) is now indispensable in almost all sectors, but particularly in Industrial Manufacturing. Every day, countless new applications come onto the market. We are only standing at the very beginning of what is possible, and the possibilities are infinite. Many innovations are coming from the 'Internet of Things'. Manufacturing companies must process and analyze the information that is gathered by these applications. What counts is that the ERP system being used is capable of connecting with all of these IoT applications. This 'connector' collects the diversity

[2] *'UPS Change in the (Supply) Chain' and Erasmus Innovation Monitor 2015*
[3] *'Onderzoek cloud computing en de gevolgen voor de ERP-softwaremarkt' ('Research into cloud computing and the consequences for the ERP software market'),* Ruben van der Drift, Cadran.

of data and converts it to relevant information for use in improving the working process. This feeds another development, namely that of the self-learning ERP. Analysis of all data by people will become too complex. Through the recognition of patterns, the software will be capable of generating the solutions to problems itself, either for presenting to end users or even for directly applying them in the SCM process flow.

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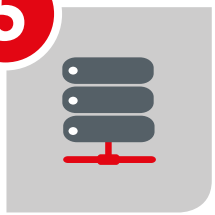

"Actionable" Big Data

In order to be able to operate successfully as a manufacturing company, real time access to and analysis and management of large quantities of data is a critical factor. Many companies seek ways of improving their quality while saving costs by improved 'defect tracking' and improved forecasting methods to optimize their supply chain. These production and operational improvements are necessary for an excellent 'customer experience', the current distinguishing factor for 'winning' companies. Insight into big data is essential in order to be able to realize these improvements. Manufacturing companies have large quantities of information about their production and distribution. The art is in extracting so-called 'actionable' information from this. Below are a number of important developments at manufacturing companies in which big data plays an important role:

- Improved production forecasting
- Improved service and quicker customer support
- Real time decision-making and alerts about production details
- Insight into performance details across multiple production units
- Analyses of supplier performances for better negotiation

Because manufacturing companies are getting larger and more diverse, the type of data being worked with has become more complex; information from ERP systems, social media, machine sensors and information from the sales channel must be combined with each other in order to generate the right insights. Big data reporting and analysis tools that can combine all of these sources of information are essential for this.

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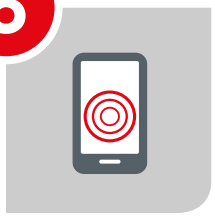

Mobile applications in the supply chain

Even more so than in previous years, mobile applications will become part of our way of life. This has two sides for the manufacturing industry: the machines and equipment will need to be *mobile-connected* themselves so that they can communicate with smartphones, tablets and other *mobile wearables*. In addition, these smartphones, tablets and other mobile wearables will have an impact on daily work activities. Frequently used functions of business applications such as ERP, CRM and BI will need to be accessible using a mobile device. The great advantages for organizations include information and guidance on the shop floor, direct insight into changes in supply and demand and their impact on stock and production, as well as a reduction of the administrative tasks afterwards.

7

Additive Manufacturing (3D printing)

One of the most disruptive trends in the manufacturing industry is the advent of Additive Manufacturing, or 3D printing. Being able to make the components of an end product in-house will totally change the processes around purchasing and stock in manufacturing companies. Fewer reserve components will be kept and a make or buy decision can be made for the manufacturing process itself. A derivative of this is the big change in the financial stream because keeping components in stock is far more expensive than keeping a piece of metal or plastic that can be printed in any shape.

On the way to the future

We stand on the cusp of a new Industrial Revolution, known as the 4th Industrial Revolution or Industry 4.0, in which existing business models will be overthrown, and consumerization, crowdsourcing and other all-encompassing trends will radically change the production processes. Some also justly pose the question: is an ERP system still of this time?
The answer is 'yes' and 'no'. No, because a traditional ERP doesn't fit any more, but ERP suppliers are constantly on the search for new ways of improving their software and thus being able to respond to the rapidly changing market. Yes, because a 'new style' ERP system is of this time, and offers the manufacturing industry flexibility and innovative capacity. In these dynamic times, therefore, ERP software is the differentiator in the manufacturing industry: only those companies that upgrade their ERP systems, enrich them with new functionality or, where necessary, change over to a completely new system, will be able to realize a rapid time to market, one of the most important requirements for staying successful.

3D metal printer for Airbus

The fledgling company Additive Industries can deliver its first 3D metal printer to its first customer, Airbus. The cost of this piece of innovation: €1.8 million. Airbus can use the 8 meter long piece of equipment for making small, lightweight metal components like brackets and armrests for seats, among other things. "Airbus intends ultimately to be able to print half of an aircraft," says Daan Kersten, one of the founders of Additive Industries. "Knowing that this is possible for only a couple of components now, then the potential of this technique is enormous." It took two and a half years to develop the industrial metal printer. "One of the advantages of 3D metal printing is that you need less material. You discard less because you can print accurately. You can also produce more rapidly; you don't need to make molds, or to wait for the boat from China to come in."

Source: NOS

Cadran Consultancy is a certified Oracle Platinum Business Partner and reseller. Cadran, that started its ERP business in 1998 is specialized in implementing, supporting and hosting ERP systems. Cadran is fully focused on wholesale/distribution, commodity traders and manufacturing companies. Cadran's ERP portfolio consists of Oracle JD Edwards ERP, Oracle Cloud and Oracle NetSuite. For our in-house developed CTRM-module that is fully integrated with Oracle JD Edwards ERP, we have a dedicated department. In the Benelux Cadran serves more than 80 customers. Cadran is also co-founder of Redfaire International, a joint venture of 6 European Oracle ERP consultancy organizations with more than 300 specialists combined.

Cadran Consultancy
De Beek 7, 3871 MS Hoevelaken, The Netherlands
P.O. Box 208, 3870 CE Hoevelaken, The Netherlands
+31 (0)33 24 71 599
info@cadran.nl
www.cadran.nl

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Redfaire International
De Beek 7, 3871 MS Hoevelaken, The Netherlands
P.O. Box 208, 3870 CE Hoevelaken, The Netherlands
+31 (0)33 24 71 598
info@redfaireinternational.com
www.redfaireinternational.com

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