

Journal of the European Union Chamber of Commerce in China

EURObiz

www.eurochamber.com.cn

March/April 2016

SAFETY ON THE EDGE OF DIGITALISATION

The importance of proactively protecting your company data

DO ANDROIDS DREAM OF ELECTRIC SHEEP?

Future trends in the robotics industry

THE GREAT LEAP FROM 2.0 TO 4.0

How Made in China 2025 may require a back-to-basics approach

ALSO IN THIS ISSUE:

XI'S MASTER FIVE-YEAR PLAN

Adjusting to the 'new normal' for foreign investors

OVERCAPACITY IN CHINA

An Impediment to the Party's Reform Agenda



European Chamber
中国欧盟商会



TABLE OF CONTENTS

SPECIAL REPORT

06 XI'S MASTER FIVE-YEAR PLAN

Adjusting to the 'new normal' for foreign investors.

10 OVERCAPACITY IN CHINA

An Impediment to the Party's Reform Agenda.

COVER STORY

14 SAFETY ON THE EDGE OF DIGITALISATION

The importance of proactively protecting your company data.

16 ROBOTICS REVOLUTION

The rise of China's intelligent robotics industry and the role of foreign manufacturers.

19 DO ANDROIDS DREAM OF ELECTRIC SHEEP?

Future trends in the robotics industry.

22 ELECTRIC ARGUMENTS

Disruptive electrification of Chinese urban mobility.

26 COME TOGETHER

Areas for future EU-China cooperation through smart manufacturing.

28 CHINA'S MULTISPEED ECONOMY

Opportunities and challenges in industrial products and services.

31 TIME TO RAISE YOUR GAME

How IT can improve efficiency, transparency and quality of manufacturing operations.

34 THE GREAT LEAP FROM 2.0 TO 4.0

How Made in China 2025 may require a back-to-basics approach.

36 MADE IN CHINA 2025

What does it mean for EU SMEs?

FEATURES

42 FENCING OFF THE WORLD WIDE WEB

China's new online publishing regulations.

45 IPR

How to hold on to your secrets: manufacturing non-disclosure agreements in China.

48 4I's on B20 China

Business priorities of the G20 as China assumes presidency for the first time.

50 TIANJIN TAKES UP ITS POSITION

Launch of the *Tianjin Position Paper 2015/2016*.

52 WORKING GROUP FOCUS

Maintaining standards: Jun Zhang, Chair of the Standards and Conformity Assessment Working Group.

REGULARS

05 PRESIDENT'S FOREWORD

40 LOBBY REPORT

54 EVENTS GALLERY

56 CHAMBER BOARD



TIME TO RAISE YOUR GAME

How IT can improve the efficiency, transparency and quality of manufacturing operations

One of the fundamental aspects of the Made in China 2025 plan is the advancement of manufacturing processes through the use of IT systems. While to some this may just represent an additional expense there are actually many affordable solutions that can help to make factories leaner, cleaner and more productive. **David Collins**, Chief Operations Officer for **China Manufacturing Consultants**, looks at five of the most accessible.

Making the most out of the ERP

Enterprise Resource Planning (ERP) systems can comprise numerous modules, including: financial, quality, manufacturing planning, purchasing, and warehouse and logistics, among others. Some ERP systems can be expensive and are generally only cost-effective for large corporations, and many small and mid-sized manufacturing operations simply don't need such powerful solutions. There are many of excellent alternatives that have been developed by Chinese entrepreneurs, though, that come at a fraction of the cost of their Western equivalents yet are still capable of supporting a EUR 200 million manufacturing operation.

An ERP system provides transparency for purchasing, planning, logistics, and manufacturing operations, helping companies to keep track of their assets as well as helping to keep inventory fresh and not obsolete. By keeping this information in a database, it is easier for factory owners or general managers to control costs and maintain a healthy product flow.

Another advantage of ERP systems is that they allow manufacturing planning, a function that is critical in factories with multiple stock keeping units (SKUs). It can help to efficiently plan the materials and work sequence. Planning is also linked to purchasing, which helps to control inventory levels, thereby making significant savings and improving cash flow.

The following steps should be followed when implementing an ERP system:

- Clean up your warehouse.
- Prepare and clean the 'base data' (SKUs, suppliers etc.).
- Understand and map all industrial and administrative processes.
- Try to marry the needs of the factory and the logic of the ERP system (while minimising customisation of the ERP system).
- Plan how to roll out the implementation of the ERP system – maybe starting with the finance module and then adding other modules over time.
- Start applying the ERP in a 'ghost space' for a short

period (running it in parallel) before going live. This can be done while maintaining your current processes, with no loss of production.

While foreign companies may wish to keep ERP system servers physically located in their country of origin, it should be taken into account that unreliable Internet connections could make accessing and updating the database a challenge.

Controlling quality, production and process parameters with a dashboard



Dashboard information can be extracted directly from your ERP system, or from a quality information system (if the quality module is not offered by the selected ERP vendor), which can pull data from production and testing equipment.

Putting in place a high-level dashboard can show you the key indicators you want to track: quality, cost, delivery, and maybe even safety and morale. If an indicator is orange or red, management can drill down to lower-level indicators and find out in what area the problem is occurring before searching for a root cause. The advantage of this is that data can be viewed by senior managers

anywhere in the world.

On the factory level, it enables very easy visual management. With the use of TV monitors, some key, real-time performance data can be displayed to each individual operator, each process group/team, each workshop, each department, and so forth. This facilitates quicker problem resolution and reduces the number of supervisors required.

Pertinent information can be sent to your senior management's mobile devices without the need for human input, allowing them to remotely view a candid assessment of what is happening in the factory. Data on machine breakdowns or process data from the equipment is very useful for keeping production moving, and can even be used to generate and implement maintenance programmes. This aspect of the dashboard is very important when robots and other high-end automation become part of the factory.

Using IT to simplify office tasks and reduce labour

Office labour can be one of the highest costs for a factory

– many have as many office workers as there are operators on the line. Well managed companies usually have only one office worker to every 7-10 operators. Obviously you can see the cost advantage here.

So how do you reach this level of efficiency? The answer is, by using some of the above-mentioned systems. Here are a few examples of how office work can be minimised:

- Financial data can be automatically loaded from purchasing, since all these data are input into the ERP system.
- Data can be automatically loaded from the payment system, using an operator's card or finger scan to pay. Checks can then be automatically printed as needed.
- Quality data can be automatically loaded into the system and even sent to your customers as you see fit.
- Supervisors and managers can keep track of production.
- Shipping labels can be automatically produced.
- The dashboard can improve communication and coordination as all the data required will be easily accessible during meetings.
- Many other functions, such as purchase order signatures, can be done anywhere from a smart phone or tablet.
- All your documentation for ISO technical specifications, engineering and so on can be kept in your system. It allows you to control changes, signoffs, new processes and new product introduction documentation. This keeps transparency and integrity in your systems and cuts the manpower needed to maintain these controls and exchange of data.

Simple in-line systems

If you are not ready for the kind of cost commitment of adopting automation, such as robots and smart machines, there are many alternative IT solutions that can be implemented on the factory floor that are simpler and relatively inexpensive.

Bar code readers allow the factory to keep track of inventory and in-process product. Always knowing what state the factory floor is in allows for better planning and shipping. It also helps factories with multiple lines of products to keep track of what goes into a container.

Vision systems (which can see what is happening to your product) are excellent ways to detect quality issues and watch production runs. Vision has been used for many years now and has proven extremely inexpensive and reliable. It can allow you to reduce your quality inspection staff and will alert your production operators very quickly

after a problem occurs. Finally, statistics from your Vision system can be downloaded to your dashboard or ERP system.


Apps and consumer electronics

Apps for your smart phone and other devices are becoming more and more useful. They can be used for quality, production, communicating with suppliers, watching shipments, managing financial and sales data, and many other functions. These apps are being developed quickly and many are very good. Most ERP system vendors are launching their own apps too.

The 'consumerisation of IT' trend has created many opportunities, for example, warehouse employees can use iPads that are paired with Bluetooth scanners that let them know what to pick up next and allow them to register their operations in real time. Similarly, a maintenance technician can get an alert when a machine goes down unexpectedly.

The benefits are quite substantial:

- Gains in productivity and reduction of mistakes, because notes don't have to be written on paper and later manually input on a computer in the office.
- Ability to take photos and videos and share them with a few taps on a screen, for a faster feedback loop throughout the organisation.
- Virtually the same resistance to harsh environments as a 'rugged' laptop thanks to the vast choice of protective casing.

In summary this is a great time to start employing technology and IT to improve your operations. Having said that, properly integrating the systems and using them for your needs takes time and good planning. Technology should never be installed just for the sake of it, always make sure you identify a need and conduct a full analysis of how it will help your organisation. Your employees will then embrace the change and see how technology helps them in their jobs: even with all the technology in the world, it still has to be used by your employees... otherwise it is worthless. 

David Collins is Chief Operations Officer at **China Manufacturing Consultants (CMC)**. David has more than 30 years of manufacturing experience in the automotive, computer, aerospace, chemical and furniture industries. He was a senior manager of several General Motors and Chrysler car plants, as well as general manager and site director for Foxconn. He helped set up five factories from scratch in three different countries. David is a firm believer that good manufacturing practices improve performance on cost, quality, safety and environmental impact simultaneously. He may be contacted at david.collins@cmc-consultants.com.