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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

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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





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DOES MADE IN CHINA 2025 MEAN NOT MADE BY EUROPEANS?



Jörg Wuttke
President of The European Union
Chamber of Commerce in China

A handwritten signature in blue ink, appearing to read 'J. Wuttke', with a stylized flourish at the end.

The Chinese Government understands that in order to ensure continued economic growth and raise living standards its economy must ascend the value chain, so it came as no surprise when the State Council announced the Made in China 2025 initiative (2025 initiative) plan during the first half of 2015. The plan, which is the first step in a larger three-stage project that is set to run until 2049, aims to expand the manufacturing sector's capacity to innovate, fully integrate IT into industrial processes, build quality brands and strengthen links with the international advanced manufacturing industry. It identifies ten priority industries—many being sectors where European companies currently enjoy competitive advantages in the Chinese market—that are central to this initiative.

This is not the first time that the Chinese Government has attempted to use industrial policy to foster innovation. It attempted something similar in 2010, in seven strategic emerging industries, four of which have been included in the 2025 initiative: information technology, biotechnology, new materials and new-energy vehicles. Many European companies in the wind and solar energy industries, which were also part of the 2010 initiative, agreed to transfer technology to Chinese partners, and future competitors, as the price they had to pay to enter the market. However, few of them have ultimately prospered under the Chinese Government's policy framework. Many have since vanished altogether.

Yet there is no doubt that government industrial policies have played an important role in developing a range of economic sectors in Europe and other advanced industrial economies.

In fact, Europe's position as a global leader in numerous industries is partially a result of policy priorities that were set by European governments.

Regardless, useful apples-to-apples comparisons cannot be made between the intentions and likely outcomes of European and Chinese industrial policies. In fact, concerns about overcapacity and overinvestment were already raised with reference to the development of the strategic emerging industries China identified.

The European business community therefore wonders whether the 2025 initiative will be powered by market-based innovation or state-driven control. As the plan sets specific sales-growth and market-share targets for "domestic production" that fit poorly with the liberalisation of China's investment regime, there is certainly cause for concern. Can the 2025 initiative be improved through the potential bilateral investment agreement that the EU and China are negotiating, or will it include more pressure for technology transfers? As it also includes goals for international market share, can EU businesses now determine whether or not they will still be in the game in a decade down the road? These questions cannot be fully answered at this time.

The special report included in this issue of *EURObiz* on the Chamber's major study on overcapacity in China's industrial economy is therefore directly relevant to the 2025 initiative. The study examines how industries in which the Chinese state has played an active role, such as steel, aluminium and shipbuilding, have misallocated enormous amounts of land, labour and capital toward the production of goods for which there is no market-driven demand.

Factors such as easy access to capital and weak implementation of regulations, coupled with a lack of reliable data on market trends that are necessary for informed decision making, have ensured that there is no market mechanism to force state-owned enterprises (SOEs) and state-affiliated companies to cease production. The fierce competition on price that has resulted from the mismatch between supply and demand also leaves many companies in afflicted sectors lacking the funds for the R&D programmes necessary for moving into more profitable product segments. As a result, they remain stuck in repetitive cycles of low tech production of undifferentiated products. Recently in the solar industry, and currently in steel, this has disrupted global markets.

The central government has issued a seemingly endless series of directives calling for inefficient, polluting and low tech companies to be shut down. However, to date, the iron triangle of local governments, local state-owned banks and local SOEs has prevented fundamental reforms from taking place. As their primary interest is to defend their tax base, maintain social stability at the local level and defend their market share, from their perspective this is perfectly rational. We just do not see these dynamics in industries where private enterprises are dominant and the government acts as regulator instead of market participant.

Does the 2025 initiative present exciting near-term opportunities for European companies that can provide relevant technologies and services that China currently lacks? Absolutely. Is it possible that the initiative is promoting additional industries in which overcapacity may emerge as a problem? Entirely. Will the European Chamber continue to closely monitor related developments of importance to our members' business interests? Undoubtedly.

中国人民政治协商会议第十二届全国委员会第四次会议



XI'S MASTER FIVE-YEAR PLAN

Adjusting to the 'new normal' for foreign investors

On the last day of the annual *Lianghui* (two sessions), China's NPC delegates almost unanimously approved the 13th Five-Year Plan (2016-2020). For all intents and purposes, it is Xi Jinping's plan: for the first time in approximately three decades, the original briefing on the draft was given by the President himself at the Party's Fifth Plenum, rather than by the Premier. **Mark Rushton**, Senior Director at **FTI Consulting**, and **Kevin Ma**, Director at FTI Consulting, dissect the plan, outlining the main themes—as well as the opportunities and implications for investors—that lie within.



The context of the 13th Five-Year Plan (13FYP or *Plan*) is the ‘new normal’, a phrase first coined by President Xi Jinping in 2014, to describe China’s economic status quo. Positioned as an active economic transition, it denotes three changes in the Chinese economy: a gearing down of China’s development speed from high to medium-level growth; a shifting focus from industrial production and manufacturing to services; and a focus on innovation and consumption as drivers of growth rather than investment and exports.

China’s five-year plans are not action plans. They are instead intended as broad sets of overarching social and economic development guidelines to direct policy-making and resource allocation at all levels of government. In doing so, they are also intended to induce industry—state-owned and private alike—to re-orientate their strategies and focus their investments in line with promoted industry sectors and priorities.

Xi’s ‘master plan’ is designed with the overarching goal of developing China into a “moderately well-off society” in mind. To do this, the government has again set a hard target for the country’s GDP growth. Annual economic growth for the coming five years should average at least 6.5 per cent, a goal that would see a doubling of China’s GDP and per capita income between 2010 and 2020. While the range underscores an appreciation of the need to sacrifice some of the speed of growth to restructure the economy, discarding hard GDP targets would likely have instilled greater confidence among those wanting to see evidence that the reform agenda was to take precedence over growth.

What’s new?

Five key development themes are central to the 13FYP. Two of them—innovation and shared development—are given prominence in the State’s primary planning document for the first time. They sit alongside the more familiar priorities of green growth, coordinated development and opening up. Together, these are the five major trajectories of China’s next five years.

1. Innovative development: creating an innovation nation

This 13FYP is the first ever Party document in which innovation has ranked first in the ordering. Driven by the pre-existing concepts of Made in China 2025 and Internet Plus, China has vowed to take decisive steps to upgrade its manufacturing capabilities in line with the innovative and smart technologies that are expected to govern future industrial production. The *Plan* also calls for companies to harness the Internet and big data to improve the daily lives of China’s people. However, the *Plan* still does not provide any greater clarity on how China intends to transition from a country that is already

spending a significant portion of its GDP on R&D to one that is generating genuine innovation.

Foreign investors who can help advance China’s innovation capabilities stand to benefit. Opportunities exist in areas including energy, environmental protection, biotechnology, IT and high-end manufacturing, though domestic technologies will likely still be promoted in strategic or national security-related areas.

2. Coordinated development: bringing China closer together

The coordinated development goals aim at addressing the gulfs in industrial production and consumption between the coastal and inner regions of China. With the march of urbanisation, the Chinese Government is encouraging foreign investors to ‘go west’ from their traditional coastal clusters to mid and western regions. With potential opportunities likely to emerge in lower-tier cities, a geographic readjustment of investment and vertical penetration into lower tier markets may become critical to maintain high growth in some industries.

3. Green development: a lean and green economy

China’s reliance upon heavy industry and fixed-asset investment, in addition to lax enforcement of environmental standards, has led to severe environmental and ecological degradation. This directly affects the quality of life and health of China’s citizens and is recognised as being a potentially absolute limiting factor on China’s economic growth.

The 13FYP period will witness a focus on both sustainable production and consumption, as well as continued changes to China’s energy mix and infrastructure, to increase the proportion of clean and renewable energy sources. China will also support technology R&D and the further commercialisation of carbon emission reduction, energy-saving and efficiency-improvement technologies. While foreign environmental and renewable energy companies have long suffered market access restrictions, the emphasis on green development should lead to increased opportunities as the country encourages the uptake and deployment of globally-leading environmental products and solutions. Also, as sustainability has long informed the lexicon of many MNCs in China, it is a concept they will be able to leverage not only to benefit their businesses but also to build favourable platforms from which to engage various public and private sector stakeholders.

4. Open development: looking outside

Many commentators understand China’s commitment to opening up to singularly mean a liberalisation of China’s marketplace for foreign investment. However, this is only a small part of the story. Opening up also relates



to relaxing domestic market restrictions for private Chinese companies. More significantly, it also relates to the loosening of restrictions for—as well as active support to encourage—domestic companies to invest in overseas markets. An understanding of these additional aspects of China's opening up policy explains why many foreign investors have been underwhelmed by the speed and breadth of investment liberalisation since the promulgation of the Third Plenum's *Decision*. The *13FYP* does little more than reaffirm China's stance on its opening-up policy as iterated in the *Decision*.

The *Plan* promises a national rollout of the negative list system for foreign investment, which will undoubtedly bring opportunities for companies in many sectors to access China's market. However, foreign companies should not expect China to fully shake off its protectionist tendencies that continue to curtail full market access. Many foreign business leaders will likely be disappointed that the *Plan* doesn't emphasise the theme of the 'market-led' economy as strongly as the *Decision* did. Further, the *Plan* reiterates that SOEs should continue to be the backbone of China's economy, dominating crucial sectors. While further SOE reform is mooted, additional aspects of the *Plan* will raise concern among foreign companies concerned that reform efforts following the *Decision* are yet to take hold in the area of SOEs. For example, China has committed to position a group of major Chinese

MNCs to become global leaders in their respective fields. This point also relates to China's increasing encouragement of outbound investment, which we are already witnessing this year with the spate of global M&A transactions by Chinese firms. Such outbound investment is set to continue to grow throughout the next five years. This will provide opportunities for foreign investors to attract Chinese investment and also for foreign professional services firms to support Chinese companies going global.

5. Shared development: a real sharing economy

The concept of shared development relates to the objective to distribute the fruits of China's three decades of reform-based growth to the Chinese people en masse. Key policies include poverty alleviation, universal and fair access to education, a 'healthy China' and an end to the one-child policy. A Chinese baby boom triggered by the 'two-child policy' will not be an overnight phenomenon but it will certainly have far-reaching consequences for consumer-facing businesses as the proportion of children in China's demographic is set to increase. Foreign investors will likely also be able to seize breakthrough opportunities derived from healthcare reform as the 'healthy China' programme is rolled out, with the government encouraging the establishment of wholly foreign-owned healthcare institutions and elderly care facilities.



Adjusting to the 'new normal'

The *13FYP* is not a game-changer. The development themes it contains closely reflect those already outlined in the Third Plenum's *Decision* nearly two and a half years ago, when Xi cemented his vision of how China must respond to the realities of the 'new normal'. While there is nothing new of note in the *Plan* to indicate marked improvements for foreign industry, this is not to say that it isn't significant or that it doesn't present opportunities.

China's slowing growth during the *13FYP* period will certainly pose challenges, but the 'new normal' also presents opportunities. Foreign companies have more experience operating in markets during times of slowing growth and are generally better equipped than their Chinese counterparts with technical expertise and operational excellence to respond to changes. The *Plan* is an undoubtedly crucial document to understand China's future trajectories during the 'new normal' and to determine opportunities that might impact how companies choose to hone their business plans. This is particularly the case for those companies that foresee possibilities to move into new spaces that could provide significant growth potential or that were not previously accessible. In addition, the *Plan* should also be regarded as a communications guide for firms to position themselves in-market. In doing so, companies should demonstrate how their businesses are aligned with its tenets and can help the government

achieve the country's principal development goals.

Now that it has been rubberstamped by the NPC, the *Plan* will cascade downwards over the next few months to provincial, local, regulatory and other government entities. These authorities will be tasked with developing their own, more actionable, sectoral, industrial and local five-year plans that will have more direct impacts on companies operating in those areas. As these authorities will themselves need to determine how to mould their own plans in line with the central-level document—which purposely lacks clarity on how the development themes and concepts will be transformed into reality—there is therefore the possibility for companies to engage with these authorities to shape the lower-level plans. The window of opportunity for this is now. [Eb](#)

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OVERCAPACITY IN CHINA

An Impediment to the Party's Reform Agenda

On 22nd February, 2016, the European Chamber of Commerce in China released its second major study on overcapacity in China's industrial economy. *Overcapacity in China: An Impediment to the Party's Reform Agenda* provides a detailed examination of the causes and consequences of serious overcapacity in eight key industries: crude steel, electrolytic aluminium, cement, refining, chemicals, flat glass, shipbuilding, and paper and paperboard. The new report explains how central government efforts to address excessive production capacity have so far been ineffectual, due to regional protectionism, weak regulatory enforcement, low resource pricing, misdirected investment, inadequate protection of intellectual property rights and an emphasis on market share. It also provides recommendations that should be taken by the Chinese Government to address this serious problem.

Overcapacity, which is defined as the difference between production capacity and actual production, is a topic of long-standing interest to the European Chamber. In 2009, we were one of the very first organisations to publicly raise this subject in a major report. In the autumn of 2015, due to a notable deterioration of the situation, the Chamber decided to revisit the topic, examining subsequent developments that have taken place over the course of the last six and a half years.

Within hours of its release the report had garnered in-depth coverage from the most prominent international and domestic media as well as keen interest from European and Chinese officials, industry groups and international institutions.

Why overcapacity?

With European businesses facing so many other pressing challenges in China, you may wonder why overcapacity merited another standalone study. Examples from China's crude steel, aluminium and cement industries illustrate why: steel production has become completely untethered from real market demand, and is now *more than double the combined production of the four next leading producers*: Japan, India, the United States (US) and Russia; in China's aluminium industry, *60 per cent of production capacity has negative cash flow*; and, according to data from China's National Bureau of Statistics and the US Geological Survey, in just two years—2011 and 2012—*China produced as much cement as the US did during the entire 20th century*.

Generally speaking, utilisation rates below 80 per cent are taken to denote overcapacity, with rates of 75 per cent or lower indicating serious overcapacity. While the calculation of utilisation rates for chemicals and shipbuilding is more challenging, in 2014, five of the six other industries examined had utilisation rates in the range of 66 to 79 per cent.¹ In the chemicals industry, utilisation rates for nine out of 16 products were also below 70 per cent, with an additional four having rates in the range of 70-79 per cent. Paper and paperboard, with a utilisation rate of 84 per cent, is the one industry examined that is an exception. However, this represented a six-point fall from 2008, and with major investments continuing to be made in this industry, despite low demand growth, the utilisation rate is expected to continue to decline.

Consequences of overcapacity for China

With the scale of these industries also growing significantly since 2008, utilisation rates by no means

tell the whole story. For example, absolute overcapacity in China's crude steel industry grew from 132 million tonnes in 2008, to 327 million tonnes in 2014. In cement it almost doubled as well, growing from 450 million tonnes to 850 million tonnes during the same period. The list goes on.

Ultimately, many companies in these industries are caught in a vicious cycle of low tech and low-value-add production. Thin profit margins and fierce competition also ensure that few can afford to invest in R&D or other measures that would enable them to adjust their focus toward high-value-add products. With overcapacity frequently resulting in trade tensions and tariffs being applied by other countries in industries like steel and electrolytic aluminium, China is clearly the primary victim.

Unfortunately, the fact that there are so many companies that continue to produce goods for which there is no market-driven demand amounts to an enormous misallocation of land, labour and capital. As these factors of production could be directed towards more productive uses, this currently serves as an impediment to China's economic growth and modernisation. This sentiment was echoed in a speech given by Levin Zhu, former head of China International Capital Corporation and son of former Premier Zhu Rongji, on 16th October, 2015, in Singapore. He stated that many of the attempts to stimulate China's economy through investment had been inefficient and that, as a result, for the country to meet its long-term potential it needed fundamental economic restructuring, not rebalancing.²

Efforts to date

So what is to be done? The Chinese Government has clearly demonstrated that it understands the scale of the problem. As early as 26th August, 2009, the State Council released a statement noting that overcapacity had become a serious problem in many industries and that many local governments were continuing to expand capacity "blindly" and make "duplicated" investments without considering the mid- and long-term implications, and not just in traditional industries such as steel and cement.³

In response to the growing threat posed by overcapacity, the State Council revised its policy targets with the goal of reducing any potential negative impacts such as factory closures, job losses and mounting bad bank loans.

² Wu, Wendy, *China Should Just Trust Market Forces to do the Work, Analysts Say After Reform Efforts Fail to Stabilise or Improve Slowing Economy*, *South China Morning Post*, 18th October, 2015, viewed 17th December, 2015, <<http://www.scmp.com/news/china/economy/article/1869279/china-should-just-trust-market-forces-do-work-analysts-say-after>>

³ *Opinions on the Inhibition of Overcapacity in Some Industries and Redundant Construction and Guide the Healthy Development of the Industry*, *The State Council*, No. 38, 26th April, 2009, viewed 14th January, 2016,

¹ The utilisation rate used for Electrolytic Aluminium is from 2015.



President Jörg Wuttke presents the Chamber's overcapacity report to attending media on 22nd February, 2016

Since the State Council's August 2009 statement, some actions have subsequently been taken in an attempt to ensure that the cost of production inputs is better aligned with market demand:

- In 2012, the National Development and Reform Commission introduced a progressive electricity pricing system for aluminium producers.
- In October 2013, and in advance of the Third Plenum, the State Council introduced price reforms for water and electricity. This measure called for the removal of any local price subsidies and the introduction of tiered pricing for significant users of water and electricity in overcapacity sectors.
- Steel, cement, electrolytic aluminium, sheet glass and shipping were identified as priority sectors in which existing projects would potentially be re-evaluated and proposed projects would be blocked.⁴
- The Third Plenum's *Decision* stated that "a long-term mechanism will be established and improved for preventing and dissipating excess production capacity", in addition to introducing an initiative to remove price controls in order to allow markets to play the decisive role in allocating resources.⁵

⁴ *Guidelines to Resolve Severe Overcapacity Problems*, The State Council, 2013, No. 41, viewed 2nd January, 2016, <<http://www.gov.cn/gongbao/content/2013/content2514934.htm>>

⁵ *Decision of the Central Committee of the Communist Party of China on Some Major Issues Concerning Comprehensively Deepening the Reform*, Central Committee of the Communist Party of China, 29th January, 2014, viewed 2nd January, 2016, <<http://en.people.cn/90785/8525422.html>>

Unfortunately, these measures, and others like them, have resulted in few real breakthroughs that positively address China's industrial overcapacity. While there is some variance across industries as to why it has been so difficult to address, one of the roots of the problem can be summed up in two words: local protectionism. As local governments depend on 'local champions' for their tax base and employment they have incentives to defend them against closure. As a result, an iron triangle of interlocking interests has been forged through local governments encouraging local state-owned banks to provide local state-owned enterprises (SOEs) with loans, regardless of the state of market demand or how efficiently these companies are run. Subsidised energy and lax enforcement of environmental, health and safety standards and laws are also used to reduce their operational costs.

This desire to maintain social stability is understandable, especially in regions where there are few or even no other major sources of employment. The fact that some of China's approximately 150,000 SOEs—which employ around 30 million people—also provide funding for local hospitals, schools and other social services means that their survival is intertwined with that of the regions in which they operate. Initiatives by the central government to address serious overcapacity are therefore strongly resisted at the local level. Equally fearful of the potential consequences of unemployment, the central government does not always push for full implementation as hard as it otherwise might.



The Chamber's stance and recommendations

The European Chamber appreciates the Chinese Government's positive attempts to deal with the issue of overcapacity. At the same time, a great deal remains to be done if the problem is to be brought under control and to ensure that it does not subsequently re-emerge. Clearly this is difficult. Much like the EU with its 28 Member States, China has 31 provinces and autonomous regions with competing and conflicting interests. This often impedes the central government's ability to effectively implement coherent policies.

While it is laudable that the Third Plenum's *Decision* stated that the market should play the "decisive role" in the economy, such aspirations need to be paired with correspondingly bold actions. Ultimately, the fact that the overcapacity problems highlighted by the Chamber in 2009 have become more pronounced indicates that economic restructuring is now more essential than ever. It remains to be seen whether or not policy-makers are up to the task.

Unfortunately—and in spite of the central government's stated focus on curtailing overcapacity—many of the sources of the problem have resulted from macro-economic, industrial and fiscal policies that have been part of a development strategy designed to favour industrial and investment expansion over consumption: it therefore needs to be recognised that the Chinese Government's current role in the economy is part of the problem. The audacity to change that the government requires must be paired with a willingness to change itself.

These changes include direct measures like reforming the fiscal system to provide regional governments with more funding possibilities; expanding and increasing SOEs' dividend payments in order to reduce their ability to pursue unproductive investments; reducing energy price subsidies and continuing resource price reforms; and publishing more reliable and transparent industry data in a timely manner. Indirect measures that will help to address overcapacity include redistributing SOEs' dividend payments through social programmes; continuing to increase government spending on government pensions and healthcare programmes that can provide support to laid off workers, thereby ensuring social stability and diversifying the economy by driving increased demand for goods and services; and improving the business environment for small and medium-sized enterprises so they can serve as stronger drivers of employment.

"A review of our original study showed that the action plan we proposed in 2009 is still relevant today. We hope that our analysis and recommendations for 2016 will result in concrete actions by Chinese policymakers," said President Wuttke in a statement to the media. "Although the Party's annual Central Economic Work Conference has listed addressing overcapacity as a priority every year from 2007 to 2015, fundamental changes have not yet taken place. Tackling overcapacity is now more urgent than ever: the cost of maintaining the status quo is far too high." **Eb**

Download Overcapacity in China: An Impediment to the Party's Reform Agenda from www.eurochamber.com.cn/en/publications-overcapacity-in-china



SAFETY ON THE EDGE OF DIGITALISATION

The importance of proactively protecting your company data

Every day, millions of individuals upload pieces of their lives to the 'cloud'. Our business operations and data about our clients and employees are spread across server rooms scattered all over the globe. We continue to become increasingly dependent on data, yet very few are aware of the dangers they are exposed to when it comes to data safety, say **Raquel de Oliveira Barra** and **Shi Rongfeng** of **Freudenberg IT**. Very soon, with the advances of Industry 4.0 and the Internet of Things, data will be automatically compiled, interpreted and actioned without the need for human interaction. With China's Made in China 2025 initiative also promoting greater integration between manufacturing and technology the risks may be set to increase for a number of companies .

Unless corporations are willing to bring back endless archive rooms full of paper files, digital data dependency is here to stay and growing exponentially stronger. We are reliant on having all our important data stored in our in-house or third-party servers and, in most cases, blissfully unaware of the dangers involved until a disaster occurs.

Nowadays, corporate data is vulnerable on two main fronts. The first is the physical location, including the system architecture where the data is stored, the servers and the systems they run. The second is data theft, with this threat mostly coming internally from a company's own employees. Yet China owns some of the most technologically advanced data protection systems in the world—technology that was made in China, for China—that sets extremely high standards, and it also has the manpower to implement it. It is therefore something of a paradox that a number of industries in China, such as manufacturing, are still extremely underdeveloped in terms of data protection.

Part of the problem takes root during the initial setup phase of a company. At that stage, most companies are more concerned about their clients and suppliers to even consider investments in data safety, and to an extent this is understandable. It doesn't make much sense, especially for manufacturing companies, to spend as much on their IT department as they spend on their production lines. However, unless you run your entire production process manually and your factory owns no computers at all, you will certainly require *some* level of data protection – the decision of *how much* to invest requires careful consideration.

Regardless of the nature of a data disaster, whether it is related to the setup of physical data storage or data theft, once it happens most companies take years to recover, some never recover at all. Examples such as the 2014 attack carried out on Sony Pictures or the 2015 Ashley Madison scandal demonstrate that nobody is 100 per cent safe from data exposure. In over 10 years of operations in China, we have seen all levels of data negligence, ranging from companies that, for economic reasons, decided to set up server rooms without climate control in regions with over 95 per cent humidity, to others that install their servers' cabling using low-quality, flammable materials.

Solutions often involve an investment that most companies cannot afford. Setting up the right space, putting in place effective access control systems and getting sophisticated equipment with resilient backup connections is not only costly, it is also not enough. You also need to have trained personnel capable of operating it. Our estimations indicate that less than 20 per cent of companies are proficient in safely backing up their own data. Among those that do, only a fraction are equipped with the technology and trained personnel to be able to check if their backups are really successful, and an even smaller number is capable of running this process on a regular

basis. However, small and medium enterprises need not despair. Even with limited resources or expertise, there are plenty of local and international partners operating in China who can save you the trouble by offering a wide scope of IT services, ranging from simple data storage in highly secure Tier IV data centres to managing your entire IT department.

Data safety regulations are becoming increasingly strict all over the world, and particularly in China. Over the next few years, it is anticipated that there will be an increasing trend requiring companies to store more data physically in the country where they operate, and more controls and procedures are expected to increase safety protection, especially when it comes to personal data from clients and employees. However, legislation alone will not keep your company's data safe from harm. Companies need to become conscious about their own level of potential exposure and act preventively instead of ignoring the problem until it is too late. **Eb**

Freudenberg IT (FIT) is the Freudenberg Group's global IT solutions provider. FIT has been a specialist in the needs of small and medium enterprises for over 20 years. Its portfolio covers all facets of the IT Industrial solutions landscape, from managed services through industrial processes, and from SAP consulting to system integration. FIT's services include solutions that pioneer in Industry 4.0, and it is a trusted partner in major fields of innovation such as Big Data, SAP HANA, Cloud Computing and Enterprise Mobility. FIT Asia operates in some of the safest Tier IV data centres in the world to bring companies peace of mind so they can focus on their business without worrying about IT complexity.





ROBOTICS REVOLUTION

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

The Made in China 2025 (MiC2025) initiative will see as much as CNY 8 trillion invested over the next 10 years in order to transform China into a global, high-end manufacturing powerhouse.¹

Cherry Li and **Benjamin Jacobs** of **APCO Worldwide** shine a light on China's intelligent robotics industry—one of ten industries prioritised by the Chinese Government under the plan—and analyse the potential risks and opportunities for foreign manufacturers.

¹ <http://www.scmp.com/news/china/economy/article/1814281/made-china-smart-revolution-blueprint>

Intelligent robotics—an emerging field in smart manufacturing—makes use of pre-programmed, self-corrective robots to enable high-quality production that is unprecedentedly clean, safe and efficient. This article focuses on Chinese efforts to promote intelligent industrial robotics, which primarily pertain to the auto, chemical and electronics industries.

In these fields, advances in high-end sensors and the Internet of Things (IoT) have enabled close collaboration between humans and interconnected robots. European manufacturer KUKA, for instance, designs intelligent robots that work alongside humans, using the IoT to monitor the status of unfinished pieces in production lines.² SAP's HANA Cloud software analyses data in real-time to predict when machines might fail.³ Technological advances such as these have experts worldwide hailing intelligent robotics as the next Industrial Revolution. National governments that embrace this change with favourable robotics development policies stand to reap enormous economic benefits.

Intelligent industrial robotics in China

The reason for MiC2025's emphasis on intelligent robotics is simple: China's traditional manufacturing sector can no longer compete with Vietnamese and Indian labour prices, yet also cannot match the quality and efficiency that characterises European, American and Japanese manufacturing. In light of this economic conundrum, MiC2025 encourages the development and application of robotics in Chinese factories as a means of moving Chinese producers up the manufacturing value chain.

Over the past few years, the industrial robotics industry has experienced robust development worldwide. According to the International Federation of Robotics, the global sales volume of industrial robots reached 230,000 in 2014, and was expected to increase by 15 per cent in 2015.⁴ Manufacturers in developed economies such as America, Japan and Europe lead the industrial robotics industry with advanced core technologies and well-established brands.

Sales of Industrial Robots
(2010 - 2014)



Source: International Federation of Robotics <http://www.ifr.org/>

² <https://www.microsoft.com/en-us/server-cloud/customer-stories/kuka-robotics.aspx>

³ <http://news.sap.com/industry-4-0-two-examples-future-factory/>

⁴ <http://research-center.amundi.com/index.php/layout/set/popin/page/Article/2016/01/Industrial-robots-the-start-of-a-megatrend>

China has seen rapid growth in its robotics market over the last few years; however, domestic manufacturers still struggle to compete with their international counterparts. While in 2014, nearly 50,000 industrial robots were sold in China, accounting for nearly a quarter of global sales, only 16,000 were produced by domestic manufacturers. MiC2025 aims to have Chinese manufacturers close this gap. Experts predict the Chinese Government will set aside CNY 500 billion for robotics development over the next few years, tripling sales volume and raising the output value of industrial robotics to approximately CNY 100 billion by 2020.⁵ This investment is also expected to encourage domestic technology upgrades in the robotics manufacturing industry, which is expected to achieve a value of approximately CNY 300 million during the 13th Five-Year Plan period.⁶ Finally, despite China's relatively low robotics density (approximately one per cent), China is expected to be home to over one third of all industrial robots by 2018.⁷ These positive predictions indicate a bright future for robotics in China. Whether they come to fruition, however, will ultimately depend on Chinese policy implementation.

China's robotics development policy environment and implementation

Although the 13th Five-Year Plan for the robotics industry is still being reviewed by the Ministry of Industry and Information Technology (MIIT), its release is expected by the end of March. In the meantime, local governments have begun to respond to MiC2025 by drafting implementation guidelines and rules. Local policies specific to intelligent industrial robotics mainly focus on creating changes within the supply chain, robotics users and service platforms.

Following MiC2025's release, Shanghai's government acted fast in issuing the *Rules of Special Support on First Breakthrough and Application Models of High-End Intelligent Equipment*, subsidising 30 per cent of first sales for breakthrough technology and 20 per cent of investment for application models.⁸

In December 2015, Foshan's government released a policy which pledged to support over 3,000 local enterprises in achieving intelligent upgrades with special funds for automation from 2015 to 2017.⁹ In January 2016, Dongguan's government announced that it will provide a maximum CNY 5 million reward for companies conducting projects with Dongguan-made robotics.¹⁰

Despite the emergence of a number of local documents

⁵ <http://en.xinfinance.com/html/Industries/Manufacturing/2015/41593.shtml>

⁶ <http://finance.people.com.cn/stock/n/2015/0731/c67815-27390031.html>

⁷ Robotics usage density: the number of robots used per 10,000 workers. See: http://www.worldrobotics.org/index.php?id=home&news_id=286

⁸ <http://www.imrobotic.com/news/newsDetail.php?sid=5&fid=148&nid=298>

⁹ http://www.foshan.gov.cn/zwgk/zfgb/rmzfbgswj/201510/t20151014_5431305.html

¹⁰ <http://xxgk.dg.gov.cn/publicfiles/business/htmlfiles/cndg/s1271/201601/1010978.htm>

detailing MiC2025 implementation, the Chinese Government will likely still encounter problems putting the plan into action. First of all, a lack of broader supportive policies and mechanisms in other areas may affect MiC2025's effectiveness. Although the policies listed above provide general guidelines and support for smart manufacturing and intelligent robotics, funding these policies and ensuring that robots are properly applied in factories will require close coordination in the areas of taxation, finance, technology and talent. Second, making policies in accordance with local circumstances is critical. Industrialisation levels and regional focuses differ across China; local governments that blindly invest in robotics as a way to curry favour with central government officials will waste resources and produce low-quality products. Whether the government properly incentivises prudent investment and implementation will ultimately determine the success of the MiC2025 plan.

Implications for foreign robotics manufacturers

China's robotics policy environment presents both opportunities and risks for foreign-invested companies operating in China. Abundant potential demand and favourable robotics policies make China an attractive destination for robotics manufacturers today. Currently, foreign-made robotics dominate 70 per cent of the Chinese market and, even though Chinese companies are catching up, foreign companies with sophisticated technologies will still enjoy a favourable market share in the near term.¹¹ Additionally, technical superiority also enables foreign manufacturers to take the initiative in cooperating with Chinese partners when developing innovative robotics parts, materials and operation systems.

Despite these substantial opportunities for development, foreign companies still face significant risks in the Chinese market. When collaborating with Chinese partners, they may find themselves confronted with intellectual property (IP) issues. Although China has been making efforts to address IP concerns over the last few years, Chinese IP laws and regulations remain vague and underdeveloped. Many foreign companies—especially those that are technology-intensive—frequently suffer patent violations regarding designs, trademarks and software. Although foreign robotics manufacturers are confident that innovation will be protected at home, the Chinese robotics landscape presents an entirely different picture.



Finally, in addition to concerns over IP, the expectation of increasingly fierce competition from domestic companies merits the attention of foreign robotics manufacturers. Amid the current robotics craze, almost all policies favour domestic companies in two ways.

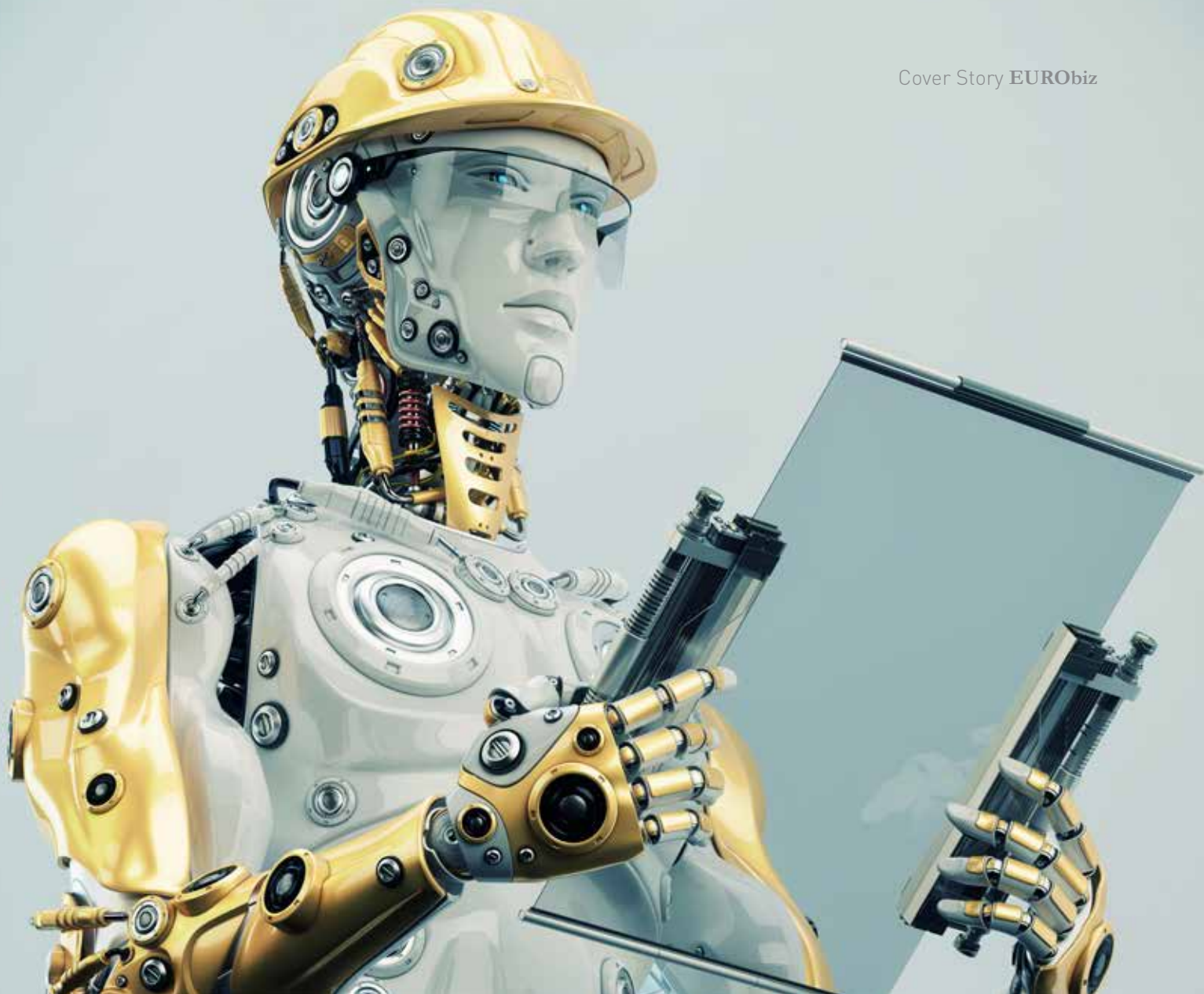
First, national and local governments have provided Chinese producers enormous financial incentives for research and development, talent recruitment and training. For companies that purchase domestic robots, local governments have started to compensate for lay-offs and replacement expenses. This means that as the Chinese robotics industry develops further, foreign robotics manufacturers will begin to encounter challenges from state-backed domestic competitors.

Second, foreign companies in various industries might be pressured to purchase domestic robots in order to obtain favourable treatment from the Chinese Government. Depending on whether Chinese manufacturers are successful in converting MiC2025 funds to high-quality, high-efficiency production, these risks could threaten the operations of MNCs in China in the medium-to-long term.

In sum, the intelligent robotics industry is already transforming global manufacturing, and China's sudden emergence onto the world stage provides tremendous opportunities for both Chinese and foreign manufacturers. While the ultimate efficacy of MiC2025 remains unknown, China has demonstrated its intention to develop a powerful domestic robotics industry. Remaining wary of risks, advanced foreign robotics manufacturers should recognise the potential for rapid growth in the Chinese market, and should pursue careful collaboration with Chinese partners in the common interest of both expanding profit margins and propelling China's economic transition further along. **EB**

*Founded in 1984, **APCO** has grown into one of the largest independent communication, stakeholder engagement and business strategy firms in the world, with 35 offices and more than 600 people worldwide. We challenge conventional thinking and inspire movements to help our clients succeed in an ever-changing world. Stakeholders are at the core of everything we do – we turn the insights that come from our deep stakeholder relationships into forward-thinking, creative solutions that always push the boundaries. By combining diverse global viewpoints and local insights, we help our clients plan for what's next.*

¹¹ http://finance.cnr.cn/jjpl/20160105/t20160105_521030950.shtml



DO ANDROIDS DREAM OF ELECTRIC SHEEP?

Future trends in the robotics industry

As we have already seen in the previous article, a great deal of money will be pouring into China's robotics industry over the next few years, which will bring both opportunities and risks for foreign investors. In this article **Stefan Sack** former Vice President of the European Chamber and former Chairman of the Chamber's Shanghai Chapter, looks at how robotics could help China to overcome its demographic imbalance and says that human-robot collaboration could be the future of manufacturing.

The Spring Festival Gala that was broadcast on 7th February, 2016, featured an amazing performance set against the backdrop of the Guangzhou skyline. The group Alpha1S performed a dance with 540 individuals, which was broadcast to 690 million people. While it doesn't match the 15,000 performers that took part in the opening ceremony of the Beijing Olympics, what made this special was that these perfectly synchronised dancers were not humans, but robots – what a change in just eight years.

Is this China's future development in microcosm? And what role will robots play in China manufacturing, an industry that was at the centre of its economic rise over the last three decades?

Robot choreography aside, the nation was focussed on robots in November 2015, when Beijing hosted the World Robotics Conference. A congratulatory note sent by President Xi Jinping praised automation as “the bright pearl in the imperial crown of the manufacturing industry”. The breadth of its application in R&D and manufacturing has become an important yardstick by which industry development, standards and technological innovation are now measured. Its inclusion as one of the key industries promoted under the Made in China 2025 plan means that it will be one of the pillar industries tasked with raising China's economic development to the next level.

And not before time, too! China's demographic dividend has expired – the number of young workers has been contracting year-on-year since 2010. Factories in Guangdong and Zhejiang that used to welcome floods of migrant workers are now having to fork out for higher wages or put up with empty seats at their conveyor belts. Compounding this issue is the increased requirement for high-quality, precision work. This relies on a workforce that has a level of education commensurate with high-end manufacturing processes.

But not only this: increased awareness of environmental, health and safety issues has forced factory directors, company executives and the government to rethink the future of China's manufacturing.

Robots can be a solution to a number of these challenges. As opposed to people, they can be multipurpose. They can be applied in hazardous environments, work precisely, don't go on strike, seldom take breaks (routine maintenance aside) and don't leave the factory during the Chinese Spring Festival.

In recent years, the government has encouraged the development of robots in China as much as new energy vehicles and Internet+, two other areas that have the potential to promote a climate of innovation and high technology, which can lead China away from its status as the world's workbench.

Policy support

The Made in China 2025 initiative may be seen by some as something of a gamble, but its 10-year horizon underscores just how seriously China views it.

In the document presented by Li Keqiang in May 2015, 10 pillar industries were named, among which the robotics industry was second on the list. The list was topped by the development of next generation information technology and also included new energy vehicles, aerospace, maritime and rail industries.

It is not only Beijing that has provided strong policy support encouraging automation of manufacturing processes, local governments have developed their own incentives, too. Zhejiang and Guangdong provinces have put forward concepts like ‘Robots replace Humans’ and are offering subsidies in the range of 10 to 15 per cent to robot end users. Dongguan City has stated the creation of ‘unmanned factories’ as a potential goal. One example in the electronics industry is Changying Precision Technology, who reduced their original workforce by 90 per cent, from 650 to 60, by introducing automation lines and robots.

Application areas are expanding

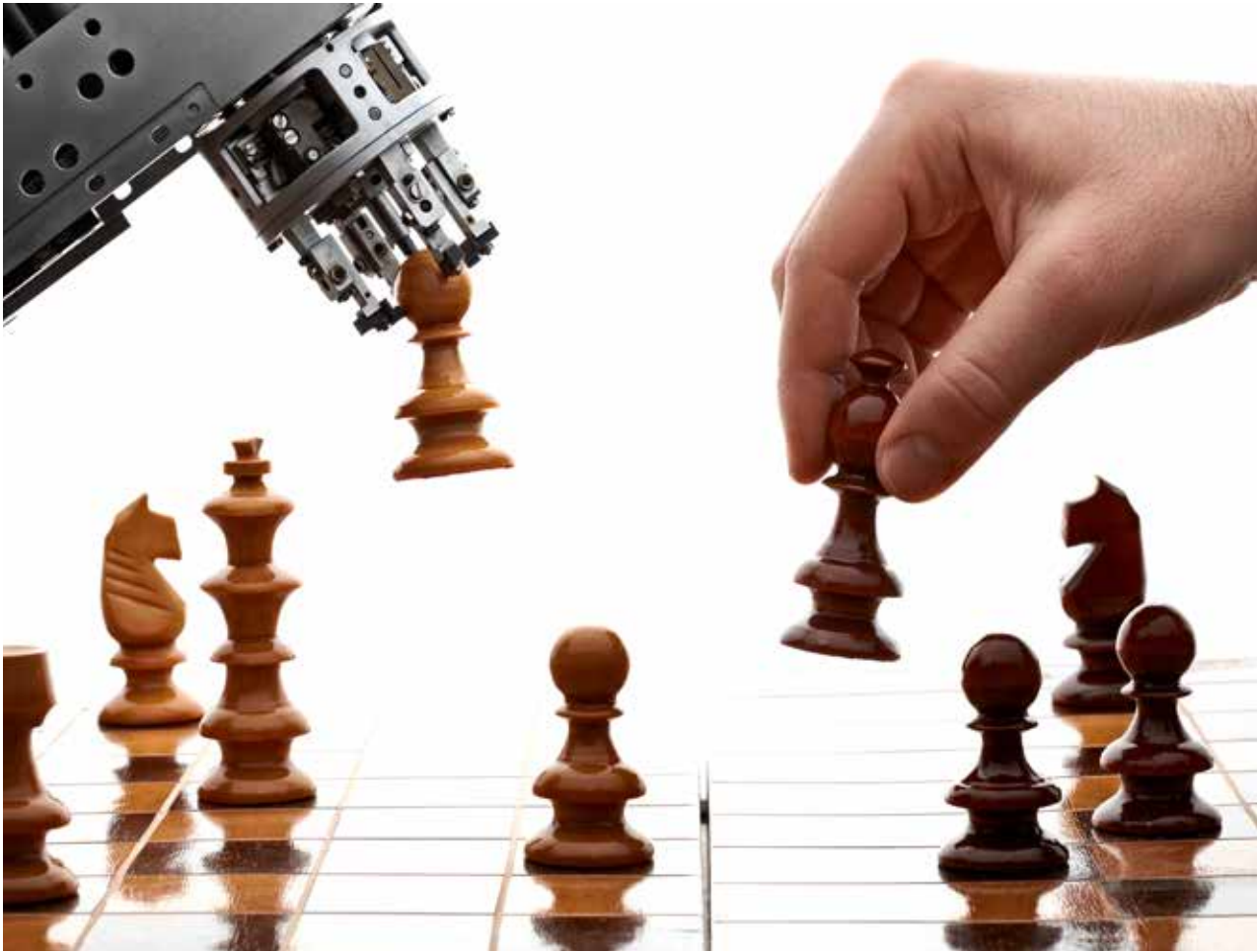
The most widespread use of robotics worldwide is still in the automotive industry, with 100,000 out of 240,000 robots sold in 2014 going either to automotive OEMs or their suppliers. But the range of applications for robotics is expanding, and China could be the driver for global changes: with China now looking at other industries to replace humans with robots this change could happen quickly.

This presents robotics suppliers with some exciting opportunities: alliances between manufacturers with an understanding of goods as varied as shoes, clothes or electronics on the one hand, and a partner that can offer automation on the other could have a brilliant future. Therefore, there is an increasing need for so-called integrators and trained robot specialists in China. Currently this field is neglected, but no doubt its importance will be raised as China edges towards fulfilling its potential for automating its manufacturing industry.

There is even the possibility for potential customers to help themselves and become active integrators for a changing industry, even for their competitors. In 2015, the Chinese home appliance manufacturer Midea announced the formation of a joint venture with the Japanese robotics company Yaskawa, in order to enter the robotics industry. But they didn't place all their eggs in one basket: with over five per cent of shares, Midea is also KUKA's fourth largest shareholder.

Major trends: open and easy automation + human-robot collaboration

What does the future hold in this industry?



First, plug-and-play robots will be the way forward. Much like the development of electronics in the 80s and 90s, initially only nerdy scientists used new technology. Nowadays, laptops and tablets are so easy to operate that children start using when they are still in kindergarten. We are currently still in the phase where robots are operated by specialists, but this will change.

Many robotics companies are opening this area up to the normal factory worker. For instance, Italian manufacturer Comau has introduced Open Robotics, which uses mapp technology—a modular intuitive programming language—to integrate different operating procedures, in order to reduce costs and facilitate ease of use. Others will no doubt follow.

Another important trend is human-robot collaboration. A robot can be best utilised in cooperation with humans instead of being separated from them. Now, if you enter an automated factory, it is somewhat like entering a mechanical zoo, with the robots the ‘dangerous animals’ kept behind cages. When the ‘cages’ are opened, robots are automatically deactivated as a safety measure to prevent accidental injury. This is changing though, with more robots being developed that are safe for human collaboration. German

manufacturer KUKA recently presented models that can support human collaboration without the risk of causing injury. Comau launched their human-cooperative robot AMICO at the China International Industry Fair in 2015. The word ‘amico’ means ‘friend’ in Italian, and much like the Spring Festival dancers, AMICO has a human shape and a friendly face.

As robots increasingly become android by design, it seems to underline the fact that we are heading towards a future that will involve closer relationships between humans and robots.

Humans will soon need to welcome these new ‘colleagues’ in the workshops of China, and indeed throughout the rest of the world. The opportunities that these artificial creatures present are huge and should be used wisely. **Eb**

Stefan Sack is an expert in the automation industry and former CEO of COMAU China. He is the founder of the consulting company SinEuSyn Ltd, which supports companies lifting synergies by using Chinese and European cultural approaches in the fields of manufacturing and Industry 4.0. Stefan can be contacted at stefan.sack@sineusyn.com



ELECTRIC ARGUMENTS

Disruptive electrification of Chinese urban mobility

The direct and indirect costs of air pollution in China are significant and growing with increased urbanisation and production. As one of the major contributors to PM 2.5, reducing traffic exhaust fumes is a clear priority of the Chinese Government, and promoting the use of New Energy Vehicles (NEVs) is a good place to start. As a central part of the Made in China 2025 initiative, **Jeroen Pynenburg** of **ABB** looks at impact the NEV sector will have on China's overall development goals over the coming years.



In Beijing (and many other Chinese cities), up to a third of the city's PM2.5 pollution is caused by vehicle exhaust fumes, according to the Beijing Municipal Environmental Protection Bureau. In response to this dire problem, China's central government has embarked on a number of initiatives aimed at significantly reducing air pollution through focussed interventions, and it is this determination that could see China take a leading position in the New Energy Sector. Hopefully it will not be too long before the investments made today start to pay us back in cleaner air.

The number of people working in industries related to renewable power generation and efficient power use is growing rapidly; of these, the NEV industry is one of the more important and attractive ones – clean energy vehicles and equipment has been prioritised in the Made in China 2025 plan. It is set to influence the lives of billions, and bring disruptive change.

Within the next five years the automotive and energy industry in China, and indeed the world, will see more change than in the last 50 years. Car manufacturers will need to commit to producing electric cars and

power companies will need to commit to renewable generation and efficient storage of electric energy.

Electric mobility will contribute significantly to the ultimate goals of reducing pollution and improving the quality of life in China's cities, and throughout the entire country. However, although this is an inevitable shift, it will not be easy to change the mobility habits of 1.3 billion Chinese people, many of whom have only just started to get used to owning cars.

So, what is happening and why will it happen fast?

An internal combustion engine peaks at ~30 per cent efficiency while burning fuel in its cylinders. This is the result of a century of continuous advances and trillions of dollars in research and development. The room for improvement that's left in combustion engines is minimal. Yet, even though still in their first generation, electric cars can comfortably reach efficiency levels of 85–90 per cent – at least three times more energy efficient than conventional engines. This clearly demonstrates the tremendous potential of the electric car, in addition to the benefits of fast acceleration, very low maintenance costs due to a large reduction of moving parts and no noxious



exhaust fumes — and it could be driven on pure sunlight.

Since the introduction of the first series of mass-produced NEVs around 2010, many car manufacturers in China have been creating plans to introduce a completely new generation of electric cars and/or electrify existing models. China is even taking the lead in a number of initiatives and is mobilising the entire industry for change. More than 170 model launches are scheduled over the next three years by all major manufacturers. This represents a significant effort for these companies that have their capital invested in expensive production lines that produce gear boxes and petrol engines, and oil companies that are valued on reserves for the next 30 years. We now need batteries, electric motors and solar farms, instead.

There is a clear clash of ideologies among the ‘petrol heads’ that prefer the sound and power of a 6-cylinder and the environment lovers that believe in the cleaner electric variant delivering the same power, and even better torque, the instant the pedal hits the metal. I am certain which technology will prevail.

Consumers will soon be faced with the choice of either a fun, rapidly-accelerating electric car, which can be charged on pure sunlight and which might even earn some tax breaks, and an ordinary, heavily-taxed, fossil-fuel car which is banned from entering city centres and is decked out with expensive emission control systems.

Currently, the price of electric cars is mainly driven by the price of the battery; all the other components are at least of equal, but in most cases even lower, value to those on conventional cars. Technology like digital cameras and solar panels were once expensive, but not anymore. These technologies followed a steep ‘learning curve’ but declining costs soon took effect. A similar development is expected for the electric car. Over a 10-year period, starting from 2010, with a price of USD 1,000 per kWh capacity in the battery, it is now projected that costs will be only one tenth of that in 2020 at around USD 100 per kWh. This

disruptive development will put the electric car within the reach of most people. The first movers in the industry will soon be offering cars at price levels that are competitive.

If mainstream acceptance of electric vehicles is to become a reality, consumers must feel confident that replacing their conventional vehicle with a NEV alternative will not be financially disadvantageous, leave them stranded on the way to work or otherwise restrict their mobility options. This means that a credible charging network will be a crucial pillar to further accelerate the adoption of NEVs. Today’s NEV batteries can provide up to a 150km driving range and can be charged in 25 minutes. With the application of new technologies, within the next 10 years battery sizes will triple and charging times will be reduced by half or even two thirds. The result will be charging times that are 6-10 times faster than today’s. Charging a battery will be almost like fuelling a car.

Add to the price and performance arguments in favour of electric mobility, the pressure from an ever-growing group of people advocating a cleaner environment, and we have all the ingredients for the disruptive electrification of mobility. Only the parties that play along will deserve a place in the mobility value chain of the future: for China, that future looks very bright. The people are ready for the transition and the government is launching a number of measures and policies to support electrification. This presents an excellent opportunity to even play a significant role on a global scale. [Eb](#)

ABB is a leading global technology company in power and automation that enables utility, industry, and transport & infrastructure customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in roughly 100 countries and employs about 135,000 people. ABB has a full range of business activities in China, including R&D, manufacturing, sales and services, with 18,000 employees, 40 local companies and an extensive sales and service network across 147 cities.

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COME TOGETHER

Areas for future EU-China cooperation through smart manufacturing

On 19th May, 2015, China’s State Council unveiled their China Manufacturing 2025 strategy, also known as Made in China 2025 or the ‘fourth Industrial Revolution’. It aims to turn China into a leading smart manufacturing nation by encouraging innovation and digitalisation, where production processes and speeds will be adapted to minimise costs and increase efficiency. **Mireia Paulo**, Business Development Manager at **A&Z Law Firm**, outlines areas for potential collaboration between the EU and China within the framework of the Made in China 2025 initiative and the EU-China Investment Cooperation.

Premier Li Keqiang has repeatedly stated that Made in China 2025 will be implemented in conjunction with Internet Plus, a plan that focuses on the Internet of Things, mobile Internet, Big Data and cloud computing. The Chinese Government has pledged support that will cover tax incentives and special funding for ten industrial sectors that have been identified as the core of the plan. These include: next generation information technology; automated machine tools and robotics; aerospace and aeronautical equipment; maritime equipment and high-tech shipping; modern rail transportation equipment; new energy vehicles and equipment; power equipment; agricultural equipment; new materials; and biopharma and advanced medical products.

Possible avenues for the EU-China Investment Cooperation

The launch of China’s One Belt, One Road (OBOR)

initiative coincided with the launch of the European Commission’s Investment Plan for Europe (IPE), also known as the ‘Juncker Plan’. During the last EU-China High Level Economic Dialogue, held in Beijing on 28th September, 2015, officials from both sides explored possible areas of collaboration open to the EU and China in light of these two economic initiatives.

The OBOR and the IPE share a common interest in that both projects seek to channel investments. Three main avenues for cooperation were identified for 2016:

- Set up a joint working group comprising experts from both the EIP and OBOR initiatives, who will be charged with the responsibility of establishing cooperation mechanisms.
- Establish an EU-China Connectivity Platform to facilitate discussions on cooperation strategies, plans and policies.

- Launch a European Investment Project Portal, which will be used to attract future domestic and international investment into projects in the EU.

Establishing a common ground

On 16th February, 2016, a workshop on China's OBOR Initiative, the European Fund Strategic Investment and the EU-China Investment Cooperation was held at the European Parliament in Brussels. It was organised by Ernest Maragall, MEP and member of the Committee on Budgets of the European Parliament. The workshop provided an opportunity to review and discuss the achievements of the EU-China Investment Cooperation in 2015, with the aim of exchanging views between European and Chinese official institutions, as well as the business and investment experts working on the EU-China Investment Cooperation.

During the workshop, Madame Yang Yanyi, Chinese Ambassador to the EU, emphasised the many converging interests that exist between Europe and China's economic agendas, such as China's Internet Plus strategy and Europe's Digital Agenda. She also elaborated on the advancement of EU-China cooperation in the digital economy, including the development of 5G.

At the same event, Miguel Gil-Tertre, member of the cabinet of Jyrki Katainen, Commissioner/Vice President for Jobs, Growth, Investment and Competitiveness, and Laurent Bardon, Policy Coordinator, China, Hong Kong, Macao, Taiwan, Mongolia at DG TRADE, European Commission, highlighted strategic areas for the EU-China Investment Cooperation to focus on for the present year:

1. Encourage Chinese investments to advance European digital infrastructure and services in accordance with the Juncker Plan.
2. Create a High Level Task Force to identify specific opportunities for European businesses in China. Also, expand Chinese business in Europe in fields such as hi-tech innovation, green and renewable energy, and agricultural equipment.
3. Establish major investment funding and incentives focused on incubating hi-tech start-ups and collaborative innovation in both Europe and China
4. Enhance cooperation on Smart Cities.

Potential opportunities open to EU-China industry

According to the Made in China 2025 strategy and the EU-China Investment Cooperation, it is possible to identify key common sectors and new smart

manufacturing technologies that are of equal interest to both European and Chinese companies, such as Big Data, cloud computing, mobility and the Internet of Things. A large number of business opportunities have already been identified in the following sectors: pharmaceutical and healthcare; automotive; hi-tech innovation (robotics, low carbon technologies and green energy); transportation (railway equipment, aerospace and aviation equipment, maritime engineering equipment and high tech vessel manufacturing); as well as research and innovation.

For instance, Miao Wei, China's Minister of Industry and Information Technology, encouraged local Internet companies to develop electric vehicles, which will consequently reduce the reliance on imported oil and reduce China's carbon footprint.¹ A McKinsey Global Institute report shows that China's chemical industry is exploring new ways to employ Big Data on inventory levels. Big Data also has the potential to provide great support to farmers, enabling them to monitor crop conditions in real time, which will cut production costs, increase farm yields and allow product customisation. The Internet of Things also entails new business opportunities for the healthcare sector, for example, the implementation of remote patient monitoring. This is a growing field offering advantages to the home healthcare and elderly care sectors, and anyone residing in an isolated area.²

It remains to be seen how the cooperation will play out once the Made in China 2025 strategy has been fully realised. In the meantime, the ability to align the strategy with the EU-China Investment Cooperation will bring numerous collaboration opportunities in both China and Europe. Most importantly, a regular communication between European and Chinese officials will ensure a streamlined approach to the investment in both regions, facilitate B2B exchanges and increase enterprises' cooperation through joint ventures or merger and acquisitions. **EB**

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¹ Tate, Paul, *China Adopts 'Smart Manufacturing' Strategy To Up Its Game in Manufacturing*, 10th March, 2015, <www.gilcommunity.com/blog/china-adopts-smart-manufacturing-strategy-its-game-manufacturing/#sthash.M5E0C9Dj.dpuf>

² Woetzel, Jonathan et al, *China's digital transformation*, McKinsey, July 2014, <<http://www.mckinsey.com/industries/high-tech/our-insights/chinas-digital-transformation>>

A photograph of a factory interior. In the foreground, a worker wearing a red hard hat and a white short-sleeved shirt is seen from the back, working on a large engine component. The engine is mounted on a blue frame. In the background, other workers and factory equipment are visible under bright overhead lights.

CHINA'S MULTISPEED ECONOMY

Opportunities and challenges in industrial products and services

Business leaders across China's industrial landscape just waved goodbye to a challenging and, for many, probably a worse-than-expected 2015. As we head into 2016, the outlook for many players remains rather murky. Though the market is never easily predicted, by analysing past trends and events a picture of the opportunities that lie ahead does start to emerge. **Michel Brekelmans** and **Steve Cao** of **L.E.K. Consulting** provide the analysis.

Let's start with the economic outlook. The days of double digit growth are definitely over. An average of 6.5 per cent is the 'new normal', but is this really that bad? Yes, when you compare it to the 14 per cent growth in 2007. But seven per cent growth equates to CNY 5 trillion in incremental GDP in 2016, which is the same as the entire Chinese economy 20 years ago or the size of the entire Indonesian economy in 2014. In any major economy, seven per cent would be considered an economic miracle – in China, we call it a slowdown!

The headwinds that many industrial companies have been facing in the past two to three years are not necessarily a market growth issue, nor will that be the case going forward. Growth of six to seven per cent per annum means the economy in 10 years will be twice its current size. In most cases underlying end-market growth across many industrial sectors will remain robust. However, other factors are impacting company performance in the short term, such as overcapacity, cutthroat competition and the delay in capital spending caused by China's anti-corruption drive.

China's easy days of catch-up growth are over. Ten years ago, all you had to do was be in the right place at the right time and you had a great business. The more critical issue for business leaders now is whether they have the right capabilities, business model and product offering to compete in this new environment.

China's multispeed economy

Growth in China is not evenly distributed across the economy – China has become a multispeed economy. Some sectors are still showing very fast double-digit growth. For instance healthcare and environmental protection are doing very well and the digital space continues to explode. But other sectors such as automotive are slowing down to single digit growth.

So with average GDP growth around seven per cent and some parts of the economy growing much faster than that, by definition we are seeing some sectors that are flat or even in decline. Suppliers of capital equipment have been hit hard by a fall in demand due to overcapacity. Also, the government is trying actively to rebalance the economy toward more consumption and services and away from investment and infrastructure-led growth.

The demography impact

The Chinese population is greying rapidly, and the size of the working population is shrinking. This trend means labour cost pressures are likely to remain and rising prices in service sectors will prevail. Labour-intensive and low-value-added activities will continue to shift

to cheaper locations either within or outside China. Another key trend is the migration into towns and cities. China's urban population is expected to reach one billion in 2030, which will provide some buffer against the shrinking working-age pool as new workers move from rural subsistence farming into the secondary and tertiary sectors.

The political dimension

More so than in any other market, the business climate in China is shaped by government policy and regulatory developments, and sometimes the lack thereof. The Third Plenum in late 2013 set the stage for China's reform direction under Xi Jinping over the next 10 years.

The government announced some major paradigm shifts, which have since been given more colour – from quantity to quality, accepting a lower level of growth and a focus on the environment. The role of the government was also to change: from participating in and planning the economy to stepping back. The economy is now too large and complex for the government to control all aspects of it the way it had in the past – the stock market turmoil over the past six months made this abundantly clear. Whether China actually follows through with concrete actions to liberalise key aspects of the economy remains to be seen.

In addition to these promises, China last year proposed several industrial upgrade initiatives, including Made in China 2025, aimed at boosting high technology and innovation over the long term.

Made in China 2025...

The Made in China 2025 programme has begun to provide a level of specificity that gives more direction as to where China is heading and how company leaders should align their strategies. It is interesting that the programme focuses on a 10-year horizon rather than the more typical five-year period. China's ambition is to become a manufacturing power that leads through innovation and not through scale or costs. There is no long-term value in the latter.

Made in China 2025 specifies the key tasks necessary to achieve China's industrial ambitions. These include improving manufacturing innovation; integrating technology and industry; strengthening the industrial base; fostering Chinese brands; enforcing green manufacturing; promoting breakthroughs in 10 key sectors; advancing restructuring of the manufacturing sector; promoting service-orientated manufacturing and manufacturing-related service industries; and internationalising manufacturing.

The plan also identifies the 10 key industries that will likely enjoy high-growth prospects within China's multispeed economy: new information technology; numerical control tools and robotics; aerospace equipment; ocean engineering equipment and high-tech ships; railway equipment; energy-saving and new-energy vehicles; power equipment; new materials; medicine and medical devices; and agricultural machinery.

... or Made in India?

The key theme that cuts across the plan is innovation: China needs to upgrade manufacturing from quantity to quality. There is recognition that China needs to follow this path as it is at risk of getting stuck in the middle. China is not yet able to compete with advanced nations such as the US, Germany and Japan in terms of advanced manufacturing and innovation. At the same time, emerging economies with their own advantages are catching up and could potentially pose a threat from the bottom. Indian Prime Minister Modi last year introduced the 'Made in India' concept.

So what does it all mean?

If you are running an industrial product or business service company in China, what's next? What does it all mean for laymen trying to run a business? They are paid to grow their business in a sustainable and profitable way in order to keep shareholders happy. So what are the concrete opportunities for businesses in China?

Overall, the outlook seems quite positive for those who can bear some of the short-term wobbles:

- Market forces will play a more prominent role in the economy.
- The size of the economy will double in the next 10 years.
- A drive towards innovation and globalisation means a more level playing field.
- Innovation, quality and manufacturing excellence become key competitive levers – pure cost-driven competition or government-relationship models are less likely to succeed.

But the easy days are over. Companies have to pick their battles carefully and develop strategies and capabilities to

have lasting success. There are three investment themes that align against the major macro trends and that can support continued development of industrial product and service providers in China.

Automation and robotics

With labour costs going up, many Chinese manufacturing businesses are now experimenting with introducing automation and robotics into their production processes in an effort to save costs and improve productivity.


Green energy and new materials

After the recent commitments from China at the UN Climate Change Conference in Paris the government will double down on its efforts to control environmental impact, creating opportunities for suppliers of technology and solutions in clean energy, lightweight materials, etc.

Business model evolution – from product to solution

Driven by rising labour costs and more demanding customer needs, we are seeing a gradual shift away from competing purely on cost in the industrial product and service space. Customers are increasingly looking at

value, and suppliers are increasingly looking at lowering total cost of ownership (TCO) – reducing downtime, optimising maintenance and repair, and improving product life time.

No doubt many others opportunities exist – each will need to be carefully weighed against China's macro trends and individual company's resources and capabilities to compete effectively in China's multispeed economy. 

L.E.K. Consulting is a global management consulting firm that uses deep industry expertise and rigorous analysis to help business leaders achieve practical results with real impact. We are uncompromising in our approach to helping clients consistently make better decisions, deliver improved business performance and create greater shareholder returns. The firm advises and supports global companies that are leaders in their industries – including the largest private and public sector organisations, private equity firms and emerging entrepreneurial businesses. Founded more than 30 years ago, L.E.K. employs more than 1,000 professionals across the Americas, Asia-Pacific and Europe. For more information, go to www.lek.com.



A photograph of a man wearing a yellow hard hat and a tan work jacket, looking down at a laptop computer. He is standing in front of a control panel with various buttons and a small screen. The background is a light-colored wall with orange horizontal lines.

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.

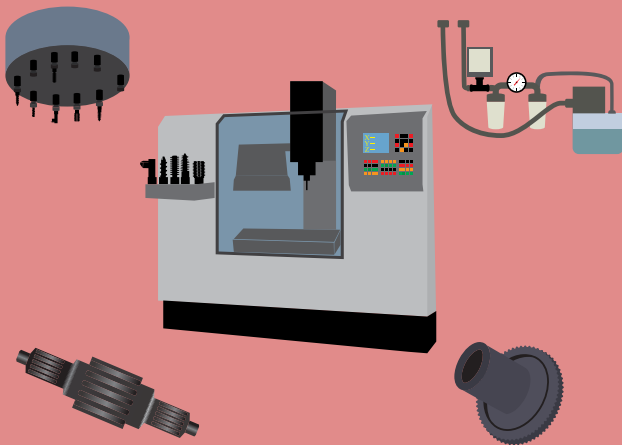
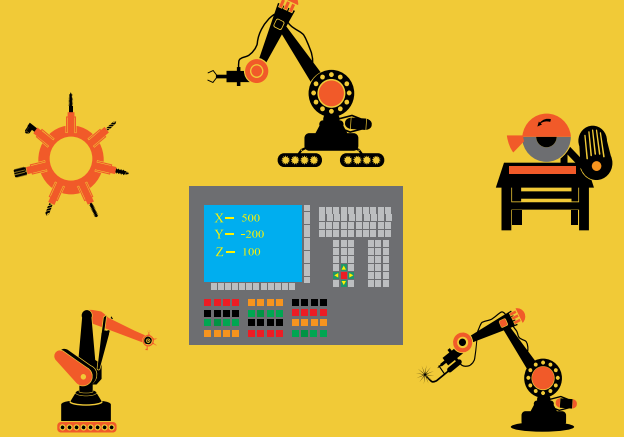
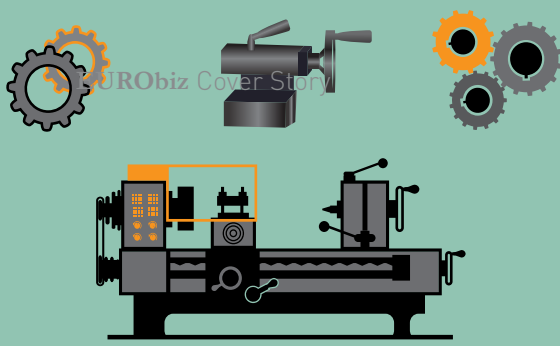
The 'consumerisation of IT' trend has created many opportunities, for example, warehouse employees can use iPads that are paired with Bluetooth scanners that let them know what to pick up next and allow them to register their operations in real time. Similarly, a maintenance technician can get an alert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



THE GREAT LEAP FROM 2.0 TO 4.0

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

Inspired by Germany's Industry 4.0 programme, Made in China 2025 is seen by many as a panacea to China's current manufacturing woes, with its ambition to transform China from the world's low-cost factory into a leading manufacturing heavyweight in just 10 years. **Justin Tao** and **Tim McLean** from **TXM Lean Solutions** take a slightly different view. They suggest that before most manufacturers in China consider the kind of costly investments in information technology, robots and other forms of automation typically associated with Industry 4.0, they need to consider upgrading their management practices.

Ever since Made in China 2025 was unveiled in 2015, many Chinese manufacturers have viewed it, or its slightly more mature cousin, Industry 4.0, as something that can turn junk into gold with just a touch. A common assumption is that the

numerous problems that they currently face can be solved through embarking on pilgrimages to global smart factories and by adopting robotics, 3D printing and other advanced technologies.

Early in 2015, the Ministry of Industry and Information Technology (MIIT) released the Smart Manufacturing Projects, which identified a number of archetype projects and symbolised the official launch of the smart manufacturing segment within the overall Made in China 2025 plan. Some companies scrambled to receive government funds in order to assist with upgrading their factories. However, poor basic operational management and a lack of understanding of the technological revolution means that a number of these will not in fact produce gold, but instead rack up costs that they did not expect and cannot sustain.

Made in China 2025 focuses on five major projects, including establishing manufacturing innovation centres and boosting intelligent manufacturing. But it doesn't feature much language that focuses on manufacturing excellence or leadership. Modern manufacturing thinking, such as Lean, Agile or Six Sigma, has been neglected. This is something of an oversight: if your bill of materials is not accurate, your process is broken or your equipment maintenance procedures are lacking, then your Big Data or robots will be completely ineffective and may actually become a liability to your business.

In China Manufacturing 2025 (as in Industry 4.0), machines and systems will independently exchange information, trigger actions or control each other. So you might be thinking, *do we even need manpower as a part of the workforce anymore?* The answer is an emphatic 'yes'! Perhaps now more than ever, manufacturing businesses need highly skilled leaders and teams.

As a benchmark, German manufacturing never neglects people development. Academy Cube was introduced in Germany, which connects students, graduates and professionals with companies. The aim is to provide qualified and motivated people with skills that have actual relevance to companies and fit the new challenges that they face. However, people development does not appear to be a major focus in the China Manufacturing 2025 plan. Over the years, many manufacturers in China find that their biggest challenge is first identifying, and then successfully recruiting and retaining, the talent that they need. If this issue is not properly addressed, and existing management skills in Chinese manufacturers are not upgraded, much of the proposed investment in new technology will be wasted.

Manufacturing efficiency and quality remain major challenges for Chinese producers and obviously need to be overcome quickly if Chinese manufacturing is not to be squeezed by both emerging low-cost producers and advanced industrialised economies. This means that before the focus can be shifted to the magic of intelligent manufacturing there is much work to do in addressing the basics of manufacturing management. Globally proven techniques such as lean manufacturing can deliver huge gains in productivity and quality without the need for substantial capital investment. Most Chinese factories still hold great potential for improvements that can be gained in this way.

Before manufacturers can make the leap to Industry 4.0, they should consider each phase:

- **Industry 1.0** was based on the introduction of mechanical production equipment driven by water and steam power.
- **Industry 2.0** was based on mass production achieved by a division of labour and the use of electrical energy.
- **Industry 3.0** was based on the use of electronics and IT to further automate production.
- **Industry 4.0** will be based on the use of cyber-physical systems.

It is safe to say that many manufacturers in China still are in the Industry 2.0 stage, some remain in Industry 1.0, while some even occupy the realm of Industry 0.0 (i.e. handcraft workshops). The well-known seven wastes in lean manufacturing of transportation, inventory, excess motion, waiting, over-production, over-processing and defects, are easy to find in almost every Chinese company. It is important to note that in most cases eliminating the seven wastes costs almost nothing. Without improving processes and eliminating these wastes, any upgrade to Industry 4.0 will present a major burden.

If China truly wants to learn from the success stories of Japan and Germany, it needs to follow the same path that they travelled. This means starting with improving quality and employing lean manufacturing to deliver better products and increase productivity. It needs to develop high-quality manufacturing talent, particularly leaders, who can lead the transformation of China's manufacturing industry. There are no shortcuts to manufacturing excellence, so it is essential that Chinese manufacturers first improve their Industry 1.0 or 2.0 before making the leap to the dizzying heights of Industry 4.0. **Eb**

***TXM** is a leading Australian Lean Manufacturing and Project Management Company, with offices in China, the UK and the USA. TXM adapt and create profit-building processes to fit each customer's industry and culture. With decades of manufacturing expertise and outstanding lean coaching skills, TXM achieves real lasting results for our clients across every aspect of operations. We develop the people, the processes and the culture to achieve sustainable positive change and provide a platform for ongoing continuous improvement within your business. Using proven world-class Lean Manufacturing practices, our broad industry backgrounds and practical 'hands-on' coaching approach means that TXM can work with your team, to develop tailored long-term sustainable solutions to achieve breakthrough improvements in business performance.*



MADE IN CHINA 2025

What does it mean for EU SMEs?

In the second quarter of 2015, China's State Council unveiled the country's 10-year national plan, Made in China 2025. Its purpose is to upgrade China's manufacturing industry, with a focus on product quality, sustainability and developing domestic brands to make China a world manufacturing power. **Dr Martina Gerst**, Standards and Conformity Assessment Advisor at the **EU SME Centre**, looks at the opportunities that this initiative may present to EU SMEs.

In addition to raising the quality of manufacturing, Made in China 2025 looks to increase productivity through digitisation and the implementation of advanced technologies, to bring it up to par with other countries. To facilitate this process, the State Council has established a fund of CNY 40 billion to push innovation, promote emerging industries, start-ups and other projects.

The plan will certainly have a global impact – Chinese manufacturing currently accounts for about 20 per cent of the world's total¹ and ranks first worldwide in terms of output in more than 220 categories among 500 major types of industrial products.²

At the core of the plan are advanced ideas adopted from Germany, Japan, the United States and the UK, among others – nations that have all developed national plans to boost industrial competitiveness. It is widely seen as picking up on the concept of Germany's Industry 4.0, an ongoing strategic initiative of the German Government that is part of the November 2011 *High-Tech Strategy 2020 Action Plan*. Industry 4.0 holds the potential to provide 'end-to-end' transparency throughout the manufacturing process, facilitating optimised decision-making in engineering processes in such a way that enables last-minute changes to production, maintaining the ability to respond flexibly to disruptions and failures. In addition, smaller suppliers may enjoy increased business opportunities through the development of smart factories that can cater to individual customer requirements where even one-off items can be manufactured profitably.

What's in the plan?

Nine tasks have been identified as priorities that will help China to upgrade its manufacturing sector:

1. Boost innovation in manufacturing.
2. Promote the integration of industrialisation and IT.
3. Strengthen the fundamental capacity of the industry.
4. Develop quality Chinese brands.
5. Enforce green manufacturing.
6. Promote innovation in 10 key sectors (listed below).
7. Restructure the manufacturing sector.
8. Promote service-orientated manufacturing and related industries.
9. Accelerate manufacturing progress through greater opening up and internationalisation.

Besides the already massively expanded research budget of more than EUR 234 billion (2012) spent in China, the plan includes five key projects for the setting-up of manufacturing innovation centres, smart manufacturing, manufacturing base strengthening, green manufacturing and high-end equipment innovation.

These priority tasks and the focus on internationalisation should result in more opportunities for European SMEs in the following sectors:

- Next generation IT
- Automated machine tools and robotics
- Aerospace and aeronautical equipment
- Maritime equipment and high-tech shipping
- Modern rail transport equipment
- Clean energy vehicles and equipment
- Power equipment
- Agricultural equipment
- New materials
- Biopharma and advanced medical products

In order to successfully realise the nine above-mentioned tasks in these strategic sectors, the plan outlines specific support and related policies that, for example, look to deepen reform mechanisms or create a fair and competitive market environment. Strengthening fiscal and taxation policies in support of SMEs is also high on the agenda.

This support for SMEs demonstrates the government's commitment to support companies of all sizes in its push for more innovation. China's supply-side reform stresses the government's support to encourage sustainable business growth through tax cuts and reforms, encouraging entrepreneurship and innovation.

In Europe, a huge number of innovations are actually created by SMEs. They are the backbone of the European economy, accounting for more than 98.7 per cent of all European companies with about 92 per cent working with fewer than 10 employees.³ A report compiled by the German Kreditanstalt für Wiederaufbau (KfW), and three European banks, concludes that investment and innovation results in strengthened competitiveness.⁴

What opportunities are there for EU SMEs?

More than 12 per cent of European SMEs are already

¹ http://news.xinhuanet.com/english/2015-05/19/c_134252230.htm

² <http://knowledge.ckgsb.edu.cn/2015/09/02/chinese-economy/made-in-china-2025-a-new-era-for-chinese-manufacturing/>

³ European Commission "Internationalisation of European SMEs" (2010); "EU SMEs in 2012: at the Crossroads" (2012).

⁴ "SME Investment and Innovation", France, Germany, Italy and Spain (2015) by KfW Bankengruppe (KfW).

exporting their products for manufacturing to China.⁵ According to VDMA'S (Verband Deutscher Maschinen - und Anlagenbau, German Engineering Federation's) 2012 statistics, overall exports of European machinery and equipment was about EUR 34 billion.⁶

Concrete opportunities for EU SMEs can be found in the sectors defined in the Made in China 2025 plan. For example:

- **High-end equipment manufacturing**

Computer Numerical Control (CNC) Systems, specialised high-end machinery, 'productronics', cyber-physical systems (CPS), automation, machine tools, material handling, high-end components of machinery and specialised components, rail and other transportation, and marine engineering equipment.

- **Next generation IT**

Core Internet equipment, mobile communications, new displays, integrated circuits etc.

- **New materials**

New functional materials and advanced structural materials. The EU SME Centre is already supporting SMEs in this field and briefed a delegation of Austrian experts in January on how to tackle a changing China.⁷ A guide to stakeholders in the advanced materials sector can be downloaded from the Centre website at <http://www.eusmecentre.org.cn/press-article/advanced-materials-china-tackling-changing-china-austrian-smes>.

- **Clean energy vehicles**

Electric hybrid cars, electric cars, fuel cell cars, battery technology and components.

- **Clean energy technology**

High-efficiency and energy saving technologies; recycling waste treatment.

- **Training**

As the technologies listed above are all advanced, it is anticipated that services, particularly maintenance and operations, as well as vocational training, will be highly sought after in China. To ensure sustainable innovation and the transformation of China's manufacturing sector will require a highly educated workforce with a strong emphasis on talent and skills.

Innovation


⁵ EU SME Centre website, <http://www.eusmecentre.org.cn> (2015).

⁶ Vdma presentation; China's machinery imports from EU 27 (2012).

⁷ <http://www.eusmecentre.org.cn/press-article/advanced-materials-china-tackling-changing-china-austrian-smes>

The Chinese Government is encouraging what has been previously called 'indigenous innovation' (part of a profound effort by the Chinese leadership to advance the country from its status as a prolific, but low-end producer to a technology leader) for Chinese local products and services. There is a great demand for technology transfer from abroad in the high-end machinery sector especially. EU SMEs could target Chinese companies with the necessary manufacturing capabilities and provide technology transfer services to them. Building such partnerships can be a good market entry strategy for EU SMEs. For more on the opportunities in China's machinery sector, see <http://www.eusmecentre.org.cn/report/machinery-sector-china>.

Made in China 2025 calls for further marketisation, as well as a strengthening of intellectual property rights for SMEs, which should increase their ability to compete.

Small and medium-sized enterprises exporting their technology to China that have approached the Centre mostly perceive the major challenges to be the lack of uniformity in the regulatory framework, such as different implementation rules at the central and provincial level, and the level of protection of intellectual property (IP) that is key in the area of high-tech. To learn more about it, read the Centre's report *Exporting Goods, Services and Technology to the Chinese Market*: <http://www.eusmecentre.org.cn/report/exporting-goods-services-and-technology-chinese-market>. 

The EU SME Centre in Beijing provides a comprehensive range of hands-on support services to European small and medium-sized enterprises (SMEs), getting them ready to do business in China.

Our team of experts provides advice and support in four areas – business development, law, standards and conformity and human resources. Collaborating with external experts worldwide, the Centre converts valuable knowledge and experience into practical business tools and services easily accessible online. From first-line advice to in-depth technical solutions, we offer services through the Knowledge Centre, the Advice Centre, the Training Centre, the SME Advocacy Platform and our Hot-Desks.

The Centre is funded by the European Union and implemented by a consortium of six partners – the China-Britain Business Council, the Benelux Chamber of Commerce, the China-Italy Chamber of Commerce, the French Chamber of Commerce in China, the EUROCHAMBRES, and the European Union Chamber of Commerce in China.

To learn more about the Centre, visit website www.eusmecentre.org.cn



Preventing a direct hit from activist short seller attacks



Emmanuel Vignal

Partner, EY
Greater China Leader
Fraud Investigation & Dispute Services

Over the last year, short selling has never been far from the global media spotlight and some regulators have taken steps to impose order on the practice. Locally, however we have witnessed the emergence of a trend of activist short sellers, specifically targeting companies in Asia, often with allegations of corporate fraud, but always seemingly aimed at negatively impacting share prices for personal gain.

Today's activist short sellers comprise individuals, analyst companies and even anonymous research groups. They come with multiple agendas, ranging from those just out to make money for themselves to those claiming a moral high ground by denouncing potential corporate fraud that they believe investors should be aware of.

However, whether these activist short sellers are individuals, companies or groups, what they have in common is that they make allegations of financial impropriety at listed companies and these allegations have an immediate negative impact on the share price. Our connected world, largely by virtue of the internet and the speed at which the reports become readily available to the public, amplifies the speed and scale of the negative impact of such attacks.

While the allegations may generally be refuted just as quickly as they are released, companies are often seemingly so stunned and unprepared that they have little time to respond in sufficient detail to quell rising concerns amongst shareholders and regulators. Without a timely and persuasive response from the companies, the damage soon becomes entrenched, causing a prolonged drop in the share price, applications for share trading to be halted, calls for independent investigations, lengthy delays in resumption applications and ultimately loss of investor confidence.

This new breed of short seller certainly appears to be more active in Asia. Activist Shorts, an independent database dedicated to tracking activist short-seller campaigns found that in 2014, short sellers, both named and unnamed, had 146 public campaigns, up from 121 in 2013. While in Asia, during the second half of 2015, research reports from groups including Iceberg Research and Anonymous have had a big impact on certain companies trading on Asia's share markets.

So is it avoidable? There may be no panacea, however as with most things, prevention is always better than cure. Avoiding becoming a target to begin is the best prevention technique. And the key to this technique is transparency. Companies need

to be transparent about the ethical leadership they have in place, the accounting methods and financial results. A lack of transparency is often a red flag for activist short seller looking to take aim. Experience tells us that companies that can demonstrate and communicate a zero tolerance to fraud, bribery and corruption, together with strong and visible ethical policies and procedures, are at less risk of becoming the target of an activist short seller attack. If the company is too hard to crack, an activist short seller will move on to an easier target.

If despite having the best compliance programs in place a company still faces an activist short seller attack, it is essential that the company has an action plan to deal with the attack, anticipating the concerns of stakeholders and how best to address such concerns.

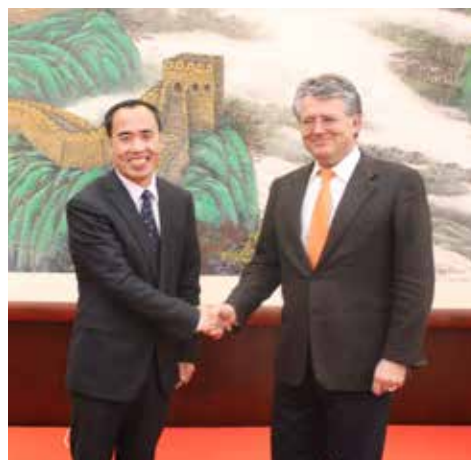
It has been proven time and time again that bare denials of the claims by an activist short seller are not enough. Companies need to demonstrate concrete proof to refute the claims and this often comes down to solid compliance procedures that can be demonstrated, embedded tone from the top on ethics, supported by sustainable reviews and the use of tools, such as whistleblower hotlines and forensic data analytics to detect unethical behaviour.

To attain solid compliance procedures, companies also need to avoid addressing compliance in silos, undertaking holistic fraud risk assessments to cover the risks of all types of fraud, whether by employees or management, and ensuring policies and procedures include all aspects of the business. In Asia, this would also necessitate a focus on fraud risks contained within third party relationships (such as joint venture partners, distributors, agents and vendors) due to the reliance many companies in this market have on such parties. To reduce the risk of these relationships being called into question as part of an activist short seller attack, especially where the allegations impute undisclosed third party relationships, these third parties need to be continually monitored and assessed. This may include updating existing due diligence procedures, providing regular training, conducting compliance health checks and risk assessments, and exercising audit rights.

Companies in Asia can no longer ignore activist short seller analyst reports and simply hope they don't become the next target. Instead they need to take proactive steps to remove the potential bulls-eye from the company, so that should an activist short seller take aim they will miss their target.

For more information on FIDS, feel free to visit www.ey.com/FIDS or contact **Emmanuel Vignal** at emmanuel.vignal@cn.ey.com or **Jim Yuan** at jim.yuan@cn.ey.com for any inquiries in China.

EUROPEAN CHAMBER LOBBYING HIGHLIGHTS



Working towards clarity, cooperation and contributions in China's financial sector

On 19th January, President Wuttke, members of the Chamber's Advisory Council and representatives from the Banking and Securities Working Group met with Wang Zhaoxing, Vice Chairman of the China Banking Regulatory Commission (CBRC). In addition to presenting Vice Chairman Wang with the Chamber's *Position Paper 2015/2016*, they raised concerns regarding the Chinese Government's plans for "secure and controllable" IT and the decreasing market share of foreign banks in China. Vice Chairman Wang responded by encouraging foreign banks to invest more in China's financial infrastructure, stating that China is willing to further open up its financial services sector. The Chamber delegation thanked the CBRC for its support and expressed European banks' desire to continue to contribute to China's reforms as well as initiatives like interest rate liberalisation and internationalisation of the RMB.

A working lunch in Brussels with the Chinese Ambassador to the EU

During their trip to Brussels, President Wuttke and vice presidents de la Noue, Harbon and Marchetta had a lunch meeting with China's Ambassador to the EU, Yang Yanyi, and three counsellors from the Chinese Embassy, on 27th January. In addition to outlining the strong connection that the European Chamber has with leading reformers within China's government and the focus of the Chamber's key publications, President Wuttke put the debate over granting China Market Economy Status into perspective by highlighting the fact that less than

two per cent of China's exports to the EU are affected by trade investigations. Ambassador Yang stated she was impressed by the Chamber and expressed her appreciation for the contribution it makes to promoting understanding of China as well as her view that the messages delivered by the Chamber to the

Chinese Government are taken very seriously. The Ambassador gave assurances that China will continue to open up and called on the Chamber to help reduce misunderstandings and misconceptions between the EU and China.

Presenting the Chamber's Position to the Vice Mayor of Tianjin



The 1st February saw Dr Christoph Schrempp, Chairman of the European Chamber's Tianjin Chapter, along with board members Gabrielle Castaldi and Michael Stengele, present the Chamber's first ever local position paper on Tianjin to Vice Mayor Zhao Haishan. Officials from Tianjin Commission of Commerce, Tianjin Binhai New Area and the Tianjin Pilot Free Trade Zone also attended the meeting. Vice Mayor Zhao thanked the Tianjin Chapter for providing the recommendations outlined in the paper. In addition to providing an overview of recent developments in the Tianjin Pilot Free Trade Zone, the integration of Beijing-Tianjin-Hebei and lessons learned from the huge explosion that took place in Tianjin in August 2015, he also explained Tianjin's work plan for 2016. Notably, he also expressed interest in setting up

an open dialogue mechanism between the European Chamber and the Tianjin Government in order to ensure effective communication.

Exclusive insights into Made in China 2025

On 28th January, at an exclusive dialogue hosted by the European Chamber, Deputy Director Li Beiguang of the Ministry of Industry and Information Technology's (MIIT) Planning Department provided fresh insights on Made in China 2025 and its relationship to the One Belt One Road (OBOR) initiative. After outlining the plan's logic, strategy and goals, he explained that Made in China 2025 would focus on supply-side reforms while it is hoped that OBOR will help to expand global demand. Deputy Director Li then

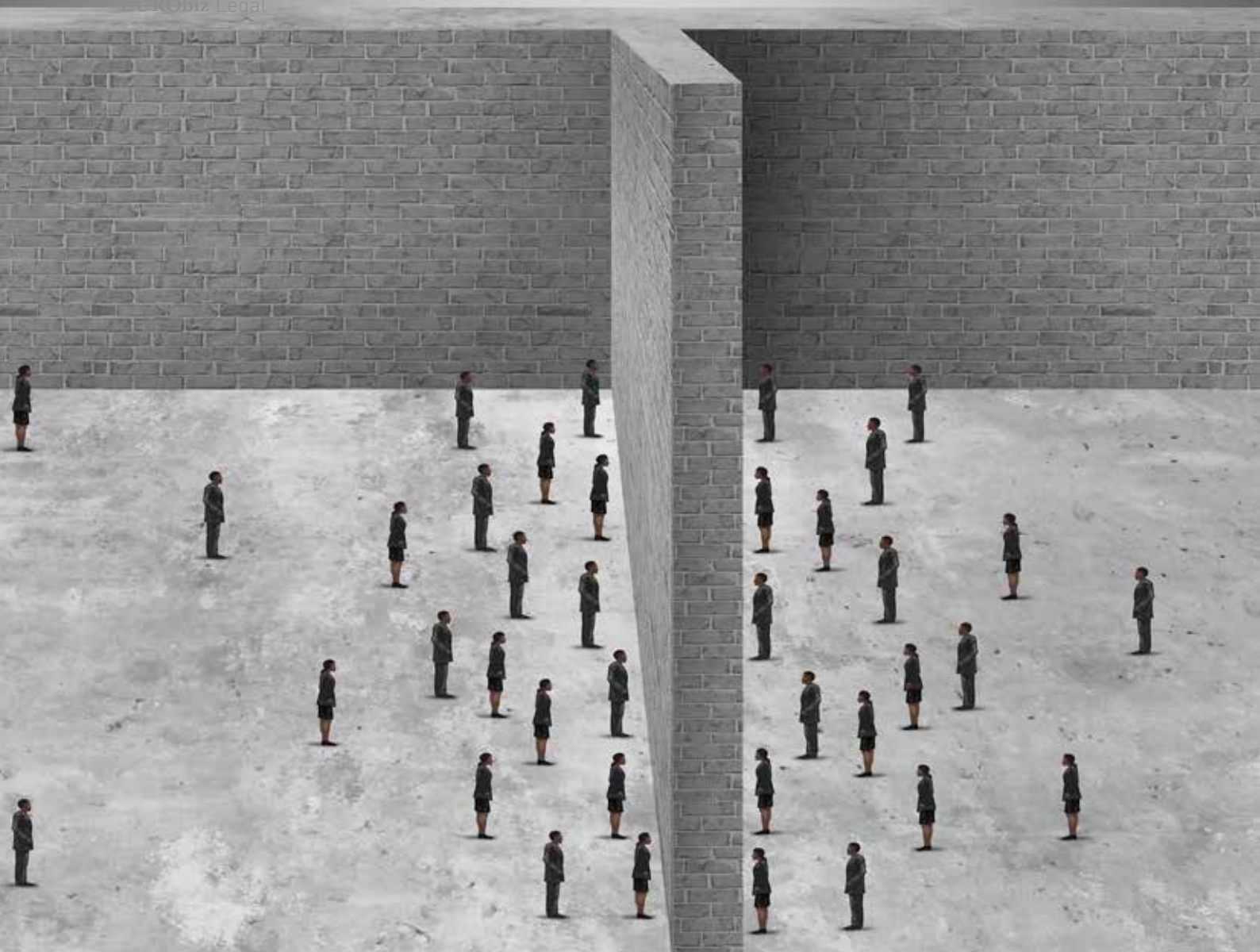
outlined plans for industrial capacity cooperation in highly competitive sectors, indigenous innovation, advanced manufacturing, international cooperation and platform building, before answering questions from Chamber members on a wide range of topics.

Deputy Director Li also encouraged EU-China cooperation and expressed his hopes that the European Chamber will continue to serve as a bridge between China and the EU.

Building cooperation and opportunities for SMEs in Shanghai

Zong Yuyuan, Vice President of the Shanghai Foreign Investment Development Board, introduced the newly established Invest Shanghai organisation and the services it provides to recently established SMEs in Shanghai, to representatives of the European Chamber on 5th January. The chair of the European Chamber's SME Forum, Rosario di Maggio, then introduced the forum's recent activities and some of the challenges

that European SMEs face in China. Both parties agreed to compare their plans for 2016 and to look for additional opportunities to cooperate in event organisation, information sharing and training. After the meeting, Vice President Zong gave di Maggio a tour of Invest Shanghai's incubator for startup businesses.



FENCING OFF THE WORLD WIDE WEB

China's new online publishing regulations

China's State Administration of Press, Publication, Radio, Film and Television (SARFT) and Ministry of Industry and Information Technology (MIIT) recently issued their new, joint *Regulations on the Administration of Network Publication Services (Regulations)*. They overhaul the previous regulations—which took effect in 2001—significantly tightening applicable legislation. It reaffirms that foreign publishers are prohibited from the online publishing market and further restricts the operations of Chinese online publishers. **Deanna Wong** of **Hogan Lovells** summarises the key points of the *Regulations*, which came into effect on 10th March.

Wide Scope

The *Regulations* have a very large scope of application. They define online publication services as “the provision of online publications to the public through the information network”. This definition, if applied strictly, could in theory encompass virtually any uploading activity on the Internet by both individuals and businesses in China. However, the *Regulations* also provide that the “specific classification” of online publication businesses “are to be further clarified” by the authorities. It is anticipated—and, in fact, the SARFT informally confirmed—that the scope of the *Regulations* will be limited to professional online publishers, excluding individuals and entities that only occasionally or incidentally publish online media in China.

As to the types of media covered by the *Regulations*, the following three—very broad—categories of online publications are listed under Article 2:

- Works of literature, art, science and technology, including literary works, pictures, maps, videogames, animation, audio, video and audio-visual works.
- Digitised books, newspapers, magazines, sound and/or video recordings and electronic publications that were previously published via other media.
- Online databases of digital works developed from the selection, edition and collection of the above two types of works.

Additionally, a catch-all section is provided, allowing the SARFT to add other types of media to the scope of the *Regulations*, e.g. to include novel types of digital works and arguably content aggregators.

Publication licences required

Any individual or entity providing online publications to the public in China must apply for an online publication service licence with the SARFT. Such licences must be obtained before the entity can engage in any online publishing in China, and will be valid for five years.

Applicants must, among other things, fulfil the following requirements in order to be eligible for a licence:

- The servers that online publications are stored on must be located in China.
- The legal representative of the applicant must be a Chinese citizen residing in China.
- The applicant must establish a system for self-editing/scrutiny (this provision is somewhat unclear, but is probably directed at any ‘sensitive’ content).

Licences are non-transferable (this includes ‘sub-licensing’, leasing etc.) and information regarding the licence, such as the licence number, must be clearly displayed on the publisher’s home page.

Anyone providing online publications to the public in China without a valid licence faces administrative penalties, such as removal of the website, including all online publications, confiscation of illegal proceeds and fines of five to 10 times the amount of the illegal turnover, and even criminal sanctions.

Foreign entities banned

Foreign entities, including Sino-foreign joint ventures and WOFEs, are banned from providing online publications to the public in China, and are not eligible for a publication licence. Sino-foreign publishing ‘cooperation programmes’ may, on the other hand, be permissible, but remain subject to the SARFT’s prior and ad hoc approval, an amendment that is a noted tightening compared to the standard ‘prior security report’ used in the 2012 draft *Regulations*.

However, this seemingly draconic measure does not come as a real surprise since foreign entities were already banned from investing in the online publication sector in China under the current (2015) version of the *Catalogue for the Guidance of Foreign Investment Industries*.

It is currently unclear if foreign media companies with overseas servers will be targeted or whether the *Regulations* are just targeted at content providers in China.

Increased government control over online publishers

The *Regulations* provide that online publishers must conduct their business with respect for China’s laws and regulations, China’s socialist direction and China’s socialist core values. Online publishers will need to report annually to the local authorities about their operations, the quality of their publications and their compliance with the laws and regulations, among others. The local SARFT authorities are also granted powers of inspection.

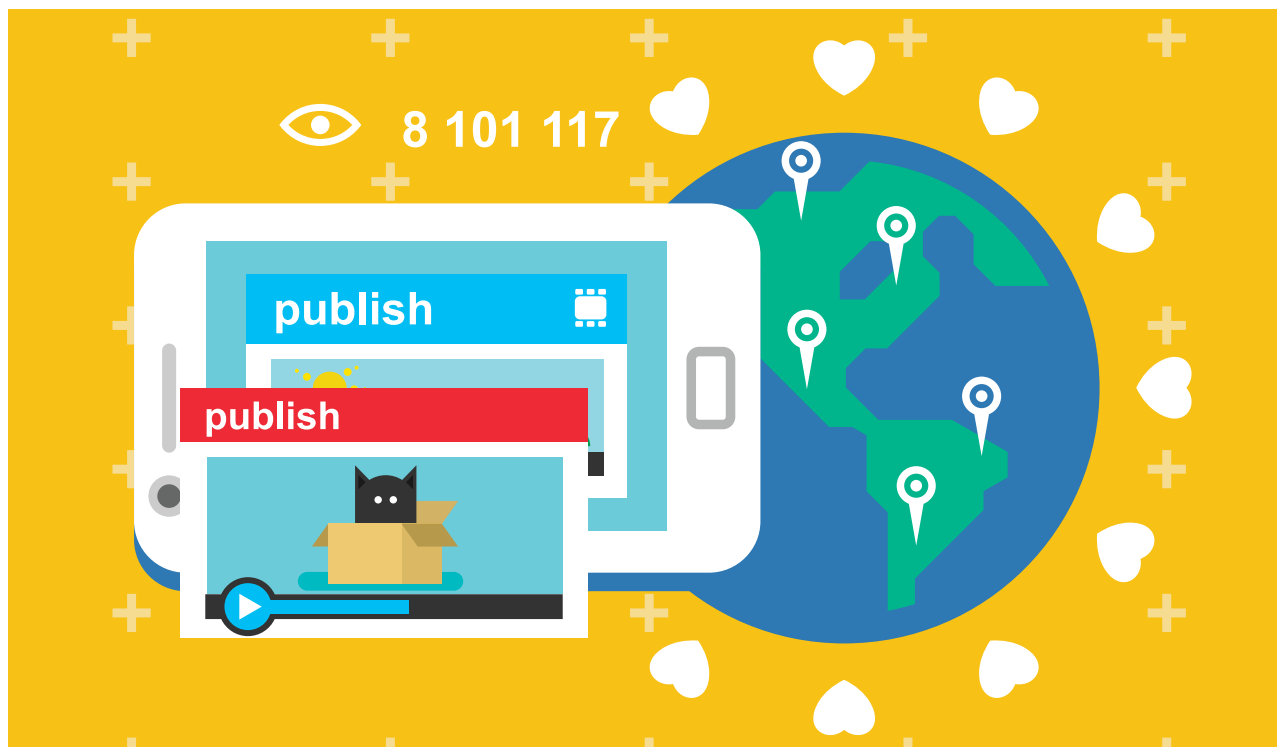
If an online publisher is suspected of violating the publishing laws and regulations, committing copyright infringement or other illegal conduct, the local SARFT authorities can suspend its operations for up to 180 days, pending further investigations. The online publisher must then cease all publishing activities for the time period of the suspension.

Monitoring obligations for ISPs

The *Regulations* impose a direct duty of verification on Internet Service Providers (ISPs) for so-called acts of “active intervention”. This means that they are obligated to verify such information as online publication licences and the business scopes of online publishers when providing services such as search engine result ranking, advertising and promotion. Any ISP failing to do so faces fines of up to CNY 30,000.

Specific rules for online games and minors

Foreign online video game developers are required to



license their software copyrights to a Chinese online publishing licence-holder, since only such licence-holders are permitted to publish content online in China. This domestic Chinese licence holder will then have to apply for a pre-approval from the local SARFT authority before a game can be published/uploaded on the Internet in China. This pre-approval is a requirement for both foreign and domestic games developers.

The *Regulations* also provide for specific measures to protect minors. In particular, they prohibit the online publication of:

- Content encouraging minors to imitate immoral or criminal conduct;
- Content that is deemed horrific, cruel or likely to prejudice the physical or mental health of minors; and
- Content that violates the privacy of minors.

Conclusion

The *Regulations* are the last in a series of laws that significantly tighten regulation of the Internet and the freedom of operation of technology companies in China.

The objective—underlined by President Xi Jinping in his keynote speech at the World Internet Conference in Wuzhen in 2015—is to make the Chinese Internet, and IT in general, more “secure and controllable”. This has been reflected in the recent National Security Law, the Counter-Terrorism Law and a draft of the Cyber Security Law, among others. The result is often the exclusion of foreign

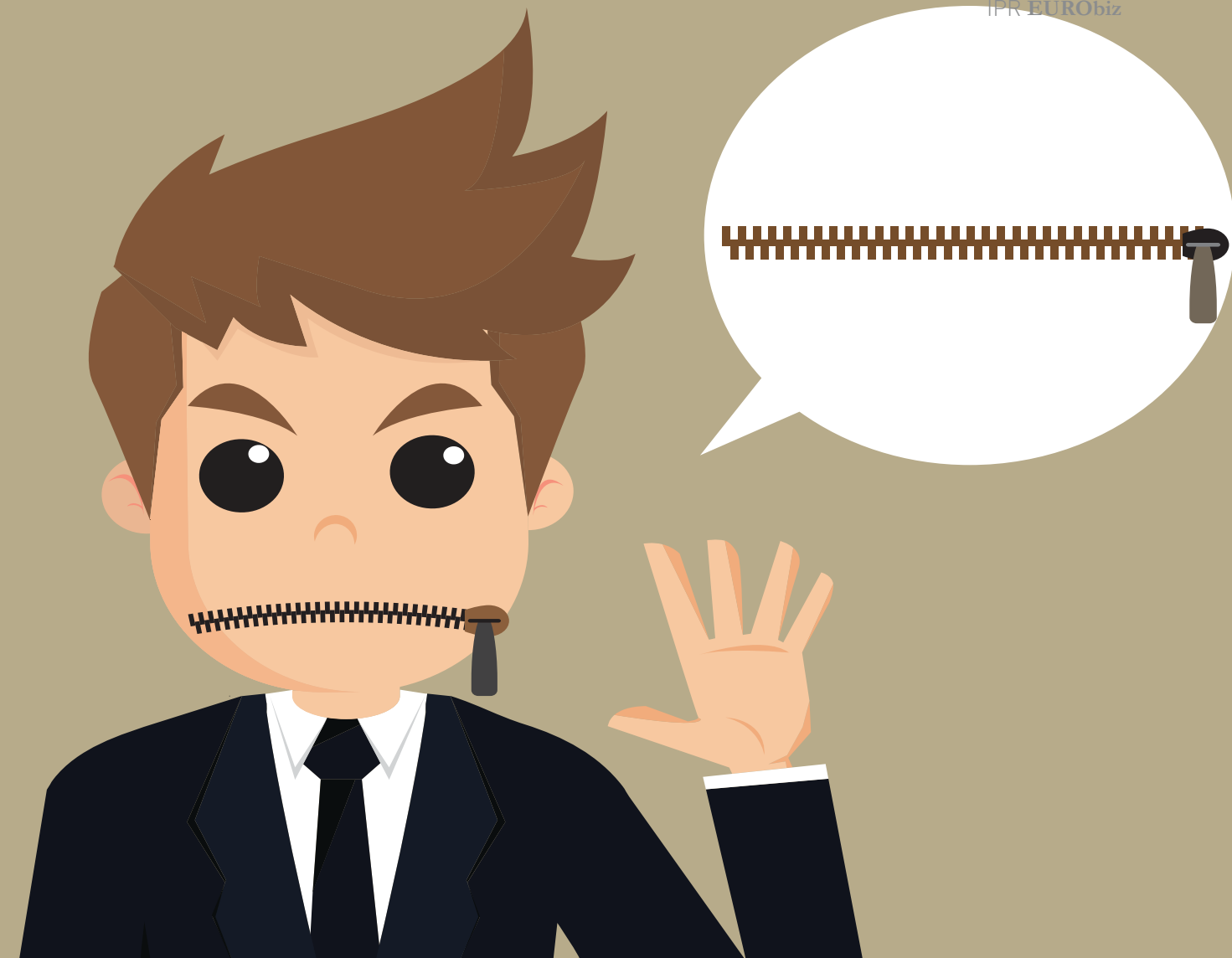
players and content providers as they are considered less “secure and controllable”.

However, the clear tightening of China’s Internet and technology legislation notwithstanding, the *Regulations* do leave some loopholes for foreign content providers (e.g. Sino-foreign cooperation programmes) and for Chinese publishers to publish their media in China. This should allow market players to continue targeting China’s immense online population—estimated at 700 million people—provided they tread carefully and stay within the boundaries of the government’s laws, regulations and policies.

As of now, the *Regulations* seem incomplete and require further clarification from the authorities. For example, more details are needed about the application process for licences and the application for permission for Sino-foreign cooperation projects, and the specific classifications of online publishers are currently still lacking.

We will be providing a more comprehensive article on our website, and will continue to keep you updated with further developments as soon as they become available. [Eb](#)

Hogan Lovells is a global legal practice with over 2,800 lawyers in more than 40 offices including three offices in Greater China, five offices in the rest of Asia and 17 offices in Europe. The Beijing, Shanghai and Hong Kong offices provide a full range of services covering anti-trust/completion law, intellectual property, media and technology, banking and finance, corporate and contracts, dispute resolution, government and regulatory, projects, engineering and construction, real estate, and restructuring and insolvency.



NEVER DIVULGE ANYTHING

Manufacturing non-disclosure agreements in China

Many EU SMEs pursue partnerships with Chinese manufacturers, viewing them as relatively cheap yet still technically-skilled producers. While this strategy can benefit the companies that employ it, China—like many countries—is home to unscrupulous merchants who view IP theft as way of gaining their own advantage. The **China IPR SME Helpdesk** says that the most effective way for companies to protect themselves is to tailor iron-clad contracts specifically adapted to their intellectual property rights (IPR), and that should start with the drafting of a non-disclosure agreement.



What are NDAs and NNNs?

At its core, a non-disclosure agreement (NDA) is a contract (or part thereof) between two parties which states that once Party A has revealed its trade secrets to Party B, Party B will refrain from disclosing those secrets to anyone else. Once a secret has been revealed it no longer enjoys any kind of legal protection and will consequently lose some, if not all, of its economic value.

However, a NDA is not necessarily a cure-all for preventing, or even deterring, the theft of trade secrets – it is possible for a NDA to fall short of offering the kind of comprehensive protection sought by SMEs. This could be due to a number of reasons: perhaps the contract is shoddy and does not address all potential risks; maybe the contract includes certain wording or provisions that nullify it; or it may even be that the NDA was never signed to begin with. It is therefore highly recommended that all SMEs sign a non-use, non-disclosure, non-circumvention (NNN) agreement before revealing any sensitive information to Chinese manufacturers.

The NNN: why NDAs may ‘not deter anyone’ in China

When looking to engage a Chinese manufacturer the best course of action is to triple-down on protection and opt for a NNN agreement. The three elements are:

- **Non-use**

This is an extremely important element of IPR protection. It means that manufacturers are prevented from using an SME’s IP to compete with it.

- **Non-disclosure**

Manufacturers can bypass non-use agreements by disclosing the IP to a third party, thereby removing its protected status as a trade secret. To prevent this, NNN agreements mandate that trade secrets cannot be disclosed without the SME’s approval and that adequate steps must be taken to protect all such secrets.

- **Non-circumvention**

Beyond protecting trade secrets, non-circumvention clauses inhibit manufacturers from capitalising on exclusive access to your products to sell unauthorised products in other markets. Essentially they prevent manufacturers from bypassing anti-counterfeiting methods built into an SME’s IP.

When to sign an agreement: sending in the canary

A fatal error that SMEs frequently make when engaging a Chinese manufacturer is delaying signing a NNN agreement. Unfortunately, these agreements are sometimes considered to be of secondary importance and

SMEs will either overlook their use or will wait until the last minute.

The best time to draft a NNN agreement is actually while preparing to search for manufacturers. Once the agreement has been written, it is then critical to send it to potential manufacturer partners *before* any secrets are disclosed. Many a Chinese lawyer has detailed horror stories about companies that have failed to protect their IP, or have been duped into believing that not signing a NNN agreement is actually part of Chinese business culture.¹ If a manufacturer refuses to sign such an agreement before learning key information about an SME's IP, it's a pretty strong indicator of less-than-honest motives. Even if a manufacturer has no intention of stealing your IP (which is unlikely in any case where a manufacturer tries to avoid signing a NDA), if they refuse to install adequate IP safeguards then the business relationship will probably not prove to be suitable. Any manufacturer that signs a NNN agreement, however, or even comes back and asks for provisions to protect their own proprietary information, is much more likely to be a reliable partner.

Naming names: beware of the manufacturer's relationships with other firms

Deciding precisely who will sign contracts and receive classified information on behalf of the Chinese manufacturer is critical. It should be remembered that while manufacturers may be closely aligned with other firms through relationships between owners or long-standing business ties, these companies are separate legal entities in the eyes of Chinese courts.

Problems can crop up if a manufacturer tries to avoid its contractual obligations by signing an agreement with one company and then asking that information also be disclosed to a sister company not covered by the original agreement. This will allow the manufacturer's sister organisation to freely exploit the SME's proprietary information without recourse. This is particularly common with Chinese companies that have sister companies located in Macau, Hong Kong or Taiwan, where agreements enforceable by mainland courts may prove ineffective. If companies in these jurisdictions become part of an agreement they should be bound by separate NNN agreements that are specifically designed to be enforceable in those jurisdictions.


Even honest manufacturers may see no harm in circumventing carelessly crafted contracts. In China, many companies belong to larger corporate groups or identify as state-owned enterprises (SOEs). These companies may not consider other companies within their group or other SOEs operating within the same sector to be competitors and may see no harm in sharing an SME's trade secrets with them. In this case, what seems like harmless collaboration to the Chinese

firm could actually constitute a grave blow to your firm's competitive advantage.

These kinds of relationships pose added security risks that need to be addressed while the contract is being drafted. In such situations, it is not against decency or local business culture to insist that all manufacturers that will be privy to classified information are bound by agreements and will be fully liable if the information is disclosed within their group. If possible, asking that individuals working for the manufacturer personally sign the NNN agreement and accept personal liability if it is broken can help to further solidify a contract.

An often overlooked aspect of enforcing NNN agreements is ensuring that the SME's communications themselves abide by the agreement. By making it clear which information is classified or is considered a trade secret, SMEs can prevent abuse by unscrupulous manufacturers or even costly errors by their own employees. Once a NNN agreement is signed with a Chinese firm, SMEs should be careful to only disclose secrets to that firm and insist that that firm does not disclose those secrets to anyone else.

Conclusion

An SME should sign a NDA with any manufacturer to whom it plans to reveal any confidential details such as sensitive product information, designs and sketches, business strategies or client information. Non-disclosure agreements are quick and inexpensive, and a basic knowledge of key clauses is enough for effective use with manufacturers or employees. They are widely used in China and well-accepted by Chinese courts, so a Chinese third party that is unwilling to sign an NDA is likely not a trustworthy potential business partner and should be treated with caution. 

*The **China IPR SME Helpdesk** is a European Union co-funded project that provides free, practical business advice relating to China IPR to European SMEs. To learn about any aspect of intellectual property rights in China, including Hong Kong, Taiwan and Macao, visit our online portal at www.china-iprhelpdesk.eu. For free expert advice on China IPR for your business, e-mail your questions to: question@china-iprhelpdesk.eu. You will receive a reply from one of the Helpdesk experts within three working days. The China IPR SME Helpdesk is jointly implemented by DEVELOPMENT Solutions, the European Union Chamber of Commerce in China and European Business Network (EBN).*



¹ Dickinson, Steve, *China NNN Agreements: Make Sure Yours Bites*, China LawBlog, 9th November, 2015, viewed 7th March, 2016, <<http://www.chinalawblog.com/2015/11/china-nnn-agreements-make-sure-yours-bite.html>>



Vice President Sara Marchetta, B2O China Sherpa Yu Ping and Sun Xiao, Policy Director and Liaison Officer, B2O Infrastructure Task Force

4I'S ON B2O CHINA

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

During an exclusive event on 3rd March, Mr Yu Ping, Sherpa of the B2O China, met with European Chamber members to explain the underlying themes for this year's B2O and outline its overall aims.

Formed in 1999, the Group of Twenty (G20) is an international forum made up of 20 of the world's major economies, including the EU and China. Members of the G20 account for 90 per cent of the world's GDP and two thirds of the global population. Its main purpose is to govern economic activity and coordinate economic policy at a global level.

In response to the global economic crisis, the G20 Summit was established in 2008, with 10 subsequent meetings having taken place since. For each summit, the host country assumes the presidency and looks to spearhead efforts to tackle global challenges. China will be president for the first time in 2016, having taken over the presidency from Turkey at the end of 2015, with the summit taking place in Hangzhou from 4th to 5th September. The theme for this year is based around the idea of creating a world economy that is innovative, invigorated, interconnected and inclusive – the '4i's'.

An integral part of the G20 Summit is the Business 20 (B20), a forum that feeds practical ideas and recommendations—in the form of structured reports—from the international business community into the main summit, to contribute towards G20 policy making. The B20 China will follow the same 4i's theme as the G20 Summit, with discussions focussed around how to contribute to international efforts to increase global productivity, invigorate world markets, tap unutilised potential and remove barriers to economic growth.

Within the context of the 4i's, the B20 China has identified four clusters of challenges: 1) growth has been identified as a top priority, so efforts will be made to develop a new plan that can deal with short- and mid-term demands and provide long-term solutions; 2) reform of international financial architecture, international taxation, green finance, energy exploration and innovation; 3) multinational and global trade, growth, the global value chain and global investment policies; and 4) the 2030 agenda for sustainable development.

The B20 China is presided over by Chairman Mr Jiang Zengwei, who is also Chairman of the China Council for the Promotion of International Trade (CCPIT). Mr Yu Ping, B20 Sherpa and former Vice Chairman of the CCPIT, heads the International Cooperation Committee which has two tracks: functional groups that organise meetings and provide logistics support; and taskforces, which provide the content and formulate recommendations.

The taskforces carry out the core function of the B20 through closed door meetings, teleconferences, joint meetings, special sessions at events, and seminars, to develop their respective papers. These papers form the basis of the B20 policy recommendation paper, which is then submitted to the G20. The taskforces and their respective priorities for B20 China are as follows:

Trade and Investment	
Chair: Frank Ning, Chairman, Sinochem	
Priorities	<ul style="list-style-type: none"> • Improve trade cooperation mechanisms and suspend or roll-back protectionism • Ratify and implement a trade facilitation agreement (TFA) • Improve the global investment governance system
Infrastructure	
Chair: Ren Hongbin, Chairman, Sinomach	
Priorities	<ul style="list-style-type: none"> • Improve the infrastructure investment policy environment • Promote innovative financing for infrastructure (particularly public-private partnerships) • Better utilisation of multilateral development banks and institutions
Financing Growth	
Chair: Miao Jianmin, President, Chinalife	
Priorities	<ul style="list-style-type: none"> • Improve global financial regulations • Promote the diversification of international settlement currencies • Explore the means to enhance international taxation cooperation and coordination
SME Development	
Chair: Jack Ma, Chairman, Alibaba	
Priorities	<ul style="list-style-type: none"> • Facilitate SMEs' access to financing • Promote SMEs' access to the global value chain powered by innovation • Improve the regulatory environment for the development of SMEs
Employment	
Chair: Robin Li, Chairman and CEO, Baidu	
Priorities	<ul style="list-style-type: none"> • Encourage public entrepreneurship and business innovation • Increase employment among youth and the female population • Increase availability and improve the quality of vocational training

Each chair of these taskforces is supported by multiple co-chairs from Chinese and international companies such as China Merchants Group, Lenovo, Rio Tinto, Sinopec, Standard Chartered and Accenture.

Prior to the kick-off meeting on 26th January, chairs and co-chairs of each taskforce had worked together, along with executives and administrative officials from the G20, to identify their target areas for the year. These targets were then used to produce a draft paper for which comments were solicited from members, before the priorities were ordered. In total, each paper will eventually contain five to seven recommendations. In April and June, taskforce meetings will take place in Washington DC and Paris respectively, where the G20 International Cooperation Committee will review the papers in the context of the four issue clusters, and summarise each paper. The papers will then be utilised in relevant ministerial and working group meetings. [E](#)



TIANJIN CHAPTER TAKES UP ITS POSITION

Launch of the Tianjin Position Paper 2015/2016

The Chamber's Tianjin Chapter has spent the last decade successfully facilitating positive relations between its members and the Tianjin Government to help improve the operational and investment environment for European companies invested in the city. It is apt, then, that as the Tianjin Chapter reflects on 10 years of advocacy efforts in Tianjin and the surrounding area, they launched the *Tianjin Position Paper 2015/2016* as a standalone publication for the first time.

Launched on 3rd March, 2016, the *Tianjin Position Paper 2015/2016* provides a comprehensive overview of the challenges that European businesses based in Tianjin face on a daily basis, and makes recommendations to the Tianjin authorities that can help them to achieve their long-term goals and make Tianjin a more attractive destination for foreign investment.

After gaining particular prominence in the mid-19th century as a gateway to the nation's capital, Tianjin is finally ready to outgrow its status as a stopover and become a key destination in its own right. Nowadays, Tianjin features one of the highest gross domestic product (GDP) figures in the country.¹ It enjoys a quasi-provincial status that guarantees unique access to and support from the central government and is home to the China (Tianjin) Pilot Free Trade Zone (CTPFTZ). It is also at the heart of the planned Beijing-Tianjin-Hebei ('Jing-Jin-Ji') megaregion, which, once realised, will cover 216,000km² and will be home to more than 100 million people.²

While current overall growth figures are encouraging, Tianjin's efforts to reinvigorate the local economy are a relatively recent phenomenon: the State Council designated the Tianjin Binhai New Area (TBNA) a special economic zone to become the next economic engine for Northern China as recently as 2006. And while Tianjin and Beijing are, at least geographically, separated by just one thirty-minute train ride, the developmental gap between the two cities is far wider – since the early 2000s, Tianjin has continuously lagged behind Beijing in terms of overall contribution to China's GDP.

Historically, a number of factors have contributed to Tianjin's lagging economy. These include China's command economy, the decision to incorporate Tianjin into Hebei Province and the concurrent relocation of certain key industries away from the city. One of the key challenges it faces, though, is its proximity to the capital: the majority of resources have continuously flowed into Beijing, adversely affecting Tianjin's growth. The TBNA is one initiative that the Tianjin authorities hope can help to reverse the trend, but with the slowdown of China's overall economy it may prove to be too little too late. With this and other recent tools that have been put in place to jumpstart the local economy, will Tianjin be able to close the developmental gap and employ a long-term strategy to firmly establish Tianjin as a prime investment destination?

The way forward for Tianjin: the 3+1 model


In this time of transition, Tianjin's local government has already launched a number of initiatives to further grow the local economy. These include investing in transportation infrastructure, the construction of a completely new 'ecological district' in Tianjin, the expansion of its port facilities and taking the first steps to improve overall living conditions.

If Tianjin is to successfully move towards establishing

itself as north China's economic centre, the Tianjin Chapter believes that it must leverage its unique potential and focus on four key projects – what we call the '3+1' model (three expansions and one integration):

- **Expand Tianjin's overall quality of life:** Tianjin must address two long-term problems – its air quality and the lack of public transportation options.
- **Expand the TBNA and Tianjin Port:** Even after the explosion in August, Tianjin remains a major seaport. In order to get back on track to becoming the most competitive in China it needs to return to the level of service it provided prior to the disaster, and then surpass it. It is an important hub in the national transportation system, an important foreign trade port for north China, and a key node in the modern transport network between Beijing, Tianjin and Hebei province. It is also a link between Northeast Asia and Middle and Central Asia. In order to release its full potential the TBNA should also be expanded and its regulatory infrastructure internationalised.
- **Expand the Tianjin Free Trade Zone:** The local authorities must safeguard transparency and compliance with regulations within the zone, and should encourage more input from foreign enterprises in formulating a future development strategy that will help it flourish.
- **Integrate 'Jing-Jin-Ji':** China is looking to the creation of megaregions such as 'Jing-Jin-Ji' to provide its future model for sustainable growth. If executed carefully, 'Jing-Jin-Ji' may further boost the local economy while providing solutions to some of China's acute problems such as pollution, overcrowding, water-shortages and uneven development.

Tianjin finds itself at a critical juncture, but it has a number of unique tools at its disposal to maximise evenly-distributed, long-term growth that will allow it to finally close the developmental gap with Beijing and take advantage of its strategic location.

With Tianjin's ambitious plan—established by the State Council—to become the economic centre of Northern China by 2020, it is anticipated there will be more growth and a corresponding amount of investment opportunities for the foreseeable future. The Tianjin Chapter hopes that the *Tianjin Position Paper 2015/2016* will open fresh channels of communication with the local government, and that European Companies will be able to continue contributing to Tianjin's development for many years to come. 

Download a copy of the Tianjin Position Paper 2015/2016 from http://www.eurochamber.com.cn/en/publications-archive/407/Tianjin_Position_Paper_2015_2016



MAINTAINING STANDARDS

Jun Zhang (June) has been working in standards and conformity assessment (SCA) for nearly 10 years and is currently Head of Technical Regulation and Standardisation in Corporate Technology, **Siemens Ltd, China**. June has been an active member of the Chamber's Standards and Conformity Assessment Working Group for four years now, and in 2015 she was elected its chair. She met with *EURObiz* to discuss the current SCA landscape in China and some of the working group's positions related to SCA.

How significant are SCA-related issues for companies operating in China?

If you want to sell your products in China, it is necessary to fulfil local, technical requirements related to SCA, including mandatory standards, compulsory certifications, technical regulations or even administrative licences. Otherwise, due to non-compliance with national requirements, your products coming to China might be blocked by customs or you might be held liable for products already sold in the market. So SCA is a serious topic that impacts a number of sectors and products.

What are the main differences in China's SCA system now, compared to when you first began working in this area?

With China's increasing exchanges and cooperation with international partners on SCA issues, the

whole SCA system has been steadily improving. More importantly, after the restructuring of the central government in 2013, the standardisation system and certification system went through significant changes.

For standardisation, we can see a few major changes. First, the previous three levels of mandatory standards—national, sectoral and local—have been grouped into one level. This makes it much easier for standards users to become aware of all mandatory requirements in a more transparent way. Second, standardisation work was previously purely government driven in China. Now, qualified social organisations are encouraged to develop standards in the form of 'social organisational standards'. This allows a group of participants from industry and other stakeholders to formulate standards based on their individual and practical requirements. Generally, these are positive changes as long as they are openly communicated and are open to all interested

parties.

What are the main issues that European companies face in China in terms of standardisation?

We have been continuously making efforts to facilitate the establishment of a standardisation system that is run in an open, fair and transparent manner. Besides this, the legacy membership issue is still very worthy of attention, although there have been some recent improvements in certain technical committees.

But some technical committees still refuse membership requests from foreign companies in practice. One reason is that we are seen as competitors to local companies. This may keep foreign companies out of the local market, and prevent them from contributing the internationally agreed state of technology to national standards as well. This risks market fragmentation and the creation of technical barriers to trade, and does not take international technological developments into consideration. In my view, by definition standardisation requires cooperation between all interested stakeholders to mutually define the standards that are of interest and then apply them broadly.

What are the main issues that European companies face in China in terms of conformity assessment?

The major challenge is being aware of, and knowing how to apply, the overlapping or even conflicting requirements for a specific product in all of the different schemes, including mandatory standards, compulsory certification, technical regulations and administrative licences. These schemes are defined and released by different authorities, and in some cases we perceive a lack of agreement between them. In some extreme cases, it is up to the companies to go to each one individually to try and resolve these issues. This not only wastes resources but also increases the time to market for manufacturers and hinders the timely provision of products to end users. It is the hope of the working group that going forward there can be improved coordination between the relevant authorities.

Do you think China's ongoing standardisation reform is being

correctly implemented?

Generally it is going in the right direction. Last March, the State Council released its reform plan and last June an inter-ministerial joint meeting scheme was established as a high-level coordination scheme. Also, in February 2016, the central government began the process of streamlining and consolidating mandatory standards.


Regarding social organisational standards, in the last year there have already been 39 pilot organisations formulating their own social organisational standards. This presents a risk but also an opportunity.

There has also been progress in the area of enterprise standards. Previously, enterprise standards required registration, now enterprises only need to do self-declaration via public information platforms. Pilots were started in seven provinces, later expanding to many more, with around 20,000 enterprises declaring their standards.

What would you consider to be the working group's major successes since you have been active?

I have participated in several actions that contributed our opinion on SCA on issues such as energy efficiency, labelling and the revision of China's Standardisation Law.

The SCA Working Group considers the efforts we made on China's mandatory standard GB 5296.1 to have been a great success. This standard applies to how to write instructions for the use of certain consumer products. It addresses several sectors such as household appliances, toys and cosmetics, so its impact is far reaching. This standard was released by the government at the end of 2012, and was set to come into force five months later. Upon its release we noticed that some of the requirements were conflicting with relevant regulations and that there were some practical implementation issues. We contacted the relevant authorities and held several rounds of technical discussions, and joined hands with other industry associations. Eventually, this standard was first postponed until May 2014, and then postponed for a second time until May 2016.

Last but not least, the SCA Working Group welcomes all interested parties to work together to facilitate the establishment of a fair market access environment in China. 

EUROPEAN CHAMBER EVENTS GALLERY

BEIJING CHAPTER



1

China Income Taxes for Expats: Exemptions and Obligations (1)

On 21st January, the Chamber hosted a seminar on tax-free benefits for expatriates as well as the obligations they face while living and working in China.



2

Exclusive Dialogue on Made in China 2025 with MIIT (2)

On 28th January, the Chamber held an Exclusive Dialogue with Mr Li Beiguang, Deputy Director General, Department of Planning, Ministry of Industry and Information Technology. He discussed the drafting process and the context of the Made in China 2025 Plan.



3

Overcapacity in China: An Impediment to the Party's Reform Agenda(3)

On 22nd February, the European Chamber released an updated study on overcapacity in China's industrial economy to members and more than 80 international and domestic media.

NANJING CHAPTER



1



2

Finance and Taxation Forum Chair election (1&2)

The 2016-2017 Finance and Taxation Forum Chair election was held on 26th February. Ms Paky Ding, Director at Deloitte won the election.

SOUTH CHINA CHAPTER



1

Nansha Free Trade Zone (1)

On 26th February, South China Chapter members had the opportunity to visit the Herrenknecht (Guangzhou) Tunnelling Equipment Co Ltd, who are operating in the Nansha Free Trade Zone.



2

President Wuttke with Guangzhou Party Secretary Ren Xuefeng (2)

On 19th March, Jörg Wuttke, President of the European Chamber, met with Mr Ren Xuefeng, the Party Secretary of Guangzhou, and handed over a lobby letter expressing the issues faced by innovative pharmaceutical companies due to the new tendering policy in Guangdong.



3

Shenzhen Managers' Networking Dinner (3)

On 25th March, 70 attendees from a variety of industries gathered at Shark Fine Wine & Dine to share business visions and ideas at the Shenzhen Managers' networking dinner.

SOUTHWEST CHINA CHAPTER



1

Third Speed Business Meeting (1)

On 21st January, the third Speed Business Meeting was organised in Chongqing with over 80 participants. People exchanged business cards and introduced themselves every two minutes – a most efficient and interesting way to expand their network.



2

Chengdu Welcomes New Polish Consul General (2)

On 29th January, more than 50 members and friends including diplomatic representatives of European Consulate Generals in Chengdu and government officials related to foreign affairs came together to welcome the new Polish Consul General, Katarzyna Wilkowiecka.



3

Chongqing Also Welcomes New Polish Consul General (3)

Polish Consul General Katarzyna Wilkowiecka also gave a speech at the welcome cocktail party in Chongqing on 25th February, 2016, to introduce the Polish Consulate General in Chengdu's mission and business opportunities.



4

VIP Dinner with Customs Director (4)

On 29th February, the Southwest Chapter held a VIP dinner with Mr Zhan, Director of Division, Customs Risk Management, Chengdu Customs District. Director Zhan, shared the interpretation of customs policy on cross-border E-commerce in the region with member companies and discussed the major risks and opportunities that are presented in China.



5

Exclusive Training on the New Business Licence Policy (5)

On 4th March, the Southwest Chapter invited Ms Mima, Chengdu Administration for Industry and Commerce, to provide training to our members and friends, and assist companies on a variety of China business licence policy-related topics.

TIANJIN CHAPTER



1

Tianjin Position Paper presented to Vice Mayor Zhao Haishan (1)

On 1st February, Dr Christoph Schrempp, Chairman of the Tianjin Chapter, together with other board members, presented the newly published *Tianjin Position Paper 2015/2016* to Vice Mayor Zhao Haishan.



2

Working meeting on Key Recommendations of the Tianjin Position Paper together with relevant authorities (2)

On 25th February, the European Chamber Tianjin Chapter organised a government meeting to discuss the Key Recommendations from the *Tianjin Position Paper* between member representatives and relevant government departments, in advance of the paper's official launch.



3

European Business in China - Tianjin Position Paper 2015/2016 Launched (3)

The *Tianjin Position Paper 2015/2016* was launched in Tianjin on 3rd March. Around 80 people attended the event, including Chinese government officials, media, members and non-members.

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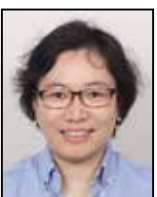


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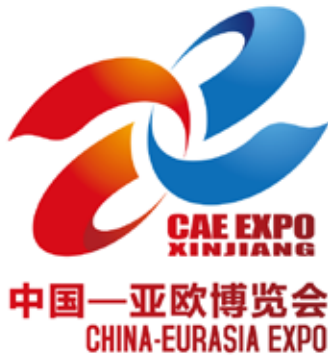


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THE ADVISORY COUNCIL OF THE EUROPEAN CHAMBER

The 29 members of the European Chamber's Advisory Council are particularly active in representing and advising the Chamber, and make an enhanced contribution to the Chamber's funding.





THE 5TH CHINA-EURASIA EXPO

China-Eurasia Expo has been hosted successfully for four sessions and achieved substantial results as a platform for China's summit diplomacy and economic and trade exchanges with its neighboring countries. Chinese state leaders including Li Keqiang, Wen Jiabao, Li Yuanchao and Wang Yang, 21 leaders and former dignitaries of Eurasian countries, as well as over 800 Chinese and foreign minister-level guests attended the exposition. During the previous four editions of exposition, the sponsors and organizers (27 Chinese state ministries and commissions and Xinjiang's over 60 competent governmental departments) organized diverse and inclusive special forums and economic and trade promotion activities which covered a wide range of fields such as agriculture, finance, food security, news, technology and communications. Relevant international organizations and overseas trade and industry departments held over 100 activities such as investment trade fair, tourism promotion and national pavilion day. With the constant improvement of its brand influence and internationalization level, the China-Eurasia Expo is becoming a major platform under the strategy of the "Silk Road Economic Belt". In light of the actualities of participation by domestic and overseas enterprises and institutions in recent years, the Secretariat of China-Eurasia Expo has planned to host the 5th China-Eurasia Expo 2016.

The 5th China-Eurasia Expo 2016, to be held from September 20-25, 2016 in Urumqi Xinjiang China, is proposed to be themed "Discussion, Building and Sharing, the Silk Road: Opportunities and the Future". The exposition will involve different specialized exhibitions: textile and garment exhibition, agricultural product and food exhibition, jewelry and jade craft exhibition, and automobile decoration exhibition. To fully display Eurasian countries' superior industries and characteristic products, the Secretariat will invite trade and investment promotion agencies from key countries and regions to present relevant fine items, and will invite other overseas exhibitors to participate in the specialized industrial exhibitions above by category.

THE SECRETARIAT OF CHINA-EURASIA EXPO

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