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President's Foreword

China's Fading Allure as a R&D Base

When the topic of research and development (R&D) is raised, people often think solely of laboratories and researchers clad in white. However, innovation in China has always been about much more than this; it comes from various other areas where China has been able to shine.

Companies operating in China have been driven to create new products by local customers, whose approach to goods and services are significantly different from their European counterparts. Chinese customers tend not to choose products primarily based on brand loyalty. Instead, they constantly demand new designs and better features. For example, in the car industry, buyers of premium cars in China are on average 20 years younger than in the European Union and prioritise smart-technology over mechanical selling points. The double challenge of meeting Chinese customers' demands and staying ahead of fierce competitors makes companies see the Chinese market as a fitness club, where they can build their strength and stamina in preparation for the race for global prominence.

Chinese private entrepreneurs have also played an important role in shaping the country's innovation ecosystem. Their ability to think big and to respond fast, coupled with their willingness to take risks, means ideas can be trialled at a faster pace. They provide space for creativity to flourish by accepting failure from time to time and quickly moving on to new ideas in search of one that will prove profitable.

Diversity has been another contributing factor. The seeds for China's economic success were planted in Shenzhen, a small city composed of Chinese people from all over the country, ¹ situated just across the border from the international financial centre Hong Kong and containing very few state-owned enterprises. The blend of people from different backgrounds coming together, with foreign companies acting as catalysts, saw innovation flourish in South China.

While these strengths made China an attractive destination for R&D, some are now being challenged by an increasingly politicised business environment, a set of recent policies and measures unfavourable to innovation, and a host of headwinds currently facing the country.

The traumatic experience of extended lockdowns and quarantine measures implemented across China in 2022 led to insecurity among Chinese consumers, who grew increasingly cautious of spending as their financial stability was challenged.

With growing protectionism and state-directed preference for domestic suppliers in certain sectors, such as digital and telecommunications services, barring foreign companies from the Chinese market, the competition that is needed to stimulate innovation is subdued. Furthermore, the 2021 crackdown on China's information technology sector and the push for common prosperity had a demoralising effect on leaders of privately owned enterprises (POEs), who previously were key players in the R&D race.

With the abandonment of stifling pandemic controls and policy focus shifting again towards shoring up the economy, China now has the opportunity to regain its strength in areas favourable to innovation. While China is losing some of the benefits of its population dividend and ratio of young people as both start to dwindle, it can mitigate the impact of these trends by promoting diversity, as the country still significantly lacks women in leadership positions as well as foreign talent. Furthermore, by returning to a path of pragmatic reforms, and taking action that signals its commitment to opening up and maintaining economic stability, China could go a long way towards rebuilding the confidence of businesses and consumers alike.



Jörg Wuttke
President
European Union
Chamber of
Commerce in
China

In 2017, the ratio of migrant population to total population in Shenzhen stood at 6.77 per cent, far above the same ratio excorded in China's other first-lier cities. Lin Xiaozhao, Shanghai Has Largest Migrant Population in China), but Sharchen Has the Highest Fallo; Nical Global, 28° November 2017, viewed 10° March 2023, chttps://www.yi.ocji.obd.com/ens/shanghia-lasa-largest-migrant-population-im-china-but-shenzhen-has-the-lihoptet-ratio-



and those operating in industries in which investment is not encouraged in China, such as information and communication technology.

The second European Chamber/
MERICS joint report, China's
Innovation Ecosystem: The localisation
dilemma, looks at the wide spectrum of
R&D strategies European companies
are deploying in China to mitigate risks
and maximise their competitiveness. It
comes at a time when optimism about
business prospects in China is starting
to reappear following the country's
abandonment of its zero-COVID policy,
with face-to-face exchanges at all
levels between Europe and China now
gradually resuming.

However, it also comes against the backdrop of a steady escalation of the United States-China struggle for technological supremacy, all while geopolitical factors—such as the war in Ukraine-are making the situation more complex. Companies across the board are now placing far greater importance on risk assessments when deciding on their future R&D plans. It is therefore especially important for both businesses and policymakers to understand the role European companies play in China's innovation ecosystem, as well as the positive effects and potential liabilities of doing so.

Members of the European Chamber provided unique insights into China's innovation ecosystem for this second report. A late 2022 survey of 107 members—with extensive follow-up interviews—portrays a complex environment that necessitates a wide range of localisation strategies to be deployed depending on the industry each company is in and the contribution they can make to China's strategic goals, as well as their size. Periodic adjustments to these strategies are also required to both better align with China's increasing innovation capacity

and manage emerging political factors that are undermining long-term business confidence.

The main drivers for investing in China remain the same as in 2022. In addition, a number of regulatory factors are both positively and negatively influencing R&D strategies, with some incentivising companies to localise and others forcing companies to put strict limitations on their R&D operations. The cons of investing in China also remained similar: weak IPR protection (34 per cent), an unlevel playing field (32 per cent) and limited or non-existent government support (24 per cent). However, of those that can access R&Drelated government support, policies reported as having had a positive impact on R&D activities include tax incentives (46 per cent), access to related subsidies (35 per cent), and those related to attainment of high- and new-technology enterprise status (32 per cent).

Further complicating the picture is the Chinese Government's ongoing advancement of its technological selfreliance campaign, aimed at creating completely localised supply chains insulated from external shocks, while expanding the country's access to foreign technology. This is resulting in increased pressure for certain companies to localise technology and onshore R&D into China. While demands to do so are coming primarily from state-owned enterprise and government customers, private business partners are increasingly exerting their own influence.

One of the core requirements for investing in R&D is a predictable and reliable business environment. While business confidence was deeply eroded by China's stringent zero-COVID policy and the subsequent lockdowns and travel restrictions, many European companies are optimistic and expect this to be

restored over time. On the other hand, the impact that geopolitics is having on the stability of China's business environment is only expected to worsen. Nearly half of respondents reported negative impacts on R&D strategies resulting from Russia's invasion of Ukraine, and many interviewees said the role that corporate risk assessments are now playing in strategy-making is unprecedented. A potential escalation of Russia's war in Ukraine or further frictions in the Taiwan Strait are scenarios that businesses are taking into account, and the potential risks they pose do not support a case for increasing R&D investments in China.

These factors, among others, pose a dilemma for European companies. The rewards of localising technology and R&D into China are considerable, but so are the potential hazards. The broad spectrum of strategies being employed by European companies are bookended by two opposing views: as one company noted, it is essential to do R&D in the China market to make the most of the innovation ecosystem and compete for market share with domestic rivals; the other noted that since China's system favours local competitors and because technology leakage risks are high, it makes more sense to secure and increase their share in other markets outside China; their logic being that there they only have to compete with their Chinese counterparts, and not the Chinese Government as well.



For more details and to download the report, please scan the QR code:





Overview of China's R&D environment for European SMEs by Alessio Petino

There is no doubt that China's innovation ecosystem has grown exponentially over the past decade. The country ranks 11th among 132 economies featured in the *Global Innovation Index 2022*. Its research and development (R&D) spending exceeded Chinese yuan (CNY) 3 trillion for the first time in 2022, reaching 2.55 per cent of its gross domestic product (GDP) – higher than the average R&D spending in the European Union (EU). China hosts one-fifth of the world's top 100 innovative clusters (same as the United States), among which Shenzhen-Hong Kong-Guangzhou, Beijing, and Shanghai-Suzhou rank second, third and sixth in the world, respectively. In this article, **Alessio Petino** of the **EU SME Centre** provides some insights into the recognition and support available for small and medium-sized enterprises (SMEs)—particularly European ones—in China's R&D environment.

Although its focus has mainly been on nurturing national champions and state-owned research structures, China has—particularly since the 13th Five-year Plan (13FYP) (2016–2020)—gradually increased the importance of the role that SMEs play in advancing its innovation strategy and quest for self-reliance. In practice, this has translated into a wide array of schemes:

- Preferential tax policies, such as super pre-tax deductions of R&D expenses and super-amortisation of intellectual property (IP) assets (currently at 100 per cent and 200 per cent, respectively) for those officially recognised as technologybased SMEs (科技型中小企业).
- Various subsidies, incentives, innovation vouchers (科技创新券), and guidance funds (引导基金), at both national and local levels, especially aimed at technology SMEs, "specialised and sophisticated" SMEs ("专精特新"中小企业), and fast-growing 'little giants' (小巨人'企业).
- Innovative schemes to increase access to credit, such as IP pledge financing and subsidies on loan interests or insurance.
- Increasing the proportion of SMEs awarded government procurement contracts, including for first sets of products (首台套产品).

This support is being intensified during the 14FYP (2021–2025). The Ministry of Science and Technology's (MOST's) Notice on Creating a Better Environment to Support R&D of Technology-based SMEs, released in early 2022, 3 outlines a series of moves such as allocating a specific budget for SMEs in national key R&D programmes, supporting mobility and 'revolving doors' for scientists to

work in both academia/research and SMEs, increasing the participation of SMEs in smart city application and demonstration projects, and including SMEs' R&D activities as a key evaluation indicator for the administrations in sci-tech parks and high-technology zones. Achievements in preferential tax policies and easier access to credit were also reiterated in the 2023 Government Work Report.4

Challenges for foreign SMEs

However, it appears that foreign SMEs are in a disadvantaged position compared to domestic SMEs, and even foreign multinational corporations (MNCs). Foreign SMEs are rarely explicitly mentioned in official Chinese Government documents - in contrast to MNCs, regional headquarters or foreign R&D centres, which often have dedicated paragraphs or targeted opinions.5 In fact, foreign SMEs normally do not receive the same degree of priority that MNCs do, and are largely absent from various dialogues that several local administrations in China have with the foreign business community, or in standardisation activities.

Furthermore, as regularly reported in the European Chamber's and the EU SME Centre's Inter-chamber SME Working Group Position Paper, foreign SMEs face bigger challenges in daily operations compared to local SMEs and MNCs, such as higher requirements and limitations for obtaining corporate loans, and more difficulties in attracting and retaining talent. In short, foreign SMEs may be considered less profitable, not contributing enough to short-term key performance indicators, and/or their brand not 'prestigious' enough - even though in many cases SMEs possess state-of-theart technologies.

The result is that the number of EU SMEs with active R&D operations in China is low. First, resources are obviously more limited for SMEs, while expanding R&D operations in other countries is costly and often not perceived to be as essential as production and sales activities. Second. China is objectively a much more challenging environment compared to others in terms of IP protection and enforcement, cross-border movement of engineers, materials and data, and fierce local competition, as well as red tape and overall compliance requirements. Keeping R&D activities at home or in close proximity, while selling in the Chinese market via traditional channels such as importers, distributors, representative offices or sales teams in the country, is just less risky and more profitable in the short-term. Even among those SMEs with active R&D in China, the majority are dedicated to further development of existing products and technologies (incremental innovation), adaptation to meet local market or regulatory needs, or product customisation. That is, R&D with not much 'R' but more 'D'.

Opportunities for foreign SMEs

Still, there are many examples of EU SMEs successfully conducting R&D in China or in cooperation with Chinese actors.⁶ These can be found across

¹ China, Global Innovation Index 2022, World Intellectual Property Organization (WIPO), 2022 viewed 20th March 2023, https://www.wipo.int/edocs/pubdocs/en/wipo_pub_2000_202.n.pdf

Cluster ranking: The GII reveals the world's top 100 science and technology (S&T) clusters and identifies the most S&T-intensive top global clusters, WIPO, 2022, viewed 20th March 2023, https://www.wipo.int/export/sites/www/pressroom/en/documents/2022gii_clusters_

Motice on Creating a Better Environment to Support R&D of Technology-based SMEs, MOST, 11th January 2022, viewed 20th March 2023, http://www.gov.cn/zhengce/zhengceku/2022-01/13/content_5668067.htm

In particular, concerning access to credit, the report highlighted that the "average interest rate of newly issued corporate loans was reduced to the lowest level since statistics are variable", and that "gradual cuts were made to interest rates on inclusive loans to micro an small businesses". Unfortunately, this does not always apply to foreign SMEs in the country. If let let Report on the Work of the Government, State Council, updated 15" March 2023, viewed 20" March 2023, attity/lenglish.www.gov.cn/news/topnews/202303/15/content, WS64110ba26cd0526996db473.html

See, for instance, the Several Measures to Encourage Foreign Investment to Establish R&O Centres, released in January 2023 by the MoST and the Ministry of Commerce (MOFCOM). The official recognition as Toreign AGO centre' requires certain trivesholds which are not easily met by foreign SMEs in China, such as minimum R&D investment (US dolar (USD) 2 million in Shangha, or CNY 8 million in

3%

Among 650+ business enquiries received by the EU SME Centre since October 2020 (beginning of phase III), less than 3 per cent involved R&D-related aspects; while inquiries on other aspects (such as legal or standards) involving technologyrelated companies is around 20 per cent. 44

To date, a total of **44 Horizon Europe projects** feature the participation of Chinese entities – mostly through universities and research structures. See, for instance, the projects:

- RECONMATIC (ID: 101058580)
- ADOPT-IPM (ID: 101060430)

(searchable via the EU's CORDIS platform: https://cordis.europa.eu/)

different sectors, but especially in areas with strong digital and consumerorientated applications; i.e., areas where Chinese innovation and speed often anticipate and exceed that of other countries. This means that it is no longer inconceivable to see R&D achievements or ideas generated in China feeding into global R&D projects and products sold in other countries. Among other benefits, there is China's large pool of science, technology, engineering and mathematics (STEM) graduates, though recruitment challenges and high turnover rates affect foreign SMEs more severely than domestic SMEs or MNCs; and a pro-innovation attitude among local administrations that translates into large administrative and financial support for R&D activities, which at least in the short/medium-term lowers the costs of innovation.

Each case is unique, but a common trait that EU SMEs active in R&D in China have is to think and act with a local mindset. For instance, a different IP strategy based on more active (yet not necessarily higher-value) patent-filing to unlock subsidies and incentives. The smaller dimension and limited resources of SMEs should not impede them from

engaging and developing relations with big players, including state-owned or government organisations. EU SMEs should fully dedicate local resources to government/public relations. These will pay off in the long term – be it for obtaining a higher amount of subsidies, extending clients' networks, hiring skilled talent or growing the company's brand. At the same time, the importance of partnerships with academia should not be neglected.

The shifting of responsibilities for hightechnology industries, high-technology zones and sci-tech parks from the MOST to the Ministry of Industry and Information Technology (MIIT) during the 2023 Two Sessions might also lead to more opportunities, as subsidies and incentives issued by local-level IIT departments (工业和信息化委、厅、局) are traditionally more easily and widely accessible for foreign companies compared to those of local-level departments of science and technology (科技委、厅、局). Relations with these bodies should be cultivated.

R&D as a market entry approach

R&D can also represent an interesting way to enter the Chinese market – albeit a 'more advanced' one. In this context, the EU-China Co-funding Mechanism represents a good platform: EU SMEs may include Chinese partners to join Horizon Europe projects in two flagship areas-Climate Change and Biodiversity; and Food, Agriculture and Biotechnologiesobtain EU funding7 and eventually scale up that partnership at the end of the project to enter the Chinese market. Similar funding schemes also exist at the local level, especially-but not onlyin Shanghai and Guangdong, through which a Chinese entity partnering up with foreign actors for a R&D project will get funding from the local administration. These are generally open to foreign companies from any country, though some are exclusively designed for certain countries - such as Finland, one of the EU's pioneers in promoting joint innovation projects in China involving SMEs.

In conclusion, doing R&D in/with China is not easy for EU SMEs; it requires deeper knowledge of and engagement with the country and certainly comes with a great deal of risk – especially in terms of intellectual property protection, as well as constraints on outbound data and technology movement, i.e. factors that in the long term may have significant implications. But with careful planning, meticulous execution and strong dedication, R&D in China may also present interesting benefits to EU SMEs.



Alessio Petino is the business advisor of the EU SME Centre (www.eusmecentre.org.cn), providing technical assistance to EU SMEs entering the Chinese market. He is also a consultant for various EU-funded projects in the area of research and innovation policy, funding, cooperation and challenges.

For any questions on R&D-related issues in China, EU SMEs and business organisations may contact the EU SME Centre's team for free-of-charge, confidential and one-to-one consultations: https://www.eusmecentre.org.cn/ask-the-expert/ or Info@eusmecentre.org.cn

⁶ An example of a very successful SME is Siveco China, a case study can be found on the EU SME Centre's website: https://www.eusmecentre.org.cn/publications/siveco-chinalessons-from-20-years-in-the-chinese-maintenance-market/.

At the same time, under certain conditions the Chinese partner may receive co-funding from the MOST, within the framework of the 'Intergovernmental Science, Technology and Industry Cooperation' National Key R&D Programme'. with calls published twice a year.

Levying Innovation

Understanding China's R&D tax incentives by Liang Wu

Research and development (R&D) tax incentive regimes have been implemented in many developed economies to boost growth in industries considered of high potential. Such regimes have also been in place in China for more than a decade. In this article, **Liang Wu** of **KPMG** outlines the Chinese incentives available to qualifying foreign enterprises, and how to address complexities in the application process.

COVER STORY

As China's urbanisation evolves, the government is increasingly acknowledging the importance of R&D in supporting business innovation, industry transformation and knowledge creation. Indeed, encouraging R&D and innovation activities has become a national strategy and one of the key central government priorities.

R&D covers enterprises applying science and technology knowledge for the purpose of obtaining new know-how or achieving substantive improvements in technologies, products or services, and processes.
R&D incentive regimes have been widely adopted in most developed economies: more than 50 countries and jurisdictions currently have some form of an R&D incentive, with some jurisdictions offering multiple options.

Although opinions vary with respect to the effectiveness of R&D incentives, most studies have found that they increase private investment and innovation, influence where companies conduct R&D and ultimately benefit the health of the businesses involved.

Over the past few years, the global economy has been severely affected by the COVID-19 pandemic. Apart from the impact on healthcare systems and social fabric the pandemic has also changed the dynamics of cross-border supply chains and globalisation.

While some reports have suggested that a number of foreign enterprises as a result have considered or may be considering relocating their operations from or reducing local investments in China, many major foreign enterprises are maintaining their faith in the prospects of the China market and are increasing their investments to drive growth amid challenging global economic conditions. Hence, it is in the interest of those companies to explore

opportunities to take advantage of local R&D tax incentives.

Prevailing R&D tax incentives

The Chinese Government has promoted a broad range of R&D- or technologyrelated tax incentives to support enterprises to conduct R&D activities.

Current prevailing tax incentives include the following:

- Companies that qualify as highand new-technology enterprises (HNTEs) are eligible for a reduced corporate income tax (CIT) rate of 15 per cent.
- Companies that qualify as technology advanced service enterprises (TASEs) are eligible for a reduced CIT rate of 15 per cent. Relevant service types include outbound and/or inbound information technology/business process/knowledge process outsourcing.
- Eligible companies in nonrestricted industry sectors can enjoy super deductions for CIT purposes:
 - Restricted industry sectors include tobacco manufacturing, accommodation and catering, wholesale and retail, real estate, leasing and commercial services, and entertainment.
 - Manufacturing companies are entitled to CIT super deductions of 200 per cent.
 - Non-manufacturing companies are entitled for CIT super deductions of 175 per cent for the first three quarters and 200 per cent for the fourth quarter of the year.

- HNTEs'/TASEs' CIT benefits and super deductions can be used in parallel under certain conditions.
- Eligible software enterprises can be exempted from CIT for two consecutive years and can enjoy a 50 per cent reduced CIT rate for the first three years after they start to show profits. Key software enterprises can be exempted from CIT for five consecutive years and enjoy a reduced rate of 10 per cent afterwards.
- Eligible integrated circuit (IC) design companies can be exempted from CIT for two consecutive years and subject to a halved CIT rate for the three years after they start to show profits. For key IC design companies, an exemption from CIT of five consecutive years is available, after which they will be subject to a reduced CIT rate of 10 per cent.
- Eligible IC manufacturers could be eligible for full or half CIT exemptions for up to 10 years, depending on the types of IC products they produce.
- The portion of annual income derived from eligible technology transfers of a resident enterprise of China, which does not exceed Chinese yuan (CNY) 5 million (United States dollars (USD) 718,000), can be exempted from CIT; the portion that exceeds CNY 5 million can enjoy a 50 per cent reduction in CIT.

All these tax incentives apply to both domestic and foreign enterprises that qualify under the same set of criteria. It is also worth noting that the number of foreign enterprises in Mainland China that have successfully enjoyed R&D tax incentives has

grown incrementally in recent years. Taking 2021 as an example, the total tax saving of foreign enterprises through R&D super deduction for the first three quarters was reported as approximately CNY 66 billion.

Scope of eligible R&D expenditures

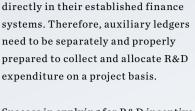
The range of typical R&D expenditures that are eligible for tax incentives is wide and can include:

- · R&D and technical staff costs;
- direct costs such as that of materials, power, utilities and so on;
- fixed asset depreciation for R&D activities;

- amortisation of intangible assets for R&D activities;
- designing and trial, prototyping and testing costs; and
- other expenses directly related to R&D activities.

Taking a collaborative approach for application preparation

In practice, companies may not be setting up the relevant R&D financial accounts required to completely capture these related expenditures. It is also challenging for companies to allocate the relevant expenses to



each of the R&D activities or projects

Success in applying for R&D incentives is often the result of a joint effort by multiple teams, not just the in-house tax team. The complex requirements can only be effectively managed collaboratively across each of the key functions shown in Table 1.

The uptake

In summary, the Chinese Government has promoted and continues to promote a broad range of R&D or technology-related tax incentives to support enterprises to conduct R&D activities that fall within a particular range. R&D tax incentives are a legal and effective tax benefit for foreign enterprises in China to improve corporate profitability, strengthen their financial health and generate funding for more sustainable technology upgrades.

To maximise the potential benefits from these policies, experience shows that foreign enterprises registered locally should take a compliant and systematic approach to secure the tax benefits and generate sustainable value.



KPMG China, part of the Global R&D Incentives practice network, has a nationwide team of professionals. Our robust methodology and extensive experience can help companies navigate the changing R&D landscape and maximise an organisation's return on investment, drawing on diverse industry knowledge and technical backgrounds, including science, information technology, engineering, law, taxation, and accounting.

Liang Wu is a partner of KPMG China's R&D Incentives Practice.



Table 1: Summary of preferential policies

Technology

- Resourcing for R&D activities
- Scoping R&D activities into projects
- Preparing technical documentation
- Managing technical contracts

Finance/Tax

- Tracking and managing R&D budget
- Capturing and allocating R&D expenditure
- Preparing auxiliary ledgers on project basis
- Managing tax compliance issues for example, transfer pricing
 arrangements
- Consolidating financial data for incentive purposes

Intellectual property (IP)/Legal

- · IP planning and registration
- IP-mapping for HNTE purposes
- Legal arrangements for contracts with overseas headquarters and external vendors

Human Resources

- Managing costing data of R&Drelated employees
- Consolidating employees' functional roles with respect to R&D chains
- Maintaining updates of headcounts and job descriptions for R&D-related employees

United States' Semiconductor Export Controls on China

Implications for international companies in the Chinese market

by **Daniel Berger**

In early October 2022, the United States (US) issued nine new rules, detailing export controls on advanced chips, transactions for supercomputer centres, and transactions involving certain companies on its *Entity List*. In addition, these new rules also impose new controls on certain semiconductor manufacturing equipment and on transactions for certain integrated circuit end uses. US citizens and green-card holders will also be banned from working on certain technologies for Chinese companies and entities. Since then, the US has joined forces with Japan and the Netherlands in trying to deepen restrictions on China. In this article, **Daniel Berger** from **Euro Asia**Consulting provides details on the most pertinent elements of the nine new rules and explains how they may affect European companies operating in the Chinese semiconductor market.

The impact is spreading

The new US controls are finely calibrated and apply to most cutting-edge chips, as a licence is required to export, reexport or transfer "logic [integrated circuits (ICs)] using a non-planar transistor architecture or with a 'production' technology node of 16/14 nanometres (nm) or less", "NOT AND (NAND) memory ICs with 128 layers or more" and "dynamic random-access memory (DRAM) ICs using a 'production' technology node of 18 nm half-pitch or less". These chips power smartphones, supercomputers, autonomous vehicles, medical imaging,

drug discovery, climate modelling, artificial intelligence (AI) systems and many other high-technology applications. The US ruling intends to isolate the design and manufacturing capabilities of China's advanced chips from people, equipment, parts and materials. Immediate effects include the following:

According to expert opinions,
 China's own equipment-makers
 remain four to five years behind
 their overseas counterparts,
 making them unsuitable as instant
 substitutes for equipment lost
 from US suppliers such as KLA

Corp, Applied Materials and Lam Research. Therefore, the current production capacity of advanced chips can no longer be guaranteed.

- In the US, semiconductor companies—which count China as their largest single market—are facing potentially severe damage to their revenues. Other companies that manufacture high-end products in China must take note that the regulations ban US citizens from working at Chinese semiconductor fabrication facilities, unless they apply for a licence.
- Internationally, large chipmakers such as Taiwan's TSMC and South Korea's Samsung, as well as Netherlands-based ASML, which makes chip manufacturing equipment, are evaluating their business with China as they explore how deeply the new rules will cut into their sales.

The direct impact is more evident in China's semiconductor value chain:

- IC design companies, domestic graphics/computer processing unit-makers and AI brands (such as Huawei Hisilicon) that need advanced chips of 14 nm or less will fall under the regulations' remit.
- Advanced chip-makers like SMIC and Yangtze Memory with chips

of 16/14 nm or less are highly impacted, as the unavailability of core manufacturing equipment and critical spare parts will make it difficult to maintain current manufacturing capacity.

• Mature chip-makers with chips of 28 nm or above are not heavily impacted, as China capacity expansion is mainly in this area. These chips are also in high demand for the manufacture of domestic equipment, parts and materials. Mature chipmakers have unlimited access to equipment from all over the world, including from the US.

According to the State Council, China's chip self-sufficiency rate will reach 70 per cent by 2025. Despite the direct impact of the US rules on certain industries, China is expected to accelerate industry upgrading and increase its self-sufficiency rate, which will create demand for the research and development (R&D) of high-technology products.

- Demand exposure: China's ability to build a mass production line for pure domestic 55 nm equipment (with imported parts) remains uncertain, even if domestic equipment already supports 55 nm chips. The most urgent need will be to increase self-sufficiency in this area.
- Past success: China-made mature equipment is already adopted in the domestic production of mature chips (28 nm or above), mainly due to the long delivery time and high price of corresponding foreign equipment, as well as the capacity expansion of mature chip production abroad.
- On-going investment: in August 2022, SMIC International announced that it will build a 12inch wafer factory in Tianjin with

a planned construction capacity of 100,000 chips per month to produce 28-108nm chips. The project is worth about US dollars (USD) 7.5 billion (about Chinese yuan (CNY) 51.5 billion)

Although China has made progress in the development of mature chips, it still faces a long road towards reaching the same level in advanced chips. The Chinese Government is actively promoting R&D in this field, as is evident from State Council announcements of new related policies:

- "Focus on R&D of advanced chips, integrated circuit equipment and process technology, key integrated circuit materials, integrated circuit design tools, basic software, industrial and application software..."
- "In the fields of advanced storage, advanced computing, advanced manufacturing, high-end packaging and testing, key equipment materials, new-generation semiconductor technology, etc., promote the construction of various innovation platforms in combination with industry characteristics..."

In 2021, the scale of the IC market in Mainland China reached USD 186.5 billion (domestic consumption), while the actual output value of chips manufactured in Mainland China that year was only USD 31.2 billion, with a self-sufficiency rate of about 16.7 per cent. Unlike high-end chips of below 14nm, which are utilised by a small number of industries—for example, high-end consumer electronics, AI devices, application processors, to name but a few-28nm chip products can be applied to new energy vehicles, automatic driving, home appliances, communications, as well as Internet of Things equipment, routers and other fields - representing 90 per cent of

market demand. This indicates that domestic production capacity, especially for chips below 28 nm, will be further improved to reduce dependence on imports and improve localisation rates.

Implications for multinationals operating in China

The new US regulations mean that economic and technological decoupling between the US and China becomes inevitable. The new restrictions may accelerate industry upgrading in China and lead to a broader market for non-American high-end technology and products.

On the other hand, these unprecedented steps are likely to create a less stable world where globalisation lives on but is transformed by limited free trade, increasing protectionism and an accelerated technology race as well as potential high-technology embargoes. European and multinational companies operating in China are urged to re-balance and prepare their China strategy for de-risking while also ensuring they can stay in the game. Considering the importance of the Chinese market and its production capabilities, different China-specific scenarios with corresponding countermeasures should be developed and deployed to prepare for an increasingly divided world.

Daniel Berger is partner at Euro Asia Consulting (EAC). EAC is one of the leading management consultancies for strategy, M&A, and operational excellence in emerging markets for over 30 years. We support our clients in the realization of growth strategies and the optimization of international value chains. Our firm has grown organically and now with four offices worldwide: Shanghai, Munich, Mumbai, and Kuala Lumpur. Our experts have shared their expertise and experience gained from numerous projects and market analyses to our globally committed teams.

China ShortCuts

The European Chamber launched its new, short-format podcast series in October 2022.

China ShortCuts is a five-minute weekly catch-up about the Chinese business landscape.

Tune in to stay up-to-date on the latest economic data, market trends, and policy and regulatory updates that could shape your industry.

minutes + - Heu

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R&D PROJECTS IN CHINA

Regulatory compliance and IPR-related aspects to consider by **Sebastian Wiendieck** and **Felix Engelhardt**

To help its economy recover from the dampening effects of the zero-COVID measures over the past three years, the Chinese Government has promoted incentives for enterprises—including foreign-invested companies in some cases—involved in research and development (R&D) locally. While there are many benefits to engaging in R&D in China, such as the potential market size and the speed of development, there are also many risks for foreign enterprises.

Sebastian Wiendieck and Felix Engelhardt of Rödl & Partner outline areas for concern with regard to compliance and intellectual property rights (IPR) protection when conducting R&D in China.



R&D in China - the two sides of the medal

China offers a highly attractive environment for creating innovative products, services, processes or even entire business models, which is increasingly being recognised by European companies, universities, scientific research institutions and other relevant stakeholders. A survey conducted among members of the European Chamber in cooperation with the Mercator Institute for China Studies (MERICS) between November 2022 and March 20231 highlights the following factors as underlying European companies' R&D investment decisions: the size of the Chinese market; strong local demand/appetite for companies' innovative goods/services; and the fast pace of commercial application of R&D results.

Historically weak economic growth in 2022 seems to have led China to realise that foreign investment is urgently needed, especially in key development areas. This is reflected in a circular published by the State Council on 11th January 2023,2 urging relevant departments and local authorities to entice foreign investors to set up R&D centres in China through measures such as financial and tax support; facilitated access to land, infrastructure and necessary equipment; and opening new channels to top talent and valuable data from national science and technology (S&T) programmes.

In reality, foreign investment into R&D projects in China is often associated with certain risks and unfavourable investment conditions, among which the above-mentioned survey lists weak protection of IPR; an unlevel playing field for foreign companies, in particular unequal access to and opaque/unclear application information/processes for government

support; and administrative challenges not faced by local companies. It is against this ambivalent background that European companies and other relevant stakeholders have a genuine interest in understanding how to approach typical legal compliance as well as IPR-related challenges when planning and executing joint R&D projects in China.

Regulatory compliance considerations for R&D projects in China

Regardless of the increasing number and diversity of R&D-related incentives, state support normally does not, or at least not fully, exempt companies from a host of mandatory requirements under Chinese law. Investors must first assess the potential impact of prohibitions, restrictions and other obligations under China's foreign investment regulatory framework, with the Foreign Investment Law (FIL) and the concept of 'pre-establishment national treatment plus negative lists' at the top. The FIL, together with its Implementing Regulations and various negative lists for foreign investment access, are usually the first hurdle foreign investors will encounter. Closely related, yet applicable to both domestic and foreign-invested market entities, is the Negative List for Market Access of all industries and sectors for which prohibitions or restrictions for market access exist, including listed R&D activities. Further substantive and procedural requirements are covered by industry-specific laws and regulations. Any prohibitions or restrictions—such as administrative licence or approval requirements not contained in either the Foreign Investment Negative List or the Market Access List-are illegal and should be reported to the competent supervisory authority.

Since 1993, R&D in China has been

governed by a national statute called the Law on Science and Technology Advancement, which was most recently revised in January 2022. The majority of this law's provisions are dedicated to the areas and means at the disposal of the Chinese Government to further progress in science and technology (S&T), but several also stipulate obligations and potential punishments for violations. For example, falsely reporting, claiming, embezzling, misappropriating or withholding designated R&D government funds may lead to mandatory restitution, fines or termination of ongoing and exclusion from future government-funded R&D projects. Similar consequences may be triggered if the Chinese Government holds that specific R&D activities may endanger national security, harm public interests, endanger human health or violate scientific integrity and S&T ethics. Due to the vagueness of these undefined terms and the mounting centralisation of R&D activity control, compliance risks are particularly high and hard to predict.

A third area of importance for regulatory compliance is the vast field of data and cybersecurity to which the Chinese leadership attributes the status of national security. Data processing activities in China are subject to an increasingly complex mesh of laws, departmental rules and technical standards. Applicable to all sorts of data processing activities within-and sometimes also outside of-the Chinese territory, the compliance pressure is multiplied if processed data is considered 'important' or as 'national core data'. R&D activities in systemically important industries such as public telecommunications, information services, energy, transportation or finance are also likely to fall into the domain of 'critical information infrastructure and will necessitate implementation of stringent

China's Innovation Ecosystem: The Localisation Dilemma, European Chamber and MERICS, 2023, https://www.europeanchamber.com.cn/en/publications-innovation-report

China further supports foreign-funded R&D centers, State Council, updated 18th
January 2023, viewed 23th March 2023, https://english.www.gov.cn/policies/latestreleases/202301/18/content_wS63c79b01c6d0a757729e5cf7.html



information technology (IT) and data security measures.

The risk of running afoul of China's data security regime is highest when transferring R&D-related data generated in China across Chinese borders. In many cases, an official security assessment organised by the Cyberspace Administration of China will be required. The State Council circular stresses, without any room for interpretation, that concerned authorities should exercise a high degree of diligence in supervising cross-border transfers of R&D-related data.³

IPR-specific aspects of R&D projects in China

The European Chamber/MERICS survey shows that IPR protection is still a serious concern for many foreign companies conducting R&D in China. From a regulatory point of view, China has made much progress in strengthening and aligning official registration and enforcement mechanisms regarding patents, utility models and designs with international standards. According to the European Chamber/MERICS report, one third of respondents cited "weak IPR protection systems' as negatively impacting their R&D activities in China

As far as patentable inventions, utility models and designs are concerned, a vital question to ask is who will be entitled to apply for and ultimately own the

R&D outcome. According to the Patent Law, if two or more organisations or individuals cooperate in, or an organisation or individual has been entrusted with, the completion of an invention, all are granted the right to patent application and, if the patent is granted, will be the lawful patent owner(s). This can be altered by agreement between the parties involved, subject only to mandatory provisions of Chinese law making the agreement or individual clauses in it illegal and/or invalid. Therefore, a comprehensive agreement providing for matters such as exploitation, profit distribution, licensing, rights transfer modalities or dispute settlement is strongly recommended. Similar considerations apply to R&D-related achievements and material that do not fall within the scope of the Patent Law, but may be protected ipso facto as copyrights under Chinese law.

Enhancing trade secret protection in China hinges on many different factors. Focussing on what European companies involved in Chinese R&D projects can actively do in this regard, the first step should always be to understand what qualifies as trade secrets under Chinese law and, second, how to obtain legal protection. China's Anti-unfair Competition Law defines trade secrets

technical and business information, which is not known to the public, has commercial value and for which the rights holder has adopted corresponding confidentiality measures'. To make this workable in practice, valuable guidance is provided by the Provisions of the Supreme People's Court on Several Issues Concerning the Application of Law in the Trial of Civil Cases Involving Trade Secret Infringement, which list, for example, what kind of protection measures rights holders must take to gain judicial support, and under what circumstances difficulties in obtaining and submitting relevant evidence might be overcome. The provided guidance can assist companies in not only reducing the actual risk of misappropriation and unauthorised use of their trade secrets, but could also increase their chances of successfully enforcing their rights in Chinese courts if violations occur.

As attorneys, tax advisors, as well as management and IT consultants and auditors, **Rödl & Partner** is present in 50 countries with 107 own offices and around 5,260 experts. In China, Rödl & Partner assists clients from four wholly-owned offices in Beijing, Guangzhou, Shanghai and Taicang.

Sebastian Wiendieck is partner and head of Legal at Rödl & Partner in China, and is based in Shanghai. Felix Engelhardt is senior associate at Rödl & Partner in Shanghai.

Other relevant fields of regulatory compliance in R&D projects in China (for example, import and export of material, equipment and R&D outcomes; cross-border movement of R&D personnel; and compliance regarding project finance and taxation) cannot be addressed here in greater detail due to editional limitations.



R&D challenges for European companies in China by **Gianluca Giorgi**

To better understand the research and development (R&D) world in China, what R&D entails needs to be defined. Quantifying how much research is being carried out in a company or a country is not easy; general statistics can provide, for example, how many engineers are involved, how much money the company/country is investing in R&D, but how many advanced projects are being developed and what kind or in which direction is not as evident. In addition, while research can spark several ideas, only some will go on to be developed, and of those few, only one or two will make it to the market, where they may or may not find success.

Therefore, the road to a successful project is long and difficult. Along the way, several issues may arise, such as others developing the same idea first and protecting it with patents, the team being infiltrated by a competitor, or collaboration with a university or another company being required to get to the next stage. Gianluca Giorgi, vice chair of the European Chamber South China Chapter, has summarised the life path of an innovative project, explaining the difficulties of taking a concept to fruition.

China has many engineers skilled at developing products similar to others, but not so many can, or have the resources to, invent something original. This means if you need to develop something similar to what you are already producing, Chinese engineers can quickly modify your solution and add many new features. The final product can be packed with accessories and functionalities; these may or may not be useful to the product's/project's purpose but will give added strength to the sales team's pitch.

Previously in China, it was possible to recruit many engineers from a variety of fields and backgrounds because their salaries were lower than European researchers – who often cost at least double or three times more. Chinese engineers were also more dedicated to their work, and benefitted from the abundance of examples around them for inspiration.

Nowadays, the situation is different: many engineers in China are more costly and less productive than their European counterparts, giving several European companies reason to move their R&D activities—if not all, at least partly—back to Europe.

In addition, in the past, it was more profitable for China to produce, copy and learn from foreigners' products because,

first of all, if a product is sent for production in China, it meant the product was already accepted by the market, so copies or similar products are more likely to sell; and second, if a foreign company made that product, all potential problems will have already been weeded out and the final product is likely to already comply with international safety and standardisation requirements.

The situation with R&D in Europe is different due a strong history of manufacturing development and innovation by companies and universities. There are also well-established frameworks for university-industry collaboration. This allows universities to test out theories by using a real project, though the process can take a long time due to the number of rounds of testing, networking with other universities/companies/institutions, and the lack of pressure to meet market demands within a fixed schedule.



Therefore, many European companies operating in China have a R&D department in Europe because there they can truly develop something new and innovate a full series of products. In China, they localise the project to suit the Chinese market. One major deterrence from creating R&D centres in China for European companies is the weak protection for intellectional property (IP) in the country. While the Chinese Government has made efforts to improve the IP protection system in recent years, it is still not on par with European levels. As a result, many European companies develop new products for the European market before moving them to the Chinese market or production lines.

Hurdles to collaboration

Another problem facing European companies with regard to R&D is access to materials, from electronic components to human tissue and organs. Up until the end of 2022, China's strict zero-COVID policies had caused disruptions to supplies between Europe and China, leading to shortages in some components. This created many challenges for R&D teams, with uncertainty over their ability to source materials on time as well as the conditions for launching a product in the market. In addition, the United States (US) under the Trump Administation introduced onerous economic policies to protect its domestic market from Chinese products, which led to a US-China trade war that has also disrupted supply chains for new products. To top it all off, Putin started a war with Ukraine that is now affecting all sectors of the market, from materials and products to energy supplies. China's ambiguous stance on the war has ruffled feathers in Europe and the US, and created challenges for R&D both in and outside China.

COVER STORY

The increasing trend towards decoupling between the US and China means engineers often need to use different materials and components for different markets. In Italy, there is a phrase, "Between two faiths, the third will be the winner", and indeed India has started to emerge strongly in the R&D area, as have several Southeast Asian countries like Vietnam and Malaysia.

While China has now ended its zero-COVID policy, many European companies have already moved some of their operations out of China, especially their R&D departments. The Chinese market remains important for European business but, while China was the main target market pre-COVID, the recent supply chain and geopolitical difficulties mean that if a company does not have a strong presence in China, it will no longer be as profitable for it to have an R&D centre, or even a production base, in the country.

On the other hand, China is investing a lot in fields such as green energy and decarbonisation. European companies are in a strong position to support China on this front, though political issues may have a negative effect on these business and collaboration operations. This concern highlights the need for China and the US, and all governments worldwide, to avoid friction and war. A stable and peaceful environment is vital for the global exchange of knowledge necessary to achieve the levels of innovation, development and decarbonisation required to save the planet for our children and future generations.

European Chamber recommendations

The European Chamber recently launched reports on standardisation, decarbonisation and innovation. These publications have been shared with



Chinese stakeholders, including the Guangdong provincial and local governments with the aim of contributing to lifting the Greater Bay Area to the next level. For example, when developing future technology, it is important for the products to comply with the relevant international standards for a wider impact and to avoid the waste of resources due to compatibility. Decoupling of those standards would be counterproductive for industry development.

The European Chamber believes that high-technology manufacturing and new technologies are required to meet the growing demand for green energy and achieve both the EU's and China's decarbonisation goals. As stated by Chamber President Jörg Wuttke, "Given that European companies have a strong track record of working towards carbon neutrality in their home markets, deepening EU-China cooperation in decarbonisation seems like a logical move." In the South China Chapter's viewpoint, in the GBA-particularly in Shenzhen-the business environment and infrastructure are ready for the

implementation of the new technologies required for a green future.

The Chamber's China's Innovation Ecosystem reports show that some European companies are increasingly integrating China R&D with their global efforts, and while the majority are using China R&D to refine existing products, more and more are creating new goods and services in China that are included as part of their global portfolios. To maintain this confidence in the China market, it is vital to ensure equal access to government R&D support for all industries and companies, as well as a strong record on IP enforcement.

Gianluca Giorgi is vice chair of the European Chamber South China Chapter and a member of the Information and Communication Technology Working Group. He is the chief executive of Shenzhen ES Automation Consulting Ltd, providing strategic mentoring in robotics and automation projects. Mr Giorgi also serves as the director of the Italian Innovative and Technologies Working Group, which belongs to the Italian Chamber of Commerce in China, created in partnership with the Italian Academic Association in China. Additionally, he is an MIT Sloan Blockchain Technologies: Business Innovation and Application Certified Expert, and member of the International Blockchain Council.

China Speed

China's rapid innovation ecosystem by **Hania Thurlow**

'China speed' has been used to describe the inordinate pace of the country's development over past decades, with skyscrapers, super-speed railways and even COVID-19 hospitals seemingly popping up overnight. In recent times, the phrase has been adopted to refer to the pace of innovation compared to that in Europe, particularly in industries such as artificial intelligence, new technologies and the Internet of Things.

Hania Thurlow, project manager at the European Chamber, explains more.



COVER STORY

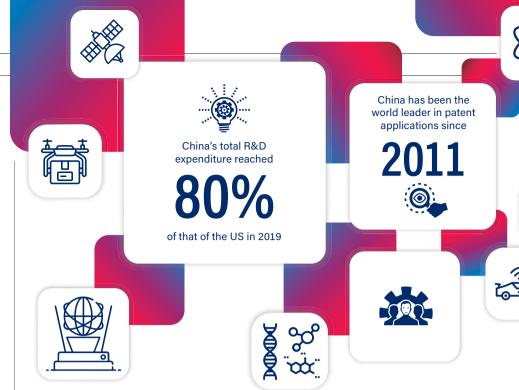
Since China began to reform and open up its economy four decades ago, its gross domestic product (GDP) grew from around United States dollars (USD) 360 billion in 1978 to almost USD 16 trillion in 2021.¹ China's annual GDP growth rate has been over nine per cent on average,² well above the world economy average of four per cent over the same period.³ The World Bank had described China's growth as "the fastest sustained expansion by a major economy in history".⁴

Shenzhen is a commonly used example of this transformation. Riding on the back of a wave of economic reforms, a sleepy fishing village with a population of just tens of thousands transformed into a booming metropolis with more than 10 million inhabitants in just 40 years. This fast pace of economic development is evident across China, particularly on the east coast.

China's innovation ecosystem

Today, 'China speed' no longer simply reflects the country's economic prowess or the startling pace of infrastructure development, but also the future of China's innovation ecosystem.

Research and development (R&D) is the backbone of innovation, supporting the creation of new products and services.6 In 2020, China's gross domestic R&D expenditure was significantly higher than EU Member States and second only to the US.7 To get a better idea of the pace of R&D growth, China's total R&D expenditure reached 80 per cent of that of the US in 2019, up from 26 per cent in 2005.8 Patents are another key innovation indicator. China has been the world leader in patent applications since 2011, according to the World Intellectual Property Organization (WIPO).9



'Imitator' to global innovator

In fact, a report published by the Information Technology and Innovation Foundation (ITIF) published in November 2022 found that, based on key indicators of innovation and advanced industry capabilities, China has surpassed the US in total innovation output. In the decade up to 2020, China's output increased from approximately 78 per cent to 139 per cent of that of the US (in absolute terms).¹⁰

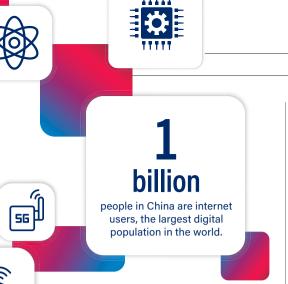
Up until recently, 'China speed' in innovation referred to how quickly China was able to imitate innovations from elsewhere, rather than domestic inventions. However, the progress made against the US market, even when accounting for size, shows that China is swiftly becoming an innovator in its own right. ¹¹ According to the ITIF, China's ability to bring an invention to market and commercialise it faster than anywhere else in the world has the potential to define the global innovation ecosystem for decades to come. ¹²

With such progress being made, the 'China speed' approach to innovation is increasingly important for those doing business in China to understand.

'China speed' is embedded in Chinese business culture

According to the head of a Shanghaibased R&D division of a major multinational, one reason for the growing success of 'China speed' innovation is that it is ingrained in today's local business culture. Decisions that could take weeks or months

- GDP (constant 2015 US\$) China, World Bank, 2021, viewed 10th March 2023, https://data.worldbank.org/indicator/NY.GDP.MKTP.KD?end=2021&locations=CN&start=1978
- The World Bank in China, World Bank, 29th September 2022, viewed 10th March 2023, https://www.worldbank.org/en/country/china/overview
- ³ GDP growth (annual %), World Bank, 2021, viewed 10th March 2023, https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?start=1978
- China's Economic Rise: History, Trends, Challenges, and Implications for the United States, Congressional Research Service, 25th June 2019, viewed 10th March 2023, https://sgp.faiorg/crs/row/RL33534.pdf
- ⁵ Wasserstrom, Jeffery N., The Shenzhen Experiment' Review: Building up a 'Fishing Village', The Wall Street Journal, 22" January 2022, viewed 16" March 2023, -https://www.ws.com/artickes/the-shenzhen-experiment-review-building-up-a-fishing-village-11597-35005>
- Is China a Global Leader in Research and Development?, China Power, 28th January 2021, viewed 13th March 2023, https://chinapower.csis.org/china-research-and-development-md/
- Gross domestic spending on R&D (indicator), OECD, 2023, viewed 17th March 2023, https://www.oecd-lilbrary.org/industry-and-services/gross-domestic-spending-on-r-d/indicator/english_d8b068b4-en
- OECD Main Science and Technology Indicators: Highlights on R&D expenditure, March 202 release, 0ECD, March 2021, viewed 14th March 2023, https://www.oecd.org/sti/msti-highlights-march-2021.pdf
- ⁹ World Intellectual Property Indicators 2020, World Intellectual Property Organization, 2020, viewed 16th March 2023, https://www.wipo.int/edocs/pubdocs/en/wipo_pub_941_2020.pdf
- ¹⁰ Clay, Ian & Alkinson, Robert, Wake Up, America: China is Overtaking the United States in Innovation Capacity, Informational Technology and Innovation Foundation, 23rd January 2023 viewed 10rd March 2023, <a href="https://doi.org/10.1016/j.china.is-overtaking-the-united-states-in-innovation-capacity/s-depth-10.1016/j.china.is-overtaking-the-united-states-in-innovation-capacity/s-
- ¹¹ China's economic power on uncertain speed, European Commission Competence Centre on Foresight, 5th October 2022, viewed 13th March 2023, 4-thtps://knowledge4policy.ec.europaeu/foresight/chinas=economic-power-uncertain-speed_en>
- ¹² Clay, Ian & Alkinson, Robert, Wake Up, America: China is Overtaking the United States in Innovation Output, Informational Technology and Innovation Foundation, November 2022, viewed 10th March 2023, https://www2.tifi.org/2023-us-v-china-innovation.pdf
- Dychtwald, Zak, China's New Innovation Advantage, Harvard Business Review, June 2021 viewed 10th March 2023, https://hbr.org/2021/05/chinas-new-innovation-advantage:
 Milasevic Marija & Hofer Maxim, Dinital Living: Who are the Next Billion Internet Users?
- Millasevic, Marija & Hofer, Maxim, Digital Living: Who are the Next Billion Internet Users?, Euromonitor International, 12th December 2022, viewed 14th March 2023, https://www.euromonitor.com/article/digital-living-who-are-the-next-billion-internet-users
- Fleck, Anna, Mobile Payments: Asia Far Ahead in Mobile Payment Adoption, Statista, 31st August 2022, viewed 1st March 2023, https://www.statista.com/chartr/28128/mobile-payments-a-com/othe-world">https://www.statista.com/othe-world
 Buchholz, Katharina, Mobile Payments: China's Mobile Payment Adoption Beats All Others, Statistias, 8st July 2022, viewed 14st March 2023, https://www.statista.com/chartr/17908 pos-mobile-payment-user-periodion-rates/>
- Wright, Andrew, This is how China's economy has changed in the last 10 years, World Economic Forum, 22st June 2016, viewed 17² March 2023, https://www.weforum.org/agenda/2016/06/how-has-china-s-economy-changed-in-the-last-10-years/



to action by European companies can be turned into prototypes and tested within days in China, a key differentiating factor from European and US markets. But why is China uniquely positioned for this accelerated decision-making and innovation?

After the tremendous economic growth of the past decades, adaptability has played an integral role in China's economic development. In a rapidly changing environment, consumers are more demanding for solutions to make their lives more convenient and help adapt to the changes. For example, take the rate of digital adoption in China. It has the largest digital population in the world, estimated at over a billion internet users. In the EU, mobile payments accounted for eight per cent of all point-of-sale transactions in 2022. In China, it was over 40 per cent.

China has adopted its own version of the 'fail fast, fail forward' approach – one where innovative solutions can be tested on a huge population that is generally much more open to change. Although the trend is beginning to shift, the Chinese population has historically been much more willing to provide their data in exchange for convenience. The result: the ability to quickly generate a huge amount of data and use this to react to market changes and continuously improve technology.

This continuous iterative approach is essential for speedy innovation results. Having seen such rapid economic development in their lifetime, Chinese consumers have high expectations that this will continue at the same pace. 18 For a brand to offer just one new model or software update annually—as is often the case in Europe—is not enough. 19 Businesses targeting the Chinese market need to be constantly redeveloping to stay ahead of the competition. As a result, Chinese enterprises are much less risk averse and able to act a lot faster on any opportunity or threat.

Unlike Europe or the US, China is able to actively anticipate and compartmentalise rapidly so that development can happen in parallel and new technology can immediately be taken advantage of.²⁰

Importance for doing business in China

China's Innovation System: The Localisation Dilemma by the European Chamber and the Mercator Institute for Chinese Studies (MERICS), surveyed European member companies engaged in R&D in China. It showed that 39 per cent of respondents saw the fast pace of commercial application of R&D results as an advantage, and considered it a key incentive for having R&D operations in the country. For some, R&D in China is essential in order to be able to compete with domestic rivals on the global market.²¹

Of the respondents surveyed, 61 per cent said that they valued the size of the market, and 47 per cent felt the positive impacts of the consumers' strong appetite for their innovation. These advantages mean quicker breakthroughs in technological development and refinement of operations that can then be applied back home.

Speed isn't everything

Rapid development comes at an expense. European companies have not been immune to the negative aspects of participating in China's innovation ecosystem. Those surveyed highlighted weak intellectual property rights (IPR) protection systems (34 per cent); an un-level playing field for foreign companies (32 per cent); insufficient local talent (29 per cent); and too much market competition (28 per cent) as specific challenges.

For example, despite the enforcement of IPR being noted as one of Shanghai's strengths, the risk of IP infringement remains the leading reason why local Chamber members remain reluctant to bring their latest technology to China.²²

Conclusion

Even if China can fix some of these domestic challenges, issues undermining international collaboration remain. Global opinions of China have soured over recent years, 23 and geopolitical tensions is the most likely issue that could cut China off from of the global innovation ecosystem. 24 Engaging in innovation with China may get increasingly difficult if these tensions continue to intensify.

European businesses are right to recognise the benefit of 'China speed' and its advantages for the global innovation ecosystem. Those already engaging in R&D in China can see the advantages, even if it is just by observing the sheer speed and scale of developments. Only time will tell whether 'China speed' will continue to dominate the country's development for the next few decades.

¹⁸ Future of Consumption in Fast—Growth consumer Markets: China, World Economic Forum, January 2018, viewed 15th March 2023, https://www3.weforum.org/docs/WEF_Future_of Consumption_in_Fast_Growth_Consumer_Markets_China.pdf>

Dychtwald, Zak, China's New Innovation Advantage, Harvard Business Review, June 2021, viewed 10th March 2023, https://hbr.org/2021/05/chinas-new-innovation-advantage

lbid.

²¹ China's Innovation Ecosystem: The Localisation Dilemma, European Chamber of Commerce in China and MERICS, April 2023, https://www.europeanchamber.com.cn/en/publicationsinnovation-report

Shanghai Position Paper 2023/2024, European Chamber of Commerce in China, 14th February 2023, viewed 14th February 2023, https://www.europeanchamber.com.cn/en/publications-archive/1073/Shanghai_Position_Paper_2023_2024

²³ Pomfret, James, Opinion of China in advanced economies sours 'precipitously' under XI – Pew, Reuters, 29° September 2022, viewed 16th March 2023, https://www.reuters.com/world/china/opinion-china-advanced-economies-sours-precipitously-under-xi-pew-2022-09-29/

²⁴ Lau, Joyce, Is China open to adopting a culture of innovation, Nature, 7th December 2022, viewed 16th March 2023 https://www.nature.com/articles/d41586-022-04207-0

10th JAN. shanghai

President of the Shanghai Foreign Investment Development Board, Mr Xue Feng, speaking at the Investment Working Group meeting on FDI Photo: European Chamber

Investment Working Group hosts Shanghai Foreign Investment Development Board president



On 10th January, the European Chamber's Investment Working Group held a meeting on foreign direct investment (FDI) in China, featuring president of the Shanghai Foreign Investment Development Board, Mr Xue Feng. President Xue spoke on international investment trends in Shanghai, emphasising the important role that European enterprises play in the municipality's economy. Investment Working Group National Chair Jens Ewert presented the facts and myths of FDI in China, highlighting the importance of restoring investor confidence if FDI into China is to reach its potential. Vice chairs Shane Farrelly and Miguel Montoya also spoke, addressing China's Foreign Investment Law and Chinese asset valuation trends respectively.

8TH FEB.

Chamber discusses EU-China trade and investment with Chinese Special Representative on European Affairs

On 8th February, Chamber President Jörg Wuttke and Secretary General (SG) Adam Dunnett welcomed Ambassador Wu Hongbo, the Special Representative of the Chinese Government on European Affairs, to the Chamber's Beijing office. Topics discussed included European Union (EU)-China trade and investment; challenges European businesses

face when operating in China; restrictions on high-technology exports to China; the EU-China Comprehensive Agreement on Investment; and the United States Inflation Reduction Act. Both parties agreed that interdependency and economic cooperation, especially in terms of technology, should be celebrated and encouraged.



Chamber explores collaboration options with Fujian vice governor

On 14th February, SG Dunnett, accompanied by several high-level Chamber representatives, welcomed a delegation led by Wang Jinfu, vice governor of Fujian Province, to the Chamber's Beijing office. SG Dunnett praised the progress Fujian has made in the field of decarbonisation, as noted the Chamber's *Position Paper 2022/2023*. He also outlined European

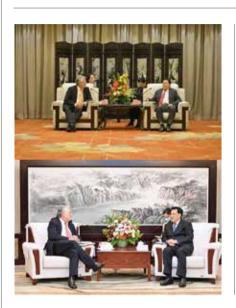
companies' recommendations for improving Fujian's business environment and calls for equal access to public procurement opportunities. Members' interest in contributing to Fujian's economic development, in particular its green transition and green financing, as well as the digital, maritime, tourism and healthcare sectors, was also discussed.

15TH-16TH FEB. SOUTHWEST CHINA

President Wuttke met with Sichuan Vice Governor Yang Xingping on 15th February. **Photo: European Chamber**

President Wuttke met with Secretary of the Chongqing Municipal Party Committee Yuan Jiajun on 16th February **Photo: European Chamber**

President visits Southwest China Chapter, attends high-level meetings with local governments



On 15th February, President Wuttke, Chamber Vice President (VP) and Southwest China Chapter Chair Massimo Bagnasco and Southwest Chapter General Manager Sally Huang met with Sichuan Vice Governor Yang Xingping. The vice governor highlighted Sichuan's great potential for foreign investment, and the Sichuan Government's willingness to provide high quality services for a vibrant business environment. President Wuttke introduced the Chamber's Position Paper 2022/2023 and briefed Vice Governor Yang on the Chamber's recent EU Tour. On 16th February, President Wuttke led a delegation to meet with Secretary of the Chongqing Municipal Party Committee Yuan Jiajun at the Foreign Affairs Office of the Chongqing Municipal People's Government. Secretary Yuan Jiajun briefed on current Chongqing opportunities and the construction of the Chengdu-Chongqing Economic Circle. The delegation expressed member companies' interest in the Chongqing market and appreciation for the local government's support and help.

15TH FEB.

Chamber and EUD work to promote EU-China collaboration on circular economy

On 15th February, the Chamber's Environment Working Group met with Laurent Bardon, head of the Sustainability and Green Transition Section at the EU Delegation to China (EUD), on promotion of the circular economy. Mr Bardon briefed on the discussions currently underway between the European Commission and China's National Development and Reform Committee in this area. A second meeting was arranged to allow the Chamber to brief EU states representatives on the current situation and discuss strengthening EU-China cooperation on the circular economy.

17TH FEB.

President Wuttke and Tianjin Chapter Chair Christoph Schrempp lead a closed door meeting with Yang Bing, vice mayor of Tianjin, on 17th February. Photo: European Chamber

President joins Tianjin Chapter in high-level meeting with local government officials



Ahead of the Tianjin Chapter 2022/2023 Government Appreciation Reception and New Year Executive Mixer on 17th February, President Wuttke and Dr Christoph Schrempp, chair of Tianjin Chapter, led a delegation of local members in a closed-door meeting with Yang Bing, vice mayor of Tianjin, Ren Hongyuan, deputy director (DD) of the Tianjin Industry and Information Technology Bureau, and He Zhineng, DD of the Tianjin Commission of Commerce. The vice mayor briefed on the progress of major investments and potential opportunities in 2023. President Wuttke shared his experiences and business intelligence collected during the Chamber's EU Tour, and discussed the economic outlook for both the EU and China. Dr Schrempp presented the 'fresh off the press' *Tianjin Position Paper 2023/2024* to Vice Mayor Yang Bing.

EU Tour 2023 | ADVOCACY HIGHLIGHTS FROM THE FIRST IN-PERSON TOUR IN THREE YEARS

In the week of 9th January, a delegation of 20 European Chamber representatives led by President Jörg Wuttke travelled to Brussels for the Chamber's first in-person European Union (EU) Tour in three years. During this trip, the delegation held 48 meetings with EU government, industry association and think tank stakeholders, 25 of which were high-level. **Carl Hayward, director of communications at the European Chamber and Beijing general manager**, and **Ester Cañada Amela, senior business manager for European Affairs**, bring us the details.

What was our key messaging to EU stakeholders?

1. The question of how the EU should recalibrate its relationship with China is a hotly debated topic, and calls for disengagement are increasing

There are growing concerns that the EU has become too economically dependent on China, and an increasing number of voices are pushing for the bloc to diversify its trading relationships. This has been reinforced by Beijing's retreat from market-based reforms, with ideology trumping the economy, as epitomised by its zero-COVID strategy. European companies operating in China continue to face long-standing issues, such as the lack of a level playing field, market access restrictions and intellectual property (IP) infringements. Meanwhile, emerging challenges include a dislocation of supply chains due to COVID-19 and increasing geopolitical tensions; and allegations of

human rights violations and forced labour practices. Companies are minimising their exposure through a variety of strategies, such as diversification of supply chains, localisation of production and re-examining how, or even if, they can continue to operate in the China market. This is not only to mitigate risk and meet global corporate pledges but also to ensure they comply with new and emerging EU legislation.

2. However, it is imperative to stay engaged - China is the world's second largest economy, and it keeps European companies profitable, innovative and globally competitive

China's market is far from fulfilling its potential for European companies, but the size of its economy means it simply cannot be ignored. While there is a need to rebalance certain areas in which the EU is dependent upon China—such as rare earths and pharmaceutical products—it is important to avoid a blanket response. China's economic leverage should not be blown out of pro-

portion. Although it is currently the EU's second largest trading partner, Chinese imports are mostly non-essential, easily substitutable goods such as toys, everyday electronic goods and household appliances. European companies are also underinvested in China - the total investment stock since 2020 is approximately euro (EUR) 170 billion, roughly the same amount that the EU invests into the United States every year. At the same time, global challenges like climate change and the digital transformation cannot be effectively tackled without China's involvement. Simply put, if the EU disengaged from China, it would be shooting itself in the foot, economically and politically.

3. The question is then, how can we engage with Chinese stakeholders in a way that pre-empts leaks, vulnerabilities and dependencies, and doesn't compromise our values?

To be successful, companies require good intelligence, but this is being lost in China. One of the main casualties of decoupling, brought about by geopolitical tensions and COVID-19, has been the flow of accurate, reliable information between China operations and European headquarters (HQs). On-the-ground expertise is drying up with business executives leaving China in droves. The European Chamber estimates that the number of European nationals in China has halved in the last few years. This has led to an increasing divide, with HQs concerned that China operations are strug-





gling to maintain a European identity and values. Meanwhile, government-to-government dialogues have also stalled.

4. The EU should adopt a more strategic approach to both competition and engagement

The European Chamber calls on its members and European policymakers to continue investing in intelligence and engaging in productive exchanges with China. For business, this means sending European executives to China and vice-versa to increase the bilateral flow of information and build both trust and expertise. In the case of European governments, this means investing in China-focussed personnel. It also means re-assessing existing EU-China dialogues, not only to ensure that high- and working-level interactions are regularly maintained, but also that they deliver concrete outcomes.

Who did we meet?

Throughout the EU Tour, delegates had the chance to discuss the key issues experienced by European companies in their respective industries with:

Representatives from the EU Commission, including:

 Executive Vice President for an Economy that Works for the People Valdis Dombrovskis (top of page)

- Director General for DG TRADE Sabine Weyand
- Director General for DG GROW Kerstin Jorna (below)



• Director General for DG MOVE Henrik Hololei (below)



• Director General for DG ENER Ditte Juul Joergensen (below)



• Director General for DG SANTE Sandra Gallina (below)



• Director-General for DG AGRI Wolfgang Burtscher (below)



 Camilo Villarino, head of Cabinet of High Representative/Vice President for a Stronger Europe in the World Josep Borrell (below)



 Stina Soewarta, head of Cabinet of Executive Vice President for a Europe Fit for the Digital Age Margrethe Vestager (below)



 Simonas Satunas, head of Cabinet of Virginijus Sinkevičius, Commissioner for Environment, Oceans and Fisheries

FEATURES

 Marco Buti, head of Cabinet of Paolo Gentiloni, Commissioner for Economy

Representatives from the European External Action Service, including: Secretary General Stefano Sannino (below)



Representatives from the European Council, including: Frederic Bernard, head of Cabinet of President Charles Michel (below)



Representatives from the European Parliament, including:

• Chair of the Group of the European People's Party Manfred Weber (below)



- Chair of the Committee on International Trade (INTA) Bernd Lange
- Chair of the Delegation for Relations with the People's Republic of China Reinhard Buetikofer and other Members of the European Parliament
- Vice Chair of the INTA Committee

 Marie-Pierre Vedrenne
- Member of the European Parliament Catharina Rinzema

 HE Fu Cong, Chinese Ambassador to the EU

Representatives from think tanks, including: the Mercator Institute for China Studies (MERICS); Bruegel; the European Policy Centre (EPC); the European Institute for East Asian Studies (EIAS); the European Centre for International Political Economy (ECIPE); the Egmont Institute; and Friends of Europe.

Representatives from industry associations, including: Business Europe; the EU-China Business Association; the European Round Table for Industry; the Chinese Chamber of Commerce in the EU; the European Banking Federation; Spirits Europe; the International Special Dietary Foods Industries; DIGITALEUROPE; Wind Europe; the European Construction Industry Federation; and the European Association for Storage of Energy.

In addition to Brussels, a number of European Chamber representatives also met with government, association and think tank stakeholders in Germany, France and Denmark in the weeks after the EU Tour.

What were the key take-aways from the Chamber's trip?

- The European Chamber remains a key interlocutor for EU stakeholders with a heavy focus on China in their portfolio. Stakeholders with China interest were eager to reconnect with the Chamber, particularly after three years the COVID-19 pandemic.
- 2. While China remains an important topic, other domestic and foreign policy priorities loomed large, including the war in Ukraine and US relatioms on the foreign policy front particularly as progress with China is often simply too slow or not taking place.

- 3. Trust among EU policymakers towards the Chinese Government has been further eroded in the past three years due to COVID, the lack of visits, the war in Ukraine and China's economic coercion aimed at member states.
- 4. There is a general agreement among EU stakeholders in terms of positioning on bottom line issues (Ukraine, human rights, the need to address dependencies and to diversify). At the same time, nuances exist not only between EU institutions like the Commission, the Parliament and Member States but also within individual institutions. Nonetheless, a number of EU stakeholders expressed that-given the importance of China not only as a market but also as a global player without which challenges like climate change cannot be tackled-engagement in specific areas is still on the table.
- 5. Taiwan was very much in the minds of EU policymakers—particularly after the invasion of Ukraine—and while there are calls from Ministers of the European Parliament and Member States to strengthen engagement, the European Chamber expressed the importance of not crossing red lines such as the One China Policy.
- 6. China and the US are more intertwined than ever before in the minds of EU stakeholders. There is also a feeling in Brussels that the EU is caught between giants and still trying to find a balance. There is quite some interest from EU stakeholders on how US export controls affect China's ability to catch up technologically, and the impact of the IRA on EU competitiveness.
- 7. From the Chamber's interactions with associations, it is apparent that there is still strong industry interest in engaging with China.





Protection of Women's Rights in the Workplace

New regulatory updates in China **by Jeanette Yu**

Women play an important role in Chinese society: in 2020, Chinese female employees reached 67 million, accounting for 43.5 per cent of the labour force. However, women are often discriminated against during recruitment and at the workplace, and new legislation to better protect their rights has recently been promulgated.

Jeanette Yu of CMS Legal looks at the current Chinese regulatory requirements and their updates for employers in relation to the protection of women's rights and interests in the workplace.

Over the years, China has promulgated several laws and regulations on the protection of women at the workplace. They include, in a non-exhaustive list, the People's Republic of China (PRC) Labour Law, the PRC Labour Contract Law and the Special Regulations on Labour Protection of Female Employees as well as related rules and regulations at the state-level or issued by local governments. On 1st January 2023, the PRC Law on the Protection of Rights and Interests of Women (New Law) was amended and became effective, outlining specific obligations for employees.

The New Law focusses on eliminating gender discrimination against women at the workplace and provides in detail the statutory requirements for employers.

 At the recruitment stage, employers are explicitly prohibited from taking discriminatory actions towards female candidates. Unless the law provides otherwise, employers cannot hire only males; specify that males are preferred for a position; inquire about a female candidate's marriage and childbirth status: ask a female candidate to do a pregnancy test in onboard physical examinations; or set restrictions on marriage or childbirth intention or status as a condition for employment. The employer shall not refuse to recruit women on the grounds of gender or raise recruitment standards for women by other means. Some of these prohibitions had already been introduced through regulations, but are now provided by law.

During employment, employers shall aim to ensure a fair working environment and adhere to the principle of equality between male and female employees in terms of salary and benefit treatment or when deciding on promotions, evaluating and recognising professional titles, or providing training opportunities. In particular, the

is the percentage of the Chinese labour force accounted for by female employees in 2020. The amended PRC Law on Protection of Rights and Interests of Women went into effect at the beginning of

marriage status of female employees, or the fact that they are pregnant, on maternity leave or nursing a baby, should not affect their consideration for promotion or training opportunities, or the evaluation and recognition of their professional titles.

According to the New Law, gender equality at the workplace will be incorporated into the scope of labour security supervision conducted by the labour administrative authority. Due to this change, rather than having to go to labour arbitration as was previously the case female employees can now complain directly to the competent labour administrative authority. If the complaint is verified, the authority is entitled to ask the employer to make rectification. If the employer refuses to do so, or the circumstances of the case are of a serious nature, the authority can impose a penalty of Chinese yuan (CNY) 10,000-50,000 on the employer.

According to the laws and regulations applicable in the past, women enjoy special labour protection at the workplace. They include the following:

- Female employees are prohibited by law from taking certain kinds of work such as underground and mining work, or doing certain types of work (for example, intensive physical labour work) during their menstrual period or pregnancy, maternity and nursing period.
- Female employees enjoy leave entitlement (such as maternity leave, pregnancy check-up leave, nursing period, and so on), salary guarantees, and overtime and night work exemption during the pregnancy, maternity and nursing period.
- Female employees enjoy special protection against termination of contract during the pregnancy, ma-

ternity and nursing periods. They shall not be dismissed due to illness, incompetence, change of objective circumstances or be mass laid-off during these periods. If a female employee's employment contract expires during these periods, the term of contract will be automatically extended until the periods expire.

In addition to the above, the New Law imposes several new obligations on employers:

- Employers must include special protection clauses for female employees in their employment contracts. If there is a collective contract, special protection clauses for female employees should be included or the employer should have a specific collective contract for female employees.
- Employers should regularly arrange health examinations specific to female employees, such as gynecological or breast disease screenings.
- During pregnancy, maternity or nursing periods, in addition to salary, employers should also not reduce female employees' welfare and benefits.

Further, the New Law requires employers to adopt measures to prevent sexual harassment at the workplace. This is the first time that statutory requirements in this regard are written into law at the national level in China. According to the New Law:

• Employers are obliged to take measures to prevent the occurrence of sexual harassment at the workplace, such as formulating relevant rules and regulations, specifying the responsible organisation or person in charge, carrying out relevant education and training programmes, adopting necessary

- safety and security measures, setting up complaint hotlines and establishing investigation procedures.
- If any cases of harassment are reported, the employer should handle disputes in a timely manner. During the investigation process, the employer must protect the privacy and personal information of the parties concerned, support female victims in safeguarding their rights, and provide psychological counselling to female victims where necessary.
- If an employer fails to take necessary measures in preventing sexual harassment, resulting in the infringement of women's rights or negative impacts on society, the employer may be ordered by the competent authority to make rectification. If the employer refuses to rectify or it is a severe violation, the person directly in charge and other persons directly responsible for the company may be punished according to law.

The amended PRC Law on Protection of Rights and Interests of Women went into effect at the beginning of 2023. In order to comply with the new legal requirements, companies may wish to revisit their employment documents and human resource policies, especially their employee handbook and template employment contract, to check if any amendments are required. Companies may also wish to review their current employment process and labour protection practice, and make any necessary adjustments.

Jeanette Yu is partner, and head of Employment and Pensions, of **CMS Legal China**, and is based at their Shanghai office. She has more than 20 years' experience in providing legal advice for international companies on Chinese labour law and compliance management issues. Since 2017, Jeanette has also been acting as the national chair/vice chair of the Human Resources Working Group of the European Chamber.



There are several elements to take into account when choosing to implement an outdoor display, such as case design, coating finishes, International Protection Markings (IP)-rating, sun-radiation resistance, corrosion resistance and cooling functionality, but nothing affects visual quality and impact more than 1) backlight and 2) the manner in which the screen's cover glass has been bonded, or attached, to its internal touch panel.

Backlight brightness of the display

The brightness of a display is measured in candela per square metre (cd/m²) – also known in the industry as 'nits'. The average household television has around 450 nits of brightness¹ and uses a backlighting method called 'edge backlight'. This is bright enough for indoor use where lighting is dim, mostly limited to lamps around the house and other artificial light sources. If you try, however, to place a television like this

outside in an outdoor environment with natural sunlight—say to watch the big match while you barbecue or enjoy your terrace—you'll notice you can hardly see anything on the screen.

'Edge backlighting' is the standard method employed on displays for normal consumer use,² and becomes more

¹ Crystal Crowder, What Is a Nit of Screen Brightness and How Many Do You Need?, Make Tech Easier, 16th June 2021, viewed 21th March 2023, https://www.maketecheasier.com/what-is-nit-of-screen-brightness/)

² TV backlights explained: Edge-lit vs. full array vs. Mini-LED, Tekno Signal, 10th October 2021, viewed 21th March, https://teknosignal.com/tv-backlights-explained-edge-lit-vs-full-array-vs-mini-led/



Top: Edge backlight method.
Bottom: Full–array backlight method

prevalent the thinner and smaller a display is. This option normally consists of one or two LED bars mounted vertically at the side of the display. These LED bars then shine onto a light guide plate which focusses the light output towards the front. This method allows for a slim design, and is also more environmentally friendly as it requires less power to operate.

The most commonly used method for larger format outdoor displays of 32 inches and above is known as a 'full-array backlight'. Here, the LEDs are mounted horizontally to the back of the display and aimed directly towards the front. To spread the light as widely as possible, additional optical lenses are mounted on each LED, enabling

extremely high brightness in a display. This method consumes a lot more power and requires a thicker back-case, but it significantly increases brightness and contrast.

Most phone screens and outdoor advertisement displays implement a backlight brightness of about 1,000 nits.

This is normally sufficient for outdoor use, but—as anyone with an iPhone or other high-end device will know—direct sunlight, which can reach over 10,000 nits, will render the screen unreadable. However, it is not uncommon to see perfectly bright outdoor displays on such occasions, as displays nowadays can reach up to 2,000 to 5,000 nits with the right backlight technology, such as the full-array method.

Optical bonding of the display

The next major factor affecting the visibility of displays in bright environments is the bonding method used to attach the LCD panel to the clear cover glass we see the picture through when we stand in front of a screen or display. There are two main types of bonding: 'air bonding' and what commonly referred to as 'optical bonding'. The first uses a clear film, much like double-sided tape, whereby the LCD / touch panel and cover glass are attached to either side.

With optical bonding, a silicone-based glue is spread between the LCD panel and cover glass. During the manufacturing process of (touch) displays, an air gap will occur between the LCD cell and cover glass / touch panel. This can give an impression of 'depth' in the final product, which is not favourable for most viewing applications. To counter this, the air gap is filled with silicone or acrylic glue, which is called 'optical bonding'.

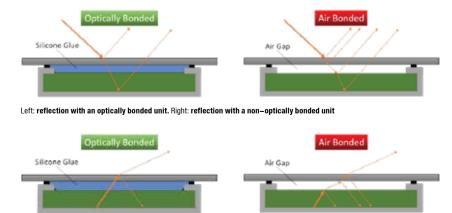
When the air gap is filled in, an observer will notice a significant increase in clarity and overall quality of a display due to a reduction in reflection of about 65 per cent. An approximate 10 per cent increase in brightness will also be perceived, due to light travelling through the glue at the same angle as the glass. Without optical bonding, light refraction will occur.

Such effects are significant in any usage scenario, but most especially when displays are used in outdoor environments, as natural ambient and direct sunlight aggravate reflection and overall brightness exponentially.

Another advantage of optical bonding for outdoor displays is that it ensures no humidity or dust can get trapped between the cover glass and LCD cell, and thus allows for better resistance to environmental forces through improved sturdiness and performance.

So, next time you see a clear display on a hot sunny afternoon, remember that the screens you use in your own home or office are not likely capable of producing the same effect.

Bernard van Strien is the manager of marketing and communication at **faytech**. Since 2009, faytech has specialised in the design, development, manufacturing and marketing of touchscreen monitors and touchscreen PCs. With its roots in Germany, faytech today sells and supports touch monitors and touch PCs on a worldwide basis. In early 2022, faytech became part of the Pyramid AG group.



Left: perceived brightness with an optically bonded unit. Right: perceived brightness with a non-optically bonded unit

TIANJIN POSITION PAPER 2023/2024

Recommendations for municipality to reach its potential

When the *Tianjin Position Paper 2015/2016* was launched, the European Chamber stated that the city was finally ready to outgrow its status as a stopover and become a key destination in its own right. Just a few years prior, in 2012, the municipality had reported among the highest gross domestic product (GDP) results in China. However, in 2021, Tianjin did not even make it into the top-10 list of Chinese cities in terms of GDP, after having slipped to sixth place in 2017 and 2018, ninth in 2019, and tenth in 2020. What can Tianjin do to turn the tide and get its development back on track?

European companies operating in Tianjin believe that a great deal of potential remains untapped. The city's proximity to the capital, and its large port, are strong strategic advantages. Tianjin also has a cluster of industriesincluding aviation, biomedicine, manufacturing and roboticsdeemed by the central leadership to be important to China's overall development and in which European companies are already active. Tianjin has an additional advantage in its topranking universities, provided they can be better leveraged to enhance industry-academic research to help the city accelerate its innovation drive. The Tianjin Chapter therefore believes that, instead of looking to copy other cities' development models, Tianjin already has its own unique advantages that it can use as the basis for developing signature policies that can help the city to regain its allure as a top investment destination.

Significant, long-term investments are based on positive sentiment, derived from confidence that a certain business environment is demonstrably transparent and predictable, and that it will continue to develop. To forge ahead in this regard, the Tianjin authorities first need to increase the frequency and quality of dialogues with industry, including European companies. Currently, the government-industry meetings that take place tend to reflect on recent developments and existing policies, as opposed to looking forward and finding ways to improve the regulatory environment. Instituting a regular, bilateral government-industry communication platform, through which high-level local officials engage meaningfully with the European Chamber and other foreign chambers of commerce, would go a long way towards increasing business confidence in Tianjin.

For the foreseeable future, when looking at where in China to increase their investments, European companies will place increasing importance on their ability to access reliable sources of green energy, and areas where government policies align with their corporate environmental, social and governance (ESG) goals.

This is because ensuring their global operations achieve carbon neutrality by 2050 is imperative for most of these enterprises. Therefore, until Tianjin's overall energy infrastructure can be upgraded, and green energy made freely available, European companies will remain reluctant to expand their investments there, and may even be forced to exit the Tianjin market if they cannot meet their ESG pledges. This in turn will make it more difficult for Tianjin to meet its carbon neutrality goals.

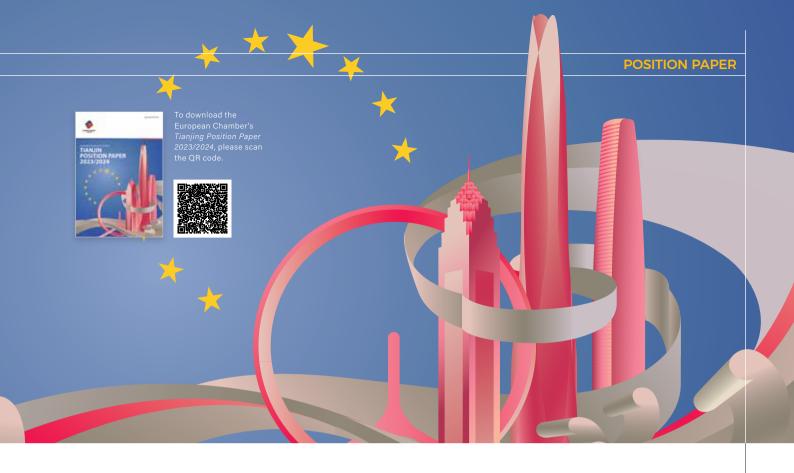
The European Chamber therefore recommends that the Tianjin Government quickly adopt measures that can encourage investment in upgrading energy infrastructure and increase the overall supply of green energy. Involving the Tianjin business community in the policymaking

¹ Tianjin Position Paper 2015/2016, European Union Chamber of Commerce in China, 3rd March 2016, viewed 13th October 2022, p. 3, https://www.europeanchamber.com.cn/en/publications-archive/407>

Shanghai, Beijing and Tianjin Lead Country in per Capita GDP, The Economic Observer, 3st February 2012, viewed 13th October 2022, http://www.eeo.com.cn/ens/2012/0203/220140.shtml

nis 2012/2025/2019/us.html:

3 / Jühna Staffsted: Petrobox 2018, National Bureau of Stafistics (NBS), 2018, viewed 23rd
November 2022, -http://www.stafs.gov.cn/tigs/inds/2018/indexeh.htm>; China Staffsted:
Petrobox 2019, MBS, 2019, viewed 23rd November 2022, -http://www.stafs.gov.cn/tigs/
nds/2019/indexeh.htm>; China Staffsted Vearboox 2020, NBS, 2020, viewed 23rd November 2022, -http://www.stafs.gov.cn/tigs/inds/2020/indexeh.htm>; China Staffsted Vearboox 2021, NBS, 2021, viewed 23rd November 2022, -http://www.stafs.gov.cn/tigs/inds/2021/indexeh.htm>;



process would be an efficient way to ensure that policies related to decarbonisation and the supply of green energy are both implementable and compatible with corporate strategies. At the moment, companies are often confronted with new and more stringent regulations that they are required to comply with at short notice, and policies are often developed without full knowledge of the industries to which they will apply. This also detracts from Tianjin's attractiveness as an investment destination and does not incentivise companies to seek innovative solutions to reduce their greenhouse gas emissions.

The conditions for companies to engage in advanced manufacturing, and research and development (R&D) in general are also not optimal in Tianjin due to the lack of a diverse working population resulting from the challenges of attracting and retaining talent. Tianjin is particularly unappealing to Chinese talent, ranking as the 20th and 23rd most attractive Chinese city for

talent in 2020 and 2021 respectively, according to Zhaopin's *China Urban Talent Attraction Ranking Report.* 48-5 Meanwhile, factory and assembly work has become increasingly less attractive to young entry-level workers, who would rather take up jobs in China's gig-economy. Highlevel talent tends to migrate to China's south to capitalise on established innovation hubs.

Here again, Tianjin has the tools to react positively. For example, the city's talent pool could be deepened by increasing the involvement of industry players in its talent programmes and by strengthening relationships between government, academia and industry in key sectors. Tianjin could also put renewed efforts into building a dual-vocational training programme, similar to the one established in Germany. Such programmes offer plenty of opportunities for on-the-job training and work experience for entrylevel candidates, to ensure that they gain both the theoretical knowledge and practical experience required in the workplace.

Human resources challenges have been further compounded by China's zero-COVID policy. While the Tianjin Chapter recognises that there may be little the local authorities can directly do to change this, there are certain measures that can be taken at the local level to alleviate the difficulties facing companies. First, because work and business visas are administrated at the local level, Tianjin could implement a fast-track visa programme for foreign experts and certain categories of international talent. Second, it is well within Tianjin's authority to designate good quality hotels with a high standard of catering and service that can facilitate a smooth process for those that have to undergo quarantine.

Implementing these measures would go a long way towards increasing business confidence and creating a more positive image of Tianjin.

^{4 2021} China City Talent Attraction Ranking: Beijing Number 1, Shanghal Number 3, Sina Finance, 14th May 2021, viewed 10th October, chittps://finance.sina.com.cn/china/ gnc/j2021—56-14dockmc/mcming/330054.shtmls: Cylina City Talent Attraction Ranking 2022. Zhaopin Macro, 17th May 2022, viewed 5th September 2022, chittps://mp.weixin.qq.com/s/ X731—59XMYAOBXbql.VRQD.

⁵ Zhaopin is an online recruitment website with more than 200 million professional users in China. To evaluate the talent attraction of Chinese cities, Zhaopin's talent attraction index assesses the proportional talent inflow, net talent inflow, talent inflow of fresh graduates, talent inflow with master's degree and above, and the per capita disposable income of taler in mainland Chinese cities.

SHANGHAI POSITION PAPER 2023/2024

Repairing a damaged international reputation



Sometimes referred to as the 'gateway to the West', Shanghai suffered a significant setback in the spring of 2022 after experiencing one of the worst COVID-19 outbreaks in Mainland China. This led to the city being cut off from the rest of the country after having already been mostly disconnected from the rest of the world in 2020.

The comprehensive, city-wide lockdown that was imposed resulted in shuttered factories, a collapse in consumer spending and disrupted operations at the world's largest port. Companies of all sizes struggled to stay afloat, and the 92 per cent of European Chamber members that reported severe supply chain disruptions1 illustrated the scale of the damage inflicted on Shanghai's business environment. As a result, the city's economy suffered greatly, with gross domestic product (GDP) declining almost 14 per cent in the second quarter of 2022.2

Just as devastating as the economic toll was the human cost; the city's

25 million citizens were confined to their homes for a minimum of two months, with many unable to access basic supplies such as food, water and healthcare. Livelihoods were lost as a result, and large numbers of people could not uphold existing financial commitments due to their inability to work. This has severely damaged Shanghai's international reputation.

While the rest of the world was adjusting to living with COVID-19, China and Shanghai continued to enforce a strict 'dynamic-zero' COVID policy. The closure of China's borders in 2020 had hit foreign companies particularly hard, with many foreign national employees prevented from returning for over two years. While some persisted and eventually returned, many decided to leave the city for good. Small and medium-sized enterprises (SMEs) were impacted disproportionately, as they lacked the resources required to adapt quickly, and many foreign nationals were forced to abandon their businesses altogether. As world-class research and development (R&D) ecosystems rely

on an abundance of talent from diverse backgrounds, Shanghai's shrinking foreign labour pool poses a real threat to its innovation ambitions.

As many aspects of the business environment disintegrated, business confidence among the international community in Shanghai dropped to an all-time low due to the continued complexity of the evolving COVID landscape and erratic implementation of local policies. This has had a significant negative impact on Shanghai's aspiration to develop a regional headquarters (HQs) economy, which the city government reiterated under its 14th Five-year Plan (14FYP). Once seen as a promising hub for regional HQs,3 Shanghai's attractiveness had declined over the past decade due to 'lagging

Data collected during the European Chamber's Business Confidence Survey in February 2022, and in a flash survey conducted in April 2022; European Chamber Flash Survey. 2009. — 19 and the War in Kizain: — The Impact of European Business in Kinha, European Union Chamber of Commerce in China, S.* May 2022, p. 2, viewed 27* August 2022, -https://www.europeanchamber.com.cne/mpublications--archives/97/Flash_Survey_COVID_19_and_the_War_in_Ukraine_The_Impact_on_European_Business_in_China>

¹ Xiao, Zibang, Shanghal's Economy Shrank Almost 14% as Lockdown Took Toll, Bloomberg, 15th July 2022, viewed 3st August 2022, <a href="https://www.bloomberg.com/news/articles/2022-07-15/shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-s-economy-shrank-almost-14-as-lockdown-took-toll-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-shanghal-s

Based on results in European Business in China Asia-Pacific Headquarters Study 2011, European Union Chamber of Commerce in China, 2011, https://www.europeanchamber.com.cn/en/publications-asia-pacific-headquarters-study

Sugiura, Eri, Beijing and Shanghai drop sharply in global attractive cities ranking, Nikkei Asia 30° October 2018, viewed 7° December 2022, https://asia.nikkei.com/ Economy/Beijing-and-Shanghai-drop-sharply-in-global-attractive-cities-ranking>



accessibility'4 - even before the pandemic struck. After the city-wide lockdown was imposed, peopleto-people exchanges disappeared almost entirely, and policies made cross-border and even domestic travel extremely onerous. In 2022, stringent travel restrictions were in place for almost three quarters of the year. Singapore has become the leading beneficiary of the cross-border travel restrictions that Shanghai faced,5 attracting European multinationals to establish regional HQs there. Chinese companies making a strategic shift out of Shanghai could also be seen, with approximately 500 registering in Singapore in 2022.6

While the removal of COVID-related restrictions in December 2022 and early 2023 was a welcome decision, the short notice and lack of preparation before the changes led to further disruptions as infection rates among the population skyrocketed. This further damaged global perceptions of the local business environment in terms of predictability and stability – vital considerations for investors when

assessing plans for future expansion.

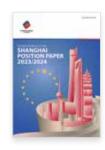
Despite these recent setbacks, Shanghai's GDP per capita more than doubled over the past ten years, putting it on par with industrialised nations.7 However, the local government's objective of developing a truly international city ultimately requires meaningful reforms, including those that can address the regulatory barriers that disadvantage foreigninvested enterprises (FIEs). This will involve: strengthening financial support for SMEs to access credit; continuing to implement policies in the Port of Shanghai that will allow all foreign vessels to carry out international cargo relay; removing thresholds and personnel requirements for the establishment of joint venture (JV) law firms; and creating a roadmap for the internationalisation of the renminbi (RMB).

Shanghai could also benefit significantly from leveraging the Yangtze River Delta (YRD) integration scheme, particularly regarding the green transition and through

strengthening intellectual property rights (IPR) protection by sharing resources from its specialist IPR court among regional courts located in the YRD. However, while this large-scale regional integration project has been in the works for the past decade, only half of the Chamber's Shanghai-based members report having seen progress, let alone having benefitted from it.⁸ This represents a missed opportunity, particularly with many European companies able to offer expertise and technology that can support China's carbon neutrality ambitions.

As Bettina Schön-Behanzin, vice president of the European Chamber and chair of the Shanghai Chapter stated at the launch of the positon paper in February, "Shanghai has a window of opportunity to rebuild the trust eroded over the past three years, particularly following the city's spring 2022 lockdown. This will not happen overnight, but must be predicated on the Shanghai Government taking tangible steps to build a business environment that is transparent and predictable." As China's most 'international' city, the world is watching how Shanghai recovers post-zero-COVID for indications of the health of the Chinese economy overall. 🗷

Unpublished local Shanghai data from the European Union Chamber of Commerce Busines Confidence Survey 2022, see Chart 12 on Page 30.



To download the Shanghai Position Paper 2023/2024, scan the QR code:



⁵ Connors, Emma, Singapore Firms as Leading City For Asian HQs, Financial Review, 26th January 2022, viewed 8th December 2022, https://www.afr.com/world/asia/singapore firms-as-leading-city-for-asian-hqs-20220126-p59rfis

Lewis, Leo, & Ruehl, Mercedes, Chinese Companies Set Up in Singapore to Hedge Against Geopolitical Risk, Financial Times, 30* November 2022, viewed 8* December 2022, https://www.ft.com/content/act/128-ab/72-4b4-a556-5579/191653938.

Yang, Jian, Shanghai's Sustained Growth Puts It On Par With Developed Countries, Shine, 8th August 2022, viewed 9th August 2022, https://www.shine.cn/news/metro/2208088950/

CROSS-INDUSTRY MENTOR INITIATIVE

Cycle 3 wrap-up and cycle 4 kick-off

Beijing, 10th February 2023

On 10th February 2023, the European Chamber concluded cycle 3 of the Cross Industry Mentor Initiative (CIMI) and kicked off CIMI cycle 4, following an earlier cycle 3 wrap-up webinar on 6th December 2022.

President Jörg Wuttke attended and presented the European Chamber's latest publication on diversity. Entitled *Women in Business Report 2022, the* report looks at the targets members of the Chamber's Advisory Council have set to improve diversity in their own workplace. He said the adage stands true, "what gets measured, gets done", and shared how even in his own company, when women are present, the conversations change.

Three mentees from CIMI cycle 3 shared their key lessons learned:

"The programme gave me a much broader view on my work, and allowed me to think more outside the box."

"Not only did I benefit from the mentoring personally, but now I am able to apply these skills to people on my team as well."

"I approach my work differently by trying to view things more from the perspective of my supervisor." The mentors from CIMI cycle 3 also spoke highly of their experience, leaving people with the impression that they gained just as much from the programme as the mentees. The mentees then turned the table on their mentors and asked them the following questions:

Question 1: What did you learn from the COVID-19 crisis?

Answer: "I learnt about the value of empathy. My workplace grew from a company into a family. The team came together in an incredible way and endured many struggles but emerged stronger and closer. The closed-loop circle really put our staff under incredible pressure. All of their time was spent together: working, eating, sleeping and playing."

Question 2: How should we address the future challenges that we face no China has lifted COVID restrictions, particularly the difficult relations between the European Union and China, and companies and their head offices.

Answer: "Communication, communication." The mentor said he had travelled to his European headquarters twice in two weeks since travel restrictions were relaxed, noting that in-person, face-to-face meetings, town-hall meetings and frequent catch-ups are essential

to rebuild trust. "It really made a difference to see people in-person again. People are talking more about collaboration instead of decoupling."

Question 3: How do you set milestones to achieve career success?

Answer A: "Milestones should be a function of several variables: personal ambition; self-awareness; value-added and relationship building. You need to know what you really want and what you are willing to sacrifice, understand your abilities and limitations, set a path for showing and building your abilities that are needed by the organisation, be prepared for the potential opportunities and think about what the organisation's mission is. You also need to develop relationships and expand your networks in the process."

Answer B: "Part of one's development should also be to maintain relationships with past bosses as well existing peers outside of the workplace. This group could be used as a sounding board to ask questions directly and openly, 'Hey, have this idea. Am I crazy?' and then hopefully be able to rely on this trustworthy environment for honesty and encouragement."

Answer C: "Young women need to be bold, to ask and

to speak up. At the same time, however, soft skills are incredibly important and even more so as you make your way up the ladder. Understanding the context and timing is just as important as demonstrating boldness."

Question 4: How do you handle conflict in the workplace?

Answer: "You shouldn't underestimate the importance of showing good respect to your colleagues and developing effective communication skills, but beyond that you should ask yourself sometimes if you have the right team.

Conflict is sometimes a product of not having the right team or team mix. Team members may disagree, but they also need to work with any eventual decision once it is made. If they can't, then maybe they shouldn't be on the team."

By end of the ceremony in Beijing, two new mentors expressed interest in being part of this initiative and sharing their mentoring experience with the younger generation in their companies.

CIMI cycle 3 wrap-up webinar, 6th December 2022

At the CIMI cycle 3 wrap-up webinar, 'Leadership Dialogue: Forging Career Paths', held on $6^{\rm th}$ December

2022, the keynote speech

was delivered by Tiziana D'Angelo, consul general of the Italian Consulate in Shanghai. She expressed recognition of the importance of the CIMI programme, which she said was not only to share experiences, advice and good practices, but also to empower and support advocacy for gender equality. Ms D'Angelo said that in society, in institutions and in company boards, the world needs more women in decision-making positions. She also said women can be the driving force to push and lobby for real change; in particular, successful businesswomen—no matter at what stage and what time

in their career—can be instrumental in instigating reform.

Following Ms D'Angelo's speech,
European Chamber Vice President
and Shanghai Chapter Chair Bettina
Schoen launched the Women in
Business Report 2022. This was
followed by breakaway groups of
mentors and mentees discussing the
key takeaways and how they benefitted
from the CIMI, for example, in areas
such as, resilient leadership; building
the right support; and visibility and
branding, among others.

Mentors for CIMI Cycle 4:

Name	Tialo
Name	Title
Bettina Schoen	Regional Representative Asia of Freudenberg
Bruno Weill	Chief Group Representative of BNP Paribas China
Jens Eskelund	Chief Representative of Maersk China
Renata Pavlov	Chair of Fincantieri China
Allan Gabor	President of Merck China; Managing Director of Merck Electronics China
Holly Lei	President of Covestro China
Francis Liekens	Vice President (VP) of Atlas Copco China
Michael Chang	Executive VP (EVP) of Nokia Greater China
Charles Cheng	Chair of Société Générale China
Lars Eckerlein	General Manager of ABB (China) Limited; Country Holding Officer of ABB China
Ma Jun	President of Volvo (China) Investment; Senior VP (SVP) of Volvo Group
Liu Chang	Government Affairs, Business Development & Marketing VP of Knorr-Bremse Rail China
Clas Neumann	SVP, Head of Global SAP Labs Network
Ouyang Bo	Chief Financial Officer (CFO) of Siemens Greater China, Director of the Board of Directors, EVP and CFO of Siemens China
Peter Qiu	President of Deutsche Bank China Co. Ltd; Head of Corporate Coverage for Greater China
Wayne Shi	Country Lead and Head of General Medicines at Sanofi Greater China
Michel Tran Van	Chief Operating Officer of Airbus China
Julie Xiaoyu Zhang	President of Arkema Greater China
William Zhao	Chair of Total (China) Investment; Country Chair of Total China
Christine Zhou	President of China Region; SVP of Novo Nordisk Pharmaceuticals

Media Watch

VP Zenkel discusses how doing business in China has changed since end of zero-COVID

China lifted its stringent zero-COVID restrictions in late December 2022, leading to a nationwide surge in COVID-19 infections and a widespread disruption of business activities. On 3rd January, *The New York Times* interviewed Chamber Vice President (VP) and South China Chapter Chair Klaus Zenkel, who noted that many European manufacturers operating in China were understaffed for several weeks during the time, which greatly affected their output.

Chamber praises China's move to remove quarantine restrictions for visitors

China's move to lift quarantine restrictions for inbound travellers was welcomed by the European Chamber. In an interview with *CGTN*, Nanjing Chapter Chair Andreas Risch emphasised the importance of in-person exchange and communication for reestablishing international ties. He further pointed out that local municipal level governments had already started sending business delegations to Europe for exchanges, investment and promotion in early January and even late December.



Nanjing Chapter Chair Andreas Risch was interviewed by *CGTN* on China's removal of quarantine requirements Media: *CGTN* Date: 11th January 2023



Article by *the New York Times* on China's economic recovery **Media:** *The New York Times* **Date:** 3rd **January 2023**



SG Dunnett took part in the *CGTN* live show, *China Economy Sprinting Ahead*, on China's economic recovery

Media: *CGTN*Date: 7th February 2023

Chamber's views on China's economic recovery sought by media

As China has moved away from its zero-COVID policy, attention is now put on the economic recovery and business development. On 31st January, the *SCMP* covered the Chamber's statement on the economic outlook for China, which stated that challenges still lie ahead, with the country's fading demographic dividend, property crisis, debt problems and growing geopolitical tensions still looming. On 7th February, Secretary General (SG) Adam Dunnett took part in the *CGTN* live show, *China Economy Sprinting Ahead*, and stressed that while Europe and China are important trading partners, China needs to further open up its market. He added that one major opportunity to strengthen this cooperation is to develop complementary policies to help achieve carbon neutrality goals.



VP Eskelund was interviewed by *CGTN* while in Brussels on the EU Tour. **Media:** *CGTN* **Date:** 13th January 2022



VP and Shanghai Chair Bettina Schoen-Behanzin was interviewed live by Phoenix TV Media: *Phoenix TV* Date: 14th February 2023

Eight-Week Wait for Visas to Europe Slows China's Reopening

Visa centers struggle to get up to speed after ourbs dropped
 German visa issuance slows while China imposes restrictions

By Bioomberg News February 6, 2023, 9:00 PM UTO - UNI (HOROCOMETR) Water Gard TV () Union to Charlington ()

Article by *Bloomberg News* on problems with the issuance of visas **Media**: *Bloomberg News* Date: 7th February 2023

Chamber comments on issues with business travel between EU and China

China's rapid dismantling of COVID restrictions put mounting pressure on embassies due to the surge of travellers in China. On 6th February, *Bloomberg* ran an article on how China's unexpected abandonment of its COVID restrictions led to complications in issuing visas. They quoted President Wuttke, who pointed out that some Chinese executives are waiting as long as six to eight weeks to get business visas to travel to Europe, while before COVID, applications could be completed as quickly as a few days.

First EU Tour in three years gains significant media coverage

The European Chamber's European Tour 2023 started on 9^{th} January, with a delegation consisting of president, vice presidents, board members and senior working group representatives. It is the first in-person European Tour since February 2020 due to the pandemic. The tour aims to present the European Chamber's key messaging and recent reports to European authorities such as the European Commission and the European Parliament, as well as industry and business associations

On 12th January, a media roundtable was held in Brussels and attended by 14 journalists, with six related articles published within a week. VP Jens Eskelund was interviewed by *CGTN* after the media roundtable on the experiences of European business operating in China. He noted that it has been three incredibly hard years for European business in China, and described the country's reopening as "the light at the end of the tunnel".

Shanghai Position Paper 2023/2024 launched to positive international coverage

On 14th February 2023, the European Chamber's Shanghai Chapter launched the fifth edition of the *Shanghai Position Paper*. The paper was presented by VP and Shanghai Chapter Chair Bettina Schoen-Behanzin, who, along with President Wuttke, held a press conference immediately after. Both also participated in live interviews with *Phoenix TV* that same day. A total of 15 media mentions were recorded within 48 hours of the paper's launch. International media coverage was generally positive, focussing predominantly on how, with the end of zero-COVID, the Shanghai authorities can act to restore the predictability of the municipality's business environment, something which was eroded by the city's spring 2022 lockdown. Chinese media coverage focussed on how Shanghai can ensure its economic recovery and address supply chain challenges, as well as issues that hinder the city in achieving its goal of becoming a regional headquarters hub.

Events Gallery

BEIJING. 20TH FEBRUARY 2023

China's Transition through COVID and its Economic Recovery



- In 2023, reopening will reverse the growth pattern of the pandemic years, and services sector will benefit most according to corresponding data.
- The end of lockdowns will push down unemployment and household income will also be improved.
- One thing to take from this pandemic is that it is hard to avoid taking a
 geopolitical perspective when dealing with a virus.

BEIJING, 10TH MARCH 2023

William Klein on US-China Ties and the Future of Transatlantic Relations



- The competitive nature of the United States (US)-China relationship still
 exists and is characterised by strategic competition and the observational
 'structural equation' modelling.
- Major problems with the Chinese Government's current industrial policies are 'overshooting' and 'undershooting', which will lead to communication challenges for foreign businesses and ongoing adjustment of government policies.
- Interdependency can be positive.

SHANGHAI, 28TH FEBRUARY 2023

New PRC Law on the Protection of Rights and Interests of Women – Implications For Employers



- Women are discriminated against during employment, especially during promotion, evaluating and recognising professional and technical titles, providing training and in termination decisions.
- The United Nations Sustainable Development Goals highlight women's empowerment as a vital development objective, and there is still a long way to go to achieve that goal and close the gender gap.
- To develop gender equality and diversity, companies have set up goals at the
 operational level and the management level.

SHANGHAI, 29TH MARCH 2023

China Outlook Conference 2023: Managing China's Post-Covid Rebound



- With the end of COVID-19 restrictions, 2023 will inarguably be a better year for business, with undeniable growth expectations - even with the Chinese Government gross domestic product target lower than expected.
- Business and consumer sentiment will take longer to recover, as they remain cautious from the instability they experienced in recent years.
- High debt is plaguing some regions, which are struggling to even pay back interest rates.

TIANJIN, 17TH FEBRUARY 2023

2023 New Year Executive Mixer



Tianjin Chapter Chair Christoph Schrempp laid out the chapter's events plan for 2023:

- On 10^{th} June and 22^{nd} July respectively, the annual football competition and badminton tournament will have corporate teams battling it out for the title.
- On 14th September, the European Chamber 3rd Carbon Neutrality Conference will take place.
- On 10th November, the chapter's landmark event, the Business Gala Dinner, will be held.

NANJING, 24TH FEBRUARY 2023

Automotive General Manager Roundtable Meeting



- New trends and market patterns will present opportunities and challenges for China's automotive market in 2023.
- The competition between traditional auto component manufacturers and new market-players presents diverse development dimensions, pricing strategies, business and technical approaches, delivery solutions and much more.
- Now China has lifted its COVID restrictions, enterprises' operating models and strategies will differ from 2022, and the automotive components industry will respond quickly to both positive and negative conditions.

SOUTHWEST CHINA, 15TH FEBRUARY 2023

Position Paper 2022/2023 Launch (Chengdu)



- European enterprises are still willing to contribute to China's economic development, but it is difficult for them to predict the increasingly complex political, economic and reputational risks, and currently most do not plan to increase investment.
- Comprehensive implementation of market reforms is the most effective measure to give full play to China's economic potential and rapidly rebuild investor confidence.
- Enterprises need transparency to fulfil the commitment of benchmarking enterprises in China and complying with new supply chain legislation in the European Union and the United States.

SHENYANG, 17TH FEBRUARY 2023

Leadership Series Session II: Female Leadership



- Women's social status has been continuously improved, and they are taking family, career and social development responsibilities through more diversified roles.
- Women are strong but not harsh, tolerant but not weak and are playing irreplaceable roles in senior positions in many industries.
- As many people are still prejudiced regarding female leadership, there is still plenty of room to improve.

Advisory Council News



Photo: thyssenkrupp.com

Top ranking for seven years: thyssenkrupp a global leader in climate protection

13th December 2022 – For the seventh year in a row, CDP has recognised thyssenkrupp AG as one of the world's leading companies in climate protection. With its sustainability strategy, thyssenkrupp contributes to reducing emissions, lowering climate burdens and sustainably supporting the development of a carbon dioxide (CO2)-free economy. thyssenkrupp is one of 330 international companies on CDP's Climate Protection A-List 2022, including 15 from Germany.

For thyssenkrupp, sustainability is a key element of its mission statement and an integral part of its corporate strategy. The aim is to offer innovative products, technologies and services worldwide that contribute to the sustainable success of the Group's customers.

Sustainable development is ecologically compatible, socially responsible and ensures that thyssenkrupp remains economically efficient. With its sustainability strategy in the area of the environment, thyssenkrupp is helping to reduce emissions, lower climate impact and sustainably support the development of a CO2-free economy.

Nokia set sights on leading a world where networks meet cloud

26th February 2023 – Nokia announced at MWC Barcelona 2023 an updated company and technology strategy, and unveiled a refreshed brand, as part of its long-term strategic transformation.

Companies across every industry are looking to digitalisation to improve efficiency, flexibility and productivity in a sustainable way. Networks are fundamental to this transformation, and Nokia is uniquely positioned with its best-of-breed portfolio across fixed, mobile and cloud networking technologies.

Nokia continues to execute against its three-phased strategy to deliver sustainable, profitable growth. Having completed the reset phase, Nokia will continue to accelerate while laying the foundation for the scale phase as an undisputed technology leader and having broadened its customer base. The MWC Barcelona announcement supports Nokia's long-term financial targets, which were re-iterated with Q4 2022 financial results.

D'Andrea & Partners Legal Counsel among recipients of China Awards

1st March 2023 – Last December,
D'Andrea & Partners Legal Counsel
was honoured to be amongst the
winners of the China Awards. Since
2005, the China Awards— organised by
the Italy China Council Foundation—
has rewarded Italian companies that
have best grasped the opportunities of
the Chinese market, alongside Chinese



Photo: D'Andrea & Partners

companies that have invested in Italy and started strategic collaborations with Italian counterparts.

On this occasion, we were grateful to be being awarded the 'Capital Elite – Social Responsibility Award', thanks to D'Andrea & Partner's regular activities and projects with a strong social commitment, which have fostered dialogue and exchanges between Italy and China, particularly in the world of education, charity and environmental sustainability. In 2023, we will continue to follow up on our core values and dedicate ourselves to making the world a better place to do business. #Becausewecare

New organ-on-chip pilot seeks to reduce animal testing in consumer health industry

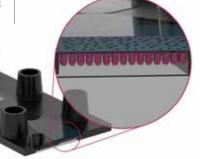
 $7^{\rm th}$ March 2023-A first-of-its-kind collaboration in the consumer health industry is developing a platform aimed at reducing or replacing animal testing

Cross—section of organ—on—chip biochip cavities with cells representing intestinal model. Photo: bayer.com using 'organ-on-chip' (OoC) technology and interactive computational software. The pilot project, supported by esqLABS, Dynamic42, Placenta Lab of Jena University Hospital and Bayer's Consumer Health Division aims to generate clinically relevant data, a key step in evaluating new drug candidates in preclinical research.

The one-year pilot will focus on evaluating whether small molecules can cross the blood-placentabarrier in pregnant women, an understudied population due to challenges in conducting clinical research. The platform will consist of a microphysiological system (MPS, dubbed OoC) representing the main human tissues involved in drug disposition (liver, intestine, placenta) as well as a pumping system to circulate cell culture media among the tissues. The platform will be digitalised to simulate the distribution of compounds and translate the data to human situations.

Sanofi announces change in R&D leadership

13th February 2023 – Sanofi announced that Dr John Reed, its global head of R&D, will leave the company to pursue a new opportunity outside Sanofi. The company warmly thanks Dr Reed for his leadership over these last years.



Since joining Sanofi in 2018, John has laid the foundation for the company's R&D transformation. He helped reshape Sanofi's discovery and development of therapeutics, focussing efforts on first and best-in-class medicines that have the potential to transform the practice of medicine and improve the lives of people with serious diseases, whilst managing the integration and development of new technology platforms and partnerships, and driving R&D productivity.

Stora Enso's lignin replaces fossil-based glue in plywood

28th February 2023 – Stora Enso's lignin, Lineo by Stora Enso, replaces fossil-based glue in plywood. Polish plywood manufacturer Paged has started collaborating with Stora Enso to meet their customers' demands for bio-based and more sustainable plywood. This partnership also allows Paged to cut product carbon emissions.



Photo: Stora Enso

With Lineo, Paged has the possibility to replace 40 per cent of fossil-based glue with lignin, resulting in a more environmentally friendly end-product. The ultimate goal for Paged is to be able to achieve several thousand tonnes of reduction in carbon emissions.

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GREENPEACE 绿色和平 〈碳中和追踪〉

Carbon Tracker Platform



Dynamically tracks 11 high carbon emission industries' latest carbon neutrality commitment.

100+

Provides assessment of 100+ leading enterprises' climate action.

Aims to:

- Raise corporate awareness of the urgency and importance of climate action.
- Empower enterprises to formulate scientific and responsible goals and action routes.
- Demonstrate leadership of key carbon-emitting industries in China.



Please scan the QR code to register as a platform user for free and receive the latest updates.



Greenpeace stands for "Positive Changes Through Actions", and is a global environmental organization comprised of 26 independent branches that are located in over 55 countries and regions.

The ship carrying hope and courage set sail in 1971 and arrived in Beijing in 2002, marking the beginning of our journey in Mainland China to defend the natural world.

The climate crisis has become one of the most crucial challenges in the 21st century. As the major cause of carbon emissions, enterprises play an important role in addressing climate change. From traditional industries with high energy consumption such as coal and steel, to emerging digital economy industries, climate actions across the industry will converge into a huge amount of carbon emission reduction, which is not just a positive response to the national climate policy, but a response to corporate climate risks.