

KEY TAKE AWAYS FROM THE GREEN TECH TOUR 2023

Shanghai – Yancheng – Beijing, September 2023



A new world-order

After three years of pandemic and sealed borders China is once again open for business. But the world has changed, and China has lost some of its allure as the factory of the world as well as a lucrative market.

First, the lockdowns of Chinese ports caused a shock in global supply chains and the war in Ukraine served as a major wake-up call for European companies who realized that they had become too dependent on Russian oil and gas. As companies and governments are investing heavily in the green transition, they are starting to understand that they are even more dependent on China's supply chain in everything from batteries and machines to rare earth minerals.

Global south leader

China has positioned itself as the spokesperson of the global south on the global stage and has strong trade and investment links with many of these countries. This is a strategic advantage for China in the future when new markets evolve in Asia, Africa, and South America.

Countries representing 85 percent of the world's population didn't impose sanctions on Russia. Not because they agree with Russia, but they insist on trading with everyone and strongly believe that globalization will benefit them. Including India, which is called the largest democracy in the world.

Economic slowdown and risk management

The economic recovery in China is slower than expected and the property bubble has burst because the government cracked down on financing and speculation. The independent economist Andy Xie has warned about the risk for years, and he believes it was a necessary move as people could no longer afford housing. Housing prices in China have a direct impact on demographics as Chinese couples are reluctant to have children if they can't afford to buy property.

The government is focusing on finishing the prepaid housing so people will get what they paid for. But so far, there is no big rescue plan, and it will cost a lot of pain in the property sector. Interestingly, we learned that the e-commerce company JD.com is currently developing real estate for their employees near the headquarters in Beijing where 30,000 people are working. This is a way to attract talent with cheap housing, while at the same time helping the government achieve its goal of more babies as China is aging rapidly.

China has been driving almost a third of global growth for several years before the pandemic, but the engine has lost steam and domestic consumption is slower than expected. This could be due to a crisis of trust after three years of severe lockdowns.

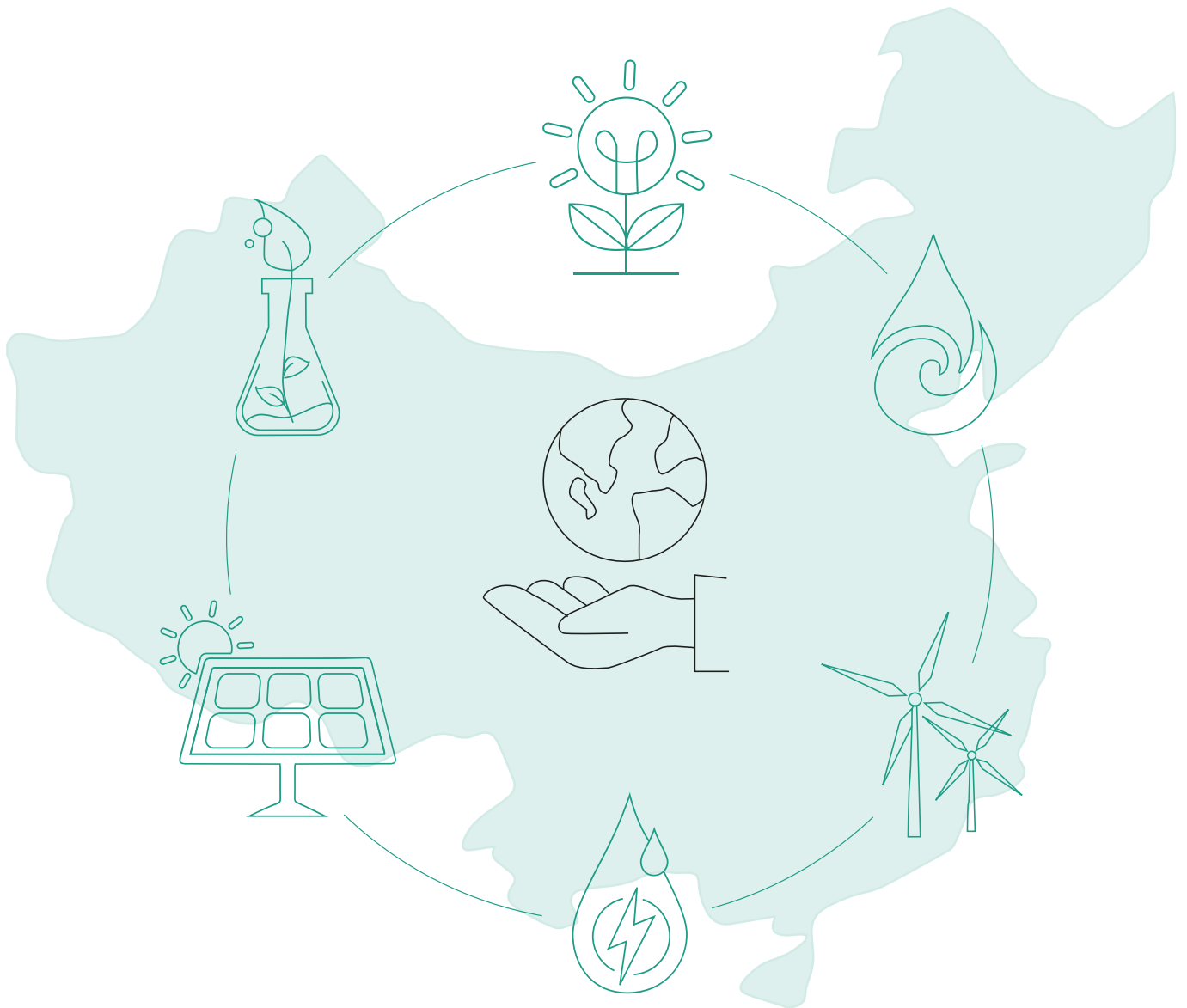
We experienced a more humble and careful tone among tech companies than before the pandemic. But despite an increasingly hostile environment in the US and EU, a slowing Chinese economy can lead to more global expansion of Chinese companies because competition is so tough in China.

Derisking from the West

At the same time, China is making a big bet on the global south and managed to divert more of its export to the so-called Belt and Road countries than to the West (including South Korea and Japan) this year. While European and American companies are trying to "derisk" from China, China is also derisking from the West.

China and India, among others, are promoting trade in their own currencies to avoid future sanctions from the West, and they are trying to build an alternative trade and financial system without the SWIFT system, which is controlled by the US.





Dual carbon goal

China has taken significant strides towards addressing the global climate crisis through its ambitious dual carbon goal. This strategic commitment, announced by Chinese leaders, aims to achieve carbon neutrality by 2060 and peak carbon emissions before 2030. China's dual carbon goal represents a crucial step forward in the global fight against climate change, as it is the world's largest emitter of greenhouse gases.

China has consistently ranked as the world's leading investor in renewables, channeling vast resources into wind, solar, hydroelectric, and other clean energy technologies. This massive commitment to renewables has not only accelerated China's transition away from coal and other fossil fuels but has also played a pivotal role in reducing global carbon emissions.

Balancing security and renewables

Despite China's notable efforts in renewable energy development, there have been concerns about its investments in new coal power plants, particularly in the context of the war in Ukraine and the evolving geopolitical environment. The conflict in Ukraine, which disrupted global energy markets and led to increased coal prices, has prompted China to expedite some of its coal-related projects to secure its energy supply.

But this is only short term as China remains committed to its green transition which is crucial to combat environmental pollution of air, soil and water in China. The current Five-Year Plan for China's economy covering 2021 to 2025, emphasizes the need to accelerate the shift towards a low-carbon economy and it promotes eco-friendly infrastructure development and green finance initiatives.

Innovation drivers in China

Surprisingly, the main driver of innovation in China is the government's ability to set up strategic goals and ambitious plans and make sure that the money and brains flow in the right direction. Introducing subsidies and attractive tax breaks has been a useful tool for decades. It often creates a hype, and a lot of money are wasted in projects without a realistic business model, but it certainly speeds up development and a few national winners after a deadly consolidation.

The Chinese government has cracked down on the tech sector several times in recent years and many people are questioning whether this will limit innovation in China. However, it has always been very important to follow the political winds in Beijing as government support is crucial for success in China. But investors have generally become more cautious like elsewhere in the world.

Made in China 2025

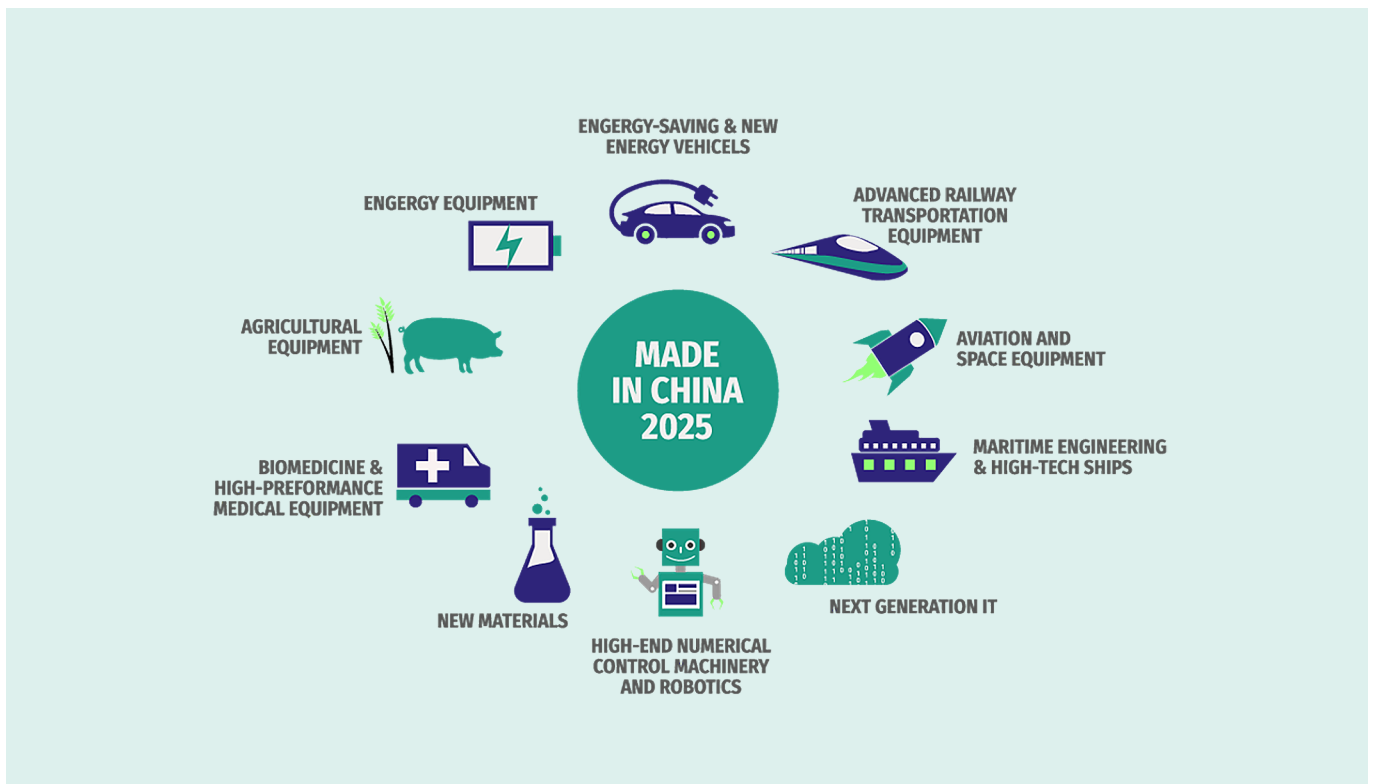
The Made in China 2025-plan, launched in 2014, aimed at upgrading Chinese companies into world leaders in high tech industries like batteries, electric cars and solar panels played a strong role in triggering the trade war with the US. It raised concerns about intellectual property theft and unfair trade practices, ultimately leading to tariffs, export restrictions and trade tensions between the two largest economies in the world.

China is already leading in 37 out of 44 critical technologies, according to The Australian Strategic Policy Institute, but still lagging behind in the most advanced semiconductors and certain areas of Artificial Intelligence. However, another quantum leap is underway and Chinese companies and universities are now world leaders in all the important technologies related to green transition as well as all categories in smart manufacturing and new materials.

The world's largest market

Of course, the size of the Chinese market is a strong driver of innovation too as competition is fierce and companies must be very creative to catch the attention of Chinese consumers who are probably the most courted in the world.

China is the world's largest digital economy, and the ecosystem of social media platforms is much more advanced than anything in the West. In fact, super apps like We Chat and Alipay are 3-5 years ahead of the curve and many of the new features (in-app-shopping, charity, digital gifts etc.) that are launched in Instagram and Facebook are copies from China.





Self sufficiency goal

The trade war and the falling image of China in the West has made life difficult for a lot of Chinese companies. The purpose of the US export restriction on the most advanced semiconductors is aimed at limiting China's ability to develop advanced technology, but so far it has only speeded up efforts.

Both Huawei and the EV maker NIO has recently announced breakthroughs in making 7-nanometer chips, a significant technological advancement. This kind of effort receives substantial support from the Chinese government, reflecting a commitment to advance technological capabilities within country.

China's AI plan

The Chinese government launched an ambitious AI plan in 2017, outlining a strategic vision and objective of becoming a global leader in artificial intelligence by 2030. China sees AI as an opportunity to leapfrog ahead in technological advancements in various sectors, from manufacturing and healthcare to autonomous transportation and smart cities.

The government strongly believes that technology is the solution to all the major challenges in society. The large Chinese population of 1,4 billion people generates vast amounts of data, which are essential for training AI algorithms and the government recognizes the strategic value in global competition. So far, China is leading in the practical implementation of AI solutions, but still lag behind in tech and talent.

From cowboyland to tough regulation

A few years ago, the legal environment in China was very lax and Chinese companies had the chance to collect loads of data from costumers without their consent. But recently the government started to introduce new regulation which is modelled after the GDPR in EU. As a matter of fact, China is now a pioneer in regulating AI and has just implemented the world's first regulation on generative AI which requires companies to watermark content, generated by AI, among others.

In general people in China – and elsewhere in Asia – have a more positive attitude towards technology compared to people in the Europe. Most Chinese consumers are curious and happy to try new products and services and they also feel that technology can make their lives easier.

Demographic challenge

China has a huge demographic challenge, and 1/3 of the population are expected to be +60 years old in 2040. This is the main driver of the big bet on automatization along with national security and military purposes.

Youth employment is currently above 20 percent, and this is so sensitive that the government stopped publishing new statistics in this field. The problem is that most young Chinese people don't find it attractive to work in factories and there is lack of workers in many industries, driving rapid investment in automatization and deployment of robots.

The Chinese government is trying to create entire new markets and jobs by establishing the legal framework embracing new technologies for example in air mobility and autonomous transportation.



Autonomous transportation

The Chinese company EHang has already performed 40,000 test flights and is very likely to become the first company in the world to receive the license to launch commercial autonomous air transportation by 2024. The company also presented its vision for a centralized operation center with charging systems and air traffic control to meet governments requirements in air space which is controlled by China's military.

One should not underestimate the importance for China of being first after decades of hard work catching up. This is a very important motivation for the Chinese government to constantly adjust the legal environment to promote new industries.

There are already level 4 autonomous delivery robots on the streets in many Chinese cities, and Baidu is currently testing 500-600 robo taxis in 10 cities in China at the speed of 30 km/h in a designated real-world scenario. The company just received a license to test in highways as well and expect to receive the license to fully operate autonomous robo taxis and mini-buses in 2025.

Industry 4.0

Chinese factories are rapidly moving from automatization to smart manufacturing powered by 5G and AI. The country has been the world's largest consumer of industrial robots for eight consecutive years, and sales of industrial robots are showing a growing trend. Thus, the world's top 5 most automated countries in manufacturing in 2021 was South Korea, Singapore, Japan, Germany and China.

Naturally Chinese companies are learning fast, and robots is one of the strategic industries in the Made in China 2025 plan, meaning they aim to become world leaders in 2025. This will be difficult because of the restrictions on the most advanced semiconductors, but the Chinese companies are very competitive on price.

The Chinese telecommunication giant Huawei has been struggling to survive sanctions and has set up internal teams to explore new business areas. It took around 18 months to come up with new divisions focusing on port management and mining industry. The company builds digital twins and smart systems to operate mines and some of the world's largest container ports with few people on the ground. The ultimate goal is to operate mines without any humans on the ground.



China is electrifying the world

Western automakers built their fortunes on the combustion engine technology, but China now has the ambitions to define the electric vehicle age. Shanghai has already reached its 2025 target for EV penetration in the market (50 % of new cars must be EV), and all public transport, police cars ect. must be powered by electricity or hydrogen.

While the western world has been underinvesting in raw material and the supply chain to go green, China has taken a controlling bet on supplying what it takes for the world to electrify. A development driven by a strategic focus, investments, innovation, carbon credits and not least favorable subsidies, nudging Chinese consumers to choose green alternatives.

Dependent on China

Both the US and EU has tried to boost local manufacturing of batteries and solar panels, but it turns out that most of them rely on Chinese technology and supply chain and processing of raw material.

During our visit at SVOLT, the Chinese battery company told us that they are currently planning to set up a third factory in the EU. They were considering Portugal which has lithium, but due to slow EU regulation, it will take up to 13 years to deliver the raw material. This is a sharp contrast to the speed in China for handling strategic industries. And even if they establish a mine in Portugal, they still rely on China for the processing of lithium.

China speed

“China speed” is a term often used to describe the rapid pace at which China has been able to achieve various goals, and most visitors from Europe find it mind blowing how fast it goes. However, its important to note that while its easy to be impressed, there is no doubt the nation’s great advances have serious human and environmental consequences.

For tech companies speed always matters. This is probably even more true in China. If you are too slow there will be 10 or 100 copycats doing the same as you, eating market share and doing all kinds of dirty tricks to overtake your business.

The Chinese unicorn battery maker SVOLT is a good example. Only five years old and already a top 10 global company in a very competitive market. It is only possible because they have the world’s largest home market, sufficient human and financial capital and an extremely costumer centric approach to developing new products.

Hard work and government support

It also helps that the battery industry is a strategic sector for China which means that the government is very supportive and facilitates development. There is often a strong sense of national pride and unity in achieving ambitious goals for the country, which can motivate people to work diligently and efficiently. But more importantly, most Chinese people are hard-working, and they are hungry for more.

The 9-9-6 (working 9-9, 6 days a week) model used to be widely spread among Chinese tech companies, but the government has cracked down on illegal overtime and forced companies to comply with labor laws.





Chinese companies characteristics

Chinese companies are born in the most competitive environment on earth. In Europe, you see American and European brands, but in China you see brands from all over the world, including Japan and South Korea.

Chinese companies are forced to be agile as they are forced to constantly adapt to an ever-changing legal environment. They are not ashamed of copying competitors and “to learn” in Chinese actually means “imitate the master”.

All companies claim to be customer centric. But Chinese companies take that into the next level. They listen carefully to their customer and quickly react to their requirements and preferences like when the e-commerce company JD.com had to change an interface overnight.

The company was allowed to deploy autonomous robots to deliver goods in Wuhan in the beginning of the pandemic and customers complained that they had to physically touch a screen on the robots to receive their parcel. Overnight the JD.com’s tech team created a new system based on QR codes and launched it the next morning.

At the same time Chinese companies have to constantly be alert on the most important political agendas in the country. All companies with more than three employees who are members of the Chinese Communist Party must form a local cell in the company. The same rule applies to companies with more than 1.000 employees, including fully foreign owned enterprises.

While politics can sometimes slow down development, it secures alignment with local regulations and policies to avoid trouble.

While hierarchy and a fear of losing face can occasionally constrain decision-making, many companies address this challenge by leveraging digital platforms to delegate responsi-

bilities to customer-facing employees. The result is that many Chinese companies have replaced the middle layer of management with digital platforms providing access to back-end like databases, warehouses, and manufacturing facilities.

It was striking to observe that some of China's largest tech companies exhibit relatively poor marketing skills when viewed from the perspective of European business leaders. Their presentation slides tend to be overly technical, and their communication may lack clarity. This could be attributed to these companies primarily focusing on the Chinese market and directing their marketing efforts accordingly."

Holistic approach

If there is one recurrent feature of China’s leading tech businesses, it’s their highly holistic approach to customers. The EV maker Nio is a good example of this because the corporation is focused on creating an entire ecosystem around the customers’ driving experience. Besides providing them with a Nio app and personal assistance on WeChat, the company has established (physical) Nio Houses that are used for meetings, lectures, yoga classes, and other events, or just hanging out. Also, Nio customers can borrow books and even have their kids looked after, just like in Ikea. The company just launched a smartphone too.

That Chinese companies employ so many different areas of business to create value for their customers gives food for thought. It stands in sharp contrast to how big European companies have undergone a difficult process in recent years where they have reduced their scope of operation and today are largely focused on their core business. Perhaps it suddenly makes good sense to create end-to-end solutions for customers, as the common denominator here is data.

Global competition

Chinese companies are typically taking market shares in many industries because of their cheap prices, but a new “born digital” generation of Chinese companies like the car producer Nio or the Chinese fashion app Shein are also competing on several other parameters like design, user experience, and logistics.

As mentioned before Chinese consumers are very curious, but they are also very cautious and spoiled because they have a lot of choices and very little patience. This is one of the reasons that the Chinese market has become a testing ground for new products and services for foreign companies. If your product or service can add value in the Chinese market, there is a good chance that it can be successful in the rest of the world.

As mentioned, we might soon see another wave of Chinese companies trying to go global as the local economy is slowing down and they need to find growth abroad. The fading image of China is a disadvantage for them, and it remains to be seen how successful Chinese companies will be in the EU, and many of them will stay away from the US for now.

Price war - a race to the bottom?

When Chinese companies enter an industry, prices go down a lot. For example, there has been an intense price competition in the solar industry. This competition encouraged companies from other countries, including Germany, to reduce their prices to remain competitive, contributing to the overall decline in solar panel prices. The problem for Europe is that most of the foreign companies didn't survive and today more than 80 percent of the world's solar panels are produced in China.

Recently, the EU Commission has warned that the European market will soon be flooded with cheap Chinese electric vehicles, launching an investigation into illegal subsidies to avoid “a race to the bottom”. The big question is how to compete with Chinese companies?

Global North Prices and China Prices

According to the independent economist Andy Xie, the current geopolitical situation and the derisking away from China's supply chain will lead to more expensive prices in the global north (the West). If European companies insist on buying from local suppliers in Europe (who are still very dependent on China), their products will get more expensive and less competitive in the rest of the world. The result could be “Global North prices” and “China prices”.

Another strategy could be to try to become competitive on the price which means that European companies will have to focus some of the innovation effort on price level instead of adding new features that will make their products more expensive. Profit will be smaller, but the market – in the rest of the world – will be much larger.

THE CHINA FACTOR





Supply chain trends

The pandemic and the war in Ukraine made many companies reluctant to invest more in China and the EU politicians have encouraged companies to diversify their supply chains away from China to reduce risk. The ultimate fear is that China will invade Taiwan and the West would have to impose sanctions on China, prompting companies to withdraw. There is even concern about a full-blown war involving both China and the US.

The result is that many companies are using the China +1 strategy, which means that they will stay in China, but find additional suppliers in Vietnam, India, or Thailand – or build their next factory outside China.

These countries have seen a boom in investments, and Apple's big supplier Foxconn is building several factories in India. The problem is that they are still very dependent on China for machines, components and in some cases the factories are owned by Chinese companies.

So far, the consequences of derisking from China resulted in supply chains getting longer and less transparent which have led to higher prices and not necessarily less risk.

Another trend is that companies are trying to encircle their China business, so they separate their supply chains in China from the rest of the world while continuing serving the Chinese market. This will also lead to higher prices outside China, but at least it can reduce risk a bit. Again, the machines, components, and raw materials are made in China. For example, the EU imports 98 % of the rare earth minerals from China. Experts predict it will take 10-15 years to change this.

Longer and more expensive supply chains

There is also a real risk that derisking from China might delay the green transition in Europe and the US because it will take time to set up local manufacturing, and it will be more costly when produced in EU and US.

Despite all the derisking, China is still the manufacturing hub of the world, and there is currently no other country able to assume its role.

The auto industry is very dependent on China's supply chain and as the Chinese NGO-leader Ma Jun points out, an electric car emits 1,5 times more than a traditional car because of the battery which consists of various raw materials like lithium, nickel and cobalt. But industry experts anticipate change with the next generation of sodium batteries and more recycling capabilities.

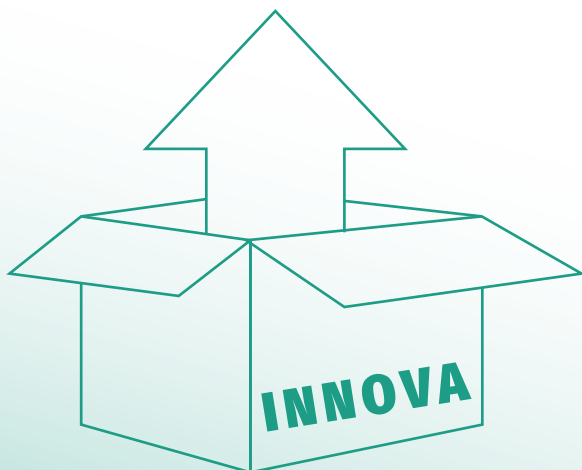
Ma Jun's NGO has recently started following Chinese companies' carbon footprints in other Asian countries as supply chains are getting longer, but less transparent. The goal is to be able to measure the total emissions of companies producing in Vietnam and other countries with supplies from China. Some producers are reluctant to disclose their emission data because of competitive concern, but the NGO is trying to put pressure on them by cooperating with the China Association of Car Manufacturers.

Market potential

According to the European Chamber of Commerce, the business environment for foreign companies in China is becoming increasingly challenging. Protectionism is on the rise, and there is a strong preference for locally produced products among state owned Chinese companies. This is mainly a problem in strategic industries which are controlled by the government, such as energy, healthcare, and finance.

However, opportunities still exist in the Chinese market for European companies that excel in niche products on a global scale. This is especially true for companies that can readily demonstrate their carbon footprints or showcase how their product or solution contribute to reducing carbon emission. This is a competitive strength in China, where local officials are evaluated based on their ability to reduce carbon emissions.

While it remains crucial to protect intellectual property rights (IPR) and retain key technologies in Europe, it's important to acknowledge successful businesses in China may still face challenges from Chinese imitators and numerous local competitors, regardless of where the products are manufactured. It's worth noting that the legal environment has improved considerably in recent years, coinciding with the growing number of patents and intellectual property rights held by Chinese companies.



The China Factor

"China is gravity", said the economist, Andy Xie.

This is very true because there is a strong China factor in all international business due to China's central role in the global economy and its far-reaching effects on everything from the price of raw materials to what products are introduced in the market. The sheer size of the Chinese market means that it often sets the tone for the world market.

As the world's largest emitter of greenhouse gases, China's effort to address environmental challenges and transition to renewable energy source have global implication for sustainability efforts and industries.

Companies must carefully consider China's market, supply chain, policies, and innovation when developing their global strategies.

A window into the future

Another reason to pay attention to developments in China is that it can serve as a window into the future. Many technologies are introduced in Europe and the US 3-5 years after being launched in China. For example, facial recognition for payments and livestreaming emerged in China several years before it was adopted in the West.

In 2020, the Chinese government acknowledged data as a means of production, on par with capital, labor, and technology and started introducing data exchanges in 50 cities around the country. The idea is that if data is the new oil, it should be traded on exchanges like oil and gold. It's too early to say if this will be successful or not, but it certainly presents a strong vision of how to structure a data driven economy in the future.

Global tech standards

The Chinese government has recognized the importance of AI in shaping the future of technology, industry and society, and it seeks to influence the development of international AI standards.

By actively participating in the development of AI standards, it can shape the rules and norms that govern the industry, potentially giving its own companies a competitive advantage on the international stage.



CHINA EXPERIENCE

INSIGHTS FOR FUTURE BUSINESS

The Green Tech Tour 2023 was organized by [China Experience](#) and facilitated by Peter Lisbygd and Christina Boutrup.



Peter Lisbygd

Peter Lisbygd has been working extensively with China since 2005, when he moved to Shanghai for the first time and founded China Experience. Since then, he has specialized in imparting valuable knowledge and insight to educational institutions and decision makers, about the world's new superpower.

Peter has an incredibly in-depth understanding of Chinese conditions and how China is shaping new business dynamics in Asia and around the world. In recent years with a special focus on the country's explosive development within technology, new digital business models and China's green transformation. Over the years he had planned, led and facilitated hundreds of business delegations and deep dives in China.



Christina Boutrup

Christina Boutrup is a leading China analyst, thought leader and keynote speaker who authored several books about China, based on her own field research as an experienced business journalist, podcaster and TV correspondent. In her latest book she writes about the tech revolution in China and how it shapes our future in Europe.

She lived in Asia for several years, most recently in Shanghai and Singapore with her family, and she has an up-to-date perspective on the most important business and tech trends in China and beyond.

For more information please contact:

Peter Lisbygd

peter@china-experience.com

DK: +45 20 11 42 26

CN: +86 182 2163 3535

www.china-experience.com

www.linkedin.com/in/peterlisbygd



Stay tuned and sign up for our newsletter to get insights and stories about the latest trends and tech development in China shaping the future of business.