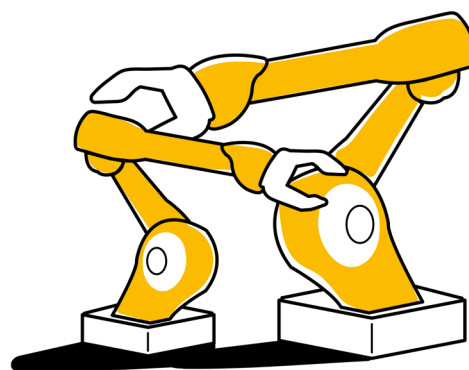


FEBRUARY 7, 2024 (REPORTING PERIOD: NOVEMBER 29 - JANUARY 30)

MERICCS

China Industries



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MERICS TOP 5

1. China seeks first-mover advantage with roadmap for future industries

At a glance: The Ministry of Industry and Information Technology (MIIT) and six other agencies released a blueprint for the development of future industries. It calls for the development of innovative products related to humanoid robots, quantum computers, advanced visual displays, brain-computer interfaces, 6G equipment, ultra-large smart data centers, third-generation internet, aviation and resource exploration. Overall goals include:

- By 2025, set up future industry incubators and pilot zones, generate breakthroughs in 100 advanced key and core technologies, launch 100 innovative products, build 100 leading enterprises, set 100 key standards and cultivate 100 professional organizations.
- By 2027, generate major breakthroughs in key and core technologies, nurture a batch of world-leading enterprises, and build a development landscape that links up future industries with advantageous, emerging and traditional industries.

MERICS comment: The plan is part of China's response to the tech war with the US. Implementing the 14th Five-Year Plan, it aims to reduce reliance on foreign technology and to generate strengths for China in new technology areas. The crux to developing future technologies is in the coordination between researchers and industry, as many of these technologies are currently only theoretical or lab-tested. Seeking to overcome the gap that traditionally exists in China between research and industry, the plan calls on national key labs to develop the needed technology, and on leading enterprises to form innovation consortia with a broad range of stakeholders. The plan also explicitly links up with other policies that address the same gap, such as those on [manufacturing pilots](#), advanced manufacturing clusters, Little Giants, the science and technology (S&T) progress law, patents and standards. These efforts are supported through funds for upgrading manufacturing, developing SMEs and a new fund for integrating S&T-industry-finance.

Foreign firms operating in China may benefit from Beijing's willingness to invest in innovation. The plan promotes international cooperation, by encouraging domestic firms and labs to participate in global networks, and foreign entities to establish research and development (R&D) facilities in China. Yet the calls for integration of resources and to fully domesticate supply chains could make it increasingly difficult for entities which are not based in China to participate. More generally, foreign entities are at risk of getting caught up in the national security framework.

Article: Implementation Opinions on Promoting Innovative Development of Future Industries (关于推动未来产业创新发展的实施意见) ([Link](#))

Issuing bodies: MIIT, MOE, MOST, MOT, MCT, SASAC, CAS

Date: January 29, 2024

2. China wants to leverage the multiplying effects of data to grow its economy

At a glance: Seventeen government agencies led by the National Data Administration (NDA) have unveiled a three-year action plan to leverage the “multiplying effects” of data as a factor of production in economic development. The plan focuses on data application, data circulation and data security, and promotes integration in 12 areas ranging from technology to the low-carbon transition. The major objectives by 2026 include:

- Form a comprehensive industrial ecosystem for data, covering all aspects from enhanced data quality to deeper synchronization between data exchanges
- Develop demonstrations for more than 300 typical application scenarios such as smart manufacturing and emergency management
- Achieve an average annual growth rate of at least 20 percent for the data industry
- Cultivate a group of data vendors, third-party service organizations and exemplary localities with strong innovation capacity and high-quality growth

MERICS comment: Per one estimate, China’s data production reached 8.1 Zettabytes by the end of 2022, accounting for 10.5 percent of the global total. Since the fourth plenary session of the Chinese Communist Party’s (CCP) Central Committee in 2019, Beijing has put data on a strategic level and considered it as a [national asset](#) and a key “[new productive force](#)” which can generate value across the industrial chain, promote self-reliant development and boost the digital economy.

Despite the lofty ambitions, China is still in the early stages of scaling the application of data. To spur progress, the NDA was established through an institutional reform in spring 2023. Its core responsibilities include coordinating and advancing the construction of data infrastructure, promoting the integration of data resources, and implementing the Digital China strategy.

This move is part of an ongoing shift to a markedly more state-led economic development and innovation strategy, which poses challenges for foreign companies in China. This is particularly evident in industries where deeper data integration is to be coordinated and supervised by the state, such as transportation and manufacturing. While the rules for data sharing are still being formed, [there is a risk](#) the government could introduce requirements to contribute to local databases, and thus endanger the confidentiality of key information held by foreign companies.

Article: “Data as a Factor of Production ×” Three-year Action Plan (2024-2026) (十七部门关于印发《“数据要素×”三年行动计划（2024—2026年）》的通知) ([Link](#))

Issuing body: NDA, CAC, MOST, MIIT, MOT, MARA, MOFCOM, MCT, NHC, MEM, PBoC, CBIRC, NHSA, CAS, CMA, NCHA, NATCM, SAMR

Date: January 5, 2024

3. Ambitious standards for auto chips could support indigenization efforts and hurt foreign incumbents

At a glance: The Ministry of Industry and Information Technology (MIIT) released a guideline for the development of automotive chip standards. Standards are divided into three types: 1. Basic standards for common characteristics of all chips; 2. Product and technology application standards for specific features; and 3. Testing standards for integration tests. Key targets included in the plan are:

- Formulate more than 30 key automotive chip standards by 2025 focused on basic requirements like sustainability, reliability, functional safety and information security
- Formulate more than 70 automotive chip standards by 2030
- Focus on key products and applications like control, computing, storage, power and communication chips
- Strengthen overall coordination and build cross-industry, cross-field and cross-department collaboration; exchange with international standardization bodies to support the formulation of international standards in areas related to the domestic standards

MERICS comment: The increasing electrification of cars has led to the incorporation of more chips, now being called “computers on wheels” due to their assist functions and general digitization. Today’s new energy vehicles (NEV) contain [1,459 chips](#) on average. China has built up its NEV industry in recent years and has many leading companies, but the country is still highly dependent on foreign automotive chips, with the localization rate estimated to be a mere [10 percent](#).

While automotive chips are security-relevant, they are not usually produced on cutting-edge equipment and processes. This means that US export controls do not directly affect the automotive chip industry. China has recently invested more in “foundational semiconductors,” which most automotive chips fall under.

For European companies, many of whom are the incumbents in China’s market, this policy is unlikely to directly push them out of the market. However, standardization and cyber security requirements have in the past been used by China’s government to support the formation of a local industry, and especially when these standards diverge from international ones, they could make it more costly and more difficult for European companies to go through the testing in China. In addition, an ambitious standardization plan like this indicates Beijing’s eagerness to indigenize production and willingness to invest resources. While some auto chips are safety-relevant, and therefore unlikely to see a switch in the short term, the multitude of chips for convenience and entertainment could be replaced by domestic alternatives easily.

Article: Notice on Guidelines for the Construction of a National Automotive Chip Standard System (工业和信息化部办公厅关于印发国家汽车芯片标准体系建设指南的通知) ([Link](#))

Issuing body: MIIT

Date: January 8, 2024

4. MIIT charts course for leadership in green shipbuilding by 2025

At a glance: The MIIT and four other government bodies issued a six-year action plan for the green development of the shipbuilding industry (2024-2030). This plan aligns with China's broader environmental goals, including for achieving peak carbon emissions and carbon neutrality, as well as its industrial upgrading objectives. It emphasizes the need to support innovation, enhance green ship design, upgrade supporting equipment, transform manufacturing systems, and more. Key interim targets set for 2025 include:

- Secure over 50 percent of international market share in green powered ships such as LNG and methanol-powered vessels by 2025
- Align the development of maritime alternative fuels and new energy technologies with global standards
- Establish green ship repair and recycling industries, and implement practices for the environmentally safe dismantling of ships

MERICS comment: The plan not only aims to reduce the industry's environmental impact but also seeks to enhance China's competitiveness in global markets. While already holding a significant [53 percent](#) of global market share in shipbuilding, it is now aiming to extend that leading position into the growing green shipbuilding segment.

This green transformation of China's shipbuilding industry presents both opportunities and challenges for European shipping companies, shipbuilders, and suppliers. European firms, known for their high-quality shipbuilding standards and technological advancements, could find medium-term opportunities through new markets for export of and investment in green technologies and products in China as well as potential for partnerships and collaborations with Chinese firms in the sector.

However, there is a risk of long-term competition emerging from Chinese firms. China's plan to reduce reliance on foreign technology and enhance its own green shipbuilding capabilities could lead to increased competition for European shipbuilders and suppliers. European companies, which are [the largest global supplier of maritime equipment](#), may need to adapt their strategies to maintain their competitive edge in this shifting landscape. Furthermore, the opportunities of investing in production in China to meet localization requirements should be weighed against the risks of technology spillage that could empower Chinese competitors moving forward both within that market and abroad.

Article: Green Development Action Plan for the Shipbuilding Industry (2024-2030) (船舶制造业绿色发展行动纲要 (2024—2030 年)) ([Link](#))

Issuing bodies: MIIT, NDRC, MOF, MEE, MOT

Date: December 28, 2023

5. The mid-term report: China falls short on 14th Five-Year-Plan environmental goals

At a glance: In his report to the Standing Committee of the National People's Congress, Zheng Shanjie, director of the National Development and Reform Commission (NDRC), reviewed the progress made during the first half of the [14th Five-Year-Plan \(FYP\) \(2021-2025\)](#). Indicators related to science and technology (S&T), like growth in research and development (R&D) investment, have outpaced expectations, and the economy has progressed in line with projections. However, environmental metrics, such as the reduction of energy consumption and CO2 emissions per unit of GDP, have fallen short.

Looking ahead, the report outlined nine key measures for the second half of the 14th FYP, placing emphasis on the need to:

- Expand domestic demand for an accelerated economic recovery
- Develop core technologies and promote scientific and technological self-reliance
- Construct a modern industrial system rooted in high-end, smart and green manufacturing
- Strengthen pollution and carbon emission controls

MERICS comment: The first half of the 14th FYP has been shaped by the on-going impact of the pandemic, rising geopolitical tensions and concerns around energy security. China's leadership has prioritized the manufacturing sector to fortify resilience against external economic shocks. This course is reflected in the steady progress of S&T and economic targets, but also means that expanding demand and the environment have taken a back seat.

The tasks outlined for 2024 and 2025 present a more balanced development approach. However, officials will need to prioritize certain areas. Support for manufacturing will continue to be a top-tier objective, as it aligns with Beijing's core goals of advancing industrial upgrading and self-reliance. Recent policies indicate a potential resurgence of environmental priorities. Notably, the State Council has mandated that officials will be [held accountable](#) for environmentally harmful decisions and set a target to cut [PM 2.5 levels](#) in cities by 10 percent by 2025 (compared to 2020 levels). The central government is yet to introduce any substantial measures to boost consumption. It can be assumed that efforts to expand domestic demand will remain a second, if not third tier priority for local officials.

Article: Report on the Mid-term Evaluation of the Implementation of the 14th Five-Year Plan (《中华人民共和国国民经济和社会发展第十四个五年规划和 2035 年远景目标纲要》实施中期评估报告) ([Link](#))

Issuing bodies: NDRC

Date: December 27, 2024

NOTEWORTHY

Policy news

- *December 6:* The MIIT and three other government bodies introduced a plan to upgrade China's textile industry, emphasizing the development of advanced materials, intelligent manufacturing, as well as green, circular and low-carbon processes ([MIIT notice](#))
- *December 11:* The MIIT, Ministry of Finance (MOF), and Tax Administration adjusted the technical requirements for tax-exempt new energy vehicles, raising standards for driving range and energy density from mid-2024 onward ([MIIT notice](#), [South China Morning Post article](#))
- *December 21:* Several ministries led by the MIIT issued a plan to promote growth and technological innovation in audiovisual electronics sector, including capabilities in new technologies such as 4K/8K ultra-high definition, 5G+4K/8K, virtual reality and augmented reality ([MIIT notice](#), [Yicai article](#))
- *December 28:* The MIIT and seven other government agencies released guiding opinions on accelerating the transformation of traditional manufacturing industries like petrochemicals, steel, and automobiles, aiming for a significant improvement in high-quality, green, and innovation-driven development by 2027 ([MIIT notice](#))
- *December 29:* The MIIT published the final version of guidelines for the development of industrial data security standards, with 30 related standards to be developed by 2024, and 100 by 2026 ([MIIT notice](#))
- *January 4:* The Ministry of Emergency Management (MEM) and the MIIT issued a plan to boost the development of emergency and rescue robots by establishing a batch of demonstration bases by 2025 ([MEM notice](#))
- *January 18:* The MIIT released draft guidelines for the development of a national standardization system for the AI industry, which includes a target to formulate more than 50 new national and industrial standards by 2026 ([MIIT notice](#))
- *January 25:* Several ministries led by the MIIT published a plan to promote digitalization of raw material industries – such as petrochemicals, iron and steel, metal and building materials – with further applications of digital technology in R&D and design, production and manufacturing, management, etc. ([MIIT notice](#))

Corporate news

- *December 5:* The Chinese Academy of Agricultural Sciences has launched the world's tallest unmanned vertical farm in Chengdu; the 20-story installation incorporates efficient lighting, automatic fertilization, and AI-based control

systems to achieve year-round food production ([South China Morning Post article](#))

- *December 20:* Neusoft Medical launched China's first domestically developed dual-energy 3.0T MRI system; with the integration of AI technology, the system shortens the examination time for patients and improves accuracy and stability of scans ([Science and Technology Daily article](#))
- *December 29:* UBTech Robotics successfully raised USD 128 million in its Hong Kong IPO, becoming the first Chinese manufacturer of humanoid robotics to go public ([Yicai Global article](#))
- *January 9:* China State Railway Group stated it will complete the prototype production and testing of its CR450 high-speed train this year, with plans for it to enter commercial service by 2025; the train is expected to reach speeds of up to 450km/h for testing and 400km/h for commercial use ([Science and Technology Daily article](#), [South China Morning Post article](#))
- *January 10:* Volkswagen (VW) and General Motors (GM) are facing increased competition from local electric vehicle manufacturers in China; while China's car market grew by 5.6 percent last year, VW's sales in China only saw a 1.2 percent increase, while GM's deliveries fell 8.7 percent ([South China Morning Post article](#))
- *January 19:* Huawei Technologies unveiled HarmonyOS Next, an operating system no longer compatible with Android apps; HarmonyOS Next distinguishes itself by not depending on Linux or Unix cores, instead using entirely self-developed core technologies ([Yicai Global article](#), [Zaobao article](#))
- *January 22:* China significantly increased its chipmaking machinery imports by 14 percent to nearly USD 40 billion in 2023, as it responds to US-led restrictions on its semiconductor industry ([Bloomberg article](#))
- *January 24:* Airbus opened the world's first whole lifecycle service center in Chengdu, China, offering a full range of services for aircrafts, from storage and maintenance, to recycling ([Yicai Global article](#))
- *January 24:* The Business Confidence Survey from the German Chamber of Commerce in China revealed an increase in German firms exiting or considering an exit from the Chinese market, rising from 4 percent to 9 percent due to various challenges such as local competition and geopolitical risks ([German Chamber of Commerce in China survey](#), [Reuters article](#))

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