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General Office of the Provincial Government on Printing and  
Distributing Jiangsu Province  
Notice of the "14th Five-Year Plan" high-quality development  
plan for the manufacturing industry  
(Su Zhengbanfa [2021] No. 51)

The people's governments of all cities and counties (cities, districts), all provincial committees, offices, bureaus, and provincial units directly under:

The "14th Five-Year Plan for the High-quality Development of Manufacturing Industry in Jiangsu Province" has been approved by the Provincial People's Government, and is now issued to you. Please organize and implement it carefully.

General Office of Jiangsu Provincial People's  
Government

August 16, 2021

(This piece is publicly released)

Jiangsu Province "14th Five-Year" Manufacturing High Quality  
Development Plan

Manufacturing is the foundation of a country and the foundation of a strong country. The Fifth Plenary Session of the Nineteenth Central Committee of the Party emphasized that we must persist in focusing on the development of the economy on the real economy, and unswervingly build a manufacturing power, a quality power, a network power, and a digital China. Jiangsu's economic development has entered a new stage of innovation-led acceleration and comprehensive quality

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improvement. In-depth practice of the new mission and new requirements of "strive to be an example, strive to be a demonstration, and be at the forefront" must persist in building a strong manufacturing province, continue to maintain and strengthen The pillar position and leading role of the manufacturing industry in the economic and social development of the province, strive to build an independent, controllable, safe and efficient modern industrial system, accelerate the construction of an industrial technology innovation center with global influence, an advanced manufacturing base with international competitiveness, A two-way open hub with world cohesion. This plan is compiled in accordance with relevant national plans and the "14th Five-Year Plan for National Economic and Social Development of Jiangsu Province and Outline of Long-term Objectives for 2035".

#### 1. Basic Situation

Since the "13th Five-Year Plan", in the face of severe and complex macro-environment, unprecedented risks and challenges, especially the severe impact of the new crown pneumonia epidemic, the whole province has adhered to the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, resolutely implemented the decision-making and deployment of the Party Central Committee, Fully implement General Secretary Xi Jinping's important instructions on Jiangsu's work, closely follow the general goal of "strengthening wealth, beauty and high quality", deepen the practice of "two gatherings and one high", and strive to promote the high-quality development of the manufacturing industry to be at the forefront. The manufacturing industry plays an important role in the province's economic society The leading and supporting role in development continues to increase, and remarkable achievements have been made in building a strong manufacturing province. The comprehensive strength ranks in the forefront of the country, the added value of the manufacturing industry reaches 3.5 trillion yuan, accounting for about 1/8 of the country's scale, contributing 34.5% of the province's GDP and 39.1% of tax revenue, and 6 clusters in the national advanced manufacturing industry Winning in the final of the cluster competition, the number is the first in the country. The adjustment of industrial structure continued to deepen. The output value of strategic emerging industries and high-tech industries accounted for 37.8% and 46.5% respectively, which were 8.0 and 6.4 percentage points higher than the end of the "Twelfth Five-Year Plan". From 31.6% to 28.6%, overfulfilling the state's energy-saving emission reduction and capacity reduction tasks. The innovation capability of the manufacturing industry has been continuously enhanced. The R&D investment intensity of industrial enterprises above the designated size has reached about 2%, which is double that of the end of the "Twelfth Five-Year Plan". Two national-level manufacturing innovation centers have been established, accounting for 1/8 of the country. High-tech enterprises More than 32,000 companies have undertaken 74 national industrial strong foundation projects, the number of which ranks first in the country. Breakthroughs have been made in basic materials, components and processes such as core components of high-speed rail gear transmission systems, aviation-grade titanium alloy materials, and high-standard bearing steel. The transformation of manufacturing models has been accelerated, large-scale digital transformation has been accelerated, and the role of industrial Internet network foundation, platform hub, and security guarantee has further emerged. A total of 42 smart manufacturing demonstration factories and 1,307 smart workshops have been built, and 86 key industrial Internet platforms and benchmark factories have been cultivated. 95, 5G base stations have basically achieved full coverage of the main urban areas and key central towns of cities and counties in the province, and the integration index of industrialization and industrialization of enterprises has reached 63.2, ranking first in the country for six consecutive years. Backbone enterprises have strong support. There are 148 industrial enterprises with an annual operating income exceeding 10 billion yuan, of which 12 enterprises exceed 100 billion yuan. There are 1,374 new "little giant" enterprises with specialization and specialization.

During the "14th Five-Year Plan" period, the manufacturing industry is still the main force supporting the economic and social development of our province, and it is also the main battlefield for building a strong science and technology province and a strong open province. To promote the

high-quality development of the manufacturing industry in our province, there are new developments and changes in both opportunities and challenges, and the situation is more complicated. First, the new round of scientific and technological revolution and industrial transformation is in-depth development. Digital technology has become an important force driving the evolution of industrial forms. The manufacturing technology system, production mode and value chain will undergo systematic reengineering, which will provide a basis for accelerating the transformation and upgrading of the manufacturing industry in our province. new opportunities. Second, the international environment is becoming more and more complex, the adjustment of world trade and industrial division of labor is accelerating, and economic globalization is facing a countercurrent. Developed countries are promoting "re-industrialization" to maintain their leading positions in high-tech fields. The transfer of large-scale industries and low value-added links has brought new challenges to our province to consolidate its status as a strong manufacturing province and a large open province, deeply participate in international cooperation and competition, and build a strong science and technology province. The third is that my country's economy is turning to a stage of high-quality development. Systematic changes will occur in demand structure, industrial structure, development momentum, technology system, and institutional mechanisms. In particular, the Party Central Committee has made a strategic deployment to build a new development pattern. Based on the new development stage and implementing the new development concept, Jiangsu is placed in the overall situation of the national manufacturing industry to plan, to meet the needs of the people for a better life as the direction, to be driven by innovation, high-quality supply to lead and create new demand, and to build A strong manufacturing country shoulders Jiangsu's responsibilities and contributes to Jiangsu's strength. Fourth, after years of development, Jiangsu's manufacturing industry has formed a solid foundation, a complete supporting system and leading advantages in some fields, but the characteristics of "big but not strong" are still obvious, and the problem of unbalanced and insufficient development is still prominent. The chain value chain and innovation chain are generally at the middle and low end. The level of independent innovation needs to be improved urgently. Some key core technologies are controlled by others. Enterprises and brands, the manufacturing industry consumes a lot of resources and energy, and has a great impact on the ecological environment. During the "14th Five-Year Plan" period, we must thoroughly implement the new mission and new requirements of "strive to be an example, strive to be a demonstration, and be at the forefront", fully grasp the new opportunities of industrial transformation, strengthen the scale advantages and supporting advantages of our province's manufacturing industry, and find A breakthrough point for quasi-industrial transformation and upgrading, a new engine to reshape competitive advantages, and promote Jiangsu manufacturing to accelerate towards the middle and high end of the global industrial chain value chain, and make every effort to build an advanced manufacturing base with international competitiveness and a higher level of manufacturing power.

## 2. General requirements

(1) Guiding ideology. Guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, fully implement the spirit of the 19th National Congress of the Party and the Second, Third, Fourth, and Fifth Plenary Sessions of the 19th Central Committee, conscientiously implement General Secretary Xi Jinping's important instructions for Jiangsu's work, and base ourselves on In the new stage of development, implement the new development concept, build a new development pattern, take promoting high-quality development as the theme, take deepening supply-side structural reform as the main line, take reform and innovation as the fundamental driving force, and meet the people's growing needs for a better life as the fundamental Purpose: To implement the deployment requirements for the construction of a strong manufacturing province, focus on independent innovation, integration and empowerment, green intensification, and quality and efficiency improvement. Guided by the cultivation of advanced manufacturing clusters and industrial chains, promote seven tasks, implement six major projects, and strive to improve Jiangsu manufactures core competitiveness, promotes the high-quality development of the manufacturing industry, strives to be a model, accelerates the construction of an advanced manufacturing base

with international competitiveness, and strives to write a great mission to fulfill the major mission of "strive to be a model, strive to be a demonstration, and be at the forefront". "Strong, rich, beautiful and high" provides a solid guarantee for the modernization of the new Jiangsu construction.

(2) Basic principles.

Independent innovation, open cooperation. With technological self-reliance and self-improvement as the strategic support, innovation guides demand, drives transformation, optimizes supply, and ensures safety to build an independent and controllable modern industrial system. Integrate into the new development pattern, continue to deepen a higher level of open cooperation, and form new advantages for the manufacturing industry to participate in international cooperation and competition.

Quality and efficiency priority, eco-friendly. Completely, accurately and comprehensively implement the new development concept, adhere to quality and efficiency priority, green development, focus on optimizing the supply structure of the manufacturing industry, promote industrial digitalization and digital industrialization, improve manufacturing production efficiency, improve the supply capacity of high-quality consumer goods and mid-to-high-end products, and promote The manufacturing industry will be upgraded to high-end, intelligent, green, and intensified, and accelerate towards the mid-to-high end of the global industrial chain.

Market-led, government-guided. Adhere to the combination of an effective market and an effective government, give full play to the decisive role of the market in resource allocation, release and stimulate the vitality of enterprises to the greatest extent, and enhance market competitiveness. Comprehensively deepen the reform and innovation of systems and mechanisms, strengthen planning guidance and industry guidance, improve the efficiency of service enterprises, and enhance industrial governance capabilities.

Advance the system and highlight the characteristics. Adhere to the system concept, promote the development of the province's manufacturing industry as a whole, strengthen the coordination of advantageous industries and emerging industries, promote the coordination of science and technology, finance, talents and manufacturing, support and guide localities to find their positions and give full play to their advantages, and form the province's upper and lower linkages and local characteristics A new pattern of high-quality development of regional manufacturing industry that highlights and improves the industrial ecology.

(3) Main objectives. By 2025, the pillar position of the manufacturing industry in the province's economy and the country's leading position will be consolidated and improved, and high-quality development will be achieved with high levels of innovation, high manufacturing efficiency, high-quality supply, more optimized structure, more coordinated regions, and a more environmentally friendly environment. , international first-class independent brand leaders who have mastered key core technologies are constantly emerging, the industrial base is advanced and the level of industrial chain modernization continues to improve, the comprehensive competitiveness of key advanced manufacturing clusters has been significantly enhanced, and the first national demonstration zone for high-quality manufacturing development has been established. Build an advanced manufacturing base with international competitiveness. By 2035, the province's manufacturing industry's independent innovation capability, total factor productivity, and international competitiveness will be greatly improved, and the manufacturing industry will be more coordinated with the ecological environment and social development, which will strongly support our province to take the lead in realizing modernization in the country.

Quality and efficiency have reached a new level. The proportion of the added value of the manufacturing industry remained basically stable, and the competitiveness of key advanced manufacturing clusters and industrial chains was significantly improved. Productivity has steadily increased.

Innovation leads to new breakthroughs. The dominant position of enterprise innovation has become more prominent, the R&D investment intensity of manufacturing enterprises above designated size shall remain above 2%, maintain the domestic leading level, break through the technical bottlenecks urgently needed for a number of industrial development, and become the

source of national and even global technological innovation and standard leadership in several fields.

Digital transformation creates new momentum. The integration of industrialization and industrialization in the province continues to lead the country. The digital transformation of manufacturing enterprises above designated size is accelerating and popularizing. The added value of the core industries of the digital economy accounts for more than 10% of the regional GDP. The digital economy has become a new driving force for economic growth.

Green development reaches a new level. The utilization efficiency of energy and resources in the manufacturing industry has been further improved, green, safe and low-carbon technology and equipment have been widely used, and the level of clean production of enterprises has been continuously improved. The transformation of the enterprise's green and safe production methods has achieved remarkable results.

Strong enterprises and strong enterprises have achieved new results. The leading role of leading enterprises has been continuously enhanced, large and small enterprises have coordinated and integrated development, 160 industrial enterprises with operating income exceeding 10 billion yuan, and 3,000 specialized, special and new "little giant" enterprises above the provincial level have formed a group of internationally competitive, An independent brand enterprise occupying the middle and high end of the value chain.

专栏 1 制造业高质量发展“十四五”主要指标			
类别	指标	2025 年	指标属性
质量效益	1.制造业增加值占比（%）	保持基本稳定	预期性
	2.高新技术产业产值占规模以上工业比重（%）	48.5	预期性
	3.制造业全员劳动生产率增长（%）	高于制造业增加值年均增速	预期性
创新引领	4.规模以上工业企业研发投入强度（%）	2 以上	预期性
	5.规模以上企业有效发明专利拥有量增长（%）	12	预期性
数字转型	6.两化融合发展水平指数	70 左右	预期性
	7.规模以上工业企业关键工序数控化率（%）	65	预期性
	8.数字经济核心产业增加值占地区生产总值比重（%）	10 以上	预期性
绿色发展	9.单位工业增加值能耗比 2020 年降低（%）	17	预期性
	10.单位工业增加值二氧化碳排放比 2020 年降低（%）	20	预期性
壮企强企	11.营业收入超百亿元工业企业（家）	160	预期性
	12.省级以上专精特新“小巨人”企业数量（家）	3000	预期性

3. Development focus

During the "14th Five-Year Plan" period, focus on emerging fields, highlight unique advantages, make every effort to build 6 advanced manufacturing clusters with internationally leading or advanced comprehensive strengths, cultivate 10 advanced manufacturing clusters with domestic leading comprehensive strengths, and promote the optimization of the entire industrial chain Upgrade and continuously enhance the international competitiveness, innovation and control of the industrial system.

(1) New electric power and new energy equipment clusters. To implement the carbon-neutral development requirements of the carbon peak, with the direction of high-end, intelligent, and clean, vigorously develop UHV equipment, smart and safe grid equipment, green and efficient new energy equipment, etc., and support the construction of clean energy bases such as photovoltaics and offshore wind power , to create a new power and new energy equipment cluster with international leading comprehensive strength.

smart grid. With the direction of low-carbon, interconnection, and safety, focus on the development of high-proportion new energy consumption, high-proportion power electronic devices connected to the power system operation dispatching and safety control equipment, and break through large-scale COSCO offshore wind power grid-connected consumption, distributed photovoltaic Key technologies such as group control and group dispatching will accelerate the

research and application of technologies such as flexible power transmission, (power supply) grid (load) storage (energy) friendly interaction, regional energy comprehensive utilization, terminal energy efficiency improvement, and electric energy substitution.

UHV equipment. Make breakthroughs in UHV and high-power semiconductor devices, key DC transmission equipment and independent safety power protection and control equipment (systems), make UHV (composite, porcelain and glass) insulators stronger and better, UHV cable insulation materials and power sensors, a new generation Power-specific communication products.

Crystalline silicon photovoltaics. With high conversion efficiency and high power as the direction, accelerate the research and development of N-type tunneling oxide passivation contact (TOPCon), heterojunction (HJT) crystalline silicon cell technology and next-generation solar cell technology, and make breakthroughs in new high-efficiency large-size cell components , high-efficiency photovoltaic inverter, high-efficiency conductive silver paste (silver powder) preparation and equipment, battery plasma enhanced chemical vapor deposition (PECVD), atomic layer deposition (ALD) and plasma oxidation and plasma assisted in-situ doping (POPAID) production Research and development of technology and equipment, testing equipment for batteries and components, support the development and application of intelligent operation and maintenance systems, tracking brackets, and wind-solar storage and charging systems.

Wind power equipment. With the direction of intelligence and deep sea, focus on breakthroughs in high-power generators and converters, large-scale wind turbine main bearings, pitch control systems, ultra-long and ultra-flexible blade technologies, etc., and support the construction of smart wind farms that integrate the application of new generation information technology , coordinate the development of wind power installation, maintenance, wind power infrastructure equipment and other related industries.

Hydrogen equipment. Focusing on hydrogen production, hydrogen storage (transportation), hydrogenation, hydrogen fuel cells and other links, improve the entire industrial chain of hydrogen energy equipment. Focus on breakthroughs in renewable energy green hydrogen production equipment, industrial by-product hydrogen purification equipment, low-temperature liquid hydrogen storage equipment, composite hydrogen storage equipment, hydrogenation machines and other supporting equipment, hydrogen fuel cell systems and other special equipment, and vigorously promote hydrogenation and hydrogen storage Development and application of core components and hydrogen fuel cell core materials.

(2) Clusters of construction machinery and agricultural machinery. Focus on the development of large-scale construction machinery, large-scale hoisting machinery, high-altitude operation machinery and high-horsepower power machinery, smart farm equipment, and agricultural characteristic robots with the direction of high efficiency, intelligence, and greenness, and promote the development of a new generation of information technology and engineering machinery and agricultural machinery. Efficient integration, strengthening the application of unmanned scenarios, and building an internationally advanced construction machinery and agricultural machinery cluster with comprehensive strength.

Hoisting Machinery. Vigorously develop large-scale, intelligent and new energy-powered cranes, focusing on key breakthroughs such as large-tonnage crane engines and wire ropes, large-load disconnected axles and high-torque automatic transmissions, high-pressure and high-precision hydraulic pump valves, and high-precision intelligent control systems Core components and technologies.

excavation machinery. Vigorously develop large-scale mining excavators, flexible and maneuverable small and new energy-powered excavators, expand the multi-scenario switching function of excavators, promote the joint construction mode of unmanned excavator groups, and focus on breakthroughs in low-speed, high-torque, high-transient response power systems, digitalization Hydraulic systems, serialized new energy technologies, etc.

road machinery. Focusing on the direction of intelligence and greening, promote the unmanned single machine of road machinery products and the joint unmanned operation of road rollers, paver and other machine groups, promote the breakthrough of the integration and

application of intelligent control, sensing technology and road machinery, and vigorously develop road rollers, paving machines, etc. High value-added road machinery such as paver, road maintenance machinery, and milling machine.

emergency equipment. Focusing on the needs of "all disasters, major emergency, and major rescue", develop serialized, complete sets, and intelligent emergency equipment, and vigorously develop unmanned rescue equipment for multiple scenarios such as petrochemical fires, underground space tunnels, and underground mines, as well as rice data High-rise building fire rescue and other special equipment, strengthen new emergency rescue technologies and equipment such as new emergency command and communication, special traffic emergency support, special emergency medical rescue, intelligent unmanned emergency rescue, special emergency rescue, monitoring and early warning, and disaster information acquisition. System research and development, and strive to form a disaster prevention and control equipment system with a full range of categories and high reliability.

agricultural machinery. Based on the development needs of comprehensive and full-scale mechanization of agriculture, with the goal of high-quality and high-efficiency operations, vigorously develop large and medium-sized and compound agricultural machinery equipment such as intelligent high-power tractors, rice full-process intelligent equipment, and ride-on high-speed rice transplanters. Planting machines, high-efficiency intelligent variable pesticide and fertilizer applicators, cotton pickers, intelligent bait feeding machines, high-performance beverage grain and oil equipment and other special agricultural machinery and equipment with great market potential. Key core components such as power hydraulic steering drive axles and intelligent operating tools, key core technologies such as complete sets of research equipment, agricultural integrated navigation systems, and intelligent control systems for operating processes, promote the large-scale application of intelligent unmanned agricultural machinery.

(3) IoT clusters. Deepen the integration of the Internet of Things and new-generation information technologies such as artificial intelligence, big data, and blockchain, and expand the application of the Internet of Things in smart cities, Internet of Vehicles, industrial Internet, and smart homes with the direction of industrial digitization, intelligent life, and intelligent governance. , smart medical care and other key areas, accelerate the deployment of mobile IoT networks such as narrowband mobile Internet of Things (NB-IoT), 5G, and new-generation low-orbit satellites, build ubiquitous and secure Internet of Things network infrastructure, and advance at a high level The Wuxi National Sensor Network Innovation Demonstration Zone will be built, the World Internet of Things Expo will be successfully held, and an internationally advanced Internet of Things cluster with comprehensive strength will be created.

Beidou navigation. Support the development and industrialization of Beidou general navigation and timing chips, modules, and terminals, vigorously develop software such as remote sensing technology, geographic information systems, and global positioning systems, and develop Beidou for terminals such as mobile phones, wearables, vehicles, ships, and airborne Satellite navigation products and solutions, and further promote the wide application of Beidou satellite navigation in transportation, water conservancy, electric power, environmental protection, land and other industries. Support the construction of Beidou Industrial Park in Nanjing Jiangbei New District, and improve the service capabilities of the Beidou navigation and location service public platform.

information perception. With high performance and localization as the direction, vigorously develop advanced intelligent sensors such as pressure, flow, gas, biology, and acceleration, break through key technologies such as intelligent sensor simulation, signal processing, and software algorithms, and support the deep integration of device design and manufacturing processes. Micro-electromechanical system (MEMS) device localization foundry platform, sensor integration collaborative manufacturing service platform construction and MEMS process simulation, multi-physics field coupling simulation and other special software tool development to improve the supply capacity of mid-to-high-end smart sensor products.

Transmission networking. Research service-oriented IoT network architecture and multi-level efficient networking technologies applicable to wired and wireless networks, develop mobile IoT,

low-power wide-area networks, and network virtualization technologies and products, and support new short-range wireless technologies applicable to the Internet of Things R&D and industrialization of communication products and sensor nodes, research and promotion of interconnection and standardization between existing different IoT network architectures.

Handle the application. Focus on supporting the development of software such as embedded real-time operating systems, middleware, and data sharing service platforms, breaking through key core technologies such as data collection and exchange, compression, indexing, storage, and multi-dimensional query of massive high-frequency data, combined with key technologies such as Internet of Vehicles, Industrial Internet, etc. Application fields and typical application scenarios, support technology research and development such as IoT data analysis and mining, visualization and intelligent control, and form professional software products and application services. Internet of Vehicles: Driven by the construction of a national-level Internet of Vehicles pilot area, coordinate the layout of smart transportation and information communication infrastructure, promote cross-department, cross-platform, and cross-regional data integration and sharing, support key cities to take the lead in realizing regional coverage of Internet of Vehicles, and provide rich A variety of vehicle-road collaborative applications, exploring a sustainable business model of the Internet of Vehicles, and comprehensively improving traffic safety and traffic efficiency. Industrial Internet: break through key core technologies such as advanced algorithms and industrial mechanism models, cultivate industrial applications and solutions, and accelerate 5G, time-sensitive networking (TSN), edge computing, digital twins, logo analysis, industrial intelligence, VR/AR, etc. Integration of new technologies. Achieve a higher level of application in more scenarios in areas such as economic development, social governance, people's lives, and natural resource protection, and comprehensively enhance the experience of the Internet of Everything.

(4) High-end new material clusters. Facing the needs of the rapid development of advanced manufacturing industries such as new-generation information technology, high-end equipment, new energy, intelligent manufacturing, and biomedicine, with high-end applications as the lead, strengthen advanced carbon materials such as carbon fiber and graphene, biomedical, energy-saving and environmental protection, and other nano-new technologies. Material research and development and application, accelerate key technological breakthroughs in electronic high-purity materials, third-generation semiconductors and other advanced electronic materials, promote the upgrading and development of high-quality special steel, new chemical materials, rare earth functional materials, etc., and create an internationally advanced high-end new material cluster with comprehensive strength .

advanced carbon materials. Focus on the development of high-strength, high-modulus carbon fiber series products for aerospace, rail transit and other fields, break through the industrialization of high-performance polyacrylonitrile-based carbon fibers such as polymerization, spinning, pre-oxidation, and carbonization, as well as large-scale and low-cost preparation of key technologies such as large tows and equipment. Make breakthroughs in the large-scale and stable preparation technology of graphene materials on demand, and encourage enterprises in the fields of electronic information, energy and environmental protection, marine engineering, biomedicine, textiles and clothing to accelerate the application of graphene materials.

Nano new materials. Focus on the development of high-performance membrane materials, nano-microspheres and other nano-functional materials, functional implant materials, regenerative repair active materials, nano-antibacterial materials and other nano-biological materials, support large-scale controllable preparation technology, equipment integration research and development, encourage nano-new Material production and application enterprises carry out joint research and support the construction of major innovation platforms such as the Gusu Laboratory of Materials Science and the Nano-Vacuum Interconnection Experiment Station.

advanced electronic materials. Focus on the development of large-scale high-purity silicon and silicon-based materials, third-generation semiconductor materials such as gallium nitride and silicon carbide, high-purity metal-organic source materials (MO), photoresist, high-purity metal targets, packaging and heat dissipation, etc. High-quality microelectronic materials, Micro-LED



light-emitting materials, high-efficiency holographic grating materials, high-stability organic light-emitting materials, quantum dots and other nano-optoelectronic materials.

Special steel material. Focus on meeting the steel needs of aerospace, marine engineering ships, energy equipment, rail transit and other industries, develop high-quality special steel, ultra-high-strength marine engineering steel plate, steel for oil drilling platforms and other high-performance marine engineering steel, high-pressure hydrogen Special alloy steel for high-end equipment such as large-diameter thick-walled alloy pipe, nuclear grade 1, 2, and 3 stainless steel seamless steel pipe, special welding materials, high-grade bearing steel, high-quality gear steel, high-quality tool steel and other core basic components Steel, as well as high-quality special steel such as high-quality cord steel, large deformation-resistant pipeline steel, and non-quenched and tempered steel, etc., support special steel manufacturers and steel companies to carry out joint research.

New chemical materials. In line with the needs of national and provincial emerging industries and high-end manufacturing industries, with the direction of greening, high-end, and agglomeration, vigorously develop silicon materials, fluorine materials, engineering plastics, polyurethane and its raw materials, special rubber and elastomers, and new inorganic chemical materials , key supporting monomers, high-performance resins, catalysts and catalytic materials, environmental protection chemicals, surfactants, additives and other new chemical materials. Focus on improving the self-sufficiency rate of high-end fluorine materials such as high-performance fluorine-containing polymers and products, low-greenhouse effect fluorine-containing ODS substitutes, and electronic special gases, accelerate the development of special engineering plastics, and develop high-purity analytical reagents, standard reagents, clinical diagnostic reagents, pharmaceuticals, etc. Use auxiliary materials and other products to cultivate and grow high value-added polyurethanes, special rubbers and elastomers, high-performance fibers, and new inorganic chemical materials.

(5) High-end textile clusters. Focus on the research and development of new textile fiber materials, advanced textile product development, creative design, brand promotion and other high value-added links, vigorously develop high-quality brand clothing, functional high-end home textiles, functional textiles, smart textiles, industrial textiles, and break through high-performance fibers , textile green processing, recycled fiber and other technologies, build a high-level national advanced functional fiber innovation center, improve the intelligence and green level of chemical fiber, spinning and weaving, printing and dyeing, clothing and home textiles, and create a high-end textile cluster with international advanced comprehensive strength .

Chemical Fiber. Focus on the development of high-performance industrial fiber materials such as carbon fiber, aramid fiber, ultra-high molecular weight polyethylene, polyimide, etc., with differentiation, functionalization, and high performance as the direction, and accelerate the research and development of nanofibers, smart fibers, and biomedical fibers. New fiber materials, encourage the development of high-fidelity, comfortable and easy-care, high-efficiency flame-retardant and other functional fibers, as well as bio-based chemical fibers such as bio-based polyester and polylactic acid fibers, and green fibers such as recycled polyester fibers, and improve the quality of polyester, nylon, and viscose. Differentiation, functionality and comfort levels of conventional fibers.

M. Focusing on satisfying diversified, personalized and fashionable consumer demands, vigorously develop high-grade functional fabrics such as moisture-wicking, anti-wrinkle and non-ironing, breathable and warm-keeping, flame-retardant, anti-static, antibacterial and antibacterial, self-cleaning, etc., and continuously improve clothing Apparel product performance and quality, promote new models such as large-scale personalized clothing customization, vigorously popularize intelligent production lines such as flexible design, cutting, sewing, and ironing, support leading enterprises to build high-level creative design communication platforms, and gather high-level creative design talents , to enhance the international competitiveness and influence of well-known clothing brands in our province.

Home textiles. Promote the transition from "home textiles" to "home furnishing", encourage key enterprises to transform into integrated home furnishing solution providers integrating design, manufacturing and one-stop customized services, vigorously develop new fibers, green environmental protection, personalized design and healthy sleep, etc. Home textile products, continue to expand new fields of home textile products such as outdoor and decoration, and support Nantong International Home Textile Industrial Park to build a world-renowned high-end home textile industry cluster.

Technical textiles. Facing the needs of medical and health, environmental protection, geotechnical construction, wind power, marine engineering equipment, aerospace and other industrial fields, focus on breakthroughs in technologies such as nonwovens, special weaving, and composite materials, and encourage research and development of epidemic prevention, personal hygiene care, medical textiles, and chemical protection Anti-stab, anti-cut and other personal protective medical and health textiles, and vigorously develop new industrial textiles such as fan blade skeleton materials, special cables for ships, and high-temperature resistant filter bags.

(6) Biomedical clusters. Facing the needs of people's life and health, continue to consolidate the leading advantages of chemical drugs and the industrialization of biological drugs in our province, vigorously develop biological drugs such as macromolecular drugs and gene and cell therapy drugs, chemical innovative drugs and high-quality generic drugs, and innovations in traditional Chinese medicine advantageous diseases Drugs and famous Chinese patent medicines, layout and construction of a number of platform carriers such as general technology research and development, contract research and development and production, industrial pilot testing, drug non-clinical research institutions, clinical trial institutions, and promote the open and innovative development of the entire biomedical industry chain in the Jiangsu Pilot Free Trade Zone , to create an internationally advanced biomedical cluster with comprehensive strength.

biopharmaceuticals. Focusing on improving the level of innovative research and development, promote the research and development of new target biomacromolecule innovative drugs such as therapeutic antibodies and cellular immunotherapy for malignant tumors and immune system diseases, and accelerate the research and development of recombinant insulin, recombinant coagulation factors, and recombinant granulocyte colony-stimulating factor Replace recombinant protein drugs with enzymes, actively develop therapeutic vaccines, new coronavirus vaccines, influenza vaccines, AIDS vaccines and other major disease vaccines, encourage the research and development and industrialization of gene therapy drugs, and support the construction of Suzhou National Biomacromolecular Drug Industry Innovation Center, National Biological Pharmaceutical Technology Innovation Center, Taizhou National New Vaccine and Specific Diagnostic Reagent Cluster Development Pilot.

chemicals. Focusing on acute infectious diseases, malignant tumors, major diseases such as cardiovascular and cerebrovascular diseases, central nervous system, and drug-resistant bacterial infections, focus on the development of innovative drugs and nanocrystals with new targets and new mechanisms of action, such as small molecule targeted drugs and immunotherapy drugs Improved new drugs and fixed-dose compound preparations, high-quality generic drugs, improve the production of high-end preparations and high-quality pharmaceutical excipients, encourage the R&D and industrialization of rare diseases, children' s drugs and other clinically scarce drugs, and support qualified regions to develop raw materials Pharmaceutical and other professional pharmaceutical park construction.

Modern Chinese Medicine. Give full play to the unique advantages of modern Chinese medicine in disease prevention, treatment and rehabilitation, and carry out research and development of innovative Chinese medicine and famous medicines around cardiovascular and cerebrovascular diseases, metabolic diseases, neurodegenerative diseases, infectious diseases, and gynecology, pediatrics and other TCM superior diseases Secondary development of large varieties of Chinese patent medicines, focusing on the research and development of traditional Chinese medicine characteristic equipment that integrates new technologies such as big data and artificial intelligence, and applying information technology to establish a traceable quality control system for

the whole process of planting, production, and distribution of Chinese medicines, and improving the level of intelligent manufacturing technology of Chinese medicines. Promote the standardized production of traditional Chinese medicine formula granules and traditional Chinese medicine decoction pieces, and accelerate the standardization and internationalization of the Chinese medicine industry.

(7) Clusters of new medical devices. With the direction of high-end, intelligent, and specialization, vigorously develop high-performance diagnostic equipment such as ultrasonic imaging and ion beam radiation therapy, in vitro diagnostic equipment such as automatic biochemical analyzers, medical robots such as rehabilitation, 3D printing of inorganic materials and degradable High-end implant medical consumables such as polymer materials, life support equipment such as respiratory anesthesia first aid and extracorporeal cardiopulmonary support assistance, support the research and development and industrialization of wearable health evaluation equipment, and develop new models and new formats such as telemedicine, mobile medicine, and Internet medicine, Build a 5G smart medical platform and a big data center, and build a new medical device cluster with comprehensive strength in the country.

High-performance medical equipment. With the direction of high-end and intelligentization, focus on the development of multifunctional dynamic real-time three-dimensional ultrasound imaging and optical imaging systems such as cardiac Doppler ultrasound, ultrasound endoscopes, ultra-high field ( $\geq 5T$ ) magnetic resonance systems, and photon counting-based energy Spectrum CT, intelligent X-ray imaging system and high-performance DSA and other equipment, research and development of new special ultrasonic probe, high heat capacity cold cathode X-ray CT tube and other core new devices, accelerate the promotion of MR/PET/SPECT/CT guided radiotherapy accelerator, ion beam The development and application of high-performance radiation therapy equipment such as radiation therapy, breakthroughs in remote image transmission and interaction technology, and the development of remote intelligent ultrasound terminals.

In vitro diagnostic equipment. With the direction of personalization and automation, focus on the development and application of automatic biochemical detection, mass spectrometry and other point-of-care testing (POCT) equipment for the diagnosis of diabetes, cardiovascular, tumors and other major diseases, and improve the use of nucleic acid detection and molecular diagnosis. The development level of high-throughput gene sequencers, digital PCR and other testing equipment and supporting reagents, support the development of mobile and wearable in vitro diagnostic integrated systems, and encourage the development and industrialization of new in vitro diagnostic technologies.

medical robot. With the direction of human-machine collaborative control and intelligent perception, focus on the development of rehabilitation robots and nursing robots for stroke patients and disabled elderly, real-time image-guided surgical robots for minimally invasive surgery, and capsule robots for the diagnosis of major diseases of the digestive system. Support the development of 5G-based medical robot systems for remote rehabilitation, remote surgery, and remote diagnosis, and support accelerated breakthroughs in key core technologies of medical robots such as surgical robots, intelligent rehabilitation service robots, and micro-diagnosis robots.

High-end implant consumables. With the direction of tissue replacement and functional restoration, focus on the development of high-end implant and interventional consumables such as brain pacemakers, personalized 3D printed orthopedic implants, ophthalmic intraocular lenses, and degradable vascular stents, and support the development of new artificial tendons, artificial nerves, and bionic skin Research and development of new tissue engineering products such as tissues and organs and regenerative medicine products.

life support equipment. In the direction of miniaturization, desktop, and portability, focus on the development of high-performance critical care ventilators, intensive care systems, ECG recorders, hemodialysis machines, intelligent feedback target-controlled anesthesia machines and other respiratory anesthesia emergency equipment, breaking through the artificial heart outside the body , Extracorporeal membrane oxygenation (ECMO) and other key core technologies of extracorporeal life support systems.

(8) Integrated circuits and new display clusters. Facing the new demands of the new generation of smart hardware, industrial Internet, Internet of Things, smart home and other digital economy, vigorously improve the development level of the design industry, steadily improve the manufacturing process and capabilities, accelerate the development of key integrated circuit equipment and special materials, and accelerate the TFT-LCD industry chain Supporting capacity building, continue to promote the continuous improvement and industrialization of AMOLED product technology, promote the key technological breakthroughs and industrialization process of new generation display technologies such as Micro-LED and silicon-based OLED, coordinate and optimize the industrial layout, and promote the coordinated development of the integrated circuit industry chain, Create domestically leading integrated circuits and new display clusters with comprehensive strength.

integrated circuit. Design: Focus on supporting high-end chips such as central processing unit (CPU), field programmable logic circuit (FPGA), high-speed and high-precision AD/DA, digital signal processor (DSP), industrial micro-controller (MCU), micro-electromechanical system (MEMS) , radio frequency chips, optical communication chips and other special chip R & D and design. Comprehensively improve the supply capacity of mid-to-high-end products in the fields of advanced smart chips, smart sensor chips, automotive electronics chips, industrial Internet product chips, and network communication chips. Manufacturing: promote the existing production lines to improve the technological level and production capacity, steadily promote the introduction and construction of 22/20nm, 16/14nm and other advanced production lines, and support the stable development of analog and digital-analog hybrid circuits and micro-electromechanical systems in areas with good industrial foundation and economic conditions System (MEMS), high-voltage circuit, radio frequency circuit and other special process production lines and GaN, SiC, GaAs and other compound semiconductor production lines. Packaging and testing: Vigorously develop advanced packaging technologies such as wafer-level packaging, system-level packaging, panel-level fan-out packaging, and heterogeneous integrated packaging, support the construction of advanced packaging production lines, and increase the proportion of advanced packaging.

新型显示。加快超高清显示、大尺寸内嵌式触控、金属氧化物、Mini-LED背光等技术的融合创新，提升薄膜晶体管液晶显示（TFT-LCD）技术水平。加速有源矩阵有机发光显示（AMOLED）技术、先进制程工艺研发及产业化，大幅降低柔性显示屏的制造成本，突破低温多晶金属氧化物技术并实现量产，支持微发光显示（Mini/Micro-LED）的量产技术研发和产业化，提升关键材料与装备自主可控水平。

(九) 信息通信集群。以做强新一代通信、光传输、未来网络为重点，大力发展服务定制网络架构与系统、5G核心通信器件，重点突破网络操作系统、高性能网络芯片、5G毫米波多通道一体化芯片、高性能介质波导滤波器、高端激光器芯片，开展面向国家重点行业的创新应用与示范推广，发挥网络通信与安全紫金山实验室等科研单位技术优势，打造综合实力国内领先的信息通信集群。

移动通信。支持5G毫米波多通道一体化芯片、高性能介质波导滤波器、5G增强等技术研发突破，重点提升高端芯片、高性能器件等产业链关键环节竞争力，加快5G网络建设，重点推进在交通、教育、农业、水利、文旅、医疗等领域的创新应用，积极跟踪和参与6G网络技术研究。

光通信。支持光通信技术研发，重点突破高速光互联、大容量光传输等核心技术，提升高端激光器芯片、高速光模块、新型光纤、超高密度放大器等核心技术和产品，开展400Gbps长距离光传输和T级光交换系统应用示范项目建设，加快千兆光纤网络部署，重点推进高速光网在工业互联网、5G等领域的融合应用。

未来网络。重点突破服务定制网络架构、低时延确定性、高性能网络芯片、云边端协同、可编程网络等关键技术，研发全场景网络操作系统、高性能智能网卡、可编程网络交换设备、异构云网融合系统等产品，大力推进未来网络技术在工业、金融、电力、航天、国防等重点领域的推广应用，构建未来网络发展生态。

(十) 新能源（智能网联）汽车集群。顺应汽车低碳化、信息化、智能化发展趋势，支持新能源（智能网联）汽车发展成为集成新技术、承载娱乐消费的平台级工业品，持续加大新能源汽车推广应用力度，完善新能源充电换电、智能路网、加氢体系等基础设施，培育整车知名品牌和生态主导型企业，打造综合实力国内领先的新能源（智能网联）汽车集群。

智能网联汽车。以打造智能移动空间和应用终端为目标，推进汽车产品和产业生态转型，加强环境感知、车载软件、车规级芯片、执行与控制、高精度定位等关键环节技术攻关，面向机场、景区、矿山、工地、港口等特定需求，开展基于5G的自动驾驶接驳车、工程车、物流车、环卫车等示范运营，推动自动驾驶技术发展和商业模式探索，建设国家级质量检验监督机构，完善和提升智能网联汽车测试验证能力。

动力电池。以长续航、高安全、全气候为发展方向，支持固态锂电池等新一代电池技术研发及产业化，优化高比能正负极材料、耐高温隔膜、耐高压阻燃电解液等关键材料技术，提升动力电池数字化智能化制造水平，拓展在船舶、工程机械、港口机械等场景的应用，支持开展动力电池梯次利用，加强来源可控、去向可溯的全生命周期管理，建成安全规范高效运行的回收利用体系。

氢燃料电池汽车。依托重点城市开展氢燃料电池汽车新技术、新车型、新模式的示范应用，加快电堆和系统关键部件、核心材料等技术突破和产业化，重点推动市内氢燃料电池公交车运营、城市间氢燃料电池汽车物流配送，鼓励氢燃料电池叉车等作业工具在物流园、工业园区等场景应用，推进加氢基础设施网络建设，形成与氢燃料电池汽车应用需求相适应的氢能基础设施布局。

充换电网络。加快推进智能有序充电、大功率充电、无线充电等技术研发应用，着力突破光储充放微电网、新能源汽车与电网能量互动、能源区块链等新型充放电技术，适度超前布局充换电基础设施，鼓励换电服务、“光储充放”一体化、油气氢电综合供给等新兴模式发展，加快5G通讯、物联网、智能交通、大数据等技术融合应用，逐步优化充换电设施地理布局，大幅提升充换电服务水平。

(十一) 高端装备集群。坚持智能化、成套化、服务化、高附加值方向，重点发展高档数控机床、智能机器人、智能仪器仪表等智能制造装备，高速列车整车及关键配套件、智能运维等轨道交通装备，发动机关重件、航电设备、通用航空等航空航天装备，提升纺织、轻工等优势专用装备发展水平，提升具有自主知识产权的仪器设备和成套装备生产能力，打造综合实力国内领先的高端装备集群。

高档数控机床。以优化提升机床精度保持性、运行可靠性和关键部件性能为重点，提高数控机床智能化制造、装配水平，加快智能型数控系统、高精度高可靠丝杠及导轨、电主轴等关键功能部件攻关，大力发展高精度五轴联动加工中心、多工序复合加工中心等高端数控金切机床和高速高精度冲压、柔性折弯、激光切割等数控成形机床，以及增减材一体化制造激光加工、超声加工等特种机床，加快促进数控机床向高速、高精度、复合化、智能化、服务化转型。

智能机器人。以智能化、安全化、特色化为方向，大力发展智能装配、重载物流、智能协作等工业机器人，消防应急、智能巡检等特种机器人和手术诊疗、康复养护等服务机器人，进一步提升高性能减速器、高精度伺服驱动系统、先进控制器、新型智能传感器等核心零部件自主可控水平。

轨道交通装备。大力发展新一代高速城际列车和地铁车辆等整车装备，围绕列车全自动运行和信号互联互通，进一步提升车辆、信号、供电、通信、综合监控等系统控制技术和轨道车辆轴承、新型牵引变流器等关键零部件发展水平，加强系统总集成、工程总承包模式推广应用，推动轨道交通装备智能运维技术、产品和服务“走出去”。

民用航空航天装备（航空发动机和燃气轮机）。面向商用大飞机和商用发动机的配套需求，大力发展航电、液压、环控、空管系统等机载和机场控制设备，以及航空材料、航空构件产业，推进商务机、轻型运动飞机等通航整机产业发展。大力发展巡检、监测、救援、物流配送等生产型无人机，积极发展各类消费型无人机。加快形成叶片、整体叶盘、涡轮盘环、机匣等高性能关键零部件专业化制造能力，重点发展涡轮叶片、涡轮盘、机匣等热端部件用高温合金材料，突破关键零部件精密铸造、精密锻造、净近精密加工等技术。

特色专用装备。面向行业智能化转型需求，大力发展信息化智能化集成化的食品、纺织、制药、化工等行业特色专用装备。重点突破肉类及肉制品加工、速冻食品加工、大型多功能酿造一体机、高黏度流体灌装等智能成套装备，以及化纤、纺纱、机织和针织、印染、纺织成型等纺织装备，加快发展流程工业自动化控制系统与检测仪表、离散工业大尺度和高精度综合测量装置等。

(十二) 高技术船舶和海洋工程装备集群。加快发展大型化、绿色化、智能化的集装箱船、散货船和油船等三大主力船型，突破邮轮、大型液化天然气运输船、特种工程船舶等高端船型，重点发展海上生产类平台、风电类海工产品、海上和陆地大型专业化模块等高端海工装备，鼓励深海采矿、风浪能利用等海洋资源开发装备研发，大力推进智能制造等总装制造模式，培育自主研发设计机构，形成自主可控的关键配套能力，支持建设无锡深海技术科学太湖实验室，开展深海运载安全（深潜）、深海通信导航（深网）、深海探测作业（深探）等方向重大任务攻关，打造综合实力国内领先的高技术船舶和海洋工程装备集群。

高技术船舶。大力发展超大型智能型集装箱船、散货船和油船，7000车位以上汽车滚装船和客滚船、7000米车道以上新型货物滚装船、化学品船、全回转拖轮、大型疏浚船、起重船等特种船舶，突破一批核心动力装置、通讯导航系统等关键配套件，加快提升薄膜型或棱型罐、球型罐液化天然气运输船设计建造能力，支持清洁能源动力系统推广应用。

luxury cruise. Make breakthroughs in key technologies for the design and construction of medium and large luxury cruise ships, form independent construction capabilities for medium and large luxury cruise ships, speed up the research and development of intelligent operation and maintenance, pod propulsion, medium voltage power, automation and air conditioning and other

system devices, and form piping lines and thin-plate segmented laser lines , cabin assembly line intelligent manufacturing capabilities, and actively develop green and environmentally friendly inland river cruise ships and coastal cruise ships.

Marine engineering equipment. Focus on breakthroughs in production platforms such as floating production storage and offloading unit (FPSO), floating storage and offloading unit (FSO), floating liquefied natural gas production storage and offloading unit (FLNG), floating storage and regasification unit (FSRU), etc. R & D and manufacturing technology, accelerate the upgrading of heavy-duty self-propelled cutter suction dredgers, offshore wind power installation, operation and maintenance operation ships and other ship-type offshore products, expand regasification modules, wind power booster stations/converter stations, LNG processing modules, The supporting capabilities of offshore and land modules such as substation modules will promote the development of new marine engineering equipment such as deep-sea farming, deep-sea mining, and wind and wave energy utilization.

(13) Energy-saving and environmental protection clusters. Focusing on key areas such as energy saving, low carbon, comprehensive utilization of resources, and environmental governance, speed up the R&D, manufacturing, and promotion of equipment and products such as high-efficiency energy saving, water pollution prevention, air pollution prevention, and solid waste treatment, and promote the intelligentization of R&D, design, and production processes. Improve the standardization, modularization, and intelligence of energy-saving and environmental protection products, promote the integrated development of energy-saving and environmental protection equipment manufacturing and services, cultivate a group of high-level energy-saving and environmental protection comprehensive solution suppliers, and create a domestically leading energy-saving and environmental protection cluster with comprehensive strength.

Energy-efficient equipment. Focus on improving energy efficiency, make breakthroughs in combined cycle waste heat utilization, highly integrated lightweight rare earth permanent magnet energy-saving motor systems, high-power high-speed magnetic levitation drive technology equipment, low-loss combustion technology, high-efficiency energy-saving transformers, etc., and promote high-power electrode hot water The R&D and industrialization of equipment such as boiler and boiler exhaust latent heat recovery, and the improvement of energy-saving technologies such as waste heat and pressure utilization, blower compressors, key energy-consuming equipment systems, and energy information management and control. Vigorously develop new formats such as one-stop contract energy management and franchising.

Water pollution prevention equipment. Taking the utilization of sewage resources as the direction, promote zero-discharge technology of industrial wastewater, advanced treatment and reuse technology of refractory chemical wastewater, high-performance small-aperture ceramic membranes and equipment, high-performance membrane materials such as nanofiltration membranes, and harmless water treatment functions The development of precision monitoring instruments such as pharmaceuticals and full-spectrum online monitoring, and complete sets of equipment for deep defluorination of water bodies, and the promotion of refractory industrial wastewater treatment equipment, high-efficiency and low-consumption intelligent domestic water treatment equipment, high-concentration organic wastewater comprehensive treatment equipment, deep denitrification Phosphorus removal equipment and other advanced complete sets of equipment.

Air pollution prevention and control equipment. Focusing on reducing pollutant emissions, accelerate the research and development of technologies such as ultra-low nitrogen combustion, low-temperature denitrification catalysts, volatile organic compound (VOCs) waste gas purification and disposal, high-temperature (260-800 degrees Celsius) bag-type dust removal equipment, and efficient control of motor vehicle pollution. Promote high-temperature and high-corrosion bag filter, dust removal, desulfurization and denitrification integration, industrial volatile organic waste gas treatment and other advanced complete sets of equipment.

Solid waste treatment equipment. Accelerate the research and development of bulk solid waste disposal and utilization technologies such as fly ash harmless recycling, power battery recycling,

steel slag, general combustible industrial solid waste, etc., and promote cement kiln co-processing with the direction of high value, resource utilization, and reduced utilization Solid waste, biological drying and incineration integrated sludge treatment, kitchen, medical waste treatment and other advanced technologies and equipment.

(14) Green food clusters. Guided by biotechnology innovation, with the direction of green, health and safety, we will consolidate and improve the quality and brand competitiveness of brewed food, accelerate the intelligent production of meat products and the upgrading of high-end products, vigorously develop functional foods, and strengthen the bulk of grain, oil, rice and noodle products, Dairy products, fruit and vegetable products, aquatic products and other high-quality livelihood food supply capabilities, guide the creation of efficient, healthy and high value-added foods, and accelerate the precise nutrition supply and intelligent health management of the people. Encourage the development of new production methods for online allocation of offline resources such as central kitchens and cold chain logistics, and hold China (Huai'an) International Food Expo at a high level, etc., to create a domestically leading green food cluster with comprehensive strength.

brewed food. Focus on shaping the high-end brand image of Jiangsu brewed food, break through key technologies such as wine flavor quality design, brewing bacteria function regulation, and yellow water resource utilization, establish a personalized product research and development system, and improve the level of intelligent and green manufacturing in the brewing industry. Deepen the brewing culture, support the development of industrial tourism with the theme of experiencing the brewing process, and continue to enhance the competitiveness and reputation of Jiangsu's brewed food regional brand.

meat products. Focusing on nutritious and healthy high-quality meat products, actively promote technologies such as controllable fermentation of meat products, integrated processing, central kitchen processing, and comprehensive preservation of meat products under the new retail model, and vigorously develop chilled meat, leisure meat products, and conditioned meat Improve the intelligent manufacturing level of the whole process of meat processing, improve the comprehensive utilization rate of by-products, and promote the whole industrial chain "Internet + " covering breeding-slaughter-deep processing-sales Traceable mode.

functional food. To meet individualized, differentiated and refined needs, vigorously develop functional foods such as sports nutrition food, food for the elderly, special health food for special populations, formula food for special medical purposes, functional probiotic preparations and fermentation agents, and accelerate the development of food products. Biosynthesis and directional separation of functional factors, steady-state targeted delivery, food precision manufacturing and other technical applications, research and development and production of precision nutritional food and heavy functional food with targeted nutrition design, breakthrough in protein biological replacement and other technologies, using synthetic biology, cell Engineering and food 3D printing technologies to develop new nutritious and healthy foods such as vegetable protein meat and artificial milk.

(15) Core software cluster. With the direction of autonomy, high-end, and integration, focus on improving the level of autonomy and controllability of industrial software, basic software, and security software, promote information technology application innovation, and promote open source technology, software development cloud, software subscriptions, and billing software. Develop a new model of operation, guide the software transformation of industrial enterprises, hold the China (Nanjing) International Software Products and Information Service Trade Expo, and build a domestically leading core software cluster with comprehensive strength.

industrial software. Taking the softwareization of industrial knowledge as the direction, focusing on R&D and design, production control, operation management, operation and maintenance services and other major links, focusing on breakthroughs in real-time operating systems, time series databases, engineering design and simulation software, building information modeling/urban information modeling (BIM) /CIM), industrial control system software, embedded industrial software, equipment operation and maintenance software, large-scale management software, and new industrial software such as industrial Internet APP, industrial intelligence

software, and "5G+Industrial Internet" integrated application software, supporting low-code, wireless The development of code development tools and the integration of industrial software driven by data models will accelerate the development of industrial support software such as test tool software.

basic software. Focus on breakthroughs in basic software such as high-performance operating systems, databases, middleware, tool software, and office software that are highly compatible with independent innovations such as CPUs, complete machines, storage, and peripherals, and actively develop basic operating system application frameworks and application program interfaces. (API), accelerate the deployment of artificial intelligence algorithm evolution and quantum computing basic software in the fields of intelligent voice, computer vision, natural language processing, and intelligent networked vehicles, and actively promote new types of infrastructure such as IoT operating systems, cloud operating systems, and distributed databases. Software development and industrialization.

信息安全软件。面向网络安全事前防护、事中监测、事后处置、调查取证等环节，着力提升隐患排查、态势感知、追踪溯源、应急处置等安全软件技术水平，加强针对安全生产、工业控制、工业互联网、5G、下一代互联网、云计算、大数据、人工智能、物联网等领域网络安全软件研发，积极探索拟态防御、可信计算、零信任、安全智能编排等网络安全新技术，打造全方位覆盖的信息安全软件防护体系。支持符合国家要求的密码产品研发和推广应用。

信息技术应用创新。围绕金融、交通、通信、能源、环保、卫生健康等优势领域，基于基础软硬件自主技术体系适配优化各类行业应用软件，支持研发一批行业通用软件和信息化应用创新解决方案，持续提高信息技术应用创新产品和服务的安全性、可靠性、用户友好性，建设信息技术应用创新先导区，在重点领域形成一批信息技术应用创新标准。

(十六) 新兴数字产业集群。面向数字中国建设，顺应数字技术与实体经济深度融合趋势，以融合赋能、创新应用为重点，大力发展大数据、云计算、人工智能、区块链等新兴数字产业，打造综合实力国内领先的新兴数字产业集群。

大数据云计算。以推动数据要素价值化为重点，适度超前布局智能计算中心、边缘数据中心、行业数据中心等新型数据中心，大力发展行业云、定制云服务，稳妥有序推进制造业企业上云用云。推动企业研发设计、生产管控、经营管理全域数据采集、汇聚、分析，以及政府、企业多元数据融合应用协同创新。加强工业大数据产品服务供给，重点打造以算法为核心，软硬一体、落地性强、易用性好的工业大数据产品。鼓励有条件的地区在工业数据资产价值评估模型、数据资产化目录、数据共享流通模式等方面先行先试，发展数据银行、数据中介等新兴服务业态。

人工智能。以人工智能与产业的深度融合创新为重点，突破机器学习、深度学习、知识图谱构建等理论与算法，重点研发人工智能芯片、机器视觉、语音识别、推理与决策等关键技术，布局开源代码托管平台、算力共享平台等公共技术服务平台，支持南京、苏州等争创国家新一代人工智能创新应用先导区。

区块链。开展加密算法、共识机制、智能合约、分布式存储与计算、用户隐私与数据安全、跨链交互等技术攻关，构建安全可靠的区块链底层平台，部署基于云计算的区块链BASS服务平台，推动区块链技术在智能制造、电子存证、商品溯源、数据流通、政务服务等方面融合应用，加快区块链产业集聚。

#### 四、主要任务

(一) 打造自主可控安全高效的现代化产业链。以更强创新力、更高附加值、更安全可靠为导向，实施卓越产业链打造、重点产业焕新工程，推进新一轮大规模技术改造行动，锻造优势产业长板，补齐产业基础短板，提升产业链供应链抗风险能力，推动产业基础高级化和产业链现代化走在全国前列。

推动产业基础再造。聚焦基础零部件、基础软件、基础材料、先进基础工艺、产业技术基础等领域，制定实施产业基础能力提升行动方案，构建高标准的产业基础体系。支持基础材料、零部件和软件企业与产业链下游应用企业协同攻关突破，实施一批产业基础再造项目，重点提高基础产品的可靠性、稳定性，力争在高端液压件、超精密控制器、驱动器和传感器、光通信器件、设计仿真分析一体化软件、先进合金和纤维材料等领域取得突破。持续引导和鼓励财政资金支持的重大工程项目率先应用产业基础创新成果。大力促进军民基础技术相互转化应用，搭建国防科技成果民用转化平台。建设一批产业技术基础公共服务平台提升研发设计、检验检测、技术成果转化、认证等公共服务能力。完善技术、工艺等基础数据库。围绕重点工艺环节，试点建设一批区域性（共享）专业工艺中心，提升集群产业基础工艺水平。

Enhance the competitiveness of the advantageous industrial chain. Based on the scale advantages and supporting advantages of our province's manufacturing industry, implement the action of strengthening industrial chains in depth, establish and improve the linkage system of



industrial chains, implement precise policies by industry, support key industrial chains, strengthen chains and complement chains, strengthen resources, technology, and equipment support and guarantee, and consolidate Improve the overall competitiveness of industrial chains such as UHV equipment, biomedicine, crystalline silicon photovoltaics, wind power equipment, and high-tech ships, strengthen the advantageous links of industrial chains such as integrated circuits, rail transit, 5G, and new medical equipment, and deploy a number of supporting industries to upgrade Independent intellectual property rights, create a batch of complete machines or terminal products that conform to the trend of future industrial transformation, accelerate the upgrading of key industries such as steel, petrochemicals, light industry and building materials, and promote the upgrading of advantageous industrial chains to the middle and high end of the value chain. By 2025, more than 10 excellent industrial chains with world-class comprehensive strength will be formed.

专栏2 卓越产业链打造工程
实施挂钩联系制度。省领导挂钩联系优势产业链，组建产业强链工作专班，每条产业链确定一位首席专家、培育一个支撑机构、明确一批智库单位、建设一批园区载体、打造一个对接平台、梳理一批企业和项目、形成一个专属政策包、建立一张技术长板短板动态表。保持制度的稳定性、连续性、实效性，高位协调解决产业链发展中的重大问题。
组织卓越产业链竞赛。以 16 个集群重点细分领域为基本范畴，以各县（市、区）、省级以上经济开发区、高新技术产业开发区、新型工业化产业示范基地为竞赛载体，以集聚性、根植性、先进性和协同创新力、智造发展力、品牌影响力为评价尺度，上下联动、竞争择优一批区域性特色产业链，打造若干支撑性大、附加值高、竞争力强的卓越产业链。
培育支撑促进机构。建立基础能力、卓越能力建设清单，明确观察员、服务员、组织员、领航员四个方向，以转型、提能、代言的路径，鼓励支持行业协会、产业联盟、事业单位和市场化主体提升资源整合能力、专业服务能力，打造一批有国际影响力的集群促进机构、产业链支撑机构。

Cultivate and strengthen emerging industrial chains. Focus on new-generation information technology, biotechnology, new energy, new materials, new energy vehicles, green environmental protection, aerospace, marine equipment and other fields, strengthen basic research support, and promote Internet, big data, artificial intelligence, Internet of Things and other technologies Empowerment, accelerate the breakthrough, iteration and application of key core technologies, encourage mergers and reorganizations, prevent low-level redundant construction, cultivate and expand new kinetic energy for industrial development, and strive to create new pillar industries. In cutting-edge technology fields such as genetic technology, aerospace and ocean development, quantum technology, hydrogen energy and energy storage, and brain-inspired intelligence, implement future industry cultivation plans, support qualified regions to enrich and expand application scenarios, improve ecology, and build future industries test area.

Promote the deep integration of manufacturing and service. With the direction of expanding the manufacturing value chain and extending to high value-added links, vigorously promote new service-oriented manufacturing formats and new models such as customized services, supply chain management, shared manufacturing, full life cycle management, and total integration and general contracting. Promote the professionalization and high-end extension of the manufacturing service industry, accelerate the development of product research and development, industrial design, inspection and testing, intellectual property rights, human resources, brand operation and other services, and improve the development level of modern logistics, procurement and distribution, production control, after-sales service, etc. , Introduce and cultivate a group of high-level manufacturing service supply entities. By 2025, cultivate 200 industrial design centers above the provincial level and 300 service-oriented manufacturing demonstration enterprises (projects, platforms).

专栏3 重点产业焕新工程
钢铁。巩固钢铁去产能成果，鼓励重点钢铁企业兼并重组，提升行业集中度，推动钢铁产品结构调整，提高优特钢产品比例，推进废钢铁资源循环利用，加快钢铁行业碳达峰，钢

铁企业基本完成超低排放改造。

石化。推动沿江地区战略性转型、沿海地区战略性布局、分散向园区集聚，重点发展石化深加工、化工新材料、精细化工、专用化学品等产业和项目，壮大生物化工产业，开发低碳、生态友好型化工新产品。

轻工。重点发展智能家电、可穿戴智能健康产品、品质家具、时尚电动工具、时尚眼镜等优质轻工产品，培育自主高端品牌，推广个性化定制和智能制造技术和模式。

建材。巩固水泥、平板玻璃等行业去产能成果，依法依规淘汰落后产能，开展新型墙体、水泥材料等绿色建材应用示范工程，大力发展装配式建筑，突破特种玻璃、生物质建材、工业陶瓷等技术和产品。

(2) Accelerate the construction of an industrial innovation system with enterprises as the main body. Strengthen the main position of enterprise innovation, implement the enterprise independent innovation and upgrading project, formulate and implement the plan to enhance the enterprise innovation ability, and make every effort to build an industrial science and technology innovation center with global influence.

Improve the innovation capability of key enterprises. Implement the high-quality improvement plan for enterprise R&D institutions, support enterprise R&D institutions to increase R&D investment, innovate management mechanisms, and enhance innovation capabilities, build a number of new R&D institutions with enterprises as the main body, support key enterprises to build overseas R&D bases, and establish a global R&D network . By improving policies and measures such as standards and quality, the innovation drive of enterprises will be stimulated. Implement inclusive preferential tax policies that support enterprise innovation, explore ways to provide post-financial subsidy support according to the growth quota for enterprises with sustained and steady growth in basic research investment, and establish a research and development reserve system for independent accounting, error tolerance, and error correction in leading manufacturing enterprises. By 2025, 500 enterprise R&D institutions such as enterprise technology centers above the provincial level and engineering technology research centers will be added every year.

Accelerate breakthroughs in key core technologies. Focus on the areas where the country has needs and Jiangsu has the foundation, implement key core technology (equipment) research projects, improve the support mechanism for unveiling the list, organize high-end equipment, key materials, core components, core software, digital technology integration and other fields by field. , and strive to make breakthroughs in several fields and make up for a number of technical shortcomings. Use government procurement policies to support innovative product applications and service upgrades, and improve insurance compensation and incentive policies for the first (set) of major technical equipment, the first version of software, and the first batch of materials. By 2025, about 50 major core technology research projects will be organized and implemented each year.

Strengthen the supply of industrial common technologies. Give full play to the leading role of innovation consortiums in integrating innovation resources and promoting common technological breakthroughs, support key enterprises in leading the construction of innovation platforms such as industrial innovation centers, manufacturing innovation centers, and technology innovation centers, and undertake major national scientific and technological research projects. Give full play to the role of the Provincial Industrial Technology Research Institute in serving regional key common technological innovations, support qualified regions to build regional industrial technology research and development institutions around provincial key clusters, and form a group of high-level common technologies that are market-oriented, diversified, and flexible in mechanism Innovation platform. Encourage qualified enterprises to jointly transform scientific research institutes to establish industry-based research institutes to provide public welfare and common technical services. By 2025, build more than 20 innovation platforms such as manufacturing innovation centers above the provincial level.

促进产学研用深度融合。进一步激发我省科教资源创新活力，支持高校、科研机构创建国家重点实验室，紧密对接地区主导产业创新需求，建设一批创新成果转化中心，推动国家科研平台、科技报告、科研数据进一步向企业开放。加快建设专业化、市场化技术转移机构和技术经理人队伍。到2025年，建设制造业创新成果产业化公共服务平台、工业和信息化部重点实验室10家以上。

专栏4 企业自主创新升级工程
企业创新能力提升。实施企业研发机构高质量提升计划，深化与大院大所的战略合作，以企业为主体引进或共建一批新型研发机构，支持行业领军企业建设重点实验室、企业研究院等高水平研发机构。
协同创新体系建设。以优势产业链为重点，在特种机器人、工业生产线智能装备、增材制造（激光技术及应用）装备、装备关键件、先进储能系统、高性能膜材料、高温合金、高性能碳纤维及复合材料、微纳制造、数字化设计与制造、5G 中高频器件、智能网联汽车、节能与新能源汽车动力总成、水污染防治、智能电网装备、海工装备和高技术船舶智能化动力推进系统等领域，支持建设产业创新中心、制造业创新中心、技术创新中心等创新联合体，承担行业共性技术攻关任务，引导创新平台加大研发投入、增强创新能力、提升服务质量，打造若干立足江苏、辐射长三角乃至具有全国影响力的产业创新平台。
创新成果推广应用。定期发布省重点推广应用的新技术新产品目录，在交通、水利、环保、市政等政府重大工程项目招标中，明确自主新技术新产品应用比例，政府采购每年支持100 项以上自主创新产品应用。

（三）开创全面数字化转型的智能制造新图景。坚持系统推进产业数字化和数字产业化，以智能制造为主攻方向，深入实施智能制造工程，大力发展数字经济，制定智能制造引领制造业高质量发展实施方案，加快制造模式和企业形态变革，打造制造业全面数字化转型江苏样板。

分类推进数字化改造升级。推动数字技术全链条、全要素赋能制造业发展，坚持制造企业数字化普及、网络化推广、智能化示范并行推进。支持骨干企业推动工艺创新、装备升级和业务流程再造，建设数字化全连接的智能示范车间、制造全过程智能化升级的智能制造示范工厂。落实工业和信息化部中小企业数字化赋能专项行动，研发推广面向中小企业的低成本、模块化的先进数字化解决方案，推动中小企业数字化普及。引导企业积极开展两化融合管理体系贯标，完善数字化转型战略架构，加快建立数字化转型闭环管理制度。到2025年，全省规模以上制造业企业基本普及数字化、重点行业骨干企业基本实现智能转型。

夯实智能制造基础。突破高性能传感器、可编程逻辑控制器等基础零部件和装置，加快研制一批技术工艺水平先进、信息化程度高的新型智能制造装备，推动各类通用、专用制造装备加速迭代升级。大力开发面向产品全生命周期和制造全过程各环节的核心软件，推进工业软件云化部署。引导行业龙头企业、装备服务商、互联网平台企业等跨界融合，培育一批熟悉工业机理、专业化水平高的智能制造系统解决方案服务商。支持骨干企业牵头或参与国家智能制造基础共性和关键技术标准制定，提高行业标准试验验证水平和能力。办好世界智能制造大会。

推动区域数字化转型。以数字化产品、智能化生产和敏捷化服务的系统集成融合为方向，引导“链主”企业持续优化研发设计、生产制造、经营管理、市场服务等业务流程，建设信息可信交互、生产深度协同的智慧供应链，带动上下游企业同步实现智能化升级。结合重点行业特点，培育推广网络协同制造、大规模个性化定制、远程运维服务等新业态新模式。全面推进智能制造进集群进园区，支持有条件的地区建设智能制造先导区，打造若干区域数字化转型促进中心，推动重点产业集群和园区数字化转型。

加强数字产业支撑。培育壮大云计算、大数据、区块链、人工智能等新兴数字产业，支持建设数字开源社区。推进工业互联网创新发展行动，重点打造一批高水平的工业互联网平台，加快工业设备和业务系统上云上平台，支持企业建立全流程的数据归集体系，深入挖掘数据价值。加强5G、千兆光纤宽带、数据中心、标识解析等新型信息基础设施规模部署和创新应用，鼓励有条件的企业建设完善企业内网，创建国家“5G+工业互联网”融合应用先导区，提升工业信息安全保障能力。到2025年，建成国家工业互联网平台10个、工业互联网标识解析二级节点40个。

专栏5 智能制造工程
<p>装备软件自主供给。重点突破各类产品优化设计与全流程仿真、基于机理和数据驱动的混合建模等基础技术；增材制造、超精密加工、近净成形、分子级物性表征等先进工艺技术；工业现场多维智能感知、基于人机协作的生产过程优化、装备与生产过程数字孪生、质量在线精密检测、生产过程精益管控、装备故障诊断与预测性维护、复杂环境动态生产调度、生产全流程智能决策、供应链协同优化等共性技术；5G、人工智能、大数据等新技术在典型行业质量检测、过程控制、工艺优化、计划调度、设备运维、管理决策等方面的适用性技术；基于信息模型和标准接口的各类可复用数据集成和交互运用技术。大力开发各类基础零部件和装置、通用与专用智能制造装备以及融合数字孪生、大数据、人工智能、VR/AR、5G、北斗等新技术的智能工控系统、智能工作母机、协作机器人等新型智能制造装备。合力发展各类研发设计、生产制造、经营管理、控制执行、行业专用软件以及工业 APP、云化软件、云原生软件等新型软件。到 2025 年，认定首台（套）重大装备 200 个、首版次软件 250 个。</p> <p>重点行业示范应用。面向装备制造领域，重点开发面向特定场景的智能成套生产线、模块化生产单元，发展精益生产、柔性制造，满足产品可靠性提升和高端化发展需求。面向电子信息领域，重点建立复杂电磁环境下的企业通信网络和主动安全防护系统，实现企业内数据可靠传输；推进电子产品专用智能制造装备与自动化装配线的集成应用；开发智能检测设备与产品一体化测试平台；建设智能物流配送系统，优化生产经营决策系统，满足提高生产效率和产品良率、缩短研制周期等关键需求。面向原材料领域，重点实施大集团统一管理下的多基地协同制造；建设基于人工智能技术的决策支持系统、面向民爆、矿山等少人无人作业环境的安全一体化监控系统，推进大型制造设备健康监测和远程运维，满足安全生产、降耗减碳、提质降本等各类需求。面向消费品领域，重点推广面向工序的专用制造装备和专用机器人，支持供应链协同和用户交互平台建设，发展大规模个性化定制和产品质量全过程追溯，切实提高产品质量和安全性，满足多样化、高品质需求。</p>

（四）建设低碳清洁可持续的绿色安全制造新体系。落实碳达峰碳中和目标要求，大力实施绿色制造工程，推动重点行业节能、降碳、清洁生产水平大幅提升，基本形成全省制造业绿色安全发展方式。

推动制造业节能减排。组织实施重点用能单位节能，大力推广节能低碳技术装备和产品，加快提升锅炉、变压器、电机、泵、风机、压缩机等重点用能设备系统能效以及5G基站、数据中心等新基建领域能效。引导企业开展清洁生产工艺技术升级改造，加快推进中小企业清洁生产水平提升，开展污染源源头控制与过程削减协同工艺技术的研发和应用示范，降低制造业污染排放强度。构建覆盖设计、产品、工厂、园区、供应链的绿色制造体系。到2025年，培育绿色园区15个、绿色工厂1000家。

Accelerate carbon reduction in key industries. Focusing on key industries such as iron and steel, petrochemicals, building materials, etc., research and formulate carbon peak implementation plans, use raw material substitution, process reduction, and end-of-life treatment to reduce greenhouse gas emissions in industrial production processes, and develop carbon capture, utilization, and storage technologies R&D and demonstration applications. Optimize the energy consumption structure, strictly control the intensity of energy consumption, rationally control the total energy consumption with a focus on fossil energy, reduce coal consumption, and increase the proportion of renewable energy consumption such as photovoltaics and wind power. Carry out the construction of industrial green and low-carbon micro-grids, encourage factories and parks to develop plant photovoltaics, distributed wind power, multi-energy storage, high-efficiency heat pumps, waste heat and pressure utilization, smart energy management and control systems, etc., and promote the efficient and complementary utilization of multiple energies.

Significantly improve resource utilization efficiency. In accordance with the requirements of reduction, recycling, and reuse, strengthen the application and promotion of recyclable and degradable materials and products, and reduce the generation of industrial solid waste. Implement the water efficiency leading action, increase the use of unconventional water, and promote the recycling and graded reuse of industrial wastewater. Research and formulate policies and measures for the comprehensive utilization of emerging solid waste such as decommissioned photovoltaics, wind power generation devices, and marine engineering equipment. Vigorously promote the comprehensive utilization of bulk industrial solid waste such as fly ash, smelting slag, and chemical slag, strengthen the efficient recycling of resources such as scrap iron and steel, scrap non-ferrous metal, and waste power batteries, and standardize the development of remanufacturing industries.

Improve the level of intrinsic safety. Focus on key industries such as chemical industry, metallurgy, and civil explosives, formulate safety access standards for processes, technologies, equipment, and materials, strictly enforce safety access reviews of projects in high-risk industries and safety qualifications of employees, and speed up the intelligent defense of major industrial facilities and equipment. The application of control technology, promote the standardization of enterprise safety production, promote the intelligent, circular and green transformation of chemical industry parks, build a "one network" information management system for hidden danger management covering provinces, cities, counties and enterprises, and improve key industries. Intrinsic safety level. Guide enterprises in various industries to widely adopt advanced technologies, processes and equipment through technological transformation to improve production safety.

专栏6 绿色制造工程
重点企业节能降耗。开展重点用能单位节能低碳行动，依法依规严格落实重点用能企业节能管理制度，严格执行能耗限额标准，实施用能预算管理和能耗“双控”目标管理，加强节能监察，开展能效领跑行动，重点耗能行业单位产品能耗水平达到国际先进水平。
重点行业碳达峰。遏制“两高”行业新增产能，严格实施有关行业产能置换政策，加快研发推广低碳工艺技术，着力优化制造业能源消费结构，大力开发应用低碳能源和非化石能源，探索创建“近零碳排放”企业和园区。
企业清洁生产。钢铁：重点深化热装热送、连铸连轧技术应用，推广无头轧制、高比例球团冶炼、全氧高炉冶炼等技术，开展氢能冶金等低碳冶金技术研发，加强冶金尘泥、钢渣等固废资源化利用。石化化工：重点推广高效精馏系统、高效先进煤氧化、氧阴极离子膜电解等技术，推行清洁原料替代，开展废盐焚烧精制、废硫酸高温裂解、煤气化协同处置装备清洁化等相关技术推广应用。建材：重点推广辊压机终粉磨、新一代
高效篦冷机、节能玻璃宽板在线高均匀镀膜等，提高清洁能源使用比重，推进水泥、平板玻璃行业超低排放改造。纺织轻工：推广喷水织造废水处理回用技术、分散染料无水连续染色、印染前处理环保助剂替代技术、再生纤维素纤维绿色制浆等技术。

(5) Cultivate the world-renowned "Made in Jiangsu" famous brand. Guide enterprises to base themselves on innovation and pursue excellence, firmly establish brand awareness, implement the project of strengthening enterprises and strengthening enterprises, formulate and introduce several policies and measures to support leading enterprises to enhance their comprehensive competitiveness, and promote the guidance of small and medium-sized Competitiveness and influence, forming a highland for specialized, special and new "little giant" enterprises.

Cultivate leading enterprise groups. Focus on giving full play to the key role of entrepreneurs in leading the industrial development in the new era, aim at the world-class, promote the 100-enterprise pilot plan, carry out development strategy consultation and diagnosis for leading enterprise organizations, one enterprise with one goal, one enterprise with one strategy, through product innovation model Changes mergers and reorganizations etc guide leading enterprises to improve their operating capabilities and management levels, establish a modern enterprise system, and cultivate a group of leading enterprises with industrial chain integration and ecological leadership. Benchmark the "hidden champion", promote the upgrading plan of thousands of enterprises, guide enterprises to stick to professionalism and craftsmanship, continue to focus on technology and process optimization, product quality and performance upgrades, forge "unique skills", and form a group of key links in the industrial chain A single champion of mastery and a special new "little giant" enterprise. Guide all kinds of enterprises to attach importance to management innovation and corporate culture construction. Give full play to the leading and leading role of large enterprises, and promote the coordinated development of the upstream and downstream of the industrial chain, large and medium-sized enterprises and small and medium-sized enterprises. By 2025, more than 1,700 specialized and special new "little giant" enterprises above the provincial level will be added.

Improve the quality level of Jiangsu manufacturing. Promote the quality improvement actions of the manufacturing industry, implement the quality management of the whole industry chain, and guide enterprises to promote the upgrading of the quality management system. Organize the three major projects of quality comparison, quality research, and quality pass rate improvement, fully

implement the chief quality officer system, make full use of technologies such as the Internet of Things, big data, and cloud computing to improve quality control and online real-time monitoring, and strengthen product quality Supervision, vigorously promote green organic certification and high-end quality certification. Build a number of national and provincial quality inspection centers, industrial measurement and testing centers, and technical standard innovation bases. Formulate and implement a standardization work plan for the manufacturing industry, support the development and upgrading of enterprise standards, encourage the formulation and implementation of enterprise standards and group standards that are higher than national standards, industry standards, and local standards, improve the industry chain standard system, and cultivate a number of standard pilot products. Implement intellectual property rights to strengthen enterprises and cultivate a number of high-value patent demonstration centers. Support manufacturing enterprises to strive for government quality awards and internationally renowned quality awards. By 2025, continue to promote the quality improvement of 200 key segments, 300 key products, and 5,000 enterprises.

Build a high-quality brand image. Implement the brand development strategy, encourage and support enterprises to attach importance to quality-based brand building, give play to the leading role of industrial design, the supporting role of quality standards, and the basic role of excellent culture, and temper the brand in expanding opening up and actively participating in international competition. Set up brand cultivation and guidance stations in key advanced manufacturing clusters to create more regional brands of "Jiangsu Boutique" and "Sudi Youpin" to enhance the influence and reputation of Jiangsu's manufacturing regional brands. Strengthen the innovation of classic brands, promote the integration of light industry, textile and other brands with cultural creativity and fashion design, enhance cultural connotation and added value, and create high-quality domestic products. Focus on health, fashion, creativity and other fields that create new supply, and cultivate a group of cutting-edge brands that lead demand. By 2025, 500 "Jiangsu high-quality goods" in the manufacturing industry will be cultivated.

专栏7  壮企强企工程
做强领军企业。选择 100 家左右有技术、有前景、有市场的龙头企业特别是终端产品企业，支持创建省级以上实验室、创新中心等重大创新载体，承担关键核心攻关任务，
通过兼并重组引进关键技术、完善产品矩阵、提升品牌形象，在参与国际竞争中做强做优。
培育专精特新企业。支持中小企业专注细分领域的产品，持续技术迭代、工艺升级、数字化转型，成为专精特新“小巨人”企业，并在此基础上形成一批单项冠军，支持软件、大数据和云计算、区块链、人工智能等新兴数字领域企业专精特新发展。
知识产权强企。实施知识产权强企工程，选择一批具有较强创新能力、品牌优势和发展潜质的骨干企业，引导建立高水平的知识产权管理组织体系、高效率的知识产权信息利用体系和明晰的知识产权资产管理体系。支持创新型企业瞄准国际先进水平，研究制定知识产权战略规划，将知识产权战略纳入企业经营发展总体战略，加强国内外专利申请与布局、专利与标准结合、企业品牌打造，综合运用专利、商标、版权等知识产权提升企业核心竞争力。
标准品牌强企。实施标准领航工程，支持重点产业链上下游企业、科研院所、检测机构和产品使用者等多方共同开展标准研制，建立覆盖全产业链和产品全生命周期的标准体系。完善品牌工作机制、评价标准和推广体系，以“国内先进国际一流”为总体要求，组织开展“江苏精品”认证，积极组织参与国家品牌推广活动，宣传推介江苏品牌。

(6) Forming a new pattern of regional industries with characteristics that highlight integration and coordination. Strengthen the development of the province's manufacturing industry "a game of chess", give play to the basic advantages according to local conditions, highlight the characteristics of the industry, in-depth collaboration to build clusters and industrial chains, support the coordinated development of the three major regions along the river, the coast and northern Jiangsu, and enhance the overall competitiveness of the province's industrial system , to contribute to the Jiangsu program to promote the coordinated development of regional industries.

Improve the industrial belt along the river. Deepen the implementation of the integrated development deployment of the provincial party committee and the provincial government Ningzhenyang, Suxichang, etc., guide the areas along the river to gather high-end elements, improve the ecology of emerging industries, promote the renewal of advantageous industries, and give full play to the leadership of the Southern Jiangsu National Independent Innovation Demonstration Zone in industrial innovation support the areas of Suzhou, Wuxi, Changzhou, Ningzhen, Yangzhou, etc. to strengthen the co-construction and sharing of innovation resources and innovation platforms, and jointly cultivate the Internet of Things, high-end new materials, biomedicine, new medical devices, integrated circuits, information communication and display, new energy and intelligent network Clusters and key industrial chains such as automobiles, core software, emerging digital industries, new power equipment, high-end equipment, high-tech ships, energy conservation and environmental protection, support the joint construction of cross-river integrated industrial parks, and focus on building an important industrial innovation leading area in the Yangtze River Delta, The Yangtze River Advanced Manufacturing Industrial Belt with global influence.

Create coastal growth poles. Implement the provincial party committee and the provincial government's seaward development strategy, formulate and implement a three-year action plan for industrial development in coastal areas, adhere to a high starting point layout, high-level planning, and high-quality development, and further enhance the ability to absorb factor resources in coastal cities such as Nantong, Yancheng, and Lianyungang. Improve the construction of a number of industrial carriers such as Tongzhou Bay, Xuwei, and Binhai Port, and focus on cultivating new electric power and new energy equipment, new energy vehicles, marine engineering equipment and high-tech ships, high-end new materials, high-end textiles, biomedicine, high-end equipment, Advanced manufacturing clusters such as energy conservation and environmental protection, actively undertake the transfer of heavy chemical industries along the river, promote the green development of chemical, steel and other port-side industries, and vigorously develop new marine engineering equipment, marine pharmaceuticals and biological products, seawater desalination equipment and other marine characteristic industries, Strengthen the linkage with Shanghai port resources, expand modern shipping, modern logistics and other productive service industries, and create the most dynamic new growth pole of advanced manufacturing in the northern wing of the Yangtze River Delta.

Accelerate the rise of industries in northern Jiangsu. Implement the development strategy of the Huaihe Ecological Economic Belt, fully stimulate the industrial foundation and vitality of the northern Jiangsu region, support the strength of the industrial chain, strengthen the chain, supplement the chain and extend the chain, enhance the leading role of leading enterprises in the region, and focus on cultivating new electric power and new energy equipment, construction machinery And advanced manufacturing clusters such as agricultural machinery and equipment, high-end textiles, biomedicine, high-end equipment, energy conservation and environmental protection, green food, etc., promote the accelerated transformation and upgrading of key industries such as petrochemicals, light industry, and building materials, and promote the industrial revitalization of northern Jiangsu. Improve the north-south cooperation and co-construction mechanism, build a north-south co-construction industrial cooperation docking platform, hold regular provincial industrial transfer docking conferences, support the northern Jiangsu region to improve its undertaking capacity, and explore cross-regional industrial cooperation relying on the Susu Industrial Park and the Ninghuai Special Cooperation Zone new path.

Improve the energy level of industrial carriers. Take development zones and industrial agglomerations as the core carriers for cultivating clusters and industrial chains, guide various development zones above the provincial level to build characteristic industrial clusters and industrial chains, improve industrial innovation capabilities and resource intensive utilization efficiency, and build intelligent manufacturing. The promotion of smart parks explores models such as regional cooperation, brand linkage, and park alliances to drive the development of low-efficiency parks in local or cross-regional areas. Support the innovation of the management system

and mechanism of the development zone, and encourage social capital to participate in the construction and operation of the park. Support and guide all regions to accelerate the transformation and upgrading of industrial concentration areas below the county level, and build a number of characteristic industrial bases with high quality through high-standard planning and construction and efficient space utilization.

(7) Create a new advantage in international competition in which internal and external cycles promote each other. Adhere to the simultaneous development of "bringing in" and "going out", continue to promote the all-round high-level internal and external opening of the manufacturing industry, expand new space in the international and domestic markets, and build a two-way open hub with global cohesion.

Promote opening up. Actively integrate into regional coordinated development strategies such as the national Yangtze River Economic Belt and the integration of the Yangtze River Delta, implement the "Yangtze River Delta Manufacturing Coordinated Development Plan", formulate a concerted action plan for the Yangtze River Delta national advanced manufacturing clusters, and benchmark the world-class level. , software and information services, Internet of Things and other fields to jointly cultivate world-class advanced manufacturing clusters, strengthen the overall layout of major projects, coordinate the promotion of the Shanghai-Nanjing Science and Technology Innovation Corridor and the development along the Shanghai-Nanjing Industrial Innovation Belt, and accelerate the construction of the Yangtze River Delta Industrial Internet Integration Develop demonstration zones, deepen the coordinated development of intelligent networked vehicles, establish the Yangtze River Delta Industrial Chain Development Alliance, jointly build a number of inter-provincial and municipal industrial cooperation parks, improve the coordination mechanism for industrial undertaking and transfer, and enhance the level of regional cooperation in the industrial chain. Strengthen cooperation with the middle and upper reaches of the Yangtze River Economic Belt, guide the transfer of some links in the industrial chain to the central and western regions, and build a number of industrial transfer bases.

Deepen international industrial cooperation. Focusing on key advanced manufacturing clusters such as high-end new materials, biomedicine, new medical devices, and high-end equipment, provinces and cities will jointly guide foreign-funded enterprises to actively integrate into and participate in the construction of key industrial chains, and promote the sharing of manufacturing knowledge and cultural overflow between domestic and foreign capital. Support enterprises in the province to consolidate their traditional market shares in developed economies, develop diversified markets such as the "Belt and Road Initiative" , build high-level overseas economic and trade cooperation zones, and support manufacturing enterprises to export superior production capacity, capital brands, technical standards and management experience. Guide industry organizations and overseas Chinese-funded enterprise chambers of commerce (associations) to form industrial alliances, build a comprehensive service platform for Jiangsu's "Going Global" and improve the "Going Global" service guarantee system.

Strengthen the platform for opening up to the outside world. Enlarge the advantages of policy integration and opening up in the pilot free trade zone, enhance the global collaborative innovation and resource allocation capabilities of the industry, and take the lead in investment and trade, industrial cooperation, modern service industry, digital economy and other fields to lead and drive industrial innovation and development. Give full play to the leading role of China-Korea, China-Germany, China-Israel, and China-Japan cooperation demonstration parks, strengthen close cooperation with the industrial chain supply chain in East Asia and Southeast Asia, cultivate international characteristic industrial cooperation parks, and hold the Taihu Lake Forum for East Asian Entrepreneurs. Further promote the construction of the Kunshan Pilot Zone for Deepening Cross-Strait Industrial Cooperation and the Huai'an Demonstration Zone for Taiwanese Capital Gathering.

#### 5. Safeguard measures

(1) Strengthen organizational leadership. Adhere to the party's leadership in building a strong manufacturing province. The leading group for building a strong manufacturing province will



coordinate and promote the high-quality development of the province's manufacturing industry. The leading group office will work with relevant departments to formulate annual work plans and task divisions. Focusing on counties (cities, districts), organize and carry out the cultivation of demonstration zones for high-quality manufacturing development. Establish a regular evaluation system for planning tasks, improve annual evaluations and mid-term evaluations, and adjust plans in strict accordance with prescribed procedures. All localities should scientifically formulate relevant policy documents to promote the high-quality development of the manufacturing industry during the "14th Five-Year Plan" period.

(2) Deepen reform and innovation. Further deepen the reform of streamlining administration and delegating power, combining decentralization and management, and optimizing services, promoting the optimization and upgrading of the business environment, benchmarking against the world's first-class, and creating an upgraded version of our province's business environment. Implement the list management of enterprise-related business licensing items, implement the reform of "one license for one industry", innovate the approval method, and widely implement the notification and commitment system. Establish and improve a facilitation service system covering the entire life cycle of enterprise registration, business development, capital operation, liquidation and cancellation. Promote the modernization of supervision capabilities in environmental protection, emergency response, and quality inspection, and implement inclusive and prudent supervision of new industries and new formats. Support all localities to build a one-stop online platform for enterprise services to improve the efficiency of enterprise-related services. Further relax the market access of private enterprises, remove various barriers in bidding and other fields, reduce the cost of the real economy, and improve the long-term mechanism for preventing and resolving the default of accounts owed to small and medium-sized enterprises. Build a pro-Qing political and business relationship, and establish a normalized, standardized and institutionalized communication channel between government and enterprises.

(3) Guarantee development space. Strengthen the docking with land and space planning, guide all regions to delineate industrial land areas and red lines, strengthen the control of industrial land use, and ensure the development space of manufacturing industry. Implement industrial land access and full life cycle management, guide various market entities to participate in the revitalization of stock land, promote low-efficiency land "vacating cages and replacing birds", and support local governments to introduce differentiated policies and measures for the intensive use of resources by industrial enterprises. Adjust and improve the industrial land use policy, explore the compatibility and compound utilization of land use, and promote the legal and reasonable conversion of different types of industries. Under the premise of conforming to the national land and space planning, manufacturing enterprises can use their own industrial land to develop productive services, and they can continue to apply the transition period policy within 5 years according to the original use of the land and the type of rights.

(4) Expand the talent team. Focusing on the province's advanced manufacturing clusters and key industrial chains, compile talent maps and demand catalogs, increase the proportion of talents in manufacturing companies in the introduction of overseas talents, "Double Innovation Plan" and "333 Projects", explore the establishment of a manufacturing talent development fund, formulate and implement The three-year action plan for the integration of industry and talents aims to cultivate a high-level engineer talent team that is urgently needed for industrial development, and pay more attention to the cultivation of local talents. Give full play to the important role of entrepreneurs in technological innovation, cultivate outstanding entrepreneurs with innovative spirit and international vision, build Zhang Jian Entrepreneur College, set up "Jiangsu Entrepreneur Day", and implement the growth promotion plan for new generation entrepreneurs. Promote the precise connection between the setting of higher education and vocational education disciplines and key industries, and encourage enterprises to hold high-quality vocational and technical education.

(5) Strengthen precise support. Promote the transformation of industrial policies from differentiated and selective to inclusive and functional, support localities in exploring and innovating the use of

special funds, guide enterprises to make good use of various policies that benefit enterprises, and improve the sense of policy acquisition. Encourage financial institutions to increase the allocation of medium and long-term loans to the manufacturing industry, expand the scale of financial risk compensation funds, reduce the financing costs of manufacturing enterprises through interest discounts and risk compensation, and keep the proportion of manufacturing loans basically stable. Support the establishment of sub-funds of the National Industrial Fund in our province, increase the support of provincial government investment funds for the manufacturing industry, set up special funds for key industrial chains, and encourage the development of angel investment and venture capital.

(6) Carry forward manufacturing culture. Excavate the connotation of manufacturing culture, carry forward the spirit of entrepreneurship, innovation, model workers, craftsmen, and integrity, rely on the region's industrial heritage, old factories, industrial museums, modern factories and other manufacturing cultural resources to create a group of immersive manufacturing culture Experience products and programs. Promote manufacturing culture into the campus, and encourage craftsmen, engineers, and entrepreneurs from big countries to enter the classroom. Encourage the creation of cultural film and television works on the theme of manufacturing, set up manufacturing channels and columns, tell the story of Jiangsu manufacturing through various forms, publicize the typical characters of manufacturing, promote the inheritance and dissemination of Jiangsu manufacturing culture, and enhance the soft power of Jiangsu manufacturing culture. Regularly hold the province's high-quality manufacturing industry development conference to commend outstanding enterprises and outstanding entrepreneurs, especially the new generation of entrepreneurs, who have made outstanding contributions to the high-quality development of the manufacturing industry.



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