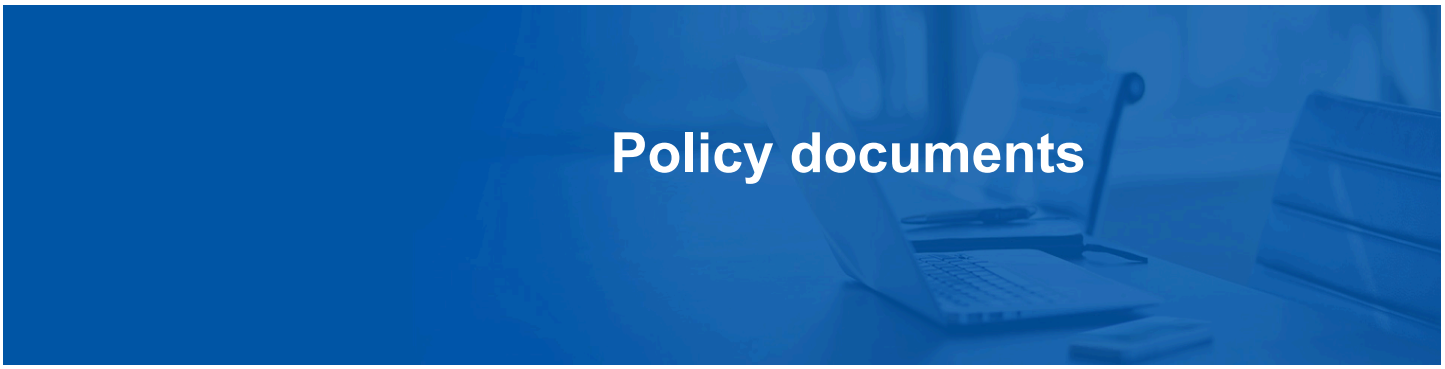
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[Interpretation] Interpretation of the "14th Five-Year Plan for the Development of the Robot Industry"

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Interpretation of the ″14th Five-Year Plan″ Robot Industry Development Plan

Recently, the Ministry of Industry and Information Technology, the National Development and Reform Commission, the Ministry of Science and Technology, the Ministry of Public Security, the Ministry of Civil Affairs, the Ministry of Housing and Urban-Rural Development, the Ministry of Agriculture and Rural Affairs, the National Health Commission, the Ministry of Emergency Management, the People's Bank of China, and the National Market Supervision Fifteen departments including the General Administration of China, China Banking and Insurance Regulatory Commission, China Securities Regulatory Commission, State Administration of Science, Technology and Industry for National Defense, and State Mine Safety Supervision Bureau officially issued the "14th Five-Year Plan for Robot Industry Development". (hereinafter referred to as the "Plan"), in order to facilitate the understanding of the content of the "Plan" and the implementation of the plan, the relevant issues are interpreted as follows.

1. Background of the preparation of the “Plan”

Robots are known as "the crown jewel of the manufacturing industry", and their research and development, manufacturing, and application are important indicators of a country's technological innovation and high-end manufacturing levels. The Party Central Committee and the State Council attach great importance to the development of the robot industry, include robots in key areas of national scientific and technological innovation, and vigorously promote robot R&D innovation and industrial application. During the "Thirteenth Five-Year Plan" period, with the joint efforts of many parties, my country's robot industry has developed vigorously, the industrial scale has grown rapidly, the technological level has continued to improve, integrated applications have greatly expanded, key enterprises have accelerated their growth, and the advantages of key industrial clusters have gradually emerged. However, compared with foreign advanced levels, there are still problems such as insufficient technology accumulation, weak industrial foundation, and lack of high-end supply.

At present, a new round of scientific and technological revolution and industrial transformation are accelerating. The new generation of information technology, biotechnology, new energy, new materials, etc. are deeply integrated with robot technology. The robot industry has ushered in a window period for upgrading and leapfrog development. The world's major industrialized countries have regarded robots as the frontier and focus of competition in the technology industry and stepped up their planning and layout. Our country has shifted to a stage of high-quality development, building a modern economic system, and building a new picture of a better life, which urgently needs strong support from emerging industries and technologies. As an important carrier of emerging technologies and key equipment of modern industries, robots lead the digital development and intelligent upgrading of industries, constantly nurturing new industries, new models and new business formats. As an important tool for human production and life and a powerful assistant in dealing with the aging of the population, robots continue to promote the improvement of production levels and quality of life, and effectively promote the sustainable development of the economy and society. Facing the new situation and new requirements, in order to promote my country's robot industry to move towards the mid-to-high end and accelerate the realization of high-quality development, the Ministry of Industry and Information Technology, together with the National Development and Reform Commission, the Ministry of Science and Technology and a total of 15 departments, jointly prepared the "Plan" 》.

2. Overall ideas and goals of the Plan

Currently, the robot industry is booming, which is greatly changing human production and lifestyle, and injecting strong momentum into economic and social development. The "14th Five-Year Plan" period is the first five years that our country has embarked on a new journey of comprehensively

building a modern socialist country and marched towards the second centenary goal. The "Plan" is guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, fully implements the spirit of the 19th National Congress of the Communist Party of China and all 19th Plenary Sessions, is based on the new development stage, completely, accurately and comprehensively implements new development concepts, builds a new development pattern, and coordinates Development and security, guided by high-end intelligent development, facing the needs of industrial transformation and consumption upgrades, adhering to "innovation-driven, application-driven, basic improvement, integrated development", focusing on breakthroughs in core technologies, consolidating the industrial foundation, and enhancing effective supply , focusing on expanding market applications, improving the stability and competitiveness of industrial and supply chains, continuing to improve the industrial development ecology, promoting high-quality development of the robotics industry, and providing strong support for building a strong manufacturing country, a healthy China, and creating a better life.

The "Plan" is based on my country's high-quality development needs in various fields and the people's needs for a better life, grasps the development trend of the robot industry, and proposes that "by 2025, my country will become the source of global robot technology innovation, a high-end manufacturing cluster, and a new highland for integrated applications." And put forward specific goals for 2025: a batch of robot core technologies and high-end products have achieved breakthroughs, the comprehensive indicators of the entire machine have reached the international advanced level, and the performance and reliability of key components have reached the level of international similar products; the average annual growth rate of the operating income of the robot industry More than 20%; forming a group of leading enterprises with international competitiveness and a large number of specialized new "little giant" enterprises with strong innovation ability and good growth potential, and building 3-5 industrial clusters with international influence; manufacturing industry Robot density doubled.

The "Plan" proposes that by 2035, the comprehensive strength of my country's robot industry will reach the international leading level, and robots will become an important component of economic development, people's lives, and social governance.

3. Main tasks deployed by the Plan

In order to promote the implementation of the development goals of the "14th Five-Year Plan", the "Plan" has deployed five major tasks, including improving industrial innovation capabilities, consolidating the foundation for industrial development, increasing the supply of high-end products, expanding the depth and breadth of applications, and optimizing the industrial organizational structure.

The first is to improve industrial innovation capabilities. Strengthen core technology research, break through common technologies such as robot system development and operating systems, develop cutting-edge technologies such as bionic perception and cognition, and biomechanical integration, and promote the integration and application of new technologies such as artificial intelligence, 5G, big data, and cloud computing with robotics technology . Establish and improve the innovation system, promote key research and development institutions to strengthen technological research and achievement transformation, encourage key enterprises to collaboratively promote the standardization and modularization of software and hardware systems, and support enterprises to strengthen the construction of technology centers.

The second is to consolidate the foundation for industrial development. Make up for the shortcomings in special materials, core components, processing technology, etc., and develop robot control software, core algorithms, etc. Establish a national robot standardization organization, improve the robot standard system, accelerate the research, formulation and application of urgently needed standards, and actively participate in international standardization work. Encourage enterprises to strengthen testing and verification capabilities, enhance the testing capabilities of robot testing and assessment centers, and promote the construction of China's robot certification system.

The third is to increase the supply of high-end products. Facing the needs of manufacturing, mining, construction, agriculture and other industries, as well as household services, public services, medical and health, elderly care and disability assistance, special environment operations and other fields, we will gather advantageous resources and focus on promoting key products of industrial robots, service robots and special robots. The development and application of robots will expand the series of robot products, improve performance, quality and safety, and promote the development of high-end and intelligent products.

The fourth is to expand the depth and breadth of application. Encourage user units and robot companies, complete machine companies and component companies to jointly carry out technical testing and verification. Promote robotic system integrators to develop solutions in niche areas. Support the establishment of an application promotion platform and organize the docking of production and demand. Promote the development of robot application scenarios and product demonstration and promotion. Accelerate the formulation of robot access standards, product certification or registration in the fields of medical care, elderly care, electric power, mining, construction and other fields, and encourage companies to establish product experience centers. Explore the establishment of new leasing service platforms and develop new business models such as intelligent cloud services.

The fifth is to optimize the industrial organizational structure. Cultivate and strengthen high-quality enterprises, promote the growth of enterprises into leading enterprises with ecological leadership and core competitiveness, and create a group of specialized, new "little giant" enterprises and individual champion enterprises. Promote strong and stable chains, support collaborative innovation in the upper, middle and lower reaches of the industrial chain, accelerate the research and development, verification and iteration of weak products, and promote the diversification of the supply

chain of the robotics industry chain. Create advantageous and characteristic clusters, promote reasonable regional layout, cultivate advantageous clusters with strong innovation capabilities and good industrial environments, and support clusters to focus on subdivided areas to create characteristic cluster brands.

4. Safeguard measures to promote the implementation of the Plan

In order to strengthen implementation, the "Plan" proposes five safeguard measures.

The first is to strengthen overall planning, coordination and advancement. Coordinate the resources and strength of various departments to support industrial innovation and development. Encourage localities to formulate targeted policies and measures to guide the healthy development of industries. Give full play to the role of industry associations and intermediary organizations, strengthen monitoring of industry dynamics and provide timely feedback on problems and suggestions.

The second is to increase fiscal, taxation and financial support. Strengthen support for major national science and technology projects and national key research and development plans for robot R&D and applications. Optimize the pilot work of the insurance compensation mechanism for the first (set) of major technical equipment, give full play to the role of government procurement, and promote the application of innovative robot products. Implement tax policies such as super deductions for R&D expenses. Promote the investment of various industrial funds and support the listing of qualified companies. Encourage pilot cities for industrial-financial cooperation to increase investment in robotics companies and guide financial institutions to innovate service models.

The third is to create a good market environment. Improve industry standard conditions and increase implementation and acceptance. Support the capacity building of third-party testing and certification institutions. Strengthen the protection of intellectual property rights and increase the punishment of intellectual property infringements. Regulate market bidding and procurement and prohibit the establishment of discriminatory clauses. Conduct research on robot ethics, laws and regulations.

The fourth is to improve the talent security system. Support universities and scientific research institutes in cultivating professional technical and comprehensive high-end talents. Promote the construction of new engineering disciplines, encourage schools and enterprises to jointly carry out industry-university collaborative education projects, jointly build modern industrial colleges, implement order-based training, modern apprenticeships and other models to cultivate talents urgently needed for industrial development. Implement vocational skills improvement actions and support the skills improvement and job transfer training of enterprise employees. Support the holding of various robot competitions and increase science popularization efforts among teenagers.

Fifth, deepen international exchanges and cooperation. Carry out international exchanges and cooperation in the fields of technology, standards, testing and certification, intellectual property rights, talent training and other fields. Encourage foreign companies and institutions to set up R&D institutions, education and training centers, etc. in China, and support domestic companies in setting up R&D institutions in developed countries. Make full use of multilateral and bilateral cooperation mechanisms to promote the "going out" of robot products and solutions.

Online consultation

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