

## Translation



*The following PRC government action plan lays out numerous institutional measures to spur the conversion of technological breakthroughs into commercial or practical uses. The action plan creates and expands institutions for organizing, funding, and recruiting talent for this "achievement conversion" work. While the plan's focus is on Chinese innovation, it also includes provisions to increase Chinese acquisition and application of foreign technology.*

### Title

Notice of the General Office of the State Council on the Publication of the Action Plan for Promoting the Transfer and Conversion of Scientific and Technological Achievements  
国务院办公厅关于印发促进科技成果转移转化行动方案的通知

### Author

General Office of the State Council (国务院办公厅). The State Council is China's cabinet and the executive branch of the PRC government.

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*US \$1 ≈ 6.5 Chinese Yuan Renminbi (RMB), as of January 8, 2020.*

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### Translator

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### Editor

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To the people's governments of all provinces, autonomous regions, and province-level municipalities, and all ministries and commissions of the State Council and their respective agencies:

The *Action Plan for Promoting the Transfer and Conversion of Scientific and Technological Achievements* has been passed by the State Council, and is hereby issued to you. Please implement it conscientiously.

General Office of the State Council  
April 21, 2016

(This document is to be released publicly)

## **Action Plan for Promoting the Transfer and Conversion of Scientific and Technological Achievements**

Promoting the transfer and conversion of scientific and technological (S&T) achievements into practical applications (科技成果转移转化) is an important task for implementing the innovation-driven development strategy. It is a critical aspect of strengthening the close connection between S&T and the economy, and it has great significance for promoting

structural reform, especially supply-side structural reform, for supporting economic transformation and upgrading and the structural adjustment of industries, promoting mass entrepreneurship and mass innovation, and creating new engines of economic growth. This Plan has been specially formulated in order to deeply implement the series of major decisions and deployments of the Chinese Communist Party (CCP) Central Committee and the State Council, to put into practice the *Law of the People's Republic of China on Promoting the Conversion of Scientific and Technological Achievements*, accelerate promotion of S&T achievement conversion, and, relying on S&T innovation, to support stable growth, promote reform, adjust the structure, and improve the people's livelihoods.

## **I. Overall Philosophy**

We shall deeply implement the spirit and deployments of the 18th Party Congress and the Third, Fourth and Fifth Plenums of the 18th CCP Central Committee, adhere closely to the requirements of innovation-oriented development, promote mass entrepreneurship and mass innovation, make full use of the decisive role the market in allocating resources, make better use of government's role, perfect the policy environment for the transfer and conversion of S&T achievements into practical applications (科技成果转化), strengthen system deployments for key fields and critical links, strengthen the in-depth integration and optimized deployment of technology, capital, talent, services and other resources for innovation, strengthen central-local government coordination on promoting the transfer and conversion of S&T achievements into practical applications, establish S&T achievement conversion systems that conform to the basic patterns of S&T innovation and the market economy, and promote the capitalization and industrialization of S&T achievements, thereby forming new drivers of sustained and stable economic growth, and contributing to China's entering the ranks of innovation-oriented countries and achieving the goal of establishing a well-off society in an all-round way by 2020.

### (1) Basic principles.

— Market orientation. We shall fully utilize the market's decisive role in allocating S&T innovation resources, strengthen the mainstay status of enterprises in the transfer and conversion of S&T achievements, fully utilize the key role of enterprises in integrating technology, funds and talent, promote industry-university-research institute collaborative innovation, and vigorously develop technology markets. We will refine demand-oriented mechanisms for the transfer and conversion of S&T achievements into practical applications, and expand the market application space for new technologies and new products.

— Government guidance. We shall: Accelerate the transformation of government functions; advance the simplification of administrative procedures and the delegation of authority (简政放权), the integration of delegation and management, and the optimization of services; strengthen government functions in areas such as S&T achievement transfer and conversion-related policy formulation, platform establishment, talent development, and public services; and fully utilize the guiding role of government funding, so as to create a good environment conducive to the transfer and conversion of S&T achievements into practical applications.

— Vertical and horizontal linkages. We will enhance the vertical linkages between central and local governments, fully utilize the important role of local governments in promoting S&T achievement transfer and conversion, and explore effective achievement conversion paths that conform to local realities. We will strengthen overall planning coordination and military-civil fusion (军民之间融合) linkages between departments, and form a combined force for jointly promoting S&T achievement conversion in aspects such as resource allocation, task deployment, etc.

— Mechanism innovation. We will make full use of new internet-based innovation and entrepreneurship concepts such as makerspaces (众创), crowdsourcing, crowd support, and crowdfunding, establish new mechanisms for fully integrating innovation factors (创新要素), fully utilize the catalyzing role of capital, talent and services in the transfer and conversion of S&T achievements, and explore new models of S&T achievement transfer and conversion.

## (2) Main objectives.

During the 13th Five-Year Plan period [2016-2020]: We will promote a number of major S&T achievement conversion applications that see results in the short-to-medium term and that drive the structural optimization and upgrading of industries; there will be a significant increase in the S&T achievement transfer and conversion ability of enterprises, institutes of higher learning ("universities") and scientific research institutes; the market-based system of technology trading services will be further improved; development of S&T-based innovation and entrepreneurship will flourish; the ranks of specialized technology transfer talents will be developed and expanded; diversified channels for investment in S&T transfer and conversion will be steadily perfected; the institutional environment for the transfer and conversion of S&T achievements into practical applications will be further optimized; and we will complete construction of a market-based system for S&T achievement transfer and conversion, with perfected functions and efficient operations.

**Main indicators:** Construct 100 demonstration-type national technology transfer institutions, support construction by qualified local governments of 10 S&T achievement transfer and conversion demonstration zones, and in key industrial fields, lay out and construct a number of makerspaces (众创空间) that support development of the real economy; complete construction of several bases for the development of S&T transfer talents, develop 10,000 specialized S&T transfer talents, and strive to reach a nationwide total of RMB 2 trillion in technology contract transaction amounts.

## II. Key Tasks

Focusing on key problems and weak links in S&T achievement transfer and conversion, we will enhance system deployments, and maintain a good grasp on implementation of measures, so as to form a new pattern for S&T achievement transfer and conversion in which the orientation is towards the technological innovation requirements of enterprises, market-based transaction platforms serve as vehicles, and specialized service organizations provide support.

### (1) Carry out the exchange and publication of S&T achievement information.

**1. Issue "packages" of S&T achievements for conversion into advanced applications.**

With a demand-led orientation, and focusing on key fields such as new generation information networks, intelligent green manufacturing, modern agriculture, modern energy, high-efficiency resource utilization, ecological and environmental protection, maritime and space, smart cities and digital society, and population health, a number of S&T achievement packages will be issued that conform to the direction of industrial transformation and upgrading, and that are large in terms of investment scale and industry-driving effects. We shall: Make full use of the guiding role of government funding and the roles of intermediary institutions in terms of achievement screening, market-based evaluation, financing services and achievement promotion; encourage enterprises to explore new business models and paths for S&T achievement industrialization; and accelerate the transformation of major S&T achievements into applications. We shall also guide support for the conversion of S&T achievements into practical applications in agriculture, healthcare, ecological construction, and other social welfare fields.

**2. Establish a national S&T achievement information system.** We shall formulate specifications for S&T achievement information collection, processing and services, and promote interconnectedness of data resources covering various kinds of S&T plans, S&T awards, and stocks and increments of achievements, at the central and local level; and we shall build project libraries and data service platforms for the conversion of S&T achievements generated from government funding support. We shall refine mechanisms for sharing S&T achievement information. Provided there is no disclosure of state secrets or trade secrets, we will release information on S&T achievements and related intellectual property (IP) to the public, and provide public services such as S&T achievement consulting and screening.

**3. Enhance the exchange of S&T achievement information.** We will establish and improve the mechanisms of all local governments and departments for S&T achievement information exchange, promote an online registration and exchange system for S&T achievements, and smooth the channels for S&T achievement information collection. We shall: Strengthen the organic linkages between S&T achievement administration and the management of S&T programs and projects; specify the S&T achievement conversion obligations of organizations that undertake applied S&T projects established with government funding; and carry out exchanges of information on the achievements of applied S&T projects and the achievements of scientific research projects with application prospects within basic research. We shall also encourage the exchange of information on privately funded S&T achievements.

**4. Enhance the development and use of S&T achievement data resources.** Focusing on the requirements of traditional industry transformation and upgrading and emerging industry incubation and development, we shall encourage various kinds of organizations to utilize new generation information technology such as cloud computing and big data, actively carry out value-adding services for S&T achievement information, and provide precise S&T achievement information that meets the requirements of users. We shall carry out pilot projects for the conversion of S&T achievements into technical standards, so as to promote the conversion of more applied S&T achievements into technical standards. We shall also strengthen informatization links between S&T achievements, S&T reports, S&T literature, IP, standards,

etc., and all local governments and departments must fully utilize S&T achievement resources in their plan formulation, program administration, strategic research and other areas.

**5. Promote the integrated conversion of military-civil S&T achievements into applications.** We shall construct information and promotion-conversion platforms for defense S&T industry achievements, study establishing a military-civil fusion (军民融合) industrial investment fund for the defense S&T industry, and support the extension and application of military-civil fusion-based S&T achievements. We shall sort through projects with market application prospects, publish a directory for promoting the conversion of military technology to civilian use, a catalog of recommended technologies and products for private sector participation in the military sector (“民参军”), and a defense S&T industry IP conversion catalog. We will also implement special projects for promoting military industry technologies, and promote conversion of defense S&T achievements into applications in civilian fields.

(2) Industry-university-research institute collaboration on carrying out S&T achievement transfer and conversion.

**6. Support industry-university-research institute collaboration on carrying out S&T achievement transfer and conversion.** We shall organize efforts by universities and research institutes to sort through S&T achievement resources, publish a catalog of S&T achievements, establish a network of enterprise-oriented technical service sites, promote the effective linking of S&T achievements with industry and enterprise requirements, and realize the market value of S&T achievements through multiple means such as R&D collaboration, technology assignment, technology licensing, and investment based on assessed value. Relying on the system of scientific research institutes under the Chinese Academy of Sciences, we shall implement the Science and Technology Service Network Initiative; and focusing on the requirements of industries and localities, we will carry out tackling of key problems, as well as technology transfer and demonstration, IP operations, etc. We shall encourage medical institutions and medical research organizations to build collaborative research networks, strengthen the work of formulating clinical guidelines and specifications, and accelerate the application and extension of new technologies and products. Qualified universities and scientific research institutes will be guided to establish and improve specialized S&T achievement transfer and conversion organizations. We shall specify their duties for overall planning of S&T achievement transfer and conversion and for IP management, and enhance their abilities in market-based operations. We will carry out pilot projects at some universities and scientific research institutes to explore effective mechanisms and models for the transfer and conversion of S&T achievements into practical applications, establish a disclosure and management system for S&T achievements made at work, implement a market-based hiring system for technology managers, and establish a number of national technology transfer organizations with flexible operating mechanisms, pooled professional talent, outstanding service ability, and international influence.

**7. Push enterprises to enhance their conversion of S&T achievements into practical applications.** Focusing on innovation-based enterprises, high-tech enterprises and S&T-based small- and medium-size enterprises (SMEs), we shall support the joint establishment of research and development (R&D) and S&T transfer organizations by enterprises, universities

and scientific research institutes, so as to jointly carry out research and development, application and promotion of achievements, study and formulation of standards, etc. Focusing on the "Internet+" strategy, we shall explore "R&D crowdsourcing" models such as competitive bidding by enterprises on technical challenges, and guide S&T personnel, universities and scientific research institutes in undertaking projects and special problems commissioned and tendered by enterprises, so as to gather wisdom and promote open innovation. Enterprises shall take the lead in organizing and implementing S&T program projects with a clear market orientation. We will also refine mechanisms for the transfer and diffusion of technological achievements to enterprises, support enterprises in introducing advanced and applicable technologies from home and abroad, and in carrying out technological change and retrofitting upgrades.

**8. Construct multiple forms of alliances for industrial technology innovation.** Focusing on the "Made in China 2025," "Internet+" and other national development strategies for key industries, as well as regional development strategy deployments, we will give full play to the leadership role of industrial backbone enterprises and restructured scientific research institutes, and join together upstream and downstream enterprises, universities and scientific research institutes to build a number of industrial technology innovation alliances, create innovation chains centered around production chains, promote cross-regional and cross-industry collaborative innovation, enhance industries' R&D, extension and application of key generic technologies, and provide made-to-order R&D services for alliance member firms. We will also support alliances in taking on significant S&T achievement conversion projects, and explore effective mechanisms and models for jointly tackling key problems, sharing benefits, and conducting IP operations.

**9. Fully exploit the linkage role of S&T social organizations (社团) in fostering S&T achievement transfer and conversion.** Taking innovation-driven support projects as important initiatives, we shall improve the abilities and levels of associations in serving S&T achievement transfer and conversion, use the service websites, technology R&D bases and other flexible innovation vehicles of associations, organize and mobilize the intellectual resources of associations to serve the transformation and upgrading of enterprises, establish long-term mechanisms for association-to-enterprise contact, carry out S&T information services, and achieve precise matching between the supply side and the demand side in the transfer and conversion of S&T achievements into practical applications.

(3) Construct vehicles for pilot industrialization of S&T achievements.

**10. Construct S&T achievement industrialization bases.** Relying on national innovation demonstration zones, national high-tech zones, national agricultural S&T parks, national sustainable development experimental zones, national university S&T parks, strategic and emerging industry clusters and other areas with concentrations of innovation resources, as well as universities, scientific research institutes, industry backbone enterprises, etc., we shall construct a number of S&T achievement industrialization bases aimed at energy conservation and environmental protection, new generation information technology, biotechnology, high-end equipment manufacturing, new energy, new materials, new energy vehicles and other

strategic emerging industries, so as to guide the transfer and conversion of S&T achievements to match the requirements of special industries, and foster new economic growth points.

**11. Strengthen the pilot testing and maturation of S&T achievements.** We shall encourage enterprises to take the lead, governments to guide, and industries, universities and research institutes to collaborate, in carrying out pilot testing and maturation and industrialization development directed at the requirements of industrial development, and provide turnkey (全程) solutions for technology R&D, thereby accelerating S&T achievement transfer and conversion. Support shall be provided to local governments in establishing general or industry-specific technology innovation service platforms, focused on the requirements of regional characteristic industry development and of technological innovation by SMEs, which provide the instruments and equipment, pilot production lines and other resources required—from experimental research, pilot testing and maturation, to the production process—and perform R&D design, inspection, testing and certification, S&T consulting, technical standards, IP, investment financing and other services. We will also promote the rational layout and functional integration of various types of technology development-oriented scientific research bases, encourage the transfer and conversion S&T achievements by scientific research bases, and promote the diffusion and conversion into applications of more generic technology achievements urgently needed for the development of enterprises and industries.

(4) Strengthen marketization services for S&T achievement transfer and conversion.

**12. Build a national technology trading network platform.** We shall build a demand-oriented national technology trading network platform that combines online and offline, takes "Internet+" S&T achievement transfer and conversion as the core, connects technology transfer service institutions, investment and financing institutions, universities, research scientific research institutes and enterprises, and gathers together various innovation factors such as achievements, funds, talent, services and policies. Relying on specialized organizations to carry out market-based operations, the platform will adhere to the open sharing operation concept, support provision by various service organizations of specialized services such as information dissemination, mergers and acquisitions (M&A) financing, public listing, bidding and auctioning, and consulting and counseling, forming an innovation services network with active entities, complete coverage of factors (要素), and flexible mechanisms. We shall also guide universities, scientific research institutes and state-owned enterprises in making S&T achievement listing transactions and public announcements.

**13. Improve regional technology transfer services organizations.** We shall support local governments and relevant organizations in establishing and perfecting regional and industry-specific technology markets, and forming a new pattern of technology trading with organic linkages across different levels and different fields. On the foundation of existing regional and international technology transfer centers, we will implement the "Belt and Road,"<sup>1</sup> Coordinated Development of the Beijing-Tianjin-Hebei Region, the Yangtze River Economic Belt and other major strategies, further enhance resource sharing and complementary advantages between key regions, improve cross-regional technology transfer and dissemination functions,

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<sup>1</sup> Translator's note: The "Belt and Road" ("一带一路") refers to the Silk Road Economic Belt and the 21st Century Maritime Silk Road.

and create a technology transfer network comprising foreign and domestic technology, capital, talent and other innovation resources.

**14. Improve the service functions of technology transfer organizations.** Various platform functions will be improved, including technology property rights transactions and IP transactions, and effective linking of S&T achievements and capital will be promoted. We shall support cooperation between qualified technology transfer organizations and angel investment, venture capital, etc., in establishing investment funds, so as to increase investment in S&T achievement conversion projects. We will encourage domestic organizations and internationally renowned technology transfer organizations to carry out deep-level cooperation, and introduce advanced and applicable S&T achievements from abroad, focusing on the technology requirements of key industries. We will also encourage technology transfer organizations to explore S&T achievement evaluation methods adapted to the needs of different users, thereby boosting the success rate of S&T achievement transfer and conversion. Industries will be urged to organize the formulation of standards and specifications for technology transfer services, establish evaluation and credit mechanisms for technology transfer services, and enhance the self-discipline management of industries.

**15. Enhance IP services in key fields.** We will implement patent navigation projects in key areas of "Internet+" integration, guide the strategic layout for IP in such areas of integration as "Internet+" collaborative manufacturing, modern agriculture, intelligent energy, green ecology, artificial intelligence (AI), etc., and boost the innovation-driven development ability of industries. IP analysis and appraisal of major S&T-related economic activities will be carried out, providing a basis for strategic planning, policy formulation, project establishment, and so on. Internationalized IP information platforms for key industries will be refined, guidelines on IP practices for "going global" ("走出去") will be issued, and specialized IP services will be provided for enterprises to "go global."

(5) Vigorously promote S&T-based innovation and entrepreneurship.

**16. Promote makerspaces that serve and support development of the real economy.** With the emphasis on regions with concentrations of innovation resources, and relying on industry-leading enterprises, universities, and scientific research institutes, a number of makerspaces will be constructed in key fields such as electronic information, biotechnology, and high-end equipment manufacturing. Such makerspaces will focus mainly on the transfer and conversion of achievements, and have high levels of professional services, superior allocations of innovation resources, and strong industry radiating and driving functions, so as to effectively support development of the real economy. A number of "Farm Star Worlds"<sup>2</sup> will be built to support agricultural and rural S&T-based innovation and entrepreneurship. We shall support enterprises, universities and scientific research institutes in exploiting their innovation advantages, in terms of scientific research facilities, professional teams, technology accumulation and other areas, and provide technology R&D services for entrepreneurs. More S&T personnel, returnees from overseas, and other high-end entrepreneurial talents will be

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<sup>2</sup> Translator's note: "Farm Star Worlds" ("星创天地") are agricultural technology-focused makerspaces.



recruited to take up residence in makerspaces, with the focus on supporting innovation and entrepreneurship originating in core technologies.

**17. Promote opening up of innovation resources to innovative entrepreneurs.** We shall guide universities, scientific research institutes, large-scale enterprises, technology transfer organizations, venture capital organizations and national-level scientific research platforms (bases) in opening up scientific research infrastructure, large-scale scientific research instruments, S&T data and literature, S&T achievements, venture capital funds, etc., to innovative entrepreneurs. Relying on advanced technologies and means such as 3D printing, big data, network-based manufacturing, and open-source software and hardware, we will support various institutions in providing innovative entrepreneurs with facilitative tools for innovation and entrepreneurship. We will support universities, enterprises, incubator institutions, investment organizations, etc., in opening innovation and entrepreneurship training courses, and encourage experienced entrepreneurs, angel investors and experts and scholars to serve as business startup mentors.

**18. Hold a variety of innovation and entrepreneurship competitions.** We shall organize and carry out activities including the China Innovation & Entrepreneurship Competition, the China Innovation Challenge, the China International College Students' "Internet+" Innovation and Entrepreneurship Competition, the China Agricultural Technology Innovation and Entrepreneurship Competition, and the China Investment and Financing Intensive Training Camp for Science and Technology Innovation and Entrepreneurship Talents. We will support local governments and society at large in holding various innovation and entrepreneurship competitions, so as to gather and integrate venture capital and other resources that support innovation and entrepreneurship.

(6) Construct teams of S&T achievement transfer and conversion talents.

**19. Carry out development of technology transfer talent.** We will fully utilize the role played by various demonstration bases for innovative talent development, and rely on qualified local governments and organizations to construct a number of bases for the development of technology transfer talent. Qualified universities will be encouraged to establish S&T achievement conversion-related courses and build top-notch faculties. We will accelerate development of leading S&T achievement transfer and conversion talent, and incorporate various types of innovative and entrepreneurial talent recruitment and development plans. A team of specialized technology brokers will be built, and career development paths will be smoothed. We will also encourage and regulate engagement in technology transfer work by qualified S&T personnel of universities, scientific research institutes and enterprises. Internationalized technology transfer talent will be developed jointly with international technology transfer organizations.

**20. Organize S&T personnel to carry out S&T achievement transfer and conversion.** Aligning closely with the requirements of local industrial technology innovation, agricultural and rural development, social welfare and other areas, we shall continue to implement the Experts to Serve the Grassroots Action Plan, the Technical Task Forces, the Science and Technology Entrepreneur Movement, Academicians-to-Enterprises activities, promotion of advanced and applicable technology projects, etc. We will mobilize the S&T personnel and high-level experts

of universities, scientific research institutes and enterprises, and carry out technical advice, technical services, research on key S&T challenges, achievement promotion and other S&T achievement transfer activities in-depth at the grassroots level and the front line, so as to create a grassroots-oriented talent team for the transfer and conversion of S&T achievements.

**21. Strengthen services for S&T achievement transfer and conversion talent.** We will build an "Internet+" innovation and entrepreneurship talent services platform, provide public services such as technical consulting, talent programs, S&T talent activities, and education and training, and achieve interactive and cross-sectoral collaboration between talents, between talents and enterprises, and between talents and capital. Focusing on support for the cultivation and development of industries with local characteristics, we will establish a number of innovation-driving centers for leading S&T talents, support construction of academician (expert) work stations by qualified enterprises, and build platforms linking up high-level talents with enterprises and local governments. We will also construct offshore innovation and entrepreneurship bases for overseas S&T talents, and build platforms and bridges for introducing innovation and entrepreneurship resources.

(7) Vigorously promote local S&T achievement transfer and conversion.

**22. Enhance the S&T achievement conversion work of local governments.** We shall improve provincial, municipal and county-level networks for S&T achievement conversion work, strengthen the functions of S&T administrative departments in carrying out S&T achievement transfer and conversion tasks, enhance coordination and cooperation between relevant departments, and explore assessment and evaluation mechanisms adapted to the achievement conversion requirements of localities. We will enhance construction of grassroots S&T management organizations and teams, refine platforms and mechanisms for undertaking S&T achievement transfer and conversion, publicize S&T achievement conversion policies, help SMEs find applied S&T achievements, and build an information services platform for industry-university-research institute cooperation. We will also guide local governments in exploring "innovation vouchers" and other models for government procurement of services, and lower the technology innovation costs of SMEs.

**23. Carry out regional pilot demonstrations of S&T achievement transfer and conversion.** Led by provinces (or autonomous regions, or municipalities) with concentrations of innovation resources and good work foundations, national S&T achievement transfer and conversion pilot demonstration zones will be constructed through cross-regional integration of achievements, talent, capital, platforms, services and other innovation resources. In areas such as S&T achievement transfer and conversion services, financing, talent and policies, we will explore forming a number of replicable and scalable work experiences and models. Focusing on technological bottlenecks in the development of industries with regional characteristics, we will promote a number of major S&T achievements that meet the requirements of industrial transformation and development and promote their application in demonstration zones.

(8) Strengthen diversified funding for the transfer and conversion of S&T achievements into practical applications.

**24. Utilize the guiding role of central government funding for S&T achievement transfer and conversion.** We will utilize the leveraging role of the National Fund for Technology Transfer and Commercialization, etc., and employ methods such as sub-fund establishment and credit risk compensation, so as to attract social capital<sup>3</sup> investment and support the conversion of S&T achievements into practical applications related to the national economy, people's livelihoods and industrial development. Using the optimized and integrated Technology Innovation Guidance Project (Fund) and the Base and Talent Project, we will increase support for qualified technology transfer organizations, bases and talents. Prior to the industrialization of major and strategic S&T achievements, the National Science and Technology Major Projects and the National Key R&D Program will support problem-tackling research and the demonstration of their applications.

**25. Intensify local government support of S&T achievement conversion.** We will guide and encourage local governments in establishing special funding (funds) for venture capital guidance, S&T achievement conversion, IP operations, etc., and guide credit funds, venture capital funds and various social funds in expanding their investment, so as to support S&T achievement transfer and conversion in regional key industries.

**26. Broaden supply channels for the marketization of S&T achievement conversion funds.** We will vigorously develop venture capital, and incubate development of angel investor and venture capital organizations, so as to support the preliminary phases of S&T enterprises and S&T achievement conversion projects. Internet-based financing platforms such as crowdfunding will be used to expand financing channels for the transfer and conversion of S&T achievements by small- and micro-size enterprises. Qualified innovative and entrepreneurial enterprises will be supported in carrying out financing through methods such as bond issuance and asset securitization. We will also support banks in exploring models that combine equity investment and credit extension, providing a portfolio of financial services for S&T achievement transfer and conversion.

### **III. Organization and Implementation**

**(1) Enhance organizational leadership.** Based on their respective functional positions and task allocations, all relevant departments must strengthen policies and resource planning, establish mechanisms for coordinating promotion, and form a work pattern of close cooperation and collaboration on promotion among S&T departments, industry departments, social organizations, etc. We will strengthen central-local coordination, enhance the overall allocation of key tasks and overall deployment of innovation resources, and form a combined force for the joint promotion of the transfer and conversion of S&T achievements into practical applications. All local governments must include S&T achievement transfer and conversion work in their agendas of important matters, strengthen their S&T achievement transfer and conversion work functions, formulate specific implementation plans in light of actual

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<sup>3</sup> Translator's note: The Chinese term 社会资本, translated literally as "social capital," and its synonyms 社会资金 "social funding" and 社会投资 "social investment," refer to any source of funding outside of government budget outlays. These terms encompass investment by private individuals and private institutions. However, investment from state-funded entities such as state-owned enterprises (SOEs), including state-run banks, also falls under the umbrella of "social capital" or "social funding."

circumstances, specify work promotion roadmaps and timetables, make a detailed breakdown of tasks level by level, and effectively increase financial inputs, policy support, and facility assurance (条件保障).

(2) **Enhance policy guarantees.** We will implement the *Law on Promoting the Conversion of Scientific and Technological Achievements* and related policy measures, and improve the environment of policies conducive to S&T achievement transfer and conversion. A system will be established for evaluating the performance of scientific research institutions and universities in S&T achievement transfer and conversion, and S&T achievement transfer and conversion circumstances will serve as a basis for reference in granting support to organizations. We will encourage scientific research institutions and universities to establish systems for professional title evaluation, position management and performance assessment that conform to their own personnel management needs. We will refine policies related to the management of state-owned assets of public institutions conducive to the transfer and conversion of S&T achievements into practical applications. We will also study and explore a shareholding entrustment system for the equity that leaders of scientific research institutions and universities receive from S&T achievement conversion prior to their full appointment. All local governments shall focus on implementing the *Law on Promoting the Conversion of Scientific and Technological Achievements*, and improve policies and regulations for promoting S&T achievement transfer and conversion. Measures for monitoring and assessing implementation circumstances will be established, and support will be provided for adjusting and refining relevant policy initiatives.

(3) **Enhance demonstration and guidance.** We shall enhance the guidance and promotion of pilot demonstration work, exchange the good experiences and practices of local governments and various departments, and promptly summarize and extend experiences and models that are replicable and scalable.

Attachment: Division of Key Tasks and Schedule

## Attachment

### Division of Key Tasks and Schedule

No.	Key tasks	Responsible departments	Schedule
1	Issue a number of "packages" of S&T achievement urgently needed for industrial transformation and upgrading	Ministry of Science and Technology in conjunction with relevant departments	To be completed by end of June 2016
2	Establish a national S&T achievement information system	Ministry of Science and Technology, Ministry of Finance, Chinese Academy of Sciences, Chinese Academy of Engineering, National Natural Science Foundation of China	Construction to be completed by end of June 2017
3	Enhance the exchange of S&T achievement information, and promote an online	Ministry of Science and Technology in conjunction with relevant departments	Continue to advance

	registration and exchange system for S&T achievements		
4	Carry out pilot projects for the conversion of S&T achievements into technical standards	General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ), Ministry of Science and Technology	Begin by end of December 2016
5	Promote the integrated conversion of military-civil S&T achievements into applications.	State Administration of Science, Technology and Industry for National Defense, Ministry of Industry and Information Technology, Ministry of Finance, China National Intellectual Property Administration, etc.	Continue to advance
6	Implement the Science and Technology Service Network Initiative relying on the system of scientific research institutes under the Chinese Academy of Sciences	Chinese Academy of Sciences	Continue to advance
7	Establish a number of national technology transfer organizations at qualified universities and scientific research institutes	Ministry of Science and Technology, Ministry of Education, Ministry of Agriculture, Chinese Academy of Sciences, etc.	Construction to begin by end of June 2016, continue to advance
8	Focusing on national key industries and major strategies, build a number of industrial technology innovation alliances	Ministry of Science and Technology, Ministry of Industry and Information Technology, Chinese Academy of Sciences, etc.	Construction to begin by end of June 2016, continue to advance
9	Promote the rational layout and functional integration of various types of technology development-oriented scientific research bases, and encourage the transfer and conversion of S&T achievements by scientific research bases	Ministry of Science and Technology in conjunction with relevant departments	Continue to advance
10	Build a national technology trading network platform that combines online and offline	Ministry of Science and Technology, Ministry of Education, Ministry of Industry and Information Technology, Ministry of Agriculture, State-Owned Assets Supervision and Administration Commission of the State Council	To be constructed and in operation by end of June 2017
11	Formulate standards and specifications for technology transfer services	Ministry of Science and Technology, AQSIQ	Issue by end of March 2017
12	Rely on industry-leading enterprises to construct a number of makerspaces that support development of the real economy	Ministry of Science and Technology in conjunction with relevant departments	Continue to advance
13	Rely on qualified local governments and organizations to construct a number of	Ministry of Science and Technology in conjunction with relevant departments	Continue to advance

	bases for the development of technology transfer talent		
14	Build an "Internet+" innovation and entrepreneurship talent services platform	Ministry of Science and Technology in conjunction with relevant departments	To be constructed and in operation by end of June 2016
15	Construct offshore innovation and entrepreneurship bases for overseas S&T talents	China Association for Science and Technology	Continue to advance
16	Construct national S&T achievement transfer and conversion pilot demonstration zones, and explore replicable and scalable work experiences and models	Ministry of Science and Technology in conjunction with relevant local governments	Construction to begin by end of June 2016
17	Utilize the leveraging role of the National Fund for Technology Transfer and Commercialization, etc., to support the conversion of S&T achievements into practical applications	Ministry of Science and Technology, Ministry of Finance, etc.	Continue to advance
18	Guide credit funds, venture capital funds and various social funds in expanding their investment, so as to support S&T achievement transfer and conversion in regional key industries	Ministry of Science and Technology, Ministry of Finance, People's Bank of China, China Banking Regulatory Commission, China Securities Regulatory Commission	Continue to advance
19	Encourage scientific research institutions and universities to establish systems for professional title evaluation, position management and performance assessment that conform to their own personnel management needs.	Ministry of Education, Ministry of Science and Technology, Ministry of Human Resources and Social Security, etc.	Complete by end of December 2017
20	Study and explore a shareholding entrustment system for the equity that leaders of scientific research institutions and universities receive from S&T achievement conversion prior to their full appointment.	Ministry of Science and Technology, CCP Central Organization Department, Ministry of Human Resources and Social Security, Ministry of Education	Continue to advance