To science and technology departments (or committees, or bureaus) in every province, autonomous region, and centrally administered municipality (直辖市) and their planning units, and to the Science and Technology Bureau of the Xinjiang Production and Construction Corps:

The Ministry of Science and Technology (MOST) has established *Guidance on National New Generation Artificial Intelligence Open Innovation Platform Construction Work* to thoroughly implement the *State Council Notice on the Issuance of the New Generation Artificial Intelligence Development Plan[3]* (《国务院关于印发新一代人工智能发展规划的通知》)

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[1] An English translation of this document, and a link to the Chinese source text, is available at:
https://www.newamerica.org/cybersecurity-initiative/digichina/blog/full-translation-chinas-new-generation-artificial-intelligence-development-plan-2017/
[2] For a Chinese-language news article describing these 10 new platforms, see:
https://www.yicai.com/news/100312280.html
[3] See footnote 1.

(National Development and Reform document no. 35 [2017]), to give full play to the leading role of top artificial intelligence (AI) companies and research institutions, to promote profound harmonization of AI with the real economy, to further advance the construction of national new generation AI open innovation platform, and to promote technical innovation and industrial development in AI. We now publish this for you. Please do a good job of carrying out this work in a way that suits the actual situation in your regions.

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MOST
1 August 2019

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(Actively publicize the following)

Guidance on National New Generation Artificial Intelligence Open Innovation Platform Construction

In accordance with the overall requirements for planning and arranging the AI innovation platforms in the *State Council Notice on the Issuance of the New Generation Artificial Intelligence Development Plan* (National Development and Reform document no. 35 [2017]), as well as with the overall objectives and immediate objectives set forth by the major Science and Technology Innovation 2030: "New Generation Artificial Intelligence" project (科技创新2030——"新一代人工智能"重大项目) the below work guidance is established, in order to further clarify the significance of the goal of, the principles for the construction of, the basic conditions for, and the main tasks of the national new generation AI open innovation platforms. These instructions guide and promote the orderly development of the national new generation AI open innovation platforms.

I. Significance of the Goal

The new generation AI open innovation platforms (henceforth abbreviated "open innovation platforms") are focused on key sub-domains (细分领域) of AI. They bring fully into play the leading model role of leading companies and research institutions in the AI industry. They effectively integrate technological resources, supply chain resources, and financial resources. They are an important vehicle for innovation that consistently generates core R&D capabilities and service capabilities in AI. "Openness and sharing" are important concepts driving China's technical innovation and industrial development in AI. By constructing the open innovation platforms, we help improve our technical innovation and R&D strength, and we help improve the capacity for open and shared services of our foundational software and hardware. We encourage open-source and openly available software and technology. We support innovative and entrepreneurial individuals, groups, and medium-, small-, and micro-sized companies in throwing themselves into AI technology R&D. We promote the dissemination of AI technical achievements, and their transformation into applications. We will make AI into a new engine driving the construction of the real economy and the development of social endeavors.

II. Principles for Construction

(1) Applications are the driving force. Making the requirements for the major applications of AI into the driving force, and relying on the open innovation platforms to develop AI-related basic theory, key and core technologies, and software and hardware support systems, products, and applications, make achievements in AI innovation that have international influence and broad coverage.

(2) Companies are the actors. Encouraging leading companies in AI sub-domains to establish open-source, open platforms is a move aimed at making AI technical R&D resources publicly available. This will export AI technology service capability to society, promote industrial applications for AI technology, nurture leading companies in the industry, and support the growth of medium-, small-, and micro-size companies.

(3) Marketization mechanism. Encourage the use of a marketized organizational management mechanism. Rely on work units to be the main source of funding for and investment in the open innovation platforms, but also provide sustained support for development of the open innovation platforms by other means, such as authorizing the transfer of technological achievements (技术成果转让授权) or through pay-to-use technology (技术有偿使用).

(4) Coordinated innovation (协同式创新). Encourage local governments, industry, scientific research institutes, universities, etc. to participate together in advancing the construction of the open innovation platforms. Build an open ecosystem and promote the transformation of core technological achievements into commercial products (核心技术成果产业化) through the integration of human, technical, data, and supply chain resources.

III. Basic Criteria

Leading AI technology companies will drive the construction of the open innovation platforms. They are encouraged to invite research institutes and universities to participate in their construction and to provide knowledge and technical support. The open innovation platforms will be organized and built around the sub-domains of AI that require major applications, namely those involved in the key tasks defined in the *New Generation Artificial Intelligence Development Plan*. In principle, one new generation AI open innovation platform will be built for each concrete sub-domain. The sub-domains that the different open innovation platforms belong to should have distinct differences and emphases.

Those who submit applications to build open innovation platforms should ensure that their platforms meet the following basic criteria:

(1) The open innovation platform should possess outstanding technological strength and industrial innovation influence, and should be able to put into full play the leading model role of the AI industry.

(2) It should have a technical foundation and service capacity that provide open, shared service to society, ones that can effectively integrate technological resources, supply chain resources, and financial resources. It should possess the technical capability for rapid-turnaround external service, such that it can greatly lower the use threshold (使用门槛) for R&D and technology in the industry, and it must propel coordinated innovation and development among medium-, small-, and micro-size companies.

(3) The unit entrusted with constructing the open innovation platform must commit to making sustained investments of funding, human resources, infrastructure, and so on, so as to provide a guarantee for the open innovation platform's development.

(4) It should possess a clear-cut, reviewable open service operation mechanism, one that establishes a very comprehensive organizational framework and a mode of operation that supports the sustainable development of the open innovation platform.

IV. Key Tasks

(1) Launch technological innovation in AI sub-domains. Integrate the existing technical foundation and industrial resources of the open innovation platform's sub-domain. Bring together the innovation power of strong companies, scientific research institutes, universities, etc. Work together to promote the basic theories, model methods, and basic software and hardware research of AI. Serve and support the cutting-edge basic theories and key technological innovations of AI.

(2) Promote the dissemination of technical achievements and their transformation into applications. Actively explore a mechanism for transforming the achievements of the open innovation platforms into applications. Driven by innovative achievements, effectively integrate the relevant technological, supply chain, and financial resources. Bring together the innovative power of upstream and downstream elements. Build a complete technical and industrial ecosystem. Promote high-quality economic and social development and the improvement of the people's livelihoods.

(3) Provide open, shared services. Build standard test datasets on the open innovation platforms aimed at sub-domains of AI. Promote data openness and sharing, and create standardized, modular models, middleware, and application software. Provide open and shared software and hardware services to society through methods such as an open interface, modeling library (模型库), and algorithm bundles (算法包).

(4) Guide innovation and entrepreneurship among medium-, small-, and micro-size companies and among industry developers. Create communities for information sharing and exchange of experience in the AI sub-domains. Guide medium-, small-, and micro-size S&T companies and innovative entrepreneurs in carrying out product R&D and application testing on the open innovation platforms. Lower the technical and resource use threshold. Create a good atmosphere for coordination, innovation, and entrepreneurship throughout the entire industry.

V. Organization and Management

(1) Recommendation and application.

Entities that meet the aforementioned criteria and are willing to provide public innovation services should assemble their technical foundations and development ambitions, choose a clear-cut, concrete AI sub-domain, fill out a *National New Generation AI Open Innovation Platform Construction Application Form*, and obtain either a self-recommendation from the entrusted work unit (依托单位) or a recommendation from the provincial-level S&T management department it is subordinate to (所属省级科技管理部门). The best applications will be sent on to MOST for approval.

(2) Comprehensive examination.

MOST will organize experts who will conduct a comprehensive examination of each application. These experts will be drawn both from overall experts (综合专家) and from domain experts (领域专家). The overall experts will be chosen from among the members of the consulting expert group (咨询专家组) for the major Science and Technology Innovation 2030: "New Generation Artificial Intelligence" project, and from among people in charge of already-built open innovation platforms. The domain experts will be chosen mainly from among experts who have guided and arranged major projects (重大项目指南编制专家). The comprehensive examination will unfold mainly in the form of examination meetings. The examining experts will review the open innovation platform construction application, and hear a report from the work unit that applied. Based on factors such as the logic of the concept behind the application, the foundation and capabilities of the work unit entrusted with building the platform, the feasibility of the construction plan, and the anticipated results of the open service, the experts will make a thorough inquiry and make a determination, thus forming an opinion of the application based on the comprehensive examination.

(3) Confirmation and announcement.

Taking into account both the comprehensive examination opinions and an overall consideration of the development requirements, construction plan, and the overall arrangements for new generation AI technology, MOST will select the best open innovation platforms and the work units entrusted with them, and, in accordance with procedure, confirm the winners and announce them to society.

(4) Operations and management.

The work units thus entrusted are the entities which will construct and be responsible for the national new generation artificial intelligence open innovation platforms. The entrusted work units are encouraged to actively explore high-efficiency organizational management models that suit their own development characteristics. They should build efficient mechanisms for resource integration, cooperative innovation, open service, and profit allocation. They are encouraged to build a mechanism for technological cooperation, exchange of experience, and resource-sharing between each open innovation platform.

Each entrusted work unit should build a system for annual reports and for reports on important matters. At set intervals, the open innovation platforms should sum up their work situation and compile an annual summary report. After being examined by the provincial-level S&T management department that the entrusted work unit is subordinate to, the report will be sent to MOST. MOST will actively support the construction of the open innovation platforms and will promote the coordinated development of the platforms with construction of the national new generation AI innovation and development experimental zones (国家新一代人工智能创新发展试验区). Provincial-level S&T management departments should combine the development characteristics of their regions, actively advance the construction of the open innovation platforms, help with the popularization and application of their technology, and provide them with the relevant supportive policies to benefit their development.

Each entrusted work unit should build a launch mechanism for its open innovation platform. The entrusted work unit for each open innovation platform should comply with the

Governance Principles for New Generation Artificial Intelligence[4] (《新一代人工智能治理原则》), develop responsible (负责任) AI, actively and dependably advance technological innovation and industrial development in AI, and unstintingly explore performance management and evaluation mechanisms for the open innovation platforms. Provincial-level S&T management departments should report back to MOST in a timely way on any problems that crop up in the process of building the open innovation platforms; MOST will shut down an open innovation platform if its entrusted work unit is unable to continue carrying out its duties, or if the platform produces a negative effect on society.

Appendix: Outline of the Application Materials for Building the National New Generation Artificial Intelligence Open Innovation Platforms

Appendix

Outline of the Application Materials for Building the National New Generation Artificial Intelligence Open Innovation Platforms

I. Background and Significance of the Construction of the Platform
   1. The state of the industry and its development trends
   2. An analysis of the resource situation for technological innovation
   3. An analysis of the necessity of the construction of the platform
II. The Objective and Nature of the Construction of the Platform
   1. The objective of the construction of the platform
   2. The nature of the construction of the platform
   3. The schedule for the construction of the platform
   4. Indicators to be used in examining the platform
   5. The status of the entrusted work unit
   6. The status of resource integration
III. The Mechanism for and Nature of the Open Service
   1. Organizational structure and operations mechanism
   2. Nature and means of the open service
   3. Indicators to be examined, and anticipated results
IV. Proof of Meeting the Criteria
   1. Financial investment status
   2. Personnel investment status
   3. Other coherent proofs

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[4] An English translation of this document, and a link to the Chinese source text, is available at: https://www.newamerica.org/cybersecurity-initiative/digichina/blog/translation-chinese-expert-group-offers-governance-principles-responsible-ai/