

Science, Technology, Education and Health News from China Number 151 – January 2017

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Introduction

The story of the month covers China released a national plan on protection and application of Intellectual property rights. Shenzhen will accelerate the construction of a number of overseas and industrial innovation centers in 2017. China's has issued a guideline on mobile Internet service management calling for more use of mobile internet service. China has established cooperation ties in science and technology with 158 countries and regions in the world. China's maritime authority has issued a five-year plan on developing ocean renewable energy. China's R&D spending estimated to reach 2.1 pct of GDP in 2016. China's scientific innovation gains momentum in 2016. China issued medical reform plan for 2016-2020. China has unseated North America as the global investment leader in financial technology.

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Story of the Month

China releases plan on IPR protection, application

(State Council, 13-1-2017)

The State Council on Jan 13 released a national plan on protection and application of intellectual property rights, which will be carried out during the 13th Five-Year Plan period (2016-2020).

The move is aimed at improving the legal environment, enhance market value and strengthen comprehensive management of intellectual property rights in China.

The plan contains several major indexes, including the number of patents for every 10,000 people, number of registered work nationwide and the public's satisfaction degree in intellectual property protection. According to the circular, by 2020, the three indexes should reach 12, 2.2 million and 80 percent, respectively.

Related departments are asked to strengthen the legal system for intellectual property, enhance the efficiency in protection, and improve its quality and market value while speeding up the construction of key intellectual property enterprises, cities and provinces and promoting industrial transformation upgrades, in an effort to achieve the targets.

The legal system for intellectual property is underlined. Efforts should be made to establish patent law, copyright law and laws against illegal competition, and study protection rules under newly emerging fields such as e-commerce and Internet Plus.

To enhance the protection level, departments should put more emphasis on judicial, criminal and administrative protection and strengthen protection in different fields, including imports and exports, traditional cultural heritage, newly emerging fields and people's lives, said the plan.

Related departments are also asked to establish a quality supervision mechanism for patent application, optimize trademark registration, build high-quality copyrights and push forward intellectual property work on the design of geographical marks, new biological breeds and integrated circuits, with the goal to improve the quality and market value of intellectual property.

The plan also urged boosting the GPS industry, improving the intellectual property layout of Chinese manufacturing and supporting the development of an intellectual property alliance.

In addition, to further ensure the successful implementation of the plan, the construction of an intellectual property public service system was also emphasized, including building service platforms, developing service industry clusters for intellectual property, and enhancing service supervision mechanism.

The document also emphasized talent training and cultivation for intellectual property development and intellectual property cultural construction.

http://english.gov.cn/policies/latest_releases/2017/01/13/content_281475540821300.htm

News

1. Shenzhen to build overseas industrial innovation centers

(China Daily, 14-1-2017)

Shenzhen will accelerate the construction of a number of overseas and industrial innovation centers this year as part of its efforts to ramp up innovation-driven economic growth.

The city in southern Guangdong province plans to build 10 overseas innovation centers in countries and regions where there are abundant resources - such as the US, Canada and Europe - to absorb and make use of the innovative skilled staff located there.

Shenzhen Mayor Xu Qin mapped out the initiative in his government work report on Jan 13, when the Shenzhen people's congress kicked off.

"We will formulate special plans to support enterprises and organizations, to set up 10 innovation centers overseas to create an international collaborative innovation platform and gather innovative talent from across the world," Xu said, adding that the first four will start construction this year.

"To implement the action plans of Internet Plus and 'Made in China 2025', we also plan to build 10 manufacturing innovation centers in such areas as robotics, 3D printing and new energy vehicles to enhance our capability in high-end, precise and smart manufacturing," Xu added.

Known as the country's innovation hub, Shenzhen has been taking the lead in China in pursuing an innovation-driven economic development model.

Investment in research and development by the city amounted to more than 80 billion yuan (\$11.6 billion) last year, accounting for 4.1 percent of its total gross domestic product. The number of its national high-tech companies increased by 2,513 in 2016, triple the growth a year earlier, to 8,037.

http://www.chinadaily.com.cn/business/2017-01/14/content_27952860.htm

2. China encourages more use of mobile Internet service

(Xinhua, 16-1-2017)

China's central authority has issued a guideline on mobile Internet service management, calling for more efforts to develop the sector in a healthy and orderly manner.

The guideline calls for increasing the use of mobile Internet service in sectors including transport, tourism, education, medical service, and public security, to better serve the public.

It says that mobile Internet service could play a big role in poverty relief, as it provides an efficient means to connect these regions with the outside world.

The guideline, issued by the general offices of the Central Committee of the Communist Party of China and the State Council, also urges cultivating an orderly environment for development of mobile Internet service.

"With the rapid evolvement of Internet technology, threats and risks posed by mobile Internet service are prominent and must be addressed," according to the guideline.

China will resolutely crack down on criminal activities such as instigating overthrowing state power and inciting religious extremism through mobile Internet service, it says, adding that promoting ethnic separatist ideology and instigating violence and terrors will also be targeted.

In addition, more efforts will be made to investigate and punish those involved in defamation, telecom fraud, infringement and illegal sale of personal information, it says.

It urges regulating the order of competition and optimizing the environment for the development of the mobile Internet service to unleash energy for innovation and market potential.

It urges preventing and eliminating risks caused by the development of mobile Internet service to ensure security of network data, technology and apps.

It says that market access rules of mobile Internet service should be perfected and the upgrade of information infrastructure should be accelerated, urging efforts to make breakthroughs on core technologies.

The guideline urges making more efforts to strengthen intellectual property protection and boost international exchange and cooperation in this sector.

(http://news.xinhuanet.com/english/2017-01/16/c_135984375.htm)

3. China establishes technological cooperation with 158 countries, regions

(Xinhua, 13-1-2017)

China has established cooperation ties in science and technology with 158 countries and regions in the world, according to the Ministry of Science and Technology on Jan 13.

The ministry said that a total of 111 intergovernmental agreements on science and technology cooperation had been signed, and the nation had taken part in more than 200 intergovernmental organizations devoted to boosting such cooperation.

A stable intergovernmental cooperation mechanism, which covers major countries, regions and international organizations, has taken shape, contributing to the improvement of the nation's capability in science and technology cooperation, according to the ministry.

Statistics from the ministry also showed that some 70 offices of science and technology had been set up in Chinese embassies, consulates and diplomatic missions in 47 countries, regions, international organizations and multilateral mechanisms, with 146 diplomats.

(http://news.xinhuanet.com/english/2017-01/13/c_135979996.htm)

4. China eyes ocean renewable energy development

(Xinhua, 12-1-2017)

China's maritime authority has issued a five-year plan on developing ocean renewable energy, stipulating measures to develop relevant technology and utilize island renewable energy.

The plan, issued by the State Oceanic Administration and made public on Jan 12, said efforts will be made to promote the application of marine renewable energy and make better use of island renewable energy by carrying out evaluations and developing technology and equipment.

The plan also said basic research and innovations in key technology related to marine renewable energy will be encouraged.

The foundation for ocean energy development will be reinforced, and resource assessment and building of public service platforms in the South China Sea and island regions will be the focus, according to the plan.

The plan also mentioned opening-up and international cooperation measures in relevant fields.

According to the plan, ocean renewable energy includes energy generated from sea tides, waves, temperature differences and biomass.

(http://news.xinhuanet.com/english/2017-01/12/c_135977464.htm)

5. China's R&D spending estimated to reach 2.1 pct of GDP in 2016

(Xinhua, 10-1-2017)

China's investment in research and development (R&D) is expected to reach 1.54 trillion yuan (around 223 billion U.S. dollars) in 2016, accounting for 2.1 percent of GDP, according to Science and Technology Minister Wan Gang.

Last year's R&D expenditure was estimated to increase by 9 percent from 2015, with over 78 percent of the spending coming from enterprises, Wan announced at a national work conference on science and technology held Jan 10.

Wan said initial figures showed the value of technology transactions in China was anticipated to amount to more than 1.14 trillion yuan, and the scientific and technological progress contribution to the country's economic growth in 2016 had increased to 56.2 percent.

He said that China was a world leader in invention patent applications, ranking third place, with over one million invention patents.

At the conference, Wan also announced that China had begun working on implementation plans of key projects that involved quantum communication and computers, brain science and brain-like research, deep sea stations, as well as space-ground integrated technology.

Wang said more projects, including ones on deep earth exploration and artificial intelligence, were in the pipeline.

(http://news.xinhuanet.com/english/2017-01/10/c_135970625.htm)

6. China's scientific innovation gains momentum in 2016

(Xinhua, 08-1-2017)

From the Internet to space missions, scientific innovation picked up speed in China last year, as the country has its sights set becoming an innovative nation by 2020.

Thanks to mobile broadband systems developed by Chinese scientists, the Internet became affordable for more people in 2016. By the end of November, China had a total of 730 million 4G mobile users and nearly 300 million broadband users.

In June, China's new supercomputer Sunway-TaihuLight was named the world's fastest at an international supercomputing conference in Germany. It is already being used in meteorology, aviation and medicine.

China also had successes in other areas including deep-sea research and spaceflight.

In January, unmanned submersible Qianlong-2 completed its maiden dive in the southwest Indian Ocean and is now capable of diving to a depth of 4,500 meters.

In August, unmanned submersible Haidou-1 reached a depth of 10,767 meters in the Mariana Trench, a new Chinese record. China is only the third country, after Japan and the United States, to build submersibles capable of reaching depths in excess of 10,000 meters

In the field of spaceflight, Shenzhou-11 was launched on Oct. 17 and docked two days later with China's first space lab Tiangong-2 where two astronauts lived for 30 days, another Chinese record.

These achievements were only possible with strong support from the government.

The budget for national natural science stood at 24.8 billion yuan (about 3.6 billion U.S. dollars) in 2016, an 11.9 percent increase from 2015.

As China has embarked on an innovation-driven journey of development, it is ready to make even bigger strides in the future.

"Fundamental research and international influence are gradually improving," said Tian Gang, a professor with Peking University school of mathematical sciences.

http://news.xinhuanet.com/english/2017-01/08/c_135964399.htm

7. China issues medical reform plan for 2016-2020

(Xinhua, 09-1-2017)

China's State Council issued a plan Jan 9 on medical reform during the 13th Five-Year Plan period (2016-2020).

Signed and approved by Premier Li Keqiang, the plan includes diagnosis and treatment systems, hospital administration, medical security, medical supplies, and a regulatory system.

A multi-tiered diagnosis and treatment system commensurate with Chinese conditions should be basically in place by 2020, encouraging patients to go to community clinics for initial diagnosis and treatment.

An "efficient and well-regulated" modern hospital administration system with "clear-cut responsibilities" should also be established by 2020.

An efficient medical security system that covers the entire population is needed with an improved fund raising mechanism, reform of insurance payments, portability of the basic medical insurance across different localities, and improved insurance for major diseases.

The plan also stressed a "streamlined and orderly" medical supply system.

http://news.xinhuanet.com/english/2017-01/09/c_135967523.htm

8. 'Chinese Dragons' Overtake U.S. in Financial Tech Investment

(Fortune, 23-1-2017)

China has unseated North America as the global investment leader in financial technology, or "fintech," according to Citigroup's (c, +3.18%) latest report on "digital disruption."

The researchers attribute the power shift to the rise of what they term "Chinese dragons," an industry term for the biggest upstarts in Asia. Think of Ant Financial, the payments spinout of Alibaba (baba, -0.45%), as well as Lu.com, JD Finance, and Qufenqi, emerging eastern juggernauts that are generally less familiar to consumers in the west.

As the report's authors summed up 2016: "The Chinese dragons roared and some previously feted FinTech leaders wilted." (You can read more about Citi's own efforts to embrace fintech in this Fortune feature from June 2016.)

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China accounted for more than half of all fintech investments globally in the first nine months of last year, the report said. Specifically in terms of venture capital, the country more than doubled its worldwide share of the investment category, rising to 46% of the global total versus just 19% the same period in 2015.

The U.S., meanwhile, sunk to 41% of the global total from 56% during the same period in 2015, putting it behind China.

A number of factors have placed China at the forefront of financial innovation in recent months.

First, mishaps at fintech upstarts in the United States have cooled investor enthusiasm in the private markets there. Once-soaring firms such as Zenefits, Lending Club, OnDeck, and others, have run afoul of regulation, struggled to meet expectations, or both.

In China, the biggest fintech accelerants involve the concurrent explosion of Internet connectivity through mobile devices and the rise of a middle class. This revolution has created an opening for new businesses, filling a void left by incumbent financial firms, which are more accustomed to working with state-owned entities than ordinary consumers.

It also helps that China has "light regulatory touch, at least initially," per the report.

While the U.S. still boasts more fintech "unicorns," startups valued at \$1 billion or more, the concentration of wealth is greater in China. The dragons are lately raising more funding per round and achieving larger private valuations than their western kin.

For instance, Lu.com, JD Finance, and Qufenqi raised rounds of \$1.2 billion, \$1.0 billion, and \$0.45 billion respectively last year, making them the global fundraising leaders in fintech.

Furthermore, no unicorns even come close to touching Ant Financial's private valuation of \$60 billion. (San Francisco-based Stripe is the U.S.' highest valued fintech unicorn, leaping to a private valuation of \$9 billion from \$5 billion only after a November raise, which fell outside the purview of the report's nine month period.)

Another difference? Whereas fintech upstarts in the U.S. and elsewhere have been picking off niche areas of to specialize in (e.g. lending, insurance, and wealth management), the Chinese giants are taking a broader approach to build "one-stop financial shops."

(<http://fortune.com/2017/01/23/china-fintech-invest-citi-report/>)