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China's Achievements in Innovation and Entrepreneurship
Developments of State Key Lab
Developments of Enterprise-based State Key Lab

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China's Achievements in Innovation and Entrepreneurship

Come with

"UNICORN" to look at

China's achievements in innovation and entrepreneurship

Premier Li Keqiang repeatedly stressed the need to push forward mass entrepreneurship and innovation and establish a vibrant "ecosystem" of mass entrepreneurship and innovation in line with the innovation-driven development strategy. In this favorable ecosystem, a group of well-recognized start-up "unicorns" have emerged with a globally impressive innovation achievements. Our website invites you to go with "UNICORN" and have a look at what we have achieved.

What is a "unicorn"?

In the venture capital circles, a "unicorn" refers to a fairly new startup company valued at over **$1 billion**. It is seen as an **important barometer** of the development of new growth driving force.

"Entrepreneurship" in China as seen from this latest list of "Unicorns"

List of "Unicorns"

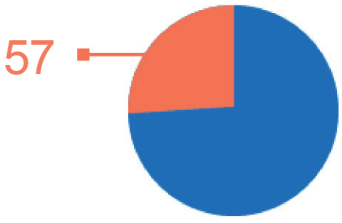
Issuing body:	CB Insights
Last updated on:	October 18, 2017
Shortlisted companies:	217
Total Valuation:	$750 billion

Clusters of Chinese "Unicorns" Appear on the List

Large Numbers

57 Chinese companies have been included in this year's list of Unicorns.

This makes China the country with the **second** largest number of unicorns, with a narrowing gap from the first-placed United States;



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Big Size

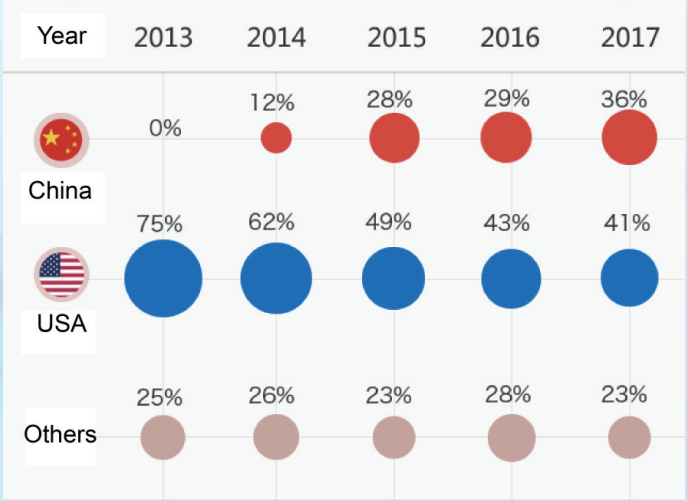
Four of the TOP10 giant unicorns are Chinese companies.

2 Didi Chuxing 滴滴出行
6 SpaceX
5 Airbnb
1 Uber
3 Xiaomi 小米
8 WeWork
4 China Internet Plus Holding 新美大
7 Palantir Technologies
9 Lu.com 陆金所
10 Pinterest

Fast Growth

Since 2013, "unicorn" companies have grown from scratch in China, with a rapid increase in their share of all unicorn companies in the world.

Distribution of new "Unicorns", 2013-2017



Data as of September 28, 2017

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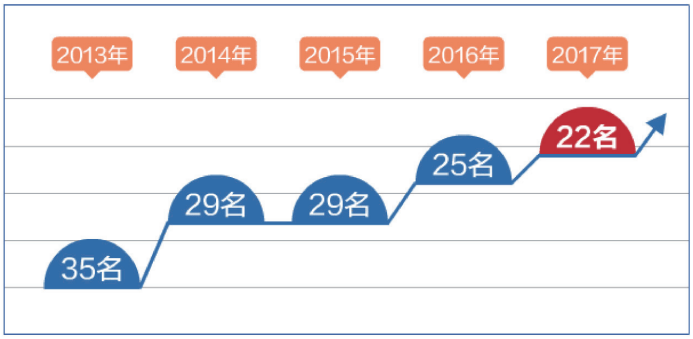
China's Innovation in Terms of the "Global Innovation Index"

"Global Innovation Index"

Issuing bodies:	World Intellectual Property Organization, Cornell University and INSEAD
Latest release date:	June 15, 2017
Selected number:	127 economies across the world
Selection criteria:	A total of 81 indicators in the 7 major categories of institutions, human capital and research, infrastructure, market sophistication, business sophistication, knowledge and technology output, and creative output.

China's rankings in the Past 5 Years



China

- Is the only middle-income country to rank among the TOP 25;
- Is the only middle-income country with a continuously narrowing innovation gap with developed economies; and
  Has joined the rank of global innovation leaders

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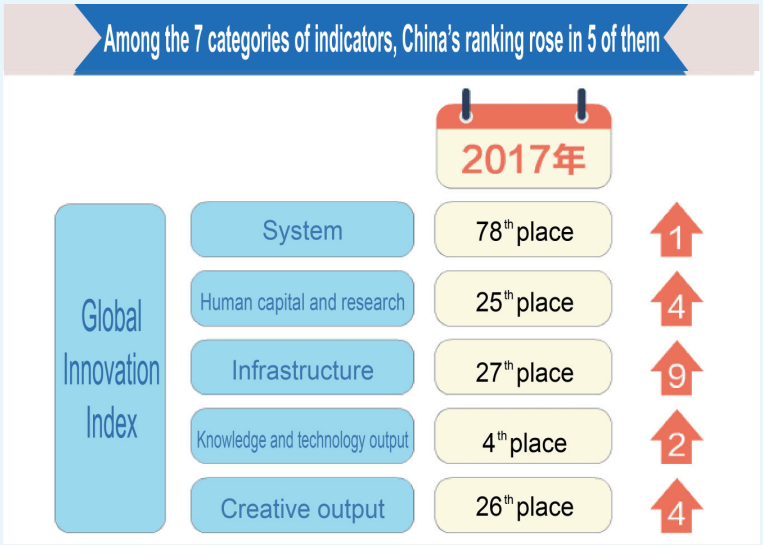
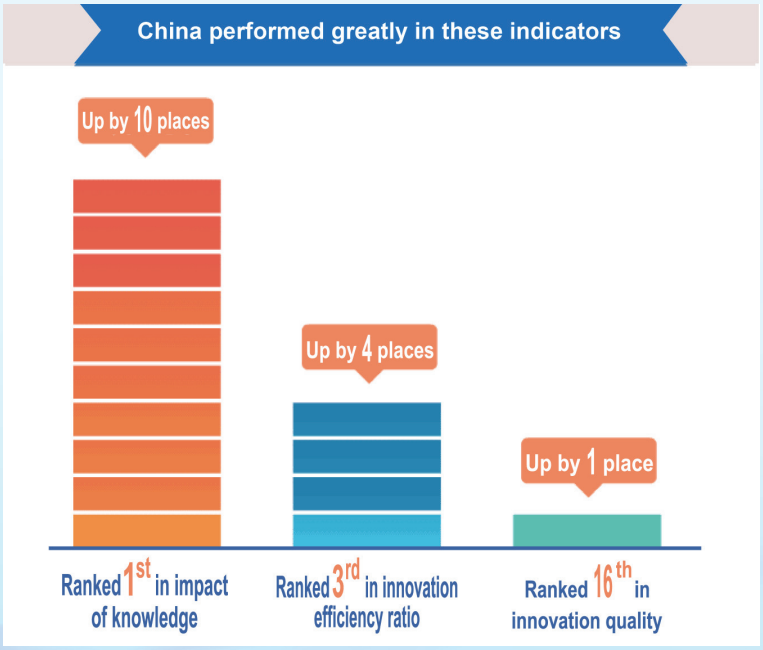




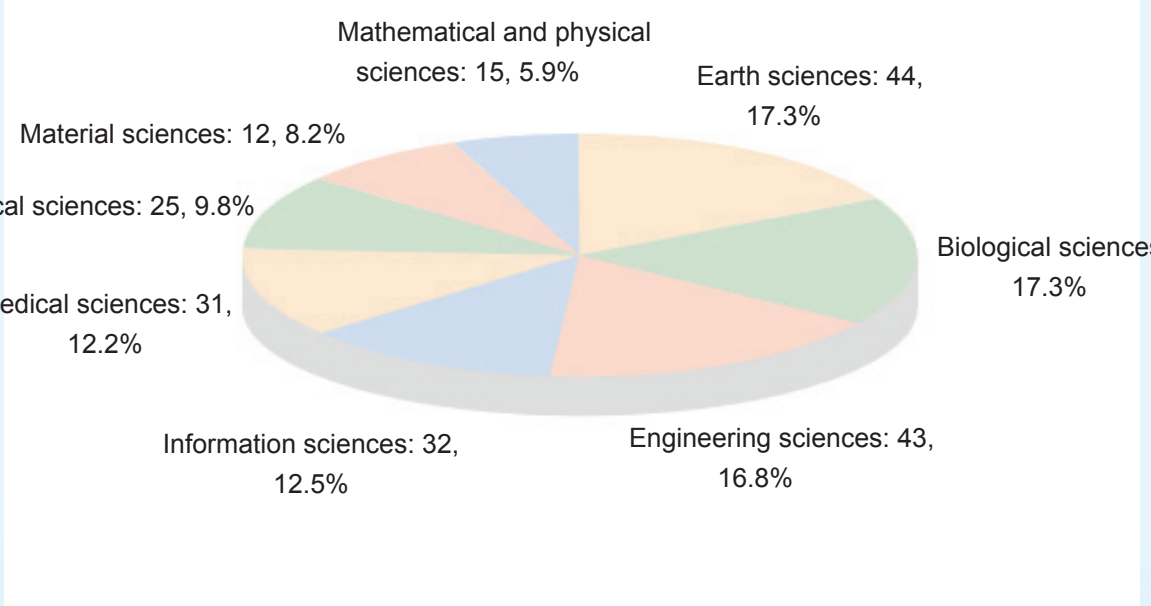
(Source: www.gov.cn, October 26, 2017)

Developments of State Key Lab

Thanks to the operation mechanism featuring openness, mobility, alliance and competition, the State Key Labs and pilot National Labs have conducted various forms of international academic exchanges and cooperation and played a significant role in advancing frontier science exploration and meeting major demands of the country.

I. Layout

By the end of 2015, there have been 255 national key labs under operation and 7 pilot national labs. The amount and proportion of 255 state key labs in 8 disciplines:



Pic. 1 The layout of the state key labs

II. Staff

In 2015, the state key labs and pilot national labs had altogether 33,417 staff, among whom 23,095 were fixed and 10,322 were mobile, respectively accounting for 69.1% and 30.9%.

III. Research

In 2015, the state key labs and pilot national labs co-hosted and co-managed various types of 40,220 projects, an increase of 7.0% compared with 2014 and acquired 19.78 billion yuan, an increase of 17.9% compared with 2014. Among those projects, 22,213 were national-level ones and the research funding reached 11 billion yuan, respectively up by 10.1% and 3.0% compared with the previous year. Moreover, the State Key Labs and pilot national labs acquired 8,897 invention patents; published over 81,900 science papers on domestic and overseas major academic journals and conferences, among which over 49,900 or 61.0% were indexed by SCI; 5,764 or 7.0% were indexed by EI (excluding SCI indexation); issued 28 papers on The Science and 309 papers on Nature and its series.

Chart 1 Invention patent authorization, new medicine certificate, software registration, academic works and standard formulation

Year	Invention patent authorization	New medicine certificate	Software registration	Academic works	Standard and norm
2015	8,897	11	450	566	57
2014	7,619	10	638	782	46
2013	7,497	9	629	669	30

Chart 2 Paper publication by the labs

Type	Important foreign publications			Important domestic publications			Conference papers	
	SCI citation	EI citation	others	SCI citation	EI citation	Others	International conferences	Domestic conferences
Amount	47,632	1,876	744	2,252	3,888	7,114	9,131	9,232

IV. Academic exchange and open sharing

In recent years, the labs have conducted various forms of international and domestic academic exchanges and cooperation. In 2015, the labs altogether took care of 1,087 projects with a research funding of 570 million yuan; held 446 global academic conferences and 482 national academic conferences; invited 5,739 reporters at academic meetings home and abroad; invited 7,623 foreign experts to China for lecturing and 3,980 got invited to deliver lectures in foreign countries. 36,549 were invited to academic meetings home and abroad, among whom 12,007 to international meetings.

Chart 3 Organization of large academic conferences

Type	Global	Regional	Bilateral	National
Visit	446	102	108	482
Share	39.2	9.0	9.5	42.3

In 2015, the labs have opened themselves to the public by conducting various forms of activities. By making full use of the research, talent and resource strengths, the labs have made a great deal of fruitful efforts in disseminating science knowledge, science popularization and science awareness improvement. In 2015, the labs organized 38,889 open activities like site visits, summer camps, science popularization lectures and student practices, opening themselves to college students and middle school students mainly, accounting for 29.5% and 29.1% respectively.

Chart 4 Open activities of labs

Form	Visit	S&T Summer Camp	Science Popularization lecture	Student practice	Others
Times	29,156	1,064	2,415	4,984	1,270
Share %	75.0	2.7	6.2	12.8	3.3

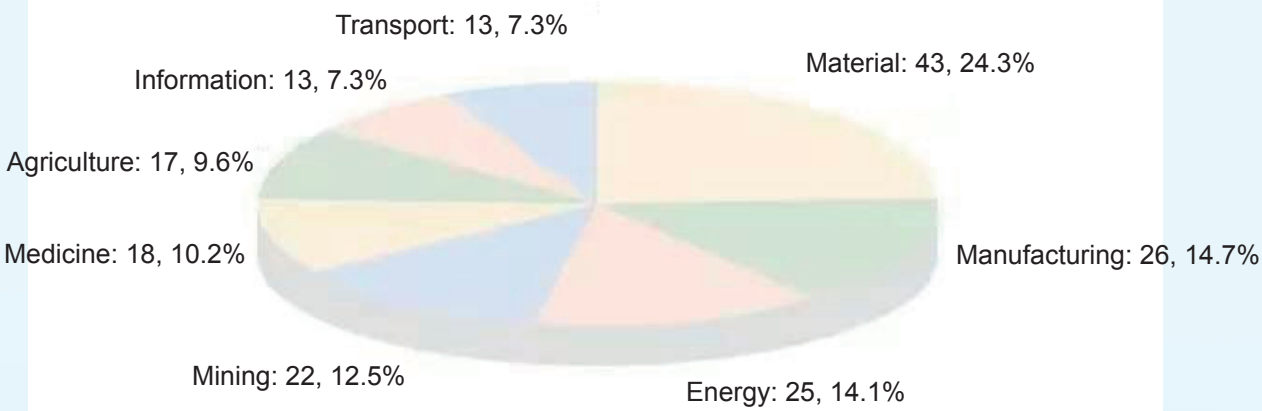
(Source: MOST, April 7, 2017)

Developments of Enterprise-based State Key Lab

The major missions of the enterprise-based labs are to meet the requirements of the social and industry development, conduct basic research and compete in frontier and generic technology research, formulate international, national and industrial standards, pool and produce outstanding talents and lead and drive industrial technical progress.

I. Layout

By the end of 2015, there were 177 such labs under construction and operation, which basically covered the main areas of national economy development and showed the general trend of technology innovation research. The 177 labs are distributed in 8 fields:



Pic. 2 The layout of the enterprise-based state key labs

II. Staff structure

By giving full play to their own strengths, the labs are dedicated to talent production and team building in light of the development of the labs and enterprises. By 2015, there were 17,033 staff, among which 15,193, or 89.2% were fixed and 1,840, or 10.8% were mobile.

III. Research

In 2015, the labs won 4.98 billion yuan of research fund, among which 330 were national-level ones under 973 and 863 Programs, accounting for 16.0% of the total. They have won 2.02 billion yuan of funding support, 40.5% of the total. Moreover, they have won 2,881 domestic invention patent authorizations, 145 foreign invention patent authorizations; 9 new medicine certificates, 9 production approvals and 317 software registration copyrights; formulated 607 international, national and industrial standards and 181 norms; edited 107 works; published 3,022 academic papers in journals home and abroad, among which 435 were cited by SCI, accounting for 14.4%, 562 cited by EI, 18.6%, 94 jointly cited by SCI and EI, 3.1%; published 457 international conference papers and 905 domestic ones.

IV. Academic exchange and open sharing

By 2015 the labs have conducted various forms of hi-level S&T exchange and cooperation, organized 156 international cooperation projects totaling a fund of 230 million yuan; hosted 43 global academic meetings and 117 national academic meetings; 499 been invited to international and domestic meetings for lecturing and invited 2,237 experts to China and 1,978 been invited to other countries for lecturing; 8,567 attended academic meetings home and abroad, among which 1,182 to international meetings. The international exchange and cooperation has facilitated and led industrial development and served as a boost to fast development of the labs.

Chart 5 Lab staff conducting academic exchanges

Category	Invited lecturers to the lab		Dispatched to lecturing		Meetings	
	Home	Abroad	Home	Abroad	Home	Abroad
Number of people	9,312	2,237	8,961	1,978	7,385	1,182

Chart 6 Organization of large academic conferences

Type	Global	Regional	Bilateral	National
Visit	43	22	9	117
Share %	22.5	11.5	4.7	61.3

(Source: MOST, July 7, 2017)