



# BEIHANG UNIVERSITY

# 北京航空航天大学

4 December 2015

37 Xueyuan Road, Haidian District, Beijing 100191, China  
<http://www.buaa.edu.cn/>



# BEIHANG UNIVERSITY – QUICK FACTS

## ◆ A central location

- Main campus located in Zhong Guan Cun Science and Tech Park, Haidian District in Beijing
- At the heart of higher learning and science and technology development

## ◆ New Campus: 100 hectares, in Shahe, Changping District





# BEIHANG UNIVERSITY – QUICK FACTS

## ◆ History

- Established in 1952

### **Beijing Institute of Aeronautics (BIA)**

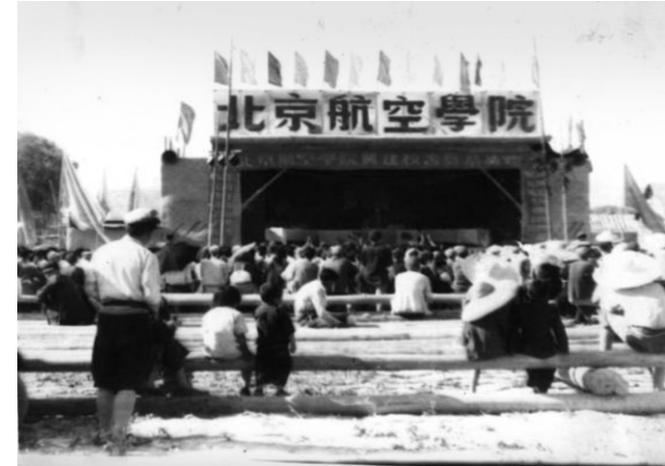
- *One of China's very first key universities*
- *Established through merger of the aeronautics departments of 8 top Chinese universities, incl. Tsinghua University, Tianjin University, Xiamen University, Sichuan University*

- 1988

### **Beijing University of Aeronautics and Astronautics (BUAA)**

- 2002

### **Beihang University (BUAA)**





# BEIHANG UNIVERSITY – QUICK FACTS

## ◆ Today's Beihang

- A leading research university in China
- Listed in all national initiatives for building first-class universities
  - **National 211 Project** – to develop key disciplinary areas (112 universities)
  - **National 985 Project** – to build world-class universities (39 universities)
  - **National 2011 Project** – to promote “**Collaborative Innovation**” and build **innovative capacity** through collaboration between universities, research institutes and industry





# BEIHANG UNIVERSITY – QUICK FACTS

## ◆ 189 Academic Programs

- *Undergraduate Programs: 61*
- *Master's Programs: 76*
- *Doctoral Programs: 52*

## ◆ Enrollment: 28,266

- *Undergraduate Students: 15,298*
- *Master Students: 8,867*
- *Ph.D Students: 4,101*
- *International Students: 2,000*

## ◆ 2,033 Faculty Members

- *Full Professors: 578*
- *Associate Professors: 815*

## ◆ Over 200,000 Alumni

## ◆ 27 Schools





# BEIHANG UNIVERSITY – QUICK FACTS

- School of Materials Science and Engineering
- School of Electronics and Information Engineering
- School of Automation Science and Electrical Engineering
- School of Energy and Power Engineering
- School of Aeronautical Science and Engineering
- School of Computer Science and Engineering
- School of Mechanical Engineering and Automation
- School of Transportation Science and Engineering
- School of Reliability and Systems Engineering
- School of Astronautics
- School of Instrument Science and Optoelectronics Engineering
- School of Software Engineering





# BEIHANG UNIVERSITY – QUICK FACTS

- School of Mathematics and Systems Science
- School of Physics and Nuclear Energy Engineering
- School of Chemistry and Environment
- School of Biological Science and Medical Engineering
- School of Economics and Management
- School of Humanities and Social Sciences
- School of Foreign Languages
- School of Law
- School of New Media Art and Design
- School of Political Science
- School of Advanced Engineering
- Sino-French Engineer School
- School of Advanced Studies in Humanities and Social Sciences
- Flight School (Pilot training)





# BEIHANG UNIVERSITY – QUICK FACTS

**Ranking:** main disciplines ranked top 10 nationwide

Disciplines	Ranking
Aeronautics and Astronautics	1
Instrument Science and Technology	1
Mechanics	4
Control Science and Engineering	4
Computer Science and Technology	4
Software Engineering	4
Biomedical Engineering	6
Management Science and Engineering	6
Transportation Engineering	7
Materials Science and Engineering	8
Power Engineering and Engineering Thermophysics	9
Mechanical Engineering	10
Information and Communication Engineering	10

*Evaluation by Chinese Ministry of Education, 2012*



# BEIHANG UNIVERSITY – QUICK FACTS

**Ranking:** 7<sup>th</sup> nationwide by national key disciplines

Ranking	University	Number of National Key Disciplines
1 <sup>st</sup>	Tsinghua University (THU)	22
2 <sup>nd</sup>	Peking University (PKU)	18
3 <sup>rd</sup>	Zhejiang University (ZJU)	14
4 <sup>th</sup>	Fudan University (FDU)	11
5 <sup>th</sup>	Shanghai Jiaotong University (SJTU)	9
	Harbin Institute of Technology (HIT)	
7 <sup>th</sup>	<b>Beihang University (BUAA)</b>	8
	Renmin University of China (RUC)	
	University of Science and Technology of China (USTC)	
	Xi'an Jiaotong University (XJTU)	
	Nanjing University (NJU)	



# BEIHANG'S MISSION

World Class University

**First-class  
education**

**Leading  
research  
and  
innovation**

**Strong  
global  
engagement**

**Our strategy - *Innovative, Interdisciplinary and International***



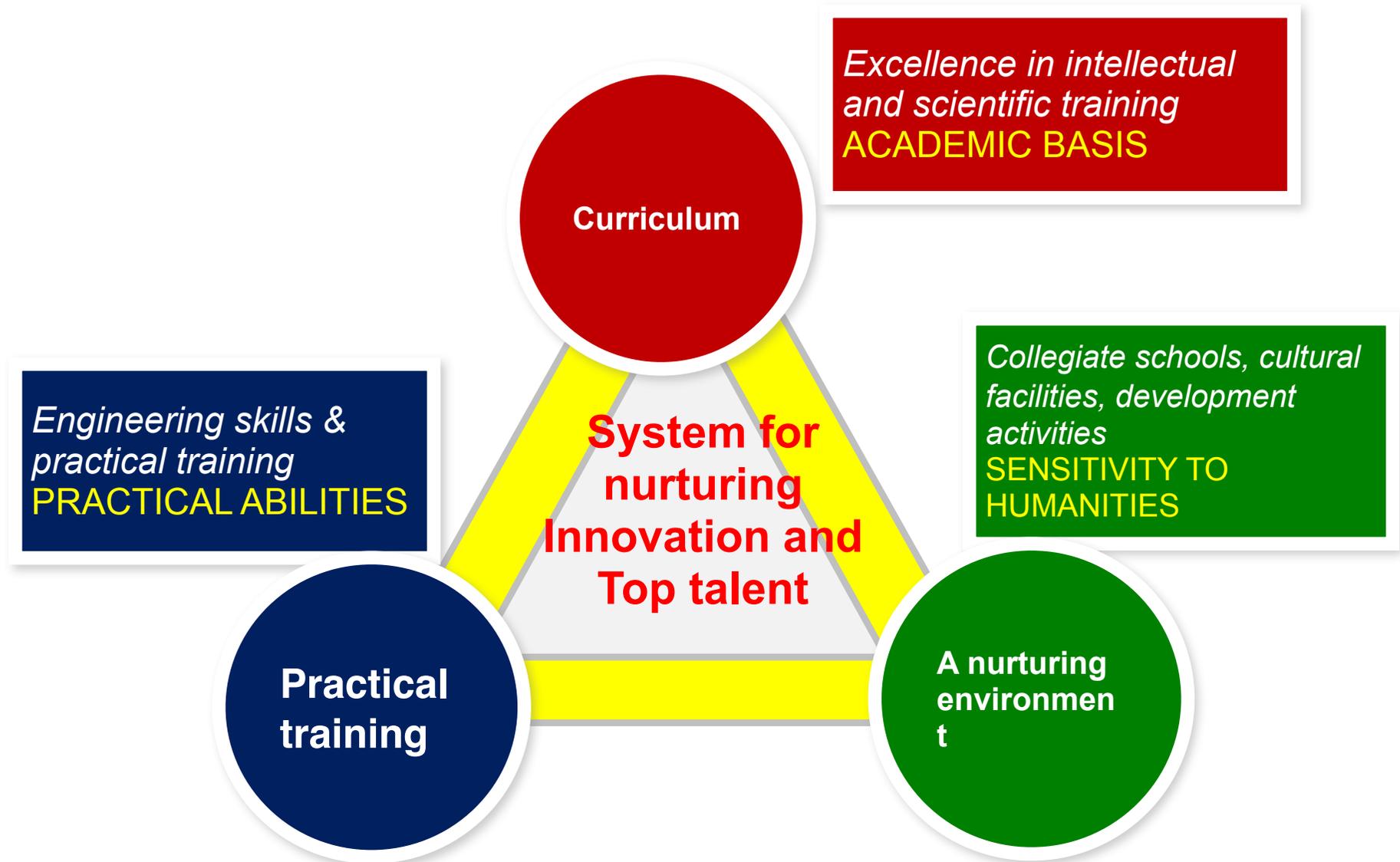
# OUR EDUCATION – STUDENTS

- ◆ Recruits the top 0.3% students in China
- ◆ One of top 10 universities in terms of attracting finest students
- ◆ Employment rate:
  - *First degree employment rate: 98%*
  - *Postgraduate degree employment rate: 99%*
- **How do we provide the best students with the best education?**





# OUR EDUCATION – TALENT NURTURING SYSTEM





# OUR EDUCATION – PRACTICAL ENDEAVOR

- ◆ **Nurture Innovation, Creativity & Entrepreneurship**
  - **"Fengru Cup" Innovation Competition**
    - *Launched in 1991*
    - *24 annual competitions held*
    - *49,210 students participated with 19,917 innovation projects*
  - **Beihang Aeromodel Team**
    - *Championship of the 2012 SAE Aero Design Competition, Atlanta, USA*
    - *1st in Design of Air Cargo Challenge 2013*
    - *Seven 1st prizes in China Aeromodelling Design Challenge 2015*
  - **"Challenge Cup"**
    - *The only university in China to win top prize for 13 consecutive years*



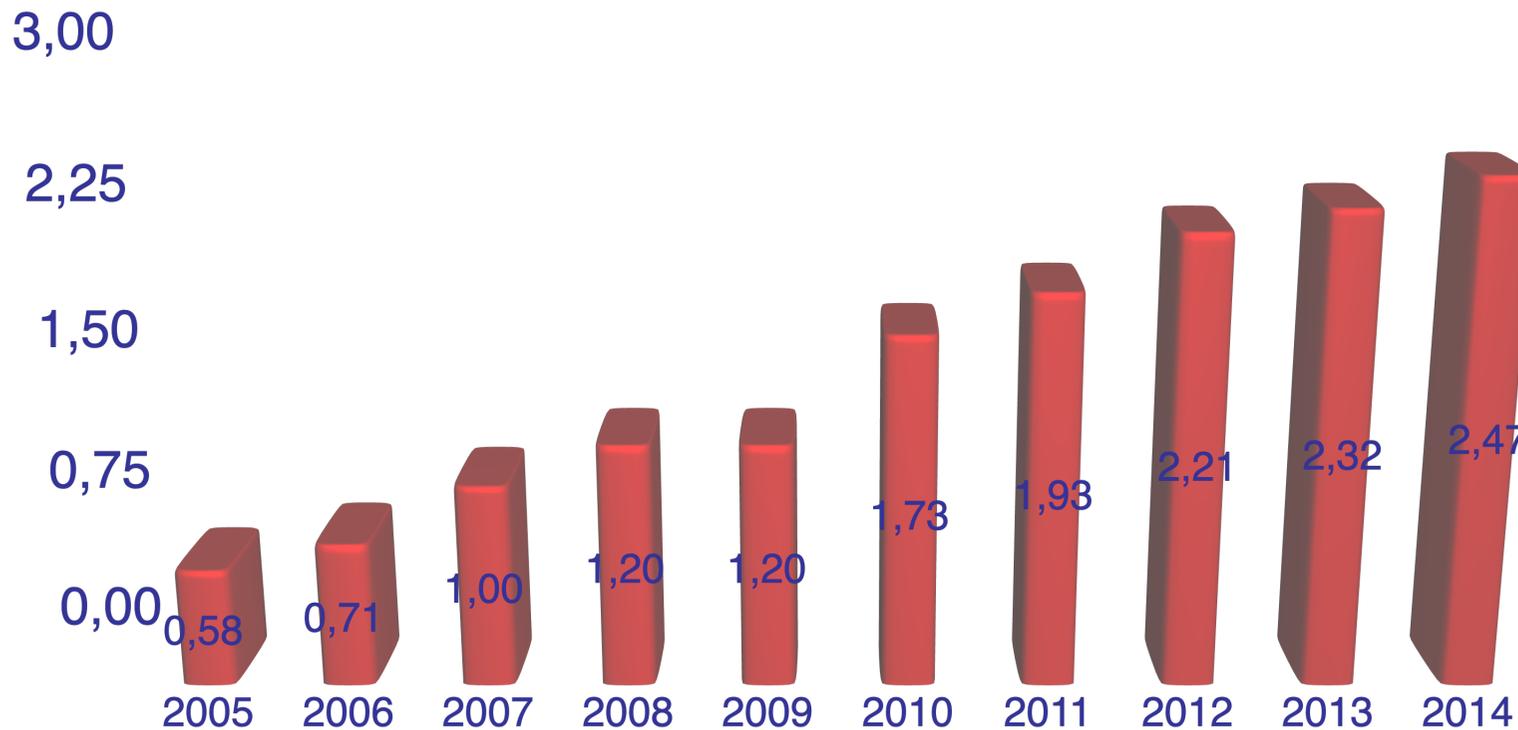


# OUR RESEARCH – FUNDING & AWARDS

## ◆ Research Funding

➤ Funding from industry: Over 50%

**Total Research Funding: in billion RMB**  
*Per capita funding: RMB 1.2 million (No. 1 among Chinese universities)*





# OUR RESEARCH – FUNDING & AWARDS

- ◆ **Leading research and innovation**

*in engineering and sciences, with a special focus on aerospace and informatics*

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**National Scientific and Technological Progress Awards**  
(2004-2014)

**1st Prize: 3**

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**National Technological Invention Awards**  
(2004-2014)

**1st Prize: 6**  
(Nationwide in Total 12)

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**National or Ministerial Awards in Total:**

**1264**

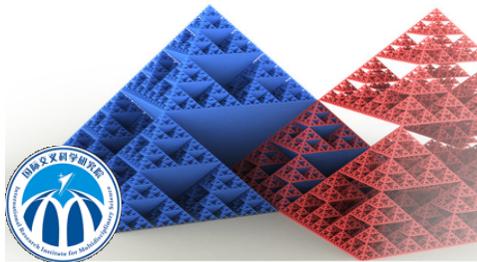
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# OUR RESEARCH – MECHANISM

## ◆ Innovation Mechanism

- **International Research Centres for Multidisciplinary Science (IRC)** *targeting cutting-edge interdisciplinary research*
- **National Laboratory for Aeronautics and Astronautics (NLAA)** *fulfilling national strategic needs*
- **Beijing Advanced Industrial Technology Institute (BAITI)** *boosting technology transfer*





# OUR RESEARCH – MECHANISM

## ◆ International Research Centres for Multidisciplinary Science (IRC)

– 11 research institutes in operation under 11 PIs

– 108 researchers  **500 by 2020**

- *Biological & Nature-Inspired Materials – Prof. Robert O. Ritchie*
- *Big Data – Prof. Fan Wenfei*
- *Clean Energy Systems and Materials – Prof. John W. Holmes*
- *Implanting & Interventional Medical Device – Prof. Cheng-Kung Cheng*
- *Nuclei and Particles – Prof. Isao Tanihata*
- *Soft Matter Physics & Applications – Prof. Masao Doi*
- *Spintronics – Dr. Weisheng Zhao*
- *HEEGER Beijing Research and Development Center – Prof. Alan J. Heeger*
- *Magnetism & Magnetic Materials – Prof. JMD Coey*
- *Integrated Computational Materials Engineering – Prof. Zhimei Sun*
- *Space Environment Science and Technology – Prof. Malcolm Wray Dunlop*

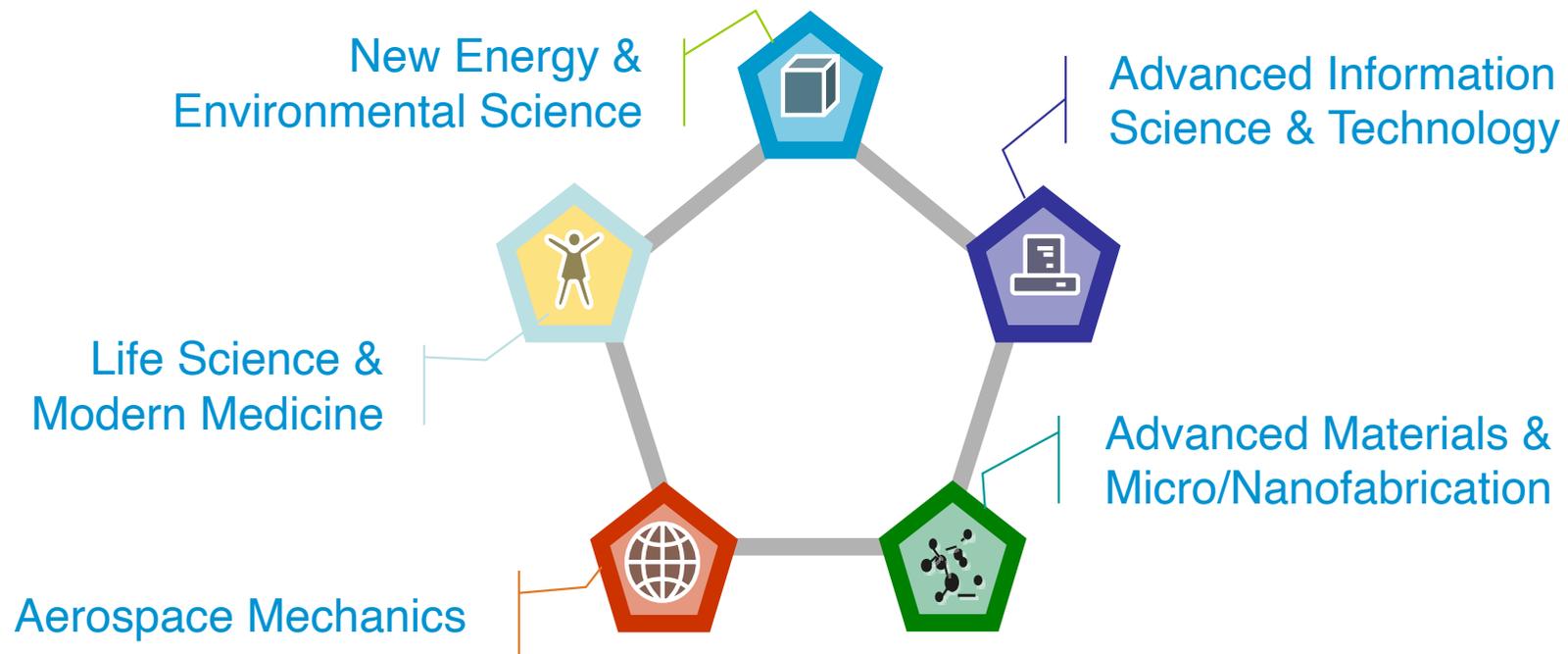




# OUR RESEARCH – MECHANISM

- ◆ **International Research Centres for Multidisciplinary Science (IRC)**

- Five Major Scientific Fields of Strategic Focus:





# OUR RESEARCH – BEYOND THE IVORY TOWER

## ◆ Collaborative innovation

- With industry
  - *Co-founded a number of Consortia on general aviation, cloud computing, smart city..*
- With Beijing government & other parts of China
  - *Collaboration with Guangzhou, Shenzhen, Shunde governments, etc.*
  - *General aviation, Internet technology, new energy, bio-pharmaceuticals, advanced manufacturing*

## ◆ Beihang Sci & Tech Park

- Credited Class A (excellent) in China
- 238 enterprises, total revenue expected to reach ¥15 billion by the end of 2015





# GLOBAL ENGAGEMENT

## ◆ “UPS” Internationalization Plan

### ■ U: University – University

- Bilateral and multilateral partnerships
- Joint research and education institutions/ centres

### ■ P: Professor – Professor

- Faculty and staff exchange
- Joint research
- Joint supervision of graduate students

### ■ S: Student – Student

- Exchange, double degree, summer programs, internships, etc.

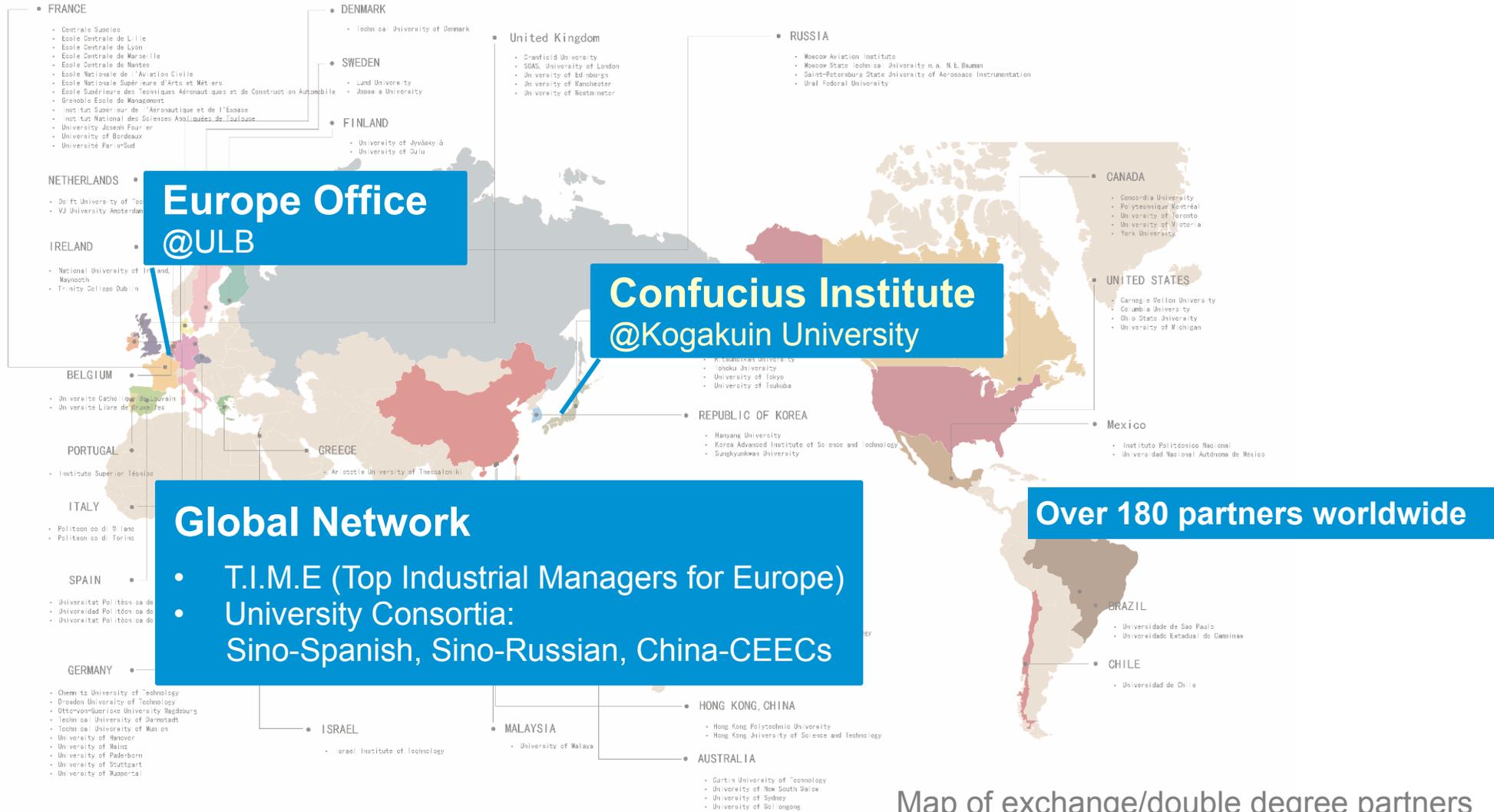


UPS 2020 unveiled in December, 2014



# GLOBAL ENGAGEMENT

## ◆ Partnership



Map of exchange/double degree partners



# GLOBAL ENGAGEMENT

## ◆ BEIHANG GLOBAL CAMPUS

*Promoting distributed globalized learning,  
regardless of time or geographical boundaries*

*Educating global citizens with effective  
communication skills across disciplines & cultures*



### ▪ Joint education programs

- *Sino-French Engineer School*
- *Confucius Institute at Kogakuin University (Tokyo)*



# GLOBAL ENGAGEMENT

- **Example: Sino-French Engineer School**

(or Ecole Centrale de Pékin)

- Partners: Beihang and the Group of Ecoles Centrales
- Year of establishment: 2005
- A highly selective program that recruits only the best students
- Unique 6.5-year program that aims to train the best ingénieurs généralistes through combining best engineering training practice of China and France
- Granting triple degrees:
  - *Bachelor of Science from Beihang University*
  - *Master of Science from Beihang University*
  - *The French Diplôme d'ingénieur*





# GLOBAL ENGAGEMENT

## ◆ Beihang Global Campus

### – Beihang International Summer University

- *"Fengru Cup" Competition*
- *Beihang International Summer School*
- *International Graduate Summer School in Aeronautics & Astronautics*
- *International Collegiate Design and Innovation Competition*
- ...

- *Undergraduate Study Abroad Program*
- *Summer programs organised in collaboration with partner universities*
- ...





# GLOBAL ENGAGEMENT

## ◆ International Students & Programs:

### – International Students:

- *2,000 International students from 90 countries*
- *One of the largest international student populations in engineering studies*

### – International Programs

- *Among the first universities to offer degree courses in the English language in China*
- *All courses available in English at the postgraduate level*
- *7 undergraduate programs offered in English*

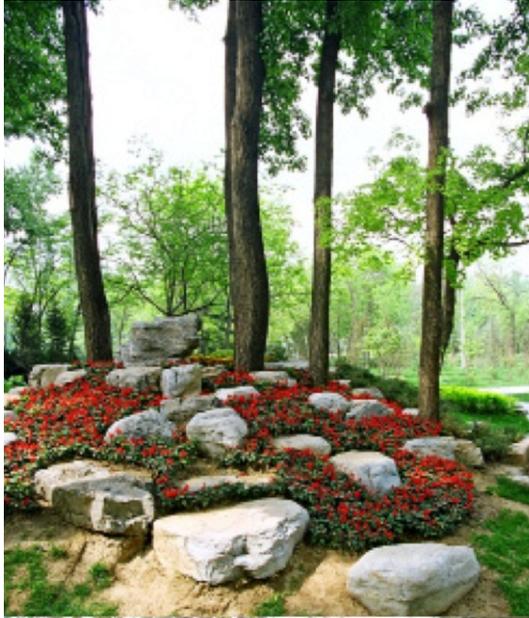
### – U.N. Regional Centre for Space Science and Technology Education

### – APSCO Education and Training Center in China





# CAMPUS & FACILITIES





# CAMPUS & FACILITIES



**THANK YOU**