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Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Département fédéral de l'économie,  
de la formation et de la recherche DEFR  
**Secrétariat d'Etat à la formation,  
à la recherche et à l'innovation SEFRI**

# Swiss-China cooperation in innovation



**Dr. Beatrice Ferrari, Head Bilateral Relations  
State Secretariat for Education, Research and Innovation**

**19 June 2019**

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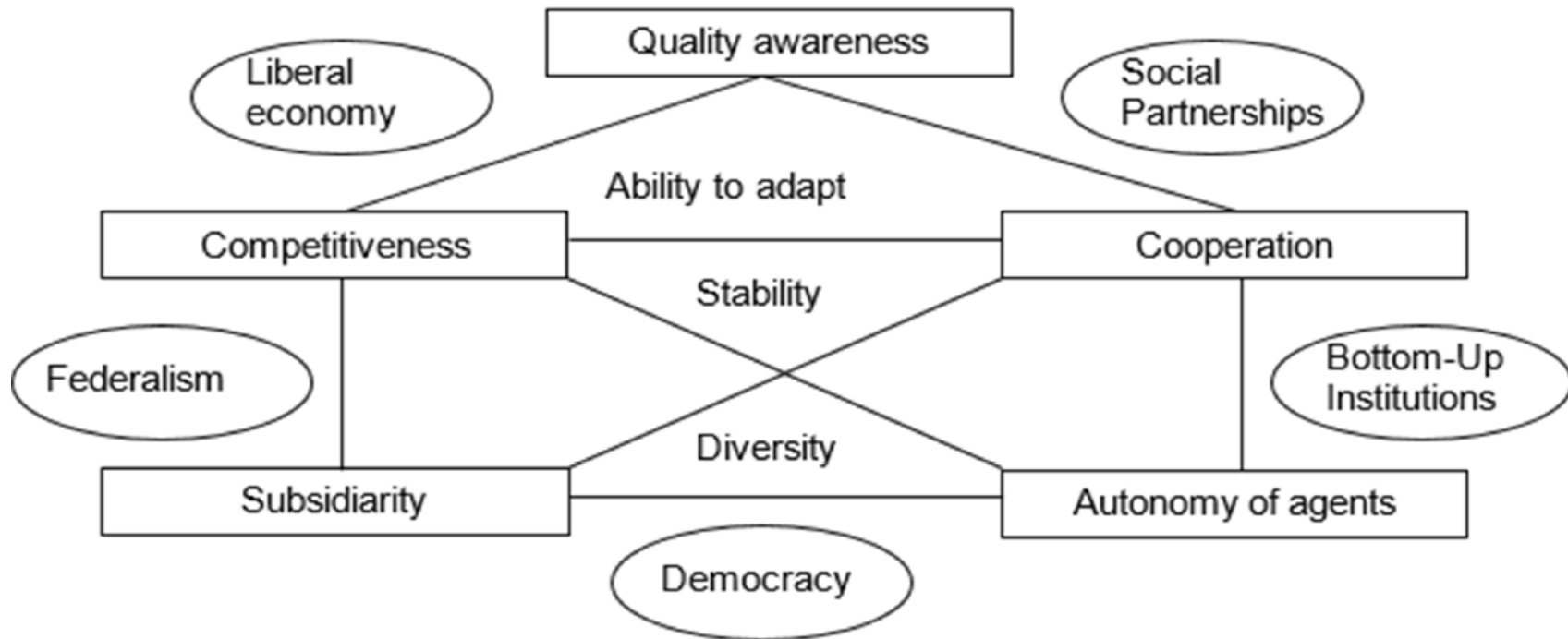


From manufacturers to investors, from education and policy makers to customers, from decision makers to the ordinary man in the street... each and every body in this country pulls together and understands that they are **all part of the same team** when it comes to setting up **innovation-friendly framework conditions**.

Deutsche Bank Research

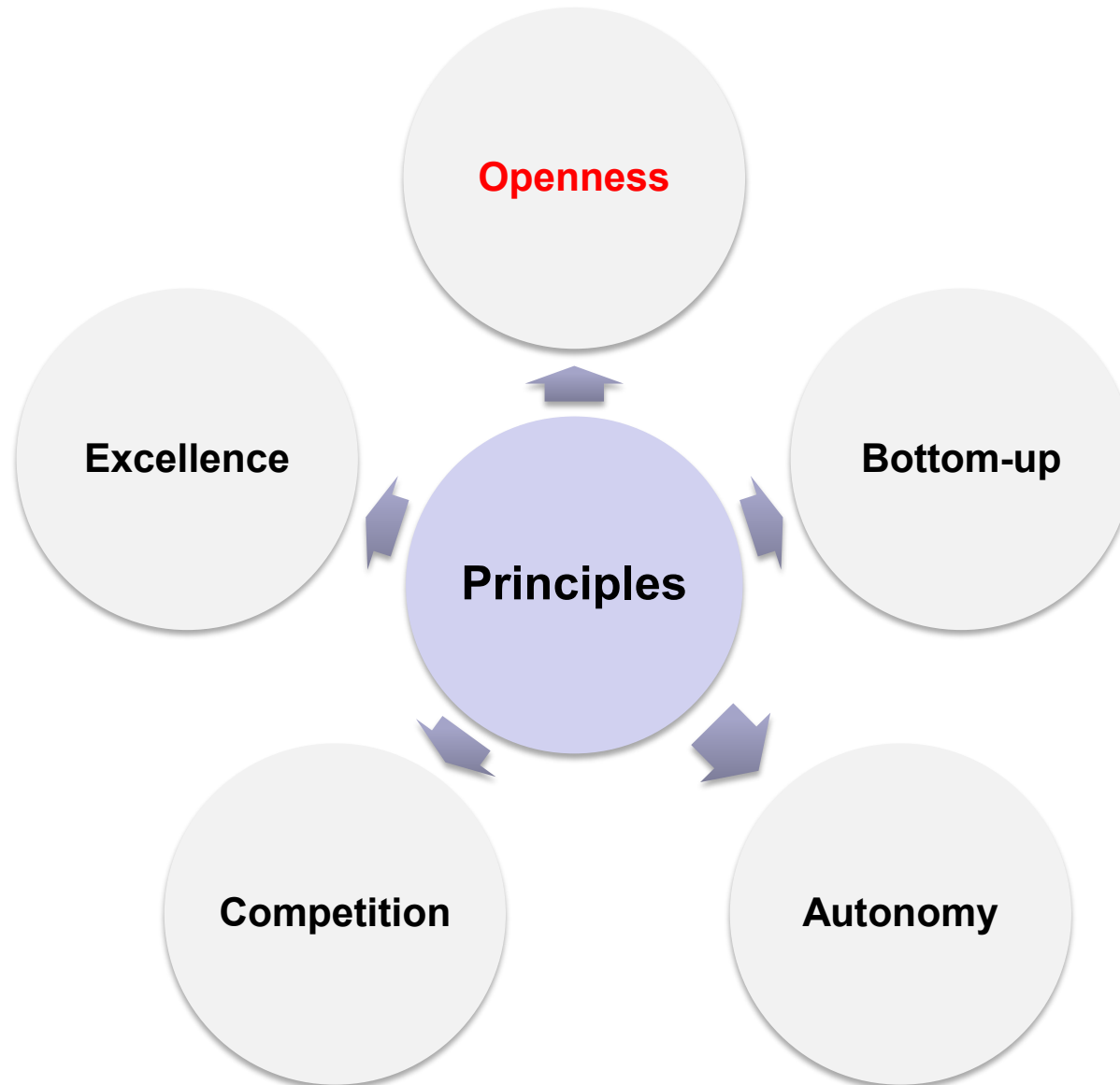


# Swiss Innovation System





# Principles and framework conditions





# New international strategy - Vision

## 1. Openness is good for competitiveness

*Switzerland continues to occupy a **globally leading position in education, research and innovation.***

*Key factors for implementing this vision **include committed and internationally active ERI actors and the required framework conditions as well as financial resources.***

## 2. International engagement is a strenght

*Through that, they strengthen their ability and willingness to learn, to conduct research, and to innovate and be creative. They promote the exchange of ideas and **contribute to the development of solutions to global problems.***



# Guidelines and objectives (1)

**Continuous creation of optimal framework conditions for Swiss ERI actors to freely engage in international activities**

## **Objective 1: Accessibility**

Infrastructures, programmes and services abroad are open to Swiss actors and help them to safeguard and improve the quality of their own services.

## **Objective 2: Mobility**

Switzerland makes use of the available opportunities for the cross-border promotion of young professionals and scientists. It promotes transnational research and learning mobility as well as the international recognition of Swiss educational qualifications and extracurricular practical experiences.





## Guidelines and objectives (2)

**Strengthening Switzerland's international attractiveness  
as one of the world's leading countries in education,  
research and innovation**

### **Objective 3: Competitive, connected and informed**

Switzerland is and will remain a high-quality focused, globally renowned and competitive location for education, research and innovation. The Swiss ERI system knows how to assess the relevance of nascent global trends and how to proactively use them.

### **Objective 4: Attractive**

Switzerland is globally perceived as an attractive location for high-quality research institutions and innovation-based companies.



# China



Li Wei

*Elsewhere I would just follow the tracks, but come on, I'm in China!  
Maybe this stage will never come again.*



# Brain Gain: Tech Graduates return to China



Source: South China Morning Post

- 2.5 million Chinese students educated overseas returned home
- 432,500 (2016) up 58% from 2012!

## Sample

- China has goal to become global AI leader by 2030, but..
- Acute shortage of AI talents!

## Main drivers behind trend:

- faster growing salaries
  - more opportunities
  - a sense of belonging to China
  - invisible promotion barrier for Asians in the US
  - Trump's tighter immigration policy
-



# Chinese Innovation Policy



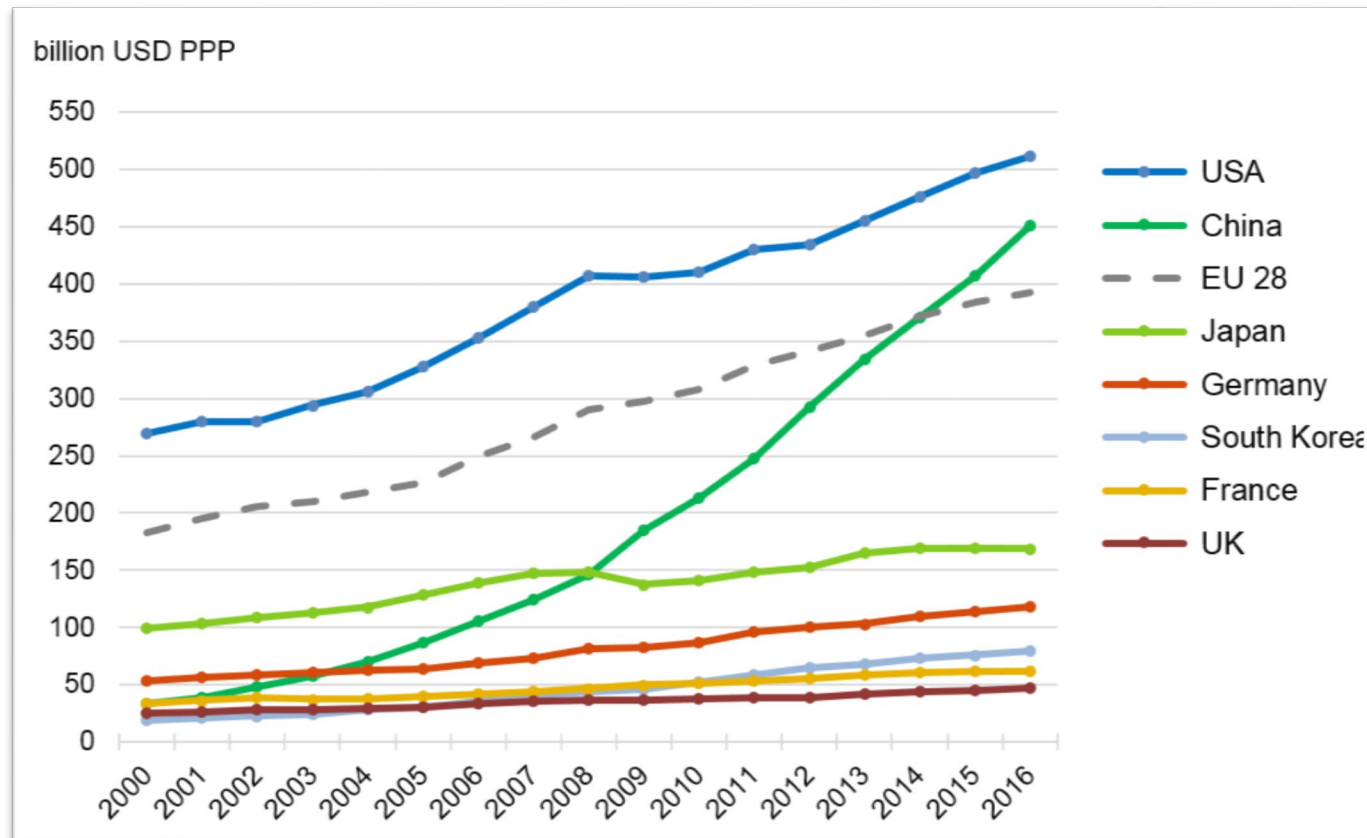
Source: Le Nouvelliste

## **Prime Minister Li Keqiang, 2015:**

Made in China 2025, aim is to pursue innovation-driven development, and have national champions in 10 high-tech industries...



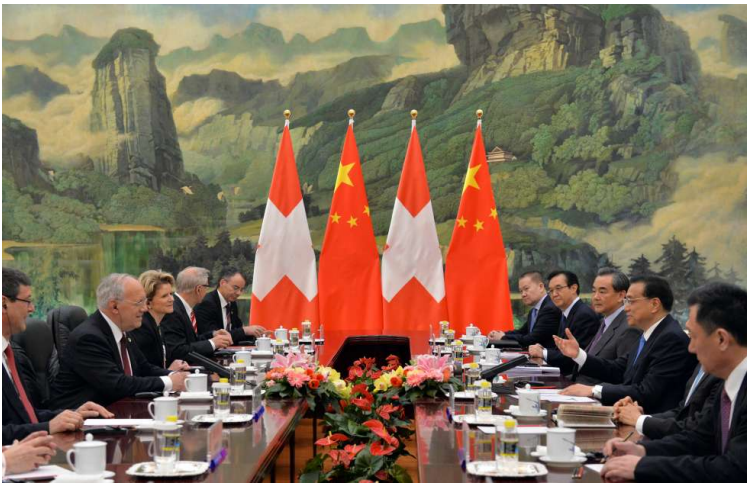
# R&D spending, 2000-2016



Source: OECD Main Science and Technology Indicators Database, February 2018 / Chart: SERI

China continued its steady increase in R&D intensity. Having overtaken the EU in R&D intensity in 2013 and in raw R&D spending in 2015, China spent 15% more on R&D than EU countries spent collectively in 2016.

# Long-standing collaboration between Switzerland and China



- S&T Agreement in 1989
  - Bilateral programme since 2007
- Two official dialogues: in science and technology and in higher and professional education
  - FTA since 2014
- Strategic Innovative Partnership 2016
  - Many official visits in both countries



# Science and Technology Cooperation Programme

**300+**  
**projects**

**ETH Zurich is Leading House for bilateral collaboration**

**Swiss National Science Foundation works with NSFC**

## **Goal:**

- instruments to facilitate collaborations
- Flexible instruments, matching the needs of Swiss stakeholders
- Facilitate mobility and exposure for young people





# swissnex China since 2008



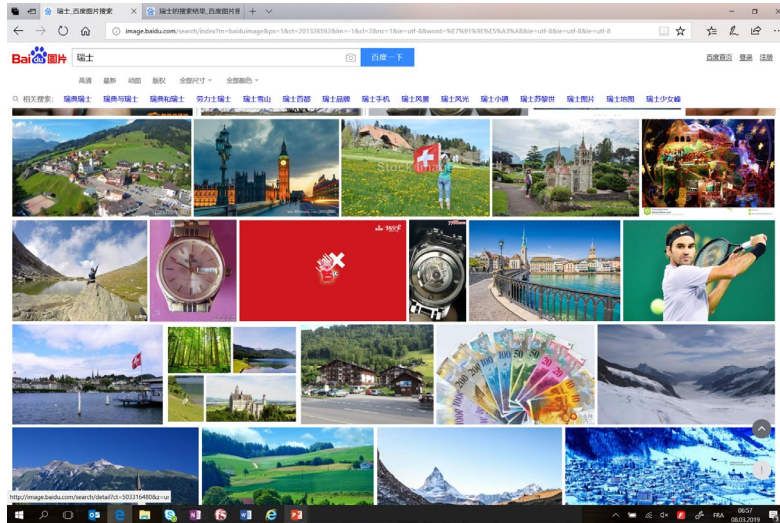


# Swiss-China exchanges

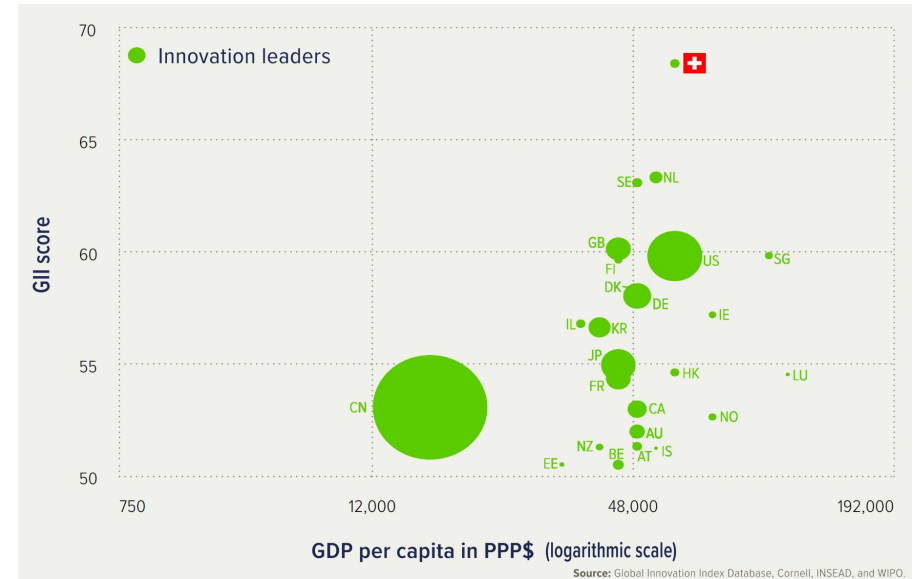
- **200 + agreements between universities**
- **Chinese = #1 community of non-neighbour foreign students**
- **China = #1 partner in Asia for economy and science**
- **Large investments of Swiss companies in R&D in China**



# Innovation and image

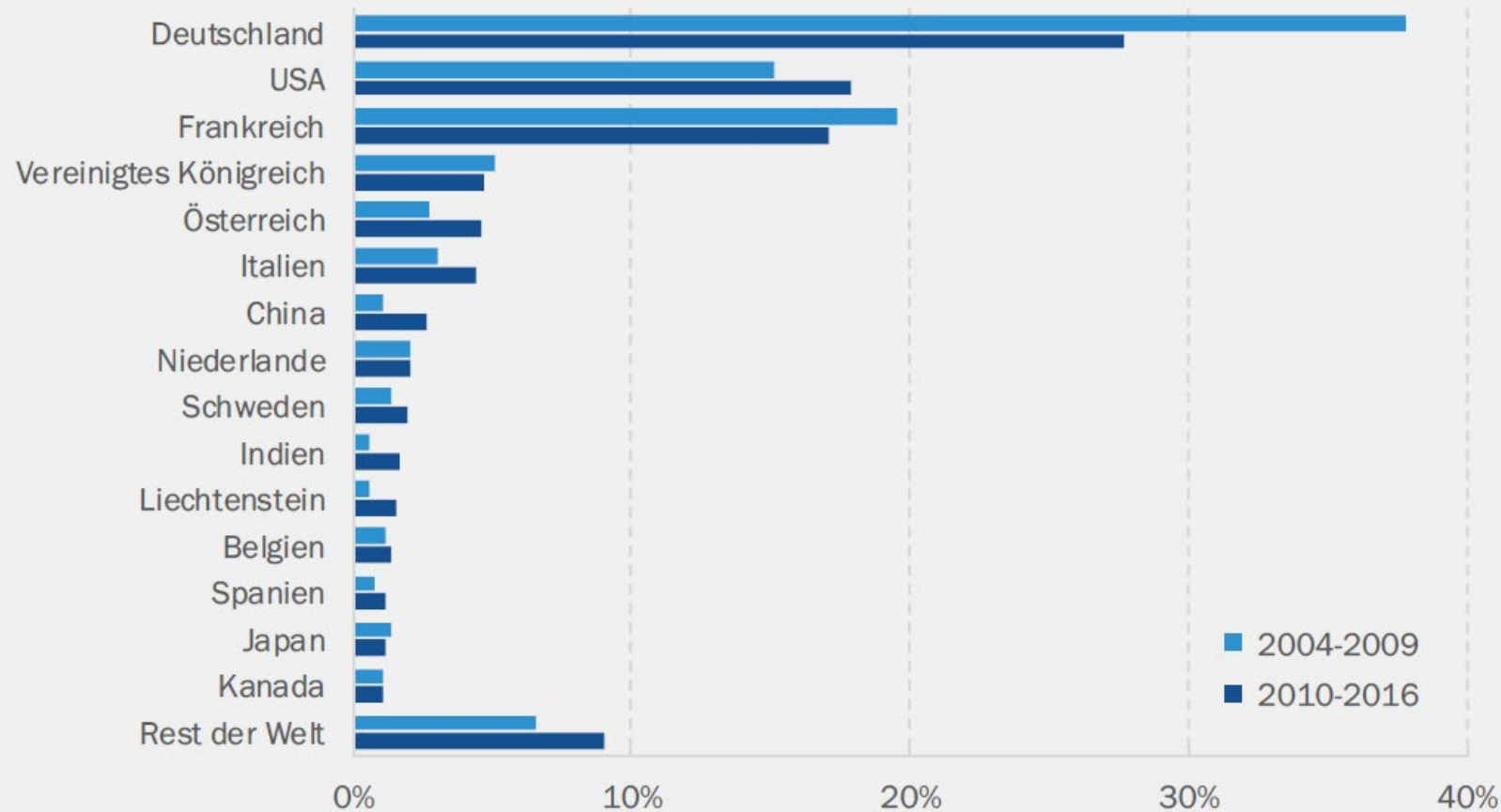


Source: digitalswitzerland



# International collaboration

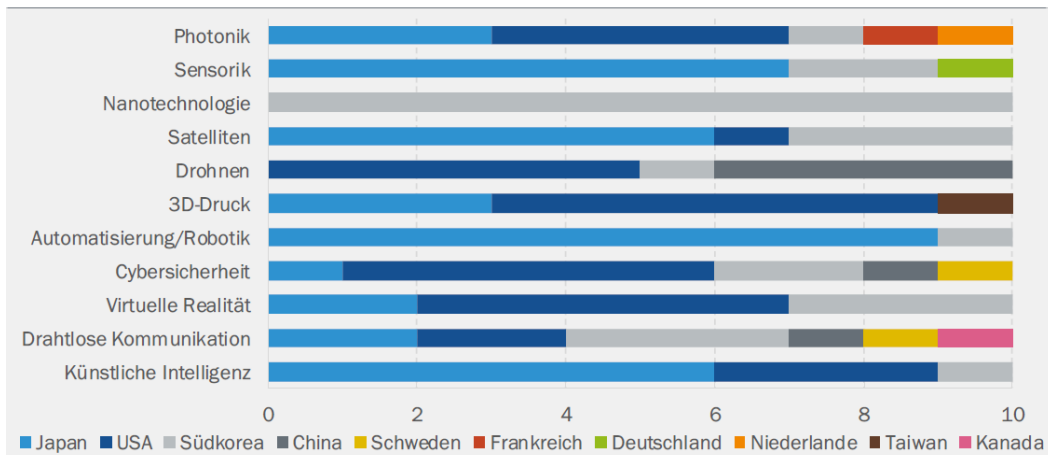
**Abbildung 19: Anteil von Ländern an grenzüberschreitenden Patentanmeldungen mit Schweizer Beteiligung, 2004-2009 bzw. 2010-2016, in %**



Prognos: Internationale Innovationskooperation der Schweiz, 2019

# China's potential

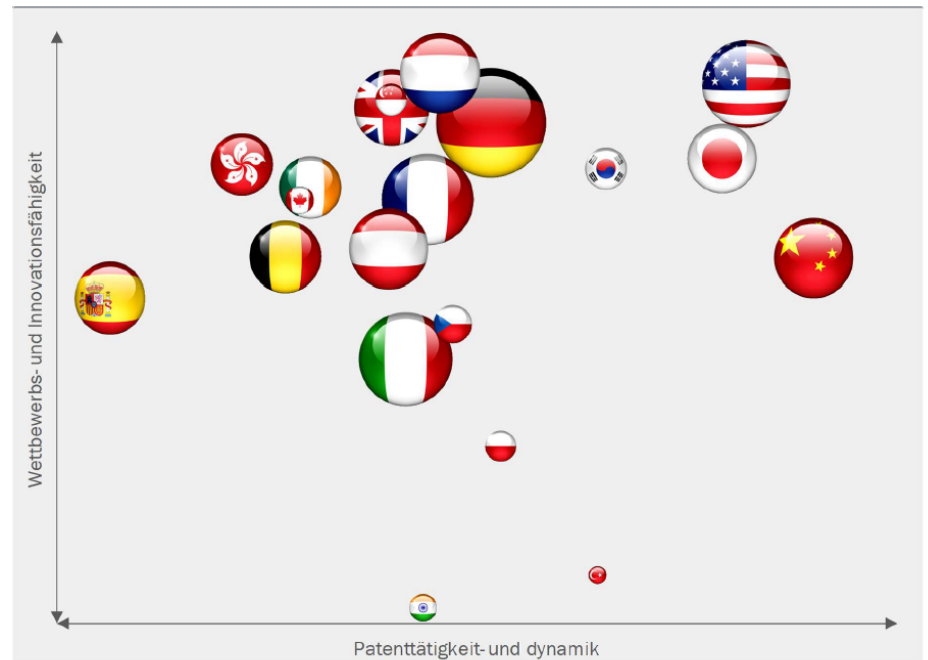
**Abbildung 17: Zukunftstechnologien: Woher kommen die Innovationsführer?**  
Nationalität der jeweils zehn technologisch führenden Unternehmen bzw. Institute nach elf Technologiebereichen, Anteil in %



Quelle: Sørensen, 2018

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**Abbildung 18: Zusammenfassung der Informationen zu ausgewählten Ländern**  
Kombinierte Indizes zu den Daten der Zukunftsfähigkeit von Ländern (Kugelgrösse ist abhängig vom jeweiligen Handelsvolumen mit der Schweiz)



Lesehilfe: Je grösser die Kugel, umso mehr Handel betreibt die Schweiz mit dem jeweiligen Land. Ganz rechts stehen Länder, die sehr viele Patente anmelden und/oder ihre Patentanzahl in den letzten Jahren sehr stark steigern konnten. Ganz oben stehen Länder, die bei Global Competitiveness Index und/oder beim Global Innovation Index sehr gut abschneiden.

Quelle: Global Competitiveness Index, Global Innovation Index, Europäisches Patentamt

© Prognos 2018



# Trend / innovation scouting

**MIGROS**

**arma**suisse

**BOBST**

**SWISS POST**

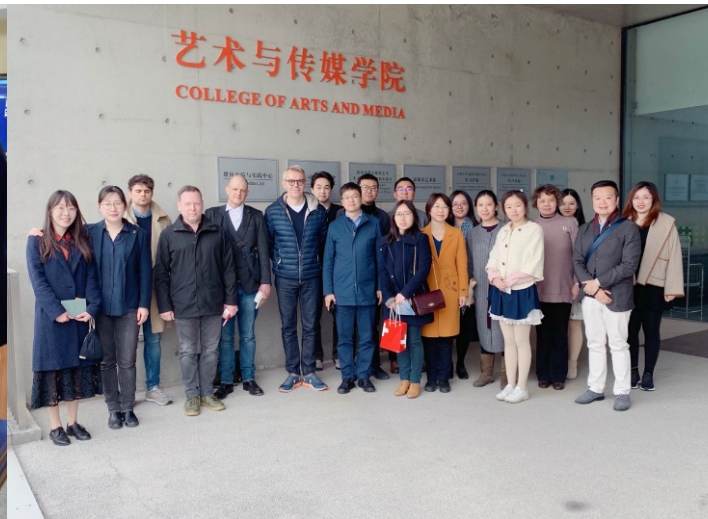
**YPSOMED**  
SELF CARE SOLUTIONS



  
**swisscom**

 **Debiopharm Group**  
WE DEVELOP FOR PATIENTS

 **BUHLER**



# “Future of Money” series – Brilliance in Fintech



Blockchain  
AI in Wealthtech  
InsurTech / RegTech  
Cybersecurity  
Sustainable Investing  
Big Data



9 Fintech events in 18 months + Venture Leaders HK

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# Platform for startups

150+ startups introduced to Chinese ecosystem

**Venture Leaders China 2019**

 <b>BEEKEEPER</b>	 <b>EXPLORIS</b>	 <b>FLYBOTIX</b>	 <b>holo one</b>	 <b>IDUN Technologies</b>
<b>Beekeeper</b> Daniel Sztutowojner	<b>Exploris Health</b> Peter Ruff	<b>Flybotix</b> Samir Bouabdallah	<b>holo one</b> Dominik Trost	<b>IDUN Technologies</b> Simon Bachmann
 <b>LORIOT</b>	 <b>Lymphatica</b>	 <b>piavita</b>	 <b>tomplay</b>	 <b>TOUCHLESS AUTOMATION</b>
<b>LORIOT</b> Yannik Kopp	<b>Lymphatica Medtech</b> Marco Pisano	<b>Piavita</b> Dorina Thies	<b>Tomplay</b> Alexis Steinmann	<b>Touchless Automation</b> Maurizio Migliore

[www.venture-leaders.ch](http://www.venture-leaders.ch)





# Switzerland Innovation & Innosuisse





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谢谢