

luxexecutivesummit 2018

Tokyo • October 17

Pinching the Funnel

How China is disrupting your innovation and growth strategies

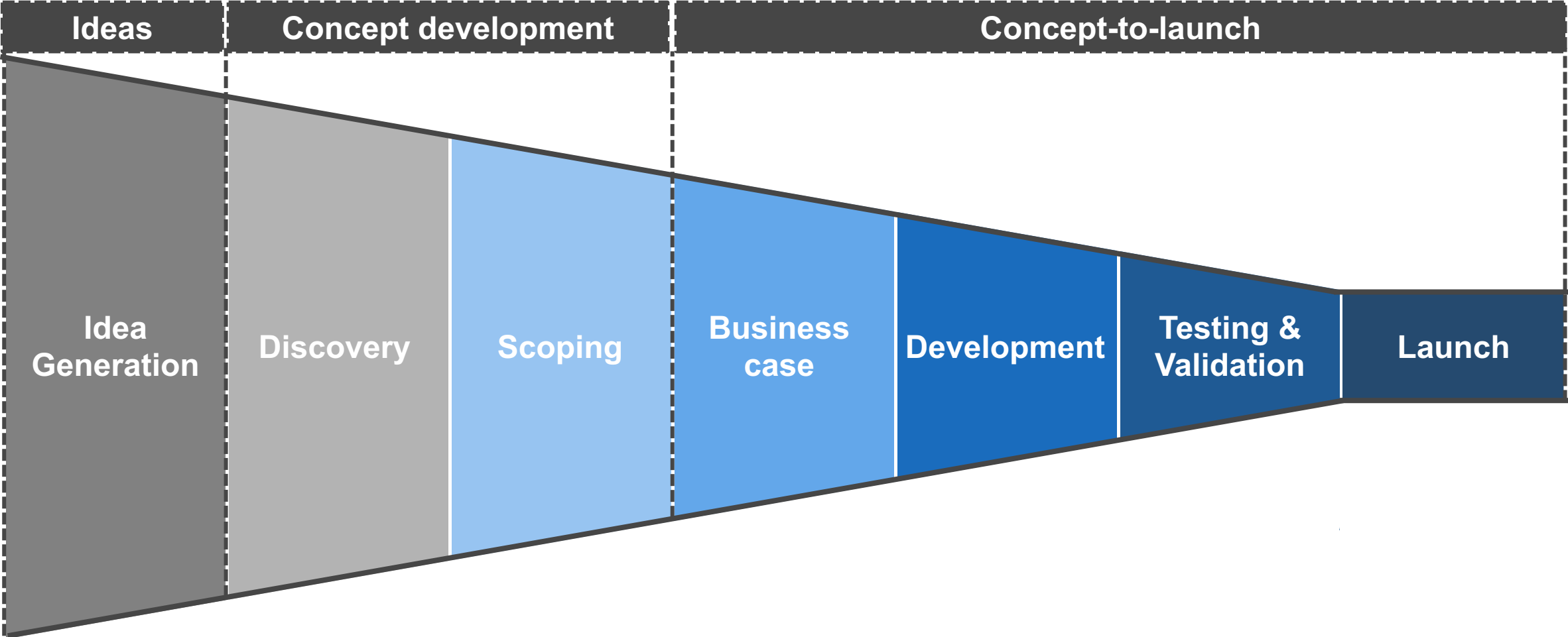
Presenter: Yuan-Sheng Yu, Senior Analyst, Lux Research



Agenda

- 1 | **Disrupting the innovation process as you know it**
- 2 | **China's rise as a global leader in key transformational technologies**
- 3 | **Your strategic playbook to counter China's disruption**

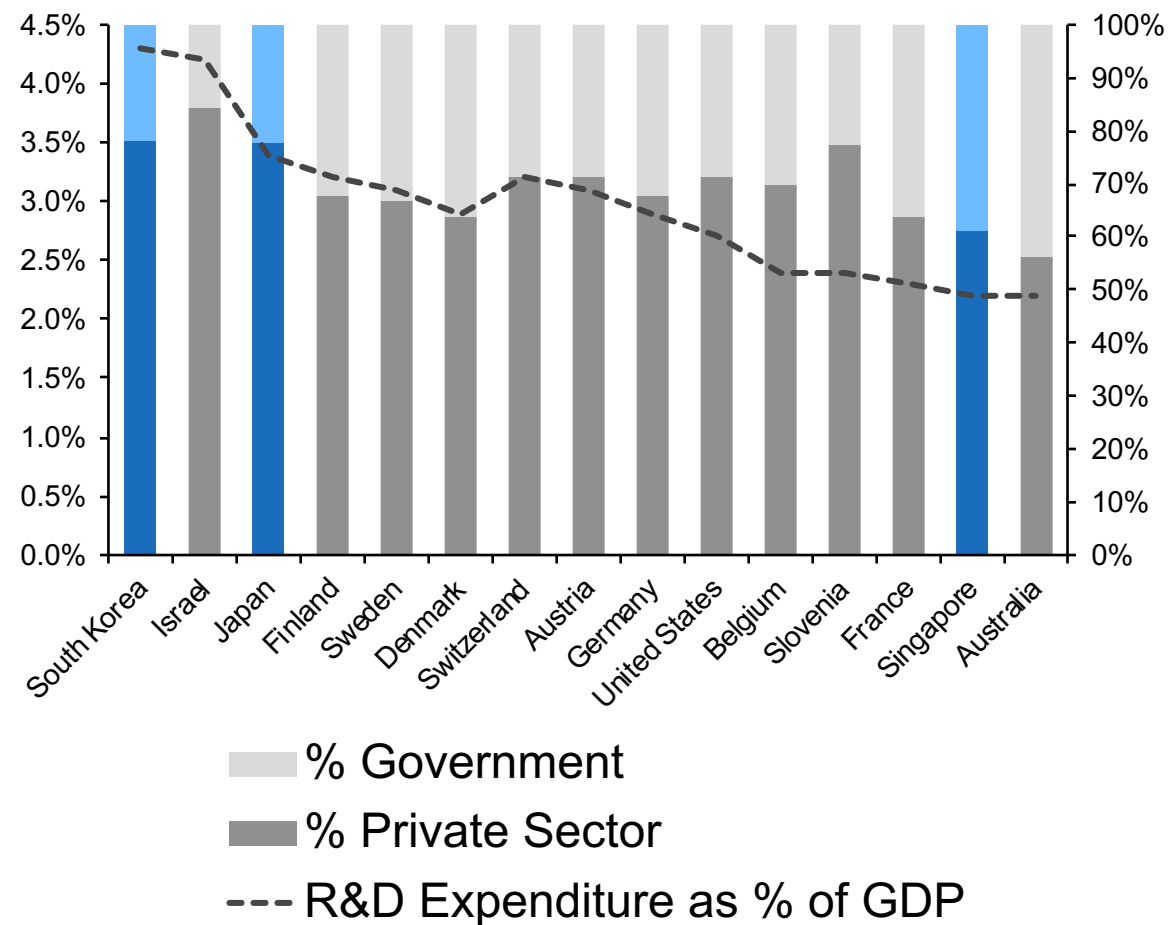
The innovation funnel is a systematic approach to innovation from ideation to implementation



Bloomberg Innovation Index

2018 rank	2017 rank	YoY rank change	Economy	Total score
1	1	0	S. Korea	89.28
2	2	0	Sweden	84.70
3	6	+3	Singapore	83.05
4	3	-1	Germany	82.53
5	4	-1	Switzerland	82.34
6	7	+1	Japan	81.91
7	5	-2	Finland	81.46
8	8	0	Denmark	81.28
9	11	+2	France	80.75
10	10	0	Israel	80.64

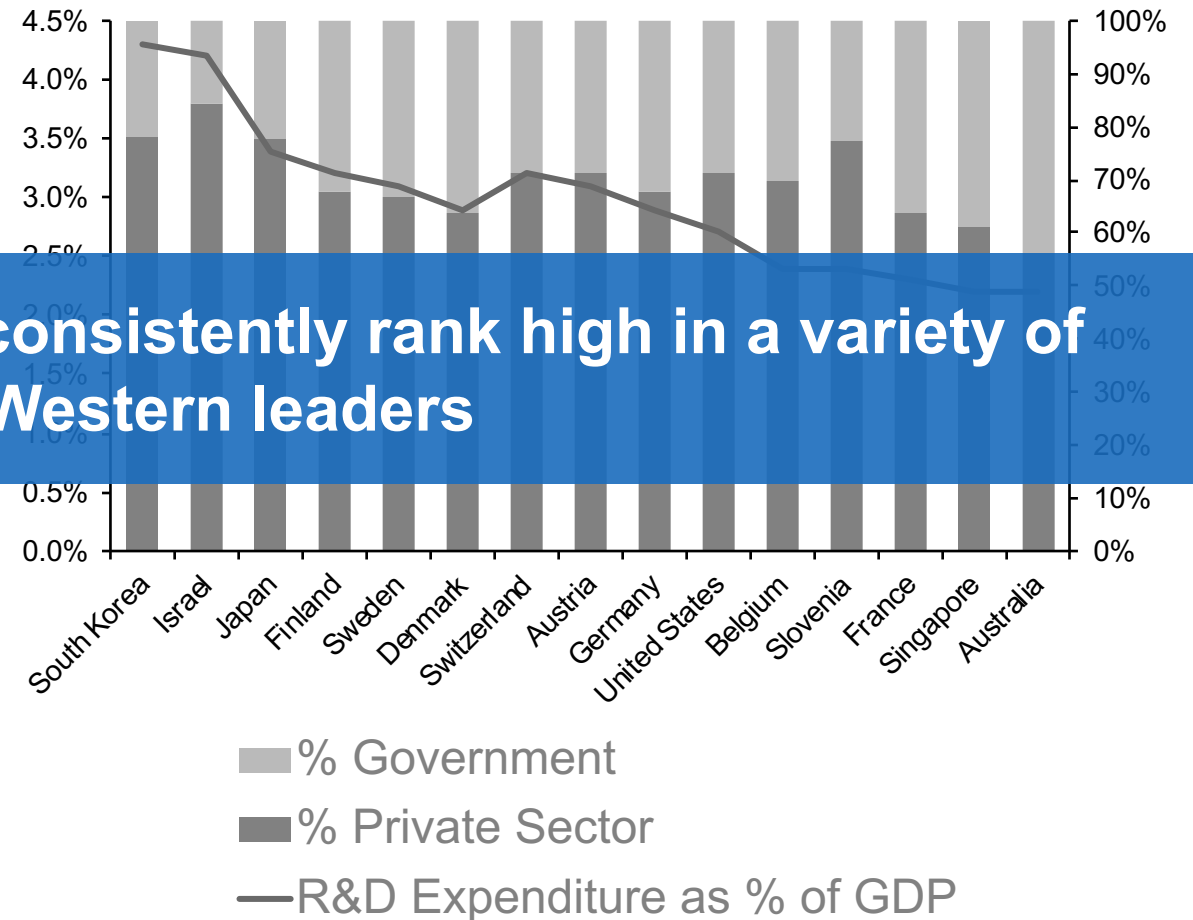
Global R&D Expenditure



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Global R&D Expenditure



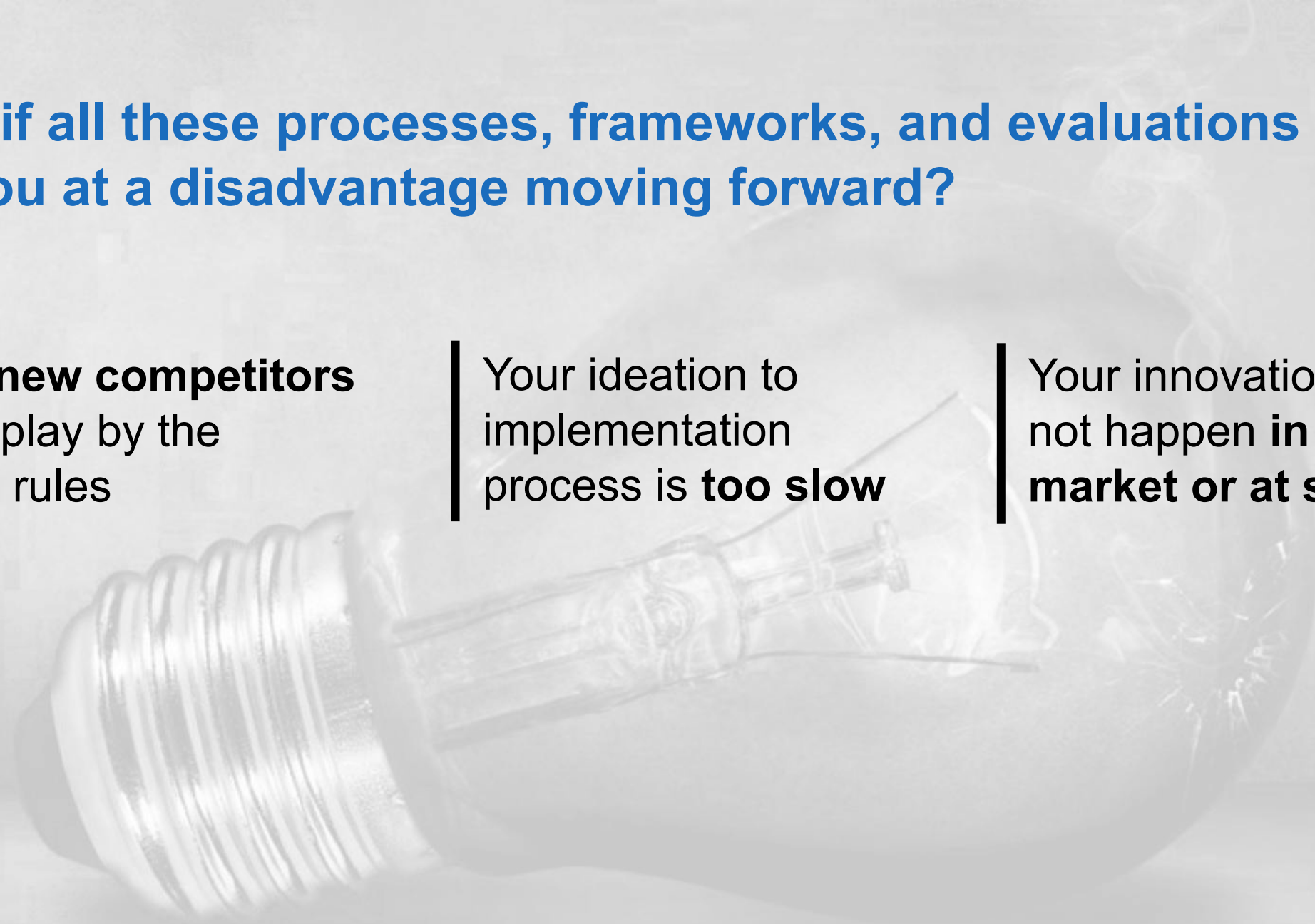
Japan, South Korea, and Singapore consistently rank high in a variety of innovation metrics along with many Western leaders

What if all these processes, frameworks, and evaluations put you at a disadvantage moving forward?

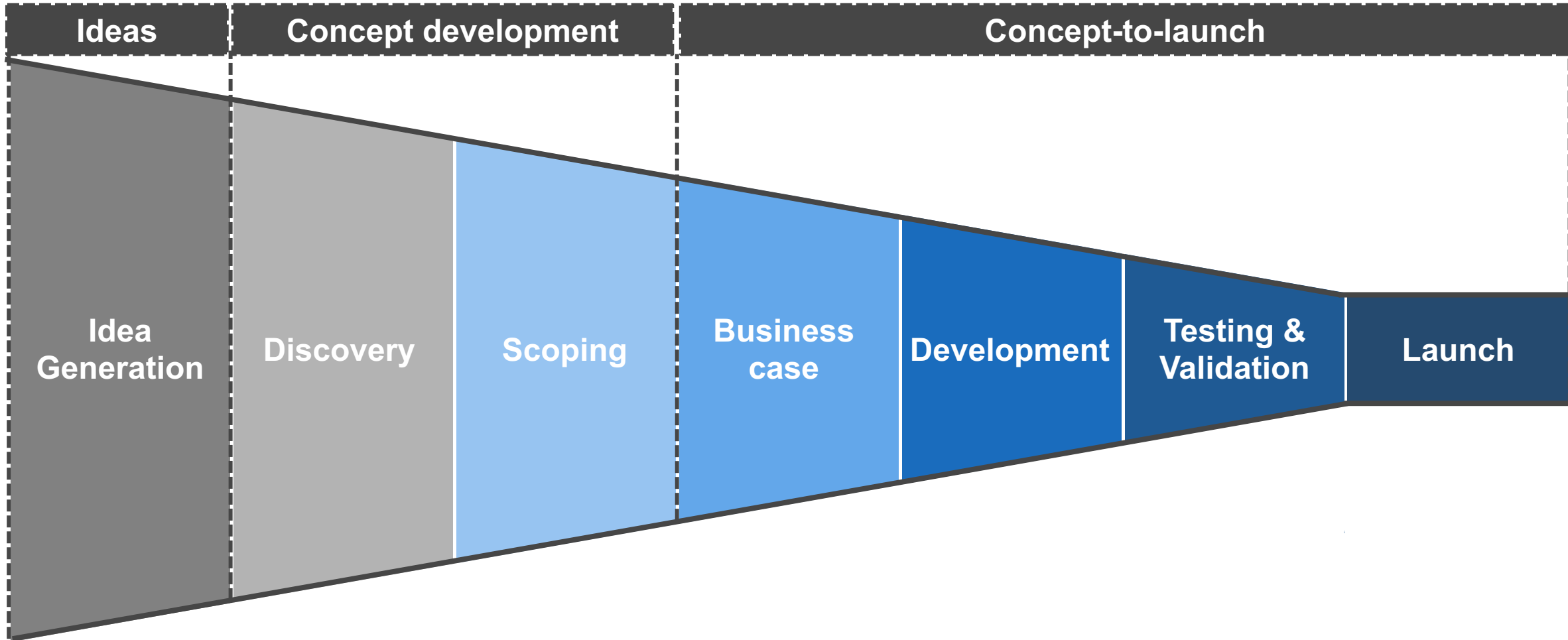
Your **new competitors** don't play by the same rules

Your ideation to implementation process is **too slow**

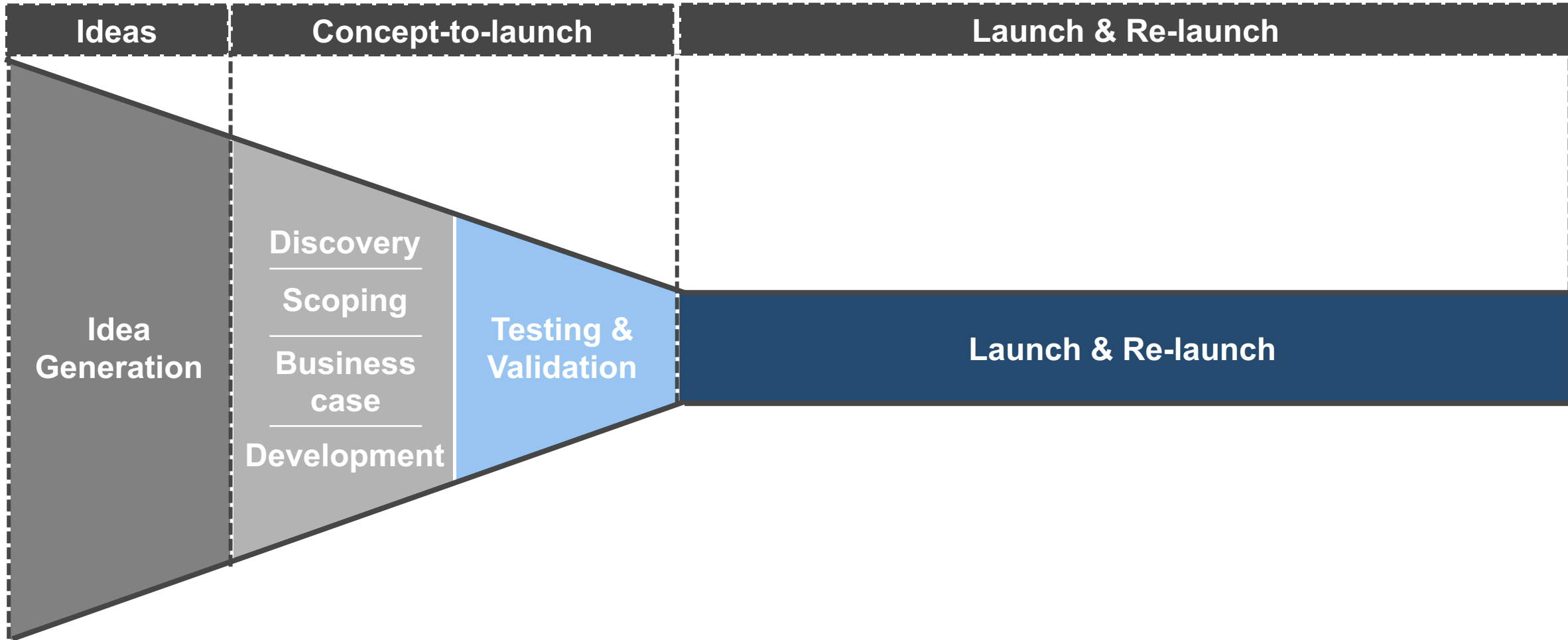
Your innovation does not happen **in the market or at scale**



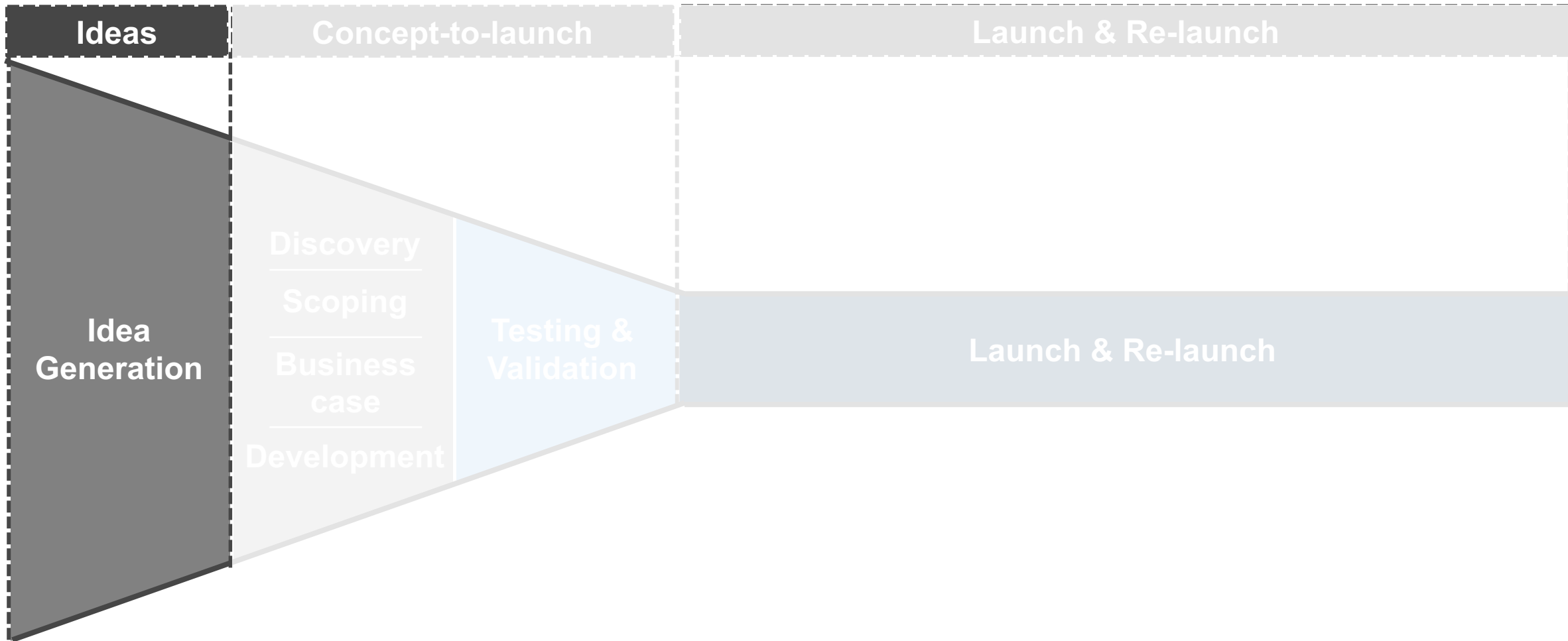
Innovation in China is about scaling first and market entry, not R&D and design perfection



China pinches the innovation funnel and rapidly moves through the traditional stage-gate process



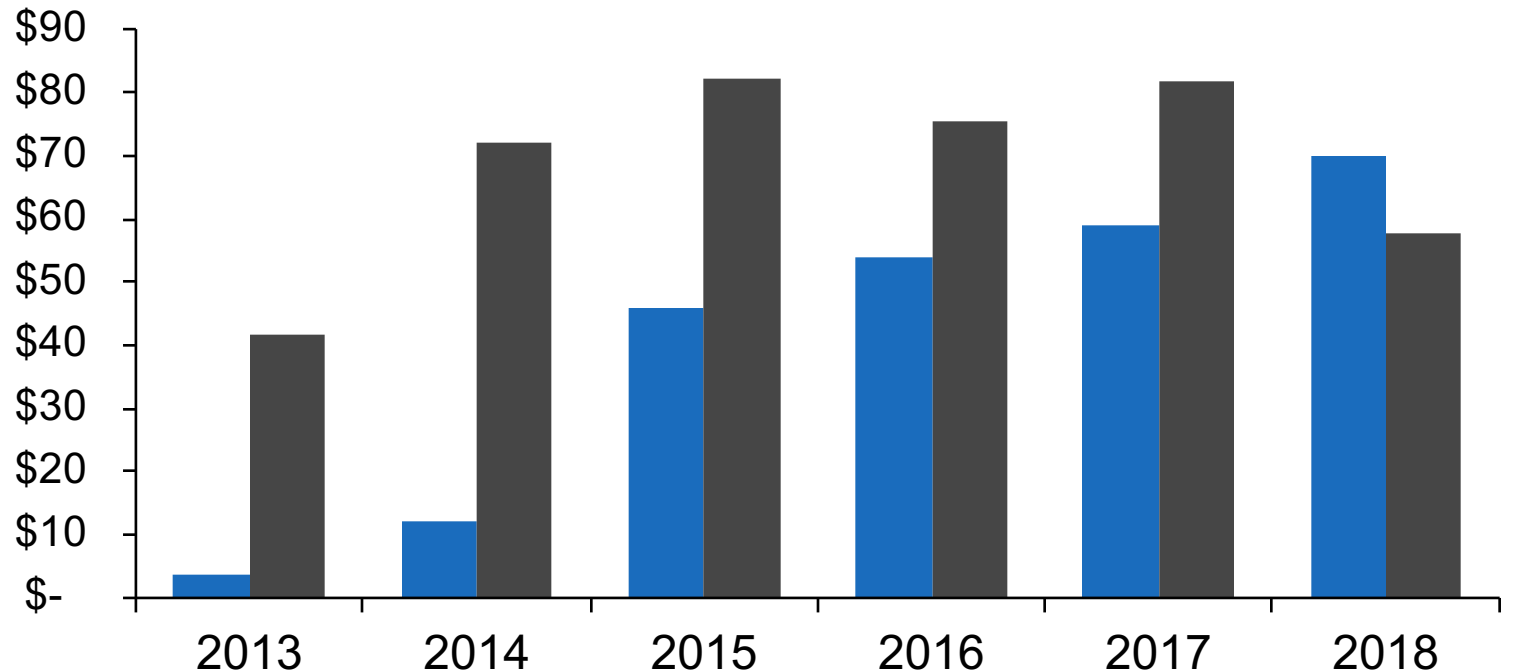
There is less nurturing of the traditional startup ecosystem as investors look to generate revenue faster



Have Chinese investors spoiled the startup ecosystem, or do they have a strategic plan with the flood of funding?

Total VC Deals (\$US Billions)

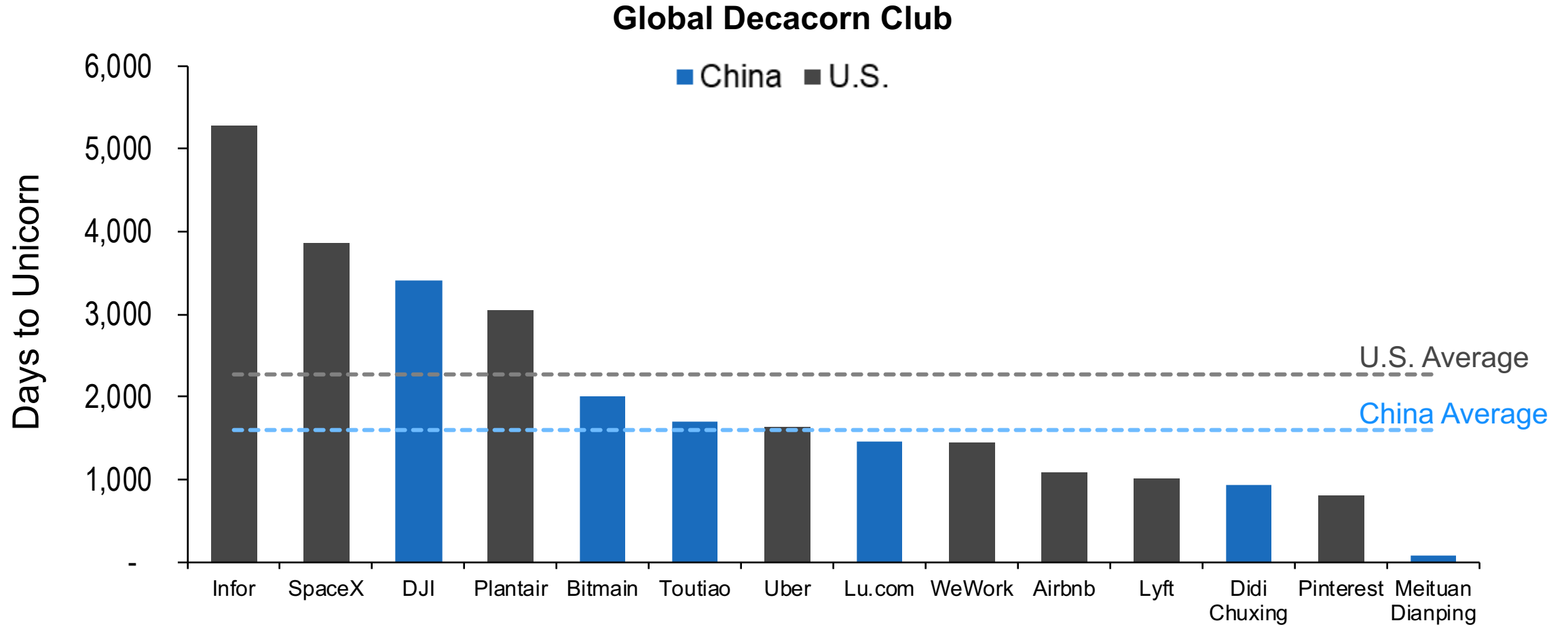
■ China ■ U.S.



SCMP | JULY, 2018

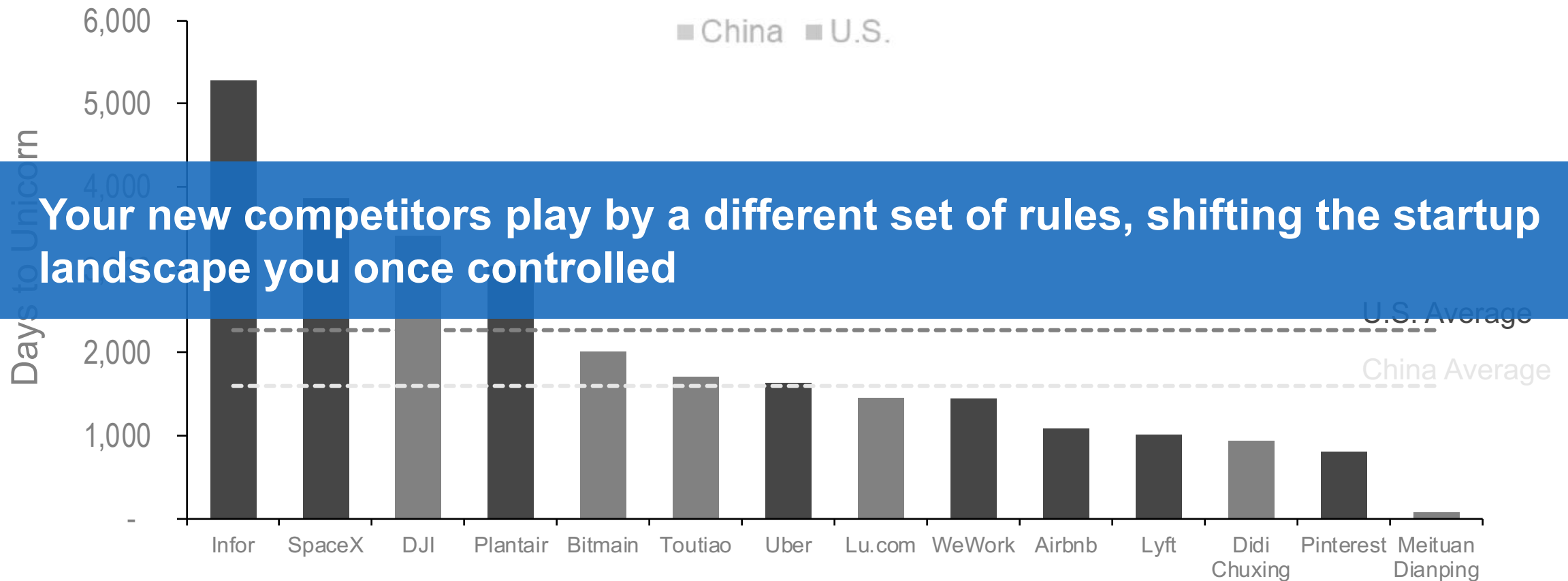
China surpasses North America in attracting venture capital funding for first time as investors chase 1.4 billion consumers

Demand for faster ideation to implementation and faster market entry also means faster unicorns – a lot faster

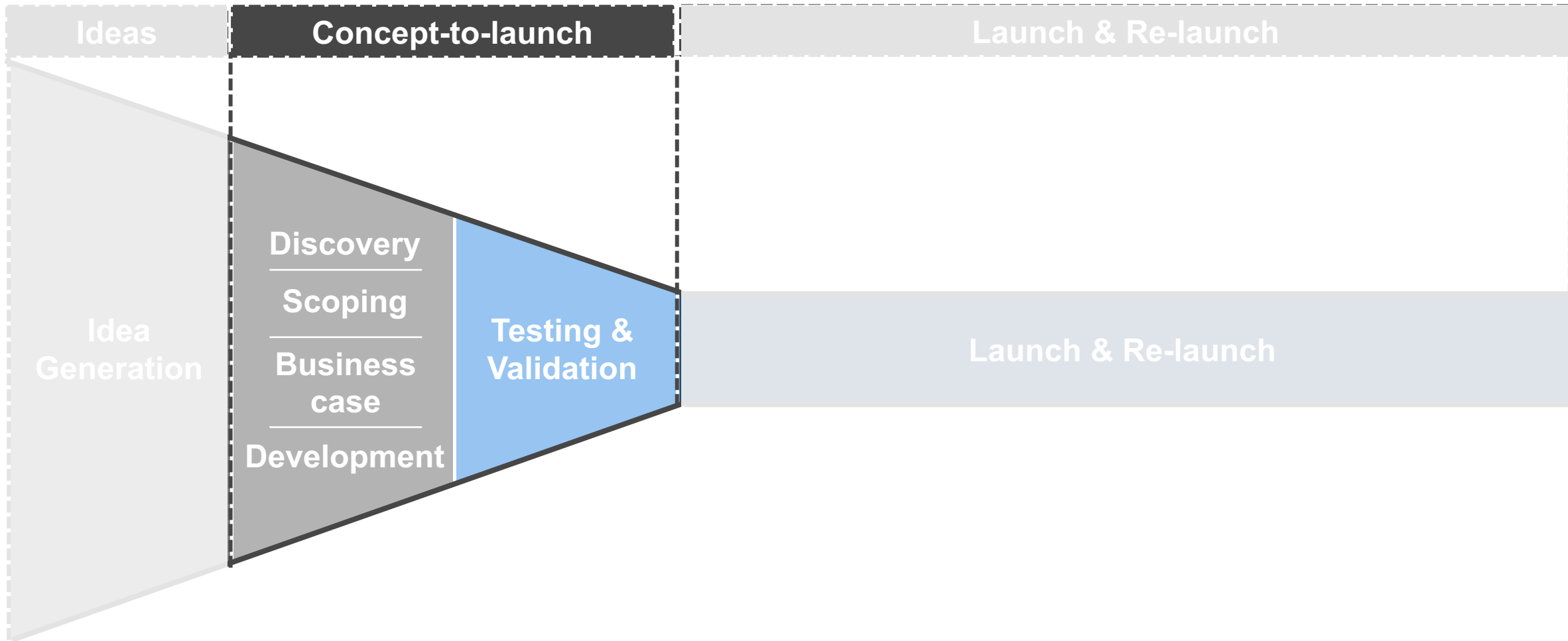


Demand for faster ideation to implementation and faster market entry also means faster unicorns – a lot faster

Global Decacorn Club



The middle of the funnel is pinched as companies move quickly through conceptualization, R&D, and market entry



Do Chinese smartphone makers have us on the verge of the largest market shift since Nokia and BlackBerry?

COMPUTER WORLD | JULY, 2016

Meet OPPO, the fastest-growing smartphone brand in the world

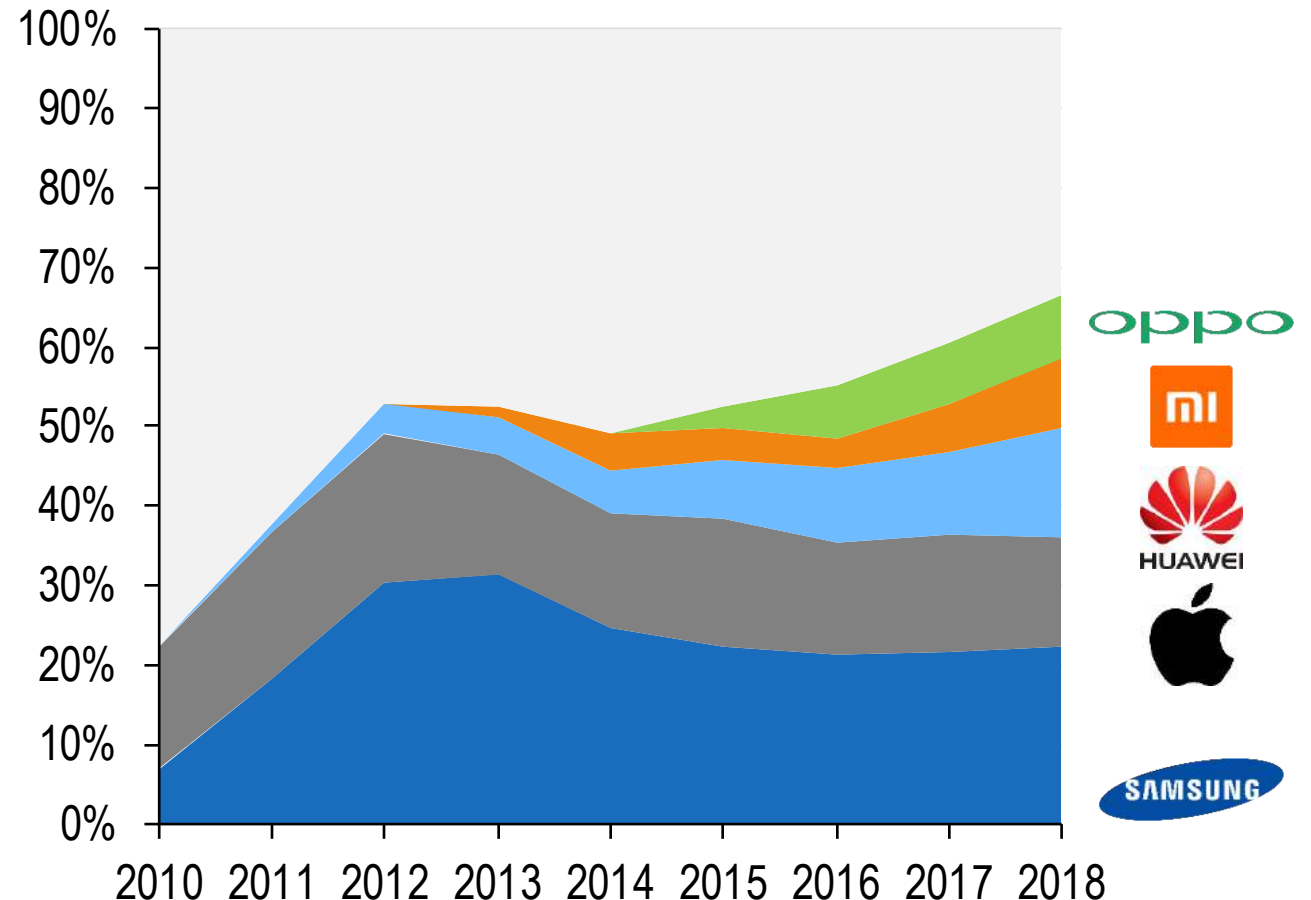
CNBC | JUNE, 2018

What's behind China's Xiaomi, one of the world's top smartphone makers

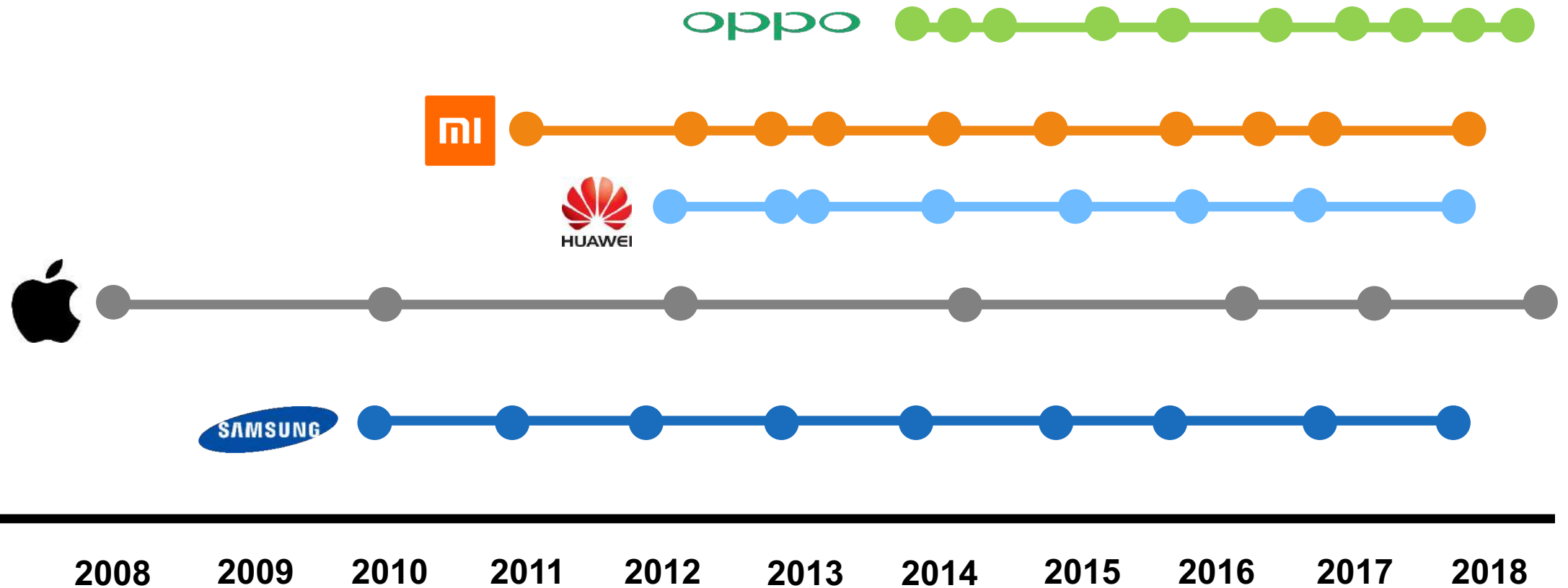
REUTERS | JULY, 2018

Huawei overtakes Apple as world No. 2 smartphone seller, gains ground in China

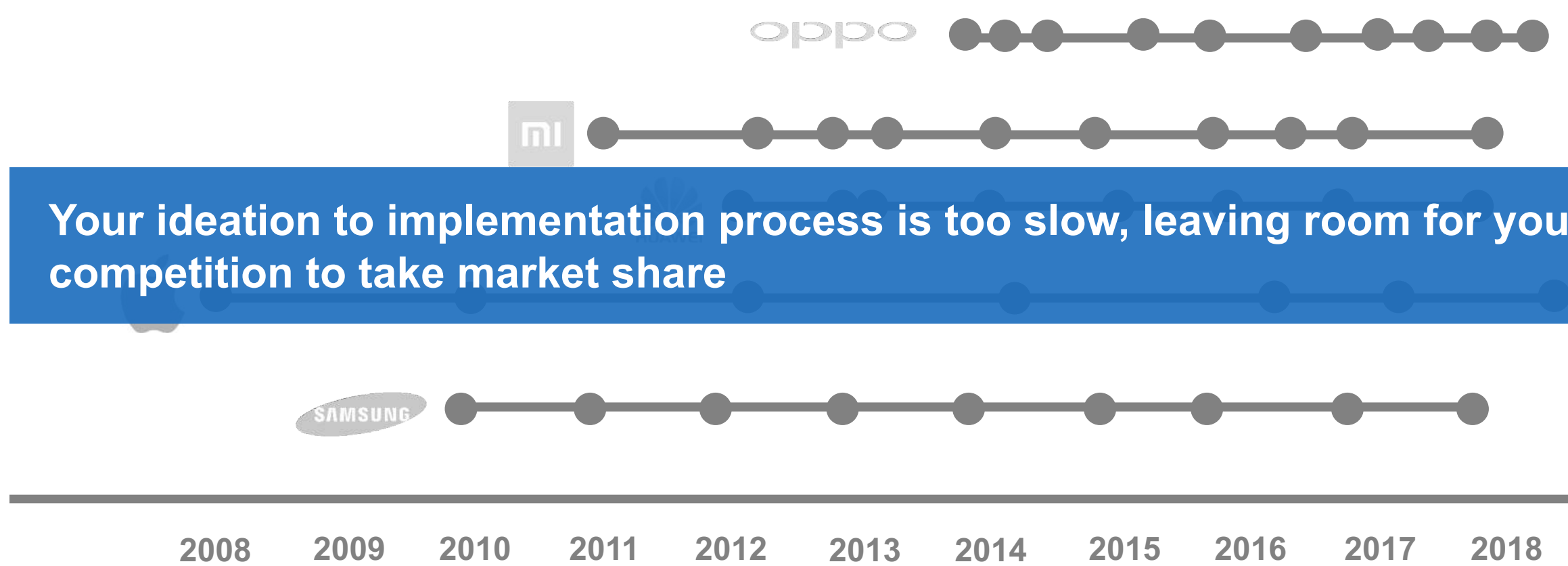
Global Smartphone Market Share



Driven by rapid design cycles, Chinese smartphone makers have forced themselves into Apple's and Samsung's space

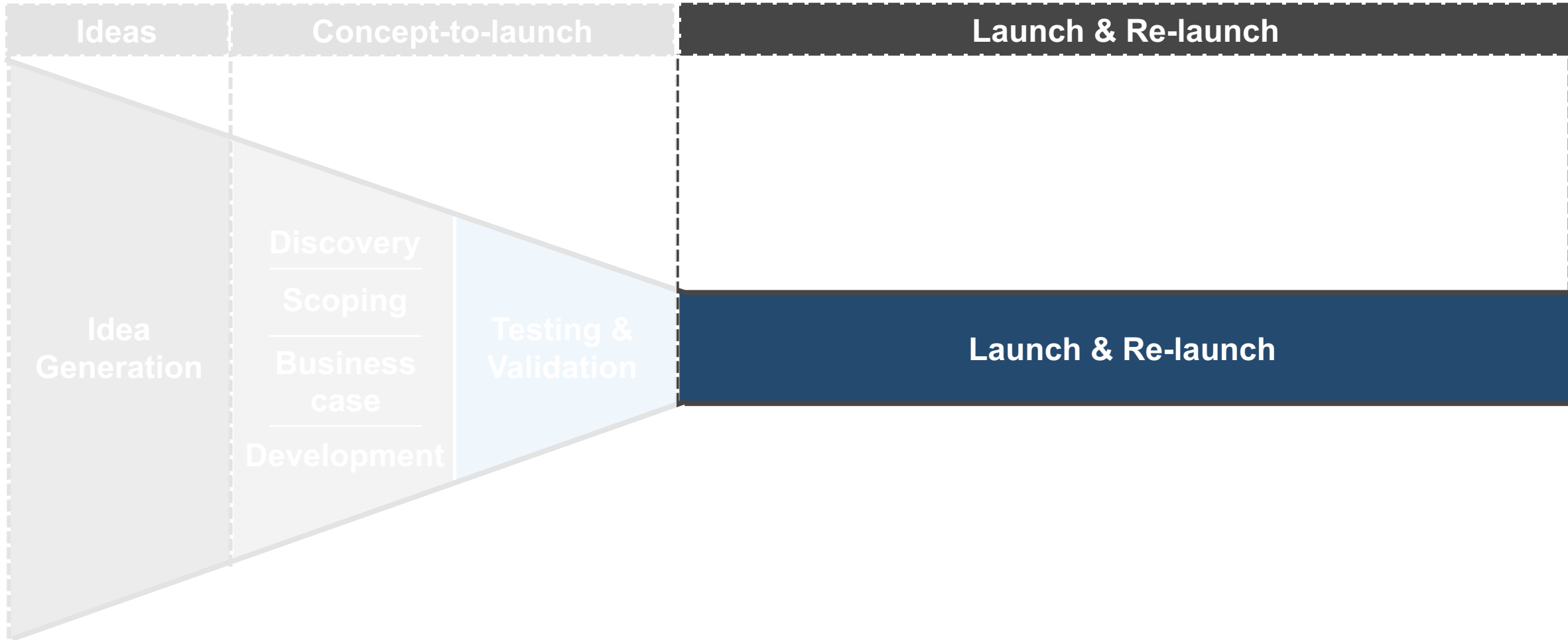


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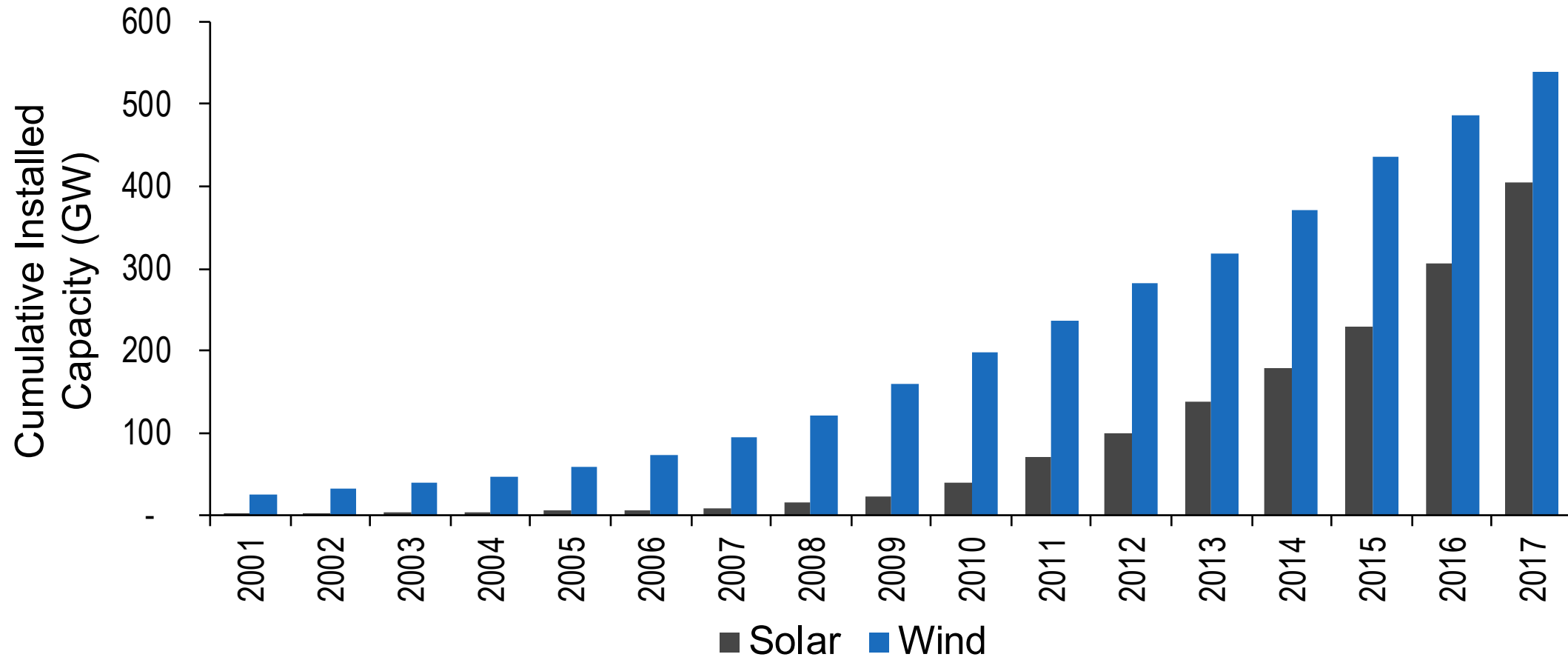
Your ideation to implementation process is too slow, leaving room for your competition to take market share

The majority of time is spent innovating at scale, generating revenue and increasing market penetration



Global solar and wind capacity continues to grow, but how has China influenced renewable energy beyond its own borders?

Global Solar and Wind Installed Capacity

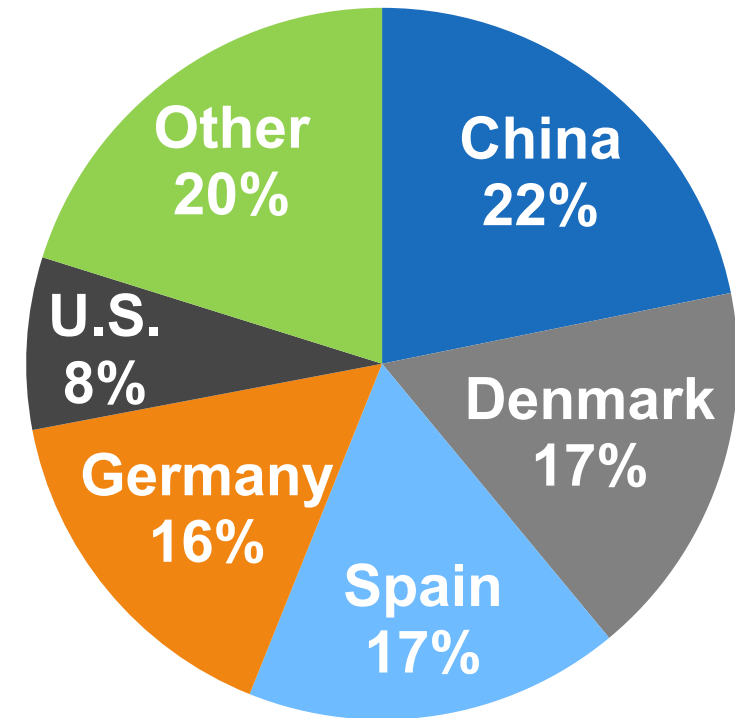


China's historical commitment to scale solar and wind manufacturing is responsible for low costs today

WORLD'S LARGEST SOLAR MANUFACTURERS

Company	Country	Capacity (GW)
Jinko Solar	China	6,555
Trina Solar	China	6,405
Canadian Solar	Canada	6,031
Hanwha Q-Cells	South Korea	5,603
JA Solar	China	5,407
LONGi Green Energy Technology	China	4,801
GCLSI	Hong Kong	4,605
Risen Energy	China	3,429
Yingli Green Energy	China	3,428
Talesun Solar	China	3,048

GLOBAL WIND TURBINE MANUFACTURER MARKET SHARE BY COUNTRY

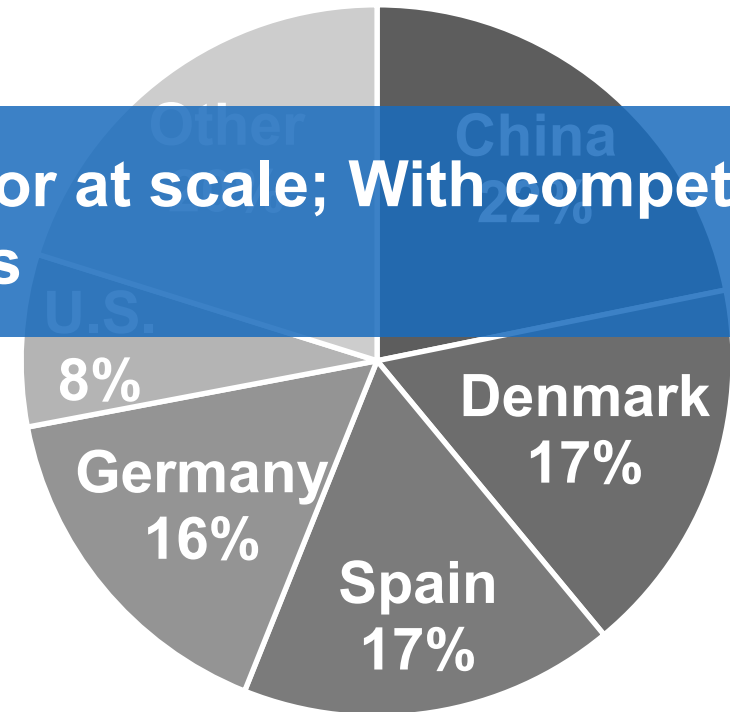


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GLOBAL WIND TURBINE MANUFACTURER MARKET SHARE BY COUNTRY



Your innovation doesn't happen in the market or at scale; With competitors carving dominant control over entire industries

What if all these processes, frameworks, and evaluations put you at a disadvantage moving forward?

Your **new competitors** don't play by the same rules

Will China's cash push you out of the startup ecosystem?

Your ideation to implementation process is **too slow**

What transformational technologies will China be a leader in next?

Your innovation does not happen **in the market or at scale**

How do you plan your innovation strategy to counter China's rise?

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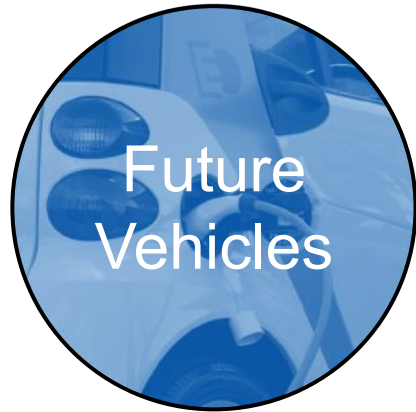
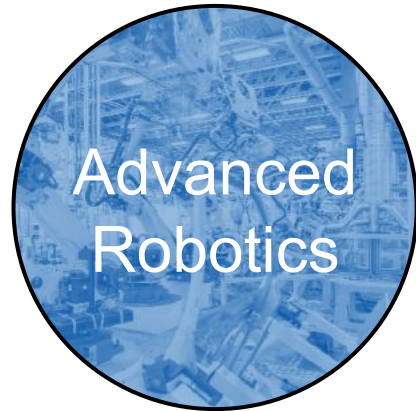
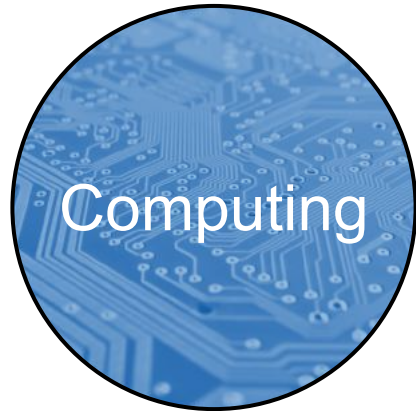


Innovation is the
primary driving force
behind development;
it is the strategic
underpinning for building
a modernized economy.

- Xi Jinping, 2017



Made in China 2025: Ten Key Sectors for Strategic Growth



Artificial intelligence is the critical technology for China's advancement towards a digital economy

CHINA'S AI TECHNOLOGY ROADMAP

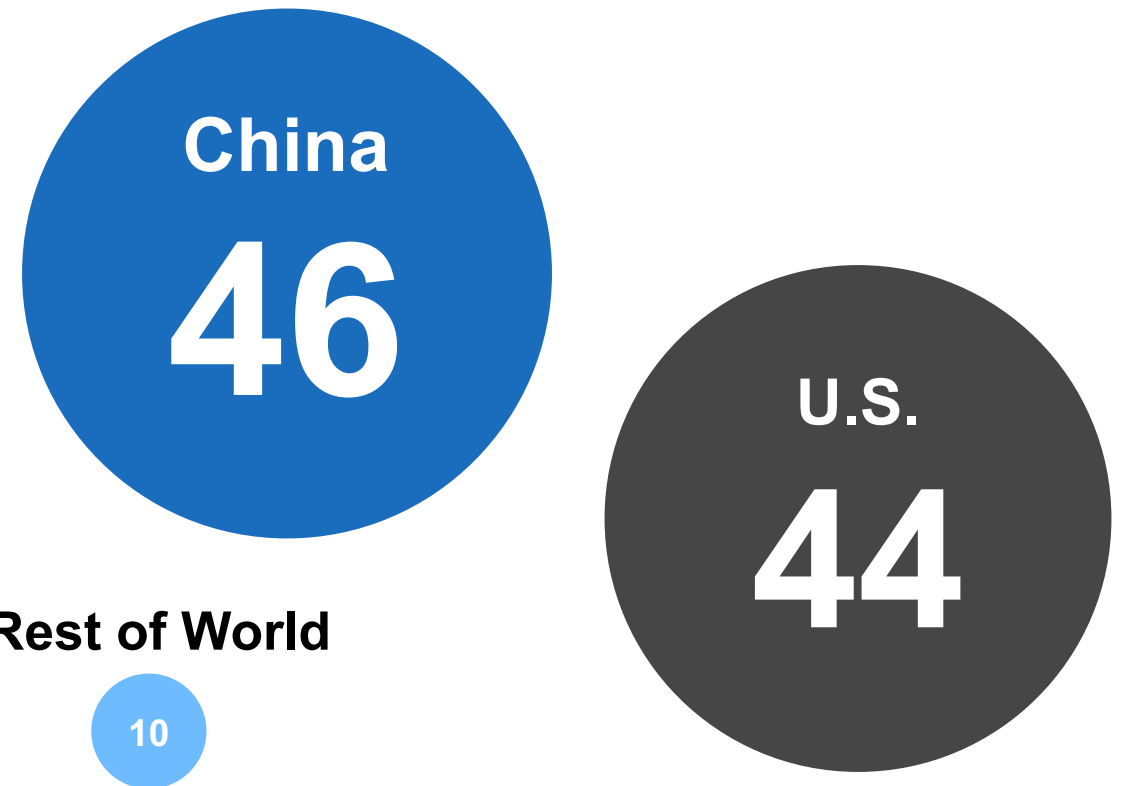
Next-Generation AI Development Plan (July 2017)

Three-stage roadmap with specific AI development goals to make China the world leader in AI.

AI Three-Year Action Plan (December 2017)

Four key tasks covering 17 AI-related technologies and products.

INNOVATION FORCE: ARTIFICIAL INTELLIGENCE



China's venture capital ecosystem continues to toe the line between startup funding and growth financing



Cambricon

Category: AI chip

Key investors: Alibaba, Lenovo Capital



4Paradigm
第四范式

Category: Machine learning

Key investors: Sequoia Capital, Sinovation Ventures



Horizon Robotics

Category: Autonomous cars

Key investors: Intel Capital, Sinovation Ventures



Category: Computer vision

Key investors: Qualcomm, Alibaba



AISPEECH

Category: Voice recognition

Key investors: Alibaba, Legend Star

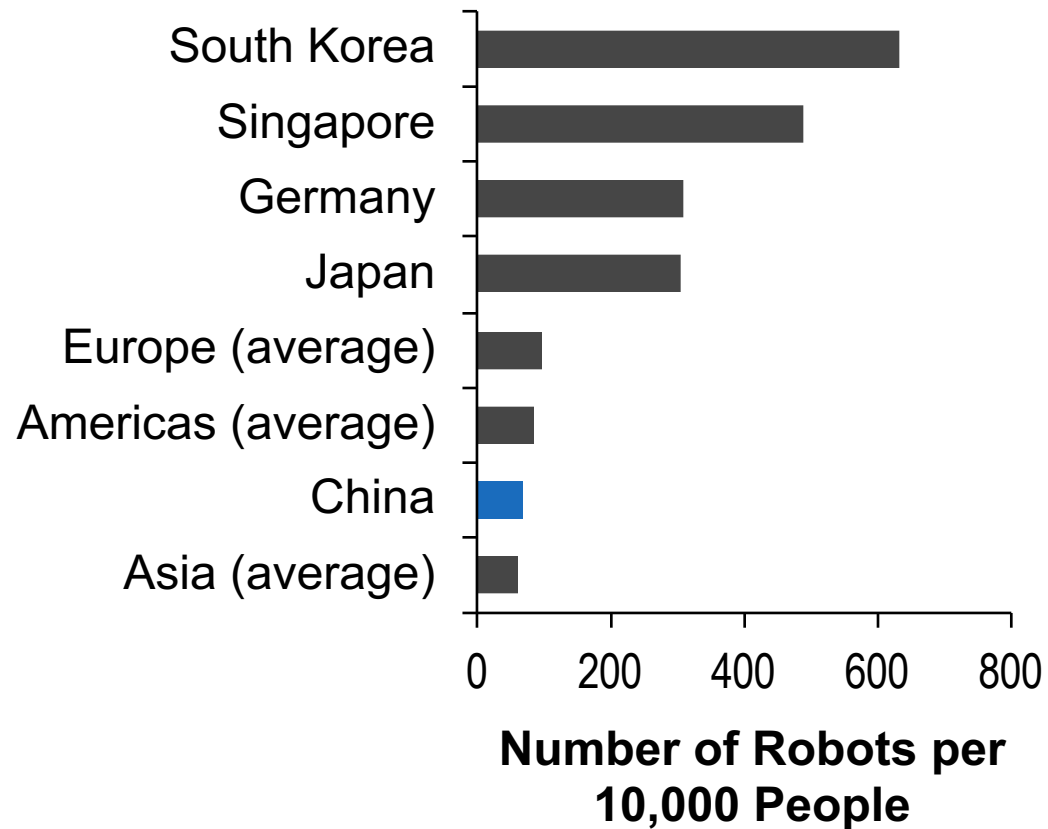


Category: Healthcare

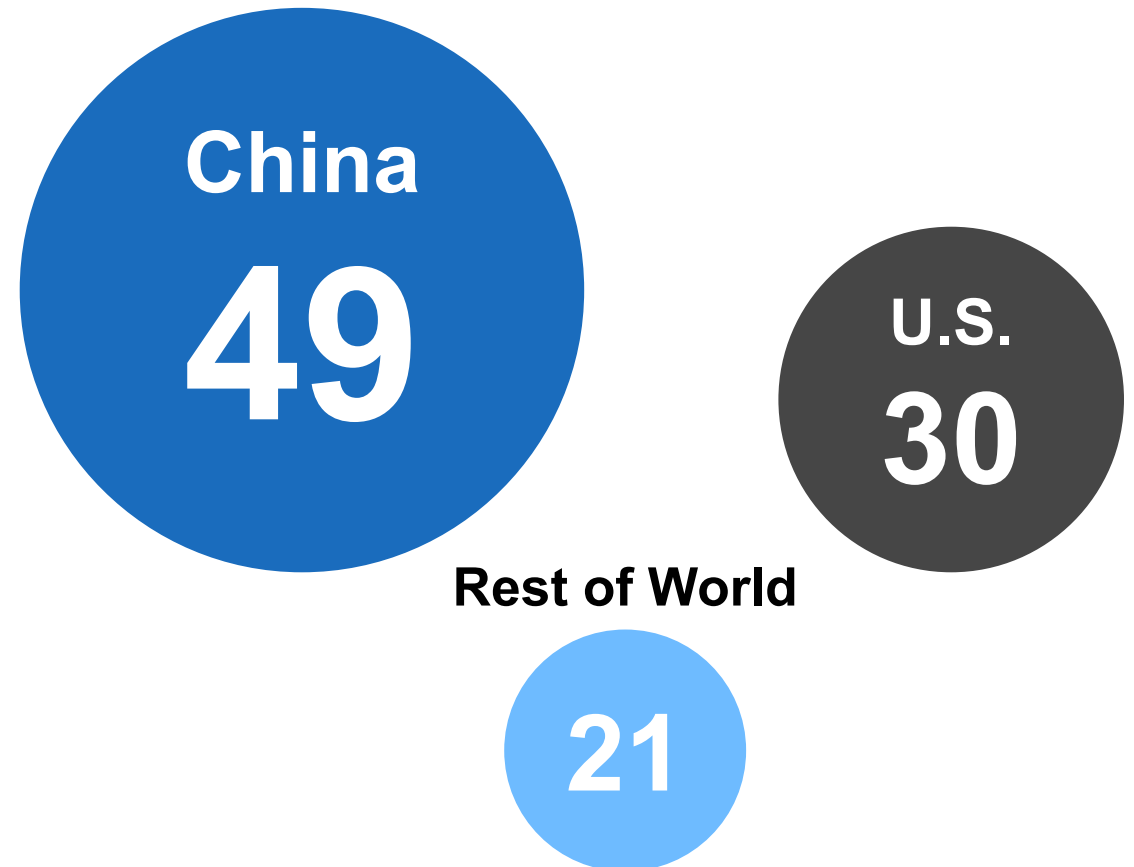
Key investors: Tencent

China is deploying advanced robotics to enable its aggressive ramp-up in advanced manufacturing capacity

INDUSTRIAL ROBOT DENSITY



INNOVATION FORCE: MANUFACTURING ROBOTS



Despite trailing in industrial robot adoption today, China is poised to push from ideation to implementation at a rapid rate

CHINA ARMING FOR INDUSTRY 4.0

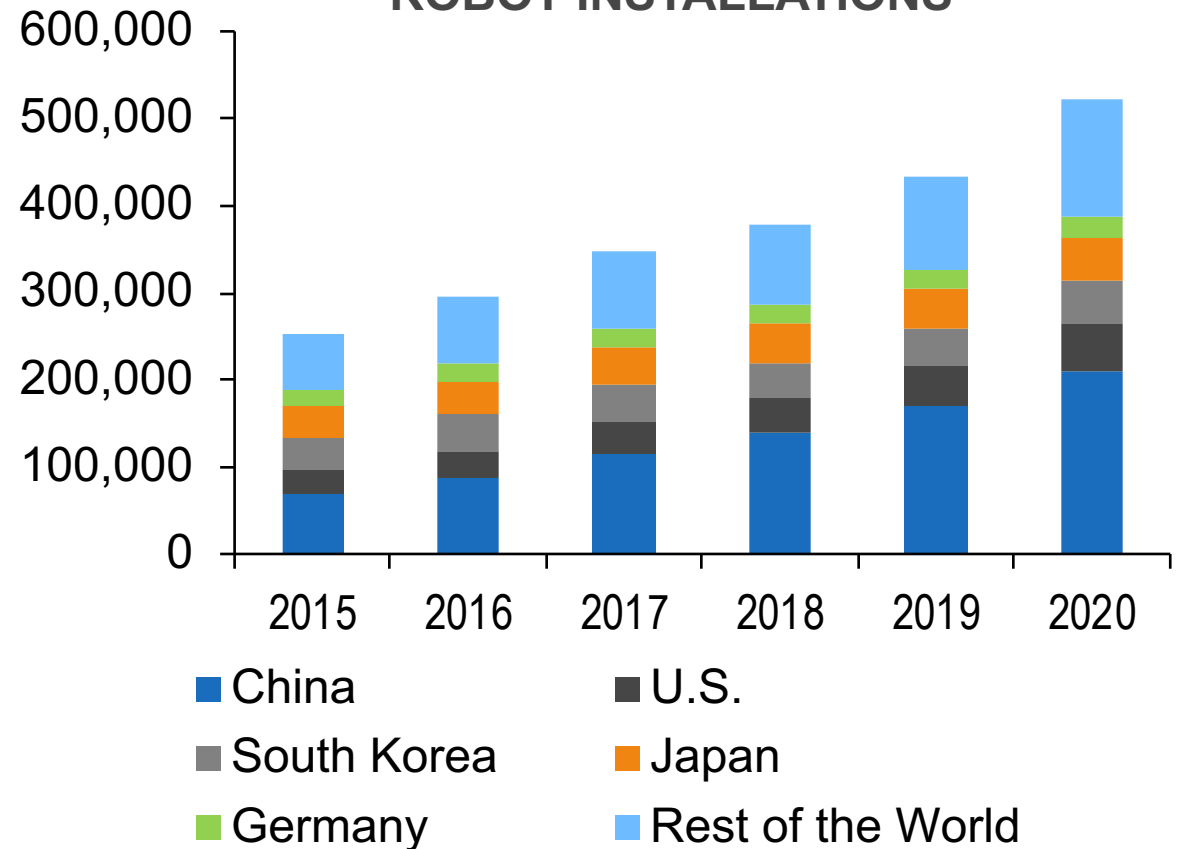
SCMP | JULY, 2015

Foxconn's Foxbot army close to hitting the Chinese market, on track to meet 30 per cent automation target

BBMC | MAY, 2016

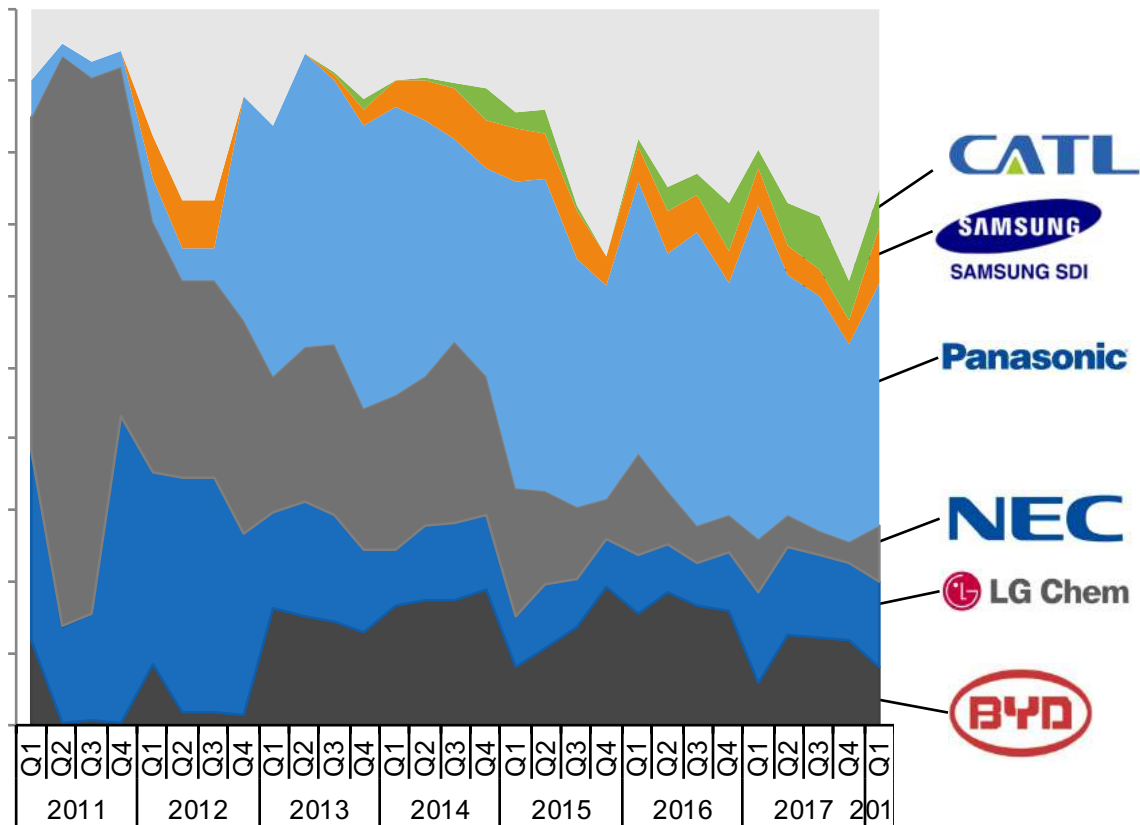
Foxconn replaces 60,000 factory workers with robots

GLOBAL INDUSTRIAL ROBOT INSTALLATIONS

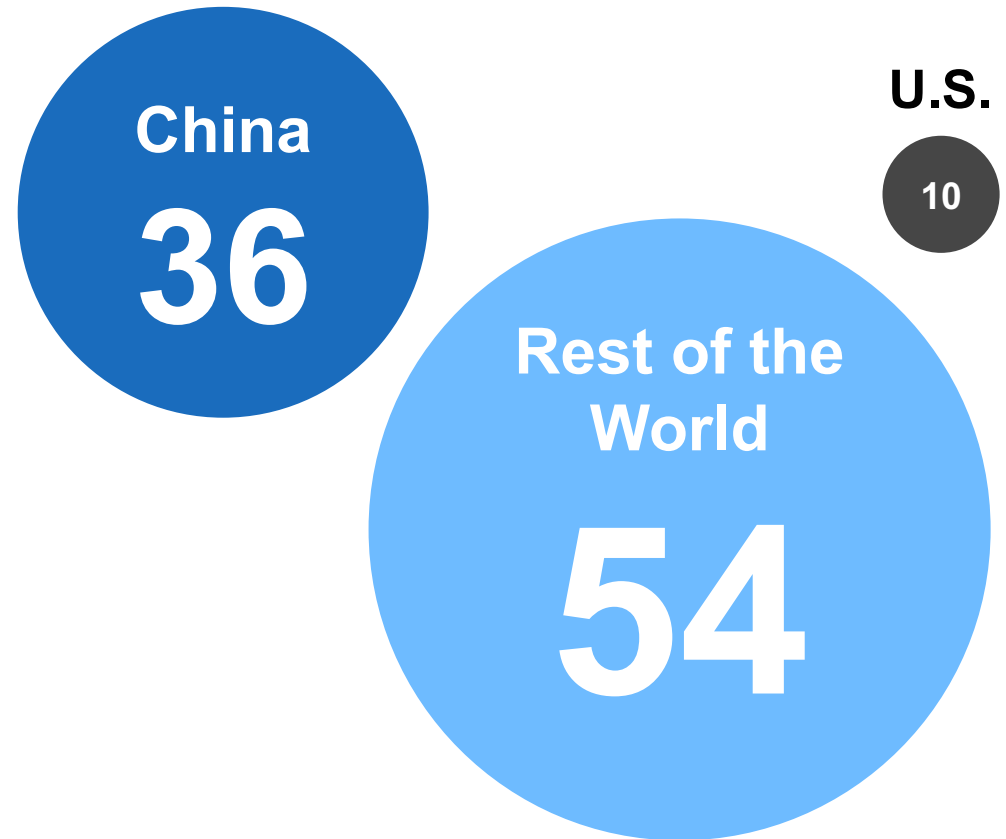


The future of automotive is electric and the foundation of the electric vehicle is the Lithium-ion battery

QUARTERLY PLUG-IN BATTERY SALES



INNOVATION FORCE: LITHIUM-ION BATTERY



China's innovation in Lithium-ion batteries now occurs at scale and is poised to repeat solar and wind's history

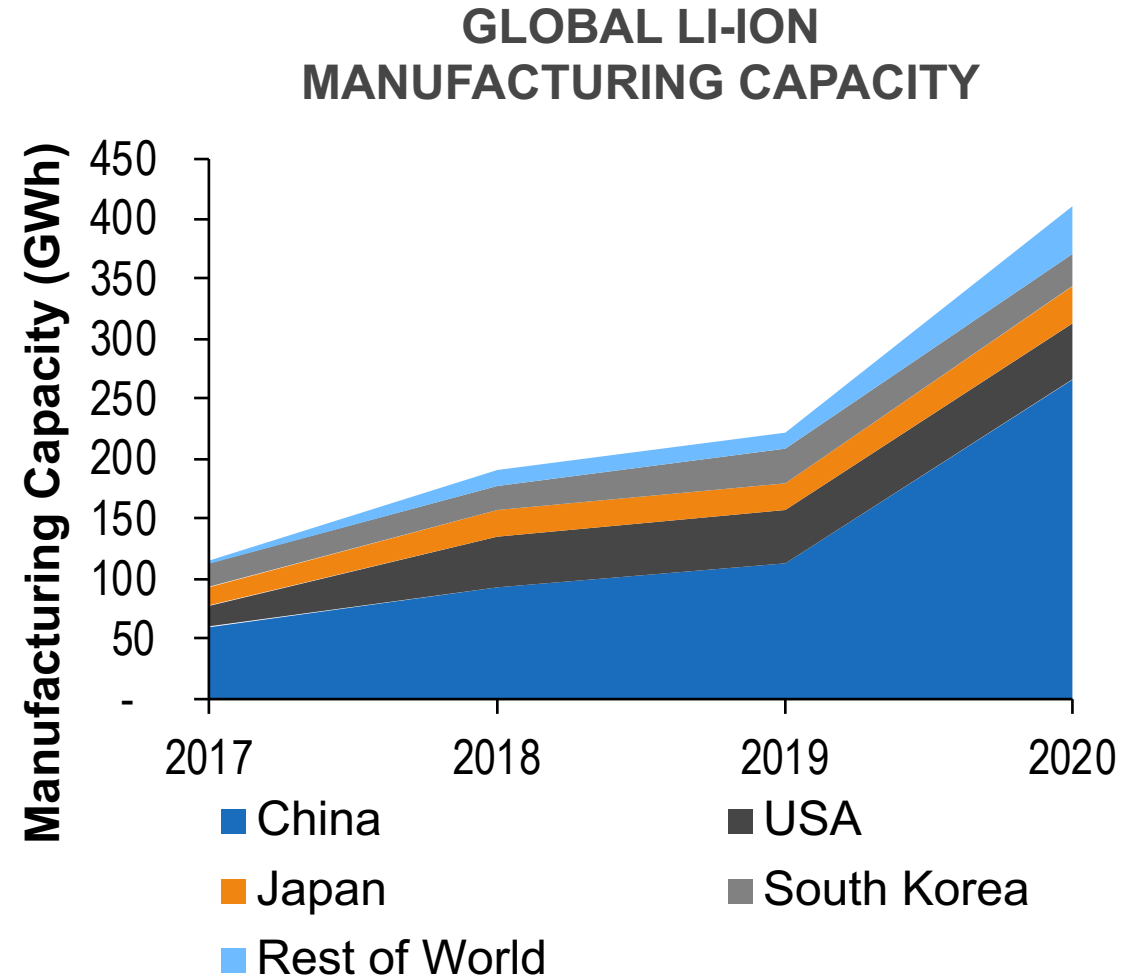
CHINA'S PRODUCTION GOES GLOBAL

BUSINESS INSIDER | JUNE, 2018

China's BYD launches world's biggest battery factory

REUTERS | JULY, 2018

China's CATL to build its first European EV battery factory in Germany



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Your strategic playbook to counter China's disruption

1

Tap your surrounding innovation ecosystem

2

Don't build when you can buy

3

Reap the benefits of playing in China's backyard

1 Tap your surrounding innovation ecosystem

OPPORTUNITY

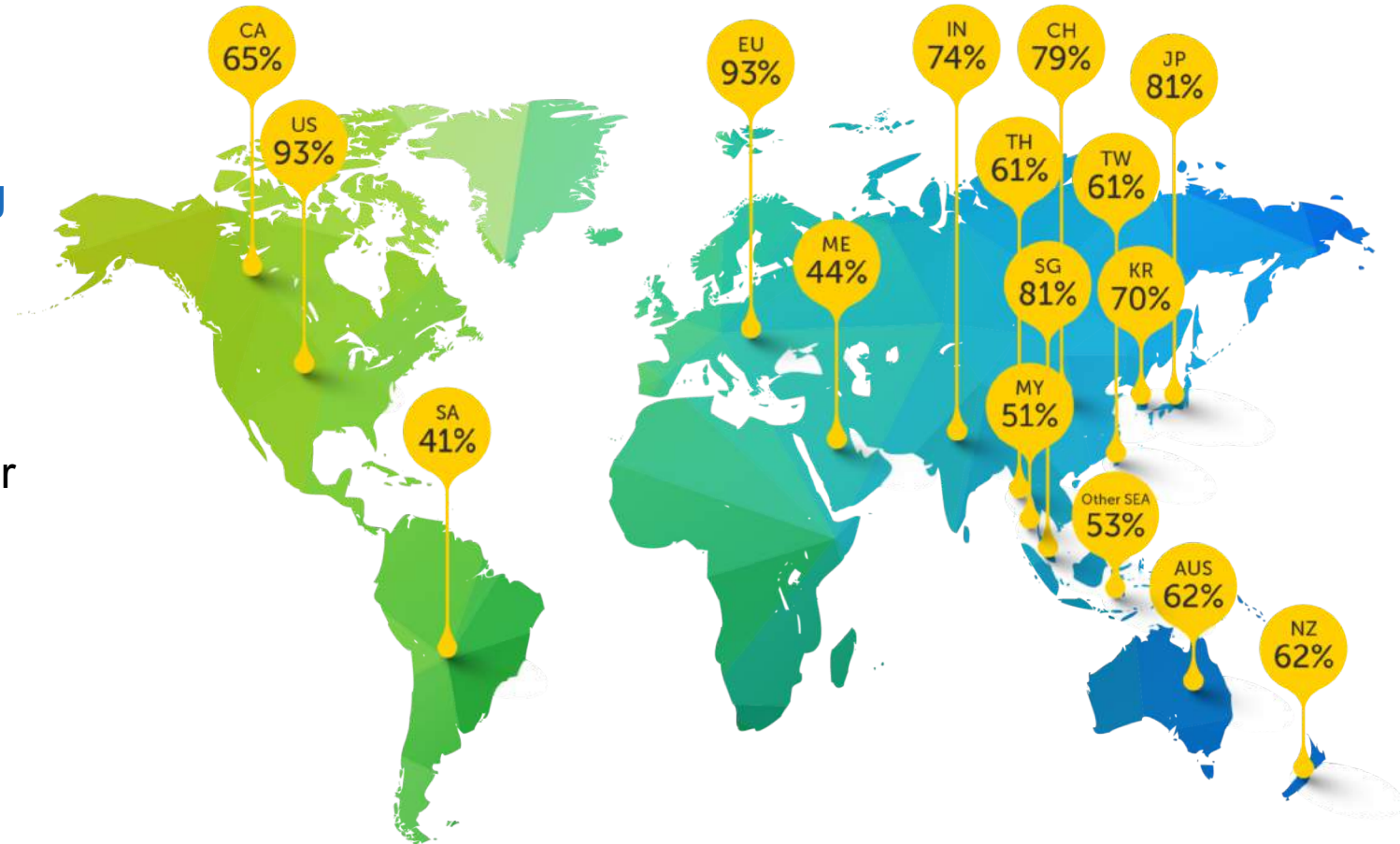
Look across **Asia's diverse and growing innovation ecosystem** for new ideas.

STRATEGY

Leverage **public-private partnerships** for technology development.

Establish a **physical presence and personal network**.

TOP DESTINATIONS FOR INNOVATION



2 Don't build when you can buy

OPPORTUNITY

You understand your corporation's **core strengths and needs** the best.

Outside technology developers **understand the potential of their solutions.**

AUTONOMOUS MOBILE ROBOTS



ACCELERATING DIGITAL TRANSFORMATION



3 Reap the benefits of playing in China's backyard

OPPORTUNITY

Untapped market opportunity for **technology development and deployment.**

STRATEGY

Identify key gaps in China's innovation ecosystem.

Engage state-owned enterprises for development partnerships.

GOOGLE'S CHINA-BASED RESEARCH LAB



CHINESE DEMAND FOR HIGH-TECH CARS



Conclusion

- 1 | This is not a China versus the world scenario.
- 2 | China will be a global powerhouse in innovation.
- 3 | Ignoring it today is too large of a risk to your business of tomorrow.



2018

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Thank you for joining us.





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