



Hong Kong as a bridgehead to robotics innovations

NORMAN C. TIEN

Tectonic plates

Germany's
Industrie 4.0

Horizon 2020

US Advanced
Manufacturing Initiative



Japan's 'Robot
Revolution' by 2020

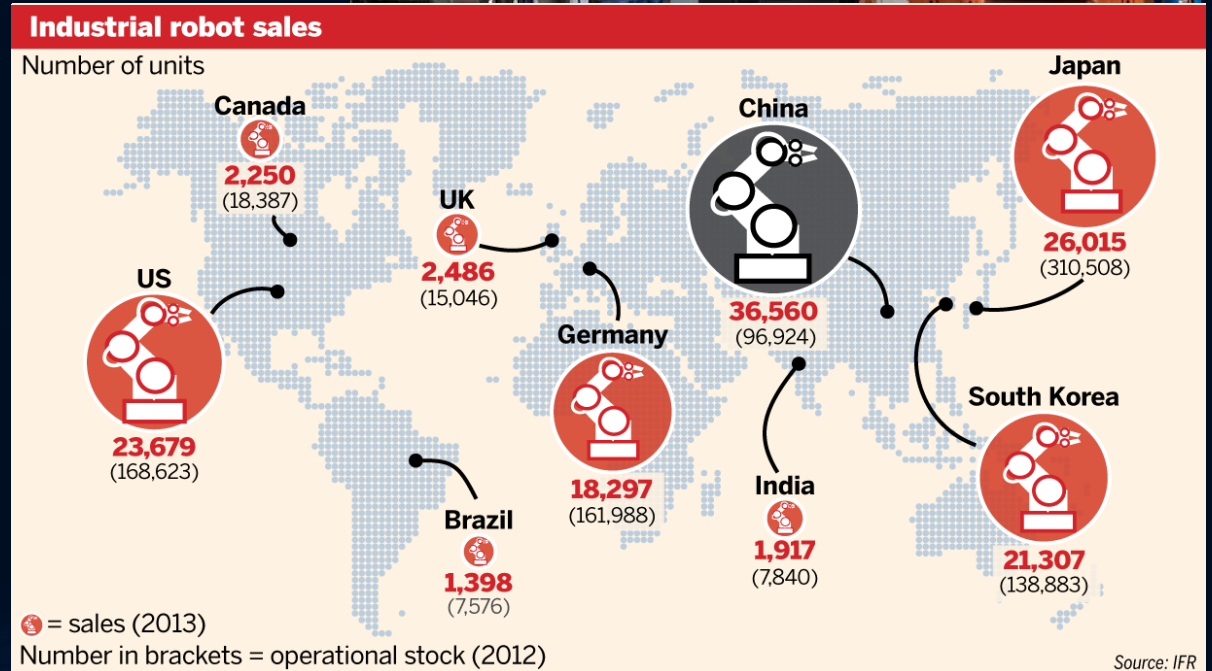
Made in China 2025

Source: www.reference.com

Rising needs for robots in Asia

- Increasing labour cost & shrinking labour pool
- Rising demand for customization
- China outweighing other countries on purchase of robotic systems
- Confidence in German brand names in precision machinery and automation technologies

Rapidly increasing consumer market



Why Asia, Why Hong Kong

- Hong Kong in the heart of Asia
- Gateway to the whole supply chain of China with seamless logistics and large shipping hub
- Rule of law and protection of IP rights
- Business friendly environment
- Entrepreneurial spirits and “can-do” legacy



Source: InvestHK

Strategic areas in Hong Kong

Smart Manufacturing
& Automation



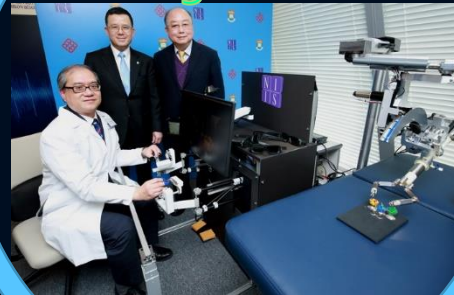
Healthcare & Assistive
applications



Infotainment



Medical &
Surgical use



Innovation ecosystem

Participants and institutions

- Innovation and Technology Bureau
- Hong Kong Science and Technology Park
- InnoCentre
- 8 public universities
- R&D Centres
- Industrial estates
- Industry, entrepreneurs & professionals
- End-market consumers



Innovation ecosystem



Innovation and Technology Bureau

The Government of the Hong Kong Special Administrative Region



Innovation and Technology Commission

The Government of the Hong Kong Special Administrative Region



Innovation ecosystem



Drivers & pathways

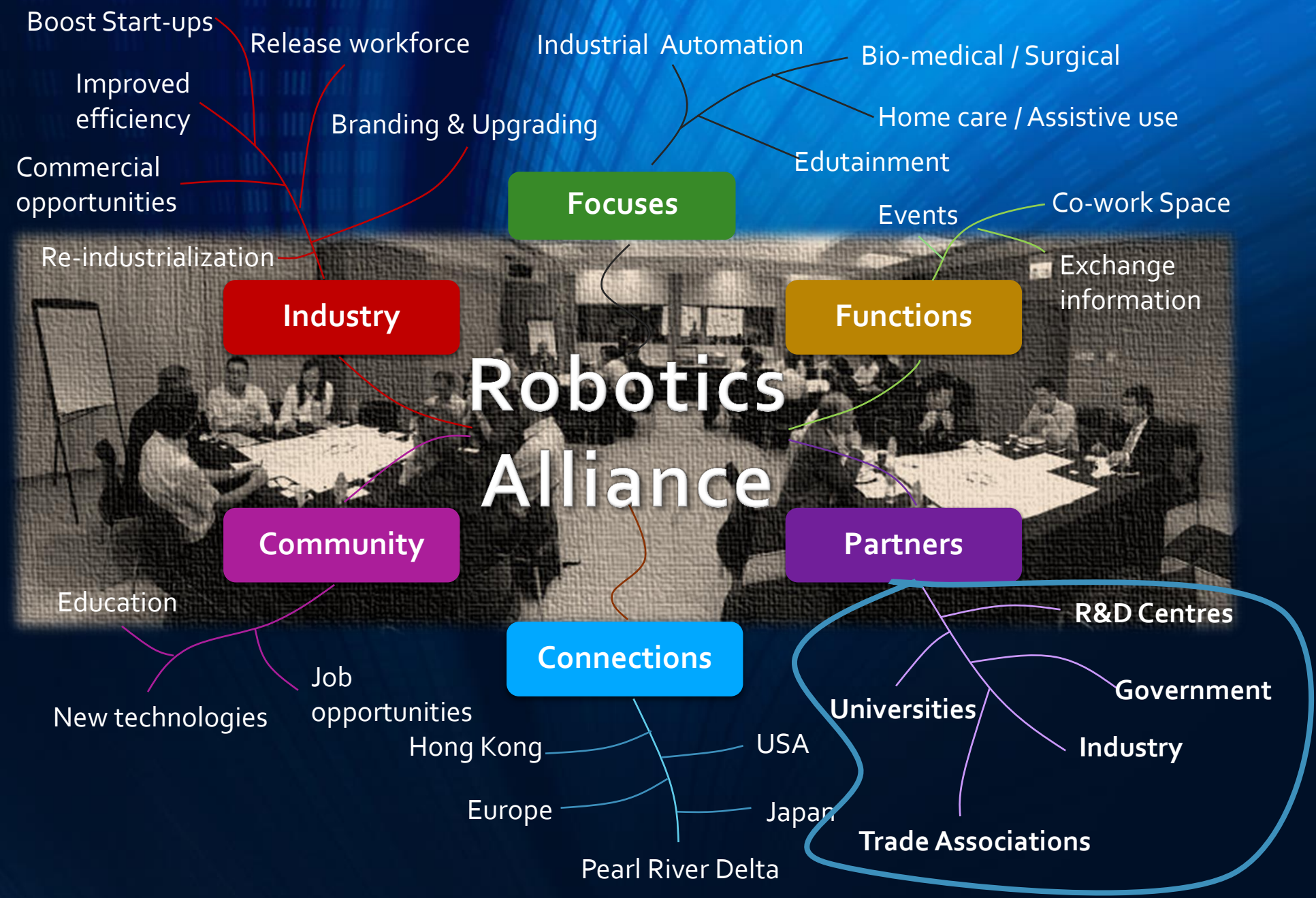
- Government funding for innovation and technology in HK (EUR2,079M)
- Innovation and Technology Venture Fund (EUR231M)
- Midstream Research Program (EUR231M)
- A collaboration scheme to allow co-funding of Hong Kong researchers in the Horizon 2020 programme
- Innovation and Technology Fund, a flagship funding scheme from HKG, may support up to 50% of the R&D projects conducted outside HK

Innovation ecosystem

Initiatives, projects & plans

- Robotics Alliance
- Industry Connect
- APAC Innovation Summit conferences
- Industry Focus Group
- Advanced Manufacturing Centre
- Data Technology Hub

Robotics Alliance as a super-connector

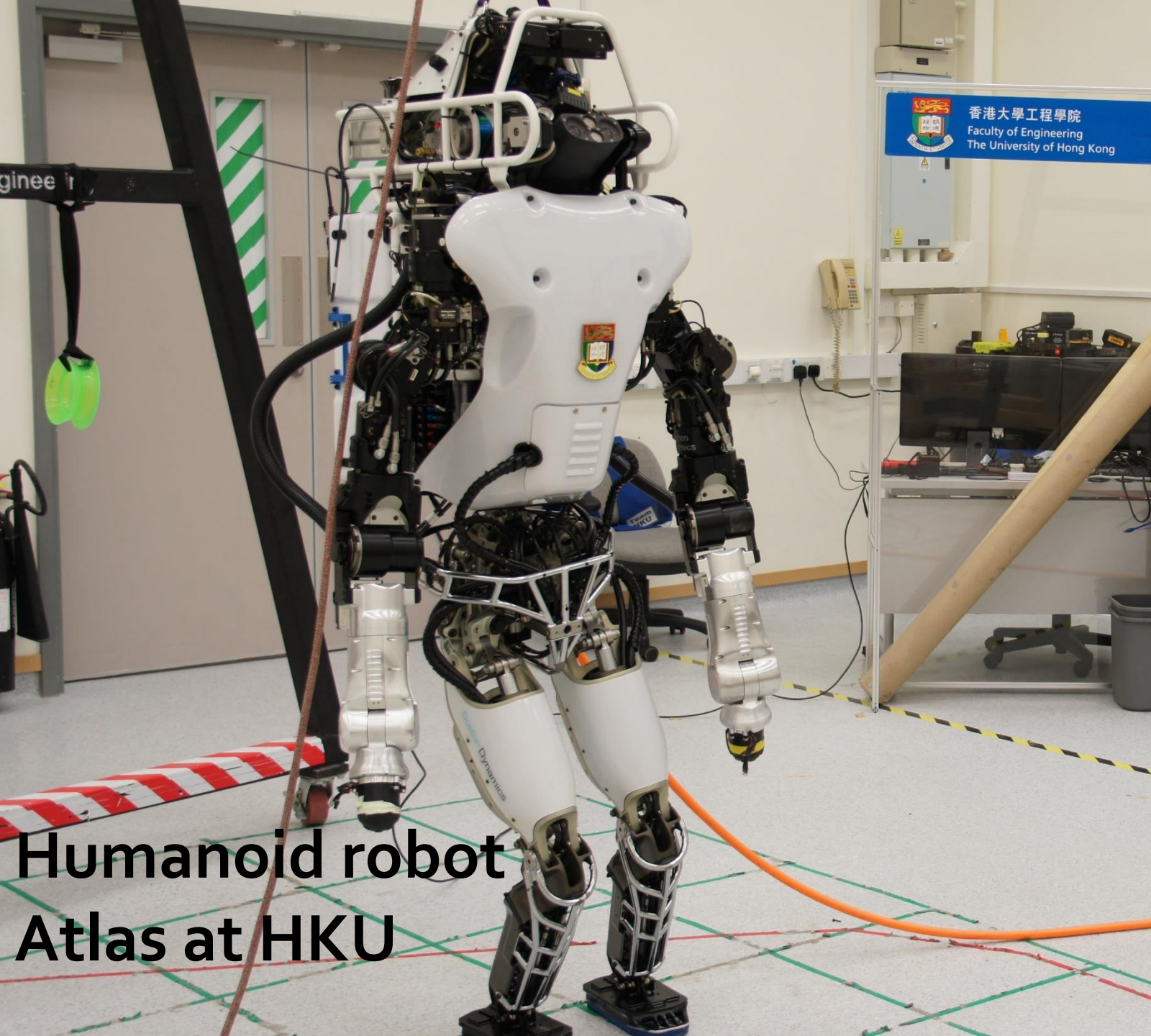




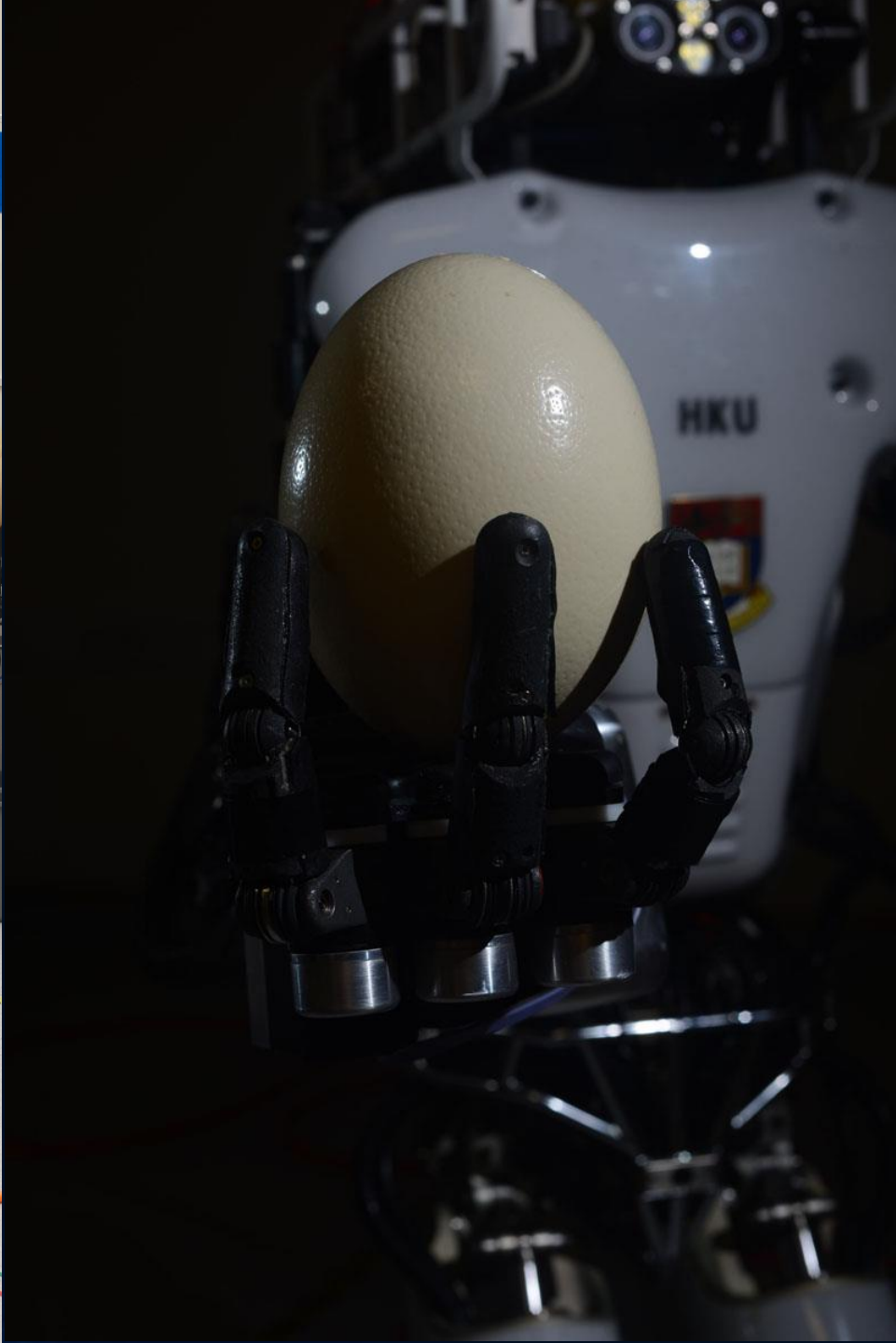
DJI - Hong Kong → Pearl River Delta

- Frank Wang, DJI's founder and chief executive, graduated in 2006 from Hong Kong University of Science and Technology
- Launched DJI as a start-up with his supervisor Professor Zexiang Li in Shenzhen
- Manufacturing unmanned aerial vehicles (UAV) for aerial photography and videography
- Over 50% market share in North America & over USD1 billion in sales in 2015
- “a forefront of civilian drone industry” by *The Economist*





Humanoid robot
Atlas at HKU



Atlas and other competing robots in June 2015



Atlas in 2016 by Boston Dynamics



1 + 1 = 3

Synergies make a quantum leap

