

# Tackling the Technology Competition with China

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19 November 2019

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# China the Leader

## CHINA AT PARITY OR AHEAD

- Genomics, quantum science, artificial intelligence (AI)

## R&D SPENDING

- China poised to overtake United States as largest spender on R&D (PPP) as early as 2019

## STRATEGIC EMPHASIS

- Strong government support for achieving scientific and technological milestones

# China the Laggard

## DEPENDENT ON FOREIGN TECHNOLOGY

- Jet engines
- Semiconductors

## INNOVATION SHORTFALLS

- Few world-class universities and research institutes
- Patents – quantity over quality

## CLOSED AUTHORITARIAN SYSTEM

- Scientists and technologists tend to flourish in open societies

# China and AI

## AI IS A STRATEGIC PRIORITY

- Critical to the future of global military and economic power competition

## MILITARY AI

- Aggressive pursuit of military usage of AI
- Growing exports of armed autonomous platforms and surveillance technology
- “Leapfrog”: Beijing believes China is better positioned to adopt military AI than US and its allies

## VULNERABLE DEPENDENCIES

- Imports of international technology
- Homegrown talent

# A New International Technology Policy Regime

## WHAT IT IS

- A new organization to achieve broad-based, proactive and long term multilateral cooperation
- Members would be leading liberal-democratic technology powers such as US, Japan, UK, France, Germany, Canada, Australia, The Netherlands, and South Korea

## NECESSITY

- No single country can easily prevail in technology competition with China
- China achieving dominance in critical technologies would confer substantial economic, military, and political advantages

# A New International Technology Policy Regime

## PURPOSE

- Regain the initiative in the global technology competition
- Protect and preserve key areas of competitive technological advantage
- Promote collective norms and values around the use of emerging technologies

## PROPOSED AREAS FOR COOPERATION

- R&D, supply chain diversity and security, standards-setting, multilateral export controls, countering the illiberal use of advanced technology

# — Proposed Areas for Cooperation and Collaboration



## RARE EARTH ELEMENTS

- Mining and processing
- Recycling
- Man-made substitutes



## SEMICONDUCTOR FABS

Consortium to establish new fabs



## EXPORT CONTROLS

Restrict sale of semiconductor manufacturing equipment to China



## 5G – OPEN ARCHITECTURE

Stimulate transition to network virtualization





# THANK YOU



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