

Digital Transformation: Pre & Post Covid-19

Jim Balsillie

Founder, Centre for International Governance Innovation

Co-founder, Institute for New Economic Thinking

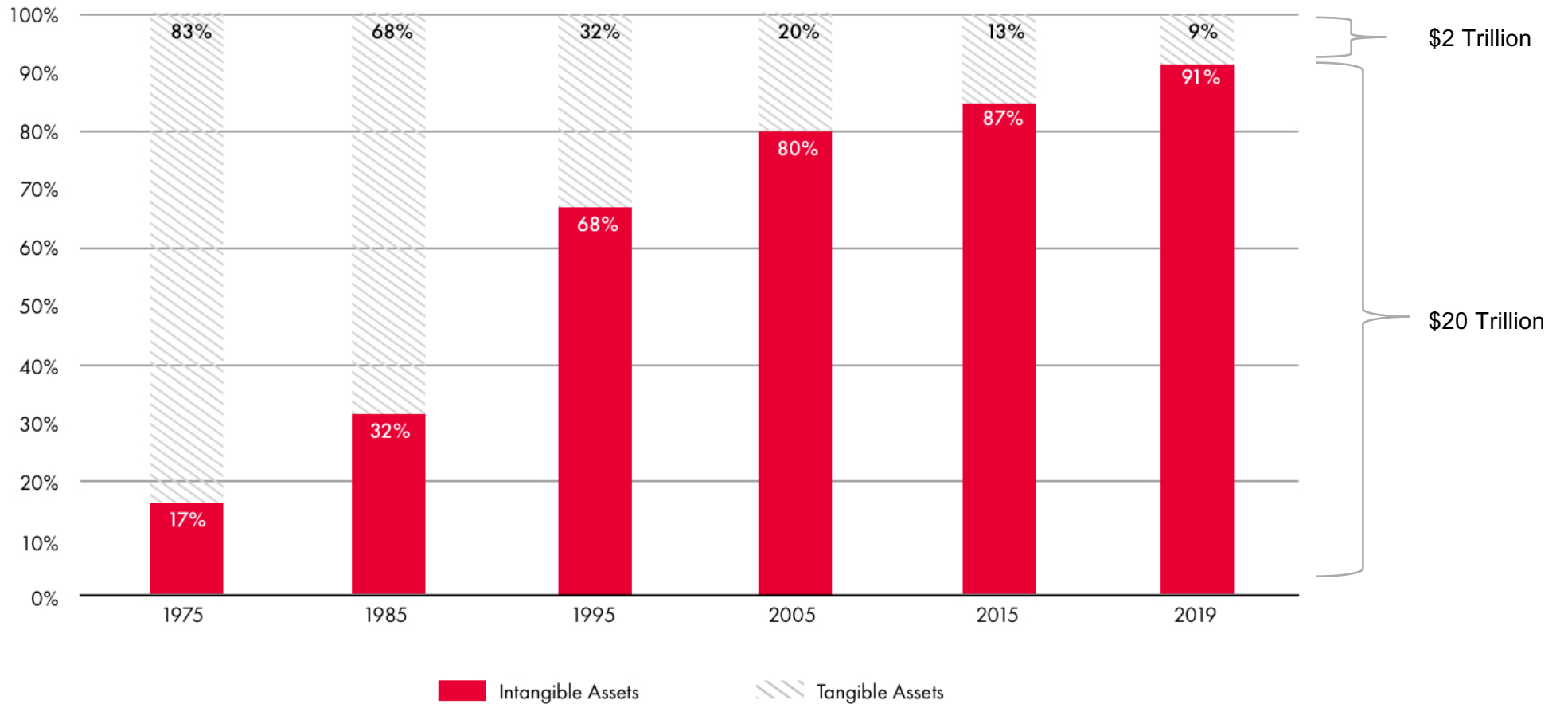
Retired Chairman and co-CEO of Research In Motion (Blackberry)

Institute for New Economic Thinking Webinar

August 20, 2020

Shift From Tangibles to Intangibles

Components of S&P 500 Market Value



Source: Ocean Tomo, LLC
*January 1, 2015

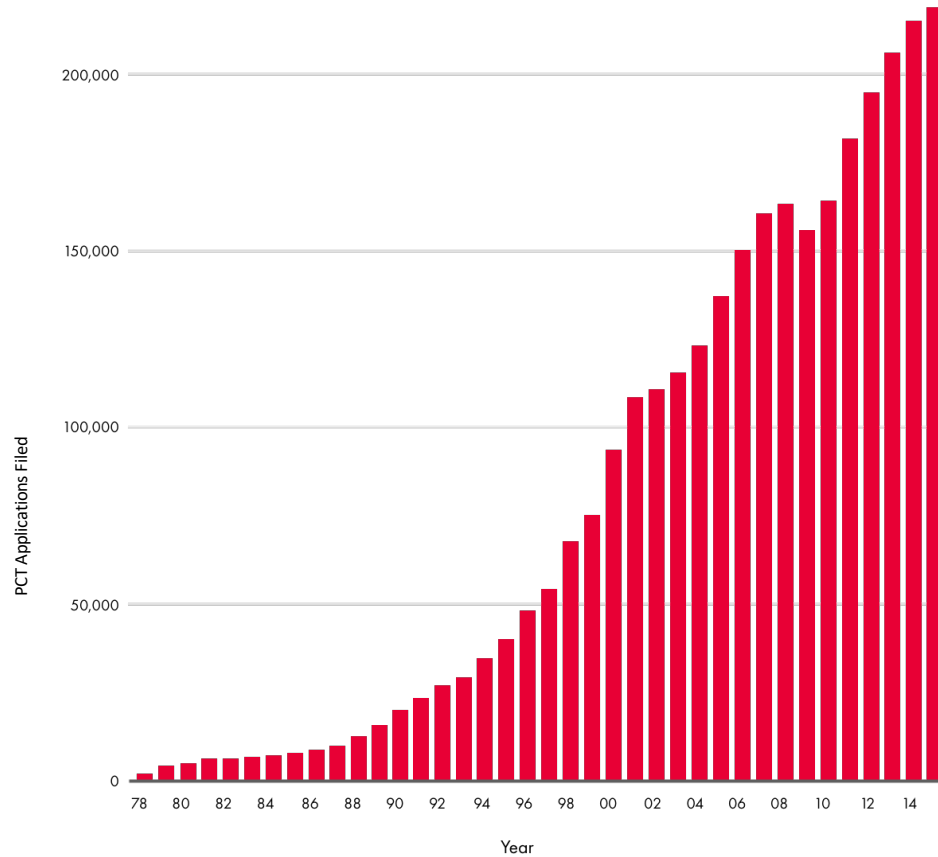
Apple, Amazon, Alphabet, Facebook, Microsoft total value is ~\$6.6 trillion, with total tangible book value ~ 4%
Alibaba and Tencent in China are valued at ~\$1.3 trillion, with total tangible book value ~3%

Economy of Traditional, Tangible Goods

Economy of Ideas, Intangible Goods

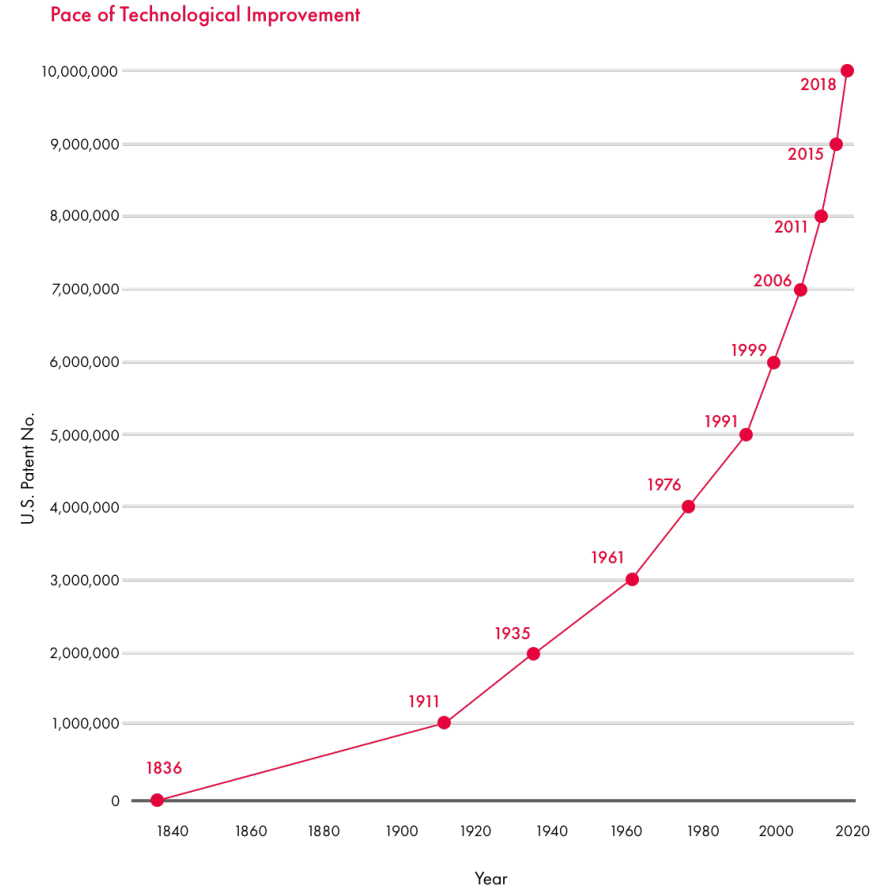
Ownership of physical property is a positive right	→	Owning (“generating”) intellectual property is a negative right
Production and sale of physical property to generate revenue	→	Amassing IP and restricting use to collect “rents”
The objective in industrial/services economy is to move inventory	→	The objective in the innovation economy is to acquire IP
Traditional goods can only be owned by one person at a time (“rivalrous”)	→	IP globally & simultaneously accessible by unlimited number of people (“non-rivalrous”)
Traditional infrastructure needed to move goods across borders to individual customers	→	IP is impossible to determine where it originates & how it moves across borders
Supply chains feature multiple vendors competing with each other based on cost competitiveness	→	Value chains are based on winner-take-all economics
Competition rules prevent traditional production monopolies	→	IP is a government created temporary monopoly
Trade liberalization increases competition and reduces prices	→	Stronger IP protections decrease competition and increase prices
Traditional trade agreements reduce the value of vested interests	→	“Asset Enhancement Agreements” raise value of vested IP-based interests

Patent Cooperation Treaty – Patent Filings



Source: <http://www.wipo.int/pct/en/3million/index.html>

USPTO – Patent Filings

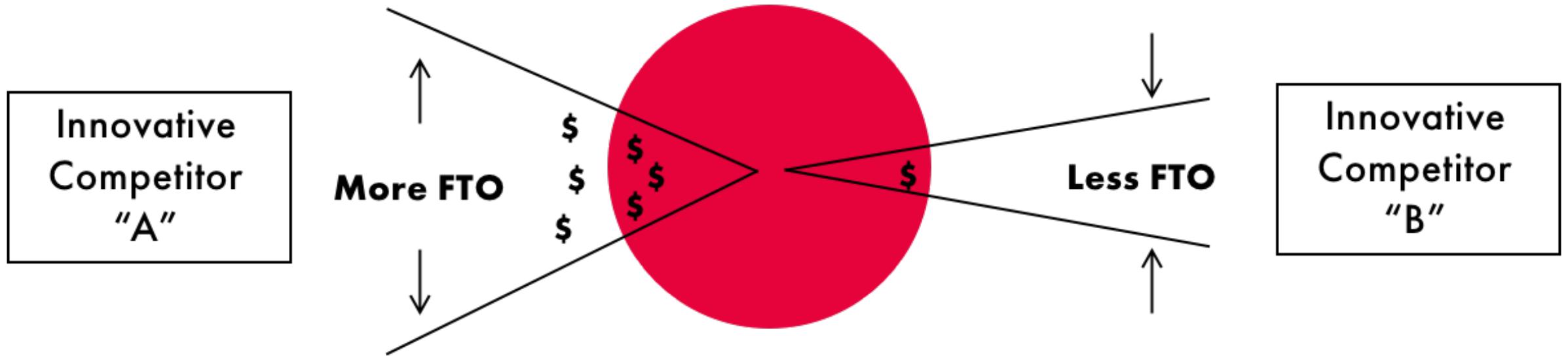


“Patents are the most concrete and comparable measure of innovative output over countries and time.”

The IT Revolution and the Globalization of R&D (<http://www.nber.org/papers/w24707>)

Digital Transformation: Pre & Post
Pandemic
Jim Balsillie

Policy Infrastructure for 21st Century Economy: Freedom-to-Operate (FTO)



Data Governance: Cross-cutting Issues

DATA PROPERTY RIGHTS

- Who owns the data & what do these data rights entail?
- Who is allowed to collect what data?
- What are the rules for data aggregation?
- What are the rules for data transfer?

GLOBAL GOVERNANCE

- What should the international rules be governing trade of data?
- How are diverse sovereign choices supported?
- How is the flexibility preserved to allow on-going innovation & proper utilization?
- Is it too soon to encode data provisions in international trade agreements?
- How to establish and enforce new global cyber norms?



SOCIAL GOOD

- What are the mental health issues, especially for youth, from surveillance capitalism?
- How do we protect citizens, but especially vulnerable groups, from this?
- How do we use surveillance for legitimate public safety purposes but not abused to undermine democratic rights & freedoms?
- How do we enhance regulation & monitoring of political messaging and advertising?

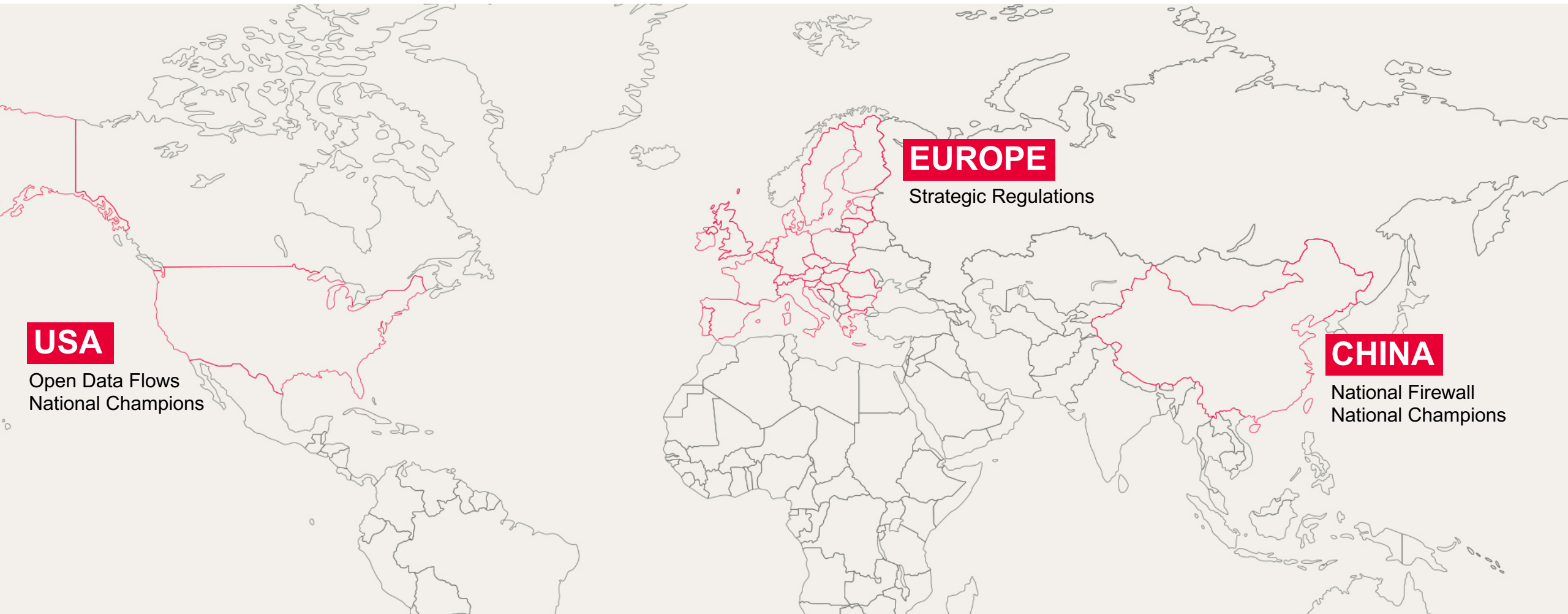
CYBER SECURITY

- Who owns the data & what do these data rights entail?
- Who is allowed to collect what data?
- What are the rules for data aggregation?
- What are the rules for data transfer?

COMMERCIAL POTENTIAL

- How can data strategies better support innovation outcomes?
- What are the individual firm and collective capacities need to capitalize on this?
- How to select industries & sectors to support?

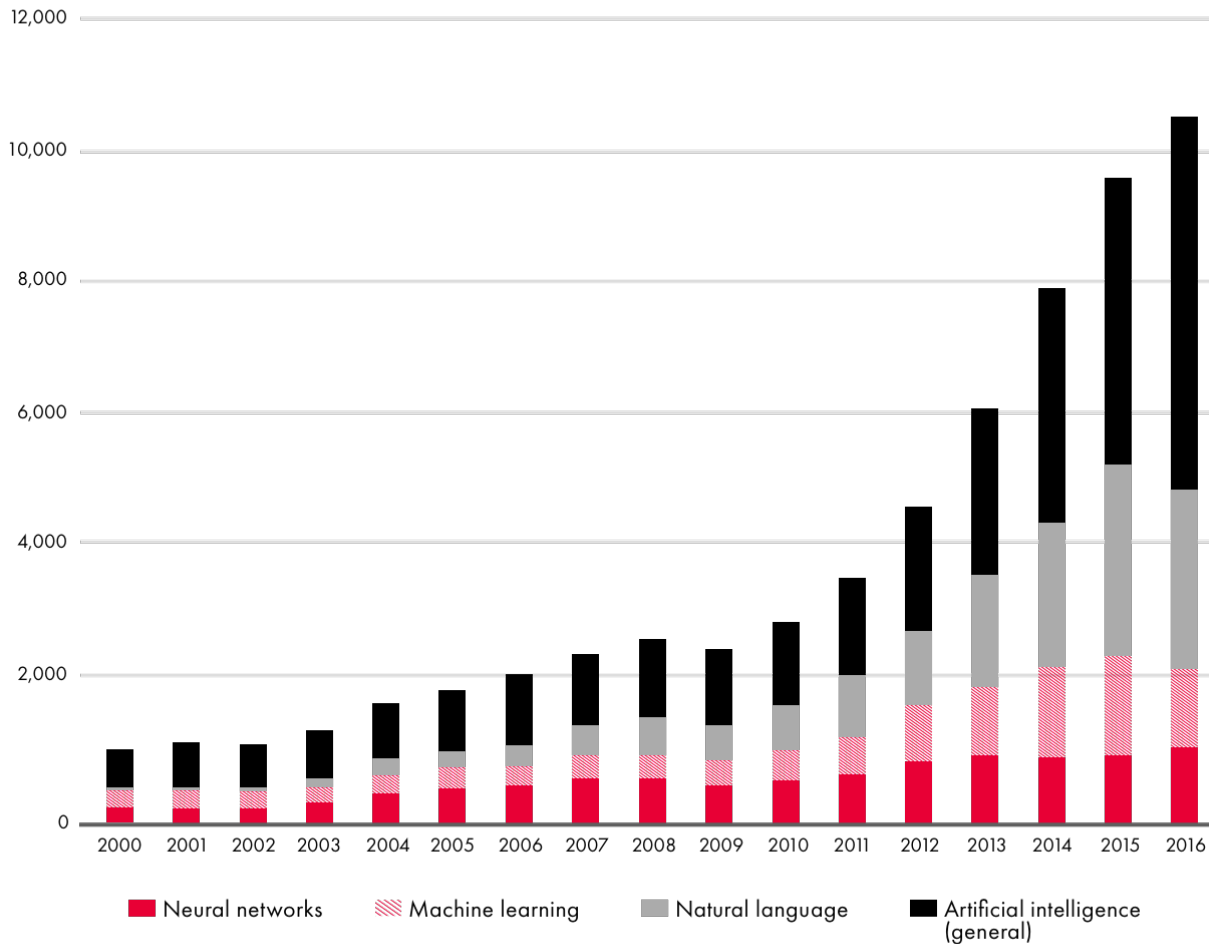
Geopolitics of Data Governance



“The rapid development of artificial intelligence will profoundly change human society and life and change the world...AI brings new opportunities for social construction...AI is a disruptive technology with widespread influence that may cause: transformation of employment structures; impact on legal and social theories; violations of personal privacy; challenges in international relations and norms; and other problems. It will have far-reaching effects on the management of government, economic security, and social stability, as well as global governance.” **China’s New Generation Artificial Intelligence Plan released in 2017 (as translated)**

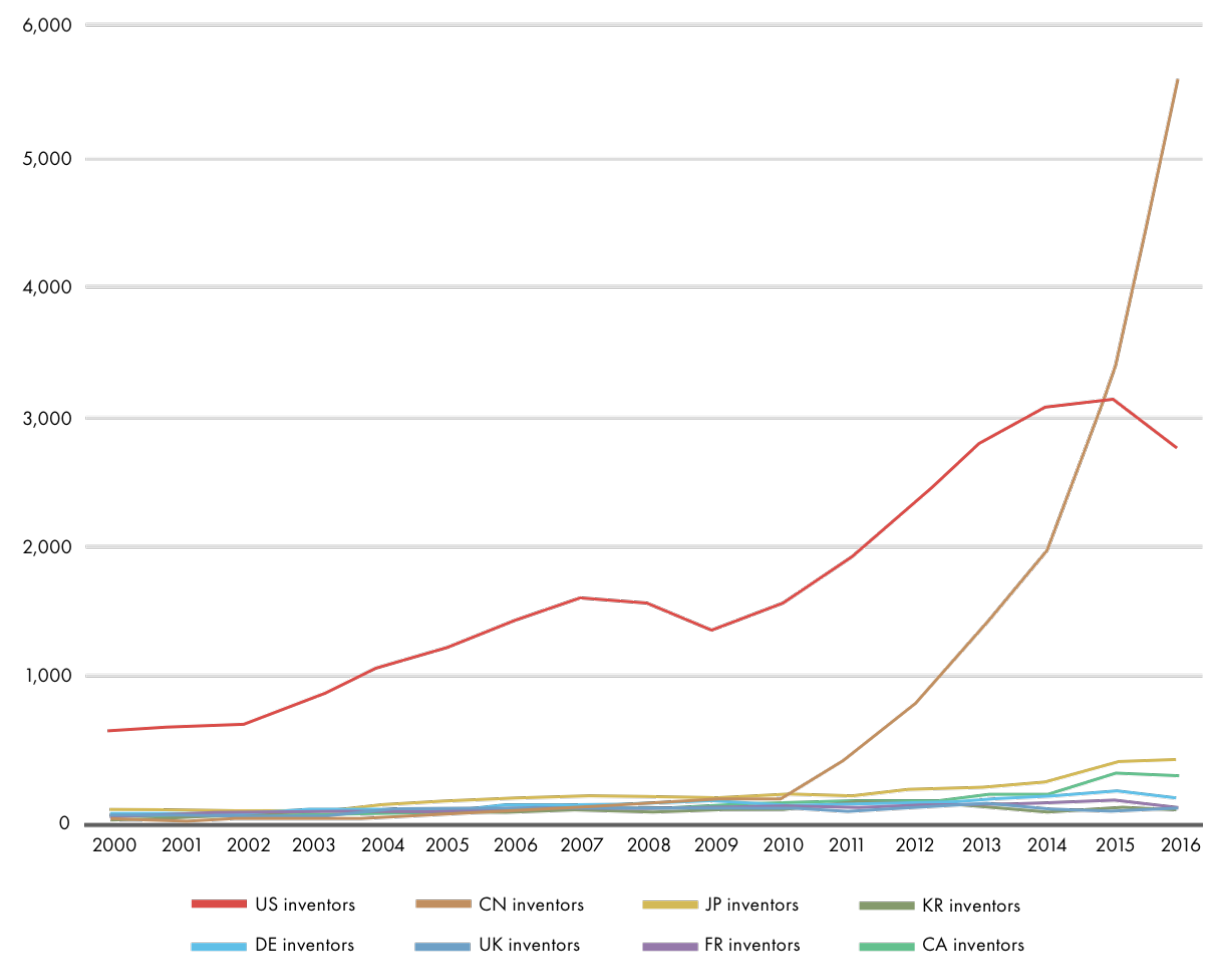
Strategic Technologies and AI Nationalism

Figure 2. Patent filings by taxonomy



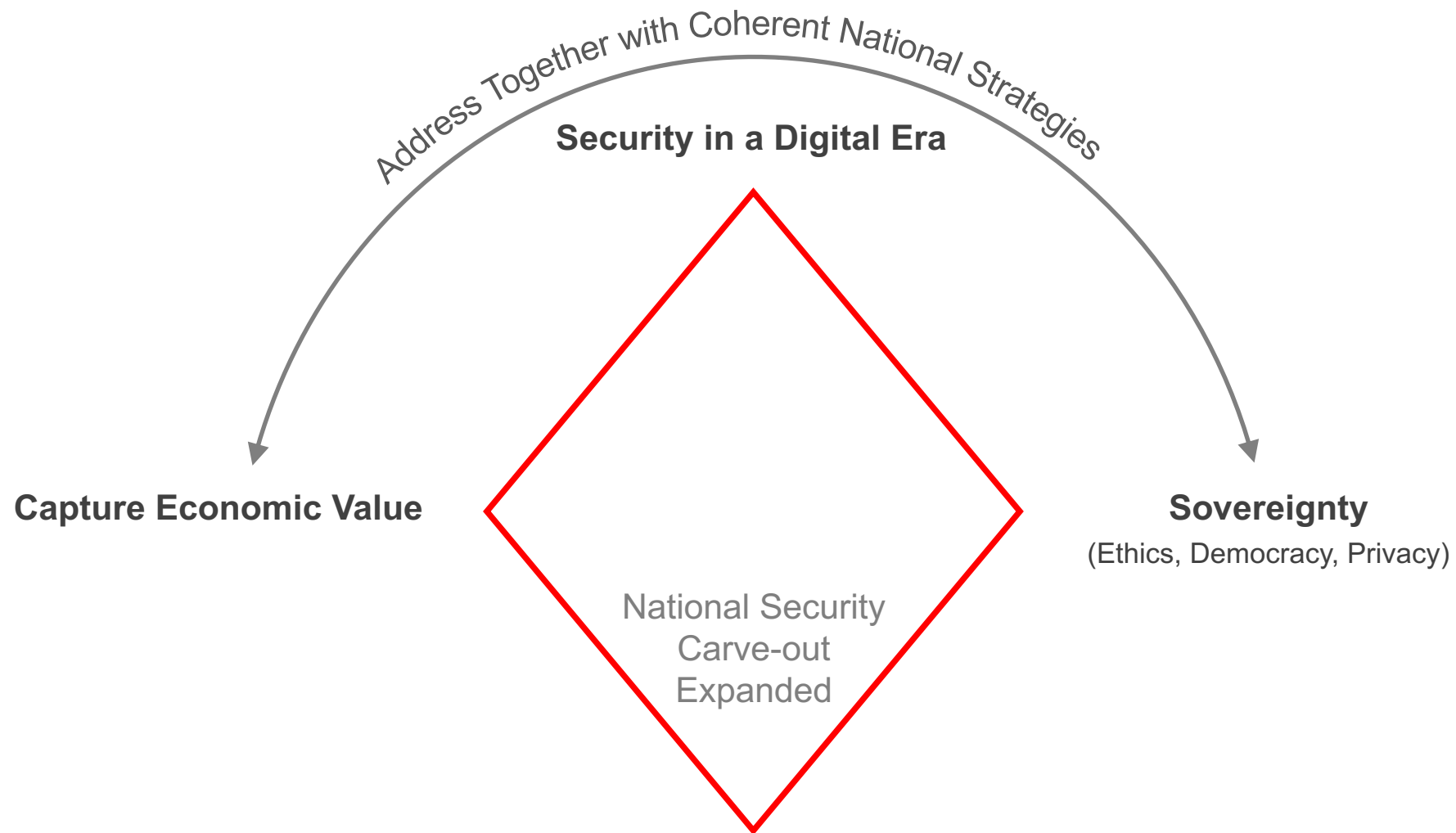
Source: Northworks IP

Figure 4. AI-related patent volume by inventor nationality



According to the China AI Development Report for 2018, China filed more than 30,000 public AI patents, an impressive tenfold jump in five years and about 2.5 times more than the United States, which it surpassed for the lead.

Policy Framework for the Knowledge-based, Data-driven Era



Categories of Economic Spillovers in the Intangible Economy

1. Jobs Created (key skills such as computer engineering and data science have negative unemployment)
2. Wealth Effects (future benefits go to foreign owners)
3. Management Development
 - a. Remote Direction/Supervision vs. Autonomous Branch Operation
 - b. Expansiveness of Employee Non-Disclosure Agreements
 - c. Comprehensiveness of Non-Competition Agreements
4. Top Talent Exfiltration
5. Data Exfiltration
6. Ecosystem Dynamism Effects
7. Erosion of Tax Base
8. Value Chain effects (particularly for high potential emerging firms)

How to Build a Prosperous Country in the Era of Intangibles (Digital, IP, Data)

National

- Updated foreign direct investment (FDI) strategies
- Updated trade strategies
- Updated research funding strategies
- Updated Bureau of Competition regulations
- Domestic media/content strategies
- National data strategy
- National cyber strategy
- National IP strategy
- Strategic procurement
- Digital Stability Board (DSB) for international digital governance

Cooperatives

- Data trusts (energy, mining, forestry, agriculture, cities, healthcare, etc.)
- Patent cooperatives (key vertical sectors, key horizontal technologies)
- Digital standards

Social

- Data governance regulations to protect private sphere & personal autonomy
- Data governance regulations to protect elections/democracy
- Utilize tax code to address externalities from digital realms
- Future of Work (social programs, education)