

CDO

MAPPING CANADA IN ASIA

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April 30th, 2015

FILTER BY COUNTRY

 CHINA

 INDIA

 JAPAN

 SOUTH KOREA

 TAIWAN

 INDONESIA

 THAILAND

 MALAYSIA

 PHILIPPINES

 HONG KONG

 SINGAPORE

 VIETNAM

 MYANMAR

 BRUNEI

 CAMBODIA

 LAOS



COUNTRIES



LEGEND



TURN OFF CLUSTERING



FEEDBACK

FILTER BY SECTOR



VIEW ALL



INFRASTRUCTURE / TRANSPORT /
ENGINEERING & CONSTRUCTION



AGRICULTURE / FISH / FOOD



ENERGY / EXTRACTIVE / ENVIRONMENT



INFORMATION COMMUNICATION
TECHNOLOGY



MANUFACTURING / AUTO / DEFENCE / AERO



FINANCIAL SERVICES / INDIRECT
INVESTMENTS



EDUCATION



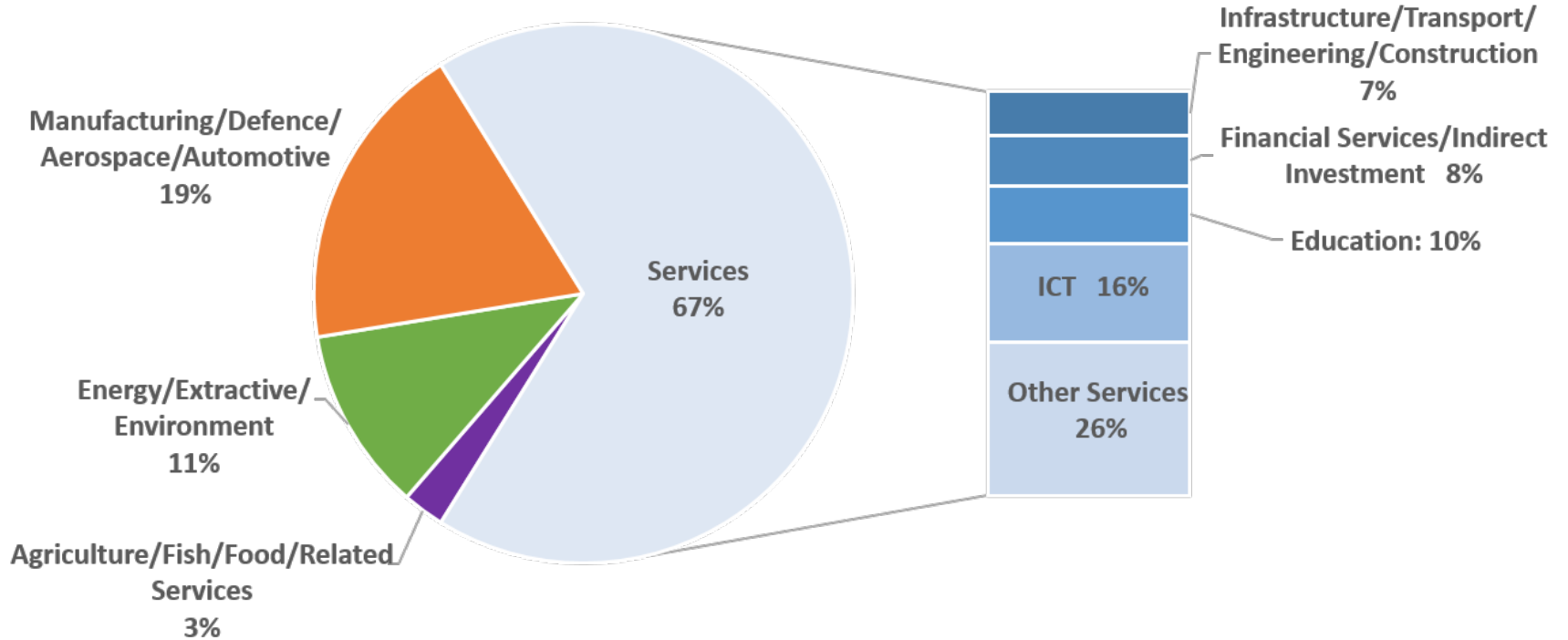
OTHER SERVICES

How big is the map data set?

- 1200 data points mapped
- 608 companies
- 8 sectors
- Public info
- CDO Subset:
 - 179 companies
 - 397 total locations



Map data set: Services

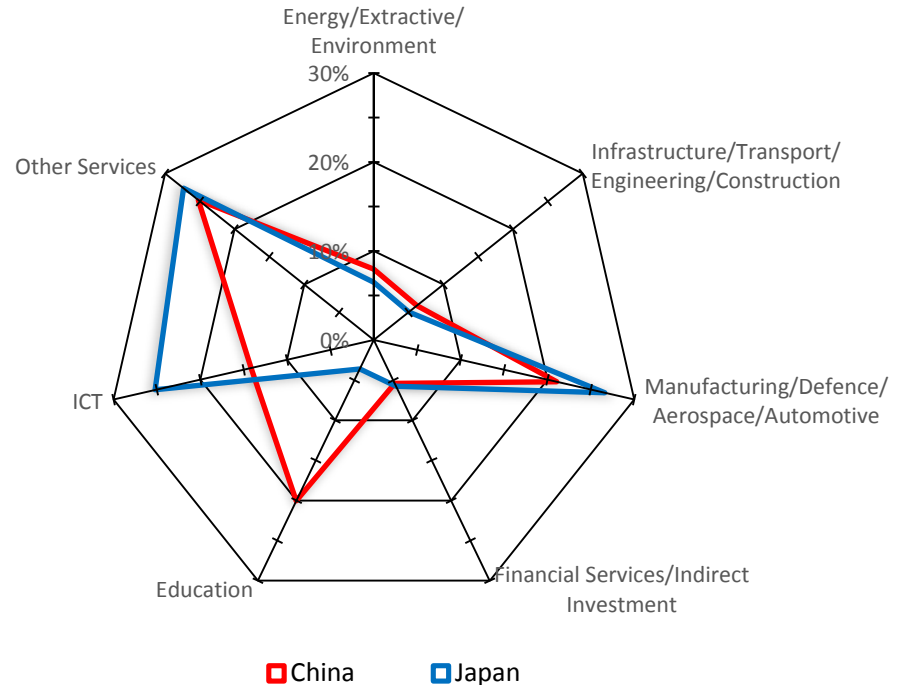


CDO data set: locations in Asia markets

- Publicly available data plus Bloomberg
- 75% of Canadian firms are represented in at least 2 Asian countries
- Expanding definitions of “Asia-Pacific”
 - Companies now include Australia and NZ within this category
 - Trend to recognize China, Hong Kong, Taiwan, and Macau as “Greater China”

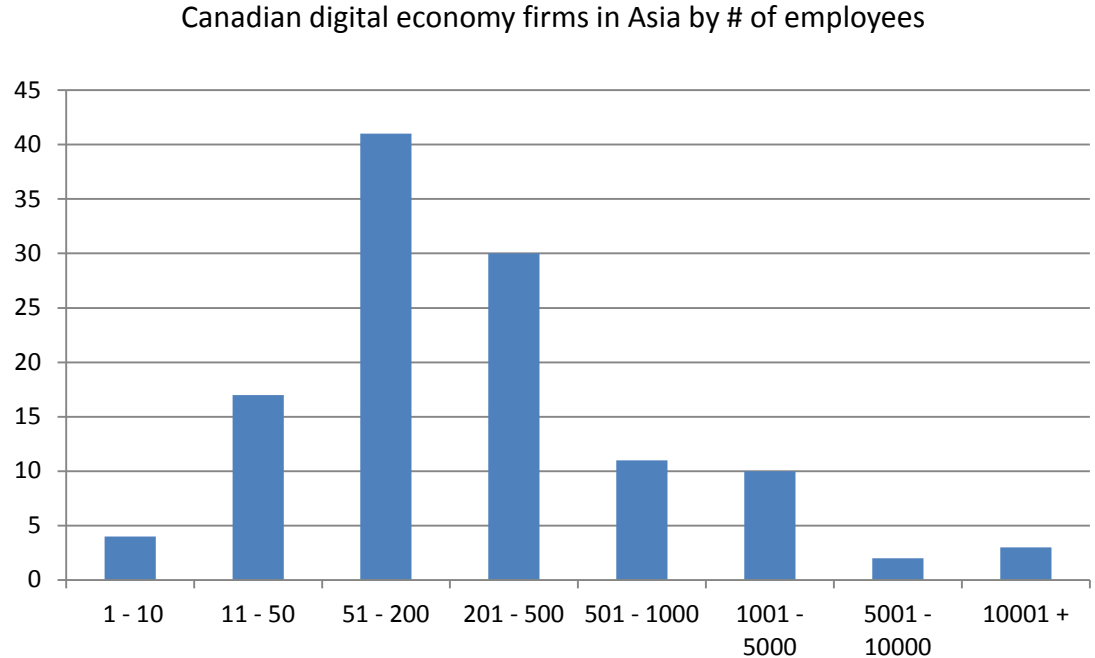
How is the firm set up in each market location?

- Joint ventures more common in other map sectors
- CDO dataset: Asian operations are 100% **Foreign Owned Enterprises**
 - Substantial # of privately held operations in licensing agreements
- What does this signify?
 - Ownership choices reflect proprietary and IP protection



of employees in each location

- Some employee head counts provided in aggregate
- Sample size is still small
- 2/3 firms employ between 51-500 people



Major clients by sector

Auto & Aviation



BOMBARDIER

Major clients by sector

Network Architecture & Communications

3M

Bell



Honeywell



CISCO™



Microsoft

ORACLE®

SAMSUNG

TOSHIBA

BlackBerry

Major clients by sector

Financial Services



Major clients by sector

Services supply chains?



THOMSON REUTERS

Coca-Cola



ENBRIDGE



Disney



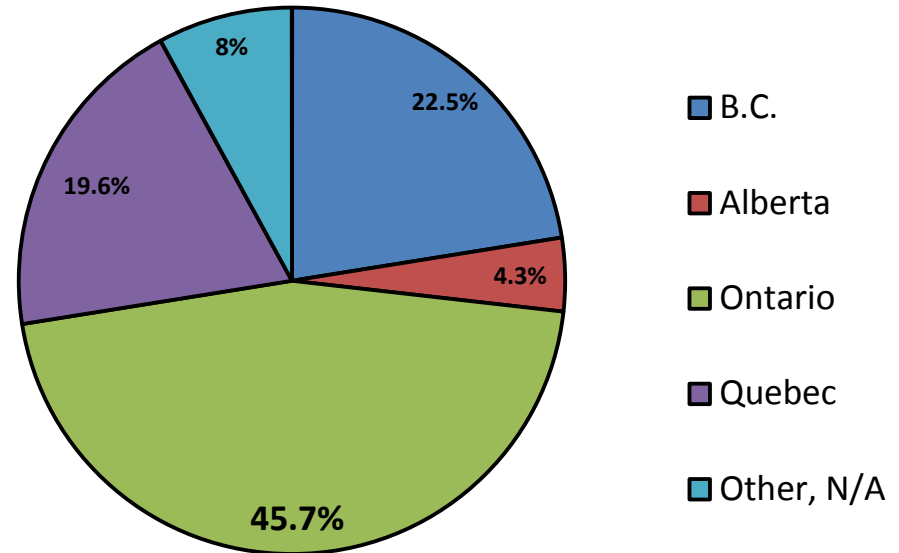
Revenue from Asian markets?

- Senes/Arcadis – 26%
- ATS Automation – 24%
- Blackberry – 12%
- Absolute Software – 11%
- CAE – 16%
- CGI – 4%
- Descartes – 3%
- Data from publicly traded companies only
- Further analysis is required
- Robust growth forecasts for entertainment industries (IMAX, D-Box) as disposable incomes rise in China and India

Location of head office

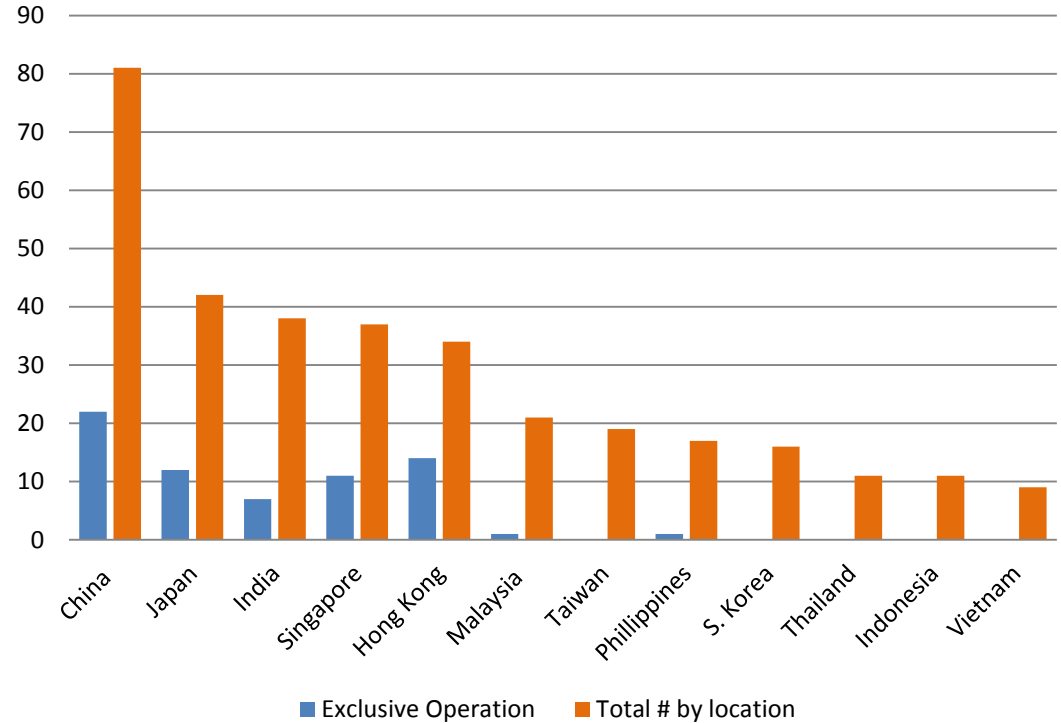
- Ontario: 63
 - Toronto/GTA: 35
 - Ottawa/Kanata: 13
 - Kitchener/Waterloo: 13
- British Columbia: 31
 - Vancouver: 12
 - Richmond: 12
- Quebec: 27
 - Montreal: 16
- Alberta: 6

Canadian Digital Economy Firms
Asian presence % by Head Office Province



CDO dataset locations in Asia

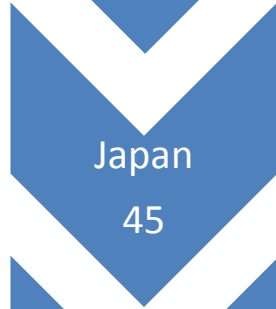
- Roughly 25% of Canadian business operations in Asia are in only 1 country
- Japan tops locations for Toronto/Waterloo
- About 20% of corporate websites had Asian language options
 - Majority in Chinese



Internal supply chain dynamics?



- China + Taiwan = 71



- Japan + South Korea = 61



- Singapore + Malaysia = 59

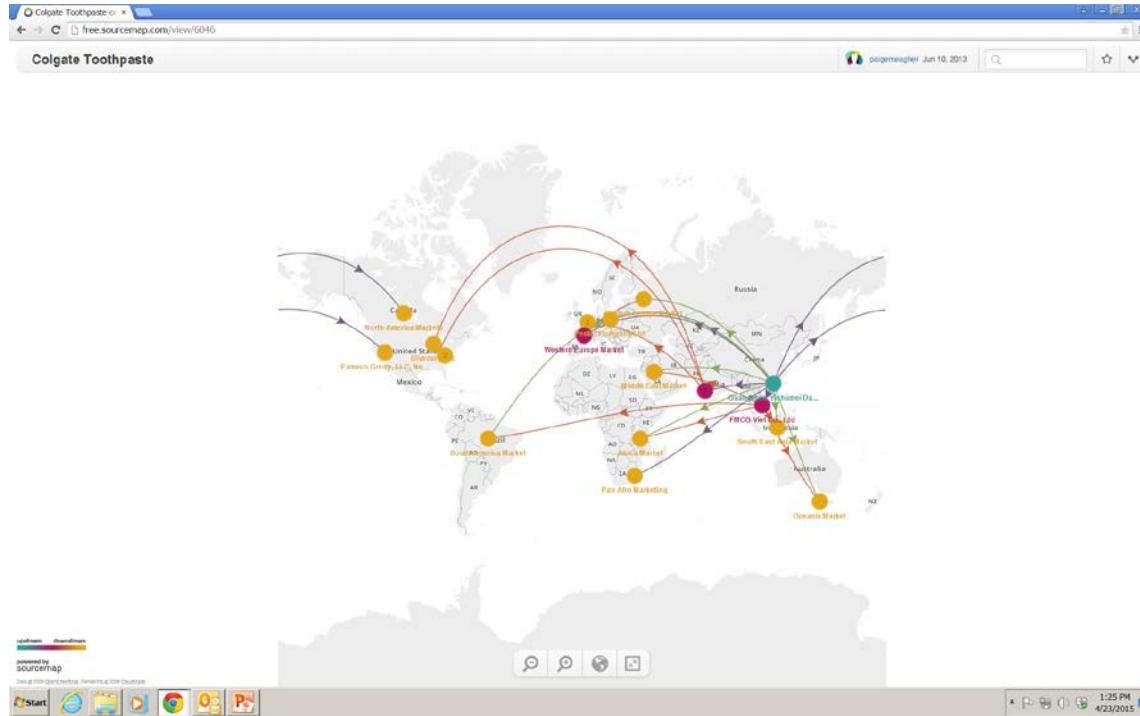
Internal supply chain dynamics?



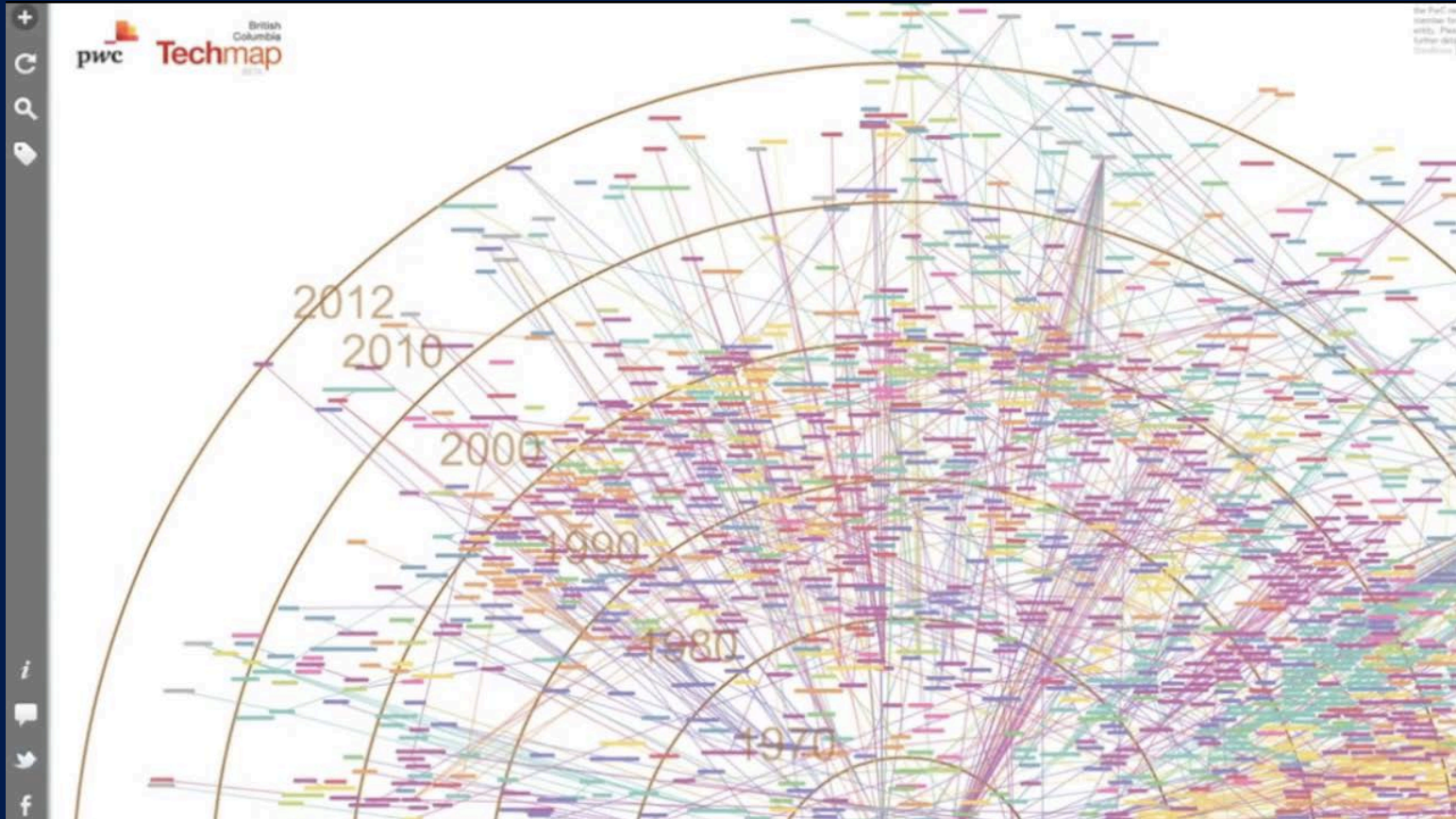
Next steps

- Service supply chains?
- Research Europe, USA?
- CDO-only map?
- NAICS code classification?

CDO supply chain mapping



PWC 2012 BC TechMap: 1400 Companies



PWC 2012 BC TechMap: Classifications



Sector Descriptions

Industries represented on the Global Map



Software

Companies involved in developing enterprise applications software, middleware, tools, and personalized applications



Electronics & Peripherals

Companies involved in designing, manufacturing and implementing subassemblies, set-top boxes, integration devices, electronic components, computers, storage devices, photonics, and advanced control and measuring devices



Digital & Media

Companies involved in developing multimedia and e-commerce enabling technologies, multimedia content, portals, and e-learning



Clean Technology

Companies involved in developing fuel cells, solar energy, hydro electric or wind energy systems



Mobile & Web

Companies involved in developing (ios, Android, Windows, etc.) business social and game platforms



Telecommunications & Wireless Communications

Companies involved in developing telecommunication, data, wireless, and satellite communication products



Advanced Manufacturing & Semiconductors

Companies involved in developing technologies that combine manufacturing with information technology and microelectronics including aerospace, advanced materials, lasers, and robotics. Companies involved in designing and manufacturing semiconductors and semiconductor equipment



Cloud Integration

Companies involved in the cloud integration technology platforms for data storage as well as virtualization and virtualization-based cloud infrastructure solutions



Life Sciences

Companies working in pharmaceuticals, biotechnology, medical devices, bioinformatics, and environmental technology



Energy Technology

Companies involved in developing energy conversion, energy storage, systems or components for stationary, portable or transportation use that are not clean technology



Services & Analytics

Companies involved in delivery of software, internet, and information technology services, including mobile and web analytics, other technology services as well as diagnostics of technology-related equipment

CDO

MAPPING CANADA IN ASIA

Thank You