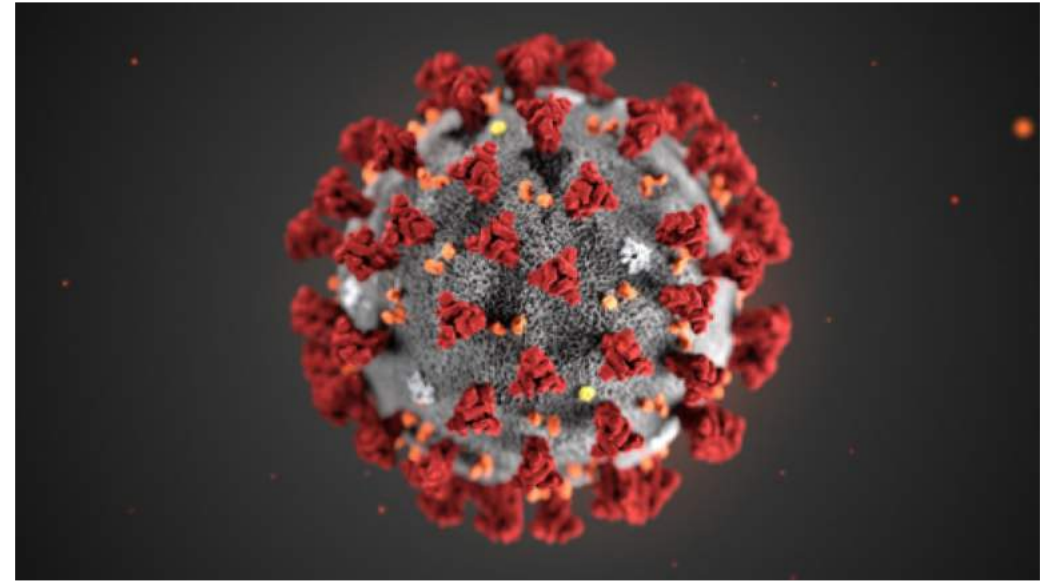




Source: Shutterstock

Trade War

Greg Hutchins PE CERM
Quality + Engineering
GregH@800Compete.com
503.233.1012 or 800.COMPETE



Source: WHO

Coronavirus COVID - 19

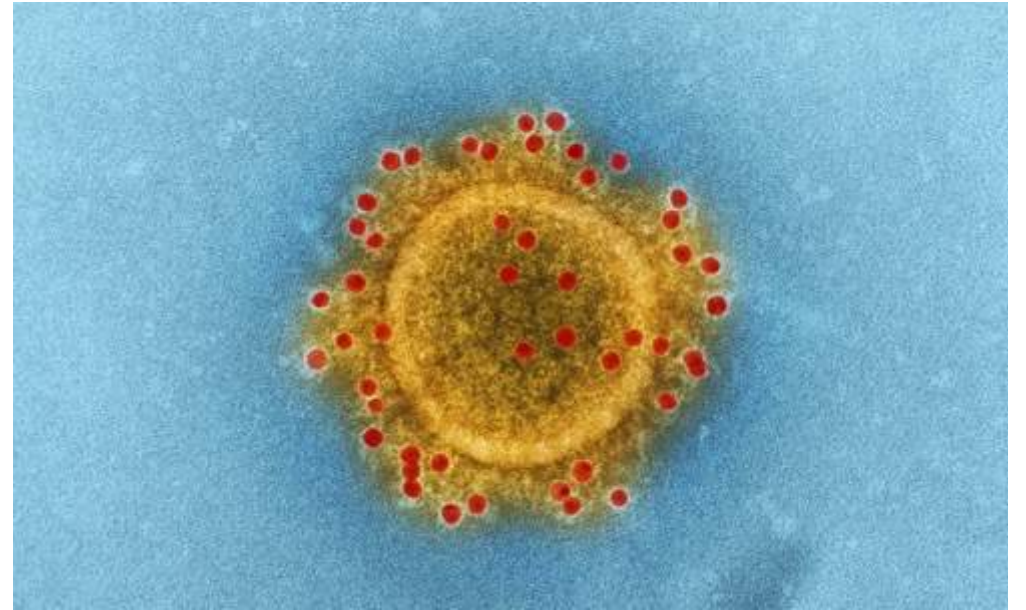
Greg Hutchins PE CERM?

- Engineer
- Author of more than 30 books including **Supply Chain Risk Management**
- First company to be DHS approved for CIP Forensics, Assurance, Analytics®
- Been involved in global trade for more than 30 years
- Grew up in Asia
- Founder of:
 - 800Compete.com
 - WorkingIt.com
 - CERMAcademy.com
 - QualityPlusEngineering.com



Presentation Questions

1. What risks does COVID – 19 present?
2. Why does this question matter?
3. What's the critical question for all companies sourcing in China?
4. What are sourcing options?
5. What's the future of US/China relations?



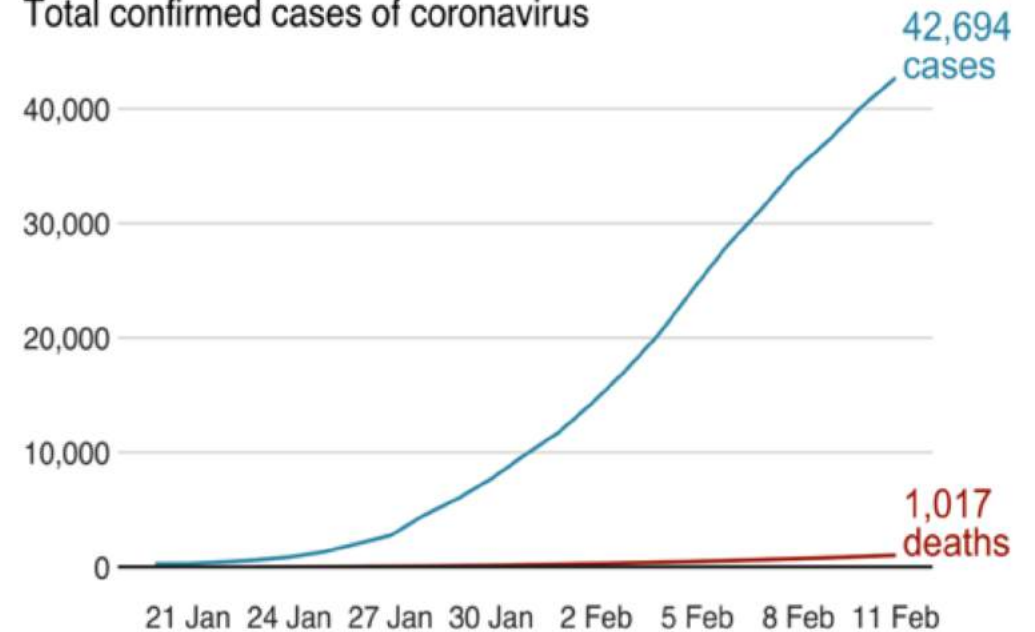
Source: Center for Disease Control

1. COVID 19 Risks

- Context is worth 20 IQ points
- We are at an inflection point in:
 - Global health
 - Trade
 - Geo-politics
 - Geo-economics
- Words can't adequately describe :
 - "Catastrophic"
 - "Existential threat"
 - "Unprecedented"
 - "New normal"
 - "Scary"

More than 42,000 cases in China so far

Total confirmed cases of coronavirus



China National Health Commission, BBC Research, 11 Feb

BBC

Times & Rules They Are A'Changing

- COVID 19 is a game changer
- Worldwide epidemic shows how quickly events can change business models
- This is exactly what is happening with today's topic trade, supply chain management and changing assumptions
- Dynamic environment and asymmetric risks
 - Business and government face questions and quandaries not addressed before?



Source: Xinhua

China's stock markets plunge as coronavirus nears pandemic status

Australia to quarantine crew coming from China with coronavirus symptoms

Cathay Pacific asks its 27,000 employees to take three weeks unpaid leave

Coronavirus pandemic threatens to cut pharmaceutical industry's lifeline

Virus threatens U.S. companies' supply of Chinese-made parts and materials

China virus hits cruise ships, carmakers, airlines and Airbus

China's top task is to stop coronavirus, Xi Jinping says

China Tightens Wuhan Lockdown in 'Wartime' Battle With Coronavirus

China Expands Mass Coronavirus Roundup; U.S. Reports 15th Case

Coronavirus Consequences in China Are Real

- “I am in Hong Kong, where they closed the border with China at midnight (Feb 3), barring a few crossings such as the sea bridge with Macau and Zhuhai.
- Everyone here is working from home, the streets are quiet and the docks are even more so. In Hong Kong, freight forwarders are twiddling their thumbs as the Chinese market is on effective shutdown.
- **Factories have been shut since before Lunar New Year and will remain closed until at least February 10 in 14 provinces that cover 70% of GDP and 80% of exports.**
- It's too early to see concrete downstream impact, but with borders being shut to Chinese travelers, air cargo flights being cancelled and no workers in Chinese factories to make the inputs for use in manufacturing in Southeast Asia, it is a matter of time.
- I spoke with one manufacturer in Thailand this morning who has enough inventory to stock the next order, then he doesn't know what he can do, since he needs parts (and talent) from China.”



Source: Twitter

Finbarr Bermingham
South China Morning Post
Production Editor
Political Economy
Hong Kong

2. Why Does This Matter?

- Let's do an experiment. Pick up local paper.
- What is the common lens for most of the articles and news?
- What percentage of articles deal with risk?
- Welcome to the world of disruption & uncertainty
- Let's look at global, business, and people impacts and risks



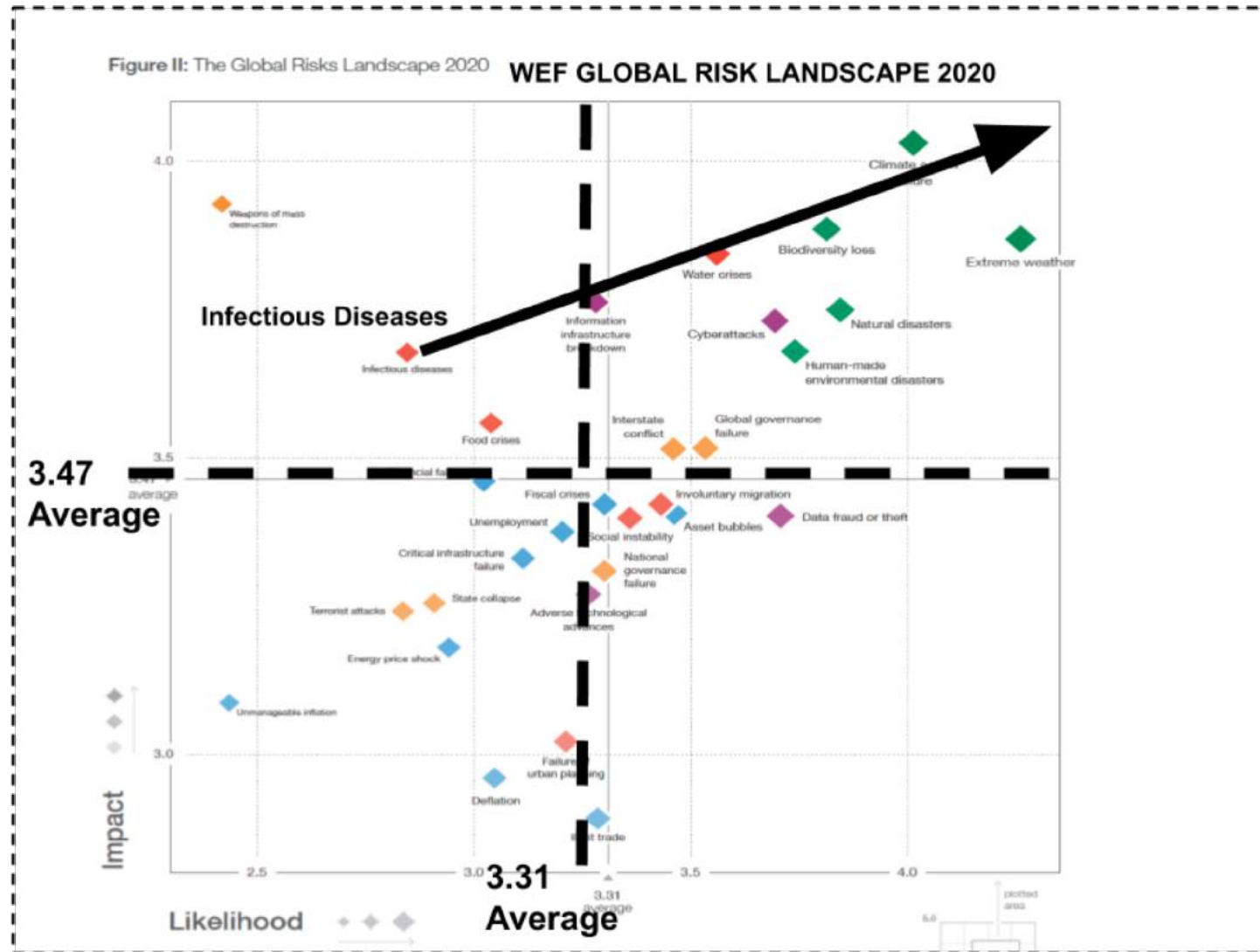
Source: The Economist

Global Risks

- Coronavirus risks
- People risks
- Geo-economic risks
- Geo-economic risks
- Impacts:
 - 'Do Not Enter' Signs in US, Australia, etc.
 - Quarantines
 - New business models



Coronavirus Risks



People Risks

- Public Safety: 45 million people in China quarantined
- Shanghai & Beijing may be next
- Chinese cities isolated
- Some cities are 3 times bigger than London
- Global health emergency
 - WHO may determine **pandemic**



Source: Macau Photo Agency

Geo-Political Risks

Old Engagement Rules

- Geo-economic and geo-political co-operation
- Military expansion
- Friendly competition
- Free trade
- World wide job creation
- Made In China

New Engagement Rules

- Geo-economic and geo-political confrontations and containment
- Tech warfare with information AI, 5G, IOT, surveillance, cyber. etc
- Rise of the Digital Curtain
- Continuous trade wars
- Domestic job creation
- Made in USA

Geo-Economic Risks

Old Engagement Rules

- Buy (Source)
- Single source in China
- Just in Time delivery
- Lean manufacturing
- Offshoring
- Mechanical products
- Supplier evaluation
- Quality focus

New Engagement Rules

- Made in USA
- Sourced in multiple countries
- Just in Case contingencies
- Buffer inventories
- Near or on shoring
- Products + Embedded software
- Supplier forensic evaluation
- Risk focus

3. Trade & Sourcing Risks

- Trade deficit 2018 with China = \$419 B
- Trade deficit 2019 with China = \$346 B
- One year ago, we would have said that US - China trade differences were negotiable
- Both sides were talking, positioning, posturing, and negotiating
- Fundamental shift in sourcing to China
- Trade and sourcing have been “weaponized”
- It’s all about domestic high - paying jobs – Senator Schumer (D) is hardliner



Source: Shutterstock

Business Risks: Apple's Story

- Apple has a market capitalization of \$1 Trillion. Most of its revenue and margins are from iPhone.
- “Virtually all of the world’s iPhones are Made in China.”
- “I can’t imagine a scenario where the supply chain isn’t disrupted” ... “If there’s one major hiccup in the raw materials, fabrication, assembly, test, and shipping, it will be a disruption.”
- **Source:** Bloomberg, January 27, 2020
- The risk here is obvious.

Foxconn’s biggest iPhone plants: one banned from reopening, second 10% staffed

Source: 9to5Mac.com 2/10/20



Source: Apple

SUPPLY CHAIN > SUPPLIER RELATIONSHIPS

Apple: The Supplier Nightmare Is Real

The tech giant relies on a winner-take-all approach.

Source: Industry Week 2/10/20

Chinese Covert Risks: Huawei's Story

- Huawei is a Chinese state-funded communications firm
- Sells 200 million smart phone in 2019
- Huawei provides products and software for critical infrastructure
- If this a real threat? Yes!!
- Is the fear real? **Yes!!**



Source: Huawei

U.S. Officials Say Huawei Can Covertly Access Telecom Networks

Source: WSJ, 2/12/20

China - Great Decision - World Class Sourcing

Ten Years Ago

Manufacturability - ISO 9001 certified

Op Ex Practices – First article, SPC

Technology/Design – Acceptable

Quality - Cpk - 1.0, compliance

Product delivery – Within acceptable windows

Cost – 40% or more lower

Now

Manufacturability – World class/Robotic/AI/IOT

OP Ex Practices – Lean, Six Sigma

Technology/Design - World class

Quality – Cpk – 2.0 or PPM

Product delivery – Just-in-Time

Cost – 10% lower or higher

But - China Sourcing Risks Are Increasing

- Weaponized trade
- Asymmetric warfare – i.e. Chinese cyber attacks
- Nationalist politics (made in China, USA, etc.)
- Chinese & US politics
- Supply chains as pawns in a global struggles
- Unintended consequences
- Black Swans -Coronavirus
 - Known, unknown events
- Tariffs – 25% game changer
- IP loss
- Lack of access domestic markets
- Confused and changing sourcing rules
- Embedded malware in products (IOT/com/etc)



Source: Pixabay

Pivotal Time: Re-evaluate Business Models

Current Model

- Manage brand
- Outsource product design
- Outsource manufacturing
(Up to 80% of value)
- Test products (externally)
- Sell products

Re-evaluation of Model

- Secure brand & IP
- Design product (retain control)
- Re-evaluate 'make or buy'
- Test products (internally)
- Sell products (equivalency)

Risk Based, Decision Making

The Challenge:

- “... , it is questionable whether fragile globalized supply chains can thrive at all in an environment where the world's two largest economies are disinclined to play by the rules, even their own.”

Wall Street Journal, **December 13, 2018**

Responses:

- Risk (Threats) are much higher due to coronavirus etc.
- Result:** Brand companies are re-evaluating sourcing models and 'make or buy' decisions based on risk



Source: Shutterstock

Critical Question: 'Make or Buy' Decision

- Can a U.S. company withstand loss of parts from Chinese major supplier for four or six months?
- NO!!!!
- So, what's the solution:
- Revisit business assumptions made 20 or even 30 years ago
- Revisit 'Make or Buy' Decisions for each China sourced product
 - Business continuity was based on fire or work disruption, not shutdown of China's economy
 - Chinese disruptions are continuous



Source: Shutterstock

4. Sourcing Risk Strategies

1. Accept sourcing risks
2. Diversify sourcing risks
3. Share sourcing risks
4. Control sourcing risks



Source: Pixabay

Assumption: Each sourcing category is risk evaluated and mitigated separately

- i.e. Chinese commodity supplier is evaluated differently than tech supplier with embedded software

Accept Chinese Sourcing Risks

- Re-evaluate internal business and sourcing models
- Bilateral economic concessions
- Reprice products to domestic customers
- Pass along costs along supply chain (T1, T2, etc)
- Change China sourcing risk tolerance
- Source from China commodity products
- Insource high risk/value products
- Game tariff system (i.e. transship)



Source: Shutterstock

Diversify Chinese Sourcing Risks

- Develop new supplier risk assurance methods
- Develop multiple sourcing options
- Develop prime domestic supplier/ acceptable offshore alternative
- Find new suppliers in Asia (Vietnam)
- Make product in house
- “Just in case” NOT “just in time” delivery
- Carry additional buffer inventories



Source: Google Maps

Share Chinese Sourcing Risks

- Share tariff costs between OEM with 1st tier suppliers
- Cascade supply cost sharing
- Source disruption insurance
- Bring IP & design in house
- Impose higher product and cost requirements on suppliers
- Retain single and acceptable alternate suppliers
- Source in multiple countries
- Add further requirements on supplier



Source: NZ Defemse

Control Chinese Sourcing Risks

- Re-evaluate 'make or buy' risk decision
- Re-evaluate suppliers based on risk
- Add further supplier controls
- Conduct forensic supplier audits
- Add Internet Of Things product testing (i.e. reliability , software)



Source: Pixabay

Control Chinese Sourcing Risks

- Add IP agreements with suppliers
- Obtain source code for embedded software
- Push OEM requirements to sub-tier suppliers
- Ensure product traceability of suppliers (2nd tier etc.)
- Provide chain of assurance and risk - controls to OEM



Source: Pixabay

5. Future of US/China Sourcing and Relations

“In short - after a year from hell during which the trade war, Hong Kong's protests, and an international clamor against the persecutions in Xinjiang (Ethnic) blotted the Communist Chinese Party's (CCP) copybook in the eyes of many domestically, this is the last thing China needed. It is expected that the economic impact will be enormous.”



Source: Twitter

Finbarr Bermingham
Production Editor, Political
Economy
Hong Kong

Short Term Scenarios

China

- More quarantines
- More human and product testing
- Factory closures
- Logistics bottlenecks
- Disrupted supply chains
- Return factories to production
- Drastically reduced factory output
- Suspension of flights and ships
- 4% GDP in 2020

U.S.

- Continue to use Chinese suppliers
- US factory closures due to lack of parts
- Scramble for alternate sourcing in Asia and worldwide
- Review of current business and sourcing models
- Review domestic sourcing options
- Readjust product plans & schedules
- 2.2% GDP in 2020

Long Term Scenarios

China

- Manifest Destiny – Belt and Road
- Asymmetric war via weaponized trade, global infrastructure investment
- Artificial intelligence
- Increased surveillance & control
- EU, China, USA, India, GCC, and major trading blocs wage trade war
- Domestic consumption and build out

U.S

- Digital curtain
- Government prosecution of IP theft and individual theft
- Artificial intelligence
- Review and develop new sourcing strategies based on enterprise risk
- Develop new investment plant strategies
- Trade 'equivalence' - access to markets/amount of trade

Long Term Sourcing Strategies

China

- Sourcing is perceived as power, competitiveness and jobs issues
- Massive state investment in companies
- 'Made in China' brand management
- Focus on domestic consumption

U.S.

- Select and certify new suppliers
- Develop new rules of sourcing engagement
- End product manufacturers will weigh 'make or buy' through risk lens
- Forensic evaluation of suppliers and sourcing decisions

Outcomes – U. S. Perspective

- “I don’t want to talk about a victory lap over a very unfortunate, very malignant disease. But the fact is, it does give businesses another thing to consider when they go through their review of their supply chain.”
- Coronavirus is “another risk factor that people need to take into account. “I think it will help to accelerate the return of jobs to North America. Some to the U.S., some to Mexico as well.”

Wilbur Ross, U.S. Secretary of Commerce



Source: USA.gov

Outcome: Metaphor for Chinese Relations?

- Trade war in one picture
- Mai's Bakery
 - Portland, Oregon, USA
 - Sells Chinese baked goods
- Plastic bag to carry hum bao etc.
- **MADE IN THE USA** logo



We Don't Know What We Don't Know!!!!

- Uncharted territory
- Coronavirus is a Black Swan
- Political, economic, business & people unintended consequences
- Don't have the vocabulary
- Don't know the rules of engagement or even words to properly describe
- Rules and norms have changed



Source: Time Magazine

Masked Xi Jinping warns of 'grim' fight with coronavirus

Thank you for this
opportunity to speak to
you and your attention.

Any thoughts or
comments would greatly
be appreciated?



Source: Shutterstock