The Great Disconnect?

US-China technology decoupling and its implications for New Zealand

By Dr Reuben Steff

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Introduction

Technology supply-chain issues are at the sharp edge of current geopolitical tensions between the United States and China. The world has on the whole benefited from highly integrated, global supply chains.

Technology supply chains cross over borders with design and engineering services, component manufacturing, logistics and distribution, and labour — often spanning multiple markets. Increasingly, the global supply chains for the critical componentry in technology are breaking down. Supply chains are shortening and onshoring, with "techno-nationalist" rules and regulations narrowing the range of sourcing options.

Dr Reuben Steff of the University of Waikato has written this *Issues Brief* and scenarios paper at a critical time. As outlined below, COVID-19 has exposed global supply-chain vulnerabilities and increased our reliance on technology. At the same time, increased international competition is compelling great powers to take action to ensure they do not fall behind.

The US Senate passed industrial policy legislation aimed at boosting the ability of the United States to compete with Chinese technology. The US and EU agreed to coordinate more closely on technology issues. And China, for its part, made technological self-reliance the key theme of its 14th 5-year plan.

Ongoing, strategic competition between the US and China is driving global fragmentation as both are increasingly focused on reducing their interdependence through a managed decoupling of their technology sectors.

Far from being merely conceptual or an academic topic for discussion, these issues are playing out right now. And they have real-world consequences. New Zealand is a player, albeit a small one, in the global technology market. As geopolitical tensions alter technology supply chains it will impact New Zealand's technology sector and the country more broadly.

This *Issues Brief* introduces the concept of "decoupling" and uses three scenarios as a discussion starter. The intention is not to provide the answers nor predict the future. Instead, the scenarios should be used to kick off a discussion, be adjusted and added to, reformulated, and more importantly, lead to planning at both the government and business level.

When I approached Dr Steff to work on this paper, we wanted to outline the current situation and consider some of the following questions:

- What is decoupling and what might it look like in practice? How might it play out and what are the potential implications?
- Where would this leave New Zealand and our burgeoning tech sector?
- Is it possible to take a neutral 'Switzerland-like' position on the technology front?
- How is New Zealand engaging internationally on these technology issues?
- What mechanisms exist, or will need to be developed, to ensure we retain access to important, potentially 'walled off' digital/technology markets?

The paper touches on many of these questions without going into great detail. This approach leaves you to consider not only these questions but any others that are relevant to your individual circumstances.

I thank Dr Steff for this important contribution to this global issue.

Jordan Small
Executive Director
NZUS Council

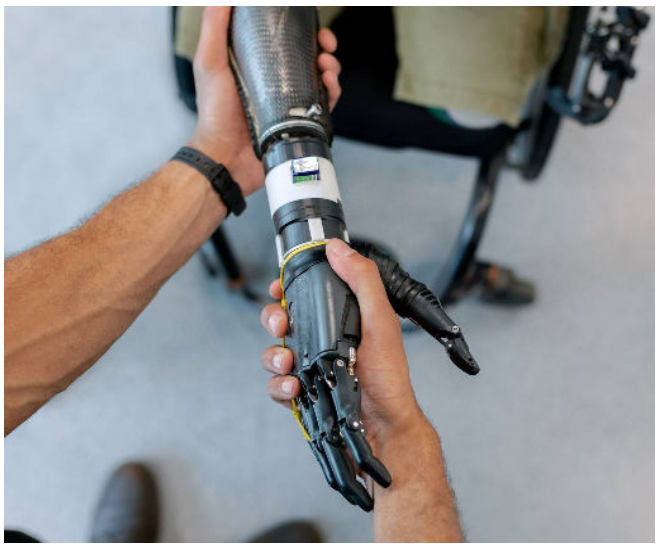
Background

This *Issues Brief* focuses on the growing importance of New Zealand's technology sector in the COVID-19 era and considers potential implications from increasing US-China tensions in the technology space. In particular, it looks at the risk of further decoupling of these markets.

Decoupling in this paper refers to the breakdown of global technology supply chains into increasingly separate supply-chain systems that serve either US or Chinese-lead technology blocs. The paper proposes three scenarios for consideration that are designed to generate discussion and planning.

Intensifying great power competition

COVID-19 has intensified great power competition between the US and China for global technological advantage and accelerated a trend towards deglobalisation and decoupling, especially in advanced technologies (5G, artificial intelligence (AI), quantum, semiconductors and robotics).[1]



Credit: thisisengineering-raeng. Unsplash

The US is concerned over its diminishing lead in technology and science as it sees China pulling ahead in 5G, with a formidable innovation ecosystem and growing market, and apps like TikTok becoming the most downloaded in 2020.[2]

1 Ian Bremmer and Cliff Kupchan, 'Risk 2: The Great Decoupling,' 16 March 2020, https://www.eurasiagroup.net/live-post/risk-2-great-decoupling

2 Zak Dychtwald, 'China's New Innovation Advantage,' May–June 2021, https://hbr.org/2021/05/chinas-new-innovation-advantage?ab=seriesnav-spotlight; David Curry, 'Most Popular Apps', 14 September 2021, https://www.businessofapps.com/data/most-popular-apps/; Andrew B Kennedy and David L Dwyer, 'The Stakes in Decoupling Discovery: China's Role in Transnational Innovation, *The Pacific Review*, 15 October 2020; Anne Hoecker, Shu Li, and Jue Wang, 'US and China: The Decoupling Accelerates', 14 October 2020, https://www.bain.com/insights/us-china-decoupling-tech-report-2020/; Omnicore, 'TikTok by the Numbers: Stats, Demographics & Fun Facts,' 4 January 2020, https://www.omnicoreagency.com/tiktok-statistics/, David Capie, Natasha Hamilton-Hart and Jason Young, 'The Tech War is the One to Watch,' 7 January 2021, https://www.newsroom.co.nz/ideasroom/the-tech-war-is-the-one-to-watch; Peter Cowhey, 'Meeting the China Challenge: A New American Strategy for Technology Competition,' 16 November 2020, https://china.ucsd.edu/_files/meeting-the-china-challenge_2020_report.pdf, Audrey Cher, 'Superpower Marathon': US may lead China in tech right now but Beijing has the strength to catch up'; 17 May 2020, https://www.cnbc.com/2020/05/18/us-china-tech-race-beijing-has-strength-to-catch-up-with-us-lead.html

Drive to self-reliance

Actions taken by the US and other Western nations (for example, on 5G and semiconductors) have exposed China's vulnerability to, and reliance on, key technology components. This is fuelling a drive on both sides for greater self-reliance.

There is little argument that technological decoupling will affect the 5 trillion dollar global tech sector, with estimates it will lead to losses of approximately 5% of GDP for many states.[3] Furthermore, given that R&D is transnational to a degree unprecedented in history, and the circulation of human capital underpinning innovation is more mobile than ever,[4] decoupling will reduce innovation and impact economies and businesses as investment and financial flows shift.

COVID-19 accelerates decoupling

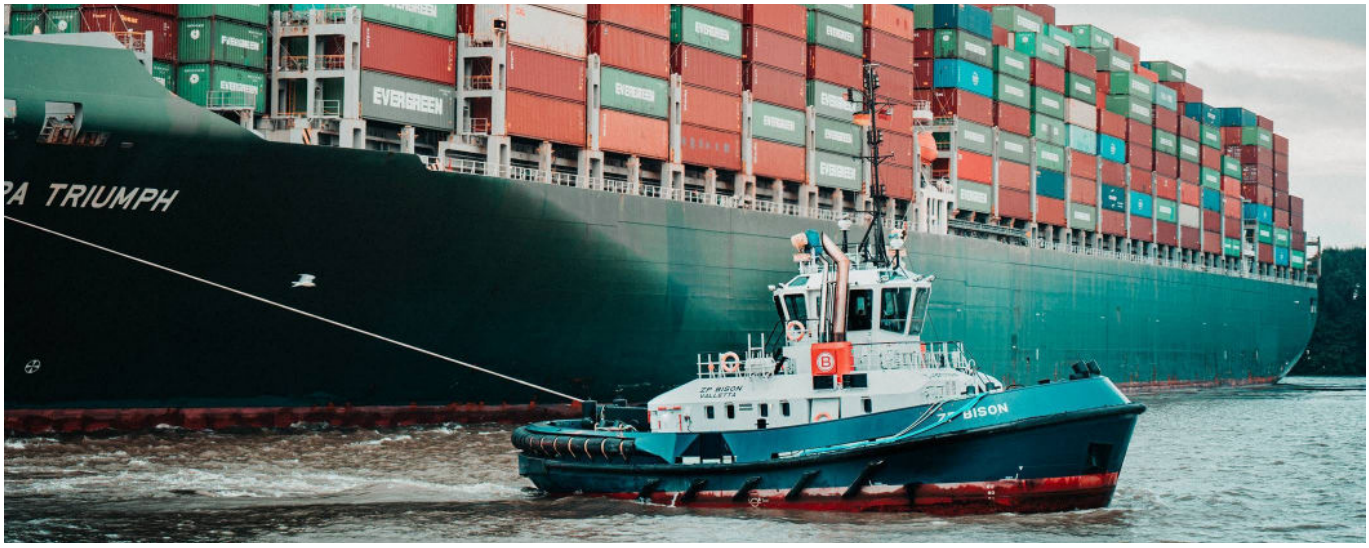
The COVID-19 pandemic has increased reliance on technology and forever changed patterns of working, schooling and living. It has also painfully exposed the vulnerabilities in global supply chains. In the early stages of the pandemic, protectionist urges were most evident in the breakdown of the flow of essential medical supplies. The issues around the movement of goods including logistics, shipping and port clearance, continue and are expected to persist for at least the next 18 to 24 months.

New Zealand's fast-growing technology export sector

A bright spark in an otherwise bleak picture has been the continued growth of New Zealand's technology exports. Based on Statistics NZ trade figures, New Zealand's global Information Communication Technologies (ICT) exports grew over the 12 months ending June 2021 by 8.4% ($111.7M) to $1.4B.[5] The US is New Zealand's largest ICT export market by a large margin. Over the same period, ICT exports to the US grew by 14.8% ($70.1M) to $544M.

New Zealand's Technology Innovation Network (TIN), a technology industry grouping, uses a methodology in its annual report that captures a much broader range of technology exports and export revenue than Statistics NZ figures. TIN's methodology claims that the industry globally brought in $12.7 billion in 2020 (up 10% from 2019) and the sector aims to be the nation's largest export sector by 2030,[6] currently making up 8% of GDP and employing 5% of the workforce.[7]

Regardless of the method used, the clear takeaway is that the US is an important export market for New Zealand's burgeoning technology sector.



Credit: Mika Baumeister. Unsplash

3 Diego A Cerdeiro, Rui Mano, Johannes Eugster, Dirk V Muir and Shanaka J Peiris, 'Sizing Up the Effects of Technological Decoupling,' 12 March 2021, https://www.imf.org/en/Publications/WP/Issues/2021/03/12/Sizing-Up-the-Effects-of-Technological-Decoupling-50125

4 Kennedy and Dwyer, 'The Stakes in Decoupling Discovery'.

5 Anuja Nadkarni, 'NZ's Fastest-growing Technology Exports get a Boost from Covid-19,' 20 October 2020, https://www.stuff.co.nz/business/123130786/nzs-fastestgrowing-technology-exports-get-a-boost-from-covid19

6 The countries top 5 tech exports include financial technologies (Fintech), health technologies (Healthtech), Information Technology (IT), agricultural technologies (Agritech) and gaming. Jessica Chiang, 'The Detail: China and the US stuck in a technology headlock but where does New Zealand stand?' 23 March 2020, https://www.stuff.co.nz/national/the-detail/300259184/the-detail-china-and-the-us-stuck-in-a-technology-headlock-but-where-does-new-zealand-stand

7 Make Lemonade, 'NZ Tech Sector Soaring Since Covid,' 10 August 2021, https://www.scoop.co.nz/stories/SC2108/S00013/nz-tech-sector-soaring-since-covid.htm

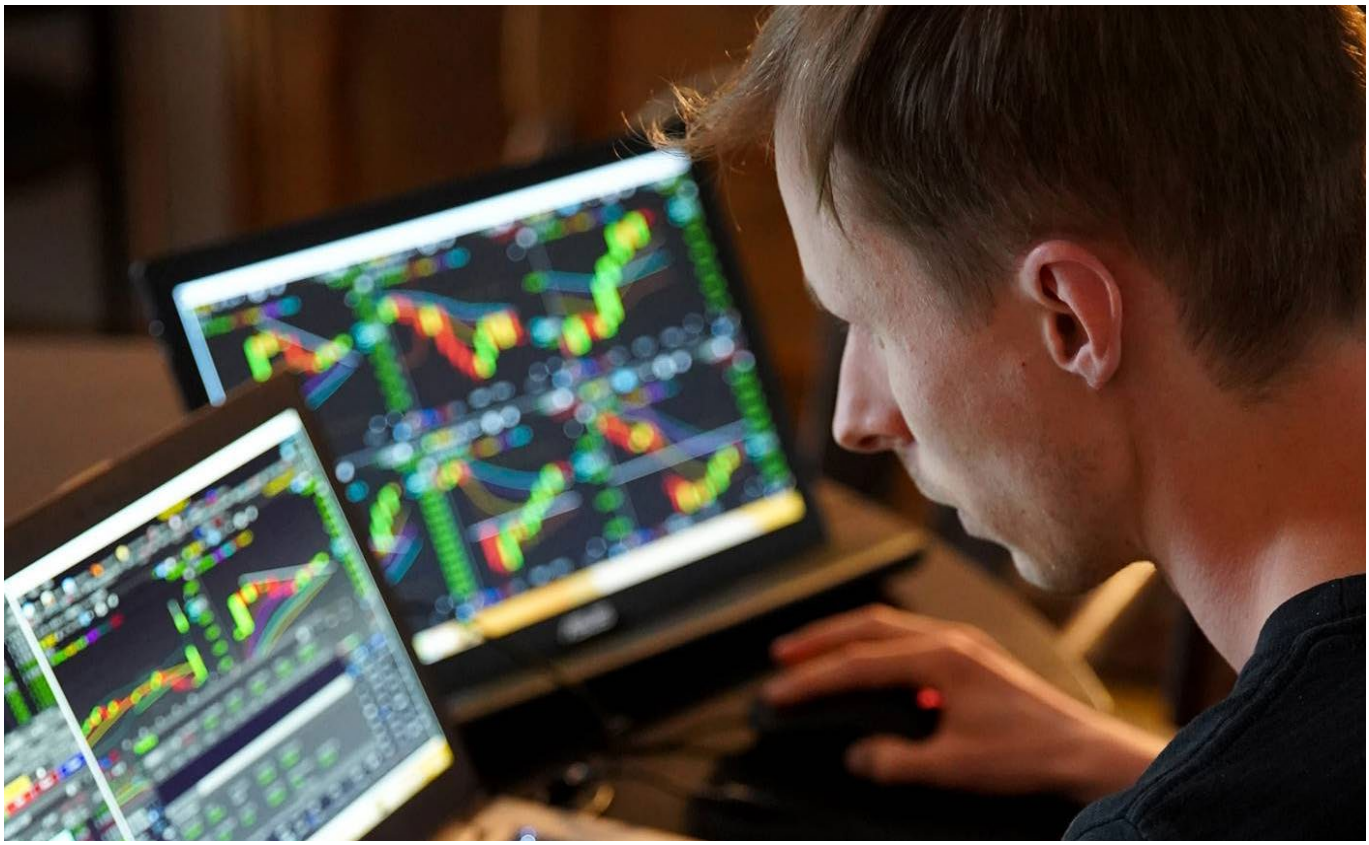
Concept: A new 'virtual Berlin Wall'?

US decoupling from China involves a range of things: severing of global high-tech supply chains from China-connected entities; export controls on key technological inputs (like superconductors); industrial policies and market interventions to bolster domestic technological capabilities, and innovation.[8]

For its part, China has made technological self-reliance the main theme of its 14th 5-year plan and has a longstanding policy of limiting access to its markets by US technology players.[9] The Digital Silk Road – the technological vector of China's globe-spanning infrastructure Belt and Road Initiative – is another important aspect of the Chinese strategy.[10]

According to *Eurasia Group*, this 'great decoupling' in high-technologies will be "the single most impactful, geopolitical development for globalization since the collapse of the Soviet Union".[11]

A *primary driver* behind this great decoupling is the growing need by Washington DC and Beijing to access and control data and related sources (cloud computing, social media and critical infrastructure) as well as core componentry in critical technologies beyond their borders. Data is considered 'the new oil' — the main 'fuel' for many advanced technologies, which provides advantages to governments, businesses and militaries that can harness and integrate it in innovative ways.[12]



Credit: Adam Nowakowski. Unsplash

[8] A key pillar of the US effort to reduce US-China technology trade is through the publication of the 'Entity List' targeting key Chinese firms. This restricts the export of sensitive materials and technologies from the US. It is continually updated and includes companies, universities and institutions that are believed to have connections with the Chinese Communist Party. Most listed entities are involved in high-tech areas and subject to specific licence requirements for the export, re-import and transfer of specified items and can be barred from buying US parts and components. US Department of Commerce, 'CBC FAQs-1. What is the Entity List?' https://www.bis.doc.gov/index.php/cbc-faqs/faq/281-1-what-is-the-entity-list; Robert Farley, 'With Focus on China, US Senate Passes Major Industrial Policy Bill,' 12 Jun 2021, https://thediplomat.com/2021/06/with-focus-on-china-us-senate-passes-major-industrial-policy-bill/

[9] Elsa B Kania, 'Made in China 2025 Explained,' 1 February 2019, https://thediplomat.com/2019/02/made-in-china-2025-explained/

[10] Dai Mochinaga, 'The Digital Silk Road and China's Technology Influence in Southeast Asia,' *Council on Foreign Relations*, https://www.cfr.org/sites/default/files/pdf/mochinaga_the-digital-silk-road-and-chinas-technology-influence-in-southeast-asia_june-2021.pdf

[11] Ian Bremmer and Cliff Kupchan, https://www.eurasiagroup.net/files/upload/Top_Risks_2020_Report_1.pdf, p 6.

[12] Deloitte, 'Data is the New Oil. Where are the 'Refineries,' https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/technology/deloitte-uk-tech-trends-2016-industrialised-analytics.pdf

CASE STUDY: Semiconductor production

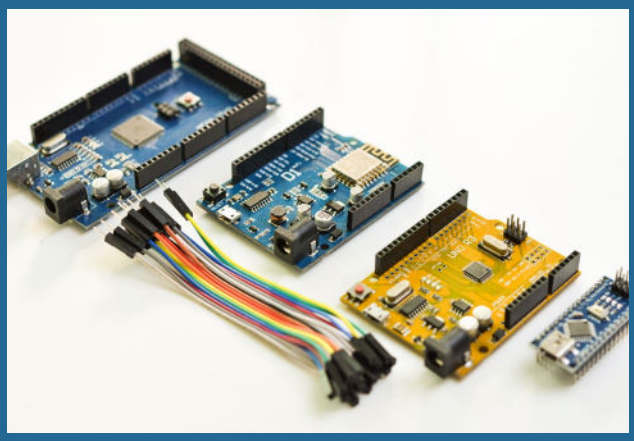
Semiconductors are critical components of modern electronic devices, enabling advances in communications, computing, healthcare, military systems, transportation, clean energy and countless other applications. They have become an arena for competition between Washington and Beijing, with both countries prioritising indigenous innovation in semiconductor production to reduce foreign dependency, and to secure supply.[13]

The US dominates global sales of semiconductors with 47% of global revenue, while China only secures 4%. In terms of manufacturing, only 13% of the global total is manufactured in the US; 16% takes place in China, 20% in Taiwan, 19% in South Korea and 17% in Japan.[14]

Meanwhile, much of the value comes from the design of chips, and here Taiwan stands out, with Taiwan Semiconductor Manufacturing Company (TSMC) manufacturing 92% of the highest-tech chips.[15] Taiwan is therefore a potential flashpoint given that China has pledged to reunify Taiwan with the mainland by 2049, while Washington maintains defence commitments to Taipei through the Taiwan Relations Act.

In light of its vulnerabilities, China is investing billions in semiconductor production. Its 14th 5-year plan proposed sweeping goals to achieve technological self-reliance and increase sales of semiconductors globally through a "dual circulation" strategy (comprised of internal and external actions).[16] Washington's concern about China's efforts to catch up, combined with the US reliance on foreign manufacturing, has seen the US Senate aiming to reshore some chip production as evidenced by the passing of the US *Innovation and Competition Act* in June 2021 with $52 billion for semiconductor production.[17]

Credit: Unsplash



Credit: Frank Wang. Unsplash

[13] Jeanne Whalen and Chris Alcantara, 'Nine Charts that show who's Winning the US-China Tech Race,' 21 September 2021, *The Washington Post*, https://www.washingtonpost.com/technology/2021/09/21/us-china-tech-competition/; Akinori Kahata, 'Semiconductors as Natural Resources – Exploring the National Security Dimensions of US-China Technology Competition', 17 February 2021, https://www.csis.org/blogs/technology-policy-blog/semiconductors-natural-resources-%E2%80%93-exploring-national-security

[14] Whalen and Alcantara, 'Nine charts that show who's winning the US-China Tech Race'.

[15] Whalen and Alcantara, 'Nine charts that show who's winning the US-China Tech Race'

[16] Internally, this includes reducing tech-dependence on foreign countries and corporations while facilitating the development of domestic firms, and externally seeks to leverage these efforts into heightened global competitiveness. J Stewart Black and Allen J Morrison, 'The Strategic Challenges of Decoupling: Navigating your Company's Future in China,' May-June 2021, https://hbr.org/2021/05/the-strategic-challenges-of-decoupling

[17] Thomas Franck, 'Senate Passes $250 Billion Bipartisan Tech and Manufacturing Bill aimed at Countering China,' 9 June 2021, https://www.cnbc.com/2021/06/08/senate-passes-bipartisan-tech-and-manufacturing-bill-aimed-at-china.html

A *secondary driver* is a philosophical disagreement over tech-governance and the 'politics of the internet' (with democracies promoting open systems and the free flow of information, and autocracies seeking greater levels of control over the flow of data).

A nascent 'virtual Berlin Wall' is emerging between what US President Joe Biden has termed the "techno-democracies" (comprised of the US, its allies and close partners), and the "techno-autocracies" (including China and Russia).[18]

In this vein of thinking:

- the US, Australia, New Zealand, Canada and the UK have blocked Huawei 5G equipment from their core telecommunications infrastructure[19]
- the EU and US have established a EU-US Trade and Technology Council to compete with Beijing[20]
- and, to address COVID-19 disruption, the US announced it was forming a trusted supplier network (including Australia, India, Japan, New Zealand, South Korea and Vietnam) that excluded China.[21]

CASE STUDY: The global deployment of 5G

China or US-backed 5G networks will set a baseline for how countries interact with technology and data. They will also create technological path-dependency by giving Washington and Beijing immense influence to impede and/or proffer critical technologies, data and upgrades that lock patrons into the adoption of successor technologies. US and China-centric spheres of geopolitical technological influence could map across those parts of the world that adopt their preferred supplies.

China's global 5G-reach is led by the tech-giant Huawei, which in 2021 is projected to secure 34% of global revenue of telecom equipment. Finland and Sweden both follow with 16% each; the US sits at 6% and South Korea, 3%.

Washington views Huawei as an extension of the Chinese Communist Party's intelligence operations.[22] The US, unable to offer its own end-to-end 5G, has sought to bar sales of essential computer chips to Huawei to limit its operations, in turn bolstering preferred suppliers (Nokia, Samsung and Ericsson).

Despite the US 5G pressure campaign, Huawei remains a global telecommunications behemoth.[23] Looking around the globe:

- In Europe, Hungary, Iceland and the Netherlands are using Huawei, as are Saudi Arabia and the United Arab Emirates in the Middle East.
- In Africa, Huawei has 70% of the continent's 4G networks (with South Africa, Mozambique and Namibia using Chinese 5G). While a lack of data exists for the rest of Africa, Huawei will likely be widely adopted given its cost advantage.
- Much of Latin America is using or planning to use Huawei in its 5G, as are Russia, Turkey, much of Southeast Asia and Central Asia.[24]
- China also has cloud-computing agreements with countries in Africa, the Middle East and Southeast Asia.[25]

[18] Bloomberg,' Biden putting tech, not troops, at core of US-China policy,' 2 March 2021, https://www.straitstimes.com/asia/east-asia/biden-putting-tech-not-troops-at-core-of-us-china-policy
[19] Katharina Buchholz, 'Which Countries Have Banned Huawei?' 30 January 2020, https://www.statista.com/chart/amp/17528/countries-which-have-banned-huawei-products/
[20] Jennifer Hillman and Seara Grundhoefer, 'Can the US-EU Trade and Technology Council Succeed?' 29 October 2021, https://www.cfr.org/blog/can-us-eu-trade-and-technology-council-succeed
[21] Sam Sachdeva, 'NZ joins US-led Covid Coalition,' 16 July 2020, https://www.newsroom.co.nz/nz-joins-us-led-covid-coalition
[22] Bojan Pancevski, 'US Officials say Huawei can Covertly Access Telecom Networks,' 12 February 2020, https://www.wsj.com/articles/u-s-officials-say-huawei-can-covertly-access-telecom-networks-11581452256
[23] Juan Pedro Tomás, 'Huawei Claims involved in half Global 5G Networks, 22 February 2021, https://www.rcrwireless.com/20210222/5g/huawei-claims-in volved-half-global-5g-networks
[24] David Sacks, 'China's Huawei Is Winning the 5G Race. Here's What the United States Should Do To Respond,' 29 March 2021, https://www.cfr.org/blog/china-huawei-5g
[25] Fergus Ryan, Audrey Fritz and Daria Impiombato, 'Mapping China's technology giants: Reining in China's technology giants,' 8 Jun 2021, *Australian Strategic Policy Institute*, https://www.aspi.org.au/report/mapping-chinas-technology-giants-reining-chinas-technology-giants

The Great Disconnect: three scenarios

US-China competition is in an introductory phase, with arguably greater levels of decoupling to come. The extent and scale of decoupling will be driven by the trajectory of US-China political relations and geopolitical competition, and related changes in strategy and conception of their respective national interests.

Given hardware design and manufacturing, software development, services and standards are cross-border phenomena, a deep separation between US and China supply chains threatens to potentially fracture the world into China-centric and US-centric digital ecosystems, and competing technological spheres of influence.

The three scenarios are based on a set of core characteristics that dial up as each scenario moves toward a greater level of decoupling. The characteristics include the following:

1. **Scenario descriptions** provide an overview and narrative for each scenario and the weighting given to its core characteristics. The descriptions include some commentary about the expected impacts. The implications table expands on this.
2. **Interventions** comprise a growing toolkit of techno-nationalist rules, regulations and other restrictions. These include the use of tariffs, export controls and other restrictions or stipulations relating to data localisation, security and privacy.
3. **Relationship climate** focuses on cybersecurity concerns and expected growth in state-backed, cyber attacks. Being able to protect data and systems from attack will be a core value proposition of each aligned bloc.
4. **Rule setting** refers to the effectiveness of international rule-setting bodies to moderate ambitions and tensions on frontier technology and data issues. Beyond the 'Intensifying Status Quo' scenario there is little hope that international forums can maintain any control. As the scenarios move towards greater levels of decoupling, fragmentation of rule sets is expected.

Three scenarios: Core characteristics[26]

	Scenario 1: Intensifying status-quo	Scenario 2: A competitive (but not divided) world	Scenario 3: A technological Cold War
SCENARIO DESCRIPTION	**High-level of global supply chain integration remains**, except in key sensitive technology areas. A narrow set of targeted interventions, such as tariffs and export controls, are used across these targeted sensitive areas. The impacts are reasonably well contained as a result.	**Moderate levels of market integration remain** but the list of sensitive technology areas targeted has grown. The use of "techno-nationalist" interventions is expanded, leading to increasingly walled-off supply chains across a broader range of technology areas. The difference with scenario 3 is that third-party nations can continue to trade with either the US or China, although with potentially severe limitations. There may be early signs of spill over into other economic sectors.	**Complete technological decoupling occurs** and extends into non-tech sectors. With rare exceptions, ***bloc-aligned supply chains*** emerge: China-allied trading bloc and supply chain versus US-allied trading bloc and supply chain. Governance systems between the blocs are irreconcilable. This scenario foresees the requirement for third-party nations to effectively "pick their side" (or aligned bloc), with the choice spilling over into all other economic sectors.
INTERVENTIONS	• Tariffs in key sensitive technological areas. • US intervention in technology transfer. Multinational corporations prohibited from sharing next-generation IP with China and joint ventures.	• Modest tariffs applied across a broadening group of technology and some non-technology sectors. • US prohibits all IP sharing with Chinese parties. Multinational corporations encouraged to reduce their involvement with the Chinese market.	• The full range of interventions is used to maintain block-aligned supply chains. • Significant tariffs and sanctions. • US prohibits all IP sharing with any parties related to, or trading with, the Chinese-aligned bloc. Multinational corporations compelled to reduce joint ventures to become exclusive within their alliance bloc.

[26] This scenario table adds to and expands on Bain & Company's model included in 'US and China: The Tech Decoupling Accelerates', 14 October 2020, https://www.bain.com/insights/us-china-decoupling-tech-report-2020/

	Scenario 1: Intensifying status-quo	Scenario 2: A competitive (but not divided) world	Scenario 3: A technological Cold War
RELATIONSHIP CLIMATE	State-backed cyber attacks continue, leading to growing cybersecurity concerns.	State-backed cyber attacks increase, leading to heated tit-for-tat spirals and political relations deteriorating and mistrust heightening.	State-backed cyber attacks become common place, with cyber security concerns becoming the leading priority for national defence.
RULE SETTING	States work through standard-setting bodies and international fora to develop rules on frontier technology issues including data usage and governance. These fora have a moderating effect on ambitions.	Standard-setting bodies and international fora on data usage and governance produce weak rules. US and China markets effectively create their own rules which leads to increasing fragmentation and compliance costs for business.	Standard-setting bodies on data usage and governance fail to create any meaningful rules. Aligned blocs create their own rules for membership.

Three scenarios: Implications

Scenario 1: Intensifying status-quo	Scenario 2: A competitive (but not divided) world	Scenario 3: A technological Cold War
This scenario is still quite confined and reflects, in large part, the current state. Impact is limited. • New Zealand firms largely retain access to global technology supply chains although there may be shortages and increased supply-chain risk with narrowing of supplier options. • Washington and China do not retaliate against states for sustaining trade in tech with the other. • Tech and data issues do not impede New Zealand's foreign relations and people-to-people ties remain strong.	This scenario sees the emergence of 'walled-off' systems, although it falls short of full decoupling in that third-party nations are still permitted to trade with either the US or China. This could be an end scenario or transitionary scenario towards full decoupling in scenario 3. The US-China relationship climate has further deteriorated. • Hugely inconvenient for industry and expensive; politicised trade increases risks to doing business. • Firms can retain some mutual market access but may be forced to customise their offerings in the US and China. • Challenges to sourcing technology componentry and increased supply-chain risk. • Limitations are imposed on R&D which restricts innovation. • New Zealand pressured to stick with close partners; 'strategically sensitive' trade with China is reduced. • Beijing and Washington aggressively court New Zealand with carrots and sticks. • Some New Zealand firms discover opportunities to position themselves to replace US and Chinese firms excluded from trade with the other. • Nations like India become alternative hubs for Asia-based supply chains.	This scenario presents the fully decoupled technological Cold War played out. New Zealand will effectively be required to 'pick a side' that will impact on all economic sectors. For example, this scenario does not see the possibility of New Zealand's tech sector playing in the US-aligned bloc, while also being able to retain broad market access to the China-aligned bloc. • Intense pressure compels New Zealand to pick one technological bloc to ensure access to data and technology but this inevitably flows over into other sectors. • R&D only permissible within blocs which has an overall impact on global innovation and R&D. • Larger firms may be able to set up 100%-indigenous operations in China or the US. • New Zealand's foreign policy independence is significantly reduced and/or challenged. • People-to-people ties are significantly reduced with the other bloc.

Credit: Jason Goodman. Unsplash

Key questions

The above background section and scenarios outline the current state and some possible future states. This section proposes a number of questions or considerations that government and businesses may want to take into account in their planning. There are undoubtedly many more questions that should be asked and this is an important aspect of the discussions that this paper hopes to generate.

Scenario descriptions

- Do the scenarios, whether individually or collectively, align with how you are currently seeing and/or expect to see the impacts of US-China competition in the technology sector play out?
- How would you dial up or dial down the core characteristics we have identified — interventions, relationship climate, the impact and effectiveness of rule-setting bodies — in your description of scenarios? Would you use other characteristics?

Implications

- Given the importance of technology to New Zealand's current and future prosperity, what are the implications of each of the aforementioned scenarios for New Zealand's tech future and technological supply chains?
- There is immense uncertainty over the degree to which the US and China will politicise third-party technological cooperation with the other. In your area of interest, how do you see this playing out and what are the implications for you and your business?
- What are the implications for New Zealand if there is a slow-down in global R&D and technological innovation?
- How can our trade policy innovate to recognise and ensure technology access? Are agreements like the Digital Economy Partnership Agreement (DEPA) signed by New Zealand, Chile and Singapore in June 2020, sufficient? Can existing free trade agreements be updated to include tech and data provisions?
- Is the New Zealand Government planning for these types of scenarios? Is this planning being shared with New Zealand businesses and how are they being helped in their preparations?