

# The Clean Network:

## How Keith Krach and his Clean Team Defeated China Inc. and Created a Blueprint for the World to Follow in Future Technology Competition

5G, or the 5th generation network, promised to be a revolutionary shift in network speed for telecommunications.<sup>1</sup> 5G relied on a physical network of switches and routers and possessed the ability to accommodate vast exchanges of data required to power autonomous vehicles, virtual reality and artificial intelligence with little lag. Global equipment providers competed to build the underlying switching systems, which theoretically gave them control over information flow passing through the network, alongside the capacity to reroute or copy data without user knowledge. As countries held high-band 5G spectrum auctions to build their 5G networks, Huawei, a Chinese company, was emerging as the global leader, surpassing competitors such as Ericsson, Samsung and Nokia on technology and price for 5G network supplies.<sup>2</sup>

Huawei, along with ZTE, another Chinese telecom company, had ambivalent economic relationships with the world and the United States in particular. For many years, ZTE and Huawei both had enjoyed access to supply chains rooted in the U.S. and, especially for ZTE, U.S. markets. But both companies had also been sites of conflict between the U.S. and China. Huawei was formally a non-state-owned firm, but its origins and associations with the People's Liberation Army (PLA) and murky relationship to the Chinese Communist Party (CCP) made it a source of consternation for countries concerned about the Chinese government's potential access to the company's data or the state's support for firms generating an unfair competitive landscape in the industry. ZTE was a formally state-owned firm (See **Exhibits 1 and 2** on Huawei and ZTE ownership structures). Both firms were considered Chinese national champions and, though both firms denied excessive state involvement and claimed their motives were commercial, many doubted the firms' independence.

Ambivalence would become antipathy over the course of the late 2010s and 2020. While the U.S. had essentially excluded Huawei from its own critical infrastructure after 2019, concerns within the U.S. national security establishment over Huawei's global position mounted. Many fretted about U.S. military and other interests overseas relying on Chinese telecom equipment. Fears included espionage risks as well as what a former National Security Council official called "the worst possible day" scenario: "On the worst possible day in a conflict with a peer adversary, the United States may not be able to count on the survivability of communication satellites."<sup>3</sup>

To be sure, competition between the U.S. and China was not confined to technology. President Donald Trump initiated a trade war in 2017 that would see tariffs affect up to 55% of the total value of U.S. imports from China and 85% of China's imports from the U.S.<sup>4</sup> Amid multiple sources of economic conflict, however, the technology issue seemed the thorniest. As the President of the U.S.-China Business Council, Ambassador Craig Allen, put it: "The trade war is bogus, but the technology war is real."<sup>5</sup>

Yet, despite widespread agreement in the U.S. among members of both political parties that Chinese technology firms presented a security threat to American interests, it was not at all clear how to address the problem. By 2020, Huawei's dominance in 5G seemed all but assured, and no American companies possessed the technology necessary to challenge the company. Over the course of 2019, the U.S. unsuccessfully sought to exclude Chinese telecom firms from deploying equipment in large swaths of the globe through an uncoordinated effort by the interagency. In 2020, the "Clean Network" led by the U.S. Department of State, challenged Huawei and convinced a significant number of countries to rip already deployed equipment out of their infrastructure. It would transform the technological competition between China and the U.S. with ramifications for countries and firms the world over.

## From a Two-Way Street to a Dead End

The People's Republic of China (PRC) had come a long way from the poor, agrarian country it was when it resumed economic and diplomatic relations with the U.S. after decades of political antagonism. After three decades of state socialism and political upheaval under Mao Zedong, the PRC under Deng Xiaoping adopted a series of market reforms in the late 1970s that catalyzed growth in agriculture and rural and urban industrialization. A steady opening to global markets that began in coastal areas and culminated in the country's accession to the World Trade Organization (WTO) in 2001 turned China into an export powerhouse—the “world's factory”—and the largest non-western recipient of foreign direct investment. In the years following the global financial crisis of 2008, however, the CCP made clear that the future of growth would have to move beyond low value-added exports and into both higher technology sectors and reliance on domestic demand. Policies as early as the 1990s encouraged Chinese firms to “go out” to compete in global markets, and the years following 2008 saw several strategic initiatives to push Chinese firms into global competition in frontier industries.

China was increasingly a sender of foreign direct investment, especially as outbound investment exceeded inbound in 2015 and Chinese firms became involved in infrastructure, real estate, commerce, and technology sectors in the developed and developing worlds. Analysts increasingly discussed the “two-way street” of investment flows between China and the United States; in 2016, Chinese investment in the U.S. peaked at \$46 billion, much of it in mergers and acquisitions in industries ranging from hospitality to semiconductors.<sup>6</sup> Traffic in the “two-way street,” however, would rapidly disappear within a few years, as new industrial policies in China and new anxieties in the U.S. about the security implications of China's technological advancement transformed the investment landscape.

### *Made in China 2025*

In the 2010s, Chinese industry leaders and policymakers grew concerned about China's position in global technological value chains and began to search for ways to ignite technological growth. Science and technology drives and industrial policy were nothing new in China, but several events seemed to propel a sense of urgency. One trend was expanding capabilities in cyber-weaponry and cyberespionage in the west, such as the Stuxnet virus that devastated Iran's nuclear program in 2010 and Edward Snowden's 2014 revelations that the U.S. National Security Agency (NSA) breached Huawei's servers. Another set of trends in China included rising wages, declining labor productivity and the fear of trade conflict, and tariffs that dissipated China's advantages in manufacturing. China's competitiveness and security in the coming decades would depend on its domestic technological capabilities.

In 2015, China's Ministry of Industry and Information Technology (MIIT) announced a “Made in China 2025” initiative to comprehensively upgrade China's manufacturing sector. It laid out three phases: in the first phase from 2015 to 2025, China would transform itself from a “big” manufacturing power to a “strong” manufacturing power where innovation in key technologies would drive productivity, lower energy use and emissions, and create globally competitive companies and sectors. By 2025, domestic content of “core components and materials” would double to 70 percent. By 2035, China would become a “mid-level” player among “strong” manufacturing powers. By 2049, the 100<sup>th</sup> anniversary of the country's founding, China would become a world-leading manufacturing power.<sup>7</sup>

Made in China 2025 identified ten priority sectors including “new advanced information technology,” which included telecommunications and semiconductors. The latter would be a focus of domestic funding to relieve dependence on foreign chips. The government planned to mobilize \$150 billion for national and local “industry funds” to identify domestic firms in the space and fund them. For example, SMIC of Shanghai was designated to be China's champion “foundry,” or a bulk manufacturer of chips designed by other firms, and HiSilicon of Shenzhen, part of telecom equipment giant Huawei, would be one of several national champions in chip design.<sup>8</sup>

As Chinese firms embarked on an international buying spree, governments in Germany, South Korea, Israel, and the United States began to fear losing prize technological firms to Chinese acquisitions. Toward the end of Obama's administration, the Committee on Foreign Investment in the United States (CFIUS) became a greater roadblock to Chinese acquisitions, striking down deals in the semiconductor sector specifically. In 2018, the purview of CFIUS was expanded and an export controls regime was strengthened through two pieces of legislation designed to deal with the changing nature of Chinese entities and ambitions. Policymakers in the U.S. and elsewhere worried about murky relationships between Chinese technology firms and the state, as well as about a series of news laws in China that seemed to give the Chinese state broad legal rights to state assets. The National Intelligence Law (2017) obliged "individuals, organizations, and institutions to assist Public Security and State Security officials in carrying out an array of intelligence work" including that "state intelligence work organs...may demand needed support, assistance, and cooperation."<sup>9</sup> Laws on Cybersecurity (2016) and National Security (2015) similarly expanded the legal possibilities of state intervention.

Huawei and ZTE Corporation were both seen as China's national champions in telecom, but the firms were very different. Huawei was founded in Shenzhen in 1987 by Ren Zhengfei, a veteran of the People's Liberation Army's engineering corps. Huawei was technically a non-state-owned firm, but its ownership structure was vague and the company certainly benefitted from the state's largesse. A *Wall Street Journal* investigation estimated that the company had benefitted from more than \$75 billion worth of tax breaks and preferential financing and resources as it grew.<sup>10</sup> The company had long been accused of stealing intellectual property, and had on occasion admitted doing so.<sup>11</sup>

ZTE was also founded in the 1980s by a state-connected entrepreneur and later attracted a majority state owner.<sup>12</sup> The company grew through capturing domestic market share in mobile phones and 3G and also committing to internationalization, pursuing both network contracts and mobile phone market share abroad. Unlike Huawei, ZTE was focused on the U.S. market.<sup>13</sup> The Bureau of Industry and Security (BIS) subjected the company to export controls in 2016 when it was found in violation of U.S. sanctions on Iran, but the controls were lifted after only two months when ZTE agreed to fines and judicial review of its practices in the United States.<sup>14</sup>

Both companies attracted unwanted attention in the U.S. as early as 2012 when the U.S. House of Representatives Permanent Select Committee on Intelligence issued a report on Chinese telecommunications firms, principally Huawei and ZTE, and potential effects on U.S. national security. The report criticized both firms for failing to clarify their relationships with the CCP and, therefore, concluded that "to the extent these companies are influenced by the state, or provide Chinese intelligence services access to telecommunications networks, the opportunity exists for further economic and foreign espionage by a foreign nation-state already known to be a major perpetrator of cyber espionage."<sup>15</sup>

At the end of 2018, Huawei's CFO, Meng Wanzhou, was arrested in the Vancouver airport at the request of the U.S. Department of Justice officials. The indictment was focused on the company's activities in violation of U.S. sanctions in Iran.<sup>16</sup> On May 16, 2019, the BIS amended the Export Administration Regulations by adding Huawei Technologies Co., Ltd. and sixty-eight of its non-U.S. affiliates located in twenty-six countries to the Entity List.<sup>17</sup> The change was made based on the U.S. government's determination of Huawei's involvement in activities adverse to the national security or foreign policy interests of the United States. The goal of this amendment was to restrict Huawei's access to chips from most American chipmakers.<sup>18</sup> Three months later, BIS added another 46 non-U.S. affiliates of Huawei to the Entity List.<sup>19</sup> The central security concern was that Huawei could allow the Chinese government to use its telecom network for intelligence collection and would have the potential power to disrupt critical communications infrastructure.

Dealing with Huawei's links with U.S. firms and preventing Huawei from deploying equipment in the U.S. was possible using U.S. legal infrastructure. But, whatever the U.S. did in its own market, Huawei

was offering high-quality and competitively priced 5G equipment across the globe. U.S. policymakers had to determine what U.S. interests were in the global battle for 5G and how to act on them.

## **The Clean Network: Addressing the Global China Challenge**

Though many in the U.S. appeared to agree that Huawei's role in global 5G digital infrastructure posed serious national and economic security concerns, addressing the issue was not straightforward. The technical aspects of rapidly changing telecommunications were complex, as were the supply chains that enabled the development, manufacturing and deployment of 5G. Among the several agencies in the U.S. government charged with national security, trade, investment and technology, no agency had clear responsibility for the challenge, and the U.S. was losing allies to Huawei's business.

In mid-2019, Secretary of State Mike Pompeo brought Silicon Valley veteran Keith Krach (MBA '81) into the U.S. State Department to help. Krach had co-founded and served as the CEO of Ariba, the first and largest B2B e-commerce Network, and more recently served as CEO of the digital security company DocuSign, building the company's Global Trust Network to 320,000 companies and 300 million users in 188 countries.<sup>20</sup> Earlier in his career, he had built another \$40B+ company as founder, chairman and CEO of Ariba, which created the category of B2B e-commerce and today transacts \$3.75 trillion of in commerce annually on the Ariba network. Before that, Krach created another category in mechanical design software as founder and COO of Rasna Corporation. Before that he served as the youngest Vice-President in the history of General Motors at the age of 26. His content knowledge and leadership experience in software strategy, sales, management and information technology made Krach suited to understanding the nature competition in the industry.

"Krach has become a category kingmaker, building four game-changing companies from robotics to engineering software to e-commerce to e-signature and digital transaction management," [observed](#) former HBS faculty chair of Building New Businesses, Bruce Harreld. "All four companies are considered disruptors, became clear market leaders through category creation, generated significant shareholder value, and chose paper or manual processes as their main competitors."

### *Why Krach Went to Washington – China Inc.'s Malign Intentions*

While Krach was running DocuSign, he went to Guangzhou in China for a business leadership summit organized by his friend, Fortune CEO Alan Murray, to explore whether his company should enter the China market. Krach spent two weeks in China on a "listening trip." He heard from five of China's Politburo members, who said some unflattering and untrue things about the U.S. He also saw what he called China's "bleeding-edge" technology and thought these technologies could be used in alarming ways against the United States and its allies.

"I had been going to China on occasion for business ever since I graduated from HBS in 1981, but this time was different," said Krach. "I could see they were going to be really, really aggressive. It was the first time I saw their drone swarm technology and heard about the One Belt One Road. It looked like a military supply chain to me. It also seemed odd that every 30 minutes at the conference I was being asked to download Tencent. I just kept thinking, the guys with the best technology win the war, and these guys have malign intentions. I wonder what the folks in Washington think about this."

Krach made it his mission to find out. Shortly after his return to Silicon Valley, he flew to Washington, D.C. to share his experience in China with the only government official he knew, Vice President Mike Pence. Krach had never been involved in politics and had always run his companies politically neutral, but he became acquainted with Pence while he was the Chairman of the Board of Trustees at Purdue. Pence was Governor of Indiana at the time, and Krach hired Pence's predecessor, Mitch Daniels, to serve as the president of the University. When Krach met with the vice president, Pence relayed a story to his

chief of staff about how he tried to talk Krach into a third term as chairman of the board of trustees at Purdue.

“But no,” Krach recalled Pence saying to his chief of staff, “he’s got to run some little software company. How’s that going Keith?”

Krach replied, “Well, Mr. Vice President, we went public a few months ago. It’s worth \$20 billion dollars now.” Krach then informed Pence that he would be leaving DocuSign in a year.

“Have you ever thought about serving your country?” Pence asked.

“That’s a dream I never knew I had. I’d be honored,” Krach replied.

Pence followed up, “Can you move?”

Krach didn’t hesitate with his answer. “I can move anywhere in the world,” he said

### *The Mission – Harness U.S. Competitive Advantage*

On January 24, 2019, Keith Krach was nominated to serve as Under Secretary of State for Economic Growth, Energy and the Environment. During his Senate confirmation hearing, Krach [stated](#), “It is comforting to know that both sides of the aisle understand that the Chinese Communist Party is playing the long game, and they are playing for keeps – a four-dimensional game of economic, military, diplomatic, and cultural chess. The CCP has little respect for human rights, intellectual property, rule of law, the planet, or the sovereignty of other nations.” Respect for these values would turn into the Trust Principles of the Clean Network.

When referring to his strategy on the China Challenge, Krach [said](#), “My focus will be on embracing this opportunity and harnessing 3 powerful areas of competitive advantage: strengthening our partnerships with friends and allies, leveraging the innovation and resources of the private sector, and amplifying the moral high ground of our American values and enduring optimism to advance peace and prosperity for our country and for the world.” These would become the 3-pillars underlying the Clean Network.

In June 2019, Krach was confirmed unanimously by the Senate. As America’s top economic diplomat, known in government simply as “E,” Krach was tasked with advancing the State Department’s global economic security agenda. A day after his confirmation by the Senate Foreign Relations Committee, Krach flew to Bahrain to attend the Peace to Prosperity conference, followed by the G20 summit and a visit to Korea.<sup>21</sup> A week later, back in the U.S., Secretary Pompeo gave Krach the charge “to develop and operationalize a global economic security strategy that drives economic growth, maximizes national security, and combats Chinese economic aggression.”<sup>22</sup>

The resulting strategy consisted of three pillars. First, catalyze economic competitiveness by driving productivity and access to capital and accelerating the development of emerging technologies critical to economic growth and security. Second, safeguard critical American assets, such as intellectual property, supply chains, financial and education systems. Third, form a network of partnerships comprising like-minded countries, companies, and civil society that would operate by a set of trust principles in multiple areas of economic collaboration.<sup>23</sup>

As the top economic diplomat for the State Department, known in government simply as “E,” the position required Krach to advance the State Department’s global economic and security agenda. A day after his confirmation by the Senate Foreign Relations Committee, Krach flew to Bahrain to attend the Peace to Prosperity conference, followed by the G20 summit and a visit to Korea.<sup>24</sup> A week later, back in the U.S., Secretary Pompeo gave Krach the mission of developing and operationalizing a global economic

security strategy that would drive economic growth, maximize national security, and combat the CCP's economic aggression.<sup>25</sup>

### *CCP's Masterplan to Dominate 5G – Huawei Appears Unstoppable*

Meanwhile, China's top global brand and leading telecommunications company, Huawei, seemed unstoppable. Washington officials of both parties feared that Beijing could control – and even deny the U.S. and its allies access to – the 5G networks that drive global commerce and enable the projection of military power. By early 2020, the world was convinced it was too late to prevent 5G vendors sponsored by the Chinese Communist Party (CCP) from dominating the next generation of global telecommunications. The rise of Huawei was the fulfillment of decades of careful planning by the Chinese government. Supported by the CCP, Huawei benefitted from state protection against foreign competitors, billions in government funding, as well as forced technology transfers and well-documented cases of outright technology theft.

Huawei and the CCP spent years maneuvering into this leadership position. The company was founded in 1987 by Ren Zhengfei, a veteran of the People's Liberation Army's engineering corps. Many of Huawei's crucial first contracts were with the Chinese army. As it grew, Huawei benefitted from both state support and forced technology transfers from foreign companies. Several cases of technology theft also drove the company's rise, including the well-documented theft of router software from [Cisco](#).

Later that month, the United Kingdom's decision to allow Huawei into its 5G network sparked tensions between London and Washington. For its part, the U.K. had announced to Parliament that it would permit "high-risk" vendors to supply equipment to carriers for its 5G networks, but would manage that risk by "protecting networks regardless of vendor."<sup>26</sup> The U.K.'s National Cyber Security Centre (NCSC) announced a set of standards for telecom security in July 2019 that laid out "principles, requirements and tests for the most important things we need operators to do to protect their network, regardless of vendors used."<sup>27</sup> The NCSC also put in place special processes for "high risk vendors," and specifically a Huawei Cyber Security Evaluation Centre which published annual Oversight Board reports for Huawei especially. The oversight board reviewed the company's source code and assessed security risks. In 2020, the Oversight Board concluded that it could "only provide limited assurance that all risks to U.K. national security from Huawei's involvement in the U.K.'s critical networks can be sufficiently mitigated long-term."<sup>28</sup>

Across the Atlantic, the Americans were not impressed. White House officials said it would be "nothing short of madness" to include the Chinese company in telecoms infrastructure, and that intelligence sharing would be at risk if Britain went ahead. In a sign of the U.S. bipartisan political alignment on the threat posed by Huawei, Speaker of the House Nancy Pelosi warned European countries they will "choose autocracy over democracy" if they let Huawei take part in rolling out 5G technology at the 2020 Munich Security Conference in February 2020. She added it would be the "most insidious form of aggression" if 5G communications were to come under the control of an "anti-democratic government."<sup>29</sup>

Still, Huawei's momentum toward capturing tremendous global market share in 5G appeared assured. A few days later, at a press conference in London, Huawei announced 91 commercial 5G contracts worldwide, with 47 in Europe. "It looked like they were going to run the table," Undersecretary Krach recalled.<sup>30</sup> The U.S. government's past approach to addressing Huawei's 5G network with other countries had been more sticks than carrots. "It involved a lot of banging on the table and saying, 'Don't buy Huawei.' Where I come from, you never mention your competitor's name," Krach said. "Why don't we treat them as a customer?"<sup>31</sup>

## **The High-Performance Clean Team Listens – Ah-Ha’s, Bullies, and Warcraft**

In March 2020, Krach was given the authorities he needed to quietly begin designing the Clean Network with his team. Their goal was to plot strategic chess moves to turn the tide against Huawei.

Krach was uniquely qualified for his mission of developing a global economic security strategy and operationalizing its 5G plan. He had a proven track record of building high-performance teams and market-leading companies by constructing global networks. According to Joe Kaeser, President and CEO of Siemens AG, “Under Secretary of State Krach’s experience of building the Ariba Network with \$7 trillion per year of B2B eCommerce and the DocuSign Global Trust Network with 600,000 businesses and nearly 1B consumers provided the perfect background for leading the Clean Network charge.”

*The Team with The Best People Wins – Diversity of Thought Is the Catalyst for Genius*

Krach believed the same leadership principles and strategies he used so effectively in building category kings and massive networks could be applied in economic statecraft against an increasingly aggressive China Inc. He had already brought in a diverse group of about a dozen results-oriented, seasoned experts from outside of government, paired them with State Department’s foreign service officers, and creatively organized them into a company-like structure. (Exhibit 2)

To operationalize the plan, Krach augmented the “Clean Team” with a broad network of “honorary E-team members” from throughout the public and private sectors. Core members of the Clean Team included software entrepreneur and former Assistant Secretary of Defense James Shinn (MBA ’81); marketing and advertising executive Len Khodorkovsky; Purdue Dean of Engineering Mung Chiang; DocuSign sales leader Marc Carlson; Navy Captain Cory Johnston; Ariba CFO Ed Kinsey, as well as key foreign service officers. The team was convinced the stakes were so high in 5G that this was a battle the U.S. simply could not lose. They treated Huawei as a “beachhead” for a bigger effort to counter the Chinese Communist threat. (Exhibit 3)

“When you’re in a leadership position,” Krach said, “it’s all about building a high-performance team. The organization with the best people wins and diversity of thought is the catalyst of genius. The key is to get everyone working together. You need three things for that: 1) a noble cause which is national security; 2) an adversary – that’s the CCP; and 3) a playbook to set a crystal-clear direction – the vision, the mission, the values, the team rules, the long-term goal, strategy. And then, it all boils down to execution. “But before they could put together the Clean Network Playbook, they needed to collect some information first.

*The Big Ah-Ha: China Inc.’s Biggest Weakness – Lack of Trust*

Despite Huawei’s apparently unassailable position, Under Secretary Krach saw an opening in Huawei’s opaque business practices. Unlike other companies that made their customer lists public, Huawei did not specify their contracts. Krach believed this lack of transparency suggested that its market position was not irreversible. He believed that the place to begin was listening to the customer – countries and companies that already were, or considered, doing business with Huawei. As in the private sector, Krach insisted that his team first go on a “listening tour,” conducting 60 bilateral meetings with foreign ministers and finance ministers. They discovered that most countries were terrified of China. Nobody even wanted to use the words China or Huawei. The big ah-ha came when they asked about their relationship with China.

Krach recalls, “They’d say ‘well, they are an important trading partner,’ but then they would look both ways, lean in, and softly say ‘but we don’t trust them.’ This would happen over and over again. That’s when I told the team that we need to make our strategic positioning all about trust. Nobody trusts these guys. All I know is that ‘Trust’ is the most important word in any language. You buy from people you trust. You partner with people you trust. Trust is the basis of every relationship. It made me think back to

my DocuSign days when I would stand on a stage and use our customer, Deutsche Telekom CEO Tim Hoettges, as an example of a trusted relationship. I used to say that we're not in the software business, we're in the trust business." The U.S.'s strategic positioning would need to be all around trust.

#### *The Bully in the Room – CCP's Intimidation, Retaliation, and Retribution*

In January 2020, Under Secretary Krach had brought Secretary Pompeo to Silicon Valley on a four-day listening tour to better understand the US-China business relationships from 36 CEOs. The trip helped reveal the extent of the lack of trust between U.S. firms and China, and the nature of China's rapid advance and aggressive upgrading strategy. It became clear that a strategy was needed to prevent China's dominance in semiconductor manufacturing. Many executives also shared their shame in having trusted Chinese investors and partners, only to have their own intellectual property, proprietary technology, and data outright stolen from them.

Krach also had personal experience with Chinese intellectual property theft from his days as a Silicon Valley CEO. However, it was not until he arrived at the State Department that he learned the full extent of the problem. Companies like Huawei Technologies, ZTE Corporation, and other major Chinese players are bound by China's National Intelligence Law, which requires any Chinese company – state owned or otherwise – to turn over any information, proprietary technology, intellectual property, or data, upon request to the Chinese Communist Party. It became clear that allowing Huawei to pursue its strategy of world domination would cause irreparable damage to global economic security. Krach believed that the U.S. had to fight this form of 21st century economic warfare by providing a democratic alternative.

"What really became clear was that the elephant in the room was always the CCP's intimidation, retribution, and retaliation," Krach recalled. "Countries and companies are terrified of retaliation. I reckon we have all had experiences with a bully. The one thing that I do know is when you confront a bully, he backs down. And he really backs down if you have your friends by your side. I knew that if we could strengthen our relationships across the Atlantic, Asia Pacific, and around the world, we could achieve strength in numbers and power in unity and solidarity to stand up to the CCP bully."

#### *The Challenge – China Inc.'s Market-Distorting Economic Warfare*

From Krach's Silicon Valley experience, he understood that **building category kings** is about more than revenue growth and profits, it is also about focusing on generating market power derived from tilting the scales in your favor to suppress competitors. Similar principles were key to China Inc.'s state-backed economic warfare doctrine being deployed on a grand scale for the benefit of its most strategic companies. While many observers assumed Huawei was a naturally strong competitor that gained its dominant position by simply outcompeting its rivals, the Clean Team understood that Huawei owed its rise to Chinese market-distorting industrial policies that suppressed global competition for nearly two decades.

Beijing had a playbook of its own which primarily utilized a 4-part state-backed strategy to gain competitive advantage. First, China strategically places officials, including a former Chinese telecom official as ITU Secretary-General, and subsidized Chinese firms across key standards-setting bodies to sway the standardization process in Huawei's favor. Second, China provided subsidies – including guaranteed market share within China and cheap credit from Chinese state banks – that significantly reduced Huawei's operational costs, speed time to market for Huawei's products, and allowed it to price its products well below the prices set by its competitors. Third, Chinese state banks provided generous financing to Huawei's customers on terms most commercial banks could not match, making Huawei equipment cheaper to deploy. Fourth, China's Ministry of Foreign Affairs was used as a sales agent for Huawei's equipment, the doctrine of seducing with money (in some cases – bribes) and reinforcing with intimidation and retaliation.

As a result of China Inc.'s policies, Huawei's equipment was cheaper than the three alternatives. The team observed that the security risks associated with Huawei equipment were hard to quantify for telecommunications companies and governments. However, the lower costs associated with choosing state-subsidized Huawei over Ericsson, Nokia, or Samsung were immediate and measurable. It also created a pricing umbrella so low that it eliminated the profit incentive for new entrants and created an oligopoly with only three non-U.S. vendors, and two Chinese vendors. If the team could change that dynamic, the United States could make the market more competitive, which would help solve the problem of quantifying the security side.

## The Playbook Charts the Course of a Bold Vision

After analyzing China Inc.'s warcraft strategy, dissecting Huawei's tactics, reflecting on the Silicon Valley sessions, and considering the bilateral comments, it was time for the Clean Team's diverse group of business leaders, entrepreneurs, technologists, diplomats, and military intelligence experts to get moving. As he's done before, Krach was now ready to align his team around a shared playbook, following the same format as his last four companies – the mission, vision, principles, goal, and strategy. This would enable rapid scaling to drive their execution forward together into objectives, lines of effort, and action items. For the top part of the Playbook pyramid, Krach was fond of saying, "Make no little plans. They have no magic to stir people's souls." (Exhibit 4)

The mission was to build an Alliance of Democracies by harnessing the synergies of the U.S. Government, our allies, and the private sector, leveraging America's comparative advantages, existing initiatives, and shared democratic values. The Playbook was designed to inspire a bold vision of advancing freedom and prosperity by unifying a network of trusted partners. The goal was to stand up against the growing threat of authoritarianism by catalyzing and inspiring a worldwide movement. The Core Principles would be grounded in democratic values, which form the basis of trust: integrity, accountability, transparency, reciprocity, and respect for the rule of law, property, labor, sovereignty, human rights, and the planet. (Exhibit 5)

In Krach's Senate confirmation testimony, he outlined his strategy to address the China Challenge: "My focus will be on harnessing three powerful areas of competitive advantage: strengthening our partnerships with friends and allies, leveraging the innovation and resources of the private sector, and amplifying the moral high ground of our democratic values."<sup>32</sup>

In formulating his strategy, Krach said, "The Clean Network's mission would be to build an alliance of democracies to reverse China's dominance of the critical economic sectors by harnessing the synergies of the U.S. Government, our allies, and the private sector, while leveraging our competitive advantage and existing initiatives like Blue Dot Network and ERGI and shared democratic values in the epic battle between freedom vs. authoritarianism. The core principles of this initiative were grounded in democratic values, which form the basis of trust: integrity, accountability, transparency, reciprocity, and respect for the rule of law, property, labor, sovereignty, human rights, and the planet."

These "trust principles" formed the basis of the network and criteria that countries and companies had to meet for inclusion. Krach said, "The trust tenets of the Clean Network explicitly state that 'The U.S. is committed to fostering the Clean Network comprised of like-minded countries, economies, companies, investors, institutions, and civil society organizations that adhere to the set of Trust Principles. The goal is to include all countries and organizations as participants. Countries that currently do not abide by the Trust Principles will be excluded from CN membership until they reform problematic practices and laws. No nation is excluded forever, and the CN does not require a country to choose between partnership with the U.S. and any other nation.'" (See **Exhibit 3b** on trust principles). "The ultimate objective was to create a fair, free, and reciprocal level playing field; we never assumed we could create regime change."<sup>33</sup>

Krach envisioned that 5G would serve as “the initial beachhead to a comprehensive strategy of economic competition with China in a variety of other sectors.” Once one built a network and secured a defensible beachhead, he reasoned, one had a strategic high ground that could be used to attack adjacent markets.

Part of Krach’s strategy was to brand the Clean Network as an alliance of democracies and companies that operated by a set of trust principles for all areas of economic collaboration in opposition to what he called “China Inc.” He said, “I call them China, Inc. because, I witnessed the devastation of thousands of manufacturing companies like my dad’s five-person machine shop. At GM, I learned about forced tech transfer when the Chinese government requires a JV to have access to their market and in Silicon Valley, I experienced government backed IP theft from China. I didn’t understand it at first, but then I saw the coercive nature of how their system methodically targets one industry after the other. They give a bunch of subsidies and resources and let companies grow and compete domestically and then at a certain point declare a national champion and put government resources, including the Ministry of Foreign Affairs, behind them. Then, you’re not competing with a company but with China as a country.” Krach said, “Huawei was the posterchild for China Inc, so it was natural to link Huawei to the CCP since everybody understands the party is the government and then link the CCP to the surveillance state which enables the genocide in Xinjiang and the evisceration of freedoms in Hong Kong.” (See **Exhibit 4** for these arguments).

Krach brought James Shinn (MBA ’81), who also had experience in software and substantial experience in government service, onto the team as a Senior Advisor. By March 2020, Krach had recruited a half-dozen executives, many from Silicon Valley, and paired them with State Department career officers to form a broad network of “honorary E-team members” to operationalize a plan that was aligned around a shared playbook. (See **Exhibit 3a** on this “playbook.”)

The Clean Network had three stated objectives: “The first objective was to prove that China Inc. is beatable by defeating the CCP’s masterplan to dominate 5G which would also open the playing field and enable U.S. entrants. The second objective was to deliver an enduring model for competing with China Inc. as measured by meeting ten essential factors. The final objective was to provide a beachhead and a head-start on building a strategic platform that could be leveraged in other sectors of economic competitions, such as cloud computing, mobile applications, underwater cable, AI, IoT, clean energy, digital currency, autonomous vehicles, advanced manufacturing and biomedical engineering, electronic payments, since they all pose the same challenges.”<sup>34</sup> (See **Exhibit 5** on these objectives and the team’s system of measuring achievements).

“Huawei had all the momentum and seemed unstoppable,” Krach said.<sup>35</sup> Krach believed that everyone wanted to go with the leader: “In a rapidly changing technology market, leadership was not determined by size but by momentum. Our strategic imperative was to reverse Huawei’s lead in global 5G market share by taking away its momentum.”<sup>36</sup> In 2020, no U.S. firm could offer end-to-end 5G services, and the market was an oligopoly dominated by Ericsson, Nokia, and Samsung in addition to the two Chinese vendors. Up to this point, network equipment had been a single-vendor market. When an operator purchased equipment from one vendor, it could not mix in technology from other companies. “My team believed the market was ripe for a shift to interoperability, similar to what happened in the PC business,” Krach said. “If the mobile network equipment market became truly interoperable, it would no longer be an oligopoly. U.S. firms would have new opportunities to enter the market, making it much harder for Beijing to suppress competition and maintain Huawei’s dominant position.”<sup>37</sup>

The team deployed a four-prong strategy to build the network effect. (See **Exhibit 6** on the four principles of the network effect). According to Metcalfe’s law, as members and areas of collaboration grew, the resulting network increased exponentially. Market power came from the number of members squared. Following this principle, the team first brought all the countries and telcos that had already decided to exclude Chinese vendors onto the Clean Network, and recruited several additional telcos and high-tech companies where Krach had pre-existing relationships to reach an initial critical mass and increase

market power. They would supply public endorsements, quotes and serve as examples for other countries and companies on the fence. (See **Exhibit 7**.)

Second, the team established a set of value propositions and put together a marketing and sales campaign for alternative providers. (See **Exhibit 8 for value propositions**.) They would leverage existing U.S. bilateral relationships and pitch the campaign to allies. An essential element of the value proposition entailed reducing Huawei's state-subsidized pricing advantage by securing various authorities from the Export-Import Bank (ExIm), the Development Finance Corporation (DFC), and USAID, as well as the allies' governments' financing arms. For developing countries, a key component of the value proposition involved U.S. private sector investment, especially from high-tech companies that were part of the network. For the more advanced developed countries, the value proposition extended to potential collaboration in the Techno-Democracies 12 alliance (TD-12) which the team developed previously as part of their Global Economic Security Strategy.<sup>38</sup> Krach also wrote to CEOs and governing boards at American universities and asked them to incorporate clean labor practices into their supply chains and divest from Chinese companies involved in human right violations.<sup>39</sup>

Third, the playbook targeted networks of networks. Krach believed that the fastest way to build a network was to build a network of networks and by combining the Blue Dot's clean infrastructure network and ERGI's Clean Mineral Network and uniting existing regional initiatives in the Indo-Pacific, Latin America, Africa and across the Atlantic. From his bilateral talks, Krach knew that countries and companies not only distrusted China but feared Chinese retaliation. Krach said, "Countries and companies are terrified of China's retaliation. The CCP cannot retaliate against everyone. That is where the E.U. comes in, the Transatlantic Alliance comes in, NATO comes in."<sup>40</sup> "There is strength in numbers and there's also power in union and solidarity."<sup>41</sup>

Fourth, Krach and his team sought to establish the 5G industry trust standard that would combine trust principles with the highest international standards for equipment vendors.<sup>42</sup> In May 2020, Krach's team at the U.S. State Department asked the Center for Strategic and International Studies (CSIS) to convene a working group of 25 experts from companies and research centers to establish a set of guidelines to evaluate the level of security and trustworthiness of telecommunications equipment vendors.<sup>43</sup> The resulting criteria used internationally recognized, technologically neutral standards of digital trust and touched a broad network model including network infrastructure, data transfer and applications.<sup>44</sup> The guidelines complemented the Prague Proposals<sup>45</sup> and the EU's 5G Toolbox.<sup>46</sup> The idea was for such standards to be included in Requests for Proposals (RFPs) put out by governments in 5G network auctions. Krach explained, "That way, no matter how technologically sophisticated the competition might be, failure to meet predetermined standards would disqualify them by default."<sup>47</sup>

### *Launching the Initiative: "5G Trifecta"*

Krach wanted to be able to move fast, and so needed to align the multiple agencies and departments within the U.S. government around a competitive U.S. technology strategy. Senior Advisor Shinn was in charge of leading the interagency process. The process could be tedious, as each department was subject to due process with a disclosure timeline. Specific goals, constraints and interests had to be taken into account and required negotiations, office by office. "These are all quasi-independent agencies with their own well-established sets of procedures," Shinn recalled.<sup>48</sup>

When Krach felt that the pieces were in order, they began to operate. In May, three opening moves Krach dubbed at a press conference as the "5G national security trifecta" commenced: an announcement of a major U.S. onshore investment in semiconductors, and the public announcement of a 5G Clean Path initiative laying out rules for mobile traffic passing through U.S. diplomatic facilities at home and abroad, and tightened restrictions on exports to Huawei. Together, these moves were designed to put Huawei on the defense.<sup>49</sup>

**TSMC** In May, Taiwan Semiconductor Manufacturing Co Ltd, the world's biggest contract chipmaker and a major supplier of Huawei, announced that it would build a \$12 billion chip factory in Arizona to utilize the company's 5-nanometer chip production technology, the most advanced in the world. It would be the company's first production investment in the U.S. in decades; most of its production took place in Taiwan, where the company said production was more effective and cost-efficient. Mike Pompeo stated that the deal "bolsters U.S. national security at a time when China is trying to dominate cutting-edge tech and control critical industries."<sup>50</sup>

Krach said, "The onshoring of TSMC, which was the biggest onshoring in history – \$12 billion state of the art plant. And it also brought their ecosystem. We had two theories. One was that it would trigger other semiconductor companies to onshore in the U.S., which has happened, and it also triggered the CHIP Act, which is roughly about a \$30 billion act to help onshore these things."<sup>51</sup> The team worked with a bipartisan group of senators to develop two bills to bolster domestic spending on U.S. science and technology research, onshoring, and the industrial base. The Endless Frontier Act, introduced in late May 2020, was a \$100 billion bipartisan technology research funding bill.<sup>52</sup> That bill had not passed by the end of the Trump administration. The CHIPS for America Act sought to increase federal incentives to enable research, supply chain and in semiconductor manufacturing.<sup>53</sup> Parts of the CHIPS for America Act were passed in 2020 and 2021.<sup>54</sup>

**Internationalization of the Clean Path** On April 29, 2020, Secretary Pompeo announced that the U.S. Department of State would prohibit all 5G mobile data traffic passing through U.S. diplomatic facilities at home and abroad to touch equipment supplied by untrusted IT vendors such as Huawei and ZTE.<sup>55</sup> The 5G clean path would be an end-to-end communication path that did not use any transmission, control, computing, or storage equipment from untrusted IT vendors. Secretary Pompeo also invited governments and corporations to "join a global effort to promote data privacy, security, human rights, and collaboration in communication networks."<sup>56</sup>

**Tightened Export Controls** On May 15, the U.S. Department of Commerce issued export controls to further restrict Huawei's access to semiconductor chips. All non-U.S. chip manufacturers that used American-origin equipment, intellectual property or design software to produce chips for Huawei or its affiliates would be subject to Export Administration Regulations (EAR), and required a license before shipping to Huawei.<sup>57</sup> As a result, TSMC, Huawei's supplier for artificial intelligence processors and networking chips, stopped taking new orders from Huawei.<sup>58</sup> Huawei said in a statement that the new rule "will impact the expansion, maintenance, and continuous operations of networks worth hundreds of billions of dollars that we have rolled out in more than 170 countries."<sup>59</sup> The company's rotating chairman, Guo Ping, said "Survival is the keyword for us now."<sup>60</sup>

## **The U.S. on the Offense, with Friends**

After the initial barrage of the 5G Trifecta, Krach initiated the global campaign that would include trips to Asia, Europe, the Middle East, and Latin America. The team first started with gathering up the countries that already excluded Huawei. By the end of May, Japan, Poland, Australia, Denmark, Norway, New Zealand, and the Czech Republic were already members of the Clean Network. In the first week of June all Canadian telcos made the decision to exclude Huawei.

In order to demonstrate momentum building the network, the team would keep a public scoreboard of Clean Countries, Clean Telcos, Clean Companies and systematically update it with a "rolling thunder of wins" at press conferences. Krach also borrowed the One Key Metric (OKM) concept that he used so effectively building DocuSign into a powerhouse. He maintained the team needed one number to focus on that measured the true power of generating the network effect since it was the accelerator for getting members to join. (Exhibit 7)

Metcalf's Law postulates that the power of the network increases by the number of members squared. But in this case, just using the number of Countries and Telcos is not a true measure of network power because some are more important than others. They determined the most accurate quantifiable measure is economic power as quantified by GDP and the % of global GDP represented by the countries and telcos on the Clean Network would be the OKM. With speed being of the essence, the team was now armed with its enterprise salesforce spreadsheet of over 500 telcos and countries and guided by their One Key Metric.

#### *Building the Brand – Early Momentum with the Telcos*

Krach's approach with telcos was novel because it was not "standard operating procedure" for a government official to make CEO sales calls. The Clean Team's strategy would draw on Krach's and Marc Carlson's existing CEO relationships and their credibility as global business leaders to convince telcos to go with trusted vendors and join the Clean Network. Subsequently, the Clean Telcos would be leveraged to create a tipping point within countries, making it easier for governments to choose to join the Clean Network.

After building a trusted relationship with Telefónica CEO and Chairman José María Álvarez-Pallete López, the Clean Team scored a huge victory when he declared, "Telefónica is proud to be a 5G Clean Path company. Telefónica Spain and O2 (UK) are fully clean networks, and Telefónica Deutschland (Germany) and Vivo (Brazil) will be in the near future without equipment from any untrusted vendors." López' statement put pressure on other European telco CEOs who expressed concern about the cost entailed in upgrading from existing Huawei equipment and claimed they needed Huawei functionality.<sup>61</sup> López' quote would be used by the Clean Team in every telco presentation going forward.

In his June 25 [press conference](#), Krach began validating the growing momentum, "Clean Network is almost up to 20 Clean Countries and the largest telco companies in major countries around the globe are also becoming Clean Telcos. In addition, we've seen this with Telefónica in Spain, Orange in France, Reliance in India, Telstra in Australia, SK and KT in Korea, Cosmote in Greece, NTT in Japan, O2 in the United Kingdom, and all the telcos in Canada. The momentum in favor of securing 5G is building. The more countries, companies, and citizens ask whom they should trust with the most sensitive data, the more obvious the answer becomes: not the Chinese Communist Party's surveillance state." Singapore's telcos would ban Huawei a few days later. The brand started to build, and the tide was beginning to turn.

#### **Rolling Out the Marketing Campaign – Freedom versus Authoritarianism**

Krach observed that typically what the government calls marketing is really tactical communications focused on crisis management and public diplomacy. Private-sector marketing know-how was another unique skillset the Clean Team brought to the table, especially with the addition of a former advertising executive, Len Khodorkovsky. Khodorkovsky was instrumental in helping Krach build the Clean Network into a global brand and develop the marketing campaign. From a strategic standpoint, Krach believed that to enable transformational change you need three things: a noble cause, an adversary, and a plan. In order to inspire America's allies and partners, the noble cause became the battle of "Freedom versus Authoritarianism," which provided a clear differentiation from the adversary – the Chinese Communist Party.

#### *The Strategic Positioning – Who Do You Trust?*

The Clean Team purposefully targeted the CCP, not Huawei, because they envisioned 5G as the initial beachhead in a much bigger battle. The heart of the marketing plan consisted of the strategic positioning and three simple key messages re-enforced countless times. The strategic positioning was all about "Trust." As Krach said during his June 25 press conference and repeated continuously, "The question that governments and businesses around the globe are asking about 5G is, 'Who do you trust?'"

### *First Key Message: Huawei Is an Extension of the CCP*

The first key message consistently linked Huawei to the Chinese Communist Party by reminding audiences that Huawei was the most important company to the CCP. It was the backbone for the CCP's surveillance state and the only Chinese company with a world-wide brand, backed by state-supported IP theft, subsidies, and forced technology transfers. Huawei CEO Ren Zhengfei was not only a Communist Party member, but a veteran of the People's Liberation Army. Unsurprisingly, Huawei's first contracts came from the Chinese army. Krach often reminded the public that "Huawei is an extension of the Chinese Government and a tool to extend its surveillance state. 5G is the backbone for that surveillance state's human rights abuses. All you have to do is hook up the appendages like cameras, apps, clouds, and microphones, and you've got Big Brother, George Orwell's 1984."

Krach often incorporated future pacing into his remarks as demonstrated by setting up the Clean Network's future [expansion](#) of five additional Clean Initiatives in his reference to the appendages. The Big Brother reference was also a reminder that by doing business with Huawei you are supporting human rights abuses.

### *Second Key Message: CCP's 3C's Doctrine of Concealment, Co-Option, and Coercion*

The second key message focused on the malign intentions and behavior of the CCP. In his [speeches](#), meetings, during [TV](#) appearances, and [press](#) interviews, Krach frequently repeated, "Today as we sit here wearing masks, citizens around the world have woken up to the truth about the Chinese Communist Party's 3 C's doctrine of concealment, co-option, and coercion. They now understand that the pandemic is a result of the concealment of the virus. They witness the CCP's co-option of Hong Kong that has eviscerated the freedoms of its citizens. They realize the coercion of the Xingjian people has grown into some of the most horrific human rights abuses in their lifetime. And they don't like it. This now has given the political will to government leaders and CEOs around the world to stand up to that CCP bully. In Washington for Democrats and Republicans, this is one of the most unifying bipartisan issues of our time."

This message was relevant to anyone upset about the pandemic (i.e., everyone), highlighted the CCP's stepped up aggression, preempted the potential objection of U.S. political division, future paced the government leaders and CEOs, and set up the final marketing message.

### *Third Key Message: The Bully's Seduction, Intimidation, and Retaliation.*

The third key marketing message called out the elephant in the room, framed it with another 3-point doctrine, and offered a solution that everybody can relate to. Krach said, "The CCP's stated doctrine is to seduce with money and reinforce with intimidation and retaliation. I think we have all experienced a bully some time in our life. If there's anything I learned, when you confront a bully, he backs down and he really backs down if you have your friends by your side. That's why the Clean Network is so vital. There is strength in numbers and power in solidarity. When we are united, the CCP cannot retaliate against all the democracies and companies in the world at the same time."

This folksy testimonial labeled the CCP as a bully, which can be confronted safely by joining the Clean Network. The bully designation was also planned as a trap for China's Foreign Ministry, which served as Huawei's unofficial sales arm. The Clean Team knew that China Inc. was not used to backpedaling while playing defense and knew the trap would be sprung when they overreacted to the Clean Network's initial momentum. That's what happened next.

### *Turning the Tide in the United Kingdom – Here Comes the CCP Bully*

Throughout June and early July 2020, all eyes were on the UK as Boris Johnson was reexamining the previous January's decision to allow Huawei in its 5G network. [London](#) was dismayed by PRC's crackdown in Hong Kong and its lack of transparency about the pandemic outbreak. The British government was facing a potential political rebellion by parliamentarians from the U.K.'s ruling Conservative Party about the security implications of Chinese involvement in the country's 5G network. Pressure was mounting from Washington, as a bipartisan group of U.S. Senators urged the Parliament to reconsider, suggesting that U.S.-U.K. intelligence sharing, and military collaboration was at risk.<sup>62</sup> Following the new U.S. export restrictions in May 2020, the British government backed out of its agreements with Huawei.<sup>63</sup> The new export restrictions of the U.S. 5G Trifecta served as an additional catalyst for the reassessment.

China's ambassador to the UK Liu Xiaoming warned Prime Minister Johnson that any ban would send "a very bad message" to Chinese businesses<sup>64</sup> and it was "[not in the UK's interest](#)" to make an enemy of Beijing. He [added](#), "But if you want to make China a hostile country, you will have to bear the consequences." Fortune observed, "Liu warned that severing ties with Huawei could prompt Beijing to pull Chinese investment from major British infrastructure projects—including the Hinkley Point nuclear power plant and the costly High Speed 2 railway." And Bloomberg [reported](#) that China's state-run media has warned that steps to punish HSBC, Jaguar Land Rover Automotive and Burberry could be next.

Secretary Pompeo [slammed](#) the Chinese Communist Party's bullying against the United Kingdom by issuing statement [saying](#), "The United States stands with our allies and partners against the Chinese Communist Party's coercive bullying tactics." He continued, "The CCP's browbeating of HSBC, in particular, should serve as a cautionary tale. ...Beijing's aggressive behavior shows why countries should avoid economic overreliance on China and should guard their critical infrastructure from CCP influence." He concluded, "The United States stands ready to assist our friends in the U.K. with any needs they have, from building secure and reliable nuclear power plants to developing trusted 5G solutions that protect their citizens' privacy. Free nations deal in true friendship and desire mutual prosperity, not political and corporate kowtows."

On the heels of that statement, Krach [penned](#) an op-ed in The Telegraph headlined, "The Free World Must Unite Against Huawei," which reiterated Pompeo's commitment to stand by all countries against the China bully and quoted Foreign Secretary Dominic Raab, saying that it wasn't just the devastation of COVID-19 that took the shine off China, but the fact that the CCP didn't live up to the agreements that it made. The crackdown on Hong Kong was a case in point. As Mr. Raab said, "It comes down to an issue of trust. Otherwise, why would anyone trust them with other deals we might make?" On July 14, 2020, the British government responded to China's threats, reversing course, and banning local mobile providers from purchasing new Huawei equipment after 2020, and removing Huawei's kit from Britain's 5G network by 2027.<sup>65</sup>

The UK decision to exclude Huawei was an important milestone in turning the tide against the Chinese company, which was now being defined as an extension of the CCP. Countries and companies were asking themselves whether Huawei could be trusted with their most sensitive information. A week after the UK ban, France announced its plan to phase out Huawei by 2028. "France's position is similar to that of Britain, but the government's communication is different," a telecoms industry source [told](#) Reuters. "Huawei can't do much about it." More chips were about to fall. The tide was now turning.

#### *Intensifying the Marketing Campaign – Calling Out CCP's Genocide*

Krach and his team have always been [outspoken](#) and vigorous advocates for human rights. Their stand during the Clean Network campaign played a pivotal role in driving home the second marketing message regarding the CCP's malign intentions and behavior, and Huawei's enabling of the surveillance state and perpetuation of human rights abuses. On July 1, 2020, at the height of PRC's suppression of democracy in Hong Kong, Krach sent a [letter](#) to all U.S. CEOs alerting them to CCP's human rights

abuses in Xinjiang. A month later, Krach followed with a similar [letter](#) to all the governing boards of American universities. In the letters, Krach asked these decision makers to ensure their organizations have Clean Supply Chains with Clean Labor Practices and Clean Investments by divesting from all Chinese companies involved in human rights violations. (Exhibit 11)

“By running U.S. economic diplomacy,” Krach [said](#) on Cavuto Live’s Fourth of July show, “I have come to learn that nowhere are the CCP’s human rights abuses more pronounced than in the Xinjiang’s mass internment camps. Citizens, institutions, and companies must be made aware that the CCP’s large-scale human rights abuses, which include forced abortion, forced sterilization, abuse of women, forced marriage, and slave labor, result in cultural and religious genocide.” He added, “The CCP really stepped up their aggressive tactics since the pandemic.

The pandemic is a result of the concealment of the virus. ...In Hong Kong, they’ve extended their Gestapo-like security forces and have totally eviscerated their freedoms.” “We are holding China accountable,” Krach [told](#) Fox Business’ Maria Bartiromo. “They’ve attacked in Hong Kong freedoms of the press, freedom of speech, freedom of assembly, and rule of law.” In a related [op-ed](#) titled “US businesses must take a stand against China’s human rights abuses,” Krach urged business leaders to: “Do human rights due diligence. Get the answers.” He said, “Businesses can reaffirm corporate America’s role as a powerful force for good around the world. Your companies can make a profound and enduring difference in this human rights tragedy.”

The Clean Network became a [platform](#) for global CEOs to shine the light of transparency on the CCP’s increasingly aggressive bullying from multiple angles – government, business, universities, [pension funds](#), stock exchanges, financial institutions, the press, and [civil society](#) – asserting their duty to establish governance principles when it comes to investing in entities that facilitate human rights abuses and [Chinese military buildup](#). Krach urged pension funds, mutual funds, insurance companies, venture capital firms, institutional investors, and [emerging index funds](#) to disclose Chinese investments to their constituents and consider divesting from investments that pose a risk of financing China’s human rights violations. Strategically, the Clean Network furnishes the platform for Clean Investments with Clean Portfolios and Clean Funds, raising the cost of capital for the Chinese companies, as the Clean Network expands its initiatives.

### *Expansion of the Clean Network*

August 5, 2020 marked the team’s expansion of the Clean Network with five additional lines of effort as Secretary Pompeo announced its extension beyond the 5G Clean Path to Clean Carrier, Clean Store, Clean Apps, Clean Cable, and Clean Cloud and directly named Alibaba, Baidu, China Mobile, China Telecom, and Tencent as threats to be countered. (See [Exhibit 9](#).) The resulting Clean Network would be based on “internationally agreed upon digital standards and serve as a comprehensive approach to address long term threats to data privacy, security, human rights and collaboration posed by the PRC.”<sup>66</sup>

A day later, two Presidential Executive Orders were issued in quick succession to ban transactions on TikTok, a video-sharing mobile application owned by the Chinese company ByteDance Ltd., and WeChat, a messaging, social media, and electronic payment application owned by Tencent Holdings Ltd. within 45 days of the respective orders.<sup>67</sup> Furthermore, U.S. Senate unanimously approved a bill banning federal employees from using TikTok on government-issued devices. On August 17, the U.S. Bureau of Industry and Security added another 38 Huawei affiliates in 21 countries to the Entity List which restricted access Huawei’s non-U.S. affiliates from producing components using U.S. technology and software.<sup>68</sup>

Krach was asked about the TikTok and WeChat announcement during an interview. He said, “It’s about more than just two companies like TikTok and WeChat. What it’s really about is three things. First, it’s about the Communist Party’s surveillance state with 5G being the backbone. Second, it’s about the

appendages that connect to that backbone like apps, cables, clouds. Third, it's also about that 'Great One-Way Firewall of China,' where all data can come in for the CCP's exploitation, but none come out. All the propaganda can go out. But the truth cannot come back in. You know it is also about reciprocity because our apps like YouTube, Google, Twitter, Facebook, aren't allowed in China."<sup>69</sup>

A month earlier, India had already banned 59 Chinese apps including TikTok, and WeChat, citing security concerns.<sup>70</sup> On August 24, India, a major Chinese trading partner, announced that it would phase out 5G equipment made by Chinese companies.<sup>71</sup> By late August, the Clean Network reached over 30 countries and major telecommunications companies including Orange (France), Reliance (India), Telstra (Australia), SK and KT (Korea), Cosmote (Greece), NTT (Japan), and all telcos in Canada, Norway, Vietnam, and Taiwan.<sup>72</sup>

#### *"Taiwan's Number One Friend" Tightens Ties*

Taiwan was another major strategic partner in the Clean Network playbook and was crucial to global economic security as well as U.S. national security. Krach's Taiwan mission, which consisted of six major undertakings, played a pivotal role in strengthening the U.S.-Taiwan relationship. His first endeavor, which was bolstering support for countries that still recognize Taiwan when he hosted their Finance Ministers at his DC home, resulted in some of the early Clean Network members. Krach's second initiative was brokering the crucial onshoring of TSMC, one of most vital and vulnerable companies to US national security, and represented a quantum leap forward in securing the semiconductor supply chain. (Exhibit in progress)

Third, on September 17, Undersecretary Krach attended the memorial service of former Taiwanese President Lee Teng-hui, becoming the highest-ranking U.S. State Department official to visit Taiwan since the Carter administration severed diplomatic ties in 1979.<sup>73</sup> Krach and his delegation met with the Taiwanese business community, including executives at Foxconn, the Taiwanese multinational electronics manufacturer, and government officials including President Tsai Ing-wen hosted a banquet for Krach, which was also attended by Morris Chang founder of TSMC.. Taiwan in particular responded to the "strength in numbers" value proposition of the alliance, and quickly joined the Clean Network.<sup>74</sup>

While in Taiwan, Undersecretary Krach and local officials set the groundwork for his fourth effort, the Economic Prosperity Partnership which they named after the late President Lee. A five-year agreement was signed on November 20, 2020. The State Department cited that "future EPP Dialogues will help strengthen the U.S.-Taiwan economic relationship, further magnify the two societies' respect for democracy, and strengthen our shared commitment to free markets, entrepreneurship, and freedom."<sup>75</sup> For the fifth initiative, Krach challenged the team to complete a U.S. – Taiwan science and technology cooperation agreement by December 15<sup>th</sup> which was signed on schedule and became the first concrete outcome of the EPP.<sup>76</sup>

For the sixth initiative, Krach built the foundation for the completion of a TIFA as a first step towards negotiating a Free Trade Agreement with Taiwan which he hopes the Biden team will consider. Even though Krach wasn't to complete his final mission, President Tsai said "Under Secretary Keith Krach exemplified the remarkable possibilities of Taiwan-US economic relations." And Taiwan's Ambassador Hsiao Bi-khim dubbed Krach "Taiwan's Number One Friend."

#### *Securing the Transatlantic Alliance – the European Union, NATO and the Three Seas*

On September 22, 2020, Under Secretary Krach embarked on an extended trip with the goal of building a Transatlantic Clean Network. He recognized that the success of the Clean Network hinged on it being viewed as an impetus of an alliance of like-minded partners, not solely a U.S. initiative. To drive that message home, the team executed on the playbook's strategy of building a network of networks by aligning with NATO, EU, and Three Seas Initiative, an energy and infrastructure network comprised of

12 Central and Eastern European countries and integrating their own 5G programs into the Clean Network. (Exhibit 13)

At EU headquarters, Under Secretary Krach met with Commissioner Thierry Breton, who had just led the member states in developing the EU 5G Clean Toolbox, which outlined clear guidelines to avoid using “high-risk” 5G suppliers in EU networks. Krach and Breton issued a joint statement on the synergies between the Clean Network and the EU 5G Clean Toolbox, stating that the Toolbox fit the criteria for inclusion in the Clean Network, and cited shared values for “developing, deploying, and commercializing 5G networks based on the principles of free competition, transparency, and the rule of law.”<sup>77</sup> They also urged stakeholders to carefully weigh the long-term impact of allowing “high-risk suppliers” access – directly or indirectly – their 5G networks. Krach and Breton reminded the telco operators’ board members of their responsibility to make the 5G suppliers decision based on the guidelines laid out in the EU 5G Clean Toolbox. The guidelines stipulated that if the board members chose a high-risk supplier, they could be personally liable for when any breach.

While in Brussels, Krach also met with NATO Deputy Secretary General Mircea Geoana, who emphasized the strategic importance of having a secure, non-fractured 5G Clean NATO Network, stating “the Alliance is only as strong as its weakest link.”<sup>78</sup> It is critical during peacetime and wartime to ensure that NATO countries’ civilian 5G infrastructure is secure, and avoid the situation where some NATO members use trusted 5G suppliers and others high-risk’ suppliers.” U.S. NATO Ambassador Kay Bailey Hutchison hosted a dinner in honor of Under Secretary Krach with Deputy Secretary General Geoana and a dozen NATO ambassadors to discuss the Clean NATO Network and encourage NATO members to join the Clean Network by either adopting the EU 5G Clean Toolbox or developing regulations to only include trusted suppliers in their 5G infrastructure. Germany was debating such regulations and its decision was due within months.

During his trip to Europe, Krach also met with Kersti Kaljulaid, President of Estonia and Chairwoman of the Three Seas Initiative, an energy and infrastructure network that comprised 12 Eastern European countries, who endorsed the Clean Network on behalf of the consortium.<sup>79</sup> By this time, it became undeniable that the Clean Network was not an America alone approach and the security blanket against CCP retaliation was heavily fortified.

#### *Germany – Speaking the Language of Diplomacy*

Germany was a key market for Huawei’s expansion outside of mainland China. The majority of Europe’s fiber-optic lines connected in Germany, and its political influence in Europe made a partnership valuable.<sup>80</sup> China was Germany's biggest export market, and Germany's automotive industry, especially, relied on China for sales. A U.S. delegation went to Germany in spring 2019 to dissuade Germany from buying from Huawei, arguing that security threats posed by Chinese telecoms equipment outweighed the economic benefits. Over the course of 2020, Germany proposed increasing restrictions on telecoms equipment providers to exclude Huawei from 5G mobile phone networks without officially doing so.<sup>81</sup> A senior security official noted that Britain formally banned Huawei and France informally excluded it, while Germany’s strategy appeared to “strangle it in red tape.”<sup>82</sup>

Undersecretary Krach chose to praise Germany and appeal to its own strengths and values: “During my 30 years as a Silicon Valley CEO, I have always admired Germany because it has implemented the world's highest standards in terms of security, data protection, reliability, precision, and quality. The members of the Clean Network are asking Germany to defend these standards and follow the example of the vast majority of EU and NATO countries.”<sup>83</sup> Krach cited the importance of Article 1 of German Basic Law, written in 1949, which states that, “Human dignity shall be inviolable. To respect and protect it shall be the duty of all state authority.”<sup>84</sup> In Germany, Krach met with top level German executives, as well as

Germany's Federal Government Commissioner for information technology and the head of Cyber and Information Security to discuss industry security standards.

Prior to meeting government officials, Krach utilized his long-standing business relationships to engage with more than twenty top German executives in Munich, Frankfurt, and Cologne, including Krach's friend and Deutsche Telekom CEO Tim Hoettges, who offered valuable insights on the Clean Network's value proposition. The most fruitful government [meeting](#) was with Germany's Federal Government Commissioner for Information Technology Markus Richter and the head of Cyber and Information Security Andreas Könen, where Krach shared how DocuSign's xDTM industry standard was leveraged to block competitors from winning competitive bids.

During all of his meetings, Krach cited the importance of Article 1 of German Basic Law, written in 1949, which states that, "Human dignity shall be inviolable. To respect and protect it shall be the duty of all state authority." The German publication, *Handelsblatt*, noted that Krach spoke the language of diplomacy. He did not threaten but appealed to the conscience of the German people. Krach called Huawei "the backbone of the Chinese police state" and held the company jointly responsible for the persecution of minorities and critics of the regime. Krach called Huawei a tool that the worst of dictators could have only dreamed of.

Krach's visit proved to be the catalyst for increased restrictions on Huawei equipment in Germany.<sup>85</sup> On the heels of Krach's trip, the German government put in place tougher oversight of telecom networks and allowed German security agencies technical and legal means to monitor network equipment vendors and operators. Krach was confident that "it should do the job."<sup>86</sup> A senior German security official noted while Britain formally banned Huawei and France informally excluded it, Germany would eventually "strangle [Huawei] in red tape. ...The final outcome is the same."<sup>87</sup> The tide has turned.

#### *The Momentum Accelerates in Europe – Signing 3 Clean Network Agreements in 1 Day*

During the rest of the trip, which covered eight countries and ten cities, Krach met with heads of state, telco CEOs, business leaders, and other government officials with the goal of building a Transatlantic Clean Network. Over the next two weeks, visits to Belgium, Luxembourg, Austria, Spain, Portugal, Albania, as well as Germany and Estonia, yielded important wins on the continent. The adoption of the Clean Network principles by the EU, NATO, Three Seas, and a growing number of European countries solidified its credibility as a multilateral initiative. Krach pulled off an impressive diplomatic feat by signing three Clean Network agreements with the Prime Ministers of Bulgaria, North Macedonia, and Kosovo in one day.

The Clean Network had now become a Transatlantic Clean Network. It had grown to 40 countries and turned into an effective security blanket against the CCP's retaliation.

After additional visits to Egypt, Bahrain, and the United Arab Emirates, the Clean Network grew to 49 Clean Countries, representing two-thirds of the world's GDP, more than 100 Clean Telcos, and dozens of industry-leading Clean Companies such as Oracle, Fujitsu, Cisco, Siemens, VMware, NEC, and HP. Its membership consisted of 26 out of 27 EU nations, 27 out of 30 NATO members, 11 out of 12 Three Seas countries and 31 out of 37 OECD members. "The success of the Clean Network has taken all the momentum away from Huawei," Krach told Bloomberg. "When we looked at this six months ago it looked like Huawei was unstoppable." The tide had officially turned.

## Latin American Case Study – Putting It All Together in Brazil

To keep the momentum moving forward, Krach's team turned their outreach to Latin America. Brazil was pivotal and would be their first [stop](#). Similar to Germany in Europe, Brazil had the biggest influence on the rest of the South American nations' decision to join the Clean Network, and Huawei had staked out a strong position by making significant investments in the country. The challenge was further complicated by the discovery that Huawei had somehow [convinced](#) the Brazilian Telcos not to participate in a previously-scheduled meeting with the Clean Team. (I can do an Exhibit on this and you can cut in down to a couple of paragraphs)

### *Phase I: Sequencing the Strategy in Washington*

Brazil was so crucial, and Huawei was so entrenched that the team had already developed a Brazilian five-phased sequenced strategy early on with Ambassador Todd Chapman who was one of Krach's senior advisors. The execution of the first phase began in the spring before Chapman headed down to Brasilia for his ambassadorial duties with a relationship building dinner, they hosted at Krach's home for Brazil's Foreign Minister Ernesto Araújo and several other Brazilian Ministers. That was followed up in the summer by Krach strategically [penning](#) a well-publicized op-ed in O Globo, Brazil's leading newspaper, that called out Huawei's role in the human rights abuses in Xingjian and evisceration of Hong Kong's freedoms, and pointed out the early momentum of the Clean Network, noting that two of Brazil's operators, Telefonica already committed to be clean and Telco Italia was clean in Italy.

### *Phase II: Customizing the Value Proposition in São Paulo*

The second phase of the strategy consisted of a set of three listening sessions in Sao Paulo. The objective was to gather ammunition for customizing the Brazil value proposition in advance of scheduled meetings with government decision-makers in Brasilia. The first session was with 15 of Brazil's top entrepreneurs and investors from the rapidly growing tech sector, which was enormously important to officials in Brasilia. Krach knew many of these titans from his Silicon Valley days when DocuSign acquired a Brazilian company. One of the business leaders in attendance, President Augusto Lins of the \$20B Stone Pagamentos, said that having the Clean Network is particularly important to fight cybercrime, data breaches, and money laundering, as well as to attract investments to new value-added products and services. Lins reiterated NATO Deputy Secretary General Geoana's key point that a network is only as strong as its weakest link.

The team also picked up valuable endorsements of the Clean Network's value proposition and the importance of trusted 5G infrastructure in the second session with a dozen CEOs who ran the Latin American operations for European, Japanese, and American Fortune 500 companies. The team knew these companies would carry a lot of weight with the Brazilian government's decision to join the Clean Network and used the following three approved [quotes](#) as a sales tool:

- **Siemens Brazil:** "A Clean 5G Network is not just about cell phones; it is about critical manufacturing processes, oil and gas platforms, and power networks, sanitation systems and internet of things. The Clean Network will help ensure that Brazil's critical infrastructure – power, transportation, and sanitation systems – is safe and reliable."

- **NEC Latin America:** “The Clean Network with open radio access network architecture will support a diversity of trusted vendors. This is good for Brazil’s economic growth, good for operators, and good for consumers. Open architecture and clean 5G will help Brazil become a global producer of network components.”
- **3M:** “The Clean Network will help Brazil become a trusted export platform, expanding Brazil’s market of 200 million consumers into potentially 500 million consumers.”

For the final session, the Clean Team met with Nokia and Ericsson’s local leadership teams to gain insights about the Brazilian market and to share their findings, approach, and the set of quotes. The team also encouraged these 5G providers to further the strategy of creating end customer pull from the Fortune 500 companies and those from the high-tech sector in order to influence the government regulators’ decisions in their favor and enhance their own value proposition. These three sets of private sector meetings would not only prove to be invaluable in credibly engaging with officials in Brasilia by providing real local substantiation of the Clean Network’s value proposition, but ended up being highly leverageable and relevant to the other countries on the trip.

### *Phase III: The Integrated Plan Pays Off in Brasília*

The third phase of the strategy was also a carefully crafted three-part plan that was executed in Brasília with the government officials.

The first part was to ensure the Clean Network was viewed as an alliance of security-minded partners, not solely a U.S. initiative. The Clean Network’s recent success in Europe made this task easier., but the team took it a step farther by drawing on the fact that the EU was Brazil’s second-biggest trading partner, as well as Brazil’s desire to join the OECD and become a NATO partner, like Colombia. The solidarity of the Clean Network alliance was further bolstered by Krach bringing in Japan — one of the network’s most powerful and staunch supporters — to hold the first-ever Japan-U.S.-Brazil trilateral dialogue (JUSBE). The three nations issued a [Joint Declaration](#) affirming their commitment to secure 5G networks.

The second part was designed to take advantage of the growing momentum of closer U.S.-Brazil ties by making the Clean Network an integral component of the broader expanding relationship. Krach held a formal [U.S.-Brazil Environmental Dialogue](#), issuing an Environmental [Framework Joint Declaration](#) and a [fact sheet](#). He also discussed the U.S.-Brazil [space partnership](#) that resulted in joint statement of intent for Brazil to become the first country in Latin America to sign the [Artemis Accords](#). Additionally, a Clean Team member and Assistant Secretary of State for Energy Resources, Frank Fannon, held renewable energy discussions, which concluded with an announcement of the [establishment](#) of the U.S.-Brazil Critical Minerals Working Group.

The final part of the Brasilia plan was focused on the Clean Network's value proposition for the benefit of the Brazilian economy and its companies. The Sao Paulo sessions with the Fortune 500 regional CEOs, entrepreneurs, and investors provided ample ammunition. However, the government officials coveted private-sector investment from Silicon Valley. The team deployed the quotes from the high-tech Clean Company CEOs and their insistence on trusted 5G networks before substantially expanding their operations in foreign countries. The final exclamation point was the offer of government financing for clean projects via the DFC, ExIm Bank, USAID, and Latin America's International Development Bank.

The first three phases of their strategy paid off when Brazil's Foreign Minister Ernesto Araújo concurred. On behalf of the government of Brazil, he announced his support for the principles of the Clean Network, making Brazil the first South American country – and 50th in the world – to join the alliance of democracies with Secretary Pompeo echoing it state-side about an hour later at a press conference.

#### *Phase IV: Marketing the Momentum to the World*

The fourth phase was amplifying the Brazil announcement so it could be heard loudly and clearly during the next leg of the team's journey through Latin America. U.S. Ambassador to Brazil Todd Chapman ensured the Clean Network message was [well-published](#) and picked up by international outlets, such as [Reuters](#).

Ambassador Chapman organized a barrage of marketing activities to support the positive developments. They included formal [statements](#) by the U.S. and Brazil at a joint press briefing, which highlighted the Clean Network's value proposition; Krach's own press conference, which underscored Brazil's leadership in becoming the 50<sup>th</sup> member of the Clean Network and the first in Latin America; and a [telecast](#) of Krach's speech and fireside chat hosted by the Getúlio Vargas Foundation, which accentuated the common set of values shared by the U.S. and the other Clean Network members with Brazil. On [CNN](#) International, Krach emphasized the trust among the Clean Network's members, which serves as a force multiplier for each of them to accomplish much more together than they can do alone.

#### *Phase V: Leveraging Brazil in Latin America*

Following a stop in Chile, where Krach advanced 5G security with Undersecretary of Foreign Affairs Carolina Valdivia and Vice Minister of Telecommunications Pamela Gidi, Krach travelled to Ecuador where he met with President Lenín Moreno and many members of the national assembly. Ecuador's Telecommunications Minister Andrés Michelena issued a statement during a joint press conference with Krach declaring Ecuador's commitment to pursue open and secure global internet based on democratic values and respect for human rights. Joining Brazil, Ecuador endorsed the Clean Network principles, becoming the network's 51st member.

In Panama, the Clean Team met with a broad group of business leaders and senior government officials, including Foreign Minister Alejandro Ferrer. There was broad agreement on the importance of 5G security and the key role of the Clean Network in driving U.S. private sector investment. This would be critical in realizing Panama's objective of becoming the regional innovation hub.

The trip wrapped up with a big win in the Dominican Republic. After a productive discussion with the country's four telco operators, and an in-depth meeting with President Luis Abinader and Foreign Minister Roberto Álvarez, Krach and Alvarez issued a joint statement welcoming the Dominican Republic as the first Caribbean nation in the Clean Network. The country has a wonderful opportunity to become "la Perla del Caribe," the pearl of the Caribbean, in the high-tech innovation sector.

## **Running Through the Tape – The Clean Network Relay Race**

With just a few weeks remaining in the Administration, Under Secretary Krach resolved to recruit as many additional nations as possible into the Clean Network pipeline for the incoming team and to keep the momentum flowing with a few wins in the last month for the Alliance of Democracies. His relentless virtual diplomacy paid off with several notable accomplishments.

### *The Winning Continues – Ukraine, Georgia, Palau, Nauru*

The Transatlantic Clean Network grew in December 2020 with the addition of Ukraine. Prime Minister Denys Shmyhal announced the country's commitment after his meeting with Krach, stating, "Ukraine supports the principles of the Clean Network and will remain a reliable partner for investments of technological companies from around the world." Krach thanked Shmyhal, emphasizing the key benefit of a growing economy joining the ranks of not only its neighbors in NATO, EU, and the Three Seas Initiative, but also alongside 31 countries in the Organization of Economic Co-operation and Development (OECD).

Ukraine was soon followed by Georgia. On Orthodox New Year's Day in January 2021, Krach and Natia Turnava, Georgia's Minister of Economy and Sustainable Development, signed the 5G Security Memorandum of Understanding ushering the Western Asian nation's entry into the Clean Network. In his [remarks](#) during the signing ceremony, Krach listed five immediate benefits for Georgia: "First, it will strengthen the case that Georgia should be welcomed into NATO. Second, joining the Clean Network demonstrates solidarity with the European Union, and can speed up integration into the European fold. Third, Georgia's Clean Network membership could bring a closer relationship with the Three Seas Countries. Fourth, joining the Clean Network will pave the way to greater private sector investment in Georgia, especially the innovation sector. Fifth, and finally, the good news is the United States has a number of financing tools to help Georgia," alluding to the expanded financial tools adopted by both, the U.S. International Development Finance Corporation (DFC) and the Export-Import Bank.

Pacific island nations of Nauru and Palau rounded out the year-long Clean Network effort. Krach issued joint statements with President Lionel Aingimea of Nauru and President Tommy Remengesau Jr. of Palau. They highlighted the critical importance of building a partnership based on shared principles of transparency, reciprocity, and respect for sovereignty and the rule of law – especially in the vital area of cyber and telecommunications security. Palau's Remengesau said, "The data traveling across our communication infrastructure must be carefully protected." Nauru's Aingimea added, "The Clean Network provides a trusted foundation for countries and companies to ensure the security of their most sensitive information." Both nations were now members of the Clean Network.

On May 15, 2020, when Trifecta was announced it appeared that the Chinese Communist Party's march to global telecommunications domination was unstoppable. On January 20, 2021, when Keith Krach walked out of the Harry S. Truman building in Washington's Foggy Bottom for the last time, the Clean Network boasted an impressive membership of 60 Clean Countries, more than 200 Clean Telcos, and dozens of industry leading Clean Companies.

With the 5G beachhead firmly in place, the Clean Network was poised to expand into the realm of Clean Investments, Clean Supply Chains, Clean Labor Practices, Clean Drones, Clean Currency, and Clean Things (IoT), among others. But first, it was important to ensure a seamless transition to the Biden Administration.

### *Passing the Baton*

Krach had extensive experience transitioning global operations from one team to another. During his three decades in Silicon Valley, Krach transitioned four companies in high growth modes and learned, sometimes the hard way, that the race for market leadership was won or lost on the baton pass. The Clean Network's current momentum was not only a strength, but also a weakness. If there was a pause in the action, China Inc. would be ready to pounce. Krach could already see the CCP lining up its chess moves. He had seen that movie many times in the private sector, where a competitor would get beaten and came back to life stronger, scrappier, and hungrier. The Clean Network was not your typical bureaucratic initiative. It was economic warcraft at Mach 3. The rules of the game were not written in a book. Outside of the hi-tech business, the closest analogy would be a military battlefield.

In his debrief to the incoming team, Krach focused on maintaining momentum in three primary areas: defense, offense, and expansion.

First, it was important to defensively protect the base and not lose any ground by preventing the current Clean Countries or Clean Telcos from walking back their commitments, especially through what Krach called "knock outs," where one guy wins the deal, but the competitor takes it back. Knockouts are the most valuable marketing collateral in economic warcraft. They were the fuel that turbocharged the Clean Network's marketing machine. Remember the marketing power gained by the UK's anti-Huawei decision? Imagine the marketing power that would be lost if Huawei got back in. The incoming team needed to be both, vigilant of the vulnerabilities and aware of potential countermeasures.

Second, maintaining momentum requires staying on offense by adding more countries and telcos. The Clean Network pipeline had about 40 potential Clean Countries. Of the 40, Krach was actively working 25 of them based on two large transactions that were strategic island nations with underwater Clean Cable. The other 15 countries could be closed over the next 90 days with the usual significant amount of effort. Five big regional Clean Telcos were also in the works that could cause a tipping point in numerous countries. He was also working to get an OECD endorsement which would provide further momentum. The easiest way to ensure continued momentum was a steady drumbeat of Clean Company announcements which could easily be achieved by someone with an enterprise sales background and some clever marketing.

Third, expansion beyond countries, telcos, high-tech companies, and 5G would turbocharge the Clean Network's momentum. One dimension was people. Krach knew the Clean Network was now ripe for launching a large advisory board comprised of leaders and experts from the government, business, academia, industry associations, and social sectors. Krach built the 300-person DocuSign advisory board and his legendary Ariba advisory council to hyperscale growth and achieve market power. Krach was a big believer in the concept that people support what they help create. Krach's philosophy was to keep scaling bigger and constantly segmenting the network by industry, geography, and application into manageable-sized groups.

The Clean Network was evolving beyond 5G into a platform. The ultimate objective was to assemble the Clean Network into a collection of networks consisting of multiple forms and lines of economic collaboration, and organized by sectors, regions, and industries. Forms of collaboration include commerce, investment, supply chains, money flows, research, safeguarding assets, research, logistics, procurement, trade, policy, and standards. Lines of collaboration include sectors, such as energy, healthcare, digital, agriculture, manufacturing, transportation, minerals, infrastructure, finance, space, and security. (Exhibit 14)

### **Measuring Results – The Clean Dream Team Leaves Its Mark**

According to Bloomberg, Silicon Valley veteran Keith Krach harnessed the power of Metcalfe's Law to build a network of nations to counter China – a notable change in tone after years in which the Trump administration pursued a go-it-alone, "America First" strategy. And says the Clean Network's effort to create a united economic front is to China what George Kennan's "long telegram" of 1946 was to the Soviet Union. Kennan is considered by the State Department as the father of modern foreign policy who formulated the Cold War strategy of containment. It's no wonder the Wall Street Journal wrote that the Clean Network is an undisputed success and will be perhaps the most enduring foreign-policy legacy of the last four years.

In contrast to some of the confrontational actions of the outgoing administration, the Clean Network bears the hallmarks of "good old fashioned" diplomacy. The Clean Network's momentum has succeeded in strengthening relationships with long-time allies and rallying U.S. partners to take a stand against authoritarianism – fostering true collaboration based on shared democratic values. Further, the Clean Network has demonstrated a rare genius for building effective public/private sector partnerships that leverage the innovation and resources of the world's business leaders and entrepreneurs. Krach and his clean team, through dedicated, creative, non-partisan outreach, have laid the foundation and future plans for a Network that needs to be expanded.

His Global Economic Security Strategy provides a winning bipartisan formula in addressing CCP's long-term threat to data privacy, security, human rights, investment capital and democracy by leveraging the three big areas of U.S. competitive advantage: the strength of allies and friends, the innovation of the private sector, and the moral high ground of democratic principles.

The Clean Network serves as the crucial first step in constructing a trusted network of networks composed of like-minded countries, companies and civil society that operate by a set of democratic principles for all areas of collaboration and establishes an equitable and unifying alternative to the One Belt One Road.

Since July, Krach's team has actually executed on that strategy by getting 60 countries, representing 66% of the world's GDP, on the Clean Network and 180 Telcos on top of that. Krach has turned the tide on Huawei and the CCP's 5G master plan. And in the process, the Clean Network has also proven that China Inc. is beatable and most meaningfully, exposed its biggest weakness — lack of trust. "While far from perfect, at its heart the Clean Network program is some of the first real coordinated action we've seen from the US government to secure supply chains, ensure the use of trusted vendors, and build consensus around what safe and trustworthy technology should look like," wrote Mary Brooks senior research associate for cybersecurity in January.

### *The Bully Retaliates Right on Cue – A Shot Across the Bow*

On Jan. 19, 2021, his last day of government service, Krach appeared on Fox Business Network's Claman Countdown. The show's host, Liz Claman, posed a prescient question: "China has said they're going to retaliate. You could possibly be on that list eventually, Keith. Do you expect to be sanctioned?" Krach responded, "I already am, Liz. I guess that's a badge I wear with honor. I'm going to act and not react to it. I don't think we should bend the knee to the China bully. All I know is when you confront a bully, he backs down and they really, really back down if you have your friends by your side. And that's why we formed the Clean Network Alliance of Democracies. And it's been such a success." (Exhibit 15)

As it turned out, four minutes after President Biden took his oath of office, the Chinese government announced new sanctions on a number of former U.S. officials, including Krach. In his Washington Post assessment of where things stood with China in the early days of the Biden Administration, Josh Rogin observed, "China's new sanctions on Americans are actually helpful, since they identify which of Trump's policies have been effective. For example, Beijing sanctioned former undersecretary of state Keith Krach, who led an effort to keep 'untrusted vendors' out of international 5G infrastructure called the Clean Network."

The incoming Biden team seemed to be aligned with Krach's multilateral approach. "These are two things that Biden and his people are talking about — the first is the outreach to allies and partners and like-minded states — democracies," said former Obama-Biden Asia diplomat Daniel Russel in a Wall Street Journal article. "Secondly is ensuring our policy and strategy are rooted in shared values, including human rights, democratic principles and market economies."

President Biden himself wrote in Foreign Affairs that the best way to confront China is by forming a "united front" with allies. "When we join together with fellow democracies, our strength more than doubles. China can't afford to ignore more than half the global economy." Biden's Secretary of State, Antony Blinken, added, "When we're working with allies and partners, it's 50 or 60% of GDP. That's a lot more weight and a lot harder for China to ignore. China sees alliances as a core source of strength for the United States, something they don't share and enjoy."

The Clean Network Alliance of Democracies succeeded in de-positioning China-backed Huawei in the 5G space and built a sound foundation to take on the chief threat to democracies worldwide. Krach and his Clean Team handed the Biden Administration a global brand featuring an impressive roster of nation-state and corporate members well-positioned to challenge the CCP's hegemonic ambitions across every critical economic realm.

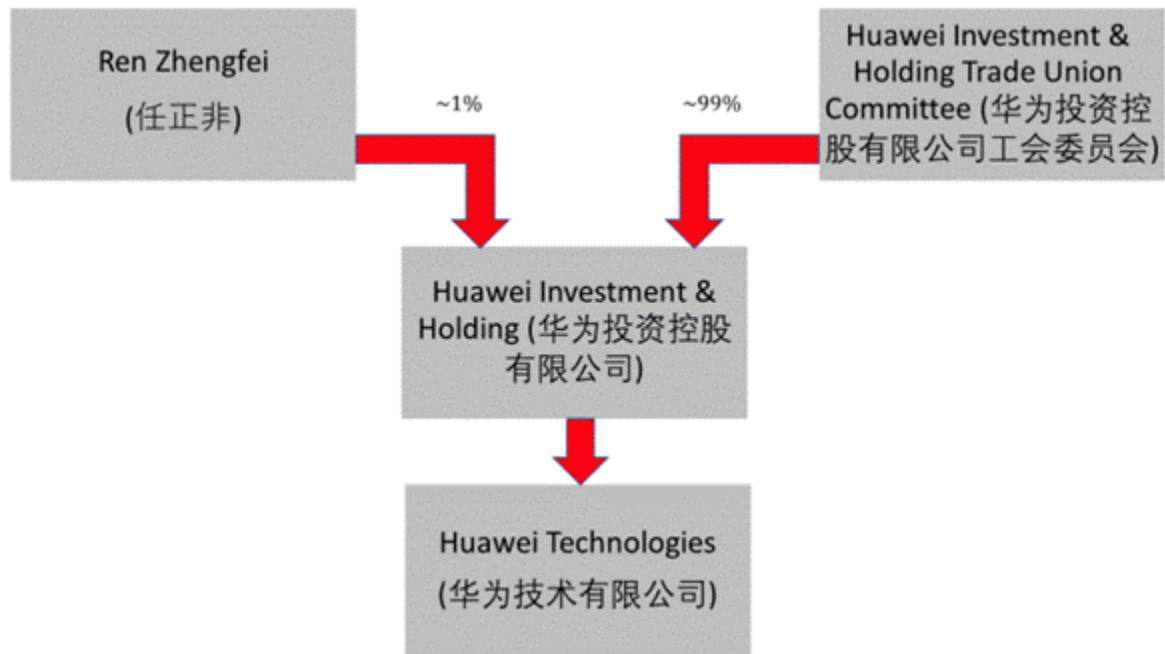
The team agreed reflecting back that the Clean Network had achieved their original three objectives of defeat CCP's masterplan and create a level playing field for US entrants; deliver an executable model containing the 10 essential elements; and provide a head start with the foundation for a technology security platform already underway in other areas. But they knew there was much work to be done and no time to waste. One member of the Clean team pointed out that Winston Churchill's quote about "This

is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning," didn't even apply because the threats to democracy and free enterprise will never end.

Notably, pressures on the U.S. government to respond systematically to digital threats remain. While some continue to argue that “techno-nationalism” is antithetical to American economic values, complications around cybersecurity, surveillance, and intellectual property are poised to only increase as technological advancements progress. “Ben Bernanke taught me open economy macro. I’m a pro-competition, Silicon Valley type. We’re being backed into a more obtrusive set of government policies,” Senior Advisor James Shinn, pointed out.<sup>88</sup> The Clean Network model had proven itself in a come from behind victory in 5G, but the Biden Administration still had some tough decisions to make about the future of the U.S.-China technology competition.

## Exhibits

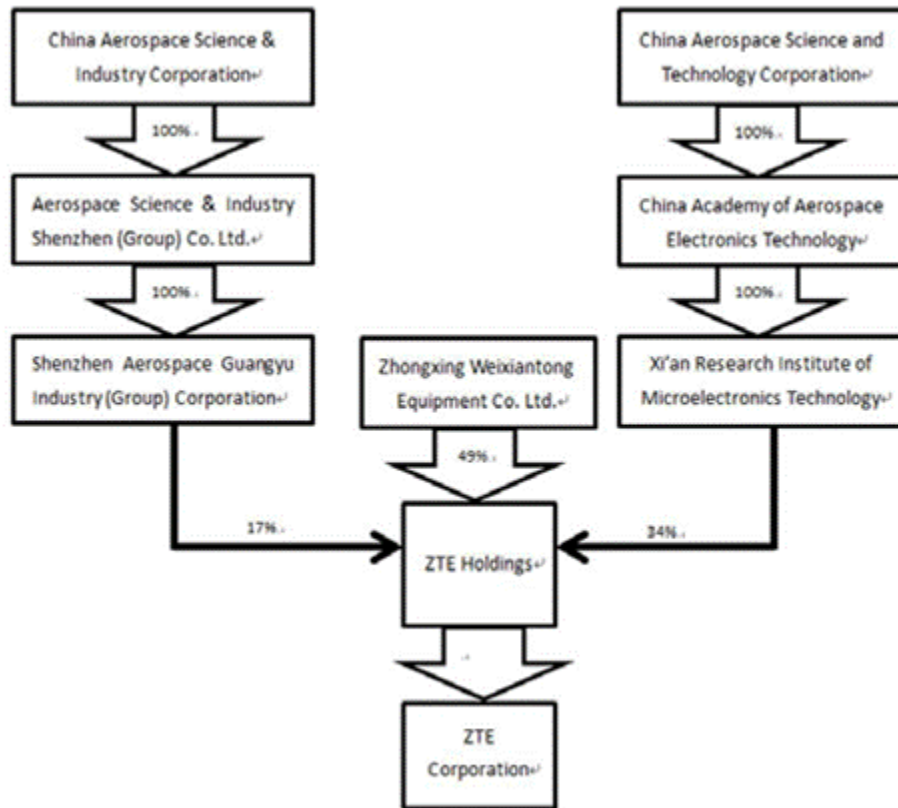
**Exhibit 1** Huawei's Corporate Structure



Source: Balding, Christopher and Donald Clarke. "Who Owns Huawei?" April 17, 2019. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3372669](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3372669), accessed March 13, 2021.

Note: Huawei Technologies is a single-shareholder limited liability company (有限责任公司), one of the two basic corporate forms under China's company law, and is 100% owned by Huawei Holding. Huawei Holding, in turn, has two shareholders: Ren Zhengfei and the Huawei Investment & Holdings Trade Union Committee. How the Trade Union Committee makes decisions is unclear, according to legal scholars.

**Exhibit 2** ZTE's Corporate Structure



Source: Li, Ran and Kee-Cheok Cheong, "How Much 'State' Is in China's State Enterprises? A Case Study of ZTE Corporation in an Era of Reform," *International Journal of China Studies* 7 (3), December 2016: 245-270.  
[https://www.researchgate.net/publication/316083725\\_How\\_Much\\_State\\_is\\_in\\_China's\\_State\\_Enterprises\\_A\\_Case\\_Study\\_of\\_ZTE\\_Corporation\\_in\\_an\\_Era\\_of\\_Reform](https://www.researchgate.net/publication/316083725_How_Much_State_is_in_China's_State_Enterprises_A_Case_Study_of_ZTE_Corporation_in_an_Era_of_Reform), accessed March 13, 2021.

Note: This was the ownership structure in 2016. China Aerospace Science & Industry Corporation was formerly part of the Chinese Ministry of Defense and, after 2003, was owned by the State-owned Assets Supervision and Administration Commission (SASAC).

**Exhibit 3a** Clean Network Playbook



Source: Public materials from Keith Krach presented early 2020 at the beginning of the Clean Network Initiative, <https://www.slideshare.net/KeithKrach/clean-network-overview>, accessed January 27, 2021. Previously referenced at Michael Mink. "How the Clean Network Alliance of Democracies Turned the Tide on Huawei in 5G." Life & News. December 2, 2020. <https://www.lifeandnews.com/articles/how-the-clean-network-alliance-of-democracies-turned-the-tide-on-huawei-in-5g/>. Accessed April 6, 2021.

**Exhibit 3b** Description of the Clean Network

## The Clean Network of Trusted Partnership

The **Clean Network (CN)** is comprised of like-minded countries, companies, and civil society that operates by a set of trust principles for all areas of collaboration. It is an alliance of democracies built on the idea that strong partnerships advance shared prosperity. By harnessing the innovation, resources and synergies of its members, the CN creates a unifying and equitable global framework for trusted geo-economic partnerships.

It enables a set of shared principles that form the basis of trust. It does so in pursuit of three long term goals: Ensuring sustained economic growth and prosperity for all partners; Expanding fair, transparent, and reciprocal collaboration and trust principles to all aspects of economic partnering; and Creating a level playing field for companies, economies, and countries based on integrity, reciprocity, accountability, transparency, and fairness.



### Trust Principles

#### A Series of Trust Standards based on:

Respect for:

- Rule of Law
- Property
- Sovereignty of Nations
- Labor
- The Planet
- Human Rights
- Integrity.
- Accountability
- Transparency
- Reciprocity
- Liberty

The CN partnerships are grounded in democratic values and shared Trust Principles that form the basis of trust: integrity, accountability, transparency, reciprocity and respect for the rule of law, property, and sovereignty. These Trust Principles which form the basis for sector and industry specific Trust Standards will enable fast, frictionless, and secure collaboration in areas critical to our shared future.

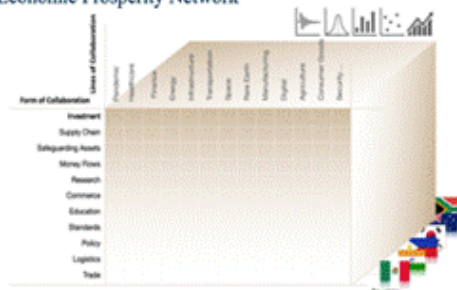
CN partners need to demonstrate and operate under the same set of shared trust principles, in order to ensure a high-integrity, level playing field for reliable transactions between trusted members. The commitment to these trust principles will offer private and public members of the network greater confidence to invest in long term prosperity of each partner and the network itself.

### Lines of Collaboration – A Network of Networks

The **Clean Network** is a collection of networks that consists of multiple forms and lines of economic collaboration organized by sectors, regions and industries. Forms of collaboration include commerce, investment, supply, chains, money flows, research, safeguarding assets, research, logistics, procurement, trade, policy, and standards. The lines of collaboration include sectors such as energy, healthcare, digital, agriculture, manufacturing, transportation, minerals, infrastructure, finance, space and security.

Trust standards are tailored to fit the various forms and sectors of collaboration and built upon existing global norms such as those established by the Blue Dot Network (Infrastructure), Prague Proposals (5G), and the Energy Resource Governance Initiative (critical minerals) and the new Healthcare Prosperity Network. The CN also creates an umbrella network for existing regional initiatives such as the Indo-Pacific Strategy, Transatlantic Partnership, 3 Seas Initiative, EU-Asia Connectivity Initiative and American CRECE.

#### Economic Prosperity Network



### Strength Through Shared Principles and Solidarity

Some but not all the networks that comprise the CN have or are evolving structures by which countries, companies and civil society organizations may join. Opportunities will surface through establishment of traditional diplomatic partnerships (bi-laterals, tri-laterals and multi-laterals), agreements such as those related to economic development, direct foreign investment, trade, the environment or humanitarian endeavors. Creating and executing viable opportunities for investment and stable economic growth builds the network and validates contributors as members.

The U.S. is committed to fostering the Clean Network comprised of like-minded countries, economies, companies, investors, institutions, and civil society organizations that adhere to the set of Trust Principles. The goal is to include all countries and organizations as participants.

Countries that currently do not abide by the Trust Principles will be excluded from CN membership until they reform problematic practices and laws. No nation is excluded forever, and the CN does not require a country to choose between partnership with the U.S. and any other nation.

By forming this alliance of democracies, members have strength in numbers and solidarity to stand up to any nation that seeks to undermine our prosperity and basic freedoms. The power of the network is a product of the members' collaboration and mutually beneficial actions.

Source: Public materials from Keith Krach, presented early 2020 at the beginning of the Clean Network Initiative, <https://www.slideshare.net/KeithKrach/clean-network-1-page-overview-public-version>, accessed March 26, 2021.

**Exhibit 4** Essay by Keith Krach, Undersecretary of State, in *The Telegraph*

# The Telegraph

## The Free World Must Unite Against Huawei

*China's 5G Strategy Is A Real and Urgent Threat to Countries That Value Liberty and Justice*

KEITH KRACH 25 June 2020

The UK's decision to reconsider the use of Huawei in its 5G networks resulted in a predictable backlash from China, with Beijing threatening to punish HSBC and pull investment from major British infrastructure projects. It appears the Chinese Communist Party (CCP) sees much more than mere financial benefit in having Huawei embedded in foreign 5G networks. It's no wonder that so many countries are re-evaluating their partnerships with Chinese firms.

Foreign Secretary Dominic Raab recently remarked that it wasn't just the devastation of Covid-19 that took the shine off China, but the fact that the CCP didn't live up to the agreements that it made. The crackdown on Hong Kong is a case in point. As Mr. Raab said: "It comes down to an issue of trust. Otherwise, why would anyone trust them with other deals we might make?"

Governments and businesses around the world are asking a similar question regarding 5G systems that carry their most private information and intellectual property: who do we trust? The primary choices are two world-class European vendors, Ericsson and Nokia, and two Chinese companies, Huawei and ZTE. Both Huawei and ZTE are required to abide by China's National Intelligence Law, by turning over any and all data to the Chinese government upon request.

US telecom providers have chosen wisely. They are successfully deploying Ericsson and Nokia throughout their 5G systems and are working with other trusted firms for further expansion. They understand that a secure "edge" is just as important as a secure "core", because it's all part of an integrated system. And they know that talk of "secret back doors" is irrelevant because software updates provide a front door every day through which 5G vendors have the capability to pull data and interfere with networks.

Initiatives, such as those by the new Open RAN Policy Coalition, show great promise in accelerating innovative, secure, and trusted alternatives to Huawei. The US looks forward to collaborating with our partners in Europe to further advance these technologies. The US is accelerating its efforts to protect 5G security, as exemplified by three recent announcements.

First, we secured a \$12 billion investment from the Taiwan Semiconductor Manufacturing Company to build a leading-edge semiconductor foundry in America, and bring eight of their suppliers with them, creating thousands of jobs.

Second, we unveiled a new rule requiring chip companies to obtain a license from the United States to sell certain 5G chips to Huawei that can only be produced with sophisticated US technology. It is imperative that Europe adopt similarly stringent export controls to keep critical tech out of the hands of the CCP.

Third, we unveiled the 5G Clean Path, requiring all data entering US diplomatic facilities to transit only through trusted equipment, thus reducing the risk of Huawei or the CCP siphoning away our sensitive information. The US encourages all of our partners – both companies and countries – to adopt similar 5G Clean Path models. Many already are. Across Europe, 5G "clean countries" are emerging that allow only trusted vendors in their 5G networks. The largest telecom companies across the globe, including Orange in France, Reliance in India and O2 in the UK, are also becoming "clean telcos".

The coercion experienced by the UK is only one of the authoritarian tactics that China employs in its battle to dominate 5G. Concealment, coercion, and co-option is a common three-pronged strategy of the CCP, including in its Covid-19 response. The CCP brazenly concealed the initial outbreak, co-opted the crisis to turn a profit, and coerced other nations through "face-mask diplomacy" to do its bidding. Those three strategies are also on display in Hong Kong.

To prevent CCP authoritarianism from winning the day on 5G, we must maintain solidarity. Nato Secretary General Jens Stoltenberg recently remarked on the China challenge, "We have to make sure that Europe and North America stand together." As Secretary of State Mike Pompeo recently said, "The United States stands with our allies and partners against the CCP's bullying and we stand ready to assist our UK friends with any needs they have." That goes for all freedom-loving countries, because the CCP's 5G strategy is a real and urgent threat to all who value liberty and justice around the world.

**Keith Krach is the US Under Secretary of State for Economic Growth, Energy, and the Environment**



Public surveillance cameras are mounted to a pole in front of Huawei's new flagship store in Shanghai

Source: Krach, Keith. "The Free World Must Unite Against Huawei." *Telegraph*, June 25, 2020.

<https://www.telegraph.co.uk/news/2020/06/25/free-world-must-unite-against-huawei/>, accessed April 2, 2021.

### OBJECTIVE 1 METRICS: REVERSE HUAWEI'S MOMENTUM & DEFEAT CCP 5G MASTERPLAN

Measurements	Clean	Competition	Results	Network Coalitions	Total	Clean
OKM Global GDP <sup>1</sup>	76%	Nokia 5G contracts	196 ↑	EU Members	27	26
Clean Countries Global GDP <sup>2</sup>	67%	Ericsson 5G contracts	131 ↑	NATO Allies	30	27
Clean Path Global GDP <sup>3</sup>	74%	Huawei 5G contracts <sup>4</sup>	?? ↓	Three Seas Nations	12	11
Clean Countries	60	Nokia market cap <sup>5</sup>	89% ↑	Quad Members	4	4
Clean Telcos	200+	Ericsson market cap <sup>5</sup>	65% ↑	Five Eyes Members	5	5
Clean Companies	+++	Huawei market cap <sup>6</sup>	?? ↓	G7 Members	7	7

### OBJECTIVE 2: DELIVER THE FIRST VERIFIED COMPETITIVE MODEL

10 Key Elements	Results Verification	+/-
<b>1. EXECUTABILITY</b>	Perfected on countermeasures; bloodied on competitive battlefield	+
<b>2. MEASURABILITY</b>	Achieved tangible results; from metrics within timeframe	+
<b>3. PROVABILITY</b>	Defeated Huawei; demonstrated China Inc. is beatable	+
<b>4. AFFORDABILITY</b>	No new funds; no new manpower	+
<b>5. PRACTICALITY</b>	Not dependent on Congress, Exec Orders or company acquisitions.	+
<b>6. SCALABILITY</b>	Success on a global scale; easily configured to suit local needs	+
<b>7. REPEATABILITY</b>	Strategies, sequencing systematized; trust positioning works for all sectors	+
<b>8. VIRALITY</b>	Cumulative effect proven; tipping point reached in Europe	+
<b>9. MARKETABILITY</b>	Viable brand established; seized the moral high ground.	+
<b>10. APPLICABILITY</b>	Expanded to 5 tech areas + semi; infrastructure, minerals, labor, funds	+

### OBJECTIVE 3: PROVIDE BEACHHEAD & FOUNDATION FOR TECH-SEC PLATFORM

Clean Lines	Program Status	Beachhead?	Model Work?	TD-10	Trust Risk	Level Field	Engagement
Clean Path (5G)	Advanced	Yes	working	Yes	Yes	No	60 Countries
Clean Carrier	Announced	Yes	Yes	Yes	Yes	No	Limited
Clean Store	Announced	Yes	Yes	Yes	Yes	No	No Activity
Clean App	Underway	Yes	Yes	Yes	Yes	No	Stalled
Clean Cable	Underway	Yes	working	Yes	Yes	No	good Success
Clean Cloud	Announced	Yes	Yes	Yes	Yes	No	T, A, B
Clean Things (IOT)	Pre-announced	Yes	Yes	Yes	Yes	No	Limited
Clean Drones	Pre-announced	Yes	Yes	Yes	Yes	No	Defensive
Clean Data	Pre-announced	Yes	Yes	Yes	Yes	No	Limited
Clean Currency	Pre-announced	Yes	?	Yes	Yes	No	Studies Only
Clean Quantum	---	No	?	Yes	Yes	?	Limited
Clean AI	Some Policy	Yes	Yes	Yes	Yes	No	Limited
Clean Cars	---	?	?	Yes	Yes	No	No Activity
Clean Semi	Onshoring	No	Limited	Yes	Yes	No	success
Clean Energy	Policy	Yes	Yes	Yes	Yes	No	Priority
Clean Minerals	ERGI	Yes	working	Yes	Yes	No	20 Countries
Clean Infrastructure	Blue Dot	Yes	Stalled	No	Yes	No	16 Countries

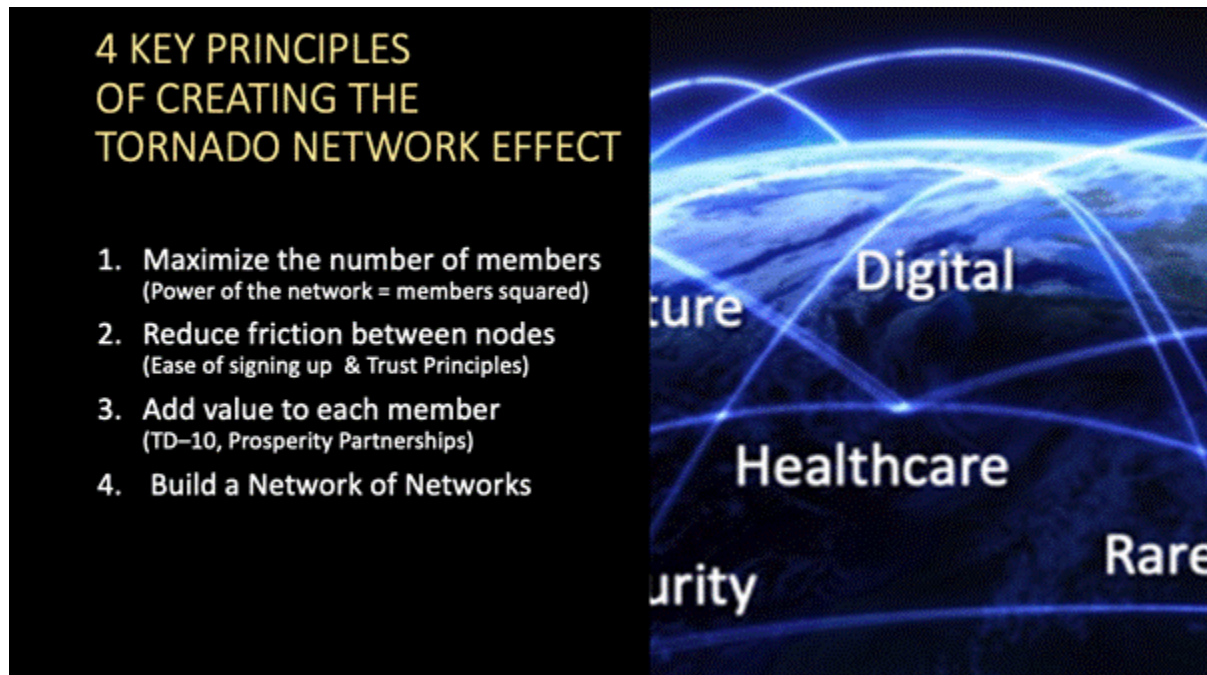
Source: Chart prepared for use in this case by Keith Krach, Former Under Secretary of State. March 26, 2021.

#### Footnotes

1. One Key Metric (OKM\*) approximates the power of the network as outlined below by calculating the sum of the Clean Countries GDP + in a non-clean country, for a clean telco, take their market share and multiple by the country's GDP. (most telcos use more than 1 provider) in a non-clean country, for a non-clean telco, take their market share multiplied by their % using clean suppliers and then multiple by the country's GDP. So basically, come up with a % Clean for all non-Clean countries and multiply times their GDP to add the GDP of the Clean Countries.
2. % of Global GDP for Clean Countries.
3. % of Global GDP for the sum of Clean Countries GDP + GDP of countries that have at least 1 clean carrier for 5g called "Clean Path Countries".

4. Huawei has not given a number since February 22, 2020's number of 91. They have not commented when asked by the press that has gone down to 12 outside of China.
5. Measured from when Clean Team got authorities in mid-March until they left office January 20.
6. Huawei private company but issue. However, smartphone revenue down 43% in Q4 2020

**Exhibit 6** Four Principles of the Network Effect



Source: Source: Public materials from Keith Krach presented early 2020 at the beginning of the Clean Network Initiative, <https://www.slideshare.net/KeithKrach/clean-network-overview>, accessed January 27, 2021. Previously referenced at Michael Mink. "How the Clean Network Alliance of Democracies Turned the Tide on Huawei in 5G." Life & News. December 2, 2020. <https://www.lifeandnews.com/articles/how-the-clean-network-alliance-of-democracies-turned-the-tide-on-huawei-in-5g/>. Accessed April 6, 2021.

## Exhibit 7a Quotes from Political and Corporate Leaders Used by the Clean Network



Japan's Minister for Foreign Affairs Toshimitsu Motegi stated that Japan would like to deepen cooperation with the U.S. in cyber security and supports the basic concept of the 5G Clean Path Initiative on securing safe communication between diplomatic facilities.



The Prime Minister of North Macedonia Zoran Zaev stated, "The signing of the U.S.-North Macedonia 5G memorandum is vital for the prosperity, national security, and economic development of North Macedonia. North Macedonia and the United States underscore the importance of the Clean Network and utilizing trusted hardware and software suppliers to build 5G networks to protect against unauthorized access by third parties."



The Prime Minister of Poland Mateusz Morawiecki stated, "Poland believes the construction of our 5G Clean Path network is a prerequisite for EU strategic technological sovereignty. That is why we must keep it secure at all costs and we are a 5G Clean Country. To protect our 5G network from potential wrongdoers it is necessary that all European entrepreneurs maintain clean production lines and a 5G Clean Path, free from potential industrial espionage. Demanding that 5G Clean Standards are observed with regard to 5G technology is a step towards building a fairer



Telefónica states in its Digital Manifesto that "security is paramount," and its CEO and Chairman José María Álvarez-Pallete López recently declared, "Telefónica is proud to be a 5G Clean Path company. Telefónica Spain and O2 (UK) are fully clean networks, and Telefónica Deutschland (Germany) and Vivo (Brazil) will be in the near future without equipment from any untrusted vendors."



CEO Jun Sawada of Japan's NTT states, "The safety and security of our customers and their personal information is our top priority. In this context, the statement by US government regarding 5G Clean Network is consistent with our position. That is why we are glad to be appreciated as a 5G Clean Telecommunications company and are committed to only using trusted vendors in our 5G networks in Japan and as we expand our business around the world."



Oracle CEO Safra Catz said, "Oracle shares the vision of secure, trusted and resilient 5G applications and networks. Grounded in our commitment to develop the most secure telecommunications and infrastructure products and services for our customers, we are proud to support the Clean Network initiative and provide Clean Network solutions."



Cisco Chairman and CEO Chuck Robbins said, "Cisco supports a fair, free, and open Internet. After all, our founding mission is to connect everyone and everything. Human rights have long been integrated into how Cisco works with our trusted supply chain partners as we build the next generation of intelligent, intuitive, secure advanced wired and wireless networks, including Optical, 5G and Wi-Fi 6 networks. The Clean Network Initiative is bringing needed attention to these issues."



Antonio Neri, CEO of Hewlett Packard Enterprise stated, "At Hewlett Packard Enterprise, security is a core value that guides us from initial design all the way through a product's lifecycle. As the only major server manufacturer to produce made-in-USA industry-standard servers, we're also proud to be recognized by the Clean Network and support its goal of promoting network security around the world. HPE's Trusted Supply Chain initiative, Trust technology ensures that when our partners build networks with our hardware and software, they can be sure it is trusted, secure and uncompromised."



VMware CEO Pat Gelsinger said, "VMware is pleased to provide support for Clean Path and its intent to create end-to-end 5G infrastructure that is open, secure, programmable, reliable, and software-driven. Safety and security should be the goal of everybody globally who is serious about building the best and safest possible telecommunications infrastructure for 5G, 6G, and beyond."



SoftBank Corp. CEO Ken Miyuuchi said, "SoftBank Corp. is pleased to be recognized as a 5G Clean Telecommunications company. We believe telecommunication networks are an important part of social infrastructure, and that they will play a crucial role in transforming people's lives and industry in the 5G era. SoftBank Corp. is committed to providing services that are convenient and secure to all of its customers. We fully supports the Clean Network and will endeavor to build out 5G Clean Network that use secure equipment from trusted network vendors."



NEC Corporation CEO Takashi Niino said, "NEC is dedicated to developing and deploying innovative, reliable technologies in a manner consistent with our AI and Human Rights Principles. We are committed to working with trusted partners who share our values for building open, secure global networks that create an inclusive world. As a trusted supplier of 5G Open RAN solutions and top undersea cable vendor, we are proud to support the Clean Network."

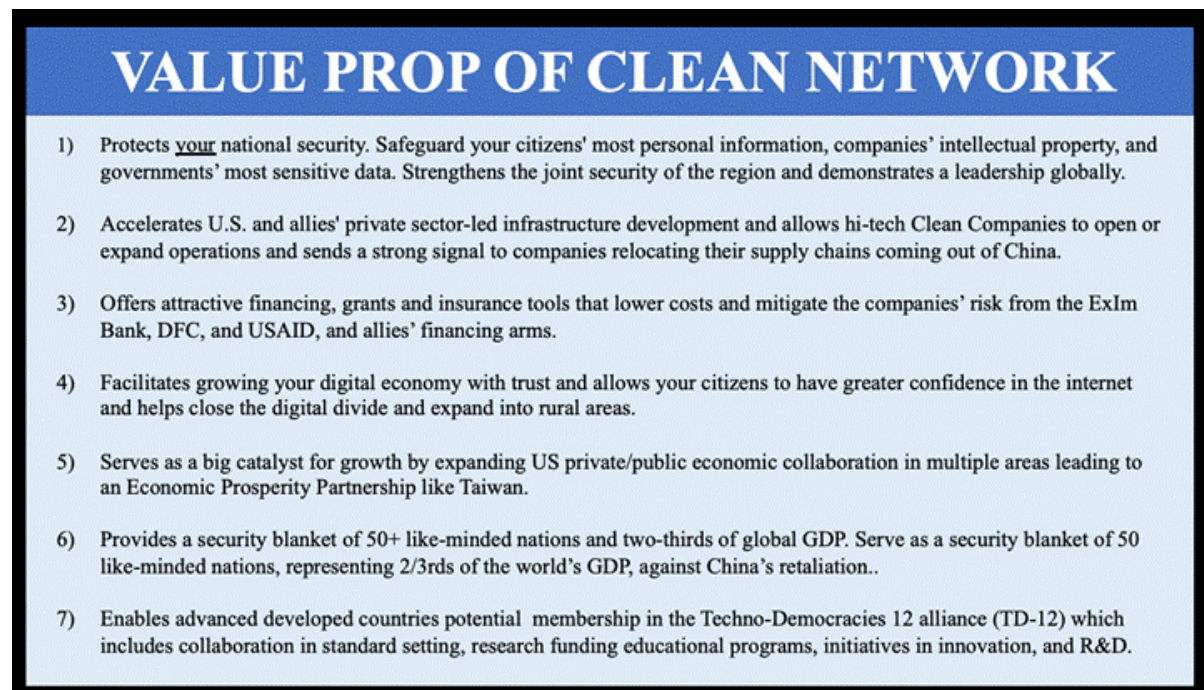
Source: United States Department of State. "The Clean Network." Webpage. <https://2017-2021.state.gov/the-clean-network/>, accessed April 6, 2021.

**Exhibit 7b** Quotes from U.S. Financial Institutions Used by the Clean Network



Source: United States Department of State. "The Clean Network." Webpage. <https://2017-2021.state.gov/the-clean-network/>, accessed April 6, 2021.

## Exhibit 8 Value Propositions of the Clean Network



Source: Chart prepared for use in HBS case study by Keith Krach, Undersecretary of State for Economic Affairs, Energy, and the Environment. Based off of media remarks by U.S. Under Secretary of State Keith Krach. See U.S. Embassy of Chile. <https://cl.usembassy.gov/under-secretary-keith-krach-opening-remarks-to-the-media/>. Accessed April 8, 2021.

## Announcing the Expansion of the Clean Network to Safeguard America's Assets

### The Clean Network Lines of Effort

The Clean Network is a comprehensive effort to address the long-term threat to data privacy, security, human rights, and trusted collaboration posed to the free world from malign actors, such as the Chinese Communist Party. The Clean Network is rooted in internationally accepted digital trust standards and reflects the commitment to an open, interoperable, and secure global internet based on shared democratic values and respect for human rights. This effort represents the execution of a multi-year, enduring strategy, built on a coalition of trusted partners.

#### Expansion of the Clean Network

The alignment around the Clean Network is about countries and companies choosing freedom versus authoritarianism. Huawei along with its CCP appendages—like cloud and apps and cables—create the Orwellian big brother state which extends the great one-way China firewall, where data comes in but not out and, reciprocally, propaganda goes out, but the truth doesn't come in. The full set of Clean Network initiatives includes:

##### Clean CARRIER

Clean Carrier: To ensure untrusted People's Republic of China (PRC) carriers are not connected with telecommunications networks. Such companies pose a danger to national security and should not provide international telecommunications services to and from the United States.

##### Clean STORE

Clean Store: To remove untrusted applications from mobile app stores. PRC apps threaten privacy, proliferate viruses, and disinformation. Personal and business information must be protected from exploitation and theft for the CCP's benefit. India has already banned 106 Chinese apps.

##### Clean APPS

Clean Apps: To prevent untrusted PRC smartphone manufacturers from pre-installing or downloading trusted applications on their apps store. Huawei is trading on the reputations of leading companies and should remove their apps from Huawei's store to ensure not partnering with a human rights abuser.

##### Clean CLOUD

Clean Cloud: To prevent U.S. citizens' most sensitive personal information and our businesses' most valuable intellectual property from being stored and processed on cloud-based systems accessible to our foreign adversaries through companies such as Alibaba, Baidu, and Tencent.

##### Clean CABLE


Clean Cable: To ensure the undersea cables connecting our country to the global internet are not subverted for intelligence gathering by the PRC at hyper scale. We will also work with foreign partners to ensure that undersea cables around the world aren't similarly subject to compromise.

##### Clean PATH

Clean Path: To secure data traveling on 5G networks into diplomatic facilities overseas and ensure it only passes through clean equipment from trusted providers. This protects against access by Chinese companies, which are obliged to hand over data and information to the state without any controls.

Source: United States Department of State. "The Clean Network." Webpage. <https://2017-2021.state.gov/the-clean-network/>, accessed February 10, 2021.

Exhibit 10 The Clean Network in Europe and North America



U.S. DEPARTMENT of STATE

# The Transatlantic Alliance Goes Clean


FACT SHEET

OFFICE OF THE SPOKESPERSON

OCTOBER 17, 2020

## TRANSATLANTIC CLEAN NETWORK

- Government regulations in place to exclude untrusted vendors; and/or All major telcos are Clean Telcos; and/or Government signed 5G security MOU
- Government expressed public commitment for the Clean Network or EU 5G Clean Toolbox; and/or Government regulations in progress to exclude untrusted vendors



*We issued a joint statement with the EU on the synergies between the Clean Network and the EU 5G Clean Toolbox. Since adoption of the Toolbox meets the criteria for being part of the Clean Network, the two work well together. NATO's Deputy Secretary General has also emphasized the importance of having a 5G Clean NATO Network. Glad to hear that."* – Secretary of State Michael Pompeo,

*"The 5G Toolbox serves as a reference for telco operators' board of directors, who are required to make the decision on 5G suppliers. If they choose a high-risk 5G supplier and something happens, the board members may be liable."* – EU Commissioner Thierry Breton,

*It is important to have a secure 5G Clean NATO Network, which is non-fractured, because the Alliance is only as strong as its weakest link."* – NATO Deputy Secretary General Mircea Geoana

*"Countries and companies are terrified of China's retaliation. The CCP cannot retaliate against everyone. That is where the EU comes in, the Transatlantic Alliance comes in, NATO comes in. The bottom line is the tide has turned. Countries and companies now understand that the central issue is not about technology, but TRUST."* – Under Secretary of State Keith Krach

*"It's good news that Berlin soon will address the security risk posed by the CCP telecom giant."* – WSJ, A Huawei Turning Point,

Source: United States Department of State. "The Transatlantic Alliance Goes Clean." Fact sheet, October 17, 2020. <https://2017-2021.state.gov/the-transatlantic-alliance-goes-clean/index.html>.

## Exhibit 11 Quotes from Latin American firms presented in Brazil

### **Augusto Lins, President of Stone Pagamentos:**

*"Having a 5G clean network is very important to fight cyber crime, data breaches, and money laundering as well as to attract investments to new value-added products and services which will require innovative solutions. A network is only as strong as its weakest link."*

### **NEC Latin America:**

*"The Clean Network with open radio access network architecture will support a diversity of trusted vendors. This is good for Brazil's economic growth, good for operators, and good for consumers. Open architecture and clean 5G will help Brazil become a global producer of network components."*

### **Siemens Brasil:**

*"A Clean 5G Network is not just about cell phones; it is about critical manufacturing processes, oil and gas platforms, and power networks, sanitation systems and internet of things. The Clean Network will help ensure that Brazil's critical infrastructure – power, transportation, and sanitation systems – is safe and reliable."*

*"The Clean Network will help us do Brasil become a trusted export platform, expanding Brazil's market of 200 million consumers into potentially 500 million consumers."*

*"Clean networks are important to safeguard intellectual property and user privacy."*

Source: Krach, Keith. "Under Secretary Keith Krach's Remarks on Economic Security." U.S. Embassy and Consulates in Brazil, November 11, 2020. <https://br.usembassy.gov/under-secretary-keith-krachs-5g-policy-remarks-in-brazil/>, accessed March 15, 2021.

**Exhibit 12** Ministry of Foreign Affairs Statement on Sanctions on U.S. Officials, issued January 2021



The screenshot shows the official website of the Ministry of Foreign Affairs of the People's Republic of China. The header features the Chinese national emblem and the ministry's name in English. Navigation links include Home, The Ministry, Policies and Activities, Press and Media Service, Countries and Regions, About China, and Resources. A search bar is also present. The main content area displays the title 'Foreign Ministry Spokesperson Announces Sanctions on Pompeo and Others' with a date of 2021/01/20. The text of the statement follows, detailing the government's decision to sanction 28 U.S. officials for interfering in China's internal affairs.

Ministry of Foreign Affairs of the People's Republic of China

Home The Ministry Policies and Activities Press and Media Service Countries and Regions About China Resources

Home > Press and Media Service > Spokesperson's Remarks

**Foreign Ministry Spokesperson Announces Sanctions on Pompeo and Others**

2021/01/20

Over the past few years, some anti-China politicians in the United States, out of their selfish political interests and prejudice and hatred against China and showing no regard for the interests of the Chinese and American people, have planned, promoted and executed a series of crazy moves which have gravely interfered in China's internal affairs, undermined China's interests, offended the Chinese people, and seriously disrupted China-U.S. relations. The Chinese government is firmly resolved to defend China's national sovereignty, security and development interests. China has decided to sanction 28 persons who have seriously violated China's sovereignty and who have been mainly responsible for such U.S. moves on China-related issues. They include Michael R. Pompeo, Peter K. Navarro, Robert C. O'Brien, David R. Stilwell, Matthew Pottinger, Alex M. Azar II, Keith J. Krach, and Kelly D. K. Craft of the Trump administration as well as John R. Bolton and Stephen K. Bannon. These individuals and their immediate family members are prohibited from entering the mainland, Hong Kong and Macao of China. They and companies and institutions associated with them are also restricted from doing business with China.

Source: Screenshot from the Ministry of Foreign Affairs of the People's Republic of China. Webpage.  
[https://www.fmprc.gov.cn/mfa\\_eng/xwfw\\_665399/s2510\\_665401/t1847554.shtml](https://www.fmprc.gov.cn/mfa_eng/xwfw_665399/s2510_665401/t1847554.shtml), accessed March 22, 2021.

## Endnotes

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<sup>1</sup> Sanger, David, Julian Barnes, Raymond Zhong, and Marc Santora. "In 5G Race With China, U.S. Pushes Allies to Fight Huawei." *New York Times*, January 26, 2019. <https://www.nytimes.com/2019/01/26/us/politics/huawei-china-us-5g-technology.html>.

<sup>2</sup> Ibid.

<sup>3</sup> Donahue, Thomas. "The Worst Possible Day: U.S. Telecommunications and Huawei." *Prism* 8, no. 3 (January 2020). [https://ndupress.ndu.edu/Portals/68/Documents/prism/prism\\_8-3/prism\\_8-3\\_Donahue\\_14-35.pdf](https://ndupress.ndu.edu/Portals/68/Documents/prism/prism_8-3/prism_8-3_Donahue_14-35.pdf), accessed March 29, 2021. Donahue was a former Senior Director for Cyber Operations on the U.S. National Security Council.

<sup>4</sup> Cavallo, Alberto, Mariana Cal, and Anne Laski. "The U.S.-China Trade War." HBS No. 9-719-034. Boston: Harvard Business School Publishing, revised May 24, 2019, p. 8.

<sup>5</sup> Allen, Craig. "U.S.-China Trade Negotiations: No Perpetual Friends or Enemies, Only Perpetual Interests." Presentation for the Harvard Fairbank Center, September 11, 2019, Cambridge, Massachusetts. Transcript available at <https://fairbank.fas.harvard.edu/wp-content/uploads/2019/08/Craig-Allen-U.S.-China-Trade-Negotiations-No-Perpetual-Friends-or-Enemies-Only-Perpetual-Interests.pdf>, accessed February 27, 2021.

<sup>6</sup> Rhodium Group. "Two Way Street – U.S.-China Investment Trends – 2020 Update." May 11, 2020. <https://rhg.com/research/two-way-street-us-china-investment-trends-2020-update/>, accessed April 6, 2021.

<sup>7</sup> Chinese Ministry of Industry and Information Technology. "State Council Announces 'Made in China 2025.'" May 19, 2015. <http://www.miit.gov.cn/n973401/n1234620/n1234622/c4409653/content.html>, accessed August 2018.

<sup>8</sup> Staff. "Chips on their shoulders." *Economist*, January 23, 2016. <https://www.economist.com/business/2016/01/23/chips-on-their-shoulders>, accessed August 2018.

<sup>9</sup> Tanner, Murray Scot. "Beijing's New National Intelligence Law: From Defense to Offense." *Lawfare*, July 20, 2017. <https://www.lawfareblog.com/beijings-new-national-intelligence-law-defense-offense>.

<sup>10</sup> Yap, Chuin-Wei. "State Support Helped Fuel Huawei's Global Rise." *Wall Street Journal*, December 25, 2019. <https://www.wsj.com/articles/state-support-helped-fuel-huaweis-global-rise-11577280736>.

<sup>11</sup> Thurm, Scott. "Huawei Admits Copying Code from Cisco in Router Software." *Wall Street Journal*, March 24, 2003. <https://www.wsj.com/articles/SB10485560675556000>.

<sup>12</sup> "Hou Weigui: hunhe suoyouzhi de xuanxingzhe侯为贵：混合所有制的先行者 [Hou Weigui: a forerunner of the mixed-ownership system]." *Guozi baogao*, July 22, 2019, <http://www.sasac.gov.cn/n2588025/n4423279/n4517386/n11788753/c11790574/content.html>.

<sup>13</sup> Fan, Eric. "Huawei: Not Just Another ZTE." Blog post for *Asia Unbound*, Council on Foreign Relations, July 30, 2019. <https://www.cfr.org/blog/huawei-not-just-another-zte>.

<sup>14</sup> "ZTE: The Investigation, Settlement, and Lessons Learned." PowerPoint presentation for the Conference on Export Controls and Policy, October 2017, Washington, D.C. <https://bis.doc.gov/index.php/documents/update-2017/2156-zte-the-investigation-settlement-and-lessons-learned-recap/file+&cd=1&hl=en&ct=clnk&gl=uk>.

<sup>15</sup> United States House Intelligence Committee. "The House Intelligence Investigative Report on the U.S. National Security Issues Posed by Chinese Telecommunications Companies Huawei and ZTE." October 8, 2012. [https://republicans-intelligence.house.gov/sites/intelligence.house.gov/files/documents/huawei-zte%20investigative%20report%20\(final\).pdf](https://republicans-intelligence.house.gov/sites/intelligence.house.gov/files/documents/huawei-zte%20investigative%20report%20(final).pdf), accessed March 17, 2021.

<sup>16</sup> United States Department of Justice. "Chinese Telecommunications Conglomerate Huawei and Huawei CFO Wanzhou Meng Charged With Financial Fraud." Press release, January 28, 2019. <https://www.justice.gov/opa/pr/chinese-telecommunications-conglomerate-huawei-and-huawei-cfo-wanzhou-meng-charged-financial#:~:text=Chinese%20Telecommunications%20Conglomerate%20Huawei%20and%20Huawei%20CFO%20Wanzhou%20Meng%20Charged%20With%20Financial%20Fraud,-Huawei%20Device%20USA&text=A%2013%2Dcount%20indictment%20was,Ltd>.

<sup>17</sup> Stacey, Kiran. "U.S. tightens restrictions on suppliers to Huawei." *Financial Times*, August 17, 2020. <https://www.ft.com/content/b6e8cbd3-88dd-4212-b98d-58c7bf0334ce>, accessed April 7, 2021.

- 
- <sup>18</sup> Bureau of Industry and Security. "Addition of Entities to the Entity List." *Federal Register*, Department of Commerce, May 21, 2019. <https://www.federalregister.gov/documents/2019/05/21/2019-10616/addition-of-entities-to-the-entity-list>. Huawei background, from Section II and III.
- <sup>19</sup> Bureau of Industry and Security. "Huawei Entity List Frequently Asked Questions (FAQs)." Department of Commerce, December 3, 2020. <https://www.bis.doc.gov/index.php/documents/pdfs/2447-huawei-entity-listing-faqs/file>. Huawei background, from Section II and III.
- <sup>20</sup> Staff. "Keith Krach." *Purdue News*. <https://www.purdue.edu/newsroom/releases/2018/Q2/keith-krach--doctor-of-industrial-engineering.html>, accessed February 10, 2021.
- <sup>21</sup> Zoom interview with former U.S. Undersecretary of State Keith Krach, January 27, 2021.
- <sup>22</sup> Zoom interview with former U.S. Undersecretary of State Keith Krach, January 27, 2021.
- <sup>23</sup> Krach, Keith. "Statement of Keith J. Krach, Nominee to be the Under Secretary of State for Economic Growth, Energy and the Environment." Testimony for the U.S. Senate Committee on Foreign Relations, March 27, 2019. [https://www.foreign.senate.gov/imo/media/doc/032719\\_Krach\\_Testimony.pdf](https://www.foreign.senate.gov/imo/media/doc/032719_Krach_Testimony.pdf).
- <sup>24</sup> Zoom interview with former U.S. Undersecretary of State Keith Krach, January 27, 2021.
- <sup>25</sup> <https://keithkrach.com/the-catalyst-for-stronger-us-taiwan-ties/>
- <sup>26</sup> Levy, Ian. "The future of telecoms in the U.K.." Blog post for the National Cyber Security Centre, January 28, 2020. <https://www.ncsc.gov.uk/blog-post/the-future-of-telecoms-in-the-uk>, accessed March 26, 2021. Dr. Levy is the Technical Director of the NCSC.
- <sup>27</sup> Levy, Ian. "The future of telecoms in the U.K.." Blog post for the National Cyber Security Centre, January 28, 2020. <https://www.ncsc.gov.uk/blog-post/the-future-of-telecoms-in-the-uk>, accessed March 26, 2021. Dr. Levy is the Technical Director of the NCSC.
- <sup>28</sup> National Cyber Security Centre. "Huawei Cyber Security Evaluation Centre Oversight Board: Annual Report 2020." September 2020. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/923309/Huawei\\_Cyber\\_Security\\_Evaluation\\_Centre\\_HCSEC\\_Oversight\\_Board-annual\\_report\\_2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/923309/Huawei_Cyber_Security_Evaluation_Centre_HCSEC_Oversight_Board-annual_report_2020.pdf), accessed March 30, 2021.
- <sup>29</sup> Peel, Michael and Helen Warrell. "Nancy Pelosi warns Europe over Huawei 5G dangers." *Financial Times*, February 14, 2020. <https://www.ft.com/content/c2fbac2-4f43-11ea-95a0-43d18ec715f5>, accessed April 7, 2021.
- <sup>30</sup> Zoom interview with former U.S. Undersecretary of State Keith Krach, January 27, 2021. See also Coy, Peter. "U.S. Policy on China May Move from 'America First' to America & Co." *Bloomberg Businessweek*, December 9, 2020. <https://www.bloomberg.com/news/articles/2020-12-09/u-s-policy-against-china-america-first-is-becoming-america-and-others>, accessed March 22, 2021.
- <sup>31</sup> Zoom interview with former U.S. Undersecretary of State Keith Krach, January 27, 2021. See also Michael Mink. "How the Clean Network Alliance of Democracies Turned the Tide on Huawei in 5G." *Life & News*. December 2, 2020. <https://www.lifeandnews.com/articles/how-the-clean-network-alliance-of-democracies-turned-the-tide-on-huawei-in-5g/>. Accessed April 6, 2021. <https://www.politico.com/news/2021/02/04/trump-europe-5g-466016>
- <sup>32</sup> United States Senate Committee on Foreign Relations. "Statement of Keith J. Krach, Nominee to be the Under Secretary of State for Economic Growth, Energy and the Environment." Testimony of former U.S. Undersecretary of State Keith Krach, March 27, 2019. [https://www.foreign.senate.gov/imo/media/doc/032719\\_Krach\\_Testimony.pdf](https://www.foreign.senate.gov/imo/media/doc/032719_Krach_Testimony.pdf).
- <sup>33</sup> Zoom interview with former U.S. Undersecretary of State Keith Krach, January 27, 2021.
- <sup>34</sup> Zoom interview with former U.S. Undersecretary of State Keith Krach, January 27, 2021. See also, U.S. Department of State. "Under Secretary Keith Krach Remarks on U.S.- Georgia 5G MOU." January 14, 2021. <https://2017-2021.state.gov/under-secretary-keith-krach-remarks-on-u-s-georgia-5g-mou/index.html>, Accessed April 6, 2021; See also Michael Mink. "How the Clean Network Alliance of Democracies Turned the Tide on Huawei in 5G." *Life & News*. December 2, 2020. <https://www.lifeandnews.com/articles/how-the-clean-network-alliance-of-democracies-turned-the-tide-on-huawei-in-5g/>. Accessed April 6, 2021.
- <sup>35</sup> Keith Krach, "How to Beat China Inc.," *Washington Examiner*. March 23, 2021. <https://www.washingtonexaminer.com/opinion/op-eds/how-to-beat-china-inc>. Accessed April 6, 2021.
- <sup>36</sup> Zoom interview with former U.S. Undersecretary of State Keith Krach, January 27, 2021. See also Michael Mink. "How the Clean Network Alliance of Democracies Turned the Tide on Huawei in 5G." *Life & News*. December 2, 2020. <https://www.lifeandnews.com/articles/how-the-clean-network-alliance-of-democracies-turned-the-tide-on-huawei-in-5g/>. Accessed April 6, 2021.

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<sup>37</sup> Zoom interview with Under Secretary Keith Krach, January 27, 2021.

<sup>38</sup> The Techno-Democracies group was imagined as a technology-focused and larger version of the G7, a set of “like-minded countries that will focus on the development, protection, dissemination, development, and use of emerging technologies” as well as “serve as stewards of technology norms for the coming decades.” Public materials of U.S. Department of State, Global Economic Security Strategy Pillar III, <https://www.slideshare.net/KeithKrach/td10-technologydemocracies-10>, accessed April 6, 2021.

<sup>39</sup> Krach, Keith. “Letter From Under Secretary Keith Krach to the Governing Boards of American Universities.” U.S. Embassy in Romania website, September 1, 2020. <https://ro.usembassy.gov/letter-from-under-secretary-keith-krach-to-the-governing-boards-of-american-universities/>.

<sup>40</sup> U.S. Department of State. Factsheet: The Transatlantic Alliance Goes Clean.” October 17, 2020. <https://2017-2021.state.gov/the-transatlantic-alliance-goes-clean/index.html>. Accessed April 8, 2021.

<sup>41</sup> U.S. Department of State. Special Briefing, “Under Secretary for Economic Growth, Energy, and the Environment Keith Krach and Assistant Secretary for Energy Resources Francis R. Fannon Briefing on Recent Travel to Central and South America.” November 24, 2020. <https://2017-2021.state.gov/under-secretary-for-economic-growth-energy-and-the-environment-keith-krach-and-assistant-secretary-for-energy-resources-francis-r-fannon-briefing-on-recent-travel-to-central-and-south-america/index.html>. Accessed April 8, 2021.

<sup>42</sup> Ibid.

<sup>43</sup> CSIS Working Group on Trust and Security in 5G Networks. “Criteria for Security and Trust in Telecommunications Networks and Services.” Center for Strategic and International Studies, May 2020. [https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/200511\\_Lewis\\_5G\\_v3.pdf](https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/200511_Lewis_5G_v3.pdf).

<sup>44</sup> Layton, Roslyn. “State Department’s 5G Clean Network Club Gains Members Quickly.” *Forbes*, September 4, 2020. <https://www.forbes.com/sites/roslynlayton/2020/09/04/state-departments-5g-clean-network-club-gains-members-quickly/>.

<sup>45</sup> Government officials and industry representatives convened in May 2019 to discuss national security, economic and commercial issues related to 5G technology. The meeting produced the Prague Proposals, a set of recommendations and principles for nations to consider in the design, construction, and administration of their 5G infrastructure. Source: United States Department of State. “The Clean Network.” Webpage. <https://2017-2021.state.gov/the-clean-network/>, accessed February 10, 2021.

<sup>46</sup> Ibid.

<sup>47</sup> Zoom interview with former U.S. Undersecretary of State Keith Krach. January 27, 2021.

<sup>48</sup> Zoom interview with former U.S. State Department Senior Advisor James Shinn. February 3, 2021.

<sup>49</sup> Krach, Keith, Mung Chiang, and Christopher Ashley Ford. “Briefing on Taiwan semiconductor manufacturing corporations intend to invest \$12 billion in the U.S. and on the CCP’s ability to undermine U.S. export controls.” Press briefing, May 15, 2020. <https://2017-2021.state.gov/briefing-with-under-secretary-for-growth-energy-and-the-environment-keith-krach-science-and-technology-adviser-to-the-secretary-mung-chiang-and-assistant-secretary-for-international-security-and-n/index.html>.

<sup>50</sup> Ting-Fang, Cheng, Lauly Li, and Yifan Yu. “TSMC to build \$12 bn cutting-edge chip plant in U.S.” *Nikkei Asian Review*, May 15, 2020.

<sup>51</sup> Quoted in Fox News Interview. “U.S. Working to Break Dependence on China for Rare Earths.” February 2021. <https://www.youtube.com/watch?v=BC3SP19b0YI&t=6s>, accessed April 8, 2021.

<sup>52</sup> Schumer, Charles E. “Endless Frontier Act.” S.3832, 116<sup>th</sup> Congress. Webpage. May 21, 2020. <https://www.congress.gov/bill/116th-congress/senate-bill/3832>.

<sup>53</sup> McCaul, Michael T. “CHIPS for America Act.” H.R.7178, 116<sup>th</sup> Congress. Webpage. June 11, 2020. <https://www.congress.gov/bill/116th-congress/house-bill/7178>.

<sup>54</sup> The CHIPS for America Act was folded into the Health, Economic Assistance, Liability Protection and Schools Act (HEALS), a \$1 trillion coronavirus stimulus bill in summer 2020. Other parts of the Act were folded into the National Defense Authorization Act in 2021. See “Restoring Critical Supply Chains and Intellectual Property Act,” 116<sup>th</sup> Cong., 2<sup>nd</sup> sess., accessed at [https://www.lgraham.senate.gov/public/\\_cache/files/bac7d1c0-a7ba-4ace-bb1a-59cdd09bfa51/bai20728---domestic-manufacturing.pdf](https://www.lgraham.senate.gov/public/_cache/files/bac7d1c0-a7ba-4ace-bb1a-59cdd09bfa51/bai20728---domestic-manufacturing.pdf); and HR 6935-23, 116<sup>th</sup> Cong., 2<sup>nd</sup> sess., <https://www.congress.gov/116/bills/hr6395/BILLS-116hr6395enr.pdf>, accessed March 23, 2021.

<sup>55</sup> U.S. Embassy & Consulates in Italy. “Secretary Michael R. Pompeo at a Press Availability.” Press release, April 29, 2020. <https://it.usembassy.gov/secretary-michael-r-pompeo-at-a-press-availability-april-29-2020/>.

---

<sup>56</sup> U.S. Embassy & Consulates in Italy. "Secretary Michael R. Pompeo at a Press Availability." Press release, April 29, 2020. <https://it.usembassy.gov/secretary-michael-r-pompeo-at-a-press-availability-april-29-2020/>.

<sup>57</sup> U.S. Department of Commerce. "Commerce Addresses Huawei's Efforts to Undermine Entity List, Restricts Products Designed and Produced with U.S. Technologies." Press release, May 15, 2020. <https://www.commerce.gov/news/press-releases/2020/05/commerce-addresses-huaweis-efforts-undermine-entity-list-restricts>.

<sup>58</sup> Ting-Fang, Cheng, and Lauly Li. "TSMC Halts New Huawei Orders after U.S. Tightens Restrictions." *Nikkei Asian Review*, May 18, 2020, <https://asia-nikkei-com.ezp-prod1.hul.harvard.edu/Spotlight/Huawei-crackdown/TSMC-halts-new-Huawei-orders-after-U.S.-tightens-restrictions>; and Ting-Fang, Cheng, and Lauly Li. "Huawei blasts latest U.S. crackdown as bid for 'tech supremacy.'" *Nikkei Asian Review*, May 18, 2020. <https://asia-nikkei-com.ezp-prod1.hul.harvard.edu/Spotlight/Huawei-crackdown/Huawei-blasts-latest-U.S.-crackdown-as-bid-for-tech-supremacy>.

<sup>59</sup> Huawei Technologies Company. "Media Statement on Foreign Direct Product Rule Changes Made by U.S. Government." Press release, May 2020. <https://www.huawei.com/us/facts/voices-of-huawei/media-statement-on-foreign-direct-product-rule-changes-made-by-us-government>.

<sup>60</sup> "Working Together to Build a Fully Connected, Intelligent World." Keynote address given in May 2020 at HAS 2020 Global Analyst Summit, Shenzhen, China, <https://www.huawei.com/en/events/has2020>. Cited in Feng, Emily. "The Latest U.S. Blow to China's Huawei Could Knock Out Its Global 5G Plans." *NPR*, May 28, 2020. <https://www.npr.org/2020/05/28/862658646/the-latest-u-s-blow-to-chinas-huawei-could-knock-out-its-global-5g-plans>, accessed March 22, 2021.

<sup>61</sup> United States Department of State. "The Clean Network." Accessed February 10, 2021. <https://2017-2021.state.gov/the-clean-network/>.

<sup>62</sup> Gold, Hadas. "UK Bans Huawei from Its 5G Network." *CNN*, July 14, 2020. <https://www.cnn.com/2020/07/14/tech/huawei-uk-ban/index.html>.

<sup>63</sup> Zoom interview with former U.S. State Department Senior Advisor James Shinn. February 3, 2021.

<sup>64</sup> Staff. "UK Expected to Order Removal of Huawei 5G Equipment by 2025: Telegraph." *Reuters*, July 10, 2020. <https://www.reuters.com/article/us-britain-huawei-tech-idUSKBN24B2VU>.

<sup>65</sup> Gold, Hadas. "UK Bans Huawei from Its 5G Network." *CNN*, July 14, 2020. <https://www.cnn.com/2020/07/14/tech/huawei-uk-ban/index.html>.

<sup>66</sup> U.S. Department of State. Factsheet: The Transatlantic Alliance Goes Clean." October 17, 2020. <https://2017-2021.state.gov/the-transatlantic-alliance-goes-clean/index.html>. Accessed April 8, 2021.

<sup>67</sup> Executive Office of the President. "Addressing the Threat Posed by WeChat, and Taking Additional Steps To Address the National Emergency With Respect to the Information and Communications Technology and Services Supply Chain." Executive order 13943, *Federal Register*, August 6, 2020, <https://www.federalregister.gov/documents/2020/08/11/2020-17700/addressing-the-threat-posed-by-wechat-and-taking-additional-steps-to-address-the-national-emergency>.

<sup>68</sup> U.S. Department of Commerce. "Commerce Department Further Restricts Huawei Access to U.S. Technology and Adds Another 38 Affiliates to the Entity List." Press release, August 17, 2020. <https://www.commerce.gov/news/press-releases/2020/08/commerce-department-further-restricts-huawei-access-us-technology-and>.

<sup>69</sup> Krach, Keith. Interview with Fox Business, August 21, 2020. <https://www.youtube.com/watch?v=tqTOi5uDgDY>, accessed March 13, 2021.

<sup>70</sup> Yaseer, Samir, and Hari Kumar. "India Bans 118 Chinese Apps as Indian Soldier is Killed on Disputed Border." *New York Times*, September 2, 2020. <https://www.nytimes.com/2020/09/02/world/asia/india-bans-china-apps.html>.

<sup>71</sup> United States Department of State. "The Clean Network." Webpage. <https://2017-2021.state.gov/the-clean-network/>, accessed February 10, 2021.

<sup>72</sup> Ibid.

<sup>73</sup> Everington, Keoni. "Visit of Highest-Ranking US State Department Official to Taiwan in 41 Years Confirmed." *Taiwan News*, September 17, 2020. <https://www.taiwannews.com.tw/en/news/4010766>.

<sup>74</sup> Zoom interview with former U.S. Undersecretary of State Keith Krach. January 27, 2021.

<sup>75</sup> Staff. "US, Taiwan Boost Economic Cooperation." *US, Taiwan Boost Economic Cooperation*, November 21, 2020. <https://www.voanews.com/east-asia-pacific/us-taiwan-boost-economic-cooperation>.

---

<sup>76</sup> Chia-nan, Lin. "Taiwan-US Deal on Science and Tech First Concrete Result of EPP Dialogue - Taipei Times." Taipei Times, December 19, 2020. <https://www.taipeitimes.com/News/front/archives/2020/12/19/2003748984>.

<sup>77</sup> Krach, Keith. Provided materials.

<sup>78</sup> Krach, Keith. Provided materials.

<sup>79</sup> Krach, Keith. Provided materials.

<sup>80</sup> Sanger, David, Julian Barnes, Raymond Zhong, and Marc Santora. "In 5G Race With China, U.S. Pushes Allies to Fight Huawei." *New York Times*, January 26, 2019. <https://www.nytimes.com/2019/01/26/us/politics/huawei-china-us-5g-technology.html>.

<sup>81</sup> Chazan, Guy, and Nic Fildes. "Germany crackdown set to exclude Huawei from 5G rollout." *Financial Times*, September 30, 2020. <https://www.ft.com/content/35197477-acef-4429-a1d8-71743ee8d8e3>.

<sup>82</sup> Rinke, Andreas, and Douglas Busvine. "Germany moves to toughen Huawei oversight: sources." *Reuters*, September 30, 2020. <https://www.reuters.com/article/us-germany-huawei-idUSKBN26L16Q>.

<sup>83</sup> Krach, Keith. Interview with *Unternehmer-Magazin*, August 27, 2020. <https://dub-magazin.de/digitalisierung/keith-krach-interview-usa-china/>. Accessed April 7, 2021.

<sup>84</sup> Koch, Moritz. "'Menschenrechtsfrage:' Washington erhöht bei der 5G-Entscheidung den Druck auf Berlin. ['Human rights issue:' Washington increases pressure on Berlin with 5G decision.]" *Handelsblatt*, August 16, 2020. <https://www.handelsblatt.com/politik/international/netzausbau-menschenrechtsfrage-washington-erhoeht-bei-der-5g-entscheidung-den-druck-auf-berlin/26099238.html>.

<sup>85</sup> <https://www.ft.com/content/35197477-acef-4429-a1d8-71743ee8d8e3>. Huawei background, from Section II and III.

<sup>86</sup> Woo, William Boston and Stu. "Huawei Gets Conditional Green Light in Germany as Government Approves Security Bill." *Wall Street Journal*, December 16, 2020, sec. Tech. <http://www.wsj.com/articles/huawei-gets-conditional-green-light-in-germany-as-government-approves-security-bill-11608117504>.

<sup>87</sup> Busvine, Andreas, and Douglas Busvine. "Germany Moves to Toughen Huawei Oversight." *Reuters*, September 30, 2020. <https://www.reuters.com/article/us-germany-huawei-idUSKBN26L16Q>.

<sup>88</sup> Zoom interview with former U.S. State Department Senior Advisor James Shinn. February 3, 2021.