POLICY MEMO

Winning the Geo-Tech Battle and Building the Quad Alliance in the Indo-Pacific

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Introduction
Under Xi Jinping, the People’s Republic of China (PRC) has established as its paramount geopolitical objective the replacement of the free and open, rules-based order in Asia with an alternative world order, one that is to be dominated by the interests and values of the Chinese Communist Party (CCP). This decision presents a danger to the entire world, not just to any one state or group of states. For, as US Secretary of State Antony Blinken said at the March 2021 US-PRC meeting in Alaska, the alternative to a rules-based order “is a world in which might makes right and winners take all, and that would be a far more violent and unstable world for all of us.”

In furtherance of its objectives, the PRC is in the midst of a large military build-up, but there is much more. For today’s CCP, political power grows not only from the “barrel of the gun,” as Mao Zedong once put it, but also from cutting-edge technologies. Thus, while Beijing pours billions into artificial intelligence and surveillance tech to impose its new “digital totalitarianism” inside the PRC, from Hong Kong to Xinjiang, it is also using its growing technological prowess to press its larger geopolitical agenda in the Indo-Pacific and beyond. It is weaponizing technology and connectivity, along with trade, finance, and other policy instruments to try to rule the key technologies and industries of the future, as well as to improve its strategic positioning and acquire political power over other countries—for instance, through its bid to dominate other nations’ most sensitive data networks, or via the export of its suite of “social stability” technologies, i.e., the “techno-tyrant’s toolkit.” In all this, the CCP’s intent is to entrench its power and Leninist norms and practices to the extent it can do so beyond the PRC’s borders, and to make other nations, or at the least their ruling elites, beholden to it.

So in addition to the PRC’s militarily destabilizing activities in the West Pacific and incursions into India’s Himalayas, there is also a “geo-technological front.” If Xi’s CCP succeeds at enmeshing other countries in its expanding “PRC sphere of technological influence,” it could unlock and be able to exploit decisive military, economic, diplomatic, and ideological advantages.

The PRC’s many-faceted assault on international order requires a similarly comprehensive and sustained response. Many democratic nations, therefore, have been acting to reimage and deepen cooperation with one another, including in the geo-tech arena. However, the CCP is aware that the world’s democracies are of many minds about how to respond to it, and the party has always relied on poor coordination among the democracies to advance its aims. Far greater coordinated planning and action—an “alliance of democracies,” as President Biden has called for—will be needed to safeguard and promote democratic leadership over the key technologies and industries of tomorrow, and the ends to which they will be put. In the meantime, the main locus of PRC’s strategic gambits is in Asia, and there, a powerful grouping of Indo-Pacific democracies has emerged to balance against and counter the PRC’s bid for primacy.

Steps to Strengthen Geo-Tech Cooperation among Quad Members
The Quadrilateral Security Dialogue, known as the Quad, was reinstituted in 2017 by four democratic nations—Japan, Australia, India, and the United States—who shared a common outlook on the PRC’s strategic intentions. In the first instance, Japan, India, and Australia have each felt the pressure of the PRC’s intimidatory and coercive geo-economic actions and, joined by the United States, they have also stood firm in the face of Beijing’s sabre-rattling.

The Quad is unique among other democratic groupings because it is not burdened by cumbersome bureaucratic processes. It is a purpose-driven, flexible, and action-oriented body committed, as the Quad heads of state said in a recent joint statement, to an Indo-Pacific region that is “free, open, inclusive, healthy, anchored in democratic values, and
unconstrained by coercion.” It is especially significant that the Quad has become India’s preferred way of becoming part of the emerging strategic architecture of the Indo-Pacific without taking on overly burdensome obligations. India-US defense ties have grown by leaps and bounds, but the Quad arrangement has also facilitated Japanese and Australian security cooperation with India in ways which might not otherwise have occurred.

Beyond the military and intelligence arenas, the Quad has rapidly established itself as a vital “mini-lateral” platform from which its members can devise and coordinate policy stances across the Indo-Pacific, including in commerce, finance, economic and infrastructure development, and technology. All four Quad governments are clear-eyed about the meaning of PRC’s blueprints for geo-technological dominance, including its Made in China 2025 mercantilist industrial policy, and the PRC’s “Digital Silk Road” scheme, a key tech component of its Belt and Road geo-strategy to entangle other countries in a CCP-led world order. Quad members see the need—but also the opportunity—for acting proactively to counter the PRC’s geo-tech designs.

The March 13, 2021, virtual Quad summit—the first such meeting between heads of government—announced the creation of a Quad Critical and Emerging Technology Working Group as one of three top priority policy areas (along with eradicating COVID-19 through a joint vaccine development and distribution campaign and combating climate change). The working group will focus on enhancing Quad coordination and action across the geo-tech front, from protecting and promoting democratic commerce and innovation in key industries, to ensuring that tomorrow’s technologies are created and governed in accord with shared democratic principles and interests—not the Chinese Communist Party’s. This is a crucial initiative, and Quad nations must now move to institutionalize and add meaningful content to this effort. Mindful of the CCP’s ambitions, here are some specific areas for Quad cooperation on the geo-tech front that ought to be further explored and developed:

1. Foster a robust democracy-led tech ecosystem in the Indo-Pacific

The PRC’s challenge to international order and today’s global health crisis have brought to the fore a roiling debate about the need to rethink globalization. As democracies plot out their long-term recoveries, many are prudently looking to reshape and protect the supply and value chains that are essential to their growth, competitiveness and security. Given the PRC’s destabilizing military activities as well as its efforts to inflict damage on the Indian and Australian economies, it is hardly surprising that plans to bolster national economic resilience—including by relocating strategic chains to trusted nations with similar institutions, values, and interests—are well underway among the Indo-Pacific’s leading democracies.

In building resilience, Quad nations must continue to make clear they do not seek to create an exclusive economic and technological bloc, closed to Asia’s other economies. This would be both impossible and self-defeating. Rather, Quad members are responding to PRC’s concerted geo-economic efforts over decades to lure in, capture, and monopolize critical supply chains so that regional and global economies become uniquely dependent on the PRC. Under Xi, Beijing’s bid to dominate high-tech industries and its mercantilist policies have become ever-more aggressive—and a growing threat to the rules-based, open trading system which has helped secure Asia’s general peace and prosperity, including China’s, for decades.

The many countries of the Indo-Pacific region are at different stages of responding to the strategic and economic risk posed by Xi’s PRC. Many are either hedging or are simply reluctant to join in efforts to counter the PRC’s strategic aggrandizement. These countries need to know that they are not alone; they need to be involved in joint partnerships with trusted
governments that can help create in these cautious states the requisite resilience and capability. In years ahead, a core focus of the Quad must be to ensure these countries have superior economic, developmental and technological alternatives to what the PRC is offering.

In all these efforts, India’s membership and full participation is crucial. The US and other Pacific democracies have made clear they seek to abet India’s emergence as a fellow democracy and also as a counterweight to the PRC. India, for its part, stands to benefit enormously as the Pacific democracies undertake to reduce their vulnerabilities to the PRC’s coercive measures and reshape their international economic connections. But the desire for economic self-sufficiency among some Indian policy elites is still strong. This will severely constrain India’s (and also the Quad’s) strategic options and potential—at a time when Beijing is striving to sideline India and cement the PRC’s economic and tech dominance in other South Asian countries.

As an inclusive body, the Quad should aim to be a platform which can help chart a course of outward, multilateral Indian economic engagement in a manner and at a pace sensitive to Indian citizens’ concerns and needs. As a practical matter, Quad nations should focus on critical subsets of common interest where cooperation is possible and politically sustainable over the long term, with a view toward growing both India’s and the overall Quad’s economic and geo-tech presence throughout the Indian Ocean Basin, from Southeast Asia to East Africa.

Already, the Quad has emerged as a useful arrangement for engaging other forward-leaning countries wary of the PRC’s designs. Southeast Asian nations like Vietnam, Singapore, and Indonesia are increasingly comfortable with the Quad’s advancing relevance and role, and they see it as a strategic stabilizer in the Indo-Pacific. Through a “Quad-Plus” framework, the grouping should further engage with other advanced democracies like Israel (a technological power in its own right, and crucial to the unfolding geopolitical and tech competition in West Asia), as well as France and the United Kingdom—with the aim of fostering an open and inclusive ecosystem that can protect and promote tech cooperation and innovation in accord with democratic—not the Chinese Communist Party’s—interests and values.

2. Create commercially competitive alternatives to PRC 5G

One immediate priority for Quad collaboration on the geo-tech front is building open, secure, and commercially competitive 5G systems—the superfast data networks which will enable key future industries from artificial intelligence to the Internet of Things. The PRC’s state-directed and heavily subsidized firms seized first-mover advantages in the roll-out of 5G systems throughout Asia and beyond. If the PRC is permitted to monopolize these foundational systems, it could prove extremely difficult to halt the advance of, or reverse, that dominance. The transaction costs for smaller Indo-Pacific countries to transition out of a PRC-dominated techno-sphere are likely to be prohibitive. In some circumstances, it will be virtually impossible—without foreign help. In the meantime, PRC’s dominance of advanced data networks is far from assured, and significant progress has since been made by the Pacific democracies in developing compelling alternatives.

The software-based, virtualized or Open RAN (radio access network) 5G systems that Japanese and American companies have been perfecting have the potential to disrupt the vendor-dependency model that gives the PRC’s state firms enormous leverage over other nations’ policy choices and data. The open architecture of virtualized systems also promises to help level the commercial and innovation playing field for India’s and Southeast Asia’s vibrant tech start-up sectors, while creating a pathway for smaller countries to pursue their digital development with a diversity of foreign partners, not just the PRC. Meantime, Japan and the US
have also made headway in defining democratic standards and protocols for the deployment of virtualized systems, as well as in developing new AI which can secure the data that flows through them.

Far greater progress can be made if India’s software engineering talent, its enormous domestic consumption market, and its potential as a low-cost manufacturer can be joined with other Quad countries in making and commercializing virtualized networks. Indian software is already being deployed in pilot projects utilizing Open RAN technology, either through domestic firms such as Reliance Jio or in collaboration with US and Japanese equipment makers and system integrators.

Quad governments should catalyze this private sector cooperation and compete for Asia’s next generation telecommunications landscape. Among other things, the new trilateral Infrastructure Investment program between Japan, Australia, and the US is a prime vehicle for financing sovereign, virtualized systems both in India and, in partnership with New Delhi and joint ventures with Indian firms, in third countries. The Japanese Bank of International Cooperation and the US’s International Development Finance Corporation have a vital role to play, too, especially in de-risking private sector involvement in the construction of open and secure digital infrastructure across the Indian Ocean region.

3. Establish a Quad free and secure digital trade agreement
Setting data governance standards must be another top priority on the Quad’s geo-tech agenda. How data is collected, used, shared, and protected depends greatly on a country’s political arrangements and values. Data can make markets produce value and function freely, more efficiently, and transparently, or it may be used to distort and corrupt the free and fair functioning of markets. Likewise, data can be used by governments to achieve public goods and to safeguard civic rights, or it can be abused to surveil, manipulate, and oppress, as the Leninist regime controlling China is doing.

Liberal democracies have tended to underregulate the use and flow of data or leave these decisions to private firms. In this era of deepening geo-tech rivalry, this must change, not least because driving innovation and economic growth crucially depends on free and secure cross-border data flows between trusted nations. A Quad digital trade agreement would, among other things, help enable the massive data flows essential to further collaboration in strategic tech areas such as artificial intelligence and network-connected devices. There are, at the same time, growing democratic concerns about the deterioration of individual and business privacy, as well as alarm in India and other Asian countries over “data colonialism.” The establishment of clear and enforceable rules governing intra-Quad digital commerce and Big Tech would go a long way in reassuring the citizens of the four nations.

The 2019 US-Japan Digital Free Trade Agreement may be a useful starting point for designing a Quad arrangement on digital trade. The four member nations might also draw from the digital chapters of the US-Mexico-Canada Agreement, or from the Digital Economy Agreement (DEA) between Australia and Singapore (a vital Quad partner) for building a consensus on ensuring free and trusted data flows. The DEA was built on existing bilateral agreements and introduced rules and processes to reduce unnecessary burdens to trade, make it easier and safer to transfer data across borders, protect intellectual property, and enhance the experience for cross-border users of technology platforms (e.g., payment systems and financial technology, a key area of competition with the PRC).

Quad governments, civil societies, and firms should also expand their data governance discussions on the ethical uses of data and joint ways to promote civil norms and institutions
throughout the Indo-Pacific as a bulwark against abuse and the PRC's advancing "digital Leninism."

4. Coordinate policies to restrict PRC economic involvement in geo-tech and manufacturing competition

Quad nations have blocked PRC firms like Huawei and ZTE from participating in their respective 5G networks due to concerns over how PRC entities collect and use data—and to reduce the vulnerabilities of critical infrastructure to PRC espionage and sabotage. But telecommunications is just one component of the geo-tech competition. Quad countries should also review and scrutinize PRC investments and involvement in other areas and discuss whether additional restrictions on or prohibitions of PRC entities are needed.

Inbound investment restrictions and export controls exist to enhance national security, improve economic resilience and protect innovative technologies from strategic rivals. Important steps have been taken in recent years to plug “leaks” which the PRC has taken advantage of or exploited for its own purposes. However, far greater international coordination and standard-setting will be needed if the Quad democracies are to promote rules-based trade and competition that drives qualitative leads in emerging technological areas.

Given the PRC’s concerted use of investment, forced tech transfer, espionage, and other tools in its attempt to make itself the world’s dominant high-tech manufacturer, Quad nations should also upgrade and harmonize their industrial security practices. Meanwhile, they should explore policies to encourage greater inbound investment by firms from trusted nations and incentivize joint manufacturing ventures in key sectors and technologies, including defense, sensitive infrastructure and shipbuilding, advanced computing, robotics, and pharmaceuticals. Here the objective is not for Quad members to replicate the autarchic mindsets of the PRC but to ensure the latter does not take advantage of democratic innovations to advance its strategic objectives at our collective expense. With the right policies, Quad nations and their private sectors can innovate superior and commercially attractive alternatives to what PRC firms might offer for our markets as well as for other economies in the Indo-Pacific.

5. Address PRC freeriding and the illegitimate use of innovation on the “global democratic commons”

Like other open democratic economies, Quad members are part of the same “scientific and academic commons” that includes research by universities, industry, and platforms such as GitHub—a major global repository of software that is accessed by around 95 percent of coders in the PRC. The guiding principle should be reciprocity, yet the PRC does not offer the world the same access to its “open source” research that it receives from the rest of the world. Quad members need to reassess giving the PRC unrestricted access to the scientific and academic “commons.”

In critical domains where reciprocity cannot be assured because of the PRC’s mercantilist industrial practices, Quad members should also consider ways to impose restrictions on university research collaborations with PRC institutions. Furthermore, given the PRC’s Military-Civil Fusion agenda to build the world’s most technologically advanced military, Quad countries ought to standardize screening mechanisms for student visas to ensure that PRC students are properly vetted and not permitted to participate in sensitive technology research at Quad universities.

6. Establish a Quad innovation fund

Quad members already have some experience in establishing joint funds to develop certain sectors or technologies (e.g., critical minerals between the US and Australia). A Quad R&D fund could focus on sectors or technologies where all the following criteria are met:

- That sector or technology is identified by all members as critical for national economic resilience and capability.
• That sector or technology underpins the fundamental economic competitiveness of democratic nations.

• All members have firms able to make significant R&D contributions.

• There is an urgent need to develop capability and market presence due to PRC activities.

• There are few alternatives or similar capabilities in other trusted and friendly economies.

One clear candidate for joint Quad research and innovation is the next generation of energy storage and battery technology. The more effectively the democratic economies of the Indo-Pacific can store and transport energy, the less dependent they will be on older, fixed, and geopolitically risky sources of power. Another promising area for research cooperation is biotechnology, with a focus on food, medicines, materials, and fuel.

7. Focus on environmental technology

In their recent virtual summit, the Quad heads of state identified combating climate change as a top priority. Addressing climate change can never be truly separated from geopolitics. In recent years, the PRC has tried to amplify differences in the climate policies of the US and its allies around the world to drive a wedge between them, to the PRC’s advantage. Further, when it comes to the use of market mechanisms (such as carbon taxes or cap-and-trade schemes) the PRC has tried to exploit these to enhance its own power, wealth, and influence at the expense of the US and its allies and partners.

In this context, tackling climate change, environmental degradation, and pollution ought to be seen as an issue on which countries of similar political values and geopolitical interests must cooperate, and the announcement by Quad leaders of the establishment of the Quad Climate Working Group is of great significance. The Quad, along with other like-minded nations, should be prepared to call out and push back against PRC practices and activities in the Indo-Pacific that contradict the climate goals to which Beijing has committed under the Paris Agreement. More importantly, Quad nations should also focus on innovating technologies which can help achieve better environmental outcomes for the whole of the Indo-Pacific.

In addition to clean energy and other pollution-reducing technologies, Quad cooperation should focus on other environmental issues that matter to Indo-Pacific nations, especially water conservation and agriculture. Artificial intelligence and big data analytics, for instance, will increasingly be used to achieve better results when it comes to greener ways to achieve food and water security. There is an opportunity for Quad countries to prevent the PRC from gaining a dominant foothold in key environmental sectors and technologies.

Conclusion

The virtual meeting of the Quad heads of state on March 13, 2021, is a clear signal that the members are placing ever higher importance on the entity as a platform to discuss cooperative approaches to responding to the PRC’s policies and actions. This is timely and necessary. Unlike the G7, the Quad includes the most populous democratic country and largest developing country in the world. This means that the Quad’s geo-tech position and agenda is not only informed by the interests of fully industrialized and advanced economies in Asia, North America, or Europe. The other international grouping relevant to these issues would be the D10, which includes the G7, South Korea, Australia, and India. As a more unwieldy grouping, it may not be as agile as the Quad in moving decisively on difficult and complex issues.

Just as the PRC is employing military, economic and technological approaches in its bid to remake the world and achieve dominance, the Quad countries need to do the same to implement an effective balance and counter. In this sense, the focus on the geo-technological front is a complement to other forms of collective action, and essential to promoting a free, open, and prosperous future in the Indo-Pacific.
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