The Tech 10: A Flexible Approach for International Technology Governance

Anja Manuel

Roman paved roads, ancient Chinese compass and gunpowder, British steamships and repeating firearms—great power competition has always been defined by who has the technological edge. China, Russia, Iran, and other competitors recognize that technology can nullify the military and economic supremacy the U.S. has enjoyed for decades.

China in particular, is singularly focused on catching and surpassing the U.S. It does so legally, by investing hundreds of billions of dollars in key technologies, focusing on STEM education and mining open-source databases. It does so illicitly through cybertheft and industrial espionage. And it does so through coercion: forcing non-Chinese companies to transfer their technologies to Chinese joint ventures as the price of doing business in China.

How we choose to react will define whether the United States continues to lead in—and reap the benefits of—technical innovation. Previous U.S. presidents of both parties were unable to shape China's behavior. Much of the energy of the Trump administration has focused on "defensive" or punitive measures: tightening foreign investment restrictions and export controls and slowing cross-border collaboration. But playing defense alone will not be enough; the U.S. must have an affirmative strategy to ensure we remain competitive, and that—importantly—includes **deepening our engagement with allies.**

After World War II, Europe and the U.S. led to create the international order as we know it—including building the World Bank and International Atomic Energy Agency, among others. They established norms for peaceful economic relations and international standards governing everything from telecommunications to satellites to safe flight paths. It was an enormous effort, and it paid off. It is high time for a comparable effort to form a robust international innovation ecosystem among countries that share the same values in tech development: a proposal Mike Brown, Pav Singh, and I have spoken about and call the "Tech 10."

A Flexible Forum for Coordinating Technology Policy

The Tech 10 would join Europe and the United States with other countries who share a vibrant innovation sector, support public investment in science and technology, and are committed to safe and ethical use of emerging technologies. **Group membership would be somewhat flexible depending on the subject discussed, but the inaugural members could include powers such as the United States, Germany, the United Kingdom, Australia, Canada, France, Israel, India, Japan, and South Korea.** Others could apply to join as long as they agree to adhere to the same high standards.

Importantly, **the world should *not* create another standing organization** like the Organisation for Economic Co-operation and Development (OECD) or International Telecommunications Union. These government-led institutions are by their nature slow and bureaucratic, beholden to whichever national leaders are in power, and prone to issue vague communiques that no one acts on.

Instead, a flexible, informal structure of working groups, which convenes senior government officials, technology CEOs, and academic experts in a series of closed-door meetings that drive concrete outcomes, is needed.

A **flexible structure** is key to accommodate allies who view the China threat differently and who may be world class at one technology covered but not another. For example, a working group on semiconductor policy might involve the U.S., South Korea, Japan, the Netherlands, and even Taiwan, while a working group on AI standards might emphasize members from the U.S., UK, Canada, Israel, India, and beyond. This ensures the most knowledgeable and impacted countries are at the table for each topic.

The Tech 10 would incorporate **non–policy makers—industry leaders and academics**—**from the outset**. Too often, governments do not have the technical expertise to make thoughtful decisions about innovation policy. Also, engaging industry from the start would help them understand why certain restrictions may be necessary and why "business as usual" with China may no longer be feasible.

Existing Approaches and How the Tech 10 Differs from Them

Since Mike, Pav, and I began to float this concept with U.S. and European colleagues about 18 months ago, a number of think tanks have also tried to define how it could work,[1] and both the U.S. and UK have announced smaller, piecemeal approaches to technology coordination.

In May 2020, the UK government proposed creating a "Democracy 10," which would include the G-7 countries along with South Korea, India, and Australia in an effort to set global standards on 5G and secure supply chains.[2] So far, the only activity has been a statement by an aide to Boris Johnson. As far as we know, no other proposed member country has engaged in any meaningful way with the concept, and no actual meetings have happened.

Additionally, the U.S. government has announced several efforts to coordinate allies on technology issues. All are nascent, vague, and, as far as we can tell, not coordinated through the interagency process. For example, in September 2020, the Defense Department held an "AI Partnership for Defense" meeting, which included delegations from thirteen partner nations, focusing on how to best utilize artificial intelligence in national defense.[3] The State Department has put forward two separate proposals. It announced the "Economic Prosperity Network" in spring 2020 as a group of ten nations focused on securing supply chains against China: pushing companies "to operate under the same standards across digital business, energy, infrastructure, research, trade, education, and commerce."[4] As best we can tell, nothing has happened yet. This is separate from the recently proposed State Department "Clean Network Initiative (CNI)," which wants to enlist other countries to limit the influence of Chinese telecom makers, such as Huawei and ZTE, on American communications networks. It is also in its infancy. Finally, the U.S. Trade Representative issued a vague joint statement with the EU and Japanese trade ministers in January 2020, saying that each would work "to stop harmful forced technology transfer policies and practices, including through export controls, and investment review for national security purposes."[5]

These efforts are commendable but disorganized, limited in scope, and far from sufficient. It's time to think bigger—and across multiple technologies.

Topics for the Technology 10

Due to its flexible structure, the Tech 10 could begin with a few narrowly scoped problems and create additional working groups to tackle other thorny issues as countries begin to buy into the process.

While there are numerous topics a Tech 10 could address, promising early candidates include:

a)   ensuring the U.S. and its friends stay in the lead in semiconductor design and production;

b)   securing a diverse supply of 5G and 6G technology (whether through an open source software layer or other mechanisms);

c)   coordinating narrowly tailored investment screening and export controls;

d) ensuring research integrity while preserving basic openness at universities and, to a lesser extent, national labs; and

e) setting international technical standards and beginning to define norms to govern safe uses of AI and other advanced technologies.

A more ambitious, future target for the Tech 10 might be to coordinate research and pool resources and talent to tackle key basic science challenges underlying disciplines such as advanced AI, advanced biotechnology, and quantum computing.[6]

Putting It All Together

Here are two examples of how a Tech 10 might work in practice.

Semiconductors are the crucial building block of the information economy. While the most advanced chips are designed in the U.S., American semiconductor manufacturing companies are losing market share and risk falling behind in state-of-the-art innovation. China is lagging but investing over $100 billion to catch up. State-of-the-art semiconductor fabs—or factories—costing $10-20 billion each are mostly found in Korea and Taiwan.[7] Financial incentives from Tech 10 governments could bring home production capacity to manufacture the most advanced chips (for defense, advanced AI, and other applications), creating much-needed supply chain security and fueling further technological advances.[8]

A working group on semiconductor policy might involve representatives from the U.S., South Korea, Japan, Taiwan, the Netherlands, and elsewhere. Rather than just writing another report on the problem, the government leaders, academic experts, and tech CEOs could actually implement the solutions. For example, if legislation is needed, government representatives will weigh in with their respective legislative bodies to get it passed. CEOs would commit to a certain level of investment and may receive some government incentives to match their own efforts. Academic institutions across the key countries may focus science research where it is most needed.

A working group on **research integrity** might have an entirely different mandate. Institutes affiliated with the Chinese People's Liberation Army (PLA) have research partnerships with, and send researchers to, prominent universities around the world to acquire cutting-edge technology. Since 2007, the PLA has quietly sent more than 2,500 military scientists to Australia, Canada, Germany, Japan, Singapore, and the U.S. to exfiltrate sensitive information that could facilitate the development of new Chinese military technologies.[9] In response to Chinese practices, Australia recently tightened its rules on university collaborations.[10] Other countries have not.

Yet one of the great strengths of the Western university system is its openness. All research institutions clearly gain from having foreign scientists participate. Many Chinese scientists in particular later stay in the U.S., and over 80 percent would like to stay but are sent back due to our immigration laws. An international working group of university leaders and government officials might, for example, share classified information on Beijing's activities and choose to publicize some of these activities, survey different countries' efforts to ensure basic research remains open and secure, and decide on best practices and encourage each government to implement consistent rules.

As these examples show, the flexible, open structure of the Tech 10 would bring together the most knowledgeable people to actually solve each of these thorny, complex problems and create buy-in from all sides.

Conclusion

The time for the U.S. and friendly countries to let their innovative companies "go it alone" in the face of Chinese industrial policy has passed. Coordinating technology policy with key allies is the most effective way to counterbalance China's systematic efforts—expressed in Made in China 2025 and China Standards 2035—to end the lead of the U.S. and its friends in key tech industries by dominating market share, controlling international standards, and hollowing out its competitors' industrial capacity. Like-minded nations should unite to maintain the lead in developing advanced technologies.

Anja Manuel, former diplomat, author, and advisor on emerging markets, is Co-Founder and Partner along with former Secretary of State Condoleezza Rice, former National Security Advisor Stephen Hadley and former Secretary of Defense Robert Gates, in Rice, Hadley, Gates & Manuel LLC, a strategic consulting firm that helps U.S. companies navigate international markets. She is the author of the critically acclaimed *This Brave New World: India, China and the United States*, published by Simon and Schuster in 2016. From 2005-2007, she served as an official at the U.S. Department of State, responsible for South Asia Policy. Earlier in her career, Ms. Manuel was an attorney at WilmerHale working on corporate governance, international and Supreme Court cases, and represented special committees of major corporate boards before the U.S. Congress, Department of Justice and the SEC. She was also an investment banker at Salomon Brothers in London. A graduate of Harvard Law School and Stanford University, Ms. Manuel now also lectures at Stanford University. Ms. Manuel serves on a number of corporate and non-profit boards and is a frequent commentator on foreign policy for TV, radio, and print press. She is the Director of the Aspen Strategy Group and Aspen Security Forum—the premier bi-partisan forum on foreign policy in the U.S.—and is a member of the Council on Foreign Relations.

[1]   The most comprehensive of these efforts is Martijn Rasser's working group report for the Center for New American Security (CNAS), done with substantial input from U.S. and allied country experts. Ely Ratner et al., *Rising to the China Challenge: Renewing American Competitiveness in the Indo-Pacific,* CNAS, December 2019, https://www.cnas.org/publications/reports/rising-to-the-china-challenge. Dan Kliman also did excellent work sketching out with the representatives from Israel, Japan, Norway, and Australia on which tech policies they could coordinate in the future. Daniel Kliman, Ben FitzGerald, Kristine Lee, and Joshua Fitt, *Forging an Alliance Innovation Base*, CNAS, March 2020, https://www.cnas.org/publications/reports/forging-an-alliance-innovation-base. Recently, the Atlantic Council has also produced research about how the U.S. and Europe could cooperate in facing a more aggressive China. Hans Binnendijk, Sarah Kirchberger, and Christopher Skaluba, *Capitalizing on Transatlantic Concerns About China,* Atlantic Council, August 24, 2020, https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/capitalizing-on-transatlantic-concerns-about-china/.

[2]   Erik Brattberg and Ben Judah, "Forget the G-7, Build the D-10," *Foreign Policy,* June 10, 2020, https://foreignpolicy.com/2020/06/10/g7-d10-democracy-trump-europe/.

[3]   Patrick Tucker, "France, Israel, S. Korea, Japan, Others Join Pentagon's AI Partnership," *Defense One,* September 16, 2020, https://www.defenseone.com/technology/2020/09/france-israel-s-korea-japan-others-join-pentagons-ai-partnership/ 168533/.

[4]   Humeyra Pamuk and Andrea Shalal, "Trump Administration Pushing to Rip Global Supply Chains from China: Officials," *Reuters*, May 4, 2020, https://www.reuters.com/article/us-health-coronavirus-usa-china/trump-administration-pushing-to-rip-global-supply-chains-from-china-officials-idUSKBN22G0BZ.

[5]   "Joint Statement of the Trilateral Meeting of the Trade Ministers of Japan, the United States and the European Union," January 14, 2020, https://ustr.gov/about-us/policy-offices/press-office/press-releases/2020/january/joint-statement-trilateral-meeting-trade-ministers-japan-united-states-and-european-union.

[6]   There's no shortage of topics a Tech 10 could consider. Dan Kliman and his co-authors in *Forging an Alliance Innovation Base* recommend several additional possible areas for cooperation, such as expanding rare earths supply chains, addressing digital disinformation, and building military cyber resiliency. Senator Mark Warner and his staff are also thinking carefully about this issue and have recommended other areas, such as developing norms around responsible state behavior in cyberspace, international data protection/privacy rules, and harmonizing immigration and student visas across a tech alliance for freedom of talent movement. All are valuable, but I believe the ones listed above are most pressing and require immediate international cooperation.

[7]   Saif M. Khan and Carrick Flynn, *Maintaining China's Dependence on Democracies for Advanced Computer Chips,* Brookings, April 2020, 4, https://www.brookings.edu/research/maintaining-chinas-dependence-on-democracies-for-advanced-computer-chips/.

[8]   Martijn Rasser, "Countering China's Technonationalism," *The Diplomat*, April 24, 2020, https://thediplomat.com/2020/04/countering-chinas-technonationalism/.

[9]   PLA's National University of Defense Technology (NUDT) has established "overseas study bases" at academic institutions ranging from Oxford, Cambridge, and Harvard.

[10]   "Guidelines to Counter Foreign Interference in the Australian University Sector," University Foreign Interference Taskforce, November 2019, https://docs.education.gov.au/system/files/doc/other/ed19-0222_-_int_-_ufit_guidelines_acc.pdf.