Compete.
Council on Competitiveness

National Commission on Innovation & Competitiveness Frontiers

A Council Plan to Redefine 21st Century Productivity, Prosperity and Security

Developing and Deploying at Scale Disruptive Technologies

Working Group 1 Charter

Setting the Stage for the Commission Working Groups

Despite significant strengths in its innovation capabilities and capacities—documented in the Council on Competitiveness *2018 Clarion Call for Competitiveness*—U.S. competitiveness is dynamic and ever transforming. And our nation's comparative position in the global competitiveness arena can change rapidly.

Now and into the future, U.S. companies, industries and our national and regional economies that expect to compete will have to rise to the challenge of this dynamic, and reorganize for an age of growing technological, economic and political disruption. Our government, communities and our education system must be prepared to support rapid change, and help those who are displaced or negatively affected by technological and competitive change.

When the United States controlled the global direction of technology, we were positioned to control our economic destiny. That is no longer guaranteed.

The United States must take stock. We must assess if our innovation ecosystem and its investments are enough to maintain our global economic and technological leadership. And, as technology seeps into nearly every aspect of American life, our national leaders and our governments at every level must bolster their knowledge and response capabilities to match the strengthening global competition, technological change and coming disruptions.

What will the United States do in the face of challenges at home and coming from abroad?

Will we plan for the long term, transforming challenge to opportunity? Will we put in place the talent, innovation capital and infrastructure necessary for continuing success in the decades to come? Will we recognize the multifaceted nature of today's global innovation race, and come together across all sectors to form a new "innovation compact" for economic growth, productivity and inclusive prosperity?

To confront and overcome critical challenges facing the U.S. innovation engine…

To create momentum in the United States to outpace the rest of the world in innovation capacity, capability and competitiveness…

To build on the Council's history of work in defining, articulating and activating America's innovation movement…

And to develop new partnerships and efforts to launch and scale innovation-based research, businesses and ventures in the United States.

The Board and Executive Committee of the Council has formed the National Commission on Innovation & Competitiveness Frontiers (Commission) to prepare the Nation for a new, unfolding and evolving innovation reality that will shape the nation's prosperity for the next half century.

In the first year of the Commission's work, the Council will build a powerful set of recommendations with **Working Groups focused on three core pillars:**

1. **Developing and Deploying at Scale Disruptive Technologies.**
2. **Exploring the Future of Sustainable Production and Consumption, and Work.**
3. **Optimizing the Environment for the National Innovation System.**

Working Group 1: Developing and Deploying at Scale Disruptive Technologies

Mission

The **Developing & Deploying at Scale Disruptive Technologies Working Group** aims to identify long-term, productivity and prosperity-enhancing technology pathways for the United States, and to recommend steps needed to ensure the development and deployment activities around these pathways create sustained value in the United States (jobs, new companies and industries, wealth, better living standards, etc.).

To accomplish this aim, the Working Group will map promising, strategic technology pathways to enhance productivity and economic growth. Building on those roadmaps, the Working Group will create and prioritize concrete, sector-appropriate (government, industry, academia, national laboratories, workforce) recommendations to bolster the talent, investments and infrastructure supporting the technology pathways.

Timeframe

The Working Group will:

- Form in late summer and fall 2019, following the launch meeting of the Commission.
- Convene physically in early 2020 for cross-Working Group level set conference.
- Continue virtual engagement in spring 2020, with potential physical meetings hosted by a Commissioner.
- Target delivery of final recommendations at a summer 2020 Commission meeting.

Background

Great revolutions in science and technology are rapidly advancing—a new phase of the digital revolution characterized by vast deployment of sensors, the Internet of Things, artificial intelligence and big data; biotechnology and gene-editing; nanotechnology; autonomous systems; etc.

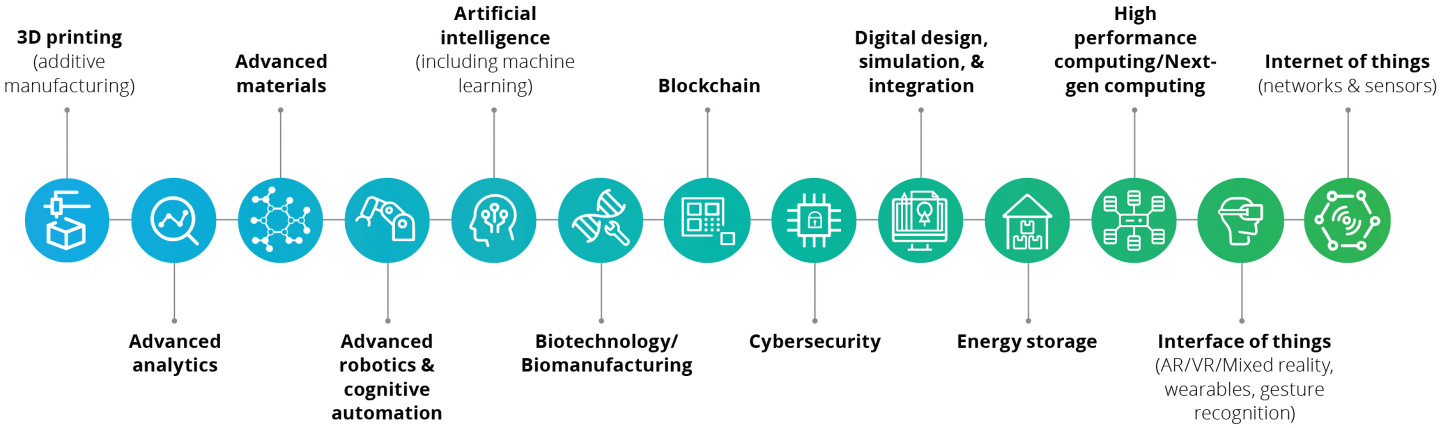
Each of these technologies—and others still emerging—has numerous applications that cut across industry sectors, society and human activities. Each is revolutionary; each is game-changing in its own right. But they are now colliding and converging on the global economy and society simultaneously. They are the drivers of 21st century global competitiveness, economic growth and productivity, with profound implications for U.S. national security and society. U.S. economic growth, jobs and standards of living will hinge on our ability to leverage and scale these technologies for economic impact.

For example:

Biotechnology
The cost of gene sequencing has dropped more steeply than Moore's Law, igniting the scaling of biotech in research; in industries such as agriculture, food, healthcare and pharmaceuticals; energy; and retail genomics screening for health risks and ancestry. New gene-editing technology such as CRISPR-Cas9 is taking biotech to the next level with, theoretically, the ability to cut and paste bits of DNA into the genome of any living thing with unprecedented precision and efficiency. Recently, a Chinese researcher announced he gene-edited human embryos with the aim of conferring HIV resistance, which resulted in the birth of twins, whose memory and cognition may have also been enhanced by

Figure 1. A Snapshot of Exponential and Disruptive Technologies Driving Innovation

Source: *Exponential Technologies in Manufacturing, 2018*, Council on Competitiveness, Deloitte and Singularity University.



the gene edit.[1] It has been reported that Chinese scientists used gene-editing to create transgenic monkeys with extra copies of a human gene that may play a role in human intelligence. As reported, the gene-edited monkeys demonstrated improved short-term memory.[2] Researchers are also working in the field of synthetic biology—stitching together long stretches of DNA and inserting them into an organism's genome, or synthesizing an organism's entire genome—to modify or create novel biological organisms not found in nature.

Sensorization and the Internet of Things

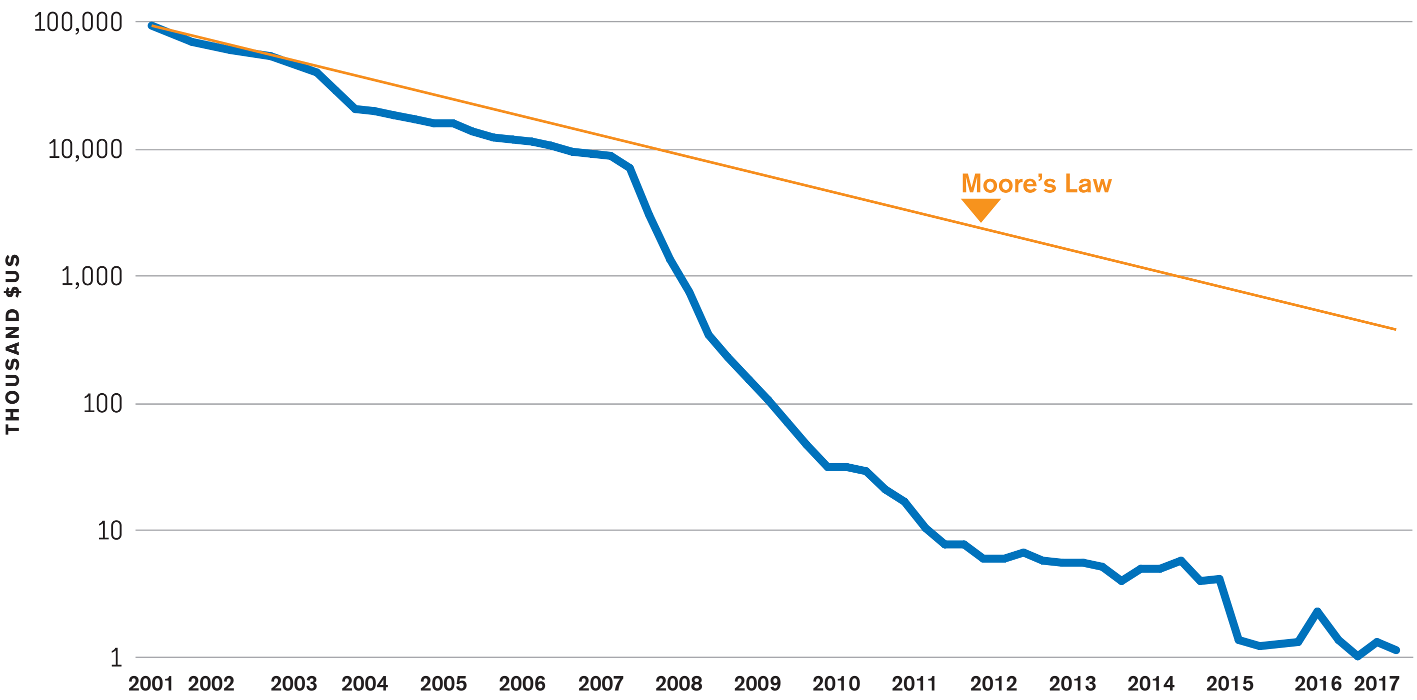
Development of the largest system in human history is underway, in essence, a "nervous system" that detects, sends signals and responds, generating data at unprecedented scale for analysis. A wide variety of sensors are being deployed rapidly across natural, built, production and personal environments, many of them connected to networks. These sensors and networks are connecting people, machines and objects in a wide range of human activity, including industrial production, supply chains, the military, transportation systems, agriculture, utilities, public works, health monitoring, environmental monitoring and more. In these venues, the data generated and higher levels of control offer new ways to improve productivity, optimize production, improve products,

1 China's CRISPR Twins Might Have Had Their Brains Inadvertently Enhanced, Technology Review, February 21, 2019.

2 Chinese Scientists Have Put Human Brain Genes in Monkeys—and Yes, They May be Smarter, MIT Technology Review, April 10, 2019.

Figure 2. Cost Per Genome

Source: National Human Genome Research Institute, genome.gov/sequencingcosts.



enhance services and safety, and reduce costs. For example, it has been estimated that productivity gains based on the Industrial Internet of Things could add $15 trillion to global GDP by 2030.[3]

Big Data

In addition to sensors deployed across natural and built environments, people are also generating mind-boggling amounts of data collected through cell phones, social media, transactions, internet searches, wearable devices and other activities. Estimates indicate this data tsunami is nearly doubling in size every two years, and pouring into every area of society and the economy.[4] Stunning analytic power is unleashed. Big data and data analytics are providing powerful new tools for gaining insight in a wide range of fields, such as business, manufacturing, marketing and advertising, financial transactions, health care, sports and entertainment, crime fighting, agriculture, transportation management, disaster management, animal migration, astronomy and historic research.

3 Industrial Internet, Pushing the Boundaries of Minds and Machines, Peter Evans and Marco Annunziata, GE, November 26, 2012.

4 The Digital Universe of Opportunities: Rich Data and the Increasing Value of the Internet of Things, IDC, April 2014.

For example, harvesting data from its user base of 2 billion people, Facebook can enable a previously unimaginable level of targeting, offering advertisers hundreds of thousands of personal attributes from which to choose in targeting ads.[5]

Autonomous Systems

Deployment of autonomous systems is accelerating. Self-driving automated vehicles could be available within the next decade, with disruptive effects on employment and infrastructure, and numerous manufacturing and service industries such as auto manufacturing and repair, parking garages, the taxi industry, goods delivery, mass transportation systems, road and highway construction, traffic management and urban planning. Drones are deploying in a wide variety of applications, and about 2 million industrial robots are in operation worldwide, expected to grow to 3 million by 2020.[6] The use of service robots is increasing in areas ranging from logistics and medical applications to lawn mowing and window cleaning. Robots and autonomous systems are likely to become commonplace, working in homes and offices, assisting in hospitals and classrooms, helping run farms and mines, and caring for the elderly. These systems will interface and team with humans to enhance our daily lives and change the patterns of society.

…the one who becomes the leader in this sphere (AI) will be the ruler of the world.

Vladimir Putin
President of Russia

Artificial Intelligence

AI could be one of the most disruptive technologies of the 21st century. Broad application of AI could lead to an intelligent society, disrupting business, societal patterns, the workforce, the global balance of power and how we live our lives. It has been estimated that AI could contribute $15.7 trillion to global GDP by 2030, bigger than the GDP of any country other than the United States.[7] The nation that leads in AI—in its development, application and deployment—will lead and benefit from a massive global transformation.

Issues

The United States must compete in a multipolar technology world. In 1960, the United States dominated global R&D, accounting for a 69 percent share of global R&D investment.[8] The U.S. share has dropped to 29 percent in 2017,[9] diminishing U.S. dominance and leverage over the direction of technology advancement. U.S. competitors around

5 The Secretary, United States Department of Housing and Urban Development, on behalf of Complainant Assistant Secretary for Fair Housing and Equal Opportunity vs. Facebook, Inc., Charge of Discrimination, March 28, 2019.

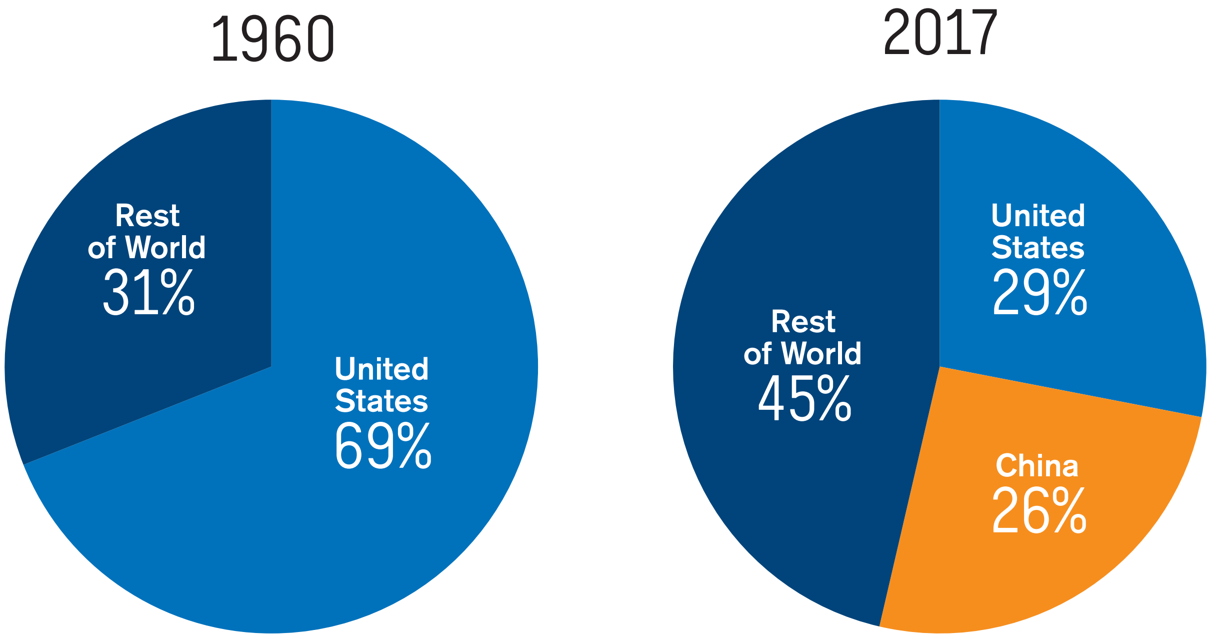
6 Robots Double Worldwide by 2020, International Federation of Robotics, May 30, 2018.

7 Sizing the Prize: What's the Real Value of AI for Your Business and How Can You Capitalise? PriceWaterhouseCoopers, 2017.

8 U.S. Department of Commerce, Office of Technology Policy, *The Global Context for U.S. Technology Policy*, Summer 1997.

9 Main Science and Technology Indicators, OECD.

Figure 3. U.S. Share of Global R&D Expenditures
Source: OECD.



the world seek to leverage emerging technologies to advancing productivity, job creation, standards of living and, in some cases, their geopolitical goals. As a result, many deploy policies and programs to scale new technologies and innovation, and to create a business environment to achieve this impact. These countries are instituting their own distinctive innovation ecosystems, which may not be compatible or friendly with U.S. systems of innovation.

Some nations' science, technology and innovation efforts are strongly guided by national strategic plans, and many have high-level ministries devoted to stimulating technology and innovation. Many countries have national research programs or projects that target emerging technologies and fields. Other countries may deploy protectionist policies and illicit means to advance their technology positioning.

Potential questions for the Working Group to consider:

- What is the outlook for U.S. global competitiveness in the application and deployment of disruptive technologies?
- In which of these technologies is the United States comfortably ahead globally, behind or at risk of falling behind?
- What factors account most for the U.S. global competitive position in disruptive technologies?

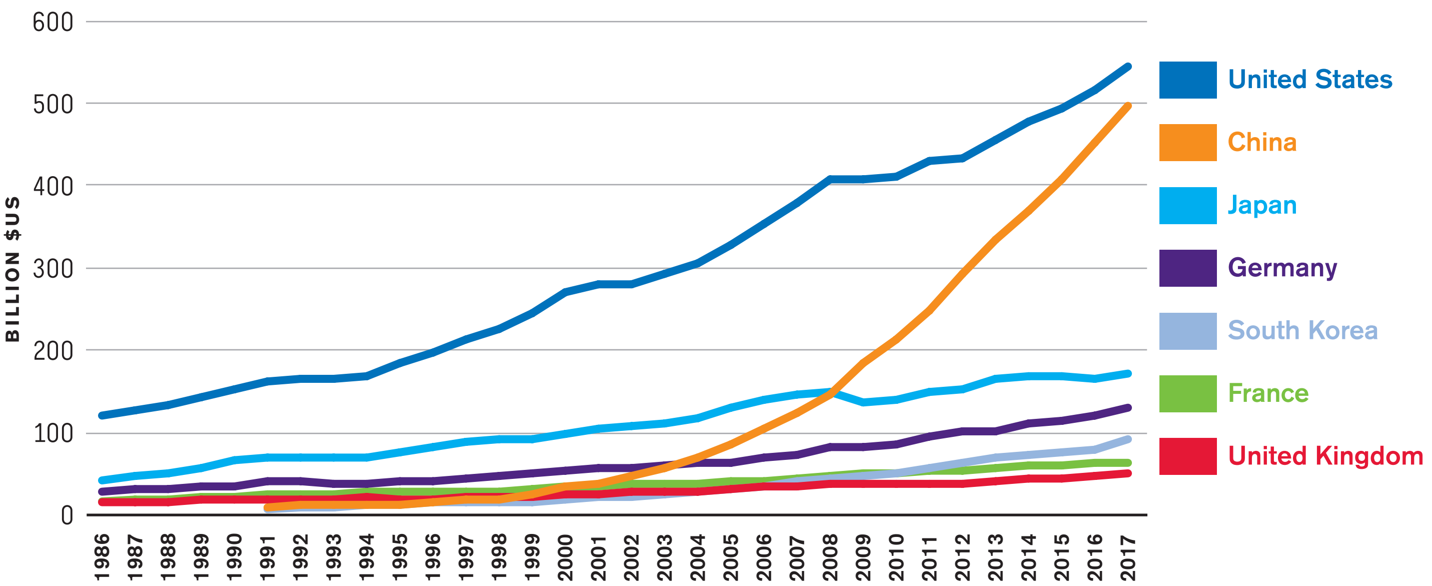
- Should the United States move its global technology leadership to the top of the national agenda?
- What kind of leadership structure in government—in both the Executive Branch and Congress—is needed to address the multiple factors affecting technology development, commercialization, deployment, and innovation in a strategic and integrated way?
- Should the U.S. government systematically monitor what other nations are doing to advance and scale new technologies and innovations?

Gearing up an ecosystem that can accelerate U.S. technological innovation. As the pace of technological change accelerates, achieving higher levels of U.S. GDP growth and maintaining U.S. global competitiveness will depend on the rate of U.S. innovation and flow of U.S. innovation processes.

Potential questions for the Working Group to consider:

- To what degree does the United States need to accelerate technology development, commercialization and deployment? How much faster do we need to go to keep pace with the technological and economic disruption that is happening? Can the current system be optimized to operate at that pace?
- Can the "tech transfer" model of innovation scale to the size of the emerging opportunities and operate at the speed at which technology is accelerating and disruption occurring?
- What in the fundamental structure of the U.S. innovation system is dragging down the speed at which the United States develops and scales new technologies?
- What factors play the most pivotal role in the speed with which the United States develops, scales and deploys technologies? What factors in government, universities and the private sector? What are the highest priorities for change?
- Overall, is the United States investing enough in research and technology development ($543 billion annually; 2.79 percent of GDP)? What areas of investment require more funding to maintain U.S. global technology leadership. Basic research? Applied research? Development? Research centers, hubs, accelerators, etc.?
- Do we need new types of R&D programs, such as national technology initiatives, technology focused centers and hubs, critical technology targeting, etc.? Should these efforts target the dynamism and innovation capabilities concentrated in U.S. metropolitan areas?
- In this era of disruptive technology and rising strategic competition, what is the proper balance between the speed and dynamics of marketplace, and greater national investment and strategic planning? Can these co-exist in a productive way?
- How can the efforts of national government be better integrated with those at the state and local level?
- How do we link geographic clusters of innovation to rural areas that need economic revitalization? Can we afford the costs (rural schools, health care, infrastructure)?

Figure 4. Gross Domestic Expenditure on R&D
Source: OECD Main Science and Technology Indicators



- Does the United States need to rethink how its spends its public R&D investment? Are we spending it at the right pivot points? And how can we spend it in ways that ensure the opportunities created by this investment are captured by the United States?
- As they become more globalized and remain open in their research, do U.S. research universities have a responsibility to help ensure U.S. taxpayers capture the benefits from the university R&D they fund? What more could universities do? Should they protect the technology?
- Should we embed more public R&D in private organizations as a measure of protection and ability to drive development toward commercialization?
- Should the United States launch a global dragnet for top researchers and innovators, and encourage them to come and work in the United States?
- Companies increasingly look outside the firm for breakthrough innovations, while technology breakthroughs increasingly come from universities and small start-up companies. Yet, industry spends just one percent of its R&D investment at universities.[10] What do research universities need to do to make partnering more attractive and productive for industry? Should universities seek routine industry input to shape and guide the research they perform? Do we need to reexamine IP/licensing models?

10 Table 6, U.S. R&D Expenditures, by Source of Funds and Performing Sector: 1953-2017, National Patterns of R&D Resources: 2016-17 Update, National Science Foundation, February 27, 2019.

- Are greater funding and more programmatic efforts needed to scale promising technologies being developed by U.S. start-ups? What would these efforts be, and who would deploy them?
- How can we increase flows of innovation across industries, enabling companies to tap innovations outside of their own industries?

Key U.S. science and technology infrastructure is eroding. Infrastructure that supports knowledge creation and technology development is vital for the 21st century knowledge economy and U.S. success in innovation-based global competition. This includes laboratories, research and technology demonstration centers, supercomputers, test-beds, wind tunnels, propulsion and combustion facilities, simulators and other user facilities. America's national laboratory system is considered a globally unique competitive asset. But, across the system, core scientific and technological capabilities are potentially at risk due to deficient and degrading infrastructure.

Potential questions for the Working Group to consider:

- How do we convince national leaders and the American public that this infrastructure is just as important to the economy as roads, bridges, waterways, etc., and worthy of substantial investment?
- Looking forward—facing accelerating technological advancement and other disruptive developments, such as the industrialization of space—what should be the plan for new science and technology infrastructure?

Confronting rising competitive superpowers. U.S. competitors around the world seek to build and strengthen knowledge and tech-based economies as the basis for advancing productivity, job creation, raising standards of living and, in some cases, advancing geopolitical goals. As a result, many deploy policies and programs to harness science, technology and innovation, and to create a business environment to achieve this impact. These countries are instituting their own distinctive innovation ecosystems, which may not be compatible or friendly with the U.S. innovation system.

Of particular concern—for social, economic and national security reasons—China is rising as a strategic competitive challenger, aiming to wrest global technology leadership from the United States. China:

- Is rapidly strengthening in science and technology. Its investment in R&D has more than doubled since 2010, reaching $496 billion in 2017, second only to the U.S. investment, and now accounts for 26 percent of R&D spending globally.
- Has overtaken the United States in science and engineering publications, and posted double-digit growth rates in international patent filings in every year since 2003, and now lags only the United States in patents filed.[11]
- Is growing its global venture investments at a rapid pace and is focusing on technologies foundational to future innovation: artificial intelligence, autonomous vehicles, augmented/virtual reality, robotics, gene-editing and the entire semiconductor industry ecosystem.

11 Patent Cooperation Treaty Yearly Review 2018, World Intellectual Property Organization, 2018.

Will the 21st century economic center of the world be in the United States, or in Beijing, Berlin or Bangalore?

China is pursuing aggressive plans to dominate the next generation of technology. National policies—such as the 13th Five-Year Plan on National Scientific and Technological Innovation and the Made in China 2025 Plan ($3 billion committed)—are concerted efforts to cultivate indigenous technological innovation, backed by commitments for hundreds of billions of dollars in investment. China's national plan for artificial intelligence is breathtaking in its scope and ambition—estimated at more than $150 billion—a blueprint for constructing an AI innovation ecosystem that they believe will make China the world's AI leader by 2030. They have laid out a vision for the deployment of AI in the construct of society, with plans to invest billions, believing that the nation the leads in AI will shape a global transformation of the economy, society, human activity and national security. This will be backed up by plans also to invest more than $20 billion in the next-generation integrated circuit industry.

China is deploying a multi-pronged strategy to acquire technologies and intellectual property from other countries, including the United States, by both licit and illicit means. This includes building research centers in U.S. innovation hubs, forming partnerships with U.S. research universities, forced joint ventures for market access, sending students to the United States for academic studies, cyber theft and industrial espionage. Moreover, China's model of military-civilian fusion and its policies seek to reduce institutional barriers between civilian and defense science and technology, and to connect the People's Liberation Army, its defense R&D and manufacturing enterprises, government agencies, universities and private companies to create an ecosystem that delivers advanced technologies for China's military.[12]

Potential questions for the Working Group to consider:

- For both economic and national security, does the United States need to ensure that China (or other nations and regions) does not achieve an overmatch position against the United States in technology?
- In which critical technologies is the U.S. competitive position at risk of ceding to China? The European Union? Are there areas of technology for which we need to shore up U.S. efforts?
- Do we need a better understanding of the extent of China's technology collecting in the United States? Does the United States need to crack down on these efforts and how?

12 Blurred Lines: Military-Civil Fusion and the "Going Out" of China's Defense Industry, Pointe Bello, December 2016.

Figure 5. Illustrative Innovation Ecosystem Characteristics/Practices

Sources: OECD Science, Technology and Innovation Outlook 2016; Science and Engineering Indicators 2018, National Science Foundation; 2018 Global R&D Funding Forecast, R&D Magazine, Winter 2018; national S&T plans.

United States

- No. 1 global R&D spender
- No. 1 global spender on basic research
- No. 1 global spender on applied research
- Large expenditure on military R&D
- Business dominates R&D spending
- National research programs
- Unique national laboratory system
- Top research universities
- R&D tax credit
- Small Business Innovation Research program to drive innovation for government missions
- Manufacturing Innovation Institutes
- Science and research parks
- Start-up culture
- Strong venture capital system
- State/regional innovation programs

United Kingdom

- Top research universities
- National plan for science and innovation
- Government department for business innovation
- Two national science and innovation campuses with business enterprise zones
- National Research Councils
- R&D tax credit
- Global Challenges Research Fund targets areas where multidisciplinary research is required
- Tax break for profits from products derived from U.K./EU patents
- Small Business Research Initiative to drive innovation through public procurement
- Networks, clusters, centers to bring university research to industry

Brazil

- National science and technology programs
- Targeting key sectors
- Government-funded competitive grants for R&D in key sectors
- Government-funded technology parks
- Government grants for start-ups
- Tax incentives for purchase of research equipment
- Government credit, grants, equity financing for company innovation

Germany

- R&D investment civilian focused
- National research ministry
- National high-tech strategy
- Industry 4.0 initiative to promote smart, digitally-infused manufacturing
- Public research institutes
- Large network of applied research institutes
- Funded efforts to strengthen university-business S&T partnerships
- Competitive grants to business
- Tax incentives/grants for investing in start-ups
- Public-private investment fund to ready start-ups for venture capital
- Government funds for cutting-edge research at SMEs
- Government support for promoting university spin-outs
- Tax incentives/grants for investing in start-ups
- Public-private investment fund to ready start-ups for venture capital

China

- No. 2 global R&D spender
- No. 1 global spender on experimental development
- National S&T strategic plans
- National ministry
- National research centers
- Science and research parks
- National seed and start-up capital fund
- Funding for targeted emerging technologies
- Targeting industry clusters
- National strategy to foster entrepreneurship
- National demonstration projects
- Program to attract foreign S&T talent
- Business tax incentives for university research
- State subsidies to domestic firms
- Forced technology transfer for market access
- Espionage/IP theft

Japan

- Science, technology and innovation dominated by large corporate groups
- Vast majority of R&D funded by business
- National S&T strategic plan and strategies
- Industry cluster plan
- Efforts to strengthen national research system
- R&D tax credit
- New expedited immigration policies to attract S&Es

India

- R&D centers of global firms
- National ministry
- Government departments focused on industrial research & biotechnology
- National innovation strategy
- National S&T strategic plan
- National Manufacturing Policy
- National Biotechnology Strategy
- Plans for biotech clusters and incubators
- Start-up India initiative to promote entrepreneurial ecosystem
- Technology roadmap targets 12 technologies
- Innovation centers
- National innovation projects
- Plan to promote transfer of public R&D to industrial R&D
- Make in India promotes FDI in manufacturing in India
- Inclusive Innovation Fund/National Innovation Foundation supports innovators from poor and excluded groups

Summary of Key Questions Working Group 1 Could Explore

Topic	Questions
U.S. Competitive Position	• What is the outlook for U.S. global competitiveness in the application and deployment of disruptive technologies? In which of these technologies is the United States comfortably ahead globally, behind, or risk falling behind? • What factors account most for the U.S. global competitive position in disruptive technologies? • For both economic and national security, does the United States need to ensure that China does not achieve an overmatch position against the United States in technology? • In which critical technologies is the U.S. competitive position at risk of ceding to China? Are there areas of technology for which we need to shore up U.S. efforts?
Intelligence Gathering	• Should the U.S. government systematically monitor what other nations are doing to advance and scale new technologies and innovations? • Do we need a better understanding of the extent of China's technology collecting in the United States? Does the United States need to crack down on these efforts and how?
Leadership	• Should the United States move its global technology leadership to the top of the national agenda? • What kind of leadership structure in government—in both the Executive Branch and Congress—is needed to address the multiple factors affecting technology development, commercialization, deployment, and innovation in a strategic and integrated way?

Topic	Questions
Strategy	• To what degree does the United States need to accelerate technology development, commercialization, and deployment? How much faster do we need to go to keep pace with the technological and economic disruption that is happening? Can the current system be optimized to operate at that pace? • Can the "tech transfer" model of innovation scale to the size of the emerging opportunities, and operate at the speed at which technology is accelerating and disruption occurring? • In this era of disruptive technology and rising strategic competition, what is the proper balance between the speed and dynamics of the marketplace, and greater national investment and strategic planning? Can these co-exist in a productive way? • How can we protect U.S. technology?
Fundamental Structure of Innovation Ecosystem	• What within the fundamental structure of the U.S. innovation system is dragging down the speed at which the United States develops and scales new technologies? • What factors play the most pivotal role in the speed with which the United States develops, scales, and deploys technology? What factors in government, universities, and the private sector? What are the highest priorities for change? • How can the efforts of national government be better integrated with those at the state and local level? • How do we link geographic clusters of innovation to rural areas that need economic revitalization? Can we afford the costs (rural schools, health care, infrastructure)? • How do we convince national leaders and the American public that this infrastructure is just as important to the economy as roads, bridges, waterways, etc., and worthy of substantial investment? • Looking forward—facing accelerating technological advancement, and other disruptive developments such as the industrialization of space—what should be the plan for new science and technology infrastructure?

Topic	Questions
Investment	• Overall, is the United States investing enough in research and technology development ($543 billion annually; 2.79 percent of GDP)? What areas of investment require more funding to maintain U.S. global technology leadership? • Does the United States need to rethink how its spends its public R&D investment? Are we spending it at the right pivot points? And how can we spend it in ways that ensure the opportunities created by this investment are captured by the United States? • As they become more globalized and remain open in their research, do U.S. research universities have a responsibility to help ensure U.S. taxpayers capture the benefits from the university R&D they fund? What more could universities do? Should they protect the technology? • Should we embed more public R&D in private organizations as a measure of protection and ability to drive development toward commercialization? • Are greater funding and more programmatic efforts needed to scale promising technologies being developed by U.S. start-ups? What would these efforts be, and who would deploy them?
Programs	• Do we need new types of R&D programs, such as national technology initiatives, technology focused centers and hubs, critical technology targeting, etc.? Should these efforts target the dynamism and innovation capabilities concentrated in U.S. metropolitan areas? • Should the United States launch a global dragnet for top researchers and innovators, and encourage them to come and work in the United States?
Partnerships	• What do research universities need to do to make partnering more attractive and productive for industry? Should universities seek routine industry input to shape and guide the research they perform? Do we need to reexamine IP/licensing models? • How can we increase flows of innovation across industries, enabling companies to tap innovations outside of their own industries.

Council on Competitiveness
900 17th Street, NW, Suite 700, Washington, D.C. 20006, T 202 682 4292
Compete.org

Compete.
Council on
Competitiveness