



Compete.

Council on  
Competitiveness

# Summer 2022 Meeting of the Council on Competitiveness Board, Executive Committee and National Commissioners

Gallup Headquarters  
July 13, 2022

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# Introduction

When the National Commission on Innovation & Competitiveness Frontiers (Commission) launched in 2019, no one could have known that the world was entering an era of complete turnover, restructuring, social and economical turmoil, and rapid transformation.

The Commission took on this challenge—now with even more relevance and pressure to develop new ideas and recommendations to transform the economy sustainably and long-term. The result, summarized in the December 2020 [Competing in the Next Economy](#) report, had measurable impact and many of the report's recommendations—based on the Council's targeted effort to engage and leverage partnerships through its membership, and in Congress and the Biden-Harris Administration—have been implemented.

The recent passing of the CHIPS and Science Act brings together many of the Council's priorities to increase U.S. domestic research and development capabilities, manufacture critical technologies, secure supply chains, and boost global competitive leadership of the United States in innovation.

Since publishing the groundbreaking report *Competing in the Next Economy*, the Council has witnessed more transformations that require tailored solutions.



*Mr. Brian Moynihan, Chair of the Board and Chief Executive Officer, Bank of America, and Chair of the Board, Council on Competitiveness; Dr. Sethuraman Panchanathan, Director, National Science Foundation; and the Hon. Deborah L. Wince-Smith, President & CEO, Council on Competitiveness.*

Throughout various innovation initiatives, the Council has worked to leverage its unique community of leaders for this goal, and the Commission—with its unique community of innovation leaders—has developed a strategy to meet new, changed and persistent challenges.

The Board, Executive Committee and National Commissioners came together on July 13, 2022, to assess the past year of the Council's work and lay the groundwork for the year ahead. This meeting occurred at a time of tremendous transition in the U.S. economy—compared to only year ago—with high inflation, an ongoing conflict in Ukraine and continued disruptions from the COVID-19 pandemic.

# State of the Council

The Council has continued its mission to push forward pressing issues, co-develop new recommendations and set an agenda to boost U.S. global competitive leadership through its activities in its national innovation initiatives, engagement with policy leaders in Washington, and discussions with its members in 2021 and 2022.

The Council's success in bringing this mission to the forefront of national policy making hinges on its community of members and partnerships. Over the past years, the Council has continuously expanded its membership and entered new partnerships, and the pandemic has made it even more apparent that speed and agility to move forward and drive innovation are crucial, in light of increasing global competition.

The Council has made it a priority to achieve a wider network of members and partners across the United States, with the intent to achieve greater inclusion and increased regional innovation. And we are therefore particularly pleased to have expanded our membership to include numerous new members and partnerships across the country in 2021 and 2022



*The Hon. Deborah L. Wince-Smith, President & CEO, Council on Competitiveness, and Co-Chair, National Commission on Innovation & Competitiveness.*

(see Box 1). These new members will continue to grow and execute the mission of the Council and the Commission. The Council continues the membership expansion efforts and is working to capture underrepresented regions of the country—and we encourage our members to use their respective networks to increase the impact of the Council's collective mission.

**BOX 1****New Members in 2021 and 2022 (as of August 2022)****Dr. Tony Allen**

President  
Delaware State University

**Dr. Stuart Bell**

President  
University of Alabama

**Dr. Walter Carter, Jr.**

President  
University of Nebraska System  
Executive Committee  
Member, Council on Competitiveness

**Dr. Daniel Diermeier**

President  
Vanderbilt University

**Dr. Philip J. Hanlon**

President  
Dartmouth College

**Dr. Bill Hardgrave**

President  
University of Memphis

**Mr. Thomas Hudson**

President  
Jackson State University

**Dr. Mark Keenum**

President  
Mississippi State University

**Dr. Richard Linton**

President  
Kansas State University

**Dr. Gabrielle Star**

President  
Pomona College

**The Hon. Olin Wethington**

Founder & CEO  
Graham Biosciences LLC  
National Commissioner

**Dr. Barbara Wilson**

President  
University of Iowa

In the context of the current time of tremendous turbulence and transition, the Council will expand our ongoing efforts to engage public sector leaders to shape the next generation of public-private partnerships tackling long-term competitiveness challenges.

The Council is exploring opportunities for engagement with the U.S. Department of Energy, the Economic Development Administration, DARPA, foundations, and others. The Council is also exploring opportunities for engagement with DARPA and the Lumina Foundation.

By fostering relationships with important innovation organizations and relevant federal agencies, the Council is taking steps to increase the impacts of its

recommendations and policy work, and leverage its membership for public-private partnerships, now and in the future.

**Council Initiatives in 2021 and 2022**

The Council's innovation initiatives—the **National Commission on Innovation & Competitiveness (Commission)**, the **Technology Leadership and Strategy Initiative (TLSI)**, the **University Leadership Forum (ULF)** and the **Advanced Computing Roundtable (ACR)**—are the core pillars of the Council's strategy to bring forward crucial new issues, develop ideas and recommendations. In 2021 and 2022, these initiatives have been working together to advance the Council's overall mission.

The Commission's [\*Competing in the Next Economy\*](#) report produced findings and recommendations that are embedded within crucial pieces of bipartisan legislation, highlighting Congress' sincere desire to broadly enhance American competitiveness on the global stage. This sentiment is exhibited through the support garnered by the CHIPS+ Act, legislation that seeks to expand domestic computer chip production and stymie over-reliance on foreign supply. Elements of the report's conclusions are also found within the America COMPETES Act and its recently passed companion legislation, which seek to create opportunities for manufacturing, quicken technological advancement in the United States, and strengthen economic and national security. The recent passing of the CHIPS+ Act shows the bipartisan understanding for the need to upgrade American innovation capabilities in light of China's rise in the ranks of global economic superpowers.

The Council has taken deliberate steps to facilitate discussion with American leaders of industry on the future of global competition. The Commission is on the frontier of this effort. The four working groups on the future of sustainability, the development and deployment of at scale disruptive technologies, the future of work, and the future of place-based innovation, will continue to work together to pioneer a comprehensive approach to the rapidly changing economic and technological landscape.

**BOX 2****Mountain West Innovation Summit at the University of Wyoming,  
June 21-22, 2022****Co-hosts**

**Mr. Gregory P. Hill**  
President and Chief  
Operating Officer  
Hess Corporation  
[National Commissioner](#)



**Dr. Edward Seidel**  
President  
University of Wyoming  
[National Commissioner](#)



**Dr. John Wagner**  
Director  
Idaho National Laboratory  
[National Commissioner](#)



**The Hon. Deborah L. Wince-Smith**  
President & CEO  
Council on Competitiveness  
[National Commission](#)  
Co-chair

**Keynote Speakers**

**The Hon. Mark Gordon**  
Governor of Wyoming



**Mr. Tony Aquila**  
CEO  
Canoo



**Dr. Erwin Gianchandani**  
Assistant Director  
National Science  
Foundation

With this mission in mind, the Council convened, under the auspices of the Commission, in June 2022 in Laramie, WY, for the Mountain West Innovation Summit. The event's four co-host and National Commissioners—the Hon. Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; Dr. Ed Seidel, President, University of Wyoming; Dr. John Wagner, Director, Idaho National Laboratory; and Mr. Gregory P. Hill, Chairman and COO, Hess Corporation—welcomed leaders across the region and the country. The event featured keynotes from the Hon. Mark Gordon, Governor of Wyoming; Dr. Erwin Gianchandani, Assistant Director, National Science Foundation; Mr. Tony Aquila, CEO, Canoo, a new innovative electric vehicle manufacturer.

The Summit also served as a living laboratory to test these new priorities in the working groups and new concepts for the second phase of the Commission. The Summit highlighted the importance of regional innovation and economic development in regions outside of the known innovation hubs on the coasts and allowed for a first discussion of priorities in the working groups that will continue to be developed over the coming weeks and months as the Commission enters into the next phase, in four working groups:

1. The Future of Sustainability
2. The Future of Developing and Deploying at Scale Disruptive Technology
3. The Future of Work, and
4. The Future of Place-Based Innovation

One of the key next steps for the group will be the identification of leaders that will participate in any of these working groups in phase 2. Working Groups will hold dialogues both virtually and in-person throughout the Fall of 2022 and Spring of 2023.

The TLSI, chaired by Dr. Jahmy Hindman, CTO, John Deere; and Dr. Steve Walker, Vice President and CTO, Lockheed Martin, is in its 13th year of operation and continued the effort to engage and deepen the relationships with our nation's most important technology and innovation leaders and bring their



**Top:** TLSI Co-chair Dr. Steven Walker, Vice President and CTO, Lockheed Martin; and Mr. Chad Evans, Executive Vice President, Council on Competitiveness.



**Bottom:** TLSI Co-Chair Dr. Jahmy Hindman, CTO, John Deere.

action priorities to a national agenda in Washington. Through its webinar series “Competitiveness Watch,” the TLSI has engaged with leaders in the Biden-Harris Administration (from the U.S. Department of Energy, the U.S. Department of Defense, the White House Office of Science and Technology, and the National Science Foundation), and continued to discuss the crucial impact of interdisciplinary research for groundbreaking innovations (such as for sustainability efforts, the food industry etc.)

In May 2022, the Council held its first in-person Spring Dialogue since the beginning of the pandemic, with guest speakers from the White House and the NSF, discussing the balance between



*TLSI Spring Dialogue Participants, May 5, 2022.*

attracting skilled research workers and international partnerships with research security and intellectual property protection, how the United States can learn from global allies and partners to restructure the innovation ecosystem and be adequately prepared for future changewaves, as well as DARPA and guests from industry, highlighting the impact of advanced technology on defense and national security.

At the Spring Dialogue in May 2022, Dr. John Smee, Senior Vice President of Engineering, Qualcomm Technologies Inc., presented a model to leverage the network of technology leaders and make a meaningful impact in light of the upcoming midterms and over the coming two years.

The Advanced Computing Roundtable (ACR) Co-chairs Dr. Tommy Gardner, CTO, HP Federal; Mr. Rick Arthur, Director of Advanced Computing, GE Global Research; Dr. Michael McQuade, Special Advisor to the President, Carnegie Mellon University; and the Hon. Patricia Falcone, Deputy Laboratory Director for S&T, Lawrence Livermore National Laboratories, are working to refresh and strengthen its membership through the committed work of its co-chairs. The Council is actively exploring opportunities to re-engage on issues around the future of

U.S. leadership in high-performance computing and the ongoing importance of democratizing this technology across the country.

The University Leadership Forum (ULF) Co-chairs Dr. Michael Lovell, President, Marquette University; and Mr. Jere Morehead, President, University of Georgia, continue to focus on the future of U.S. higher education and its critical role in enhancing competitiveness. The ULF released two major policy statements (see Box 3) in 2021 and 2022 calling for greater support of global cooperation and collaboration around U.S. research and technology priorities and highlighting the threat to the U.S. technology-based innovation ecosystem and calling for an all-of nation response to the new domestic and global competitive realities.

## **Communications and Engagement**

To bolster the impact of the Council's work and increase visibility of the Commission, the Council has taken recent steps to increase engagement and promotion of its activities, research, and partnerships. The Council's website (see Box 4), [Compete](#).

**BOX 3****University and Research Leadership Forum****Need for a National Innovation Response**

In a statement released on March 8, 2022, 49 of the Council's academic and business leaders warned that U.S. leadership in technology-based innovation is under threat, due to deficiencies in the U.S. innovation engine, barriers to developing and scaling new technologies, and an underdeveloped pool of citizens who are equipped with the knowledge, skills, and opportunities to participate and thrive in an innovation-driven economy. The leaders called for a strong, all-of-nation response to the new competitive realities at home and challenges from overseas,

Download the full statement [here](#).

**Critical Role of Collaborative Research**

In a July 8, 2021, statement, more than 40 of the Council's academic and business leaders call for greater support of global cooperation and collaboration around U.S. research and technology priorities. The signatories endorsed increased scrutiny of domestic and foreign bad actors who seek to take advantage of the historic openness of the U.S. research enterprise.

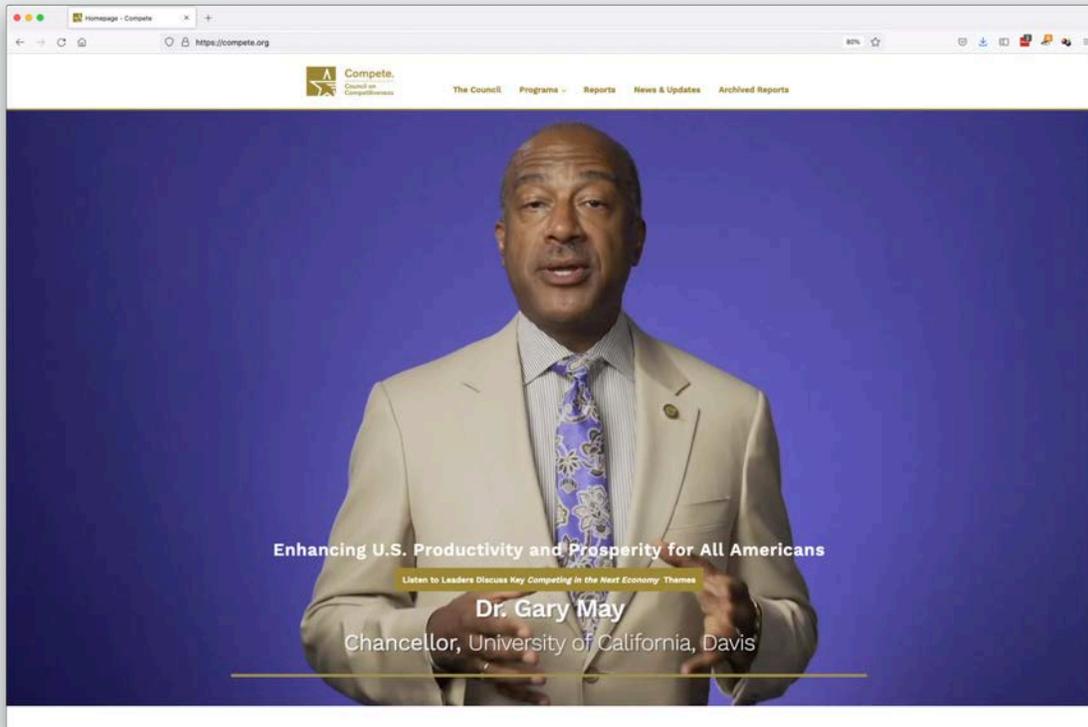
Find the full statement [here](#).

[org](#), underwent a sweeping renovation. The updated interface allows current and prospective members to navigate the site with ease, with ready access to all reports, news, and updates. *Compete Connect*, a monthly e-newsletter penned by the Hon. Wince-Smith, publishes updates on events, discusses the status of significant legislation relating to competitiveness, and advocates for perspectives strongly supported by the Council. The newsletter gives current and prospective members a real-time view into the Council's current priorities and initiatives. The Hon. Wince-Smith also continues to write a monthly column for [Forbes.com](#) on economic growth, population trends, and technological innovation and its impact on international affairs and domestic policy (see Box 6).

**Global Engagement**

On the international front, looking at the rest of 2022 and into 2023, the Council is pursuing several international partnerships and engagements:

- Through its leadership role in its sister organization, the **Global Federation of Competitiveness Councils (GFCC)**, the Council continues to create opportunities for global engagement of its members. This year, the GFCC holds its annual Global Innovation Summit hosted by the Council on Competitiveness of Greece and the Delphi Economic Forum in Athens and Ioannina, Greece, from November 14–18, 2022.

**BOX 4****New Council on Competitiveness Website**

- Queen's University Belfast has asked the Council on Competitiveness to be a strategic partner in 2023 for the **Good Friday Accords** event in Northern Ireland. The event marks the 25th anniversary of peace in Northern Ireland following longstanding conflicts between Protestants and Catholics in the country. The Council's participation in the Good Friday Accords event signals the affirmed commitment by Queen's University Belfast to international cooperation, coordination, and belief in a shared future driven by innovative thinking and socioeconomic progress.
- Building off the success of the U.S.-Japan Competitiveness and Resilience Partnership (CoRe), launched last April, the Council on Competitiveness and the Japan Innovation Network (JIN) recently announced a new initiative: The U.S.-Japan Commission on Innovation and Competitiveness.  
The Commission was established to promote the objectives of the CoRe Partnership and to advance joint research and development and collaborative innovation initiatives, as well as new business models, across the two nations' advanced science and technology ecosystems.

**BOX 5****Council President & CEO the Hon. Deborah L. Wince-Smith's Monthly Forbes.com Column**

Since December 2020, the Hon. Deborah L. Wince-Smith has published a [monthly column](#) on economy, innovation, technology, international affairs, national security and many other issues.

**2020**

|          |   |
|----------|---|
| December | Smart Manufacturing Could Turbocharge U.S. Global Competitiveness |
|----------|---|

**2021**

|         |   |
|---------|---|
| January | Four Ways The Biden-Harris Administration Can Boost U.S. Innovation Tenfold In The First 100 Days |
|---------|---|

|          |   |
|----------|---|
| February | COVID-19 Is Highlighting The Promise And Pitfalls Of The Digital Transformation |
|----------|---|

|       |                                      |
|-------|--------------------------------------|
| March | Fixing Crumbling U.S. Infrastructure |
|-------|--------------------------------------|

|       |   |
|-------|---|
| April | Getting A 'Big Bang' For Our Bucks Invested In Innovation |
|-------|---|

|     |  |
|-----|--|
| May | Who Will Write The Rules For The 21st-Century Global Economy |
|-----|--|

|      |   |
|------|---|
| June | America's Lack Of Chips Is More Than A Blip |
|------|---|

|      |   |
|------|---|
| July | Without Safeguards, U.S. Risks Funding Foreign Innovation |
|------|---|

|        |  |
|--------|--|
| August | Tech Diplomacy Needed Now More Than Ever |
|--------|--|

|           |   |
|-----------|---|
| September | Regulating The 'Next Big Things': Who Is Doing It, And How Does It Affect U.S. Innovation |
|-----------|---|

|          |  |
|----------|--|
| November | The Changing Labor Force: What's Driving It, And What To Prepare For In The Future |
|----------|--|

**2022**

|          |                                |
|----------|--------------------------------|
| February | Bracing For The Silver Tsunami |
|----------|--------------------------------|

|       |   |
|-------|---|
| April | Waves Of Grain And Fruited Plains: The Recipe For Making An American Economic Apple Pie |
|-------|---|

|     |  |
|-----|--|
| May | The Key Ingredients Shaping The Future Of Food |
|-----|--|

|      |  |
|------|--|
| June | Building A New Technology Diplomacy For The 21st Century |
|------|--|

|      |                                  |
|------|----------------------------------|
| July | We Must All Be Digital Guardians |
|------|----------------------------------|

|        |   |
|--------|---|
| August | CHIPS And Science Act Is Now Law. That Doesn't Mean Policymakers' Work Is Done. |
|--------|---|

|           |                         |
|-----------|-------------------------|
| September | I Salute American Labor |
|-----------|-------------------------|

# Past and Present of the National Commission on Innovation & Competitiveness Frontiers

Over the past two years, the National Commission on Innovation and Competitiveness (Commission) has worked together to push key policy for economic growth, U.S. innovation and global competitiveness. Mr. Chad Evans, Executive Vice President, Council on Competitiveness, presented a recap of the work of the Commission thus far, the milestones that have been achieved, and the new challenges and circumstances that will define the work of the second phase of the Commission, before opening up to a discussion of key issue areas for the working groups in 2022 and beyond.



## Launch and Growth of the National Commissioner Community

In August of 2019, the Council launched the Commission with more than 35 CEOs, university presidents, labor leaders, and national laboratory directors. The Commission's membership has since grown considerably, reaching more than 50 National Commissioners, and its network of Commission issue experts has grown into a community of hundreds of leaders in their respective fields.



## Working Groups Phase 1

In January of 2020, the Commission community officially gathered to form working groups. Each working group engaged in robust discussion on a critical theme concerning the future of competitiveness to provide the Commission with actionable policy recommendations:

**Top:** The Hon. Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; Ms. Janet Foutty, Chair of the Board, Deloitte LLP, and Mr. Charles O. Holliday, Jr., Chair Emeritus, Council on Competitiveness.

**Bottom:** Mr. Chad Evans, Executive Vice President, Council on Competitiveness; Mr. Brian Moynihan, Chair of the Board and Chief Executive Officer, Bank of America, and Chair of the Board, Council on Competitiveness; and the Hon. Deborah L. Wince-Smith, President & CEO, Council on Competitiveness.



Working Group 1: Developing and Deploying at Scale Disruptive Technologies

Working Group 2: Exploring the Future of Sustainable Production and Consumption

Working Group 3: Optimizing the Environment for the Nation's Innovation Systems

Working Group 4: Unleashing Capabilities for Work and Entrepreneurship

The Commission's four working groups collaborated on nearly 100 virtual workshops (see Box 7), where they created, debated, and refined potential policy recommendations. The final recommendations were published in the Council's [Competing in the Next Economy](#) report at the end of 2020.

## Year One Report

The [Competing in the Next Economy](#) flagship report details the critical challenges and opportunities as they were discussed in 2020, in more than 50 recommendations, especially as they relate to (1) leveraging disruptive technology for economic impact and national security, (2) repositioning the United States at the global market in light of increasingly aggressive competition from China, (3) expanding economic opportunity by increasing the participation in the innovation economy for all Americans, and (4) increasing sustainable practices in the use of natural resources.



**Top left:** Dr. Walter Carter, Jr., President, University of Nebraska System, and Executive Committee Member.

**Top right:** Ms. Christine Sheehan, Chief of Staff, Gallup; Dr. Darryll J. Pines, President, University of Maryland, and National Commissioner; Mr. William H. Bohnett, President, Whitecap Investments, and Executive Committee Member; Dr. Thomas Mason, Director, Los Alamos National Laboratory, and National Commissioner; and Dr. Suresh V. Garimella, President, University of Vermont, and Executive Committee Member.

**At left:** Mr. Nolan Pike, former President and CEO, Electrolux North America; and Mr. Charles O. Holliday, Jr., Chair Emeritus, Council on Competitiveness.

## Engagement and Leveraging of Commission Recommendations with the Biden-Harris Administration and Congress

Since then, the Council and its members have engaged extensively with leaders in Washington and across our nation to put in place actions that reflect these recommendations. In 2021, the Council



actively engaged with leaders in the Biden-Harris Administration, such as U.S. Secretary of Energy Jennifer M. Granholm and U.S. Secretary of Commerce Gina M. Raimondo, as well as senior leaders on the Hill, including working with U.S. Sens. Chuck Schumer (NY) and Todd Young (IN) in developing the bi-partisan U.S. Innovation and Competition Act (USICA).

The TLSI has also played a significant role in elevating Council recommendations and engaging with key leaders on technology statecraft, and national, cyber and research security through discussions with U.S. Under Secretary of Defense for Research and Engineering Dr. Heidi Shyu; Dr. Philip Root, Director, Strategic Technology Office, DARPA; Dr. Victoria Coleman, Chief Scientist, United States Air Force; and Dr. Vanessa Chan, Chief Commercialization Officer and Director of the Office of Technology Transitions, U.S. Department of Energy.

**Top left:** Dr. Willie May, Vice President for Research & Economic Development, Morgan State University; Mr. Mike Cassidy, Director, Emory Biomedical Catalyst, Emory University, and National Commission Advisor; and Dr. Sylvia Thomas, Interim Vice President for Research and Innovation, University of South Florida.

**Top right:** Dr. Sylvia Thomas, Interim Vice President for Research and Innovation, University of South Florida; the Hon. Steven J. Isakowitz, President and CEO, The Aerospace Corporation, and National Commissioner; and Dr. James S. Peery, Director, Sandia National Laboratories, and National Commissioner.

**Bottom left:** Dr. Darryll Pines, President, University of Maryland, and National Commissioner; Dr. Walter Carter, Jr., President, University of Nebraska System, and Executive Committee Member; and Dr. Suresh V. Garimella, President, University of Vermont, and Executive Committee Member.

**Bottom right:** Mr. Chad Evans, Executive Vice President, Council on Competitiveness.

# History of the Commission Phase 1

In August 2019, the Council on Competitiveness launches the **National Commission on Innovation and Competitiveness Frontiers** with more than 35 CEOs, university presidents, labor leaders, and national laboratory directors.

2019



The Commission holds a major launch conference at Arizona State University to kick off working group dialogues, research, and reporting that will inform policy recommendations.

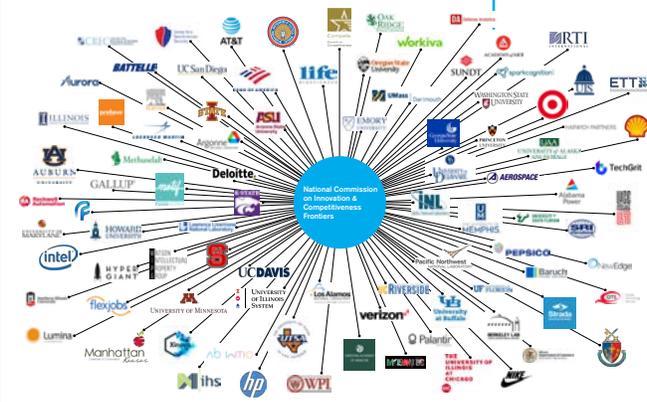
2020



The Commission releases the *Competing in the Next Economy* report, laying out 50 priority recommendations from across the four working groups and calling for a 10x boost to U.S. innovation.

The Council builds the multi-hundred "community" of experts to stand up the National Commission Advisors and working groups

The Commission's four working groups collaborate in nearly 100 virtual workshops, creating, debating, and refining potential recommendations for the Commission's first annual report.





The Council focuses on communicating and advancing key recommendations of *Competing in the Next Economy* with the administration, on the Hill, et al.

2021

The Commission hosts three *Competing in the Next Economy* webinars centered on various innovation topics, as well as a virtual summer meeting featuring guest speakers U.S. Secretary of Energy Jennifer M. Granholm and U.S. Secretary of Commerce Gina M. Raimondo.

The Commission convenes the **2021 National Competitiveness Forum**, featuring panels on a variety of technology topics, and announces “phase 2” of working group engagement to articulate a new set of goals.

2022

The Commission meets at the University of Wyoming for the **Mountain West Innovation Summit** to formally kick off a new phase of working group engagement to build on the findings from the *Competing in the Next Economy* report.



# The Future

## New Challenges, Priorities, and Charges for the National Commission on Innovation & Competitiveness Frontiers

While many of the challenges addressed in the work of the Commission to date persist, the pandemic has caused other, new and evolving shifts.

As the Commission enters into a new phase of working group discussions and co-development of recommendations, these will continue to shape the priorities and charges for the coming months.

### Transformation of Work and the Workplace

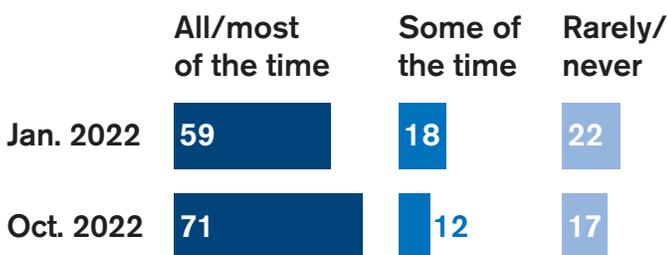
Telework has become a necessity during the pandemic and is here to stay. More than two thirds of white-collar employees in the United States continue to work from home at least some of the time (see Figure 1) and even though many companies have returned to in-office work, the most common model is a hybrid work schedule.

The change in the nature of work through hybrid work environments not only changes company cultures and has caused the majority of workers to feel less connected to their work and co-workers ([PEW](#)

**Figure 1: The Majority of Workers With Jobs That Can Be Done From Home Are Teleworking, Even as More Workplaces Have become Available**

Source: <https://www.pewresearch.org/social-trends/2022/02/16/covid-19-pandemic-continues-to-reshape-work-in-america/>

Among employed adults who say, for the most part, the responsibilities of their job can be done from home, percent saying they are currently working from home...



Among employed adults with a workplace outside their home who are working from home all or most of the time, percent saying they are doing so because...



Note: Share of respondents who did not offer an answer not shown.

[research 2022](#)), but has also had real geographic effects: In 2021, moves out of the densely populated cities increased 17 percent ([PEW 2022](#)), and while these number have returned to pre-pandemic levels in 2022, those workers that have moved are likely to stay in the less populated areas in light of the remote working opportunities and lower costs of living.

The pandemic has fundamentally changed the way that work is perceived: Nearly 7 in 10 employees have rethought the role of work in their lives ([Gartner HR Research 2022](#)). Voluntary employee turnover is expected to jump to 20 percent this year, from a pandemic annual average of 31.9 million to 37.4 million workers quitting their jobs in 2022. The record attrition level during the pandemic has caused a new bargaining power for workers in a tight labor market.

## U.S. Research and Development Investments

Although Gross Domestic Expenditure on research and development in the United States is at its highest to date, China is rapidly making up ground (see Figure 2). The rate at which China has increased its funding of research and development in recent years vastly exceeds efforts by the United States

Because Chinese researchers undoubtedly benefit from a lack of red tape, it is imperative to optimize the research and development process in the United States. This competitive disadvantage calls for novel ways of thinking about how to innovate quickly and sustainably.

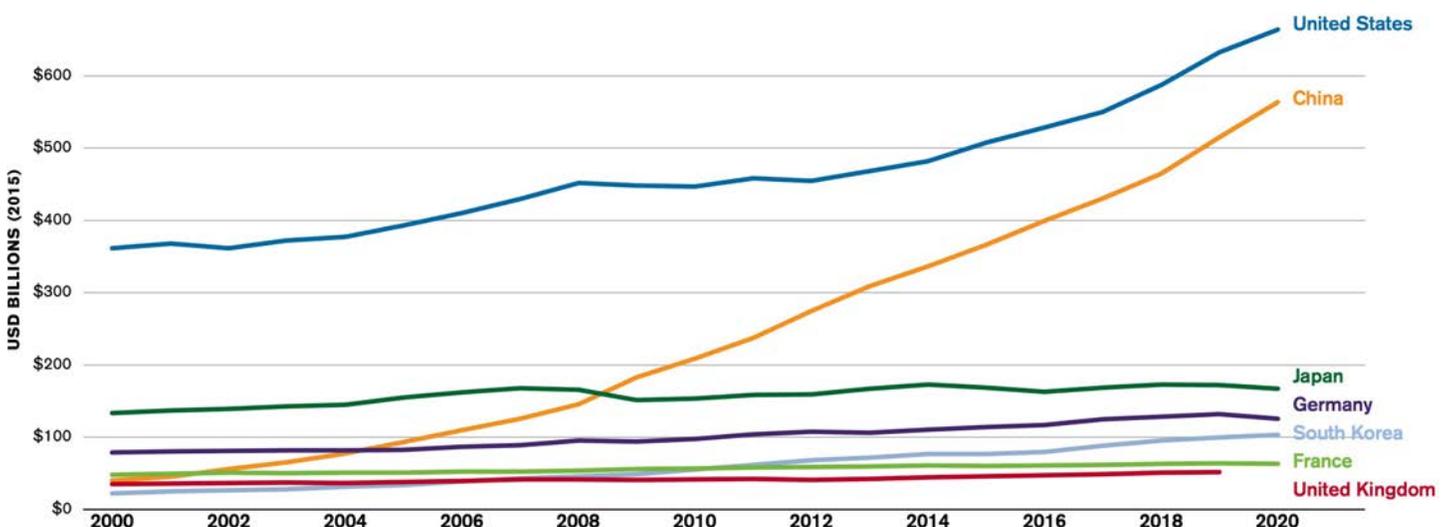
The United States has increased its investments in research in developments in 2020 to more than USD 700 billion. This significant increase compared to 2018 (10 percent) and 2019 (6 percent) was largely driven by the business sector, accounting for 75 percent, higher education (12 percent) and the federal government (9 percent) ([NCSES 2021](#)).

Foreign direct investment in the United States reached USD 192 billion in 2021, a 36 percent increase compared to 2020, with the largest share in manufacturing. 35.7 percent of FDI supported jobs are in the manufacturing sector, with 24 states exceeding this average ([Global Business Alliance 2021](#)).

Private domestic non-residential investment has reached a record high in Q2 of 2022 ([Bureau of Economic Analysis 2022](#)), with a particular focus on equipment and intellectual property, such as software and R&D.

**Figure 2. Gross Domestic Expenditures on R&D, 2000–2020**

Source: OECD (2022), "[Gross domestic spending on R&D](#)."



New federal investments as part of the Bipartisan Infrastructure Bill will further support research and developments in clean energy technology, such as the planned USD 8 billion investments in hydrogen hubs and the USD 7 billion investments for battery materials and manufacturing to help decarbonize heavy industry.

The CHIPS+ Act and the included USD 52 billion budget of emergency investments for the semiconductor industry was a much needed effort to boost U.S. competitive leadership in light of the increasingly aggressive competition with China and insecure supply chain issues that have affected the U.S. economy.

### **New Technologies and Automation**

In line with these crucial investments, new technologies continue to make rapid advances across the economy and society. The current record inflation is likely to increase industry's efforts to invest in new technology developments to allow them to do more with less and increase efficiencies. A recent CIO survey found that, on average, CIOs expect their technology budgets to grow by 4.5 percent in 2022 (compared to a 10 year average of 4.1 percent), most of them expected in software upgrades, cloud computing, and cyber security ([Goldman Sachs Asset Management 2022](#)). Research from the MIT Center for Information Systems Research found that digital transformations can provide margins that are up to 16 percent higher than industry averages, which further incentivizes spending on disruptive technology development ([GHD 2022](#)).

With a particular focus on increasing productivity and in light of rising labor costs ([Bloomberg 2022](#)), automation continues on an upwards trajectory. More than 80 percent of companies expected to continue or increase their investments in automation spending in 2022 ([Gartner 2022b](#)). The increased automation will in turn free up working hours for workers that can be spent on more complex tasks, which will change the nature of the labor market and skills.

### **Geopolitical Challenges, Supply Chains and the Global Energy Shock**

The Russian Invasion of Ukraine has disrupted the geopolitical order. While Europe is much more affected through tight energy supply lines from Russia than the United States, the global increased oil prices and overall insecure supply chains that have expanded to other sectors (such as grains etc.) have caused a global shock.

Securing supply chains and developing swift solutions for sustainability issues, such as waste reduction, clean energy, etc., will continue to be a core issue of the Commission working groups in phase 2.

These new challenges and priorities present a clarion call to the Council's Commission to leverage its community of U.S. innovation leaders to deliberate and co-develop new policy recommendations during phase 2 of the Commission.

# Discussion with the Board, Executive Committee and National Commissioners

Given the new global circumstances and the speed at which these have changed—even just within the last few months—Board, Executive Committee Members and National Commissioners discussed their key overarching priorities for the Commission’s next phase that affect all four planned working groups.

## **The Need for Speed, Scale and Agility**

The COVID-19 pandemic has made it clear that conditions can change in an instant and that agility and resilience are crucial for the future. Supply chain insecurities and regulatory inhibitors present some of those challenges that slow down change and agility. To remain competitive, the U.S. innovation system must be reactive. National Commissioners agreed on the importance of planning for contingencies, particularly in the case of a big, disruptive change.

Both scale and speed are crucial for developing and deploying new technologies. China’s “top down” model for research and development presents the United States with a challenging uphill battle in maintaining global technology leadership. Focusing on deploying technology at both speed and scale will help to mitigate this inherent disadvantage.

## **Research Models and their Readiness for Disruptive Technology**

In order to achieve speed and scale, the United States must address and examine different kinds of research models across sectors and internationally and drastically rethink our innovation ecosystem. To optimize the growth of disruptive technology, the Commission believes the nation must first recognize the advantages and disadvantages of each kind of research model it chooses to engage with.

## **Increase Funding Efforts for Basic Research**

While disruptive technology has the ability to transform our economies fundamentally, basic research efforts must also be increased. While investing in basic research is often less exciting, basic scientific discovery is vital and currently lacks the attention necessary to sustain our place in the global hierarchy.

## **The Changing Landscape of Work**

COVID-19 served as a catalyst for an already-burgeoning shift toward telework. The workforce is now on the move, and employers are faced with an unprecedented challenge of sorting through contradictions in telework preferences.

### **Demographics as a Challenge for Training and Education**

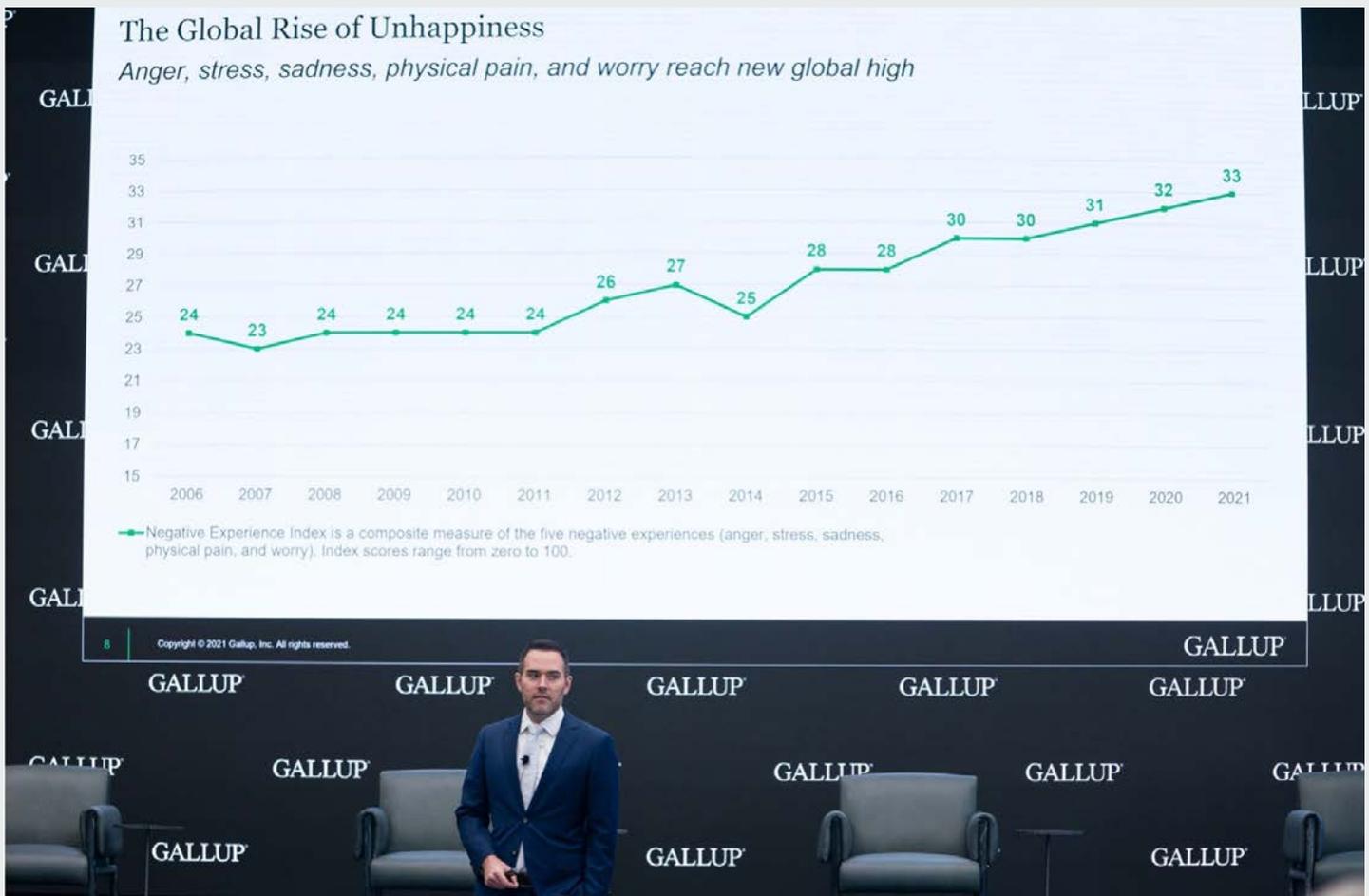
An aging population and workforce also present new challenges to employment. Dr. Victor Dzau, President of the National Academy of Medicine, posed the possibility of retraining programs for older workers to evolve their skills as they age to meet the needs of modern industry. Ensuring all Americans are brought into the future of work requires a concerted effort to give everyone the skills they need to succeed. Failing to do so leaves substantial potential for growth on the table.

### **Investments in Human Capital and Cross-Disciplinary Education**

Higher Education plays an important role in developing the workforce of the future and equipping them with the skills for years to come. Dr. Darryll Pines, President of the University of Maryland, noted that special care must be taken to prepare those matriculating out of four-year universities to not only take part in but thrive in the working world. Investing in human capital, financial capital, and infrastructure play obvious roles in facilitating this process.

Students learn better in environments that invest in them. Investing in cross-disciplinary education and systematically underscoring the importance of assimilation to practical use for society, however, give students the experiences to effectively apply their knowledge to the real world. It allows them to discern the viability of their ideas to better understand what the world needs. The future of work requires dynamic thinkers that have the skills to improve conditions for themselves and society at large.

# **Innovation Insights from America's Private and Public Sectors**



## The Global Rise of Unhappiness

**Mr. Jon Clifton**  
 CEO  
 Gallup

*How can happiness be a key determinant in how our societies and economies develop over time? And what factors determine the global decline of happiness? Jon Clifton, CEO of Gallup, discussed how the issues previously discussed, such as changes in the scope and nature of work, have a tremendous impact and why unhappiness deserves more attention as a key economic parameter.*

## Unhappiness as an Economic Predictor

While traditional statistical and economic models can deliver incredible accuracy in calculating economic metrics, they have failed to determine the impact of human emotion on productivity, and statisticians and economists alike have never been able to calculate happiness. Gallup data shows that while GDP per capita has grown steadily, it stands in stark contrast with a precipitous drop in Gallup's own calculation of "Percent Thriving" over time.

GDP per capita continued to grow despite historically significant events occurring, such as the Arab Spring and the Brexit vote. But while GDP per capita remained largely unaltered during times of crisis, the percent thriving collapsed. Several examples of these events were followed by some of Gallup's largest recorded decreases in percent thriving. This shows that there is a deep underappreciation of the emotional impact on economic behavior. Economists make bold assumptions of human rationality when constructing models, which falter when humans act irrationally. The effects of negative emotions inevitably influence decision-making and consequently, macroeconomic trends.

## Two Main Street-Points as the Cause of Rising Unhappiness

Throughout the world, the level of unhappiness is rising. Although the United States has fallen in the global ranks of unhappiness levels, unhappiness continues to grow at an alarming rate. Determining some of the root causes of this rise in unhappiness could enable us to fix this trend.

Clifton noted two main causes for the concerning data: Until recently, the world was winning the war against hunger, but in 2014, trends reversed.



*Mr. Jon Clifton, CEO, Gallup.*

Because food is vital to our existence, increasing numbers of those with limited access to food contributes to the rising unhappiness levels. Making strides in combating hunger will lead to happier lives and decreased stress globally.

Work is another key determinant for the global rise in unhappiness. On average, humans spend 13 straight years of our life at work. For the many who dread going to work, this takes a mental and physical toll that over time contributes to overwhelmingly negative emotions. This data becomes particularly concerning when comparing workers who dislike their work with those who are unemployed: Negative emotions and stress associated with unsatisfying work is higher than unemployment.

Addressing the stressors that many face in their day-to-day lives, primarily hunger and work, will lead to a happier, and ultimately more productive world.



## Accelerating Innovation at Speed and Scale

**Dr. Sethuraman Panchanathan**

Director

National Science Foundation

*Remaining globally competitive requires agility, speed and scale. But how can the United States achieve these key traits and compete with other nations with different research models and national innovation strategies. The NSF plays an important role in developing this strategy, and NSF Director Dr. Sethuraman Panchanathan explains this vision and the importance of building cross-sectoral partnerships.*

## Innovation Anywhere, Opportunities Everywhere

### The NSF's vision: Advancing Research Frontiers

The NSF is a 9-billion-dollar federal agency committed to advancing scientific discovery and technological innovation. Dr. Panchanathan has played an important role in elevating the NSF and its efforts to develop place-based innovation. Its mission is to promote the progress of science, advance national health prosperity and welfare, and bolster national security. The NSF vision is to advance the frontiers of research into the future, ensuring accessibility and inclusivity, and securing global leadership. Through his efforts to achieve this vision, Dr. Panchanathan has cultivated several global partnerships with universities, industry leaders, municipalities, and states, all with the goal of helping to scale innovative technologies.

### NSF Initiatives and Opportunities for Collaboration

The NSF has a number of initiatives that align with the Council on Competitiveness' mission. The "AI in Every State" initiative is an effort to connect all corners of the country and ensure an inclusive implementation of AI nationally. Dozens of funding partners have invested with mutual interest. Since 2020, the NSF has added Amazon, Google, Accenture, Intel, USDA, and the U.S. DHS. Through this program, the NSF is working closely with community colleges and smaller universities. The education system is mutually vested in innovation through partnerships that can accelerate and augment the development of research and technology. The "Innovation Anywhere, Opportunities Everywhere" initiative is focused on creating programs that provide universal access to the skills necessary to bring ideas to life. The I-CORPS program within "Innovation Anywhere" is an immersive, entrepreneurship training program that teaches participants to turn invention

"...we need to pre-wire industry to get partners co-invested...to help build the workforce of the future."

into impact. It prepares scientists and engineers to consider the societal and economic benefits of innovative research in an effort to accelerate practical applications. The NSF GRANTED initiative focuses on addressing the systemic barriers to equity and diversity that exist within the national research environment. Through the program, the NSF gives opportunities to all institutions that cultivate new ideas and need funding. "Innovation Anywhere" also places special emphasis on accelerating public-private partnerships. Dr. Panchanathan believes the United States "needs to pre-wire industry to get partners co-invested...to help build the workforce of the future." The specific focus on public-private partnerships continued the day's theme of involving all aspects of the innovation ecosystem to truly maximize opportunities for innovation and growth.

### A Call to Action

Dr. Panchanathan concluded his presentation with a call to action. With the United States facing stiff competition from China and the rest of the world, there is an absolute need for bipartisan support for STEM research. The polarization of Congress has sown doubt on the legislative body's ability to react to the country's needs in a timely manner.

Dr. Panchanathan requested that all National Commissioners use their status and existing relationships to co-invest in ideas and partnerships. Further, he called on the Council on Competitiveness to use its understanding of the "pulse of the nation" to tap into what it knows is necessary and disruptive. He insists that the Council has a platform and must use it to make innovation and technological advancement actionable and relatable to everyone, not just "elites."

# NIST's Efforts to Support American Competitiveness in the Global Economy

Dr. Laurie E. Locascio  
Under Secretary of Commerce for Standards and  
Technology and NIST Director

**NIST** National Institute of  
Standards and Technology  
U.S. Department of Commerce

July 13, 2022

## The Role of Standards for Global Competitiveness



### Dr. Laurie Locascio

Under Secretary, U.S. Department of Commerce &  
Director, National Institute of Standards and Technology

*As China's competition with the United States is becoming increasingly aggressive, the U.S. global leadership in critical technology, science and discovery is in jeopardy. The drastically different research approach of the United States is slower than the autocratic top-down approach of the Chinese government. Undersecretary of the Department of Commerce and National Institute of Standards and Technology Director Dr. Laurie Locascio explains the role standards play and how NIST can help boost U.S. involvement in the global market for critical technologies.*

## NIST's Mission

NIST's mission is to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life. It has several priorities, including strengthening standards, bolstering U.S. leadership in critical and emerging technologies and manufacturing. NIST is on the forefront of the development, manufacturing, and adoption of biotech, AI, cybersecurity, energy technology, quantum science and computing. It also works across the continuum from basic to applied research, utilizing strong collaborations and industry-driving programs. Despite its unwavering focus on important disruptive technologies, Dr. Locascio warns that the global economic landscape is rapidly changing; the United States is poised to lose its leadership position. She compared the Chinese "top-down" model for R&D to the slower, more methodical "bottom-up" approach taken by the United States. Although it produces results, the bottom-up approach lacks the speed necessary to keep up with China's autocratic method for R&D.

## The Role of Standards for International Competition in Light of Increasing Chinese Aggression

NIST executes the U.S. government's National Standards Strategy for Critical and Emerging Technology and the development of federal standards policy to ensure continued U.S. global economic competitiveness. 93 percent of trade worldwide is impacted by standards. As a result, NIST plays an active role in dictating U.S. involvement in the global marketplace. It responds to the Biden-Harris administration's national security priorities and watches China's and the EU's standards strategies closely. While Dr. Locascio affirmed her commitment to the bottom-up approach to R&D, she revealed that the federal government will soon release an all-of-government

national strategy for standards. She also highlighted her concern for the lack of congruence between the public and private sectors, which she believes hinders NIST's ability to serve as a standards leader. NIST does, however, maintain relationships with proactive allies (TTC, Quad, IPED, APEP) aimed at addressing international standards. Lastly, NIST holds convening power from the federal government.

## The Importance of the CHIPS Act

Maintaining U.S. manufacturing leadership requires the successful implementation of policies meant to boost industrial capacity. For example, with the CHIPS Act looming, NIST must help to position the Department of Commerce to carry out CHIPS Act programs if the Bipartisan Innovation Act is funded. Successful execution of the CHIPS Act will boost domestic semiconductor chip manufacturing capacity and allow the United States to make up for a glaring competitive disadvantage. NIST's fixation on the CHIPS Act exemplifies its role in bridging the gaps between the federal government and private sector actors.

## Diversity, Equity and Inclusion

Dr. Locascio highlighted NIST's efforts for community building. She emphasized that NIST seeks to be a place where workers feel welcomed, included, and valued. To do so, she has promoted the strengthening of diversity, equity, and inclusion, as well as strengthening cross-NIST programs. The gradual return to NIST campus post-COVID is a chance to restart and become the exemplar of a safe, healthy, and respectful work environment.

# The National Commission Phase 2— Addressing Core Issues

## The Future of Sustainability—Tackling the Challenge of Waste

### Key Takeaways

- Clean energy requires continuous investments and needs further development in order to fully replace traditional energy sources.
- The United States needs to secure sources for critical materials for sustainable production sectors (such as electric vehicles)
- Consumer engagement and gaining consumer support for sustainability practices is critical for companies in order to design more sustainable, efficient and less wasteful products.

### Waste Reduction and Sourcing of Critical Raw Materials

The future of sustainability increasingly hinges on the issue of reducing waste and the barriers with respect to clean energy. Mr. Charles O. Holliday, Jr., Chair Emeritus, Council on Competitiveness; and Mr. Nolan Pike, former President and CEO, Electrolux North America, opened a new conversation in the context of sustainability: Waste reduction and a sustainable use of materials is becoming increasingly important in light of materials scarcity and supply chain insecurities.

## The Importance of Investments into Clean Technology

Mr. Holliday noted that even though there are sizeable existing investments in clean energy, the costs remain too high. Moreover, solar and wind energy have yet to reach a point in their development to provide reliable levels of power for enough people. Similarly, for electric vehicles to become a mainstay in the United States, manufacturers must ramp up charging capabilities. To achieve this, the United States must secure sources of the critical materials used in the manufacturing process, most of which are sourced outside of the United States. The general failure of renewables to generate critical levels of energy unfortunately dissuades future investment, even if the technology will eventually catch up to the current needs of consumers.

### Winning the Consumer for the Sustainability Case

Mr. Pike discussed Electrolux's transition to clean sources of energy as an example of a successful corporate sustainability strategy. Electrolux has reduced greenhouse gas emissions by 82 percent and now uses 100 percent renewable energy. Mr. Pike noted, however, that consumers often fail to identify with the concept of sustainability. Corporate responsibility toward sustainability, does not



**Top:** Mr. Charles O. Holliday, Jr., Chair Emeritus, Council on Competitiveness, and National Commissioner.

**Bottom:** Mr. Nolan Pike, former President and CEO, Electrolux North America, and National Commissioner.

resonate with most consumers in the United States. Repackaging the idea of sustainability as waste reduction, however, struck a chord with Electrolux customers. Wasting a valuable resource like food contributes to sustainability issues while also impacting the consumer's bottom line. In the United States, billions of pounds of food are wasted each year. Thus, designing more sustainable (i.e., less wasteful) products is an avenue toward achieving a cleaner, more sustainable business.

Waste continues to be an issue in every industry, but healthcare is a particularly difficult sector for waste-reduction. National Commissioner Dr. Victor Dzau, President of the National Academy of Medicine, noted that disposables, PPE, and similar single-use products are widely used throughout the healthcare industry present leaders with the opportunity to severely cut down on waste. While efforts in healthcare have been made to reduce waste where possible, some sectors have natural limits to the amount of recycling and sustainable action that is possible.

## The Future of Place-Based Innovation

### Key Takeaways

- Opportunities for regional development are not limited to the innovation hubs on the coasts, but expanding the innovation network does require targeted action to build up local ecosystems
- Regional opportunities for small businesses and entrepreneurship need to be expanded to create local job opportunities.

Past polling by the Council suggests that the term “innovation” has a negative connotation for many in the country who worry about being left behind by a modernizing economy. In a time when entrepreneurship and small businesses are facing many challenges, these attitudes present an additional barrier to widening and deepening America’s innovation economy.

However, the Hon. Wince-Smith notes there are pathways opening to affect change. She noted the success of the recent Mountain West Innovation Summit as a proof point for exuberance around turbocharging local innovation ecosystems.

### Examples of Innovation Success outside of Known Innovation Hotspots

Mr. Joshua Parker, Founder, Chairman and CEO, Ancora L&G, highlighted the opportunity of expanding business to areas outside of the traditional,



“...talent is the currency of innovation, [therefore] we must create spaces that encourage increased quality of life to cultivate the best possible talent.”

#### Mr. Joshua Parker

Founder, Chairman and CEO, Ancora L&G  
National Commissioner, Council on Competitiveness

known innovation hubs and discussed Ancora’s experience in Fort Wayne, Indiana as an example of successful investment. After Ancora purchased a former Ford campus in Fort Wayne, Mr. Parker noted a steady revitalization of the community and local economy. The project, Electric Works (see Box 7),

**BOX 7****Equality of Opportunity:  
Electric Works**

Since 1883, the former General Electric campus was an economic engine for Indiana's second largest city. Over time, well-documented trends led to the closing of the 1.2 million SF campus and its 39 acres adjacent to Fort Wayne's downtown.

Ancora developed a strategy for regeneration of this historic campus, offering a public-private partnership template for inclusive growth in secondary and tertiary cities to leverage and enhance their innovation ecosystems.

Now under construction, the \$286 million first phase includes 740,000 SF of office, innovation, healthcare, retail space, and education including a new STEAM public high school at Electric Works

Read more [here](#).

houses offices for healthcare, retail, and most notably, education, including a new STEAM public high school. Mr. Parker noted that Electric Works should serve as a public-private partnership template for inclusive growth in secondary and tertiary cities to leverage and enhance their capacity for innovation

and growth. The democratization of opportunities for small business growth can tap into largely untouched talent pools. Mr. Parker believes “talent is the currency of innovation,” therefore “we must create spaces that encourage increased quality of life to cultivate the best possible talent.” Education programs at the Electric Works campus, such as the Venture and Entrepreneurship Lab, provide students with the opportunity to learn new skills and exposure to advanced concepts.

**Broadening the Innovation Ecosystem**

Places like Fort Wayne and Laramie, Wyoming represent a vast swath of forgotten regions in the United States. Enhancing connectivity between universities and spaces for innovation and entrepreneurship and strengthening their regional assets will increase national innovation capacities and take advantage of underutilized drivers of economic growth.

**The Importance of Public-Private Partnerships  
for Regional Innovation Success**

National Commissioners placed a special emphasis on the crucial role public-private partnerships play in the innovation process. To begin enacting the vision for the future of place-based innovation, the Hon. Wince-Smith suggested that the Council map out where members and partners are based in the country to get a better understanding of how the Commission can induce place-based innovation.

## Technology Diplomacy—The “U.S.-Japan Commission on Competitiveness and Resilience”

### Key Takeaways

- The newly established partnership between the United States and Japan is an example of a successful engagement of two of the largest democratic economies to strengthen the rules-based economic order
- To further support this partnership, the United States and Japan must include the private sector in bilateral partnerships in the future.
- The Council's new partnership with Japan Innovation Network will leverage our mutual private sector leadership to advance pro-innovation, pro-competitiveness and resilience policies and actions that support the goals expressed in the recently confirmed Competitiveness and Resiliency Partnership (CoRe) between the U.S. and Japanese governments



*The Hon. Olin Wethington, CEO and Co-Founder, Graham Biosciences LLC, and National Commissioner.*

*The Hon. Deborah L. Wince-Smith, President & CEO, Council on Competitiveness, and National Commission Co-chair.*

### **Technology Statecraft at the Core of Competition**

During the Cold War, technological advancements were at the core of competition between the great powers. Today, it remains the main battlefield for the future of the global stage. Japanese colleagues have recently reached out to the Council to create an innovation network (see Box 8). The engagement between the United States and Japan is a strategic way to highlight technology statecraft, powered by bilateral, privately led partnerships.

### **Bilateral Partnerships for Technology Statecraft**

The concept of technology statecraft is quite simple. Implementation, however, is a different story. It requires an elevated level of coordination and effort from all sides. Fortunately, Japan and the United States have made strides to nurture bilateral relations in this respect. Japanese Prime Minister Suga and President Biden issued the U.S.-Japan Competitiveness and Resilience (CoRe) Partnership (see Box 9) last year in an effort to internationalize technological innovation through a bilateral partnership. As the world's two largest democratic economies, the partnership seeks to cultivate prosperity and strengthen the rules-based economic order in the Indo-Pacific region and the world. This is only a start. Leaders must make efforts to add a private sector element to bilateral relations. For this to occur, the Japanese and American governments must continue to offer

#### **BOX 8**

### **A New Council Partnership with Japan**

Building off the success of the United States-Japan Competitiveness and Resilience Partnership (CoRe), launched last April, the Council and the Japan Innovation Network (JIN) recently announced a new initiative: **The U.S.-Japan Commission on Innovation and Competitiveness**.

The Commission was established to promote the objectives of the CoRe Partnership and to advance joint research and development and collaborative innovation initiatives, as well as new business models, across the two nations' advanced science and technology ecosystems.

"The Council on Competitiveness is honored to join with the Japan Innovation Network in launching this distinctive, joint commission. Our Council members, spanning a broad cross section of our economy, are poised to contribute our experience and capabilities, and we will exercise leadership in the private sector to advance the CoRe agenda," said the Hon. Deborah L. Wince-Smith, President & CEO, Council on Competitiveness.

Read more [here](#).

**BOX 9****Competitiveness and Resiliency Partnership**

The United States and Japan, as the world's two largest democratic economies, resolve to promote prosperity and to strengthen the rules-based economic order in the Indo-Pacific region and the world. Together, the two countries recognize the progress made under the U.S.-Japan Competitiveness and Resilience (CoRe) Partnership announced in April 2021 and commit to broaden and deepen bilateral economic cooperation including through the **Economic Policy Consultative Committee** announced in January 2022.

Read more [here](#).

strong support from multiple departments within federal government. Over time, there must be plans to lay out mechanisms for considerable exchange. The Japanese Innovation Network would be our partner on the other side of this effort. Part of the U.S. competitive advantage is its ability to collaborate with like-minded nations, thus Japan will be a key actor in bilateral strategy moving forward. Furthermore, the Biden administration has taken to heart one of the core recommendations from the December 2020 report: Science and technology must be a core part of American national security and foreign policy. Throughout his tenure in office, President Biden has sought to implement some of the more specific recommendations in the report, signaling a commitment from the highest level of government to bolstering U.S. competitiveness.

# Conclusion

The new circumstances of the work of the Commission will shape the path for the Working Groups in phase 2.

The Council will work to expand its network of issue experts, encourages its members to help bring leaders from their network to the conversations, and will continue the discussions that led to the successful creation of policy recommendations at the end of 2020.

Ms. Janet Foutty, Chair of the Board, Deloitte, and Business Vice-chair and National Commissioner, Council on Competitiveness, advised regular communication between different working groups to account for contingencies that might spill over from one working group to another. As the Commission addresses a comprehensive set of issues related to competitiveness, there are likely to be cross-cutting discussions that link several working groups. Maintaining clear lines of communication will be key to achieving the collective efforts necessary to maintain technological supremacy in the United States.

Mr. Charles O. Holliday, Jr., Chair Emeritus, Council on Competitiveness, concurred and urged attendees to widen the scope of solutions within the working groups. Concepts like sustainability and placed-

based innovation have the potential for a wide range of applications that are not immediately discernible. The problems faced today necessitate creative problem solving, which can only be spurred by a comprehensive approach drawing on all facets of the innovation ecosystem.

Finally, Mr. Brian Moynihan, Chair of the Board and Chief Executive Officer, Bank of America, and Chair of the Board and Commission Co-chair, Council on Competitiveness, called on the many leaders of industry, academia, and research to proliferate the concepts discussed at the meeting and implement them in a productive capacity.

Mr. Moynihan concluded the day by calling on the Council's Board, Executive Committee, and National Commissioners to help grow and engage the general membership. He referenced the resounding success of the Mountain West Innovation Summit in Wyoming, underscoring the importance of regional outreach. Mr. Moynihan stressed that increased American competitiveness requires concerted efforts to involve all facets of American industry, throughout the country, and encouraged participants to remain closely engaged with the Hon. Wince-Smith and Mr. Evans to ensure the Council stays coordinated and updated about the priorities of its membership.

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Competitiveness

## Contact

For more information, please contact:

### Mr. Chad Evans

Executive Vice President  
[cevans@compete.org](mailto:cevans@compete.org)

### Council on Competitiveness

900 17th Street, NW  
Suite 700  
Washington, D.C. 20006

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## About the Council on Competitiveness

For more than three decades, the Council on Competitiveness (Council) has championed a competitiveness agenda for the United States to attract investment and talent, and spur the commercialization of new ideas.

While the players may have changed since its founding in 1986, the mission remains as vital as ever—to enhance U.S. productivity and raise the standard of living for all Americans.

The members of the Council—CEOs, university presidents, labor leaders and national lab directors—represent a powerful, nonpartisan voice that sets aside politics and seeks results. By providing real-world perspective to Washington policymakers, the Council's private sector network makes an impact on decision-making across a broad spectrum of issues—from the cutting-edge of science and technology, to the democratization of innovation, to the shift from energy weakness to strength that supports the growing renaissance in U.S. manufacturing.

The Council's leadership group firmly believes that with the right policies, the strengths and potential of the U.S. economy far outweigh the current challenges the nation faces on the path to higher growth and greater opportunity for all Americans.