

Compete Connect

January 2025 Edition

From the CEO's Desk



Deborah L. Wince-Smith President and CEO Council on Competitiveness Dear Council Community,

2025 marks the start of "Q2" of the 21st century. And after 25 years of incredible progress, challenges, innovations, and transformations across the U.S. economy and society, the next 25 portend even greater change. Emerging and converging technology revolutions – from AI and quantum computing, to biotechnology, aerospace, energy, and a host of others – will reshape daily life for everyone, in ways we can scarcely predict. As such, being prepared to leverage this turbulence and transformation is crucial.

The new year also heralds the beginning of a new Administration and Congress – both of which will have to face the rapidly shifting global innovation landscape, and work with the private sector to set the tone of U.S. competitiveness policy. As global technology competition, especially with China, intensifies, a robust pro-innovation and procompetitiveness policy framework will be essential to maintaining U.S. prosperity, security, and leadership – <u>a topic I raise in</u> my January Forbes.com article.

And the Council is primed to be a key partner in this effort – as we work to disseminate and educate around the 55 strategic recommendations in the latest report from our flagship National Commission on Innovation and Competitiveness Frontiers – <u>Competing in the Next Economy: Innovating in the Age of Disruption and</u>

<u>Discontinuity.</u>

The recommendations in our report target key barriers facing and opportunities ahead for American innovation. And if implemented by the new Congress and Administration, they will strongly position the United States to achieve the ambitious goal of boosting innovation tenfold – 10X.

We strongly encourage our community to help us spread the findings and recommendations of this report. Together, the Council and its community are a powerful voice for change and progress; with your help, together we can deliver real policy progress at a critical juncture for U.S. competitiveness. And below, I map out some concrete steps you can take to help us spread our critical recommendations.

This year, under the auspices of our <u>National Commission on Innovation and</u> <u>Competitiveness Frontiers</u>, we will host six editions of the <u>'Competitiveness</u> <u>Conversations Across America</u>" series, with the first on March 10-11 in San Antonio, Texas. The <u>Texas Competitiveness Conversation</u> will highlight the strides in critical infrastructure security being made in the state. Shortly following this edition, from March 30 – April 1, we will be in Boulder, Colorado for the <u>Mountain West</u> <u>Competitiveness Conversation</u>, highlighting the quantum computing and climate resilience innovations taking root in Colorado, Wyoming, and New Mexico. Plan to join us at these Conversations – registration pages found in each link above. In addition, start to mark your calendar for each of the following, critical Conversations taking place all over the country.

2025 will also be a landmark year for the Council's other initiatives:

- The <u>Technology Leadership and Strategy Initiative (TLSI)</u>, now in its 16th year, will release a new "Compact for America" a prioritized set of recommendations for a more adaptive, agile defense industrial base to drive U.S. economic growth and enhance national security.
- The <u>University Leadership Forum</u> will continue to highlight the set of crucial, indispensable roles higher education plays in the U.S. innovation-based economy.
- The <u>Alliance for Transformational Computing</u> is poised to focus the Council community on AI, quantum, and other critical computing platforms transforming every sector of the economy.
- Under the auspices of our National Commission, we will soon announce a major effort to develop the strategic policy roadmap to optimize the U.S. bioeconomy. More to come!
- The Council's sister organization, the <u>Global Federation of Competitiveness</u> <u>Councils</u>, will continue to benchmark global best practices in innovation, sustainability, and resilience. Plan to join us in October for the 2025 GFCC Global Innovation Summit at the University of Pittsburgh, hosted alongside the Council's planned Competitiveness Conversation.

As we begin the new year, a special thank you to all Council on Competitiveness Members for their continued support in our mission.

Sincerely,

Deborah Wince-Smith President & CEO A "Toolkit" to Share "*Competing in the Next Economy: Innovating in the Age of Disruption and Discontinuity*"

National Commission on Innovation & Competitiveness Frontiers



Competing in the Next Economy

Innovating in the Age of Disruption and Discontinuity

A Call to Action

Help the Council share the new report!

Consider launching social posts tagging the Council on X (@CompeteNow) and LinkedIn.

Below are samples to use or customize. And if you have other ideas to collaborate on this, we are game!

Sample X post: .@CompeteNow has released a new, ambitious #innovation & competitiveness agenda for the country – w/ recs on how best to compete in an era of disruption & discontinuity. Read here: <u>https://compete.org/2024/12/05/competing-in-the-next-economy-innovating-in-the-age-of-disruption-discontinuity/</u> #CompetingInTheNextEconomy

Sample LinkedIn post: <u>The Council on Competitiveness</u> has released a new, ambitious policy and action agenda for the United States – with 50+ strategic recommendations to boost U.S. #innovation tenfold – 10X – in an era of disruption

and discontinuity. Read the report here: <u>https://compete.org/2024/12/05/competing-</u> in-the-next-economy-innovating-in-the-age-of-disruption-discontinuity/

Why is this call to action needed now? The United States' long-term prosperity is built on the productivity of its people, capital, and natural resources. The Council's report provides recommendations for the United States to expand its innovation capacity and capability across seven pillars — all intended to strengthen U.S. global competitiveness and dynamism.

#CompetingInTheNextEconomy

Council News



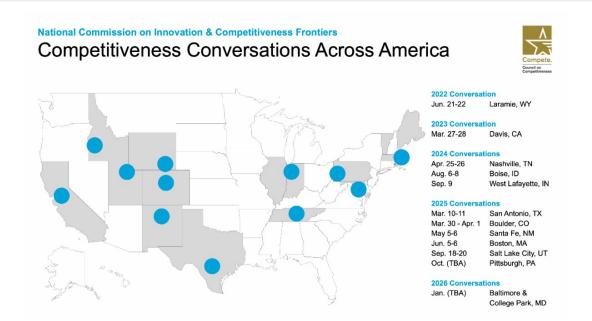
Register Now

Join the University of Texas at San Antonio (UTSA) and the Council on Competitiveness for the first Competitiveness Conversation of 2025, hosted at the UTSA's \$92 million, 167,000-square-foot San Pedro 1 Data Science Center, which houses the National Security Collaboration Center. Discussions will focus on accelerating innovation, building the workforce of the future, enhancing collaboration across sectors, and securing vital systems — from the electric grid to financial infrastructure. <u>REGISTER ONLINE and learn more here.</u>



Register Now

Join the CO-WY Engine, the National Renewable Energy Laboratory, the University of Wyoming, the University of Colorado, and Elevate Quantum for the upcoming edition of the Competitiveness Conversations Across America: "The Mountain West —Pioneering Climate Resilience & Quantum Innovation" in Boulder, Colorado, from March 30 to April 1. Engage with leaders stretching along the I-25 innovation corridor as they recount the region's rapid ascent as an innovation powerhouse and global leader in sustainability and quantum technology. REGISTER NOW and lean more here.



The Council is excited to be hosting six Competitiveness Conversations Across America this year, and we look forward to seeing many of you there! Find out more about previous and upcoming conversations here.

Deborah Wince-Smith Rings in the New Year with a Look Ahead in her January 2025 Forbes.com Article



Ringing in the New Year: Competing in the New Economy

Deborah Wince-Smith Contributor ⁽⁵⁾ *I write about manufacturing, competitiveness and innovation.*

Follow

In her latest Forbes.com piece, Council on Competitiveness President and CEO Deborah Wince-Smith looks ahead - and maps out the arc of disruptions and discontinuities that have not only defined the past five years but that are poised to trigger even greater turbulence and transformation in the years to come.

With a new Congress and Administration quickly kicking off, the Council's latest report, <u>Competing in the Next Economy: Innovating in the Age of Disruption and</u> <u>Discontinuity</u>, offers 50+ recommendations to amplify U.S. innovation tenfold - 10X. Wince-Smith's latest at Forbes.com highlights these major recommendations - and a path forward for the nation. <u>Read the full article here.</u>

President Trump Issues a Range of Executive Orders Impacting the American Higher Education Community

President Donald Trump has moved swiftly, signing several Executive Orders (EOs) likely to affect the U.S. higher education system. While the implications of these EOs will take time to fully understand, there are some immediate impacts across the research community from certain orders. For additional information, <u>visit an initial analysis on the Council's website here.</u>

Mountain West Competitiveness Conversation Report Now Available





Competitiveness Conversations Across America

A Competitiveness Conversation in the Mountain West:

Powering and Securing Innovation— Semiconductors, Clean Energy, Advanced Nuclear, and Cybersecurity

Boise State University Boise, Idaho August 6-8, 2024

The summary report from the August 2024 Mountain West Competitiveness Conversation in Boise, Idaho is now available. We again want to extend our thanks to all of the speakers, panelists and attendees who made this Conversation such a success. <u>Read the full recap of this insightful and engaging event here.</u>

Council Community News

Boise State University and Idaho National Laboratory Sign New Energy Security Research Cooperation Agreement



From left to right: Professor of Engineering Dave Estrada, Idaho National Laboratory Associate Laboratory Director for Science & Technology Todd Combs, Idaho National Laboratory Director John Wagner, Boise State President Marlene Tromp, Boise State Vice President for Research and Economic Development Nancy Glenn, and Boise State Provost John Buckwalter

Boise State University and Idaho National Laboratory have announced a new partnership to study advanced energy technologies. The Strategic Understanding for Premier Education and Research (SUPER) agreement will facilitate cooperation between students and faculty at Boise State and researchers at INL, covering advanced materials and manufacturing alongside the creation of secure and resilient grid systems. Read the full announcement here.

The Honorable Michael Kratsios Nominated to Serve as Director of the White House Office of Science and Technology Policy (OSTP)



President Donald Trump has nominated the Hon. Michael Kratsios to serve as the Director of the White House Officer of Science and Technology Policy (OSTP). Kratsios served as the Under Secretary of Defense and the Chief Technology Officer of the United States during the first Trump administration, and he has most recently acted as Managing Director of Scale AI. Read the announcement here.

The Council and Other Leaders Strongly Support Kratsios Nomination

Council President and CEO Deborah Wince-Smith has issued<u>a letter supporting the</u> <u>nomination of Michael Kratsios</u> for director of OSTP to Senate Committee on Commerce, Science, and Transportation Chairman Cruz and Ranking Member Cantwell. In addition, the Council joined a range of colleagues and leaders across DC tech and trade groups with <u>a letter strongly endorsing Kratsios</u>.

Utah's University Leaders Make the Case for Research Investment





Utah has a storied innovation ecosystem, having made significant contributions to technologies like the internet and organ transplants. However, though the birthplace of firms like Pixar, Adobe, and Atari, Utah faces the challenge many other states confront: keep cutting-edge leaders and companies anchored to the state once they reach a stage for intensified growth and deployment. According to University of Utah President Taylor Randall and Utah State University President Elizabeth Cantwell, investments in research and innovation ecosystems – in response to such losses – have led to Utah's enormous growth in STEM degree growth, the highest in the nation for nearly a decade, and its status as a bourgeoning center of innovation. With the results of research investment visible across the state, they make the case for Utah to double down on its innovation investment, further boosting the state's productivity and prosperity. Read the op-ed here.

Purdue University, Eli Lilly and Company, and Merck & Co., Inc. Announce New Pharmaceutical Manufacturing Consortium

Purdue University, in partnership with Eli Lilly and Company and Merck & Co., Inc., have announced the creation of the Young Institute Pharmaceutical Manufacturing Consortium, a new initiative with the goal of pioneering new methods for advanced medicine manufacturing. The new consortium will focus its efforts on sterile and antiseptic manufacturing, improving quality, safety and regulatory compliance in the pharmaceutical manufacturing industry. Purdue Executive Vice President for Research Karen Plaut said that "Through this partnership, we will have a global impact in solving complex problems in the pharmaceutical and biopharmaceutical manufacturing ecosystem." Read the announcement here.

The Honorable Paul Dabbar Outlines Trump Administration's Energy Goals in ABC Interview



Former Under Secretary of Energy for Science and Council on Competitiveness Distinguished Fellow the Hon. Paul Dabbar appeared on ABC to spell out the elements of the new Trump administration's energy policy. Executive orders signed by the President during his first day in office seek to drive up energy production, decreasing costs, and providing inflation relief to consumers, especially in the face of higher Al-driven energy demand. Dabbar outlined an "all of the above" approach to energy production. He also highlighted plans for investments in new energy technologies, like fusion, through the national laboratories in order to achieve longterm energy security. Watch the full interview here.

Quantinuum Announces New Quantum Computing R&D Center in New Mexico



QUANTINUUM

Quantinuum has announced plans to build a new quantum computing R&D center in New Mexico, continuing its longstanding partnerships with universities and national laboratories in the state. The center will be focus on photonics, the study of light and its behavior, required for the company's trapped ion quantum computing technologies. On establishing a center in the New Mexico, Quantinuum President and CEO – and Council Member – Rajeeb Hazra said: "The state's dynamic technology ecosystem and highly skilled workforce align perfectly with our strategic goals." Read the full announcement here.

And learn even more about New Mexico's vibrant innovation ecosystem at our upcoming <u>New Mexico Competitiveness Conversation</u>, May 5-6 in Santa Fe.

Lawrence Livermore National Laboratory Dedicates El Capitan, World's Most Powerful Supercomputer



Kim Budil, Director, Lawrence Livermore National Laboratory and sixth from the left, surrounded by colleagues, including Thomas Zacharia, SVP, AMD; Thom Mason, Director, Los Alamos National Laboratory; and James Peery, Director, Sandia National Laboratories. Photo by Garry McLeod, Lawrence Livermore National Laboratory.

The nation's top computing leadership gathered at Lawrence Livermore National Laboratory to dedicate El Capitan, the world's newest and most powerful supercomputer. The new supercomputer has a capacity greater than two exaFLOPS, or the equivalent of about a million IPhones, and will primarily help the National Nuclear Security Administration (NNSA) maintain and advance the U.S. nuclear deterrent, alongside other investigations into materials, astrophysics simulations, and more. With the creation of El Capitan, all three of the world's most powerful supercomputers now reside at U.S. national laboratories. <u>Read more here.</u>



\$1 Billion "Capital of Quantum" Initiative Launched in Maryland

Council National Commissioner and University of Maryland President Darryll Pines, Maryland Governor Wes Moore, and IonQ CEO Peter Chapman have announced the beginning of a new "Capital of Quantum" Initiative, a public-private partnership with the goal of creating a world-leading quantum hub in Maryland and the greater DC area. Governor Moore's FY 2026 budget proposes \$27.5 million in initial funding, expected to help unlock as much as \$200 million in University of Maryland and private funds, alongside continued funding of the \$244 million Zupnik Hall quantum lab facility. Pines remarked, "[Governor Moore] recognizes the immense potential of quantum technology and the possibilities we can explore if we work together to position our region as the global Capital of Quantum." <u>Read more here.</u>

Arizona State University to Host National Facility for Advanced Semiconductor Packaging



Arizona State University's Tempe Research Park has been selected by the U.S. Department of Commerce to host the National Semiconductor Technology Center (NSTC) Prototyping and NAPMP Advanced Packaging Piloting Facility. The third of three flagship semiconductor R&D facilities funded under the CHIPS & Science Act, and the largest financial investment, the facility will have both semiconductor and packaging research, filling a critical role in the U.S. microelectronics ecosystem. Arizona State University President and Council Member Michael Crow said the investment "…represents the greatest national laboratory investments since those that came out of the Manhattan Project." Read the announcement here.

The National Science Foundation (NSF) Invests \$15 Million in Cybersecurity Scholarships at Council Universities



As a part of its CyberCorps Scholarships for Service Program, the NSF awarded four universities a total of \$15 million for scholarships dedicated to training the next generation of the cybersecurity workforce. Of the four awarded, three are members of the Council: Iowa State University, George Mason University, and the Ohio State University. Each will receive investments designed to expand their cybersecurity offerings, especially to meet the increased need for government cybersecurity experts. Of the rising generation of cybersecurity graduates the investment would create, NSF Director Sethuraman Panchanathan said, "This...cohort, focusing on... artificial intelligence, autonomous systems security, next-generation wireless, cybersecurity for smart manufacturing and more, is poised to make significant contributions to our national and economic security." Read more here.

U.S. Department of Commerce's Economic Development Administration (EDA) Announces Additional \$210 Million in Tech Hub Funding



The next round of federal funding for designated U.S. Tech Hubs has been announced by the U.S. Department of Commerce's Economic Development Administration (EDA), with \$210 million in funding being allocated by the 2025 National Defense Authorization Act. This funding joins \$504 million in funding announced in July, for a total of over \$700 million. Several hubs with involvement from Council members received awards, including:

- American Aerospace Materials Manufacturing Tech Hub \$48 million: Located in Washington and Idaho, this hub seeks to create a world-class testbed for advancing high-rate manufacturing techniques for next generation aerospace materials and parts. Partner institutions with Council members include Lockheed Martin, Pacific Northwest National Laboratory, and Oak Ridge National Laboratory.
- Corvallis Microfluidics (CorMic) Tech Hub \$45 million: Located in Oregon, this hub is working to strengthen U.S. microfluidics manufacturing. Microfluidics, or working with fluids in channels the size of micrometers, is a critical part of semiconductor and biomanufacturing. The National Renewable Energy Laboratory is a key partner in this hub.
- Forest Bioproducts Advanced Manufacturing Tech Hub \$22 million: Located in Maine, this hub is working to expand the usage of wood products into a greater number of manufacturing processes and consumer products, providing an eco-friendly alternative to plastics. Partner institutions with Council members include the University of Maine and Northeastern University.

Other News and Updates

President Trump and AI Leaders Announce New \$500 Billion AI Investment



From left to right: President Donald Trump, Softbank CEO Mayoshi Son, Oracle Chairman Larry Elison, OpenAl CEO Sam Altman

On his first full day in office, President Donald Trump, alongside OpenAI CEO Sam Altman, SoftBank CEO Masayoshi Son, and Oracle Chairman Larry Ellison, announced plans for a new partnership to build AI infrastructure in the United States. Dubbed "Stargate," SoftBank will initially finance the new company with \$100 billion, with up to \$500 billion of further funding possible in the coming years. The first of the company's new facilities, a one million-square foot data center in Texas, is already under construction. The partnership would be, in the words of Altman, "the most important project of this era." <u>Read more here.</u>

Former NIST Director Laurie Locascio Takes on the Mantle of President and CEO of the American National Standards Institute (ANSI)



From left to right: David Miller, Chair, ANSI Board of Directors and Laurie Locascio

Former National Institute of Standards and Technology Director Laurie Locascio has started her tenure as the new President and CEO of the American National Standards Institute (ANSI), a non-profit that coordinates voluntary standardization across U.S. industry. She is responsible for ANSI's portfolio of standardization projects that reach more than 270,000 companies and 30 million professionals worldwide. On accepting the position, Locascio said, "I am thrilled to be entrusted

with the leadership of this renowned institution with such incredible national and global impact." <u>Read more here.</u>



Commonwealth Fusion Systems Chooses Virginia Site for First Commercial Fusion Plant

Fusion power startup Commonwealth Fusion Systems has announced it plans to build its first fusion power plant, and the first grid-scale commercial fusion power plant in the world, in Chesterfield County, Virginia, near Richmond. The proposed facility would provide 400 megawatts of power once online sometime in the early 2030's. While fusion power has yet to be proven commercially viable, the company, noting that site selection, approval and preparation have the longest lead time of any commercial power project, have chosen to begin work now in anticipation of the completion of its own fusion systems. <u>Read more here.</u>

New National Bureau of Economic Research Paper Explores Al's Potential Impact on the Labor Market

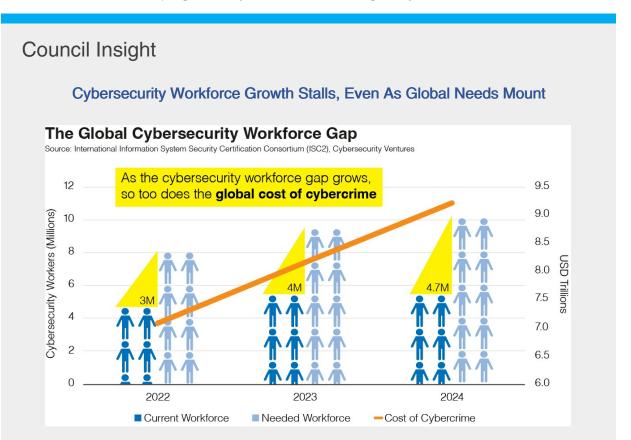
NBER | NATIONAL BUREAU *of* ECONOMIC RESEARCH

In a recent National Bureau for Economic Research (NBER) paper, David J. Deming, Christopher Ong, and Lawrence H. Summers explore the potential impacts of AI on the labor market by comparing it to past technology-driven revolutions. Looking back to 1880, they find technological disruption over the past 30 years have been minor in comparison to the massive upheavals of the late 19th and early 20th centuries driven by general-purpose technologies (GPTs) like steam power and electricity. However, AI could be a new GPT for the 21st century, meaning that its impact will be transformative, while taking many years to fully manifest. According to the authors, "At least in the near term, AI is more likely to ratchet up firms' expectations of knowledge workers than it is to replace them." Read the full paper here.



From left to right: Dr. Hiroshi Komiyama, Chairman, STS forum, and the Hon. Deborah Wince-Smith, President and CEO, Council on Competitiveness

Council President and CEO Deborah Wince-Smith hosted the Chairman of the STS forum, Dr. Hiroshi Komiyama, and his senior leadership team during their annual visit to Washington, DC. Council members and leaders from across the DC tech and innovation community gathered to honor the work of the STS forum, and to contribute to the shaping of this year's 22nd meeting in Kyoto, October 5-7.



Despite the increasing need for cybersecurity expertise worldwide, the size of the global cybersecurity workforce remained broadly flat at 5.5 million workers from 2023 to 2024, according to the ISC2 Cybersecurity Workforce Study. Over the same two-year time period, the need for cybersecurity workers increased from just over 9 million to approximately 10.2 million. As the gap between cybersecurity supply and demand widens, cybercriminals have taken advantage; the global costs of cybercrime have climbed from 7 to 9.2 trillion dollars in the past two years alone,

according to Cybersecurity Ventures.

As cybersecurity becomes an increasingly important topic for organizations of all sizes, the number of cybersecurity professionals needed likely will continue to grow. Universities and public institutions have begun to recognize this skill gap, with programs like the National Security Agency's "National Centers of Academic Excellence in Cybersecurity" partnering with more than 460 universities nationwide to create cybersecurity talent pipelines. Initiatives like these will be crucial to growing the talent needed to not only fill gaps in the current workforce but also be prepared for the needs of tomorrow. One of the National Centers, the University of Texas at San Antonio, will host "A Competitiveness Conversation in Texas: Fortifying the Future — Innovation in Critical Infrastructure Security" from March 10-11; join us there to learn about how educational institutions in Texas are tackling the cybersecurity workforce gap.

New to the Community



Dr. Suresh Garimella President University of Arizona

Dr. Garimella joins as a General Member and member of the Executive Committee.



Mr. David Ricks

Chair and CEO Eli Lilly and Company

Mr. Ricks joins as a General Member and a National Commissioner.



The Hon. Brad Carson President University of Tulsa

The Hon. Carson joins as a General Member.



Dr. Todd Combs Associate Laboratory Director Energy and Environment Science and Technology Idaho National Laboratory

Dr. Combs joins as a member of the TLSI.



Dr. Tomás Díaz de la Rubia Senior Vice President for Research and Innovation University of Arizona

Dr. Díaz de la Rubia joins as a member of the TLSI.



Dr. Arthur Lupia Gerald R Ford Distinguished University Professor and Interim Vice President for Research and Innovation University of Michigan

Dr. Lupia joins as a member of the TLSI.

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