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# Fact Sheet

### Engineering Research Visioning Alliance (ERVA)

#### About ERVA

The [Engineering Research Visioning Alliance](https://www.ervacommunity.org/) (ERVA) is a neutral convener that helps to identify and develop bold and transformative new engineering research directions, directly supporting the nation’s ability to compete in a rapidly changing global economy. Funded by the National Science Foundation (NSF) Directorate for Engineering, ERVA is a diverse, inclusive and engaged partnership that enables an array of voices to impact national research priorities. The five-year initiative convenes, catalyzes and empowers the engineering community to identify nascent opportunities and priorities for engineering-led innovative, high-impact, cross-domain, fundamental research that addresses national, global and societal needs.

#### Name

Engineering Research Visioning Alliance (ERVA)

First reference should be “Engineering Research Visioning Alliance (ERVA).” Every reference after should be “ERVA.” Use “the” before “Engineering Research Visioning Alliance” when grammatically necessary, but do not use “the” before “ERVA.” Pronunciation is “UR vuh.”

#### Date Founded

April 2021

#### Timeframe

A five-year award from the NSF establishes the timeframe for ERVA. In the first year, ERVA sets its focus on launching the organization, developing its strategic plan, and hosting informational webinars, visioning events and an inaugural symposium. Years two through five will involve growth and maintenance of the organization, as ERVA continues to convene researchers and practitioners to ideate and catalyze rapid translation of identified needs into future research directions. ERVA will perform an ongoing evaluation of outcomes.

#### Short Summary

Funded by the National Science Foundation (NSF) Directorate for Engineering, ERVA is a unified voice advancing high-impact engineering priorities. ERVA convenes, catalyzes and empowers the engineering research community to envision high-impact solutions for a more secure and sustainable world.

#### National Science Foundation

The U.S. [National Science Foundation](https://www.nsf.gov/) provides funding for and is engaged in a cooperative agreement with ERVA. The NSF propels the nation forward by advancing fundamental research in all fields of science and engineering. NSF supports research and people by providing facilities, instruments and funding to support their ingenuity and sustain the U.S. as a global leader in research and innovation. Its (FY) 2021 budget is $8.5 billion. NSF funds research in all 50 states through grants to nearly 2,000 colleges, universities and other institutions. Each year, NSF receives more than 40,000 competitive proposals for funding and makes about 11,000 new funding awards.

#### Founding Partners

ERVA is managed by a team of three founding partners: the Big Ten Academic Alliance (BTAA); the Established Program to Stimulate Competitive Research (EPSCoR)/Institutional Development Award (IDeA) Foundation (EIF); and the University Industry Demonstration Partnership (UIDP).

#### Principal Investigators

ERVA’s principal investigator (PI) is [Dorota Grejner-Brzezinska](https://www.ervacommunity.org/profile/Dorota-Grejner-Brzezinska), Ph.D., senior associate vice president for research-corporate and government partnerships at The Ohio State University, a member of the Big Ten Academic Alliance (BTAA). Co-PIs are [Anthony Boccanfuso](https://www.ervacommunity.org/profile/Anthony-Boccanfuso), Ph.D., president and CEO of UIDP; [Barry W. Johnson](https://www.ervacommunity.org/profile/Barry-Johnson), Ph.D., the L.A. Lacy Distinguished Professor of Engineering at the University of Virginia; [Charles Johnson-Bey](https://www.ervacommunity.org/profile/Charles-Johnson-Bey), Ph.D., senior vice president at Booz Allen Hamilton; and [Edl Schamiloglu](https://www.ervacommunity.org/profile/Edl-Schamiloglu), Ph.D., distinguished professor of electrical and computer engineering and associate dean for research and innovation for the school of engineering at the University of New Mexico.

#### Organizational Structure

ERVA consists of six groups that represent the engineering stakeholder community and that interact to facilitate the identification and development of bold new engineering research directions: [Executive Committee](https://www.ervacommunity.org/about/executive-committee), [Advisory Board](https://www.ervacommunity.org/about/advisory-board), [Standing Council](https://www.ervacommunity.org/about/standing-council), [operations team](https://www.ervacommunity.org/about/staff), thematic task forces and working groups. Additionally, critical input will be contributed by ERVA stakeholders from academia, industry, government, the nonprofit sector and the general public.

#### Purpose

ERVA brings together diverse perspectives to amplify efforts to improve the human experience through advancements in fundamental engineering research. Specifically, ERVA convenes multi-sector and cross-disciplinary engineering researchers, practitioners and technologists to work jointly to solve the most challenging problems of modern society. Addressing today’s critical scientific and societal challenges requires increasingly collaborative, cross-disciplinary and convergent approaches through new modes of engagement to ensure broad participation across the entire engineering ecosystem — and ERVA was formed to create this new, convergent network.

#### Mission

To identify and develop bold and transformative new engineering research directions and to catalyze the engineering community's pursuit of innovative, high-impact research that benefits society.

#### History

Launched in April 2021, the Engineering Research Visioning Alliance (ERVA) was created by the National Science Foundation (NSF) Directorate for Engineering (ENG) to provide the engineering community with a process for identifying bold and high-impact engineering research directions that will place the U.S. in a leading position to realize a better future for all.

On March 4, 2020, NSF-ENG invited the engineering research community to establish an organization to fulfill these needs. The NSF funds more than 40% of fundamental engineering research at U.S. academic institutions. The Directorate for Engineering identifies and prioritizes programmatic directions through consultation with academic, federal, industrial and other stakeholders, and responds directly to national priorities.

With the [ERVA solicitation](https://www.nsf.gov/pubs/2020/nsf20551/nsf20551.htm), NSF-ENG called on the engineering community to establish an Engineering Research Visioning Alliance to provide mechanisms for ideation and communication across the public and private sectors — with expert input from industry and academia — that will generate coordinated information on nascent opportunities and priorities in engineering research. The intent was for ERVA to catalyze the engineering research community’s pursuit of innovative, high-impact research through identification and communication of compelling research visions responsive to pressing national and global challenges.

#### Context

America’s economic competitiveness is tied directly to the pace of scientific and technological discovery, which requires sustained, long-term support as well as agility. To help the U.S. stay at the forefront of research and innovation — and maintain its leadership in the global economy — the National Science Foundation (NSF) Directorate for Engineering launched the Engineering Research Visioning Alliance (ERVA), the first engineering research visioning organization of its kind.

Engineering research profoundly impacts our daily lives in a variety of areas, from improved vaccine distribution to better smartphone cameras to Mars rover landings. ERVA brings the engineering community together to envision high-impact solutions to society’s grand challenges and to spark new research directions for a more secure and sustainable world.

ERVA is a diverse, inclusive and engaged partnership that enables an array of voices to impact national research priorities. ERVA will help the U.S. remain an international leader by identifying and developing new, high-impact engineering research directions to help the engineering community solve challenges and improve daily life.

#### Examples of Engineering Research Categories

ERVA welcomes stakeholders from all engineering disciplines, including aerospace, chemical, electrical, computer/data science, materials, civil/environmental and mechanical engineering.

#### Geographic Reach

ERVA is a U.S.-based partnership that will have a global impact on the future of engineering research. ERVA focuses on engaging with U.S. entities, but global audiences that follow U.S. scientific research as well as U.S. media will become acquainted with the brand.

#### Spokespeople

1. **Dorota Grejner-Brzezinska**, Ph.D., ERVA PI, senior associate vice president for research-corporate and government partnerships at The Ohio State University.
2. **Barry W. Johnson,** Ph.D., ERVA Co-PI, the L.A. Lacy Distinguished Professor of Engineering at the University of Virginia.

*Additional spokespeople available on a case-by-case basis.*

#### Website

[www.ERVAcommunity.org](http://www.ERVAcommunity.org)

#### Email

info@ERVAcommunity.org

#### Phone Number

803-807-3679

#### Social Media

**Handle:** @ERVAcommunity

LinkedIn: <https://www.linkedin.com/company/ervacommunity>

Facebook: <https://www.facebook.com/ERVAcommunity>

Twitter: <https://twitter.com/ervacommunity>

#### Hashtag

#ERVAcommunity

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