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# ERVA FAQs

### FREQUENTLY ASKED QUESTIONS

## Key Details about ERVA

#### What is ERVA?

The Engineering Research Visioning Alliance (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](https://www.nsf.gov/) (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.

#### Who are ERVA’s Founding Partners? How is ERVA led?

ERVA is managed by a team representing three Founding Partners: [the Big Ten Academic Alliance](https://www.btaa.org/) (BTAA); [the Established Program to Stimulate Competitive Research](https://www.epscorideafoundation.org/) (EPSCoR)/Institutional Development Award (IDeA) Foundation (EIF); and [the University Industry Demonstration Partnership](https://uidp.org/) (UIDP). 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 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.

Members of the engineering research and industry communities, as well as professional societies and associations, can join ERVA at no cost as [Affiliate Partners](https://www.ervacommunity.org/get-involved) and [ERVA Champions](https://www.ervacommunity.org/get-involved). See details below.

The NSF provides funding for and is engaged in a cooperative agreement with UIDP to administratively manage ERVA.

#### What is the purpose of ERVA? Why was it formed?

ERVA was created by the NSF 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.

ERVA serves as a synthesizer of traditional disciplines to solve big challenges — and it enables the engineering research community to speak with a unified voice.

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.

ERVA also includes ethicists, physical and life scientists, and those in the social and behavioral sciences. Inclusion of myriad perspectives ensures that pursuit of technological progress considers the potential for unintended societal consequences. Learning from a range of theoretical paradigms informs novel approaches to address global and societal needs.

#### What is ERVA’s mission?

ERVA’s mission is 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.

#### What does ERVA do?

ERVA **convenes** an inclusive group of academic, industry, community, professional society and public sector stakeholders; **ideates** and articulates bold new engineering research visions; **catalyzes** the development of programs, policies and collaboration to support investments that address critical national and global challenges; **communicates** findings, directions and opportunities to stakeholders; and **evaluates** the results and impacts of that work. ERVA listens across disciplines to identify and coalesce emerging research directions from across the engineering community that can evolve into the products and services that benefit society.

ERVA’s thematic task forces — ad hoc teams of interdisciplinary domain experts — scope and frame themes selected for further study and will organize and engage in visioning events. Event participants will be strategically selected to ensure the needed knowledge and vantage points are represented (e.g., active researchers from diverse sectors, technologists, policy makers, ethicists, and workforce development professionals).

#### What is the funding source for ERVA?

The Engineering Research Visioning Alliance (ERVA) is supported by the National Science Foundation (NSF) Directorate for Engineering.

#### How is ERVA structured?

As described in the organization’s bylaws, 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.

#### What is the time frame for ERVA?

The NSF has established ERVA as a five-year initiative, and the core organizational partners have developed an ambitious agenda for its work. This schedule will be significantly impacted by the alliance's strategic plan development — the results of which will be made public on the ERVA website upon completion.

#### Who can contribute to ERVA’s visioning activities?

All are welcome — the general public; students at all levels; researchers, faculty and deans in small and large college engineering programs; and interested parties in industry (from engineers to CEOs). Everyone is encouraged to get involved with ERVA, especially those with an interest in the future of engineering research. ERVA believes that diverse participation — including different backgrounds, voices and ideas — is vital to identify emerging trends and efficient solutions that benefit society.

#### How do I get involved?

Everyone can [participate in ERVA](https://www.ervacommunity.org/get-involved), especially those interested in increasing collaboration between engineering researchers and practitioners to benefit society. There are many ways to get involved:

* **Visit us online** at www.ERVAcommunity.org.
* **Become an** [**ERVA Champion**](https://app.smartsheet.com/b/form/0101cbcd9ba84d088ba8914aee0da4d6): Subscribe for email updates on our progress and get an early look at our latest advances, such as highlights from visioning sessions with some of the most innovative minds in engineering.
* **Become an** [**ERVA Affiliate Partner**](https://app.smartsheet.com/b/form/448abf38907f483d804c893f3d1c6622): If your organization aligns with ERVA’s mission and goals and you are willing to substantially contribute on an ongoing basis, apply to become an ERVA Affiliate Partner at no cost.
* **Contribute to our visioning activities**: Review our upcoming events. Is there something you could contribute to the discussion? We’re looking for participants to help us create bold, new ideas and identify cross-domain engineering research directions.
* **Give us feedback**: [Let us know what you think](https://www.ervacommunity.org/get-involved) about ERVA and share your ideas about what we can do to help diverse engineering constituencies identify and unite behind research priorities that address major societal challenges.
* **Follow ERVA on social media**: Join the discussion with ERVA on [Facebook](https://www.facebook.com/ERVAcommunity), [Twitter](https://twitter.com/ervacommunity) and [LinkedIn](https://www.linkedin.com/company/ervacommunity) by following @ERVAcommunity and #ERVAcommunity.

## Learn More About ERVA

#### What is the impact of ERVA on society?

Engineering research is foundational to many of the products and services that we currently depend upon and look forward to having in the future. ERVA will help our nation stay at the forefront of innovation in engineering research and practice by identifying and developing new, high-impact engineering research directions to help the engineering community solve challenges and improve daily life. These visioning efforts will play a critical role in identifying opportunities that can be effectively translated to provide real-world positive impact to society.

#### What is the impact of ERVA on the engineering research community?

ERVA will advocate on behalf of the engineering research community across the country and provide a unified voice. As a convener, ERVA serves as a broad, inclusive pathway for the engineering community to participate in defining new engineering research directions and have an impact on national research priorities.

#### What is the impact of ERVA on the engineering industry?

ERVA welcomes engineering practitioners to participate in the ERVA visioning process and ideate collaboratively with others in the research community. By engaging those in industry, ERVA will catalyze development of fundamental research ideas to address problems industry is interested in tackling. ERVA will breed connectivity that drives timely translation of identified needs into research objectives.

#### How do practicing engineers benefit from ERVA?

ERVA prepares practitioners for what’s around the corner by participation in ERVA visioning activities and by using ERVA's visioning outcomes to get in front of emerging technology needs. In this way, ERVA serves as a force multiplier for industry’s own investments and establishes a means to better translate technology to next generation solutions.

#### How do engineering researchers benefit from ERVA?

Engineering researchers benefit from ERVA’s activities by learning about emerging areas likely to attract the attention of funding agencies and nonprofit organizations. This gives engineering researchers a competitive edge. Additionally, ERVA communicates with key constituencies on behalf of the research community and serves as a convener for researchers to participate in defining new engineering trends that will impact national research priorities.

#### How do policymakers and the public benefit from ERVA?

ERVA serves as a trusted, neutral source to inform policymakers about emerging areas of engineering research that can assist in decision-making. The public benefits from ERVA’s outreach activities that illustrate why engineering research is critical to future innovation and how that research impacts lives.

#### Does ERVA fund engineering research activities?

The future research directions that ERVA develops could stimulate future funding opportunities for engineering research, but ERVA is not currently a direct source of engineering research funding for individual investigator or institutional engineering research grants. Instead, ERVA’s role is 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.

#### What is the role of non-engineering disciplines in advancing ERVA’s mission?

ERVA will include the voices of basic, social, and behavioral sciences as well as humanists, ethicists, and educators. Inclusion of these myriad perspectives ensures that pursuit of technological progress considers the potential for unintended societal consequences and that learning from complementary disciplines informs novel approaches to address global and societal needs. Visioning events will enable the engineering community to identify nascent opportunities and priorities for engineering-led innovative, high-impact, cross-domain research that addresses global and societal needs.

#### How will ERVA impact the workforce/professional development of the next generation in engineering research and Industries of the Future?

ERVA will help the NSF identify future research initiatives that will create opportunities for students to be engaged and trained through those funded programs. Future engineering research includes inquiry into engineering education that will drive educational programs for the workforce of the future — the innovative professionals who will work in industry at the nexus of disciplines and in roles we have yet to imagine.

#### How does ERVA propose to embrace all engineering disciplines, given how broad the profession is?

ERVA relies on a vast network of stakeholders to ensure inclusion among the diverse engineering research community in its formal structures, as well as its invited ad hoc thematic task forces and visioning events. The intellectual capital providing fuel to the ERVA engine is its [Standing Council](https://www.ervacommunity.org/about/standing-council), which convenes quarterly to explore contemporary and future research/translational opportunities. It serves as the intellectual brain trust for this visioning alliance and is charged with soliciting and integrating input from all stakeholders with interest in engineering research. ERVA Standing Council members represent a range of demographics, geography and rank/career stage, inclusive of numerous engineering disciplines as well as engineering ethicists, scientists and nonprofit representatives. The Standing Council membership possesses significant commercialization and development knowledge, which is critical when evaluating research opportunities emanating from the visioning events. ERVA is also accepting [Affiliate Partners](https://www.ervacommunity.org/affiliates) to engage the major engineering professional societies and other similar organizations.

## ERVA Affiliate Partners

#### What is an ERVA Affiliate Partner?

The [ERVA Affiliate Partner program](https://www.ervacommunity.org/affiliates) seeks to engage major engineering professional societies and other similar organizations to participate in ERVA's visioning activities on a formal, ongoing basis. ERVA Affiliate Partners will be invited recommend experts to attend ERVA events and contribute regularly to ERVA's process and outcomes.

#### What do ERVA Affiliate Partners gain from participating?

ERVA Affiliate Partners will have the opportunity to participate in defining new engineering trends that will impact national research priorities and future engineering industry outcomes. Affiliate Partners will enjoy formal inclusion in the ERVA visioning network, will have the opportunity to recommend experts for visioning activities and working groups, and will be the first to learn about visioning events, resources, and other initiative outputs. Affiliate Partners will be recognized on the ERVA website with a logo and website link, and most importantly, they will advance the nation’s engineering research enterprise by sharing their perspectives and knowledge.

#### What is required of an ERVA Affiliate Partner?

Affiliate Partners agree to demonstrate alignment with ERVA’s mission, include the ERVA logo on their websites, identify a communications liaison, participate in identification of research opportunities for possible visioning activities, offer candid feedback and input on ERVA’s activities, and periodically share relevant ERVA news and resources with their members and stakeholders. There is no cost associated with becoming an ERVA Affiliate Partner.

## ERVA Champions

#### What is an ERVA Champion?

[ERVA Champions](https://app.smartsheet.com/b/form/0101cbcd9ba84d088ba8914aee0da4d6) are individuals who are interested in staying up to date on ERVA's progress.

#### What do ERVA Champions gain from subscribing to ERVA updates?

ERVA Champions will be propelled to the leading edge of engineering research, staying abreast of opportunities that will have a concrete, positive impact on our daily lives in the future. There is no cost to [become an ERVA Champion](https://www.ervacommunity.org/get-involved).

***About ERVA***

*The Engineering Research Visioning Alliance (ERVA) is a neutral convener that helps define future engineering research directions. 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 enables the engineering community to identify nascent opportunities and priorities for engineering-led innovative, high-impact, cross-domain research that addresses national, global and societal needs. Learn more at* [*www.ERVAcommunity.org*](http://www.ERVAcommunity.org)*.*

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

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

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Hashtag: #ERVAcommunity

***About the National Science Foundation (NSF)***

*The U.S.* [*National Science Foundation*](https://www.nsf.gov/) *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. With a fiscal year 2021 budget of $8.5 billion, NSF funds reach all 50 states through grants to nearly 2,000 colleges, universities and institutions. Each year, NSF receives more than 40,000 competitive proposals and makes about 11,000 new awards. Those awards include support for cooperative research with industry, Arctic and Antarctic research and operations, and U.S. participation in international scientific efforts.*

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