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Content - About

Shaping the Future of Software for a Better World

About the SEI

In the early 1980s, the U.S. Department of Defense recognized that software was quickly becoming central to powering novel capabilities and unprecedented flexibility for its mission-critical systems. To help boost its efforts in software, the DoD established the Software Engineering Institute (SEI) at Carnegie Mellon University (CMU) to serve as a federally funded research and development center (FFRDC) in 1984.

FFRDCs conduct specialized research for government and provide an agile workforce with unique skills and expertise. They help government agencies respond quickly to national challenges, and they provide objective information and solutions that are free from commercial bias or other interests.

The SEI is the only DoD FFRDC that works on software engineering and cybersecurity. We conduct research to demonstrate how the DoD—and other organizations we partner with—can apply advanced software concepts and technology to obtain strategic advantages in cyberspace and create a safer future.

Our Mission

We establish and advance software as a strategic advantage for national security. We lead and direct research and transition of software engineering and related disciplines at the intersection of academia, industry, and government.

The Carnegie Mellon University Community

The SEI is a research center based at Carnegie Mellon University in Pittsburgh, Pennsylvania. In addition to our headquarters in Pittsburgh, we also have offices in Arlington, Virginia, to be able to stay close to our sponsor in Washington, DC.

Carnegie Mellon University is a national and international leader in higher education and research as well as a global leader in cybersecurity, artificial intelligence (AI) engineering, and software initiatives. The university provides the SEI with infrastructure and business processes and our technical staff form part of the university's world-class community of researchers and innovators.

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Our Core Competencies

The SEI is a recognized leader in software engineering, AI engineering, cybersecurity, and other areas of computing. We specialize in several research areas to develop tools, practices, and other materials that help support our goals of advancing software engineering and ensuring national security.

Info Graphic

Our Research and Development

Our People

SEI staff comprises a diverse group of people that contributes to our mission in different ways.

- **Researchers:** maturing the software engineering discipline and serving in leadership roles at prestigious organizations, including IEEE, FIRST, ACM, INCOS, the National Academy of Engineering, and more
- **Innovators:** creating and prototyping technologies and serving in leadership roles as technical leads, working group directors, or committee members for institutions like the The American Society for Industrial Security, IETF, The International Society of Automation, SAE International, and more
- **Collaborators:** applying our expertise with academia, government, and private industry to extend the reach of our impact
- **Educators:** partnering with Carnegie Mellon University to disseminate our solutions

[Learn more about the SEI's leadership team.](#) [Learn about careers at the SEI.](#)

SEI National Impact

Since the SEI's foundation in 1984, software continues to generate life-changing advancements throughout our society. The pace of these changes is accelerating everywhere we look, from the field of medicine, to finance, commerce, education, communications, and almost every aspect of our day-to-day lives. As software continues to grow and evolve, the SEI conducts research and development (R&D) to stay at the forefront of those changes, protect against emerging threats, and ensure that our nation is prepared to leverage the rapid changes in software to create a better future.

Learn more about the impact that the SEI has on software engineering.

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Collaborations: Work with Us

The SEI works with a broad range of government agencies as well as companies in the private sector to introduce innovative software solutions and improve how organizations acquire, develop, operate, and sustain software. We support government initiatives by conducting research and development that is objective, long term, and free from the constraints of commercialism.

As a part of Carnegie Mellon University, we are rooted in academia and collaborate often with academic institutions all over the world on research and education.

Our partnerships enable us to take innovations from concept to practice, closing the gap between research and use. [Learn how you can work with us today!](#)

Government	Academia	Industry
<p>As an FFRDC, we fulfill core DoD software engineering needs that are unmet by in-house and private sector R&D centers. For example, the U.S. Army and the SEI engaged in a multiyear partnership to improve the Army's capability to acquire software-reliant systems. Our engineers stepped in to help a prototyping team accelerate its use of Agile methods in an acquisition for a critical U.S. Air Force intelligence system. We also collaborated with the Department of Transportation and US-CERT on research aimed at securing the U.S. government's fleet of vehicles.</p> <p>Are you part of a government agency? Initiate a new project with us.</p>	<p>As part of Carnegie Mellon University, SEI researchers contribute to the university's intellectual capital through research, collaboration, and teaching. Thanks to SEI researchers' close relationships with the university, we often participate in key academic initiatives and collaborate with other universities. SEI researchers publish in academic journals and frequently speak at top conferences in the fields of cybersecurity, computer science, AI, and more.</p> <p>Learn more about our Collaboration with CMU.</p> <p>Reach out to collaborate with us on research.</p>	<p>Commercial organizations achieve strategic advantage by rapidly applying improved software engineering technology. We combine our expertise with yours to mature new technology. While all of industry benefits, our commercial R&D sponsors enjoy early access to results they can use to improve development, streamline operations, and gain an edge.</p> <p>Contact us to learn how we can help support your organization achieve its goals.</p>

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