DISCOVERY, INNOVATION, AND SOLUTIONS

Accelerating communications platforms of the future. Slowing cyber adversaries. Securing microelectronics and pharmaceutical supply chains. Assuring the integrity of artificial intelligence.

MITRE Labs inspires breakthroughs in applied science and advanced technology to transform the future of U.S. scientific and economic leadership. We're focused on strengthening vital U.S. missions and industries of the future through our talent, platforms, partnerships, and community.

Our goal? Deliver disruptive innovation to support our mission of solving problems for a safer world.

How? By drawing on what we've learned through our operation of federally funded research and development centers. By strengthening competitiveness in a world where dual-use technologies like artificial intelligence (AI) and quantum computing can be game-changers for our nation's security and economy.

We apply the expertise of technical staff across a wide range of disciplines, including MITRE fellows—prominent thought leaders and subject matter experts in their fields.

MITRE

> "The U.S. risks falling behind in key areas of innovation while other nations are racing to close the gap. For our safety and prosperity, we must turn this around."
>
> Charles Clancy, Senior Vice President and General Manager, MITRE Labs, Chief Technology Officer

Revitalizing American Innovation

MITRE Labs is the modern national foundry to advance U.S. science and technology leadership. We stimulate new ways of thinking and action to tackle national and global challenges—in partnership with industry and academia—by extending MITRE's whole-of-government platform to whole-of-nation impact.

To drive applied science and advanced technology solutions, MITRE Labs has developed ten strategic focus areas, called Horizon Strategies. These strategies in advanced manufacturing and materials; AI; biotechnology; climate, energy, and environment; cybersecurity; digital health; future connectivity; intelligent connected domains; microelectronics; and quantum will scale MITRE's expertise to best support the U.S. innovation economy and America's competitive success.

Highlights of MITRE Labs' recent work include:

- **Securing Critical Infrastructure.** China, Russia, and other malicious state actors are ramping up attacks against the operational technology systems that Americans rely on every day. We're working with government agencies and critical infrastructure operators to ensure resiliency while developing techniques to deter adversaries and mitigate risk.
- **AI Assurance.** AI systems are being employed for critical activities, posing both potential and risks. To enable meaningful, assured AI across sectors, MITRE is using its technical knowledge and strategic convening role to develop new standards and best practices that adapt to the speed of AI innovation. To maintain the integrity of AI systems, MITRE identifies emerging threats using ATLAS™, a global knowledge base of adversary tactics based on real-world attacks and demonstrations from AI security teams.
- **Driving American Innovation in Microelectronics and Advanced Manufacturing.** Focusing on critical supply chain issues, MITRE invests in novel chip security, rapid prototyping, 3D titanium printing, and integrated circuit design to push the development and production of key technologies on U.S. shores.
- **Advancing Healthcare Research and Treatment.** Building a connected digital health system and putting patients at the center of their care are essential to improve health and well-being for all. MITRE seeks solutions through digital health records and data analytics that accelerate research and development, advance treatment and response, and lower costs. MITRE-designed Synthea™ gives medical communities artificial yet realistic patient data and tools to innovate for better outcomes.
- **Taking a Quantum Moonshot.** The speed and processing power of quantum computers could revolutionize research in cybersecurity, defense, finance, manufacturing, and health. We're developing hardware and protocols for unconditionally secret quantum communications, quantum sensing, post-quantum cryptography, and universal photonic quantum computing, powered by AI.
- **Partnerships and Organizational Enablers.** MITRE harnesses the power of collaboration among government, industry, nonprofits, and academia to solve complex, at-scale challenges, using tools including Assemble™ to assist partners in launching and running collaborative initiatives.

MITRE LABS OPERATES 15 INNOVATION CENTERS THAT ARE AT THE HEART OF THE TECHNOLOGY WE DELIVER.

- Artificial Intelligence and Autonomy
- Cost, Acquisition and Management Sciences
- Cross-Cutting Urgent Innovation Cell
- Cyber Infrastructure Protection
- Cyber Operations and Effects
- Cyber Solutions
- Electronic Systems
- Emerging Technology
- Enterprise Strategy and Transformation
- Health and Society
- Infrastructure and Networking Innovation
- Integrated Systems
- Modeling and Analysis
- Software Engineering
- Systems Engineering

For more information about MITRE Labs, contact labs@mitre.org.

Through our public-private partnerships and federally funded R&D centers, we work across government and in partnership with industry to tackle challenges to the safety, stability, and well-being of our nation

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