



NWRTC

Northwest Regional
Technology Center
@PNNL



OPPORTUNITIES

Events current at time of publication. Have a virtual resource or event to share? Email us!

- October 24–27 – [International Association of Chiefs of Police Annual Conference and Exposition](#)
- November 3–5 – [Critical Minerals and Materials Science Summit](#)
- November 6–12 – [International Association of Emergency Managers Conference and EMEX](#)
- November 12–13 – [Pacific NorthWest Economic Region Trade and Infrastructure Forum](#)
- April 26–28 – [ARPA-E Energy Innovation Summit](#)

CONTACT

Want to know more? Visit us at pnnl.gov/projects/nwrtc. Contact the NWRTC with questions and comments at nwrtc@pnnl.gov.

AROUND THE REGION IN HOMELAND SECURITY

The Northwest Regional Technology Center (NWRTC) is a virtual resource center, operated by Pacific Northwest National Laboratory (PNNL), that supports regional preparedness, resilience, response, and recovery. The center enables homeland security solutions for emergency responder communities and federal, state, and local stakeholders in the Northwest.

REFLECTING ON 25 YEARS OF S&T PROTECTING PUBLIC SAFETY

This month marks 25 years since September 11th, 2001. For our public safety and emergency management partners across the country, this remains one of the most devastating events in our history.

This year, we've taken a moment to look back at how science and technology (S&T) have pivoted to meet ever-evolving challenges in public safety. We invite you to check out this [timeline capturing 25 years of S&T](#) to see the many tools and capabilities serving in nearly every layer of the country's security. Reflecting on the historical [millimeter-wave scanner](#) and recent advances in [fentanyl detection](#), [wildfire preparedness](#), [critical infrastructure protection](#), and [exploring AI for emergency management](#)—dozens of projects developed by PNNL in partnership with sponsors, industry, and first responders have helped enhance abilities to detect, respond to, and recover from threats across domains and complex environments.

We appreciate the many collaborators who have joined us through the years to connect S&T with emerging public safety needs. Our team at PNNL remains committed to advancing S&T innovations to address the threats of today and tomorrow. To learn more, see the [PNNL feature article](#).

Ann Lesperance
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[Click to see PNNL's S&T Timeline](#)



ASSESSING S&T FOR FIRST RESPONDERS

In an emergency, responders need the technology to meet their needs in the face of complex threats and environments, like rugged terrain, hazardous materials, and limited visibility. On behalf of the [System Assessment and Validation for Emergency Responders \(SAVER\) program](#), PNNL joined the Department of Homeland Security Science and Technology Directorate and first responders from across the country to evaluate commercially available unmanned ground vehicles for emergency response. The results were captured in [a series of reports](#) made available to emergency response agencies on the SAVER website.



To learn more, see the [PNNL article](#).

IMMERSIVE IMAGING SYSTEM DEPLOYED TO WORLD CUP

As crowds gathered in stadiums around the nation for the FIFA World Cup competition, crowd security at stadiums in Seattle, Washington, and in Santa Clara, California, was enhanced with an immersive imaging system. The [360-degree immersive imaging system, called Guardian-iiS](#) (pronounced Guardian Eyes), provides a new tool for security specialists to secure an event. The system stitches together imagery from multiple cameras of differing focal lengths, providing a high-resolution 360-degree field of view. Artificial



intelligence specially trained for crowd behavior monitoring, object detection, and object tracking is layered on top of the immense video dataset.

The system was originally developed in a partnership between the Massachusetts Institute of Technology Lincoln Laboratory and PNNL. MIT licensed the technology to Consolidated Resource Imaging LLC in 2017, and PNNL continued to partner with CRI to develop the video analytics that now underlie the system.

To learn more, see the [PNNL article](#). For a more in-depth look at Guardian-iiS, see the DHS article [Leveling the Playing Field at the Big Game](#) that describes testing and evaluation of the system by Betzsold and the PNNL team at the Super Bowl.

FIVE INNOVATIONS WIN R&D 100 AWARDS

Five technologies developed by PNNL and its research partners have won *R&D World* magazine's [2026 R&D 100 Awards](#), an international competition recognizing technologically significant products and advances.

PNNL's 2026 award-winning technologies:

- AMP2: Accelerating innovation in microbial biotechnology
- HiVe: Transforming automotive materials joining
- Flow-Ore™: Tapping previously unreachable critical minerals
- Engineered cermets for advanced reactor waste disposal
- Persistent DyNAMICS: Advancing event-driven sensing for nuclear security

Two technologies were given honorable mentions and [received 2026 Federal Laboratory Consortium awards earlier this year](#): VaporID: Bringing ultratrace threat detection to high-risk locations, and Sensor Fish Suite/HBET: Making water infrastructure safer for aquatic life.

To learn more, see the [PNNL article](#). You can also learn more about PNNL technology commercialization and industry partnerships at <https://www.pnnl.gov/industry>.