



NWRTC

Northwest Regional
Technology Center
@PNNL



OPPORTUNITIES

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

- July 19–23 – [Pacific NorthWest Economic Region 2026 Annual Summit](#)
- August 10–13 – [National Homeland Security Conference](#)
- August 12–14 – [Fire-Rescue International 2026](#)
- 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](#)

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.

ENHANCED GRID VISIBILITY AND EVENT RESPONSE EFFORT TO TACKLE ENERGY SECURITY CHALLENGES

PNNL has established the Enhanced Visibility and Event Response capability to help grid operators adapt to a rapidly evolving electricity system and thwart potential adversarial cyber and physical attacks on the grid.



Within [EVE@PNNL](#), researchers will partner with government and industry partners to develop real-time AI-driven analytics, real-world simulations, and novel sensing and monitoring tools to tackle challenges faced by the nation's grid operators.

“The U.S. electrical grid faces two main challenges: nation-state adversaries and our country's lack of visibility into the underlying physics in the system,” said [Bruce Walker](#), a PNNL advisor. “Although we have deployed significant protection and control schemes tailored to the existing grid, the fundamental behavior of the grid is significantly changing, which is challenging the existing controls.”

With the establishment of EVE@PNNL, researchers will explore how newer AI tools can help support an expanding and dynamically changing grid. In May 2025, the Lab [published a report](#) detailing opportunities for grid operators to incorporate AI—specifically in the form of large language models—into their work. EVE@PNNL will allow the Lab to partner with other research institutions and private industry to bring even more advanced AI tools into grid operations.

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



GUIDE EXPLORES BEST PRACTICES OF BUILDING A DATA CENTER

As more companies invest in data centers to support their shift to AI-driven systems, demand for electricity will rise significantly. To help developers, engineers, utilities and policymakers understand the complexities and best practices of building a data center, PNNL has codeveloped [a comprehensive guide](#) to siting, building and maintaining the facilities. The guide was written by experts from [PNNL](#), the [National Electrical Manufacturers Association](#), and [ASHRAE](#).

The new guide acts as a one-stop shop for anyone involved in development of a data center. For example, the guide covers planning and siting, operations and maintenance, and integrated design, among other topics. To learn more, see the [PNNL news release](#).

REPORT HIGHLIGHTS AI-DRIVEN ONE HEALTH SECURITY

In the wake of an infectious disease, the health of humans, animals, plants, and the environment presents a complicated nexus with global impacts. A new report highlights a public workshop hosted by the National Academies Forum on Microbial Threats to address the ecological, social, and technological factors that shape emerging diseases.



The report, "[Understanding the Introduction of Pathogens into Humans: Preventing Patient Zero: Proceedings of a Workshop](#)," captures the discussions from the 2025 workshop, where [Lauren Charles](#) shared [PNNL's One Health approach](#) and highlighted a [series of tools](#) that leverage AI and other advanced capabilities to enhance situational awareness, early warning, and disease forecasting.

Tools like [Biofeeds](#), [MedINT](#), and [TREADS](#) are serving One Health collaborators and agencies across the U.S. government and abroad.

Charles also participated in the National Academies of Sciences, Engineering, and Medicine One Health Action Coalition webinar called "[Advancing Data Sharing to Strengthen One Health Effectiveness: Series Synthesis and Paths Forward](#)," which explored how data sharing can strengthen One Health efforts by identifying barriers, highlighting successful approaches, and examining opportunities for future action.

"Integrating different types of data (news, medical, landscape, weather, literature, populations) can help us get a holistic view of the threat landscape, of when, where, and what is happening. This type of integrated approach to using open-source news, scientific literature, and a range of other sources can help assess risk, mitigation measures, and more," said Charles. To learn more, visit [pnnl.gov/projects/one-health](#).

SYMPOSIUM EXPLORES AI ADVANCES RESHAPING CBRN READINESS

Scientific and technological advances are changing how to counter chemical, biological, radiological, and nuclear (CBRN) threats. At the 14th Annual Joint CBRN Symposium, PNNL's [David Wunschel](#)



participated on a panel focused on how emerging technologies are transforming CBRN defense, detection, and response across military and government operations. The event convened representatives from across government, military, academia, and industry to share insights for countering CBRN threats. Wunschel highlighted the Department of Energy [Genesis Mission](#) and PNNL's investments and [opportunities in AI](#) and [autonomy](#), particularly lab autonomy and the role AI plays in designing and controlling workflows, data outputs, and analysis. See the [PNNL article](#) to learn more.

For more information, contact Director Ann Lesperance (ann.lesperance@pnnl.gov | (206) 528-3223) or Deputy Director Rachel Bartholomew (rachel.bartholomew@pnnl.gov | (509) 371-6906) or visit pnnl.gov/projects/nwrtc.

PNNL-SA-224527