

**Pacific Northwest National
Laboratory's
Northwest Regional Technology Center
for Homeland Security**

**“A Model for Connecting State and
Local Users & DHS S&T' Research
Agenda”**

DHS S&T Stakeholder's Conference West

January 15, 2008

Pacific Northwest National Laboratory



W.R. Wiley
Environmental Molecular Sciences
Laboratory



The Guest House at PNNL

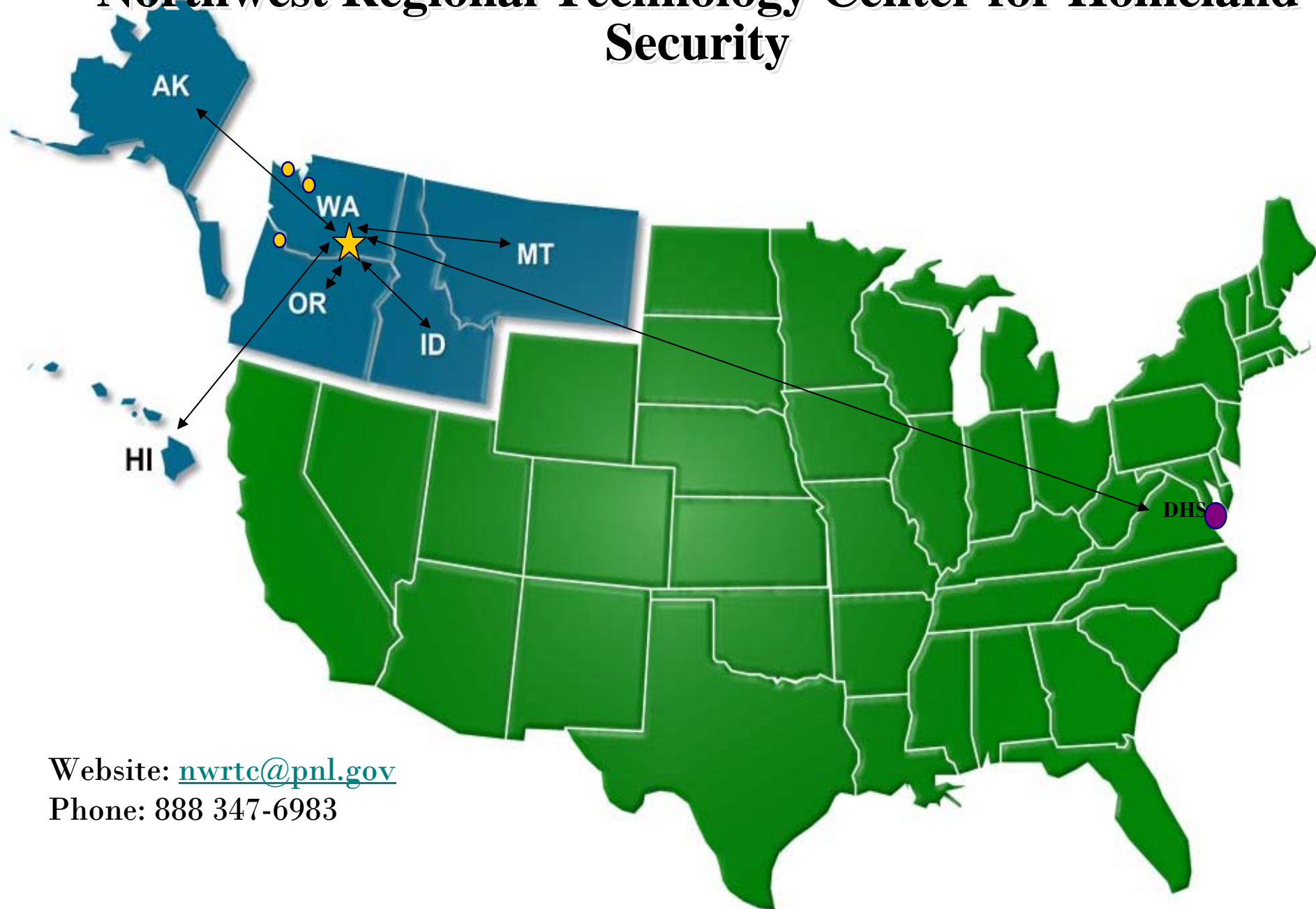


Research Operations Building

Pacific Northwest National Laboratory



Northwest Regional Technology Center for Homeland Security



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NW Regional Technology Center for Homeland Security

Vision: *Be widely recognized and valued in the Northwest as the key resource enabling science and technology solutions for Homeland Security Prevention, Detection, Emergency Preparedness, and Response & Recovery.*

Mission: Lead collaborative efforts between technology developers and users to: 1) define critical technology needs and develop functional requirements that will be provided to DHS S&T to influence the R&D agenda and 2) enable deployment of early stage technologies

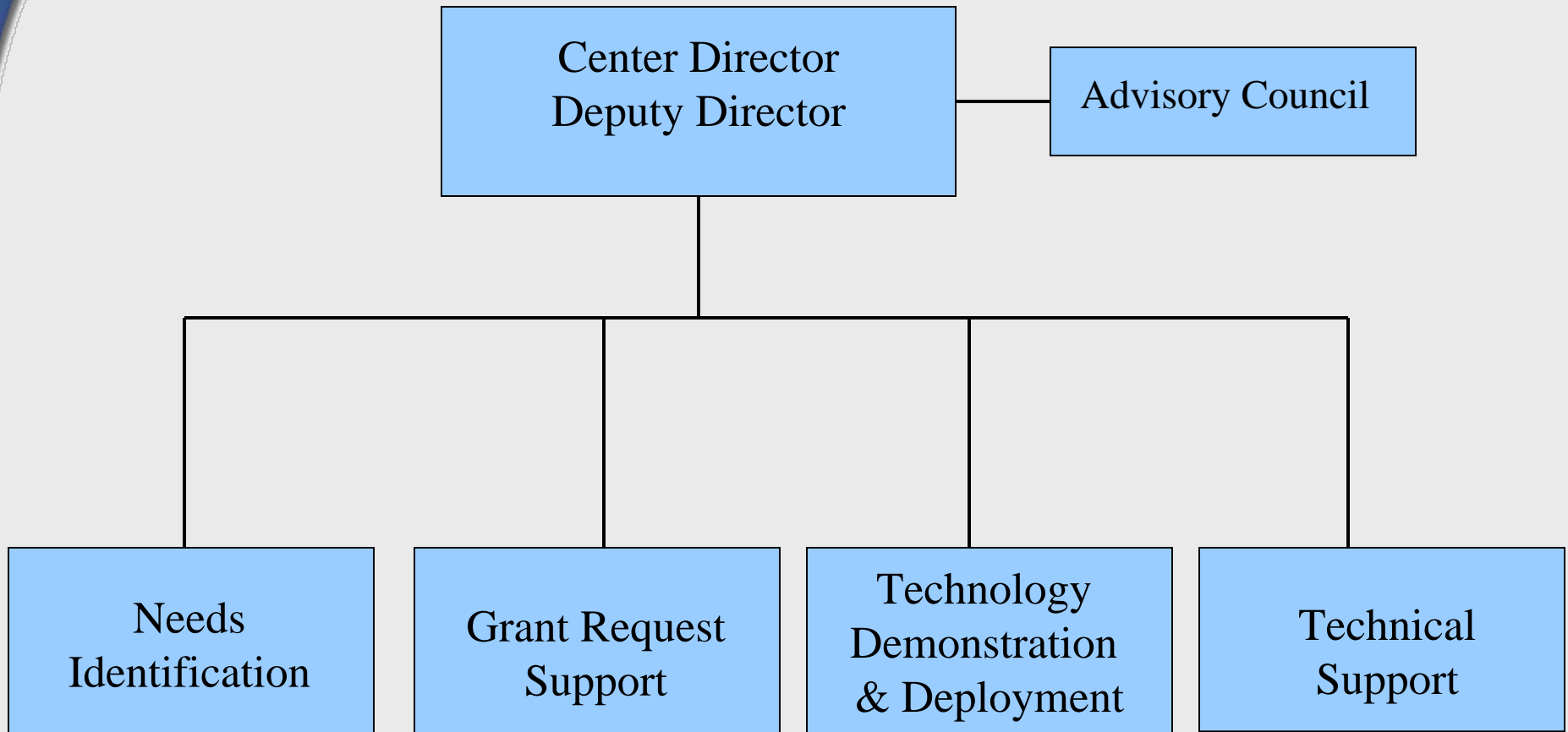
Organizational Values

- ▶ Give the voice to State and Local Users for technology needs and requirements to influence the R&D agenda
- ▶ Accelerate development and demonstration of technology solutions through early and continuous user engagement
- ▶ Provide unbiased information to assist with acquisition and deployment decisions
- ▶ Serve as a window to national labs, providing state and local users with access to in depth technical capability
- ▶ Provide value at every engagement with Public Safety professional and Emergency Managers

So what is it?

- ▶ The Northwest Regional Technology Center (NWRTC) is a virtual resource center supporting regional preparedness, response, and recovery by enabling homeland security solutions for emergency responder communities and federal, state, and local stakeholders in the Northwest.
- ▶ Objectives
 - Serve as a conduit between the Northwest region, the DHS S&T and the broader technology development community to communicate technology gaps and requirements.
 - Accelerate the development and deployment of technologies that are effective homeland security solutions for the region, and accelerate technology transfer to the national user community.
 - Foster a collaborative spirit across agencies and jurisdictions.
 - Serve the region's preparedness and response communities as the primary resource for information on homeland security solutions, policies, and procedures.

NW Regional Technology Center for Homeland Security



Needs Identification

- Engage a wide range of emergency management and public safety professionals across multiple jurisdictions to systematically identify needs
- Prioritize needs within disciplines and validate
- Conduct workshop with representation from multiple disciplines to prioritize needs.
- Validate and document outcomes

Needs Identification (cont'd)

Other Needs

	Scenario #1	Scenario #2	Scenario #3	Scenario #4
Training and Exercises				
Training modules for emergency response activities <ul style="list-style-type: none"> Compliant with ICS and NIMS training requirements Oriented towards specific agencies/activities Provide simulation and hands-on modules Flexible, on-location, interruptible, widely available, low operational impact, affordable, interactive, challenging & engaging, situation-, scenario-, and site-specific Appropriate and automatic initial credentialing and recertification 				
Decision support tool for recovery operations <ul style="list-style-type: none"> Supports modeling of recovery options to analyze trade-offs and to select preferred recovery approach 				
Critical Infrastructure Protection				
Sensor systems to detect abnormal conditions <ul style="list-style-type: none"> E.g., cameras, motion, sound, and thermal sensors Sample assets: water systems, wastewater, energy systems, and transportation systems <i>Notification to stay in building/evacuate</i> 				
Smart video systems <ul style="list-style-type: none"> Software to aid in monitoring assets/situations and in interpreting video imagery, with automated alerting capabilities 				
Operator identification and verification systems <ul style="list-style-type: none"> E.g., password-based or biometric technology linked to vehicle startup for buses, ferries, etc. 				
Sensor systems that evaluate the structural integrity of critical infrastructures <ul style="list-style-type: none"> Including wireless communication capabilities 				
Information management tool for infrastructure <ul style="list-style-type: none"> Identifies critical nodes, interdependencies, and vulnerabilities among critical infrastructure 				

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Grant Support

- ▶ Needs assessment provides foundations and justifications for specific grant requests
- ▶ Independent reviews can strengthen grant request justifications
- ▶ Independence of Center can be used to help reconcile differences between priorities in State and UASI grant requests

Technology Demonstration & Early Deployment

- ▶ Work with DHS S&T, State and Locals to match maturing technologies to communities and users that can accelerate technology development and support national deployment
- ▶ Facilitate agreement on key success factors and expectations between multiple disciplines and multiple jurisdictions
- ▶ Support the technology provider develop a project plan that defines user contributions and commitments
- ▶ Assist with demonstration/deployment activities as needed

Technical Support

- ▶ Refer users to Federal resources for unbiased technology evaluations
- ▶ Provide consultation on technology issues
- ▶ Direct users to existing technologies where appropriate
- ▶ Refer unmet needs to DHS S&T or other federal agency for inclusion in the R&D agenda

Example Activities

- ▶ Regional Technology Integration
- ▶ Emergency Response and Communications Planning
- ▶ Interagency Biological Restoration Demonstration
- ▶ Fusion and Counter Terrorism Center

Regional Technology Initiative (RTI) Seattle

Goal Make regional, state, and local jurisdictions safer through the introduction and transfer of existing and new technology systems that improve preparedness and response capabilities.

Value

- ▶ **Assessment Phase** Used by Seattle Urban Area and DHS to support DHS and Law Enforcement Grant Applications to improve regions preparedness
- ▶ **Solutions Phase** Piloting and deploying technologies strengthening regional preparedness and supporting national deployment
 - Interoperable communication
 - Credentialing (SRA)
 - 3-D Responder Locator (L3)
 - Interconnected Emergency Operations Center (SAIC)
 - Uniform Incident Command Data System (Paragon)

Radiological Emergency Response Plan and Guidance on Emergency Communication for King County

Goal Develop an emergency response plan, including a risk-communication guidance manual, considering the effects on waste water treatment plant workers, treatment processes and facilities from an RDD.

Value

- ▶ King County understands its waste water system vulnerabilities, risks and monitoring needs
- ▶ A response plan is in place
- ▶ Guidance for emergency communications is in place
- ▶ King County is sharing this with other jurisdictions in the NW (Wa and OR) for application in other regions.



Interagency Biologic Restoration Demonstration (IBRD)

Goal Joint DHS/DTRA program will develop, test and demonstrate the Consequence Management Plan and supporting technologies to restore and recover from a bioterrorist attack on a large urban area/military installation.

Value

- ▶ The plan will be specific to the Seattle Urban Area, and applicable nationally
- ▶ The plan will be tested and demonstrated with local responders to ensure efficacy
- ▶ Plan will provide a focus on exercising restoration and recovery, an inherent weakness in emergency management
- ▶ The plan, although focused on a bio event, will be applicable to recovery and restoration from any major disaster



Puget Sound Fusion and Counterterrorism Center

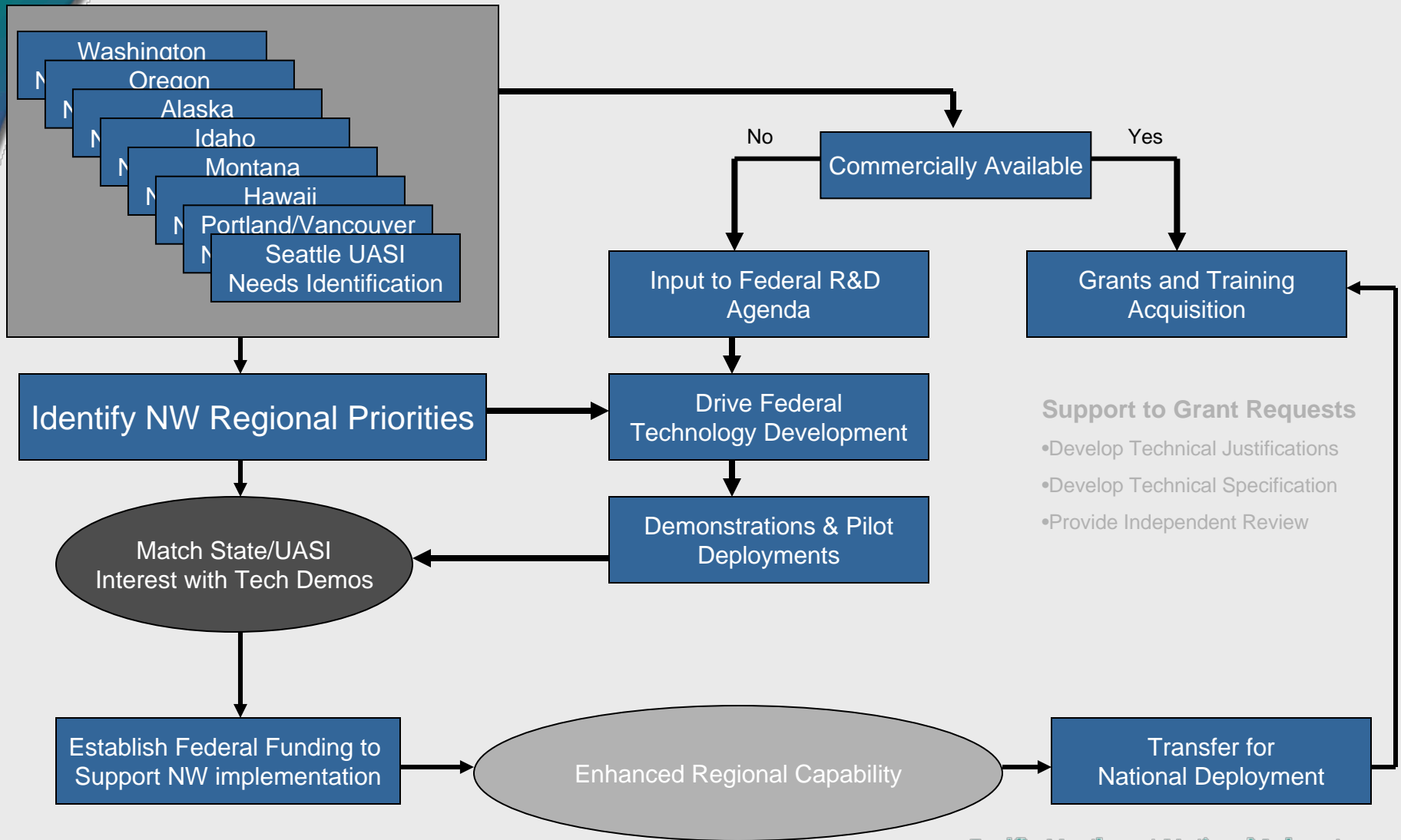
Goal Merge resources to provide the greater Puget Sound region with a robust information fusion capability using advanced technologies to protect citizens, businesses and infrastructure from criminal and terrorist threats while respecting the privacy and civil rights of citizens.

Value

- ▶ Detect, deter, prevent, and respond to terrorism and organized criminal activity by joining state and regional resources to create an integrated, multi-partner, 24/7 all-crimes information fusion center
- ▶ Provide investigative and intelligence analysis support to regional agencies and organizations
- ▶ Support law enforcement operations during emergencies and major events
- ▶ Test and evaluate new technologies for intelligence analysis and detection of chemical, biological, radiological, nuclear and explosive threats



PNNL Vision for NW Collaborations



Possible National Model

- ▶ Charge National Labs with establishment of Centers that operate consistent with the values established for the NW Center
- ▶ DST S&T and States use the Centers as a conduit to identify needs and accelerate development of needed solutions
- ▶ Centers collaborate to share needs information with the intention of creating a common view of user needs and priorities at the national level
- ▶ DHS S&T provides base funding to support Center operations, provided operations are non-parochial and technology provide neutral

Northwest Regional Technology Center

for Homeland Security

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Questions