



**Pacific
Northwest**
NATIONAL LABORATORY

YOUR TECHNOLOGY
& INNOVATION PARTNER

**BRINGING
INNOVATION
TO MARKET**

A COMPETITIVE EDGE FOR YOUR TECH-BASED BUSINESS

By coming to Pacific Northwest National Laboratory, businesses of all sizes tap into technology and expertise, much of it already developed through multiyear, government investments. At PNNL, we have been creating and moving technologies into the marketplace for more than 50 years. In fact, making our broad array of intellectual property and expertise available to businesses is part of our mission as a taxpayer-funded laboratory operated for the U.S. Department of Energy.

It's our job to tackle the most challenging problems in science, energy, the environment, and national security. By partnering with us, businesses gain valuable insights into emerging and new technological developments for solving their problems.

What We Offer Businesses

- *New technologies and other intellectual property available for licensing*
- *Collaborative development to transform technologies into customized products*
- *Access to nationally and internationally known, entrepreneurial-minded staff who understand the fast-paced, solution-focused culture of industry*
- *Connections to a vast entrepreneurial ecosystem for specialized expertise*
- *Access to EMSL, the Environmental Molecular Sciences Laboratory, a DOE scientific user facility at PNNL*

Business Partners

From startups to Fortune 100 companies, we've partnered with hundreds of businesses, including:

- *Alcoa Inc.*
- *Alstom Grid*
- *Boeing*
- *Bruker Daltonics, Inc.*
- *Cisco Systems, Inc.*
- *Con-Agra Foods*
- *Lamb-Weston, Inc.*
- *Cummins, Inc.*
- *General Motors*
- *LLC Genifuel Corporation*
- *IsoRay Medical*
- *L-3 Security & Detection Systems*
- *PepsiCo*
- *PerkinElmer*
- *Thermo Fisher Scientific*
- *TWB Company*
- *UniEnergy Technologies*
- *Virgin Atlantic*
- *Xerox*

Options for Working Together

COLLABORATION METHOD	JOINT AGREEMENT	FINANCIAL TERMS	INTELLECTUAL PROPERTY (IP)
<p>Sponsored Research PNNL conducts work for company using specialized DOE facilities, services, and technical expertise</p>	<p>Strategic Partnership Projects (SPP)</p>	<ul style="list-style-type: none"> • Company funds all costs • Advance payment required • Company assumes all risk • DOE must approve changes 	<ul style="list-style-type: none"> • Company can own or access IP created by PNNL staff
<p>Sponsored Research PNNL conducts work for company using specialized DOE facilities, services, and technical expertise</p>	<p>Agreement for Commercializing Technology (ACT)</p>	<ul style="list-style-type: none"> • Terms and conditions are negotiable • Payment terms can be flexible • Risk may be shared • Can use sponsor's terms as starting position 	<ul style="list-style-type: none"> • Company can own or access IP created by PNNL staff
<p>Collaborative Research Company and PNNL conduct R&D together under a joint statement of work</p>	<p>Cooperative Research and Development Agreement (CRADA)</p>	<ul style="list-style-type: none"> • Each party to the CRADA funds its own effort and contribution to the joint statement of work 	<ul style="list-style-type: none"> • Company gets option to exclusively license IP from PNNL staff in a pre-negotiated field of use
<p>Licensing Company obtains rights to PNNL patents and technologies, copyrighted software, or open-source tools</p>	<p>License or option to license</p>	<ul style="list-style-type: none"> • Terms are negotiable • Typically includes a percentage of sales and recovery of PNNL patent costs 	<ul style="list-style-type: none"> • Rights provided on negotiated terms
<p>Facility use Company conducts research in EMSL: www.emsl.pnnl.gov</p>	<p>User agreement</p>	<ul style="list-style-type: none"> • Use based on application and scientific merit 	<ul style="list-style-type: none"> • Company can own or access IP, non-proprietary users must publish results

In each of the above scenarios:

- Companies must manufacture resulting products substantially in the United States unless waiver re-obtained.
- The government retains nonexclusive rights to IP, software, and data generated.

“PNNL’s impact on the competitive longevity of my company is unmatched.”

Benjamin Peng

President, XL Sci-Tech, Inc.

Industry Sectors

We collaborate with businesses in the following areas:

- Analytical instruments
- Bio-based fuels and products
- Bioinformatics, biomaterials, and biotechnology
- Building efficiency
- Data analytics
- Carbon capture and sequestration
- Catalysts
- Chemistry
- Coatings/film
- Electrical grid
- Energy
- Environmental systems
- Information technology
- Manufacturing
- Materials
- Microtechnology
- Sensors
- Vehicle technology
- ...and more



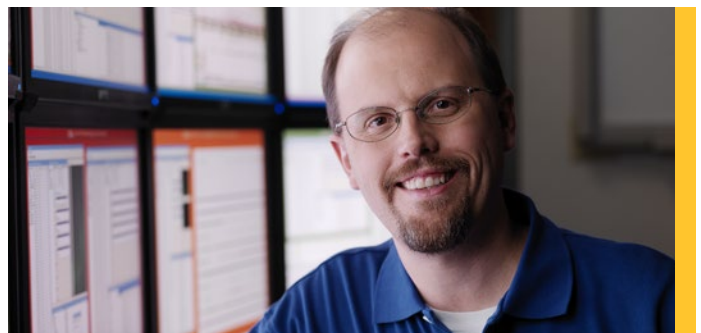
Airport scanners for safer travel



Redox flow batteries for a more reliable and secure power grid



Light-weight material manufacturing for more fuel-efficient autos



Digital Ants that identify cyber attacks