
Tri-City businesses get technical help

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Larry Hatfield knows his company's archery bows are good, but he wants to make them even better. Hatfield, manager of Damon Howatt Archery Manufacturing in Yakima, suspected that making archery bows out of a new combination of materials could improve performance and longevity. A search for the right expertise among materials manufacturers nationwide came up short.

Hatfield's efforts finally hit the bull's eye when he discovered free technical assistance available to private companies from the Pacific Northwest National Laboratory in Richland. The Laboratory's Technical Assistance Program encourages the growth of businesses in local and regional communities and helps attract new firms to the region.

At no cost to the archery company, Laboratory scientist Kevin Simmons designed a material composition for the bows that combines carbon fibers with fiberglass. Simmons' colleagues ran computer models of the new material to fine tune the structure and design for best performance.

For the next round of technical assistance, Hatfield wants Simmons to create and test a prototype bow using the new material composition.

Since 1994, more than 350 local and regional businesses have benefited from technology-based assistance from the national laboratory. Businesses can receive up to 40 hours of work annually from Laboratory engineers and scientists.

Assistance has included developing new materials and packaging, testing products and processes, designing manufacturing systems and applying technologies for Internet-based marketing, among other activities.

For-profit companies anywhere in the United States with fewer than 500 employees are eligible, as are local companies of any size. Local efforts target businesses in ten counties: Adams, Benton, Franklin, Grant, Klickitat, Walla Walla, Whitman and Yakima in Washington, and Morrow and Umatilla in Oregon.

According to Hatfield of Howatt Archery, the technical expertise from researcher Simmons has been critical for creating an improved product. "As a scientist, Kevin understands how materials can change the speed of shooting the arrow, and how energy and stress are captured and released in the bow," he said. "So he can design the materials and their placement to take advantage of those properties."

Philip Pulver, president of Custom Catalogs OnLine, Inc., agrees that the quality of specialized technical talent is key to his business's success. His Richland company, started in 1996, develops and maintains on-line catalogs for electronic commerce. Last year, software designers at the Laboratory created an electronic template that Pulver's company uses to construct catalogs for some of its clients. This year, a

computer scientist is providing custom Web graphic design for the electronic catalogs.

"In the Tri-Cities area, it's extremely difficult to find the level of computer skills and experience that we need in employees, outside of Hanford," Pulver said. "Technical assistance from the Laboratory is helping us get some of this critical support as we strive to meet the increasing needs of our on-line catalog business.

Companies in agribusiness, medicine, manufacturing and many other fields have benefited from the extensive range of expertise available at the Lab.

In one project, researchers processed a company's grape seeds to determine whether commercially valuable antioxidants could be extracted from them. In other work, engineers tested a prototype exercise device invented by a local chiropractor and identified key design specifications.

For medical imaging equipment, scientists helped produce ultrasonic transducers by applying a thin film of gold to a special ceramic material. For the same medical imaging equipment, engineers conducted a preliminary hazards analysis, which the company will use to help fulfill regulatory requirements.

Services provided by the Laboratory must not be readily available in the private sector. The program does not include help for business planning, legal advice or other nontechnical needs.

In the Mid-Columbia area, the Technical Assistance Program is administered through Pacific Northwest National Laboratory and the Tri-City Industrial Development Council. Federal support to fund the assistance comes from the U.S. Department of Energy's Office of Worker and Community Transition (3161) Program and Energy Research Laboratory Technology Research Program. The Tri-City Industrial Development Council and other economic development organizations help the Laboratory spread the word about the program.

To learn how your company can tap into technical resources, contact Gary Spanner at 372-4296 or send e-mail to gary.spanner@pnl.gov.