Solving Problems

**An Interview with Jeffrey Wadsworth,
President and Chief Executive Officer, Battelle**

Jeffrey Wadsworth

How do you describe what makes this organization so special?

The culture here is all about solving problems. If I walk around and talk to our researchers, engineers, staff, and technicians, I find that they're highly focused on problem-solving, especially solving problems that other people have said can't be solved.

How diverse are the projects that you handle at your various labs?

Battelle is a $6-billion entity with 20,000-plus people and we do a tremendous range of things. We are in a variety of diverse fields, from national security to studying the brain and creating neural bridges.

For instance, at the six Department of Energy labs and one Department of Homeland Security lab where we play a management role, there is a tremendous variety of work being done. We run $5-billion worth of work at those laboratories. So Battelle manages and operates projects across a broad spectrum on behalf of the nation.

In Oak Ridge, Tennessee, we're working on the world's most powerful computer and the world's most powerful neutron source. In Brookhaven, New York, we're building the most powerful X-ray source in the world; at Livermore, it's the most powerful laser in the world.

In Columbus, we execute about $800 million to $1 billion per year of research and development, but we have offices spread across the United States and in some other countries.

What are some of the most interesting projects you're currently working on?

The Bluefin Robotics device, which was used to search for the downed Malaysian airplane in the Indian Ocean, is one of our most current and famous projects.

We also build armored vehicles. We have a factory on the west side of Columbus where we exclusively build them. They are heavily armored but look like normal vehicles. They're used to protect our troops, and we're very proud of that work.

We also have a factory in Dublin, Ohio, where we make a lot of electronics-based items that, for instance, replace older electronics in the Black Hawk helicopter. We manufacture devices that measure the degree of CO_2 absorption into the oceans to aid in the massive global warming calculations.

We're introducing a bottle screener, the LS10, at airports in Australia, the Netherlands, and Heathrow in the U.K., where instead of having to toss your bottle of water as you go through the security gate, you can put it through the machine that tells security personnel it is safe. It can look through cans, glass, or plastic. That is also being manufactured in Dublin. There are other exciting possibilities for using that invention in the medical arena.

We're also involved in quantum computing for security purposes. We have built one of the few quantum-computing networks in the world. The beauty of quantum computing is that it's one of the few physics-based methodologies where it's impossible to be unaware that you've been infiltrated – it's the ultimate secure network. There is a lot of interest from Europe and the U.S. in developing that into the next realm of cyber-security. We do a lot of other cyber-security work as well.

What was the impetus behind forming the organization?

It's all derived from Gordon Battelle's will. As he wrote his will in 1920, he recognized that there was a time lag between invention and application that restricted the rate at which one could improve people's lives.

He was an early observer of what we now call the "valley of death" between a research idea and its commercial application. In his will, he dedicated his resources to creating a company that would try to solve that problem. He died in 1923, leaving us $1.5 million. His mother also left $2 million. Today, that would be about $45 million; he basically left a $45-million start-up whose broad purpose was to accelerate the rate of converting discovery into application.

He clearly directed that we should make money in order to reinvest in the further continuance of this purpose and that, should we make more than some nominal amount, to spend 20 percent of those earning on philanthropic activities focused on education.

Even though we're nonprofit, we're really a high-tech company that wants to make money. However, we're unusual in that we want to use that money in part to reinvest in furthering the company through equipment, people, and facilities, but also take a piece of it and use it to engender that same spirit of innovation in education.

To that end, we have helped build the Metro School in Columbus, which is a very successful STEM school and many STEM networks in Ohio, other states and across the nation. We're also working with the KIPP School, and we're privileged to be helping to build out the STEM efforts there.

How do you avoid becoming complacent following your many successes?

A lot of money is won every year in competitive proposals, and there is a constant stream of proposals being made to agencies and the commercial sector. We constantly have to sell our ideas against others, but we manage to keep the company vital that way. If we're not doing leading-edge work, we're probably not going to get funded. We do our own internal investments into research and development, and into ventures, and we try and make a return on those as well. ●