

‘New attitude’ favors partnering with private sector, colleges

San Francisco Business Times - by [Lindsay Riddell](#)

Lawrence Livermore and Sandia National Laboratories — longtime secretive federal agencies working on classified weapons programs — are about to throw open their doors to the private sector.

Technologies developed at the labs to build and test warheads and nuclear weapons could be game-changers in clean energy, climate change, biotech and other sectors.

Locked away for five decades, the federal agencies are pursuing better ways of commercializing their technology with other-than-weapons applications. They are partnering with the private sector in new ways and pushing for an open campus on 50 acres to help the labs better collaborate with the best and brightest.

In addition, the two Livermore-based labs are working with the local business council, consulting with M.B.A. students and launching a formal “hub” program to partner with the transportation industry.

The shift could mean a transformation of the role the labs play in the Tri-Valley and the Bay Area economy, creating an economic engine with tech transfer capabilities that rival UCSF and UC Berkeley’s.

Livermore Lab’s new leadership

Livermore and Sandia — federal agencies under the U.S. Department of Energy and funded mostly through the National Nuclear Security Administration — are boosting tech transfer plans.

Erik Stenehjelm and Roger Werne, director and deputy director of the industrial partnerships office of Lawrence Livermore, are tasked with forging new partnerships that will help get its discoveries to market.

Stenehjelm came to the lab when the **University of California** ceded management in October 2007 to Lawrence Livermore National Security, a partnership of the University of California, **Bechtel Corp.**, **Babcock & Wilcox**, **URS Corp.** and **Battelle**.

The new management marked a paradigm shift for the labs, say community members and industry insiders. “(The labs) tended to be silos,” said Toby Brink, president of the Tri-Valley Business Council. “But now that the directives have changed and management has changed, I think there’s a whole new attitude toward working collaboratively, and the (open campus) park is just the next step in that evolution.”

Lawrence Livermore went through a process six months ago where it identified seven priorities for its research funding. Energy and climate change modeling are two of them. Reducing America’s dependence on foreign oil is viewed as a national security issue, so clean energy technologies that help America toward that goal support the labs’ missions, lab officials said.

For example, the recently opened National Ignition Facility at Lawrence Livermore was built to test what happens inside a nuclear fusion reaction, but the same technology could also create nuclear fusion energy to meet massive energy demands.

“Energy is almost exclusively a product of the private sector. So in order for the labs to help solve the energy crisis, we must partner with the private sector,” Werne said.

Lawrence Livermore has partnered with the Tri-Valley Business Council to launch the Tri-Valley Innovation Network, which is working to match entrepreneurs with funding and mentors. It has also reached out to Keiretsu Forum, an angel investor network, and is working with three venture capital firms: Princeton, N.J.-based Battelle Ventures, Exceed Capital out of Calgary and Paladin Capital Group of Washington, D.C. plus San Francisco-based tech consulting firm **TangibleFutures Inc.** with whom it regularly shares information on technologies that may have commercial appeal.

The partnerships will increase the odds that the technology that comes out of the lab can qualify for federal money, including federal stimulus funds, said Bruce Tarter, former director of Lawrence Livermore who helps connect Keiretsu investors with potential tech spinouts, but doesn't invest in them himself.

“(The Keiretsu partnership) gets the technology developed and gets it to the marketplace. And to the degree we can get that to happen, that's a plus,” said Tarter.

Lawrence Livermore over the past two years has also put more than \$1 million of its own budget into building prototypes of intellectual property — which help investors understand the technology's commercial potential. Stenehjem said the labs have developed technologies related to carbon sequestration, energy storage, new battery technologies and others.

“A lot of these things got developed for other purposes,” said Stenehjem. “We think they have incredible commercial opportunities, and it's our job ... to make this known to people.”

Lawrence Livermore two years ago began a program with Bay Area M.B.A. students to get ideas about how the labs might bring to market discoveries with commercial applications.

Stenehjem also said his goal is to grow the lab's licensing revenue to \$30 million from approximately \$9.5 million last year.

Sandia starts energy hub

Similar to Lawrence Livermore's push, Sandia launched HITEC — the Hub for Innovation in the Transportation Energy Community — earlier this year. The hub's goals are to accelerate innovation in the transportation industry through large-scale partnerships between the national labs, the private energy industry, universities, transportation companies and other Department of Energy agencies. It's seeking those partners now.

To be effective in bridging the funding “valley of death” to get advanced vehicle technologies to commercialization, HITEC needs a headquarters that is accessible to outsiders, said Bob Carling, director of the Transportation Energy Center at Sandia who leads Sandia's HITEC initiative.

“If you're going to have an impact, you have to include the smartest people from throughout the globe,” Carling said. “We want to bring those people together in an open, collaborative way.”

Open campus

Sandia and Lawrence Livermore are working together on the open campus plan, imagined about a year ago. The vision for the plan is to develop a 50-acre site on the east side of their facilities outside security gates where scientists and engineers could work side-by-side with the lab's employees to solve challenges in transportation, energy and other sectors. The labs have submitted a proposal to the Department of Energy and to NASA, the landlord of the labs' property and asked the DOE to approve the plan and provide millions to fund the project. Most lab officials with knowledge of the approval process say it will likely take five years to get the open campus plan adopted and the infrastructure to support it built.

The labs ideally would like to build new buildings for the open campus plan, but until those get approved, the open campus could start with moving fences and building an entrance to some buildings accessible to the public.

The proposed open campus would be anchored by Sandia's HITEC hub and the International Center for High Energy Density Science led by Lawrence Livermore.

More open relationships between the labs, universities and private industry could be a boon to the Tri-Valley region that was never able to fully leverage the resources available at the labs.

Said Bruce Kern, director of the East Bay Economic Development Alliance: "This is a true paradigm shift for the labs and the Tri-Valley."

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