RESEARCH COLLABORATIONS

NASA Lab Offers Land to Lure Research Partners

Ames Research Center hopes to strengthen its programs by having universities and industry set up shop on its Silicon Valley campus

MOUNTAIN VIEW, CALIFORNIA—An aging federal research lab here on the outskirts of Silicon Valley hopes to use some of its prime real estate to lure universities and industrial companies to become its neighbors and partners in a unique research campus. If successful, the arrangement could help NASA's Ames Research Center over the next decade to become a major player in the hot new fields of information technologies, astrobiology, and nanotechnology. In return, its academic and business partners would get a window into the technology-rich region.

Built on the eve of World War II as an aircraft research laboratory, Ames, which sits on 800 hectares of land just west of San Francisco Bay, has spent the past decade struggling to gain a beachhead in high-tech areas such as information technologies and to attract the needed talent. Last year, officials at NASA headquarters shot down the lab's proposal for an industry-built lab dedicated to astrobiology. Now it is negotiating deals with aerospace giant Lockheed Martin and three universities—Carnegie Mellon, San Jose State, and the University of California, Santa Cruz—to build more than 1 million square meters of office and lab space over the next decade. Ames managers hope to break ground on the center, called the NASA Research Park, in early 2002.

The plan must still clear several hurdles, including potential environmental problems, a likely change in NASA leadership, and the current economic slump. But officials think the new facilities—and those who will work in them—will greatly enhance Ames's research capacity. "We get fresh blood and the chance to interest them in our mission," says Nancy Bingham, special assistant to the Ames director. The prospective partners agree. "It's a win-win for everyone," says Don Fulop, Lockheed's vice president of business development.

The park would consist of separate university, industry, historical, and museum areas. Each university would provide the funds to build and operate its own lab and office space. Lockheed would also build Ames a $40 million Laboratory for Advanced Science and Research (LASR) in exchange for use of a large parcel of land. The 10,000-square-meter lab will be designed to house a multidisciplinary array of researchers from NASA, academia, and industry.

Carnegie Mellon has the firmest plans to date among the three universities. It hopes to raise $150 million to establish its presence in Silicon Valley, says James Morris, dean of the computer science school. The park is a better, cheaper alternative to developing its own campus in the region, says Morris, who adds that the university may eventually spend $400 million over the next decade to beef up its advanced computing and robotics research.

CREDIT: AMES RESEARCH CENTER/NASA

Science park. NASA hopes to transform its Ames Research Center into a bustling research park that also houses industry and university scientists.

San Jose State University wants to develop an $87 million technology center starting in the next couple of years, says associate vice president Nabil Ibrahim. Half of the money would come from a tax on current research programs and the rest from state and industrial grants. The University of California, Santa Cruz, hopes to begin development in 2004 of up to 16 hectares that will contain an undefined amount of lab and office space. "It's coming together," says Chancellor M.R.C. Greenwood, who has a $2 million planning budget in 2000 and 2001 for facilities that will focus on biotechnology, information processing, nanotechnology, and astrobiology.

The largest single investment would come from Lockheed Martin's space company based in Houston, which this month expects to sign a letter of intent with NASA. In exchange for its use of land, the company would sublease some of the 56,000-square-meter office and lab space to other science and technology firms. It also would build LASR over 18 months starting in late 2002 or early 2003 and hand it over to a nonprofit group to operate.

Lockheed wants closer ties to information technology companies, and NASA documents indicate that Sun Microsystems, Oracle, Intel, Apple, and Raytheon are among those interested in partnering with Lockheed and NASA. A portion of rent increases may go into a research fund for LASR operations, says Fulop. "This has never been done, and it requires creativity," he adds.

In addition to all the new construction, the science park also hopes to rejuvenate existing structures. The core of an old Navy base, an area designated as a historic site, will be renovated by Invisible Studios, an affiliate of Dreamtime. Last year, the Mountain View–based company won a NASA contract to handle the agency's image archives. Renovations of four historic buildings are slated to begin this year. A 33,000-square-meter hangar will be converted into the California Air and Space Center to be operated by a nonprofit foundation with state and other funds, with a museum on the history of computer science as a neighbor. To meet environmental requirements, space will be set aside for a nature reserve.

Despite the number of agreements already signed, however, the center still has a way to go. The development plans will be debated at public hearings this spring, and an environmental impact statement will not be ready before early 2002. The likely replacement of Dan Goldin, who has endorsed the park, as NASA administrator could also affect the pace and scope of the effort. Finally, the economic downturn may hamper university fund raisers.

But participants remain enthusiastic. "There will be many twists and turns and surprises," says Morris. "But this is a unique effort, and the basis of cooperation is there." Ames officials are just as eager to get started. "It's a lot better than sitting here with a bunch of vacant buildings," says Bingham. **–ANDREW LAWLER**