



Incubating Ideas

The University of Delaware is converting a former Chrysler plant into an engine of high-tech commerce for the entire region.

Can a former automotive assembly plant drive technology transfer and economic development transformation throughout an entire state and region?

Innovative minds at the University of Delaware think so, and they are beating lumber into laboratories to prove it.

At a place in Newark where Chrysler used to make cars, the university is building a research complex to facilitate public-private collaboration on a scale not seen before in Delaware.

UD President Patrick Harker outlined this vision recently when he said:

“Right here and very soon, there will be thousands of creative minds working together, and there is nothing that can match that power. This land is an investment in our people, and in our culture of creativity, collaboration and

by **RON STARNER**

ron.starner@conway.com

risk, innovation, entrepreneurship and excellence.”



UD President Pat Harker

On Nov. 23, 2009, after 20 months of negotiations, UD officials paid about \$24 million to acquire the 272-acre (110-hectare) site formerly occupied by the Chrysler Assembly Plant in Newark. Salvage and demolition operations on some 2.5 million sq. ft. (232,250 sq. m.) of buildings will begin soon as the university embarks on an ambitious project to

transform entrepreneurial research into job creation.

“We are reinventing and creating innovation. Long-term, it could be a model for others,” says Jennifer Davis, vice president for finance and adminis-

tration at UD. “When you look at former assembly plants across the country that have closed down, we represent a stark difference. The president of UD and our governor believe in re-use for the next generation.”

“This is a once-in-a-lifetime opportunity,” Davis says of the new challenge represented by redeveloping this property. “We are working on site stabilization, asset identification and auction. The next step involves completing a competitive RFP for the decommissioning of most of the structures and then working on the long term.”

The 20-year master plan for the future science and technology campus envisions up to 5 million sq. ft. (464,500 sq. m.) of multi-use space including research labs, health-science space, mass transit facilities, housing, retail, office and environmental structures.

“We have some of the brightest and best minds here. We have 20,000 students. We have the latest technol-

ogy. This site gives us the chance to mix people and ideas all in one location. Bright minds working together create solutions to the world's problems," says David Singleton, vice president for facilities and auxiliary services.

From Classroom to Commercialization

One of those minds belongs to Brian Waibel, president of **DynaSep** and chief technology officer for **Element Clean Tech** (ECT), a joint venture with Dynasep.

A company focused on separation solutions and chemical processes, DynaSep is engaged in cutting-edge research that's creating applications involving the cultivation of algae to form nutraceuticals, bio-fuels, biologically formed plastics and other materials.

DynaSep and ECT have committed to occupy two acres of the site for research and development of these new products. The company plans to grow from five employees to 15 within a short time frame, says Waibel.

"We needed some open space in order to do our research, and the site has open space in it," he says. "That is good for doing activity that needs to be outdoors but still has access to infrastructure like water and electrical power. Working with the university provides a lot of synergies, especially through the chemistry and chemical engineering and agricultural departments. We are working with the university to grow an entirely new agricultural engineering niche. We are using second-generation technology that leverages the research capabilities of the university."

Companies like DynaSep represent the ultimate goal of UD's strategy — take the learning that goes on in the classroom and translate it into commercial application.

"We provide a benefit because we are working on technology transfer, commercialization development and market development," adds Waibel. "We are helping the university understand how the products in the research phase connect with value in the marketplace."

With customers in Sri Lanka, Japan, Spain, Portugal, Norway, Canada, the Middle East and the U.S., Dynasep and



The former Chrysler automotive assembly plant in Newark was acquired by the University of Delaware late last year for about \$24 million. The 272-acre site is being converted into a high-tech science and research campus.

ECT need access to efficient transportation systems. Waibel says the site gives both firms that ability to connect.

"Delaware is well connected between New York and Washington, it is close to Philadelphia, and it has great access to sea transport," he says. "Being in a modest cost-of-living location relative to the Northeast Corridor of Boston to D.C. helps too."

The top location advantage, however, notes Waibel, is the access to knowledge capital. "We have access to a huge base of undergrads and grad students, and that provides us a benefit in terms of the labor pool. And some aspects of our research are better handled by the university faculty. The university also has tremendous resources in terms of experimental labs and analytical equipment. We can leverage that synergy, and

the university can leverage us. We are a scaling facility for the cultivation of materials and bio-testing. This has a real opportunity to work both ways."

Taking Learning into the 'Real World'

That was the goal when University Treasurer and Executive Vice President Scott Douglass consummated the deal to acquire the old Chrysler manufacturing plant that was shuttered on Dec. 3, 2008.

"The issue is very simple," says Douglass. "We think that part of the mission of the university is to have a positive impact on the area where it resides. We want to make a positive impact on our community, our faculty and our students. Part of the learning experience is being out in the real world. Focusing



University Treasurer and Executive Vice President Scott Douglass

on research with impact is very important to the quality of education that our students receive.”

Having 272 acres located adjacent to the university “allows us to extend our research activities,” says Douglass. “This is a multi-use plan focused heavily on research. We don’t want a traditional research park. We want to include some retail, some residential and some other uses. We don’t want a series of stand-alone buildings that do not interact with each other. Our goal is to develop it into a more urban model. We think that will be good for our students and our faculty. We want to exploit the research commercially. That is our basic strategy.”

Douglass notes that the economic downturn provided UD the opportunity the school needed to acquire the Chrysler site. “The site didn’t have many suitors. Chrysler thought they could get more than \$50 million for the site,” he adds. “When the downturn came, all of the other interested parties pulled away. We purchased it for much less. In the end, we paid what we thought it was worth. The State, and in particular the Governor, were partners in the University’s efforts to assume ownership of this site.” (For more on the deal, read “Blue

Ulhas Naik is director of the Delaware Cardiovascular Research Center at the University of Delaware. He is also one of the leading researchers at the Delaware Biotechnology Institute at Delaware Technology Park.

Hen Blockbuster” in the January 2010 issue of Site Selection.)

The first phase of development will include relocating the school’s health sciences group to the site.

Thomas Jefferson University in Philadelphia, Douglass adds, is interested in partnering with the school on such an operation.

“We are also very interested in partnering with DuPont and other companies if they have a strategic value they can bring to the university,” he says. “We are interested in talking to a number of small technology companies in the area as well. Our targets are firms that have a core interest in technology. We would like our students to have access to those firms.”

The site will also have a close relationship with the nearby Delaware Technology Park (DTP), a 40-acre (16-hectare) complex that is home to five buildings, 250,000 total sq. ft. (23,225 sq. m.) and 54 companies.

Michael Bowman, chairman and president of DTP, tells Site Selection that this park focuses on the development of high technology, life sciences, advanced materials and renewable energy.

“We have spun out 20 companies since we started, and all of them have re-emerged as very strong entities in the community,” Bowman says. “We function as a science research hub for the whole state of Delaware. We are currently the only research park in the state.”

DTP is home to the **Delaware**

Biotechnology Institute and the **Fraunhofer Center for Molecular Biotechnology**.

“Both institutes are world class,” says Bowman. “We have world-class professors, the latest equipment for three-dimensional imaging and high-speed computer technology. This has positioned us to be a leader in human health research in such areas as Alzheimer’s and other diseases.”

World-Class Scientists Form Foundation

DTP conducts research on advanced materials for the Aberdeen Proving Ground in Maryland. “We are the closest category one research university to the proving ground. We are doing that research for the U.S. Army,” says Bowman. “Companies that would like to be near Aberdeen are looking at Delaware and our location in particular.”

Breakthrough research has been the hallmark of DTP. **QPS**, a contract research organization in the life-sciences sector, began with two people in a DTP incubator. It now employs more than 200.

The Fraunhofer Center takes plants and makes proteins to produce vaccines. “We are producing clinical trial materials now for the Gates Foundation and the Department of Defense,” says Bowman. “The center developed a robotically produced line of seeds, infusing the plants to produce vaccines. These are now under tests for use to fight malaria, plague, anthrax and cervical cancer. We also take downsized pharmaceutical in-



dustry companies and help them restart in the park.”

Other prominent tenants of DTP include **Athena Biotechnologies, Cirrus Engineering, InfoQuest Systems, Quantum Leap Innovations** and **Standard Solar**.

The success formula for DTP is simple, notes Bowman: “Our model is based on the premise that the science and scientists here are of international status. That has produced a plethora of high-quality products and services for a number of industries. Delaware also is known for being one of the most business-friendly states in the country. It is very easy to know the political figures here and get things done. Small is faster. Small is warmer. It allows companies to accelerate and grow or get established quickly.”

Bowman attributes the university’s success in this area to the vision of UD president Pat Harker, former dean of the Wharton School of the University of Pennsylvania. “He gets economic development and the importance of a research-based university working in the greater community for its benefit,” Bowman says. “Path to Prominence is his game plan. He comes with a business mindset. The various colleges at UD are viewed as independent business centers. They are engaged with the state and the community, and they all play an active role in entrepreneurial development. He is very enthusiastic about growing the research park model.”

The next stage of development will occur at the site. David Weir, director of the Office of Economic Innovation and Partnership for UD, says that “Pat Harker brought a different view of the university. He believes that the university must take a lead responsibility in the prosperity of the community, the state and the region. That is why we formed this office, and that is why we acquired the former Chrysler site. It is so that we can take the lead in attracting knowledge-based businesses to the state.”

Weir notes that the Army partnership is of particular interest. “With BRAC consolidating the Army’s research, development and engineering command at the Aberdeen Proving Ground, thousands of Army civilian researchers

will be moving to APG,” he says. “Many of these researchers will be working on command, control, communications, computers, intelligence and reconnaissance. We assist them in these areas, and we also work with them on professional development and systems development. We even prepare some of our students for careers in the military.”

Weir notes that the site “will be quite different from Delaware Technology Park. It will have incubator space and the Health Science Alliance. And it will be multi-use. It will be a living community.”

UD, TJU Partner on Biomedical Hub

Kathy Matt, health sciences dean at UD, also serves as the executive director of the Delaware Health Science Alliance. The alliance is a joint venture of UD, Thomas Jefferson University in Philadelphia and two hospitals — Christiana Care Health System and A.I. duPont Hospital for Children/Nemours (Nemours).

“The UD College of Health Sciences will be relocating to the new site, but the site will feature a lot more than that. It will have trains, restaurants and a host of technology,” Matt says. “At the college, we focus on behavioral health, kinesiology, nursing, physical therapy, nutrition and biomechanics. To have the site come online gives us the potential to be co-located with TJU and have a home for some of the alliance activities. Our goal is to create both a biomedical hub and a biotech hub. There will be lots of opportunity for interaction between academic and business partners and lots of opportunity to create spinout companies. This project increases our total university space by 20 percent, and the timeliness of this happening right now is very good.”

Making the real estate component of the project work is the job of Andy Lubin, real estate development executive for UD. “My role is to create opportunities for federal grants, federal and state funding and other incentives that will attract and induce activity to be devel-

oped at the site,” he says. “It is my job to distinguish the site as a highly desirable place for developers and businesses.”

With built-in access to Interstate 95 and key rail lines, all it takes now is “a lot of patience to develop the site and a lot of time,” says Lubin. “We have learned the need for incubation from the current park. These firms have grown and matured and gone off into commercialization. The site will allow attraction for incubation, and if an entity matures, that organization can continue to grow at or near the site.”

The next phase of development will involve planning the utility grid for the site and appropriately sizing and installing the infrastructure. To defray those costs, Lubin says he will seek grants and incentive dollars from both the state and federal government.

“Following that, our goal will be to induce development on the site,” he notes. “If you look at the relationship between UD and the Army, a lot of entrepreneurial possibilities emerge. Because Aberdeen has an ongoing relationship with UD research, there will always be a need for certain kinds of defense industries to be located nearby.”

Lubin emphasizes that it is also important to understand “that there is a regional relationship. For this project to be successful, it has to cross state boundaries. Delaware has the ability to work seamlessly with other states in the region — namely, Pennsylvania and New Jersey. With easy access to Philadelphia, New York and Washington, D.C., we have a very strategic location.

“We’re ready to move to the next chapter of our vision.”

SITE



Kathy Matt, health sciences dean, UD

This Investment Profile was prepared under the auspices of the University of Delaware. For more information, visit www.udel.edu or call Meredith Chapman at (302) 831-8749.

Requests for further information should be directed to David Singleton, UD vice president responsible for leading the redevelopment, at densing@udel.edu or (302) 831.1110.