

Business of Biotech

HCC has a biotech vision

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HAGERSTOWN — The way Hagerstown Community College sees it, Washington County stands on the edge of opportunities that could transform its economic future.

Very soon, HCC President Guy Altieri said in a new report, the community must begin discussions about education, economic development and 21st-century bioscience-related jobs.

"In particular, this paper presents the case for Washington County embracing a unique and timely set of opportunities that would greatly assist in making high skill/high wage bioscience or biotechnology employment a significant part of the local economy," Altieri wrote in the report.

Already, much is under way to train local students and to attract young biotech companies, but much more is possible because of what's happening around us, the report said.

That includes:

- Gov. Martin O'Malley's proposal to spend \$1.1 billion on Maryland's bioscience industry over the next 10 years.
- Word that having started nearly \$1 billion in projects, officials of the giant biotech hub at Fort Detrick in Frederick County, Md., want to build economic and educational bridges to Washington County.
- Signs that the so-called I-270 Technology Corridor, bustling with hundreds of biotech companies along the interstate from Montgomery County to Frederick, could extend west along Interstate 70 into Washington County as suburban land becomes more expensive.

"Taken together, these developments point to the potential for bioscience business development in Washington County that would enable the county to capitalize on its existing assets," the report said.

Because of steps that HCC and Washington County Public Schools already have taken, "I don't think there's any question our community will be involved in biotech," Altieri said in an interview. "The question is the magnitude."

That, he said, is why HCC has started talking to community leaders about its report, "Education, Economic Development and 21st Century Jobs: The Case for Planned Growth of Biosciences in Washington County."

Communitywide discussion is needed, Altieri said, and HCC sees its role as being the catalyst.

Economic reality

In Washington County's not-too-distant past, this was the land of Fairchild Industries, Mack Trucks and other manufacturers that kept generations employed at premium wages, strong fuel for our economy.

Many families were railroaders, others farmers who worked the wide expanses of pasture and field.

Now, Fairchild is gone, Mack — now Volvo — isn't as large nor are railroading or farming. The county has seen growth in such service-based industries as transportation, the financing sector, health care, and leisure and hospitality.

"While providing employment for thousands of workers, jobs in these sectors are typically less well paid than manufacturing jobs, which have experienced a 19.5 percent decrease in the county between 2001 and 2007," HCC's report said.

Enter biotechnology, also known as bioscience and life sciences.

Tough to define, its many applications range "from developing diagnostic tests that spot cancers, to designing bugs that will clean Brownfield contaminants," the report said.

By 2006, there were 42,910 biotech companies and agencies nationwide — a 15.7 percent increase in five years, according to the report. In the same time, employment in that field grew nearly 6 percent, to 1.3 million workers.

A \$1.1 billion plan

This past summer, O'Malley announced his Bio 2020 Initiative.

The \$1.1 billion expenditure — up for approval by the Maryland General Assembly this coming year and beyond — calls for creation of the Maryland Biotechnology Center to showcase and support the industry.

The plan also would double the state's biotech investment tax credit in fiscal 2010 and again by 2013, requiring companies to invest almost \$50 million in return, according to a press release.

O'Malley also wants to invest \$60 million to draw \$120 million in private and federal investment, and grow Maryland's business incubator network by 50 percent. Additional money would help expand existing incubators and build others.

Maryland is among the nation's top states in technology economy preparedness, according to the latest Milken Institute report on technology and science.

Massachusetts still is tops, but "closing in fast is second-place Maryland, which moved up from fourth place" four years ago, said the institute, an independent economic think tank based in Santa Monica, Calif.

The Milken report, which looks at technology and science assets that can be leveraged to promote economic development, praises Maryland for such initiatives as its Sunny Day Fund.

This kind of financial help has attracted businesses, "while new products like Maryland's NanoCenter have linked research facilities with industry know-how to promote cutting-edge product development," Milken said.

A nanocenter is, in this case, a place at the University of Maryland where scientists and engineers are trying to make atoms and molecules work as machines to repair cells or provide drug therapy.

From the report

There are about 370 bioscience companies throughout Maryland, according to the state Department of Business & Economic Development (DBED).

Sixty percent of them are in Montgomery County, clustered around the many big federal agencies just outside Washington, D.C., according to DBED spokeswoman Karen Hood.

Another 24 percent are in the Baltimore metropolitan area and the remaining 16 percent are concentrated in Frederick County, with a few around Hagerstown, she said.

Between 30,000 and 35,000 people work for biotech companies in the state and “an almost equal number” work in federal and academic bioscience organizations, Hood said. Most such companies are small, having fewer than 50 workers each, she said.

HCC’s report said such businesses would help strengthen the county’s economy because they pay well.

According to DBED, the average wage at Maryland’s biotech companies is about \$75,000 per year.

In Washington County, the average wage is \$35,672 per year, according to the Hagerstown-Washington County Economic Development Commission. Maryland’s average wage for all workers is \$48,238.80, DBED said.

Biotech jobs would include laboratory technicians, research associates, manufacturing and production technicians, and senior scientists, HCC’s report said. There’s work in medical and pharmaceutical research, microbiology, forensics and product development, it said.

There also is the opportunity of more jobs at and around Fort Detrick, according to HCC’s report. Construction at the post is expected to add more than 1,400 jobs by 2010, according to the report.

Washington County has launched a biomedical sciences academy at its Technical High School, in addition to its focus on science, technology, engineering and mathematics elsewhere.

HCC has started offering a degree in biotechnology. That is in addition to the wing it opened this year in its Technical Innovation Center, as an incubator where fledgling biotech companies can grow.

In a few years, the college plans to build a 65,000-square-foot Science Building “that includes 14 leading-edge laboratories and ‘smart’ classrooms for the preparation of technicians and future scientists,” HCC’s report said.

Argument for accelerator

Adding to the “attractiveness of the county as a bioscience hub,” the report said, would be to build what is called an accelerator. This is a facility with specialized labs that provide larger spaces for companies outgrowing the incubator, but still needing financial help.

An accelerator probably will be needed within a few years as the young biotechs already here grow and others arrive, the report said.

It said one site near the college might be the 200-plus acre Mount Aetna Farms land, now owned by PNC Bank.

The report noted that "recent high profile expansion attempts, however, have met with some public opposition which can delay large scale projects."

So it is recommending change in the county's zoning law.

"For example," the report said, "HCC is proposing a new zoning district designation that would support the college's interrelated higher education and economic development initiatives. More comprehensive rezoning in the Robinwood area, encompassing land occupied by the Washington County Health System, Hagerstown Community College, and the Mt. Aetna Farms property, could create a bioscience/biomedical corridor."

The report cited several other possible steps if the community wants to aggressively seek biotech companies.

These steps range from allowing students at the University System of Maryland at Hagerstown to use the labs planned in HCC's new Science Building to limiting the search for biotech companies to those doing research and development that would need far less water than medium- to large-scale pharmaceutical production facilities.

If you want to know more about nanotechnology, go to www.nanocenter.umd.edu/ or to www.crnano.org/whatis.htm

Biotech could be big in Washington Co., official says

WASHINGTON COUNTY — Maryland's top economic development official foresees biotech companies soon will begin to pop up in Washington County in a big way.

"I do, if we define 'soon' as in the three- to five-year period," said David W. Edgerley, secretary of the state Department of Business & Economic Development.

Washington County is "certainly one of the strategic counties to watch in the economic high-growth, quality community sectors," Edgerley said Wednesday.

Frederick County is another.

That neighboring county will be Washington County's rival as biotech companies move out of the Interstate 270 Technology Corridor toward less expensive land to the west, officials said.

Both counties are scrambling toward an economic development plum — the region's first "accelerator" — a second-stage incubator that would nurture existing young biotech companies as they expand and would attract others.

Officials in Washington County also are looking at large tracts, particularly east of Hagerstown, where they might build an industrial park for biotech companies, said John F. Barr, president of the Washington County Commissioners.

Bringing biotech firms here is “a vital interest of this community,” Barr said. “I think most of the business leaders feel Hagerstown and Washington County are a viable option.

“We’ve got land available, infrastructure available and, of course, we’re always looking for higher paying jobs. And that industry obviously offers that with a bright future.”

Close and less expensive

Montgomery County is king of Maryland’s prime biotech realm, which stretches from the suburban Washington, D.C., area north to Baltimore.

The area contains 84 percent of the state’s more than 370 biotechs. Montgomery County alone has 60 percent of them; Frederick and part of Washington County have 16 percent.

“Montgomery, Frederick County, right down to D.C., that whole area is ranked like No. 2 (in the nation) for the number of biotech firms concentrated in one area,” said Timothy Troxell, executive director of the Hagerstown-Washington County Economic Development Commission.

“They’ve always kind of been down there because of Johns Hopkins, and NIH (National Institutes of Health) and all those federal labs,” Troxell said.

Large research universities around cities draw them, too, he said.

But as suburban D.C. has become more crowded, another economic development truism has emerged. Some biotechs have started setting up second operations where land is less expensive, but not far away.

That’s the case with MedImmune, the big biotech company that is headquartered in Montgomery County. In 1999, it opened a biomanufacturing plant in Frederick that employs 230 people and is building a larger, \$250 million plant next door to that facility.

That was the trend that Troxell had hoped to cash in on for Washington County.

“What we thought our sort of calling card was ... we’re close to that and yet, we’re not near as expensive,” he said.

Reaping the benefits

Before Edgerley became head of the state’s Department of Business & Economic Development, he was director of Montgomery County’s Department of Economic Development.

As such, he said, he saw Montgomery County become “what I call the donor county” as biotech employees moved to build houses in less expensive areas and their companies began to follow.

“The acorn doesn’t fall far from the tree,” Edgerley said. “As startups grow into mature companies and their work force extends into greater distances, they start companies closer to their (employees’) houses. We saw that with the great company MedImmune.”

Now, he said, he’s seeing a trend that should begin to benefit Washington County in a big way in as few as three years.

“Guess what? There will be employees from MedImmune that will move to Washington County and start companies,” Edgerley said.

"... The factors that you have going for you are extraordinary — transportation, high quality work force, good leadership, proximity, educational system," he said.

But there are drawbacks, too.

"I think your biggest issues are going to be available work force, (and) available land that has the right zoning with infrastructure — water and sewer," said Richard Griffin, director of the City of Frederick's Department of Economic Development.

"I would say those things are the single most important. The value of land, in our case, in ... Frederick, you're paying additional taxes to be here, but yet we have a number of good companies. I believe it's proximity to those other companies" that counts more, Griffin said.

Washington County has other hurdles, too, according to Richard Phoebus, president of the Hagerstown-Washington County Industrial Foundation, known as CHIEF.

"We are missing a number of elements that biotech firms like. For instance, a research university," Phoebus said. "They like to be close to a research university."

The University System of Maryland at Hagerstown has no labs and is not set up to be a research facility, Phoebus said.

"So our community college has to be the surrogate or stand up for that role," which will require upgrades to Hagerstown Community College over time, he said.

Where would it go?

Phoebus and others here are far from discouraged despite being aware there is much to be done.

"Ain't going to happen fast and ain't going to be cheap," Phoebus said.

Troxell said he welcomes a new report that Hagerstown Community College has issued urging countywide discussion of the opportunities.

"Because for this to be successful, it's going to need the entire community behind us," he said.

Barr said local officials already have started doing "a lot of work behind the scenes." From the city, to the county, to the Chamber of Commerce, to the Greater Hagerstown Committee, to the EDC, "everyone's talking it up," he said.

Barr said discussions are being held about developing additional high-tech business space in what would be called a biopark. In addition to agreeing on a site, "water and sewer's got to be available, county and city's got to work together in a collaborative effort, (and) give open and warm arms to the biotech industry," he said.

Barr would not say what properties east of Hagerstown are being considered, saying "it's still in negotiation." He said that other local organizations and not the commissioners are taking the lead role in the talks.

But he confirmed that one of the sites being considered is the 220-acre Mount Aetna Farms land mentioned in HCC's report as a possibility. Asked whether CHIEF might be the potential buyer, Barr replied, "You're real warm."

As a nonprofit organization, CHIEF has in the past bought land and developed it as industrial parks.

Mount Aetna Farms, which is east of the city between HCC and Robinwood Medical Center, was acquired in March 2007 by PNC Financial Services Group Inc. in a foreclosure sale for \$9 million, according to Herald-Mail records. In June, a real estate representative was quoted as saying the asking price at that time was about \$11.5 million.

Phoebus, while not describing CHIEF's role in any negotiations, said several area properties "would be suitable for biotech research" companies.

He described the Mount Aetna property as "interesting," but said it has several problems.

"One is access. It is not landlocked, but it is close," he said.

Both he and Barr also said Friendship Technology Park, off Downsville Pike south of Hagerstown, is a possibility. That park has about 360 acres remaining to be developed.

In the millions

Just as important is finding a site for an accelerator, Phoebus said.

That even could be on HCC's campus, in a joint venture with a private developer, as has been done at several universities, he said. He said that idea "has not at all been accepted by the (HCC) college board."

Ideally, he said, the accelerator and the biopark would be on the same property.

Building an accelerator can cost \$300 to \$500 per square foot because special ventilation systems and so-called "clean" labs are needed, Phoebus said.

Troxell said an accelerator probably would have to be 20,000 to 40,000 square feet overall.

At \$300 per square foot, the cost could range from \$6 million to \$12 million just for the building, Troxell said. He said he didn't know what it might cost to outfit it with lab equipment.

Asked whether financial aid might come from Gov. Martin O'Malley's proposed \$1.1 billion Bio 2020 Initiative to help expand Maryland's biotech industry, Edgerley was optimistic.

"I would assume this accelerator would be eligible as an initiative in that fund," he said, adding that Troxell should look for a variety of funding sources.

Building such a facility is "very close to being a field of dreams — not exactly, but if you size the initiative appropriately for your market area," the returns can be good, Edgerley said. He said it might be wise to start out smaller and expand later.

'A huge need'

While Washington County looks for land, its neighbor to the east is looking at the possibility of building its own accelerator.

Mike Dailey, executive director and president of the Frederick Innovative Technology Center Inc., said his county is working with Maryland's Technology Development Corporation to determine whether an accelerator would be successful.

Dailey, whose nonprofit organization has two incubators in the county, said Maryland has little to no accelerator space now. Only two facilities in the Baltimore area have “what you might consider accelerator space,” he said.

“But there is, of course, a huge need in my opinion, if we are going to advance biotechnology in the state of Maryland,” he said. With a young biotech company, he said, the money needed to furnish a lab “far exceeds their capital to fund it.”

Phoebus said whoever might take on the development of an accelerator in Washington County could face a financial problem.

“Depending on who owns such a building, they have to get enough rent to sustain the debt on that,” Phoebus said. “Those rents can run anywhere from \$60 to \$100 a square foot on an annual basis — \$300,000 to \$400,000 a year” on even a much smaller building than Troxell was talking.

“So those are not going to be easy companies to attract here,” Phoebus said.

Public discussion?

So what of HCC’s call for communitywide discussion of the issues? Is it time for public forums and the like?

“In my mind, not yet,” Barr said. “Our community’s not stagnant on this issue, that’s for sure.

“Again, you’ve got the county, the city, the Chamber of Commerce, the Greater Hagerstown Committee. These are active discussions on their agendas. They’re talking to positions higher up in the state and national level, of infrastructure.”

But, he noted, “It’s bad timing all the way around. It’s tough to get money on anything.”

Phoebus said he thought public discussion would be good.

“I think we need to get people talking about this. I think this is almost as important as when CHIEF back in the 1990s with unemployment and Fairchild closing, bought and developed the first industrial park in this county,” Phoebus said.

“That became a boon for this county in bringing in a diversified manufacturing and business base. And I think this could be as important as that was,” he said.

“Now, in order to sell out that first park, it took nearly 40 years. We may be looking at the same thing in developing this biotech park. It could be a 30- to 40-year journey.”

— *Arnold S. Platou*

What the heck is biotech?

That was a subtitle of a Biotech Bootcamp for Journalists presented recently by Bio — the Biotechnology Industry Organization.

With 1,200 members, Bio is the world's largest biotechnology group. Based in Washington, D.C., it provides advocacy, business development and communications services.

In its Guide to Biotechnology 2008, it explains biotechnology this way:

"At its simplest, biotechnology is technology based on biology. From that perspective, the use of biological processes is hardly noteworthy.

"We began growing crops and raising animals 10,000 years ago to provide a stable supply of food and clothing. We have used the biological processes of microorganisms for 6,000 years to make food products, such as bread and cheese, and to preserve dairy products.

"Crops? Cheese? That doesn't sound very exciting. So why does biotechnology receive so much attention?

"The answer is that in the last 40 years, we've gone from practicing biotechnology at a macro level — breeding animals and crops, for example — to working with it at a micro level.

"It was during the 1960s and '70s that our understanding of biology reached a point where we could begin to use the smallest parts of organisms — in addition to using whole organisms.

"An appropriate modern definition of biotechnology would be 'the use of cellular and biomolecular processes to solve problems or make useful products.'"

By Yvette May | Staff Photographer

Hagerstown Community College President Guy Altieri holds drawings of the new Science Building at its planned location on campus





David W. Edgerley

Secretary of the Maryland Department of Business & Economic Development