The incubator at the University of Central Florida boasts not only a traditional research park with 100 companies and 11,000 high-tech workers, but also a Venture Lab created to cull ideas that might have market potential.

From Massachusetts to Florida, Missouri to California, AASCU campuses across the nation are increasingly involved in entrepreneurial efforts to help foster new businesses and aid their local economies.

Under pressure from state governments to increase their contributions to local economic development, many state universities in the late 1970s and early 1980s began developing research parks and business “incubators” to attract businesses to their regions. Although some developments flourished, many did not.

In recent years, however, a new wave of research and business space has emerged, designed for a variety of purposes—to help commercialize faculty research, provide business-development services to start-up companies, or reflect regions’ changing economic needs. Because of the greater amounts of land required, as well as higher property costs and related expenses, many of the newer projects on AASCU campuses take the form of business incubators, accelerators or other spaces more modest than traditional research parks.

“The impetus to do more is coming from a state-level push, with a lot of governors seeing higher education as an asset that can encourage economic development,” says Richard Dunfee, director of AASCU’s Grants Resource Center. Institutions often receive support from local and federal economic-development programs to work with start-up businesses. Many campus leaders have become adept at locating federal and state dollars to help spur faculty research that may lead to spinoffs or assist fledgling entrepreneurs.
A sampling of projects underway on AASCU campuses indicates that the entities created in recent years take a wide variety of forms.

Missouri State University (MSU), for instance, opened The Jordan Valley Innovation Center in mid-2007 in a blighted downtown area in Springfield, not far from the main campus. With a mandate to help create jobs for the Springfield region, the institution renovated a now-vacant feed mill to create the center.

Missouri State officials call Jordan Valley a "technology accelerator," not an incubator. Rather than focusing on generating start-ups, the facility provides space for well-established businesses—headquartered all over the country—to collaborate at the center on applied research in fields including nanotechnology, bio-materials, genomics, software engineering, and development of medical devices and instruments. The project stemmed from a Missouri State faculty member’s connections to a scientific company. The company had previously paired with other universities, yet had grown frustrated with the difficulties of working out ownership and patent rights.

MSU’s Associate Vice President for Economic Development, Allen Kunkel, notes that although the university has a traditional intellectual-property policy governing faculty research, there is a limited volume of such research at the institution. Kunkel says, “Four to five years ago, leaders decided we needed to think strategically if we were going to contribute to local economic development. ’’That led us to think that if we provided space for companies that wanted to do some joint research, and if we agreed to negotiate royalties once a product reached the commercialization stage—to allow the companies to retain intellectual-property rights rather than our seeking an equity interest in businesses developed in an accelerator—that would give us a strategic advantage to get companies to come here.”

According to Kunkel this concept has been very successful, as companies that become affiliates of the center are not competition with each other. “They all bring something to the table. They collaborate on projects and share some equipment. For another company to be allowed in, the other companies have to feel it is a good fit.” Kunkel notes that the first product developed, which involves nanotechnology, is nearing the commercialization stage.

The center is self-supporting through the “affiliate fee” paid by companies to access staff, shared spaces and equipment. In addition, the seven companies involved pay a fee to lease specific space in the seven-story center. Influential local Congressman, House Republican Whip Roy Blunt, has also helped the center and its affiliates find
funding from federal agencies with missions that fit in with the companies participating in Jordan Valley.

“For a university our size, it is hard to put the resources together to obtain patents and, if necessary, defend them, so this structure alleviates a lot of those issues,” Kunkel says. “We reduced our risks by focusing on companies that have existed for a long time and are medium-to-large companies.”

Because the campus has not been able to meet all of the demands for space from its current corporate affiliates, the university has formed a partnership with the city and, in collaboration with a private contractor, plans to develop some key parcels of land containing abandoned or closed businesses near the Jordan Valley center. Missouri State President Michael T. Nietzel describes the vision as “an urban research park.” Although not adjacent to campus, the development—as much as 35 acres—would be relatively close.

Nietzel explains, “We looked at what parts of the university, from an academic and research perspective, could thrive better in a more urban setting and be successful in attracting private partners.” The university decided that some of the science, design and arts departments could fit together “because they share the common element of creativity.” This also would free up space on the main campus, which now is “land-locked” because it is surrounded by residential neighborhoods.

“We’re looking to bring together activities that are synergistic and bring them together in a way that stimulates more business entrepreneurship. We’re also catering to lifestyle preferences of the creative class, because there are residential lofts and restaurants and nightlife developing downtown, and people like to live close to where they work,” says Nietzel. “We think that by growing our presence there it would be good for the local economy and good for the university.”

A similar goal can be found at the University of Massachusetts Boston’s Venture Development Center (VDC), an 18,000-square-foot facility set to open early in 2009 in a building located in the heart of the campus. Hosting meeting space, video and data conferencing technology, and both dry and wet laboratory space, the center was designed to “provide laboratory, office and collaboration space for research-oriented organizations” in close proximity to UMass Boston’s researchers. Ultimately, the center seeks to promote the “exchange of knowledge and commercialization of research.”

The institution aims to attract more research funding, including funding from federal and state agencies, and to better connect the university to the development of its particular urban location. “I don’t think you can do one without the other,” says Richard Antonak, vice provost for research at UMass Boston.

Antonak notes that a 2007 report on the nation’s research parks, released by the Battelle Memorial Institute’s Technology Partnership Practice in cooperation with the Association of University Research Parks, “shows the progression from incubators not connected to universities’ own research to incubators integrated into the fabric of a university.”

According to Antonak and other officials, the VDC’s strategy is to encourage collaboration with other institutions, researchers, fledgling companies, and state and federal government agencies. “Our faculty members, for example, have been working collaboratively for some time with institutions like the Dana Farber Cancer Center, the Harvard School of Public Health, Children’s Hospital of Boston, and...
Boston Public Schools on various projects,” notes William Brah, executive director of the VDC and assistant vice provost for research. As a result of the collaborations, new ventures are being created and, over time, such research collaborations will attract companies and young scientists, he adds.

About 20 projects are already underway, and since only about six laboratory spaces and 10 offices will be available in the new center, many VDC partnerships will not be physically located at the new facility, say officials. Explains Christine A. DePalma, program director of the VDC, “With our equipment for video conferences and data visualization, people on other campuses and in other parts of the state will find that they don't have to leave their areas to connect with people important to their work and to show others what they are doing in their laboratories.”

J. Keith Motley, chancellor of UMass Boston, adds that his institution “collaborates closely with the four other campuses of the UMass system. For example, the campuses recently completed a joint strategy for life science research and development, and we will continue to look for ways to collaborate and share the unique strengths of our individual campuses. We have encouraged the other campuses to use the Venture Development Center, and we will continue to do so.”

As an example of the local partnerships under way, Brah cites a project currently in a clinical trial that connects expensive scientific instruments in a new way to test for metals in the body. The ultimate aim is to enable better testing in children exposed to toxic metals. This project involves a new faculty member at UMass Boston who arrived with her own company and patent related to the project. She joined the university, Brah says, because she was interested in working at an institution that encourages such entrepreneurial activity.

Not all projects are science-oriented. For instance, Brah mentions the development of a curriculum for public-school math and science teachers by UMass Boston faculty members. "There are a bunch of companies developing products to complement the curriculum we are developing, particularly software companies,” he says.

DePalma notes that including the faculty in planning is key to gaining campus support for business-development projects. "We involved faculty members at all stages of planning, and they were interested because they said there was no area where they could come together and discuss their research and think about outlets for their creativity," she explains.

Just as economic development has bypassed many rural areas, “innovation economies also have bypassed inner-city areas, and that was the rationale that helped attract..."
support for the VDC from the state Economic Development Administration,” notes Brah. “Our grads stay here and become the talent that drives the economy of the state, so the state has a vested interest in keeping top-notch talent. We need a venture environment so our graduates are used to working with business.”

In the past, adds Antonak, “There was very little contact or direct interaction between our faculty and the city of Boston. There were very few dollars coming in for research and scholarly activity from the local area. We weren’t getting what we should, given where we’re located. We wanted to grow that slice of the pie, and one way to change this was to offer a physical location, as well as business-development support, so we can increase our ties to business and to the region.”

Regional ties are also important to TowsonGlobal, a business incubator launched in June 2007 at Towson University (Md.), near Baltimore and its international port. The incubator, a project of the university and the Baltimore County Office of Economic Development, has a dual purpose, says Dyan Brasington, Towson’s vice president for economic and community outreach. “We want to help new companies form or spinoff of existing companies to get into the international market, and we also want to be a helpful entry point for foreign firms who want a presence in the eastern U.S. or want to find business partners here.”

According to Brasington, the incubator staff is also creating partnerships with other universities around the world. She notes, “Oldenburg University in Germany, for example, has a very large incubator and could be a landing spot for our people who want to get into their markets and vice versa.”

Besides the expertise of university faculty members and a diverse student body, Baltimore already has numerous companies doing international business because of its port. Brasington adds, “We knew we had expertise in the existing business community to help others.” At just 5,100 square feet, the incubator is small; it now houses four early-stage companies working on business plans and three “associate” members, who aren’t located onsite but receive all the other services of the incubator, including mentoring and business presentation development.

The incubator also runs programs and conferences that are open to any local company, with topics ranging from labor law to intellectual-property. Further, earlier this year the institution became the base for the University Economic Development Association, notes Brasington, which is “focused on sharing best practices and being a resource for economic-development officers for local jurisdictions and institutions that receive grants from such government agencies as the Commerce Department’s Economic Development Administration.”

The incubator at the University of Central Florida (UCF) sits at the other end of the spectrum in terms of size. It boasts not only a traditional research park with 100 companies and 11,000 high-tech workers, but also a Venture Lab, created to cull ideas from students, faculty and entrepreneurs that might have market potential.

Thomas O’Neal, executive director of the UCF Incubation Program and associate vice president for research and commercialization, says that for institutions not in burgeoning areas like Orlando, an incubator may be a good choice as a vehicle to encourage small-business creation and local economic development.

“Opening a research park is much more difficult because you have to have a massive quantity of land, which has gotten expensive. But with an incubator, you can rent space; you don’t have to acquire or develop a lot of land.”

O’Neal, who launched the incubator, says he toured other incubators, raised money and obtained grants prior to opening the doors. “We rented 12,000 square feet of space and added a company a month,” he recalls. “Now we have 90,000 square feet available in five locations, and another location will be added in a year. We have 64 companies in the incubator now, and 34 companies have graduated. All the companies that have graduated are still in business. And we only had about 20 that didn’t make it through to graduation from the incubator, and we are very happy about that. We didn’t open our doors until 2000, so it shows that in eight and a half years, you can do a lot.”

There is a structured process for incubator clients, beginning with orientation activities the first month and continuing through to graduation at around 18 months (although some companies may stay in the incubator
That kind of a disciplined approach is important, says John C. Hitt, UCF’s president. “As I have talked with people successful with incubators,” adds Hitt, “having a well thought-out business plan for the project and then sticking with it is key.”

Hill notes that the success and usefulness of the incubator have been proven by the fact that now officials in counties around the university are coming to it and asking for a branch of the incubator in their area. “We’ve had a lot of community support because we didn’t limit the activities to business spinoffs from our faculty and students. If you start with that approach, you limit community buy-in. But we have said that anyone with a good idea can approach us,” Hitt says.

That philosophy of responding to the local community’s needs was also key to the development of four incubators at San Jose State University (Calif.), operating under the auspices of the university’s research foundation. They focus on environmental products and services, early-stage software technology, bioscience, and a U.S. market-access center for international companies. The oldest of the incubators dates back to the mid-1990s and, collectively, hundreds of companies have graduated from the incubators and created at least 3,000 jobs, according to 2007 foundation figures.

Donald W. Kassing, who recently retired as president of San Jose State, notes that his predecessor, Robert Caret (now president of Towson), was instrumental in forming the original conception for the incubators. Kassing adds, “The success and expansion of incubators at San Jose State rests, I think, on a combination of ingredients. Obviously, if you’re in Silicon Valley, as we are, surrounded by a collection of international companies, you have important ingredients. This was mixed with aggressive, business-oriented city leadership, and then we had strong engineering, business and science programs at the university. With those, you have the ingredients for success.”

But Kassing notes that outreach to entrepreneurs and interest in economic development can’t be imposed on the faculty, even though incubators do provide internships for students and research opportunities for faculty members. “Success is about having a university’s faculty and deans interested in being engaged, though the university does need to create the proper conditions and support.”

San Jose State’s incubators have thrived even though it is located not far from major research institutions such as Stanford University and the University of California at Berkeley. Kassing explains, “I think research on the topic has shown that when you have high-technology clusters nearby and a research base from institutions like Stanford and Berkeley, the comprehensive universities in the neighborhood get stronger too.”

The attitude of the institution is especially important, he adds. While some of the companies created have resulted from faculty research, “one of the fascinating features was that more of them came through cooperative work involving several parties. And this, I think, is one of the real strengths of the AASCU institutions—their willingness to be partners, to truly collaborate with their communities.”