



Georgia Tech Squared

FENCE IT, OR FIX IT? A DECADE AGO, GEORGIA Tech faced a tough decision: whether or not to cordon off its campus from the crime and decay that had cropped up in adjacent neighborhoods. Instead, the university has opened its boundaries to creative partnerships with surrounding entities to engage in what must be among the most impressive urban and academic revitalization efforts in the country.

Today, Georgia Institute of Technology is rapidly broadening its long-time reputation as a top engineering school. Georgia Tech is enhancing its main campus with new facilities for biological, molecular, and environmental science and technology and entering into a joint biotech relationship with Emory University—among other new initiatives (see sidebar, “When It’s All Done”).

Georgia Tech is also jumping 14 lanes of interstate that had for 30 years severed the university from Atlanta’s Midtown district to build Technology Square. This \$180 million, eight-acre, 1.1 million square-foot complex blends executive, distance, and continuing education with Georgia Tech’s DuPree College of Management. The two-block project will become the technology anchor for a downtown redevelopment renaissance that is adding its own multiple millions of square feet in new office, retail, medical, cultural, and residential space.

To what can Georgia Tech attribute such astounding development success—especially in the midst of a down market economy? Among the requirements: flexible, visionary leadership; a we-can-do entrepreneurial attitude; and full participation in a symbiotic web of relationships within the larger community.

Take big ideas. Add energy.

Then multiply the ideas by their own magnitude. That’s Georgia Institute of Technology’s formula for accomplishing \$1 billion in projects in 10 years.

BY KARLA HIGNITE

All-Around Excellence

Georgia Institute of Technology President Wayne Clough is the first Georgia Tech alumnus to head the institution. One of his priority goals is to have his alma mater mentioned in the same breath as MIT and Stanford in discussions concerning institutional leaders not only in engineering but also in architecture, science, computing, business, and technology. Clough admits that academic reputations can be slow to change. Yet, since he took the helm in 1994, Georgia Tech's national rankings have risen dramatically—to within the top four in engineering, the top 12 in computing, and the top 15 in architecture, according to *U.S. News & World Report's* 2003 edition of "Best Graduate Schools." The university recently cleared another hurdle—breaking through the research ranks to become a recipient of major National Institutes of Health funding.

Georgia Tech is recruiting aggressively and attracting faculty by the handfuls, with 100 new positions added to the roster during the past five years. One big indicator of its success in this area is that Georgia Tech ranks second only to the University of Illinois, Urbana, for the most National Science Foundation Career Development Grants for new faculty during the past five

Georgia Tech is completing the Technology Square project, which is more than a million square feet, in a mere 36 months.



years. Likewise, student applications are up by 30 percent from four years ago. "We're doing something on campus that attracts both students and faculty," says Robert Thompson, Georgia Tech's senior vice president for administration and finance. He admits that hasn't always been the case.

Four months after Clough arrived at Georgia Tech, he brought Thompson on board—a former University of Washington colleague—to head a newly created administration and finance office. While Atlanta had been home to the university since its establishment in 1885, Georgia Tech had become something of an island unto itself, says Thompson. "And it wasn't a place where you felt particularly safe." To the north, a former steel mill had been shut down for 20 years. What little residential property that lay between Georgia Tech and the mill had decayed in the midst of absentee landlords. On the south side, public homes that the federal government built years before had become a drug zone. An industrial section to the west did little to provide a sense of safety and continuity. And to the east, Interstates 75 and 85 had carved an impasse between the Georgia Tech campus and Atlanta's Midtown district—which itself had seen better days. Midtown's Biltmore Hotel, built in the 1920s, had until the 1960s been *the* place to stay in Atlanta, says Thompson. But it, too, had long since closed and become engulfed by vacant lots and decaying buildings.

What Clough and Thompson both knew when they first came to Georgia Tech was that to attract the kind of faculty it needed to realize its potential, the university desperately needed to improve its climate. "To have faculty members come and stake their careers at your institution, you have to compensate them well, give them facilities and labs to do what they need to do, provide them with the funding to attract the best students, *and* offer an attractive environment in which to work, live, and play," says Thompson. "If you compare two campuses that are the same academically, faculty and students will go to the one with a strong, vibrant community. That's the reality," says Thompson. And that was Georgia Tech's dilemma.

It's the synergy of different groups coming together for a shared purpose that can inspire so much energy and creative thinking way beyond what any one entity could accomplish on its own.



Susan Mendheim

Road to Rejuvenation

The 1996 Summer Olympics in Atlanta had provided a start to rehabilitation efforts. In addition to some new housing construction associated with being the Olympic Village for the games, Georgia Tech was the venue for boxing and aquatic events. As such, it had received limited funding for housing, an aquatic center, and a boxing venue in the university's basketball arena. But it was going to take much more than that—and more than some new buildings on its own campus—to become a magnet for excellent faculty and top students.

So, in addition to buying land to the south and west of its campus for future development, Georgia Tech began reaching out to its beleaguered community. On both the university's south and north sides, the city and other community groups were organizing to replace dilapidated housing units with new homes. Georgia Tech supported these and other development efforts, seeing the potential for the kind of neighborhood that might attract faculty. As a component of its partnering efforts, the university agreed to build a community daycare facility. ▶

MIDTOWN: Where the Whole Is Greater

Midtown Atlanta in the 1970s was neither a pretty picture nor a safe place. Drugs, prostitution, and abandoned buildings ruled the streets. But in 1978, business and community leaders created the Midtown Alliance to turn around the blighted urban area.

Today, the private nonprofit group is 400 members strong. Stakeholder companies—from small entrepreneurs to big employers like Bell South—represent upwards of 50,000 employees, says Susan Mendheim, Midtown Alliance president. Alliance members also include educators, students, artists, neighborhood associations, and nonprofit groups representing local concerns. “Instead of a handful of separate organizations embarking on their own efforts, we pulled together a diverse group to get things done,” says Mendheim.

In the early days after the dilapidated buildings were torn down, the two square miles that make up Midtown's commercial district were 60 percent vacant. “We essentially had a blank canvas to work with,” says Mendheim. A wave of development in the mid-1980s brought a skyline to Midtown. But the next 10 years passed with little additional development. That's when the alliance initiated its blueprint brainstorming. The community-designed visioning process solicited input from residents, employers, artists, and Georgia Tech students, faculty, and administrators to develop visual images of what Midtown should become. “Everything from street lamps to landscaping, parking to building design, and traffic flow to the types of businesses and activities allowed was fair game on which to comment,” says Mendheim.

The outcome was a shared vision among all stakeholders that amplified the desire for a vibrant mixed-use urban corridor of business, retail, cultural activity, education, living space, and green space—and with specific design details, such as foot-traffic-friendly sidewalks and ample windows that would show activity from the street. “Georgia Tech has been so important to the implementation of

this whole effort—especially because of its student capital,” says Mendheim. “We've had students working on this blueprint measuring every parking space, providing data, and developing models.”

As Mendheim puts it: The whole is greater than the sum of its parts. “It's the synergy of different groups coming together for a shared purpose that can inspire so much energy and creative thinking—way beyond what any one entity could accomplish on its own.” Mendheim believes that key to the success of both Georgia Tech's Technology Square and a revitalized Midtown is shared visioning. “Georgia Tech has been our partner in this all the way. We were part of Georgia Tech's master planning, and it has been part of our blueprint planning from the beginning.”

Today Midtown is up to its ears in development initiatives, with nearly 50 new projects of all sizes and scope on the table, including 6,000 new residences, 10 million square feet of new office space, and 13 cultural venues. In addition to Georgia Tech as technology anchor, two other long-time Atlanta establishments are securing the corners of Midtown. The Woodruff Arts Center is expanding its campus, including a symphony hall, and the Crawford Long Hospital is undergoing its own \$500 million redevelopment effort. “These three huge institutional developments are raising the bar and setting new standards for excellence in their respective fields,” comments Mendheim.

Currently the alliance has received \$8 million in grants as a result of its Midtown improvement district, whereby citizens have voted to tax themselves and to take advantage of matching federal funds. A more specific blueprint initiative is underway to determine the kind of retail environment Midtown should create. “We'd like to be a midtown Manhattan—on a smaller scale,” says Mendheim. In the meantime, the alliance is concentrating on getting its streetscape in place so that when the economy picks up, it will be ready for the wave of retailers already lining up for a spot.

When you look outward to develop your vision and strategy, stay true to the core mission of your institution, Clough advises. The education of our students has always been our top priority.



Wayne Clough

Across the freeway a block and a half to the east, the Midtown Alliance—a group of business and community leaders—was in the midst of developing a blueprint for taking back the streets of Midtown with a mixed-use initiative that would include business, retail, and residential development (see sidebar, “Midtown: Where the Whole is Greater”). In this alliance, Georgia Tech found a ready partner for pro-

pell the university to new heights in technology leadership. As a result, the university is physically extending its campus with eight acres of Midtown property. On this property, the university is building new facilities for the business school and launching a new executive education program and Global Learning Center for distance and continuing education.

Entrepreneurial Mindset

How was Georgia Tech able to develop and implement its strategies for completion of the greater than a million square-foot Technology Square project within an unheard of 36 months? For starters, by stepping outside of the traditional state funding process, says Michael Sivewright, managing director for Jones Lang LaSalle—a group of real estate experts providing real estate services to universities and institutions that Georgia Tech hired as development manager for its Midtown project.

Not that Georgia Tech didn't initially try going the route of state funding, says Robert Thompson, Georgia Tech's senior vice president for administration and finance. “But when the state norm calls for one building per institution every five or six years, it quickly became obvious to us that our capital plan for facility and program development totaling \$1 billion in 10 years would have to be funded largely by other means.”

So university administrators regrouped and got creative in working out financing options. In part, that included plans for the launch of a \$300 million capital campaign. “Most fundraising experts said we shouldn't emphasize facility needs because no one wants to give money for buildings,” says Thompson. The university's “Campaign for Georgia Tech” eclipsed its initial goal within three years, surpassed its revised \$500 million goal the next year, and topped its final \$600 million goal by more than \$100 million to conclude the campaign at \$712 million—with \$180 million for new buildings. Thompson attributes the campaign results to having a compelling vision. “Once we got underway and could show our board and the foundation and our alumni how everything was coming together, the plan essentially sold itself.”

Also central to Georgia Tech's development achievements—of which Technology Square is one component—is the instrumental role the university's foundation is playing in leveraging the money. The Georgia Tech Foundation is using its endowment to guarantee a combination of tax-exempt and taxable bonds to fund various project

components, explains Sivewright. “The financing is complex, with multiple arrangements for servicing the debt based on multiple revenue streams.”

Georgia Tech alumnus William Todd is a member of the foundation's executive committee and a trustee since 2000. He notes that “this was new territory for the foundation and shows a very enlightened approach to come up with a creative way to accelerate by at least 10 years what could have been done by going a more traditional route.”

Granted, the bulk of Georgia Tech's fundraising efforts occurred during a robust economy, and—as is the case for most institutions—the university's state budget has declined during the past two years. Even so, no programs or projects have been cut, and the university's development endeavors are moving full steam ahead, says Thompson. “We started making these investments six years ago and have been continuing to invest. What we're seeing now is the success of those earlier investments helping us generate revenue and leap over the slowdown in the economy.”

“A development project like Georgia Tech's has a thousand reasons to fail,” says Sivewright. “From the financial structuring to the risk of the commercial endeavor to the limitations of state or regional systems to zoning issues—the amount of consensus-building required in an endeavor like this is gigantic and can't be underestimated.”

Todd credits Georgia Tech President Wayne Clough for bringing a “culture of engagement” to Georgia Tech that is making these new development and program initiatives work. “It's difficult and complicated mixing for-profit and nonprofit business ventures in combination with academic needs,” says Todd. “You need a great deal of creativity and trustworthiness in building good working relationships.”

For DuPree College of Management Dean Terry Blum, Technology Square is itself an authentic lesson in business acuity. “No one knew in 1999 that the market would plunge. Sometimes it can be hard to teach students real-life lessons when everything you invest in makes money regardless of what you do,” says Blum. “Georgia Tech's ability to continue with this scale of expansion through this downturn provides a reality for our students, and it proves that ours is a very entrepreneurial approach indeed.”

Technology Square

When Georgia Tech's Midtown campus expansion is complete by summer 2003, it will span two city blocks, blending business, academic, and commercial enterprises. In addition to helping Georgia Tech develop ownership and financial strategies for its overall master plan initiatives, real-estate development expert Jones Lang LaSalle provided initial market studies, best-use analyses, budgets, and schedules for the entire Technology Square project (see sidebar, "Entrepreneurial Mindset").

"In the first phase of the feasibility study, we recognized that by moving outside of traditional campus boundaries, we needed to bring a campus component to the project," says Michael Sivewright, managing director for Jones Lang LaSalle. "Also apparent was the need for greater integration with the business community and the community at large." While initial plans did not call for relocating the university's DuPree College of Management to the Midtown campus, it quickly became evident that doing so would not only enhance the university's interdisciplinary goal of blending technology and management but would also provide a gateway between the business community and Georgia Tech, says Sivewright.

The college of management's new cutting-edge facility—which also meets U.S. Green Building Council energy and environmental design certification requirements—will house Georgia Tech's new executive education center, which will offer master's degree programs and other executive-level education programs. The center will include a 250-room hotel and executive conference center that will provide accommodations for visiting students and faculty, companies providing employee education and training, and a host of Georgia Tech alumni, parents, and Atlanta-bound visitors.

Adjacent to the college of management and hotel and conference center will be Georgia Tech's new Global Learning Center, the university's physical answer to a vision that says Georgia Tech wants its graduates to look to the university for all their future education needs, says Thompson. The new facility will



Renderings of the mixed-use corridor feature foot-traffic friendly sidewalks and windows showing activity from the street.

have ample classrooms with the latest in sophisticated technologies for providing distance and distributed education. "The Global Learning Center will provide opportunities for alumni to continue to return to Georgia Tech to update their skills and will be a resource for people around the world seeking high-tech and distance education," says Thompson.

In concert with the Technology Square priority goal of strengthening the college of management and bolstering the university's lifelong learning programs is expanding on Georgia Tech's cutting-edge research and business incubator programs. The university's Advanced Technology Development Center (ATDC) is one of the nation's highest regarded technology incubators, having facilitated more than 100 high-tech startups during the past 20 years, says Thompson. ATDC will likewise get a new facility that will allow it to offer an unprecedented level of services and flexibility for what will be one of Atlanta's most prestigious addresses for technology companies. Powered by the companies, investors, and service providers and by Georgia Tech's growing presence, Midtown and Atlanta as a whole will provide a dynamic environment for entrepreneurship. ►

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Robert Thompson

ATDC's next-door neighbor is Georgia's Yamacraw Broadband Design Center, a state-sponsored initiative that is also part of the total development and that's becoming a major national center for high-speed communications systems, devices, and chips. Georgia Tech's own stake in this endeavor is the recruitment of 45 faculty members to be part of the research initiative. "We're not just investing in faculty, we're partnering with nearly 30 companies that have agreed to bring their researchers to this facility and work next to our faculty and graduate students," says Thompson. The ATDC and Yamacraw center are being constructed at the same time and add another four acres, 400,000 square feet, and \$75 million to Georgia Tech's \$180 million Technology Square investment.

Finally, the Georgia Tech bookstore is also moving to Midtown. The rationale for doing so is threefold: funnel more Georgia Tech students into Midtown, thereby increasing foot traffic to the hottest up-and-coming retail zone in Atlanta; provide improved service to students and faculty with expanded hours and seven-days-a-week shopping access; and expose more Midtown residents and business professionals to Georgia Tech. To accomplish the latter goal of appealing to a more eclectic crowd, the university is building a much bigger store—50,000 square feet—and turning over management to retailer Barnes and Noble. In addition to carrying Georgia Tech student texts and paraphernalia, the university's vision for the store is to become the source for all things technology, with all the latest technological gizmos and resources that would appeal to the crowd of working professionals in Midtown, says Thompson. Likewise, the store will contribute to Midtown's goal of becoming an active shopping district. A Starbucks located within the Georgia Tech bookstore will keep traffic flowing into the store at all times of the day and evening. In keeping with Midtown's development blueprint, the university will also lease other ground-level space in its facilities to a variety of restaurants and shops.

"All these linkages provide a tremendous ability for us to attract topnotch faculty," says Thompson. The synergy also cements Georgia Tech's initiative to become the provider of continuing education and executive education for the mix of business professionals and scholars living in and visiting the area, says Thompson.

Terry Blum couldn't be happier with the outcome. "The whole Technology Square initiative has also allowed us to think through the pedagogy of becoming leaders in technology—how we distribute information, how to get people to work in teams, and how to prepare business leaders for high-tech environments," says Blum, dean of Georgia Tech's DuPre College of

Management. The combination of new initiatives with established programs will further enhance Georgia Tech's long-time commitment to interdisciplinary programming. In recent years, 25 percent of Georgia Tech's business classes have been taken by nonbusiness majors, says Blum. That upward trend will continue to increase. Likewise, cooperative hands-on education—which has always been a big deal at Georgia Tech—will get a boost from the college's new location, says Blum. "The design is to make work and education convenient and virtually seamless. If you only have to go across or up the street for your internship, it further reinforces the connection between the academic and the experiential."

When It's All Done

The strategic planning process that Georgia Tech President Wayne Clough launched in 1995 included an assessment of the university's existing facilities to determine what new development would be required to replace outdated buildings with space for its ambitious new science and technology initiatives. The realization: Georgia Tech needed \$1 billion for more than 5 million square feet of additional space over the course of 10 years to achieve its goal of defining "the technological university of the twenty-first century."

Among the many goals outlined in the 1997 Georgia Tech Master Plan are:

- Fifty acres of newly acquired land (including eight acres in Midtown Atlanta for Technology Square) to round out the campus to 400 acres.
- A 730,000-square-foot bioengineering and bioscience complex, where more than 200 faculty and 2,000 students will come together to do science and engineering in a multidisciplinary format. The four-building BEM (biotechnical, environmental, and molecular disciplines) complex will serve as a high-profile focal point for Georgia Tech's involvement in bioengineering, biomedicine, and related fields, anticipating the rising influence and growth of biotechnology at Georgia Tech.
- A new \$62 million Advanced Computing Technology Building for growth in information technology-related disciplines.
- A new \$27 million research engineering facility within Georgia Tech's Manufacturing Research Complex in support of interdisciplinary research, including industrial and systems engineering, mechanical engineering, materials science and engineering, and electrical and computer engineering.

University Snapshot

Faculty: 831 full-time; 13 part-time

Students: 11,457 undergraduate; 5,022 graduate

Tuition and Fees (2002-03): undergraduate resident, \$3,616; undergraduate nonresident, \$13,986; graduate resident, \$4,174; graduate nonresident, \$14,218; MBA resident, \$5,390; MBA nonresident, \$19,082

Academic Programs: 103 degree programs at the bachelor's, master's, and PhD levels in the fields of engineering, architecture, business, computing, liberal arts, and science

Annual Operating Budget: \$834.2 million

Research and Development Expenditures: approximately \$320 million

Staying True to Roots

For Clough, Technology Square is a vision come true. When he took over at Georgia Tech, one of his priorities was to look for ways to dovetail the mission of Georgia Tech with that of its neighbors. “We spoke with the Metro Atlanta Chamber of Commerce to find out what problems it was trying to solve. We talked with the state and with federal agencies. We essentially said that wherever our strategic plan aligns with those of others, and where their plans can amplify what we can do, then it makes sense to align our missions,” says Clough.

But Clough admits that looking outward to develop your vision and strategy must be balanced by staying true to the core mission of your institution. “The education of our students has always been our top priority,” he says. But by reaching out in big ways to the business and wider community, Georgia Tech is still maintaining tradition.

While the physical decay that came to surround Georgia Tech over the years had caused it to turn inward, that was never a founding characteristic for the university, says Georgia Tech DuPree College of Management alumnus William Todd. “Georgia Tech has never been a classic liberal arts institution that considered itself separate from its locale,” says Todd, a long-time business leader in the Atlanta community and now president and CEO of Encina Technology Ventures, a venture capital company focusing on high-tech startups.

According to Todd, when Georgia Tech was established prior to the turn of the 20th century, it was founded as an economic development effort to transition the state from an agrarian to an industrial center. With the ambition of making Georgia and the South centers for industrialization came the recognition that training and work opportunities were needed for young people to stay in the area and find jobs. So Georgia Tech was launched to educate young people in manufacturing and engineering.

“Georgia Tech’s culture has always been strongly connected to business and industry. That’s part of its tradition,” says Todd. In his mind, current Georgia Tech initiatives are clearly in character with the founding principles of the institution, where the university is once again not only engaged in but is propelling the business community at large toward leading-edge achievements.

A New Front Door

For Todd, the Fifth Street bridge and pedestrian walkway being constructed to physically reconnect Georgia Tech with the Midtown community is filled with a great deal of symbolism as well as substance—crossing the divide that so often separates business from academia. For him, pushing the edge of the Georgia Tech campus to overlap that of the Midtown business

community is ideal. “Business types feel more comfortable interacting with a university when they feel they’re on common ground. When academic and business interests meet—both physically and philosophically—fertile ground is cultivated for creative thought, with each entity reinforcing the other,” says Todd.

He projects that 10 years from now, Georgia Tech will see a record number of students engaged in internships and coop experiences with companies in Atlanta, and that more business people at all levels of their careers will be engaged in lifelong learning. “It’s a beautiful two-way street, where students are exposed to real-world business people and problems, and business leaders are able to feed their intellectual curiosity,” says Todd.

The university is raising the bar for employee education, with 2,500 Georgia Tech employees engaged in some type of training compared to only 500 employees five years ago. Clough suggests that the full extent of Georgia Tech’s current initiatives may not be known for another 20 years.

“Most universities have a regional, national, and international character,” says Clough. “If you look around at particular regions, certain universities dominate. We’re becoming a force to reckon with nationally, but in part that’s because we’ve focused as much on our role regionally. We’re building our financial accountability and positioning our research and facilities to be the MIT or the Stanford of the Southeast. That’s our starting point. By building an extremely powerful base here, we’re clearly becoming the leader in our region and certainly an emerging leader nationwide.”

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