A Message from the Vice President

Welcome to the Georgia Tech Enterprise Innovation Institute (EIP) annual report. EIP is Georgia Tech’s primary business outreach organization, providing a comprehensive program of assistance to business, industry, entrepreneurs, and economic developers. As the nation’s largest and most comprehensive university-based program of its kind, EIP helps enterprises of all types and sizes improve their competitiveness through the application of science, technology, and innovation.

A lot has happened this year, and, in this report, you will find snapshots of how our programs have had an impact throughout Georgia and beyond. A defining event in which we played a pivotal role was the launch of the AT&T Foundry, the latest corporate innovation center attracted to the critical mass forming around Georgia Tech’s multifaceted innovation environment centered in Technology Square.

Why did AT&T and — earlier — Panasonic, GE Energy, NCR, and ThyssenKrupp Elevator decide to locate their corporate innovation centers at Technology Square? In the words of Ralph de la Vega, CEO of AT&T Mobility, “When we locate a Foundry facility, our number one criterion is to be part of an ecosystem that fosters innovation, which usually occurs at the intersection of premier education, high technology, and an entrepreneurial mindset; those are all things that we found at Technology Square.”

Ten years ago, the innovation hub that Technology Square has become was a dismal collection of empty lots and abandoned warehouses. A collaboration of university, business, and political leaders boldly transformed that no-man’s-land through a dramatic expansion of the Georgia Tech campus, including the College of Business, multidisciplinary research facilities, a global learning center to promote the exchange of ideas, and the outreach programs of EIP. In addition, Tech Square now includes space for the Advanced Technology Development Center (ATDC) to incubate startups, Georgia Power’s economic development team, the Georgia Department of Economic Development, and an array of other programs that connect industry to Georgia Tech and to the entrepreneurs who are driving new technologies.

The corporate innovation centers are the most recent additions to this innovation ecosystem surrounding Georgia Tech. These industry leaders are already rapidly developing partnerships with startup companies, collaborating with research faculty, tapping into leading-edge research infrastructure, and creating co-op and internship programs for students – tomorrow’s workforce. The innovations you can expect as a result are far-ranging: the connected car and automotive infotainment systems, sensors, switches, and power systems; unparalleled home and security services; cloud and mobile applications; tools to analyze massive data sets; new dimensions in machine-human interface; and additive manufacturing technologies. And that’s just what is on the drawing board today.

If the past 10 years have brought this level of transformation, imagine what the next 10 have in store!

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Preventing Costly Phone Fraud
There were more than 2.25 million instances of phone fraud in the U.S. last year, costing some $10 billion in losses. Pindrop Security, an ATDC company, offers a solution to this vast and growing problem. The company’s technology platform combines authentication and anti-fraud detection systems. It is the first of its kind to analyze and fingerprint individual phone calls, providing the caller’s true location and calling device and matching the caller to Pindrop’s fraud database. In 2013, the company closed an $11 million round of financing, and its CEO Vijay Balasubramaniyan, who earned his doctorate at Georgia Tech, was named one of MIT Technology Review’s 35 Innovators under 35.

Reducing Production Cycle Times
Working with EI’s Georgia Manufacturing Extension Partnership (GaMEP), Dynamic Paint Solutions in Eastman, Ga., reduced its average production cycle times from as much as 10 hours to 30 minutes per cycle. The full-service metal finishing company exclusively serves the aerospace industry, which has stringent quality standards and expects quick order processing. To meet customer demands, CEO Robert Pruitt teamed with GaMEP to improve the company’s process for inspecting, treating, and painting the parts it receives from machine shops. Through value stream mapping exercises, the company identified ways to improve product handling, eliminate choke points, and increase its percentage of parts processed correctly the first time.

Conquering the Federal Procurement Rule Book
The mammoth Federal Acquisition Regulation (FAR) is the federal government’s contracting rule book. To help the project and office engineers from the U.S. Army Corp of Engineers become more adept at interpreting and applying the FAR, EI’s Contracting Education Academy developed and presented a four-week training program covering all of the FAR’s 53 chapters and 2,000 pages. To hold students’ interest and foster learning, the Academy team used a number of creative approaches in the course, including a deck of playing cards representing each FAR chapter, adaptations of popular board games, and case studies drawn from real-life scenarios.

Earning Top Rankings for Startup Services
Two key components of Georgia Tech’s innovation ecosystem received top rankings in 2013. Forbes magazine placed the ATDC on its list of top Business Incubators Changing the World. The magazine worked with CB Insights, a New York firm that tracks funding trends, to identify 12 “especially crackling innovation hubs” from among 300 candidates. In addition, EI’s VentureLab ranked second in a study of 150 university-based business incubators in 22 countries. The European university incubator, UBI Index, based in Stockholm, conducted the study, which also placed VentureLab first among early-phase university incubators and first among those supporting a broad range of technologies.

Involving Patients in Health Care Decisions
More than 60 breast cancer patients in Rome, Ga., are the first participants in MyJourney Compass, a pilot project designed to help patients navigate the complex cancer treatment process and become more involved in their health care decisions. Using inexpensive tablet computers loaded with a secure email system and a special app developed at Georgia Tech, patients have been communicating with health care providers, accessing their health information, and obtaining credible information about their disease. Funded by the Office of the National Coordinator for Health Information Technology, the project is a collaboration of health care providers and support groups in Rome, the Georgia Department of Community Health, and health information specialists across Georgia Tech – led by EI’s health outreach experts.
Increasing Energy Efficiency and Reducing Waste
As part of its overall business strategy, Tara Materials, a manufacturer of artist and print canvas, wanted to increase energy efficiency and implement sustainability efforts in its Lawrenceville, Ga., plant. By mapping out details of the manufacturing process, plant manager Mike Pedroza and the E² Energy and Sustainability Services (ESS) team made many improvements. For example, the company reduced waste – sending 204,000 fewer pounds of waste to the landfill – and decreased water usage by 558,000 gallons. In addition, Tara was able to reduce its gas and electric bills and reuse energy previously wasted in the production process. ESS is a component of the Georgia Manufacturing Extension Partnership.

Assessing Cell Behavior
Axion Biosystems operates at the intersection of microelectronics and biology. An ATDC company, Axion’s high-throughput microelectrode array system uses non-invasive electrodes in a multiwell plate to directly measure electrical activity from intact networks of neural and cardiac cells. Axion’s device gives academic and industrial scientists an in vitro method to assess the safety and efficacy of a compound early in the drug development process, as well as the ability to model diseases such as autism, Parkinson’s, epilepsy, and long QT syndrome. Axion has raised $12 million in funding, is built on technology licensed from Georgia Tech, and is a VentureLab graduate.

Turning Pastime into Profit
When Ken Drawdy acquired Albany Sheet Metal, he found a perfect opportunity to combine his love of hunting with his desire to create a customized product for an existing market. His research identified the need for a portable deer feeder that was durable and easy to ship, set up, and breakdown. But Albany Sheet Metal lacked the technology and capacity to produce enough feeders to meet market demand. The South Region office of the Georgia Manufacturing Extension Partnership helped Drawdy identify a Georgia-based manufacturing partner and turned his rough sketch into a finished design. So far, more than 250 deer feeders have been shipped, bringing in some $80,000 in new revenue for Albany Sheet Metal.

Implementing Strategies for Rapid Growth
The Royster Group provides executive search and contract staffing services in the private and public sectors and health care industry. For many years, the Atlanta firm has been utilizing the organizational development, financing, and contracting services of E²’s Minority Business Development Agency Business Center. With the Center’s guidance, Royster has achieved significant revenue growth, ranking No. 1927 on Inc. magazine’s 2013 list of the nation’s fastest-growing private companies. The firm also earned recognition from the Georgia Minority Supplier Development Council as the 2013 Supplier of the Year with sales of $1 to $10 million.

Fostering Student and Community Entrepreneurship
Most technology startups fail because they launch without developing a sound business model. Startup Gauntlet, a six-week customer discovery boot camp, immerses teams of student and community entrepreneurs in an intensive process aimed at identifying their potential customer segment and value proposition or product-market fit. Pioneered at E², the program has reached some 150 participants at universities in Georgia, Alabama, and Florida. Startup Gauntlet is a streamlined version of the National Science Foundation (NSF) I-Corps program, which helps recipients of NSF research investments identify commercial opportunities and test their viability. Georgia Tech is a founding node for I-Corps.
Restructuring for Recovery
The Great Recession hit Bonnell Aluminum in Newnan, Ga., especially hard. With a 40 percent decrease in sales in its main market – commercial and residential construction – and increased competition from imports, the company felt it had to reinvent itself. EI²’s Southeastern Trade Adjustment Assistance Center (SETAAC) was there to help. Leveraging $75,000 in funding from SETAAC, which Bonnell matched dollar-for-dollar, the company completed nine projects to restructure to a leaner workforce and increase production and sales. The result: a return to profitability and significant cost savings.

Leveraging Government Contracts to Fast-Track Growth
After retiring from the U.S. Army, Ron Saxton founded SAWTST in 2006. Named to Inc. magazine’s 2013 list of the nation’s fastest-growing private companies, the Peachtree City, Ga., firm provides a variety of information technology and logistics services primarily to the armed services. Saxton credits the Georgia Tech Procurement Assistance Center (GTPAC) at EI² with helping the company increase revenues 486 percent from 2009 to 2012. With all of its business coming from government contracts, the company has looked to GTPAC for advice and for updates on ever-changing contracting regulations. GTPAC also helped SAWTST connect with Home Depot, through the Georgia Mentor Protégé Connection program, to develop a strategy for entering the commercial market.

Streamlining Component Assembly
Harris Products Group in Gainesville, Ga., manufactures oxy-fuel cutting and welding equipment as well as compressed-gas pressure regulators. To fine-tune its process for readying chrome-plated components for assembly into its gas pressure regulators, Harris turned to the Georgia Manufacturing Extension Partnership (GaMEP) at Georgia Tech. Based on an analysis of the flow of materials through Harris’ production process, GaMEP project managers recommended providing stations along the production line to store a consistent amount of inventory. They also suggested standardizing the weekly production schedule. As a result, Harris has realized a 75 percent reduction in work in process inventory for this product.

Increasing Economic and Social Impact
Drexel University in Philadelphia, Pa., chose EI²’s Startup Ecosystems (SES) group from among several competing organizations to help design Drexel Ventures, a key component of the university’s goal to greatly increase Drexel’s economic and social impact in the greater Philadelphia area. After interviewing senior leadership and conducting market research, the SES team made recommendations about strategic goals, organizational structure, and customer priorities for Drexel Ventures. The project tapped the expertise of resources across Georgia Tech including the ATDC and VentureLab.

Expanding the Innovation Ecosystem
The AT&T Foundry has joined a growing number of corporate innovation centers tapping into the range of capabilities at Georgia Tech’s Technology Square, a multifaceted innovation zone. According to AT&T Mobility CEO Ralph de la Vega, the intersection of premier education, high technology, and an entrepreneurial mindset were the key attractions to Tech Square. Foundry teams and collaborators, including ATDC and VentureLab startups, will focus on new applications and services in home security and automation, the connected car, and emerging devices. Panasonic, GE Energy, ThyssenKrupp Elevator, and NCR also have placed innovation centers at or near Technology Square.

Penetrating New Markets
Prime Technological Services in Suwanee, Ga., designs, tests, manufactures, and distributes printed circuit boards for specific vertical markets. When CEO Greg Chestnutt and his team analyzed approaches to growing the company, they determined that the aerospace/defense industry and the medical device industry aligned well with the company’s capabilities. So, the company tapped the resources of EI²’s Georgia Manufacturing Extension Partnership for help in achieving certifications in AS9100 and ISO13485, the quality management systems for the aerospace and medical device industries. As a result, the company has successfully implemented the systems, developed partnerships with four medical device companies, and helped two companies transition production from overseas back to the U.S.
Building the Health IT Workforce
A new Health Information Technology (HIT) certificate program is underway at Gwinnett Technical College. It is part of the HIT education partnership between Georgia Tech and the college. The inaugural class of 17, which
includes students with backgrounds in health care and information technology, is training for jobs in one of the fastest-growing sectors in the health care industry. A $1.65 million award from the federal government’s Jobs and Innovation Accelerator initiative supports the program and helps provide stipends for veterans, the underemployed, and the unemployed. EI2 is coordinating the HIT education partnership.

Bringing the Garment Industry Back to the U.S.
In 2012, the U.S. imported more than $100 billion in sewn products, with $75 billion in garments alone. SoftWear Automation, an ATDC company based in Atlanta, plans to bring some of that labor-intensive business back home with its automated sewing work-cell. Until now, automated sewing has been uneconomical because movement of the fabric through the sewing process causes distortion. SoftWear’s machine vision technology measures thread count at 825 frames per second and corrects the fabric distortion at the needle head. The company is also developing robotics to automate the handling of fabric and garment parts as they enter the automated sewing process.

Spurring Rural Economic Development
The Global Center for Medical Innovation – an EI2 affiliate – and West Tennessee Healthcare are partnering to drive medical device innovation in western Tennessee. One of the 10 largest public, not-for-profit health care systems in the U.S., West Tennessee Healthcare serves 18 rural Tennessee counties. The partnership will guide a coalition of universities, industry, investors, and state and local economic development organizations in providing education and services to spur the development of new technologies and medical device startup companies. A key focus of the economic development initiative will be supporting entrepreneurial physicians, surgeons, and clinicians.

Increasing Sales with New Products
Since its founding in 2005, Savannah-based Digitus Biometrics has worked with the Georgia Manufacturing Extension Partnership (GaMEP) on numerous projects to improve manufacturing and operational systems. When the company developed a new device to provide room and cabinet security within data centers of a wide variety of organizations, it called on GaMEP once again to help increase sales to existing customers and reach new ones. GaMEP, in turn, connected the company to the Technology Association of Georgia’s Economic Gardening Program. The program’s analysts helped Digitus Biometrics develop a list of prospective customers, quickly increasing its sales.

Providing Vocational Training for the Disabled
For nearly 40 years, Easter Seals Middle Georgia in Dublin, Ga., has been providing vocational training to individuals with disabilities and special needs. Today, the nonprofit organization employs some 300 workers, many of whom help fabricate foam fire-suppressant material for the Warner Robins Air Logistics Center. To reduce training time for these workers, the organization called on the Georgia Manufacturing Extension Partnership (GaMEP) to streamline manufacturing processes as much as possible. Following GaMEP’s recommendations, Easter Seals Middle Georgia has made significant improvements in materials flow at each stage – from raw materials to finished goods – and greatly reduced materials waste.
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During fiscal year 2013, EI²:

- Served 1,347 manufacturers, helping Georgia manufacturing companies reduce operating costs by $27 million, increase sales by $237 million, and create or save 1,574 jobs.
- Assisted Georgia Tech faculty members in evaluating 200 research innovations and helped form 15 new companies based on this intellectual property. In all, startups created from Georgia Tech research innovations created 677 jobs and attracted nearly $52.6 million in investment.
- Helped Georgia companies win $566 million in government contracts, creating or saving an estimated 11,642 jobs.
- Assisted 149 minority entrepreneurs who received nearly $109 million in new contracts, increased sales, new bonding, or in new financing.
- Served 403 technology startup companies that generated capital activity (venture capital investment and mergers/acquisitions) of more than $162 million.
- Supported Advanced Technology Development Center (ATDC) companies and graduates in achieving revenues totaling more than $1 billion. Since 1999, companies associated with the ATDC have attracted nearly $2.5 billion in investment capital.
- Helped 24 Georgia companies prepare proposals for Small Business Innovation Research (SBIR) grants, winning more than $4 million in awards.

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Georgia Tech Regional Network

The Enterprise Innovation Institute (EI²) serves Georgia through a network of staff members located throughout the state.

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EI² programs include:

- Advanced Technology Development Center (ATDC)
- Contracting Education Academy
- Energy and Sustainability Services
- Flashpoint
- Georgia Manufacturing Extension Partnership (GaMEP)
- Georgia Tech Procurement Assistance Center (GTPAC)
- Global Center for Medical Innovation (GCMI)
- Health IT Extension Program
- Innovation Strategy and Impact Group
- Minority Business Development Agency (MBDA) Business Center
- Science, Technology, and Innovation Policy
- Southeastern Trade Adjustment Assistance Center (SETAAC)
- Startup Ecosystems
- VentureLab

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