State of the Institute - Today, Tomorrow and in the Future

October 16, 2009

G. P. “Bud” Peterson
President, Georgia Institute of Technology
What I’d like to share with you

- Our heritage, our present, our future
- A new strategic plan – “Designing the Future”
- The motivation for this plan – success!
- Our status in the planning process
- How do you get involved?
Our Heritage

We must recognize where we came from to understand where we must go.

- 1888 – 84 students
- Transformation from agrarian to industrial economy
Georgia Tech Today

• Nationally ranked programs
• Outstanding faculty, staff & students
• Interdisciplinary leader
• Award-winning research
• The place for success
An Institution Steeped in Traditions
National Leadership

• **One of the nation’s top ten public universities** with outstanding programs in engineering, architecture, computing, liberal arts, management, and the sciences.

• **Graduate Engineering 4th**
• **Undergraduate Engineering 4th**
• **Management – 22nd, up from 29th**
  • 7th among public Universities
  • Tied with Emory

• **Specific graduate programs ranked in the top 10 include**
  • 1st in Industrial/Manufacturing Engineering
  • 2nd in Biomedical Engineering
  • 4th in Aerospace Engineering and Information and Technology Mgmt.
  • 6th in Civil, Electrical and Environmental Engineering
  • 7th in Mechanical Engineering, Computer Engineering, Artificial Intelligence & Discrete Mathematics
  • 8th in Materials Engineering
  • 9th in Nuclear Engineering, Computing & Computer Science Theory

This past year, five programs improved in the national rankings!
Outstanding Students

• One of the largest, best qualified and most diverse freshman classes in Tech history
• Institute enrollment tops 20,000
• Average SAT – 1365; HS GPA – 3.85
• Students named to the nation’s most prestigious scholarships & prizes
  • Harry S. Truman Scholarship
  • George J. Mitchell Scholarship
  • Morris Udall Scholarship
  • USA Today All Academic Team
  • Astronaut Scholarship Foundation Award
The Student Experience

- More than 400 student organizations on campus
- Women’s Resource Center celebrated its 10th Anniversary
- Greek Life is celebrating its 120th Anniversary this year
- More than 7,000 students participated in intramurals past year

Classroom instruction is really only a part of the education of our students. While here, they learn how to be the people they will become.
Intercollegiate Athletics

Varsity Intercollegiate Competition in 17 sports

- 5 teams went to post-season competition last year
- 450 student athletes involved in varsity athletics
Campus Safety

Working to Provide a Safe Environment

- Staff of 70 police officers – (increased by 6 in the past 5 months)

- 24-hour patrols
  - Foot
  - Motorcycle
  - Bicycle
  - Car
  - Segway

- Partnering with APD & GA Highway Patrol on new strategies

- Communications Campaign for Safe Behaviors

We are collaborating with the Atlanta Police Department and the Georgia Highway Patrol to ensure a safe environment.
Our Graduates are in Demand

- Academic excellence, co-op, internship & study-abroad experiences set our students apart.
- 8,120 interviews held on campus, 471 companies represented
- Average starting salaries by discipline range from $42,500 to $60,000
Outstanding Faculty

Faculty Awards

- 137 faculty – NSF CAREER Award recipients
- Top ten in number of faculty elected to National Academy of Engineering
- Top ten in number of faculty receiving Presidential Early Career Awards in Science and Engineering.
- Increasing awards in public policy, architecture, business & liberal arts
- Fulbright, Newberry Library & National Endowment for the Humanities Fellowships
Record Levels of Research

New Sponsored Awards for FY09 – more than $483 million

- Energy and sustainability – Commercialization from Tech labs in Suniva, the South’s first solar cell manufacturing company
- Biotechnology – recently announced the Global Center for Medical Innovation
- High Performance Computing – Mapping the energy spectrum of graphene

We have some truly remarkable research underway here at Georgia Tech that will help to shape the future.
A Time of Positive Momentum

Capital construction

- Formal opening of the Marcus Nanotechnology Building
- Ground Breaking for the Zelnak BB Practice Facility
- Clough Undergraduate Learning Commons construction underway (220,000 gross square feet)
- Many deferred maintenance projects underway

Given the economic situation in the country, there is an amazing amount of capital construction underway at Georgia Tech.
Economic Engine for Georgia

- Produced more than 300 invention disclosures annually
- One of the state’s top patent producers, ranks 3rd
- Spins off an average of 10 new companies a year
- ATDC has incubated more than 120 start-up companies
- Has generated more than $13 billion in revenue and $100 million in profits
- In the past decade, companies have attracted more than $1 billion in venture capital
- In the past year, Georgia Tech programs for existing industries assisted more than 3,000 Georgia companies, saving or creating 20,000 jobs.
Taking a Look at Student Success

If you take all the students in the U.S. who enter our educational system as Kindergarteners...

And look at the underrepresented population...

Only 2/3 graduate from High School

Only 51% will attend college

And only 9% will graduate with B.A.
Georgia Tech Promise

Helps ensure that all eligible Georgia Students can attend Tech, regardless of their family income

200-10 Academic Year

• 225 Tech Promise Scholars
  • Average family income - $24,500
• Covering the cost
  • Other assistance $2,019,771
  • Georgia Tech Foundation ~ $900,000
Georgia Tech – Economics

FY 2010 - $1.2 Billion in Operating Revenue

We continue to work towards the development of a long-term sustainable financial model.

Total Georgia Tech Revenue Budget: $1,168,740,545

Georgia Institute of Technology Revenue Operating Budget by Source
Original Budget FY 2010 ($1.2 Billion)

- Sponsored: 36%
- State: 22%
- Tuition: 16%
- Other General: 3%
- Federal Stimulus Funding: 1%
- Dept Sales and Svces: 4%
- Auxiliary Services: 10%
- Indirect Cost Recoveries: 8%
- Other General: 3%
- Total Georgia Tech Revenue Budget: $1,168,740,545
Peer Budget Trends

- Declining state support for public institutions across the board
- Greater dependency on revenues from tuition and sponsored operations
- Shrinking endowments at both public and private institutions
- Shift the tuition discussion to a focus on “investment” rather than “purchase”
## Georgia Tech - - The Last 25 Years....

<table>
<thead>
<tr>
<th>Indicator</th>
<th>1984</th>
<th>1999</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Enrollment</strong></td>
<td>10,956</td>
<td>14,075</td>
<td>20,000</td>
</tr>
<tr>
<td>Mix (UG/GRAD)</td>
<td>80/20</td>
<td>73/27</td>
<td>67/33</td>
</tr>
<tr>
<td><strong>Colleges</strong></td>
<td>Four</td>
<td>Six</td>
<td>Six</td>
</tr>
<tr>
<td><strong>Teaching faculty</strong></td>
<td>515</td>
<td>680</td>
<td>925</td>
</tr>
<tr>
<td><strong>Student-to-faculty ratio</strong></td>
<td>21:1</td>
<td>21:1</td>
<td>22:1</td>
</tr>
<tr>
<td><strong>Total employees</strong></td>
<td>2,800</td>
<td>4,200</td>
<td>5,700</td>
</tr>
<tr>
<td><strong>Research Awards</strong></td>
<td>$66M</td>
<td>$217M</td>
<td>$483M</td>
</tr>
<tr>
<td><strong>Budget</strong></td>
<td>$174M</td>
<td>$582M</td>
<td>$1.2B</td>
</tr>
<tr>
<td>State Appropriation</td>
<td>$53M</td>
<td>$188M</td>
<td>$260 M</td>
</tr>
<tr>
<td>Percentage from State</td>
<td>30%</td>
<td>32%</td>
<td>22%</td>
</tr>
<tr>
<td><strong>Tuition (In-state)</strong></td>
<td>$1,130</td>
<td>$2,414</td>
<td>$6,070</td>
</tr>
<tr>
<td><strong>Facilities Square Feet</strong></td>
<td>4.6M</td>
<td>8.7M</td>
<td>14.5M</td>
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Our challenge is to help students take the tremendous amount of information available to them and turn it into knowledge, because there is a difference.
Telepresence isn’t just for Star Wars anymore. . .

The future is already here...

We just don’t know it yet!
We must address issues and create circumstances that ensure success in the future.

• What role will we have in preparing students for leadership in a globalized world?

• How will we use science and technology to help society address major problems?

• How will we build an enterprise that can be sustained in an ever-changing environment?

• What will we be on our 150th anniversary?
We are preparing students for jobs that don’t yet exist, using technologies that have not been invented, to solve problems that we don’t know are problems yet! - “Did you Know”

Strategic Planning – The Rationale

The Strategic Planning process will chart a new course for Georgia Tech for the next 25 years – one that:

- Provides greater agility in a rapidly changing environment
- Enables us to make investments today to better prepare for tomorrow
- Helps us better serve the state, the region, the nation and the world through our education, research, creative works and service
So Where Do We Start?

Our vision is right – “Define the technological research university of the 21st century and educate the leaders of a technologically driven world.”

Our mission is relevant – to provide the state of Georgia with the scientific and technological knowledge base, innovation, and workforce it needs to shape a prosperous and sustainable future and quality of life for its citizens.

How we achieve both needs a plan based on creative thinking and bold action which we will use to guide unit based planning and resource allocation.

We must identify those things that will differentiate us from other institutions and ensure the success of our graduates.
Why 25 years?

- Our long planning horizon allows us the freedom to think without the encumbrance of existing problems and conditions.

- The plan considers needs of students yet to be born: the generation beyond iPods, “MySpace,” Twitter and Blackberries.

- We are making the 25-year vision tangible by setting 12-18 month, 3-5 year and 12-15 year actions and benchmarks that will point us toward the long-term.
Outliers are those who have been given opportunities and those who have had the strength and presence of mind to seize them.  
-- No one makes it alone.--

Robert Oppenheimer  
Genius - Lead scientist  
Manhattan Project

Chris Langan  
IQ 195/210 - Bouncer

There’s no such thing as an overnight success.
Strategic Planning – the Process

- Comprehensive & Inclusive, reaching out to entire Georgia Tech community
- Led by a 75 member Steering Committee of internal and external “stakeholders”
- Strategic Planning Subcommittees that explore “Strategic Themes”
- Includes subject matter experts and “core contributors”
- Utilizes a Website for sharing information and soliciting input
- Open Forums
- Interviews with thought leaders throughout the state
- Focus group interviews with business and community leaders
- Will solicit input from the Board of Regents
Strategic themes – "a key area in which GT must focus in order to succeed – this contrasts a current state to a future state and specifies measurable actions that need to be taken over time to achieve the future state”* 

Big Ideas – long range statements of the future that are consistent with our vision and culture, but which may be outside of our comfort zone. These ideas need to be so compelling that they ignite our passions and strengthen our resolve to achieve them.

Summation of strategic themes → The GT Strategic Plan

* Norton and Kaplan, The Strategy Focused Organization
Strategic Themes

• Sustain and Enhance Our Culture
• Enrich the Student Experience
• Be Purposeful and Relevant in What We Teach and Learn, and innovative in How We Teach and Learn
• Ensure Georgia Tech’s Research Preeminence
• Enhance GT’s Role in Georgia
• Leverage GT’s Global Engagement
• Lead in Big Payoff, Transdisciplinary Areas
• Establish and Use Best-in-Class Administrative and Business Practices and Processes
Scenarios for 2035

Dominant Issues, Economic Implications
Social Implications

- Clash of Titans
- Hot, Flat & Crowded
- Lifespan Mecca
- Network U.
Clash of Titans

• **General Description**
  – GT continues to battle with MIT and Stanford for dominance in Engineering, as well as competing with CA, VA, and MI for top public university, and with premier international universities for global rankings

• **Dominant Issues**
  – The competition for talent becomes fierce, with well-endowed chairs becoming the minimum for attracting talent; top students at all levels expect and get near-free education

• **Economic Implications**
  – The top players continue to dominate receipt of Federal funds, with considerable pushback from other players; costs of facilities and labs soar, much of which must be raised from philanthropic sources

• **Social Implications**
  – University cultures are sustained, with adaptations for a decreasingly Caucasian male population – for both students and faculty -- but one that is committed to the values and sense of purpose that has been central for recent decades; changing demographics impacts how alumni best relate to their alma maters

“What a dangerous precedent. What if there are more heroes like him? What if courage and imagination became everyday mortal qualities? What will become of us?”

*Thetis: Clash of the Titans*
Hot, Flat & Crowded

• General Description
  – Global parity emerges in graduate education in science and technology, particularly for traditional disciplines and subdisciplines; greater collaboration among institutions emerges; demand for higher education in the U.S. will nevertheless increase substantially

• Dominant Issues
  – Many of the best jobs are in Asia; scarcity and constraints dominate sustainability debates; clashes of belief systems create political turmoil and security concerns; meeting demands presents strong challenges

• Economic Implications
  – Federal and state support diminish as portions of budget; industrial and philanthropic support are increasingly competitive; sponsors become sensitive to where resources are deployed; undergraduate tuition stabilizes and increases are less and less acceptable

• Social Implications
  – Global footprint of top universities increase by necessity; social, cultural, and ethnic diversity of faculty and students increases in turn; traditional business practices, e.g., promotion and tenure, must change to accommodate diversity
### General Description
- Demand for postgraduate and executive education surges as career changes become quite common; demand steadily grows for education and arts by an increasingly urban older population.

### Dominant Issues
- Two or three MS or MA degrees become common across careers, as do often required certificate programs; multiple artistic performance and sporting events per day become common.

### Economic Implications
- Tuition revenues soar for executive programs and graduate education programs popular with elders; revenues from artistic performance and sports venues become significant portions of university budgets.

### Social Implications
- Median age of students increases substantially, changing the campus culture substantially; older students in particular expect and get high quality, user-friendly services; diversity of faculty increases substantially to satisfy diversity of demands.

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The non-traditional student will become the traditional one as people embrace a lifetime of learning.
General Description
– Social technology prevails; access to the best content and faculty is universal; nevertheless, students go to college to learn and mature; however, the classroom experience is now highly interactive, both remotely and face-to-face

Dominant Issues
– Students and faculty have broad and easy access to knowledge, often via other people; with the “best in class” universally available, local faculty play more facilitative roles in small (10-20) “high touch” discussion groups

Economic Implications
– More teaching professionals are needed for recitation-sized classes; teaching skills are at a premium; increasing numbers of high quality programs result in strong downward pressure on tuition and fees; faculty research becomes near totally externally funded

Social Implications
– Students and faculty are networkers par excellence; both within and across institutions; students evaluations of teaching effectiveness play an increasing role; students seamlessly transition from K-12 to university to lifespan education
Some Possible “Big Ideas”

- Educational guarantee
- National leader in IP policy
- Staple a green card
- Virtual learning environment
- Cluster Requirements
  - Performance Cluster
  - Service Learning Cluster
  - Research Cluster
- Foster Healthcare Excellence
Strategic Planning – Timeline

- Summer 2009 – Planning Process Begins
- July 1, 2009 – Identify the Steering Committee membership
- August 3, 2009 – President’s offsite to identify key issues
- August 24, 2009 – 1st Meeting with the Steering Committee
- September 3, 2009 – Inauguration and formal kickoff
  - Planning sessions with Tech Community
- September 24, 2009 – Parents Association Workshop
- September 25, 2009 – GTAB Mtg. to discuss Issues and plan
- December, 2009 – Initial Steering Committee Drafts due
- May, 2010 – Final Draft to Communications
- Summer 2010 – Review with various constituencies
- August, 2010 – Strategic Plan finalized and printed
- September 2010 – Introduce Georgia Tech’s New Strategic Plan
- October 2010 – Public announcement of Capital Campaign

We must identify where we want to go and then plan how best to get there.
How Can You Provide Input?

Your input is critically important to the process and its success.

www.gatech.edu/vision/
Our New Public Service Announcement
Success is not a random act. It arises out of a predictable and powerful set of circumstances and opportunities…
— Malcolm Gladwell (Outliers)

Thank You