

REMARKS BY GEORGIA TECH PRESIDENT G. WAYNE CLOUGH  
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The Chinese have a saying that goes, “May you live in interesting times.” They view it as a curse.

There is no question that the DuPree College has been living in interesting times, with multiple reorganizations and dean searches. And some people may be tempted to take the Chinese view and wonder if it isn’t a curse. I prefer to regard it as an opportunity, and I believe the time to seize that opportunity is at hand. So I am very pleased that this Advisory Council has been formed, and we are going to be glad for your help with the challenges ahead.

Actually, the DuPree College has always lived in interesting times. And it has always dealt with its challenges in creative and innovative ways. Begun in 1913 as the “School of Commerce” with dual day and evening programs, it made history almost immediately by accepting a woman student in its evening program in 1917. She graduated in 1919, a full year before the state legislature passed a law permitting women to enroll, and she promptly made history again by becoming an instructor in the evening program, 40 years before Tech’s first female faculty member in a regular “day” program.

Then, during the Depression in 1933, the board of the University System of Georgia decided it “could not afford to continue two competing Schools of Commerce within 68 miles of each other.” The plan was to close Georgia Tech’s day program entirely in favor of the one at the University of Georgia. And, to add insult to injury, Tech’s evening program would become a subsidiary of the UGA adult education operation.

UGA lost out on that one. The protest against the closure of the Tech School of Commerce was so vigorous that the day program was reincarnated almost immediately as the Department of Management, while the evening program became what is now Georgia State University. So you can see that this is a college that has historically demonstrated a resilience and an ability to land on its feet.

You will also find that the faculty and staff of the DuPree College are a patient and persistent group. They are survivors. Throughout the reorganization and the dean searches, they have remained focused on quality education. And as a result, *U.S. News & World Report* has consistently ranked the DuPree College among the top 50 business schools in the nation during the 90s. Our most recent ranking in March was 33<sup>rd</sup>.

That level of recognition is a clear indication of the potential and strength inherent in the DuPree College. We are now done with reorganizing, and the search for a new dean is progressing well with impressive candidates. We are poised to move forward and seize the exciting opportunities that are before us.

Business schools and colleges are a dime a dozen in Atlanta. In-town, you can choose from among Georgia Tech, Georgia State, Emory University and Clark-Atlanta University. If you don’t want to come into town, you can go to Kennesaw State University on the northside or

Clayton State University on the southside. And then there's that other little school over in Athens who thought they were going to take us over more than 60 years ago.

The challenge for the DuPree College is to stand out from among that crowd... to find a niche that makes this place distinct, and then achieve excellence in it. I believe the DuPree College is uniquely positioned to do just that... to reinvent itself with a unique identity, and build a reputation for excellence in several emerging new fields and aspects of business management. And that is what we hope this Advisory Council will help us to do.

Where you find the new frontiers in university research and the new programs and disciplines that emerge from them, is in the cracks between the traditional disciplines. It's like what happens when you put hydrogen and oxygen together. That collision – it is literally a little atom-sized explosion – creates water, a new substance that has its own characteristics and can do things neither of those two elements could do by itself.

The hot new discipline of biomedical engineering, for example, is located in the space between biology and engineering. New advances in both biology and technology moved them closer together, and where they intersected you got an explosion that created a new discipline.

I believe the same kind of thing is happening in the space between management and technology, and the DuPree College, by virtue of being part of a technological university, is in a unique position to take advantage of it and move into a position of leadership.

Over the past two decades, the end of the cold war and the rapid emergence of a global economy were powerful forces that caused industry to make drastic changes just to survive. Large government programs and entire segments of our economy literally disappeared. New products and services emerged using alternative technologies and skill sets. Entrepreneurs, start-up businesses and venture capitalists took over the tasks of producing jobs and creating wealth.

This entrepreneurial environment is springing up outside the gates of Georgia Tech, and it represents the kind of exciting frontier that will attract our best students. When I was an undergraduate at Georgia Tech back in the 60s, my fellow students used to discuss which large corporation they would work for and what the pension plan looked like. Today, our students envision themselves as entrepreneurs running a successful start-up company, or at least working for a lively young company that is growing by leaps and bounds.

Now, Georgia Tech has always had an entrepreneurial mindset... a practical focus on finding creative and resourceful ways to get things done. Hundreds of our alumni have already used that knack to start successful new businesses. Georgia Tech folks were entrepreneurs before entrepreneurship was cool. So we have a jump on many other universities who are having a harder time in getting into the entrepreneurial spirit.

This new, entrepreneurial economy is a place where management and technology collide. To be out on the cutting edge demands an ability not only to generate new ideas and discoveries and technologies, but also to commercialize them in new products and manage their manufacture. Georgia Tech has two incubators here on campus, filled with fledging new companies founded

by scientists and engineers who are now finding themselves in need of some basic management skills.

So, in addition to the climate of entrepreneurship that has always permeated the Tech campus, we are now providing more structured academic opportunities. The DuPree Center for Entrepreneurship offers courses to all students. And students in disciplines that are more entrepreneurial in nature have the opportunity for a certificate program at the undergraduate level or a concentration in entrepreneurship at the graduate level.

I serve on the executive committee of the National Council on Competitiveness, and we are undertaking a study of six regional high-tech clusters around the nation, including Atlanta, to discover what factors interact in what ways to make these clusters leading centers of research, development and the commercialization of new ideas and products. I have asked Dr. Terry Blum of the DuPree Center for Entrepreneurship to work with me on this project, and I see it as an opportunity for the Center and the College to become more visible as a leader in this area.

This new, high-tech entrepreneurial economy is also making itself felt in on the Internet. Business-to-business electronic commerce is expected to hit \$138 billion this year, and exceed \$500 billion by the year 2003. And that doesn't even count consumer retail sites like Amazon-dot-com. Even old retail stalwarts like Sears, Roebuck & Company are announcing online sales capabilities.

As part of a technological university, the DuPree College is in a unique position to produce students who are well versed in the culture and management of electronic commerce and to be a resource to the young and rapidly growing e-commerce industry. To do that, we have just announced the creation of the iXL Center for Electronic Commerce in the DuPree College.

Our partner and sponsor in this Center for Electronic Commerce is iXL Enterprises, a leading Internet services company that is headquartered here in Atlanta. iXL has already contributed a \$1 million endowment to get the center going, and will help us increase that endowment to \$4 million.

This Center will enable the DuPree College to offer an e-commerce certificate to students and an executive education program to e-commerce industries. It will also conduct research and offer recommendations on key e-commerce issues – like online marketing, information security, business intelligence, models for Internet business ventures, entrepreneurship based on information technology, and the creation of inter-organizational systems to enable businesses to work jointly on the Internet.

The collision between technology and management is pervasive in traditional industries as well. Today's rapidly changing global economy demands a level of flexibility and nimbleness that you can only get through advanced technology. There are no low-tech industries any more, only low-tech companies. And pretty soon there won't even be low-tech companies, because to survive, they will have had to adopt advanced technology.

The traditional pyramid-shaped organizational chart has fallen by the wayside, replaced by wheels, double helixes and starbursts that look like the products of an art therapy class. The traditional manufacturing process has also become too cumbersome and unwieldy, and it has been replaced by computerized management systems that coordinate and streamline it from raw materials to finished product.

Even in traditional industries, engineers must not only be technically competent, but they also must have management skills, be effective team members, be perceptive about the global economy, and be able to communicate their ideas to management, labor and the public. The converse is also true. Managers must not only be competent at the traditional aspects of business management, but they must also understand and be able to manage technology.

This another area where the DuPree College has a unique opportunity to provide leadership, and that is already reflected in an executive master's degree in technology management.

In addition to entrepreneurship and the management of technology, there is a unique opportunity for the DuPree College in another place where the disciplines are colliding. And that is between economic development and environmental preservation... between those who believe technology will save us and those who are afraid that technology will kill us. There is tremendous potential to turn this collision into an explosion of new management strategies that are both productive and promote environmental sustainability.

Many people think of environmental preservation as a human resource issue for business... a matter of creating incentives for your employees to car-pool or use mass transit, for example. And that is important. But as an integral part of Georgia Tech, the DuPree College has the opportunity to be a pioneer in taking sustainability to the heart of business management.

Let me give you an example of what I mean. Georgia Tech alumnus Ray Anderson runs a company called Interface, Inc. And he has just written a book about how he is changing his company dramatically to make it a sustainable enterprise. Interface manufactures carpet, and Ray discovered that in the process of producing \$800 million worth of carpet each year, his company was extracting and processing over 1.2 billion pounds of materials from the Earth's stored natural capital. He had to admit that by his own definition he was "a plunderer of the Earth and a thief."

To use an example that is more familiar in our own personal lives – a laptop computer may weigh all of ten pounds, but it takes literally tons of the Earth's finite resources to produce that one small piece of technology. And operating it continues to use even more of the Earth's resources. Compare that laptop to a tree – which runs on solar energy and manages to carry water to its highest branches in seeming defiance of the laws of gravity. A tree uses renewable energy, and is engaged in a constant recycling process that neither depletes nature's stores nor creates any waste that is not biodegradable.

Ray Anderson sees the need for a second industrial revolution, a revolution that redesigns manufacturing and commerce so that it operates like that tree – not by plundering stored natural resources, but by using renewable energy and engaging in the ongoing recycling of materials.

He says, “Environmental sustainability, redefined for our purpose as taking nothing from the Earth that is not renewable and doing no harm to the biosphere, is ambitious; it is a mountain to climb, but we’ve begun the climb.” His motto is not “cradle to grave” but “cradle to cradle.” His goal is to manage his company such that no waste or scrap is ever sent to a landfill. And he expects to do it in ways that will save him \$80 million or more a year.

Now that is a revolutionary approach to business management, in which creative ideas and cutting-edge technology are aimed at being part of the solution rather than part of the problem of environmental sustainability. Georgia Tech’s campus-wide emphasis on sustainability and the expertise available in our civil and environmental engineering programs present the DuPree College with a unique opportunity to be on the forefront of the revolution.

These are just some of the exciting new frontiers for management in which the DuPree College has a unique opportunity to step forward and provide leadership. And as you can see, the college is already positioning itself to do that.

My personal hope is that this college will be very entrepreneurial in its own operation, reaching out across the disciplines and using the multi-faceted resources of Georgia Tech to create a unique identity for itself, to develop cutting-edge programs, and to achieve a high level of excellence. I am convinced the DuPree College has the potential to do that; I believe we are on the way; and I thank this Advisory Council for your willingness to help with that quest. You are going to find that this is a very exciting time to get involved with the DuPree College.