

# The University of North Carolina Board of Governors



## Supplement to Long-Range Planning 2004-2009

### The Role of UNC in Economic Transformation and Development



THE UNIVERSITY  
of NORTH CAROLINA  
at CHAPEL HILL



NORTH CAROLINA  
SCHOOL OF THE ARTS



THE UNIVERSITY OF NORTH CAROLINA  
GREENSBORO

Appalachian  
STATE UNIVERSITY



## **V. The Role of the University of North Carolina in Economic Transformation and Development**

The work of the Special Committee on the Role of the University in Community and Economic Development culminated with the Board of Governors' approval of the Committee's final report at the May 2006 meeting. In addition to this report, the Special Committee and the Committee on Educational Planning, Policies, and Programs worked together to propose an additional Strategic Direction in Economic Transformation, which was also approved by the Board of Governors.

### **Global Challenges**

Between 1999 and 2004, according to the Bureau of Labor Statistics, North Carolina averaged 207 mass layoff actions annually with an average of 31,700 workers losing their jobs each year. The decline in manufacturing jobs in North Carolina is mirrored in the experience of the rest of the country. This decline is largely the result of intense economic competition from overseas, although rapid increases in manufacturing productivity also have had an impact, as technology is increasingly substituted for labor. These changes have led to a major economic restructuring, moving North Carolina from a "brawn-driven," labor-intensive manufacturing and farming economy to a "brain-driven," technology-based service and manufacturing economy. The result is that many jobs require higher technical skills, as well as language, cultural and other capabilities. As the U.S. Chamber of Commerce noted in its report "Tapping America's Potential: The Education for Innovation Initiative," to maintain our country's competitiveness in the 21st century, we must cultivate the skilled scientists, engineers, managers, and leaders needed to create tomorrow's innovations and sustain tomorrow's economy.

The next few decades will witness a faster and yet more profound set of changes as the enormous economic potential of China, India, Indonesia and Brazil, whose total population of 2.4 billion constitutes more than 40 percent of the world's population, becomes fully integrated into the international economic system. These economies will be a source of increased competition at all skill levels, in all areas, as technological change unlocks their vast reservoirs of human capital. One study suggests that as many as 1.3 million jobs in the information technology sector alone will move overseas by the year 2010. At the same time, as these economies continue to develop, they will also present vast new market opportunities for North Carolina firms. The University should mobilize our wide variety of resources to enable North Carolina companies to capitalize on these new opportunities. University expertise in science and engineering, as well as faculty and graduates with special expertise in the history, culture, language, politics, and geography of these countries are an enormous asset to companies as they develop products and services to target these growing markets.

### **North Carolina's Response**

A relentless increase in the educational level of our citizens is required in order for North Carolina to keep pace. But this imperative represents a formidable challenge for the rural areas of the State and for population groups with low educational achievement. Unless something is done to address the population that have educational levels below state and national averages, the shift to an economy that depends upon technology, education and skill will mean an increase in inequality. In particular, it will mean an increase in inequality between the urban core and the small towns and rural areas of the State.

Skill and educational attainment alone, however, will not be enough, for there are many highly skilled and educated people in the world, hungry for a better life. Technology alone will not be

enough, for technology knows no national frontiers. The future of North Carolina will also depend upon effective, collective leadership by business, government, non-profits, and higher education to transform all our public institutions in ways that give our citizens and our businesses every advantage. Government must become flexible, swift and smart. Communities must identify their true economic opportunities and leverage unique regional assets to set them apart from the rest of the world. No set of institutions could have a larger role in this transition than the 16 campuses of the University of North Carolina, through a host of creative partnerships with the private sector, state and local governments, community groups, community colleges, and private colleges and universities. The UNC system is uniquely positioned to supply the leaders and workers of tomorrow while at the same time stimulating job creation and new investment in North Carolina.

### **The University in the Forefront**

The University was, from its inception, created to respond to the needs of society. The University's core missions of teaching, research and service have always supported the economic development of the State. Through these roles, our universities not only serve the people of North Carolina but also serve their own scholarship and teaching. Faculty ask better questions in their research, degree programs become better aligned with the needs of students and their prospective employers. The creation of the Research Triangle Park, the centennial and millennial campuses, the Small Business Technology Development Centers, the long standing work of regional universities, the extension work of our land grant universities and the broad outreach programs like, UNC Chapel Hill's Area Health Education Centers and School of Government, are just a few examples of the ways in which our campuses currently contribute to economic development efforts.

As society's needs change, so must the University. What is necessary is a renewed and expanded commitment by the University to economic development. UNC needs to recommit to preparing students for this competitive environment; we must strive to find better ways to share and apply the technologies developed on our campuses, and we must supply the expertise necessary to governments and communities so that they can adapt to the changes in their environment. The economic development needs of the State must become a central objective for the University, in ways that are accommodated by the traditional categories of work that faculty accomplish. Much of what faculty already does will meet these needs, the task is to support and transform their work in new ways. The success with which this transformation is accomplished will have a tremendous impact on the economic future and social fabric of the State.

Preparation for this transformation has already begun, sparked by House Bill 1264, a study to determine future workforce needs of North Carolina and the academic programs of both the University and the North Carolina Community College System that will respond to those needs. This study, "Staying a Step Ahead," is intended to better match the curricula offered by the University and the Community College System to the current and future needs of North Carolina.

The preparation of our State's citizens through a thorough grounding in the arts and sciences will always be the first and most important task for the University. What is needed is a new understanding of the ways in which education and training contribute to the skills and capabilities of the workforce. Lifelong learning, delivered through a variety of institutions and by a variety of means, is now required for the majority of people. This suggests that the contributions of universities and community colleges be seamlessly integrated. The old distinction between higher education and workforce development no longer makes sense in a world in which citizens must learn and re-learn a broad mixture of skills through the carefully coordinated efforts of all educational and training institutions.

While the widespread distribution of intellectual capital across North Carolina is the foundation for this transformation of the economy, it will require leadership at both the state and campus levels for these assets to be effectively deployed. It will take effective leadership to integrate economic development into all of the work of North Carolina's universities and colleges. Furthermore, in order for the University to fulfill our commitment to economic development, we must continue to play a leadership role in improving the quality of K-12 education. The University must produce high quality teachers, especially in math and science. Programs such as GEAR UP (Gaining Early Awareness and Readiness for Undergraduate Programs), whose mission is to significantly increase the number of students who are prepared to enter and succeed in postsecondary education, and the Mathematics and Science Education Network, dedicated to improving the quality of math and science education in North Carolina schools, are two examples of ways in which the University is focusing efforts to K-12 education improvements. We are making progress but we must be steadfast in our commitment to continuous evaluation and enhancement of K-12 education.

### **Defining Success**

Economic development in North Carolina can be defined broadly as activities occurring at the intersection of the public and private sectors designed to increase the long-term economic well-being and quality of life of its citizens. Workforce development, leadership development, public policy analysis, capacity building, the creation of intellectual capital and technology transfer are all relevant components. It is important to note that this definition implies a focus on long-term capacity building rather than short-term growth.

A fundamental question for involving post-secondary education in economic development is, "What will success look like?" An understanding must be developed around a set of measures, outcomes, and metrics, by which this work will be guided, evaluated, organized, and funded.

There can be no single measure of success in economic development; the process is far too complex and subtle, and in most cases the impact occurs over many years. Furthermore, it is often the case that the outcomes that are easiest to measure are not the most important factors in economic development; for example, developing social capital in low-wealth communities is essential but difficult to quantify. Therefore, we must proceed with caution in developing these metrics.

It will be important that each campus develop its own measures of success within a broad framework of the University. The measures should include inputs (who are the clients, by whom are they accessed, and what resources are required to serve them), outputs, (what are the production levels for each function defined for each campus), and outcomes (what are the actual results of the activities). Because of the diversity in size and mission of the 16 member campuses, each set of metrics will differ; however, they should all be guided by the overall metric of increasing the long-term economic well-being of North Carolinians.

Given the challenges that North Carolina faces, and the central role to be played by the University in meeting these challenges, it is incumbent on the Board of the Governors and leadership across the University to establish clear goals, design effective strategies, make required changes and mobilize necessary resources, and clearly measure success in doing so. It is important to note that success will hinge upon the economic development goals being recognized as integral to all the work done by faculty, whether it is teaching, research, or service. The research agendas, teaching curricula and engagement activities that already do so much to sustain North Carolina must nonetheless be constantly adapted to the changing environment. The agenda that follows will provide a starting point from which to do all these things.

## General Requirements and Changes

Any specific strategy is inevitably embedded in an overall institutional culture, and a certain level of leadership from chancellors and other senior officers on campuses is required to set the tone and expectations among faculty and staff. Certain general changes are required, consistent with the historical mission of the university, in order that all 16 campuses become better oriented towards the economic development needs of the State. Furthermore, all that follows requires sustained, continuous effort. The University is uniquely positioned to be an honest broker, capable of taking a long view of the challenges faced by the State.

- One or more senior officers within each campus and in the UNC General Administration should be given clear responsibility for the role of the University in economic development. This responsibility should be the lead element in their portfolio of duties.
- There should be increased rewards and expectations for all interested faculty so as to encourage external engagement. This change should be accomplished through a formal, bottom-up process within each campus that educates and mobilizes faculty. Because faculty compete in national and in many cases, international job markets, it is important that external engagement opportunities make a positive contribution to faculty professional development.
- These new rewards and expectations should be communicated clearly to all faculty. In addition, web sites, publications, media relations, and other methods of communication should be directed to targeted constituency groups as well as to the general public.
- Ideas and *best practices* should be shared and diffused across campuses through formal and informal arenas, coordinated by the UNC General Administration.
- External audiences should be made aware of the capacity and willingness of universities to be partners through regular, detailed communication. Talks, presentations and forums that engage policy-makers, opinion leaders and community leaders should be a regular element in the university calendar, employing a variety of faculty and administrators.

As the leading provider of higher education, the University, together with the North Carolina Community College System, has always played a central role in the economic well-being of the State. Giving the State's citizens all the benefits of a comprehensive education in the arts and sciences remains the first and most important task for the University and the basis upon which all other activities must be built. However, in order to meet the economic development needs of the State, UNC must do more. The task before us can be divided into five goals, with corresponding strategies, requirements, and sample metrics:

### Goal 1: Deliver learning that meets the needs of the 21<sup>st</sup> century economy

In order to prepare a citizenry that can prosper and lead in the 21<sup>st</sup> century, UNC needs to align our curricula more closely with the needs of people, communities, and businesses across the State, and in particular with the needs of businesses served by each regional campus. The University will need to accelerate our orientation towards continuous, lifelong learning in order to better meet the needs of North Carolinians who must navigate a constantly shifting labor market. To make these changes in curricula requires a University that is well-informed and adaptable.

### Strategies

- Our institutions must offer an education that prepares students for a work environment that is increasingly interdisciplinary, in which creative thinking, technical skills,

business expertise and the ability to communicate in many ways to a variety of audiences must all be combined. An example of effective response to this kind of need is the Professional Science Master's (PSM) program. A PSM is a master's degree program in natural sciences (or mathematics) that will extend the scientific knowledge of students while integrating the disciplines of management, law, information sciences, and other professional areas. Several campuses currently offer or plan to offer these types of degrees.

- The classroom experience must be well-integrated with what is learned on the job. The use of cooperative learning, internships and service-learning should be increased and spread widely across fields of knowledge. Our universities need to emphasize entrepreneurship and leadership across all disciplines both inside and outside the classroom. UNC should remain engaged with our graduates throughout their careers, delivering continuous, lifelong education where and when it is needed (for example, campuses should consider operating increasingly on a 24/7 basis, as business does). A model program in this respect is the online MBA at ECU.

### **Requirements**

- The speed and responsiveness with which academic units can make curriculum changes must be significantly increased.
- Each campus should obtain good economic intelligence that clearly identifies the needs of businesses across the region and the State so that certain curriculum change can meet those needs.
- Distance education and lifelong education should be extended to all communities, especially geographically remote areas. This is one of the many areas in which the UNC Center for Public Television is already serving a vital role with its lifelong learning program service. The funding model for distance education should be flexible in order to accommodate a variety of financial needs, thus allowing disadvantaged communities to participate. Degree programs should be even more closely and seamlessly coordinated with other campuses and community colleges.
- The spirit and skills of entrepreneurship should be infused across disciplines, working with businesses and communities. There must be a renewed focus on language and culture, promoting a multidisciplinary education for a global economy.

### **Metrics**

#### ***Inputs***

- number of identified business needs for curriculum change, technical assistance, or specialized graduates
- number of requests between universities and private companies for research
- number and size of research parks
- number of adult learners enrolled in continuing education
- number of adults returning to University for advanced degrees
- number of courses, curriculum, and programs offered in entrepreneurship
- resources to support all of the above

#### ***Outputs***

- number of changes in curriculum
- percentage of research budget from private sector
- occupancy of research parks
- number of adults completing degree and non-degree programs
- increase in amount and efficiency of resources

- number of students graduating with training in entrepreneurship

#### **Outcomes**

- number of new courses, curriculum, and programs recognized by private sector and peer institutions as excellent
- satisfaction/return rate of private sector and universities
- increase in economic output of research parks
- increase in income and wealth of adult learners
- resources imbedded in funding streams
- number of students recognized for business and social entrepreneurship success after graduation

### **Goal 2: Enhance the capacity of public institutions to implement successful and sustainable economic development policies**

The University must discover every opportunity and adopt every means for the delivery of applied research and technical expertise to build the capacity of state and local public institutions. Good governance, broadly understood, can be a source of significant competitive advantage for any economy. Faculty across a wide range of disciplines can contribute to this capacity building through applied research, teaching, and many kinds of external engagement.

#### **Strategies**

- Universities should establish mechanisms to link the faculty's traditional research and education activities to economic development opportunities. In doing so, universities become the center for research for their region. For instance, some UNC Greensboro faculty work closely with regional leaders to enhance economic development efforts by providing benchmarking analyses and contributing expertise in development of strategic plans.
- In keeping with the public service role of all University employees, faculty in a variety of disciplines should stand ready to deliver applied research, studies and other analyses to state and local leaders as needed.
- Campuses should increase the level of awareness of the variety of technical training already offered to staff and managers in the public sector and where opportunities exist, this training should be expanded, and the mechanisms by which it is delivered should be enlarged, including service delivery on-site and through distance education enhanced by the use of technology.

#### **Requirements**

- Each campus should have a senior officer responsible for economic development initiatives. This officer should have ready access to the Chancellor. This senior officer will be expected to be an effective gateway to campus assets and resources which support community and economic development and to ensure effective coordination and collaboration among campus units with economic development roles. An example of this type of role is the position of Vice Chancellor for Extension, Engagement, and Economic Development at NC State. NCSU's Economic Development Partnership (EDP) is an organization with demonstrated commitment by the University to external partners. EDP is based upon external demand for access to the university. It rests on a multi-faceted funding model, with external partners (public and private) willing to provide financial support and lobby for state support. The Center for Regional Development at WCU, The Appalachian Regional Development Institute at ASU, and the Center for Economic Development and Community Engagement at ECU are also

examples of organizations which serve their respective communities by facilitating access to university resources.

- Faculty who are engaged in applied public policy and in the delivery of service and training expertise should be rewarded in ways commensurate with faculty engaged in basic research. Faculty and administrators engaged in economic development and public policy should be aware of the activities of other public agencies engaged in the same areas. The lead economic development officer or organization should ensure that the university's efforts are fully coordinated with these outside efforts.
- The University should establish and maintain long-term partnerships with key stakeholders across the region, the State, and the Nation. Building deeper relationships with existing partners like the Research Triangle Foundation is vital.
- Where appropriate, recruit and hire faculty with an interest in applying their discipline to economic development.

## **Metrics**

### ***Inputs***

- resources devoted to senior “public engagement” administrators and to “gateway” office
- number of faculty engaged in public service and public policy research
- number of courses, technical assistance, and publications dedicated to public officials and community leaders
- number of off-campus seminars, courses, and other education and training
- number of public officials and community leaders seeking training or technical assistance

### ***Outputs***

- scope and depth of engaged scholarship and public service
- number of faculty tenure and promotion decisions based on public service
- number of partnerships with state, local, and community groups
- number of responses to requests from public and community leaders for special training, technical assistance, research and materials
- satisfaction level of clients of university services

### ***Outcomes***

- improved public policy as a result of university engagement
- improved performance of state and local governments and institutions as a result of university engagement
- improved intelligence systems of public institutions
- enriched scholarly output of faculty as result of public engagement

## **Goal 3: Enhance opportunities for research and innovation**

The University must sustain and enhance an environment that promotes and supports research, innovation, and the application of new knowledge. In doing so, we will strengthen the innovative research capacity that is essential to helping North Carolina meet the challenges of a global economy. All efforts by the University in the area of economic development rest on the foundation of faculty's access to knowledge and expertise drawn from the public pool of scholarship. Scientific discovery and the innovation linked to it represent a narrower pool of knowledge, subject to the proprietary claims of intellectual property. Goal 4 is aimed at accelerating the transfer of this knowledge from the lab to the store shelf.

### **Strategies**

- Establish strong collaborative research relationships among institutions to look for more opportunities to jointly attract research funding and solve problems.
- Enhance ability to conduct innovative research and to transfer new ideas into commercial opportunity.
- Continue to support research in core areas and link research needs with capabilities in areas such as biotechnology and nanotechnology.
- Coordinate regional economic development needs and opportunities, future university research, and economic development funding resources.

### **Requirements**

- Establish a state-wide, distributed support network of key technology transfer partners.
- Offer incentives to conduct inter-institutional and interdisciplinary research.
- Invest in competitive faculty salaries to attract and retain talented faculty, post-doctorates and graduate students.
- Revise promotion and tenure guidelines so that collaboration, entrepreneurship, and scholarly community assistance are valued alongside more traditional forms of scholarly achievement. Fund entrepreneurial sabbaticals and create entrepreneurs-in-residence programs to highlight the important role of this type activity.

### **Metrics**

#### **Inputs**

- research problems involving interdisciplinary or multi-institutional solutions
- number of and funding amounts for inter-institutional faculty grant proposals
- number and type of other incentives for inter-institutional and interdisciplinary work
- research budgets of member institutions
- research instrumentation facilities and space
- number of undergraduate, graduate, and post-doctoral students engaged in research
- number of offices devoted to partnerships with industry
- number of research faculty compared to peers
- number of institutional reviews of tenure and promotion policies

#### **Outputs**

- number of active partnerships among institutions
- number of grants awarded to multi-institutional teams
- number of faculty involved in entrepreneurial activities
- amount of sponsored research from competitive sources at each campus
- amount of research funded by the private sector
- salaries and resources for research faculty compared to peers
- tenure and promotion policies which recognize entrepreneurial activity

#### **Outcomes**

- measured positive impact of multi-institutional partnerships
- measured positive impact of multi-institutional research grants
- measured impact of research on state, national and global peers

- creation of high paying jobs, sound companies, vibrant industry sectors based on research and partnerships with private sector
- number of faculty receiving tenure or advancement based, at least in part, on entrepreneurial behavior, public service, and/or collaborative research
- number of distinguished awards won by faculty (including membership in national and American Academies)

#### **Goal 4: Provide support to build competitive businesses**

As North Carolina's economy becomes increasingly technology intensive, the University must continuously find new ways to transfer the research and ideas discovered on campuses to increase competitiveness of North Carolina businesses. The greatest potential for new job growth in NC lies in converting the substantial and rapidly growing R&D assets into new entrepreneurial growth companies. Equally as important are the opportunities for our businesses to capitalize on growth in emerging international economies. Faculty members with expertise in the culture, history, language, politics and geography of those countries should be leveraged to help North Carolina companies compete globally.

#### **Strategies**

- We need to address gaps in the service and outreach needed to support technology-based economic development. Many of businesses' needs can be met by existing University capabilities but we must first identify those needs and then partner with industry to find solutions. One such way in which our universities are already helping North Carolina companies stay competitive is Western Carolina's rapid prototyping lab. The Engineering and Technology Department faculty and students have worked with several area businesses to reduce material costs by reverse engineering a part or piece of equipment and then creating a prototype that can be used in manufacturing.
- Campuses should develop research capacity oriented towards the technology needs of firms based in the State or in their region. Campuses should be leaders in working with industry to identify primary needs for growth of regional clusters. Two original examples of careful orientation are the proposed Appalachian Enology and Viticulture Services Center at ASU, dedicated to serving North Carolina's expanding wine industry and the Center for Marine Sciences at UNCW, which has focused a wide variety of basic and applied research in marine biotechnology.
- Each campus should serve as the hub of formal and informal networks through which the needs of business are matched up not only with the supply of technology on campus but also management counseling, training, regulatory compliance, process analytics and best practices. Good examples of existing programs include NC State's Industrial Extension Service and NC Cooperative Extension Service at NC State and NC A&T.
- Faculty and entrepreneurs should have access to management and financial expertise provided through interdisciplinary programs. Management and technology programs should foster entrepreneurship to support North Carolina's competitiveness in the global economy.
- Universities should play a catalytic role in the establishment of venture funds able to finance start-ups through the seed capital stage.
- Extension and outreach programs from regional and land grant campuses should be closely coordinated to maximize the relative strengths of each institution and increase public accessibility.

## **Requirements**

- Perform an inventory of assets relevant to North Carolina companies doing business internationally. These assets would include faculty with expertise in the history, culture, language, politics and geography of other countries. This could become a model for effective collaboration among business, government and higher education across a wide range of areas.
- Expand the capacity of existing business outreach and service efforts of extension programs which provide in-depth management counseling and educational services to businesses.
- Reward faculty with a history of serial entrepreneurship (broadly defined to include those who are innovative via start-up companies, as well as new programs to help the community) in certain targeted areas for recruitment and retention. The “Jobs for the Future” project at UNCP is sustained by entrepreneurial faculty of this kind.
- Research in support of industry should be carefully coordinated with community colleges where possible. For example, NEMAC at UNCA, a national center for modeling and analysis of environmental data, coordinates the work of several universities, community colleges, and private industry.
- Encourage university-industry interactions by having a single point of contact at each campus responsible for coordinating and facilitating industry relations. The university representative should communicate regularly with the economic development professionals in their region.
- Facilitate technology transfer by integrating the function into the core mission and budget of each university so that economic development and public service, in addition to revenue generation, are equally valued. Provide technology transfer offices with required resources and flexibility to maximize economic development potential of university discoveries.
- Provide business with high-quality incubators and with labs at a reasonable rate subsidized by state or local funding. In rural regions, a system of incubators jointly sponsored by the university and participating communities should be considered. The Fayetteville Business Center, sponsored in part by FSU, is an excellent example of a public/private partnership along these lines as is the Charlotte Research Institute at UNCC. University endowments have a fiduciary duty to maximize returns; however, those endowments should be encouraged to consider, as part of their alternative asset allocation, opportunities to support university-affiliated seed funds.

## **Metrics**

### **Inputs**

- number and resources of tech transfer offices
- amount of risk and venture capital connected to university
- number and resources of business incubators connected to university
- number of courses offered for business people
- number of labs available for private sector use
- number of programs built around specific regional or state industries
- number of partnerships with industry associations

### **Outputs**

- number of US patents filed and secured
- number of risk and venture capital placements
- number of incubator tenants

- number of private sector users of university labs and equipment
- graduation numbers and rates of executive education programs
- company satisfaction measures of partnerships with universities

**Outcomes**

- number of companies launched and surviving in North Carolina
- market capitalization of university-launched companies
- number of high paying jobs created by university-related companies
- successful graduation rates from incubators
- documented improvements in companies as a result of university-based continuing education and technical assistance
- documented product improvements as result of utilization of university equipment or labs
- documented strengthening of industry sectors as result of university involvement
- patent strength as measured by utilization and citation by peers

**Goal 5: Grow high-quality, healthy and attractive communities**

The community within the University must be open to and better integrated with communities outside. Our universities are home to a rich store of creative, enlightened arts and ideas that need to be shared widely. Both the community and the university are vibrant when this integration occurs.

**Strategies**

- Art and culture depend upon rich networks that break down barriers between university communities and local communities. Each campus should seek to be a central player in such networks, drawing external audiences and constituencies of every kind. The North Carolina School of the Arts has model programs in this respect. In addition to opening many performances up to the public, NCSA faculty participate in many community outreach activities such as Artists Reading to Children in Hospitals (ARCH).
- Several campuses have programs in public health and nursing which contribute in significant ways to the health of our communities. These are enhanced when the academic and clinical sides of each program are more closely integrated, as in the Public Health Leadership Program at the University of North Carolina's School of Public Health, or the Interdisciplinary Rural Health Training program at East Carolina University.
- Faculty represent a valuable human resource for local communities which is more fully realized when they participate in community projects. This kind of engagement has a valuable reciprocal effect on academic and external communities. University programs/strengths should be leveraged to bring new desirable university partners to communities. NC Central's Young Entrepreneurial Services program is an excellent example of this kind of community outreach.
- The actual facilities controlled by each campus represent a significant cultural asset for the community which they serve. Insofar as it is possible, these facilities should be made available to external cultural and community groups, and, indeed, the university community should by that means be drawn into the work of those groups. The North Carolina Arboretum invites organizations to utilize their facilities for a nominal fee, as long as the group is compatible with the Arboretum's stated missions of Education, Economic Development, Display, Conservation and Research within the horticulture, landscape, design, botany and ecology fields.

## **Requirements**

- Each university needs to actively address community needs. The S.G. Adkins Community Development Corporation at WSSU and the Community Development Program at ECSU are examples of a dedicated point of contact. Community groups should have access to modest resources that would encourage them to become integrated into campus life. Students should be engaged in service learning, internships and community service as part of their education.

## **Metrics**

### **Inputs**

- number of service learning programs on campus
- number of courses, curriculum, and programs with civic engagement imbedded in them
- number of programs designed to connect campus and community
- resources dedicated to community engagement
- resources devoted to marketing of university resources to community

### **Outputs**

- number of students in service learning programs
- number of faculty and students taking courses with public engagement components
- number of community organizations utilizing university facilities
- number of community members participating in university enrichment programs

### **Outcomes**

- number of successful community projects completed as result of student involvement
- number of successful community projects completed as result of faculty involvement
- documented improvement in quality of community organizations and activities as result of university involvement
- documented improvements in quality of business environment as result of university involvement
- documented improvements in town-gown relations

## **Conclusion**

The transformation of the State's economy will require the involvement of higher education to achieve these goals, all of which are interrelated. The effectiveness of each depends upon the degree with which the others are also realized. Indeed, it is by accomplishing all of them in combination that North Carolina will set itself apart. It is not just that North Carolina's citizens will have the necessary skills and its businesses the necessary technologies and leadership, but also that our workers and firms will rest upon public institutions and communities that give them a unique combination of advantages. Only by realizing this combination of goals will North Carolina be prepared for the changes that the world economy will bring, and UNC must design coordinated strategies to do so.