SETTING SYSTEM GOALS FOR ECONOMIC IMPACT

September 8, 2016
Meeting Purpose, Overview, & Deliverables

**Purpose:** Approve definition and discuss draft goals.

**Overview:**
- Update on Strategic Planning Process
- Recap Last Meeting
- Vote on “Economic Impact” definition
- Creating a Goal
- Review other State Goals
- Review NC Draft Economic Impact Goals
- Discuss each Goal

**Deliverables:** Approve definition & identify 2-3 topical areas for draft goals.
UPDATE ON STRATEGIC PLANNING
PROCESS
Economic Impact Recap

Universities can take steps to increase economic impact

Economy is changing rapidly

- N.C. State economist Mike Walden projects that 1.2 million jobs — at every education level -- will disappear from North Carolina over the next twenty years due to automation.
- Students must be prepared to adapt throughout their careers
- Economic change effects different communities differently

University-based research growing in importance

- U.S. companies investing less in both R&D (8.7% decline as a share of total investment) and basic scientific research (27% decline) over the past two decades
- Sector and product lifecycles getting shorter

Themes that emerged during our prior meeting:

- Importance of teaching, employment-ready students, career preparation, research commercialization, and community partnerships.
Proposed Definition of Economic Impact for Vote

Universities have an impact on state and regional economies through the students they attract and teach, the research they perform, the innovation they encourage, the people they employ, the services they offer, and the partnerships they build. The University of North Carolina can enhance that impact by focusing on graduates’ readiness to meet the state’s long-term needs; investing in foundational research; speeding the application and translation of discoveries; and deepening partnerships that strengthen local communities and the state’s economy.
Themes from Benchmark II

• Preparing Students for the Economy of the Future
  o *Universities are taking steps through teaching and partnerships to prepare students for the future and meet known current economic needs.*

• Increasing Research Capacity for Long-term Impact
  o *Universities are increasing their long-term economic impact by engaging in fundamental and applied research to help solve the problems of tomorrow and through targeted recruitment and retention of faculty.*

• Applying Research and Innovation to Solve Today’s Problems
  o *Universities are seeking to boost near-term impact by providing incentives for faculty to focus on commercialization of research, or looking for ways to move more research from discovery to commercialization.*
CREATING A GOAL
System Goals should be:

• System-focused rather than constituent institution-focused;

• Direction-setting;

• Aligned with and central to the University’s mission;

• Aspirational and rigorous; and

• Actionable, time-bound, and measurable.
Creating a Goal

• Too broad
  o Improve the University’s six-year graduation rate.

• Too specific
  o Improve the University’s six-year graduation rate by [X%] for each of the following student categories by [Y date]: Underserved, Transfer, and Older students.

• Appropriate
  o Increase the University’s six-year graduation rate by [X%] by [Y date].
Goals v. Activities

Goal
• UNC will increase commercialization activities by x% by 2025. Relevant metrics could include patents, startups, licenses, licensing income per research dollar expenditure.

System-level activity
• Guide the implementation of the University Innovation Council (UIC) recommendations, including coordination of shared services among UNC campuses and communication with UNC institutions regarding progress on UIC initiatives.

Institutional activity
• Institution A develops a collaborative mechanism with Institution B to provide technology transfer support to other UNC universities on an as-needed, fee-for-service basis.
SAMPLES FROM OTHER STATE SYSTEMS
Other States’ Strategic Plans

An analysis of seven university system strategic plans revealed the following:

• 6/7 had a goal about preparing students for the economy of the future

• 5/7 had a goal about increasing research capacity

• 5/7 had a goal about applying research to innovation (i.e., commercialization of research)
Samples from other State Systems

Maryland:
Make the state and its universities even more attractive for R&D investment by funding research facilities and hiring additional faculty. Double USM’s externally sponsored R&D funding to $2.4 billion.

Texas:
Marketable Skills - All graduates from Texas public institutions of higher education will have completed programs with identified marketable skills.
Samples from other State Systems

Tennessee:

Expanding Research Capacities- Develop a support mechanism for System research efforts that solve critical problems and issues, expand economic development and enhance quality of life in Tennessee, the nation and the world.

1. Design and implement a strategic business plan for expanding research to harness the power of the UT System’s substantial research enterprise and increase its visibility and impact.

2. Promote the application and commercialization of research and development to improve the economy and develop and expand business and industry in the state.

3. Define standards, measure progress and communicate research outcomes and impacts in the economy.
Draft Goals for Review/Discussion

1. Within the next five years, UNC system institutions will work with others so that North Carolina exceeds the national average for citizens with a baccalaureate degree, equipped to succeed in a knowledge-based economy, to work in teams, with critical thinking skills, and with a strong work ethic and integrity.

2. Within the next five years, UNC system institutions will work with others to raise the NC per capita income to the national average by enhancing the innovation environment, leading to business development, job creation, and economic growth.
Goal 1 Problem Statement

• Economic analyses project the need for more highly-educated workers to meet the needs of our future economy. North Carolina’s workforce lags behind the national average in the percentage of citizens with a bachelor’s degree or more.

• Employers give recent graduates lower scores for workforce preparedness than students give themselves – ability to work in teams, oral and written communications, critical thinking, creativity.
Draft Economic Impact Goal 1

Develop Graduates

Within the next five years, UNC system institutions will work with others so that North Carolina exceeds the national average for citizens with a baccalaureate degree, equipped to succeed in a knowledge-based economy, to work in teams, with critical thinking skills, and with a strong work ethic and integrity.
Background for Goal 1

Current baccalaureate attainment rates (CPC 2016):

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<tr>
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<th>2000</th>
<th>2014</th>
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<tbody>
<tr>
<td>NC</td>
<td>24%</td>
<td>30.1%</td>
</tr>
<tr>
<td>US</td>
<td>26.5%</td>
<td>31.5%</td>
</tr>
<tr>
<td>Gap</td>
<td>-2.5%</td>
<td>-1.4%</td>
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- McCrory/Georgetown goal: 67% with post high school credential by 2025
- Of 11.6 million jobs created post-recession, 8.2 million have gone to those with baccalaureate or more

Percentage reporting students are “well-prepared” (Hart Research, 2015):

<table>
<thead>
<tr>
<th></th>
<th>Students say:</th>
<th>Employers say:</th>
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<tbody>
<tr>
<td>Working in teams:</td>
<td>64%</td>
<td>37%</td>
</tr>
<tr>
<td>Ethical judgment:</td>
<td>60%</td>
<td>30%</td>
</tr>
<tr>
<td>Oral communication:</td>
<td>62%</td>
<td>28%</td>
</tr>
<tr>
<td>Critical thinking:</td>
<td>66%</td>
<td>26%</td>
</tr>
<tr>
<td>Creativity:</td>
<td>57%</td>
<td>25%</td>
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Goal 2 Problem Statement

• NC lags behind the national average in per capita personal income.
• UNC's role in boosting per capita income in NC could include enhancing commercialization of research and technology.
Enhance Innovation Environment

Within the next five years, UNC system institutions will work with others to raise the NC per capita income to the national average by enhancing the innovation environment, leading to business development, job creation, and economic growth.
Background for Goal 2

• In 2015, NC had a per capita personal income of $40,656 (39th in the US) compared to the national average of $47,669.

• NC is ranked #4 in the US in academic research and development

• NC is not as strong of a performer in technology commercialization and high tech business activity, typically ranking in the second or third quartile among US states.

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<tr>
<th>Research &amp; Development</th>
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<tr>
<td>Total R&amp;D Expenditures as a Percentage of GDP, 2010</td>
<td>18</td>
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<tr>
<td>Business-Performed R&amp;D as a Percentage of Private-Industry Output, 2011</td>
<td>26</td>
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<tr>
<td>Academic S&amp;E R&amp;D per $1,000 of State GDP, 2012</td>
<td>5</td>
</tr>
<tr>
<td>Federal R&amp;D Obligations per Employed Worker, 2011</td>
<td>26</td>
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<tr>
<td>Academic S&amp;E Article Output per 1,000 S&amp;E Doctorate Holders in Academia, 2010</td>
<td>10</td>
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<tr>
<th>Commercialization</th>
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<tbody>
<tr>
<td>Average Annual SBIR &amp; STTR Funding per $1 Million of GDP, 2010-12</td>
<td>20</td>
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<tr>
<td>Academic Patents Awarded per 1,000 S&amp;E Doctorate Holders in Academia, 2010</td>
<td>15</td>
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<tr>
<td>Patents Awarded per 1,000 Individuals in S&amp;E Occupations, 2010</td>
<td>26</td>
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<tr>
<td>Venture Capital Dispersed per $1,000 of GDP, 2012</td>
<td>23</td>
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<tr>
<td>Venture Capital Deals as % of High-Tech Bus. Establishments, 2010</td>
<td>15</td>
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<tr>
<td>Avg. Annual Acad. License Inc. (Gross) as a Percentage of Acad. S&amp;E R&amp;D Expend., 2011-13</td>
<td>19</td>
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<tr>
<td>Avg. Annual Acad. License Inc. (Running) as a Percentage of Acad. S&amp;E R&amp;D Expend., 2011-13</td>
<td>13</td>
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<th>Innovative Organizations</th>
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<tr>
<td>High-Tech Establishments as a Percentage of All Business Establishments, 2010</td>
<td>23</td>
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<tr>
<td>High-Tech Business Formations as a Percentage of All Business Establishments, 2010</td>
<td>9</td>
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<tr>
<td>Employment in High-Tech Establishments as a Percentage of Total Employment, 2010</td>
<td>27</td>
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<tr>
<td>Average Annual Number of Entrepreneurs per 100,000 People, 2012-2014</td>
<td>24</td>
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<td>Average Annual Opportunity Share of New Entrepreneurs, 2012-2014</td>
<td>40</td>
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<tr>
<td>Exports as a Percentage of GDP, 2013</td>
<td>35</td>
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REPORTS FROM SMALL GROUPS
DISCUSS OTHER BROAD TOPIC AREAS TO CONSIDER
IDENTIFY 2-3 TOPIC AREAS FOR FURTHER GOAL DEVELOPMENT
NEXT STEPS

Draft goals based on topical areas identified for further discussion at October BOG meeting.