





SETTING SYSTEM GOALS FOR ECONOMIC IMPACT

October 12, 2016

Meeting Purpose, Overview, & Deliverables

Purpose: Discuss BOG Economic Impact draft goals.

Overview:

- Update on Strategic Planning Process
- Recap Prior Meetings/Discussions
- Small Group Discussion of Draft Goals
- Report Out to Full Committee
- Next Steps

Deliverables:

1. Agree on 2-3 goals.
2. Agree on metric for each goal.

Agreement on specific targets is not necessary at this time.





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 have emerged during prior meetings:

- Importance of teaching, employment-ready students, career preparation, research and technology commercialization, and community partnerships.



Approved Definition of Economic Impact

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.



Original Topic Areas

- Develop Graduates
- Enhance the Innovation Environment

From September to Now:

- Goal related to developing graduates had some overlap with student success.
 - Economic Impact goal should focus not just on degrees-seeking students, but also on adult learners who wish to build relevant skills (continuing education, certificate programs, etc.)
- Goal related to the Innovation Environment should be more directly focused on research
 - Metric on raising per capita income would be challenging and out of our control
 - Would a better indicator of the economic impact of research be income derived from intellectual property over time?
- Develop a goal to tackle larger community problems



After Today We Need to:

- Affirm our Topical Areas
- Identify one Goal for each Topical Area
- Identify Metric for each Goal

We do NOT need to set specific targets yet.

Common Framework

Four basic typologies for a measurable goal:

- 1. A topical area:** What aspect of the issue will the strategic goal focus on?
- 2. A goal:** What is the broad outcome that the system should be pushing for?
- 3. A metric:** What is the quantity we will measure to judge progress on the broad goal?
- 4. A target:** What change in the metric, and in what time frame, will we consider a success?



DRAFT GOALS WITH METRICS

Draft Goals with Metrics for Review/Discussion

Critical Workforce

To address known future needs of our economy, UNC will increase the number of students with credentials in health care, STEM and K-12 education.

Research

Over the next five years, each UNC institution will strive for continuous improvement in research/scholarship, collaboration with UNC institutions and outside entities, and effective commercialization of technologies.

Community Service

University of North Carolina students will enhance their leadership and teamwork skills through community service activities that address the needs – economic, social or cultural – of economically-distressed communities and other high need areas. The effects of this service on students will be enhanced by reflective activity and other best practices shown to enhance the impact of service.





GOAL 1

Topical Area: Critical Workforce

UNC plays a critical role in addressing the economy's needs for skilled workers, by preparing students in areas we can predict strong growth in as well as by preparing them for an economy that will require ongoing updates to skills and abilities.

Draft Economic Impact Goal on Critical Workforces

Increase number of students completing in critical workforce areas

To address known future needs of our economy, UNC will increase the number of students with credentials in health care, STEM and K-12 education.





BACKGROUND FOR GOAL ON CRITICAL WORKFORCES



What is the market telling us?

Identifying critical workforces

- Very difficult to predict future market needs with certainty
- Going forward, students need to be prepared for an ever-changing workplace
- Confidence in future demand in key areas – health care, K-12, STEM

Identifying critical workforces

Health Care:

- Projected +3 million jobs in US in the next decade (Georgetown, 2012) – “the most dramatic growth of any sector of the United States over...ten years.”
- Projected 135,000 new jobs in NC in the next decade (NCDOC, 2016) – 24% of all projected job growth in NC

K-12:

- UNC (following state trend) has seen a 30% decline in education school enrollment in past 5 years
- UNC #1 producer of K-12 teacher candidates in NC

STEM:

- President’s Council of Advisors (2012) recommends +1 million STEM grads needed in next decade
- Some reports disagree





How much have we been growing/
how much might we grow?

Potential for growth

Education degrees

- -20% decline in number of graduates past 3 years; demand remains strong

Health professions and related programs degrees

- +9.6% growth in number of graduates past 3 years

STEM degrees

- +8.2% growth in number of graduates past 3 years

*We do not have comparable data on certificates and other non-degree-based programs at this time.



What About Non-Degree Programs?

Non-academic credit education at UNC 2014-2015

	Courses	Enrollments	CEU's/ certificates/ certifications
All campuses face-to- face or hybrid	5,368	515,418	268,445
All campuses online	949	463,084	15,672
Cooperative Extension	14,890	534,549	28,619
AHEC	8,515	188,518	21,767
Total	29,722	1,701,569	334,503



Potential for growth

- New capacity will come on line with completion of bond issued buildings
- Education (40%), healthcare (28%) and STEM (25%) are the sectors that require the highest percentage of graduate degrees
- Strong predicted future growth in non-degree-based education in next decade

Summary Draft Economic Impact Goal on Critical Workforces

- *Topical area:* UNC plays a critical role in addressing the economy's needs for skilled workers, by preparing students in areas we can predict strong growth in as well as by preparing them for an economy that will require ongoing updates to skills and abilities.
- *Goal:* To address known future needs of our economy, UNC will increase the number of students with credentials in health care, STEM and K-12 education.
- *Possible metric:* Total number of credentials awarded in fields of health care, STEM and teacher education.





GOAL 2

Topical Area: Research

Research and scholarship are integral to the University's threefold mission of teaching, research, and public service. Successful translation of research discoveries into innovative, marketable products and services requires a strong foundation in fundamental and applied research.



Draft Economic Impact Goal on Research

Over the next five years, each UNC institution will strive for continuous improvement in research/scholarship, collaboration with UNC institutions and outside entities, and effective commercialization of technologies.



BACKGROUND FOR GOAL ON RESEARCH



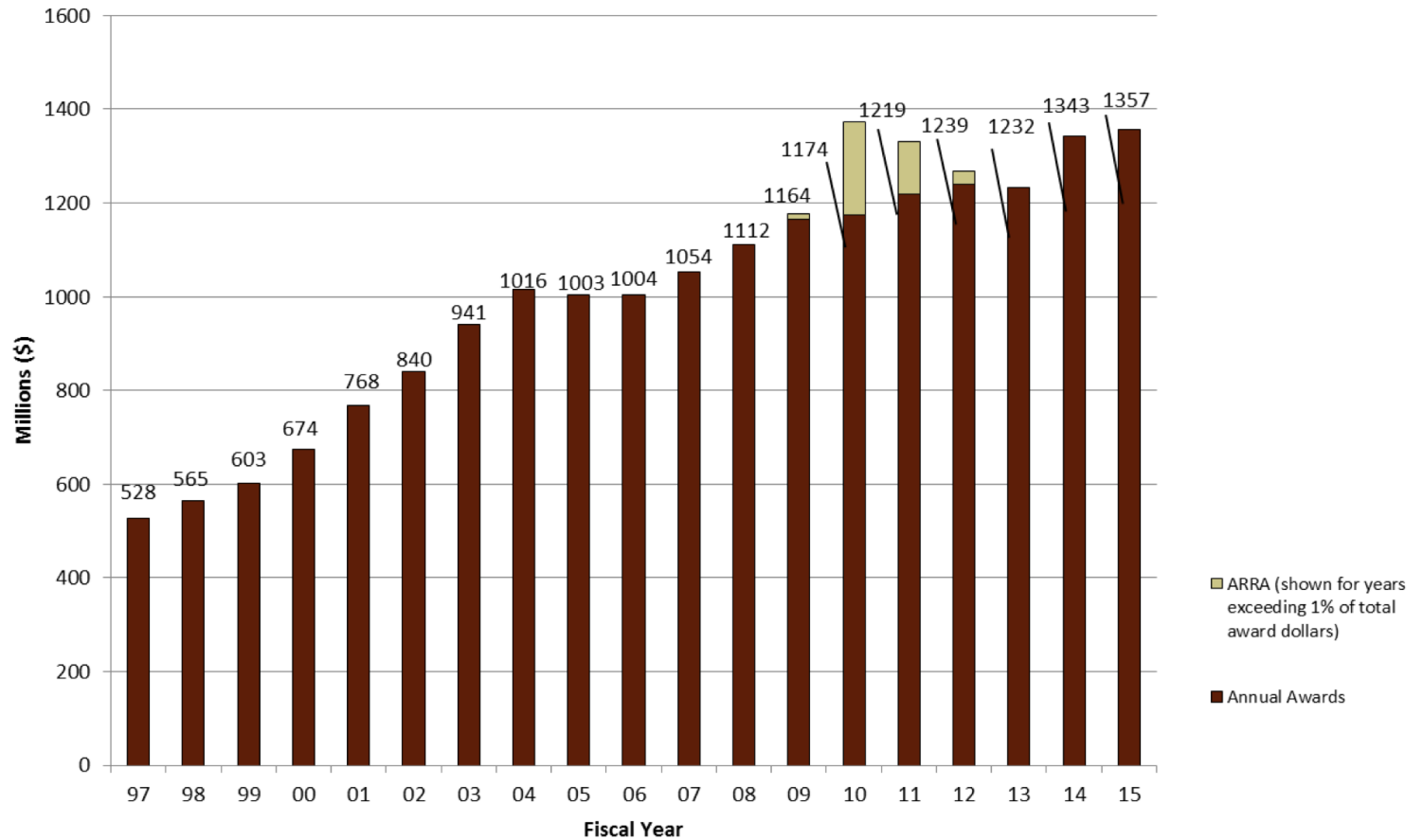
How do we measure
research productivity?

Measuring Research Productivity

- **R&D Awards** (how much research funding UNC receives)
 - UNC already collects these data for all campuses
 - UNC has many years of historical data
- **R&D Expenditures** (how much UNC spends on research)
 - Another common metric
 - Would require significant changes to data collection capacities to get timely reporting
 - National reporting (NSF) generally lags by two years

Measuring Research Productivity

UNC has shown steady growth in R&D awards



*To avoid double-counting, inter-institutional subagreements are not included in Annual Awards.





How do we measure
commercialization productivity?

How do we measure commercialization productivity?

- **Lots of possible metrics** (many of which are standardized by the Association of University Technology Managers – AUTM)
 - **Invention disclosures**
 - **US patents**
 - **Startups**
 - **Licenses executed**
 - **License income**
- The set of metrics tells a fuller story than a single metric
- If pressed to choose just one: either **number of licenses executed** or **license income**.



Recent Performance in Technology Commercialization

	Invention Disclosures	US Patents Issued	Licenses or Options Executed	Start-ups	License Income
FY15 Totals	576	90	218	31	\$ 10,886,254.50
FY14 Totals	467	97	212	31	\$ 15,927,896.60
FY13 Totals	449	85	197	30	\$ 10,735,866.79
FY12 Totals	532	91	149	17	\$ 8,977,264.00



How can we set a single metric for both research productivity and commercialization productivity?

Combined Income

- What if we look at both metrics in terms of **income**?
 - Income due to research = research funding (R&D awards)
 - Income due to commercialization = license income

Combined income

- **Benefits** of combined metric:
 - Simplifies the goal and achieves the desirable single metric per goal
 - Gives each university **maximum flexibility**
 - *Example 1:* University A excels in earning R&D awards but has room to grow in commercialization → set campus-level activity geared toward increasing commercialization
 - *Example 2:* University B is a small campus working on building its research capacity → set campus-level activities geared toward increasing research funding
- **Downside** of combined metric: does not acknowledge the subtleties of each of the components; this can be addressed in campus-level goals





Is the combined metric
operationally feasible?

Is the combined metric feasible?

- Yes – UNC already collects data on research funding and license income, so providing data on a combined metric would be straightforward.

Summary Draft Economic Impact Goal on Research

- *Topical area:* Research and scholarship are integral to the University's threefold mission of teaching, research, and public service. Successful translation of research discoveries into innovative, marketable products and services requires a strong foundation in fundamental and applied research.
- *Goal:* Over the next five years, each UNC institution will strive for continuous improvement in research/scholarship, collaboration with UNC institutions and outside entities, and effective commercialization of technologies.
- *Possible metric:* UNC institutions will improve productivity in research/scholarship and technology commercialization as judged against past performance.





GOAL 3

Topical Area: Community Service

In order to better fulfill its public service mission, help struggling North Carolina communities, and assist students in developing important leadership and citizenship skills, UNC should enhance student participation in community service and service learning activities.



Draft Economic Impact Goal on Community Service

Increase number of students engaged in public service activity

University of North Carolina students will enhance their leadership and teamwork skills through community service activities that address the needs – economic, social or cultural – of economically-distressed communities and other high need areas. The effects of this service on students will be enhanced by reflective activity and other best practices shown to enhance the impact of service.





BACKGROUND FOR GOAL ON COMMUNITY SERVICE



Why community service?

Growing interest, positive outcomes

- Community service activity is positively associated with academic learning, leadership development and community well-being
- 2016 UCLA national survey finds record levels of interest among freshmen in becoming community leaders, increasing knowledge of other cultures and countries and participating in student protests
- Outcomes stronger if:
 - Students matched to areas of interest
 - Students have sustained exposure to the activity
 - Students formally reflect on their service

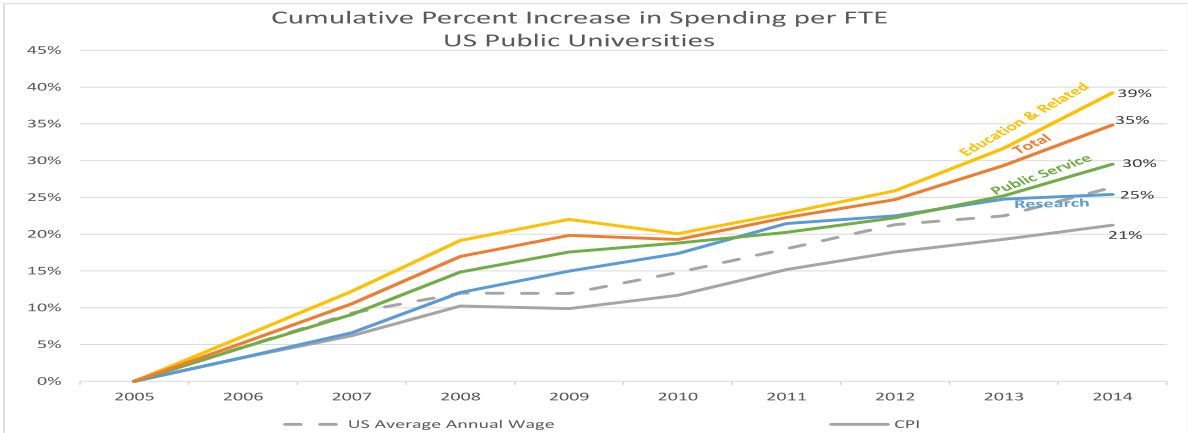
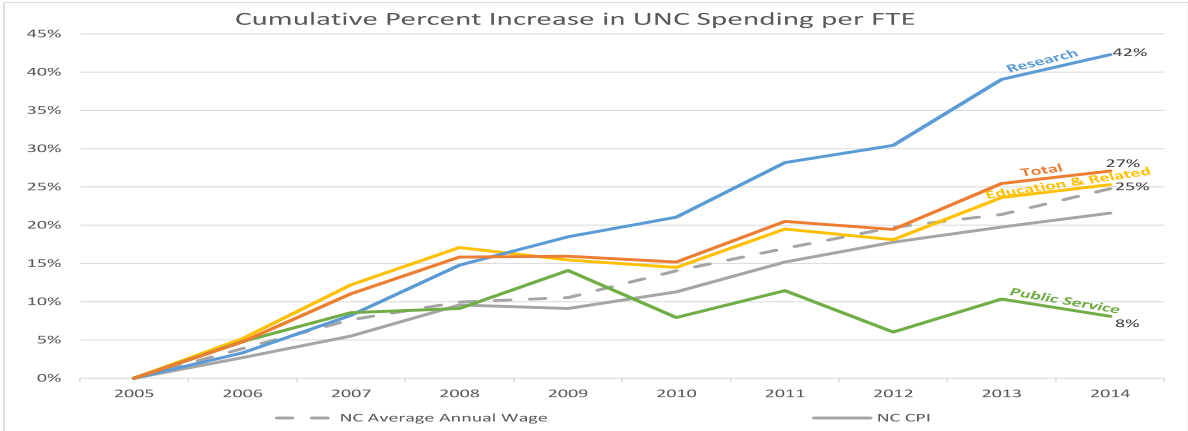




Trends in support of community service

UNC Public Service/FTE Declining Relative to Nation

US and UNC Education and Related and Total Spending FY 2004-05 to 2013-14



Source: IHS Global Insight and IPEDS
 Notes: UNC Public Service expense was adjusted for ECU Physicians practice in FY 2005 which was moved to Auxiliary Enterprise in FY 2006
 Total Spending includes all operating expenses less scholarships, auxiliary enterprises, hospital services, and independent operations.
 Operations and Maintenance, Depreciation, and Interest Expense are allocated by dollar total.



Current State of Community Service Activity

- 11 institutions designated “Carnegie Engaged” institutions
- 10 recognized on President’s Higher Education Community Service Honor Roll
- 2 designated by APLU as “Innovation and Economic Prosperity Universities”
- 2 institutions have community service graduation requirement (NCCU and NCSSM)





Issues, Challenges in Community Service

Issues to consider

- Quantifying outcomes
- Staffing needs to ensure quality service
- Additional graduation requirement
- Faculty/staff participation?

Summary Draft Economic Impact Goal for Community Service

- *Topical area:* In order to better fulfill its public service mission, help struggling North Carolina communities, and assist students in developing important leadership and citizenship skills, UNC should enhance student participation in community service and service learning activities.
- *Goal:* University of North Carolina students will enhance their leadership and teamwork skills through community service activities that address the needs – economic, social or cultural – of economically-distressed communities and other high need areas. The effects of this service on students will be enhanced by reflective activity and other best practices shown to enhance the impact of service.
- *Possible metric:* Increase the amount of community service performed by UNC students.





REPORTS FROM BREAKOUT GROUPS



NEXT STEPS

Next Steps

- Consider Stakeholder Feedback
 - Survey Results
 - Campus Forums
 - Feedback from Legislators
 - Comments from Fellow Board Members
- Strategic Planning Committee Review & Discussion
- Analysis of Data and Trends to Inform Potential Targets



Stakeholder Input as of Monday October 10th

Over 2,000 total responses

