

Organization Information

The following organization information is derived from www.northcarolina.edu.

Mission Statement. Chartered in 1789, the University of North Carolina was the first public university in the United States and the only one to graduate students in the 18th century. Today, UNC is a multi-campus university composed of all 16 of North Carolina's public institutions that grant baccalaureate degrees, as well as the NC School of Science and Mathematics, the nation's first public residential high school for gifted students. Its collective mission is to discover, create, transmit, and apply knowledge to address the needs of individuals and society. This mission is accomplished through instruction, which communicates the knowledge and values and imparts the skills necessary for individuals to lead responsible, productive, and personally satisfying lives; through research, scholarship, and creative activities, which advance knowledge and enhance the educational process; and through public service, which contributes to the solution of societal problems and enriches the quality of life in the State. In the fulfillment of this mission, the University shall seek an efficient use of available resources to ensure the highest quality in its service to the citizens of the State.

Teaching and learning constitute the primary service that the University renders to society. Teaching, or instruction, is the primary responsibility of each of the constituent institutions. The relative importance of research and public service, which enhance teaching and learning, varies among the constituent institutions, depending on their overall missions.

Objectives. As set forth in state statutes, the basic objectives and purposes of the University of North Carolina are to foster the development of a well-planned and coordinated system of higher education, to improve the quality of education, to extend its benefits, and to encourage an economical use of the state's resources.

Current Programs, Activities, and Accomplishments. Our 16 university campuses --diverse in geography, size and mission--collectively enroll more than 210,000 students and confer more than 40,000 degrees annually. Enrollment is expected to top 235,000 by 2012. UNC campuses collectively offer degrees in more than 300 disciplines. They confer more than three-fourths of North Carolina's baccalaureate degrees in high-need areas such as education, social work, engineering, and nursing. UNC programs include an array of distinguished liberal-arts programs, two medical schools and one teaching hospital, two law schools, a veterinary school, a school of pharmacy, 11 nursing programs, 15 schools of education, three schools of engineering, and a specialized school for performing artists. UNC campuses brought nearly \$1.4 billion in external grants into the state in FY 2010, largely from federal sources. Much of this research activity is directly targeted to meet economic, health, and social needs within North Carolina.

Expanding REACH NC (Research, Engagement and Capabilities Hub) to Rural NC Campuses – Proposal Description

Statement of Opportunity

Through the UNC Tomorrow initiative in 2007, citizens across North Carolina told UNC's sixteen public universities we need to communicate their resources and expertise to wider audiences. UNC's commercialization and start-up partners have echoed this same message during our current innovation development and transfer initiative – clearly stating that to help our state's economy and grow our research and economic development impacts, our institutions must convey to audiences all over the world the knowledge, skills, and competitive advantages resident throughout our state. UNC has heard the call and is responding with a new tool that no other state possesses – a comprehensive database of university expertise and intellectual property. REACH NC positions us to engage with other academic and R&D partners and communities at unprecedented levels.

REACH NC (Research, Engagement and Capabilities Hub) is a searchable portal to provide access to economic developers, private companies, government leaders, universities and others for information on the expertise of university personnel or entire units (Figure 1). Expertise profiles are automatically generated using publications, sponsored research awards, intellectual property, and course descriptions and may also include consulting or community engagement capacity (Figure 2). The beta site, which includes nearly 5,500 NC State and UNC Chapel Hill expertise profiles at this time, has been favorably received. Duke University recently committed to have approximately 3,200 of its researchers profiled in REACH NC. *Still, the portal must expand to include UNC institutions statewide in order to most fully impact economic transformation in our state.*

Statement of Need

REACH NC funding needs are two-fold: 1) one-time fees to license the vendor technology and create the expert profiles, and 2) ongoing database subscription and maintenance fees to the vendor and to the Renaissance Computing Institute (RENCI) for project/data management and visualizations.

We request \$200,000 from Golden LEAF to support the one-time costs to add nearly 3,200 new REACH NC expertise profiles of faculty from five rural or rural-serving UNC institutions: Appalachian State, East Carolina, Elizabeth City State, UNC Pembroke, and Western Carolina. Funds will support the manual disambiguation and natural language processes performed by Collexis, the vendor, in order to create the profiles. Once the profiles are included in REACH NC, they can be used to access potential collaborators in research, problem solving, shared assets (equipment or facilities), and economic development.

Golden LEAF funds will be highly leveraged. UNC General Administration funded the NCSU/UNC Chapel Hill pilot project at \$582K and, in further support of statewide expansion of the portal, will contribute up to \$300K as match against other contributions towards the one-time start-up costs. Duke University has committed \$150K towards the development of the site and will also make one-time and annual payments to complete and maintain their faculty profiles. To fulfill the three-year agreement with the vendor, REACH NC participating entities will support the annual costs for subscriptions and maintenance. A request has been made to TUCASI to support RENCI's data management and development of add-on visualizations and reports for economic developers. After three years, with clear value-added benefits, we will advance the project through either increased campus support or a request for recurring state funds.

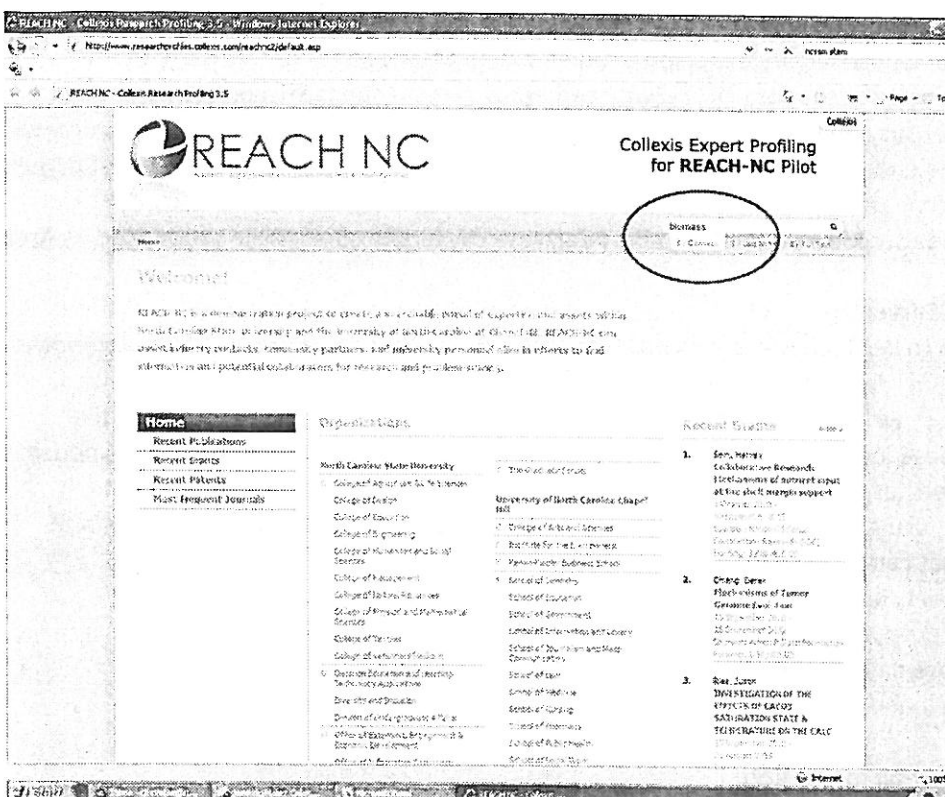


Figure 1. REACH NC beta homepage and concept search

Figure 1 shows the current homepage for the beta site. The two beta campuses and their colleges are partially visible in this screenshot. The keyword "biomass" has been entered in the top right search bar. REACH NC allows for search by concept, by last name or by full text (i.e. a user pastes text from an article or other source into REACH NC which mines profiles for relevant experts). The search for the concept biomass will prompt the user to select a category (biomass feedstocks, production, etc.) and to add refining search terms as desired.

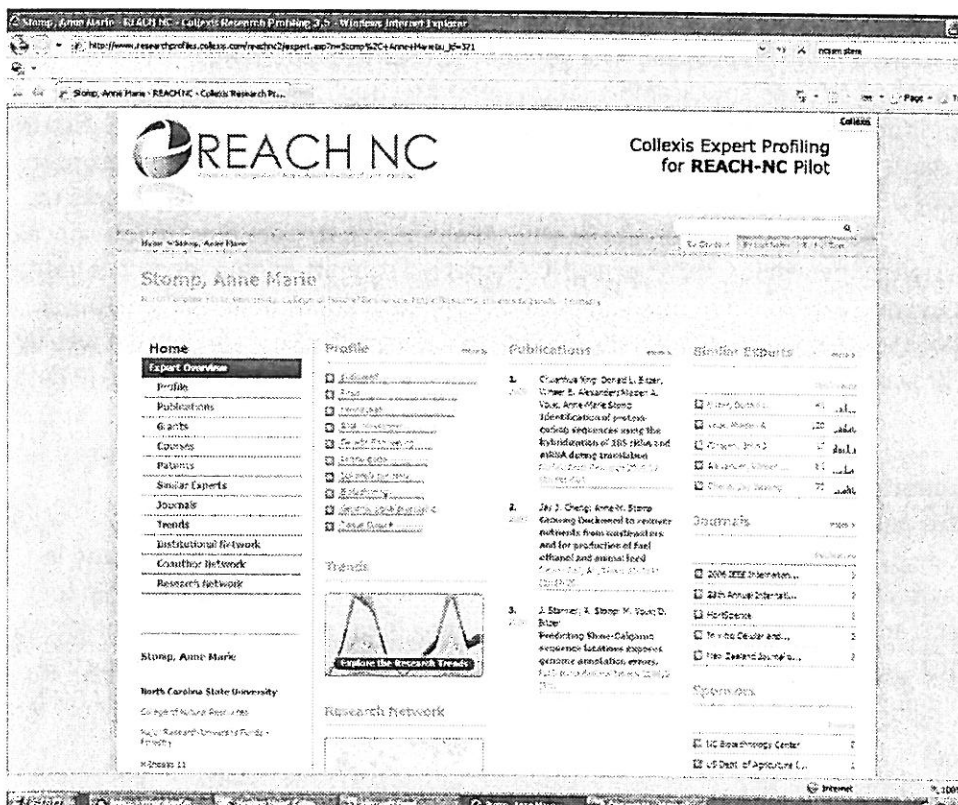


Figure 2. Sample profile (partial) in REACH NC

Once satisfied with the refined search terms, the REACH NC user can browse the expert profiles returned as a match. Figure 2 shows a typical expert profile. The blue bars are a snapshot of the individual's overall expertise, with ability to drill down into supporting information. While not all visible in this screenshot, the profile page allows the REACH NC user quick access to an expert's publications, grants, courses, intellectual property, and insights into her collaborative network and related experts.

Geographic Area and Population Served

The five UNC institutions whose faculty expertise profiles would be added to REACH NC with this funding are located in some of the most economically distressed areas across the state. For example, according to the 1990 and 2000 census and the most recently available American Community Survey poverty data for the three year period ending in 2008, fifteen counties in North Carolina exhibited persistent poverty across two or all three time periods; with exception of one, those counties are serviced by UNC Pembroke (Fayetteville Labor Market Area) and East Carolina University (Greenville Labor Market Area).

Benefits to Population Served

REACH NC is positioned to help campuses and local communities *identify and communicate strengths and facilitate partnerships*. By profiling the faculty expertise that resides at these five universities, surrounding communities will be positioned as never before to take advantage of the cumulative expertise resident at these local institutions. As fully envisioned, REACH NC will provide local industries and economic developers, as well as those in the NC Department of Commerce with a distinct competitive advantage, using custom reports, maps, and other visualizations to better understand statewide capacities that can be drawn upon to answer

- Where can experts be found to help with a technology challenge?
- Which schools produce students with the skills employers are seeking?
- What institutions have facilities and equipment for specialized R&D tasks?
- Who can accompany us as a subject matter expert on a prospective client visit?

Project Outcomes and Implementation

The main outcome will be the generation of an estimated 3,200 new expert profiles within REACH NC and the expansion of the tool's utility beyond the Triangle. The creation of profiles occurs in a series of steps, which have been piloted by NC State and UNC Chapel Hill. The campuses will prepare a data feed with personnel information for all to be profiled. The vendor then matches these names to publications in the SCOPUS database and performs any disambiguation (removing duplicate names, etc.). The vendor then associates sponsored awards with these individuals using data available through the UNC system's RAMSeS database. The campus then supplies course data and verifies intellectual property data obtained from SCOPUS. Once these initial datafeeds are complete, the campus then works to verify and, if necessary, correct the profiles with its faculty. These processes can move quickly once data is prepared and submitted to the vendor; NCSU and UNC Chapel Hill submitted data feeds in late March 2010, and initial profiles were available a month later and completed in September 2010. SCOPUS (publications) and RAMSeS (sponsored research) data feeds are refreshed automatically on a weekly basis. Campuses will provide or allow web services to access updated personnel, course, and IP data on a 2-3x/year schedule.

Roles of Project Collaborators

The REACH NC beta site was developed through the collaborative efforts of UNC General Administration, NC State, UNC Chapel Hill and the Renaissance Computing Institute (RENCI) and in partnership with Collexis (an Elsevier company). The NC Biotechnology Center, NC Partnership for Economic Development, and NC Department of Commerce, among many others, provided insights to the beta development as well as several use cases for future enhancements. Internal and external stakeholders must continue to advise us to maximize the development, use and impact of REACH NC.

Expected Outcomes

The primary outcome of this project will be the expansion of REACH NC statewide via the creation of expert profiles for faculty and key personnel at the following UNC institutions

- Appalachian State University (824 FTE)
- East Carolina University (1630 FTE)
- Elizabeth City State University (165 FTE)
- UNC Pembroke (293 FTE)
- Western Carolina University (325 FTE)

The creation of the profiles and expansion of REACH NC will result in short-term impacts (1-3 yr), including:

- Increased awareness of university expertise by local, regional and statewide stakeholders
- New collaborations in research, innovation, and community engagement
- Visibility of expertise portal to differentiate NC from other states competing for jobs

The creation of the profiles and expansion of REACH NC will result in long-term impacts (4-6 yr), including:

- Successful business retention and attraction cases aided by REACH NC data
- Increased sponsored research dollars and activity at the less research-extensive campuses located throughout the state

UNC General Administration will use the following criteria to evaluate and track progress towards completion of the campus profiles:

- Has each campus created the personnel file and submitted it to the vendor?
- Has the vendor created the initial profiles and completed the disambiguation process?
- Has each campus checked the number of profiles generated against its master personnel list?
- Has the web service document been updated pull data from RAMSeS into REACH NC from these five campuses?
- Has each campus created the course data file and submitted it to the vendor?
- Has each campus created the intellectual property file and submitted it to the vendor?
- Has each campus pursued and completed a comprehensive on-campus review strategy?

The most immediate and direct way that NC citizens and communities will realize economic benefit from this project is through the time-saving efficiencies they will realize from this comprehensive and real-time view of local and statewide expertise. New collaborations (academic-industry-government) that result from REACH NC data and insights are expected to aid in business retention and attraction and to bring new R&D dollars into the state.

Staff

UNC staff responsible for the coordination of this project include:

- Dr. Steven Leath, Vice President for Research. As vice president, Dr. Leath promotes research and sponsored programs across the full spectrum of academic disciplines and interdisciplinary activities carried out by UNC's sixteen university campuses. He helps advocate for increased levels of external support from federal, state, and private sources, and works closely with the Senior Vice President for Academic Affairs and campus research administrators to develop research and sponsored program activity in support of each campus's mission. Dr. Leath's role in implementation of REACH NC is to provide strategic direction and foster partnerships in support of the overall project.
- Dr. Courtney Thornton, Director of Research. As Research Director, Dr. Thornton works closely with the Vice President for Research to advance research and sponsored program activity across the sixteen university campuses. She is responsible for a number of coordination and strategic planning efforts with campus researchers and research administrators. Dr. Thornton's role in implementation of REACH NC is to coordinate various stakeholders in the project and ensure progress towards completion of project goals and milestones.
- Mr. Leslie Boney, Associate Vice President for Economic Development and Engagement. His duties include serving as key staff support to the President on economic development issues. He is principally responsible for conducting research and analysis in the support of the university's economic development strategy, for coordinating system-wide economic development initiatives with selected faculty and University personnel and for connecting this work to external constituencies. A primary role is to coordinate UNC's efforts to enhance entrepreneurship on campus and throughout the state. Mr. Boney's role in the implementation of REACH NC is to provide strategic direction and foster partnerships in support of the overall project, particularly towards the goal of impacting economic transformation in North Carolina.

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Project Timeline

February 15, 2011	Request the five campuses to prepare personnel data files.
March 15, 2011	Personnel data files submitted to Collexis on or before this date. Campuses prepare course and intellectual property files.
April 15, 2011	First pass of profiles released from Collexis to the campuses. Campuses check REACH NC profiles against master personnel list and work with Collexis to address any "missing persons."
April 15, 2011	Web service from RAMSeS updated and sent to Collexis.
May 15, 2011	Grant data included in profiles.
June 15, 2011	Course and intellectual property data included in profiles. Data entry phase considered complete.
July 2011	Campuses prepare data review strategy.
August 2011	Campuses conduct profile reviews with faculty and personnel.
September 2011	Public launch of completed and approved profiles.

Financial Statements

The following URL contains the Fiscal Year 2009 Certified Annual Financial Report for the State of North Carolina, which includes the University of North Carolina General Administration:

http://www.osc.nc.gov/financial/09_cafr/index.html

The FY10 state-appropriated base operational budget for UNC General Administration is \$11,061,043. These funds support salaries and all operational support, including utilities and physical plant. This will serve as the base continuation budget for the next year but is subject to reduction or increase by action of the NC General Assembly.