NC STATE UNIVERSITY

UNWAVERING COMMITMENT

Putting Our Strategic Plan to Work

Fall 2014

Excellence is no accident. It starts with a plan.

The plan to take NC State from good to great took shape in 2010. Members of the campus community joined forces to share new ideas, challenge conventional thinking and build consensus for action. "The Pathway to the Future: NC State's 2011-2020 Strategic Plan," the product of that process, sets ambitious goals for our institution and maps out a strategy for achieving them.



Under the visionary leadership of Chancellor Randy Woodson, we've committed our resources to meeting the following goals:

- Enhance the success of our students through educational innovation
- Enhance scholarship and research by investing in faculty and infrastructure
- Enhance interdisciplinary scholarship to address the grand challenges of society
- Enhance organizational excellence by creating a culture of constant improvement
- Enhance local and global engagement through focused strategic partnerships

In just three years we've made tremendous progress toward meeting these goals, propelled by the purposeful, innovative efforts of our students, faculty and staff, and supported by our alumni, donors, partners and friends.

In this report, we're pleased to share more about how we're creating economic, societal and intellectual prosperity throughout North Carolina, across the country and around the world. We still have more work to do, but an unprecedented momentum carries us forward.

Student Success

NC State's first priority is to enhance student success through educational innovation. An NC State degree must prepare students to tackle society's grand challenges, lead the fields of today and create the jobs of tomorrow.

RAISING THE BAR

Our 2020 enrollment plan — which aims to improve the academic caliber of our students and to raise retention and graduation rates — is already garnering impressive results. By slowing the growth of undergraduate enrollment, we've been able to strengthen the quality of our programs while attracting high-performing students. In fact, the last two classes of freshmen have been the academically strongest in university history, with average SAT scores above 1240 and weighted GPAs above 4.4. This year, more than half of our freshman undergraduates ranked in the top 10 percent of their high school class.

Metric	Baseline	Current	2020 Goal
Undergraduate headcount	25,246	24,473 🔻	25,713
Graduate headcount	9,130	9,516 🔺	11,287
Mean freshman SAT	1186	1248 🔺	1275
Freshman top 10% of class	41.8%	51.4%	55%
% students female	45%	44% V	≈ 50%
% students underrepresented minorities	17%	16% 🔻	Increase
Undergraduate first-year retention	89%	93% 🔺	94%
Undergraduate six-year graduation rate	72%	75%	80%
Master's student completion rate (four years)	83.0%	86.4%	88%
Doctoral student completion rate (six years)	54.9%	59.7%	60%
Alumni survey (excellent or good): How well prepared were you for graduate/professional school?	83.2%	88.7%	90%
Alumni survey (excellent or good): How well prepared were you for your first full-time permanent position?	77.4%	78.7%	85%
Associate degrees	126	143 🔺	140
Bachelor's degrees	5,175	5,535 🔺	5,800
Master's degrees	2,080	2,455 🔺	2,500
Doctoral degrees	395	494 🔺	540
DVM degrees	77	81 🔺	100

KEEPING STUDENTS ON TRACK

We've also taken steps to make it easier for undergraduate students to succeed. We created an online enrollment wizard that helps students find the classes they need in fewer clicks. Our new online advising dashboard helps advisers monitor and support students' academic progress, part of an intensive advising system that keeps students on course for graduation. And we've improved the change-of-degree process to reduce delays and frustration.

Learning has never been limited to the classroom at NC State. We've become a national leader in experiential education, including internships, co-ops, study-abroad programs and world-leading undergraduate research. These high-impact educational opportunities are proven to raise GPAs and increase student retention, and they're essential in making graduates ready for their careers.



CHANGING THE CLASSROOM

Our pioneering educational innovations are improving the student experience — and not just at NC State. The SCALE-UP approach to large-enrollment courses, pioneered by Dr. Robert Beichner in NC State's Department of Physics, has been adopted by more than 50 colleges and universities across the country. Outside the classroom, more students than ever learn where they live at NC State's 14 Living and Learning Villages, each one a tight-knit community of like-minded peers. We're also making distance education more accessible and affordable.

Right: Students work together in an innovative SCALE-UP class. *Below:* With Park, Goldwater and Astronaut scholarships to her name, Mia de los Reyes is living proof of the progress we're making to attract outstanding undergraduates.







ALL-TIME HIGHS

This fall, our first-year retention rate rose to an all-time high:



Our six-year graduation rate has also risen to an all-time high:



SECURING SUCCESS

Taken together, our efforts are keeping students at NC State and putting them on the fast track to success. This fall, our first-year retention rate rose to an all-time high of 93 percent. Our six-year graduation rate has climbed to 75 percent — another all-time high.

Reducing time to graduation frees us to serve more students and award more degrees. Last year, the totals for bachelor's, master's and doctoral degrees awarded stood close to our goals for 2020. More than ever, NC State is producing the successful students who will help secure the prosperity of our state and nation.



Interdisciplinary Scholarship and Research

As a land-grant institution and pre-eminent research enterprise, NC State confronts complex, sprawling problems. Thus, our second and third strategic planning goals are intertwined: to enhance scholarship and research by investing in faculty and infrastructure, and to enhance interdisciplinary scholarship that addresses those grand societal challenges.

Metric	Baseline	Current	2020 Goal
Tenured/tenure-track faculty (FTE)	1,343	1,343	1,700
% tenured/tenure-track faculty female (headcount)	25%	29%	Increase
% tenured/tenure-track faculty underrepresented minorities (headcount)	16%	18% 🔺	Increase
Non-tenure-track faculty (FTE)	562	582 🔺	530-580
% non-tenure-track faculty female (headcount)	47%	47%	≈ 50%
% non-tenure-track faculty underrepresented minorities (headcount)	10%	9% ▼	Increase
Postdoctorate scholars (headcount)	231	490 🔺	400
Total research expenditures (in thousands)	\$378,154	\$417,468	\$575,000
Federal research expenditures (in thousands)	\$155,293	\$177,118 🔺	\$250,000
Nonfederal research expenditures (in thousands)	\$222,861	\$240,350 A	\$325,000
Total research expenditures per tenured/tenure-track faculty	\$282,000	\$314,000 🔺	\$338,000
Federal research expenditures per tenured/tenure-track faculty	\$116,000	\$133,000 🔺	\$147,000
Nonfederal research expenditures per tenured/tenure-track faculty	\$166,000	\$181,000 🔺	\$191,000

RECORD-BREAKING RESEARCH

In a time of flat or decreasing funding for all aspects of higher education, NC State is setting records for externally sponsored research, surpassing \$300 million for the first time ever last year. That figure does not include \$140 million in funding from the U.S. Department of Energy for a new national manufacturing innovation institute or \$25 million from the National Nuclear Security Administration to combat the spread of nuclear weapons. Even so, this year's federal funding stands just shy of our all-time record of \$235.1 million, set in 2012.



NATIONAL RESEARCH HUBS

Our success at leading public-private partnerships has made NC State a "hub for hubs," which helps entrepreneurial faculty secure the resources they need. We've also made extensive policy changes to aid faculty in everything from proposal development to key technology acquisitions. It's now easier than ever to tap extramural support at NC State, and our research enterprise is stronger for it.

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STRONGER FACULTY

With the launch of the University Faculty Scholars Program in 2012, we've also begun providing direct funding to some of our most talented researchers and teachers. So far, 44 faculty members have received a five-year annual supplement of \$10,000, raised from private funding sources, that can be used either for salary or for programmatic support. This effort has helped us retain some of our best and brightest young faculty members.

SMARTER SOLUTIONS

The new College of Sciences is exemplary of our interdisciplinary approach. By combining our historical strengths in the biological, physical and mathematical sciences in one college, we've made it easier for faculty to pursue collaborative research on everything from energy shortages to food insecurity. This "convergence science" has made NC State a national leader in addressing large-scale challenges. It's also given us an edge when competing for big research grants.

One of our most successful efforts to boost interdisciplinary scholarship and research has been the Chancellor's Faculty Excellence Program. To date, we've hired 35 world-class faculty across 12 interdisciplinary fields, from forensic sciences to bioinformatics. Those outstanding researchers are raising the bar for the rest of NC State's excellent faculty—and raising the profile of our university around the globe.

We're now held up nationally as a model for cluster hiring.

Because the world's biggest problems don't fit neatly into traditional academic boundaries, we're also recognizing the value of interdisciplinary work in tenure decisions.

In fields from forensic sciences to bioinformatics, NC State faculty work in clusters to attack problems from every angle.



Organizational Excellence and Constant Improvement

When we developed "The Pathway to the Future," the United States was still in the grip of a severe economic downturn. To weather that financial storm and emerge stronger than ever, we had to build on existing strengths to create a culture of organizational excellence and constant improvement. Now we're using our resources more efficiently, tapping new sources of support and making our campus one of the most innovative in the nation.



CLEARER, SIMPLER, STREAMLINED

We've overhauled key administrative units to make our organizational structure more efficient. The most visible of those changes was the consolidation of our academic and student services into the new Division of Academic and Student Affairs. We realigned our efforts in extension, engagement and economic development, and we reorganized the units that promote diversity among faculty, staff and students. We've also created a centralized Onboarding Center to ensure that every new employee starts on the right foot.

In addition, we've improved our budgeting process by building in more transparency and developing incentives to encourage innovation and efficient use of resources. We've adopted systems to constantly review academic programs, policies and regulations to make sure we're following best practices. In our Office of Institutional Research and Planning, we have a robust hub for the data-driven approach to decision-making that informs the present and shapes the future.

Left: The renovation of the Talley Student Union has created a thriving hub for our campus community. *Below*: We take the same focused, relentless approach to organizational excellence that our students and faculty take to research.



OUTSTANDING SUPPORT

While we've focused on managing existing resources more efficiently, we've also found and tapped new sources of support. As a result, we've witnessed the university's two best years ever in fundraising, and the generosity of our friends and alumni has pushed our endowment to nearly \$900 million, 76 percent above its 2010 level. Likewise, external support for our research has never been higher. In the 2014 fiscal year, faculty research drew more than \$300 million in outside support, including a record \$35.8 million in industry funding and \$234 million in federal support.

Metric	Baseline	Current	2020 Goal
Education and related expense per degree	\$63,905	\$59,408 ▼	Decrease as appropriate
Annual giving	\$95M	\$117M 🔺	\$200M
Endowment	\$618M	\$885M 🔺	\$1,206M





BREAKING NEW GROUND

We're combining new private resources with funding from traditional sources to make smart investments. In the last three years, we've opened the James B. Hunt Jr. Library — the most innovative library in the world, as Chancellor Woodson calls it — along with new housing and dining options on Centennial Campus and a new Talley Student Union that functions as the heart of student life on campus. These new facilities are helping us compete nationally and internationally for top students, faculty, staff and partners.



Local and Global Engagement

In the interconnected world of the 21st century, NC State's land-grant mission does not stop at North Carolina's borders. To confront society's grand challenges we must form wide-ranging partnerships that meet local needs all over the world.

LEADING THE PACK

As the only university leading two active National Science Foundation Engineering Research Centers, NC State is well-known for collaborating with major partners to pursue cutting-edge research. That reputation was cemented this year when the U.S. Department of Energy called on our university to lead a \$140 million next-generation manufacturing institute, PowerAmerica. NC State is working alongside 25 sector leaders — from Durham-based Cree to Japanese giant Toshiba — to drive the development of more energy-efficient devices.



AMERICAN JOBS





GRANT

from the National Nuclear Security

Administration

\$60 Million

ADVANCED BIG-DATA ANALYSIS

LABORATORY

for the National Security Agency

THE PARTNER OF CHOICE

NC State is a leading member of other major federal partnerships. In 2013, the National Security Agency selected us to helm a \$60 million advanced big-data analysis laboratory that will bring new jobs and industry partners to the Research Triangle. NC State also was chosen to house the Southeast Regional Climate Hub, one of seven regional research centers working on behalf of the U.S. Department of Agriculture to help farmers and forest landowners adapt to our changing climate. And this year we beat out 22 other proposals to secure a \$25 million grant from the National Nuclear Security Administration. NC State will now lead the effort to develop the next generation of tools, technology and talent in the field of nuclear nonproliferation.

KICK-STARTING THE ECONOMY

We're building on our leadership position in private-sector partnerships, too. In 2012, Fortune 500 firm Eastman Chemical inked a six-year, \$10 million collaborative research agreement with NC State. Since then, the company has sponsored more than 30 projects across campus that allow high-performing students to work alongside world-leading researchers.

Eastman is just one of the more than 60 industry, government and nonprofit partners that have found a home on our Centennial Campus. In the past year, two other top companies, LexisNexis and Switzerland-based ABB, have also announced plans to move or expand their operations there. NC State has become a bustling center for entrepreneurship that nurtures local economies and sends new ideas and products to market. In 2014, we received \$7.5 million in royalties, an all-time high. That success is built on increasing numbers of patents, commercialization agreements and startup or spinoff companies.

Metric	Baseline	Current	2020 Goal
Commercialization agreements	90	145 🔺	Increase
Startup Companies	6	10 🔺	Increase



Metric	Baseline	Current	2020 Goal
No. of students in study abroad	1,087	1,180 🔺	2,000
No. of co-op work rotations	884	1,221 🔺	1,300
No. of students participating in co-ops	692	906 🔺	1,000

GLOBALLY ENGAGED

These extensive partnerships also support our teaching mission by giving NC State students unparalleled access to research opportunities. We've increased our co-op rotations with industry as well as the number of students taking those spots. When the companies we do business with are recruiting, they know there's a ready pool of talent at NC State.

Our reputation is also attracting more international students especially the outstanding graduate students who can make an immediate impact on our research. In turn, we're sending more of our domestic students to study abroad. Thanks to an increased focus on global engagement, NC State now maintains a network of 20 strategically selected partnerships in crucial world regions. We're already receiving recognition for those efforts: In 2014, we were one of just four universities in the country to receive the Senator Paul Simon Award for Comprehensive Internationalization.

NC State is revitalizing local economies, leading national initiatives and connecting with partners and peers around the globe. We're creating prosperity for all.

As our strategic plan reshapes NC State, its effects ripple out into the world with every new graduate, every research paper published, every partnership launched.

The metrics in this report show some of our progress toward making this university the pre-eminent research enterprise, but they're not the only evidence of that momentum. Over the last year, we've again won national acclaim as one of the best values in higher education, a leader in diversity and the home to fast-rising programs in veterinary medicine, engineering, business and other fields. We're climbing up the *U.S. News & World Report* rankings, too, breaking the top 100 on the 2015 list.

We've made a strong start, but there is still significant work to do. Chancellor Randy Woodson and his leadership team are setting the course for that work over the next three years.

We'll focus on continuing to create a culture of interdisciplinarity. As part of that effort, we'll be creating new faculty clusters and offering financial support for research and engagement that crosses disciplines.

We're going to make NC State a more diverse place by working harder to recruit a critical mass of diverse faculty, students and staff.

We're going to create new admissions pathways to attract the best students, whether they're traditional recent high-school graduates or transfer students from other institutions.

We're going to continue streamlining services and improving efficiency on campus.

We're going to keep building public-private partnerships that take on global challenges and solve them.

We'll do all that and more with the "Think and Do" spirit that has already brought us so far. "Our momentum at NC State has never been stronger."

— Chancellor Randy Woodson

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NC State University promotes equal opportunity and prohibits discrimination and harassment based upon one's age, color, disability, gender identity, genetic information, national origin, race, religion, sex (including pregnancy), sexual orientation and veteran status. 15-UCOM-4483