

# Leveraging Partnerships to Advance Engagement Task Force White Paper

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## **Introduction**

Executive Vice Chancellor and Provost Warwick Arden presided at the November 18, 2019 “NC State Engagement: Moving from Good to Great” event hosted by the Institute for Emerging Issues at the James B. Hunt Jr. Library. The occasion celebrated NC State University’s national recognition at the Association of Public Land-grant Universities (APLU) annual meeting in San Diego, CA earlier that month, at which NC State Chancellor Randy Woodson and Vice Chancellor Kevin Howell officially accepted the Innovation and Economic Prosperity (IEP) Economic Engagement Connections award.

The attainment of this national accolade validates the assertion that our land-grant institution is a best practice, engaged, partnership-driven institution. However, cognizant of the formidable challenges that confront our state, nation and world amidst a global pandemic, we have intentionally elected to incorporate this reality - and other challenges and opportunities - into this white paper report and our attendant recommendations for the 2021-2030 Strategic Plan.

NC State University should work to be recognized locally, nationally and globally as the best university with which to partner. Effective partnerships are central to the success of a 21<sup>st</sup> century land-grant university. They enable NC State to enhance its positive impact on the state, nation and the world to maximize its positive impact on society locally and globally, and ultimately enable our number one priority: student success.

At the heart of the success of any enterprise is the quality of its relationships. For the purpose of this report, the Task Force defined partnership as:

***A cooperative relationship between people or groups who agree to share responsibility for achieving some specific goal(s)***

A successful partnership becomes a catalyst for each partner to grow its own impact and in turn - as UNC System President and NC State alumnus William Friday stated - grow economic and societal well-being. NC State has more than 200 major partnerships that exist in more than 50 countries across the globe. Our university is home to more than 70 world class centers and institutes. More than 1,000 NC State faculty are members of these institutes and centers that work on interdisciplinary projects leading to new educational programs and discoveries. When combined with our depth of expertise in design, engineering, and social, physical and biological sciences, we are positioned to collaborate like never before to find unified solutions to the global challenges of society and the environment.

Centennial Campus is home to 75 corporate, government and non-profit partners and our university ranks 2<sup>nd</sup> and 7<sup>th</sup> in industrial funding and R&D expenditures, respectively, among public universities without a medical school. As the university embarks on a new strategic plan, it is imperative to prioritize educational, research and engagement programs that provide the NC State community with the best opportunities to translate their educational, research and professional development activities into graduate employability and success in competitive fields.

The Task Force recognizes that research partnerships are fundamental to our success, yet our partnerships span more than research and scholarship. It also recognizes that thousands of important partnerships exist across the enterprise, between students, staff and faculty members, local community members, alumni, start-up companies and entrepreneurs, multinational corporations, other universities, government agencies, and many more. For the purposes of this report, the Task Force focused mostly on those institutional-level partnerships that - with focused investment - will power the university forward in reputation and positive impact to the greatest extent. In this regard, the following themes and initiatives are recommended.

## **Task Force Approach**

The Task Force met six times, conducted a Strengths, Weaknesses, Opportunities and Threats analysis (found [here](#)), and then met many more times as sub-groups with defined tasks.

Important stakeholder groups such as the Board of Visitors and Industry Liaisons Working Group were consulted and provided valuable input. A survey was developed and sent to more than 5,000 NC State students and approximately 300 staff and faculty, as well as key external partners. The results were reviewed and key feedback incorporated into this white paper.

Results from the survey can be found [here](#). Minutes of meetings can be found [here](#). More detailed information is linked throughout this white paper.

## **Proposed Key Themes and Initiatives**

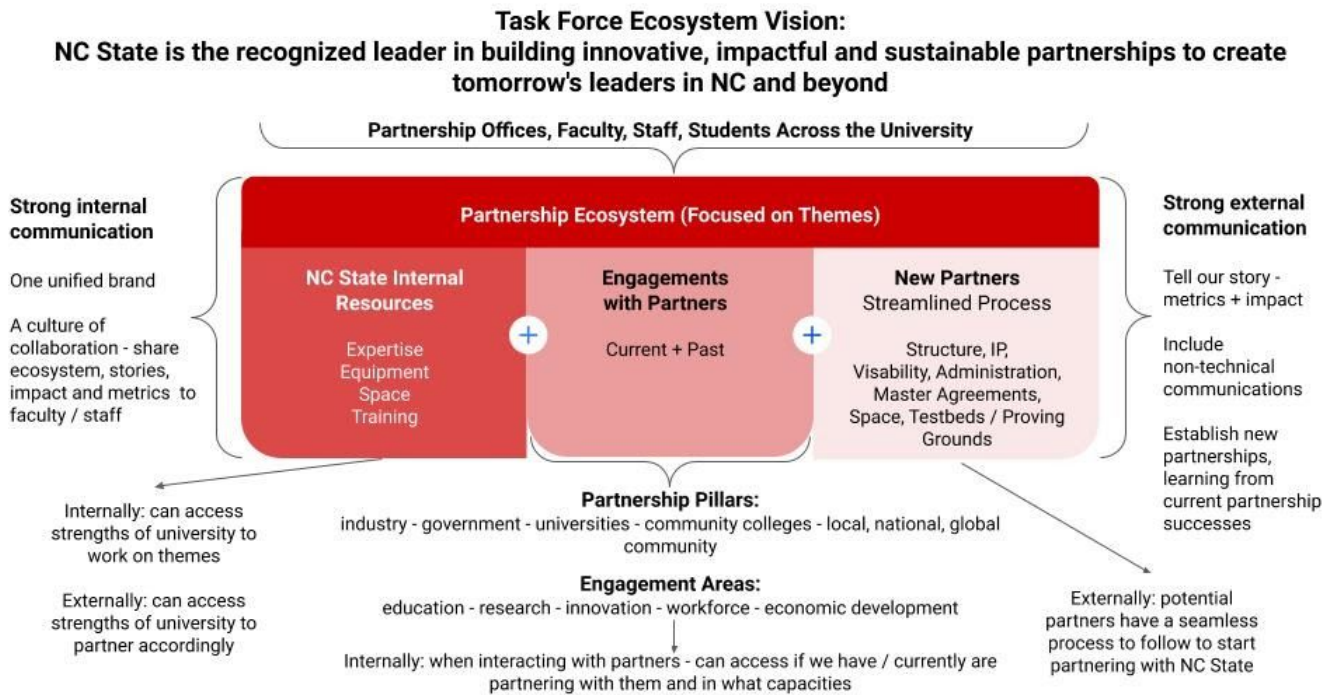
The Task Force recommends that the next strategic plan for NC State focuses resources on those partnerships that advance the following, as well as consider the strategic research [areas](#) previously developed by the Office of Research and Innovation.

### **Key Initiative: Strengthening NC State's Partnership Ecosystem**

An initiative to establish a world-leading, enhanced ecosystem is proposed; one that encompasses and capitalizes on NC State's hybrid centralized / decentralized model, leverages and expands its existing strengths that have been built with high impact during the current strategic plan, including the Centennial Campus Partnerships Office and Industry Alliances, Office of Global Engagement, our shared facilities (e.g., METRIC and the Analytical Instrumentation Facility), NC State Libraries, Office of Research Commercialization, University Advancement, University Communications, DELTA, interdisciplinary centers and institutes, the Wolpack Investor Network, entrepreneurship programs, real estate, and more. The ecosystem concept is conveyed in Figure 1. To take NC State to the next level in reputation and rankings would necessarily include:

- additional staff and faculty (see HR barrier below)
- provision of additional dedicated and flexible space, shared facilities, and physical infrastructure, to serve institutional partners as well as entrepreneurs and start-up companies
- improved online dashboard and clearinghouse for internal and external stakeholders, including databases of resources available

The ecosystem would engage undergraduate and graduate students from their first year through graduation and as alumni throughout their lives. We envision an ecosystem that truly supports life-long learning, impactful and creative knowledge generation and service to our local and global communities in ways that establish a new vision for what it means to be a land-grant university.



**Figure 1.** Proposed enhanced partnership ecosystem model.

Embedded within this enhanced ecosystem model should be focused themes around which our resources are aligned. The following themes and initiatives are proposed:

- A resilient and accessible educational ecosystem through partnerships:** Access to affordable and exceptional quality education throughout one's life is arguably one of the greatest drivers for advancing a thriving society and building a sustainable world. Building a resilient educational ecosystem through innovative partnerships that enable the removal of barriers to access to quality education for all the citizens of North Carolina, in particular, is an imperative for our great state's land-grant university. In addition, providing access to highly talented people from all over the world only serves to strengthen our community and lift NC State high in terms of our global reputation and

impact on economic and societal vitality. Partnership initiatives are proposed that create pathways to access for diverse students from underserved communities, students with financial need and students who are first generation college attendees, including:

- strengthened partnerships with North Carolina's 58 outstanding community colleges
- a fundraising strategy - including stronger corporate and foundation development resources - to support undergraduate scholarships, graduate fellowships, and infrastructure support, for need-based, first generation and rural students
- building partnerships around high value added but non-monetary partner support, such as mentorship, networking, internship and career development programs
- building and strengthening focused partnerships with high ranking universities and premier research institutions across the nation and internationally.

Education is life long, especially to be able to capitalize on opportunities that emerge within rapidly changing employment markets and our knowledge economy. Partnership initiatives are recommended for building comprehensive online and in-person credentialing, certificates, badges and other innovative ways to provide learning, not just over four years, but throughout the lives of our alumni and other professionals and institutional partners. Additional information and proposed initiatives are provided [here](#).

- **Sustainable Development:** the United Nations 17 [Sustainable Development Goals](#) (UNSDGs), see Figure 2 below, are a “blueprint to achieve a better and more sustainable future for all.” The Task Force recommends initiatives that adopt some or even all of the UNSDGs as part of its next strategic plan. NC State is well-positioned to advance the state of North Carolina and the world especially effectively in Zero Hunger (goal 2), Good Health and Well-Being (3), Quality Education (4), Equity (5 and 10), Clean Water and Sanitation (6), Affordable and Clean Energy (7), Industry, Innovation and Infrastructure (9), Sustainable Cities and Communities (11), Climate Action (13), and Life Under Water and on Land (14 and 15). Additional information is available [here](#).



**Figure 2.** The United Nations Sustainable Development Goals

- Global Health:** health and well-being are fundamental underpinnings for any society to thrive. The ongoing events of the pandemic due to COVID-19 only serve to underscore the fragility of our economic system and society at large when health and well-being is undermined. NC State’s current strategic plan has advanced our global health standing in the past decade. A key initiative is recommended that substantially builds on this progress by establishing a strengthened university-wide global health program that adds staff, faculty and infrastructure. NC State, with its strength in STEAM education, research and community engagement at the local, national and global level, is uniquely placed to be a leader in the global health arena. Such a program will support the discovery of knowledge, the development of lifelong learners, and engagement that results in a positive impact worldwide. All the colleges within NC State have a global health/engagement program that already exists and is tailored towards their own faculty and students needs. A unified global health program will break silos and create an interdisciplinary program that will unite our efforts and become a world leader. The program should build focused external partnerships that win major funding; it should span all colleges and be flexible and dynamic, capable of addressing the major global health challenges affecting humans, animals and the environment through education, research and engagement. Additional information is available [here](#).

- **Innovation and Commercialization:** NC State is renowned for its innovation and commercialization ecosystem, especially Centennial Campus and the Biomedical Campus, in large part owing to the tremendous successes of the current Pathway to the Future Strategic Plan in this realm and the various offices dedicated to support this part of NC State's strategy, such as the Office of Research and Innovation and the Centennial Campus Partnerships and Industry Alliances Office. Following the Task Force's outreach to the community and our stakeholders, particularly noteworthy are the strides the university has made in managing intellectual property with industry partners.

Our university is in the top 10 nationally for almost all innovation metrics (start-ups, patents, licensing, etc). Partnerships with industry, in particular, are a driver for our impact. NC State has an opportunity to build on this national reputation by becoming an international powerhouse of economic development and vitality that draws investment into North Carolina. An initiative is proposed that expands the Centennial Campus Partnerships and Industry Alliance Office across the university such that it enables even broader and deeper relationships. In particular, additional personnel and space are required both centrally and within each college and other units for building and strengthening institutional partnerships (see Central Challenges and Barriers section below). Additional information is available [here](#).

- **Technology and Digital Analytics:** the future of higher education and in fact the quality of everyone's lives increasingly depends on digital technology to meet the grand challenges of society. Initiatives are proposed that position NC State as a key partner in providing knowledge generation, thought leadership and is a driver in advancing society through digital technologies and analytics, including robotics, smart devices and materials, software and information systems and life-long learning. Proposed initiatives include:
  - Integrate efforts around campus into organized units, such as new consortia and institutes, that enable facile access to community and industry. One institute currently in development is the Pacific Northwest National Laboratory-NC State Data Science Institute, which is similar to the National Security Agency partnerships with NC State that led to the current Laboratory for Analytical Sciences. The new institute will focus on the areas of data science, social media

analytics, data and information management, modeling and simulation, visual analytics, high-performance computing, and cyber situational awareness. New opportunities for establishing institutes would include technologies for health, Internet of Things, and smart farming.

- Leverage the Data Science Initiative (DSI) to expand awareness and industry partnerships, by establishing a formal new institute. Data science has a long history at NC State with one of the nation's oldest, largest and most prestigious statistics departments in the United States, and with successful companies like SAS, Inc.
- Create formalized seminars, lectures and workshops for training the workforce and disseminating latest research findings in digital analytics and technology
- Create a formal industry mentorship program around themes that support student development and success. Involve these external partners in student committees

Additional proposed concepts and information are available [here](#).

### **The Central Challenges and Barriers to Advancing Our Partnerships**

The following challenges have been identified:

- **Recognition:** 42% of respondents to our survey indicated they received no or minimal credit for building partnerships. New approaches are needed to incentivize and meaningfully recognize the significant work required in establishing and growing partnerships, whether localized or across the institution. Initiatives could include:
  - awards ceremonies
  - modifications to annual review criteria, job duties, and faculty Statements of Faculty Responsibility
  - Incentivize efforts that lead to new meaningful partnerships for joint mentoring, collaborative research for faculty and educational opportunities for our students.
- **Human resources:** NC State's partnerships offices are understaffed relative to the size of the enterprise, the number of partnerships and the potential growth. Even modest investment could yield major dividends for the university and the state. Initiatives are proposed that include:



- additional resources for full and partial FTE personnel that reside centrally and within colleges and other units whose expertise and passion is in building and continuously strengthening partnerships to support the themes listed above.
  - additional collaborative space that makes partnering as easy as possible and differentiates NC State from its top peers in the eyes of key partners.
- **Communications:** with a hybrid centralized-decentralized structure - especially in terms of faculty research and many educational programs, communicating opportunities and achievements resulting from new or existing partnerships is a barrier to progress.

Proposed are :

- An internal communications plan to raise the profile even further of leaders who build new and strengthen existing partnerships, as well as highlight student engagement and development through partnerships
- An external communications plan that partners would value, promoting both their and NC State's values, goals and impacts. Strengthened media communications would, in turn, strengthen the university's major partnerships, help increase our rankings and build the NC State local, national and global brand.

The internal communications plan would allow for engaging with students at all levels, making partnerships central to the global cultural competence, technical development, leadership development and overall graduate employability and success of our students.

- **Collaborative Spaces:** There was an overwhelming sentiment from survey respondents about the importance for NC State to have both physical spaces as well as virtual places that would be conducive to collaboration, industry and community engagement, enhancing research, enabling short-term visits by research scholars or industry partners as well as bringing together students, faculty and staff. While NC State currently has unique and sophisticated spaces such as the Hunt Library, the eGarage, and expanding developments on Centennial Campus - all due to the Pathway to the Future Strategic Plan - we have an opportunity and need for new multipurpose and flexible spaces that further augment our partnership services and support. Some recurring themes include: spaces that are "accessible or shared," "multipurpose or flexible," "living and working," to promote interdisciplinary collaboration, community and industry engagement as well as research and scholarship. NC State should match our peers in offering affordable,

modern, clean and safe housing for partners who are visiting for up to a four-month period.

Another dimension, even while physical spaces on campus and virtual places to connect are increasingly important in the current environment, is to leverage the existing extension sites across the 100 counties in our state as well as locations in downtown Raleigh and the Research Triangle Park. As collaboration is truly global, we can work with overseas partner universities to establish new hubs (e.g. like NC State Prague) that would enable academic, research, training, alumni and industry engagement. The university Global Engagement Institute that consists of faculty from different colleges, and runs out of the Office of Global Engagement, can help in identifying these hubs. Leveraging the spaces of our strongest international university partners (perhaps by renting space on or near their campuses) could also be a means for expanding NC State's global footprint in a cost-effective and impactful way.

- **Partnerships Data and Metrics:** With a significantly decentralized organizational structure in some areas, collating, compiling and maintaining data on partnerships is a barrier to:
  - communicating our impact
  - understanding the diversity of talent and impact
  - positively influencing our rankings by joint publications, collaborative grants and co-mentoring students
  - recognizing excellence internally and externally
  - translating a unit-level partnership into a more impactful, university-wide one
  - building new relationships and partnerships across the globe

An initiative is proposed that provides resources for an enhanced central database of current partnerships and their activities; clear metrics for success, goals and achievements; engagement with students; and the talent and infrastructure available at NC State.

- **Bridging the Centralized / Decentralized University System via a Strengthened Partnership Ecosystem:** one of the strengths of NC State is its entrepreneurial spirit and empowerment of staff and faculty to develop their own interdisciplinary partnerships and programs. This empowerment can also be a barrier to institution-level partnership growth as communication flow and collating data and metrics may be inefficient. Breaking down barriers to collaboration, enhancing data sharing and metrics and communications are key to taking our partnerships to a new level of impact.

The process and primary outcomes of this Task Force have highlighted the leveraged impact that our strong partnerships have had on our state, nation and the world during the period of the Pathway to the Future Strategic Plan. The Task Force looks forward to the implementation of the next strategic plan through which we can build on our progress with partnerships of the last decade to forge an even higher trajectory and velocity in our impact, relevance, reputation, and support for the success of our increasingly diverse student body. What's past is prologue.

### **Acknowledgements**

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