# Research Shaping What's Next: UNC Charlotte's Research Strategic Plan 2022-2032 (RSWN)





MESSAGE FROM CHANCELLOR SHARON L. GABER AND VICE CHANCELLOR OF RESEARCH JOHN DANIELS



# Dear Niver Nation,

We are excited to present Research Shaping What's Next: UNC Charlotte's Research Strategic Plan 2022-2032 (RSWN). This plan outlines our path to becoming a world-class research university. Shaping What's Next: UNC Charlotte Strategic Plan 2021-2031 (SWN) set a bold vision for this University's future, focusing on student education, research prominence, urban research identity and campus culture. Together, we have made significant progress in all areas in just a few years. In the research realm, North Carolina has designated UNC Charlotte as the state's urban research university, and The Chronicle of Higher Education has reported our expected classification as a Research 1 (R1) institution in early 2025. This research strategic plan builds on SWN and the momentum it has created to outline exciting new directions to elevate UNC Charlotte's research success and reputation to world-class levels.

This strategic research plan envisions UNC Charlotte as a unique, world-class research university. We aim to intertwine research and student success in an access institution, growing in stature alongside the Charlotte region. Collectively, we will forge a future that leverages the power of multi-sector partnerships for economic development, social mobility, community and quality of life. This plan is shaped by feedback from nearly 4,000 engagement opportunities with campus community members and external partners (see RSWN Development Process for more details). It affirms our commitment to research in all its forms, including scholarly inquiry, discovery, exploration, innovation, entrepreneurship, creative activities, community engagement and interdisciplinary endeavors. The plan delivers on this commitment through three thrusts: acceleration of research and innovation, culture and research operational excellence:

- Accelerating research excellence, expanding interdisciplinary directions, growing purposeful partnerships and amplifying visibility and philanthropic engagement.
- Fostering a vibrant research culture that enables UNC Charlotte to thrive as a world-class university and nurturing all researchers and research administration professionals so they can excel.
- Strengthening research operational excellence to meet the future needs of a research institution increasing in world-class status.

It's a living document detailing three critical areas of work, supported by goals, objectives and actions. It introduces the new Division of Research mission and vision statements that reflect the aspirations of the UNC Charlotte community. It will be updated at the five-year mark as a living document to ensure our vision remains achievable.

In closing, we extend our gratitude to all members of the UNC Charlotte community for their invaluable contributions to this plan. We are excited to shape what's next - together!

Sincerely,

Sharon L. Gaber, Chancellor

John L. Daniels
John L. Daniels, Vice Chancellor, Division of Research

# Mission

UNC Charlotte champions research in all its forms through robust partnerships, operational excellence, a vibrant culture and synergistic collaboration of students, staff and faculty.

# Vision

UNC Charlotte aspires to be a world-class research university that develops transformational solutions to society's greatest challenges with local-to-global impact through the power of partnerships and student access and success.





#### Goal A1.

Accelerate research<sup>1</sup> and innovation<sup>2</sup> to shape a better world.

#### **Objective A1.1.**

Elevate existing areas of excellence and expand in new, interdisciplinary directions to solve society's toughest challenges.

Action A1.1.1. Refine and enhance signature focus areas,<sup>3</sup> centers and innovation hubs.

Action A1.1.2. Expand interdisciplinary collaboration, team/convergence science,<sup>4</sup> community-engaged research and use-inspired<sup>5</sup> innovation.

Action A1.1.3. Prioritize strategic faculty<sup>6</sup> recruitment and retention to advance research focus areas and centers, focusing on attracting top researchers.

Action A1.1.4. Engage undergraduate and graduate students in research to foster student success.

#### **Objective A1.2.**

Recognize and promote multiple forms of research and innovation dissemination.

Action A1.2.1. Offer researchers support for strengthening contributions to established research dissemination outlets.

Action A1.2.2. Promote translational research<sup>7</sup> to inform policy and practice, entrepreneurial opportunities and commercialization of inventions.



#### Goal A2.

Initiate and grow partnerships with purpose.

#### **Objective A2.1.**

Position local, state and national partnerships at the heart of research and innovation.

Action A2.1.1. Center UNC Charlotte as a critical catalyst for place-based<sup>8</sup> research and innovation networks.

Action A2.1.2. Co-construct enduring relationships for collaboration between researchers and local and regional communities, federal, state and local governments, nonprofits and corporate entities.

#### Objective A2.2.

Grow international partnerships that advance research and innovation.

Action A2.3.1. Create and nurture international relationships into collaborative partnerships.

Action A2.3.2. Encourage internationally immersed research as an expression of interdisciplinarity.





## Goal A3.

Amplify the visibility and reputation of UNC Charlotte's research and innovation.

#### **Objective A3.1.**

Heighten regional, national and global visibility of UNC Charlotte's research and innovation.

Action A3.1.1. Develop and execute a research-specific communications plan with local to global messaging.

Action A3.1.2. Collaborate with other UNC Charlotte divisions and offices to magnify the University's distinctive urban research and innovation identity.

#### Objective A3.2.

Build support and engagement for UNC Charlotte's research and innovation with philanthropic, nonprofit, corporate and public entities.

Action A3.2.1. Shape a fundraising strategy in collaboration with the college deans. Action A3.2.2. Equip the University to bolster its financial base for partnerships, research, innovation and commercialization.



#### **AREA B**

# VALUES, **CULTURE AND EXCELLENCE**



## Goal B1.

Foster a thriving research and innovation culture that inspires excellence.

#### **Objective B1.1.**

Shape a research and innovation community where all feel connected.

Action B1.1.1. Listen to internal constituencies and audiences to identify needs and guide priorities.

Action B1.1.2. Place integrity and respect for all researchers and innovators, and their disciplinary and interdisciplinary pursuits and methodologies at the foundation of the research culture.

Action B1.1.3. Support colleges, departments and academic units in their research pursuits.

Action B1.1.4. Catalyze a university-wide growth mindset<sup>10</sup> that emphasizes creative interdisciplinarity, experimentation and innovative problem-solving to generate new, promising pursuits.

#### **Objective B1.2.**

Stimulate collaborative synergies between researchers and research administration professionals.

Action B1.2.1. Strengthen policies, practices and systems to promote a transparent and fair environment where everyone can achieve their goals.

Action B1.2.2. Assess and improve process challenges, finding collaborative solutions.

#### **Objective B1.3.**

Share and celebrate research and innovation achievements across disciplines and professions.

Action B1.3.1. Launch an internal university communications plan to provide information and showcase researchers and innovators.

Action B1.3.2. Celebrate and publicize diverse research and innovation achievements through campuswide awards and recognitions.







#### Goal B2.

Nurture all researchers and research administration professionals<sup>11</sup> so they can thrive and excel.

#### **Objective B2.1.**

Shape a research and innovation community where all feel connected.

Action B2.1.1. Integrate faculty across career stages and levels of research involvement into the University's vibrant research culture.

Action B2.1.2. Formalize and capture research expectations in faculty evaluation, promotion, workload, research capacity policies and reporting mechanisms in conjunction with Academic Affairs.

Action B2.1.3. Cultivate a supporting community for postdoctoral trainees and non-faculty researchers.

Action B2.1.4. Uplift researchers in less fundable disciplinary areas.

#### **Objective B2.2.**

Affirm research administration professionals' goals through career growth opportunities.

Action B2.2.1. Extend access to professional development, leadership, team-building and cross-training opportunities.

Action B2.2.2. Create professional pathways within the Division of Research.

#### Objective B2.3.

Broaden research participation and incubate a passion for discovery among undergraduate and graduate students.

Action B2.3.1. Provide high-integrity and quality experiences for all students.

Action B2.3.2. Increase the number of grant-funded graduate students.

#### **AREA C**

# RESEARCH **OPERATIONS** AND SUPPORT



#### Goal C1.

Center comprehensive training, exceptional support and diversified resources at the core of collaborative researcher-professional administration teams.

#### **Objective C1.1.**

Increase, enrich and communicate resources and training opportunities to enhance effectiveness.

Action C1.1.1. Develop a catalog of training offerings and searchable reference materials for researchers and innovators.

Action C1.1.2. Advance a supportive, comprehensive training and outreach strategy for compliance, safety, integrity and security.

#### **Objective C1.2.**

Cultivate collaboration and teamwork across Division units and with connected campus divisions and units.

Action C1.2.1. Improve communications by the Division of Research with researchers regarding progress status, decision points and challenges.

Action C1.2.2. Coordinate strategies with other partnership offices <sup>12</sup> across the campus to expedite operational efficiencies.



#### Goal C2.

Strengthen and streamline Division of Research lifecycle<sup>13</sup> operations.

#### **Objective C2.1.**

Design and operationalize comprehensive support for research and innovation.

Action C2.1.1. Realize a shared services model to streamline life-cycle operations and workflow efficiency with continuous process refinements.

Action C2.1.2. Promote the integration of systems and processes across the research innovation life-cycle.

Action C2.1.3. Utilize evidence-based approaches to optimize operations and workflow effectiveness.

Action C2.1.4. Increase avenues for translational research, intellectual property initiatives, entrepreneurship opportunities and licensing.



#### **Objective C2.2.**

Review and refine research-related policies.

Action C2.2.1. Augment policy guidance relating to research and innovation to ensure transparency and efficiency for participants, partners and the University. Action C2.2.2. Review, and where necessary, develop policies and guidance to address financial reporting requirements arising from the growth in grant dollars and economic complexity.

# **Objective C2.3.**

Furnish a robust, state-of-the-art environment for financial compliance, research compliance, integrity, safety and security.

Action C2.3.1. Confirm and assure financial compliance for all externally funded projects through sufficient personnel, technology, systems and financial resources. Action C2.3.2. Implement robust and state-of-the-art research compliance, integrity, safety and security programs through extensive participation and collaboration.







#### Goal C3.

Construct the operational foundations for the future needs of a growing research-innovation enterprise.

#### **Objective C3.1.**

Build out and diversify the University's grant and contract portfolio over the long term by increasing award types, sources and sizes.

Action C3.1.1. Attain progressively complex, large-scale awards from a broad portfolio of funding sources.

Action C3.1.2. Optimize processes for grant and contract pursuits that necessitate specialized clearances, encompassing security, regulatory and domain-specific requirements.

Action C3.1.3. Expand contracting and negotiating expertise and processes with industry partners.

#### **Objective C3.2.**

Generate and maintain effective and modern technology solutions and infrastructure to advance the research enterprise.

Action C3.2.1. Explore and strategically adopt generative artificial intelligence (AI) technologies, streamline administrative processes and stimulate operational efficiencies.

Action C3.2.2. Create decision-support dashboards with embedded predictive analytic capabilities to support prioritization and decision-making.

Action C3.2.3. Use financial forecasting and return-on-investment (ROI) analysis to guide wise, future-oriented investments in the research-innovation enterprise. Action C3.2.4. Align investments in infrastructure, equipment, instrumentation, library resources and services, University intellectual property and commercialization protection with research priorities, regional industry needs and future-oriented opportunities.

# **Objective C3.3.**

Anticipate future needs, opportunities and challenges in research administration.

Action C3.3.1. Monitor and address the evolving national trends in the research and innovation enterprise.

Action C3.3.2. Equip the Division of Research professionals with the skills and mindset needed for proactive, future-oriented planning and preparations.

Action C3.3.3. Produce succession and contingency plans for diverse organizational and financial scenarios to navigate and thrive in an evolving landscape proactively.



#### RSWN DEVELOPMENT PROCESS

Research Shaping What's Next: UNC Charlotte's Research Strategic Plan 2022-2032 (RSWN) sets a research vision for the entire campus community and builds on Shaping What's Next: UNC Charlotte Strategic Plan 2021-2031 (SWN) to outline the University's research aspirations. After SWN's release, the Chancellor tasked a newly created Division of Research and its new leadership with addressing UNC Charlotte's current and future needs. This required rethinking and updating SWN's directives and defining the type of research university UNC Charlotte aims to be in the context of its urban research identity. The new Division undertook two staffing surges to increase research operations capacity and address essential research security requirements. It also reorganized units, teams, and processes. It introduced new internal funding and recognition initiatives as a strong foundation for future growth.

The RSWN strategic planning process was a collaborative 16-month effort that incorporated input from nearly 4,000 engagement opportunities with campus community members and external partners through a survey and video conference sessions. The plan harmonizes elements of *SWN*, *Roadmap to Research Top Tier* (Fall 2021), Division of Research Strategic Plan (2022) and strategic plans of UNC Charlotte divisions and colleges with a contemporary realignment.

UNC Charlotte community members contributed to the planning process, including faculty, academic and administrative leaders, heads of centers and programs and students. A survey (April-May 2023) asked more than 3,000 community members (393 responses, 12.9% response rate) for input, eliciting 2,358 comments about advancing to top-tier research status. Key themes included establishing a research-oriented pipeline, fostering a 21st-century research and innovation culture and ensuring robust operations and infrastructure. In August-September 2023, 144 University community members contributed through listening sessions (31 groups and 10 individual, hour-long video conferences moderated by Dr. Sharon A. McDade, Greenwood Asher & Associates, facilitator for the strategic planning process). The participants shared their experiences with research and innovation. The survey and listening session input became the basis for initial drafts. In April-May 2024, approximately 301 individuals, including five external experts, participated in 37 video conferences and meetings to provide feedback on the draft, with 34 people giving follow-up emails with additional observations. Participants strongly supported the plan, endorsing embedded values and suggesting enhancements to advance research and innovation capacity. This plan shows four levels (three areas supported by goals, objectives and actions). The Division of Research maintains a deeper level of tactics, constituting a map of the work needed to accomplish each action. The tactics level, coordinated with many other units across the University, will always be "in development" as new approaches, resources and interpretations of goals warrant the articulation of new means of implementation.

This process also generated new mission and vision statements for research across the campus led by the Division of Research. These reflect the status and aspirations of UNC Charlotte community members regarding the University's research success. As a living document, the strategic plan will be updated at the five-year mark and revised to ensure the vision remains achievable.

#### **GLOSSARY OF TERMS**

**Research** is fundamental to the mission of UNC Charlotte. We value research in all its forms, including scholarly inquiry, discovery, exploration, innovation, entrepreneurship, creative activities, community engagement and/or interdisciplinary endeavors. The University of North Carolina at Charlotte. (n.d.). The Division of Research, About Us.

- <sup>2</sup> **Innovation** is a dynamic process in which new ideas turn into practical value in the world. U.S. National Science Foundation (NSF). (n.d.). Glossary. Innovation.
- <sup>3</sup> **Signature research areas** (also known as areas of excellence) are existing and emerging areas of research excellence with unique distinction and future opportunities. These are broad thematic areas where the University has achieved a national level of distinction; and areas where continued work, future investments and new resources will significantly advance our research reputation, raise the profile of our research and scholarly programs and accelerate our movement to top-tier research university status. The University of North Carolina at Charlotte. (2021). Shaping What's Next: Strategic Plan 2021-2031. Glossary.
- <sup>4</sup> **Team/convergence science/research** is driven by a specific and compelling problem, whether that problem arises from deep scientific questions or pressing societal needs. It intentionally brings together intellectually diverse researchers to develop effective ways of communicating across disciplines. As experts from different disciplines pursue a common research challenge, their knowledge, theories, methods, data and research communities increasingly intermingle. U.S. National Science Foundation (NSF). (n.d.). Learn about converged research: What is convergence research?
- <sup>5</sup> **Use-inspired research** is work whose rationale, conceptualization and directions are inspired by potential use cases. U.S. National Science Foundation (NSF). (n.d.). Glossary. <u>Use-inspired</u> research.
- <sup>6</sup> **Faculty**, for the purposes of research involvement, include tenure and tenure-track employees, and non-teaching employees and other people with research responsibilities with doctorate degrees.
- <sup>7</sup> Translation/translational/applied research is an approach to research that seeks to produce more meaningful, applicable results. This is fundamentally about bridging the gap between knowledge gained through research and the use of research results in policy and/or practice. U.S. National Science Foundation (NSF). (n.d.). Glossary. Translation.
- <sup>8</sup> Place-based refers to a general planning approach that focuses on geographical places as the pivotal starting point for planning and development, specifically within a geographic region or community. **Place-based innovation and growth** includes efforts to leverage a region's existing geography, resources, culture, civic organizations, research institutions, universities and industries to establish clusters of innovation, address community needs and spur regional economic development. U.S. National Science Foundation (NSF). (n.d.). Glossary. Place-based and Place-based innovation.
- 9 Researchers/research and innovators/innovation community includes all researchers and innovators, undergraduate and graduate students, postdoctoral trainees, research administration professionals and all people working in offices involved with and supporting UNC Charlotte research and innovation excellence.

- <sup>10</sup> **A growth mindset** refers to the belief that hard work, persistence and learning are what produce results. In organizations with a growth mindset, employees view their colleagues as collaborators rather than as competitors, leading to greater trust and commitment to the university. A growth-oriented environment encourages employees to ask questions, share ideas and avoid groupthink, which boosts morale. Universities with a growth mindset embrace change as exciting challenges, leading to greater agility and adaptability. Emeritus (n.d.) <u>How and why to develop a growth mindset in the workplace.</u>
  The term and concept of "growth mindset" comes from Dweck, C. (2006). <u>Mindset: The New Psychology of Success</u>. New York: Ballantine Books. For a research university, this also relates to an entrepreneurial mindset which enables an individual to create value by recognizing and acting on opportunities, making decisions with limited information and remaining adaptable and resilient in conditions that are often uncertain and complex. Daspit, JJ., Fox, CJ., & Findley, SK. (2023, February). <u>Entrepreneurial-Mindset-An-Integrated-Definition-A-Review-of-Current-Insights-and-Directions-for-Future-Research.pdf (researchgate.net</u>). Journal of Small Business Management, p. 7.
- <sup>11</sup> **Research administration professionals** include all administrative and support staff who enable the research-innovation process. Whether their work sites are in the Division of Research, academic units, libraries and resource centers or laboratories and research-innovation spaces, these people facilitate the many aspects of project and proposal development, proposal submission, award negotiation and acceptance, project administration, compliance, budget and finances, human resources and logistical support. The work of these people is essential for taking research and innovation ideas from inception to implementation by enabling researchers and innovators to focus their time and energy on their work. Based on Shaklee, T. <u>Research administration in the United States</u> in Kerridge, S., Poli, S. & Yang-Yoshihara, M. (Ed.) (2023). The Emerald Handbook of Research Management and Administration Around the World. Leeds, England: Emerald Publishing Limited, pp. 473-481.
- <sup>12</sup> **Partnership offices**, which are integral to Division operations but located in other institutional divisions, encompass a range of functions. These include human resource operations, travel management, purchasing, systems support, and creating and managing necessary forms and documentation.
- <sup>13</sup> **Life-cycle** refers to the circle of research and innovation development from idea generation to preaward (development of the project's plan); then through post-award (execution of the project) to award closeout (completion of a project's execution details); possibly into patenting, licensing and commercialization; and then to the generation of follow-up and new ideas that lead to a new research-innovation life cycle.
- <sup>14</sup> **Infrastructure** broadly includes all spaces that serve research and innovation. This includes research and innovation-oriented facilities serving all disciplines and professions, laboratories serving science, technology, and engineering, as well as the studios, stages and other venues utilized in the arts, design and performing arts. Infrastructure also includes support and informational technology systems.

