1. Motivation
An analysis of Norman Campus research expenditures during the past several years reveals a persistent trend of funding dominance by three Federal agencies: NSF, NIH, and the US Department of Commerce (principally weather and climate-related activities). This pattern reflects support of (a) traditional research grants whereby principal investigators submit solicited or unsolicited proposals in search of funding for their own original ideas, and (b) a highly successful academic-government partnership with the National Oceanic and Atmospheric Administration (NOAA). Similarly, a persistent trend of relatively small amounts of funding is evidenced from DOD, and even smaller amounts from other Federal mission agencies including DHS, CIA, NASA, DOE, FAA and DOI. Taken together, these data indicate that the Norman Campus research portfolio could be more effectively balanced – and opportunities for faculty increased – among Federal agency sources as well as programs involving private industry, relative to faculty research areas and institutional strengths. They likewise suggest that basic research, which is the cornerstone of a comprehensive research university, should be complemented by capabilities in applied research and development via support of grants and contracts from mission agencies. Comparisons with institutional peers show that the Norman Campus is somewhat of an anomaly, in a negative sense, with regard to both portfolio balance and applied R&D.

2. Goal
To address simultaneously the two issues noted above, the University has established on the Norman Campus the Center for Applied Research and Development (CARD) within the Office of the Vice President for Research. The goal of CARD is to complement existing Norman campus strengths in basic research and outreach via the addition of an organization that focuses on applied research and development across all disciplines. CARD will bring new intellectual opportunities to faculty and students, provide mechanisms for innovating research outcomes into capabilities that serve society, facilitate interdisciplinary collaboration, and create new modes of engagement with industry, government agencies, and other stakeholders public and private. Although CARD is an important component of OU’s Strategic Initiative in Defense, Security and Intelligence (DSI) Research, its activities will not be confined to the DSI arena. Indeed, CARD is intended to be a resource for all disciplines, particularly the social and behavioral sciences as well as humanities.

3. Strategy
In contrast to many universities, which have chosen to accommodate applied R&D and special relationships with Federal agencies via arms-length non-profit organizations (e.g., Syracuse Research Corporation), a careful analysis has revealed that the most appropriate model for OU is a center, administered wholly within the academic fabric, similar in many respects to University Applied Research Centers (UARCs, e.g., at Penn State, Texas/Austin) though without the associated capabilities requirements and formal links to a cognizant agency. Consequently, CARD is being fashioned as a self-supporting interdisciplinary applied R&D center that, as an integral part of the University, fully supports OU’s educational, research and service missions.

4. Organizational Structure
Although the vision, structure, and selected programmatic elements for CARD have been determined, a fully developed policy framework and strategic plan have awaited the hiring of a founding director, which recently was completed. Briefly, CARD will function principally as an enabling administrative framework for (a) identifying and creating opportunities in applied R&D, (b) establishing certain types of contract vehicles (GSA Schedules, CRADAs, PIAs, IDIQs, 8(a) company contracts), (c) supporting business processes that are specific to the mission agencies with which OU seeks greater interaction, (d) facilitating special alignments with external collaborators (e.g., Native American Tribes, 8(a) corporations), (e) supporting a stable of full-time professional researchers whose work complements that of faculty and who support the University’s education mission by collaborating with faculty, funding graduate students and serving on student committees, (f) providing a mechanism for faculty consulting on projects administered by CARD, and (g) increasing the visibility, relevance and prestige of OU as a comprehensive research university.
CARD will coordinate closely with and leverage the strengths and resources of, but will not replace any aspects of, the Office of Research Services, which will continue to support all pre- and post-award activities and processes for University grants and contracts in both basic and applied research. Further, CARD will coordinate closely with the Center for Research Program Development and Enrichment, Office of Technology Development, Office of Export Controls, and Corporate Engagement Office.

Important to the success of CARD is a cadre of professional non-faculty researchers who focus on applied R&D activities. As a self-supporting organization funded entirely by external grants and contracts and on a percentage of indirect costs returned, CARD will require time to establish this human resource capacity as well as a funding structure to sustain it. Consequently, as projects are funded, CARD will hire professional researchers whose salaries will be charged directly to grants and contracts. A special SRI structure will be created to ensure a strong funding base within CARD, and to incentivize faculty and college participation. Importantly, CARD will not infringe upon existing research structures, such as faculty members supporting their own post-docs, research associates and scientists, students, etc. Rather, CARD will provide an additional mechanism on campus for such individuals in the context of applied R&D. Depending upon collaborative interactions, CARD researchers may be located within research space associated with academic programs, or housed in other locations, particularly on the Research Campus, as programmatic directions warrant. The administrative structure of CARD will be lean so as to provide maximum support to its personnel, collaborating faculty and facilities.

5. Expected Outcomes and Impacts

CARD is intended to move OU into an area of applied research and development where it has long been deficient, and do so without forsaking tenets of inquiry-driven investigation that have been and must remain the hallmark of the academic research enterprise. Expected outcomes and impacts include but are not limited to:

- Creation of a much broader opportunity space for research and development, particularly in areas of application, significant growth in the number of non-faculty researchers, and engagement by all researchers in a much more coordinated, systematic fashion;
- Increased breadth in research opportunities, especially applied, for students at both the graduate and undergraduate levels, and exposure to new ideas and approaches via mentoring by new non-faculty researchers;
- Increased stature for the University as a comprehensive research institution, with a greater degree of recognition in key areas of national concern and deeper, broader engagements with private industry;
- More effective translation of basic research outcomes into operational technologies and services for society, especially in areas of national interest, as well as new modalities of engagement with private industry;
- More effective alignment between OU’s R&D portfolio and that of the Federal government, going well beyond agencies for which OU has traditionally received the bulk of its funding (e.g., NSF, NIH);
- Considerable progression in OU’s administrative frameworks and business processes, leading not only to greater funding opportunities but also to options for driving necessary change in other areas;
- Increased value of OU to the State by expanding OU’s R&D portfolio and positioning it to take a leadership role in important priority areas.
- Increased value of OU’s intellectual property portfolio through the advancement of technology readiness levels (TRL) as a result of additional applied research and development activity beyond the basic research phase(s).

6. Relationship to Aspire 2020

CARD addresses one of the most important components of Aspire 2020, namely, improving OU’s engagement in areas of research where it traditionally has had less participation than possible, especially with respect to mission agencies. Success with CARD will have collateral impacts on OU’s research competitiveness as well, another Aspire 2020 objective. Finally, because CARD represents a mechanism for translating basic research outcomes into practicable capabilities, it will assist with OU’s goals of technology transfer and economic development.