

***TO BOLDLY GO***

***A STRATEGIC PLAN FOR UC DAVIS***



***DRAFT***

# GOALS

**GOAL 1.** Provide an educational experience that prepares all of our students to address the needs and challenges of a diverse and changing world.

**GOAL 2.** Enable and support research that matters at the frontiers of knowledge, across and between the disciplines, in support of a healthy planet and the physical and societal well-being of its inhabitants.

**GOAL 3.** Embrace diversity, practice inclusive excellence, and strive for equity; and make UC Davis a place of excellence for learning and working by supporting a culture that values the contributions and aspirations of all our students, staff and faculty, promotes wellness, and cultivates the open interchange of ideas.

**GOAL 4.** Support our community, region, state, nation and world through mutually beneficial and impactful partnerships that reflect a firm commitment to our mission while also increasing the visibility and reputation of the university beyond our borders.

**GOAL 5.** Develop an intellectual and physical environment that supports the development of an innovative and entrepreneurial culture that extends the benefits of our research activities beyond the boundaries of the university.

## INTRODUCTION

*UC Davis is dedicated to academic excellence and scholarship in service to the public good. As a research institution, UC Davis takes a holistic approach in addressing the most critical issues faced by the region, state and the world. The university embraces the principles of diversity, inclusion and equity to sustain a culture of mutual respect.*

It is important to affirm and reaffirm the vision and values that all of us who comprise UC Davis uphold. It is also appropriate, periodically, to reflect more deeply on our institution and to articulate more specifically how we will advance our vision and values. Such a deeper and structured reflection has resulted in this Strategic Plan.

Our university must be bold in envisioning our future. This plan has thus been titled “To Boldly Go.” The plan is optimistic and forward facing, and like all such plans, builds on the UC Davis of today. One of the greatest strengths of UC Davis is the extraordinary breadth of disciplinary expertise that has grown and been nurtured over the decades, in an academic environment characterized by low barriers between colleges, schools and departments and an historical willingness of units to collaborate and cooperate in research and education. Our success over the next decade will rest heavily on our ability to leverage this great strength, working together in old and new ways to achieve our goals; directing existing campus resources to our highest priorities when possible, and finding new sources of support when necessary.

The UC Davis of today is also a university that — after decades of direct state investment that made the entire University of California the envy of the world — must now face new realities. The UC is still preeminent, and UC Davis among the largest and strongest of the UC campuses. Our strategic plan acknowledges the reality that our aspirations for the future, both immediate and more distant, can be realized only if we find ways to strengthen the base upon which we build our future.

In this rapidly changing world, the campus must continuously adapt and evolve if we are to remain at the forefront of public education, and we must always be prepared to add new approaches or move on from older approaches as necessary. Change is constant, but our mission endures.

# GOAL 1

## *Provide an educational experience that prepares all of our students to address the needs and challenges of a diverse and changing world*

Education is undergoing rapid and extensive changes across the nation and around the globe. UC Davis must be attentive and nimble in its efforts to ensure that students enjoy an educational experience that is empowering and provides the best possible preparation for their future lives and careers. We must pay close attention to both how we teach and what we teach; and to both how our students learn and how well they learn. There is a rising interest among our students and their families in learning opportunities beyond the classroom and experiential learning. These include research experiences, participation in engaged scholarship, internships, international experiences and other activities that lead to the development of life skills that optimally prepare students for success after graduation, no matter what their career aspirations. Our focus on the success of our students must begin at the moment of admission, through orientation and their initial introduction to the rigors of the research university, continuing all the way through graduation and their postgraduate careers as alumni. Finally, we can assist our alumni to close the loop of their own UC Davis experience by encouraging and enabling them to pursue lifelong learning themselves and more effectively help future generations of students.

### **UNDERGRADUATE EDUCATION**

UC Davis attracts and matriculates enormously talented and motivated students. We are proud of our reputation as an engine for social mobility. We have made great strides in understanding more deeply the degree to which our first-year students' previous educational institutions — high schools for entering freshmen, community colleges for transfer students — have or have not prepared them to approach and complete our rigorous undergraduate curriculum.

Over the next decade we will continue to seek approaches to pedagogy and advising that enable more students to successfully complete their degree programs in a timely fashion. This will reduce total costs and improve outcomes for currently enrolled students, while creating an opportunity for additional students to benefit from a UC Davis education.

Achieving this goal will require a persistent and focused effort that will combine many approaches. Our pedagogy and infrastructure must be optimized to provide the best possible learning environment for all of our students, using data-driven approaches that help us align teaching methods with appropriately designed classroom space and effective assessment of student outcomes. To achieve this goal, we will:

- **Close gaps in academic outcomes for students from underrepresented, first generation and socioeconomically disadvantaged backgrounds.** Multivariate analysis of the academic performance of student demographic groups reveals significant gaps in academic outcomes between groups in our university today. We must develop and implement innovative and targeted approaches in academic support and pedagogic practice, with a goal of improving the outcomes for all of our students and closing the gaps. Many approaches to improving the retention and successful graduation of



## GOAL 1, Continued

our undergraduates have been proposed. The effectiveness of all new and existing approaches will be critically assessed, with a goal of developing and supporting a comprehensive and coherent data-based approach to achieving this goal.

- **Apply evidence-based approaches to improvement of learning outcomes.** To achieve the goal of improving learning outcomes for all students, faculty are exploring and adopting innovative approaches to pedagogy, including methods that promote active learning. The availability of analytical tools that can quickly reveal the impact of new approaches on learning outcomes facilitates experimentation with pedagogy and the ability to make evidence-based decisions about teaching practices. Support for faculty interested in such methods is available through the [Center for Educational Effectiveness](#) (CEE) in the Office of Undergraduate Education. Faculty who have already tested new approaches, including those whose research is focused on pedagogy in specific disciplines, are also an important resource.
- **Optimize classroom design and capacity for the future.** Enrollment growth has provided both a need and an opportunity to build new classroom space on campus with the future in mind. Classrooms will be built to accommodate new and experimental approaches to teaching, with maximum flexibility incorporated into the design to allow for active learning. The Betty Irene Moore School of Nursing provides a stellar example of such space, and there are currently plans, at various stages of realization, for a new large lecture hall (California Hall) and new classroom buildings (Walker Hall; the Teaching and Learning Center) that are designed to accommodate these styles of teaching. Additional space for laboratory courses is also needed, as well as space for office hours and other teaching support functions. As we contemplate future needs for classroom space, consideration should also be given to the potential impact of online and technology-enhanced course delivery methods on classroom space requirements.
- **Enhance the quality of the student academic experience.** Several strategies are proposed to ensure that our students have the opportunity to benefit from meaningful classroom interactions with faculty in both large and small class formats despite recent enrollment increases:
  - Faculty hiring will continue with a goal of achieving a student-faculty ratio that permits all students to enjoy an optimal instructional environment.
  - Strategies to facilitate the participation of professional school faculty in undergraduate education will be encouraged where opportunities arise, bringing exciting curricular opportunities and providing additional teaching capacity. Current examples include the joint CAES-SOVM major in Global Disease Biology, and minors in Education (SOE) and Technology Management (GSM).
  - Hybrid online courses can potentially increase the time that faculty are able spend in high-value interactions with the students during class time, by reducing the amount of class time spent on lecture-based content delivery.
- **Support curricular flexibility and student preparation for future careers.** A constant



## GOAL 1, Continued

challenge for the faculty is ensuring that the curriculum offered at UC Davis meets the needs of our changing world; whether through support for and updating of existing courses and majors, or through creation of new courses and majors. The past five years have been a time of rapid change, in part driven by the influx of students under the 2020 initiative. Several existing large majors have grown dramatically, including Computer Science (up 160% from 2012 to 2017), Statistics (up 317%), and Managerial Economics (up 91%). Further, we know that there is strong interest on the part of students (matriculated and prospective) for areas adjacent to these such as data science (possibly in multiple tracks) and business, to name but two examples. In recent years, faculty have also created, in response to new frontiers of knowledge as well as new career opportunities, several new and quickly-growing interdisciplinary majors such as Global Disease Biology, Cognitive Science, Sustainable Agriculture and Food Systems, and Marine and Coastal Science, and there is rising interest in other new fields such as robotics. Leveraging existing strengths and experience with interdisciplinary majors provides opportunities to develop unique curricula.



All of the above are strongly aligned with career opportunities, and we should take the opportunities to add such majors seriously. Our efforts should be rooted in student-centric principles, ensuring that the curricula we offer remain academically rigorous while addressing student interests, reflect societal needs in ways that optimize student success in finding rewarding careers after graduation, and prepare students for life-long learning so that they will have the flexibility to adapt in times of change. As we do, we need to reflect on our own processes. We must strengthen our capacity to act expeditiously lest we fail in our responsibility to address curricular needs in a timely fashion while maintaining academic quality and rigor. We are particularly challenged when majors are proposed that cross college and/or school boundaries. Innovation in the delivery of the curriculum as well as curricular development involve time and the investment of significant faculty effort and a commitment to the support of these efforts by the administration. As we strengthen our capacity in this way, we will rely on the deep tradition of shared governance.

- **Enhance experiential learning.** Preparation of students for future success can be significantly improved through high impact experiences beyond the classroom, including research, internships outside of the university, community or national and international activities. To enable more students to benefit from such experiences, UC Davis will increase efforts to ensure student access and participation in experiential learning as well as in impactful extracurricular and intercultural activities and experiences.
  - We will continue to improve our efforts to provide coherent and comprehensive advising to students regarding both the value and availability of opportunities beyond the classroom, whether local, regional or international. Students will also be advised on how to balance their academic and extracurricular activities. Efforts to acquaint students with their options will begin with the offer of admission, and continue until graduation.
  - Faculty, the Internship and Career Center, the Undergraduate Research Center,

## GOAL 1, Continued

Global Affairs, academic and residential advisors, peers and alumni must be supported in expediting broad student involvement in engaged learning opportunities within and beyond the curriculum. Some units may develop “cooperative education” opportunities for students in certain majors.

- UC Davis students must be provided with the necessary tools and resources to maximize internship and job placement opportunities around the globe; this is an element of the [Global Education for All](#) initiative. With an increasing number of international students on campus, and an increasing number of domestic students who seek opportunities overseas, Global Affairs and the Internship and Career Center will partner in developing a more robust set of programs to help students find international internship opportunities.



- Domestic and international alumni represent a critical resource. As friends of the university and potential mentors with real world experience, network connections and wisdom to share, alumni should be linked to our current students in a much more comprehensive manner. Such experiences create a pipeline of future mentors, as those who experience the benefits of this assistance now will be likely to “pay it forward” in the future once they leave the university and move into their own careers.
- Students need access to real-world field and laboratory research experiences that can provide experiential learning related to complex problems. The [Course-based Undergraduate Research Experiences](#) (CUREs) program is one way of providing groups of students with hands-on experience in cutting-edge technologies that are part of ongoing research projects on campus in a scalable way, thereby increasing the reach of individual, faculty-mentored undergraduate research
- Students would benefit greatly from opportunities in addition to the formal academic curriculum to develop skills and competencies appealing to potential employers and internship sponsors; e.g. data handling and coding. Continuing and Professional Education (formerly the University Extension) has experience in doing this for non-matriculated students, and can be a resource in helping, possibly in conjunction with the Library and/or the Internship and Career Center, develop and deliver these non-credit bearing but impactful learning experiences, recognized where appropriate by certificates or transcript notations.
- Exposure to innovation and entrepreneurialism should be available as part of the undergraduate experience. There are some outstanding opportunities already available (e.g., the [TEAM lab in Biomedical Engineering](#)), but more “maker spaces” in different disciplinary areas are needed to allow more students to participate. Undergraduates will also have new opportunities to participate as researchers and interns in local research incubators.
- **Engage all undergraduate students in global learning.** Humanity’s most urgent challenges are inherently global in scope—from responding to transnational migration and slowing the spread of international public health epidemics to addressing

## GOAL 1, Continued

economic disparities around the world, fostering safety and security, and developing environmentally sustainable solutions for the planet's future. UC Davis has a responsibility to prepare our students to live and work in this highly interconnected and interdependent world. We need civically engaged community members who can think critically and communicate effectively about resources and opportunities in global and local contexts, as they are often intertwined. We need employees and entrepreneurs who are prepared to navigate across different cultural, political and regulatory environments, and we need caring, curious, globally-minded leaders who understand issues in cross-cultural contexts and work collaboratively to resolve them. Global learning will prepare our students to develop skills, knowledge, networks and attitudes that will help them thrive in these roles. It is imperative that we provide our students many and varied opportunities to learn about the multiple cultures and histories around the world. For many this will involve the study of languages other than English, which should be strongly supported. The campus [Global Education for All](#) initiative, which links collaborators across the university, is one important means to support this goal.

- **Develop a strong first-year program for student success.** UC Davis offers a broad array of experiential opportunities that can be overwhelming and potentially difficult to access, particularly for new students. To achieve our goal of having every student enjoy the benefits of these high-impact activities, a coherent first-year approach should be developed. This will require that the full complement of existing programs of this type be assessed with respect to impact, overlap, and opportunities for synergy, so that investments can be optimized and leveraged. This could provide the basis for an integrated, first-year experience that would combine the most impactful aspects of current programs such as career discovery groups (CAES), the COHORT (CBS) and LEADR (COE) programs, first-year seminars, peer mentoring via the Aggie Connect model, and living-learning communities (Student Housing). One approach would include an integrated common first-year series of seminars including a Fall quarter welcome to the research university, followed by a Winter and Spring Experiential learning seminar and cross disciplinary “Big Issues” seminar.

### GRADUATE AND PROFESSIONAL EDUCATION

Graduate education is a core mission of UC Davis and the primary means by which the scholarship and expertise of its faculty are passed on to succeeding generations and transmitted beyond the university to the benefit of society at large. Furthermore, education of graduate students is one of the major contributions of the university to the economic prosperity of the region and state, bringing the expertise, skills and passion for research students acquire at UC Davis to their careers in existing fields, and sometimes in catalyzing the creation of entirely new fields.



Graduate students and postdoctoral fellows are also a major driver of research and scholarly activity at UC Davis and the quality of our graduate students is inextricably linked to the quality of our research. Graduate students also play a critical role in undergraduate education as they develop their own skills in teaching and mentoring, both through their contributions as teaching assistants and their role as mentors in experiential learning opportunities in research.

The broad constellation of research areas represented at UC Davis and the long campus history of interdisciplinary research in fields that are critical to addressing the most pressing issues

## GOAL 1, Continued

facing society ensure that our graduate students will develop both depth and breadth of disciplinary knowledge, and be uniquely qualified to serve society as innovators and leaders over the coming decades.

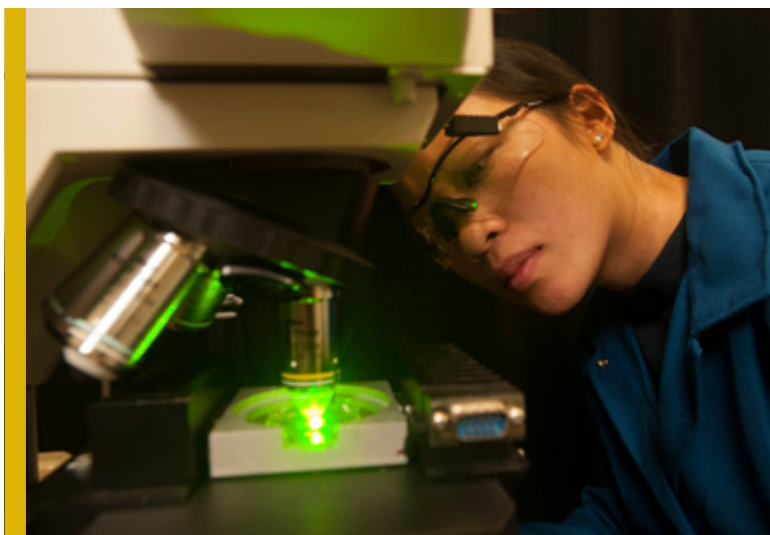
- **Graduate enrollment and support.**

Given the quality of our faculty and graduate programs, and considering the many unique opportunities for interdisciplinary graduate education that UC Davis affords, our graduate enrollment should reflect the value and impact that our students will bring to the world. Sustainable graduate enrollment, however, is constrained by consideration of the capacity of the university and its faculty to train and support these students, as well as the career prospects that students face once they complete their degrees. Graduate enrollments will vary between disciplines and over time in response to many factors, including emerging fields and economic trends. Desired graduate enrollment is often stated as a ratio in reference to undergraduate enrollment, and often in comparison to peer institutions, but differing proportions of masters and doctoral students and varying representation of different disciplinary areas between universities necessitate a more nuanced determination of appropriate enrollments for UC Davis, focusing on the issues of student support and career options, as well as on the needs of society and the university.

Graduate student support depends in complex ways on the availability of extramural research funding in different fields, the availability of university and philanthropically-supported scholarships, and student employment opportunities (primarily related to teaching), and differs between masters and doctoral programs. Every possible effort should be made to identify additional funding sources to support growth in graduate student enrollment in the many disciplines where UC Davis can play an important role in filling society's needs. Financial support packages that are competitive with national peer institutions are necessary to attract top students to our programs, and essential for creating conditions under which our students can give full attention to their studies and research. The campus is committed to creating an environment in which our students are competitively supported, through development and commitment of resources in support of stipends, research and teaching positions. Graduate Council, Graduate Studies, graduate mentors, graduate students and the provost must work together to align enrollment and support with campus goals.

The following strategies are proposed:

- **Determine appropriate enrollment levels.** Undertake a comprehensive effort to determine whether current graduate enrollment in each program is appropriate, using existing graduate program review information where available. This will include a comprehensive review of student support to determine whether levels are sufficient and competitive with peer institutions, an evaluation of whether students are achieving successful career outcomes, and any other parameters relevant to





## GOAL 1, Continued

enrollment in individual programs.

- **Ensure appropriate diversity in our graduate student population.** The diversity of our graduate students should reflect the diversity of the population of California, and our enrollment efforts should reflect this goal.
- **Increase offerings of masters degrees.** Given the unique strengths of UC Davis and its ability to train students who will play an important role in supporting the regional and state economy, the creation of new or larger masters degree programs should be encouraged where appropriate, while recognizing that appropriate investments in faculty and staff must be made to support these programs and that many of these will be self-supporting degree programs.
- **Develop online masters degrees.** Utilization of new approaches to learning, such as online degree programs, should be embraced in order to reach student populations who may lack access to traditional degree programs, such as working professionals. Advances in technology have facilitated an increased use of online delivery mechanisms across the nation in higher education. This still nascent approach has disrupted and potentially revolutionized both the pedagogy and business model of the university and offered faculty a new way to teach students. Peer institutions have developed highly successful online degrees at the MS level with significant enrollments, including of working professionals, with affordable tuition and high completion rates; this is a trend that UC Davis cannot ignore. The first online MBA at UC Davis is [under development](#) at the Graduate School of Management. There are many similar opportunities in other colleges and professional schools that could and should be aggressively pursued, potentially leveraging the expertise of Continuing and Professional Education as partners with the faculty to efficiently develop the required platforms. By providing accessible education that caters to professionals focused on acquiring advanced knowledge in the workplace, online degrees possess significant potential to enhance the impact, reach, visibility, and financial stability of the university.
- **Improve graduate student financial support.** Financial support is a key issue of concern to many graduate students. Davis has a relatively high cost of living, and current stipends are insufficient in some cases to address those costs, particularly for students with families. This issue can be addressed from either of two directions, including:
  - Increased funding. Funding sources must be identified to bring income for all graduate students to competitive levels. Strategies to address this issue include prioritizing a major effort to raise philanthropic funds for scholarships in support of multi-year scholarships for graduate education, consideration of reallocations of campus revenues towards graduate student support, and use of funds that result from creation of revenue-generating degree programs that can be a new source of funding to support PhD students in some disciplines as a way of supporting our educational and research missions.



## GOAL 1, Continued

- Affordable housing. Construction of additional graduate student housing designed and/or subsidized to be available at rents compatible with the income of our students is underway. The current project under construction at [Orchard Park](#) will include at least 200 affordable two-bedroom apartments for students with families, and any future projects should consider affordability as a key aspect of project design, though the university must consider affordability, including living expenses, for all graduate students in the context of the regional housing market.



- **Graduate program organization and course delivery.**

Excellence in graduate education requires a strong curriculum of graduate courses. Several challenges, both recent and longstanding, have been noted for the impact they have on meeting curricular goals. A long history of interdisciplinary research has led to the creation of two distinct and parallel ways of organizing graduate education: departmentally-based graduate programs, and graduate groups offering interdisciplinary programs. Each model has benefits, but one aspect of the graduate group model has presented a long-standing challenge; graduate group chairs lack the authority to independently assign teaching, depending for this on departmental chairs, who may face conflicting priorities. In many cases, this issue is resolved through cooperative approaches, but in others, particularly when the graduate group spans multiple departments and even schools and colleges, challenges arise. Also, in some cases faculty hiring in areas required by the graduate group to cover curricular needs may not align fully with departmental hiring plans. The campus budget model provides significant funding on the basis of student credit hours, which has, rightly or wrongly, to some degree incentivized chairs to assign larger undergraduate rather than smaller graduate courses to their faculty.

A review by Ernst & Young of the budget model and budget allocation process has provided an opportunity to revisit not only the formulae for allocations based on teaching activity but, more broadly, how monies are distributed at all levels including within colleges and schools, and how undergraduate and graduate teaching needs might be best addressed in the model. The Graduate Council of the Academic Senate has recently provided recommendations for revisions of the current campus budget model that might assist in resolving the issue by further incentivizing the teaching of graduate courses.

- **A new home for Graduate Studies and graduate students.** Our graduate student population is dispersed, and students have long expressed a desire for space where they could come together and help each other in addressing issues of common interest. On the Davis campus, a new physical home for graduate students, professional students and postdoctoral scholars is being created in the heart of campus through the [Walker Hall redevelopment](#)



## **GOAL 1, Continued**

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[project](#). In addition to providing space for student activities and the Office of Graduate Studies, the building will house state of the art classrooms that can serve as living laboratories in which graduate students can test new approaches to pedagogy. The need remains to determine how best to additionally support our many students on the Sacramento campus, and work has already begun to move us towards accomplishing that goal.

- **Support graduate and professional student intercultural and global learning.** Our students' ability to be effective leaders, teachers and problem-solvers will in part depend on their ability to collaborate across cultures and understand global systems that shape issues of concern to them. All graduate and professional students should have access to intercultural and global learning opportunities that reflect their aspirations, facilitate their ability to engage effectively with diverse populations, and enable them to apply their skills and generate knowledge to address regional and global challenges.

### **METRICS:**

- Student academic success, including degree completion and time to degree, for all demographic groups
- Post-graduation outcomes including career and additional degrees
- Graduate student enrollment and degrees awarded
- Student and faculty headcount; student-faculty ratio

## GOAL 2

***Enable and support research that matters at the frontiers of knowledge, across and between the disciplines, in support of the health of the planet and the physical and societal well-being of its inhabitants.***



### **INTRODUCTION**

Research at UC Davis is a thriving enterprise that involves thousands of faculty, professional, staff and undergraduate and graduate student researchers and postdoctoral fellows, creating new knowledge and answering questions that inform and improve lives. One of the most remarkable aspects of UC Davis is the breadth of our research programs, including agricultural, biological, engineering, physical, and social sciences, the arts and humanities, veterinary and human health and management, law and education. All of these occur on a vast campus, spread across multiple sites in Davis, Sacramento and elsewhere in California from the coast to the Central Valley to the Sierras.

The breadth of this research enterprise is a great strength, making possible an unparalleled diversity of interdisciplinary research opportunities. Our breadth also presents several challenges, which include supporting the physical and human infrastructure critical for this broad array of research, in other words, modern and well-equipped facilities and well-supported faculty and graduate students who make vital contributions to our research and educational missions; efficiently identifying and leveraging interdisciplinary partnerships when the people involved are spread across multiple programs and places; and identifying the most promising areas of future research and focusing investments to support these areas, while continuing to support current programs that are important to our mission.

Significant campus investments and dialogue will be needed on an ongoing basis to continually identify the areas of research that will best position the campus for the future and that should receive the highest priority for investment. Resources must be identified or generated to ensure that we are prepared to support these areas of research with innovatively designed facilities and well-coordinated academic support mechanisms.

## GOAL 2, Continued

### **STRENGTHENING THE FOUNDATION OF OUR RESEARCH ENTERPRISE**

The major new investments that will be made to ensure that UC Davis continues as a leading research university will require a strong foundation. With a portfolio of research buildings constructed over the past eighty years, operating in many cases near full capacity, and with a large (>\$1B) accumulated deferred maintenance backlog, growth in new research areas must be balanced with intentional and strategically placed investments in the existing research infrastructure. Both are essential; the university must continue to be at the leading edge of new and exciting fields of research, but this is only possible if the health of key existing research programs is sustained.

**Identify the highest priority capital needs to strengthen infrastructure.** Extensive planning over several years has identified the highest priority foundational investments needed to stabilize our existing research infrastructure. However, with needs exceeding current resources, this represents only the first phase of the process, and over the coming years, it will be critical to continue to evaluate and prioritize additional foundational investments.

The current environment around funding major capital projects is complex due to the transition from an era in which the state was the major source of funding for these projects to one in which philanthropy, public-private partnerships and limited campus resources will play an increasing role. The process of determining which and how many of the proposed “base-building” investments move forward must be done in full consultation not only with faculty and research staff, but also with Development and Alumni Relations (DEVAR) and the Office of Government and Community Relations to ensure that every opportunity for developing outside funding in support of these projects is pursued and maximally leveraged.



Chemistry building, built in 1965

**Strengthen research support services.** Increased research productivity calls for well-coordinated investments in core facilities and services, including shared equipment cores such as those included in the Campus Research Core Facilities (CRCF) program overseen by the Office of Research, as well as other cores across campus. There is no doubt that investments in these shared resources that serve multiple users are a more efficient use of limited resources than duplicating expensive facilities for individual researchers; however, considerable communal effort is required to ensure that the cores meet the needs of researchers and that there is a stable and sufficient funding base to provide the most current technologies.

Research computing and data management play an increasingly important role in the campus research enterprise. Meeting the future needs of campus researchers in this area will require a strong partnership between the research community, the Academic Senate Committees on Research and Information Technology, and administrative units including the Office of Research, Information and Educational Technology, and the University Library. No single one of these units can cover the entirety of research computing since it encompasses hardware, systems, and data that are inextricably connected. It requires all of these units to provide the deep expertise that will be needed to manage both the computing systems (whether basic, mid-range or very high-performance) and the wide range of data that must be stored as well as the tools needed for its use and access by everyone from non-experts to high-end users.

## GOAL 2, Continued

### ACHIEVING THE NEXT DECADE OF RESEARCH EXCELLENCE

The world's most pressing issues (e.g., climate change, sustainable food and energy systems, migration, poverty, aging populations, inequality) are inherently interdisciplinary. Innovative solutions arise through collaboration of experts from multiple disciplines and from multiple communities, including universities, industries and governments. UC Davis, with its great strengths of breadth across many disciplinary areas and culture of interdisciplinary research, is well-placed to make fundamental contributions.



To fully leverage the power inherent in our breadth, we need to implement a new and higher level of coordination among our many programs. Coordination requires comprehensive efforts to connect scholars with similar interests but different perspectives or skills, and the financial, physical, and administrative support to grow these partnerships. Perceived disincentives that reduce departmental enthusiasm for participation in projects that are housed in research centers or involve collaborations with multiple campus partners must be eliminated. There will be hard choices to be made in balancing new investments and current programs, but there is no alternative to moving forward boldly if we are to remain a top public land grant research institution into the future. Inspiring new programs with impactful goals will attract the funding partners necessary to move forward this decade, and the campus must be ready to move quickly and effectively to capitalize on these opportunities. Through the creation of physical spaces and funding mechanisms for interdisciplinary partnerships, we will leverage our strengths to address the real and complex challenges facing our region, state, nation and world.

**Coordination and recognition of new research opportunities.** UC Davis is already known as a university with relatively low barriers for partnerships between faculty from different departments and colleges, often but not always in the context of research centers and organized research units (ORUs) and supported by the interdisciplinary nature of many of our graduate programs. Nonetheless, there is little doubt that many opportunities are missed; researchers may be unaware of potential overlaps in interest with researchers elsewhere on campus, or may lack support to pursue new opportunities. Strategies to address this challenge would include:

- **Creating a support system to help campus researchers recognize new possibilities for collaboration and initiate partnerships.** The Library and the Office of Research can partner in developing a comprehensive database of campus research expertise that will support increased opportunities for collaborative projects. Developing this initiative campus-wide will include enhancement of researcher profiles and collaboration platforms, as well as identification of physical spaces that could be used in initial phases of planning and developing collaborative groups.

## GOAL 2, Continued

Advances in data science now allow for meaningful connections to be made quickly in a virtual setting. Once a relational database of UC Davis's scholarly work has been created, intentional and personalized communications could be used to identify and catalyze interactions between researchers who might productively collaborate but who are for whatever reason not aware of each other's work and interests. Automated programs or human "research match-makers" would identify and introduce researchers from across campus with common interests in emerging problems. As an example, cognitive psychologists, ethicists, social movement sociologists, agricultural economists, civil engineers, environmental law scholars and climate researchers might form a team to more effectively address important questions regarding more energy efficient communities.

Recognition and introduction of researchers with related interests is only a first step, and mechanisms to incentivize groups to follow through with in-depth exploration of common interests and collaborative research projects, potentially including space for pilot projects, would be critical to realizing the full benefits of this approach.

- **Providing seed funding, with the potential for continuing support, through the Office of Research.** The initial phase of developing research partnerships would be facilitated with seed funding in the expectation that such projects would catalyze the acquisition of new extramural funding for subsequent phases. It will require identifying a sustainable and ongoing source of revenue, but it is critical that funding be identified for and dedicated to this purpose to maintain momentum and enthusiasm for interdisciplinary collaborations across campus. For example, just as disciplinary clusters receive staff assistance for communications, hiring, grant writing, purchasing, etc., interdisciplinary groups will need access to similar shared resources. Another effective support mechanism could be a partial buyout of teaching load to provide release time for developing interdisciplinary projects. Project support should sunset after a reasonable time period to ensure continued availability of support for newly emerging partnerships.

**New space for interdisciplinary collaboration.** Currently, most space is designated specifically for departments and colleges. This approach can constrain interdisciplinary work by creating arbitrary physical barriers that sometimes impede the flow of information. To take on the grand challenges of the future and to be able to react quickly to new and emerging areas of interest, it is imperative that UC Davis create new research spaces, which will serve as a home for solving the most important problems of the day and will be intended to foster a culture of constant innovation, rather than becoming the permanent home of any particular discipline. To provide such an environment, the campus must secure the resources needed to construct one or more new interdisciplinary research buildings with this purpose in mind, and to the development of the new governance processes that will be necessary to manage and support an interdisciplinary and problem-focused building that serves the entire university rather than one school or college.

This represents a revolutionary new direction for the university; thinking about academic research space in a new way focused on shared interest in a problem rather than in a



## GOAL 2, Continued

specific disciplinary approach or department (one example is the [Charles Perkins Centre at the University of Sydney](#)). This approach to research could also possibly catalyze further thoughts about the education of students around interdisciplinary preparation to work on complex problems rather than the more focused approach of traditional majors.



Planning and construction of a new building will be a long-term process. One way of accelerating and testing some of the approaches involved would be to begin with creation of some quick and relatively low-cost spaces, installed around campus, providing space to pilot, promote and facilitate experimental approaches to interdisciplinary research outside of traditional spaces on campus. One very rapid way of doing this initially will be to develop launch spaces in the University Library, of which the Data Science Initiative space already in operation is an example. A next stage would be to construct small interdisciplinary buildings that could simultaneously provide a home for tightly-focused interdisciplinary groups while providing an opportunity to experiment with ideas about design and program for the eventual large interdisciplinary building.

Inherent in the concept of this large building is that the focus of the programs housed there could evolve over time, as new teams of researchers emerge with ideas for collaborative projects and new challenges emerge. There is no shortage of ideas for innovative ways to use new interdisciplinary space; some proposals include:

- Brain and Decision Science: an innovative space that would bring together academic programs at the intersection of the sciences of human intelligence and artificial intelligence, to include psychology, cognitive science, data science, informatics, neurosciences and decision sciences. A related concept was Neuro-X: a center for innovative, multidisciplinary investigation at all levels of nervous system function, from artificial intelligence to molecular neuroscience, from biology to psychology to engineering.
- Fiat Lux: a nexus of innovation in the agricultural, environmental, biomedical and social sciences at the center of campus, focused around light.
- World Food Center: a center devoted to the promotion of innovative, sustainable and equitable food systems through partnerships among the research, educational and outreach resources of UC Davis and consumers, public and philanthropic entities, and the agricultural, marine and food industries.
- Academic drug discovery: a center that would provide medicinal and analytical chemistry support as well as cellular and behavioral phenotyping for early stage drug discovery efforts.
- Environmental Health and Justice: a campus-wide research/outreach integrated initiative that would link environmental health (of land, air and water) to human health involving human ecology, law, medicine, public health sciences and engineering. One might think of this as the intersection of One Health and One Climate, or to use a phrase the UN and other organizations have adopted, Planetary Health.
- Disparities and Social Justice: A center that will take the lead in studying and understanding the causes and consequences of growing disparities social, health, and economic sectors, and engage justice activism, advocacy, art, and politics to alleviate these global problems.



## GOAL 2, Continued

- X-Lab: an innovative experimental physics program for high-risk research unconstrained by disciplinary boundaries, similar in concept to the Bell Labs.
- Diversity Science Initiative. This initiative would organize multiple campus experts into a coherent university-wide program that would maximize interdisciplinary interaction, education, and research into how people create, interpret, and maintain group differences among individuals, as well as the psychological and societal consequences of these distinctions.

There is no doubt that an organized call for proposals will add significantly to the list above, and the next step will be to organize a formal process to think about the initial themes for a building that can be the basis for generating donor interest. Important components of a successful proposal would include attention to the University's mission of research and educational excellence, and serving the public good. As such these collaborative projects would not just provide innovative opportunities for cutting edge research, but would also provide hands on experiential learning opportunities for undergraduate and graduate students. Problem-focused studies emphasize for students the value of collaborative work, teach students how to communicate across disciplines and perspectives, and provide clear connections to experiential learning (e.g., internships) and life-long careers. Further, each project would optimally connect with industry, communities, and/or policy makers.

**New sources of support for research.** UC Davis has reached record levels of extramural research funding from a diversified portfolio of sources; federal, state, foundation, corporate and philanthropic. However, continuing to build on this foundation requires a continuous search for new funding opportunities, as we adjust to changing priorities and needs. Over the next decade, we will redouble our efforts to effectively support campus researchers in their efforts, with a particular focus on several strategies.

- **The “Big Ideas” campaign.** Thirteen exciting interdisciplinary research themes have been selected in the first round of competition that will be a major focus of campus development activities over the coming years. In many cases, the “Big Ideas” overlap with concepts described elsewhere in this Strategic Plan, representing the inevitable intersection of campus priorities with the need to identify new funding sources.
- **Diversify extramural funding.** The majority of our extramural funding is derived from federal and state agencies, but some opportunities have not yet been developed to their full potential. The Office of Research will work with campus researchers to further develop our funding streams from industry engagement, international partnerships, and federal agencies underrepresented in our portfolio such as the Department of Defense (non-classified research, including DARPA and ARPA-E programs), as well as continuing efforts to increase the number of large multi-investigator program grants beyond current levels.
- **Increase support for grant preparation.** Investments in the [Interdisciplinary Research Support](#) unit of the Office of Research have had a high return on investment and could



“SmartFarm” Big Idea

## GOAL 2, Continued

provide a template for further investments in units to support the output and success rate of applications for additional categories of extramural support.

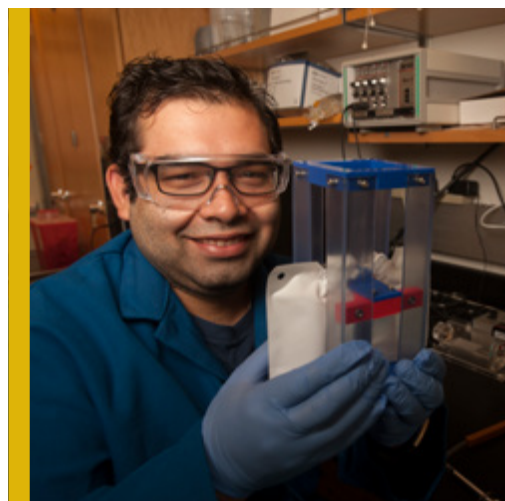
- **Increase revenue from development of intellectual property.**  
A possible consequence of increasing research partnerships with industry and supporting faculty entrepreneurship will be new revenue from licenses and patents. Although difficult to predict, this has been a significant source of revenue in some disciplines on campus, and increasing the effectiveness of our support for faculty in such efforts could be a productive investment.

### **RAISING THE VISIBILITY OF BROAD AREAS OF RESEARCH EXCELLENCE ACROSS THE UNIVERSITY**

The strength of UC Davis in some areas of research is underestimated due to the breadth of the campus and the organization of researchers with common interests into different academic units, including departments, centers and ORUs. Efforts have begun to address this issue; for example, the creation of the [Coastal and Marine Sciences Institute](#), which aims to catalyze and foster innovative partnerships for discovering, understanding, and communicating science for effective stewardship of ocean and coastal environments in California and beyond, and the recently re-launched [World Food Center](#), which mobilizes the research, educational and outreach resources of UC Davis, in partnership with consumers, public and philanthropic entities, and the agricultural, marine and food industries, to promote innovative, sustainable and equitable food systems. By drawing attention to and coordinating the efforts of researchers across campus, these united groups are better able to synergize research efforts, increase access to larger scale funding opportunities from federal, philanthropic, and industrial sources, and increase the visibility of our strengths by drawing attention to the depth and breadth of our expertise in these areas.

Next steps to advance this process include:

- Identifying all potential clusters of research excellence.
- Choosing leadership for the clusters and working with these leaders to implement the process of coordination.
- Formalizing campus support for these clustered groups, which in some cases may involve consolidation of resources already dedicated to individual programs.
- Working in partnership with Strategic Communications to ensure public recognition of the research strengths of UC Davis that are made more visible through these efforts.
- Elevating professional and public visibility with highly publicized research conferences focused on important social challenges, which would connect like-minded scholars potentially galvanizing new collaborations. These conferences would serve to solidify the region's perception (e.g., policy makers, community members, public and private sectors) of Davis as a leader and "go-to" source for information on these topics.



## ***GOAL 2, Continued***

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### ***METRICS:***

- Research activity; including extramural awards by source, expenditures, and publications
- Research space
- Major faculty awards and recognition

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## GOAL 3

**Embrace diversity, practice inclusive excellence, and strive for equity. Make UC Davis a first choice for education and employment by supporting a culture that values the contributions and aspirations of our students, staff and faculty, promotes wellness, and cultivates the open interchange of ideas.**

UC Davis believes that achieving our aspirations in teaching, research and service depends on the strength of a diverse and inclusive culture that creates access and supports success for our students, staff and faculty. From recruitment to commencement for our students, and from hiring to retirement for our faculty and staff, we are committed to finding and implementing effective strategies for continuous improvement in addressing these goals.

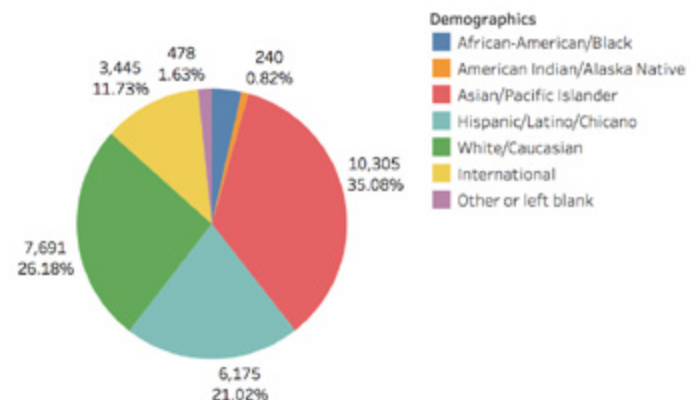
### **IMPLEMENT THE 2017 DIVERSITY AND INCLUSION STRATEGIC VISION**

The campus has recently completed a [Diversity and Inclusion Strategic Vision](#) that presents a broad plan of action for the coming years, including a very comprehensive set of recommendations and accountability metrics.

Its goals include the following:

- Identify, attract, retain, and graduate a diverse student body
- Identify, attract and retain a diverse faculty and staff
- Advance a climate that fosters inclusive excellence
- Promote diversity and inclusion in all of our research, teaching, public service, and training on campus and in neighboring communities.
- Ensure accountability to diversity and inclusion efforts on campus and in serving

Race/Ethnicity - Undergraduate, 2016-17



## GOAL 3, Continued

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neighboring communities

The Vice Chancellor for Diversity, Equity and Inclusion will provide leadership for this effort. This newly created position includes responsibility for overseeing implementation of the Strategic Vision and ensuring sharing of best practices in all dimensions of campus diversity, equity, and inclusion efforts.

The recommendations from the Diversity and Inclusion Strategic Vision cover most of the strategies that UC Davis will implement to address this goal over the coming years, including steps to be taken as the campus achieves Hispanic Serving Institution (HSI) status. The strategies noted below reflect complementary input and recommendations.

### **SUPPORTING OUR CAMPUS COMMUNITY**

We are committed to fostering a stronger sense of shared purpose and well-being throughout the entire university community. To support this goal we can:

- Create new programs to educate students about the nature and benefits of freedom of speech and free exchange of ideas. Diversity is desirable in all aspects, including diversity of opinion, and it is our goal to create a culture where students, staff and faculty respect free speech rights, and are able to express thoughts and opinions even when those are unpopular or controversial.
- Provide more opportunities for staff, students and faculty to develop stronger support networks and familiarity with each other through organized events that bring people together from across campus and across the causeway. Examples could include social/cultural events, educational events where people share about their work, research and service, and organized community service learning projects.
- Encourage a culture of wellness on campus. One way to do this would be to leverage the expertise of the schools and colleges to offer public presentations on wellness topics (e.g., the extremely popular Mini-Medical school, which could be extended to healthy pets and even healthy plants, in the spirit of One Health). Such events, both in Davis and Sacramento, will support the health and wellness of the entire university community, and would be a great opportunity to build community across the causeway and in neighboring communities. Another opportunity is to continue to build out a robust set of activities and programs that all university citizens — students, faculty, staff — could access, such as those in the [Healthy UC Davis](#) program.
- Enhance the physical environment to better accommodate students, staff and faculty with physical challenges and disabilities.
- Expand the availability of convenient and affordable child care at the Davis and Sacramento campuses for students, staff and faculty. One strategy proposed would be to explore a student-run business model to contain costs while providing student employment.
- Refresh the physical environment to improve safety, convenience and morale. Even if the campus backlog in deferred maintenance can't be tackled all at once, the campus will undertake a comprehensive project to “refresh” older spaces across campus to further contribute to a positive and productive environment for learning and work.
- Strengthen relationships and collaborate with local, community, regional, state, national and global partners to build outreach and recruitment pipelines to the rest of the world.
- Take pride in our identity as a green campus by continuing our pursuit of setting the global standard for



## GOAL 3, Continued

environmental sustainability practices among higher education institutions. Reducing our carbon footprint through updated waste streams, creative upcycling of post-consumer materials, and an increased reliance on renewable energy are key areas where we can contribute. By updating our transportation infrastructure in collaboration with the City of Davis, we can improve the accessibility and safety of biking to and throughout the UC Davis campus in order to minimize reliance on personal vehicles.

### SUPPORTING OUR UNDERGRADUATE STUDENTS

UC Davis is committed to promoting the success of its growing population of students from historically underrepresented, socioeconomically disadvantaged, and first-generation communities. Task forces have been initiated to review existing programs and options, consider improvements and make recommendations for affordable student housing, student food security and mental health care. In addition to these, we will pursue the following strategies:

**Address affordability.** With respect to the total cost of attendance, tuition is not always the most relevant variable, particularly for students in the lowest socioeconomic groups, since the [UC Blue and Gold Opportunity Plan](#) covers all tuition and fees for eligible California residents whose total family income is less than \$80,000 a year. However, rising tuition is still a challenge for students from middle income groups (both domestic and international), and the additional costs of housing, food and books remain a challenge for students seeking to avoid graduating with a large debt burden.

- Explore avenues for growing philanthropic support for student scholarships in conjunction with the university's upcoming second major comprehensive campaign, with the long-term goal of widening the paths of educational opportunity and access.
- Redouble campus planning efforts to increase the supply and affordability of housing for undergraduate and graduate students.
- Explore and implement strategies to reduce food insecurity among our students, in addition to programs like [The Pantry](#) and others mentioned on the [Aggie Compass](#) web site.
- Encourage the development and use, where appropriate, of free open-access text books, through increased campus financial support or release time for faculty willing to invest in creating this resource, and/or through promoting the awareness and use of [existing open access resources](#).



**Support for student communities.** Students from specific underrepresented, marginalized and underserved communities benefit from access to spaces and people dedicated to their success, support and enrichment. The university is committed to ensuring that these resources are available to our students, and will continue to look for ways to better meet their needs.

**Cultural awareness and inclusion.** Efforts should be made to incorporate wherever possible into both the undergraduate and graduate curricula and extracurricular experiences ideas that support cultural awareness and inclusion. With the University's growing international and underrepresented minority population, it is important for all students to develop the skills to work with a diverse group of individuals, who may have different behaviors based on their cultural background and current family dynamics.

**Summer transition program for transfer students.** While many of the surrounding community colleges operate on a semester system, UC Davis operates on a quarter system. Students transferring to the university from

## GOAL 3, Continued

community colleges often experience a challenging transition during their first quarter at UC Davis. Instead of exploring research and internship opportunities, many are overwhelmed with the brevity of the quarter system and its associated requirements (e.g., closely spaced midterms). Transfer students would benefit from a robust transition program scheduled prior to the start of their first official academic year.

**Supporting access and success for veterans.** Efforts will be made to improve recruitment and success of veterans as UC Davis students. Approaches will include creation of a web page dedicated to veterans on the UC Davis Admissions site, the building of strong relationships between the admissions office with counterparts in local community colleges with high veteran populations, and consideration of ways in which to increase recognition of educational experiences that veterans have already finished at the time of application (for example providing the opportunity to test-out of a class/course/subject of which they demonstrate sufficient proficiency based on prior experience in the military).



**Creation of a central testing center for accommodating student needs.** There is a substantial need for a comprehensive, centralized service that can accommodate the large and growing need for students taking tests with special accommodations. The campus recognizes this need, and has already established a task force to identify a solution.

### **SUPPORTING OUR GRADUATE AND PROFESSIONAL STUDENTS**

We will enhance support for programs that increase the recruitment particularly of African American, Latinx, Native American, low income and first-generation graduate and professional students. Specific strategies include:

- Support and expand the new “[ENVISION UC Davis](#)” program to increase the diversity of the pool of the graduate and professional applicant pool.
- Institute a more robust program for sharing best practices in recruitment of graduate and professional students from diverse backgrounds. For example, the very successful “Neuroscience Initiative to Enhance Diversity” associated with the NIH T32 grant supported Training Program in Basic Neuroscience has demonstrated particular success.
- Explore factors that impact the acceptance of underrepresented minority students into the graduate and professional programs, such as the increased use of “holistic review” to offset possible effects of unconscious bias in screening applications and the role of the GRE and other standardized test scores in admission decisions. For example, the School of Nursing applied relevant educational research to determine that the GRE had no predictive value for student success and has not used this requirement in their admission process. UC Davis is leading a consortium (with UCLA and USC), supported by a \$1.2M grant from the Andrew Mellon Foundation, to develop new methods for the graduate admissions process that will increase equity and inclusivity.
- Support the [Mentoring at Critical Transitions](#) program in the Office of Graduate Studies.
- Global Affairs will work with graduate programs across the university to increase the pool of qualified underrepresented international students via our Global Centers and by expanding access to fellowship funding. A comprehensive network of holistic non-academic personal supports will facilitate their success.

### **SUPPORTING OUR STAFF**

UC Davis will become an employer of choice and a national leader in hiring a diverse workforce. The Diversity and Inclusion Strategic Vision notes several strategies for increasing the diversity of our staff, where underrepresentation

## GOAL 3, Continued

is particularly notable in management roles. Priorities include the development of better pathways for advancing up the career ranks, and providing more extensive training for leaders, managers and supervisors.

- **Staff advancement and retention.** Strengthening pathways for advancement for our staff will expand opportunities to develop the advanced skills required to be competitive for internal positions offered on campus.
  - Expand and enhance [Staff Development and Professional Services](#) offerings in order to support the acquisition of career advancement skills.
  - Rather than sending a small number of candidates to advanced training opportunities off campus, the university will explore bringing trainers to campus and opening opportunities to a wider group of interested parties.
  - UC Davis Continuing and Professional Education might play a role in developing appropriate course series that would be accessible and available for staff.
  - Consideration should be given to establishing mentorship/sponsorship programs for underrepresented and diverse staff. Such a program would pair staff with participating campus leaders for a developmental partnership in which knowledge, experience and skills are shared between the two in order to foster the staff mentee's professional development and enhance the mentor's perspectives and knowledge.
- **Managerial and supervisory training.** It is important that our managers and supervisors be well trained in both management skills and cultural competency. Efforts should be undertaken to create a culture of accountability, and 360° reviews should be used more frequently in evaluating managers and supervisors.
  - Implicit bias training through the [STEAD \(Strength Through Equity and Diversity\)](#) program has been helpful in reducing the impact of unconscious bias in the hiring of faculty. Currently, all new staff supervisors are required to take an implicit bias training, but this training needs to be mandatory for all supervisors and managers. The extension of STEAD or a similar program to committees involved in staff hiring, particularly at management levels, should be considered.
- **Salary equity.** UC Davis commits to conducting a regular institutional pay analysis across occupations by gender, race and ethnicity, reviewing hiring and promotion processes and procedures to reduce unconscious bias and structural barriers, and embedding equal pay efforts into broader institutional equity initiatives.



## SUPPORTING OUR FACULTY

The [Diversity and Inclusion Strategic Vision](#) describes several strategies to help broaden the diversity of our faculty, both in recruitment and hiring of new faculty, as well as in supporting and retaining the faculty we hire.

With respect to hiring, we are committed to the support of programs that increase the pipeline of diverse candidates and the adoption of practices that increase the possibility of successful recruitments. We will continue to support pipeline programs and partnerships including the UC President's Postdoctoral Fellows Program (PPF), UC Davis Chancellor's Postdoctoral Fellowship Program (CPFP) and the UC-HBCU Initiative; as well as programs that provide campus resources in support of faculty hiring related to diversity. These include the [CAMPOS](#) (Center for the Advancement of Multicultural Perspectives on Science) and IRI (Impact Recruitment Incentive) programs to increase the pace of hiring of diverse faculty in STEM and non-STEM disciplines, respectively.

The campus will continue to develop a culture of accountability for diversity in the hiring process. This will



## GOAL 3, Continued

include continued mandatory participation in unconscious bias training through the STEAD program for all members of search committees, and extension of this training to others involved in overseeing the promotion and tenure process. Deans, chairs and administrative personnel will be held accountable for ensuring the diversity of candidate pools at every stage of the search process as well as their overall success in increasing faculty diversity in their units.

The campus will also support and continue to develop programs that increase the retention and success of diverse faculty, such as CAMPOS, the [Faculty and Academic Development Programs](#) under the Vice Provost of Academic Affairs, and the [UC Davis Launch Committees](#) developed under the ADVANCE program.



### **METRICS:**

- Metrics from the Diversity and Inclusion Strategic Vision
  - demographics of eligibility pools, applicants, and enrollments for students
  - student persistence measures (e.g. 2nd-year retention, GPA, progress toward degree)
  - distribution of financial aid and grants
  - demographics of availability, hiring pools and hires for staff and faculty
  - retention and turnover rates for staff and faculty
  - rates of advancement for all demographic groups
  - staff and faculty diversity
  - equity in salary
- Managerial and supervisory training participation rates
- Campus climate and satisfaction (based on surveys including UC Undergraduate Experience Survey, CUCSA Staff Engagement Survey, COACHE Faculty Engagement Survey)

# GOAL 4

**Support our community, region, state, nation and world through mutually beneficial and impactful partnerships that reflect a firm commitment to our mission while also increasing the visibility and reputation of the university beyond our borders.**

Reinventing the land-grant mission for the 21st century will require greater visibility with policymakers, more powerful partnerships with NGOs and grassroots organizations, and meaningful engagement with stakeholders. Humanity's greatest challenges cannot be addressed from the ivory tower or with top-down solutions. We need to meet these challenges head-on — on the ground, in the field and within the communities we serve locally and globally. Civic engagement, community empowerment and evidence-based decision-making — all arenas where UC Davis expertise can make a difference — will be critical to scaling up solutions to complex challenges like climate change and social injustice.

## **ELEVATE EXCELLENCE THROUGH ENGAGED SCHOLARSHIP**

Engaged scholarship through research, teaching, and creative practice that focuses on issues of public concern and is developed in collaboration with diverse audiences beyond the university is a hallmark of land grant excellence. Engaged or public scholarship takes many forms, ranging from providing local communities access to university resources, to organized research and intellectual pursuits that inform and shape public policies and debates, to scientific and technological breakthroughs that improve people's lives. Collectively, these activities have impact at different geographic scales, across sectors, and between disciplines that improve the wellbeing of individuals, communities, and the planet.



UC Davis is widely viewed as an engine of engagement through the many activities carried out by individual faculty, students, staff, and alumni. The collective impact of these actions is sometimes underappreciated both on and off campus, and will greatly benefit from an integrated and coordinated approach that visibly supports, rewards, and communicates the value and impact of our public scholarship. There exists an opportunity at this juncture to elevate excellence by expanding the reach of engaged scholarship, both internally and externally. The Engaged Scholarship and Engaged Learning implementation plan currently under development builds on the Community Engagement Classification awarded to UC Davis by the Carnegie Foundation in 2015. This recognition, coupled with the recent arrival of Imagining America to our campus, has created momentum that we will build on in the following ways:

- Establishment within the Office of the Provost appropriate infrastructure to support, recognize and publicize engaged scholarship in research and teaching. The unit will foster awareness and understanding of the value of engaged scholarship within all the schools and colleges and communicate its value and impact to multiple constituencies.
- Creation of a recognition program (e.g., prizes) to further raise the profile of engaged scholarship at UC Davis.

## ***GOAL 4, Continued***

### ***EXPAND OUR ROLE AS A PRIMARY ADVISORY RESOURCE TO POLICY MAKERS***

California is the 5th largest economy in the world and a bellwether for national policy. As an international powerhouse in key research areas, including climate, water, agriculture, transportation, immigration policy and health, to name just a few that intersect with the state's most vital issues and globalized economy, we already play an instrumental role in translating our expertise for policymakers. With our close proximity to the capital city, we are well-positioned to shape evidence-based public policy. Strategies to fully leverage our competitive advantages in order to increase the visibility and impact of our expertise in service to the public good include:



- Developing a public policy program. Such a program could serve as a focal point for policy makers to connect with UC Davis experts, for UC Davis graduate and undergraduate students to do policy-related research with faculty and governmental experts, and for students and faculty to directly experience the interface between university research and the making of public policy.

Ideally, this program would leverage the breadth and depth of campus research by focusing not on policy in general, but rather on how the disciplinary expertise of UC Davis could be productively partnered with public needs to advance the public good. A final goal could be the establishment of a policy-related School in Sacramento that would offer unique degrees drawing on the disciplinary strengths of UC Davis.

- Utilizing the database of campus expertise discussed under Goal 2 as a resource for those looking for policy advice on current issues. Similar to the matching efforts envisioned for developing new interdisciplinary collaborations, a proactive version of this strategy would be to identify particular faculty with expertise most relevant to the districts of individual legislators and work to develop a connection.
- Creating more formal opportunities for our UC Davis experts to give talks about their research in public forums in Davis, Sacramento, Washington DC and at the United Nations, inviting legislative staffers, legislators and other key decision makers to attend.
- Partnering with alumni to expand opportunities for our undergraduate and graduate students to intern with legislative leaders.
- Creating video presentations by expert faculty on issues of current significance to be disseminated broadly in a multimedia marketing effort.

### ***SHARING THE VISION AND IDEALS OF UC DAVIS WITH THE WORLD***

Visitors to UC Davis quickly appreciate the special nature of the university in its breadth of interests, collegial and collaborative attitudes, its focus on caring for the earth and its inhabitants, and its dedication to providing our students with the best possible learning experiences inside and outside the classroom. However, it is also often perceived that our qualities are underappreciated beyond the boundaries of the campus, and we must continue to strive to develop more effective means of communicating our vision to a wider audience.

## GOAL 4, Continued

There is no single mechanism for achieving this goal, but the following strategies are proposed:

- **Looking beyond the obvious.** We have done a great job of publicizing our top-ranked status in veterinary medicine and agriculture, but there are many other areas where the university has centers of excellence that are less well recognized; we need to increase our efforts to recognize and publicize these strengths in ways that are authentic and meaningful to external constituencies, and that add value to the degrees that we offer in many fields.
- **Leverage our 250,000 alumni worldwide.** Every graduate of UC Davis is a potential spokesperson for UC Davis; efforts to utilize this resource will be essential to getting our message out.
- **Enhance our prominence in athletics.** UC Davis student-athletes' stellar academic and post-graduation achievements have long been our signature competitive advantage in the NCAA Division I arena. Taking this leadership to the next level, we will establish UC Davis as the nation's premier athletics program for producing successful student-athlete outcomes. As we continue to build a nationally competitive Division I program that attracts more of the nation's top student-athletes, we will implement a systematic personal and professional development program that prepares our athletes academically and socially for success in their postgraduate careers, in a way that can be a model for the entire campus.
- **Maximize the effectiveness of our communications.** To raise regional, national and international visibility the campus will undertake a major branding campaign, focused on key constituencies. Locally, development of a much more sophisticated and personalized system to share information about university events and accomplishments with interested campus stakeholders could lead to increased opportunities for visibility, using targeted digital communication methods.
- **Establish Global Centers overseas to enhance international visibility.** The visibility of UC Davis will be increased by the establishment of centers in key strategic locations worldwide through the [Global Centers Initiative](#). Leveraging existing UC or UC Davis office space where possible, these centers, whose physical footprint will be modest, will support region-specific strategies based on our research with international collaborators, students moving to and from campus, engagement with international alumni, and connections with international organizations and institutions. As our international student population and our domestic students who have participated in international experiences complete their studies and travel throughout the world, they will serve as outstanding ambassadors for UC Davis.



## ***GOAL 4, Continued***

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### ***METRICS:***

- Impacts of engaged scholarship on research partners and public policy (survey-based)
- References to UC Davis in public media
- National and international university rankings
- Athletic success in both scholarship and sport
- Global activities in education, research and outreach



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## GOAL 5

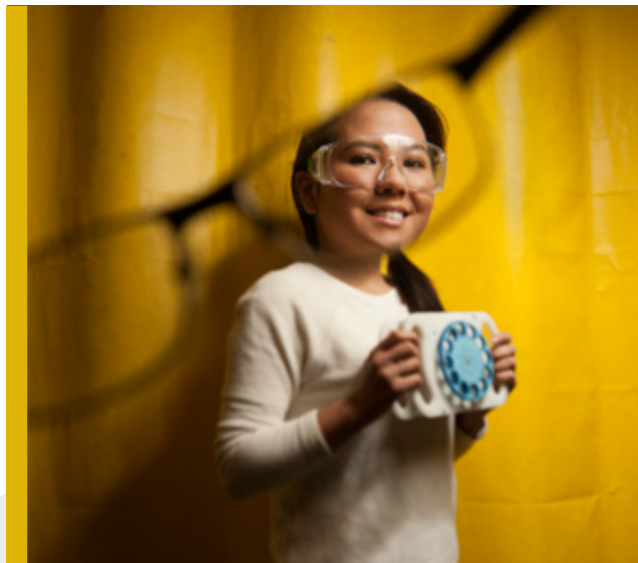
**Goal 5. Develop an intellectual and physical environment that supports the development of an innovative and entrepreneurial culture that extends the benefits of our research activities beyond the boundaries of the university.**

UC Davis is one of the top public research universities in the world. With strengths in both basic and translational research, the university is well-positioned to make substantial contributions to society through moving the products of innovative research into the commercial domain through the entrepreneurial activities of staff, faculty and students. Translating research discoveries yields the tangible benefits of new products, new treatments, and new jobs.

Important existing programs that support this goal in the Office of Research include [Innovation Access](#), which assists in managing intellectual property (e.g. patents and licensing), and [Venture Catalyst](#), which offers guidance and sometimes funding through the [STAIR](#) grant program for moving ideas from the lab into commercial enterprises. Three programs reside in the Graduate School of Management: the [Mike and Renee Child Institute for Innovation and Entrepreneurship](#), which brings together faculty, students, experienced entrepreneurs, investors and corporate leaders to learn about technology transfer and commercialization activities; [Leaders for the Future](#), which provides training in business principles for graduate students and postdocs planning careers outside academia, and [Industry Immersions](#), which offers courses in specific areas for academic graduate and MBA students. With the assistance of these programs, ever-increasing numbers of teams of faculty and/or students have been successful in developing ideas, obtaining funding, and in some cases creating startup companies.

One important goal will be to increase both curricular and extracurricular opportunities for undergraduates with an interest in entrepreneurship. A small discussion course on this topic (Engineering 2; Creativity and Entrepreneurship for Engineers) has been offered for several years, and a larger lecture course on the same topic is under development. Additionally, [numerous extracurricular programs](#) open to undergraduates have been developed through the Child Institute, including the Little Bang and Big Bang Business Competitions, the [Entrepreneurship Academies](#), and the [Entrepreneurship Quest: Undergraduate Internship program](#) (EQUIP). The campus is committed to supporting these programs and continuing to develop additional opportunities for students interested in entrepreneurship and innovation.

Today, we are at an inflection point, where more opportunities exist than can be supported with the resources available. Substantial strategic investments in staff, seed money, and physical infrastructure will enable us to provide a comprehensive framework for innovation and embed entrepreneurialism in the campus culture. A major challenge is providing researchers with the tools and knowledge that will allow them to translate their research discoveries into socially beneficial innovations. Staff will aid researchers in developing the expertise needed to navigate the steps from research discovery to startup, including securing funding. Knowing that these resources exist will provide researchers with greater



## GOAL 5, Continued

confidence that their efforts will be successful, which will increase researcher interest in participating.

Obtaining seed stage funding for the critical transition from idea development and team assembly to the early startup and proof of concept stages can be particularly difficult for faculty; many lack expertise in this area. Investing the time necessary to identify investment capital sources and successfully pitch a proposal is also challenging to faculty, due to the simultaneous pressures of teaching, publishing and seeking support for their research programs. The development of a university-associated source of investment capital (perhaps involving venture philanthropy) could significantly accelerate progress in building a larger entrepreneurial community.

The development of appropriate physical infrastructure is critical in taking entrepreneurial activities at UC Davis to the next level. Flexible incubator space will be needed in the vicinity of the Davis and Sacramento campuses to house collaborative and innovative projects involving researchers from across our schools, colleges and departments. Such space can also provide an environment in which research staff from corporate partners can interact beneficially with UC Davis faculty and graduate and undergraduate students. Significant efforts should be made to accelerate the creation of these spaces, and to facilitate the participation of faculty and students wherever opportunities exist.

**Creating a new interface between UC Davis and external partners in Sacramento.** Aggie Square will be a collaboration between UC Davis, the city of Sacramento, and the business community to establish a live/learn/work/play innovation ecosystem that facilitates economic development by easing the transition from the laboratory to the marketplace. It includes within its vision all five goals of the strategic plan: contributing to the education of our students, supporting the research enterprise, engaging with the local community, raising the visibility of UC Davis and advancing innovation and entrepreneurialism.

The development of Aggie Square adjacent to the health sciences campus of UC Davis will create a new interface between the researchers of UC Davis and the entrepreneurial world of startup businesses. Aggie Square could host incubator or accelerator space, collaborative space for research, academic programs, housing, retail, art and music venues, and more. Its collaborative nature will open up opportunities on both sides: companies could work with faculty and graduate students to conduct research, and students could have easier access to internships and jobs with the companies located there and the communities located nearby. It will also serve as a catalyst for translating research discoveries from UC Davis into the public domain, and regional interests and needs into new research.



Sacramento mayor Darrell Steinberg '84

### **METRICS:**

- Startup companies involving faculty, staff and/or students and postdocs
- Extramural investments in innovation
- Space dedicated to innovation activities
- Intellectual property developed, including patents and licenses
- Revenue generated from entrepreneurial activities

## CONCLUSION AND NEXT STEPS

The compelling vision of the futuristic, pop culture phenomenon known as *Star Trek* is summarized in the introduction of each episode: “To boldly go where no one has gone before.” In the context of higher education, what is the meaning of the phrase “to boldly go,” at a time when we strive to fulfill societal aspirations for broad access to excellence through a public research university education while endeavoring to address the world’s greatest challenges through our research? Perhaps it means “to think about how we can, and not why we can’t,” or perhaps it means to step out of our comfort zones in addressing the future.

This strategic plan captures high-level themes and aspirations of the UC Davis community, as well as the outlines of strategies that might be followed to address these themes. We have focused on crafting a roughly 10-year plan that reflects both the distinctive strengths that make us who we are today and our aspirations for the future as we reach higher and dig deeper in pursuit of our collective vision. Our core mission as a top-tier public research university — advancing the greater public good through the creation, application and dissemination of knowledge — is enduring. But our strategies for pursuing this mission must continually evolve. Our plans for the future should be definitive in pointing the way forward, but flexible enough to adapt to respond to changing societal needs and nimble enough to seize unexpected opportunities.

This document provides a starting point, first for a richer discussion of the proposals set forth, and eventually as a guide for assessing our progress in achieving these goals. UC Davis is a constantly evolving university that is committed to leading the way forward in a rapidly changing world. As we prepare to set this plan in motion, we invite the continued input and engagement of the extended UC Davis community — faculty, students, staff, alumni, university friends, partners and other key stakeholders around the world — to think about and contribute to our goals and actions over the next decade. We welcome you to join us in changing the world.

Engage!

