UC BERKELEY STRATEGIC PLANNING

FINANCIAL STRATEGIES WORKING GROUP FINAL REPORT
DECEMBER 2018

EXECUTIVE SUMMARY

Berkeley is a university unlike any other. Our scholarly achievements across a vast range of disciplines are unparalleled. We serve as a key engine of social mobility for an extraordinary number of students. And we promote the public good—in the State of California and beyond—by, for example, creating the technologies that fuel economic growth and improve lives, and through the various ways in which we connect with the citizens and communities of the state. Berkeley is truly a place that opens horizons of possibility for all. Unfortunately, long-standing, nationwide trends in the funding of public higher education challenge our ability to maintain this rare combination of excellence and access. We need new financial strategies that will preserve and ideally extend our academic excellence and access to it—strategies that permit Berkeley to thrive, to fulfill its mission, and to attend to its pressing needs (*e.g.*, increase student housing or improve the faculty-student ratio).

Recognizing that need, the Working Group on Financial Strategies (hereafter, the Group) was established as part of Chancellor Carol Christ's strategic planning initiative (see the Strategic Planning website for the Group's membership). The Group's charge was to answer the question:

How can Berkeley foster a sustainable financial model with an evolving diversity of revenue sources?

The Group reads as implicit in its charge that any financial model be consistent with Berkeley's mission, particularly its commitment to excellence and access. Consequently, the Group did not consider financial strategies that would put us on a path to mediocrity or that would make us an institution serving only the wealthy and privileged.

The Group met six times. Additionally, various members of the Group attended town halls, Academic Senate meetings, ASUC/GA meetings, meetings with campus staff, and other fora to receive input from a variety of stakeholders. The Group also collected and read a large number of reports, white papers, and other background documents that have been prepared over the last five years.

The Group quickly concluded that Berkeley's current financial models and practices are not consistent with the goal of maintaining Berkeley's distinctive combination of access and comprehensive excellence. The problems with our current financial models and practices are complex, but a quick summary is that *Berkeley has a* ***revenue*** *problem, an* ***expense*** *problem, an* ***allocation*** *problem, and a* ***scale*** *problem*. We need to increase **net revenues**: both increasing the diversity of sources and amount we bring in, and making our operations more **efficient**. We need to improve how resources are allocated, including addressing the incentives that affect allocation. We need to address the **complexity** that Berkeley's **scale** creates, the consequent opaqueness in operations, and the difficulties of assigning control rights at the appropriate level and with the appropriate oversight and **transparency**. The issues of net revenue, efficiency, incentives, complexity/simplicity, and transparency are all central to the sustainable financial model that we propose.

Although naturally any discussion of *financial strategies* suggests a focus on money, it should be emphasized that much of what is considered below also encompasses

non-monetary resources, both tangible and intangible, and non-monetary returns, both tangible and intangible. Berkeley is not a for-profit enterprise: an investment of money that yields valuable returns in terms of better research or educational outcomes, but no additional dollars, is very likely a desirable investment for us to pursue. It is also worth noting that this Group's charge is ***not*** to make recommendations about allocations of resources; that responsibility falls, to an extent, to the other three working groups.

Similarly, consistent with the Chancellor's charge to this group, we address the campus's financial strategies at a broad level, without attending to the details of implementation. Working out the details and mechanics around implementation are, of course, essential; that work, however, remains for the next phase of the strategic-planning process. With regard to implementation, we join the chorus of voices calling for a careful, consistent, and collaborative process for moving from the high-level analysis and principles set forth here to devising the details and specifics of implementation.

THE GROUP DEVELOPED THREE GENERAL PRINCIPLES TO GUIDE OUR ANALYSIS AND RECOMMENDATIONS:

TRANSPARENCY AND TRUST: A successful financial strategy must recognize that Berkeley needs both *cultural change* and *operational improvements* in how it conducts its business. Lack of transparency in our budgeting practices currently fuels an atmosphere of suspicion and mistrust among campus stakeholders. Greater transparency would help build a culture of trust that gets away from the hoarding and turf wars that currently plague us. We need to shed the belief that it is all a zero-sum game and, instead, realize that there are win-win solutions. We need practical improvements so that our processes are more readily understood, so that people can see the tradeoffs that exist among competing needs and goals, and so that that the community understands the principles guiding difficult choices.

BE WILLING TO SET CLEAR PRIORITIES: Allocating resources efficiently and wisely requires frank discussions about priorities. At the highest level, our priorities are clear: academic excellence across the widest range of fields; access to that excellence for as broad a student body as possible; and serving the public good. At a more specific level, the work of the other three Working Groups must guide our priorities. And once we set priorities, we must show commitment to them through consistent strategies.

DISCIPLINE: Berkeley needs to be more disciplined in how it operates. We need to develop the ability to say no to "bright, shiny objects" that divert attention, resources, and energies away from our core mission. Of course, we will continue to move in new directions over time, but we must select only those directions that are consistent with Berkeley's excellence in academics, access, and serving the public good. Additionally, pursuit of new revenue sources should be limited to those that make sound business sense, accounting for all costs, including indirect and imputed costs (*e.g.,* faculty and staff time, use of space, etc.). We must become more disciplined in philanthropy and other mechanisms to increase revenue, becoming as excellent in them as we are in scholarship.

Transparency and discipline come together throughout this report. Perhaps the simplest way that they intersect is in how we talk about our budget. We must be honest and numerate, relying on facts and evidence, not wishful thinking. Too often, campus constituencies point to one or another area of expenditure and declare that eliminating it would solve all our financial woes, ignoring that it represents only a small percentage of overall spending and, moreover, failing to address the fact that revenues are currently growing more slowly than expenses in almost every area of operation. Similarly, we cannot give in to fantasizing about dramatic increases in state support—we must resolve our revenue challenges ourselves.

As the campus moves forward in fleshing out its strategic plans, determining implementation, and ultimately executing, we need accountability and methods to ensure adherence to our principles. These methods will include a mix of cultural expectations, incentives, and clear negative consequences when people or units fail to comply. Leading by example, those in charge must in particular abide by these principles.

STRATEGIC RECOMMENDATIONS

FIND A HEALTHY BALANCE BETWEEN PRIVATE INCENTIVES AND THE PUBLIC GOOD: The most powerful incentives come from getting to keep what you reap, but such a laissez-faire approach offers no provision for common or public goods, and rarely provides good incentives to coordinate, cooperate, and even seek mutually beneficial synergies. It is essential to strike the right balance between private incentives and providing for the public good. We should, as discussed below, draw on the work of the earlier constituted Incentives Working Group and Common Goods Working Group, as well as the thoughtful responses to their reports provided by the Academic Senate, to determine this balance.

KEEP PROCESSES AS SIMPLE, CONSISTENT, AND PREDICTABLE AS POSSIBLE: Many of our allocation processes, ways of making internal transfers, and related decisions are complex, idiosyncratic, and shrouded in mystery. As much as possible, decisions must be governed by clearly articulated and common principles, and be informed by understandable and accessible metrics. Individual actors need to be better able to predict what will be allocated to them than they currently are. This will require end-to-end process simplifications: many of our administrative processes and institutional structures are too complex, resulting in frustration, lack of transparency, breakdowns in trust, and excessive resource consumption. We must reduce the number of special deals, because they are antithetical to the goals of transparency, predictability, and simplicity. The suspicion that others are obtaining special deals erodes trust, and such deals add transaction and lobbying costs to our operations, which although often difficult to measure monetarily, nonetheless represent the use of real resources (*e.g.*, time).

BE HOLISTIC IN OUR FINANCIAL THINKING: Decisions need to be made on the basis of what we wish to accomplish, fully accounting for the benefits (financial and non-financial) that may result, as well as all the costs that will be incurred. *We must consider all funds jointly*. When making funding decisions, we should focus on our overall goals rather than the source of funds. Although some funds—especially gifts, grants, and contracts—are constrained, there is often more fungibility than we currently imagine; moreover, we should look to remove constraints that limit fungibility. *When evaluating an activity, we must weigh all benefits and costs*. We cannot, for example, pursue an activity simply because of the benefit it provides the decision maker when a significant share of the cost is borne by others—particularly when the cost outweighs the benefit from the perspective of the University as a whole. *We need to recognize that financial expenditures are not a complete measure of costs; there are also opportunity costs and imputed (or "hidden") costs to consider.* When, for example, we ask a donor to fund one project, we often forgo the opportunity to ask her for something else. If the something else has greater value than the project to which she donated, the opportunity cost has outweighed the benefit. *We need to consider the benefits and burdens that one unit's project imposes on others,* whether in time, staff, or space, and balance them in a sensible way.

BE WILLING TO INVEST EVEN IF THAT DEEPENS CUTS ELSEWHERE: It is often necessary to spend money to make money**.** Many of the revenue-generating activities on which we will increasingly need to rely—such as non-traditional revenue-generating educational programs and philanthropy—require upfront investments. We should be wary about imposing across-the-board cuts of uniform percentages just to satisfy some simplistic notions of fairness; cuts today that impede revenue tomorrow are pennywise but pound foolish. These investments will often include investments in human capital: recruitment, retention, and training. Having the right talent makes any strategy easier to implement.

REMAIN STRONG ADVOCATES FOR PUBLIC FUNDING AND RESPONSIBLE TUITION POLICIES: We can ill afford to see a further erosion in State support or the pursuit of politically popular tuition policies that leave the University starved for funds. One must remember that current state support is roughly equivalent to a $9 billion endowment and tuition almost a third of central revenues. Modest, predictable increases to tuition are an important part of a comprehensive financial strategy. We must therefore continue to work to ensure such increases, while simultaneously ensuring investment in student aid and scholarships consistent with our obligation to ensure access. We must maintain our advocacy campaigns *vis-à-vis* maintaining State support. We must also be advocates for maintaining the campus's local autonomy within the UC system and the UC system's constitutional autonomy: although we are a public institution beholden to the citizens of California and we benefit from being part of the world's premier university system, the nimbleness and flexibility to execute on what needs to be done, as well as the benefit of local knowledge in decision making, require that we retain considerable control over our business.

Financial Strategies Working Group Report

Introduction

UC Berkeley is a remarkable place of discovery, which expands the horizons of possibility for all. But financial challenges threaten our ability to sustain that excellence. Developing a new financial strategy should enable the campus to thrive over the next decade and beyond, excelling in our mission of scholarly pre-eminence across a wide range of disciplines, enhancing access and thereby social mobility for our students, and contributing to the public good for the people of California and the world. A new financial strategy must not mean an abandonment of our central mission, but rather a new way to support that mission.

Our core financial challenge includes both the operating budget and the capital budget. Today, after years of painful austerity, we still face a modest operating deficit of about 3% of expenses. Over the next ten years, that operating deficit will increase unless we change course, because our largest current revenue streams (tuition in traditional programs, contracts and grants, and state support) are likely to grow less quickly than will expenses, even if we are careful to limit expense growth. Furthermore, alongside the issues of our operating budget is a large and important capital budget problem: our current buildings are inadequate to our needs, but we have neither the money nor the debt capacity to fix them and build more. Financial sustainability to support comprehensive excellence must address both the operating and the capital budget.

Analysis of the problem: culture and operations

Our financial problem includes four parts. We have a revenue problem, an expense problem, an allocation problem, and a scale (complexity) problem. These four are tightly interwoven. For example, we currently have at least nine different internal tax rates for different kinds of revenue, varying from 5% to 100%, which encourages savvy units to focus on activities with low tax rates, rather than on the activities that would most strongly support our pedagogical mission and bring the most net revenue to campus. By fixing those kinds of allocation (incentive) problems, we should be able to improve revenue. Similarly, some kinds of complexity are very costly. For example, when we need to schedule meetings repeatedly to coordinate similar work being done across multiple units, using considerable staff and faculty time, as well as delaying outcomes, we are bearing the cost of complexity.

Addressing the four interconnected problems of revenues, expenses, allocations, and complexity will require both cultural change and operational improvements. Two kinds of culture change are especially central: developing greater trust and self-discipline. We need to build a culture that is more trusting and that gets away from hoarding, turf wars, and the presumption that it is all a zero-sum game. We are all in this together, and we should not have to live with the "gaming, guessing, and grabbing" that have become common over the years of financial hardship. At town halls and meetings with a variety of campus groups, we heard stories of mutual mistrust: many campus members feel that their units have been disadvantaged relative to others, or that other campus units stand eager to steal their money, potential donors, space, faculty lines, or other resources. We are better than this, and we deserve better.

In addition to a higher-trust culture, we need to work toward a culture that more highly values discipline and self-control, where for example we are more able to say "no" to "bright, shiny objects" that come at the expense of the core. We must make sure that we invest only in those non-traditional programs (i.e., concurrent enrollment growth,

self-supporting degrees, etc.) that make good pedagogical and business sense, accounting for all costs including imputed costs (e.g., faculty and staff time). We must be more disciplined and coordinated in terms of philanthropy: it harms the campus to have five different fundraisers ask a potential donor for smaller sums when a single, deeper, more thoughtful conversation with the donor would induce her to give a larger, more transformational gift. Self-discipline must also guide our investments on campus: the faculty has not grown in over thirty years, but the number of majors, centers, and programs has grown considerably over that time. We now have 85 academic departments, over 110 undergraduate majors, over 130 terminal graduate degrees (Masters and Doctoral), and at least 185 research centers/museums/ORUs. All told, that is more than one academic entity for every three faculty members on campus. This contributes to faculty being overwhelmed with work, and also raises campus spending on staff in the units and in campus support. Saying “no” to some less important things will allow us to say “yes” to more important ones. It is imperative that we establish clear priorities for revenue generation and spending, and then make the hard choices consistent with supporting those priorities.

There are also important ways in which our culture is already strong and well aligned to respond to our financial challenges. As members of the UC Berkeley community we are very entrepreneurial, in the sense that we are bold, independent risk-takers, who seek to do new, creative things—as currently expressed primarily in our independent research agendas. By expanding how we think about creative, independent risk-taking into new domains—such as monetizing that research—we can make important headway on the revenue problem. We are also already committed to supporting the common good, as expressed in our Honor Code and Principles of Community. If we act with “honesty, integrity, and respect for others” in our financial arrangements as in other domains, it will make solving our financial challenges much easier.

Alongside culture change, we need operational improvements so our processes are clearer, more efficient, and make more visible the tradeoffs that exist among competing needs and goals. Too many of our processes are needlessly elaborate. For example, we should not need multiple layers of approval for a simple decision or a small purchase. Colleagues from all corners of campus recounted stories of long and opaque processes where the same work is done twice and checked three times. In these cases, we have both wasted money and caused a lot of needless frustration. We could improve our financial position by improving our operational efficiency, through end-to-end process simplification. Similarly, the campus is plagued by too many special deals. Too often, we negotiate new arrangements rather than using existing, standard arrangements. Such a tendency is antithetical to the goals of transparency, predictability, and simplicity. Moreover, special deals tend to erode trust, and add transaction and influence costs to our operations, which although often difficult to measure monetarily, nonetheless represent the use of real resources, such as time.

These operational improvements have a close tie to campus complexity: complex institutional structures are likely to breed inefficient processes, and their consequences are much more severe in those contexts. For example, if we have to forecast detailed categories of expenses by control unit, then twice as many control units means twice as much forecasting work, even if the total expenses to be forecast are the same. Complexity is costly, and represents real trade-offs; more units—whether ORUs or administrative units or Graduate Groups—means more time and money spent on administrative support, at the expense of other priorities. Reducing institutional complexity would contribute to financial sustainability, and therefore ultimately to our ability to fulfill our mission.

A critical part of operational improvement is the expanded use of metrics to inform (but not dictate!) decision-making. Currently many allocations are based on historical precedent and a series of now-invisible special deals or private pleadings, which were incrementally increased or decreased over time as the annual budget cycle allowed. Some units were given additional work without necessarily the budget to cover it; other units still receive allocations to compensate for work that is no longer important, or even work that is no longer done. As new revenue sources emerged, each was assigned a unique allocation method, according to the conditions of the day. As a result, we have a patchwork of overly complex financial arrangements, with only a limited relationship to the contemporary mission. When we build new buildings, we must increase the janitorial budget for the expansion in work; when departments grow or shrink, we must update temporary academic support (TAS) and space allocations accordingly.[1] Over the last few years, we have, for example, begun to use student credit hours (SCH) as a metric to inform—but not wholly determine—the campus (EVCP's) direct TAS allocation, increasing efficiency. Similar changes could improve allocations across a wide range of domains.

INCENTIVES ARE CRITICAL

Berkeley is a community, with a shared mission and goals, not a collection of independent actors. We are all committed to scholarly excellence, access, and serving the public good. Building a sustaining a culture of shared values—as in our Honor Code and Principles of Community—is an important piece of solving some of our financial problems. At the same time, it is also important to consider the incentives that each decision maker faces: properly designed incentives can harness and direct self-interest toward the commonweal.

As noted already, part of improving incentives is adopting more metrics-informed rules for allocation, which will make incentives more explicit.

Another issue is the proper alignment of incentives. For instance, right now, it is quite feasible for some action to improve the financial position of a unit while decreasing the financial position of the campus as a whole: a school or college could, for instance, run an academic program that generates self-supporting graduate professional degree program (SSGPDP) funds for itself, but which costs

[1] TAS is a good case study of the enormous operational complexities we have imposed on ourselves. The mission of providing temporary academic support (which is often not that "temporary" insofar as it pays for, among other things, long-serving lecturers) is funded from a variety of sources in opaque manners that are often at cross purposes.

Moreover, even when one funding source has increased, as has the EVCP's direct contribution to TAS, steadily over

time, if deans elect to reallocate other, more discretionary, funding sources away from academic support, then the actual level of academic support at the department level may fall. Department chairs may not know why this has occurred, who has made the decisions, nor be able to predict what their future allocations might be or how their actions (*e.g.*, seek to increase enrollments) might affect those allocations.

the campus more in overhead than the portion of the SSGPDP fees returned to the campus. Or an administrative unit could save money by decreasing its scope of work in some domain but shifting work out to other units at the same time, making the total work overall more complex and therefore costlier to the campus as a whole. As we clarify and simplify allocations, these incentives will become more transparent, and our success will depend in part on ensuring that all decision-makers have local incentives that align with our collective incentives as a campus. Conversely, if we fail to align incentives, individual units will continue to make decisions that benefit them, but harm the institution as a whole.

In recent years, joint working groups of the administration and Academic Senate have undertaken two important studies of incentives: one conducted by the Incentives Working Group, the other on Public and Common Goods Funding. Information about their work can be found on the EVCP site. Many of the core recommendations of these studies overlap with each other and also with our own analysis, and we strongly endorse those aspects of the two reports. We also note that the Academic Senate raised some important concerns about the reports, especially calling for clearer high-level principles, to orient their more tactical recommendations. We have tried in this document to focus on that higher-level strategic framework.

Incentives are rarely perfect, and aligning them always has costs. The design of optimal incentives is typically what economists would call a second-best problem—perfection cannot be obtained, one is simply seeking do the best that is possible under the circumstances. We should not hesitate to try to align incentives just because we know that our solutions will be imperfect. Instead, we should do the best we can, and try to get less wrong over time. Similarly, we cannot refuse to pay the costs associated with aligning incentives: they are essential to designing a functional financial model. In those cases in which incentives cannot be aligned, or where the cost is too high, an alternative is to restrict control rights: forbidding or requiring certain actions. Although restricting control rights can also be costly once one accounts for the required monitoring, it is important to recognize that it is sometimes necessary. For example, in the discussion of philanthropy below, it may be necessary to forbid some kinds of "rogue" fundraising for the benefit of the campus as a whole.

There are additional challenges in setting good incentives. One important example concerns the provision of public goods. By their nature, the benefits of these goods are widely enjoyed and it is often impractical or undesirable to restrict access to those who have paid in. One of the simplest and strongest incentives for good decision-making is to let the decision-making unit reap what it sows, but that would leave public goods underfunded. One also must guard against creating perverse incentives. For instance, in a world in which allocations appear to be made in unpredictable ways, decision makers will have an obvious incentive to build up "rainy-day" funds, seek to hide funds, or otherwise engage in behavior that protects them against the vagaries of next year's allocation. Especially in our current budget situation, we cannot afford for units to stuff funds in mattresses and hide them under the floorboards. As another example, in a world of perfect accounting, a tax on net income (revenue less cost) is non-distortionary, but in a world of imperfect accounting like the one in which we live, a unit may seek to lower its tax bill by loading costs from untaxed activities onto the taxed activity (this is especially an issue with how overhead costs are treated).

Getting incentives right will require us to have clearer property rights. Almost no one takes a rental car through a car wash—we rarely invest in what we do not own. This insight also applies when we consider inducing units to make investments that may substitute for centrally funded items: a dean is unlikely to raise money for a new ladder faculty position if it might cost him or her a 19900-

funded slot. Similarly, departments currently are unsure whether it is in their interest to teach more, because their central allocations are not perceptibly tied to SCH. As we continue to increase undergraduate enrollment, we will need some units to teach more than they do now, and we will need units that currently teach many SCH to continue to do so. We therefore need to explicitly link at least some fraction of units' funding to the tuition and state support that they generate through their teaching, as many other universities already do.

At the same time, we must be cautious lest a focus on metrics obscure important, but difficult to quantify contributions to education, such as "high-touch" discovery experiences for undergraduates. For this reason, budgeting and other allocations cannot be determined wholly by metrics; some cushion, at least, must be held in reserve to ensure funding for vital parts of Berkeley's mission and excellence that, for whatever reason, would be shortchanged by a purely metrics-driven approach to allocation.

Incentives are important, but they will not always result in optimal outcomes: individuals must also be held accountable for their actions. We must also have clear and consistent consequences for poor performance. A common refrain on the Berkeley campus is that it is better to beg for forgiveness than to ask for permission. To an extent, the refrain can be seen as a rational response to a heavily bureaucratic environment. But, at the same time, it also reflects a lack of accountability: rarely have there been negative consequences for going rogue. Yet studies of governance make clear that holding actors accountable for their actions, including dismissal when warranted, is one of the most powerful incentives there is. A common belief within Berkeley is that its academic excellence derives, in part, from the serious and relatively frequent reviews that all faculty must undergo. A similar accountability applies to administrative functions: those with administrative responsibilities should have serious and consequential performance reviews, including a review of their stewardship of the University's resources and finances. Correspondingly, their financial management goals need to be clear and, as appropriate, the appropriate financial management training provided.

Incentives and accountability work best when decisions are made at the appropriate level. To the extent we get metrics, incentives, issues of externalities, and transparency right, Berkeley can assign decision rights appropriately—the Chancellor should not decide how many paper clips a given department gets, while the Chair of that Department should not set campus fundraising priorities. Appropriate decentralization of decision-making requires that those to whom decisions have been delegated have the resources to make good decisions. Not all of our 85 departments have the capacity to manage their budgets in an independent way; decanal units are more likely the right level for many financial decisions, and even then, there is variation in capacity across units. In addition, a means of decentralizing decisions and authorities needs to be consistent with Berkeley's traditions of shared governance. For example, although there could be some efficiency gains to delegating faculty merit advances to the decanal level, it could be challenging to do so while preserving Senate review of academic personnel matters. It would also be a challenge insofar as data suggests that different deans use different standards and oversight is necessary to guard against bias. At the same time, a number of decisions, especially around fundraising, appear to be made in too decentralized a manner. Where spillovers and externalities loom large, greater centralization is necessary. In sum, to be efficient, Berkeley must centralize or decentralize decisions wisely.

REVENUE SOURCES AND OPPORTUNITIES

Increasing net revenue is the key to building a sustainable operating budget. The principles and strategies we discuss above must orient how we do that, but there is also a practical question of which potential revenue streams are the most promising. This section addresses those alternative streams.

In round numbers, we currently receive $950 million from state support and various tuition and fees in traditional programs, plus another $650 million in grants and contracts. These sources are likely to grow less quickly than our costs, even if we are careful to limit expense growth. Another $350 million in revenue comes from sales and services, primarily in housing and dining. Supporting the student experience requires us to keep the growth in housing and dining costs for our students as low as we possibly can, consistent with ensuring safe and appropriate housing and access to food. That is, we should not be seeking to earn *net* revenue from these services (unless we are renting to third parties or for-profit operations that should pay market rates), and they will not be a major contributor to improvements in the operating budget. In addition, we currently receive about $250 million in philanthropy for *current* use (annual gifts received are considerably higher, but much of this money goes into endowment), and $200 million in higher-revenue enrollment from summer session, UNEX, professional degree supplemental tuition (PDST), and SSGPDPs. Philanthropy and non-traditional programs/enrollments are both areas where faster rates of revenue growth are certainly possible, and should be priorities. In addition to higher-revenue enrollment and philanthropy, Working Group members believe that there is potential to grow revenue by better capturing the financial returns to the intellectual property (IP) generated at Berkeley, entrepreneurship around such IP, and industry alliances. There are also opportunities to license our "brand" more effectively (being, of course, sensitive not to dilute or distort it) and to monetize our real estate holdings.

PHILANTHROPY

Berkeley's academic excellence will be in jeopardy if we cannot match the excellence in philanthropy of the universities with which we compete for faculty and students. We need to continue the move to a more centralized, disciplined, and

donor-centered philanthropy organization, with a focus on stewardship. To do so requires the kinds of cultural and operational changes discussed above: getting incentives right, setting priorities and maintaining discipline, working as a unified organization for the benefit of the whole. In particular, successful fundraising requires being donor-centric; at the same time, where possible we need to match the passions of donors to the central priorities of the campus. We must no longer accept "gifts that keep on taking" (*i.e.*, consume University resources, including time, on activities that are peripheral or that would require further investment of University resources than we rationally wish to make). Raising unrestricted, general-purpose money is hard, but it must be our goal: we need philanthropy to fund core activities, not (only) "nice-to-haves." An important part of improving the donor experience and aligning priorities is related to restoring trust between University Development and Alumni Relations (UDAR) and the units. This must go in both directions: UDAR and the units share an obligation to work harder to collaborate in a productive way. Units may not decide that their priorities trump University priorities or fail to follow prospect management protocols. UDAR must respect and not undermine the relationships that the units have built with donors. On a practical level, gift accounting must become more transparent. We need greater coordination across the campus with regard to donor stewardship and relationship building.

Finally, we need to shift some of our fundraising effort away from endowment gifts toward current-use gifts.

Although philanthropy must play a larger role in the funding of the University, we recognize that this has the potential to generate difficult governance issues. In particular, how, as a campus, do we manage the risk that an emphasis on philanthropy could, in some areas or circumstances, create tensions with our academic priorities—how do we guard against the wishes of donors (or even what we believe will please potential donors) from having an outsized influence on our academic choices? These questions must be addressed as we move forward.

Higher-revenue enrollment

As the nature of work and credentialing changes, we have the opportunity to do well by doing good, offering a variety of kinds of educational experiences outside of the traditional full-time, four-year undergraduate degree. Revenue-generating Masters programs are one mechanism already in use on campus, but certificate programs and micro-credentials, both of which could be conducted partly online, offer another avenue. The point here is to provide students with skills and credentials that will serve them in their work lives, provide appropriately trained workers for the California economy, and charge fair prices that support our financial health. New teaching programs must have both a compelling pedagogical or public-mission justification and also make sound business sense: they must produce positive net revenue. Here full-costing is critical: all costs and externalities, including time, need to be taken into account in forecasting net revenue, and we must conduct sober and realistic assessments of the market demand.

In addition, we need to be willing to recognize when a revenue-generating enrollment program is no longer working. Berkeley is good at starting new things, terrible at ending things. We must establish clear means of appraising and reviewing programs; schedule periodic sunset reviews; and set forth conditions and milestones that programs need to meet to be continued. The continued role of New Academic Ventures at Berkeley (NAV-B) in reviewing all new academic revenue generation initiatives, tracking, and reporting on them seems desirable.

We discussed tax rates and incentives above, and they matter for all aspects of revenue generation, but are particularly important here. For these programs to benefit campus, we need clear and sensible policies on what fraction of the income generated by new programs will stay in the developing unit. We want units to reap the benefit of their work, but also to support the common good. Thus, our financial policies must not only establish explicit "tax rates" and the bases for collection (*i.e.*, whether taxes are based on expenses, net income, gross revenues, head count, etc.), but also address implicit taxes (*e.g.*, would a unit with large such revenues be disadvantaged in terms of receiving 19900-funded faculty slots, TAS, etc.). Similarly, we must coordinate the policies regarding income from new teaching programs in a rational way with those concerning income from existing teaching programs. Currently, different kinds of teaching are taxed at dramatically different explicit rates, from 9% for summer sessions, continuing education, and executive education to 100% for general tuition. In general, we should move in the direction of simpler and more transparent taxation.

IP, entrepreneurship, and industry alliances

Berkeley creates remarkable new discoveries, many of which have commercial applications. We currently license far fewer of our patents and discoveries, proportionally speaking, than do our near competitors. Although we file patents on a good proportion of our disclosures, we do not have as many disclosures as comparable institutions, indicating that inventions may be falling through the cracks. Of the disclosures that are parented, we under-market and under-license them to companies. In addition, at several meetings of Group members with other university constituencies, we were told that some of our exceptional inventors have had negative experiences with our patenting office, which could in some cases lead them to consider alternatives paths to patenting. The University should consider its intellectual property relationship with LBNL to ensure that our campus financially benefits from inventions conceived by joint employees of the University and LBNL for inventions in part conceived on the campus. In addition, our faculty onboarding process should offer additional clarity regarding employee contractual obligations in intellectual property assignment. In parallel, we should explore approaches to further enable our intellectual property office's operations, through increased investment and/or exploration of the possibility of partnerships with LBNL or UCSF. In addition to patents, we have the opportunity to invest in and otherwise support emerging companies started by Berkeley students/alumni or using Berkeley innovations. This could be done by taking equity positions in some companies, through licensing activities, and possibly encouraging the Berkeley Foundation to invest. These investments could provide both a direct revenue stream and the potential for future philanthropic giving.

In addition to research, we provide an important source of high-quality workers to California companies. This provides another mechanism for thinking about entrepreneurship and our relationship to the private sector. We need to ensure campus corporate engagement that is consistent with our values. This engagement can lead to corporate philanthropic giving, revenue through custom (*e.g.*, executive-level) education, internship for our students, and research collaborations. Moreover, given the importance of UC Berkeley research and the quality of its graduates, corporations (and other employers) should have incentives to join with us in public advocacy on behalf of the University. We should look to promote such joint advocacy whenever useful and appropriate.

Monetize real estate

Although we have the smallest core campus footprint of any UC, we do own a good bit of underdeveloped land that could be monetized. The Richmond tract is the most attractive parcel, because it is so large and right on the Bay, but other, smaller parcels could also be monetized. Because we lack the cash or debt capacity to develop this real estate ourselves, we will need to use a combination of philanthropy and private-public partnerships for real-estate development. We discuss this more in the section on the capital budget.

Brand licensing

The Working Group applauds the fact that campus has invested in two offices related to brand management: the University Partnerships Program and the Berkeley Business Contracts and Brand Protection office. The Working Group hopes that these two offices are working in close collaboration. In addition to protecting our name and reputation, these offices could potentially become a source for substantial revenues. Berkeley is internationally known and widely respected. Berkeley-branded travel learning opportunities, Berkeley co-licensing with appropriately vetted companies and products, or Berkeley-branded test-prep or study guides could potentially find important markets. In some of these cases, such as Berkeley travel-learning, we could simultaneously build alumni ties to today's campus, which could promote future giving.

Constraining Expenses

No university ever cut its way to excellence. We have endured years of fiscal austerity, and nearly every unit on campus is feeling drained. Going forward, we cannot rely on cutting expenses to resolve our financial problems. That said, we must refrain from allowing expenses to grow too quickly, and we must be careful to spend money wisely.

Our expenses are dominated by wages, salaries, and benefits: $1.6B out of $2.5B in 2017. Of this, we spent almost $590M on academic salaries and wages, including ladder-rank faculty, lecturers, GSIs, postdocs, and research staff. We spent another $640M on non-Academic staff salary and wages. This includes more than 900 job codes, of which the most numerous are administrative assistant/officer, custodian, food service worker, applications programmer, student services advisor, and research administrator. Nearly $400M was spent on benefits. Scholarships and fellowships is the next large category: nearly $200M in 2017. $160M was spent on services. Supplies, materials, and equipment accounted for $100M; Grant and contract subawards were another $100M. Rents and utilities cost the university $70M, and insurance another $70M. The UCOP assessment was over $60M. The remaining $140M is miscellaneous.

It is beyond the Group's purview to analyze specific expenses. Instead, consistent with our charge, we focus on high-level principles. The most general principle is that we should spend money only on our priorities, driven by what we want to do, not where the money comes from. For example, at the department level, ladder faculty and lecturers both contribute to the teaching mission, although they are funded through different streams. We need to establish processes and practices to encourage departments to staff courses focusing on what is best way to fulfill the teaching mission, rather than focusing on the two streams separately. Although some funds—especially gifts, grants, and contracts—are constrained, there is more fungibility than we currently imagine. We can also look to remove constraints that limit fungibility. In addition, we propose that we should ask the following four questions about our expenses.

What can we stop doing?

Although our financial problems are not the result of waste and extravagance, and although we have made considerable cost reductions over the last years, we must nonetheless examine our current practices and operations to see what we could reasonably cease to do. That is, what lower-priority practices, operations, and activities could we stop without harming our excellence or dishonoring our public mission? Specifically,

- Consideration should be given to a comprehensive zero-based budgeting exercise, perhaps in combination with a simplification of budget processes going forward.
- We should reward executive leaders in campus support who find ways to do their work more efficiently and at less cost. Make individual incentives align with the campus need for cost reductions on the administrative side.
- Although Berkeley has been poor about using explicit sunset clauses or imposing periodic sunset reviews, where sunsetting is a possibility we need to undertake those reviews and not be shy about sunsetting things that are not working or represent a low-priority use of resources.
- For research centers and other significant areas, some systematic review should be undertaken, perhaps along the lines of a "base-closing" commission (or commissions).

- In some instances, it will be necessary to negotiate with vested interests with regard to stopping things. We should not be shy about entering into those negotiations because they might be difficult; instead, we should see if win-win outcomes can be achieved.

HOW CAN WE DO WHAT WE WISH TO DO MORE EFFICIENTLY?

As noted already, we have many practices that are inefficient, which lead both to higher direct costs and higher indirect costs (*e.g.*, faculty and staff time). The fact that a practice is long standing, the "way we've always done things," does not mean it is sensible. To be sure, some conservatism is in order—a solid rationale for a practice may have been lost in the sands of time—but a quasi-religious traditionalism is deadly.[2] In addition to addressing inefficient practices, we must also look for duplication of activities. In a related vein, we also must look for operations that are below minimum-efficient scale; that is, operations that might profitably be merged or combined across units to ensure we realize economies of scale and don't needlessly replicate fixed- and overhead costs.

Sometimes, we can do things more efficiently by doing them in a dramatically new way. For example, we could transform faculty recruitment allowances (FRAs), which are taxable cash allowances given new faculty, into a shared-equity housing program, similar to what many other universities have. In addition to providing a larger contribution to the down payment (because untaxed), this change could potentially make our housing assistance program self-supporting in the long run.[3]

HOW DO WE ACCOUNT FOR EXTERNALITIES AND SPILLOVERS?

As we discussed above with incentives, distortions in decision-making can easily arise when less than 100% of the benefits accrue to the decision maker or when less than 100% of the costs do. When some of the benefits spillover to others (*i.e.*, when there are positive externalities), the decision maker is tempted to under-expend from a social perspective if she bears all the costs. On the flip side, if some of the costs spillover to other (*i.e.*, when there are negative externalities), the decision maker is tempted to over-expend from a social perspective if she enjoys all the benefits. In allocating decision rights, consideration

[2] In the mid-1980s, facing an obvious need for serious reform, General Motors proved remarkably resistant: practices that were clearly not helpful or made little sense were defended as part of "the General Motors way." Since the mid-1980s, General Motors has lost half the market share it once enjoyed and has gone bankrupt once.

[3] Because the University would only realize a return on its equity investment in faculty housing upon sale (or certain other events), one does need to recognize that funds so invested can be tied up for long periods. Moreover, because they are investments in equity, there is risk due to fluctuations in housing prices. Nonetheless, over a long enough period of time with a large enough portfolio, such a program would be self-funding.

must be given to externalities, positive and negative. Alternatively (additionally), incentives must be provided to the decision maker to induce her to consider externalities.

How do we bend the cost curve?

The costs of running a world-class university will increase over time. Even if we become more productive, there are limits to our productivity gains and, thus, our costs will rise relative to the rest of the economy.[4] Although we likely cannot affect the sign of the first derivative, we can try to affect the second: that is, develop strategies to slow the rate at which costs grow. Inevitably, this requires our developing means of conducting our business differently. At the same time, this cannot only be a call to do more with less: already, we're suffering from the stresses of asking faculty and staff to do more. Instead, we must look to technology, automation, and better processes to make the same labor input produce more in those parts of our operations where that is possible.

Capital Budget

In addition to the challenges of the operating budget, discussed through revenues and expenses above, we have considerable and specific problems related to capital: how we build and maintain our physical infrastructure. In the past, the State of California provided support for construction through bonds. At present, we have little to no remaining debt capacity, and in the future, State support for construction is likely to remain limited. Therefore, we have to think in new ways about funding for capital projects, while we continue to advocate with the State for renewed investment through bonds.

We have two primary alternatives to finance capital projects: philanthropy (including donor-supplied buildings and traditional philanthropic gifts) and public-private partnerships, also called P3s. P3s offer a viable funding model for any building with a dedicated revenue stream, such as housing; however, they cannot be used for classroom buildings or other kinds of buildings which will not generate a flow of revenue over time. Construction of housing can therefore be financed in three ways (P3, philanthropy, bonds), and construction of classrooms in only two. Research space is somewhat ambiguous, because while a portion of indirect cost revenue could be used to support a P3 mortgage, ICR revenue is already insufficient and so this financing model is not preferred. Because classrooms cannot be supported with P3s, the Group endorses the recommendation of the Campus Capital Planning Committee that debt capacity be reserved for classroom buildings, implying that housing will be built primarily with P3s for the foreseeable future.

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[4] This is Baumol's Disease: any industry that does not enjoy the same rate of labor productivity growth as the rest of the economy will see its costs rise relative to the rest of the economy.

Appendices

Appendix A: Working Group Membership

- Ben Hermalin, co-chair. Professor of Economics and Business, Vice Provost for the Faculty
- Jennifer Johnson-Hanks, co-chair. Professor of Demography and Sociology, Chair of the Committee on Academic Planning and Resource Allocation (CAPRA)
- Jon Bain-Chekal. Executive Director of Financial Planning & Analysis
- Jill Banfield. Professor of Earth & Planetary Science, ESPM, and Materials Science & Engineering
- Holly Doremus. Professor of Law
- John MacFarlane. Professor of Philosophy
- Jeff MacKie-Mason. University Librarian, Professor of Information, Professor of Economics
- Michelle McClellan. Associate Vice Chancellor—Constituent Programs, University Development and Alumni Relations
- Joel Moore. Professor of Physics
- David Schaffer. Professor of Chemical & Biomolecular Engineering
- Andrew Schwartz. Graduate Student, Haas School of Business, and Vice President of Finance, the Graduate Assembly.
- Chris Stanich. Associate Vice Chancellor—Financial Planning and Analysis
- Diana Wu, Dean - University Extension and New Academic Ventures at Berkeley
- Andrea Lambert. Deputy Chief of Staff to the EVCP (staff to the Group)

Additionally, the co-Chairs of the Steering Committee, Professor Lisa Alvarez-Cohen and Dean Rich Lyons, attended a number of meetings. Nina Robinson, Strategic Planning Project Lead, to the strategic planning process attended all meetings.

Appendix B: Meetings of the Group and Input Sessions

- Group meeting, January 19, 2018
- Group meeting, January 31, 2018
- Divisional Council, February 12, 2018
- Open town hall meeting, February 12, 2018
- Open town hall meeting, February 13, 2018
- Group meeting, February 15, 2018
- Department Chairs forum, February 26, 2018
- Group meeting, February 27, 2018
- ASUC Senate Forum, March 8, 2018
- Academic Senate Special Meeting, March 9, 2018
- Group meeting, March 14, 2018
- Group meeting, April 4, 2018
- Graduate Assembly Delegates meeting, April 5, 2018