

Giving Back and Getting Back

An Analysis of the Return on Community Investments by Public Universities

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EXECUTIVE SUMMARY

As stable, place-based “anchor” institutions tied to their neighboring communities, public universities can provide a valued source of community investment. The community benefits from universities’ contributions to local programs or neighborhoods are well documented, yet little is known about how the university itself achieves a return from such investments. During an economic downturn where higher education budgets are being cut, university decision-makers will likely require hard evidence that community investment not only fits within their institution’s mission, but that it will benefit their “enlightened self-interest.” By providing a business case for community investment and demonstrating how public universities can make investments that achieve quantifiable returns, we aim to provide an additional tool that decision-makers can use to advocate for community investment by anchor institutions.

In the following report, we use the University of California, Berkeley (UCB) as a case study to develop a methodology that public universities can use to quantify the returns from community investment. The selected criteria and accompanying metrics can be used to evaluate various types of community investments, as well as the range of tangible and intangible returns the university can expect to receive. Specific examples for quantifying returns include: the Chancellor’s Community Partnerships Fund, Cal Corps service-learning programs, and Cal Performances cultural programming. Given the distinct nature of these investments, university benefits range from cost savings in avoided lawsuits to increased program revenue. To quantify returns to universities, we drew from break-even analysis, cost-benefit comparisons, and a general evaluative framework. We hope that our methodology can be used to advocate for smarter community investments that yield a double bottom line: improved local communities and highly respected, financially sustainable institutions of higher education.

OVERVIEW & BACKGROUND: A MISSED OPPORTUNITY FOR COMMUNITY INVESTMENT BY ANCHOR INSTITUTIONS

Every city faces challenges that are too complex or too costly to tackle alone. Cross-sector partnerships between governments, businesses, and non-profit organizations are becoming increasingly common, as partners realize the increased benefits of working together. Anchor institutions, which are large, deeply rooted place-based organizations like universities and hospitals, make for particularly stable partners because they are less likely than private firms to outsource labor or move headquarters. Such institutions are considered to be “anchored” to their host communities and are likely to have a vested interest in improving the surrounding area.

The benefits that arise when anchor institutions invest in their communities have been studied, but most of the emphasis has been on measuring the benefits to the *community*.¹ Less information exists about the quantifiable costs and benefits to the *anchor* institution that can result from its investment activity. Researchers hypothesize that decision makers at such institutions overestimate the costs and underestimate the benefits their institution would receive from making community investments.² The lack of quantifiable information results in a missed opportunity, with too few anchor institutions investing in community development.

The Annie E. Casey Foundation believes that anchor institutions that understand the quantifiable returns from community investment are more likely to make them, thus bringing community investment up to an optimal level. As an initial step toward building the “business case” for community investment by anchor institutions, this report offers a methodology for public universities (a type of anchor institution) to calculate their returns on investment (ROI) from making contributions to the community. The methodology was developed by using the University of California, Berkeley’s community investments as examples.

METHODOLOGY: CALCULATING THE ROI FOR UNIVERSITIES’ COMMUNITY INVESTMENTS

Public universities present an interesting case due to their reliance on state funding. Legislators expect the public dollars they allocate to institutions of higher education to generate benefits not only to the members of elite institutions, but also to the broader public. Thus, it is common for public universities to commission impact studies that demonstrate the benefits they generate for

¹ For example, the recent “Serving California, the Bay Area, and the Community: The Economic Impact & Social Benefits of the University of California, Berkeley” from the University of California, Berkeley quantifies the benefits the community receives from the University’s investment activities, but was largely silent on the benefits the University itself receives. “Serving California, the Bay Area, and the Community: The Economic Impact & Social Benefits of the University of California, Berkeley.” Report. University of California, Berkeley, 2005-06.

² Webber, Henry S., and Mikael Karlström. *Why Community Investment is Good for Nonprofit Anchor Institutions: Understanding Costs, Benefits, and the Range of Strategic Options* 31 July 2008: 6.

surrounding communities.³ These reports highlight the ways universities benefit their local neighborhoods and include statistics on economic activity, such as the number of visitors the campus attracts, the amount of local spending the university generates, and the number of business start-ups its researchers have spawned.⁴ While the reports demonstrate public universities' role in regional economic development, they fail to acknowledge that university-sponsored community investment can be mutually beneficial, and thereby simultaneously produce a number of benefits for the university itself.

The lack of quantifiable information about the university's returns from community investment has a number of explanations. First, while many university leaders have a general sense that investing in the community is the right thing to do, they place these investments in the category of mission-appropriate philanthropy. Irene Hegarty, Director of Community Relations for UCB explains, "Public universities have a public service mission. Community investment is part of their mission regardless of payoff, so results are hardly ever quantified."⁵ Further, large universities are sometimes referred to as "organized anarchies" due to their structure of hundreds of decentralized departments, centers, and offices.⁶ While this organizational model may have many benefits in terms of autonomy at the unit level, it also means that each individual unit has little incentive to dedicate resources to tracking the ROI of its activities for the university in a comprehensive, quantitative way. Additionally complicating the matter is the geographic definition of "community," as it may include everything from the adjacent host city to international destinations where university students and professors conduct research.⁷ Finally, common quantitative frameworks such as benefit-cost analysis or calculation of ROI to public expenditures are often very difficult to apply in this setting because appropriate data are not collected and because it is difficult to attribute causal impacts to one particular program.

MATRIX STRUCTURE: AN EVALUATION TOOL FOR COMPARING INVESTMENT ALTERNATIVES

Given these limitations, we used the University of California, Berkeley (UCB) as a case study to develop a methodology that other universities can use to compare and evaluate the expected returns of a given set of community investments. Figure 1 below depicts investment returns as falling along a spectrum, from tangible to intangible returns. On the tangible side, we evaluate the investment's likelihood to produce *monetary* returns. On the intangible side, we assess the investment's ability to achieve other university goals, such as improved community relations, reputation, and prestige. In the middle of the spectrum are those criteria that evaluate an

³ Drucker, Joshua, and Harvey Goldstein. "Assessing the Regional Economic Development Impacts of Universities: A Review of Current Approaches." *International Regional Science Review* 30.1 (2007): 20-46.

⁴ "Serving California, the Bay Area, and the Community: The Economic Impact & Social Benefits of the University of California, Berkeley." Report. University of California, Berkeley, 2005-06.

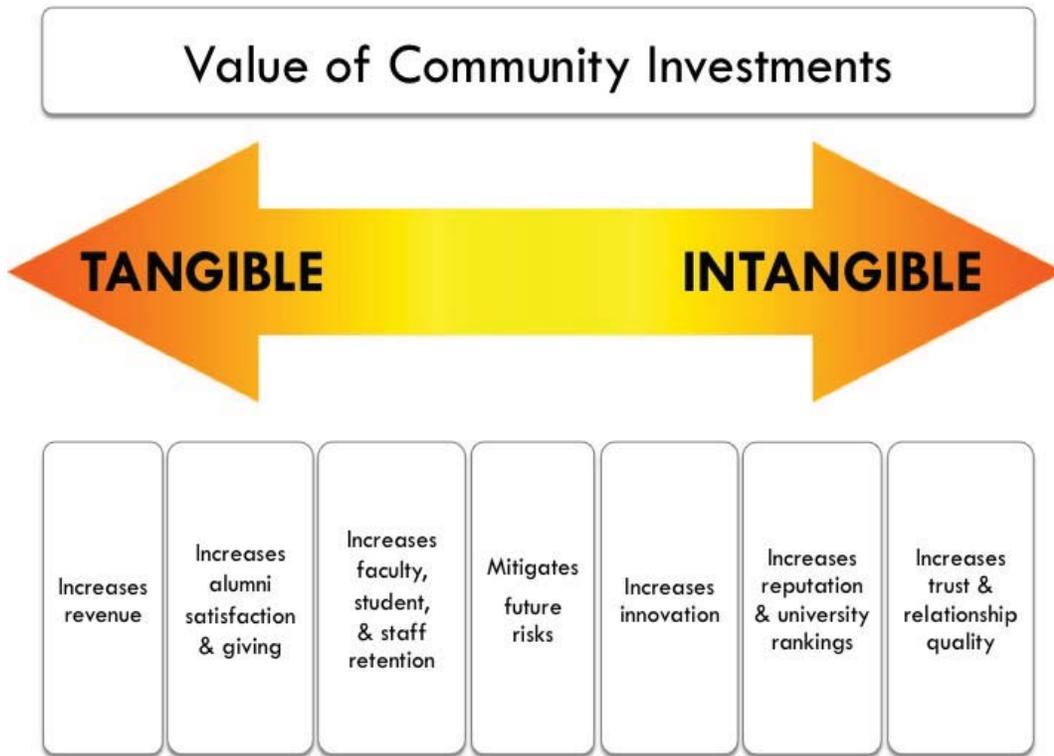
⁵ Hegarty, Irene. Director of Community Relations, University of California, Berkeley. Personal Interview. 17 March 2009.

⁶ Cohen, Michael D., James G. March, and Johan P. Olsen. "A Garbage Can Model of Organizational Choice." *Administrative Science Quarterly* 17.1 (1972): 1-25.

⁷ Taylor, Michael, et al. "The Role of Universities in Building Local Economic Capacities." *Politics & Policy* 36.2 (2008): 216-31.

investment’s potential to yield outcomes associated with both monetary and non-monetary returns to the university.⁸

Figure 1. Criteria for Evaluating Investments



Using this range of possible returns as a starting point, we created a matrix that organizes projected outcomes of potential investments (Appendix A, Table 1). The matrix serves both to give a general overview of available investment options, as well as an organizational tool for comparing alternative investments against the criteria. The criteria, which assess each investment’s potential to generate tangible and intangible returns, stretch horizontally across the top of the matrix. Community investment alternatives are listed vertically. For UCB’s current community investment categories, we ranked the projected returns from investments in each of these categories on a scale from one to five, where five is the highest.⁹ As a university progresses through an analysis of potential investments, projected returns may move from ballpark estimates of high versus low, to numerical rankings, to actual numbers. Though the version in

⁸ Our development of criteria and metrics was influenced by Lawlor, Ellis, Eva Neitzert, and Jeremy Nicholis. “Measuring Value: A Guide to Social Return on Investment (SROI).” The New Economics Foundation (NEF). London. 2008.

⁹ See Appendix A, Table 2.

Appendix A shows all criteria as weighted equally, a university could theoretically assign different weights to each, depending on the types of returns a given institution prioritizes. Weighting the criteria would help the university decision-maker to compare many investment alternatives and choose those that are most likely to maximize the prioritized returns.

BREAK-EVEN ANALYSIS: COMPARING KNOWN COSTS TO PROJECTED MINIMUM BENEFITS

Break-even analysis enables decision makers to compare the costs and benefits of a particular investment, without needing to engage in the tricky task of trying to make causal assumptions about the exact projected outcome of a particular investment.¹⁰ The general idea is that the known costs of a given investment are first estimated. Then projected benefits, valued in monetary terms, are compared with the costs, to see whether a conservative minimum estimate of benefits is likely to exceed the program costs.

While the thought process behind this method is quite simple and intuitive, it can provide a powerful framework for contextualizing the projected costs of a program. For example, instead of trying to project what exact percentage reductions will be caused by differing levels of campus security initiatives, the framework can be as follows: “Given that our planned investment in campus security will cost \$100,000, if it can prevent at least two violent incidents and five cases of theft per year, the benefits will exceed the program’s costs.” In this hypothetical example, if the campus security forces can calculate the costs associated with different crimes, then project the *minimum* amount they think the planned program will prevent, they can confidently decide that the investment is worth the cost—without needing to go about the nearly impossible task of making causal inferences about complex phenomena.

Using the investment alternatives matrix as a framework and the specific tool of break-even analysis, the following sections of our report look at potential applications and smart investment points, using UCB investments as examples.

CASE STUDY: ROI FOR THE UNIVERSITY OF CALIFORNIA, BERKELEY’S COMMUNITY INVESTMENTS

The University of California, Berkeley was founded both to teach students and to improve the quality of life for all Californians.¹¹ Its three-part mission—instruction, research and public service—guides the structure of its budget, which categorizes costs according to each of these three areas. The University spends 33% of its annual budget on instruction, 26% on research, and

¹⁰ For an overview of using break-even analysis in policy analysis as well as an example of a RAND study which utilizes this type of analysis, see: Bardach, Eugene. *A Practical Guide for Policy Analysis: The Eightfold Path to More Effective Problem Solving*. 3rd ed. Washington, DC: CQ Press, 2009, 41-44, 111ff.

¹¹ Office of Planning and Analysis. *Accountability Report: University of California, Berkeley*. University of California, Berkeley, 2009.

4% on public service, with other expenditures accounting for the remaining 37%.¹² While every department's budget is broken down into these three categories, it should be noted that the delineation between categories is not always straightforward. For example, when a professor conducts research on public transportation innovations that will benefit the community, the costs of the research are not necessarily represented under the "public service" ledger.

Because UCB receives public dollars, it has commissioned a number of studies, including the *Serving California, the Bay Area, and the Community* and the *Accountability Profile* reports, to quantify the benefit that it provides to the local community and to justify its receipt of state budget allocations.^{13,14} The economic impact report *Serving California* demonstrates that UCB spends over \$1 billion annually in the San Francisco Bay Area on salaries, goods, services, and construction, of which more than \$500 million is spent in the host city of Berkeley.¹⁵ These economic impact reports also highlight how UCB has increased local human capital, spawned business start-ups, contributed to innovation, and been a leader in community service.

The reports, however, do not include an analysis of the benefits UCB receives in return for its contributions to the community. The following section provides this counterpart to UCB's economic impact studies, and examines a few examples where community investments by the University create social and economic returns to all three areas of its mission.

PUBLIC SAFETY & SECURITY

Public safety is a common entry point for university partnerships with local communities.¹⁶ Schools have a strong interest in keeping their campuses and surrounding areas safe, not only for students, but for faculty, staff, visitors, and the general public. The strongest quantifiable benefits to a public university for investing in safety and security beyond the campus zones are: *mitigated risk, increased trust and relationship quality, and increased retention.*

Like other law enforcement agencies, UCB's police department (UCPD) relies on partnerships with other policing units, county and state officials, and local community watch groups to accomplish its security goals. UCPD works closely with the City of Berkeley Police Department, particularly in patrol boundaries adjacent to campus. UCPD Finance Manager Greg Watty notes, "We invest a good deal of staff time in local partnerships. We attend neighborhood watch

¹² Expenditures by function from 2007-08 from Office of Planning & Analysis. *Cal Stats*. University of California, Berkeley, 2009.

¹³ Office of Planning and Analysis. *Accountability Report: University of California, Berkeley*. University of California, Berkeley, 2009.

¹⁴ "Serving California, the Bay Area, and the Community: The Economic Impact & Social Benefits of the University of California, Berkeley." Report. University of California, Berkeley, 2005-06.

¹⁵ The report gathers data from City of Berkeley, Alameda and Contra Costa counties, and extends its scope to include all nine counties that make up the San Francisco Bay Area.

¹⁶ Nichols, David. "Town and Gown Cooperation for Public Safety." *American School and University*. 54.3 (1981): 32-34.

meetings and sit on local committees because it is important for the community to see that the University cares about more than just what happens on campus.”¹⁷

UCPD tracks a number of quantitative measures to inform their operations, such as number of police calls answered and number of arrests made. However, metrics for public safety and security are too spurious to generate causal inferences. Since many factors determine crime rates, it would be misguided to draw conclusions that suggest a relationship between UCPD community investments and changes in these rates. According to Watty, “Our investments are based on the premise that the whole is greater than the sum of its parts,” meaning that UCPD makes a host of investments that, in the aggregate, contribute to a larger culture of safety, both on campus and in the surrounding city.¹⁸

The Chancellor’s Task Force on Student/Neighbor Relations provides a specific example of a low-cost investment that yields substantial returns and helps UCPD meet its annual safety goals.¹⁹ The UCB Chancellor initiated this task force to help improve relations between the campus and community in response to three unrelated issues: two student deaths from overdosing, a lawsuit citing an off-campus cooperative housing complex as a public nuisance, and an increased number of complaints from neighbors living near campus. The Task Force includes representatives from the UCB administration, the police departments of the City and University, and student representatives from the Greek community, the student council, and the cooperative houses and residence halls.

For a relatively low cost, the Task Force improves community relations and, in return UCB receives increased levels of trust from the City of Berkeley and its residents. Two “Goodwill Ambassador” work-study students are employed to nurture relationships in specific nearby neighborhoods by acting as liaisons between the student community and the neighborhood associations. An additional low-cost expense is the mailing of an informational brochure offering good neighbor tips along with emergency contact information and a list of municipal codes and fines for unruly gatherings. In order to breakeven on their investment in “Goodwill Ambassadors” and printed communications, the University would need to recover less than 1% of its total \$12.7 million UCPD budget in the form of goodwill and trust generated by the Task Force initiatives.²⁰ Without access to the detailed data needed for a break-even analysis, we hypothesize that these expenditures pay for themselves in the form of better communication between UCB and the City. It is interesting to note that as part of a legal settlement (described below), UCB agreed to pay for public safety in the City by contributing \$600,000 yearly for fire and emergency equipment.²¹ The next section analyzes to what extent investments like these

¹⁷ Watty, Greg. Finance Manager, University of California Policy Department, University of California, Berkeley. Personal interview. 24 Mar. 2009.

¹⁸ Ibid.

¹⁹ UCPD is committed to creating a safe environment on campus and off campus in the jointly permitted area. More details can be found in University of California, Berkeley Police Department, *Safety Counts*. University of California, Berkeley. 2008.

²⁰ See Table 4 in Appendix B for break-even calculations for the Goodwill Ambassador Program.

²¹ 2020 Long Range Development Plan Litigation Settlement Agreement between The University of California, Berkeley, The Regents of the University of California, and the City of Berkeley. 25 May 2005. p. 12.

public security partnerships could help UCB avoid some of the heavy annual costs that stem from litigation settlements.

COMMUNITY GRANTS & CITY-UNIVERSITY PARTNERSHIPS

The Chancellor's Community Partnership Fund provides another example of a relatively small investment that can lead to numerous tangible and intangible returns to the university.²² Established in 2005 as part of a legal settlement with the City of Berkeley over the University's long-term expansion plans, the fund allocates \$200,000 per year (adjusted annually for inflation) through the year 2020 for "Neighborhood Improvement Projects" and "Community Support and Service Projects."²³ All grant applicants must involve both a community organization and a UCB partner, and are intended to "enhance quality of life in Berkeley, link university resources with the community, and encourage collaboration between the campus, the residents and the city."²⁴ To date, the Fund has allocated \$617,000 to 43 programs that provide support for homeless services, the arts, educational enrichment, the environment and a number of other programs that contribute to improving Berkeley's overall quality of life.²⁵

When this investment is viewed through the lens of our ROI matrix, we see that while the Fund is unlikely to offer tangible returns in the form of direct increases to university revenue, it is very likely to contribute to almost all of the other sources of less tangible returns: *increased retention, increased reputation, increased innovation, mitigated future risk, and even increased alumni satisfaction and giving.* Cleaner, healthier, more livable neighborhoods help attract and retain faculty, students, staff, and visitors, which in turn provide the human resources and reputation benefits needed to enhance overall perceptions of prestige. University collaborations with external community partners are likely to result in innovative ideas that improve the effectiveness of university-sponsored programs. And by using this Fund to improve its relationship and trust with city officials and local community members, UCB can mitigate future risks, improve its reputation, and perhaps even increase alumni donations and foundation grants.²⁶

²² While the \$200,000 expenditure per year referenced in this example is a trivial amount of UCB's overall budget, our analysis shows how, in certain contexts, even small expenditures can have a substantial impact.

²³ "About the Fund." *Chancellor's Community Partnerships Fund-University of California, Berkeley.* 20 April 2009. <http://communityrelations.berkeley.edu/ccpf/about.htm>

²⁴ 2020 Long Range Development Plan Litigation Settlement Agreement

²⁵ "News." *Chancellor's Community Partnerships Fund-University of California, Berkeley.* 20 April 2009. <http://communityrelations.berkeley.edu/ccpf/about.htm>

²⁶ We speculate that potential donors (foundations, alumni, etc.) are less likely to make contributions to projects or institutions that are tied up in lawsuits or that have a bad reputation.

STRONG COMMUNITY RELATIONSHIPS AMELIORATE POTENTIAL TENSION

In “The Business Case for Corporate Citizenship,” Arthur D. Little writes:

The perceptions that stakeholders have of a company’s corporate citizenship performance can significantly affect the business’s license to operate. Companies with a poor reputation in this area can find themselves continually responding to criticism of their approach to a whole range of environmental and social issues. ... Conversely, those with a good reputation for corporate citizenship are more likely to be given a chance in the event of problems.²⁷

The same idea holds true for universities that make substantial commitments to their communities. In UCB’s case, stronger community relationships and partnerships with the city might result in substantial cost savings from prevented lawsuits, expedited permitting, and avoided negative media. Lawsuits filed by the City of Berkeley against the University are especially costly because they are not only likely to be the biggest lawsuits, but also can decrease UCB future funding streams by creating a negative view of the university among state legislators and major donors; as such, investments that generate goodwill with the city legislators are especially likely to yield positive returns.

This hypothesized connection between improved city-university relationships and cost savings is validated by UCB’s involvement in the East Bay Green Corridor Partnership, a collaborative effort by the City of Berkeley and three other local cities, the University, and the Lawrence Berkeley National Laboratory to turn the region into an internationally-recognized hub of green technology and renewable energy. Because the City and the University are partners in this effort, the City opted against suing UCB for its plans to develop a renewable energy laboratory in the Strawberry Canyon area surrounding the campus.²⁸

The City’s Director of Economic Development, Michael Caplan, also emphasized the importance of university-community partnerships in alleviating underlying tensions between the two: “Though the financial allocation [of the Chancellor’s Fund] is ‘chump change’ relative to UC Berkeley expenditures, [it] generates huge goodwill by helping to provide community events, social programming, and neighborhood capacity-building. People talk about these grants: they are competitive and very important to the community.”²⁹ This anecdotal evidence supports the theory that the goodwill generated through community grants and university-community partnerships can generate positive returns. To build an even stronger case that generating “goodwill” can lead to quantifiable returns in the form of cost savings, we attempt to quantify the percent of “damage” that would need to be avoided to make UCB’s Chancellor’s Partnership Fund investments worth their cost.³⁰

²⁷ Little, Arthur D. “The Business Case for Corporate Citizenship.” Report. World Economic Forum Annual Meeting, 31 January to 4 February, 2002.

²⁸ Hegarty, Irene.

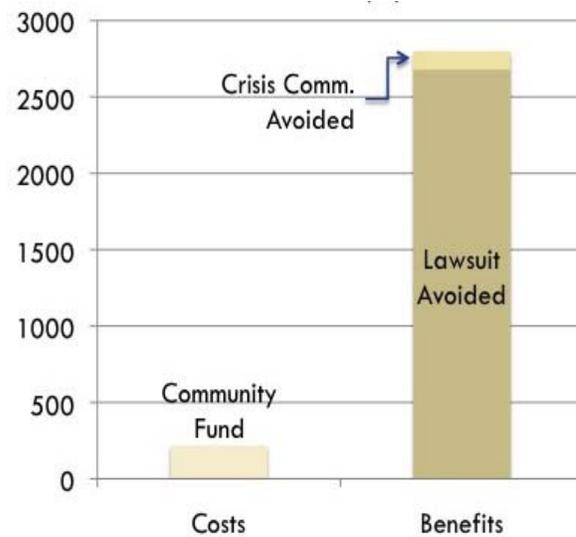
²⁹ Caplan, Michael, Director of Economic Development. City of Berkeley. Personal Interview. 7 April 2009.

³⁰ See the Methodology section under “Break-Even Analysis” for more information.

To apply this methodology, we began by annualizing the average cost of UCB’s previous lawsuits against the City of Berkeley and local community organizations over the past ten years. We then calculated an estimate for the university’s annual costs of crisis communications. Adding these costs together, we estimated the university’s average annualized cost for litigation, appeals, extra policing, and crisis communications to be approximately \$2.8 million (in 2009 dollars). In comparison, the Chancellor’s Partnership Fund cost the university \$218,000 in 2009.³¹ To project these figures out over the next ten years, we find that the partnerships and goodwill generated by the community grants would merely need to prevent 8.8% of the university’s annual litigation or crisis communications expenditures to make them worth their cost.^{32,33}

Given that the monetary returns from increased goodwill or improved community relations are impossible to calculate precisely, we believe this type of break-even analysis provides one way for universities to translate intangible “goodwill” benefits into real cost-savings. Though it is unrealistic to believe that the good community relations generated by the Chancellor’s fund will alleviate all of the city’s frustration with the university or prevent Berkeley radicals from finding ways to draw negative attention to the campus, it does seem logical that a program created to end a legal battle will likely also reduce the University’s risk of lawsuits with the City and its residents, increase community trust, and lead to other positive returns associated with having strengthened relationships with city officials.

Figure 2. 2009 Benefit-Costs Comparison in Thousands (\$)



NEIGHBORHOOD & INFRASTRUCTURE IMPROVEMENTS

Neighborhood development and infrastructure projects may generate similar intangible benefits for a university. Such projects include cleanliness and cosmetic improvements, affordable housing incentives, and investments in nearby schools or educational programs. These investments can take many forms from low-cost tree planting projects and sidewalk repairs to more expensive mortgage guarantee programs.³⁴ Given that the City of Berkeley is only 18 square miles, “no part of the community is too distant from campus” and problems that affect the

³¹ “News.” Chancellor’s Community Partnerships Fund-University of California, Berkeley.

³² The Long Range Development Plan Settlement specifies that payments will be made through 2020.

³³ See Appendix B, Table 3 for a full description of calculations.

³⁴ Blaik, Omar, President & Founder, U3 Ventures. Personal Interview. 7 April 2009.

image or well-being of the City simultaneously affect the University.³⁵ Thus, the \$250,000 UCB spent on pedestrian lighting near campus, or the \$60,000 per year it spends on the Telegraph Avenue Business Improvement District, may pay for themselves through: *increased reputation* among prospective faculty and students, *increased retention rates*, and generally offering the range of *risk mitigation* benefits that result from an environment where trust exists between the University, the City, and neighboring residents.

As is currently stands, UCB rarely invests in community housing or infrastructure projects, though it does make a \$1 million annual payment to the City for sewer and storm drain infrastructure projects, fire and emergency equipment, and transportation demand management and pedestrian improvement programs.³⁸ One of its few investments in affordable housing, the Redwood Commons housing facility for senior citizens, offers an example of how such an investment can deliver substantial benefits to the university. By agreeing to build the housing facility, the university was able to decrease City opposition to University ownership of the property and, moreover, expedite the development process.³⁹ Known in the corporate social responsibility literature as “license to operate,” this benefit was discussed in the previous section on city-university partnerships. It is also a likely positive result of neighborhood improvement and public infrastructure investments made by the University. Additionally, if investments like these increase the property value of the land surrounding the campus, UCB may also generate monetary benefits by increasing the rates for leasing University-owned office or retail space.⁴⁰

Better Neighborhoods Can Help Faculty Attraction & Retention

In speaking of the importance of neighborhood quality to faculty members, Omar Blaik, the former Senior Vice President of Facilities & Real Estate for the University of Pennsylvania recounted, “New faculty recruits would see the [university] President and then be sent to me to see the plans for how the neighborhood was going to change.” Given that the attrition of faculty members, especially women and minorities, is a serious concern for UCB, neighborhood and infrastructure investments that lead to the attraction and retention of employees may be well worth their costs. The cost of hiring new faculty includes an average salary of \$95,000 and start-up costs as high as \$2 million for some science or engineering faculty.³⁶ UCB’s estimated annual attrition cost is \$3 million (assuming an average salary of \$100,000 and an attrition rate of 6% for the more than 1500 faculty members).³⁷ A community investment in affordable housing, public transit, or other measures faculty that improve faculty satisfaction only need to offset a fraction of these human resources costs to be worth the expense.

³⁵ Hegarty, Irene.

³⁶ Krupnick, Matt. “Poaching UC faculty persists in recession.” *Contra Costa Times*, February 15, 2009.

³⁷ The cost of faculty turnover was estimated using “Cost of Attrition Calculator.” *John Cello Consulting*. 2 May 2009. <<http://www.johncelloconsulting.com/attcalc.html>>. The average attrition rate was borrowed from a peer institution, University of Texas, Austin which published a 6% turnover rate. Texas Higher Education Coordinating Board, Division of Finance, Campus Planning, and Research. *Faculty Turnover and Retention: A Summary of Faculty Exit Surveys at Texas Public Universities, Health-Related Institutions, and Technical Colleges*. Texas, March 2001.

³⁸ 2020 Long Range Development Plan Litigation Settlement Agreement.

³⁹ Hegarty, Irene.

⁴⁰ According to Omar Blaik, the former Senior Vice President of Facilities & Real Estate for the University of Pennsylvania, UPenn’s average rent for shops on university property went from \$12 dollars/ sqft to \$45/ sqft as the

KNOWLEDGE TRANSFER & K-12 OUTREACH

The human capital embodied in the large student body at public universities like UCB offers another potential source for community investments, and a common avenue for student involvement is through local service opportunities. In the 2007-2008 school year alone, UCB's central public service organization, Cal Corps, engaged 4,687 students, provided services to over 200 community organizations, and partnered with 21 units across campus. The center estimates that during the past year, students provided more than 200,000 hours of service to the community, with an estimated economic impact of \$4 million.⁴¹ Beyond the benefits generated for the community, these service opportunities give rise to both tangible and intangible returns to UCB in the form of: *increased revenue, increased student retention, and increased trust and relationship quality.*

One particularly successful program is the Bears United in Literacy Development (BUILD) program—a federally funded work-study initiative that compensates UCB students with financial need for their work in local schools.⁴² The program selects, trains, and places students in area afterschool programs as tutors in math and reading for elementary and middle school youth. Over \$400,000 public work-study dollars pass through this program, comprising the largest single portion of Cal Corps' \$1.2 million operating budget. Because Cal Corps utilizes student tutors from previous years as site directors, the BUILD program demands only 1.25 full-time equivalent (FTE) Cal Corps staff positions. Low staffing costs, along with the fee-for-service revenue and funds from private donations, enable Cal Corps to receive revenue from the BUILD program which covers its direct costs.⁴³

FUNDS ADMINISTERED THROUGH THE UNIVERSITY CREATE THREE-WAY BENEFITS

An evaluation of a program like BUILD could measure the success of the program according to any number of desired outcomes. But to understand the ROI to the University, it is important to parse out the benefits that BUILD accrues to UCB for serving as the program's administrator from the program's overall benefits.

To start, it is important to note that the partners involved in BUILD have more to gain by working together than on their own. The children and community benefit because they receive after-school tutoring services for a fee-for-service of \$500 per volunteer—a trivial amount compared to a similar program staffed by school teachers.⁴⁴ Logistically, the BUILD program

surrounding neighborhood became safer due to UPenn's neighborhood improvement programs.

⁴¹ "Campus Life and Leadership Annual Report 07-08." Report. University of California, Berkeley. <<http://students.berkeley.edu/files/osl/CLL%20Annual%20Report%2007-08.pdf>>, p. 6.

⁴² BUILD is sponsored by the America Reads program through the U.S. Department of Education.

⁴³ See Figure 3. BUILD by the Numbers.

⁴⁴ For comparison, the published hourly wage rate for teachers with 0-3 years of experience at Berkeley Unified School District is \$34.57/hour (www.berkeleyfederationofteachers.org). Using a conservative estimate of the number of tutoring hours provided by a volunteer, we can translate the BUILD placement fee into a "per hour" rate for comparison: 30 weeks x 4 hours/week = 120 hours. \$500/120 = \$4.16/hour. Even taking the differing

makes finding tutors much simpler than if schools tried to recruit and train their own volunteers. The federal government benefits because it is able to fund tutoring services for children much more efficiently by providing the work-study grants, than if it were to create its own program. Simultaneously, the government also takes a step toward making college more financially feasible for students with financial need.

The University stands to gain in a number of ways. First, UCB benefits from a high level of positive intangible benefits in the form of *improved community goodwill* and relationships, similar to those quantified in the section on the Chancellor’s Community Fund. For the BUILD program this case is particularly compelling. The fact that the City of Berkeley is willing to contribute financially toward the program presents tangible proof of the value the city places on having local children tutored by UCB students.

Total direct operating costs of BUILD and Summer BUILD	\$420,600
Federal work-study grants	\$400,000
City of Berkeley partnership funds	\$34,000
Fee-for-service revenue from schools	\$40,000
Berkeley Public Education Fund (private)	\$9,000
Amount by which BUILD program revenue covers Cal Corps’ general operating costs:	\$62,400

Second, through the work-study grants, this program supports students with financial need—a demographic UCB has a particular interest in retaining. Participation in community service activities is disproportionately filled by university students who themselves come from disadvantaged backgrounds. In its efforts to not only attract, but *retain* a diverse student body, the University benefits from student community service programs like BUILD. Many students cite their involvement in Cal Corps as a factor in helping them stay connected with and engaged in the UCB community.⁴⁵

The BUILD example illustrates a case where the financial investment from the university is very low. In fact, the excess BUILD program revenue comes close to covering the 1.25 FTE staff salaries Cal Corps allots to the program. From this perspective, all the additional returns the activities of the BUILD program bring to the University, such as *increased trust and relationship quality* or *risk mitigation*, are essentially “free” from the University’s perspective.

Service programs like BUILD tangibly build goodwill between UCB administration and local government officials. Even when the City and UCB leadership disagree on matters of development, a shared program benefiting local children provides a valuable common ground for negotiations. In this example, direct financial expenditures by UCB are quite low—the real investment lies in creating structures for using student human capital and volunteering as a form of community investment.

experience levels of teachers and UCB students into account, the cost savings for schools of \$30 per hour of after-school tutoring is significant.

⁴⁵ Voorhees, Megan. Director, Cal Corps Public Service Center. Personal Interview. 2 April 2009.

PERFORMING ARTS & MUSEUMS

Access to cultural experiences is an important quality of life indicator in many cities, and this is especially the case in college towns. UCB houses a number of museums and theaters, many of which make community investments a high priority. When such investments are looked at using our evaluation criteria, we find that the University can expect to receive returns in the following areas: *increased relationships and trust, increased alumni satisfaction and giving*, and in many cases, *increased revenue*.

Cal Performances, UCB's renowned performing arts organization, offers an interesting example of a campus unit where program revenue is believed to, in part, come as a return from community investments. Associate Director Hollis Ashby explained, "We cannot afford to be altruistic; we don't do anything unless it benefits us." To this end, Cal Performances makes strategic community investments with an eye toward "building an audience of the future."⁴⁶

Cal Performances has an annual budget of \$12 million dollars. Six percent of this budget, or approximately \$650,000, is spent on education and community initiatives, including near-free tickets for K-12 students, public lectures, and Cal Performance's hallmark community investment: AileyCamp. This nationally acclaimed program, funded and administered by Cal Performances, brings at-risk local youth to UCB's campus for six weeks. The program uses dance as a vehicle for developing self-esteem, self-discipline, creative expression and critical thinking skills among underserved sixth, seventh, and eighth-grade students.⁴⁷

Not surprisingly, such investments are viewed very favorably by area residents, as well as by members of the UCB community. Like the BUILD program, AileyCamp and other Cal Performances investments demonstrate to neighbors that the University cares about those in the community, building trust between the two. The community investments may also serve to increase the satisfaction of alumni, who are often inspired to give to area-specific niches, rather than to larger, more general fundraising requests by the University.

Cal Performances relies on earned income through tickets sales for approximately 62% of its budget. Interestingly, 60% of these ticket revenues come from a non-UCB affiliated audience, highlighting the importance of bringing in audience members from the local community.⁴⁸ In order to break even on its community investments, Cal Performances would need to receive 9% of its ticket sales from audience members who purchase tickets as a result of one of their community investments. While it is unlikely that the organization receives a full 9% in return, it is important to point out that there are other ways to recoup the costs of community investments. Foundations and, as mentioned earlier, alumni donors are often inspired to give to programs that expose people, especially youth, to the arts.

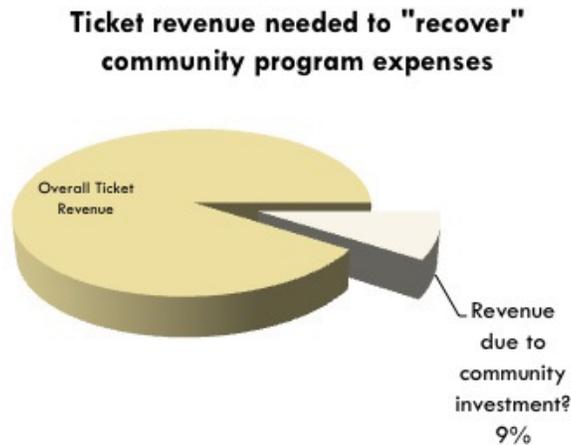
⁴⁶ Ashby, Hollis. Associate Director, Cal Performances, University of California, Berkeley. Personal Interview. 24 Mar. 2009.

⁴⁷ Ashby, Hollis.

⁴⁸ Note that these non-University affiliated audience members are especially important for Cal Performance's revenue stream because they generally pay full ticket prices, whereas UCB affiliates receive discounted ticket prices.

Figure 4. Break-even Analysis on Cal Performances Community Programming

Cal Performances would be well served to learn more about the relationship between its community program investments and ticket sales. This information would be relatively low-cost to obtain because, to learn more about its customer base, the organization already surveys audience members regularly. Such surveys could include a short list of questions specifically asking about community investments, such as “Has your child ever participated in a K-12 community program?” or “Have you heard of AileyCamp?” More information about which investments are generating the greatest return would help Cal Performances to make more strategic investment choices.



QUANTIFYING PRESTIGE: BOLSTERING NON-MONETARY RETURNS

The previous examples from the case of UCB explore a number of investment areas where the University is likely to see a positive ROI. Across our matrix, these returns ranged from the relatively intangible ones, such as improved community trust generated by community grants, to more tangible returns, including increased revenue due to Cal Performances’ ticket sales. Overlaying the many “intangibles,” many of the criteria relate—at least indirectly—to the concept of maximizing institutional prestige.

Institutions of higher education must compete to attract and retain the best faculty, staff, and students. UCB administrators are not unique in their interest in keeping up with—and getting ahead of—peer institutions. They are sensitive to perceptions of prestige and cognizant of the impact it has on important returns to the institution in both the short-run and over time.

While the concept of prestige is certainly an intangible one, there are a number of metrics a university could use to quantify its reputation. Perhaps the most recognizable marker is an institution’s standing in *US News & World Report* rankings. While the objectivity and use of these rankings may be contested, in this context, the metrics used in calculating the rankings are somewhat analogous to many of the metrics that a university can use in calculating its potential returns to community investments. These metrics take into account: graduation and retention rates, acceptance rates, standardized test scores, financial resources, and alumni satisfaction and giving.⁴⁹

⁴⁹ Morse, Robert, and Sam Flanigan “How We Calculate the Rankings.” *U.S. News & World Report*. 10 March 2009. <<http://www.usnews.com/articles/education/best-colleges/2008/08/21/how-we-calculate-the-rankings.html>>

It is likely that prestige—specifically prestige related to community investments—will play an even more important role in a university’s success in the coming years, as the millennial generation comes of age. Born between 1982 and the present, this generational cohort is known to maintain certain expectations about the college experience. In their book *Millennials Go To College*, Neil Howe and William Strauss offer a profile of college-bound millennial students, noting that among freshman, the goal of “making a contribution to society” is on the rise while “having lots of money” is on the decline.⁵⁰ They also exhibit a demonstrated interest in balancing academic work with community work, are considered to be team-oriented, and maintain high expectations of institutions such as universities. In short, this generation takes community investments into account when calculating a university’s level of prestige.

As the population of children at college-going age decreases, schools must do more to attract and retain students. The research on the millennial generation applies across the United States and suggests that prospective students will be scrutinizing universities based on their level of engagement in the community and the opportunity for students to participate in community investment programs.

Despite being important factors in the cost-benefit analysis, prestige and name recognition are not easy to monetize. They do, however, lend themselves to quantification through percentage points and rankings. One metric that institutions strongly connect with prestige is their selectivity. The underlying assumption is: the lower the acceptance rate, the more desirable the university.

An important factor in how selective an institution can be in its admissions relates to its “yield rate.” Yield comes into play after admissions decisions are made, and compares the number of accepted students to the actual number who matriculate at the university. The higher an institution’s yield rate, the more selective it can afford to be in its admissions decisions. In this context, yield rates are interesting because they reveal the (albeit complex) preferences of students on the margin: students who are already admitted to a few schools and are weighing their options. UCB’s yield ratio of 42% has remained relatively constant between 2001 and 2006.⁵¹ While it would be irresponsible to imply causality between certain types of community investments and increased prestige for a university, UCB could build metrics that address yield ratios by asking undergraduate survey questions related to why they chose the school, perhaps targeting information about specific community investments.

Universities are keenly aware of their rankings and image because these indicators help them receive more research grants, improve student yield rates, and attract renowned faculty to teaching positions. Cultivating prestige can generate a positive return on investment for universities by attracting and retaining diverse faculty and top graduate students, who in turn may bring more research funding and grants to the university. In this sense, a university’s

⁵⁰ Howe, Neil and William Strauss. *Millennials Go To College: Strategies for a New Generation on Campus*. Great Falls, VA: LifeCourse Books, 2003.

⁵¹ See Appendix B, Table 5 for UCB yield calculations. "Full-Time Total Students." *LexisNexis Statistical Datasets. 2008. National Center for Education Statistics (NCES), Applied, Admitted, Enrolled (Post-Secondary) [data file]*. 8 March 2009. <<http://nces.ed.gov/ipeds/pas/dct/downloads/index.asp>>

challenge is quite different from a private firm, which seeks to increase the number of consumers it reaches. Fiscally, public universities do not want to indefinitely increase enrollment. Instead, they want to improve the quality of students and faculty—and by extension, the prestige of the institution.

In sum, though prestige is an amorphous, intangible concept, it is one of universities' most highly valued goals and can be measured through proxy metrics, such as competitive grants received, yield rates, and endowment levels. We hold that with additional resources, more reliable data can be collected to ascertain how community investments generate intangible returns like prestige.

EXTENDING THE UNIVERSITY OF CALIFORNIA, BERKELEY CASE STUDY TO PEER INSTITUTIONS

This report focuses primarily on applying a methodology for calculating ROI to the specific example of the University of California, Berkeley. Generalizing the ROI findings from UCB to other universities is problematic because each university will have unique investment opportunities and priority areas for returns on those investments. Many other universities do, however, have a stated commitment to public service and, as such, there is reason to believe that the *process* by which we quantified ROI for this case study can be used by other universities as well.

A cursory comparison with five public institutions that UCB considers to be its peer institutions highlights the potential for making more strategic community investment decisions. University of Illinois, University of Michigan, University of Texas, University of Virginia, and University of Wisconsin all have a commitment to public service as part of their mission statements or institutional goals, but the areas where they are choosing to make investments vary greatly.⁵² The only peer institution that does not explicitly refer to public service in its mission statement is the University of Virginia. Interestingly, it was more difficult to find concrete examples of what funding or programming this institution provides as an investment in its host city of Charlottesville than it was for the other four peer institutions.

Most of UCB's peer institutions offer community programs similar to UCB. Commonalities include arts and culture programming available to the public and K-12 service programs that match university volunteers to local youth. Peer institutions also face similar problems. Like UCB, the University of Michigan has also faced animosity from the surrounding city for its exemption from paying local property taxes and the school has been accused of not paying enough for water or sewer services. The institution has creatively eased some of this tension by indirectly paying property taxes on buildings owned by the school (See the "Ameliorating Town-

⁵² Appendix B, Table 6 summarizes the community investment areas of UCB's top five peer institutions by investment category.

Gown Relations” section for more details).⁵³ This strategy may be a good way to increase trust and goodwill with the host city.

Recognizing that universities are diverse, we sought to develop a methodology that schools beyond UCB and its peer institutions can use. The matrix (Appendix A, Table 1) offers a summary of our approach, with investment possibilities listed in the rows on the left and returns across the top of the columns. Institutions will vary in terms of the types of investments available to them, as well as the feasibility of implementation. Moreover, it is critical to remain aware of the “double bottom line” inherent to such investments: the goal is to maximize *both* the return to the university as well as the positive impact in the community. And finally, we would expect different schools to weight the criteria for evaluating investments differently. For instance, a school with financial problems might determine that generating revenue is a priority return for them and weight that criterion more heavily than all the others. Another school might weight retention, alumni satisfaction, and increasing innovation equally, but not be concerned with the other returns. A key takeaway from our approach, therefore, is that in order for universities to understand their ROI from community investments, university administrators must first ascertain what types of community investments are needed, both in terms of the community’s need and their own.

METHODOLOGICAL LIMITATIONS & THE NEED FOR FURTHER RESEARCH

The methodology outlined and applied in this report offers a useful starting point to help universities quantify the return on community investments. While we are optimistic that such quantification can be done given sufficient time and resources, our research and analysis also brought certain additional insights and potential limitations to light.

MITIGATING “TOWN-GOWN” TENSIONS

While a matrix offers a useful framework to help university administrators calculate costs and benefits of particular investments, such calculations take place in the context of a web of relationships. Due to their non-profit status, universities are exempt from paying local property taxes. Moreover, public universities like UCB follow state—and not city—jurisdictional authority, which means that they do not have to follow city-imposed zoning regulations. Such “turf wars” are often the source of tensions between university administrators and local officials. In interviewing representatives from both UCB and the city of Berkeley, both short-term and long-term suggestions arose to help ameliorate these tensions.

In the short-term, there is a need for more research about best practices for developing mutually beneficial relationships between public school administrators and their local communities. Such literature should go beyond case studies of successful partnerships and look at process-oriented recommendations, answering specific questions related to: ensuring inclusion of representative and diverse perspectives, navigating power imbalances, maintaining institutional relationships despite personnel turnover, and handling dynamic political environments. Additional research is

⁵³ Swanson, Sarah. “University of Michigan Contributes in the Community Through Property Taxes Paid By Leasing And Other Innovative Collaborations.” *Ann Arbor Business Monthly*. Sept 2007.

needed to explore how to develop projects of mutual interest that create local jobs and provide local tax benefits. And finally, we would like to see more research on the ROI for prioritizing collaborative processes. Based on our findings at UCB, we project that universities that invest the time and money in such processes will see substantial returns in the form of fewer lawsuits and less expensive settlements.

In the longer-term, state and local policymakers must work together to address the jurisdictional issues that give rise to tensions between campuses and their neighboring communities. In the meantime, universities can make efforts on their own; as described earlier, the University of Michigan “is taking strides to give back [to its neighboring community of Ann Arbor] by paying indirect property tax through a number of leased buildings within the City.”⁵⁴ In total, the University of Michigan pays \$5 million per year in local property taxes, with \$1.4 million going directly to the city of Ann Arbor. Further examples of such strategies need to be identified and analyzed to determine the appropriateness of scaling them up through legislative requirements. Considering the more macro level, Omar Blaik, President and Founder of U3 Ventures suggests that, “we need to establish a framework for engagement by anchors pushed by states and cities. We cannot necessarily wait for anchor institutions to do the right thing—policy should incentivize doing the right thing.”⁵⁵

CALCULATING RISKS

An awareness of the complexities inherent to relationship-building reminds us that not all investments go as planned. Just as financial investments come with risks, so do community investments. A university in the public eye must be particularly aware of potential backlash from well-intentioned efforts that go awry. Potential risks to consider include: community displeasure with activities and accompanying bad press; increased liability associated with sending faculty, staff, and students out into surrounding communities; and a miscalculation of the return to the university. We advocate for more research on the potential tangible and intangible costs of failed investments to improve the validity of the methodology we developed.

COLLECTING BETTER DATA

Universities routinely collect data from faculty, staff, students, and alumni and would benefit from including some return on investment metrics in their existing feedback systems. To this end, we suggest that departments add questions to existing surveys in order to target the measurement of specific returns. Where appropriate, we noted a few examples in the investments we studied at UCB, which we reiterate below, in addition to suggesting a few more:

- Cal Performances could add questions to their existing audience survey to learn if and how their community programs encourage ticket sales.
- Cal Corps could more rigorously track students with financial need who participate in the BUILD program. For example, they can track whether students who participated in the BUILD program were more likely than their peers of similar financial background to graduate within five years. If such metrics were to show a significant relationship between work-study community investment programs, this could provide a stronger

⁵⁴ Swanson, Sarah. “University of Michigan Contributes in the Community Through Property Taxes Paid By Leasing And Other Innovative Collaborations.” *Ann Arbor Business Monthly*. Sept 2007.

⁵⁵ Blaik, Omar.

incentive to also invest financially in service-learning and outreach programs that do not benefit from large federal funding streams.

- The Office of Admissions, which surveys students who do and do not choose to attend UCB, could target questions related to service opportunities and perceptions of town-gown relations.
- The Office for Faculty Equity could include return on investment indicators in their existing faculty climate survey. For instance, adding questions which target feelings toward the City of Berkeley to the series of loyalty questions would help assess faculty commitment to the surrounding community. Additionally the survey could include a section that asks faculty to rate community programs and investments in order to determine which are most valued by faculty.
- The Office of Development and Alumni Relations could conduct online focus groups with alumni donors who channel funds to community investments (such as those who give to Cal Corps) to learn more about their motivations and how to reach more alumni.

By tapping existing feedback mechanisms or developing new ones, such as a facilitated discussion forum online for community residents to voice their concerns about the university, universities can learn more about the investments they should prioritize to achieve specific goals and the mechanisms through which different community investments generate returns.⁵⁶ Along with the increased knowledge, we recommend a system of centralized storage so that such data can be aggregated and analyzed. If institutions are more deliberate about the type of data they collect, they will be in a better position to quantify the returns on community investments and develop more deliberate investment strategies.

In sum, given their stability and strong identity with the local community, we believe anchor institutions can have a tremendous impact when they choose to invest in their surrounding communities. The literature already tells us how important such investments are to the local communities that rely on them, but our analysis reveals that these investments can also offer returns to the university.

Our analysis explores several ways to quantify the tangible and intangible returns to community investments. We hope that our methodology can be used to advocate for smarter community investments that yield a double bottom line: improved local communities and highly respected, financially sustainable institutions of higher education.

⁵⁶ Lee, Lloyd, Principal Counsel. Office of the General Counsel, UC Berkeley. Personal Interview 7 April 2009.

APPENDIX A: INVESTMENT ALTERNATIVES MATRIX

Table 1. Investment Criteria Matrix, Use to Prioritize Returns on University												
List your investment possibilities and then rank them on a scale of 1-5 (1 for lowest potential return, and 5 for highest potential return). These rankings will be summed arithmetically (each of the TOTAL columns on the right if you are interested in the return from each type of investment). The overall strength of investment returns is a percentage of points out of 25 total points for all criteria.												
	Financial				Liquidity				Overall strength of investment returns (0-100%)	Estimated value of return (\$ USD)	Relative benefit to the university	
	Investment returns	Investment level, risk, and cost										
INVESTMENT ALTERNATIVES												
Endowments												
Real Estate												
Private Equity												
Public Equity												
Fixed Income												
Commodities												
Art Collection												
Volunteer Services												
Research/Development												

Table 2. Investment Criteria Matrix, Use to Determine Return to University of California, Berkeley

Lies your investment possibilities and then rank them on a scale of 1-5 (1 for lowest potential return, and 5 for highest potential return). These rankings will be summed automatically. Look at the TOTAL column on the right if you are interested in the return from each type of investment. The overall strength of investment column is a percentage of points out of 55 total points for all criteria.

INVESTMENT ALTERNATIVES	Tangible					Intangible			Overall strength of investment	Cost to university (\$ U.S.D)	Estimated value of return (\$ U.S.D)	Maximize benefits to the community
	Increases income	Increases satisfaction & giving	Increases faculty, student, and staff retention	Minimizes future risks	Increases innovation	Increases reputation & university rankings	Increases trust & relationship quality	TOTAL				
City & County	1	1	1	3	1	1	1	20	67.31%			
Neighborhood & Housing	1	1	2	2	2	3	-	14	40.00%			
International	2	1	4	2	2	3	2	16	45.71%			
Self-Organized & Service Learning	3	3	5	4	3	3	4	23	65.71%			
Community Groups	2	3	3	3	2	2	3	26	74.29%			
Arts & Culture	3	3	3	3	3	2	4	23	65.71%			
Workshop Training	1	1	2	2	2	1	-	10	28.57%			
Economic Development	2	3	3	2	3	2	3	23	65.80%			

APPENDIX B: SUPPORTING CALCULATIONS

Year	Cost of Chancellor's Community Fund	Total Cost (Nominal Present Value)**	Savings from Litigation Avoided**	Savings from Crisis Communication Avoided***	Total Savings= Litigation and Crisis Comm. Avoided	Total Benefit (Nominal Present Value)*	Net Present Value = PV Benefits - PV Costs
2009	\$218,000.00	\$218,000.00	\$2,792,743.28	\$125,612.94	\$2,918,356.22	\$2,918,356.22	\$2,700,356.22
2010	\$224,540.00	\$211,830.19	\$2,876,523.57	\$129,281.33	\$3,005,906.90	\$2,646,169.29	\$2,434,339.10
2011	\$231,276.20	\$205,834.99	\$2,962,821.34	\$133,262.77	\$3,096,084.11	\$2,499,340.99	\$2,294,005.59
2012	\$238,214.49	\$200,009.48	\$3,051,705.98	\$137,260.65	\$3,188,966.63	\$2,361,696.88	\$2,161,687.40
2013	\$245,960.92	\$194,348.33	\$3,143,237.16	\$141,378.47	\$3,284,635.63	\$2,251,277.82	\$2,036,928.79
2014	\$253,721.75	\$188,848.39	\$3,237,534.88	\$145,619.82	\$3,383,174.70	\$2,108,148.77	\$1,919,299.88
2015	\$260,303.40	\$183,503.63	\$3,334,681.52	\$149,988.42	\$3,484,669.94	\$1,991,898.81	\$1,808,395.19
2016	\$268,112.50	\$178,310.13	\$3,434,721.97	\$154,488.07	\$3,589,210.04	\$1,882,142.35	\$1,703,832.22
2017	\$276,155.88	\$173,263.61	\$3,537,763.63	\$159,122.71	\$3,696,886.34	\$1,778,513.82	\$1,605,250.21
2018	\$284,440.55	\$168,359.93	\$3,643,896.54	\$163,896.40	\$3,807,792.93	\$1,680,668.76	\$1,512,308.83
2019	\$292,973.77	\$163,595.02	\$3,753,213.43	\$168,813.29	\$3,922,026.72	\$1,588,282.13	\$1,424,687.11
TOTAL	\$2,792,099.46	\$2,085,904.20	\$35,768,885.30	\$1,608,824.87	\$37,377,710.17	\$23,686,994.73	\$21,601,090.53
Savings needed to offset costs for 1 year, using 2009 dollars							
Savings needed to offset total annual expenditures by 2019							
*PV calculated with real interest rate =3%, inflation=3%. The 3% interest rate is the public savings rate (Mortuus & Rabinovich Research 2006) and 3% is the estimated Federal inflation rate.							
**Calculating the Savings from Litigation Avoided: Total annual expenditures include the Long Range Development Plan (LRDP) annual settlement payments, the annualized cost of professional legal fees for the 2003 LRDP lawsuit against the City of Berkeley, all legal fees associated with the 2005-08 Memorial Stadium/ Student Athlete High Performance Center lawsuit including the cost of presenting petitions, and an annualized estimate of the costs to UCS of extra policing. All values was converted into 2009 dollars. The estimate does not include other development-related professional fees or the costs of construction delays.							
***Calculating the Savings from Crisis Communication Avoided Items: [(Avg. amount of negative publicity UC Berkeley receives annually) * (Avg. weeks spent by a media relations staff working on a news story/52 weeks per year)] * (Avg. annual salary for a media relations staff).							

Table 4. Break-even Analysis on Public Safety Program: Task Force on Student/Neighbor Relations		
Expenses	Chancellor's Task Force on Student-Neighbor Relations Expenditures	Total Public Safety Budget
Goodwill Ambassadors (2 work-study students)	\$7,200.00	
"Welcome to the Neighborhood" brochures	less than \$10,000.00	
Letter to South Campus property owners	less than \$10,000.00	
	less than \$27,200.00	\$12,762,000.00
Percentage points to break-even (cost/total budget)	0.0021	
Note: Goodwill Ambassadors = (2 students * 15 weeks * 2 semesters * \$12.00 per hour * 10 hours per week) = \$7,200		

Table 5. Yield Ratio for University of California, Berkeley

Year	Applicants	Admitted	Enrolled First Year	Yield = enrolled/admitted	Acceptance rate = total admitted/total applicants
2006	37014	9817	4101	0.417744729	0.265223969
2005	36679	9041	3672	0.406149762	0.246489817
2004	37001	8833	3653	0.413562776	0.238723278
2003	36445	8707	3653	0.419547491	0.238907943
2002	36100	8912	3863	0.433460503	0.246869806
2001	32963	8715	3703	0.424899598	0.264387343
Average				0.419227476	0.25010036

Source: "Full-Time Total Students." LexisNexis Statistical Datasets, 2008. National Center for Education Statistics (NCES), Applied, Admitted, Enrolled (Post-Secondary) [data file]. 8 March 2009.
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