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November 8, 2017

Director Michael Cohen
Department of Finance
915 L Street
Sacramento, California 95814


The Honorable Holly J. Mitchell
Chair, Joint Legislative Budget Committee
1020 N Street, Room 553
Sacramento, California 95814

Dear Director Cohen and Senator Mitchell:

Pursuant to Section 92965 of the Education Code, enclosed is the University of California's report to the Legislature on *Innovation and Entrepreneurship Expansion*.

If you have any questions regarding this report, Associate Vice President David Alcocer would be pleased to speak with you. He can be reached by telephone at (510) 987-9113, or by email at David.Alcocer@ucop.edu.

Yours very truly,


Janet Napolitano
President

Enclosure

cc: Senate Budget and Fiscal Review
The Honorable Anthony J. Portantino, Chair
Senate Budget and Fiscal Review Subcommittee #1
(Attn: Ms. Anita Lee)
(Attn: Ms. Cheryl Black)
The Honorable Kevin McCarty, Chair
Assembly Budget Subcommittee #2
(Attn: Mr. Mark Martin)
(Attn: Mrs. Katie Sperla)
Ms. Peggy Collins, Joint Legislative Budget Committee

Director Michael Cohen and the Honorable Holly J. Mitchell

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Mr. Danny Alvarez, Secretary of the Senate
Ms. Tina McGee, Legislative Analyst's Office
Ms. Amy Leach, Office of the Chief Clerk of the Assembly
Mr. Jim Lasky, Legislative Counsel Bureau
Mr. E. Dotson Wilson, Chief Clerk of the Assembly
Mr. Jeff Bell, Department of Finance
Mr. Christian Osmena, Department of Finance
Mr. Jack Zwald, Department of Finance
Ms. Tina McGee, Legislative Analyst's Office
Mr. Mac Taylor, Legislative Analyst's Office
Mr. Jason Constantouros, Legislative Analyst's Office
Senior Vice President Christine Gulbranson
Executive Vice President and Chief Financial Officer Nathan Brostrom
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Associate Vice President and Director Kieran Flaherty
Chief Policy Advisor and Executive Director Jenny Kao
Chief of Staff to the Chief Financial Officer Oren Gabriel
Manager Bruce Kennedy

Innovation and Entrepreneurship Expansion

Legislative Report

November 2017



UNIVERSITY *of* CALIFORNIA

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Innovation and Entrepreneurship Expansion

Assembly Bill 2664 (Irwin) of 2016 added Chapter 14.5 to California Education Code, Title 3, Division 9, part 57, to read:

(a) With funds appropriated in Item 6440-001-0001 of Section 2.00 of the Budget Act of 2016, the University of California shall make one-time expenditures for activities to expand or accelerate economic development in the state in ways that are aligned with other efforts to support innovation and entrepreneurship.

(b) From the funds specified in subdivision (a), two million two hundred thousand dollars (\$2,200,000) shall be allocated to each of the following campuses of the University of California:

- (1) Berkeley.
- (2) Davis.
- (3) Irvine.
- (4) Los Angeles.
- (5) Merced.
- (6) Riverside.
- (7) San Diego.
- (8) San Francisco.
- (9) Santa Barbara.
- (10) Santa Cruz.

(c) The Regents of the University of California shall designate an external advisory body, whose members have demonstrated expertise in innovation and entrepreneurship, to encourage the effective use of the funds specified in subdivision (b) through planning and oversight.

(d) A campus shall not expend the funds specified in subdivision (b) until the external advisory body has certified that the chancellor of the campus has demonstrated all of the following:

(1) That the funds will be used only for the costs of activities that support the expansion or acceleration

of economic development in the state, such as any of the following benefits for entrepreneurs:

- (A) Business training.
- (B) Mentorship.
- (C) Proof-of-concept grants.
- (D) Work space.
- (E) Laboratory space.
- (F) Equipment.

(2) That the funds will be spent only after the uses and beneficiaries have been determined through a transparent, inclusive, and fair process.

(3) That private funds will also be used for these activities, with the intent that the amount of private funds will be at least equal to the amount specified in subdivision (b).

(4) That any financial benefit that results from the use of these funds, including any revenues generated with these funds be accounted for and also used on these activities.

(5) That a credible plan has been developed to support any ongoing activities beyond the one-time expenditures of these funds.

(e) The external advisory body shall notify the Director of Finance and the Legislature, no fewer than 10 days before providing certification pursuant to subdivision (d) of its intent to do so.

(f) (1) On or before November 30, 2017, the Regents of the University of California shall report to the Director of Finance and the Legislature on the specific activities at each campus supported by these funds.

(2) The report shall be submitted to the Legislature pursuant to Section 9795 of the Government Code.

This report is submitted in response to the language above.

Executive Summary

Assembly Bill 2664 (Irwin) was enacted on September 30, 2016 and provided one-time State funding of \$2.2 million to each UC campus (a total of \$22 million for all ten campuses) for expansion of

programming and infrastructure in innovation and entrepreneurship (I&E). The funding provides each campus an opportunity to launch or expand I&E programming that leverages the strengths of the campus while supporting the specific needs of the entrepreneurial pipeline at the campus.

Programs created by State and matching funds will generate long-term economic impact via the addition of entrepreneurs, products, and companies to the local and regional ecosystem. Robust local and regional networks affected by AB 2664 programs will keep these entrepreneurs connected to UC, and thus help support new campus entrepreneurs and campus I&E programming.

Much of the AB 2664 funding went to programs to support entrepreneurs at the early stages of company or service/product development. The programs proposed fell into the following categories: startup incubators and other workspaces, proof-of-concept grants, education and mentoring programs, and specific programmatic support (such as staff or IT support). See Figure 1 for the proposed distribution of AB 2664 funds.

Prioritizing and investing in these early-stage activities help promote a more entrepreneurial culture at a campus and within its surrounding community by providing workspace and educational resources for committed entrepreneurs and reframing potential career paths for those who might not have considered entrepreneurship.

Several programs have already had an immediate impact, as campuses saw a significant growth in participation from FY 2016 to FY 2017, demonstrating the high demand for early-stage support of entrepreneurs.

The number of participants in educational programs and events increased by 1,700 participants from FY 2016 to FY 2017. The number of users of startup incubators and other workspaces increased by 1,200 users from FY 2016 to FY 2017.

Campuses also engaged a wide range of stakeholders – from industry, venture capital, government, and civic organizations – through new and expanded programming utilizing AB 2664 funds. The feedback and expertise of these stakeholders improves the likelihood of success of the startups, which have used campus I&E programming, while also establishing each campus as a hub of entrepreneurial activity within the broader community. Creating a broad entrepreneurial ecosystem, with many partners across the campus and the community, is essential to sustaining an economic impact beyond the term of the AB 2664 funding.

Proposed Distribution of AB 2664 Funds

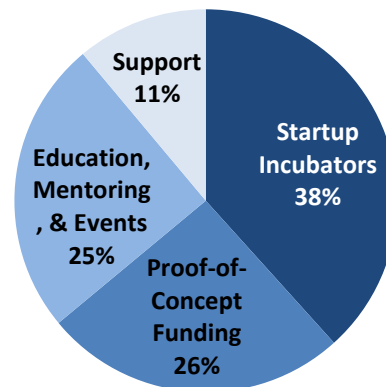


Figure 1: Proposed Distribution of AB 2664 Funds

The legislation provided a one-time investment of \$22 million to UC and a requirement that campuses seek matching funds for the I&E activities. Campuses have made progress towards achieving this goal and program sustainability, whether through additional campus commitments, corporate partners, or federal grants. Campuses have until the end of FY 2019 to utilize the State and matching funds, which allows them to invest in capital projects and multi-year grant funding programs. As of November 2017, campuses have already received or have commitments for \$11.1 million, over half of the required matching funds (see Appendix C for more details on received and committed matching funds). Additionally, several campuses have successfully applied for NSF or NIH I-Corps Site¹ grants, while others found campus partners for AB 2664 funded programs. This is significant progress, given that campuses only received the AB 2664 funds in January 2017.

Early results indicate that AB 2664 has already had an economic impact. About 400 existing companies participated in AB 2664-funded programs, and these programs supported entrepreneurs in the formation of approximately 130 startup companies. Campuses are on track to achieve program sustainability, build a more robust entrepreneurial pipeline, and create a long-term economic impact in the communities surrounding the campuses.

The AB 2664 funds have had an immediate impact on the campus programming, the entrepreneurial activity at each campus, and the economy of each campus community. The participation growth at each campus and the progress towards program sustainability indicate that AB 2664 will have a long-term economic impact on California.

Proposal Review and Award Process

In accordance with the legislation, the University utilized an external advisory body, the UC Innovation Council, to ensure the effective use of the funds through planning and oversight. The UC Innovation Council advises the UC President on issues of innovation, entrepreneurship, and technology commercialization and includes members with expertise in industry, venture capital, and government.

Each campus submitted one proposal laying out their plans for the funding and their strategies for obtaining matching funds. In November 2016, a panel of six members of the UC Innovation Council reviewed the campus proposals on their ability to:

- Expand or accelerate innovation-based economic development in California;
- Enhance California's network of programs and services that support innovators, entrepreneurs, startups, investors, and local industry and community partners;
- Create programs that are open and available to a broad group of beneficiaries through a transparent, inclusive, and fair process;

¹ I-Corps Sites provide infrastructure, advice, resources, networking opportunities, training and modest funding to enable groups to commercialize their work into the marketplace. I-Corps Sites are sponsored by several federal agencies, including the NSF and the NIH.

- Pursue external matching funds and supporting activities beyond the one-time expenditure of State funds; and,
- Measure the activities and economic impact supported by the proposed investments.

The six members of the UC Innovation Council found that the ten campus proposals met the above criteria.

After the proposal review, a second, ad hoc external advisory board – consisting of one UC Innovation Council member, one staff member from the Governor’s Office, and one industry leader – reviewed the campus proposals and proposal review process. This second advisory board found that the process fulfilled the requirements and intent of AB 2664.

When the process review was completed in December 2016, the University of California Office of the President informed the Department of Finance and the Legislature of the external advisory board findings. The funds were released to the campuses in early January 2017.

Early Results

AB 2664 seeks to leverage UC talent and innovation for economic impact in the surrounding communities. To transform ideas into products and startups, UC must invest in an entrepreneurial ecosystem on each campus and within its local community to develop a strong pipeline for entrepreneurs. Due to programs funded by AB 2664, campus entrepreneurs have been able to use campus support and access external networks to increase their likelihood of success. The combination of increased entrepreneurial support on campuses with engagement of external stakeholders creates a feedback cycle of entrepreneurial activity and long-term economic impact.

The AB 2664 programs target a range of stages on the entrepreneurial pipeline, depending on the specific needs and demands of the campus community. Some programs are at the earliest stages of entrepreneurship and will not see a concrete economic yield for several years. However, other programs target existing companies and startups as they form, and thus there are already some economic impacts. Participants launched approximately 130 startup companies due to the support received from AB 2664 programming (such as mentorship, proof-of-concept funding, and access to legal services). About 400 existing companies participated in AB 2664-funded programming, including workshops, networking events, and pitch sessions. Another indicator of success in helping entrepreneurs and startups bridge gaps to commercialization is the amount of follow-on funding raised by participants; startups have leveraged their experience and funding from AB 2664 programming to attract at least another \$3.7 million in follow-on funding.

At least 47 products were launched with the support of AB 2664 programs, ranging from footwear with sustainable materials to smartphone applications for managing campus parking. With over \$5.6 million invested in proof-of-concept funds over the course of the AB 2664 programming, the number of products is certain to grow.

As an example, UC Riverside has seen strong traction with its new and expanded I&E programs. UC Riverside launched its Entrepreneurial Proof of Concept and Innovation Center (EPIC) in October 2016, and the educational and mentorship programs in 2017 were largely funded by AB 2664. UC Riverside and EPIC leveraged the AB 2664 funds to become an NSF I-Corps Site in June 2017, which will provide a round of funding and education for entrepreneurs who have benefitted from EPIC programming. This growth of entrepreneurial activity was critical to the launch of the Highlander Venture Fund in June 2017, which will invest in early-stage startups from EPIC and the broader Riverside community. AB 2664 has accelerated the growth and success of EPIC, and created more opportunities for entrepreneurs in Riverside.

The other UC campuses have also expanded their I&E programming, engaged new partners, and made significant progress towards establishing a long-term economic impact from campus activity.

Some highlights of the programming include the following:

- Over 3,600 attendees at networking, pitch events, and entrepreneurial education workshops across the ten campuses;
- An increase of 1,700 participants in educational programs, from FY 2016 to FY 2017;
- Over 38,000 square feet of incubator space, maker space, and/or co-working space added across the UC system in FY 2017; and,
- The number of users of UC incubator space, maker space, and/or co-working spaces increased by more than 1,200 from FY 2016 to FY 2017

Use of AB 2664 State Funds and Full Program Details

The AB 2664 funds were made available to campuses in January 2017. The campuses proposed programs uniquely suited to their needs (see Appendix A for a list of programs by campus employing AB 2664 funds), with the vast majority of AB 2664 State funds proposed in the following broad programmatic categories:

Startup incubators: 38% of the proposed AB 2664 funding was allocated to support startup incubators, including capital improvements and educational programs at incubators;

Proposed Distribution of AB 2664 Funds

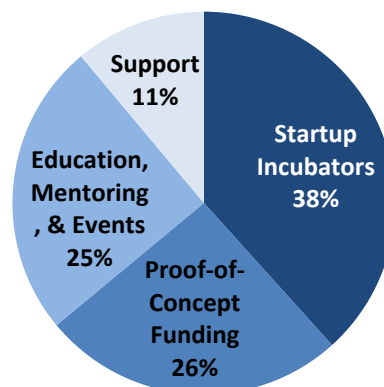


Figure 2: Proposed distribution of AB 2664 funds.

Proof-of-Concept funding: 26% of the proposed AB 2664 funding was allocated to programs that support the development and testing of prototypes, and/or similar stages in the commercialization process that have difficulty attracting external investment;

Education, Mentoring, and Events: 25% of the proposed AB 2664 funding was allocated to educational programs aimed at student, faculty, and community entrepreneurs; and,

Support: 11% of the proposed AB 2664 funding was allocated to program support, such as staff members who are leading or implementing new or expanded programs, and IT infrastructure that will allow I&E programs to better connect with entrepreneurs, mentors, and investors.

The full list of programs proposed by each campus is listed in Appendix A.

Startup Incubators (Workspace, Laboratory Space, and Equipment)

About 38% of the state funding was proposed for investments in workspace, laboratory space, and/or equipment for product development and startup operations. This includes the programming targeted at startup incubator tenants, such as mentorship programs or access to legal or financial services. While some incubator spaces are still in development, over 38,100 square feet of workspace has already been added due to AB 2664 funds, including those at the following campuses:

- **UC Berkeley:** The CITRIS Foundry expanded its 500 sq. ft. of office space to a flexible 3,500-sq. ft. co-working facility to support technology startups. In addition, CITRIS used AB 2664 funds to build the CITRIS Foundry Entrepreneurship Hub, which will support up to 60 entrepreneurs while they access specialized labs and world-class research at UC Berkeley.
- **UC Davis:** The Distribution Research Incubation & Venture Engine (DRIVE) Network is a series of startup incubators in the greater Davis-Sacramento area, which locates startup incubation space in facilities run by corporate partners. Through AB 2664 funding, UC Davis enhanced the DRIVE Network by placing 10 pieces of technical laboratory and prototyping equipment at the UC Davis-HM.CLAUSE Life Science Innovation Center (Davis), at Inventopia (Davis), and at The Urban Hive (Sacramento).

UC Santa Cruz – IDEA Hub: *The Humanities, Arts, Social Sciences, Sciences, and Engineering Divisions collaborated on launching the IDEA Hub, which provides students with a network of lab facilities, mentorship programs, workshops, and innovation competitions, all centered around sustainable innovation for the social good. In addition to the AB 2664 funds, divisions across the campus brought additional resources to the IDEA Hub: the Arts Division and the Baskin School of Engineering provided support to the UC Santa Cruz hackathon event, creating a new category of creative entrepreneurship, and the Division of Physical and Biological Sciences provided space for an incubator. This multidisciplinary hub and cross-campus network of support would not have existed without the original funding of the IDEA Hub from AB 2664 funds.*

- **UC Santa Cruz:** New spaces include the Startup Sandbox, a wet lab incubator launched in August 2017; the IDEA Hub, a multidisciplinary network of incubation and lab facilities (see inset); and SVLink, an incubator and co-working space at the UCSC Silicon Valley Campus.
- **UC San Diego:** The Basement incubator, an undergraduate-centric space, was renovated and upgraded with support from AB 2664.

Other spaces that have not yet launched, but are slated to open soon, include those at the following campuses:

- **UC Merced:** The UC Merced Venture Lab is expanding its model and network across the Central Valley with locations in both Modesto and Atwater opening in late 2017. The Atwater location will include prototyping and light manufacturing work space.
- **UC Riverside:** Once completed, the wet lab incubator at UC Riverside will be the first wet lab incubator in the Inland Empire. The incubator will be in a new campus building still under construction; completion of the building is expected in September 2018, with incubator equipment purchased and installed by early 2019.
- **UC Santa Barbara:** The Garage incubator is under construction at the UCSB Mosher Alumni House and is expected to open in January 2018.

Proof-of-Concept Grants

About 26% of the State AB 2664 funding was proposed to support Proof-of-Concept (PoC) grants. PoC grants target the critical funding gap in the commercialization process, known as the “valley of death,” between basic research funding in a university lab and early-stage funding for a startup company via federal Small Business Innovation Research (SBIR) or Small Business Technology Transfer (STTR) grants, angel funding, or pre-seed funding. Yet, developing a prototype or validating a therapeutic is critical to launching a startup company or licensing a technology to an existing company. Nine of the ten campuses used some of the AB 2664 funding to create or expand PoC grant programs. Some programs that have already launched at the following campuses include:

UCLA – UCLA Innovation Fund *The cornerstone of the UCLA proposal for AB 2664 funding was a proof-of-concept funding program operated by the Technology Development Group (TDG). The original proposal allocated approximately \$1.3 million of the campus AB 2664 funds to proof-of-concept grants with grant sizes approaching \$200,000. Instead, once UCLA received the funds, the proof-of-concept funding program became a campus-wide effort, with additional funds contributed by UCLA Health/ David Geffen School of Medicine, UCLA Henry Samueli School of Engineering & Applied Science, and the College’s Divisions of Life Sciences and Physical Sciences. Together, these partners created the UCLA Innovation Fund, with proof-of-concept funds in therapeutics, medical devices/diagnostics, and digital health. In 2017, the UCLA Innovation Fund received 106 letters of intent for the first stage of the application process.*

- **UC Davis:** UC Davis launched the Data, Informatics & Application Launch (DIAL) grant program, which awards \$5,000 to teams working to advance a consumer application or other data-centric product. UC Davis also created the STAIR-Plus grants, as an opportunity for follow-on funding for recipients of the pre-existing Science Translation & Innovative Research (STAIR) grants. Up to \$20,000 is available to previous STAIR recipients whose project advanced towards commercialization during the term of the original STAIR grant.
- **UC Irvine:** UC Irvine expanded the Proof of Product (POP) Grants, allowing them to provide grants up to \$150,000. The expansion of POP grants has led to more applicants, representing a wider range of research at UC Irvine.
- **UCLA:** UCLA launched the UCLA Innovation Fund (see inset on the prior page), which provides grants of up to \$200,000 to advance projects in health care. The program also matches project recipients with an Entrepreneur-in-Residence to maximize the use of funds.
- **UC San Francisco:** AB 2664 funds helped expand the Catalyst program which provides proof-of-concept funds to technologies in digital health. In September 2017, UCSF launched the Catalyst Plus program that provides a follow-on round of support to previous Catalyst recipients.
- **UC Santa Barbara:** UCSB launched two proof-of-concept programs: the SEED TECH funds small-scale research projects designed to generate data to make UCSB technologies more marketable and fundable, and the SEED-MVP program was launched to fund small-scale prototypes and/or pilot projects for customer feedback. A total of \$210,000 went to five awardees in these two programs in 2017.
- **UC Santa Cruz:** UC Santa Cruz created the Launchpad Proof-of-Concept Grants, which provided grants ranging from \$5,000 to \$15,000 to support UCSC inventors who have created innovative technologies that have demonstrable economic, environmental, and/or societal impact.
- **UC San Diego:** UC San Diego launched three proof-of-concept grant programs: The Accelerating Innovations to Market program, the Medical Entrepreneurship (MEET) program, and the Technology Accelerator (see inset) at the Institute for the Global Entrepreneur. These programs have recruited entrepreneurs, venture capitalists, and industry experts to provide mentorship to program participants. In addition, the eight corporate members of the Scripps Corporate Alliance, launched with AB 2664 funds, have advised ten early stage projects regarding their commercial potential.

UC San Diego – Technology Accelerator: *Veocor Diagnostics is a collaboration between mechanical and aerospace engineering and cardiovascular experts at UC San Diego, using precision medicine to identify patients at increased risk of stroke. The potential impact is targeted care, fewer strokes, and reduced mortality. The team won funding and mentorship through the AB 2664-supported, year-long Technology Accelerator. Since joining the Technology Accelerator, Veocor has continued to build on its success. In May, the team won first place and \$60,000 in the life sciences track of a regional business plan competition. Over the summer, the team formally incorporated as a company and earned acceptance to the pilot cohort of the Medical Education and Entrepreneurship Training (MEET) program.*

Education, Mentoring, and Events

About 25% of the AB 2664 funding was proposed for launching new business training programs at the campuses. These educational programs range from informational seminars for individuals beginning to explore entrepreneurship, to programs that assist entrepreneurs with the legal work involved in incorporating a company, to pitch sessions connecting UC-connected startup companies with investors. The following campuses have provided AB 2664-funded mentorship programs and events:

- **UC Berkeley:** UC Berkeley launched a range of educational programming, including a New Business Practicum at Berkeley Law providing legal guidance to entrepreneurs, a Lean Transfer course at Haas School of Business aimed at building technology startups with intellectual property from UC Berkeley, and a series of programs at the Sutardja Center for Entrepreneurship and Technology for students who are interested in entrepreneurship and are considering applying for the LAUNCH accelerator program. Big Ideas, which started at Berkeley but has expanded across the UC system, expanded its business training program with AB 2664 funds. Additionally, UC Berkeley forged a key partnership with Enel, a global power company headquartered in Europe, and the CITRIS Foundry with AB 2664 funding. Enel will form its Silicon Valley Innovation Hub at the CITRIS Foundry Entrepreneurship Hub. The partnership provides \$350,000 of funding to the Foundry over two years to connect aligned entrepreneurs, startups, and researchers with Enel to ultimately form strategic collaborations.

- **UC Davis:** UC Davis expanded its Entrepreneurship Academies: the Food & Ag Entrepreneurship Academy, which focused on the entrepreneurial opportunities at the intersection of food, agriculture, and health, was held in February 2017; and UC Davis has partnered with UC Merced for the first Entrepreneurship Academy in the Central Valley.
- **UC Merced:** In partnership with the UC Berkeley School of Law, UC Merced launched the Central Valley Ventures program, which provides legal training to Central Valley entrepreneurs. Additionally, the UC Merced Venture Lab used AB 2664 funding to broaden its network with civic, business, and government partners from Merced, Fresno, and San Jose and enlisted venture firms to provide market research. Sustaining connections with new stakeholders will drive additional membership to the UC Merced Venture Lab, while demonstrating UC Merced's commitment to economic development in the Central Valley.
- **UC Riverside:** Much of the educational programming at the Entrepreneurial Proof of Concept and Innovation Center (EPIC) at UC Riverside is funded by AB 2664, including workshops and mentorship programs for entrepreneurs (see inset).
- **UCSF:** At UCSF, QB3 used AB 2664 funds to launch the Life Science Pitch Summits, which are showcases for early stage companies to access networking opportunities with and receive feedback from industry partners and investors. A critical component of the Pitch Summits is the mentorship experience – participants receive one-on-one mentorship prior to the event as well as personalized introductions to potential investors.

UC Riverside -- EPIC: *Keep it Green Transit (KIGT) is a green tech startup from the Riverside community that has received significant support from AB 2664-funded programs at UC Riverside. KIGT attended EPIC's Startups for Innovators workshop and received additional coaching for attracting investment funding at EPIC. In September, KIGT presented in UCR's Entrepreneur Showcase to a panel of EIRs and investors to receive feedback on their funding pitch. KIGT has since raised \$200,000 in angel funding. With this support, KIGT secured a contract with University of LaVerne and is teaming up with community partners for grant proposals, including a \$3M grant proposal for Edison International with UC Riverside and a \$35M Transformative Climate Communities grant proposal with the City of Riverside. By utilizing many of the resources funded by AB 2664, KIGT has been able to establish a base in the Riverside community, mentor local high school students, and hire UC Riverside alumni.*

Support

About 11% of the funding was proposed for direct support of AB 2664 programming, such as information technology solutions for networking, or program management staff to run new programming. The following campuses are examples of how AB 2664 funding has been used to hire support staff to further I&E goals:

- **UC Berkeley:** The Sutardja Center for Entrepreneurship and Technology (SCET) hired a program manager, who was critical in launching new programming. This programming included the Management of Technology Innovation program, which facilitated collaborations with industry

experts; the Transnational Security Collider, which connects undergraduate students and innovations to federal stakeholders; and the alt.meat lab, which is creating plant-based meat alternatives.

- **UC Irvine:** Applied Innovation at UC Irvine hired a project manager to ensure the success of the expanded BioENGINE and POP Grants programs, both of which continue to be oversubscribed, even after expansion by AB 2664 funds.

Next Steps

FY 2017-18 and FY 2018-19

Many of the AB 2664 programs are multi-year programs: for example, some mentorship programs are recurring, and many of the Proof-of-Concept funding programs will have multiple rounds. Other AB 2664 funds are invested into capital projects, such as the build-out of a startup incubator or the purchase of equipment.

As seen in Table 1, through the end of FY 2017 campuses have spent about 15% of the State funding. The majority of State funding is budgeted for FY 2018. Tapering down the State funds in FY 2019 reflects the growing role of other funds (whether internal campus funds or external funds) in achieving program sustainability.

	Q1	Q2	Q3	Q4	Total
FY 2017 Expenditures	n/a	n/a	\$902,895	\$2,390,215	\$3,293,110
FY 2018 Budget	\$3,403,796	\$3,472,568	\$2,939,439	\$3,148,559	\$12,964,362
FY 2019 Budget	\$2,290,465	\$1,490,513	\$1,004,781	\$956,769	\$5,742,528
PROGRAM TOTAL					\$22,000,000

Table 1: Budget and Expenditures for AB 2664 Funds

Matching Funds / External Support

Campuses have made progress towards obtaining AB 2664 matching funds from a variety of sources. As of November 2017, campuses have received over \$5.5 million in matching funds (including in-kind contributions of equipment or services). Another \$5.6 million in matching funds are committed; many of these commitments are awaiting build-out of new startup incubators or other campus workspaces. Overall, campuses have received or have commitments for \$11.1 million in matching funds, which is over half of the \$22 million total.

	Corporate	Foundation	Individual	Total
Received	\$ 2,922,704	\$ 1,144,775	\$ 1,456,821	\$ 5,524,300
Committed	\$ 3,046,460	\$ 1,211,500	\$ 1,336,000	\$ 5,593,960
Total	\$ 5,969,164	\$ 2,356,275	\$ 2,792,821	\$ 11,118,260

Table 2: Matching Funds by Source

The campuses have identified strategies for raising additional funds from philanthropic and corporate sources to create program sustainability. UCLA is considering creating an evergreen fund² to support the UCLA Innovation Fund; the Technology Development Group has teamed up with deans across the campus and the campus development office to begin raising \$50 million towards sustaining the fund.

At UC Santa Cruz, the Startup Sandbox is working to attract corporate partners to sustain the new and expanded programs funded by AB 2664. At UC San Diego, many of the programs have leveraged the AB 2664 investment to obtain foundation money to support these programs over the long term. The Big Ideas at Berkeley utilized the AB 2664 funding to obtain corporate sponsorship for the Big Ideas competition, which will provide program sustainability.

Sustaining Impact

Overall, the AB 2664 funding has had an immediate impact on the innovation and entrepreneurship ecosystem at each campus. The campuses have launched programming to develop the skills of budding entrepreneurs and create an ecosystem that enables those entrepreneurs and their companies to be more successful. Campus participation in these new and expanded I&E programs have grown, yet demand for these programs continues to exceed capacity, demonstrating the need for more support. As campuses leverage AB 2664 funds to obtain matching funds, they amplify the impact of these programs, reaching new entrepreneurs across the campus and engaging even more external stakeholders. Additionally, many campuses have successfully leveraged AB 2664 funding to obtain large federal grants (such as the NSF I-Corps grant and the EDA i6 Challenge Grant) to achieve program sustainability. AB 2664 has energized innovation and entrepreneurship activities at each campus, charting a path to long-term economic impact with campuses as hubs of entrepreneurial activity.

With less than a year to deploy and measure the results of AB 2664, early results have been promising. The development of entrepreneurial skills and support in the early stages of company formation have already helped startups bridge the gap to commercialization. The University looks forward to seeing the impact of entrepreneurs participating in programs today as they turn their ideas into products and technologies in the future.

² Evergreen funds are structured so that money is added to the fund incrementally, rather than in a lump sum. This allows the fund to achieve sustainability.

APPENDIX

Appendix A: Full List of Programs Launched or Expanded with AB 2664 Funds

Each campus pursued a different strategy as to how to deploy funding across new or expanded programs. As an example, UCLA focused its funding on creating a new, large program (UCLA Innovation Fund), while others, such as UC San Diego, utilized its funding to create and expand a number of programs across a wide variety of entrepreneurial support areas.

Berkeley

- Management of Technology Innovation Program
- CITRIS Foundry Entrepreneurship Hub
- Visiting Entrepreneurial Fellows program
- Shared Special User Facility for Innovation & Entrepreneurship program
- SBA Road Tour event
- Berkeley Law New Business Practicum
- Haas Lean Transfer course
- Startup Disco workshop
- Startup Marketplace
- Big Ideas workshops
- Berkeley Begin virtual innovation hub

Davis

- Food & Ag Entrepreneurship Academy
- Central Valley Entrepreneurship Academy
- Advanced Student Career Enablement & Development (ASCEND) Program
- Davis Entrepreneurship Network
- STEM Innovation & Entrepreneurship Symposium
- Science Translation & Innovative Research (STAIR) Grants / Data, Informatics & Application Launch (DIAL) Grants / STAIRPlus Grants (proof-of-concept)
- Creator Challenge Series
- Prototyping Lab and Startup Mentorship Accelerator (PLASMA) Grants
- Distribution Research Incubation & Venture Engine (DRIVE) Network Equipment
- Discounted Access to Research Translation Services (DARTS) Program

Irvine

- Proof of Product (POP) Grants
- SBIR/STTR Support
- BioENGINE program

Los Angeles

- UCLA Innovation Proof-of-Concept Fund

- Easton Center Project Workshop series
- Startup UCLA 2017 Summer Accelerator
- Startup UCLA Ice House Entrepreneurship program
- Startup UCLA Venture Consultants
- UCLA School of Law Intellectual Property Clinics

Merced

- UC Merced National Science Foundation Innovation Corps program
- UC Merced Venture Lab Modesto
- UC Merced Venture Lab Atwater
- Central Valley Entrepreneurship Academy
- Central Valley Ventures
- Pi Shop Product Development Center
- Proof of Concept Fund

Riverside

- Entrepreneurial Proof of Concept and Innovation Center (EPIC)
- ExCITE Accelerator
- InSoCal CONNECT
- Molecular and Translational Medicine (MolMed)
- Creat'R Lab
- Citrus Lab Expansion
- Wet Lab Incubator

San Diego

- The Basement
- Blue LINC
- Medical Entrepreneurship (MEET)
- SPARK (formerly MetaMBA)
- Venture Incubation
- Business Bootcamp
- Technology Accelerator
- Accelerating Innovations to Market (AIM)
- Veteran Ventures
- mystartupXX
- Corporate Alliance
- Drug Pipeline
- California Shaman
- Business Accelerator
- Smart Transportation
- Social Impact Accelerator

San Francisco

- Entrepreneurship Center Online Educational Program
- Catalyst Program
- Catalyst Plus
- SBIR Workshop
- QB3 Life Science Pitch Summits
- QB3-UC Hastings School of Law partnership
- Mission Bay Capital support
- MedTech Venture Partners support

Santa Barbara

- The Garage startup incubator
- Technology Incubator
- Makerspace
- Speaker Series and Mentorship Training
- Community Needs Assessment
- Hack-a-Thon
- SEED-TECH Proof-of-Concept Grant
- SEED-MVP Proof-of-Concept Grant
- Pitchbook subscription
- Plasmatherm silicon nano-machining system

Santa Cruz

- Startup Sandbox wet-lab incubator
- Santa Cruz Accelerates business accelerator
- IDEA Hub network
- SVLink business incubator
- Launchpad Proof-of-Concept Grants
- Creative Entrepreneurship Internship program
- GameGO program

Appendix B: Budget and Expenditures

	Q1	Q2	Q3	Q4	Total
FY 2017 Expenditures	n/a	n/a	\$902,895	\$2,390,215	\$3,293,110
FY 2018 Budget	\$3,403,796	\$3,472,568	\$2,939,439	\$3,148,559	\$12,964,362
FY 2019 Budget	\$2,290,465	\$1,490,513	\$1,004,781	\$956,769	\$5,742,528
PROGRAM TOTAL					\$22,000,000

Appendix C: Matching Funds

Received and Committed, by Type

	Corporate	Foundation	Individual	Total
Received	\$ 2,922,704	\$ 1,144,775	\$ 1,456,821	\$ 5,524,300
Committed	\$ 3,046,460	\$ 1,211,500	\$ 1,336,000	\$ 5,593,960
Total	\$ 5,969,164	\$ 2,356,275	\$ 2,792,821	\$ 11,118,260

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