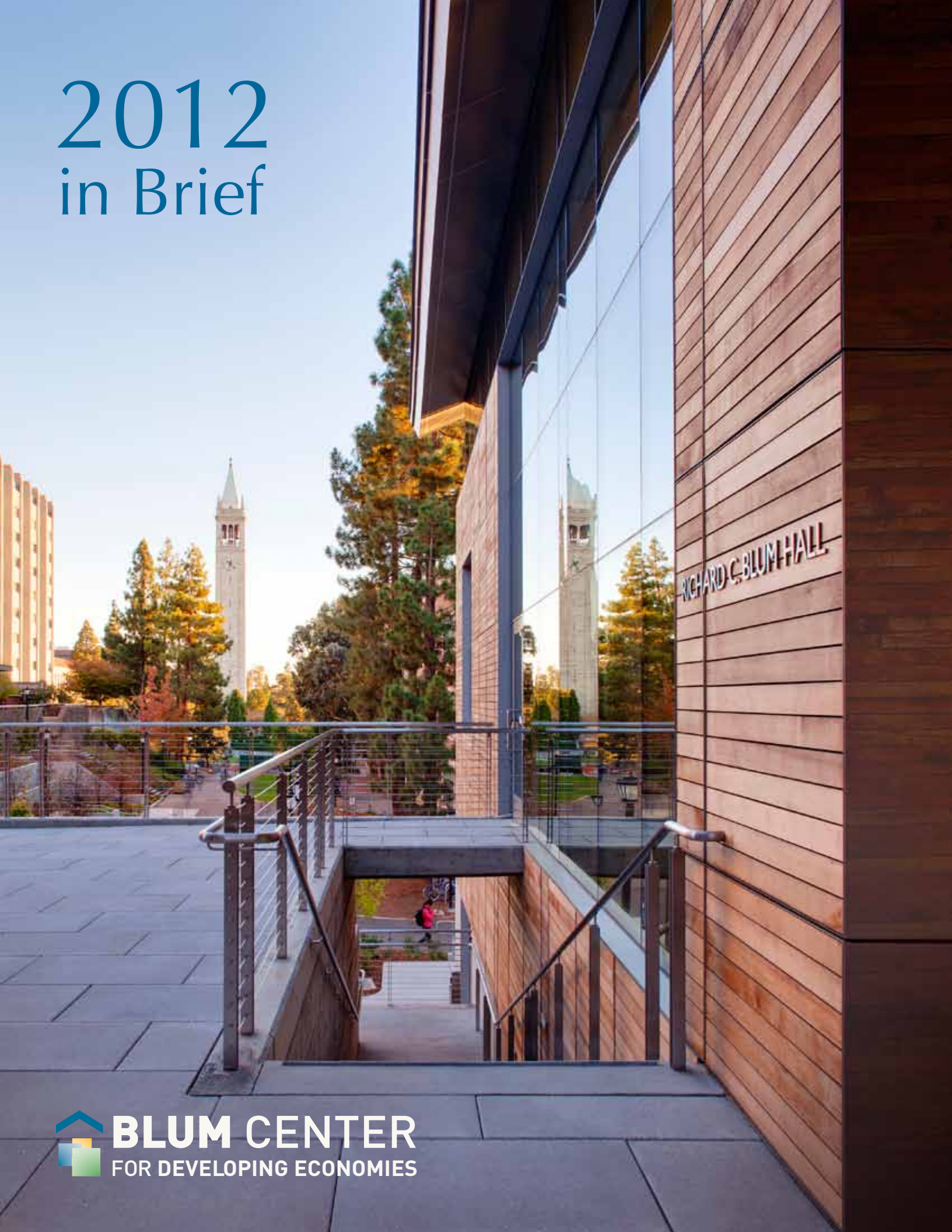
2012 in Brief



BLUM CENTER
FOR DEVELOPING ECONOMIES

“We are a campus of problem-solvers who care deeply about making the world a better place.”

Richard Blum, Founder

Cover Photo: Gensler Associates

MESSAGE FROM THE CHAIR

The University of California, Berkeley has always been a place that combines ideas and action—with a clear enthusiasm for making the world a better place.

Our university has a vital role to play in finding solutions to complex problems that require the collective expertise of many disciplines and the energy of committed individuals.

This *2012 in Brief* gives a snapshot of what we're doing at the Blum Center for Developing Economies to leverage the talent, enthusiasm and energy of the University community to address the grand challenge of global poverty.

In these pages, you will meet inspiring researchers who are designing technologies and services to improve lives around the world. You will learn about our new Development Impact Lab that links science, engineering and development economics to create effective solutions to the many problems that confront the poor both at home and abroad. Our interdisciplinary problem-solving approach has been recognized by the US Agency for International Development as a national model for how universities can utilize their knowledge and talent to help solve these problems. You will meet students from our undergraduate minor program, Global Poverty & Practice, a unique program providing a rigorous understanding of the sources and consequences of poverty and direct engagement with poverty action fieldwork.

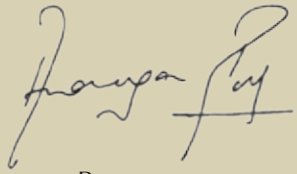
I am grateful for this opportunity to recognize the talented students, faculty, and the many generous donors and partners who make Blum Center's work possible. It is an honor to work with you and with Richard Blum, the Center's visionary founder, to make a difference in the lives of the poor around the world.

Laura D'Andrea Tyson
Chair, Board of Trustees
Blum Center for Developing Economies

GLOBAL POVERTY & PRACTICE

The Global Poverty & Practice Minor (GPP) is now five years old. As the largest undergraduate minor at UC Berkeley, our students come from nearly every major—economics to engineering, anthropology to architecture. Our alumni are now tackling urgent and complex problems as entrepreneurs, scholars, activists, and global citizens. But 2012 also marks a turning point in the GPP program. Building on the work we have done in establishing a new curriculum, we are now launching a series of initiatives to share our work beyond Berkeley.

Through a publishing partnership with the University of California Press, scholarly conferences, and a new digital and social media project, we hope to make visible and available the exciting debates, methodologies, and ethical frameworks that are core to the GPP program. Global Poverty Studies, an emerging field at the intersection of scholarship and activism, will surely expand academic knowledge. But, housed in the world's greatest public university, it is also meant to further public engagement. We invite you to join the conversation!



Ananya Roy
Blum Center Education Director
Professor, City & Regional Planning
Distinguished Chair, Global Poverty & Practice

Where We Work

Berkeley undergraduates link rigorous curriculum with poverty action fieldwork, connecting theory and practice on-the-ground in over 50 countries.

Take a look at our twitter feed, **#globalpov**, and the global "point of view" it nurtures. Join the debate!

GLOBAL POVERTY & PRACTICE
Students in Action

WATER FOR LIFE
Rural Wells for Ghana

Saad Karamat, a Public Health major, focused his GPP practice experience in India, working on rainwater harvest schemes for drought-stricken villages. Since graduating Saad has worked in rural Ghana with Water for Life, a project of UK-based Humanity First. "People walk for miles and wait in line for hours to carry back buckets of dirty water for daily needs," he says. Kids sometimes must skip school to collect water. Water for Life refurbishes village wells, each providing safe water for up to 500 villagers. In 2012, Saad's team won a grant from California-based tech company NVIDIA to refurbish 125 wells, earning recognition from Ghana's president, John Dramani Mahama. "I never thought my efforts could allow me to affect tens of thousands of people," he muses. Saad's next move: medical school.

Saad Karamat

Villagers gather around a refurbished well in rural Ghana.

FULL CIRCLE
Linking Practice and Scholarship

Emma Shaw Crane graduated in 2009 with an interdisciplinary major in Race, Gender and Political Economy, and a minor in Global Poverty & Practice. She did her GPP practice experience in Berkeley, coordinating a youth radio and poetry program with teens at B-Tech Academy, an alternative high school.

Inspired by this experience, Emma spent the year after graduation in Southern Mexico and Central America as a recipient of the Judith Lee Stronach Baccalaureate Prize working on a women's radio project. The following year, as a Fulbright Scholar in Bogotá, Colombia, she conducted a year of ethnographic fieldwork with families living with HIV/AIDS. Emma returned to California and worked in Oakland's Fruitvale district with a nonprofit group that provides health care to undocumented migrants.

Maria Reyero/COMPPA.org

Guatemalan women radio journalists editing production.

"The GPP minor gave me the tools to think about my place in the world, and allowed me to critically engage in work I deeply believe in," she reflects. Moving full circle, Emma returned to the Blum Center in 2012 as a research fellow, working alongside Professor Ananya Roy on a pioneering academic conference and forthcoming edited book, *Territories of Poverty*.

CELLSCOPE

Vietnam TB Project

Anh-Thi Le is a fourth year Political Science major, a GPP peer advisor, and a researcher with the Blum Center's CellScope Vietnam TB project. Designed at UC Berkeley, CellScope is a unique optics device that turns the camera of a cell phone into a diagnostic-quality microscope. CellScope enables health workers in rural clinics to scan and analyze patient samples to detect infectious diseases—and to share images with distant specialists.

Vietnam has a population of nearly 90 million rural villagers, stubbornly high TB rates, and a limited system of modern health services. Fluent in Vietnamese, Anh-Thi works via Skype with the Hanoi-based CellScope team, preparing for a national distribution of CellScope to all rural clinics in 2012-13. "I am thriving as a student," says Anh-Thi, "and I'm now clear that my passion is in international development."

CellScope

A patient sample seen through a CellScope, designed by Prof. Daniel Fletcher and his lab team; Vietnamese village children.

Vietnam Landscape © David Terrazas

INNOVATION INITIATIVES

Bart Nagel

At the Blum Center, we have always believed in the power of new technologies and services to improve the lot of the poor. However, too often technologies are pitched as solutions before considering ways to adapt, scale and sustain them over time. To address this gap, we've pulled together a spectacular coalition of technologists, development economists and business strategists to launch a new field of research: Development Engineering. This revolutionary approach to creating viable, scalable solutions has been pioneered at the Blum Center and adopted by the USAID in its Higher Education Solutions Network, established in 2012.

Whether it's technology to deliver better health care, expand access to safe water, or deploy smart grid options in rural areas, our faculty and students are intent on making meaningful and lasting impact. Development Engineering is a key tool to meet basic needs and help to empower people in the developing world.

Shankar Sastry

S. Shankar Sastry
Blum Center Faculty Director
Dean, College of Engineering
Chief Scientist, Development Impact Lab

USAID Water, Latin America

Cooling off in clean, safe water, Ecuador.

Jacob Dickinson testing microgrid.

Tai-De Li

CellScope demonstration with mobile device.

DEVELOPMENT IMPACT LAB

Building on the success of the Blum Center's model of applying science and engineering tools to poverty alleviation, USAID invested $20 million to create a "Development Impact Lab" based at Berkeley.

The Development Impact Lab (DIL) is focused on inventing and scaling technological breakthroughs for the poor. Drawing insights from engineering, development economics and business, the DIL model will bridge the multiple "valleys of death" that lie between innovations in the lab and their effective deployment to help the millions of people worldwide who live on less than $2 a day.

"We recognized that the Blum Center represented something special: a Center for deep analysis and broad engagement that not only generates new ideas, but also tests and applies real-world solutions," USAID Administrator Rajiv Shah explained when the grants were awarded. "In fact, we've admired it so much that it is now the model for a network of development laboratories we're forming across the country."

"Through this network of development labs, we will recapture the legacy of science, technology and innovation as core drivers of development, as well as inspire and support the next generation of development leaders," said Shah.

> **“Economists believe the best way to deal with poverty is to create prosperity, and that works, but not everywhere. Engineers, by contrast, like to invent things that might help. At the Blum Center, we’re putting them together; it’s a different approach.”**

George P. Shultz
Former Secretary of State
Blum Center Trustee

Read more about innovation research: **blumcenter.berkeley.edu**

INNOVATION INITIATIVES

GRAM POWER: Smart Grid for India

Berkeley graduates Yashraj Khaitan and Jacob Dickinson founded Gram Power with a bold vision: to create access to reliable, affordable electricity for the world's 2.6 billion people who live without dependable power.

As engineering undergrads they developed a novel technology that generates, stores and distributes renewable energy on-site, drawing from solar panels, wind or biomass. In 2012, Gram Power set up India's first "smart microgrid" in a Rajasthan village. "Our smart grid site is the only village with reliable, on-demand power 24/7," says Khaitan.

Gram Power is using a clever blend of a business model borrowed from the exploding telecommunications industry and smart meter technology. It can provide rural consumers with clean, pay-as-you-go electricity at one-third the cost of kerosene, without the health risks.

"People's standard of living increases pretty rapidly once they have access to power," notes Khaitan. By combining social impact grant awards and venture capital, Gram Power is now poised to expand its reach to thousands of people in rural India—and a potential market of about 700 million.

All Photos: GramPower.com

Above: Gram Power founders Yashraj Khaitan and Jacob Dickinson. Dry storage: grain stacked alongside MPower, a storage system of batteries and "smart" circuits.

Top: A new solar collector supplies power for energy efficient light bulbs, fans, buttermilk machines, radios, tools and more to rural families in Rajasthan, India. Right: Erecting the first pole.

Gram Power's smart grid is the only source of reliable power for rural villagers.

BIG IDEAS@BERKELEY

GLOBAL POVERTY ALLEVIATION

CLEAN & SUSTAINABLE ENERGY ALTERNATIVES

FINANCIAL LITERACY

CREATIVE EXPRESSION FOR SOCIAL JUSTICE

IMPROVING STUDENT LIFE

INFO TECHNOLOGY FOR SOCIETY

MATERNAL & CHILD HEALTH

PROMOTING HUMAN RIGHTS

SCALING UP

Big Ideas@Berkeley is an annual contest that provides funding, support and encouragement to UCB students who have "big ideas."

Seeking fresh, innovative ideas with high potential for social impact, Big Ideas@Berkeley is open to any student on campus, undergraduate or graduate, from any discipline. The more insightful and unexpected the ideas are, the better. Interdisciplinary teams of students are encouraged.

Since the first contest in 2006, Big Ideas@Berkeley has provided a kick-start to hundreds of student-led projects on campus, in the US and around the globe. Some Big Ideas have evolved into social enterprises, businesses, or international nonprofit groups; others have created impact on campus and in neighboring communities.

> **"Big Ideas@Berkeley is much more than a prize. It is an entire process for nurturing student-led innovation."**
>
> Ananya Roy

Big Ideas@Berkeley is generously supported by the Rudd Family Foundation.

Tuyen Nguyen, *Vietnam Tooth Project*

My Big Idea is to combat malnutrition by improving children's oral health in Vietnam.

Iris Shim & Ariel Chait, *Acopio*

Our Big Idea is to unlock data to increase transparency and equity in the coffee industry.

Komal Ahmad & Jacquelyn Hoffman, *Bare Abundance*

Our Big Idea is to redistribute healthy food to people in low-income East Bay communities.

IMPACT OF A BIG IDEA:
WE CARE Solar

Only about five percent of Ugandans have electricity. That's a serious problem for a woman giving birth at night.

Birth facilities use kerosene lamps, flashlights or candles, or they have nothing at all. Four years ago, Dr. Laura Statchel, an obstetrician who returned to UCB for a PhD in Public Health, saw the same problem in Nigeria where she studied maternal mortality. Statchel saw first-hand how sporadic electricity led to a C-section conducted by flashlight, and critically ill women waiting until dawn for urgent surgical care.

WE CARE Solar

The Solar Suitcase in use in Uganda.

WE CARE Solar

Blum Center Archive

Maternity health worker with a Solar Suitcase, Uganda. Dr. Rajiv Shah, USAID and Laura Stachel discuss the benefits of the Solar Suitcase.

Statchel and her husband, Hal Aronson, had an idea: create a small kit with everything needed to bring enough power and light for health workers to safely deliver babies. With early funds from Big Ideas@ Berkeley, they designed a prototype, and founded WE CARE Solar. They have since installed more than 200 "Solar Suitcases" in eleven countries, and they are just getting started.

In July 2012, WE CARE Solar and its Ugandan partners were honored by a major award from an international consortium of funders, including the Gates Foundation, USAID, and the governments of Canada, Norway and the UK. The "Saving Lives at Birth" award will provide Solar Suitcases to 200 health centers in Uganda. The rechargable, solar-powered Suitcase serves as a hub to power light for medical care at night, a fetal heart monitor, cell phone charging, and a computer.

WE CARE Solar's innovation can help to dramatically reduce maternal mortality in Uganda and potentially scale to multiple countries, protecting mothers and newborns during their most vulnerable hours.

Hannah Bichkoff,
Youth Empowerment Program

My Big Idea is to give detained immigrant youth hope through student role models.

Stephanie Yau & Erin Dunn,
Fruitful Minds

Our Big Idea is to combat childhood obesity by providing nutrition education to kids.

Fermin Reygadas, *Nuestra Agua*

My Big Idea is to bring safe water to low-income communities in Mexico.

PARTNERS

The Blum Center credits productive partnerships with NGOs, governments, entrepreneurs, academic institutions, foundations and generous private donors for our success.

Brookings Institution
Gina Maya & Richard Capelouto
Stasia Obremsky & Dan Carroll
The Carter Center
Helen & Alden W. Clausen
Clinton Global Initiative University
Dow Chemical Sustainable Solutions Program
The Energy Foundation
The Friend Family
Coleman Fung
The Griscom Foundation
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Lisa Kamal & Bassel Ojjeh
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Proyecto Horizonte, Bolivia
Relief International
Resource Centers for Urban Agricultural Farming, China
UCB Environmental Engineering, India
Uganda Village Project, Uganda
Umeed, India

DEAR FRIENDS,

In just six years, our Center has become a strong catalyst for poverty action and research at Berkeley. Students and faculty alike have embraced our bold mission, breaking new ground in poverty studies and designing new technologies that provide a 'hand up' for vulnerable people. We are heartened by the generosity of our donors and partners who enable this vital work.

Of the people brought out of poverty in the last decade, over 60% have made that step because of technology innovation—particularly in mobile technologies, micro-finance and medicine. We are involved in all of these. Nearly 7000 students have taken our courses, and we hope to expand to more UC campuses in 2013, and possibly abroad. These students will graduate as educated global citizens ready to lead and build a better world.

Please join me in supporting these amazing faculty and students.

Richard C. Blum, Founder

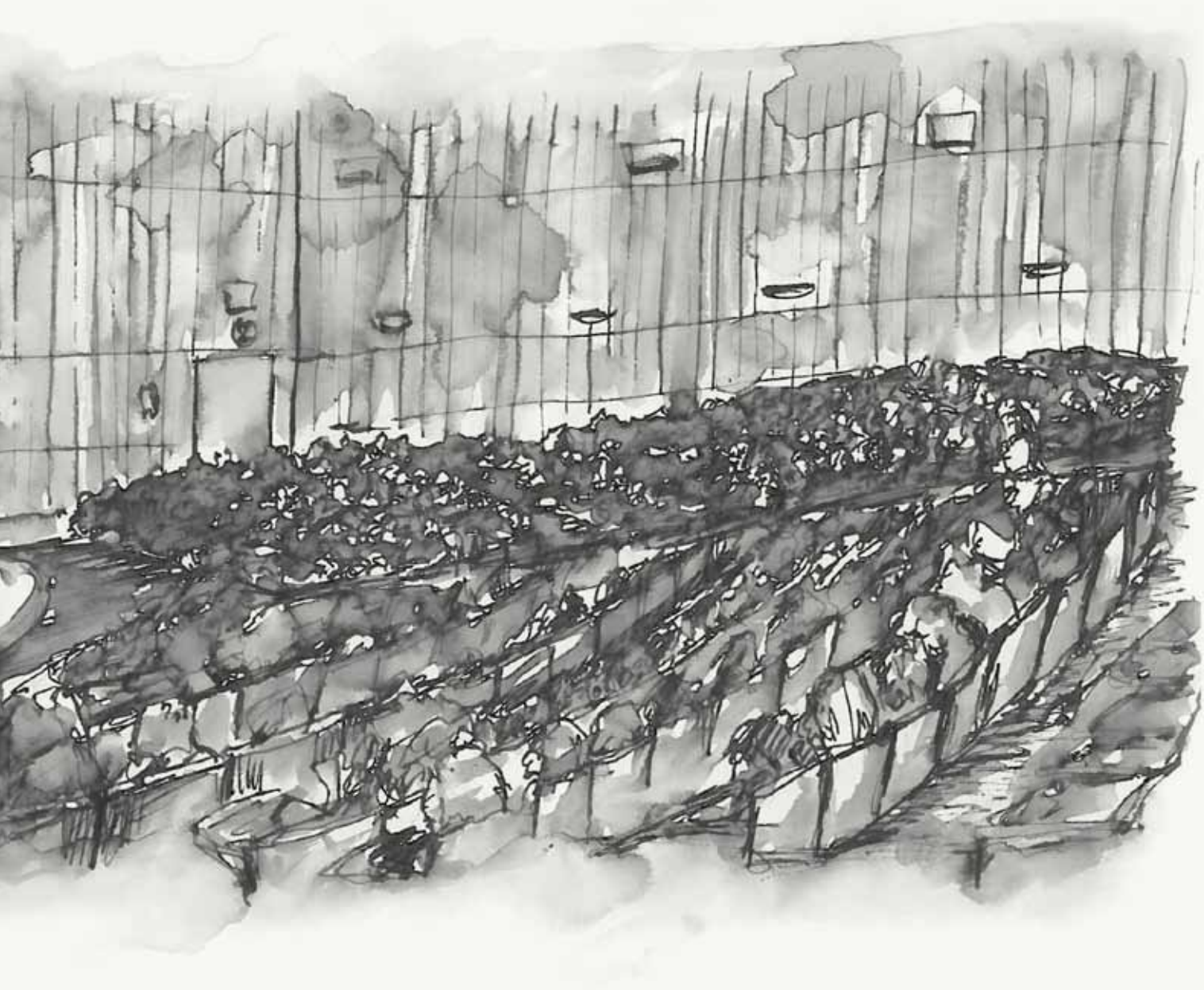

Illustration: Abby VanMuijen

Our students have remarkable abilities and aspirations. With your generosity, their potential is limitless.

Ways to Give For information on how to support education and innovation initiatives at the Blum Center, please contact Maryanne McCormick, executive director, 510. 847.6851 or mmccormick@berkeley.edu.

To give online: blumcenter.berkeley.edu

Students from Ahmedabad, Gujarat, India. Credit: Anurag Panday

"Every child in school and learning well" is the mission of Pratham India. GPP student Anurag "Raj" Panday served as a classroom evaluator with Pratham in 2012. "On my last day," Raj said, "they made this for me as a surprise thank you—a special goodbye moment."

"...the alleviation of suffering and the creation of a more peaceful world... are ideals that can and must be pursued by this and coming generations."

President Jimmy Carter, Honorary Trustee

BLUM CENTER FOR DEVELOPING ECONOMIES

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