

# w.p.carey

SCHOOL OF BUSINESS  
ARIZONA STATE UNIVERSITY

SPRING 2018

## **Power up**

Energy providers diversify  
how they do business

## **Road rules**

Alumna navigates the  
conscious capitalism path

## **Measures of success**

2017 Hall of Fame  
inductees share their  
secrets and strategies

**Utility leader champions  
sustainability in career  
and retirement**

**Bill Post**  
(BS Quantitative  
Systems '73)

# On the grid



**“Here comes the sun,  
and I say it’s all right.”**

– *George Harrison*  
*Abbey Road (1969)*

## Dear W. P. Carey family and friends,



It's hard for me to imagine that 2018 is already here, but then again, it's hard for me to imagine that we now have more than 15,000 students studying business at ASU's W. P. Carey School of Business – and more than 100,000 alumni. This year also marks a special anniversary for us. Fifteen years ago, Wm. Polk Carey transformed our school with his generosity, and now we've embarked on a campaign for the investments needed to advance the school into the

future – Campaign ASU 2020.

While the years seem to fly by, the numbers sometimes seem daunting. Where does the energy come from to continue to do all we do? We devote this issue to energy research and alumni in the energy industry. I know you'll be impressed at the impact our faculty makes with their research and our alumni make in their organizations and industries. Like so many industries, energy is changing rapidly, which in turn is changing entire communities and countries.

Each of us also has to focus on our personal energy in our endeavors. The advice, pursue your passion and you'll never work a day in your life, is certainly apropos. It seems like energy is endless when you are doing something you are passionate about, just as we are about changing lives through business education.

Do you believe we can

affect the energy and passion of those around us? I do, even for the most mundane of tasks. If every person can see how their actions fit into the strategy and impact of the organization, we can collectively advance our passion. Communicating the purpose of what we do and how each person contributes toward that vision is critical in all organizations. How can you ignite passion in others? Perhaps you can help them stay focused on the big picture and why their contributions matter.

As for energy, firing up passion is one way to inspire, but I'd argue equally important to personal energy is gratitude. I can't tell you how many times I've heard extraordinarily hard workers yearn for recognition of their efforts by others. "Thank you" isn't that hard to say. Why is it that so few of us express gratitude, or when we do, express it so infrequently?

While passion and the goal to create change may make us work hard, stay loyal, and go above and beyond, not receiving gratitude and recognition is a pail of water thrown on the fire of passion.

So let me start by thanking each of you reading this

**Communicating the purpose of what we do and how each person contributes toward that vision is critical in all organizations.**

magazine and this letter. Thank you for all your contributions of time, talent, and treasure to our organization. I know you are passionate about our school. Thank you.

Enjoy the read, and then thank someone for their contributions in your success.

*Amy Hillman*

amy.hillman@asu.edu  
@WPCdean



Shhhhh...

I just returned from my Executive-in-Residence stint at Purdue and found the new *W. P. Carey* magazine on my doorstep. Please extend my compliments to those responsible for the publication. It was excellent! I found it much more engaging than the recent edition of the Booth School publication (but please don't squeal on me).

**Bill Naumann**

Your two cents matters. And we love to get your questions. We're here and we're listening, so drop us a note anytime: [editor.wpcmagazine@asu.edu](mailto:editor.wpcmagazine@asu.edu)

**W. P. CAREY MAGAZINE**  
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*Overheard on social media*

- 1.**  
**Keegan Hartman**  
WP Carey for the win!

**Spencer Campbell**  
MBA Student at ASU W. P. Carey School of Business  
Thank you **Michigan State University – The Eli Broad College of Business** for hosting the Bowersox competition again this year! Happy to represent **W. P. Carey School of Business** in the win along with **Saagar Anand, Enny Karsono Kho, and Trang Nguyen**
- 2.**  
**@thory21 • Thorin Yee**  
W. P. Carey School of Business – ASU  
I look happy, but inside I'm still crying about the 2 finals I have left ☹️ #finalsweek
- 3.**  
**@alysawong20 • Alyssa Wong**  
A Mountain  
Rise and ☺️ smile (AKA 9 am) First time hiking up A Mountain with the best mentor imaginable! #Amountain #mccord #godevils #iamwpcarey
- 4.**  
**@ChrisFarnsworth4 • Chris Farnsworth**  
About to graduate from our MBA program @ASU @WPCareySchool!
- 5.**  
**Audrey Arrington**  
Shout out to the W. P. Carey MBA program. Featured in Poets and Quants from a few months ago. #top25 #iamwpcarey

10 Business Schools to Watch in 2017: MBA programs poised to change the rules  
[POETSANDQUANTS.COM](http://POETSANDQUANTS.COM)
- 6.**  
**Emily Ibarra** @miss\_ibarra!  
My love ❤️ we will do great things together



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*See All Things WPC, page 4*

## Features

- 10 Road rules**  
Alumna navigates the conscious capitalism path
- 11 On the grid**  
Utility leader champions sustainability in career and retirement
- 14 Power up**  
Energy providers diversify the way they do business
- 21 Measures of success**  
2017 Alumni Hall of Fame inductees share their secrets and strategies

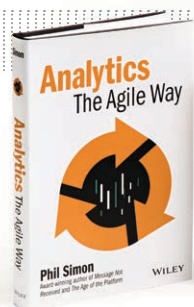
## Upfront

- 1 From the dean**
- 2 Voices**
- 4 All things WPC**  
News about your business school community

## Departments

- 24 Research**  
The connection between shopping behaviors and economic growth; how logistics improves quality of life for bottom of the pyramid (BOP) populations; why hiring a well-educated workforce pays off in high-quality financial reporting
- 30 Crunching the numbers**  
Water in the past, present, and future
- 32 Class notes**  
Identical twins share the Outstanding Graduating Senior Award; alums working on battery-powered homes

**ON THE COVER: Bill Post** (*BS Quantitative Systems '73*), a W. P. Carey Alumni Hall of Fame member, is on the board of directors of ASU's Julie Ann Wrigley Global Institute of Sustainability and leads the ASU Foundation as board chairman. *See page 11*



### BOOKSHELF


W. P. Carey authors spin tales of fantasy and real life. *See page 39*



### RESEARCH

Here's the new meaning of eating local. *See page 24*

# ALL THINGS WPC

A photograph of three students in a modern, brightly lit building with a wood-paneled wall. One woman is seated in a white chair on the left, another woman stands in the center, and a man is seated on a high stool on the right. They are all smiling and engaged in conversation. The setting appears to be a student lounge or a common area.

Full-time MBA students and Net Impact club co-presidents **Rachel Curtis** (MBA '18), **Eve Richer** (MBA '18), and **James Hood** (MBA '18) at the new Student Pavilion on ASU's Tempe campus. The 74,653-square-foot building aims to be a net-zero energy building, in accordance with ASU's goals for climate neutrality and sustainable building systems. It is also designed to meet specifications for LEED certification.



# Net Impact club makes a comeback

In 2016, the **W. P. Carey** chapter of the global, sustainable-business networking group was dormant. Then, two of the three club co-presidents traveled to the East Coast for that year's Net Impact Conference, the premier event for students and professionals who are committed to making a lasting social and environmental impact in business. For Full-time MBA students **Rachel Curtis** (*MBA '18*) and **James Hood** (*MBA '18*), attending the conference in Pennsylvania was worth giving up a balmy November weekend in Arizona.

"We came back fired up with a passion to use business principles for environmental and social good," Curtis says. Hood believes "business leadership in sustainability is the only fast-enough path forward to solve the complex, globally scaled social and environmental challenges of our time."

Today, Net Impact is the most active club within the university's MBA program, as well as one of the largest. And it's steadily attracting new members, including those who helped the club place second to the home chapter for having the most attendees at the 2017 conference in Atlanta.

Clinical Associate Professor of Management and Full-time MBA Faculty Director **John Wisneski** says the work of Net Impact fits into the Forward Focus curriculum and how it's reimagining what a business education at the graduate level looks like.

"We want the next generation of leaders to believe it's possible to run a company more efficiently and generate income – and that it's also their responsibility to be a true leader and improve the communities their businesses operate in," says Wisneski. "It's about making a difference in the lives of not only the main stakeholders but also those that interact with the products and services."

TPI Composites, the largest independent producer of wind turbine blades globally, is doing just that. The Scottsdale, Arizona-based company sponsored this year's Net Impact networking event, where President and CEO Steve Lockard also spoke to attendees. "I love the idea of doing well and doing good at the same time, and it can

be done. There are many places where it is done today. And it can be done in a much broader sense. You have to search for it, and you have to work for it," he says.

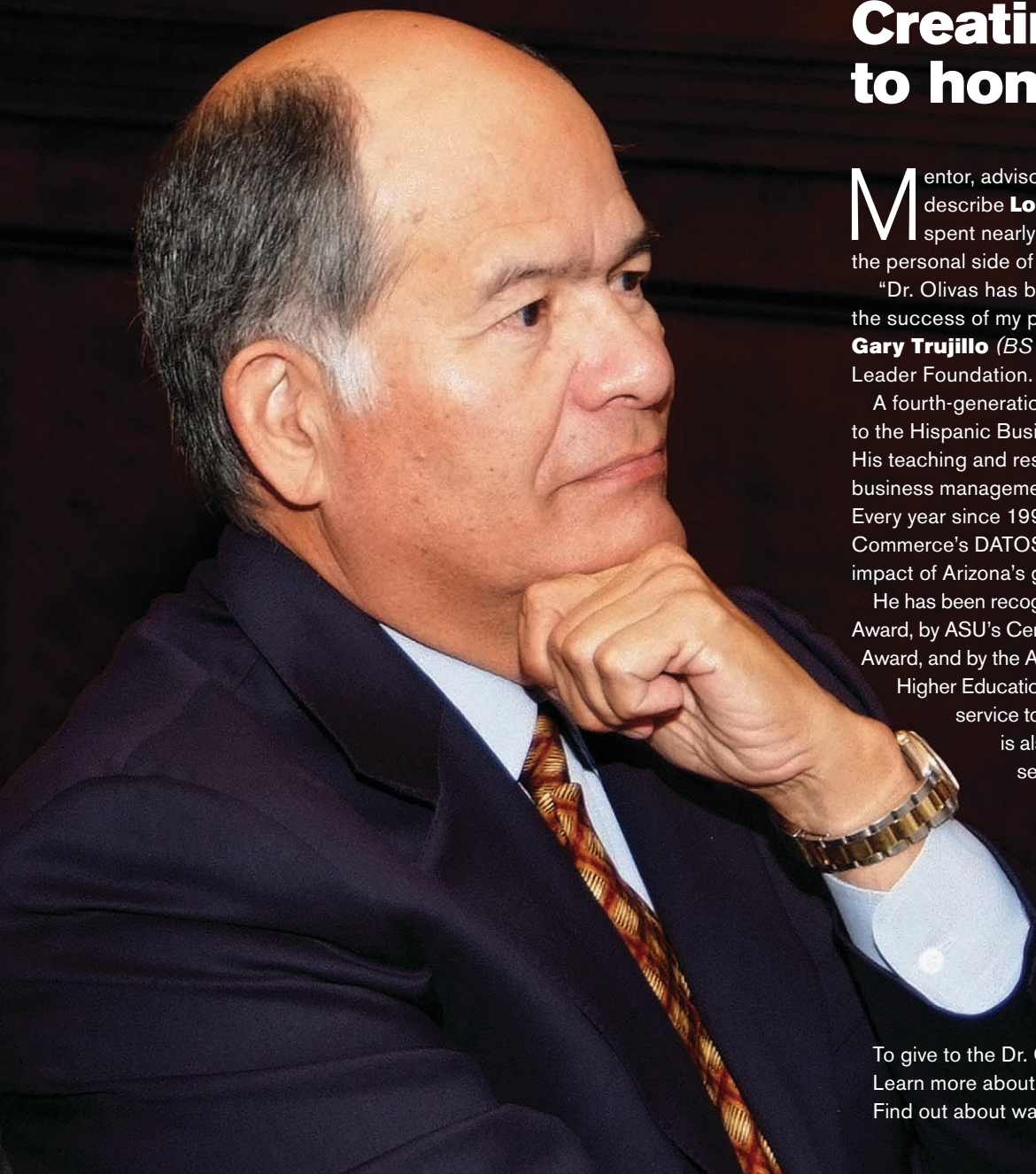
"In our case, we are fortunate that we're able to build value for our shareholders, serve our customers, and put food on the table for over 8,000 employees around the world."

The third Net Impact co-president, **Eve Richer** (*MBA '18*), says they hope to create a community for students to explore sustainable business

## Investing in social good

Net Impact mobilizes a global community of more than 100,000 students and professionals to use their skills and careers to drive transformational social and environmental change. Its programs – delivered from its headquarters in Oakland, California, as well as globally through student and professional chapters – give members the skills, experiences, and connections that will allow them to have the greatest impact now and throughout their careers. The emerging leaders take on social challenges, protect the environment, invent new products, and orient businesses toward the greater good.

opportunities, exchange ideas, and support one another long after graduation. "We have an amazing group of students in the Forward Focus class, and each of us has the potential to make a positive impact, no matter what industry or career path we pursue."



## Creating a lasting legacy to honor Loui Olivas

**M**entor, advisor, teacher, and friend. Those are a few words used to describe **Loui Olivas**, emeritus professor of management. Olivas spent nearly four decades at W. P. Carey, instilling an appreciation for the personal side of management. Alumni continue to speak fondly of him.

“Dr. Olivas has been a mentor, advisor, and significant contributor to the success of my personal and professional life for almost 40 years,” says **Gary Trujillo** (*BS Accountancy '83*), chairman and co-founder of Be A Leader Foundation.

A fourth-generation Phoenix native, Olivas served as an academic advisor to the Hispanic Business Students Association for more than 30 years. His teaching and research interests focused on entrepreneurship, small business management, and the economic potential of the Hispanic market. Every year since 1999, Olivas has authored the Arizona Hispanic Chamber of Commerce's DATOS report, the most comprehensive report on the economic impact of Arizona's growing Hispanic population.

He has been recognized by ASU students with the Outstanding Teaching Award, by ASU's Center for Executive Development with the Teaching Excellence Award, and by the American Higher Education Association with its prestigious Higher Education Leadership Award. Olivas has provided leadership and service to numerous national and local boards and commissions. He is also a retired colonel of the Arizona Air National Guard, having served a 29-year military career.

To honor and recognize Olivas for his distinctive career and dedication to shaping lives and minds as a teacher and mentor, the W. P. Carey School established

The Loui Olivas Endowed Chair. If funded, it would be the first endowed chair at any top 30 business school in the U.S. to recognize the contributions of a Latino. With more than \$900,000 already donated, the school is just \$100,000 away from the \$1 million minimum needed to fund the endowment.

To give to the Dr. Olivas fund: [asufoundation.org/supportdro](http://asufoundation.org/supportdro)

Learn more about the Dr. Olivas fund: [craig.jackson.jr@asu.edu](mailto:craig.jackson.jr@asu.edu)

Find out about ways to give to W. P. Carey: [wpcarey.asu.edu/give](http://wpcarey.asu.edu/give)

### MARCH

**14 Mark McKenna Lecture**  
Marston Exploration Theater,  
School of Earth and Space Exploration  
781 S. Terrace Road, Tempe, Ariz.  
**5 to 8:30 p.m.**

*This annual health care conference will feature Michael O. Leavitt, former secretary of the Department of Health and Human Services, Environmental Protection Agency administrator, and governor of Utah.*

[wpcarey.asu.edu/mckenna](http://wpcarey.asu.edu/mckenna)

**21 ASU Founders' Day**  
Arizona Biltmore, McArthur  
Ballroom  
2400 E. Missouri Ave., Phoenix  
**6 to 9 p.m.**

*This annual event recognizes ASU alumni, faculty, and alumni supporters whose efforts have resulted in groundbreaking research, distinguished service, and visionary philanthropy.*

[alumni.asu.edu/events/founders-day](http://alumni.asu.edu/events/founders-day)

### APRIL

**12 Terri Kelly honored at the Dean's Council Executive of the Year Award Luncheon**  
JW Marriott Desert Ridge Resort and Spa  
5350 E. Marriott Drive, Phoenix  
**11:30 a.m. to 1:30 p.m.**

*Honoring Terri Kelly, president and CEO of W. L. Gore & Associates Inc.*

[econclubphx.org](http://econclubphx.org)

**20 Undergraduate Class of 2017 One-year Reunion**  
The Graduate Hotel  
225 E. Apache Blvd., Tempe, Ariz.  
**6 to 8 p.m.**

*It has been one year since you walked across the stage, moving from student to a W. P. Carey alum. Reconnect with friends old and new. Free food and drinks. Space is limited. Register at [wpcarey.asu.edu/one-year-reunion](http://wpcarey.asu.edu/one-year-reunion)*



# Joining forces to move supply chain students forward

**V**enus and Serena. Bill Gates and Paul Allen. Beyonce and Jay-Z. The best partners take something good and, through cooperation, make it great. That's the case with Knight-Swift Transportation and the W. P. Carey School of Business, which kicked off November 2017 with the grand opening of the Knight-Swift Logistics Lab located on ASU's West campus.

"This is going to be a milestone for us to educate the next generation of logisticians," says Department of Supply Chain Management Chair and Professor **Mohan Gopalakrishnan**.

Thanks to a generous donation by Knight-Swift Transportation, the lab provides a place for students to work on projects with firms across Phoenix.

**Patricia Swafford**, clinical assistant professor of supply chain management, says students will be able to use the new lab and its technology for exposure to real-world issues in the logistics field. The technology will enable "WebEx streaming meetings, data analysis through software programs, and real-time sharing using collaboration apps and hookups in the lab's team technology pods," she says.

Knight-Swift Transportation CEO **Dave Jackson** (*BS Global Business/ Financial Management '00*) holds a special place in his heart for the W. P. Carey supply chain and logistics program. His professional journey is peppered with experiences at ASU and culminates with high ambitions for the recently merged Knight Transportation and Swift Transportation Co.

"We hope to run the most efficient, the most innovative, and the largest truckload transportation company in the world, with huge significance to the supply chains in North America," Jackson says.

**"This is going to be a milestone for us to educate the next generation of logisticians."**

— *Mohan Gopalakrishnan*  
Department of Supply Chain  
Management Chair, Professor



Dean Amy Hillman helps Knight-Swift Transportation CEO Dave Jackson cut the ribbon at the Knight-Swift Logistics Lab grand opening at ASU's West campus on Nov. 9, 2017.

**25 Sun Devil 100**  
Old Main, Tempe campus, Tempe, Ariz.

**11 a.m. to 1 p.m.**

*Sun Devil 100 celebrates the achievements of Sun Devil-owned and Sun Devil-led businesses across the globe.*

[alumni.asu.edu/sun-devil-100](http://alumni.asu.edu/sun-devil-100)

**MAY**

**3 Annual Economic Outlook Luncheon**

Scottsdale Resort at McCormick Ranch  
7700 E. McCormick Parkway, Scottsdale, Ariz.

**11:30 a.m. to 1:30 p.m.**

*Join the Economic Club of Phoenix for a first look at the Greater Phoenix economy in 2019.*

*Hosted annually. [econclubphx.org](http://econclubphx.org)*

**8 W. P. Carey Golden Reunion Breakfast**

Avnet Lounge, McCord Hall  
450 E. Lemon St., Tempe, Ariz.

**8:30 to 10 a.m.**

*Join us as we honor business school alumni from the class of 1968 with a complimentary breakfast and short program. [alumni.asu.edu/goldenreunion](http://alumni.asu.edu/goldenreunion)*

**10 W. P. Carey School of Business Undergraduate Convocation Ceremony**

Wells Fargo Arena  
Tempe, Ariz.

**2 to 3:30 p.m.**

**10 W. P. Carey School of Business Graduate Convocation Ceremony**

Wells Fargo Arena  
Tempe, Ariz.

**7 p.m.**

# MBA students take on messy problems

Education funding is one of the most complex, controversial, and political issues facing Arizona. Still, a group of W. P. Carey School of Business students eagerly jumped into the debate, trying to give more money to poor schools.

The students were part of the first Intellectual Fusion Learning Labs cohort, an applied project that paired Full-time MBA students with other graduate students during the fall semester of 2017. The teams then tackled complex real-world problems.

"The core values of the W. P. Carey School of Business are interdisciplinary collaboration, applied learning, and working on messy problems, and that's what sparked this idea to pair with non-business graduate students," says **Joan Brett**, associate professor of management. She launched the semesterlong course, one of the main components of the new Forward Focus curriculum in the Full-time MBA program.

There were four tracks in this year's Learning Labs:

- **Biomedical engineering**, with teams collaborating the development, marketing, or adoption of biomedical devices
- **Mechanical engineering**, in which students tackled a clean-energy plan and presented it to the Tempe City Council
- **Social work**, which presented ideas for improving the Department of Child Safety's (DCS) work with outside agencies to help foster children
- **School financing**, with students analyzing Arizona Department of Education data and proposing improved distribution of \$34 million to the state's 1,900 schools

The challenges were complicated and that was the point. Most of the school financing teams decided to give a larger pot of money to only a few hundred schools – a solution that would be unpopular if it was actually implemented. That's because, Brett says, not all schools that showed improvements would get rewarded for them. "But the schools that do receive funds will get a larger amount, which would be more valuable, as it would allow the schools to do something more significant with the reward, such as hire a new teacher."

**Cory Ramsey** (MBA '18), a student in the school financing track, says the groups never forgot the human component.

"We're talking about kids, and they're not Excel spreadsheets or formulas," he says. "We didn't want to come across as dehumanizing them."

Another MBA student, **Jordan Johnson** (MBA '18), says she learned a lot from the deep dive into school financing.

"We were trying to see if it's even possible to balance the human element and the financial element and the overall public policy implication," she says. "It was a holistic experience for us in that we got to see how business can be applied to problems like this."

And the expert "clients" agreed that applying business principles is a key skill in untangling complicated social problems. Michael Faust, the deputy director of the Arizona Department of Child Safety, worked with the students in the social work track over the semester. He challenged the students to come up with a better way to improve outcomes that didn't cost any more money. He was impressed by the students' work.

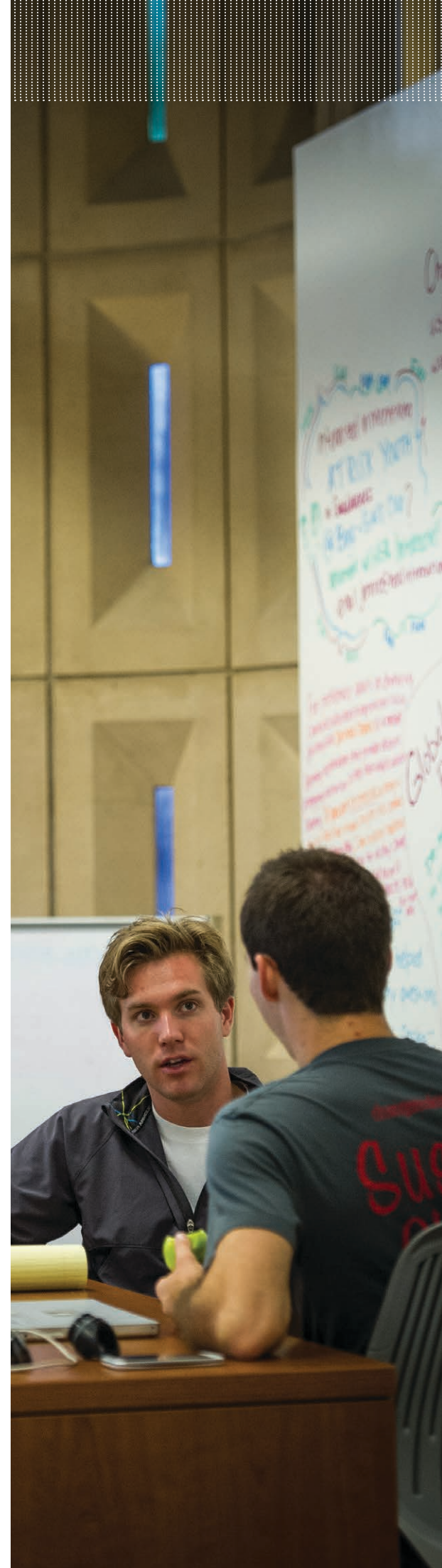
"We thought that every team came up with at least one meaningful idea that could be deployed at the department," he says. In particular, one team proposed using a geographically targeted social media campaign to find foster families in a specific area so foster children don't have to change schools.

"The idea of coupling business with child welfare isn't something a lot of people would naturally think of, but it's something that people like me have to do every day, so it was very worthwhile for everyone to see that," Faust says.

After their presentations, each team received feedback from their clients, experts in the field, ASU faculty, and students. Three school superintendents poked holes in the school financing teams' presentations. The social work team received feedback from the DCS director and five of his managers. A city of Tempe council person, a director of a community nonprofit, and a city council member heard the mechanical engineering team's presentation. A health care executive was in the audience as a critic for the biomedical engineering team.

Brett says the program hopes to add Learning Labs in more disciplines next year, and the existing labs will tackle new problems. For example, the school financing lab will look at how to increase the number of Arizona residents who have college degrees.

"It's good for our students to think about a problem where there is no one right answer," she says.



# Innovation in and out of the classroom



College is all about encouraging students to re-evaluate how things are done. Professors challenge them to face difficult problems, academic programs help students reimagine what they can do, and school provides unexpected ways to learn. Here's how:

## Professor's videos go viral

Senior Lecturer **Eddie Davila** uploaded a 12-part lecture series on supply chain management to YouTube for free in 2010. The videos have since received a combined 3 million hits, both making business education available to everyone and giving students more time for questions in class. **Watch them:** [wpcarey.asu.edu/davila](http://wpcarey.asu.edu/davila)



## Students develop data mindset

In August 2017, the W. P. Carey School of Accountancy launched the Master of Accountancy – Data and Analytics program in partnership with audit, tax, and advisory firm KPMG LLP. This one-of-a-kind initiative prepares accounting students for the digital marketplace. **Read on:** [wpcarey.asu.edu/macc-da](http://wpcarey.asu.edu/macc-da)



## Robots step in when students step out

Can you take an in-person class without actually being present? The W. P. Carey Professional Flex MBA makes it possible. Classroom robots take the place of students when they can't attend class, allowing them to interact with classmates and faculty as virtual participants so they never fall behind. **Learn more:** [wpcarey.asu.edu/flex](http://wpcarey.asu.edu/flex)

## Student studies today, leads tomorrow

**P**riyanka Mathur (MBA '18) has already accomplished a lot, working as a high-level marketing professional at a major corporation and winning a spot in the highly competitive W. P. Carey Full-time MBA program. Yet one of her biggest inspirations remains her mother.

"She was the first woman police officer in Rajasthan," the largest state in India. "India is a very conservative country, and Rajasthan is one of the most conservative states, so back in the 1970s it was really difficult for women to find challenging careers and to challenge the system. And my mom was one of them," Mathur says.

She appreciates the W. P. Carey School's attention to increasing the number of women in business – a trend she's passionate about. Mathur notes that women are drastically underrepresented among CEOs at the largest companies.

"As of 2017, there are 32 female CEOs on the list of Fortune 500, meaning that only 6.4 percent of the U.S.'s biggest companies are run by women and this is the highest proportion of female CEOs in the 63-year history of the Fortune 500," she says.

Post-MBA, Mathur wants to be a successful business leader and a trusted advisor to aspiring women. "Gender equality is the vision of my generation, and I want to be at the epicenter of the movement."



PHOTO BY CHARLIE LEIGHT/ASU NOW

# It's not business as usual

Alums lead corporate responsibility in the workplace

Director of Corporate Responsibility at Intel **Suzanne Fallender** (MBA '06)

## ROAD RULES

Alumna navigates the conscious capitalism path

**A** commitment to green power. Promoting ethical practices in the supply chain. Empowering girls and women through tech. Advancing a diverse workplace.

In the past decade, Intel has taken a leading role in conscious capitalism practices, also known today as corporate responsibility, corporate citizenship, and purposeful businesses. **Suzanne Fallender** (MBA '06) has been a guiding force all along the way.

Fallender leveraged her early experience

in the fields of corporate governance and socially responsible investing to help steer the global tech giant through myriad corporate responsibility and sustainability initiatives and milestones.

"From those early days in my career working on social investment to my time working at Intel, I have valued the opportunities I have had to help companies improve their performance by further integrating corporate responsibility practices into their operations," says Fallender.

Intel's work by teams across the company has garnered high praise in the corporate responsibility arena. The latest recognition came in December when the company took the top spot on the 2017 JUST 100 list, the

annual *Forbes* and JUST Capital ranking of companies.

## Light bulb moment

Fallender didn't set out to devote her career to the field of corporate responsibility.

At Connecticut's Trinity College, she concentrated on a double major in music and political science with a focus on Latin America, and entered a challenging job market looking for a position in international development. She shifted gears and took a position at a firm that performed research on global corporate governance issues.

Fallender figured that graduate school was just a few years away. But the firm grew quickly, and she ultimately was tapped to run its newly

acquired, socially responsible investing research company.

Through that role, Fallender found herself engaging with people driving change around environmental and social performance inside their companies. It opened her eyes to new possibilities and, with that, Fallender was off and running.

A job opportunity for her husband brought the couple west, and Fallender pursued her W. P. Carey MBA. Though she specialized in management and marketing, Fallender says professors like Dean Amy Hillman supported her interest in corporate responsibility as she focused papers and projects on related topics.

### Global leader

Fallender joined Intel a decade ago, after obtaining her MBA, and now serves as its director of corporate responsibility. The company is lauded for wide-ranging efforts, and four areas in particular are points of pride for Fallender, including:

**Environment** Intel sources 100 percent of its U.S. power use and 80 percent of its global power use from renewable sources. Under a new goal, the company will restore 100 percent of the water it uses by 2025.

**Supply chain** Intel works to ensure minerals used in devices like laptops are conflict free, meaning those minerals are not helping finance violence in countries where they are mined. The company also addresses issues such as preventing human trafficking in the supply chain.

**Diversity/inclusion** The company has set a goal to fully realize diversity and inclusion companywide, and is spending \$300 million to grow inclusive practices within the company and its industry.

**Social impact** Intel was an early leader in tech-based empowerment initiatives for girls and women worldwide, with efforts such as the Intel She Will Connect program. Fallender led a range of these efforts as director of the Intel Global Girls and Women Initiative.

### On the horizon

Fallender and her corporate responsibility

office team work with internal groups to integrate corporate responsibility practices across the company, and also engage with external stakeholders to boost the company's commitment to corporate responsibility. In addition, the team leads the company's transparency and reporting strategy on corporate responsibility.

Their work has recently been recognized with an award for best CSR (corporate social responsibility) Disclosure by the industry publication *Corporate Secretary*. Meanwhile, *Forbes* has also highlighted Intel's investor outreach on environmental, governance, and social issues, with Fallender driving a more integrated approach and working closely with the company's investor relations and corporate governance groups.

Looking ahead, Fallender expects to see continued integration of corporate responsibility issues into investor policies and processes to enhance everything from data to governance practices. The supply chain and

**“More and more, employee engagement will be vital as companies look to attract and retain talent, and provide employees with more opportunities to get involved.”**

– Suzanne Fallender

purchasing departments will also continue to be key players in promoting corporate responsibility.

More and more, employee engagement will be vital as companies look to attract and retain talent, and provide employees with more opportunities to get involved, she says.

“I think it's an incredibly interesting and important time to be working in the field of corporate responsibility as more companies, investors, and other groups evolve their thinking around the value that sustainable business practices can create over the long term, and I'm very thankful for the skills, tools, and connections I gained during my time at W. P. Carey,” Fallender says.

## ON THE GRID

### Utility leader champions sustainability in career and retirement

A young kid fresh out of ASU in the 1970s, **Bill Post** landed a position at Arizona Public Service (APS), one of the state's largest utility companies. It was a good match – the company needed someone with computer experience at a time when the skill was hard to come by, and Post was a newly minted statistics grad versed in the technology.

The match would last for nearly 40 years, with Post working his way through APS to the top spot as chairman of the board and CEO of its parent company, Pinnacle West Capital Corp. Along the way, Post helped guide the company as it became one of the state's leaders in sustainable business.

### Working on the next act

In retirement, Post (*BS Quantitative Systems '73*) is helping shape energy history – again.

Since 2010, Post has been a member of the board of directors of First Solar, an Arizona-based company focused on comprehensive solar solutions. He is also a board member of ASU's Julie Ann Wrigley Global Institute of Sustainability, the hub of the university's sustainability initiatives.

For decades, Post's name has been synonymous with energy. A W. P. Carey Hall of Fame inductee, he is recognized across the state and country for his work to boost the utility industry, foster sustainable business, and advance alternative energies.

Beyond that work, Post has been a community leader serving a variety of organizations. At ASU, he serves as a trustee, leads the ASU Foundation as board chairman, and is a principal for Campaign ASU 2020.

### Climbing the corporate ladder

Post, a Tempe, Arizona, native whose first job as a paperboy included tossing newspapers at ASU, wasn't thinking about charting a notable course when he walked through the doors at APS. He just needed a job.

“It wasn't strategic,” Post says with a laugh.

But he couldn't have chosen a more interesting period in history to join the utility.

An oil embargo placed on the United States in the 1970s led to fuel shortages, long lines at the pumps, rising prices, and calls for severe energy conservation. The 1970s also

saw the beginning of a nuclear generator-building boom across the country.

At home in Arizona, demand for electricity was soaring along with the state's population, and homeowners began replacing swamp coolers with air conditioners.

"It was a very dynamic time," Post says. "Things were changing literally throughout the world."

At APS, Post moved through several business areas, everything from forecasting to finance to nuclear energy. He became president and CEO of APS and president of Pinnacle West in February 1997. By 2001, he was chairman of the board of both companies.

During Post's tenure, APS and Pinnacle West emerged as sustainable business leaders in the state of Arizona. APS was the first utility to join the Coalition for Environmentally Responsible Economies, and also partnered with Intel to found Arizona Businesses Advancing Sustainability.

**"Sustainability to me is doing what you can to optimize energy use and increase its maximum value, while minimizing its impact. Sustainability to me is a higher goal."**

— Bill Post

APS was an early adopter of solar, building its first facility at Phoenix Sky Harbor International Airport in the 1970s. The company's Palo Verde Nuclear Generating Station came online in the 1980s, and continues to be the nation's largest energy producer.

In those early days, as the state's energy needs grew, APS focused on incentivizing customers to reduce their use and minimize demand. The company rolled out dozens of programs and pricing models that, at times, were met with mixed reviews, Post recalls.

"We were coming out of the '60s when more was better, bigger was better," he says. "But you could see the value of doing these kinds of things. You could see the value of encouraging people to use energy in a much wiser manner."



**Bill Post** is the former chairman of the board and CEO of Pinnacle West Capital Corp. A Valley leader and Alumni Hall of Fame member, Post sits on the board of directors of ASU's Julie Ann Wrigley Global Institute of Sustainability, serves as a trustee, leads the ASU Foundation as board chairman, and is principal for Campaign ASU 2020.

### Coming full circle

Post's work in the energy arena comes full circle today with a focus on sustainability and the future.

ASU's Wrigley Institute is working to advance research, education, and business practices worldwide. Its School of Sustainability, of which Post is an original member of its board of directors, offers transdisciplinary degree programs designed to support and grow those efforts.

Post credits ASU for its linkages between the School of Sustainability and W. P. Carey. He sees that kind of "cooperation and integration" as vital to finding future solutions for sustainable business.

At First Solar, Post is charged with helping further the company's mission to "create enduring value by enabling a world powered by clean, affordable solar electricity." The company, he says, is positioned to take solar energy to the next level as a full-fledged industry, beyond drivers like financing mechanisms and tax credits.

Sustainability, ubiquitous today, wasn't in the vernacular when Post got his start in the business so many years ago.

"It was really about conservation and reducing demand," he says. "Sustainability to me is doing what you can to optimize energy use and increase its maximum value, while minimizing its impact."

"Sustainability to me is a higher goal." ■



## **“It means hope, to have someone support you who you’ve never met.”**

*“I’m a recipient of three scholarships, which are all funded by private donors. The economic impact is immense. It means hope, to have someone support you who you’ve never met. Thank you so much for being supporters of education and recognizing what students can contribute to society.”*

**– Srd Kajganic**

*International student from Austria  
BS Accountancy*

Each year, students from all over the world join the W. P. Carey community. Your commitment and generosity provides an opportunity – an open door to a brighter future. Without donor contributions for scholarships and other initiatives, students like Srd would not be where they are today, or where they’ll be tomorrow.

*Every dollar makes a difference. Every gift helps create a future.*

# **Success made possible by you**

# Power up

**Energy providers  
diversify how  
they do business**

*By Melissa Crytzer Fry*





Procurement and Supply Chain Lead at BP in Houston **Alexis Adamson** (BS Supply Chain Management/BA Psychology '08) poses in front of the solar field at ASU's West campus in Glendale, Ariz. *Learn more:* [cfo.asu.edu/solar](http://cfo.asu.edu/solar)

**U**ntil the late 1800s, the crackle and pop of wood-burning fires warmed icy fingers and toes, providing a renewable energy source in early American homes. Around

the same time, water mills sprung up, bringing with them industrial growth. Coal replaced wood and further spurred commerce and industry into the late 19th century. With steam engines and steamboats chugging about, human travel expanded. Coal became the backbone of electric power generation. The world expanded. Fast forward to the era of petroleum. More expansion. Then natural gas. Nuclear. Hydroelectric. Solar. Biofuel. Hydrothermal.

It's no surprise that today's energy sources and providers continue to evolve. Globally, attitudes and perceptions about energy efficiency prevail. Some believe a new industrial revolution – powered by clean energy – is underway.

#### **The voices of many**

"Consumer concerns are largely driving changes in the energy industry," says **Tom Brittain** (BS Finance '93, MBA '95), an energy trader with Portland General Electric (PGE). A 2016 Pew Research Center survey shows just how passionate Americans are about green energy options: 89 percent of U.S. adults favor the expansion of solar panel farms, and 83 percent favor wind turbine expansion. Gallup's environment poll in March of 2016 also indicated that 73 percent of Americans prefer

an emphasis on alternative energy.

Businesses are looking to incorporate sustainable power and practices into their operations as well, with lending institutions backing them along the way. JPMorgan Chase's goal through 2025 is to provide \$200 billion in clean energy financing in an effort to help companies invest in renewable energy and other clean, advanced technologies.

#### **Source of support**

Locally, businesses and industrial customers are seeking energy advice and education directly from their power providers. **Wayne Dobberpuhl** (MBA '87) is the program manager for Arizona Public Service (APS) Solutions for Business. A leading provider of electric, APS operates on a 47-percent carbon-free platform, including power from nine grid-scale solar plants.

Dobberpuhl, formerly a design engineer for the APS fossils plant and nuclear generating station, arranges and conducts energy training classes for a range of customers: government sectors, public schools, barber shops, restaurants, large resorts.

Course topics cover everything from basic energy theory and lighting to load management and thermal energy storage. Working closely with the local chapter of the Association of Energy Engineers, APS's business-centric program also offers Certified Energy Manager designations for those who pass a four-hour exam after completing a semesterlong course.

"We build up the energy IQ of energy professionals, facility managers, and contractors throughout the state of Arizona," Dobberpuhl says. "We also work closely with trade allies – engineers and suppliers who work for our customers in lighting and heating,



Quality Manager for Hydro Generation at Salt River Project **John Blevins** (MBA '04) stands next to the Theodore Roosevelt Dam in Apache Junction, Ariz. *Learn more:* [srpnet.com/water/dams/roosevelt.aspx](http://srpnet.com/water/dams/roosevelt.aspx)

ventilation, and air conditioning – to be sure they understand how to specify and use energy.”

It's been paying off. Since 2006, the 2,000-plus annual participants have received more than \$2.4 billion in energy savings – through Solutions for Business rebate offerings, technical assistance, and energy-efficiency guidance. The program has consistently met its annual energy savings goals each year since program inception.

### **Sustainable focus**

At Salt River Project (SRP) in Phoenix and the surrounding area, the water and electric provider emphasizes hydropower as one sustainable power source. **John Blevins** (MBA '04) is the company's operations and maintenance manager for hydro generation.

A mechanical engineer, he is no stranger to energy conservation and management. Before moving into SRP's hydro operations, he worked with commercial and industrial customers to lower peak energy demands and implement conservation technologies.

Today he manages the operations and maintenance of seven dams in Arizona on

the Salt and Verde rivers and another along the Mogollon Rim. Five of the dams have hydropower plants. “We capture energy stored in water during the elevation drop as it passes through the dam. The high-pressure water from upper reservoirs turns turbines to generate electric power.”

The combined output of SRP's hydropower is 382 megawatts; a mall or hospital, in comparison, uses a connected capacity of three to five megawatts.

SRP also utilizes sustainable pump-back storage, using the generator as a motor and reversing the spin of the turbine to pump water from a lower to a higher reservoir during off-peak hours, when grid power is cheap and abundant. “The stored water is available to once again run through our turbines to generate more electricity during peak energy demands,” says Blevins. “Pump-back storage is a proven and sustainable means to harness energy for future use.”

Alumni are quick to point out that sustainability isn't limited only to ecological concerns. Oftentimes green solutions and operational efficiencies work hand in hand.

Consider supply chain, a topic close to **Justin Burnett** (MBA '07), vice president of materials management and warehousing at BP.

Burnett's team is responsible for pickup, transport, storage, and preservation of BP's upstream materials in the crude oil market, ranging from drill pipes, flanges, fittings, and valves down to gaskets and batteries. He has worked to standardize warehouse operations across the company's more than 100 storage locations extending from Alaska, Brazil, and the North Sea to Azerbaijan, Turkey, and Indonesia. “We looked at capability within our teams – what materials each warehouse had, what was in the system, what was coming inbound, what we would receive next year – and we analyzed and digitized that information so we could really manage our materials for BP on a global scale.”

Over three years, Burnett's team significantly optimized inventory, reducing its upstream holding by 37 percent. “That excess inventory was cash that had come out of the business and was just sitting on the ground and not being used.” The freed-up capital is just one

*(Continued on p. 18)*

# Greenhouse gas emissions: Less may create more

**C**limate change remains a growing catalyst for businesses, largely because it's a growing concern for their customers and other stakeholders. As companies push to reduce greenhouse gas (GHG) emissions in their own operations, cuts in one area can lead to increases elsewhere, according to Professor of Supply Chain Management **Craig Carter** and his co-authors: Supply Chain Management PhD student **Sining Song**, Professor of Supply Chain Management **Tom Kull**, Associate Professor of Management Science Yan Dong of the University of South Carolina, and Associate Professor of Management Science and Statistics Kefeng Xu of the College of Business at the University of Texas.

The research also shows this phenomenon can produce improved financial results for firms that go on the emission-slashing spree. But, that's likely to change, he says, as firms will increasingly be held accountable for emissions within and beyond their own operations.

## **Not as easy as 1, 2, 3**

At the heart of Carter's analysis is a threefold method of tracking GHG emissions. Scope one emissions are those from sources owned and operated by a company. Plumes from a firm's plant count in that category. Scope two emissions stem from sources owned and operated by another company, but they reflect activities conducted by the organization that is reporting them. "A lot of scope two emissions are the result of electricity used by a firm," Carter explains.

Scope three emissions occur "upstream with suppliers but also downstream with the actual product," he explains. Downstream emissions include those created in distribution channels, as well as those resulting from energy efficiency – or lack of it – in the product itself.

Carter says firms have increasingly been reporting on scope one and two emissions for several years and, very recently, there's been an uptick in reporting of scope three emissions. What's more, that's likely to increase, in part due to the rapidly growing popularity of the Science Based Targets initiative, a partnership between several nongovernment organizations and the United Nations Global Compact.

To date, 333 corporations have joined this movement in an effort to keep the rise in global temperatures below 2 degrees Celsius, a threshold recommended by scientists to avoid widespread ecological problems. Companies in the initiative span a wide range of sectors and are responsible for 750 million metric tons of carbon dioxide emissions per year, the equivalent of 158 million cars being driven for a year. To be part of this initiative, companies pledge to track emissions in compliance with strict criteria that includes reductions throughout the supply chain.

## **The whack-a-mole effect**

Here's the problem: "As firms focus on their own emission reduction programs, those efforts increase scope three emissions," Carter says. That doesn't help the environment, but it does help firm performance.

How does this occur? A common way firms reduce emissions is by outsourcing production to another organization, Carter explains. But, maybe that other firm uses inefficient processes. Perhaps it's located in a "pollution haven" where environmental regulation is lax. And, of course, the more the supplier produces, the more pollution that supplier emits. So, a company may slap down its own emissions, but others pop up in the supply chain.

"Even if the supplier is equal in terms of output, you've increased your supply chain footprint in terms of moving materials and product," Carter notes. That means scope three emissions rise.

Still, outsourcing has positive results for a firm. "Wall Street loves to focus on return on assets," Carter explains. "If you have fewer assets because you've outsourced production, your ROA goes up. That has an impact on other financial measures, so performance improves. You'll be rewarded in the short run. In the long run, maybe not."

## **As if they care**

Just 25 percent of people surveyed by Gallup in 2011 said they were concerned about global warming. In 2017, that number nearly doubled. At the same time, 62 percent of people believe the effects of climate change are already underway, and 68 percent attribute it to pollution from human activity.

Climate fears are also trickling down into buying behavior. A 2017 study conducted by Unilever found that one-third of consumers are now choosing brands based on social and environmental responsibility. In 2015, the Nielsen Company found that 72 percent of millennials were willing to spend more for environmentally friendly products, up from 55 percent a year earlier.

Companies are responding to that increase in environmental angst. "Far more companies voluntarily agreed to participate in the Science Based Targets initiative than what was originally anticipated," Carter says. The number is more than double original estimates. "The thought is that companies are doing this because they realize they need to self-govern because their will be less federal oversight in the near future and watchdog groups may fill this void."

Such watchdogs will be scrutinizing all of a firm's emissions, not just those coming from activities conducted within a firm's own facilities, Carter says. "Scope three emissions are no longer going to be invisible. If you're not reporting them, at some point, stakeholders will call you on this."



Program Manager for Arizona Public Service Solutions for Business  
**Wayne Dobberpuhl** (MBA '87) at the Chilled Water Plant on ASU's West campus. *Learn more:* [tours.asu.edu/sustainability/chilled-water-plant](http://tours.asu.edu/sustainability/chilled-water-plant)

**(Continued from p. 16)**

way improved supply chain efficiencies can lead to reduced waste. More operational cash can mean more dollars for project investment, and research and development in clean energy and renewable technologies.

There's another often-overlooked side to sustainability, adds **Alexis Adamson** (BS Supply Chain Management/BA Psychology '08), procurement and supply chain lead at BP in Houston. "Human rights are considered part of the global definition of sustainability," she says, "including access to water, food, education, land, and homes."

**Strategy, analysis, adaptability**

When technological advances led to the shale oil revolution, allowing for greater and more efficient extraction, crude oil prices plummeted. BP is responding with a diversified strategy that brings even more natural gas, and also renewables, into their energy mix. "Energy companies have to be agile and must learn how to adapt to the new energy environment," says Adamson.

Perhaps no one understands the need for agility, analysis, and strategy more than Brittain. He's a real-time energy trader, responsible minute-by-minute for ensuring PGE's power supply meets demand for its more than 800,000 customers.

"The biggest worry in my field is having an energy emergency," says Brittain. "You don't want to be the one to announce a blackout and

have to choose who will be without power."

He is continually taking into account predicted energy demand, efficiencies at various plants, checking the weather's impact on hydro, solar and wind production, and assessing the energy market – who is buying high, who is selling low?

"My decisions are based on what our pre-scheduled trading group did – if they set us up short, we could have to buy energy from other providers during the day. If they set us up long, we could sell." Brittain says PGE's adaptation to an energy imbalance market (EIM) has created greater efficiencies and helped stabilize the lack of predictability that comes with renewables: Will the sun produce solar power today? Is ice melt creating more hydropower? Are the wind turbines moving?

EIMs are wholesale energy markets managed by independent third parties. Large groups of energy providers who are members can buy and sell energy in real time through the EIM's data platform, which automatically analyzes pricing and energy-production information and dispatches the lowest-cost electricity resource available. "EIMs are where the market is headed," says Brittain.

**Power ahead**

Energy companies continue to comply with evolving government regulations, and they're staying abreast of climate policy. Most of all, however, they're listening. Burnett says, "At BP, we ask ourselves, how do we continue to improve customers' living standards as we

provide heat, light, and mobility – but do so in a more responsible way for the future?"

Portland General Electric operates 40 percent carbon-free, with a goal of 70 percent by 2040. In just two years, the company's remaining coal plant will cease operations, 20 years ahead of end-of-life. In Oregon, PGE also partnered with other electric utilities, environmental groups, clean energy partners and consumer advocates to pass Senate Bill 1547, which calls for a significant increase in PGE's renewable power.

BP supports the energy transition with investments in natural gas projects globally. Its recent \$200 million investment in solar, and a wind-energy business that produces enough power for 400,000 homes, illustrate that commitment.

SRP collaborates with customers, Arizona universities, and other public and private entities to develop sustainable energy technologies and conservation programs. Since 2005, it reduced its carbon emissions by 23 percent (with a renewed goal of 33-percent reduction by 2035). Also, SRP is partnering with several entities to support sustainable forest restoration on the Salt and Verde river watersheds.

APS has helped more than 300 schools go solar, and proposes to fund an electric school bus pilot program, as well as a multifamily and commercial electric vehicle charging station infrastructure to help reduce road emissions.

"I think our nation's paradigm of fossil fuels being the only cost-effective energy option has waned," says Blevins. "We now have a broader understanding of how sustainable energy will make us successful over time." And with only four percent of the globe currently fueled by renewables, opportunities abound for innovative new technologies that will add to the mix.

BP is already producing engine-cleaning gasoline that allows a tank of fuel to last longer by improving efficiency. It has partnered with Fulcrum BioEnergy to create low-carbon jet fuel from household waste and is working to decrease carbon emissions in its petrochemical manufacturing.

Renewable gas from landfills and farms is being refined as an energy source. Artificial intelligence technologies, 3-D printing capabilities, and drones are being studied for their implications in the energy market. Indeed, it's not your grandmother's wood-burning hearth anymore. New renewables are on the horizon. ■

# Vertical integration: The data and power intersection

**IN** a market of big data, big data centers, and big costs, alumnus **Clint Poole's** (MBA '04, MSIM '12) idea may make a big impact on the industry.

The pace of technological innovation is driving rapid data center growth. Yet even with all the advancements driving said growth – mobile computing, the Internet of Things, and cloud computing – the underlying infrastructure has remained relatively the same. Data centers continue to be extremely expensive investments, and as they grow in size and importance, their failures grow in significance and visibility.

Why do we invest so much money in the data center to reduce risk associated with its most critical resource – power? Why not approach these issues from a different perspective and integrate the data center with its supply chain, the power grid, to increase performance and decrease costs? Poole's questions planted the seeds for Salt River Project (SRP) DataStations™.

"I've worked in and around data centers for most of my career," says Poole, who received his MBA in 2004 and his Master of Science in Information Management in 2012, both from W. P. Carey. "Coming to SRP, I was given an opportunity to see data center challenges from a new perspective, as a complete integrated system."

## Data center balancing act

The challenge with data centers is to eliminate the risk associated with power-related failure while maintaining sufficient unit economic profitability, says Poole, who is responsible for SRP's commercial fiber business. "As traditional data centers grow in size, they grow in complexity. The more complex the power infrastructure is within a data center, the more prone to failure it becomes," he explains. Approximately 40 percent of the cost associated with constructing a data center goes to power reliability infrastructure, including generators, uninterruptible power supply, and switchgear. Statistics now show that most power-related failures within a data center have been associated with this infrastructure.

"These types of insights led me down a journey at SRP, with support from executive management, to figure out how we can better align my business unit – telecommunications – with our core business – power – and that's where the SRP DataStation concept grew," says Poole.

DataStation is a scalable, quickly deployable modular data



Commercial Telecom Business Unit Manager at Salt River Project Clint Poole (top) averts data center inefficiencies with his invention of SRP DataStations (bottom).

center that can connect directly to the grid near an SRP substation. Its design addresses needs missing in the data center market: simple, reliable, and cost-effective power.

## Power in 2030

Poole sees DataStation as the future of data centers. "Brick-and-mortar buildings with expensive and complex infrastructure are not sustainable, and they haven't lived up to the industry's performance expectations," he says. Statistics show that data center power consumption could reach 20 percent of U.S. energy use by 2030. "At some point in the near future, the growth and economics of computing will be such that the sustainability of the traditional data center will be challenged."

Poole's team cut the ribbon on the first DataStation in 2015, and they have been rigorously testing DataStation ever since. In the summer of 2017, separate reliability studies were completed by the U.S. Department of Energy's Oak Ridge National Laboratory and MTechnology, a firm that specializes in risk science for mission-critical facilities. Both studies resulted in higher reliability than the data center industry norm: annual availability of 99.998 percent and 99.997 percent, respectively.

"DataStation is the perfect example of collaboration across industries, and feedback from the data center industry has been remarkable," says Poole. His team has had requests for tours from some of the largest data center operators in the world, including the major cloud providers and even the Pentagon.

When asked about potential interest in SRP DataStations, Lt. Gen. William J. Bender, chief of information dominance and chief information officer of the U.S. Air Force, provided the

following statement:

"Given the Air Force's focus on mission assurance, cybersecurity, lowering enterprise data center costs, and commitment to leveraging renewable energy sources like solar to the maximum extent possible, I visited the DataStation a few months ago. As we work hard to consolidate and optimize our data center infrastructure, the Air Force is evaluating whether DataStation is a viable approach within our enterprise portfolio. Without a doubt, I see this approach as an excellent example of the type of innovation the Air Force needs, as well as the kind of public/private partnership required to modernize and better secure the Department of Defense's data center infrastructure."

# Opinion: The players who own the big data that powers smart city infrastructure

By Associate Dean of Research and Professor of Information Systems **Michael Goul**, who catalyzes interdisciplinary research initiatives that engage the business school in developments across ASU. He presented his paper on smart city issues at the 51st annual International Conference on Systems Sciences in January.

**E**verything we hear about information and communications technologies (ICTs) seems to be about how smart they are or how they're getting smarter. Now the smart ICT lens is being zoomed way out to focus on cities.

Smart cities are most often thought of in terms of burgeoning urban areas where Internet of Things' (IoT) real-time sensors and devices are deployed to improve the lives of citizens. These deployments range in application from smart streetlights to security-threat mitigation and data monetization. The smart city coming to the outskirts of suburban Buckeye, Arizona, thanks to one of Bill Gates's investment firms, is supposed to include autonomous vehicles. These innovations redefine city infrastructure to include increasingly sophisticated IoT devices worldwide, which have been predicted to number 50 billion by 2020.

Leading the way are phone and web applications for citizen engagement, energy management applications, faster and more economical wireless communication technologies, and business applications in areas like smart buildings, health care, education, and mobility. There's even a smart city ranking for 2017: Copenhagen, Singapore, Stockholm, Zurich, and Boston are the top five.

The one asset common to all smart city deployments and applications is data. Take Arizona's future smart city. Numerous reports tout that the community will implement high-speed data into its infrastructure.

Data is an interesting type of asset – its cost per unit to manage is going down while its value is going up. IoT, data, and the analytics they enable are the key ingredients for smart. But guidance is limited for negotiating data and analytics ownership issues in smart city application contexts.

That's where W. P. Carey research enters to fill the gap.

I've found that for owners of smart city infrastructures where data and analytics are co-owned by all participants (tenants), there are higher infrastructure and communications capacity costs than when ownership is partitioned. Similarly, if tenants sign value-based contracts – those where all participants get a cut of the benefits generated by data and analytics sharing – the infrastructure capabilities to ensure the monitoring and tracking of all transactions can be extremely complex, and needed software execution requirements drive both costs and latency higher.

## NEW TERRITORY TAKEAWAYS

- Smart cities are popping up across the globe, and smart means that data will be collected by IoT devices and harnessed through analytics to improve people's lives.
- Forward-thinking businesses will play exciting roles in smart city ecosystems where new types of data and analytics ownership contracts will pave the way for autonomous vehicles and smart health care delivery, education, and energy management.
- Research at the W. P. Carey School of Business is addressing smart city data and analytics ownership contracts with an eye toward the best contracting strategies for participating businesses and smart city public/private owners.

If newer tenants partner with complementors to their business interests and share data, and their complementors have contracts in place for sharing data with others, then new tenants' proportion of data and analytics ownership in the smart city ecosystem can scale rapidly. Also, in a smart city ecosystem where there is little to no data and analytics sharing, a new entrant is not likely to gain much benefit from entering a contract to share data and analytics with one of the existing tenants.

These and other findings are providing first insights into contracting strategies that will matter to both smart city owners and their tenants. One thing is definite, without data and analytics ownership experience, smart city players can totally miss the fine print.



## Hall of Fame

*W. P. Carey* magazine recently asked the 2017 Alumni Hall of Fame inductees to share their secret sauce for a trait they each know a thing or two about: strategy *By Laurie Davies*

# Measures of success

**S**ONDRA LEHMAN  
(BS Accountancy '88)  
From a place of humility and simplicity, Sondra Lehman used to answer polite cocktail party “what do you do” chit-chat with a vastly understated, “I run a catering company.” The follow-up question was as laughable as it was predictable: “Oh, do you do weddings?”

Not exactly.

Figuratively of course, Lehman “catered” the flights that transported out-of-town wedding guests, the on-the-go lunches they grabbed while buying registry gifts, and entire theme parks where happy couples spent their honeymoon. However, her business card for LSG Sky Chefs simply said, “President.”

During her seven-year tenure as the youngest – and only female – president and chief operating officer in the company’s history, Lehman helped double revenue from \$600 million to \$1.3 billion by expanding the company’s commercial

portfolio beyond airline catering and in-flight services.

Lehman, who retired from LSG Sky Chefs in 2013, now runs Flying L Properties, her own boutique real estate investment and rental firm that operates 10 properties in the Caribbean, Mexico, and the U.S.

So, what’s her formula for success? In broad strokes, her theory is simple: “Be better today than you were yesterday, and be better tomorrow than you were today,” she says.

How that works out in the daily grind of application is something Lehman likens to a journey. “Right out of college, this looks like a rigid set of railroad tracks. You’re on this train. You don’t know if you can get off or chart your own course because there are rails on the ground. The destination is where those tracks go,” she says. But then, business acumen, ideas, and guts merge and you risk taking an exchange – or even laying new tracks – to go in a different direction.

Lehman’s success-as-a-journey model came to life at LSG Sky Chefs, a division of LSG Lufthansa Service Holding AG, where the talent and efficiency of the kitchen operations staff inspired her to think beyond their niche. “Our people were excellent at building food to specifications on a massive scale,” she says.

Her idea? Expand what LSG was doing – consistent, efficient production of sandwiches, salads, and wraps – into the convenience store, retail, and even theme park markets. “Now they do 200 million meals annually in the U.S.,” she says.

Though she led an 8,000-employee company through explosive growth during the worst economic downturn since the Great Depression, Lehman says her aha moment of professional success actually came when she began her entrepreneurial real estate venture. “I’m running my own company. It’s really my own. I get to wake up every day and work for myself,” she says.

**1: Michael Staenberg** (BS Business Administration '76);  
**2: From left Lauren Ifflander** (MBA '83), 2017 Hall of Fame inductee **Scott Donaldson** (BS Accountancy '80, MACC '81), and **Holly Larsen**;  
**3: 2017 Hall of Fame inductee Sondra Lehman** (BS Accountancy '88) with her husband, **Roger**;  
**4: Food provided by Atlasta Catering and Event Concepts**;  
**5: 2017 inaugural Young Alumni Hall of Fame inductee Christopher Myers** (BS Finance '06) with his mom, **Marie**, and son **Jack**;  
**6: Hall of Fame member Robert C. Hobbs Sr.** (BS Marketing '63) with his wife, **Karen**. Hobbs Sr. received the Alumni Service Award in 1990 and the W. P. Carey Distinguished Achievement Award in 2006.



**MICHAEL STAENBERG** (BS Business Administration '76) At the helm of The Staenberg Group, Michael Staenberg has built a career building shopping centers – more than 200 of them to the tune of 35 million square feet of premier retail space. Yet, for all his success in retail development, he suggests that true achievement has very little to do with money. “I don’t measure success by dollars. I measure it by whether you’ve accomplished things that will last. Have you made a real difference in the lives of people?” says Staenberg, whose name in the St. Louis area is synonymous with civic leadership and philanthropy.

Staenberg credits the W. P. Carey School for his great business education. But the moxie? That’s all him. In 1978, the wet-behind-the-ears ASU graduate made a gutsy move. “I called up the McDonald’s director of real estate. He asked me, ‘How many restaurant real estate deals have you ever gotten?’”

“None,” Staenberg said, with a tone that implied the crucial next word.

Yet.

“That led me to do 300 deals for McDonald’s, and an introduction to Sam Walton to do Walmart stores,” he says. The rest, as they say, is history.

Staenberg was green before it was trendy, incorporating energy-conserving roofs, retaining

natural habitat where possible, and constructing parking lots with filters that drained and recycled oil.

He is also a visionary with a gift for seeing something where there was nothing. The two-mile mega shopping center, Chesterfield Commons in Missouri, transformed what others viewed as unusable flood plain land into the country’s first big box retail power center with 2.5 million square feet of stores.

Perhaps Staenberg’s vision was born during a childhood of modest means. Perhaps it flows because he’s an artist with a mind for business. Maybe it is driven by the Jewish concept of Tikkun Olam, or “repairing the world.” Whatever the source, the vision that drives his business success is the same vision that drives his passion for philanthropy.

“I can only fit into one pair of jeans at a time. I drive a Ford Fusion. I don’t need a fancy house,” says Staenberg, whose pay-it-forward parents instilled his desire to parlay business success into support for good causes. The Staenberg Family Foundation, which he established with his wife Carol in 2005, has supported economically disadvantaged youth, the arts, renovation of public spaces, and a wide range of programs that enhance Jewish life.

His advice for business graduates? “Pick a job you enjoy. Don’t make it about money. Pick a job that feels good. And try to give back – if you change just one life, you’ve made a difference.”

**SCOTT DONALDSON** (BS Accountancy '80, MACC '81) Some success stories are retrospectives – the long view of a fulfilling career from a much-deserved perch of retirement. Scott Donaldson, who announced his retirement last month after a 36-year tenure as partner with Ernst & Young (EY), will soon step away from his industry-leading work offering tax services to nonprofit tax-exempt organizations. His last day at EY will be June 30.

While his full retrospective won’t develop until he’s had time and distance away from the job, Donaldson already looks back with gratitude that EY gave him the flexibility early in his career to focus on a specialty practice area he enjoyed. While his gratitude is well placed, there’s another and perhaps equally important ingredient to his success.

He pounced.

In his steady, sturdy corporate vernacular, he’s not quite that blunt. He tells of beginning his EY career in real estate accounting, then gravitating early on to work with tax-exempt clients. As his interest grew, so did his realization that this sector-focused specialty line had significant untapped potential.

He pitched it to company brass and was encouraged to develop a suite of services for nonprofit clients. At first, his work was something of a one-man show, with Donaldson’s tax-exempt expertise sometimes being the tipping point that





7



8



9

**7:** Guests enjoy the cooler evening weather.  
**8:** Cupcakes provided by local bakery, Honeymoon Sweets.  
**9:** Sparky came to catch up with alums and congratulate the inductees.



10



11



12

**10 – 12:** Students attended at the invitation of their professors, and left inspired.

helped EY win out in competitive RFP bids for audit and tax services for community nonprofits.

“We had a lot of success. It grew. My career grew along with it,” Donaldson says, adding that young business graduates who see potential for a new niche – especially if it lines up with their professional interests – should never shy away from pitching it.

Today, EY enjoys a position of leadership nationally in tax services for the nonprofit sector. In 2004, EY nationalized its Exempt Organizations Tax Services practice, bringing all of its tax professionals together into one group as part of the firm’s National Tax Department. And for the last five years, Donaldson has led this team of more than 115 tax professionals in the U.S. and South America dedicated solely to helping EY’s nonprofit clients manage their tax risk – at least until June 30, when he’ll close his office door for the last time.

He plans to take a year to figure out what’s next. He already imagines that a CEO position with a Phoenix-area nonprofit might be a good next challenge. In the meantime, he’s grateful to have enjoyed a long-term career doing what he loves and he remains humble to the core about his role in shaping EY’s tax services to the country’s nonprofit sector. “I was able to specialize in what I enjoy 100 percent of the time because the firm allowed me to do what I wanted to do.”

**C**HRISTOPHER MYERS  
*(BS Finance '06)*  
 Chris Myers is the first to admit he’s no man behind a curtain making all the right decisions. Nor does he want to be.

Myers believes the most successful leaders tease out greatness in others. “It’s not about being the smartest person in the room,” says the inaugural Young Alumni Hall of Fame inductee. “It’s about pulling the best people together and helping them become successful in their own right. So, while I’m very proud to be captain of the ship, does my name personally account for our success? I hope not. If that’s the case, I haven’t created a sustainable team.”

Perhaps humility is as key as innovation when it comes to Myers’ success as the CEO and co-founder of BodeTree LLC, a technology-enabled franchise services company. But make no mistake, in innovation, he is not lacking.

His business model at BodeTree was to take the financial support, industry compliance, and sales support services available to Fortune 500 companies and “break it apart” into technology-enabled tools affordable for small businesses. “Everything we do comes down to bringing technology into the equation.” The result? Financial analytics, automated bookkeeping, streamlined lending, and other services are now accessible to what Myers calls the “Fortune 5000 Mainstream.”

Eight years ago, Myers knew his upstart

entrepreneurial venture had the kernel of a good idea. “The aha moment came when we realized franchising was the right channel for us. When we dipped our toes into that space, the sales cycle was three weeks, not 18 months. People in that market were actively pursuing us. We expanded our product array. And today we offer services for the life cycle of a business franchise,” he says.

Speaking from this experience, Myers says that success is often more a state of mind than a destination. “I don’t think I’ll ever reach a point where I’ll say, ‘I’ve made it. Here I am.’”

What he does believe is that truly successful ventures connect dollar signs to vital signs. Money in the door has to be connected to how you achieved it. A successful venture outlives its visionary. And a well-assembled, happy team whose accomplishments are nurtured takes you farther than a solo act could ever go.

It’s this ethos that carries success from the boardroom to the family room – where his two greatest ventures are his two young sons. While his business is thriving, he writes regularly for *Forbes* magazine, and is the author of the book *Enlightened Entrepreneurship*. Myers views his family as both the determinant and the reflection of his success. “My ultimate goal – regardless of anything else – is to make sure that my two young boys and my wife are happy, functioning, and fulfilled.” ■

**“Many who grow up in the city have never held a shovel. It’s important to put resources into education so those in the community become aware of urban agriculture and its benefits.”**

Research by  
**Carola Grebitus**  
*Assistant Professor  
of Food Industry  
Management*



# The relationship between shopping behavior and local economy growth

Urban farming is a popular trend across America, thanks to a “buy local” movement gaining momentum in many cities. The associated health and ecological benefits of consuming farm-raised produce and products also are pushing the uptick in urban farming operations. Yet, just like the challenges faced by rural farmers, urban farmers must understand how to stimulate business to stay viable in metropolitan settings.

The ability to predict consumer behavior is key to an urban farm’s success. What factors drive shoppers to buy directly from or even grow their own food at an urban farm and not purchase lettuce or potatoes at a chain supermarket supplied by a corporate distributor?

That’s the root of research conducted by Carola Grebitus, assistant professor of food industry management, who investigates what influences urban farm consumption in her study titled, “Relationship Between Consumer Behavior and Success of Urban Agriculture.”

Grebitus’ study is part of a five-year national project funded with \$4 million from both the Department of Agriculture and National Science Foundation. Her work adds to a multidisciplinary effort associated with faculty in ASU’s School of Mathematical and Statistical Sciences and in the School of Geographical Sciences and Urban Planning.

## Cultivating urban agriculture

To get a better perspective on consumer decision-making related to urban agriculture participation, Grebitus polled 325 ASU undergraduate students via an online survey as part of her study. She focused on Generation Y because they are educated and informed, as well as they tend to be large consumers of urban farming products and account for the greatest percentage of those creating urban gardens, based on data from the National Gardening Association.

Grebitus delved into both the psychological and personal factors that influence the

buying and growing behaviors in her research. In general, urban farming has a positive perception by the consuming public. Freshness, health, taste, and support of the environment and local economy are the main reasons that encourage consumers to shop at local farms.

One notable finding is that 60 percent of study participants revealed they are willing to buy produce from urban farms, with 44 percent more likely to grow their own produce at urban farming establishments, results that both support favorable millennial impressions of urban agriculture.

In addition, the more often consumers buy local food, the more likely they are to take part in urban farming, whether shopping or growing. Attitude also is a significant predictor of whether consumers will buy and grow at urban farms. And gender and age play an important role in urban farming participation, too, as study results showed women and older consumers are more inclined to grow their own produce at urban farms.

## Roadblocks to farming in the city

But not all perceptions about urban farms are blooming with positivity – or fact. Distance traveled, time commitment, and too much work are barriers that prevent consumers from purchasing at urban farms. Likewise, a common belief is that urban farmers only use organic products and produce food that is more natural than other growers. And 30 percent of respondents feel urban agriculture is expensive and associated with higher costs, a misconception that dissuades many from shopping locally.

While results related to subjective knowledge (based on direct experience and interpreted by the experiencer) do show respondents feel informed and knowledgeable about general issues related to food sustainability and food supply, they do not feel informed about specific issues such as community gardens or other urban agriculture endeavors.

“It’s not a surprising result,” says Grebitus of

the lack of knowledge surrounding urban agriculture. “Consumers want to buy local, fresh, and organic products, but in reality, they have little information about urban farming.”

By studying the personal and psychological attributes that drive consumer behavior, particularly millennials who represent future buying trends, the results can give critical business and economic details that lead to sustainable urban farming – key shopping habits that could increase the number of citizens who take part in urban agriculture, according to Grebitus.

“Such investigation also reveals important strategic information to help farmers develop successful market-oriented activities that can attract and keep customers,” Grebitus adds. Findings from the study, however, suggest more awareness is needed about consumer behavior and perception to improve the likelihood they’ll shop and grow locally in an urban environment.

## How does your urban garden grow?

One way to promote the development and consumption of urban farming is to increase educational opportunities, such as community centers that focus on gardening and nutritional curriculums so consumers can separate fact from fiction about urban agricultural practices. It would be beneficial to teach more consumers the basics about urban farming and its societal and environmental advantages and impact, including how it contributes to food security, supports healthy dietary patterns, and improves local ecology and sustainability.

Grebitus herself exposes students to local agribusinesses in her introductory course, AGB 100, taught at the Morrison School of Agribusiness at ASU’s W. P. Carey School. “Make students more familiar and informed about food production,” she says. “Many who grow up in the city have never held a shovel. It’s important to put resources into education so those in the community become aware of urban agriculture and its benefits.” □

– Sally J. Clasen



Research by  
**Arnold Maltz**  
*Associate Professor  
of Supply Chain  
Management*

# Strengthening the weakest link with supply chain management

**W**hen there are no roads or distribution centers – the building blocks of a successful supply chain – how do you get goods into and out of developing regions?

Those and other challenges are facing the 1 to 2 billion people globally who make up the “bottom of the pyramid (BOP)” – a term first used in 1999 to describe those who make less than \$1,500 a year. And Associate Professor of Supply Chain Management Arnold Maltz wants to figure out how supply chain can help.

Over the past three decades, Maltz’s interest in poverty obviation has grown. “In my mind, the thing that we could all do, those of us who are privileged to live in developed countries, is to see if we could bring the bottom up, without taking the top down,” he says.

To do that, Maltz started studying the supply chain factors that can affect BOP populations. “Transportation and logistics are key ingredients in improving people’s lives,” he says. His recent research, “Base of the Pyramid Projects: A Framework for Further Investigation,” looks at what efforts have been successful.

## Urban versus rural concerns

Maltz says that much of the existing BOP research has been on rural populations. But with major migration toward the cities in the past 15 to 20 years, the image of what a poor person is around the world is changing. He says the question now is whether the BOP issue can be solved in the same ways in both rural and urban settings.

Rural supply chain issues arise because areas are lightly populated with a lot of distance between deliveries, and, often, poor infrastructure. That leads to a very large set of distributors, each one with a small area.

In comparison, urban settings have dense populations and infrastructure in place. But,

Maltz says, there are similar issues. “You have terrible delays due to congestion in some of these cities, so you have long times to get stuff there. Timewise it’s just as bad, and aggravation-wise it’s probably worse.” However, dense commercial settings are different in terms of number of warehouses, so it’s a different supply chain set up.

## Logistics plays a supporting role in helping improve quality of life for bottom of the pyramid populations.

The social organizations also are different, he says. In urban settings, there is easier access to advanced information. “Does that change what they expect?” Maltz wonders. “If you go to Mumbai, slums are sitting next to very expensive housing – does that make expectations very different than rural settings?”

## BOP 2.0

Initially, developed countries viewed BOP markets as simply a source of new consumers. BOP 2.0 also looks at these populations as producers. “We weren’t sourcing from the bottom of the pyramid, partly because of a supply chain issue and partly [out of a sense] that they simply didn’t have the capabilities,” Maltz says. “It turns out, both of those things can be changed.” As a result, BOP 2.0 envisions creating enterprises that are not just a way for someone to sell to the BOP market, but also a way for BOP populations to produce income and, therefore, have money to buy what others are selling.

Supply chain actually plays a more prominent role in BOP 2.0, including the need for direct procurement, supplier

development, training, and certification, as well as centralizing processing, and minimizing transportation costs and difficulties.

Maltz says that while selling to these markets is more developed, “the whole issue of how you get stuff into and out of those markets is a big deal. Looking at distribution channels, where you put regional warehouses, and how you set up delivery operations and pick up operations. You’re going to have to be a little bit nontraditional.”

In Nairobi, for example, instead of a typical truck operation, they’re using a fleet of motorcycles, bicycles, and other vehicles that get around the urban infrastructure problems. In a rural setting, warehouses need to be set up where people can access products, often on foot.

## Technology and collaboration

As with many problems in the 21st century, technology will be part of the BOP solution, Maltz says. “People will be connected, and once you get connected and we get good tracking data, it helps the supply chain dramatically. We perform better when we can see what’s going on and we have real-time tracking.”

Regular drone deliveries to remote areas with bad or nonexistent roads could also be a game changer.

Another option to improve distribution is collaboration. One creative example of supply chain collaboration involves companies distributing malaria vaccines and medications that needed to be refrigerated in remote parts of Africa. Instead of trying to develop their own supply chain, they are piggybacking with Coca-Cola, who is already delivering to those areas with refrigerated trucks.

Setting up partnerships with companies like Alibaba and Flipkart, who are established local players in many regions, will also help facilitate distribution in and out of many developing areas. ■ – Jenn Woolson

# A well-educated workforce pays off in high-quality financial reporting

Every company says it wants to hire good employees. That should be more than a platitude, new research shows: Companies that have a well-educated workforce available in their headquarters' cities do a better job of accurately reporting and forecasting financial results than companies that must pull headquarters employees from a less-educated workforce.

Andrew Call, associate professor of accounting, studies the role employees play as whistleblowers after fraud has occurred in companies. For this research, he and colleagues from three other universities wondered whether having good employees – not just in accounting but throughout the company – could matter in warding off or catching companies' financial-reporting problems before they could occur.

"Your employees are the ones generating this information at its very core, and it gets funneled up through the organization to give the executives either reliable information to work with or not-so-reliable information," Call says. "The whole idea is that if employees who are making the sausage are better employees, the information they produce and funnel up through the system will be better."

Other researchers have explored the impact senior executives have on financial reporting, Call says, but few have looked at the impact midlevel managers and rank-and-file employees have. He and his colleagues were curious to answer the broader question of whether these everyday employees matter in accounting outcomes.

Call's team theorized that better-educated employees at company headquarters – where accounting and other key staff typically work – could make fewer errors in gathering and reporting the information that goes into financial reports. Better-educated workers also could be more likely to spot abnormal or potentially fraudulent transactions before they could go into those reports.

The researchers looked at two main categories of financial reporting: mandatory reporting and voluntary disclosures. For mandatory reporting, they examined whether to check on how the quality of employees affects the quality of the earnings information that public companies are required to disclose. For voluntary disclosures, they were interested to learn whether employee quality affects the quality of earnings forecasts companies choose to make. They also wanted to see whether employee quality relates to the frequency with which companies later restate earnings.

Because firm-by-firm data on employee quality is limited, Call's team turned to what they saw as the next best thing. Figuring that company headquarters and operations would pull employees from the local labor force, they used U.S. Census data on the average education levels of the workforces in 261 Metropolitan Statistical Areas where company headquarters or operations are located. The most-educated cities include college towns and large cities, for example, while less-educated cities include economically hard-hit, high-poverty areas.

The researchers then compared the education levels to the quality of accounting and financial statements the companies issued between 2005 and early 2012. Among the accounting measures examined, was the quality of accruals, which captures differences between when the company reports a transaction as earnings and when it is realized as cash. Accrual quality, Call notes, depends on whether transactions turn into cash in a reasonable amount of time.

The research found that companies headquartered in metropolitan areas with higher workforce education levels performed better on mandatory reporting measures – showing higher quality of accruals, fewer violations of internal control deficiencies, and fewer restatements of financial statements – than companies headquartered in areas

with lower education levels. The firms in the better-educated areas also performed better on voluntary reporting measures, issuing timelier and more accurate earnings forecasts than firms in less-educated areas.

The importance of better-educated headquarters employees also held up when Call's team looked at firms that had moved their headquarters from one city to another. Firms that moved from areas of low education levels to those with higher levels showed improvements in the quality of their financial reporting, but those that moved from higher education to lower education levels saw their reporting quality decline.

Call's team also looked at the relationship between workforce education levels in companies' non-headquarters locations and the quality of the companies' financial reporting. That relationship was not as strong in other locations where the company has a presence as it is at headquarters, but the researchers note that not all firms disclose every location in which they operate, and how to weight the importance of each non-headquarters location is unclear. Because non-headquarters employees also contribute information that funnels and ultimately makes its way to employees at the headquarters, the researchers believe employee quality at these other locations could still play a role in quality financial reporting and the companies' overall financial picture.

Having high-quality accounting matters, Call says, because it can reduce auditing fees and the cost of capital, and because high-quality reporting benefits investors who value transparent, useable information. His team's research means companies shouldn't overlook the positive effect an educated workforce has on the quality of financial reporting.

"We can't think these employees are totally interchangeable," Call says. "Their impact is more important than that. They can add value in ways we might not even be thinking about." ■ – Jane Larson

**“The whole idea is that if employees who are making the sausage are better employees, the information they produce and funnel through the system will be better.”**

Research by  
**Andrew Call**  
*Associate Professor  
of Accounting*

# Water woes: Past, present and future

Professor of Sustainability and Economics Michael Hanemann, an expert in environmental and resource economics, explores this vital resource in the U.S. and around the world.

## Tapping into water

The United States' water systems range in age, from pre-Civil War to the Civil Rights era. For instance, some of Philadelphia's water mains were installed in the 19th century – which makes sense because it's a colonial city on the East Coast. Phoenix, on the other hand, has newer water systems because its population grew during the mid-20th century.

Many water mains and pipes were laid in the early to mid-20th century with a lifespan of 75 to 100 years.

The U.S. Environmental Protection Agency regulates 155,000 drinking water systems across the United States.

There are more than 800,000 miles of public sewage pipes in the U.S.

There are 500,000 miles of private lateral sewers.

Over the next 20 years, 56 million new users will be connected to centralized treatment systems.

## Testing the waters

"The American Water Works Association recommends one percent of pipe networks be replaced each year. That is equivalent to saying a pipe should be replaced after 100 years. But in some municipalities, to keep water rates down, the investment in maintenance is equivalent to replacing a pipe only after 1,000 years," Hanemann explains.

Each year in the U.S., 240,000 water main breaks occur.

Over the next 20 years, the cost to replace urban pipe networks may reach about \$1 trillion nationwide, says Hanemann. Water agencies will have to spend three or four times as much on replacing pipes as they do today. If anything, this might lower rather than raise property values.

\$99  
Seattle

These numbers indicate average monthly water bills across 30 major U.S. cities.

\$106  
San Francisco

Arizona

Phoenix ramped up its water main replacement program in the 2000s, which helped cut water main breaks by 40 percent.

\$42  
Denver

\$154  
Sante Fe

Texas

San Antonio's water pipes are relatively young. Half were installed after 1985.

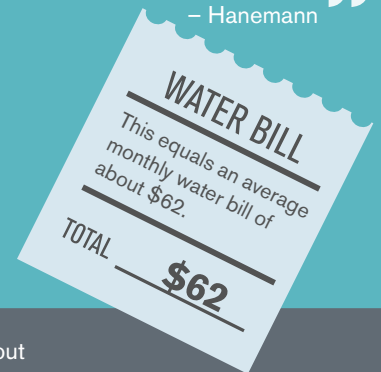
\$39  
Phoenix

\$96  
San Diego

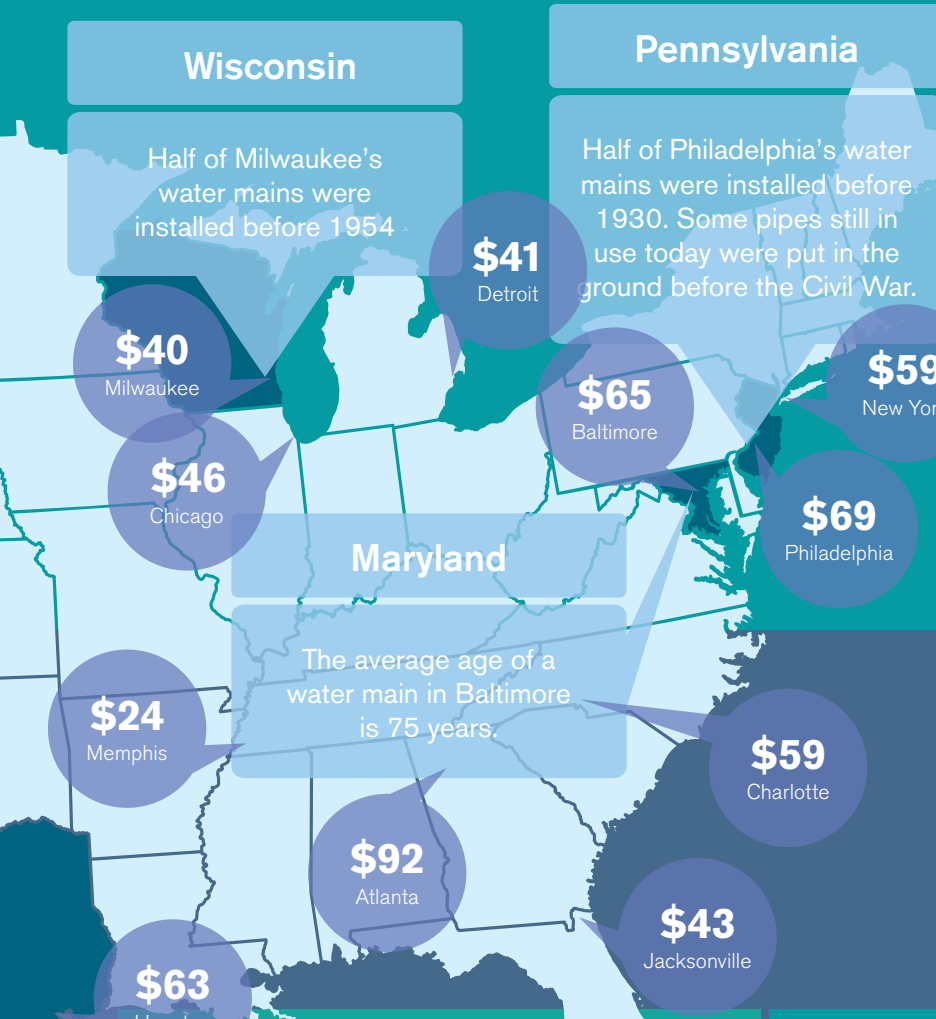
\$57  
Tucson

\$46  
San Antonio

“Across 30 major U.S. cities, a household using 100 gallons per day paid, on average, a total of \$140/month in 2015 for water, sewer and, in some cities, stormwater service. The water service component averaged \$62/month.”  
– Hanemann







A gallon of gas costs a bit over \$2.



A gallon of milk costs about \$3.



A gallon of orange juice, about \$3.50.



Water comes directly into your home, and you pay only 2 or 3 cents for a gallon.



And, you have to make a trip from your home to get them.

## Putting a price on water

Around the world, water is seen as something that should not be treated as a commodity. Instead, people see water as a human right, something that is provided but that should not have to be bought. "In 1821, a water activist in London said, 'Water must be considered one of the elements necessary to existence, the same as light and air; therefore, its supply to a great city ought not to be the subject of [commercial] trade,'" explains Hanemann.

Between 2000 and 2050

Water demand is projected to increase



according to the Organisation for Economic Co-operation and Development.

Much of the **demand will be driven by agriculture**, which already accounts for **70 percent of global freshwater** use, according to the Food and Agriculture Organization of the United Nations. The World Resources Institute says food production must grow by 69 percent by 2035 to feed the growing population, which will expand agricultural water needs.

By 2035, the World Bank says the Earth's **energy consumption** will increase by **35 percent**. This will increase **water consumption by 85 percent**, according to the International Energy Agency.

“The economics ought to be simple. Water is not a man-made commodity; it falls from the sky.”

– Hanemann

commodity. It is free and yet costly. It is simultaneously a private good and a public good. It helped cities flourish financially, but now it is their financial burden. While water comes from nature at no charge, and three quarters of the earth's surface is water, people don't always live where water is located – in Phoenix, for example. And they need water year-round, not just when it rains. The cost of water is the cost of making it available at the right time, the right location, and the right quality – it is the cost of collecting, storing, transporting, and treating the water.”

“But, in fact, the economics of water is surprisingly complex,” explains Hanemann. “From an economic perspective, water is a difficult

Residential water and wastewater bills have steadily increased by 5.7 percent annually over the past five years, outpacing average annual income growth (five percent) and inflation (1.9 percent), and magnifying the financial challenges facing municipal water utilities. Analysis of the 50 largest metropolitan areas in the U.S. show combined monthly water and wastewater bills averaging US \$91.06, based on standard household consumption by geography, according to a new U.S. Municipal Water and Wastewater Utility Bill Index from Bluefield Research.

“The cost of water is overwhelmingly a capital cost, much more so than electricity or gas or telephones. If you supply a bit more or a bit less water, the total cost hardly changes. Operating costs account for more than half the total cost of electricity supply, one third the total cost for natural gas, but only about one tenth of the cost for an urban water network.”

– Hanemann

Sources: Brett Walton and Kay LaFond/Circle of Blue, [circleofblue.org/2016/world/infographic-the-age-of-u-s-drinking-water-pipes-from-civil-war-era-to-today/](http://circleofblue.org/2016/world/infographic-the-age-of-u-s-drinking-water-pipes-from-civil-war-era-to-today/)  
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# CLASSNOTES



34 – 38... Listings  
36..... In memoriam  
37..... Zero-energy homes  
39..... Read more

## When brotherly love goes above and beyond

**T**hey grew up together. They attended community college together and mopped floors to pay for it. They founded a charity together, transferred to ASU together, and in December 2017, identical twins **Homero Sosa** (*BS Management/Supply Chain Management '17*) and **Gilberto Sosa** (*BS Management/Supply Chain Management '17*) graduated together, both of them winning the Turken Family Outstanding Senior Award.

Usually, the award goes to one person,

but the Sosa twins' accomplishments are so outstanding, their lives and projects so intertwined, that it was impossible not to give the award to both. Just listen to the professors who recommended them:

"Homero...is probably the most impressive candidate, for any award, for whom I have written a letter of recommendation," wrote Professor of Supply Chain Management Craig Carter. "He is the type of leader and corporate citizen that every company hopes to hire."

As for Gilberto, "I can readily attest

to his quantitative and analytic skills...which will undoubtedly lead him to great success," wrote Kevin Burns, senior director of strategic initiatives. "His work as the founder of Voices United to assist other students to be successful in college demonstrates his belief in the opportunity of a college education for all. Gilberto took his beliefs and turned them into action and opportunity for others," wrote Lecturer of Management Rhett Trujillo.

### Humble beginnings

College was anything but a given for the twins when, at age 11, they moved with their parents from a small town in Chihuahua, Mexico, to Arizona. Their parents' visas expired, but they decided to stay. Even as children, the Sosa twins knew what that meant. "It was scary to go outside. I thought the police might take one of my brothers or my family," Gilberto says.

After graduating from high school, the twins, undocumented immigrants themselves, worked under the table at odd jobs, cleaning restaurant floors and working at a bowling alley, a warehouse, a golf course – whatever they could find. Gilberto picked up week-old copies of *The Wall Street Journal* lying around the golf clubhouse and read some of the books members discussed at a book club. "These people had done well for themselves – maybe there was a hint in the literature they read," he says.

After a couple of years, the twins had finally saved enough to attend community college, but every semester they struggled to pay the out-of-state tuition they owed as nonresidents. At one point, they just couldn't do it. A school counselor noticed their plight and held community fundraisers to help them.

The Sosas never forgot it. They saw many other students in the same boat as themselves, and even in their limited circumstances, decided they had

to help. While working and attending school, they founded Voices United to help struggling students with expenses, holding car washes and dances to raise money. "Every penny went to scholarships for students," Gilberto says. The organization's reputation spread. An award-winning pianist gave a charity concert that raised nearly \$10,000.

Other appeals were less successful. Homero asked nearly 200 artists to donate works they could sell to raise money. Almost all refused. Some, having a tough time financially themselves, were affronted by the request. But Homero persisted, and eventually found three who helped.

"It showed me the value of resilience and perseverance," Homero says. "No matter how many people have said no, it doesn't mean the next person will."

The twins transferred to ASU, both majoring in management and supply chain management and racking up stellar grades, all while keeping up with Voices United and getting involved in other volunteer work on and off campus. Homero co-founded the Biomedical 3-D Printing Club, partnering with the Rochester Institute of Technology and Google to print out next-generation prosthetic arms and legs for patients who had lost limbs. Gilberto worked as a night manager at an alcohol and drug rehabilitation center. Both helped support their parents with money they earned from their part-time jobs.

The Sosas' hard work and dedication, combined with the skills they gained in college, have obvious benefits for employers, and the twins have already tested their mettle in summer internships. At Microsoft, Gilberto found a way to save \$1 million in the production and distribution of laptops, while Homero worked with senior managers to develop an innovative project management tool. At

Avnet, Homero helped a \$17-million client improve logistics. At Abbott Laboratories, Gilberto did statistical analysis to eliminate waste in baby formula production, saving the company nearly \$2 million.

### Separate cities, same path

Now, with graduation upon them, the twins are faced with major decisions that may lead them to go their separate ways for the first time. Gilberto has been offered a job in a three-year leadership development program at Dell. Homero was invited to join the same program, but is leaning toward Google, where he recently interviewed to become a recruiter.

"It's not easy for our paths to diverge. He's been my companion and my best friend, but he has to do what's best for him," Gilberto says of his brother.

No matter what happens, the two will stay in constant contact. "We can fly to see each other on weekends. Where there's a will, there's a way, and I'm sure we will find a way," Homero says.

Though they may live in separate cities, the twins have the same long-term agenda: Work for a few years, get an MBA, build a career, and give back to the community by doing something that has a positive impact on people's lives.

Even with all the awards and accolades they've received, the success the twins have had in helping people has affected them the most, like the Iranian woman who couldn't afford community college tuition. She had a child and had escaped from an abusive relationship. If she didn't re-enroll, both could have been deported. Voices United helped pay her tuition.

"It was less than a thousand dollars, but it changed her life," Homero says. "She was crying. I can still close my eyes and see her face. That's what I think impact is."

**Alexander Simone** (*BS Business Entrepreneurship '16*) recently appeared on ABC TV's "Shark Tank" to share his invention: a product called ProntoBev, which can chill wine, spirits, and other beverages in 30 seconds. Simone accepted a \$100,000 offer from Mark Cuban for 25 percent. The catch: Simone has to raise another \$100,000. The company, Pronto Concepts Inc., is currently raising a seed round.



## 1960s

**Marvin D. Loos** (*BS Insurance '61*) is celebrating more than 50 years as a charter member of Pi Sigma Epsilon, the only national, co-ed, professional fraternity in the fields of sales, marketing, and management.

**Anthony E. DePrima** (*BS Business Administration '63*) is chief legal officer, director, and secretary at payment solutions company 3PEA International in Phoenix.

**Greg Pearson** (*BS Management '65*) provides solutions for life's moments as a State Farm Insurance agent in Austin, Texas.

**Leonard Berry** (*DBA '68*) is the winner of the 2018 William L. Wilkie "Marketing for a Better World" Award. Berry is University Distinguished Professor of Marketing, Regents Professor of Marketing, and holds the M.B. Zale Chair in Retailing and Marketing Leadership in the Mays Business School at Texas A&M University in College Station, Texas. He is also a Presidential Professor for Teaching Excellence. In 2014, Berry was inducted into the W. P. Carey Alumni Hall of Fame.

**George Pete Hogelin Jr.** (*BS Management '68*) is a principle/consultant for financial consulting firm GPH Management Services in Salt Lake City.

**Mike McQuaid** (*BS Management '68*) is the president of insurance provider JM Management Co. in Phoenix.

**Lester Schiefelbein** (*BS Marketing '68*) was elected as CEO and vice chairman of the Silicon Valley Arbitration & Mediation Center. He resolves complex multi-million dollar commercial and government disputes around the world as the CEO and founder of Schiefelbein Global Dispute Resolution in San Francisco.

**Tom Elliot** (*BS Finance '69, MBA '71*) founded TCE Investments and Consulting in Scottsdale, Ariz., more than nine years ago.

**Garland Parker** (*BS Business Administration '69*) recently celebrated his 15th year as general manager of St. Louis Screw & Bolt, which manufactures precision tools in St. Louis.

## 1970s

**Fred Deleuw** (*BS Finance '72, MBA '74*) joined the executive team of MNX

Global Logistics in Orange County, Calif. As the chief financial officer (CFO) of the expedited transportation and logistics company, he contributes to MNX's growth initiatives given his experience leading high-performing teams and in mergers and acquisitions.

**William Bernard** (*BS Business Administration '73*) recently retired as treasurer of the city of North Ogden, Utah, and is a former member of the Utah Association of Public Treasurers.

**Ed Richardson** (*BS Business Administration '73*) is a partner at Davis Miles McGuire Gardner in Phoenix.

**Fred Van Etten** (*BS Business Administration '77*) recently joined Midland States Bank in St. Louis as the president of the company's equipment finance business.

**Peter Hill** (*BS Finance '78, MBA '86*) joined State Bank Corp., the holding company for Mohave State Bank, in August 2017. As the executive VP and chief credit officer, he oversees all credit functions of the bank, which has nine full-service branches in Arizona.

**Kim Ruggiero** (*BS Marketing '78*) is the managing partner of intelligent solutions and Internet of Things for Verizon Wireless in Phoenix. She's also a professor of practice for the Department of Marketing, teaching MKT 370, Professional Sales and Relationship Management.

**David Chanko** (*MBA '79*) teaches Advanced Placement math classes to college-bound, high school juniors at the American Leadership Academy in Gilbert, Ariz.

**Paul Faith** (*BS Quantitative Systems '79*) was recently named to the 2018 national edition of "The Best Lawyers in America." He is also celebrating the 38th anniversary as managing attorney of his law practice Faith, Ledyard & Faith, PLC in Avondale, Ariz.

**Dennis Seaman** (*BS Marketing '79*) is celebrating 16 years as president and co-founder of pet cleanup system business The Clean+Green Company in San Francisco.

## 1980s

**Scott McDaniel** (*BS Accountancy '80*) is director of finance and administration

at Scottsdale Arts (formerly Scottsdale Cultural Council) in Scottsdale, Ariz.

**Tim Wright** (*BS Finance '81, MBA '83*) was named director of real estate at John F. Long Properties in Phoenix in October 2017. "Having grown up in Phoenix, I was able to watch all of the great developments the company created over the years. It is a real honor to be able to now work with Jake Long and his staff," Wright says.

**Lisa Johnson** (*BS Management '82*) is celebrating 33 years as president and CEO of innovative office furniture solutions company Corporate Interior Systems Inc. in Phoenix.

**Denny Shupe** (*MBA '83*) has been appointed by the president of the American College of Trial Lawyers (ACTL) to chair its Special Problems in the Administration of Justice Committee. Shupe, who is a fellow of the ACTL, is a partner at

Schnader Harrison Segal & Lewis LLP in Philadelphia.

**Carla Carter** (*MBA '85*) has been providing business management consulting and organizational improvement for over 25 years as the president of Carla Carter and Associates in Scottsdale, Ariz.

**Tom Liguori** (*MBA '86*) joined Phoenix-based technology distributor and solutions provider Avnet in January 2018 as its CFO. Liguori, who has more than 30 years of finance and operations experience, previously served as the CFO of Advanced Energy Industries Inc. since 2015, a provider for semiconductor and industrial power applications.

**Kathy Bonanno** (*BS Finance '87*) is the CFO at enterprise security company Palo Alto Networks in Santa Clara, Calif., where she oversees the company's finance, accounting, and manufacturing functions.



**Caleb Street** (*BS Supply Chain Management '13*) is a global commodity manager at TPI Composites, Inc. The Scottsdale, Ariz.-based TPI Composites, Inc., is the largest U.S.-based independent manufacturer of composite wind blades, serving the growing wind energy market worldwide. Since 2001, it has produced more than 34,000 blades and has created innovative composite vehicle structures to solve the complex problem of reducing weight and cost in transportation applications.



**Michael Trejo** (*BS Economics '09*) is vice president in Global Power & Renewables Investment Banking at Bank of America Merrill Lynch in New York. He previously worked as an analyst in BofAML's Global Commercial Real Estate Investment Banking Group in New York. Trejo serves on the boards of the Be A Leader and the Hispanic Scholarship Fund's New York Advisory Council, as well as performs

volunteer research for the Latino Donor Collaborative. He has received honors including the National Hispanic Merit Scholarship and Be A Leader Foundation Scholar. As a student, Trejo was actively involved with the Hispanic Business Students Association, including serving as its treasurer; and with Adelante, El Concilio, and the Association of Latino Professionals in Finance and Accounting. As an alumnus, Trejo continues to positively influence the Hispanic Business Students Association and provides significant leadership in the establishment of the professorship in honor of Prof. Loui Olivas (see page 6).

## 1990s

**Daniel Hardesty** (*BS Management '92*) is celebrating 11 years as the president at Southwest Professional Insurance Consultants in Scottsdale, Ariz.

**Heather Stewart** (*BS Management '92*) oversees the global network of marketing staff as project manager at software company Ipro Tech in Tempe, Ariz.

**Daniel Backhaus** (*BS International Management '93*) was brought on at software-as-a-service company Coredna in November 2017 as its VP of global growth strategy.

**Ryan Price** (*BS Management '95*) is the director of in-vehicle networking, infotainment, and high-speed connectivity at the electronic solutions manufacturer Molex in Rochester Hills, Mich.

**Michelle Chun** (*MBA '96*) celebrated her 10-year anniversary in July 2017 as the CEO and founder of Insight Twenty20, a mystery-shopping company in Honolulu.

**Kathy Sacks** (*BS Marketing '97*), a former Infusionsoft executive, recently joined women's health and fitness company Oojaah as a full-time co-founder.

**Nigel Murtagh** (*MBA '98*) is celebrating 23 years at financial firm Charles Schwab in San

Diego. He leads enterprise risk management, working with the business to identify and navigate credit, market, and operational risk to support sustainable growth as executive VP of corporate risk.

**Gregory Padilla** (*BS Finance '99*) is a principal portfolio manager and research analyst at investment firm Aristotle Capital Management LLC in Los Angeles.

**Jason Wejnert** (*MBA '99*) is a partner of the Chicago-based firm SpencePC, IP and Complex Litigation.

## 2000s

**Dr. Palu Phail** (*BS Finance/Marketing/ Supply Chain Management '00*) joined Primary Health Medical Group in Boise, Idaho, as a family physician in August 2017.

**Jim Rough** (*BS Economics '00*) founded Scottsdale, Ariz.-based SunHawk Consulting, a litigation, compliance, and fraud investigations consulting firm in 2017.

**Tim Huang** (*MBA '01*) is the acting president and head of corporate banking subsidiary for Bank of America Merrill Lynch China.

**Giselle Alexander** (*BS Management '02, BS Economics '06, JD '09*) practices tax controversy as an attorney for Dickinson Wright in Phoenix.

**Bryan Beseler** (*BS Global Business '02*) is the co-founder and president of commercial construction company nSite Design+Build in Glendale, Ariz.

**Todd Vigil** (*BS Marketing/Management '02*) is the chief marketing officer at The Phoenix Symphony.

**David Anderson** (*MBA '03*) is the director of operations for Northern Texas PGA in Dallas.

**Danny Estrada** (*MBA '03*) founded E Squared Strategy & Management Consulting in Red Bank, N.J.

**Jyll Harthun** (*BS Marketing '03*) owns furniture design company Don J Designs in Phoenix.

**Colleen Kucera** (*MBA '03*) is celebrating more than six years as director of marketing at commercial real estate services firm Ryan Cos. in Phoenix.

**Timothy Fontes** (*BS Computer Information Systems '04*) is an intellectual property attorney for Polsinelli law firm in Phoenix.

**Ryan Evans** (*BS Management '05*) is the director, corporate counsel of San Diego-based Jack in the Box Inc., which operates and franchises the fast-food restaurants across the U.S. and Guam.

**Jon Faltis** (*BS Accountancy '05*) is the senior VP and controller of a \$3 billion renewable energy private equity (PE) fund for Swiss-based PE firm Capital Dynamics.

**Brian Greathouse** (*MBA '05*) practices zoning, land use, and real estate law as an associate attorney at Burch & Cracchiolo PA in Phoenix.

**John Sloan** (*MBA '05*) succeeded a 36-year veteran of the Farm Credit Bank of Texas in Cedar Park, Texas, as chief credit officer after serving as VP and unit manager of the bank's association direct lending unit since 2010.

**Matthew Visnansky** (*BS Marketing '05*) joined The Opus Group in Phoenix in April 2017 as a real estate manager.

**Brad Weber** (*BS Marketing '05*) became a retirement plan consultant in November 2017 at financial products and services firm The Standard in Denver.

**Valerie Ah Yong** (*BS Marketing '06*) is a landscape architect at award-winning landscape architecture and urban design firm Floor Associates in Phoenix.

**Daman Wood** (*MBA '06*) is the chief operations officer (COO) of technology expense management firm MDSL (formerly Telesoft) in Phoenix.

**Mary Bernardo** (*MBA/MHSM '07*) is the COO of Abrazo Medical Group in Phoenix.

**Daniel Mormino** (*BA Communications '98, MBA '07*) was promoted in October 2017 to senior VP at human resource consulting firm Infiniti HR in Scottsdale, Ariz.

**Matthew Cicinelli** (*BS Economics/ Finance '08*) is a technical advisor at Amazon in Mesa, Ariz.

**Diana Hossack** (*MBA '08*) is the executive director at Opera Lafayette in Washington, D.C.

**Stephen Williams** (*MBA '08*) manages capital markets activities as VP, corporate development and investor relations at mineral exploration and development company Bluestone Resources Inc. in Vancouver, British Columbia.

**Britni Jackson Gallelo** (*BS Marketing '09*) is the VP of digital at Magnetix advertising agency in Phoenix.

**Ava Marie Hilbun** was born to **Tricia Dunlavy-Hilbun, EdD** (*BS Marketing '03*) and **Ryan Hilbun** (*BSA '07*) in Scottsdale, Ariz., on Aug. 24, 2017.



IN MEMORIAM

**1949**

Edward J. Shelley

**1951**

Violet L. Patterson

**1957**

Noley C. Baker Jr.  
Marion R. Jenkins

**1958**

Attilio "Al" Serafini Jr.

**1959**

Shirley C. Mahaffey

**1960**

Clifford E. Webb Jr.

**1961**

Robert W. Wood

**1962**

Richard L. Wolff

**1963**

Peter G. Doyle

**1964**

Daniel L. Grove

**1965**

Jack N. Chidester  
Gregory I. Miller

**1966**

Louis Jacobo

**1967**

Lon A. Calhoun  
George G. Garbell  
Joseph H. Porter III  
Terrance J. Ven Rooy

**1968**

Lt. Col. George F.  
Aulbach Jr.  
James W. Bramlet

**1969**

Thomas S. Beardsley  
Michael L. Calhoun  
James R. Upchurch

**1970**

William Eddings Sr.  
Geraldine T. Schafer  
James M. Talla

**1971**

Donald E. Bennett  
Sherwood J. Rodgers

**1972**

Charles J. Bayer  
Sheldon H. Cohen  
Kenneth L. Ogle

**1973**

Jose L. Reynoso  
Wayne A. Simeone  
Rollin G. Vogan II

**1974**

Alfred A. Lidberg

**1975**

John R. Barone

**1976**

William E. Dixon Sr.  
David H. Geis  
Col. Thomas M. Madison

**1977**

Craig B. Cavalli  
Robert T. Kohnke

**1978**

Lewis S. Huggins  
Robert F. Koontz  
Mitchell L. Miller

**1980**

Stephen L. Cook  
Tim E. Rickert

**1981**

Kevin B. Duecker  
Jeffrey J. Kemp  
David Q. Lewis IV  
Joanne L. Young

**1983**

Kathryn S. Shaffer

**1984**

Judy M. Baldrige  
Nancy E. Bull  
Florine McCaffrey

**1985**

Kirk E. Chisholm  
Ursula S. Jackson

**1986**

James S. Dabisch

**1987**

Cynthia A. Pennell

**1988**

Michael G. Finnegan

**1989**

Grant C. Hoffman  
Chester E. Lewis III

**1994**

Janet G. Stratman

**1995**

Daniel J. Bestenlehner  
Michael McDonnell

**1996**

Christopher H. Luebke  
Kenneth W. Oakley Jr.

**1999**

Brian K. Sell

**2001**

Jeffrey S. Stahl

**2003**

Glen H. Atkin

**2004**

William B. Mace  
Christopher R. Najjar

**2005**

Kirk Ebbs



**Bradley Mayhew (MBA/MS-BA '15)** is a logistics manager at the Tesla Gigafactory in Sparks, Nev. Founded in 2003, Tesla's mission is to accelerate the world's transition to sustainable energy through all-electric vehicles and scalable clean energy generation and storage products. Supporting these products is the 1.9 million square-foot Gigafactory in Nevada, which revolves around the production of lithium-ion battery cells in partnership with Panasonic.

**2010s**

**Reilly Carpenter (BS Marketing '10)** is a senior product manager at Capital One in New York. He's also a lead trainer at The Design Gym in New York, which helps organizations spark culture change through workshops on creativity, collaboration, and innovation.

**Crystal Smith (BS Accountancy '10)** oversees day-to-day operations as the owner of Simplified Accounting in Chandler, Ariz.

**Jordan Haugan (BS Marketing '11, MBA '17)** is director of business development at August United, an influencer marketing agency in Tempe, Ariz.

**Nicole Rogers Wood (BS Finance/ Supply Chain Management '11)** is the CEO and co-founder of Ama La Vida, an innovative leadership and career coaching company in Chicago.

**Kelsey Wong (BS Marketing '11)** is the culture conductor and "coachsultant" at Delivering Happiness in San Francisco. Founded in 2010, Delivering Happiness specializes in inspiring passion and purpose in both the workplace and personal life.

**Dylan DeBusk (BS Finance '12)** has been appointed the new assistant general manager of the Northern Arizona Suns, an NBA G League team based in Prescott Valley, Ariz.

**Chad Fogg (BS Business Entrepreneurship '12)** is global program manager of regulatory compliance at Uber in Tempe, Ariz.

**Mary Beth Reisinger (MBA '12)** is the chief human resources officer at health and wellness product company Plexus Worldwide in Scottsdale, Ariz.

**Dalton Worley (BA Business Sustainability '12)** founded smartphone product company A1 Accessories in Houston.

**Blake Curtis (BA Business Law '13)** is director of capital markets and dispositions at commercial real estate development company SimonCRE in Scottsdale, Ariz.



**Jim Watson (BS Marketing '93)**, a former Arizona State University football student-athlete, died on Nov. 21, 2017. He was 48. Watson was recruited by ASU as a standout defensive lineman, and his adaptability enabled him to play multiple positions. A recipient of the Student-Athlete Award for students that excel on and off the field, Watson's final game as a Sun Devil ended in a 37 to 14 win over archrival University of Arizona. He is remembered for being an active member of charitable organizations, including United Way Campaign Cabinet, Boys & Girls Club of Scottsdale, and Pinnacle Peak Presbyterian Church.



Manager of Alumni Relations **Theresa Shaw** and her husband, **Brian**, welcomed their son, **Carson Alexander Shaw**, into the world on Oct. 26, 2017.



## Startup targets zero-energy homes

**W**. P. Carey alums are using lessons learned in the classroom to help chart their vision of the future of homebuilding, one built around neighborhoods and communities replete with zero-energy homes.

**Mike VanSteenkiste** (MRED '07) and **Philip Beere** (MRED '07) have teamed up to launch a project that will offer net-zero home plans, powered by batteries and solar panels. These plans will be made available to small and large builders, and consumers across the country and beyond.

Think of it as an Airbnb for zero-energy house plans, they say. Click on the project's website, explore the available floor plans, and you are well on your way. Welcome to the future of zero-energy homes, easily made for the consumer. Welcome to ZEROHOZZ.

VanSteenkiste and Beere say the timing of the launch, scheduled for Earth Day 2018, could not be better in light of current market conditions.

"Consumer demand is growing, energy costs are rising, and zero-energy homes cost less to build due to project competitiveness," says VanSteenkiste, who will be managing the project's e-commerce. "Who wouldn't want a zero-energy house, if it's that easy? We are making it easy."

The website will offer plans ranging from 1,800 to 3,300 square feet, costing from \$1,800 to \$2,800 per plan. All would include rooftop solar panels and battery storage.

"It's a fraction of what it would cost to have an architect start from ground zero," says Beere, who has worked on several green energy housing projects. "The real vision and passion here is to transform housing not only in the U.S. but across the world. That's what this is all about."

The partnership between the two alumni has its roots in a second-floor W. P. Carey classroom, where VanSteenkiste says the two struck up a relationship because of a mutual interest in sports and fitness.

Time spent in the program, VanSteenkiste says, taught him "the intricacies of real estate deals. That deal structure is sometimes more important than anything else." Beere says one of the things that most affected him were community architects invited to teach in the classroom who focused on environmentally sensitive and energy-saving projects.

The two kept in touch on and off following the nine-month MRED program, a transdisciplinary partnership between W. P. Carey and three other schools at ASU. After graduation, VanSteenkiste says he became involved in a number of online marketing campaigns for different products and services. Beere worked on the green and energy-efficient end of housing, including serving as a consultant for an award-winning project by Phoenix-based Mandalay Homes in Arizona.

Both alums figured the collaboration would be natural, tapping into VanSteenkiste's online marketing prowess and Beere's green touch. "It was just a matter of what and when it would happen," Beere says.

The timing was ripe to roll out the online platform because net-zero construction is economically feasible due to product innovations and market competition. Not to mention, the goal in areas such as California and Oregon are to make zero-energy homes policy by 2020. Beere says this seems to be the trend other states soon will follow.

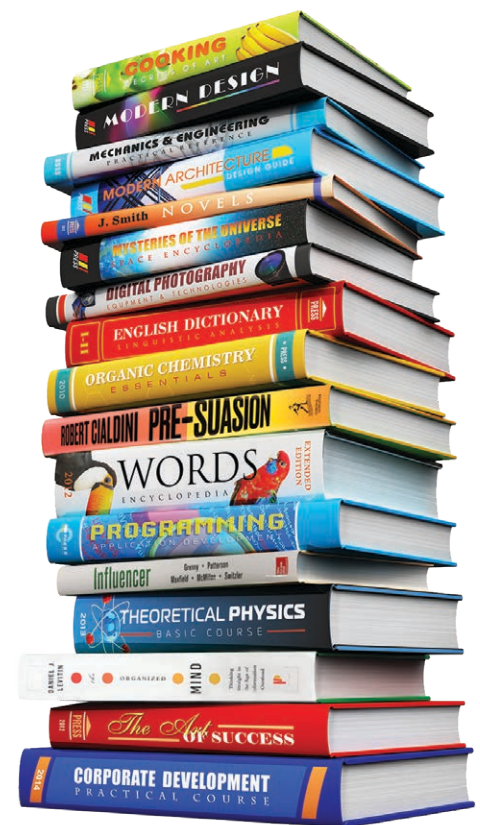
"It's no longer an option; this is the wave of the future," VanSteenkiste says. "We see policy in states and municipalities around the country committing to zero-energy homes."

## Join the W. P. Carey book club

Learn, have fun, and grow your network by joining our online book club for alumni and friends. Books will be chosen to help you become a more effective communicator and leader, and you'll get to build relationships with fellow W. P. Carey graduates as you discuss the topics and takeaways in each book.

Join today to preview the club as it wraps up *The Organized Mind: Thinking Straight in the Age of Information Overload* by *The New York Times* best-selling author Daniel J. Levitin. Plus, you'll get to vote on the next book.

Sign up today and learn more: [pbc.guru/wpcarey](http://pbc.guru/wpcarey)



**Wayne Unger** (*BS Supply Chain Management '13*) is the director of enterprise accounts at email intelligence company Emailage in San Francisco.

**Dr. Glen J. Weiss** (*MBA '13*) joined Birmingham, Ala.-based genetics testing company Circulogene in November 2017 as its chief medical officer.

**Stephen Mostrom** (*MBA '14*) is a process design consultant at Bank of America Merrill Lynch in Phoenix.

**Dr. Mark Stephan** (*MBA '14*) is the VP and medical director of Arizona-based population health risk management company Equality Health in Phoenix.

**Samantha DeRose** (*BA Business Communication '16*) is a public relations associate and social media specialist at PR firm The McRae Agency in Scottsdale, Ariz.

**Dressler Parsons** (*BS Marketing/BA Art '16*) is a marketing content manager at the student tour company EXP Trips in Tempe, Ariz.

**Mark Rodriguez** (*MSIM '16*) is an infrastructure service project manager for Safeway Albertson's Companies in Phoenix.

**Christon Valdivieso** (*MS-GL '16*) creates solutions for operations as a material manager analyst at Dignity Health in Phoenix.

**Christina Woods** (*BA Sports Business & Media Studies '16*) is an account executive for the Florida Everblades, a midlevel professional hockey team in Estero, Fla.

**Stephanie Bambury** (*MBA '17*) is a marketing manager at software company Medidata Solutions in New York.

**Bryce Keffeler** (*MBA '17*) is a financial planner at Pinnacle Advisors of America in Phoenix.

**Leo Sanchez** (*MRED '17*) is a commercial real estate professional at Fidelity National Title Agency in Tempe, Ariz.



**Originating in Arizona, Omni Block uses age-old cinder blocks with four layers of concrete that are filled with three layers of insulation, making it energy efficient and resistant to wind, fire, sound, termites, and mold.**

## Betting on age-old cinder block



**H**is journey to inventing a thermally efficient building system began in environments rife with open outcries, frantic hand signals, and competition. **Denny Miller** (*BS Management '79*) played for ASU's baseball team, and then professionally for MLB's San Francisco Giants' minor league before trading in the pits at the Chicago Board of Trade for

more than 14 years. The focus and fast reactions he gained in these settings led him to notice something on the trading-room floor: Lumber prices tripled in six months while increasing in volatility and losing quality.

It also helped that Miller had worked in Arizona home construction where he saw the necessity for sustainable building material. "I was taught that if you see a need, be the first to fill it," he says. "Then there's a good chance you'll be successful and profitable."

The sum of these experiences led Miller to consider a material that could potentially replace wood. It had to be "easily manufactured, installed, engineered, and retain creative freedom for architectural professionals," he explains. After multiple rounds of revisions, Miller developed an insulated concrete block, naming it Omni Block.

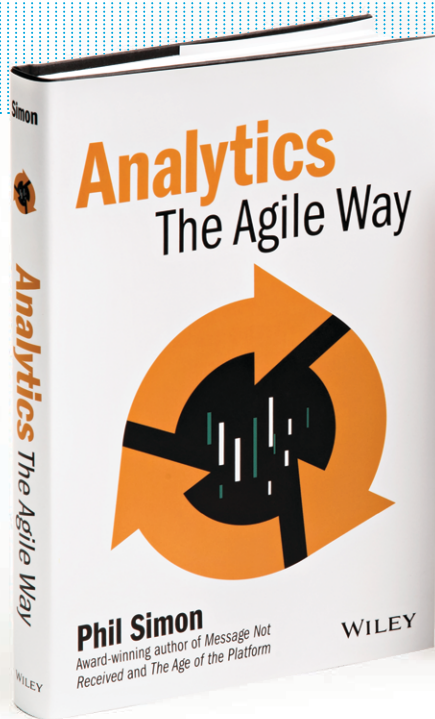
Although Miller had a plan, a product, and the determination to get his company off the ground, he didn't invest himself full time at first. While still employed as a trader, he commuted for 18 months between Chicago and Scottsdale, Arizona, while laying the foundation for Omni Block.

"I didn't want to move my family until I was sure the new business would succeed," Miller says. "Most builders were interested, but all were concerned and showed resistance to change within the industry." But those that built with Omni Block didn't regret it.

As each building using Omni Block was erected, more builders saw its potential and utility. "We have a company motto that 'buildings beget buildings,' meaning the more buildings that go up using Omni Block, the easier it is to show and convince others to use it," says Miller.

Today, Omni Block can be found across the U.S. in 29 states, Mexico, and Canada. Recently, the Dominican Republic and Al-Tahaluf Real Estate in Saudi Arabia partnered with Omni Block. Construction began in August 2017 on a single-family "show villa" residence in Riyadh, Saudi Arabia, using Omni Block at Al-Tahaluf's new Al Maali community. Al-Tahaluf and Omni Block also have invested in a factory to manufacture the new building system in the kingdom. This will allow Al-Tahaluf to grow its resources and assist with the creation of housing for thousands of Saudi citizens as part of the kingdom's diversification plan, Vision 2030.





# READ MORE

Discover new business books by W. P. Carey authors

One spins a tale of fantasy; the other speaks of real life. Together, these two W. P. Carey authors tell us about superheroes in altogether different realms.

In **Bystanders**, Phillip Murrell (MBA '18) chronicles the exploits of a superhero/vigilante named Votary as he attacks the criminal element in an imaginary place with a limited police force. Set in the fictional southwestern U.S. town of Colberton, Murrell tells the story through the eyes of those living in this 200,000-resident community, a wide-ranging crowd that includes reporters, police officers, paramedics, surgeons, crime bosses, drug dealers, and teenage fan boys.

Murrell, an active duty officer in the U.S. Army, draws on his 15 years in the military as he takes readers through over-the-top battles played out in the city's back alleys and residential streets. Key

among the characters is Claire Kennedy, a reporter looking to win ratings for her station and points with her boss by unmasking the mysterious, battle-clad avenger. Her investigation quickly reveals that real-life vigilantes do not reside in the fantasy worlds to which comics and films allude.

Murrell, who got the idea for the book during his third Army deployment in Afghanistan, keeps the action flowing throughout and gives the reader a massive battle to feast on at its conclusion.

Still, he leaves the identity of who is behind the heavily armored figure a closely held secret not yet to be revealed.

That is, at least in the first volume of the four-part, self-published book, which was released in June 2017. The second volume, **Bystanders II: Trophy Hunters**, came out last November and explores the backstory about Votary. Murrell says

he hopes to publish the final volume by year's end.

In **Analytics the Agile Way (Wiley)**, Department of Information Systems Lecturer and award-winning author **Phil Simon** describes how successful organizations are using analytics to make better decisions.

Via case studies including Google and Nextdoor, Simon demonstrates how progressive organizations gather and act on data in incremental ways. This is in stark contrast to traditional analytic approaches.

"The book makes the case that traditional ways in which companies use data and analytics simply don't work anymore," says Simon. "The world moves too fast these days." In his eighth book, Simon argues for a more nimble approach – one that breaks down a company's wants into more digestible bites.

## Teaching business writing with the 'Toms effect'



The required reading material Professor of English **Elizabeth Ferszt** had been using for her ENG 302: Business Writing course – a requirement for W. P. Carey students – was "enormous; over 600 pages; more than \$100; and so stunningly boring." It didn't seem like the kind of material she should be teaching students at the nation's most innovative university, three years running. "I take very literally our innovation culture here," she says. So, Ferszt decided to ditch the traditional

textbook and try something new.

Now she assigns her ENG 302 students, "Start Something That Matters," by Blake Mycoskie, the founder of Toms Shoes. What better book to use for her course, Ferszt thought, which is specifically geared toward W. P. Carey School of Business students. But what does a book about entrepreneurs have to do with teaching students how to write?

She didn't want to teach students how to write memos, Ferszt says. She wanted to teach them how to use writing to do

something. For every chapter, Ferszt assigned reading questions, which, she says, at first "appear to be traditional reading questions in terms of content, but what they really do is generate a lot of fast, specific writing.

"I think that's one of the values of business writing, is you've got to go fast, and it has to be good. And how do you do that? Well, you don't talk around it, you talk right at it. And you say exactly what this thing is about, and you pay attention to details."

From career changes to new members of the family – let the W. P. Carey community know what's going on in your life: [wpcarey.asu.edu/classnotes](http://wpcarey.asu.edu/classnotes)

# PHOTO FINISH

Sparky cheers on the first wave of runners at the startline of the 13th annual Pat's Run in Tempe, Ariz., on April 22, 2017. Can you find the five differences in these two photos?

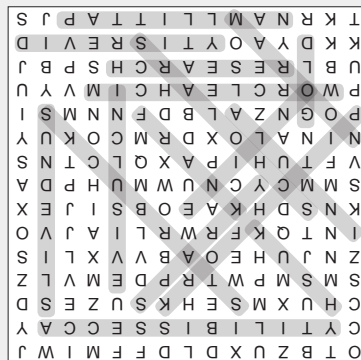


PHOTO COURTESY OF ASU

## W. P. WORD SEARCH

O T B Z U X D L D F F M I W J  
 C Y T I L I B I S S E C C A Y  
 C H U X M S E H K S U Z E S D  
 S M S M P W T R P D E M V L Z  
 Z N J U H E O A B V V X L I S  
 I N T Q K F R W R L I A J V O  
 K N S D H K A E O B S I J E X  
 S M M C Y C N U W M U H P D A  
 V F T U H I P A X Q L C T N S  
 N I N A L O X D R M C O K U Y  
 P O G N Z A L B D F N N M S I  
 P W O R C L E A H C I M V Y U  
 U B L R E S E A R C H S P B J  
 K K D Y A O Y T I S R E V I D  
 T K R N A M L L I T T A P J S

- \_\_ ACCESSIBILITY
- \_\_ ALUMNI
- \_\_ DIVERSITY
- \_\_ FRANK KUSH
- \_\_ GOLD
- \_\_ INCLUSIVE
- \_\_ MAROON
- \_\_ MICHAEL CROW
- \_\_ ONLINE
- \_\_ PAT TILLMAN
- \_\_ PITCHFORKS
- \_\_ RESEARCH
- \_\_ SCHOLARS
- \_\_ SPARKY
- \_\_ STARBUCKS
- \_\_ SUN DEVILS



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