

PENN STATE

# Smeal

ANNUAL REPORT 2022

MAGAZINE

A black and white photograph of three people standing together and smiling. On the left is a woman with long, wavy hair wearing a dark blazer over a turtleneck and light-colored pants. In the center is a man with a beard and short hair wearing a dark sweater and light-colored pants. On the right is a woman with long, dark hair wearing a patterned sweater and dark pants. They are all looking towards the camera.

**Opportunities  
Over  
Obstacles**

# Invest in People's Potential



“When someone makes a gift to the Penn State Smeal College of Business, they are really investing in something that isn’t so easily seen: people’s potential. The impact becomes evident when those people who have been empowered by philanthropy can go out and make an impact and be emboldened to engage at the university level, whether it’s a program; cocurricular opportunity; or other things that they’re passionate about.

Those donations also help to build leaders—the kind of people who not only add to the reputation of the Smeal College of Business but also the kind of people who go out and use business to change the world and solve its most pressing problems.”

**Michael Mitole**  
**'23 Fin**



To learn more about how you can invest in people’s potential, contact Michelle K. Houser at [mhouser@psu.edu](mailto:mhouser@psu.edu) or 814-865-7830, or visit the [Impact Smeal Philanthropy website](#).



## Smeal

MAGAZINE | ANNUAL REPORT 2022

Smeal Magazine is published four times each year for the alumni and friends of the Penn State Smeal College of Business by the Office of Marketing and Strategic Communications, in collaboration with the Office of Development and Alumni Relations.

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We welcome alumni news and letters. Please send them to [magazine@smeal.psu.edu](mailto:magazine@smeal.psu.edu).

**About Penn State Smeal**  
The Penn State Smeal College of Business is a vibrant intellectual community offering highly ranked undergraduate, graduate, doctoral, and executive education to more than 8,000 students from around the world. Smeal is a destination of choice for top global organizations seeking talent that will make a positive difference. Through our leading faculty and network of research centers and institutes, the college is a source of knowledge that influences the business practices of tomorrow.

Opinions expressed are not necessarily shared by the University, the publishers, or the editors. For readers with disabilities, this publication can be made available in alternative media on request. Penn State is committed to affirmative action, equal opportunity, and the diversity of its workforce.

U.Ed. BUS 23-11



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## MAKING CONNECTIONS

More than 900 students and 80 companies participated in the bi-annual Smeal Business Career Fair in September. Held in the Business Building Atrium and virtually, the event offers an opportunity for students to engage with corporate recruiters about internships, co-ops, and full-time jobs.

# Smeal

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### SMEAL DIVERSITY STATEMENT

We will make a meaningful impact on a society in which too many derive benefit from systemic racism and other forms of prejudice and bias, both implicitly and explicitly.

Using our influence as a global leader in business education, we will strive to make life better for people who experience oppression by virtue of age, religion, disability, race, color, ethnicity, national origin, gender, gender identity, sexual orientation, veteran status, political affiliation, language, family structure, marital status, socio-economic status, geographical background, education, or professional experience.

We acknowledge the global business community as a powerful force for social justice, and we com-

mit to provoking thought, conducting research, sparking dialogue, engaging with others, and preparing future leaders to advance this essential purpose.

Together, we will take action to nurture and promote a culture in which everyone feels safe, valued, respected, and empowered to bring themselves fully and authentically to our campuses and classrooms.

We will:

- Condemn acts of racism, prejudice, and bias

- Actively listen to the concerns of those who experience oppression
- Continuously evaluate our policies and practices regarding hiring, training, recruitment, and pedagogy
- Collectively study the history of racism, injustice, and bias, and pursue contemporary solutions through research and education
- Engage with community leaders to increase diversity and instill a universal sense of belonging on and off our campuses

Photo by Steve Treasler

## Record-setting Generosity

When the University's "A Greater Penn State for 21st Century Excellence" fundraising campaign began in 2016, we set ambitious goals that would make a Smeal education more accessible and create transformative opportunities for future business leaders.

The campaign concluded on June 30, 2022, and I am delighted to share that the Penn State Smeal College of Business raised a record-setting \$116.3 million.

Two years ago, in the midst of the pandemic, we celebrated the most successful single fundraising year in Smeal's history, with \$32.6 million raised. In fiscal year 2022, the bar was set even higher with a record of \$34.2 million.

I am so grateful for the steadfast commitment of our alumni and friends throughout the "Greater Penn State" campaign. Altogether, more than 8,000 alumni, friends, corporate partners, and others stepped forward to support the three key imperatives of a 21st-century public university — opening the doors of higher education to learners from every background, creating transformative experiences for students and faculty, and impacting the world by serving communities and fueling discovery, innovation and entrepreneurship.

Among the campaign's highlights: more than \$50 million was pledged to create student scholarships; there were commitments for 10 new named faculty endowments; new centers, including the Tarriff Center for Business Ethics and Social Re-

Photo by Bill Cardoni



Charles H. Whiteman, John and Karen Arnold Dean

sponsibility, were created; and a gift which endowed the Borrelli Institute for Real Estate Studies.

Private philanthropy is fueling the opportunities Smeal is able to offer its students — from in-class learning to cocurricular experiences that truly set our students apart in a highly competitive world. I can say with confidence that Smeal is a much stronger business school today than it was six years ago, and our graduates are better prepared to go forth to change the world.

In this issue of Smeal Magazine, I am pleased to share the details of Smeal's success in the "Greater Penn State" campaign with you.

The impact has been far-reaching. Already, hundreds of Smeal students have received scholarship support, our faculty

is better positioned to conduct groundbreaking research, and new programs and services are changing business education for the better.

I believe philanthropy will continue to push business education to new heights, and I look forward to seeing where it will take us.

BOSS Program helps underrepresented students envision a future in business

# OPPORTUNITIES OVER OBSTACLES

**D**uring the summer of 2008, Diag Davenport, a Black rising high school senior from Washington, D.C., participated in the Penn State Smeal College of Business's first BOSS (Business Opportunities Summer Session) program. The two-week program helps high schoolers, particularly those from underrepresented communities, to learn more about business majors at Smeal and explore possible career paths.

For Davenport, it was the first step in an impressive academic career that has included earning bachelor's degrees in management and economics from Penn State and a master's in mathematics & statistics from Georgetown University. Earlier this

year, he earned a doctorate in behavioral science from the University of Chicago Booth School of Business. Before becoming a business professor, he is now pursuing a two-year postdoctoral fellowship at Princeton University, where he is using artificial intelligence and machine learning to continue his research into how behavioral choices people make contribute to economic inequality.

Davenport is just one example of the scores of success stories for the more than 400 American and international students who have participated in BOSS since 2008. Offered every year since then except for 2020 (due to the pandemic), it is so popular that, last year, 85 students from the U.S., India, Af-

**Morgan Taylor Carosi '22 SCIS, Diag Davenport '13 Mgmt '14 Econ, and Shefali Raghavan '22 RM participated in Smeal's BOSS Program. The two-week summer experience for high schoolers helped the future Smeal graduates prepare for their time in college and beyond.**



BY BRUCE E. BEANS / PHOTOGRAPHY BY CARDONI

rica, and South America participated in a virtual week-long program. This past summer, besides 21 in-person participants for the full two weeks, 52 students from Mexico, Chile, Nigeria, the United Arab Emirates, and India participated in a virtual two-day option.

“Smeal has more than 5,000 undergraduate students,” says Jamie Campbell, Smeal’s assistant dean for diversity enhancement programs. “For some students, that’s too big. We try to create a tight student cohort and engage their parents too. Our message: when you come to Smeal, you’re not just going to be a number.

“At Penn State, we need to do a better job of making underrepresented students feel welcome and comfortable, and BOSS does that by letting students know that they can fit in here.”

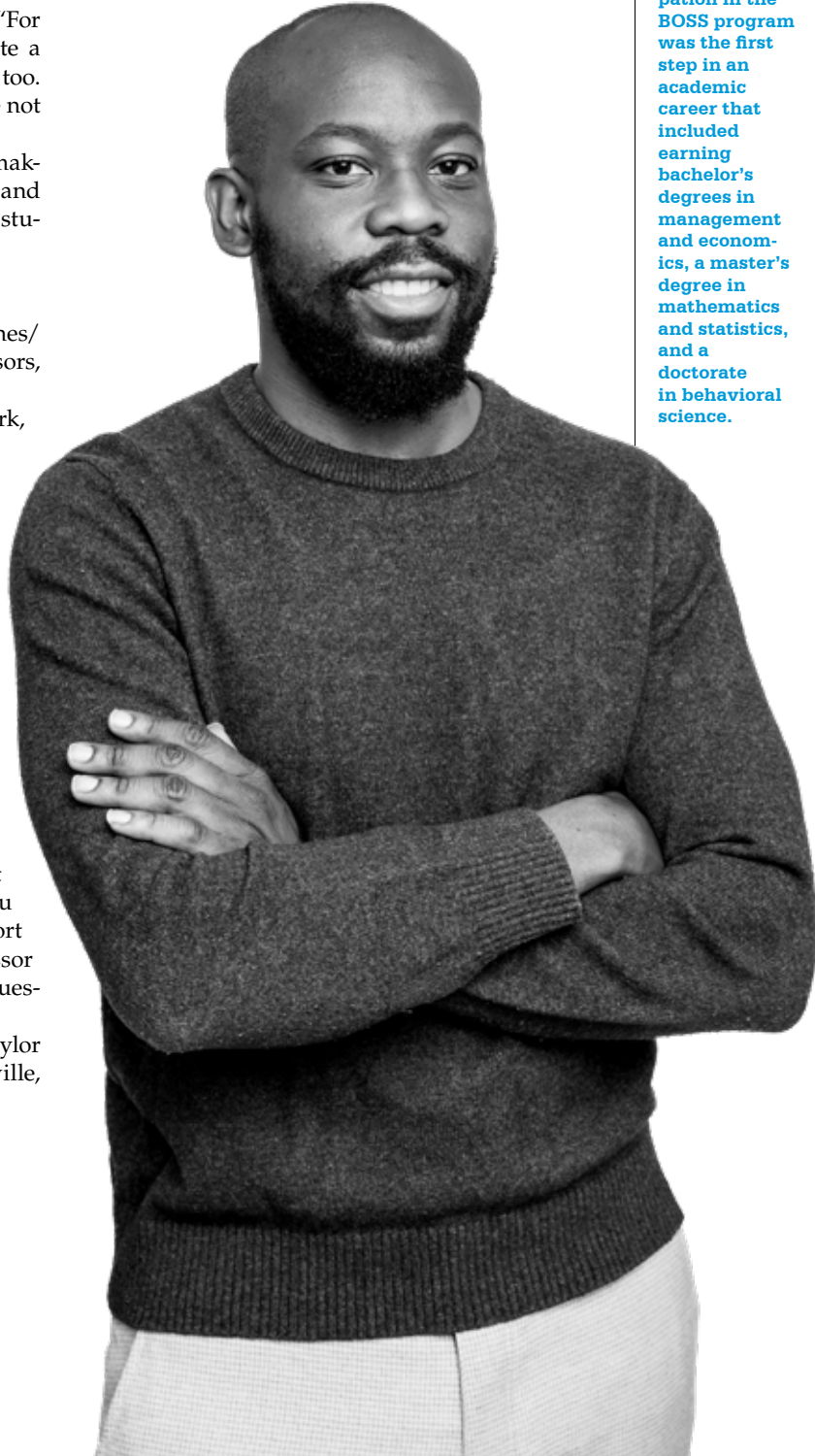
The immersive academic program includes:

- Introductions to each of the business disciplines/majors offered at Smeal by deans and professors, including departmental chairs
- Visits to learn how various businesses work, such as EY’s offices in Pittsburgh or Philadelphia, where participants meet and discuss career paths with staff and interns, including Penn State students and alumni; the on-campus collegiate and minor league baseball stadium; and a family-run amusement park
- Discussions with previous BOSS participants
- A team competition to develop the best new business proposal

Except for a \$50 registration fee (need-based scholarships are also available), BOSS is free.

“It formalizes your understanding about what it means to make money and connects you with people who have more answers,” Davenport says. “At the end of the classes, every professor said, ‘Here’s my email address. If you have questions, email me’ — which I did.”

“It was life-changing,” adds Morgan Taylor Carosi, a 2017 BOSS participant from Collegeville,



For Diagon Davenport ‘13 Mgmt, participation in the BOSS program was the first step in an academic career that included earning bachelor’s degrees in management and economics, a master’s degree in mathematics and statistics, and a doctorate in behavioral science.

## “OUTSIDE OF WEGMAN’S, WHERE I WORKED FOR FIVE YEARS, IT WAS MY FIRST EXPERIENCE MEETING BUSINESS PROFESSIONALS.”

Pennsylvania, who earned a bachelor’s degree in supply chain and information systems in 2022. “Outside of Wegmans, where I worked for five years, it was my first experience meeting business professionals. It gave me insight into what the business world would really be like after graduation. It helped me look down the road that far.”

Back home, Carosi told her dad that she only wanted to apply to Penn State. She was so enamored with the class taught by Felisa Higgins, associate dean for undergraduate education and clinical professor of supply chain management, that she majored in supply chain and information systems.

For BOSS participants like Carosi who attend Penn State, the program is just the first taste of a supportive community of students and staff.

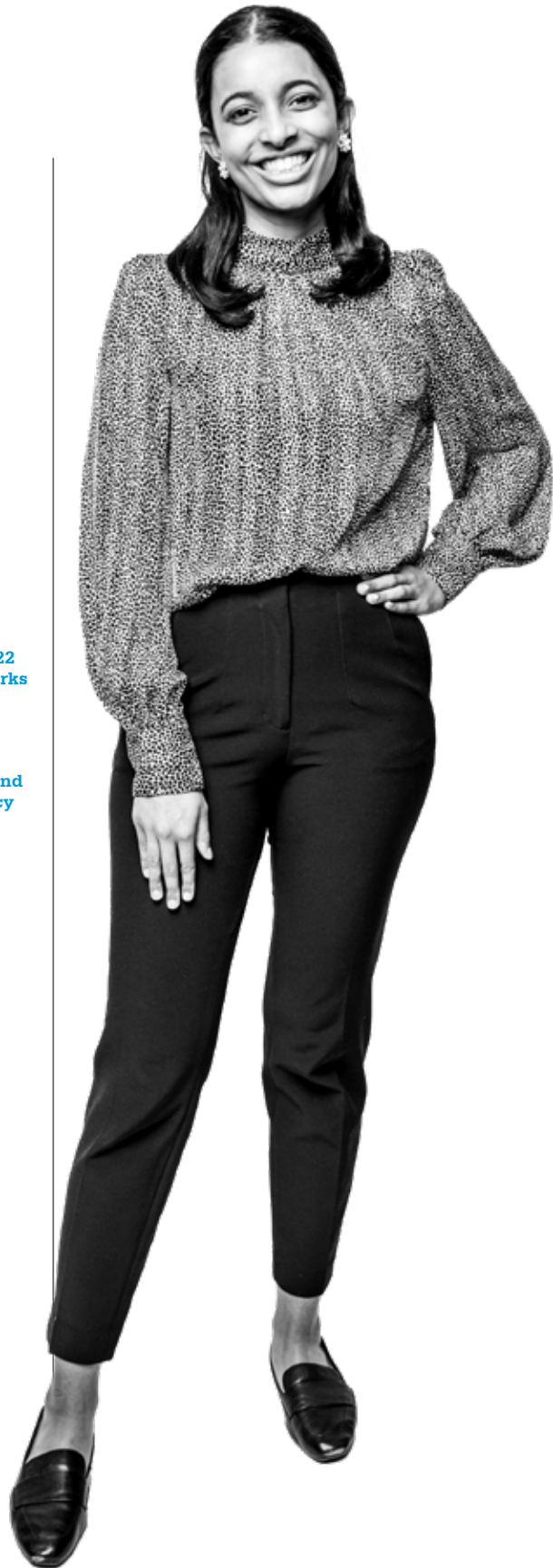
As Diversity Enhancement Scholars, they participate in a specialized first-year seminar that gives them early access to recruiters. They also meet monthly, often during a dinner hosted by company executives who discuss issues related to diversity, equity, inclusion, and belonging. In addition, they can: join multi-cultural student organizations; participate in the planning of Smeal’s annual one-day START (Striving Toward Awareness & Respect for Tomorrow) Conference; and participate in national case competitions.

Then there is the open-door policy offered by the Diversity Enhancement Program’s staff — Campbell; Director Olivia Lewis, who is the students’ academic advisor; and former Program Assistant Pauline Hough. “We always knew that someone in the office, a student or Olivia, Jamie, or Pauline, would be there to help us through anything, whether it was a school or personal issue,” says Carosi. “It made a big school very small. We created a family in there.”

Adds Davenport: “Everything starts and ends



Since July, Morgan Taylor Carosi ‘22 SCIS has been working with the Veteran’s Administration as a public sector advisory associate in Grant Thornton’s Arlington, Virginia office.



Shefali Raghavan '22 RM now works in PwC's Manhattan office as a digital assurance and transparency associate.

with Mr. Campbell, who became a welcoming father-like figure to me. He largely orchestrated my study abroad in Brazil and France and, in a flurry of emails, he let me know about internship opportunities and case study competitions. I felt I was going to hear about any useful opportunity from him."

"I could always go to Pauline to vent about anything," adds Shefali Raghavan, an Indian American from Yardley, Pennsylvania, who earned a risk management degree this spring. "Olivia asked tough questions to make sure I was selecting the right courses, and Jamie — along with Brittany Daniels (19 MAcc), who was interning with EY during my BOSS visit there — helped guide my internship choices, first with Deloitte and then PwC, where I now work.

"I still keep in touch with them because they were so influential for me," she says. "I can't thank them enough."

Raghavan, who also earned a minor in digital media trends and analytics, now works in PwC's Manhattan office as a digital assurance and transparency associate. Her job combines forensic accounting and risk auditing with data analytics. At PwC, she recently participated in a group phone call with other Penn State graduates interested in helping recruit students this fall. "There were 200 to 300 people on the call!" she reports.

Davenport also keeps in touch with the Office of Diversity Enhancement Programs. While still at Penn State he, like Carosi, was a BOSS program assistant, and usually returns to talk with the latest BOSS cohort. "One of the biggest takeaways is the value of mentorship," he says. "I've benefited immensely from the mentorship of Mr. Campbell, so I try to regularly mentor others. It's part of my DNA."

Since July, Carosi has been working with the Veterans Administration as a public sector advisory associate in Grant Thornton's Arlington, Virginia, office — a job she got through her connection with another GT employee, George Pla, a 2020 diversity scholar graduate.

"I grew up in a very white area without a lot of diversity," she says, "and the program really opened my eyes to the prejudice that some people have faced, and for the need to be inclusive and create genuine bonds with coworkers who have had other experiences.

"Given the fact that I am now spending more time with them than with my family and friends, that's particularly important."

## SMEAL BY THE NUMBERS

Here are a few additional examples of Smeal's commitment to the academic and long-term success of its students in 2021-22:

Students who participated in at least one of Smeal's 38 student organizations

1,880

Students who attended Smeal conferences that provide knowledge and networking opportunities

269

WHERE STUDY ABROAD AND INTERNATIONAL INTERNSHIPS OCCURRED

Cities

29

Countries

14

Students who studied abroad

285

Undergraduates who accepted a full-time offer

67.2%

Undergraduates who pursued further education or a fellowship

18%

Current MBA students who received at least one internship offer

100%

MBA graduates who received at least one full-time offer

94%

Average salary of undergraduate degree holders

\$63,600

Improving the Bottom Line and Environment  
Through Reverse Supply Chain Logistics

# OF PHONES, COPY MACHINES, AND CARGO SHIPS

A dozen years ago, Dan Guide was clearing out his parents' longtime property and found an old rotary phone tucked away in a closet. It was a heavy desktop model in a dull yellow, built to last by Bell Labs. He plugged it in to see what would happen. It worked.

"So, I opened it up," explains Guide, who is the Smeal Chaired Professor of Operations and Supply Chain Management. "It had a plastic housing,

point-to-point wiring, and a physical ringer bell. A technician could bring anything they needed in a box to repair this phone on site. When I went back and read the archived Bell Lab information, it said the phone had an expected life of about 40 years."

That phone was from a time when a business model, called servicizing, was being used, he says. For example, the phone belonged to Bell, but you paid for the service. Customers paid a very low cost

BY MAURA C. CICCARELLI / ILLUSTRATIONS BY HITANDRUN CREATIVE STUDIO



for repair since the phone was designed right from the start with easy repair in mind. If the customer didn't intentionally damage the phone, it would be replaced at no cost. Other manufacturers of major equipment use this model too, like office copiers (pay by the page), airplane engines (pay by the mile), and locomotive components (time-based pay, aka "power by the hour," as it's called in the industry).

Around the same time, Guide noticed a white iPhone on a student's desk — even though she already had the black version. When he asked about it, she said, "The white one became available yesterday, so I got it."

"We've had a profound impact on our planet through industrial activities. But I don't think we can put the genie back in the bottle," explains Guide, who joined Smeal in 2002 and also serves as the college's Supply Chain and Information Systems Ph.D. program coordinator. "We've created a consumeristic society with business models based on buying."

The two phone examples demonstrate critical parts of Guide's longtime expertise in closed-loop supply chain management, the study of a product's lifecycle. The first shows how some businesses can



maximize the value of their products over the long-term using approaches like remanufacturing. The iPhone story shows how consumers have responded to changing business models.

Guide has spent his career working with industry to create closed-loop supply chain management systems that are environmentally and economically sustainable. His solutions allow companies to build value in a product throughout its lifecycle. It's a pro-

## "WE'VE CREATED A CONSUMERISTIC SOCIETY WITH BUSINESS MODELS BASED ON BUYING."

cess called reverse logistics that begins with product design, creation, and delivery (supply chain management) and then back again to the manufacturer or supplier (reverse supply chain logistics) to be fixed, remanufactured for resale, or recycled for parts or materials that can be used in other products instead of being tossed into a landfill.

### EXPERTISE AND PRACTICAL APPLICATION

In 2017, Guide was listed as the leading reverse logistics expert in an International Journal of Physical Distribution & Logistics Management research study. The analysis showed that papers about reverse logistics with Guide as an author were cited 451 times by 34 other studies, making him the world's most cited author on the topic. A prolific researcher, Guide has written more than 100 papers on supply chain, reverse logistics, and other related topics. On Google Scholar, his works have been cited 16,850 times. He has also developed a course at Smeal focused on the sustainable supply chain, which includes reverse logistics.

Guide's work has earned him numerous honors. In 2014, he was appointed the Smeal Chaired Professor of Operations and Supply Chain Management for his research accomplishments. There is only one Smeal Chair per department. He has also been named a Production and Operations Management Society Fellow in 2019 and a Distinguished Scholar by the Academy of Management, Operations, and Supply Chain Management Division in 2018. From 2011 to 2017 he served as co-editor-in-chief of the Journal of Operations Management.

"Dan takes an engaged scholarship approach to research by working directly with supply chain logistics practitioners in industry to identify their more challenging problems and develop academic research questions around that," says Kevin Linderman, chair of the Department of Supply Chain and Information Systems and John J. Coyle Professor in Logistics and Supply Chain Management. "He then provides them with insights into how to better manage their organization."

Linderman adds that Guide was an early expert in reverse logistics.

"Whenever we talk about sustainability in the supply chain, it typically involves some form of reverse logistics," he says. "As consumers increasingly buy online, the ability to effectively handle returns and reverse logistics becomes more important."

"He's one of the world's experts in the circular supply chain," says Steve Tracey, executive director of Smeal's Center for Supply Chain Research, noting that the process of bringing value back to a product by remanufacturing it and making it better than before is Guide's core expertise.



## THE IMPORTANCE OF CLOSED-LOOP SYSTEMS

"I think we're staring down an environmental nightmare, with air pollution and water levels rising," says Guide. "We're going to run out of some rare earth elements at a certain point."

"But you can't tell a company to adopt a business model that doesn't make them money," he continues. "In the 1990s, we used to try to talk about the environment and some of these executives' eyes would glaze over."

He suggests people stop talking about environmental benefits and instead ask companies if they would like to make more on their bottom line. If the product is designed from the start to be remanufactured, reused, or repurposed, it will continue to deliver value after it is returned.

"That actually gets people's attention," he says.

A key hope for the future is the evolution of the digital supply chain. Instead of manufacturers making spare parts that are stored in large warehouses, those components can be made on demand using additive or subtractive manufacturing systems. All that needs to be shared is the digital engineering design file. (Additive manufacturing equipment like 3D printers lay down layers of material to build the item. Subtractive machines grind,

cut, or drill into a block of raw material such as plastic, metal, or other materials to create the part.)

"Right now, these approaches are not mainstream," Guide says, noting the economics of such approaches are becoming more pressing. "The advantage is these can allow on-demand and just-in-time production of parts."

He cites the example of a cargo ship that was prohibited from leaving the port of Singapore because a 20-year-old emergency on-board communication system wasn't working. A cheap plastic part broke, and no replacement was available. To avoid staying in port at a cost of about \$30,000 a day, Guide says, "they scrapped the old system and put in a new one with \$20,000 worth of equipment—all because they couldn't get a \$1 part."

However, if there was a digital blueprint for the part, it could be ordered on demand from an additive manufacturing center.

"If the part is co-located at the port, I just walk it over to the ship. I don't have to air freight it from some remote warehouse."

## NOT A SOLO PURSUIT

Of his career, Guide says he has been fortunate to work with so many fantastic and talented Ph.D. students, co-authors, mentors, and colleagues over the years.

"I always like to stress that if you look at all of my research in the publications, there are a bunch of other names there with me," he notes. "I might have been better at herding people and pushing things, but it's all been a team effort. It's been wonderful to work around people who are really smart. That makes the difference."

**"I THINK WE'RE STARING DOWN AN ENVIRONMENTAL NIGHTMARE WITH AIR POLLUTION AND WATER LEVELS RISING."**

## SMEAL BY THE NUMBERS

How Smeal worked to make business better in 2021-22:

### WHO SIGNED THE HONOR CODE

Students, faculty and staff

3,401

### EFFORTS TO ACCELERATE THE INTEGRATION OF SUSTAINABILITY INTO BUSINESS

Research grants awarded by Center for the Business of Sustainability

\$25,100

Gifts & sponsorships received by the Center for the Business of Sustainability

\$118,953

Enrollment in Sustainability Undergraduate Courses

2,029

How two physicians and longtime friends turned to the Penn State Online MBA to enhance their leadership skills

# MASTERING THE BUSINESS OF HEALTH CARE

**P**enn State Health Milton S. Hershey Medical Center doctors Faisal Aziz and Umar Farooq mean business. Eager to advance their careers and strengthen the voice of physicians in an increasingly complex system, the longtime friends from Pakistan have opted to add a business education to their already extensive curriculum vitae.

Aziz, who is a professor of surgery and leads the Division of Vascular Surgery, and Farooq, an associate chief medical officer and associate professor of medicine, are pursuing the Penn State Online MBA, a program that is led by the Smeal College of

Business and delivered through Penn State World Campus.

The doctors have known each other for 26 years, attended medical school together at King Edward Medical University in Lahore, Pakistan, and have been colleagues at Penn State Hershey since 2011. They recently set out on the OMBA trail to attain a better grasp of the business aspect of health care.

Aziz is of the belief that career-oriented people should add something significant to their skillset each decade of their respective careers. And when it comes to the delivery of health care in an increas-

Physicians Faisal Aziz and Umar Farooq turned to the Penn State OMBA to sharpen their business acumen and strengthen their voice in an increasingly complex system.

BY JIM CARLSON / PHOTOGRAPHY BY CARDONI





Faisal Aziz, M.D., is a professor of surgery at the Penn State College of Medicine and leads the Division of Vascular Surgery at the Penn State Milton S. Hershey Medical Center.

ingly complex environment, Aziz says physicians should have more of a voice in that process.

“There’s need for more and more physicians to know about the basics of health care economics. Unless physicians are knowledgeable about the business of health care, they won’t have a seat at the discussion table.”

Farooq explains the criticality of understanding, managing, and meeting the complex needs and expectations of patients; providing the best possible access to care; and ensuring the highest level of quality possible. “That is the business of health care,” he says. “To provide the best patient experience is the No. 1 fundamental goal. And how do you also ensure a positive experience for the staff, physicians, and nurses so they continue to stay? It takes a lot of effort.”

Farooq explains that small hospitals and physician practices have given way to large, complex health care systems in communities across America – mostly to provide competitively superior programs and services to the patients who live there. “We have to establish the business, maintain the business, grow the business, make sure nobody steals our business, and we need to keep growing,”

he says. “Without a growth mindset, we are not very successful. We want to be a highly reliable organization, and to become that organization, so many things must happen behind the scenes.”

Each doctor took economics over the summer. “I’ve been making budgets for my division for such a long time, but I feel silly that I’ve been doing that without having the basic knowledge of business,” Aziz says. “I really love it because I feel like I’m discovering something which I never knew before.”

Farooq says the classes progressively would increase in complexity and difficulty. “The business school has assigned us advisers who are really shaping the classes in a way that we do foundational classes first and then we go to the advanced classes,” Farooq says. “So, by the time we go through advanced classes, we are ready for the level of difficulty.”

The program is constructed to have a “best of both worlds approach to learning,” according to Stacey Dorang Peeler, managing director of the Penn State Online MBA. “All required activities and assignments (except for the three-day residency) are asynchronous. We also offer synchronous sessions for those who want more connection,” Peeler says.

“Those are encouraged but never required. Students can also choose how many classes they take at one time to control their workload in a way that is appropriate for their specific needs. If something unexpected occurs, there’s also no issue taking a semester (or more) off and returning to the program at a later date when their schedule allows them to concentrate on coursework.”

Farooq, who along with Aziz is scheduled to complete the online degree in 2024, says the OMBA teaches the fundamentals of business while offering opportunities to specialize. “The program is

## “I’VE BEEN MAKING BUDGETS FOR MY DIVISION FOR SUCH A LONG TIME, BUT I FEEL SILLY THAT I’VE BEEN DOING THAT WITHOUT THE BASIC KNOWLEDGE OF BUSINESS.”



Umar Farooq, M.D., is an associate chief medical officer at the Penn State Milton S. Hershey Medical Center and associate professor of medicine in the Penn State College of Medicine.

not just a one-size-fits-all type of MBA program,” he explains. “Yes, there are some basic courses, but when you add the specialized courses, you can pick your concentration.

“We picked the health care concentration. While we are covering the gaps in knowledge for the basics of business — like economics and finance and the numbers game and how the markets run — we have the opportunity to enhance and to improve our current knowledge of health care administration. At the end of the program, I will become a better version of myself and serve my organization for the better.”

As a division chair, Aziz says he is now managing complex operational and financial issues related to vascular surgery across the burgeoning Penn State Health system. “I’m hoping that with the knowledge I’m going to gain from this MBA, I’ll be able to apply it not only to our folks at Hershey Medical Center, but across the health system; that would be helpful within the bigger picture.”

Peeler notes that the Penn State Online MBA uses partnerships across many Penn State units and campuses to offer a highly customized experience. “With 27 concentration options, no matter what someone’s academic and professional background is, we likely have something in the area in which they have interest,” she says. “In addition, our Creative Team Model incorporates the expertise of faculty, learning design, teaching support specialists and learning analysts to ensure the best classroom experience.”

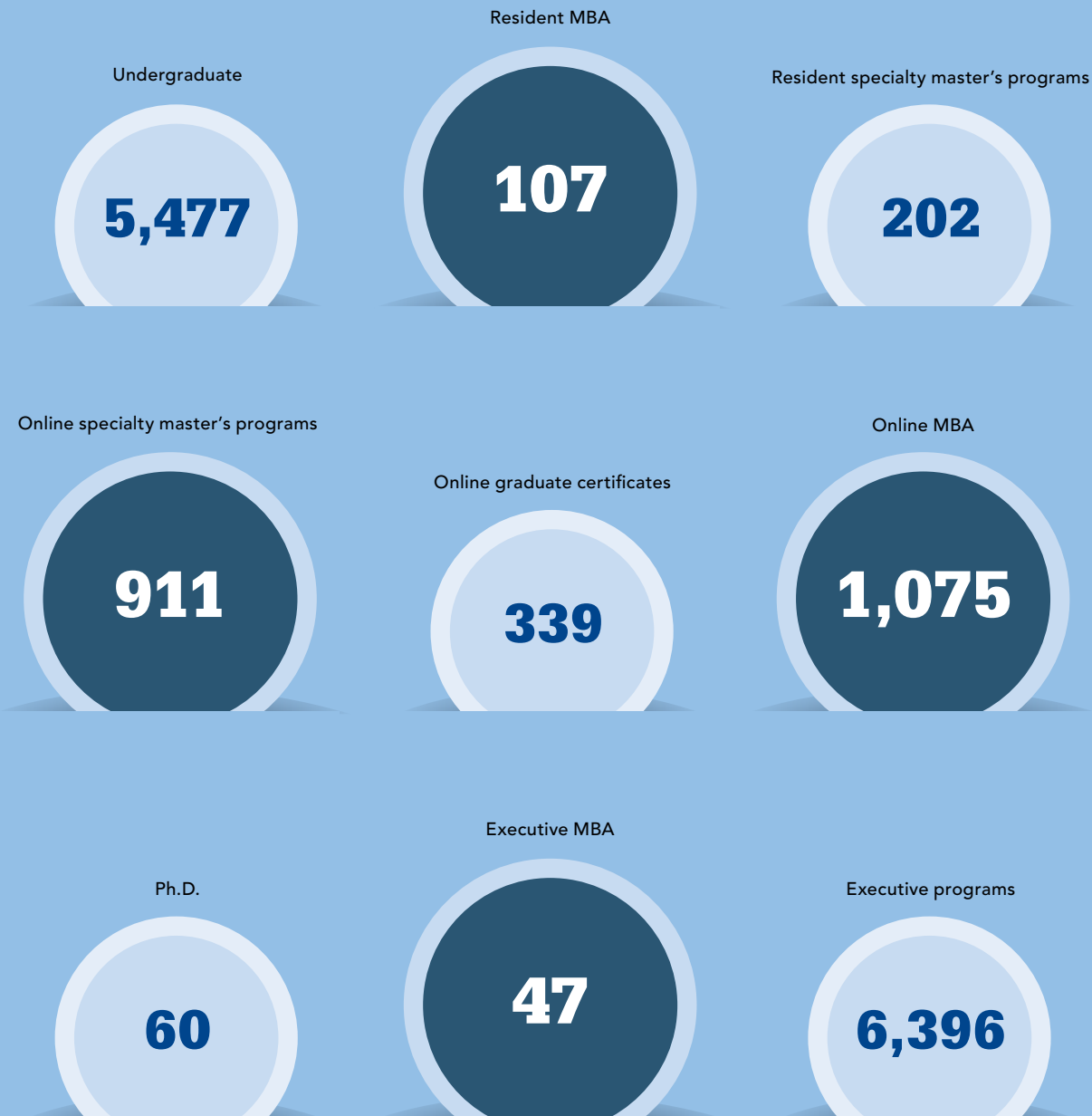
While Farooq reiterates the benefits of the program’s structure and flexibility, more important to him is its credibility and commitment to excellence. “Both of us have previously attended Penn State Leadership Academy, which is run by Smeal,” Farooq says. “There is credibility, there is convenience, and we have loyalty to Penn State. I’ve already completed a Master of Science through Penn State, and I did my fellowship training here. We have been faculty here, so we have a lot of loyalty to the University; that’s why we chose the (Penn State) Online MBA program.”

They also agree they’ll be business partners for life with Smeal. “The business world is a game of collaboration,” Farooq says. “You only grow by sharing, by engaging other people; I’ll probably engage some of those (Smeal) folks who I know, who I trust, who I validate. This (program) is helping me in many aspects of life.”

### SMEAL BY THE NUMBERS

In 2021-22, Smeal provided programs, support, and resources for every career stage and life circumstance.

#### ENROLLMENT



#### DEGREES CONFERRED



# GREATER, TOGETHER.

**W**e are pleased to share our success in the University's "A Greater Penn State for 21st Century Excellence" with you in this campaign retrospective.

While we often focus on the dollars raised in a campaign, the impact of those dollars is the true measure of success. From new scholarships to research support to innovative cocurricular experiences, the "Greater Penn State" campaign has helped position Smeal students to become active, ethical, engaged citizens and leaders in workplaces and communities around the world.

We could not have done this without loyal alumni, parents, corporate partners, and friends who, through their philanthropy and volunteerism, have demonstrated a commitment to creating a brighter future for Smeal students and faculty now and well into the future.

It's an exciting time to be a part of the Penn State Smeal College of Business, and I am looking forward to the myriad ways philanthropy will continue to enhance the future of business education.



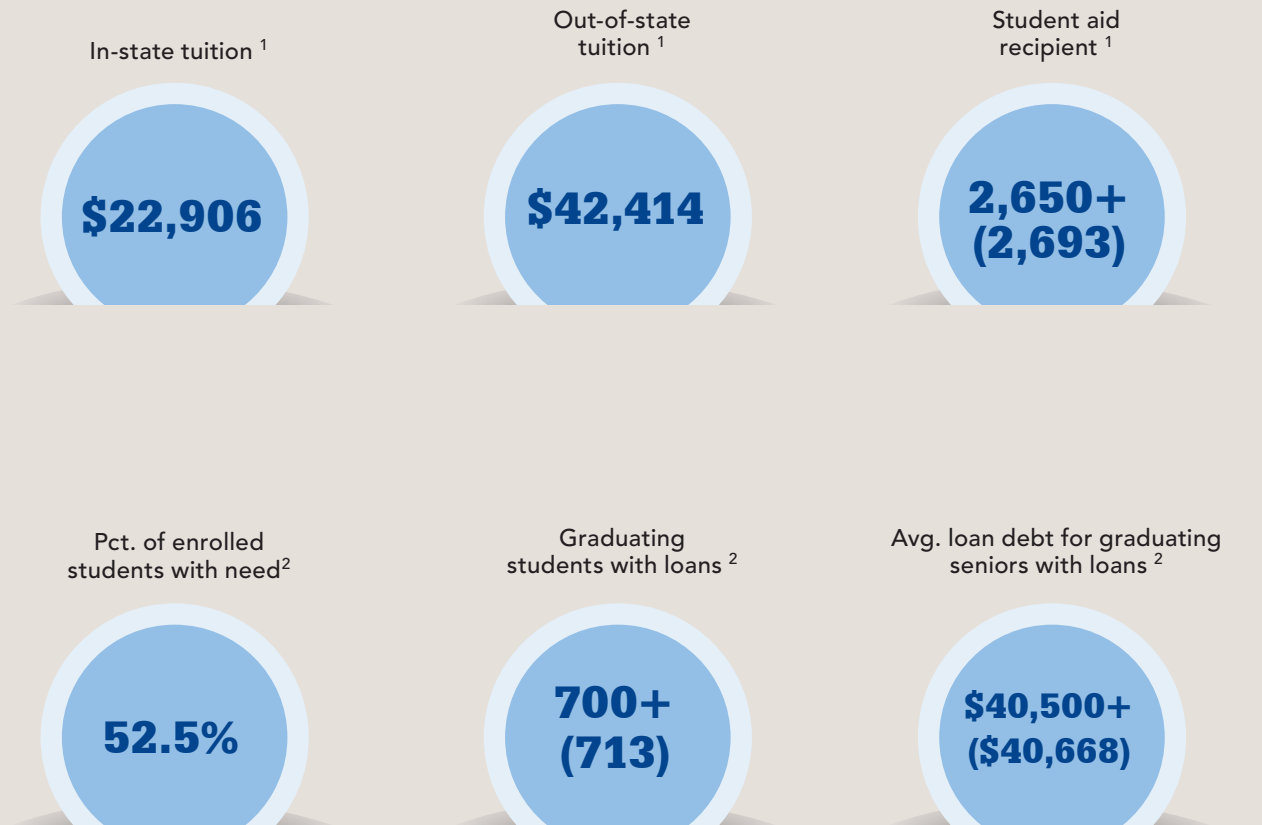
*Michelle*

Michelle K. Houser  
Senior Director of Development and Alumni Relations



## COST VS. NEED

"The growing financial need of our students was among our greatest concerns and most urgent priorities in the 'Greater Penn State' campaign."



SOURCES:

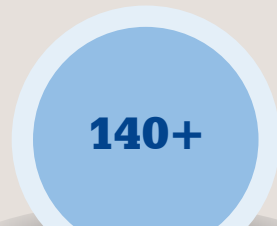
- Penn State University Budget office
  - Fall 2022, Years 3+4 Smeal tuition
  - Does not include estimated room and board
- Penn State University Office of Student Aid, 2019-2020

## SCHOLARSHIPS

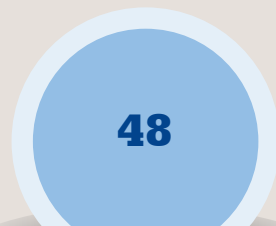
Total Raised



Total scholarships created



Open Doors Matching Scholarships



Educational Equity Matching Scholarships



UNDERGRADUATE AWARDING – FISCAL YEAR 2022

Undergraduate scholarships awarded



Average award



## STUDY ABROAD SCHOLARSHIPS (SPRING 2022)

Philanthropy also helps students study abroad, which enhances their academic experience, encourages personal growth, and prepares them for careers in a global economy.

Students abroad



Scholarships awarded



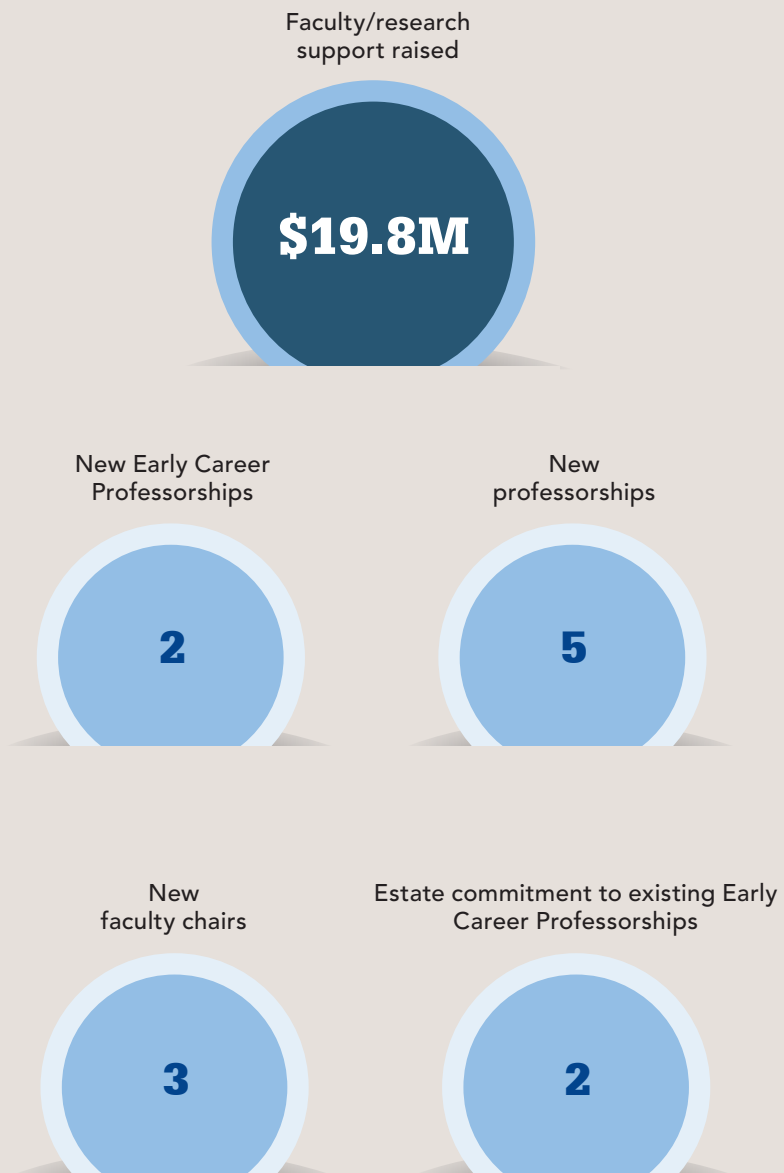
Total awarded



“My father lost his job as a direct result of the COVID-19 pandemic, and I was unsure if I would be able to complete school. The Open Doors scholarship I received allowed me to continue working toward my degree, and I was able to graduate with a double major.”

*Anonymous, Richard J. and Francine Dobkin Open Doors Scholarship*

## FACULTY SUPPORT

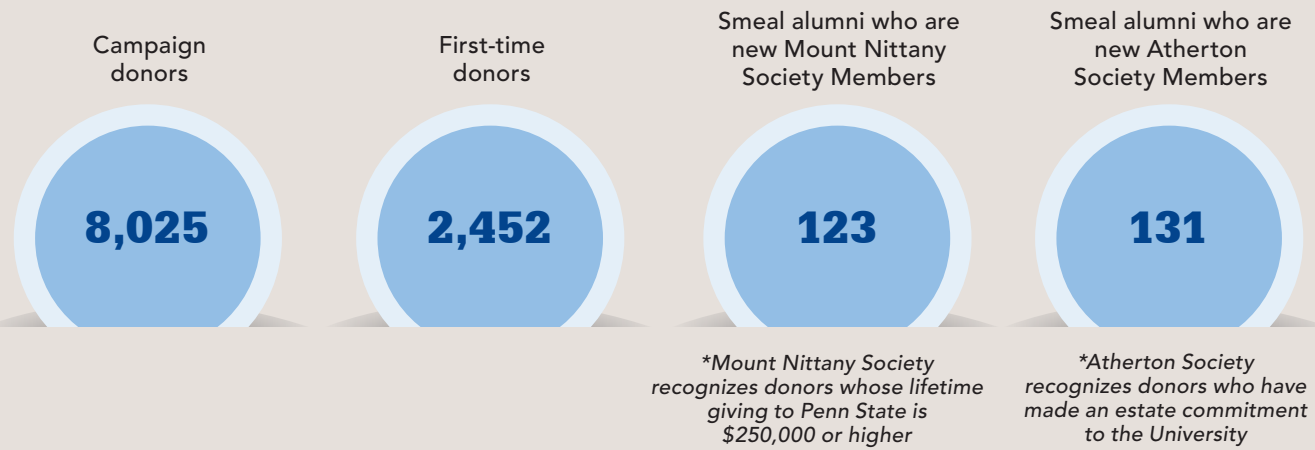


Resources from endowed faculty positions, like mine, help bolster the scholarly mission of Penn State. They provide for meaningful and stimulating learning experiences for our students—from incorporating the latest textbooks and materials into the classroom to bringing in guest speakers to share industry-focused perspectives. They also allow faculty to pursue their research interests. For me, that includes costly data sets, salaries for research assistants, and travel to disseminate my findings.”

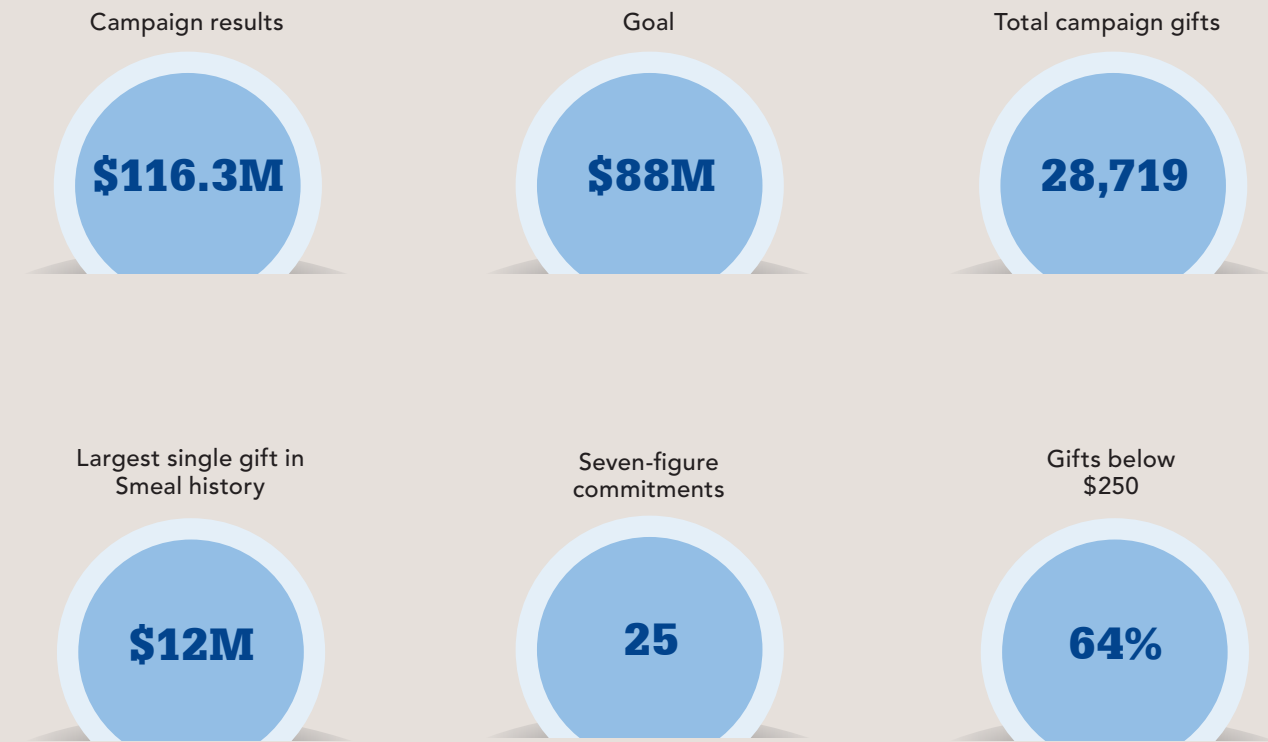
Dr. Eva Steiner, *associate professor of real estate, King Family Early Career Professor*



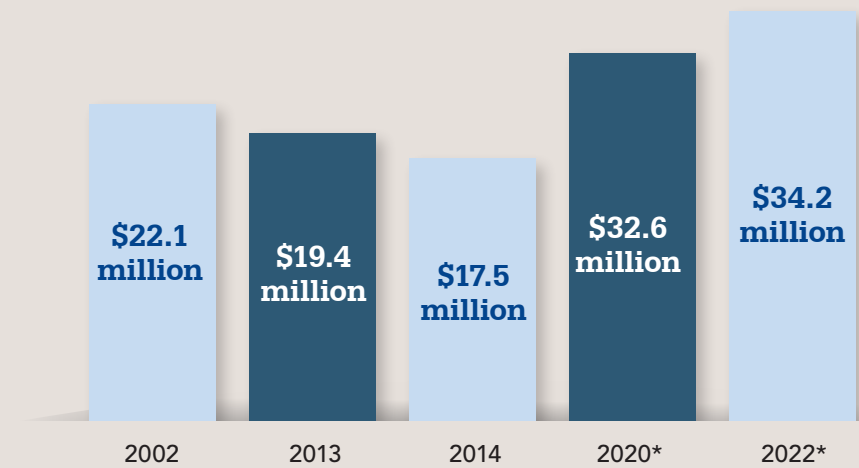
### DONORS



### GIFTS

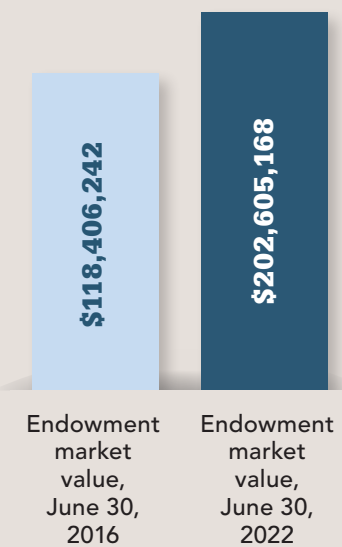


### TOP FIVE FUNDING YEARS

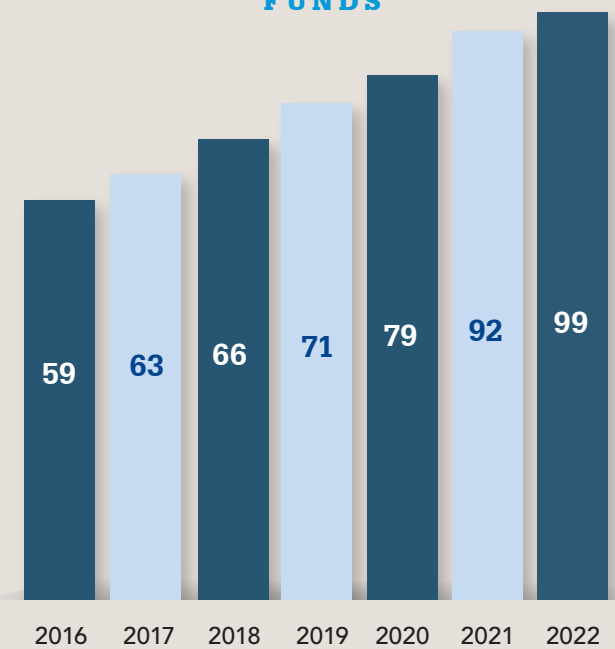


\*A Greater Penn State for 21st Century Excellence

### ENDOWMENT GROWTH



### PROGRAM FUNDS





### SMEAL CULTURE

Smeal’s culture is central to our identity as a leading business school. Philanthropy enhances this work.

#### SUSTAINABILITY

Philanthropic support (named funds)



Center corporate sponsors



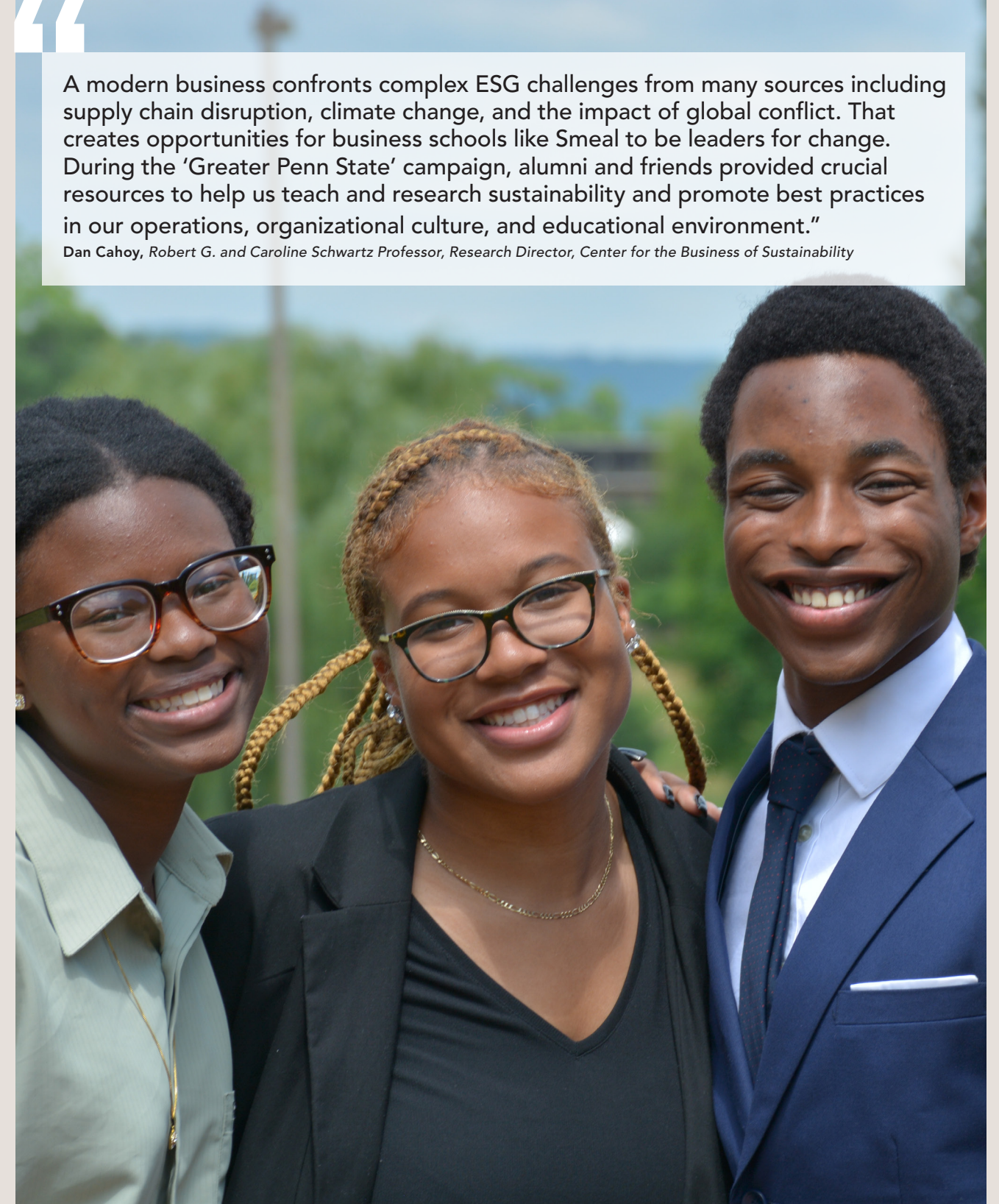
#### PHILANTHROPY SUPPORTS

20+ sustainability scholars
More than \$100,000 awarded in research grants
Susman Sustainability Award
10+ interns who helped develop Major Sustainability*
18 research seminars (including 6 in the 2021-2022 academic year)
Karen Winterich, the inaugural Gerald I. Susman Professor in Sustainability

\* Smeal’s unique educational platform which helps business schools find the connection between every business major and sustainability/ESG performance.



Scan to learn more



“A modern business confronts complex ESG challenges from many sources including supply chain disruption, climate change, and the impact of global conflict. That creates opportunities for business schools like Smeal to be leaders for change. During the ‘Greater Penn State’ campaign, alumni and friends provided crucial resources to help us teach and research sustainability and promote best practices in our operations, organizational culture, and educational environment.”

Dan Cahoy, Robert G. and Caroline Schwartz Professor, Research Director, Center for the Business of Sustainability



“The significant development and expansion of cocurricular student engagement opportunities at Smeal has been possible because of the generosity of our alumni and friends and their personal commitment to the centrality of integrity in business.”

Michelle Darnell, Director, Tarriff Center for Business Ethics and Social Responsibility

**HONOR AND INTEGRITY**

PSU 6 Case Competition



Ethics Case Competition Team



Smeal Ethical Leadership Challenge



Sapphire Leadership Academic Program's Ethics and Social Responsibility Team



Ethics component of the Schaefer Scholars Program



Giving Voice to Values



Student Organizations' Certification



Restorative Justice Initiative

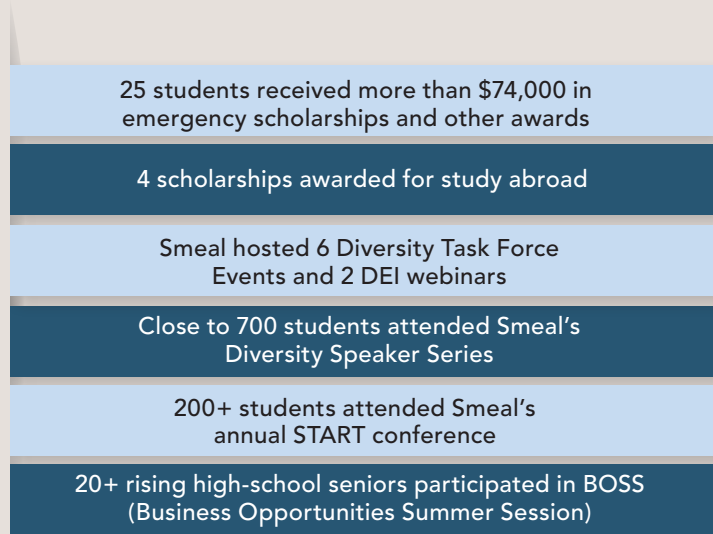


Treviño Excellence Initiative



**DIVERSITY, EQUITY, AND INCLUSION**

**THE IMPACT OF PHILANTHROPY  
IN FISCAL YEAR 2022**

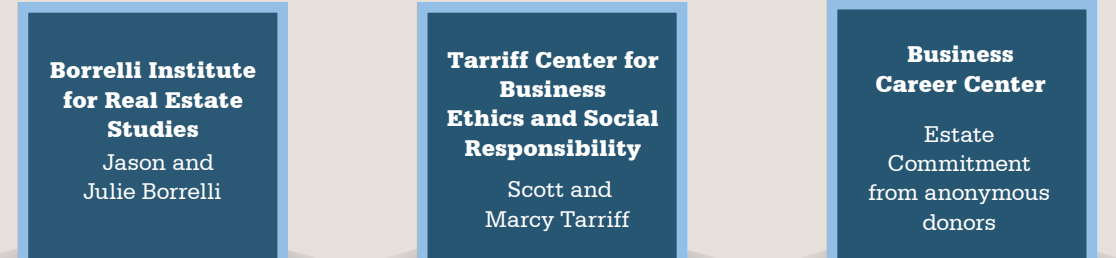


The philanthropic support the Office of Diversity Enhancement Programs receives allows us to provide the Smeal community with different perspectives on diversity, inclusion, equity, and belonging. It's allowed us to create new programs and engage with our students and faculty in unique and dynamic ways, and it's enabled our office to be a beacon of hope for students when they've faced challenging times."

Jamie Campbell  
Assistant Dean, Diversity Enhancement

**CENTERS & INSTITUTES**

Each of the following centers and institutes benefited from a \$5 million gift



BORRELLI INSTITUTE FOR REAL ESTATE STUDIES

CENTER FOR THE BUSINESS OF SUSTAINABILITY



The Borrellis' gift (to name the institute) was truly transformational. It's allowing us to expand our educational program offerings, enhancing our ability to create deeper connections with alumni and industry, and helping our faculty expand their teaching and research. All of this serves to strengthen our reputation as a leading academic institution in real estate scholarship."

Dr. Brent Ambrose  
Jason and Julie Borrelli Faculty Chair in Real Estate  
Director of the Borrelli Institute for Real Estate Studies



Since it launched in 2020, the center has already become a national and global leader in sustainability research, education, and industry engagement. The generosity of Smeal alumni and friends and the corporate partners who believe in and support our mission helps make this possible."

Erik Foley  
Director, Center for the Business of Sustainability

Smeal MBA alum pioneers accessibility in cryptocurrency investing

# A BRIDGE TO CRYPTO

**A**s the cryptocurrency market continues to evolve, obstacles such as education and accessibility have left many behind from reaping the economic benefits. A Penn State Smeal College of Business alum is breaking down these barriers by pioneering a new wave of accessibility in FinTech.

Natasha Bangopaul is the co-founder and chief operating officer of VegaX Holdings, which has developed a cryptocurrency technology platform that provides investors with “one-stop access” to secure

digital asset strategies and indexes — helping those without extensive knowledge on digital currency to experience the benefits of investing in it.

“We create infrastructure and build the technology to help traditional financial institutions and investors operate and enter into crypto,” Bangopaul says. “We want to be known as the company that makes it a lot easier for people to get into the crypto-world while bridging the gap between traditional finance and digital assets.”

**Natasha Bangopaul '10 MBA launched VegaX Holdings after identifying an opportunity to bridge traditional finance and digital assets.**

BY MELISSA MANNO / PHOTOGRAPHY BY CARDONI





## THE VALUE OF NETWORKING

The 36-year-old received her MBA from Smeal in 2010, basing her college choice on the close-knit community and smaller class sizes that allowed her to become close with both classmates and faculty who ultimately sculpted her positive experience in Happy Valley.

“Smeal prepared me for my traditional corporate experience and my entrepreneurship experience with all of the challenging classes and experienced professors who equipped me with the tools to

thrive in these environments,” Bansgopaul says.

She says the biggest lesson she learned from Smeal about running her own business was the importance of networking — a value that Smeal sees as integral to a student’s success.

“In these experiences, I was taught about corporate-level networking because of mandatory events such as going to company-specific dinners or being interviewed by alumni for job openings in their field,” Bansgopaul says. “There is so much preparation to help you better navigate the corporate world.”

Bansgopaul reflects on how making the most out

## “SMEAL PREPARED ME FOR MY TRADITIONAL CORPORATE EXPERIENCE AND MY ENTREPRENEURSHIP EXPERIENCE.”

of her Smeal education prepared her with the necessary skills to succeed in the corporate world — such as negotiations and strategic leadership classes, in addition to attending etiquette classes that focused on dress code and proper dining skills.

She describes having multiple mentors in the college who helped mold her aspirations to become an entrepreneur, including Raghu Garud, Farrell Chair of Innovation and Entrepreneurship. Garud says that he clearly remembered Bansgopaul as standing out amongst his MBA class.

“During the course, she stood out as a person who would make a difference,” Garud says. “She was an outstanding student — not only was she intellectually engaged but in addition she was socially immersed.”

After graduation, Bansgopaul worked at PepsiCo for several years before jumping ship to launch her first startup, which operated at the intersection of financial literacy and crowdfunding. In building blockchain technology while establishing her two other fintech companies — DarcMatter and Konstellation — she realized how difficult it was for people to understand what cryptocurrency and blockchain even meant — let alone how to invest in it.

## CONNECTING THE OLD WITH THE NEW

Bansgopaul and her business partner, Sang Lee, whom she met during their undergraduate education at Binghamton University, saw great potential in establishing a business based on building the bridge to help connect traditional finance with decentralized finance — or as Bansgopaul describes it: “connecting the old school with the new school.”

In 2019, they launched VegaX Holdings. Since its launch, Bansgopaul has increased the platform’s assets by over 10,000% with plans to close the company’s Series A round this year.

“Financial services, by their very nature, have

such huge inefficiencies which ultimately leads to big inequalities in access and cost. Ultimately, investors that may need the highest level of access are sidelined while investors that already have access are enhanced even further,” Lee says.

Lee, who currently lives in South Korea where VegaX has its second headquarters, says that the company provides the same level of access to all investors by making it automated and easy to understand.

Bansgopaul emphasizes that the largest obstacle the company faces is the very one that inspired her company in the first place: the lack of education regarding cryptocurrency.

“People assume that crypto is completely coming toward the disintermediation of banks or that we are trying to completely overhaul the financial system, but the reality is that there are a lot of changes that need to happen to make things more efficient and to move into the digital age,” she says.

With people either assuming they understand things that they don’t or refusing to learn new concepts, Bansgopaul says it’s a recipe for disaster. To combat it, her company provides context to people in the traditional finance world to help them better understand the dynamics of the crypto world so they can become active participants in it.

“The goal is to give everybody the tools they need to be able to succeed in this world versus a traditional world where those tools are often hidden behind dark curtains that you have no chance of opening,” Bansgopaul says.

## GROWING PERSONALLY AND PROFESSIONALLY

Since its launch, Bansgopaul says she’s experienced countless rewarding moments, such as the growth of the company’s employee base, which she says continues to attract people who want to advance the company’s position spearheading cutting-edge technology.

She’s also proud of securing venture capital seed funding, an accomplishment she described as being particularly hard because “Black women don’t get funding, let alone million-dollar seed funding, nor the chance to raise a Series A round.”

As a Black woman leader in FinTech, Bansgopaul says she’s faced significant challenges in navigating the space — like trying to attract investors who don’t look like her or are in “different circles.” However, she says she has welcomed these challenges as an opportunity to grow and notes that she’s seen progress in terms of diversity and inclusivity.

“There are more opportunities for women to

## “KEEP LEARNING, KEEP MEETING PEOPLE, AND KEEP TALKING ABOUT WHAT YOU’RE INTERESTED IN AND PASSIONATE ABOUT.”

learn and take ownership of the financial side of things, as well as ownership over what they see the future being since the industry is so young,” she says. “There’s a lot of opportunity for people to carve out lanes for themselves to learn and build — and I think that women particularly have taken that opportunity.”

Because of this, Bansgopaul is hopeful that in the future, there will be a lot more women who look like her at the table.

An illustration of her up-and-coming career trajectory, Bansgopaul was recognized as one of Penn State’s 2020 Alumni Achievement Award honorees, which highlights remarkable achievements from alumni 35 years and younger. She has also been honored as “Female Executive of the Year” and “Female Entrepreneur of the Year” from The Stevies organization and has been recognized by various publications throughout her career, including Forbes, FastCompany, Black Enterprise, Korea Times, Essence, and ThriveGlobal.

In March, Forbes published an article establishing VegaX as a “venture-backed company disrupting the Global FinTech Blockchain market.” To Bansgopaul, this reflects her business’s mission of building technology that allows all players to be entered into this space, “whether you are a big institution or a person who has never had a bank account.”

The article claims that a higher percentage of Black people (23%) own cryptocurrency than Hispanics (17%) or white Americans (11%). In response to this, Bansgopaul emphasized that a core focus of her company is making sure that disadvantaged and minority communities can access the market in a meaningful way. People of color have historically faced more obstacles in traditional institutions, so they are seeking out ways to invest in crypto. Many minority communities, however, still do not have the resources to teach how to invest in crypto. Bansgopaul’s company tries to fill that void and simplify the process.

To ensure this, the company offers workshops on digital assets and other incentives to minority- and women-led communities and organizations inter-

ested in entering the space, which she describes as a passion project she shares with her business partner due to their own experience living in these communities.

On top of her own business endeavors, Bansgopaul is also an advisor for EMTECH, a FinTech firm building modern financial infrastructure for central banks, and Waju Water, a New York-based beverage company utilizing upcycled processes.

In 2021, Bansgopaul was selected as a White House Presidential Innovation Fellow, a prestigious, rigorous program for the country’s leading technologists. In her position, she is detailed to the National Institute for Standards and Technology leading artificial intelligence initiatives on transparency.

“The goal of the program is to provide technologists with a year of governmental duty working on significant problems that their assigned agency may be having with the goal of providing positive impact and services for the public at large,” Bansgopaul says. “It is a wonderful program full of extremely intelligent and accomplished people who are all focused on this collective goal of making things better for the public.”

In 10 years, Bansgopaul said she hopes the company is continuing to grow and is operating as a service provider for 95% of financial institutions globally. She emphasized that her company’s primary focus is not to become a household name, but rather to become the standard for helping people better navigate the market so they can experience its benefits.

Her advice to people who aspire to launch a company or pave a unique way to success is simple: continue finding ways to inspire personal and professional growth.

“Keep learning, keep meeting people, and keep talking about what you are interested in and passionate about,” she says. “Because I think a lot of opportunities pop up from people understanding what your visions are and where your passions lie.”

## SMEAL BY THE NUMBERS

Here is a glimpse at how Smeal prepared students to make an immediate impact in the real world this past year:

### BUSINESS CAREER CENTER

(% of students who completed at least one internship)



### CAREER FAIRS

Companies



Events



Student Participants



### EXPERIENTIAL LEARNING PROGRAMS

APEX students



NITTANY LION FUND

Students



Investors



Holdings/market value as of June 30, 2022



### NITTANY LION CONSULTING GROUP STUDENTS



### STUDENTS PARTICIPATING IN CASE COMPETITIONS



Researchers probe the impact of irrational decision making in the supply chain

# THE BULLWHIP EFFECT

It's spring 2020, and the COVID-19 pandemic has arrived. Nervous consumers rush to stock up on hand sanitizer, buying much more than they need — "just in case." In response to the spike in consumer demand, retailers increase their orders to manufacturers, who scramble to keep up, ramping up production.

Fast forward to today: Hand sanitizer is abundant, easy to find, and often deeply discounted.

This is a classic example of the bullwhip effect: when a small change in consumer demand leads to much greater changes in demand for raw materials

at the factory level. Brent Moritz, associate professor of supply chain management in the Penn State Smeal College of Business, along with co-authors Arunachalam Narayanan, associate professor of analytics at the University of North Texas, and Chris Parker, associate professor of information technology and analytics at American University and a former member of the Smeal faculty, recently published a paper that explores the bullwhip effect in the journal *Manufacturing & Service Operations Management*.

Moritz and his colleagues specifically examined

BY KRISTA WEIDNER / ILLUSTRATION BY TAYLOR CALLERY





Photo provided by Stephen Moyer

## “THE BEER GAME ALLOWS US TO OBSERVE, IN A CONTROLLED SETTING, HOW SUPPLY CHAINS WORK TOGETHER WHEN YOU HAVE MULTIPLE PEOPLE MAKING INDEPENDENT DECISIONS.”

Brent Moritz, associate professor of supply chain management, and a team of researchers examined how irrational ordering can disrupt the supply chain and set off the bullwhip effect.

how irrational ordering can disrupt the supply chain and set off the bullwhip effect. Using a variation of the well-known simulation called the Beer Game, invented at MIT’s Sloan School of Management, they observed what happened when humans acted as inventory managers in a simplified, four-level supply chain: retailer-wholesaler-distributor-factory.

“The Beer Game allows us to observe, in a controlled setting, how supply chains work together when you have multiple people making independent decisions,” Moritz says. “Supply chains can be more or less complicated than that four-level model, but the Beer Game has enough complexity to show relationships between levels in the supply chain without being too difficult to understand.”

The researchers wanted to measure the impact of behavioral ordering — sometimes called irrational ordering — on the supply chain and differentiate that from rational ordering.

Rational ordering, Moritz explains, is behavior, absent of emotion, that’s based on the structure of supply chains and how they work. “So, if you have a small increase in ordering at the retail level, for example, some of that increase will get passed to the wholesale level, and that wholesaler should logically increase orders based on that signal,” he says. “That’s the rational, logical thing to do.”

On the other hand, irrational ordering can happen when the person placing the order gets nervous and overreacts to an increase in demand — ordering much more than needed (“just in case”) or forgetting about inventory they’ve already ordered but haven’t yet received.

They found that, while irrational behavior by a distributor or factory mostly impacts those same levels of the supply chain, irrational behavior by a retailer creates a ripple effect that travels to other levels of the supply chain.

“Our results show that inserting a human decision maker into a supply chain is more costly than expected, that this cost increase is greatest when humans are at retailer level, and that those retailer-level decisions affect the entire supply chain,” Moritz says. “Moreover, we found that having multiple individuals making ordering decisions increases the bullwhip effect.”

He points out that, contrary to some previous research that explains the bullwhip effect as a natural consequence of the structure of the supply chain, “we show that it’s not just the structure, it’s not just rational, there is human behavior that makes the bullwhip effect worse.”

In their analysis of the behavioral implications of effective supply chain leadership, Moritz and his colleagues argue that information sharing across the supply chain could help mitigate the bullwhip effect. “In our Beer Game setting, one intervention is to allow everyone to share information about consumer demand across the supply chain,” he explains. “Unfortunately, in the real world, that’s not always possible.”

He cites the relationship between Procter & Gamble and Walmart as an example of established information sharing between two large companies. “P&G has very good information sharing with a company like Walmart. So, when someone buys a box of Tide at Walmart, P&G sees not only the inventory levels of Tide on the shelves, they know that somebody just bought a box. They can see what the consumer demand is, so they are far less likely to overreact to demand. But if you’re a small retailer, say a mom-and-pop convenience store that happens to carry a little bit of Tide, you don’t have that same level of information sharing.”

The researchers also included a brief cognitive reflection test in their Beer Game simulation and found that individuals who scored high on cognitive reflection tended to exhibit less irrational behavior, and supply chains with more of those individuals had better performance. “This suggests that managers should carefully consider training and evaluating their employees before assigning them to key supply chain roles that require high cognitive reflection,” Moritz says. “Having decision makers with high cognitive reflection can partially mitigate costs and improve results for both the firm and the supply chain.”

*This research was funded by the Penn State Smeal College of Business, the G. Brint Ryan College of Business at the University of North Texas, and American University.*



## SMEAL BY THE NUMBERS

Smeal's Driven Community

### ALUMNI NETWORK

Living alumni

90,000+

Alumni volunteers

450+

### ALUMNI CAREER SERVICES

Career coaching clients

193

Countries represented

CN, BO,  
CR, IN, JP,  
PR, SA

U.S. States represented

PA, NJ,  
NY, FL,  
CA, TX

### ALUMNI WHO REGISTERED FOR SMEAL ALUMNI RELATIONS AND AFFINITY GROUP EVENTS

2,500

### ALUMNI-UNDERGRADUATE STUDENTS MENTORING RELATIONSHIPS

350+

## RANKINGS

UT Dallas Top 100 Business School Research Rankings

25

Undergraduate Education

23

U.S. NEWS & WORLD REPORT

Resident MBA  
Overall Public institutions

33

13

Online MBA

15

GARTNER SUPPLY CHAIN TOP 25

Undergraduate

Graduate

10

1

## FACULTY RESEARCH

Conference presentations

358

Published articles

103

Journal editorial positions

104

Published books or chapters

16

## SMEAL TEACHING AWARD WINNERS

Fred Brand, Jr. Teaching Award  
Ron Johnson

Undergraduate Student Teaching Excellence Award  
Jason Acimovic

Graduate Student Residential Teaching Excellence Award  
Sajay Samuel

Online Teaching Excellence Award  
Al Vicere

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Wenpin Tsai

Ossian R. MacKenzie Teaching Award  
Nathan Allred

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Rashmi Sharma

Innovation in Teaching Award  
David Lenze

Impact Award  
Karen Winterich

Fiscal Year 2022 represented the most successful fundraising year in the history of the Penn State Smeal College of Business.

PHILANTHROPY



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- Terrence R. Guay, *Associate Dean for International Programs and Director, Center for Global Business Studies*
- Felisa D. Higgins, *Associate Dean for Undergraduate Education*
- Richard L. Ayers, *Chief Marketing Officer and Assistant Dean for Strategic Communications*
- Jamie Campbell, *Assistant Dean for Diversity Enhancement*
- Rebecca J. Cianci, *Assistant Dean for Administration*
  
- Brent W. Ambrose, *Director, Ph.D. Program and Director, Borrelli Institute for Real Estate Studies*
- Keith J. Crocker, *Chair, Department of Risk Management*
- William A. Kracaw, *Chair, Department of Finance*
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- Meg G. Meloy, *Chair, Department of Marketing*
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- Westley B. Bumbarger, *Financial Officer*
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- Erik B. Foley, *Director, Center for the Business of Sustainability*
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## ALUMNI CAREER SERVICES

Find tools to advance your career, including career coaching, live webinars and podcast episodes, and more at [smeal.psu.edu/alumni/alumni-career-services](https://smeal.psu.edu/alumni/alumni-career-services).

**There are many ways for you to stay connected with Penn State Smeal and each other. To learn more, contact Michelle K. Houser, senior director of development and alumni relations, at:**

**(814) 865-7830**  
**[mhouser@psu.edu](mailto:mhouser@psu.edu)**  
**[smeal.psu.edu/alumni](https://smeal.psu.edu/alumni)**