

**PURDUE**  
RESEARCH FOUNDATION

*TRANSFORMING THE FUTURE*

PURDUE RESEARCH FOUNDATION | 2019 ANNUAL REPORT



# *OUR MISSION*

The mission of the Purdue Research Foundation is to advance Purdue University's quest for preeminence in discovery, learning and engagement through effective stewardship of assets.

## THE FOUNDATION:

- Works with Purdue's Master Planners to direct property and real estate management.
- Develops, manages and deploys real estate and financial assets.
- Provides accounting and financial activity support for Colleges' discretionary funds.
- Manages grants received by Purdue.
- Protects Purdue's intellectual property.
- Supports innovation and commercialization activities.
- Fosters Purdue's role in economic development across the State of Indiana.
- Manages programs to support student affordability initiatives.
- Advances giving through the University Development Office.
- Develops and manages new programs and initiatives for the benefit of Purdue.











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It's been another remarkable year for the Purdue Research Foundation as we joined Purdue University throughout 2019 in marking its 150th anniversary. A momentous celebration that culminated in October with the announcement that the University Development Office raised \$2.529 billion for Purdue University. The Development Office is a division of the Foundation.



**BRIAN EDELMAN**  
PRESIDENT  
PURDUE RESEARCH FOUNDATION

Throughout this past year, we celebrated innovators, entrepreneurs and researchers who are using their time and talents to change the world. We joined Purdue in looking ahead to the next 150 years of innovations and technologies in health, space, artificial intelligence, sustainability and other areas.

For the \$1 billion-plus Discovery Park District, a designated Opportunity Zone, we saw the opening of Aspire, Convergence and other buildings that are part of the 30-year commitment to transform the west side of the Purdue campus into a mixed-use "Front Door" for intellectual discourse and commercial partnerships. We already have three international companies taking space in the District:

- Schweitzer Engineering Laboratories, SEL, will open a 100,000-square-foot electric power research facility this year.
- Rolls-Royce will expand engine control capability for U.S. defense, also this year.
- Saab's global defense and security division has broken ground on a \$37-million facility to support production of the U.S. Air Force's T-7A Red Hawk. The facility is slated to open next year.

In 2019, the Foundation continued its mission of serving Purdue by promoting the commercialization of new technologies and innovations and building great spaces for the human interactions needed to create these advances making the world a better and safer place.

With a strategic goal directed by the Office of Technology Commercialization and Purdue Foundry, we had 17 startups created based on Purdue University intellectual property.

There also were 31 other startups with company-owned intellectual property. Since 2013, Purdue has produced a total of 251 startups with nearly \$400 million in funding and investments supporting more than 300 new jobs. In 2019, the Wall Street Journal listed Purdue No. 3 nationally and No. 6 globally in startup creation from university technologies.

Ten Purdue startups have been acquired by major national or international companies including Endocyte Inc., which was acquired for \$2.1 billion by Swiss pharmaceutical giant Novartis AG in 2018.

The Office of Technology Commercialization also reported 360 invention disclosures, 20 copyright disclosures, 141 U.S. patents and 136 commercialization deals. Purdue ranked 12th worldwide among universities granted U.S. utility patents.

The Back a Boiler Income Share Agreement program marked its 1,000th contract for student funding in 2019. The program provides an alternative for Purdue students to Federal Parent Plus and private student loans. The program continues to flourish since being introduced in Academic Year 2016-17 and to be of interest to more and more institutions of higher learning.

The Foundation also continued to provide other essential services to the University, including purchasing and selling real estate, providing accounting and financial services and managing Purdue's endowment investments as outlined in our mission to serve Purdue.

You can read more of these accomplishments in this report. We are proud of the contributions that the Purdue Research Foundation is making to advance Purdue's persistent pursuit of preeminence in discovery, learning and engagement.



There is much to celebrate as the Purdue Research Foundation recognizes its 80th year. Founded in 1930 at the very cusp of America's Great Depression, two intrepid innovators and entrepreneurs sought a way to advance the technologies coming out of university research and support America's struggling economy.

David Ross; an Indiana inventor whose patented innovations are still used in the 21st century, and Josiah Lilly, business leader, industrialist and president of Eli Lilly and Co., each donated \$25,000 to establish the Purdue Research Foundation.

The goal was to move intellectual property from the classrooms and laboratories of Purdue University to useful application through industry. However, as a publicly supported university Purdue could not legally collaborate or license its inventions to private industry.

Through the creation of the Foundation, Ross and Lilly created a nonprofit as a separate legal entity, which could make contacts with industry. It would benefit Purdue by helping to build its graduate school while moving University innovations to the public to improve people's lives. It also would help industry by providing valuable intellectual property.

One early contribution of the Foundation was creating the Amelia Earhart Fund for Aeronautical Research in 1936 that raised the \$80,000 she used to purchase a Lockheed Electra airplane.

In 1961, the Foundation created the Purdue Research Park in West Lafayette, Indiana. It was the third university-based park established in the United States. Stanford Research Park was founded in 1951, and the Research Triangle Park in North Carolina followed in 1959.

In 2016, the Foundation established the Discovery Park District, a \$1 billion-plus enterprise that will transform the west side of the Purdue campus. Already the District has opened housing, restaurants and parks along State Street, a main thoroughfare through the Purdue campus. Industry in the District includes international companies such as Rolls-Royce, SEL (Schweitzer Engineering Laboratories) and Saab.

The Foundation also supports Purdue's mission of student affordability through its Back a Boiler – ISA Fund, which is part of the University's Affordability and Accessibility – Purdue Moves, to help students pay for their education.

The Foundation will continue to celebrate its past as it transforms the future.

# HISTORY

CELEBRATING OUR PAST  
AND FUTURE



DAVID ROSS



JOSIAH LILLY

# Discovery Park DISTRICT

TRANSFORMING THE FUTURE

*Coworking space at the Convergence Center  
in Discovery Park District.*



Discovery Park District took several giant leaps forward with a number of new enterprises to support the long-term transformation of the \$1 billion-plus Discovery Park District. Adjacent to the west side of Purdue University campus, the District's goal is to become a preeminent environment for intellectual discourse and high-tech commercial enterprise.

The District is growing even faster than anticipated with seven major projects underway or completed. The 450-acre District already offers a thriving, walkable, urban setting that provides a unique opportunity to collaborate with thought leaders, visionaries, researchers and students at Purdue University.

The District is designed to support up to 7-million-square-feet of laboratories, advanced industrial and manufacturing facilities, collaborative office spaces, retail establishments, restaurants, residential housing, green space and walking paths. Managed by the Purdue Research Foundation and its master plan partner Browning Investments LLC, the District includes access to the Purdue University Airport with a 7,000-foot runway – a rare feature on a university campus that provides important transportation for national and international visitors.

International companies including Saab and Rolls-Royce broke ground for new facilities or expanded existing facilities and Schweitzer Engineering Laboratories is opening its new facility in the District bringing high-tech jobs with strong research and development. Aspire at Discovery Park District and the Convergence Center for Innovation and Collaboration both opened this year.

*“Discovery Park District is becoming a gateway not only for our community but for intellectual discourse as students, faculty and staff interact with commercial partners in an area that will feature modern and innovative living, learning, shopping, dining and recreation.”*

**JEREMY SLATER**  
DIRECTOR, DISCOVERY PARK DISTRICT





SEL

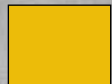
ROLLS-ROYCE -  
NEW TEST FACILITY

PTCA  
(ROLLS-ROYCE)

STATE STREET

PROVENANCE

CONTINUUM



CONVERGENCE

ASPIRE

AIRPORT ROAD

U.S. 231

SAAB



ZUCROW  
LABS

PURDUE UNIVERSITY  
AIRPORT



# SAAB

## A PARTNERSHIP TAKES OFF

*“Saab’s investment will bring more cutting-edge research partnerships for our faculty, more high value employment and internship opportunities for our graduates, and more jobs and economic vitality for our neighbors.”*

**MITCHELL E. DANIELS, JR.**  
PRESIDENT, PURDUE UNIVERSITY



Global defense and security company Saab will locate a new U.S. manufacturing operation in Discovery Park District Aerospace on the west side of the Purdue University campus, to support production of the U.S. Air Force’s T-7A Red Hawk.

The Stockholm-based company will invest \$37 million to locate and build an Indiana-based workforce in West Lafayette. Saab will construct and equip a facility to manufacture a significant portion of the Red Hawk, which will help train future U.S. Air Force pilots for generations to come. Saab is both a partner and supplier to Boeing on the program. The facility will create up to 300 new jobs, with hiring starting this year.



# ROLLS-ROYCE

## EXPANDING A PARTNERSHIP

*“Rolls-Royce has partnered with Purdue University for decades, and we are excited to launch our new controls capability near the campus to assemble and test these high-tech engine components.”*

**TOM BELL**  
ROLLS-ROYCE PRESIDENT, DEFENSE  
AND CEO OF ROLLS-ROYCE NORTH AMERICA

Rolls-Royce has created a new engine controls capability near the Purdue University campus to support its U.S. defense business, including the F130 engine competing for the U.S. Air Force B-52 program.

Rolls-Royce will assemble and test electronic engine controllers, which help manage in-flight engine operations. The first controller has been completed at Rolls-Royce in the Discovery Park District and will be installed onto a Rolls-Royce AE 3007H engine, manufactured at the company's facilities in Indianapolis.





# SCHWEITZER ENGINEERING LABORATORIES

AN ALUMNI RETURNS TO PURDUE

*“It’s exciting for us to expand in the Midwest and a sound business investment to move into Purdue’s Discovery Park District. We also will take advantage of all the resources Purdue has to offer.”*

**EDMUND O. SCHWEITZER III**  
FOUNDER, PRESIDENT AND CHIEF TECHNOLOGY OFFICER  
OF SCHWEITZER ENGINEERING LABORATORIES



Schweitzer Engineering Laboratories broke ground on a 100,000-square-foot facility for electric power research that will support 300-plus new high-tech jobs and serve as an anchor in the Foundation’s Discovery Park District. Edmund O. Schweitzer III, founder, president and chief technology officer of Schweitzer Engineering Laboratories and Purdue alumnus (BSEE 1968, MSEE 1971), and his wife, Beatriz Schweitzer, took part in the ceremony. The facility will open this year.



## Other new enterprises and expansions in the District include:

- **The Purdue Technology Center Aerospace** – often referred to as the Rolls-Royce building – was finished in 2017 at the corner of Indiana 26 and U.S. 231. Rolls-Royce is designing, developing and testing jet engine components, collaborating with Purdue researchers through corporate partnerships and recruiting future talent of Purdue student interns and graduates to work in the facility.
- **Convergence**, a 145,000-square-foot, five-story office building in the District that opened this year. The building is designed to serve as a bridge to further support connections among Purdue University research with technology commercialization and startup creation.
- **Aspire**, an 835-bed apartment complex opened in the fall of 2019 at State Street and MacArthur Drive. The four-story, three-building community features a variety of studio, two- and four-bed apartments and smart home technology. The 8,000-square-foot Crave Food Hall offers a variety of food including pizza, burgers, tacos and sandwiches.
- **Provenance**: A walkable, new urbanist neighborhood development in the District will set center stage for people who seek a quality of life that is close to the energy of a university campus. The intergenerational design for Provenance will feature single-family detached homes, townhomes, cottages, condominiums and market rate apartments. It also includes plans for features such as a community center, fitness center, restaurants and retail, day care facility and preschool, a centralized greenspace and community gardens.
- **Continuum**, a joint venture between Browning Investments LLC and J.C. Hart Co. Inc. to develop about 250 apartments and 15,000 square feet of street-level commercial space in Discovery Park District. The ground floor commercial space is designed to accommodate a diverse mix of uses including restaurants, cafes, convenience retail and soft goods shops.



**PURDUE TECHNOLOGY CENTER AEROSPACE**



**CONVERGENCE**



**ASPIRE**



**PROVENANCE**



**CONTINUUM**

# BACK A BOILER

**IT'S NOT A LOAN AND YOU'RE NOT ALONE.**



## BACK A BOILER – ISA FUND

Back a Boiler Income Share Agreement is part of Purdue Moves: Accessibility and Affordability, a multifaceted program created by Purdue University President Mitch Daniels to make higher education more affordable and to reduce student debt. Managed by the Purdue Research Foundation, the program was launched during the 2016-17 academic year as an alternative to private and Parent PLUS loans for students who need additional funding to pay for their education.

## HELPING STUDENTS

To date, there are more than 1,200 contracts with students enrolled in Back a Boiler who have received funding totaling over \$13.9 million. All Purdue University colleges and more than 150 majors are represented in the student participation. The top seven colleges represented are: Engineering, Polytechnic Institute, Health and Human Sciences, Science, Liberal Arts, Agriculture and Krannert School of Management.

## HOW THE PROGRAM WORKS

An Income Share Agreement is a contractual agreement in which a student receives education funding in exchange for an agreed-upon percentage of post-graduation income over a set number of years. Participants in Back a Boiler also may apply for available funding support from the Pave the Way program offered as a philanthropic component through the University Development Office.

## WHO IS ELIGIBLE?

Back a Boiler – ISA Fund is available to Purdue's rising Sophomore, Junior and Senior level students enrolled at Purdue West Lafayette campus for the fall, spring and summer academic sessions. Students, parents and/or guardians who may have questions about the program, are interested in learning may email [BackaBoilerinfo@prf.org](mailto:BackaBoilerinfo@prf.org).





*"Making a college education accessible and affordable is a driving principle at Purdue, and it's our mission to provide students with the tools to make that possible. Back a Boiler is an option, unique to Purdue, that we can offer students who are weighing options for financing their education in a way that is both fiscally sound and personally manageable."*

**HEIDI A. CARL**  
EXECUTIVE DIRECTOR, FINANCIAL AID

## MILESTONES: 1,000TH CONTRACT

When Purdue Polytechnic Institute junior Kai Mangiaracina hit the "submit" button for his application to the university's Back a Boiler – ISA Fund for the current academic year, he had no idea that his was to become the program's 1,000th contract.

He also wasn't aware that what was a milestone for the income share agreement program, which provides students an alternative to Federal Parent PLUS and private student loans, was to become a windfall for him.

On November 21, Mangiaracina learned that to commemorate the 1,000th contract, Back a Boiler will slash his current contract obligation by half — or more than \$5,000.

## OTHER PURDUE UNIVERSITY AFFORDABILITY MEASURES INCLUDE:

- Purdue University President Mitch Daniels announced plans in February to hold tuition constant on the West Lafayette campus for the ninth year in a row, extending the tuition freeze through the 2021-22 academic year. This means current students at the West Lafayette campus pay nearly the same in tuition and fees as students attending in the 2012-13 academic year.
- Room and board rates at the West Lafayette campus have seen no increase for eight consecutive years.
- During fiscal years 2013-19, Purdue families have saved more than \$465 million through the University's deferral of tuition, fee, and room and board increases.

# PURDUE

## OFFICE OF TECHNOLOGY COMMERCIALIZATION

Purdue Research Foundation's Office of Technology Commercialization (OTC) operates one of the most comprehensive technology transfer programs among leading research universities in the United States. Services provided by this office support the economic development initiatives of Purdue University and benefit Purdue's academic activities.

INNOVATION. INVENTION. IMPACT.

**Innovation:** Protect Purdue innovations.

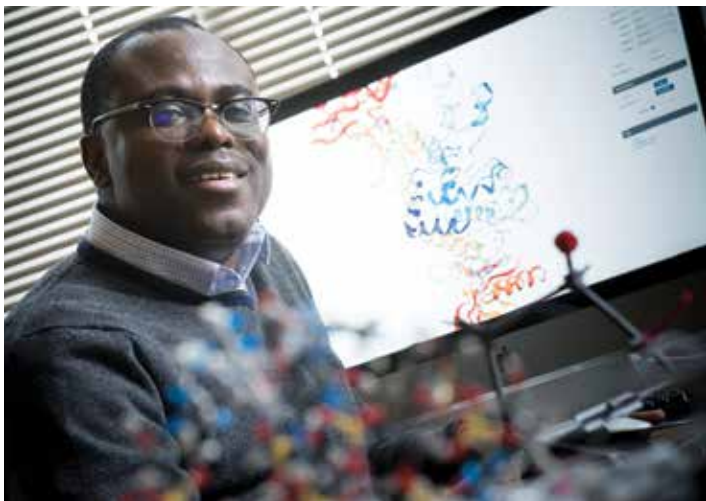
**Invention:** Patents filed and invention moved to commercialization.

**Impact:** Purdue innovations used in more than 100 countries worldwide by millions of people.

With 380 invention disclosures, Purdue researchers experienced a record-breaking year in 2019 of innovations filed through the Office of Technology Commercialization and reported another strong year for startup and commercialization activities.

Purdue was ranked 12th in the world among universities granted U.S. utility patents in 2018 by the National Academy of Inventors and the Intellectual Property Owners Association. Purdue was ranked 17th the previous year by the same organizations.

In 2017, the Milken Institute ranked Purdue 12th overall in its list of best universities for technology transfer, and No. 1 in the Midwest and No. 1 nationally among public institutions without a medical school.







*“Purdue has world-renowned innovators that develop over 300 new technologies each year. Our team works diligently with them to protect Purdue’s intellectual property and to identify the best licensing partner to bring the innovation to market. It is an honor to help steward these important innovations into products that are helping people throughout Indiana and around the world.”*

**BROOKE BEIER**  
VICE PRESIDENT

OFFICE OF TECHNOLOGY COMMERCIALIZATION

380

DISCLOSURES

671

TOTAL PATENT  
FILINGS

INCLUDING 501  
U.S. FILINGS

136

LICENSE AND OPTION  
AGREEMENTS

CONTAINING 231  
TECHNOLOGIES

12<sup>th</sup> AMONG UNIVERSITIES  
**WORLDWIDE**

GRANTED U.S. PATENTS

NATIONAL ACADEMY OF INVENTORS | INTELLECTUAL PROPERTY OWNERS ASSOC. | 2018

*OTC METRICS*

#6 *AUTM*

2018 U.S. RANKING FOR

UNIVERSITY STARTUPS

12<sup>TH</sup> OVERALL  
#1 MIDWEST  
#1 IN THE U.S.

BEST UNIVERSITIES FOR  
TECHNOLOGY TRANSFER

MILKEN INSTITUTE, 2017

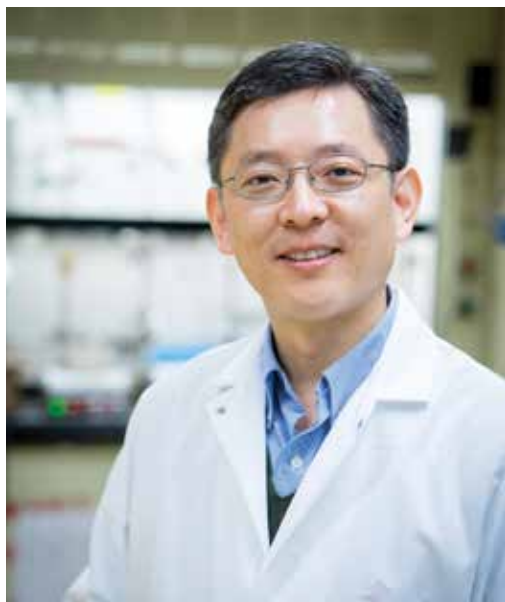
# TRASK

## INNOVATION FUND

The Trask Innovation Fund is a competitive program that provides financial support to Purdue researcher's labs to enhance the commercial value of Purdue University intellectual property assets. The Office of Technology Commercialization has awarded more than \$2.6 million to 69 technologies over the last 10 years.



### THOSE RECEIVING AWARDS IN THE FY19 ARE:



**Brad Duerstock**, "Portable device that helps people with visual impairments "see" digital images" (\$50,000)

**Georgia Malandraki**, "Wearable technology in the evaluation and treatment of dysphagia from a distance" (\$47,937)

**You-Yeon Won**, "A radiation-controlled drug-release formulation that is shown to improve the treatment of locally advanced tumors" (\$37,149)

**Chunhua Zhang**, "A compound effective in controlling weeds that also is safe for people and the environment" (\$15,000)

**Vilas Pol**, "Purdue's Sodium Powder Technology for Sustainable, Low Cost Sodium-ion Batteries" (\$50,000.00)

**Jian Jin**, "LeafSpec: An Accurate, Affordable, and Portable Hyperspectral Crop Imager" (\$50,000.00)

**Mohammad Rahman**, "A Lightweight, Scalable, Privacy-Preserving Solution for Online B2B Transactions" (\$21,218.00)



## Purdue Innovator Hall of Fame inducts 25 new recipients into a program that recognizes outstanding scientists, researchers

The Office of Technology Commercialization inducted 25 new members into the Purdue Innovator Hall of Fame that annually recognizes scientists and researchers who have made a positive impact on global society through their research.

Created in 2013, the program has honored 137 Purdue innovators. The inductees include a Nobel Prize winner, two World Food Prize winners and many other distinguished scientists and researchers.

Research of the inductees includes drug discovery, energy, food security, space exploration, cybersecurity, health, internet of things, spectrometry, biomedical devices and industrial systems.

### THIS YEAR'S INDUCTEES ARE:

- **Steven R. Abel**, Associate Provost of Engagement
- **Anil K. Bajaj**, Alpha P. Jamison Professorship of Mechanical Engineering, William E. & Florence E. Perry Head of Mechanical Engineering
- **Sylvie M. Brouder**, Wickersham Chair of Excellence in Agricultural Research
- **Darcy M. Bullock**, Lyles Family Professor of Civil Engineering and Director of the Joint Transportation Research Program
- **Todor Cooklev**, Harris Professor of Wireless Communications and Applied Research
- **John H. Cushman**, Distinguished Professor of Earth, Atmospheric and Planetary Sciences
- **Melissa J. Dark**, W.C. Furnas Professor in Purdue Polytechnic Institute
- **Mara Faccio**, Hanna Chair in Entrepreneurship, Duke Realty Chair in Finance and Professor of Finance
- **Rao S. Govindaraju**, Christopher B. Burke Professor of Civil Engineering, Bowen Engineering Head of Civil Engineering
- **Ayman F. Habib**, Thomas A. Page Professor of Civil Engineering, Co-Director of the Civil Engineering Center for Applications of UAS for a Sustainable Environment (CE-CAUSE), and Associate Director of the Joint Transportation Research Program
- **Bruce R. Hamaker**, Distinguished Professor of Food Science, Roy L. Whistler Chair
- **Kathleen C. Howell**, Hsu Lo Distinguished Professor of Aeronautical and Astronautical Engineering
- **Mamoru Ishii**, Walter Zinn Distinguished Professor of Nuclear Engineering
- **Julia Laskin**, William F. and Patty J. Miller Professor of Chemistry
- **Nathan S. Mosier**, Department Head, Indiana Soybean Board Professor, Agricultural & Biological Engineering/LORRE
- **Larry L. Murdock**, Emeritus Professor of Entomology
- **Carol B. Post**, Distinguished Professor of Medicinal Chemistry and Molecular Pharmacology
- **Laura J. Pyrak-Nolte**, Distinguished Professor of Physics and Astronomy
- **Doraiswami Ramkrishna**, Harry Creighton Pepper Distinguished Professor of Chemical Engineering
- **Torbert R. Rocheford**, Dr. Fred L. Patterson Endowed Chair in Translational Genomics for Crop Improvement
- **Farshid Sadeghi**, Cummins Distinguished Professor of Mechanical Engineering
- **Kenneth H. Sandhage**, Reilly Professor of Materials Engineering
- **Yung C. Shin**, Donald A. and Nancy G. Roach Professor of Advanced Manufacturing
- **Nien-Hwa (Linda) Wang**, Maxine Spencer Nichols Professor in Chemical Engineering
- **Zhong-Yin Zhang**, Robert C. and Charlotte P. Anderson Chair in Pharmacology, Director, Purdue Institute for Drug Discovery





## UK engineering company licenses unique Purdue heating technology to the market

A novel heating technology based on materials commonly used in the aerospace industry soon may be helping doctors, forensic scientists and automobile manufacturers. Alconbury Weston Limited, a science-engineering company based in the United Kingdom, has licensed carbon fiber technology from Purdue Research Foundation to support industries ranging from research institutes to commercial manufacturers.

The C-Core carbon fiber technology was developed at Purdue University through a partnership with the Defense Advanced Research Projects Agency. DARPA is an agency of the U.S. Department of Defense. The initial technology was developed at Purdue by James Zimmerman and Ryan Hilger, scientists in Purdue's College of Science.

"It's a completely new use of a widely accepted high-tech material as it provides an excellent means of providing heat to flowing fluids. It has been re-designed by the AWL team to facilitate mass production and already adopted for many industry sectors," said Alastair Barton, director at AWL.

## Millions of tons of the world's plastic waste could be turned into clean fuels, other products through chemical conversion

The United Nations estimates that more than 8 million tons of plastics flow into the oceans each year. A new chemical conversion process could transform the world's polyolefin waste, a form of plastic, into useful products, such as clean fuels and other items.

"Our strategy is to create a driving force for recycling by converting polyolefin waste into a wide range of valuable products, including polymers, naphtha (a mixture of hydrocarbons), or clean fuels," said Linda Wang, the Maxine Spencer Nichols Professor in the Davidson School of Chemical Engineering at Purdue and leader of the research team developing this technology. "Our conversion technology has the potential to boost the profits of the recycling industry and shrink the world's plastic waste stock."

The conversion process incorporates selective extraction and hydrothermal liquefaction. Once the plastic is converted into naphtha, it can be used as a feedstock for other chemicals or further separated into specialty solvents or other products.



## New design improves firefighting robots, increases maneuverability to fight fires better, save lives

A new design in firefighting robots, already successfully tested in the field, could make firefighters' jobs less dangerous and address one of the biggest challenges with firefighting robots – the ability to maneuver in a burning structure.

Firefighting robots equipped with a new automatic T-valve system can remove water from the fire hose whenever the robot moves to a new location. The technology takes significantly less energy for firefighters to pull an empty fire hose compared with a water-filled fire hose, which enables the firefighting robot to maneuver more quickly and efficiently in and around a burning structure.

"This discharge valve invention could be the next transformation of the fire service that saves lives," said Eric Dietz, director of the Purdue Homeland Security Institute and a professor of computer and information technology in the Purdue Polytechnic Institute. "This invention further enables the firefighting robot by adding to the robot mobility and saving lives."





## Anthrax may be the next tool in the fight against bladder cancer

Researchers at Purdue University have come up with a way to combine the anthrax toxin with a growth factor to kill bladder cancer cells and tumors. The research is published in the Oct. 4 edition of the International Journal of Cancer.

"We have effectively come up with a promising method to kill the cancer cells without harming the normal cells in the bladder," said R. Claudio Aguilar, an associate professor and the assistant head of biological sciences in Purdue's College of Science. "It is basically like creating a special solution that targets cancer cells while leaving healthy cells alone."

Aguilar said the bladder has its own protective layer, which saves the good cells from the anthrax mixture but offers no protection for the cancer cells and tumors. He said the Purdue system works within minutes to target the cancer cells in the bladder. He also works with the Purdue University Center for Cancer Research.



## Sensing technology could improve machine learning precision for manufacturing, electric vehicles, smart homes

The same small piece of technology that one day may help train welding robots and monitor electric vehicles could enable energy companies to better power smart homes and factories.

Purdue University innovators have developed a sensing module that works with machine learning for applications ranging from electric cars to manufacturing and home design. The technology is a small and noninvasive sensor that monitors electric currents.

"We have created the first-of-its-kind current sensor that is noninvasive, safe and much more precise than other options," said Kaushik Roy, Purdue's Edward G. Tiedemann Jr. Distinguished Professor of Electrical and Computer Engineering, who helps lead the research team.

Options for current sensing in applications such as electric vehicles include using a resistor as a current sensor or using a non-invasive Hall sensor, which cannot measure small currents.



## Jaw-strengthening teether designed for children with Down syndrome

A new product may assist infants with Down syndrome to eat and speak sooner by strengthening their jaw and tongue muscles.

The teether is shaped like a teddy bear with two pads for ears. The ears encourage the child to bite down upon them by playing music and lighting up the teether. It also includes a section made with silicone gel to be used in the freezer to provide pain relief for teething babies. Children with Down syndrome may be born with low muscle tone and a protruding tongue, which makes it more challenging to speak and eat.

Hannah Ferrill, a Purdue University alumna in industrial design from Purdue's College of Liberal Arts, has developed a jaw-strengthening teether. The teether is named Jon, after Ferrill's older brother who was born with Down syndrome and passed away several months after birth.

"My mom expressed to me that she could not find any products that were designed for my brother," Ferrill said. "After researching, I found that there were still few products out there and I knew I wanted to do something to change that."

# PURDUE STARTUP CLASS

OF 2019

*Georgia A. Malandraki, an associate professor of speech, language, and hearing sciences in Purdue University's College of Health and Human Sciences, and Chi Hwan Lee, an assistant professor of biomedical engineering and mechanical engineering in Purdue's College of Engineering, founded Curasis LLC to commercialize their wearable technology to help people with swallowing disorders.*



From idea to impact, Purdue startups bring life-changing innovations to our global society.



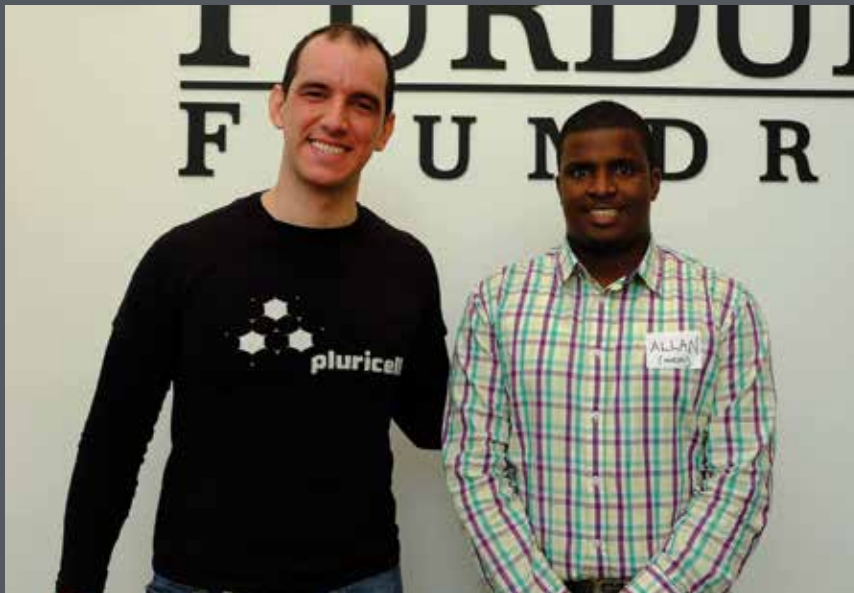
In 2019, another 17 startups using Purdue intellectual property joined the ranks of Purdue's esteemed Startup Class program. These 17 startups have signed licenses with the Purdue Research Foundation, another 31 startups originated from innovator-owned intellectual property in the same year.

- Advanced Regenerative Tech Inc.
- ALTech Simulations LLC
- BDYWR LLC
- Covert Defenses LLC
- Curasis LLC
- Digital Nature Enterprises LLC
- Erythrocare Inc.
- Evolve Biomechanics Inc.
- KinaRx LLC
- M-Cubed LLC
- Matference Solutions LLC
- Maxa Bracing
- Revive Biotechnology Inc.
- Rightfit Analytics Inc.
- Starfish Engineering LLC
- Sustainable Polymer Products LLC
- Vestigo Aerospace LLC

*“It’s not a single entity supporting these startups, but a movement across campus built upon Purdue’s very rich pipeline of cutting-edge technologies and the commitment that the people at Purdue have to serving its land-grant mission. It is amazing to be part of such a dynamic movement of turning ideas into true global impact.”*

**GREG DEASON**  
SENIOR VICE PRESIDENT OF  
ENTREPRENEURSHIP AND PLACEMAKING





# PURDUE STARTUP

## MILESTONES

**Purdue hits startup milestone with 275+ startups  
350+ jobs, \$400 million funding, nine startups  
acquired for \$2.3+ billion**

In 2019, Purdue hit a milestone in startup creation with 223 startups, nearly \$400 million in funding and investments generated and more than 350 new jobs in seven years.

Since 2013, 145 startups have licensed Purdue intellectual property through the Purdue Research Foundation's Office of Technology Commercialization, and more than 130 startups have originated from student- and entrepreneurial-owned intellectual property. More than 60 of the company-owned startups are founded and owned by Purdue students who in 2013 were granted the right to own the intellectual property that they generated as students at the university.

Major international companies invested more than \$2.3 billion to acquire 10 of Purdue's startups for their strength of technology and business potential. Those companies include:

- **Endocyte Inc.**, a drug development company, was acquired in 2018 by Novartis AG for \$2.1 billion.
- **DATTUS Inc.**, a leader in industrial Internet of Things, sold for an undisclosed price in 2018 to Michigan -based Plex Systems.
- **Spensa Technologies**, a digital ag technology company, was sold for an undisclosed amount in 2018 to DTN, a global insights and analysis company based in Minneapolis.
- **Griffin Analytics**, a mass spectrometry company, merged with ICx Technologies in 2006 and was later purchased as part of a package by FLIR Systems Inc. in 2010 for about \$274 million.



# PURDUE FOUNDRY

IDEA TO IMPACT

# 500+

ENTREPRENEURS  
HELPED

Under the leadership of the Purdue Research Foundation, the Purdue Foundry is an entrepreneurship and commercialization hub whose professionals help Purdue-affiliated innovators and entrepreneurs create startups.

Located in the Convergence Center for Innovation and Collaboration in the Discovery Park District, the Purdue Foundry received the 2019 Innovation and Economic Prosperity Universities Award for Place from the Association of Public and Land-grant Universities. For more information about funding and investment opportunities in startups based on a Purdue innovation, contact the Purdue Foundry at [foundry@prf.org](mailto:foundry@prf.org).



## The Purdue Foundry offers a number of programs, networking events and funding opportunities to advance entrepreneurs' startup goals including:

### **Startup Launch Pad: Firestarter**

Firestarter offers entrepreneurs expert advice on startup creation from business plans to marketing research. The program also opens the doors for members and continued education opportunities through the Purdue Foundry, workshops and more.

### **Making Connections through Networking:**

**Defense Entrepreneurs Forum** - The Defense Entrepreneurs Forum is a non-profit networking program that inspires, connects and empowers people by convening events, forging partnerships and delivering tangible solutions. With a mission to promote a culture of innovation in the U.S. national security community, the Indiana DEF community, called Agoras, partners with the Purdue Foundry; Naval Surface Warfare Center, Crane Division (NSWC Crane); National Security Innovation Network (NSIN); and Purdue University's Military Research Initiative.

**FoundryX** - Purdue Foundry Exchange (FoundryX) connects Purdue innovators with industry executives to accelerate commercial impact of Purdue innovations. Through FoundryX, members of the Purdue community are invited to meet with technology experts as advisors, mentors, employees, C-level executives, co-founders or investors in these nascent startups.

**Silicon Valley Boiler Innovation Group (SVBIG)** is a volunteer organization of Purdue alumni in the Silicon Valley region who mentor Purdue students, faculty and recent graduate entrepreneurs to accelerate startups.

### **Purdue Funding for Startups: Purdue Ventures**

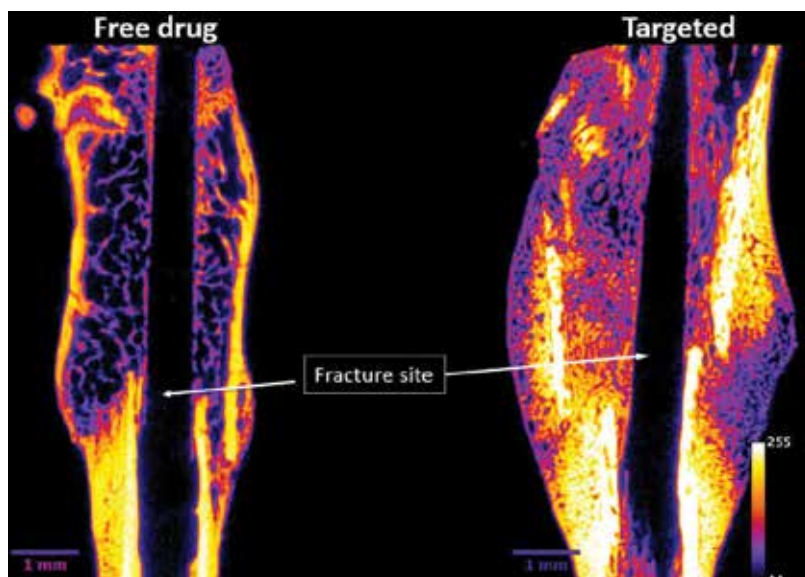
Purdue Ventures is the startup funding arm of the Purdue Foundry, which helps find and provide financial support for startups. Providing funding for very early-stage companies helps speed the process from idea to impact.

- **Ag-celerator** — This \$2 million fund is designed to provide critical startup support for Purdue innovators advancing technologies in plant sciences, including areas of research in crop optimization, hybrid and seed development and precision agriculture. The fund was launched by the College of Agriculture and the Purdue Research Foundation in 2015 as part of the Purdue Moves program.
- **Foundry Investment Fund and Purdue Startup Fund** - The \$12 million Foundry Investment Fund invests in Purdue-connected companies commercializing life sciences technologies. The \$6 million Purdue Startup Fund invests in Purdue-connected startups in all industry sectors. Both funds provide a match to outside investors' funds, adding critical capital to accelerate the growth of Purdue-affiliated companies.



# SUCCESSFUL *COMPANIES*

## EMERGING FROM THE PURDUE ECOSYSTEM



## Injectable drug for faster healing of bone fractures prepares for clinical trials

One in three adults aged 60 and over suffering from a hip fracture dies within one year. Now, a Purdue University-affiliated startup is advancing its clinical trials for a novel injectable drug that is targeted to heal broken bones faster and strengthen weak bones.

The drug, called NOV004, is unique in that it concentrates at the fracture site while reducing exposure to the rest of the body. Novosteo Inc., the startup developing the drug, currently has 288 clinical trials performed or in process using Purdue-developed medical treatments at 4,841 sites across the globe.

Novosteo was co-founded by father-son team Philip S. Low, the Presidential Scholar for Drug Discovery and the Ralph C. Corley Distinguished Professor of Chemistry, and Stewart A. Low, the company's CSO and a Visiting Scholar in Purdue's Department of Chemistry.

Scott Salka, who recently joined the startup as executive chair, will use his 28 years of experience as a biotechnology entrepreneur to help Novosteo move its innovations from the laboratory to clinical trials and ultimately in to the hands of doctors and patients.

*“We have been working on some amazing science with people truly dedicated to making a difference in reducing the mortality and improving the quality of life for our aging population. We have completed preclinical studies with NOV004 and are looking to take it to clinical trials later this year.”*

**SCOTT SALKA**  
EXECUTIVE CHAIR, NOVOSTEO



## Solid rocket fuel startup closes \$1 million funding round to advance rocket research

Adranos Inc., a Purdue University-affiliated company developing a novel high-performance, solid rocket fuel for long-range missile and space launch systems, oversubscribed its target raise by \$250,000 to a total of \$1 million.

"We knew that there was a lot of interest in our company but were shocked with both the speed and amount of the funding that was offered to us. We actually had to turn several interested investors away," said Chris Stoker, Adranos' CEO.

Adranos says its propellant is better because it would dramatically increase the range of a missile, giving military personnel a competitive advantage and making resupply missions safer. It also could reduce the missile smoke signature, making it more difficult to detect.

Following its successful launch of a prototype rocket and corresponding grand prize award at the Army's inaugural xTechSearch competition, Stoker said that additional funding was necessary to add key team members and scale up Adranos' manufacturing capabilities.

One of these team members was Stefan Coburn, who joined Adranos as its vice president of business development and strategy. Coburn previously worked at Blue Origin and led efforts to commercialize both New Shepard, a reusable suborbital launch vehicle, and New Glenn, a reusable heavy-lift launch vehicle. Coburn holds an MBA from Harvard Business School and a degree in chemical engineering from Brigham Young University.



# SUCCESSFUL *COMPANIES*

## EMERGING FROM THE PURDUE ECOSYSTEM



*Autonomous robots enter fields to collect precise soil samples, help farmers improve yields, reduce environmental impact, save money*

Collecting precise soil samples is essential for farmers because a small amount of soil determines the amount of nutrients needed for acres of crops and can determine crop yields.

The U.S. Department of Agriculture reports that soil testing can help farmers increase yields reduce production costs and prevent surface and groundwater pollution.

"Smartcore," an autonomous robot developed by a pair of Purdue University College of Engineering graduates, is designed to collect accurate, repeatable soil samples in fields and bring to the edge of the field for shipment to the lab. Troy Fiechter and Drew Schumacher founded Rogo Ag LLC, a startup to advance the technology and move it to the public.

"Smartcore helps farmers make better strategic decisions," said Schumacher, Rogo's president.

Rogo works with farmers and companies in Indiana, Ohio, Illinois and Iowa, and continues to expand with long-term plans to move into Canada and South America.

SmartCore uses a Bobcat skid steer chassis and navigates fields using boundary algorithms and a variety of obstacle detection sensors. It is equipped with RTK GPS to ensure that soil samples are taken from the correct spot and can return every season within inches.

*"There are a lot of things that can go wrong if you don't use the right equipment. Our depth is accurate within an eighth-of-an-inch 100% of the time and it's fully extracted every time."*

**DREW SCHUMACHER**  
CO-FOUNDER, ROGO AG LLC





## Support grows nationwide for medical device to improve communication in Parkinson's disease

A growing number of the 1 million people in the U.S. diagnosed with Parkinson's disease are finding the ability to communicate with a wearable device developed by a Purdue speech-language researcher and entrepreneur.

The device uses a body's natural reflex to improve communication. The device plays noise in a user's ear when they are talking, which elicits the reflex, resulting in speech that is automatically louder, clearer and lower. The Purdue-affiliated startup SpeechVive Inc. has commercialized the technology.

"Since the wearable device elicits a reflex, the patient does not need to remember to use therapy techniques to communicate in everyday life," said Jessica Huber, a professor in Purdue's Department of Speech, Language, and Hearing Sciences, who co-founded SpeechVive. "When people with Parkinson's disease cannot be heard or understood, they withdraw from communication exchanges, leading to social isolation. This device makes it possible for patients to continue to communicate with their loved ones well into their disease."

# PURDUE RESEARCH PARK

The Purdue Research Park network stretches across the State of Indiana, with locations in West Lafayette, Indianapolis, Merrillville and New Albany. The parks provide a home for tenant companies that are creating high value jobs in the local economies around each park.

Each site is anchored by a Purdue Technology Center. The Parks offer Class-A office and wet-lab space, shared conference and co-working space. These options help both early stage entrepreneurs and more mature companies keep costs down, enabling them to pour their limited resources into growing their businesses. Park companies focus on multiple technologies including life science, aerospace, pharmaceuticals, high-tech manufacturing and digital agriculture.

The Purdue Research Park of West Lafayette is located just a few miles north of the Purdue University campus and is host to one of the largest university-affiliated high-tech business incubation complexes in the U.S. The 725-acre park is home to more than 200 companies, ranging in size from startups to publicly-traded companies.



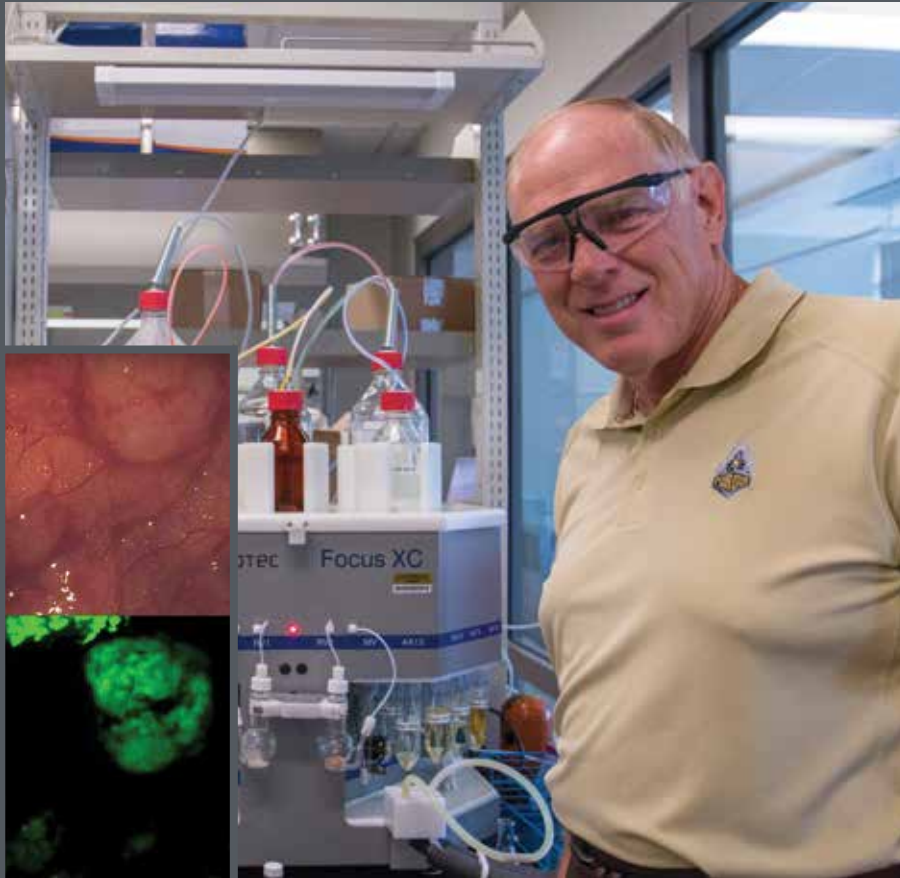
*“The parks are economic engines for communities across Indiana. In 2019 the parks welcomed, among others, digital ag companies from Cambridge, Massachusetts (Inari) and Brazil (Solinftec), as well aerospace manufacturer from Sweden (Saab). This mix, as well as the networking and collaboration that takes place between companies makes the Purdue Research Park one of the most vibrant entrepreneurial ecosystems in the country.”*

**PAUL MOSES**

ASSISTANT VICE PRESIDENT AND DIRECTOR, PURDUE RESEARCH PARKS







## 'Fluorescent markers' to illuminate cancer, improve outcomes, receives FDA fast track as Phase 3 clinical trials begin

On Target Laboratories Inc., a privately held biotechnology company developing the use of Purdue University-discovered fluorescent markers to target and illuminate cancer during surgery, has announced the results of a multi-institutional Phase 2 clinical trial in which outcomes were improved for 26% of patients undergoing pulmonary resection for non-small-cell lung cancer (NSCLC).

The results of the treatment, called OTL38, were presented at the 56th annual Meeting of the Society of Thoracic Surgeons. The treatment was developed in the Purdue laboratory of Philip Low in the Purdue Institute of Drug Discovery.

## NEWS ABOUT *PARK COMPANIES*



## Purdue-affiliated entrepreneur selected for global summit

The co-founder of Purdue University-affiliated life sciences startup Phytoption LLC was selected to participate in a global summit bringing together top entrepreneurs and innovators from across the world.

Joanne Zhang was selected by organizers of the Global Entrepreneurship Summit held last year in the Netherlands. The U.S. government, which started the summit nearly a decade ago, will sponsor Zhang's attendance at the event.

Zhang is a co-founder of Phytoption, which is transforming agricultural commodities to highly functional ingredients for food, cosmetics and drug applications.



### AMENITIES

- 24/7 access
- Fast WiFi
- Networking events
- Express Café serves breakfast, lunch, snacks and coffee
- Exterior second-floor balcony
- Fourteen conference rooms
- Three individual meeting rooms for private calls
- Business address and mailbox
- Business and mailing services including copier and access to postage supplies
- Access and networking opportunities with more than 200 companies in the Purdue Research Park of West Lafayette
- Participation in the Indiana Coworking Passport
- Access to other cospaces in the Purdue Research Park Network

*“The Purdue Railyard continues to grow and has become ‘the’ place for entrepreneurs looking for space in the ecosystem where they can receive support, network with other entrepreneurs, make connections with established company leaders in the Purdue Research Park network and grow their business.”*

**ALICIA SOUTH-HURT**  
PURDUE RAILYARD COMMUNITY MANAGER

The Purdue Railyard, managed by the Purdue Research Foundation, is one of the largest co-working facilities in the United States with 26,140-square-feet of space nestled in the Purdue Research Park's flagship incubator, Kurz Purdue Technology Center. Almost 200 members have access to the space.

The Purdue Railyard is a foot in the door to the great entrepreneurial ecosystem at Purdue Research Park and Purdue University. Fostering new relationships and building a substantial network of people allows for our members to grow their business and make new connections.

The coworking space pays homage to the Purdue Schenectady No. 1, the first full-scale locomotive used in the Purdue Locomotive Testing Plant in the late 1880s and early 1900s, which established Purdue as a national leader in transportation research and innovation. The space is highlighted with antique railroad memorabilia, conference rooms reminiscent of train cars, three phone rooms, a stage for presentations, an Express Cafe that resembles a train depot, and a wooden two-story water tower meeting space.





*“Our team and partners are driving innovation by connecting and supporting startups, entrepreneurs and investors in southern Indiana.”*

**JASON SALSTROM**  
DIRECTOR, PURDUE@WESTGATE

# PURDUE@WESTGATE *COLLABORATING*

**TO SUPPORT WORKFORCE, ENTREPRENEURSHIP AND INNOVATION**

Purdue@WestGate is an innovation and technology hub connecting startups, established companies, universities, organizations and local government entities to support workforce, entrepreneurship and innovation initiatives.

Formed through the partnership of WestGate Authority, Naval Surface Warfare Center Crane Division (NSWC Crane), Purdue University and Purdue Research Foundation, the collaboration combines institutional strengths to advance educational, research and development and technology commercialization across Indiana and beyond.

## **Purdue@Westgate Highlights Startups for 2019 Startup Showcase**

Purdue@WestGate featured a number of up and coming startups at the annual Startup Showcase where teams had one minute to pitch their ideas before investors, entrepreneurs and business leaders.

The Purdue@WestGate startups featured included:

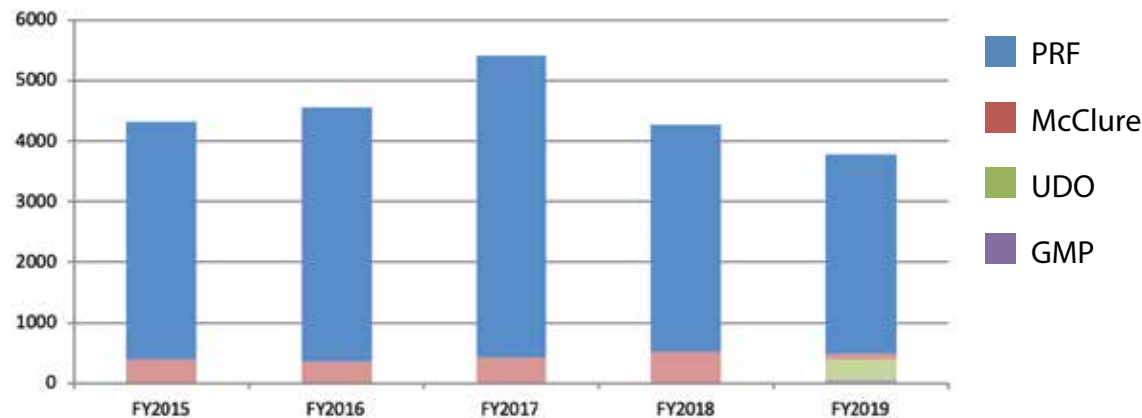
- GroPod (Heliponix), a startup producing a smart garden appliance for the home that uses coffee machine-like seed pods that grow fresh produce in the kitchen.
- Civic Champs, a startup that launched a “Seamless Volunteering” app that helps organizations and volunteers track their hours, activities and reflections.
- Ambition In Motion, a startup that provides a web-based platform that manages mentor-mentee relationships, facilitating professional and organizational development..

During the networking session of the event, Purdue Foundry's entrepreneurs presented the primary technologies for their startups and investment opportunities.



# INFORMATION SYSTEMS

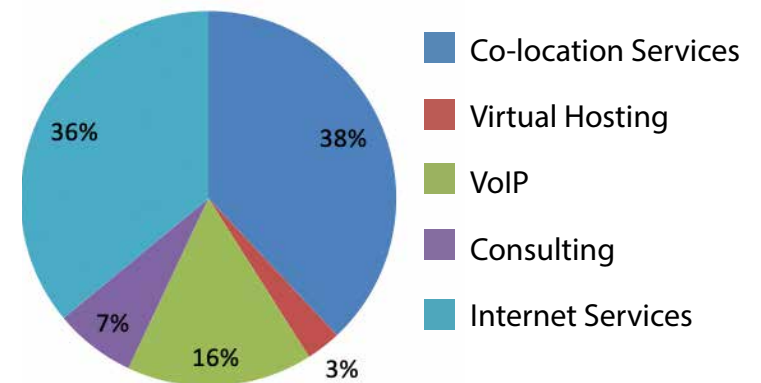
HELP DESK TICKETS



Purdue Research Foundation's Information Systems Department provides IT support through both technical support and consulting to startups and established businesses based in the five-site Purdue Research Park network. Its professionals travel throughout the state to service clients' needs.

To serve the 350-plus employees of the Foundation and the startups in the Purdue Research Park, the Department maintains a 'Help Desk' ticketing system to manage internal and external requests for information or information technology support. The system received nearly 3,400 requests for assistance last year.

TOTAL PERCENT OF BUSINESS



*“Information Systems is one of the most dynamic and ever-updating departments in the Foundation. The professionals in the Information Systems Department manage the short- and long-term IT needs across multiple locations. Foremost is the security of our all our digital assets and keeping the information technology running smoothly so all team members of the Foundation can perform their jobs. Due to the fast-paced changes in IT, we continually update our programs and systems to keep us in the forefront of digital technologies.”*

**MARY-CLAIRE CARTWRIGHT**  
VICE PRESIDENT, INFORMATION SYSTEMS



The Purdue Research Foundation's real estate division plays an essential role in purchasing, selling and making other property transactions needed to meet the University's needs.

Purdue University, through its Master Plan, designates areas for the potential expansion of campus facilities for academic and other student and faculty use. The Purdue Research Foundation, through its current real estate holdings and future acquisitions as directed by the University, supports the continued development of the main campus and its satellite campuses. This allows the Foundation to carry the financial burden of the land until needed by the University, helping to keep costs down.

#### COMMERCIAL REAL ESTATE

The Foundation owns commercial real estate that meets the consumer needs of students and faculty. Purdue West, at 1400 State Street, serves the far west end of campus with shops, restaurants and financial establishments. The Foundation also manages and operates Seng-Liang Wang Hall at 516 Northwestern Ave. The 147,000-square-foot facility is a public/private partnership between the Foundation and Purdue University. The building is used for academic and commercial purposes.

#### RESIDENTIAL REAL ESTATE

The Foundation provides rental housing appropriate for University students, staff and faculty on or near the West Lafayette campus. The properties are considered prime locations for most students and the occupancy rate in the rental units was nearly 100 percent in FY19.

# REAL ESTATE

SERVING PURDUE'S CAMPUS PLAN

*"The Purdue Research Foundation's real estate team manages the commercial, retail and residential properties available to lease or purchase to outside entities who are interested in enhancing and providing important amenities to the University campus area. We also work closely with the Purdue University master planners to help acquire property for use in the short- and long-term real estate campus plans."*

**RICH MICHAL**  
VICE PRESIDENT  
CHIEF FACILITIES OFFICER

# MARKETING

## AND COMMUNICATIONS



Below: West Lafayette Mayor John Dennis congratulates Cynthia Sequin, Purdue Research Foundation's Vice President of Marketing and Communications, on her retirement in October, 2019.



In fiscal year 2019, the Purdue Research Foundation's Department of Marketing and Communications led the strategic promotion of several major endeavors for the Foundation.

The work of the team was highlighted by the:

- Groundbreaking of SEL, a Schweitzer Engineering Laboratories 100,000-square-foot facility for electric power research that will support 300-plus new high-tech jobs and serve as an anchor for Discovery Park District.
- Announcement of a \$37 million facility to serve the Sweden-based Saab Global Defense and Security Company where Saab will conduct its contribution to the production of the U.S. Air Force's T-7A Red Hawk and other aerospace projects, also in Discovery Park District.
- Advancement of other strategic projects including Convergence, the "Front Door" of the District; Aspire, a three-building apartment complex that includes Crave Food Hall; and Provenance, an urbanist neighborhood development in the District that will feature single-family detached homes, townhomes, cottages, condominiums and apartments.

In addition, the Department continued to direct all earned, owned and paid media for the Foundation, Purdue Research Park network, Purdue Foundry, Discovery Park District, Back a Boiler and Purdue Office of Technology Commercialization.

The Department also celebrated the retirement of Cynthia Sequin in 2019, who served as Vice President of Marketing and Communications and oversaw the Department. Sequin joined Purdue University in 1999 and moved to the Foundation in 2007.

*"It has been a great 20 years with Purdue University and the Purdue Research Foundation with tremendous growth and expansion through the past two decades. I am honored that the Marketing and Communications Department has the opportunity to promote the good news coming out of the Foundation and the University to our state, national and international audiences. The Department's endeavors are made easy through all the hard work and success of Purdue faculty and students, the Foundation's strong team of professionals, the collaborative spirit of our community, state leaders and residents and all that is happening at Purdue."*

**CYNTHIA SEQUIN**  
VICE PRESIDENT, MARKETING AND COMMUNICATIONS



The Department of Human Resources provides leadership and support for all Purdue Research Foundation departments and divisions, including Purdue Foundry, Purdue Research Park, Purdue Office of Technology Commercialization, Office of Investments and the University Development Office.

The Department provides employee relations assistance, mediation, recruiting, benefits administration, educational initiatives and other services to support employment for the more than 370 employees situated across the Purdue University campus, Purdue Research Park network and Discovery Park District.

Human Resources provides training on topics such as diversity awareness, sexual harassment prevention, workplace violence prevention and CPR/AED training. In addition to in-house educational opportunities, the Department leads a PRF-West Lafayette joint "Day of Service" and an annual PRF "10,000 Steps" wellness initiative.

**The Department also provides support in the following areas:**

- Provide HR support and services to Purdue Research Park clients.
- Oversight of all aspects of benefits selection, enrollment and management for PRF staff and facilitation of benefit and retirement planning seminars.
- Organizational strategic leadership through talent recruitment, screening and interviewing; management of candidate selection; and administration of exit interviews.
- Legal compliance including monitoring and implementing applicable human resource federal and state requirements with regard to FMLA and ADA; conducting investigations, maintaining records and complying with Federal filing requirements.

*"The highly trained team of professionals in the Purdue Research Foundation Department of Human Resources provides quality human resource management, exceptional recruiting, relocation and talent acquisition services, and expert employee relations, counseling and mediation assistance for our staff. Our team also provides workforce acquisition services, HR consultation, and relocation assistance for Park companies to promote success and increase overall value to the Foundation."*

**JUDITH HALL, PHR, SHRM-CP,**  
CHIEF HUMAN RESOURCES OFFICER

# HUMAN

## RESOURCES



PRF Day of Service volunteers work to create the West Lafayette Community Garden.

# UNIVERSITY

## DEVELOPMENT OFFICE



*President Daniels at the Ever True finale celebration, held October 11, 2019, at the France A. Córdova Recreational Sports Center during President's Council Annual Weekend.*



Private giving supports Purdue in its mission to deliver higher education at the highest proven value by creating new scholarships, increasing faculty support, and funding cutting-edge facilities and innovative programs.

Ever True: The Campaign for Purdue University—the largest fundraising effort in Purdue history—concluded its seven-year run on June 30, 2019, exceeding its \$2.019 billion goal by more than \$510 million.

## EVER TRUE BY THE NUMBERS

Three priorities. 209,551 donors. \$2,529,171,911 raised.

- » **104,292 donors** made their first gift to Purdue
- » **94%** of donors made gifts of \$1,000 or less
- » **935 scholarship endowments** were established
- » **69,328 donors** across all **92** Indiana counties gave **\$547,840,423**
- » Gifts came in from all **50 states** and from **113 countries** across the globe
- » International donors gave **\$52,864,617**
- » Purdue donors gave **1,557,187 total gifts**, including:
  - **387** gifts of \$1 million or more
  - **27,378** gifts from students
  - **64,195** gifts from parents and family
  - **84,328** gifts made across all six years of Purdue Day of Giving
  - **166,421** gifts from faculty, staff, and retirees
  - **362,364** gifts from friends who did not attend the University

A campaign goal was to double student support. Purdue donors tripled student support through Ever True, giving \$501.9 million to help the University place students first.

To learn more about the success and lasting impact of our capital campaign, visit [purdue.edu/evertrue](http://purdue.edu/evertrue).



## ANOTHER RECORD YEAR FOR GIVING TO PURDUE



*Before a Boilermaker victory over Maryland, the Purdue "All-American" Marching Band celebrated the success of Ever True with a performance during Homecoming.*

*"Ever True has been a historic undertaking. Our University was created from a remarkable act of generosity: John Purdue's gift of \$150,000 and 100 acres of farmland. Throughout this campaign, the Purdue family has followed our founding benefactor's lead and made generous contributions that support people and initiatives across the entire Purdue system. We celebrate the alumni and friends who have invested in Purdue University, and we are profoundly thankful."*

**MITCHELL E. DANIELS, JR.**  
PRESIDENT, PURDUE UNIVERSITY

# \$517.6

MILLION

**TOTAL DOLLARS RAISED**

Topping the 2017-18 record of \$451.5 million. This total includes participation from 88,488 donors and includes 75 gifts of \$1 million or more.

# \$102.1

MILLION

**DOLLARS RAISED FOR STUDENT SUPPORT**

Up from the 2017-18 record of \$88.2 million. 2018-19 marks the seventh straight year that the total raised for student support has increased.

# \$41.6

MILLION

**FROM PURDUE DAY OF GIVING**

The largest single-day fundraising campaign in higher education, which included participation from all 50 states and 60 countries.

# ACCOUNTING

## AND FINANCIAL REPORTING

Finance and Investments support all the activities of the Purdue Research Foundation and is involved in all the operations activities, compliance and governance that allow the Purdue Research Foundation to function as a nonprofit corporation.

### OFFICE OF INVESTMENTS

The Purdue Research Foundation's Office of Investments manages the combined Purdue University and the Purdue Research Foundation endowments as well as retirement assets.

All funds are managed according to the policies established by the Foundation's Board of Directors Finance Audit Committee. As of June 30, 2019, funds under management including endowed funds, trusts, annuities and retirement funds totaled approximately \$6 billion.

### ACCOUNTING AND FINANCIAL REPORTING

The consolidated statements of financial position and activities for the fiscal year ending June 30, 2019 are presented.

## Consolidated Statement of Financial Position

June 30, 2019 (In Thousands)

	Total
<b>Assets</b>	
Cash and cash equivalents	\$ 20,905
Accounts and other receivables	23,457
Investments	2,771,241
Notes receivable	28,505
Investments in affiliates	8,203
Net real estate	243,125
Net other assets and equipment	20,652
Interest in charitable perpetual trusts	16,124
<b>Total assets</b>	<b>\$ 3,132,212</b>
<b>Liabilities and net assets</b>	
<b>Liabilities:</b>	
Accounts payable and other accrued expenses	24,644
Due on split interest agreements	47,287
Net funds held as custodian	60,802
Net funds held for Purdue University	1,765,968
Bonds payable	59,358
Mortgages, notes payable, and line of credit	129,142
Gift annuity payable	4,631
Other liabilities	2,010
<b>Total liabilities</b>	<b>2,093,842</b>
<b>Net assets:</b>	
Without donor restrictions	276,977
With donor restrictions	761,393
<b>Total net assets</b>	<b>1,038,370</b>
<b>Total liabilities and net assets</b>	<b>\$ 3,132,212</b>



# Consolidated Statement of Activities

June 30, 2019 (In Thousands)

	Without Donor Restrictions	With Donor Restrictions	Total
<b>Revenue and support</b>			
Amounts received for Purdue University research projects	\$ 399	\$ -	\$ 399
Payments to Purdue University	<u>(399)</u>	<u>-</u>	<u>(399)</u>
	-	-	-
Contributions	11,372	24,102	35,474
Income on investments	1,101	20,119	21,220
Net unrealized and realized gains on investments	6,345	38,647	44,992
Loss on sale/exchange of real estate	(503)	-	(503)
Change in value of split interest agreements	-	2,598	2,598
Decrease in interest in perpetual trust	-	(11)	(11)
Administrative fees	31,701	-	31,701
Rents	20,609	-	20,609
Royalties	4,078	-	4,078
Other	4,045	-	4,045
Net assets released from restrictions	<u>71,403</u>	<u>(71,403)</u>	<u>-</u>
<b>Total revenue and support</b>	<b>150,151</b>	<b>14,052</b>	<b>164,203</b>
<b>Expenses and losses</b>			
Expenses for the benefit of Purdue University:			
Contributions to Purdue University	36,096	-	36,096
Patent and royalty	3,268	-	3,268
Grants	1,102	-	1,102
Services for Purdue University	2,569	-	2,569
Other	<u>7,091</u>	<u>-</u>	<u>7,091</u>
<b>Total expenses for the benefit of Purdue University</b>	<b>50,126</b>	<b>-</b>	<b>50,126</b>
<b>Administrative and other expenses:</b>			
Salaries and benefits	35,328	-	35,328
Property management	19,459	-	19,459
Professional fees	14,757	-	14,757
Supplies	1,782	-	1,782
Interest	7,546	-	7,546
Annuity and trust expense	5,803	-	5,803
Research Park	383	-	383
Other	<u>6,747</u>	<u>-</u>	<u>6,747</u>
<b>Total administrative and other expenses</b>	<b>91,805</b>	<b>-</b>	<b>91,805</b>
<b>Total expenses and losses</b>	<b>141,931</b>	<b>-</b>	<b>141,931</b>
<b>Change in net assets</b>	<b>8,220</b>	<b>14,052</b>	<b>22,272</b>
<b>Net assets, beginning of period</b>	<b>268,757</b>	<b>747,341</b>	<b>1,016,098</b>
<b>Net assets, end of period</b>	<b>\$ 276,977</b>	<b>\$ 761,393</b>	<b>\$ 1,038,370</b>

# ADMINISTRATION

Purdue Research Foundation (PRF) is a nonprofit corporation administered by the professionals below who manage the day-to-day operations of the Foundation.

**President** | Brian E. Edelman

**Vice President Technology Commercialization** | Brooke L. Beier

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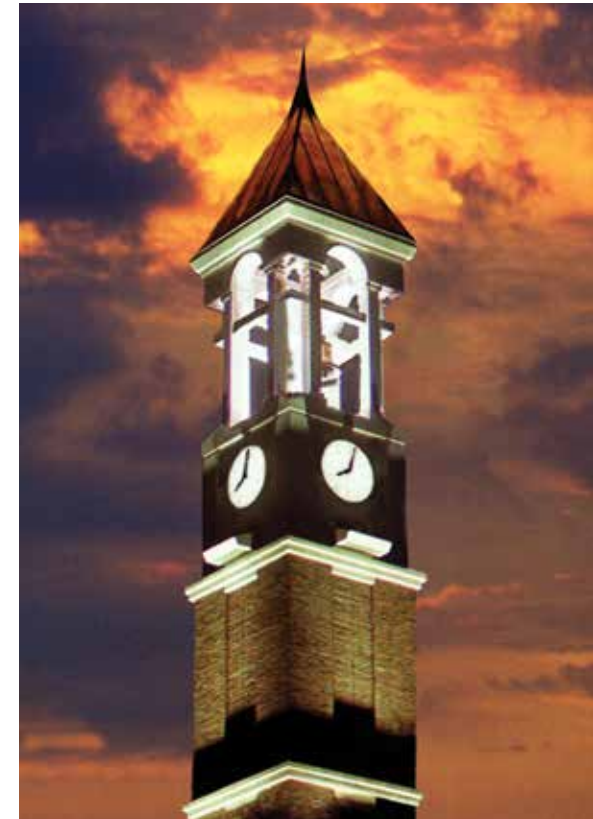
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**Senior Editor** | Cynthia Sequin, Marketing and Communications

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