WE CREATE
social and economic impact through bringing the inventions of the UA from the lab to the world.

WE CULTIVATE
conversations to refine ideas that start as UA research and grow them into new products and thriving businesses that benefit society.

WE BUILD
connections between the talents of our faculty and researchers and the experience of entrepreneurs and investors.

VISION 2
INVENTIONS 4
NETWORK 6
ASSET DEVELOPMENT 8
STARTUPS 10
RESULTS 12
By 2020, we will become a recognized national resource for our role in commercializing UA-created knowledge and bringing the University’s inventions to the public for economic and social benefit.

FROM THE PRESIDENT

Tech Launch Arizona’s success in 2017 and the past several years is a sign that the University of Arizona is deepening its culture of innovation and a call for all of us to ensure that we realize its potential.

With greater than 80 percent growth in invention disclosures over TLA’s first five years, and nearly three times the royalty and patent income this past year as 2013, we have great momentum and great promise for the future. Now, we must build on this success to achieve TLA’s vision of being a national leader in technology commercialization—TLA’s momentum will not continue on its own. Strong commercialization and technology transfer come from strong scientific discovery and a robust commitment to seeing it benefit the world. All of us who are part of the UA innovation ecosystem—faculty, staff, students, and partners here in Arizona and around the world—need to push our success forward by telling TLA and the University’s incredible stories and by working together to encourage more like them.

I came to the UA in part because I was excited to do this work and because I knew that many people here are committed to ensuring the UA’s extraordinary promise is realized. As we reach for a new horizon of possibility, I am looking forward to working with many in our ecosystem to expand TLA’s reach and impact, and I am grateful for the leadership of David Allen and his team over the past five years. I hope you will join us in forging the continuing success of Tech Launch Arizona.
Flow of Inventions from Across the UA

We receive a steady flow of invention disclosures from across the UA ecosystem. These are the sources of those 261 inventions.

261 invention disclosures in FY2017

$3.3M of income from royalties & patent reimbursements in FY2017

105 licenses & options in FY2017
Our Commercialization Network is a group of over 1,500 individuals who use their expertise to contribute to conversations around emerging University of Arizona inventions. In 2017, we grew our network both in terms of numbers as well as how we engage our membership.

Of that network, we have engaged 27 as Commercialization Partners, who have expressed a specific interest in increasing their work with TLA. Along with greater involvement with our startup teams, Commercialization Partners also participate in weekly Round Table meetings – both in person and remotely – where we discuss new technologies and their opportunities. Thus far, we have placed 14 highly qualified individuals in leadership positions with UA startups.

Kevin McLaughlin
30 years' experience in physical sciences and engineering technologies, worked with Motorola, Cray Research, SGI, Cisco Systems and Avid.

Michael Sember
Dedicated to pharmaceutical technologies, 40 years of startup and executive experience working for companies like Marion Merrell Dow, Eli Lilly, Sensor Systems, Mallinckrodt Medical, HemoCue, Inc. and others.

Steven Wood
25 years of startup and executive experience with companies such as PowerCube Corporation, Unitrode Corporation, Power Convertibles Corporation and others.

Bruce Burgess
30 years' experience in medical diagnostics, devices and drug delivery, worked with Eli Lilly, Sensor Systems, Inc., Mallinckrodt Medical, HemoCue, Inc. and others.

At the highest level of engagement, we have four Mentors-in-Residence, who are all seasoned technology entrepreneurs with track records of success; they are part-time TLA employees, advising teams and the UA research community, and helping to develop the pathways for these technologies to grow into successful ventures.

Our Commercialization Network is a group of over 1,500 individuals who use their expertise to contribute to conversations around emerging University of Arizona inventions. In 2017, we grew our network both in terms of numbers as well as how we engage our membership. Of that network, we have engaged 27 as Commercialization Partners, who have expressed a specific interest in increasing their work with TLA. Along with greater involvement with our startup teams, Commercialization Partners also participate in weekly Round Table meetings – both in person and remotely – where we discuss new technologies and their opportunities. Thus far, we have placed 14 highly qualified individuals in leadership positions with UA startups.

Kevin McLaughlin
30 years' experience in physical sciences and engineering technologies, worked with Motorola, Cray Research, SGI, Cisco Systems and Avid.

Michael Sember
Dedicated to pharmaceutical technologies, 40 years of startup and executive experience working for companies like Marion Merrell Dow, Eli Lilly, Sensor Systems, Mallinckrodt Medical, and others.

Steven Wood
25 years of startup and executive experience with companies such as PowerCube Corporation, Unitrode Corporation, Power Convertibles Corporation and others.

Bruce Burgess
30 years' experience in medical diagnostics, devices and drug delivery, worked with Eli Lilly, Sensor Systems, Inc., Mallinckrodt Medical, HemoCue, Inc. and others.

At the highest level of engagement, we have four Mentors-in-Residence, who are all seasoned technology entrepreneurs with track records of success; they are part-time TLA employees, advising teams and the UA research community, and helping to develop the pathways for these technologies to grow into successful ventures.
Asset Development

FROM INVENTIONS TO ASSETS

In FY2017, TLA budgeted over $1 million for Asset Development, providing $466,667 in new awards for 15 projects with the remainder going toward carry-over projects from prior years. These moneys went towards moving early-stage technologies toward market readiness. Awardees came from four different units: Arizona Health Sciences, the College of Engineering, the College of Science and the College of Optical Sciences. Some inventions receiving such funding include:

- A terahertz transistor being developed for applications like quantum computing
- A new formulation for a non-leaching, photochemically stable sunscreen
- Peptide derivatives to improve impaired cognitive function
- 3D printed ultra-high refractive index polymers
- New small molecule inhibitors to treat chronic pain
- New methods for additive 3-D printing of visible wavelength optics

In FY2017 Awards

<table>
<thead>
<tr>
<th>College of Science</th>
<th>University of Arizona Health Sciences</th>
<th>College of Engineering</th>
<th>College of Optical Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>$205,100</td>
<td>$156,939</td>
<td>$73,628</td>
<td>$31,000</td>
</tr>
</tbody>
</table>

ASSET DEVELOPMENT AWARDS BY COLLEGE

STARTUPS LICENSING UA TECHNOLOGIES

NEW AWARDS FUNDED
In the big picture, I-Corps broke down a lot of barriers for us. We thought that moving toward commercialization and building our business was going to be a difficult process and beyond the scope of what we do in our day-to-day, but we came to realize that it’s actually part of what we do in general, and that it’s just a few extra steps.

Cohort Studios, bringing to market an ArizonaMED learning management system developed by Senior Applications Analyst/Developer Fermín Martínez-Gregorio and Marcus Bates of the College of Medicine - Tucson.

Nanosonic Bioreagents, manufacturing reagents with applications in sample preparation for high-throughput DNA sequencing, medical imaging, and clinical therapy in conjunction with chemotherapy and ablation therapy, co-invented by Terry Nalvaruga, Pharm.D., Ph.D., of the UA Cancer Center and the College of Medicine - Tucson.

MAGPI, commercializing a multi-channel magnetic phase reconstruction to improve the precision and robustness of MRI images, developed by Joseph Daghler, Ph.D., formerly of Electrical and Computer Engineering, Biomedical Engineering and Medical Imaging.

Palo Verde Networks, Inc., offering a variety of media for both educational and entertainment use, developed by Norman Weinberg, professor in the UA Fred Fox School of Music.

As an NSF I-Corps Site, TLA offers a program which provides individual project grants up to $3,000 to help entrepreneurial teams with innovative technologies identify their customers and get to know those prospective customers’ priorities. In total, the NSF grant provides TLA with annual funding for three years to distribute to 30 selected I-Corps applicant teams each year. Teams typically consist of an inventor/academic lead, an entrepreneurial lead, and a business mentor. In FY2017, 38 teams went through the program.

SERVING ENTREPRENEURIAL INVENTORS THROUGH NSF I-CORPS

50% of FY2017 UA startups went through I-Corps

56 teams served since January 2016

11
LOOKING AHEAD

ADDITIONAL GOALS:

- Put a greater emphasis on culture change among faculty and generating invention disclosures
- Devise and obtain support for a long-term financial plan for TLA
- Create a UA seed investment fund
- Obtain funding and begin implementation of the UA Digital Healthcare Collaboratory
- Complete the funding, planning and design phases, and initiate construction of the Innovation and Technology Building at the UA Tech Park at The Bridges
- Deepen our coordination and connection with key ecosystem partners, including InnovateIA, Startup Tucson, the McGuire Center for Entrepreneurship, A2C, the Arizona Center for Advanced Biomedical Innovation, UA Research, Discovery and Innovation, and others

INTO FY2018

This year, we will continue to pursue expansion, with completion of the funding strategy, planning design and initial construction of the Innovation and Technology Building at the UA Tech Park at The Bridges. We are also working towards implementation of The Village at the UA Tech Park at Rita Road, a 175-acre mixed-use development that includes retail, commercial, residential and hotel development.

GLOBAL ADVANTAGE

The Global Advantage (GA) program continues to attract domestic and international businesses to partner with the UA. This year, we dedicated the new GA offices at the UA Tech Park and executed five new client agreements with companies from Israel, Mexico and the U.S.

ARIZONA CENTER FOR INNOVATION

FY2017 RESULTS

Tech Parks
Arizona

FY2017 was another strong year for the Tech Parks, characterized by strong tenant demand. We have aligned our economic development activities with the University’s research strengths in advanced energy, mining technology, defense and security, resilience, and agriculture and land and water. We also span multiple industry sectors such as sustainability, optics and imaging, advanced manufacturing, informatics, and intelligent transportation systems and smart vehicles.

GLOBAL ADVANTAGE

10% employment growth for tech companies

$92K
average park employee salary, double Pima County’s average

$36M
of investment raised

13
new client startups in FY2017

275
invention disclosures

62
exclusive agreements

$1.7B
annual economic impact on regional economy

46
resident companies

14-17
startups

5
participating companies

2M
square feet of office, lab, and production space

95K
20,000 solar panels and 10 energy companies at Solar Zone

6K
employees

+50%
have a direct UA affiliation

1000
clients served since 2003

BRIDGING INDUSTRY AND THE UA

THE SOLAR ZONE

Through the Solar Zone, one of our nation’s largest multi-technology solar demonstration sites, we have created a dedicated space to focus on research and development of energy storage and grid optimization. In 2017, we instituted Phase II by opening the Iron Horse Energy Storage and Solar Project, the first grid-connected lithium battery system project in North America, sponsored by C&I. Energy storage systems like Iron Horse allow utilities such as Tucson Electric Power to use renewable resources more effectively and efficiently within their electric grid.

GLOBAL ADVANTAGE

13%
economic growth

$1.7B
annual economic impact

1000
clients served since 2003

$36M
of investment raised

275
invention disclosures

62
exclusive agreements

$1B
annual economic impact

15
new client startups

5
participating companies

5
participating companies

2M
square feet of office, lab, and production space

95K
20,000 solar panels and 10 energy companies at Solar Zone

6K
employees

+50%
have a direct UA affiliation

1000
clients served since 2003
THE TECH LAUNCH ARIZONA / TECH PARKS ARIZONA TEAM

David N. Allen, Ph.D.  
Vice President, Tech Launch Arizona

Bruce Wright  
Associate Vice President, Tech Parks Arizona

Doug Hockstad  
Assistant Vice President

Joann MacMaster  
Director, Business Development

Samantha Bankston Bares  
Executive Associate, Planning & Project Management

Anita Bell  
Acting Director, Arizona Center for Innovation

Tracy Bibeau  
Executive Assistant to the Associate Vice President, Tech Parks Arizona

Iona Brinson  
Intellectual Property Docket Clerk

Bruce Burgess  
Mentor-in-Residence

Donna Callies  
Executive Assistant

Sabrina Duarte  
Administrative Associate

Justin Dutram  
Director of Business Development, Tech Parks Arizona

Emilia Fajardo  
AP/AR and Legal Doc Coordinator

Bernadette Franco  
Accounting Supervisor/Human Resources Coordinator, Tech Parks Arizona

John Geikler  
Assistant Director, Physical Sciences Licensing

Rakhi Gibbons  
Associate Director, Biomedical & Life Sciences Licensing

Molly Gilbert  
Director of Community Engagement, Tech Parks Arizona

Brenda Hough  
Community Outreach Coordinator, Tech Parks Arizona

Taylor Hudson  
Technology Marketing Associate

Lewis Humphreys  
Software & IT Licensing Manager, Eller College Embed

Sherry Jameson  
Coordinator, Business Development

Janet Kisinger  
Senior Intellectual Property Manager

Craig Kleine  
Information Technology Officer, Tech Parks Arizona

Lisa Lin  
Licensing Manager, College of Medicine

Jianling Liu  
Senior Business Analyst

Gus Loha  
Accountant

Peter Loya  
Tenant and Employee Relations Coordinator, Tech Parks Arizona

Kenneth Marcus  
Director, UA Tech Park and Chief Financial Officer, Campus Research Corporation

John Geikler  
Assistant Director, Physical Sciences Licensing

Rakhi Gibbons  
Associate Director, Biomedical & Life Sciences Licensing

Molly Gilbert  
Director of Community Engagement, Tech Parks Arizona

Brenda Hough  
Community Outreach Coordinator, Tech Parks Arizona

Taylor Hudson  
Technology Marketing Associate

Lewis Humphreys  
Software & IT Licensing Manager, Eller College Embed

Sherry Jameson  
Coordinator, Business Development

Janet Kisinger  
Senior Intellectual Property Manager

Craig Kleine  
Information Technology Officer, Tech Parks Arizona

Lisa Lin  
Licensing Manager, College of Medicine

Jianling Liu  
Senior Business Analyst

Gus Loha  
Accountant

Peter Loya  
Tenant and Employee Relations Coordinator, Tech Parks Arizona

Kenneth Marcus  
Director, UA Tech Park and Chief Financial Officer, Campus Research Corporation

ADVISORY BOARD

Steve Broadbent  
CEO, Critical Path Institute

Trina Callie-Dixon  
Strategy Manager, Raytheon

Jon Dudas  
Secretary of the University, UA

Wain Fishburn  
Partner, Cooley LLP

Harry George  
Managing General Partner, Solstice Capital

Paulo Goes  
Dean, Eller College of Management, UA

Larry Hecker  
Attorney, Hecker PLLC

Tom Keating  
Board of Directors, UA Foundation

Henry Koffler  
President Emeritus, UA

Olden Lee  
Chair, Eller College of Management National Board

Fletcher J. McKusker  
CEO, Providence Service Corporation

Angela Perez  
Attorney, Snell & Wilmer

David Smallhouse  
Managing Director, Miramar Ventures

Manny Teran  
CEO, Aztera

BUSINESS DEVELOPMENT ADVISORY COMMITTEE

Remy Arteaga  
Director, McGuire Center for Entrepreneurship, UA

Brian Ellerman  
Digital Initiative Lead, Sanofi

Kathleen Eriksen  
CEO, Downtown Tucson

Tony Ford  
CEO, Sparc Interactive

Sergio Gazic  
CEO, BioAccel

Base Horner  
Chairman, Screening Panel, Desert Angels

Nicholas Lim  
CEO, D3Sciences

Edmund Marquez  
Board Member, Río Nuevo; Owner, Edmund Marquez Allstate Agencies

Iain McCreary  
CEO, Insight SRI, Ltd

Jeff Sales  
Executive Director, Arizona Technology Council, Southern Arizona Regional Offices

Rick Schnellmann  
Professor and Dean, College of Pharmacy, UA

Andrew Squire  
Economic Development, Tucson City Mayor’s Office

David Welsh  
Chief Operating Officer, Sun Corridor, Inc.

Marie Wesselhoft  
CEO, MSDx

Justin Williams  
Founder and CEO, Startup Tucson

CONNECT WITH US

http://techlaunch.arizona.edu/tla/newsletter

@techlaunchaz

Tech Launch Arizona

Copyright © 2017. All rights reserved.  
The University of Arizona | Arizona Board of Regents

Thank you to our Gold Sponsors