Research, Innovation and Impact FACULTY SENATE

BETSY CANTWELL December 7, 2020





ELIZABETH "BETSY" CANTWELL, Senior Vice President, Research & Innovation

JOHN O'NEIL Vice President Research Development

JOHN MESTER Associate Vice President Research Development

LORI SCHULTZ

Assistant Vice President Research Intelligence

JENN FIELDS Director, Office of Societal Impacts

KIM PATTEN Director, Research Development Services

SANGITA PAWAR Vice President, Operations

BROOKS JEFFERY Associate Vice President, Infrastructure

CARRIE STUSSE Manager, Administrative Services

ANH LE Senior Director, Business Services

JOANNE CANALLI Director, Employee Services

STEPHANIE DOSTER Director, Communications

STEPHEN HARSY Director, Sponsored Projects – Contracting Services

PAUL SANDOVAL Director, Sponsored Projects – Post Awards

RACHEL RICE Assistant Director, Sponsored Projects – Preaward Services

> SUSAN MUNDT Assistant Director, SPCS – Operations

MARIETTE MARSH Senior Director, Research Ethics and Quality

STEPHANIE GRIFFIN Senior Director, Research Laboratory Safety Services & Occupational Health

> TAREN ELLIS LANGFORD Director, Conflict of Interest

KAY ELLIS Director, University Export Control Programs

SCOTT PRYOR Manager, Training Program & Research Integrity Officer

> DIRECTOR University Animal Care

INNOVATION COUNCIL

BRIAN ELLERMAN Director The Forge

DOUGLAS HOCKSTAD Assistant Vice President Tech Launch Arizona

SANGITA PAWAR Vice President, Operations Research, Innovation and Impact

> CAROL STEWART Associate Vice President Tech Parks Arizona

CENTERS & INSTITUTES

JAMES L. BUIZER Arizona Institutes for Resilience: Solutions for the Environment and Society

> HOP BAILEY Director, Arizona Space Institute

JENNIFER KEHLET BARTON Director, BIO5

> JOAQUIN RUIZ Director, Biosphere 2

DAVID SCHMIDTZ Director, Center for the Philosophy of Freedom

JAVIER DURAN Director, Confluencecenter for Creative Inquiry

> NIRAV MERCHANT Director, Data Science Institute

CAROL A. BARNES Director, Evelyn F. McKnight Brain Institute

JILL KOYAMA Director, Institute for Lesbian, Gay, Bisexual and Transgender Studies

JONATHAN SPRINKLE Director, Transportation Research Institute

CHRISTOPHER A. SCOTT Director, Udall Center for Studies in Public Policy

Existing RII Faculty Committees

Unit Name

Faculty Standing Committee Name

Arizona Institutes for Resilience	AIR Design Committee	Research Laboratory & Safety Services Laser Safety Committee (LSC)		
Arizona Institutes for Resilience	AIR Justice, Equity, Diversity and Inclusion (JEDI)	Research Laboratory & Safety Services	Radiation Safety Committee (RSC)	
Arizona Institutes for Resilience	Bridging Biodiversity and Conservation Sciences (BBCS)	Research Laboratory & Safety Services	Lab & Chemical Safety (projected to charter in 2021)	
Arizona Institutes for Resilience	Center for Climate Adaptation Science and Solutions (CCASS)	Tech Launch Arizona	Intellectual Property Policy Committee	
Arizona Institutes for Resilience	Climate Assessment for the Southwest (CLIMAS)	Tumamoc Hill	Tumamoc Hill Advisor Council	
Arizona Institutes for Resilience	Institute for Energy Solutions (IES)	Tumamoc Hill	Desert Laboratory Plant Ecology Working Group	
Arizona Institutes for Resilience	Desert Laboratory at Tumamoc			
Arizona State Museum	Continuing Status and Promotion	University Animal Care	Continuing Status and Promotion Committee	
Arizona State Museum	Market Adjustment Committee	University Core Facilities	Micro/Nano Fabrication Center	
Arizona State Museum	Annual Evaluation Committee	University Core Facilities	UA Genetics Core	
Arizona State Museum	Bylaws and Standing Rules	University Core Facilities	TBIR - 3T	
BIO5 Institute		University Core Facilities	TBIR - 7T	
	Member Advisory Board	University Core Facilities	TBIR - High Resolution Ultrasound (Vevo)	
BIO5 Institute	Annual review committee	University Core Facilities	Imaging Cores LSN and Marley - Optical Microscopy	
Conflict of Interest	Institutional Review Committee	University Core Facilities	Imaging Cores LSN - Electron	
Conflict of Interest	Executive Review Committee		Analytical & Biological Mass Spectrometry (co-operated as	
Institute for LGBT Studies	The Institute for LGBT Studies Faculty Advisory Committee	University Core Facilities	UACC Proteomics Shared Facility)	
Institute for LGBT Studies	TSRC Faculty	University Core Facilities	Flow Cytometry Shared Resource (Oversight Committee; co-managed with UACC)	
Research Integrity Program	University Committee on Ethics and Commitment		Functional Genomics Core (co-managed with AZ Drug	
Research Laboratory & Safety Services	Institutional Biosafety Committee (IBC)	University Core Facilities	Discovery, College of Pharmacy)	

RII Faculty Advisory Council (RIIFAC); kicking off 01/01/2021

- Standing committee charged with advising the Senior Vice President for Research & Innovation on matters pertaining to UArizona research activities
- Monthly meetings, members must attend 60%
- Composition
 - 2-year service, supported by RII office staff
 - 15-20 faculty members nominated by their dean/directors and approved by RII
 - Members must be participants in active research programs and demonstrate keen interest in research advancement and/or innovation at the UA
 - Ex-officio members: Chair or member designated by each of the chair of the Research Policy Council and the chairs of Strategic Planning and Budget Advisory Committee



ITHAKA Report 1/1/2020 Senior Research Officer Challenges

- Evolution from service to professional model, driven largely by growth in complexity, competitiveness, increasing need for external partnerships, compliance mandates, impact & reputation mandates, infrastructure costs and securing new, large, multidisciplinary and/or more sustainable funding
- Strategies to develop research and innovation success have challenges associated with:
 - Responding to critical or immediate events
 - Developing approaches for Grand Challenges: partnerships, consortia, etc
 - Limited resources / focus on revenue models & fundraising
 - Heightened compliance responsibility & accountability
 - Increasing and articulating impact, influence funders & stakeholders
 - Research support avoiding diminishing returns

ITHAKA S+R Research Report, Oya Rieger & Roger Schonfeld; The Senior Research Officer -Experience, Role, Organizational Structure, Strategic Directions, and Challenges, Dec 1, 2020



COSTS (IDC) ADMINISTRATIVE (F&A) COSTS // INDIRECT FACILITIES &

WHAT ARE F&A COSTS? *



When universities perform research on behalf of the federal government through agency grants, contracts, or other agreements, "Facilities and Administrative" (F&A) costs are incurred (often "indirect costs" in vernacular).

COLLEGE/RCU DISTRIBUTIONS INCREASE FASTER THAN CENTRAL

		2015	2016	2017	2018	2019
\$73M 2015 TOTAL	CENTRAL	\$55.1M 75.00%	\$54.9 76.78% -0.5% Δ	\$55.7M 71.10% +1.5% Δ	\$56.2M 68.20% +0.9% Δ	\$57.5M 61.83% +2.3% Δ 2019 TOTAL
		\$18.4m 25.00%		\$22.6M 28.90% +26.8% Δ	\$26.2M 31.80% +13.6% Δ	\$35.5M 38.17% +26.2% Δ

2019 COLLEGE/RCU, CENTRAL, AND RII UNITS SHARE THE FUNDS

SERVICES FROM RII RESEARCH, INNOVATION & IMPACT (RII)



Sponsored Projects Services and Contracting Services Pre- and post-award and contracting services



Research Development Services Complex proposal development

Compliance



Human Subjects Protection Program, Conflict of Interest, Export Control, Research Integrity, Privacy, Research Laboratory & Safety Services



Research Infrastructure Core facilities and research space



University Animal Care Animal subject research

BUDGET FOR RII

RII Operating Budget \$32m

Technology

Initiative Fund

Research



2.33% RII Cento & Institu



WHAT IS F&A RECOVERY?

Funds are recovered from granting agencies as reimbursements to support the University for the costs ofits services and infrastructure provided in order for grants and contracts to operate with minimal overhead costs.



DN, es	Total F&A Recovery						
	61.83% Central						
t, 7.75% SVP	entreisity methalion a reamonegy entrees						
Research	Distributed Education - Outreach & Global Distributed Education - Online & Distance Colleges of Letters, Arts, & Science Human Resources Business Affairs (Non-Facilities) Arizona Health Sciences Center						
	Honors College Graduate College Student Affairs	CUs					
% 5.42% Iters RII Sutes	45.42% 4.05% 2.66% 1.95% Administrative Institutional Public Aid Support Costs Service Support						

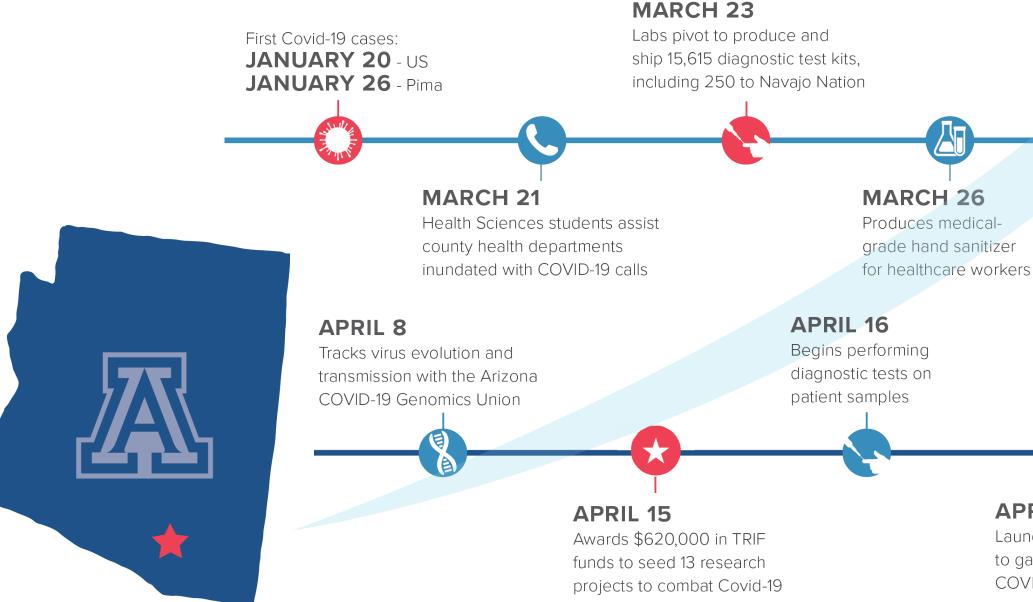
Investesments 2010-2019 enables UArizona to pivot in 2020

- University of Arizona Genetics Core
- University of Arizona Genetics Core
- BIO5 Media Facility
- The Arizona Center for Drug Discovery
- Asthma and Airway Disease Research Center
- Data Science Institute



& THE UNIVERSITY OF ARIZONA

The TRIF-funded research infrastructure already in place enabled rapid response by researchers in the BIO5 Institute to tackle COVID-19



APRIL 2 MARCH 27 Tests wastewater across Makes 3-D printed masks the country to trace for AZ healthcare workers coronavirus prevalence and first responders **APRIL 1** Invents a new respiratoryassist device **APRIL 30** Deploys UArizonadeveloped antibody test, the most effective in the U.S. APRIL 20 **MAY 18** Launches texting system Expands antibody to gather and provide

COVID-19 information

Expands antibody testing statewide to 250,000 front line workers testing statewide

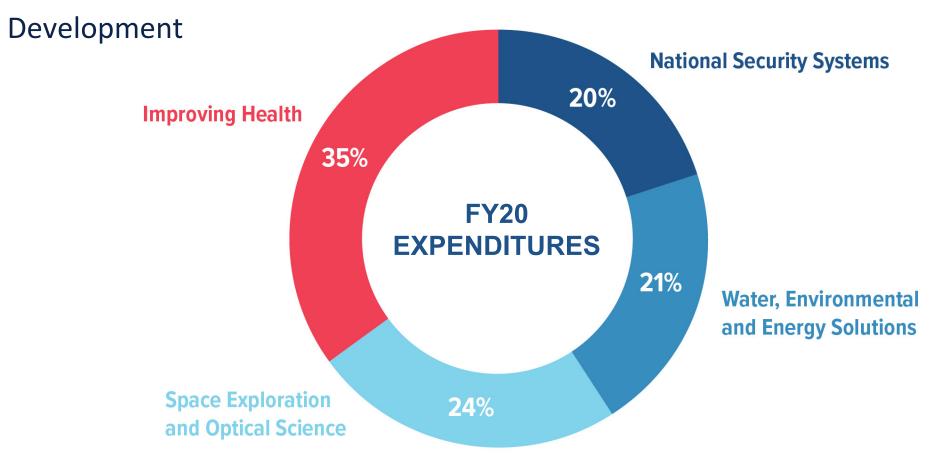
Future of Technology and Research Initiative Fund (TRIF)

CURRENT INITIATIVES

• Improving Health; Water, Environmental & Energy

Solutions; Space Exploration & Optical Sciences;

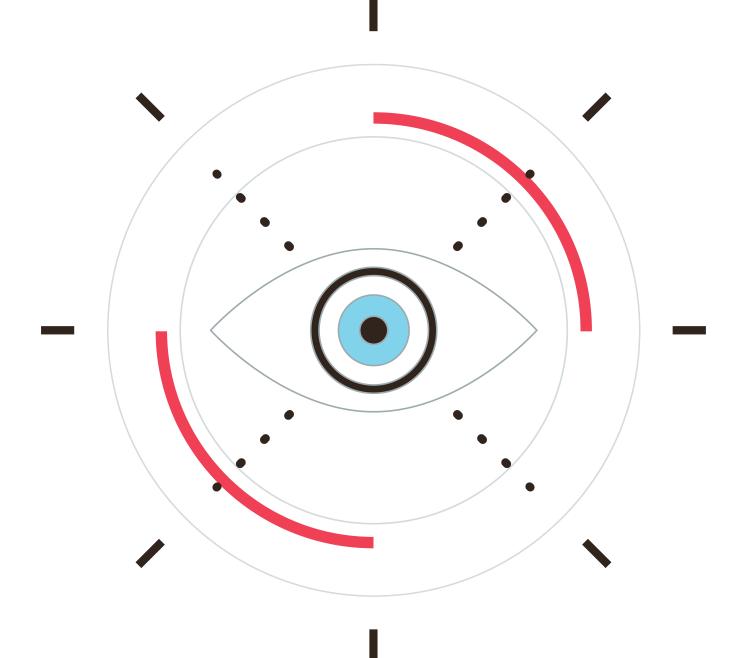
National Security Systems, and Access & Workforce



NEW INITIATIVES, Beginning FY22

- Health Futures, Resilience Science, National
 Security Systems, Space Exploration & Optical
 Sciences, Innovative Technology, and Access &
 Workforce Development
- Our TRIF allotment could vary year by year





Eye on the Future

RII GOALS

- Anticipate and prepare the UA and our community for future challenges and opportunities
- Expand our impact and influence in the world
- Strengthen our creativity, resilience, and sustainability



Eye on the Future

RII GOALS

- challenges and opportunities

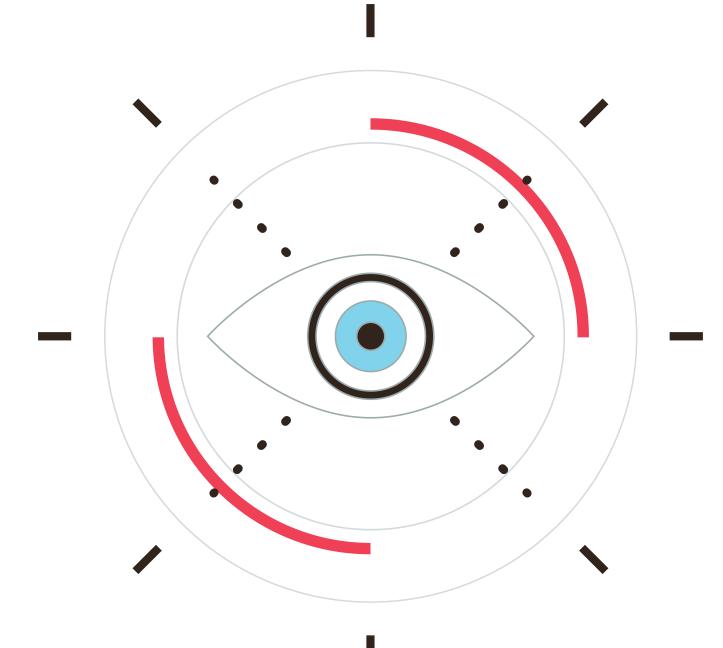
 - Ο

• Expand our impact and influence in the world

- O Design for inclusion, equity and diversity in all we do
- Expand with whom and how we engage and partner Ο
- O Enhance our institutional capabilities in infrastructure, faculty and student support through strategic investments in advanced technologies
- O Enable the UA to embrace innovation and an entrepreneurial mindset

• Strengthen our creativity, resilience, and sustainability

- Innovate new business models and methods \bigcirc
- Balance priorities Ο
- Design for distinctiveness Ο
- Continuously review governance Ο
- Ensure optimization of program/division structure Ο



• Anticipate and prepare the UA and our community for future

O Apply broad and deep collaboration to anticipate and solve problems, produce enduring knowledge and develop our innovation ecosystem

Enhance the University's knowledge and capabilities through strategic investments in multidisciplinary centers & institutes, research & innovation infrastructure and faculty support



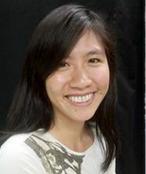
RII AWARDS

- Life on Ancient Earth and Alien Planets: NASA awarded ~\$12 million to UA astrobiology researchers Betul Kaçar and Daniel Apai – 2 of 8 awards.
- NSF Convergence Accelerator: 2 awards integrating multi-disciplinary human-centered research by junior faculty Zheshen Zhang (MSE, Op Sci) and Laura Condon (Hydrology & Atmo Science). The only two convergence accelerator awards in Arizona.
- NIH DP2 (New Innovator) Award: Alicia Allen (Clinical Translational Science, Family and Community Medicine, Public Health). First such award (DP2) to UArizona since 2010.
- Institute of Museum and Library Services: Dr. Berlin Loa, (iSchool), Knowledge River: National Impact on Diversity, Equity, and Inclusion in Libraries, Archives, and Museums enhances the UA's efforts to provide a diverse and inclusive education.















QUESTIONS?

THANK YOU

