

# Ohio Third Frontier

**Ohio**

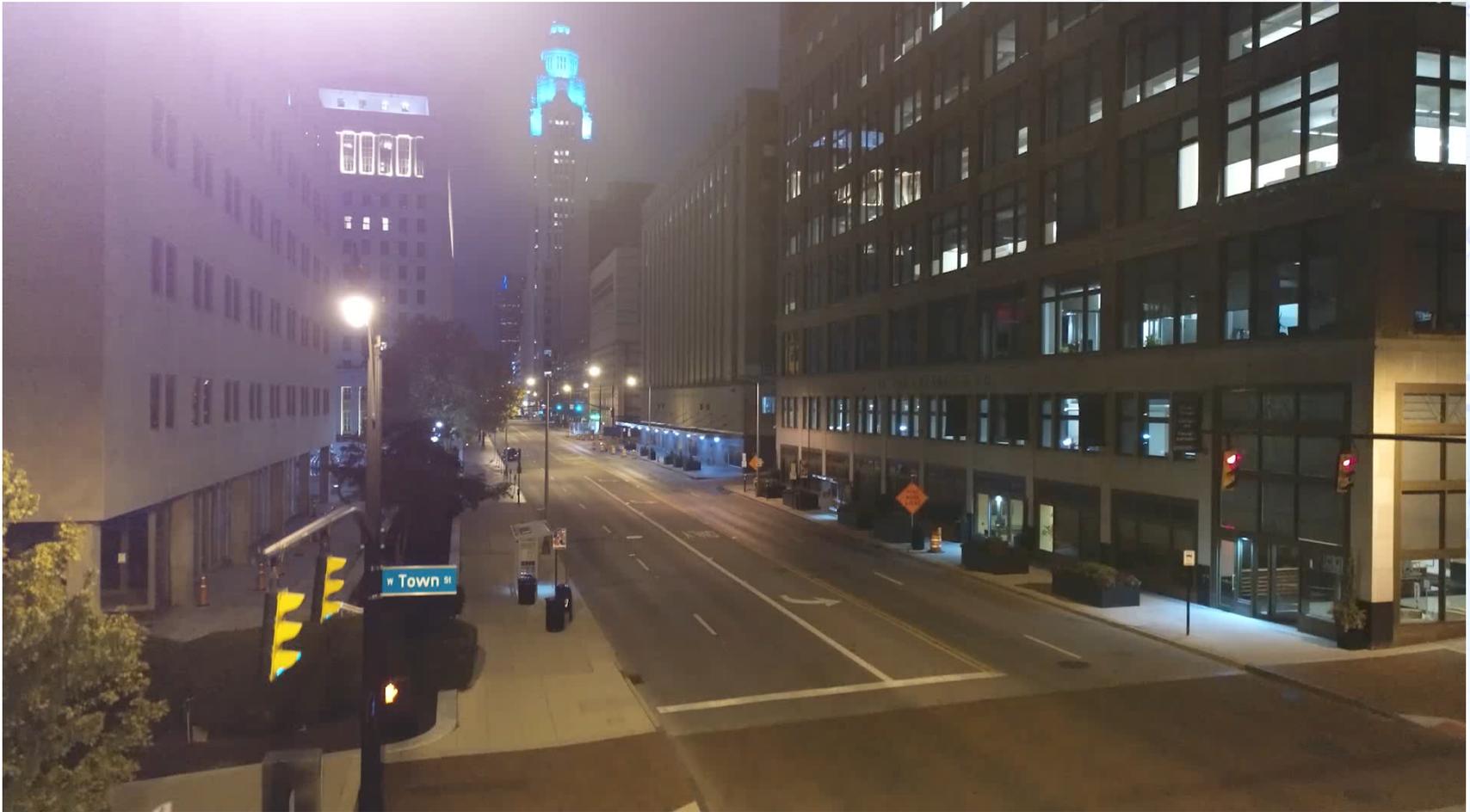


**Opioid Technology Challenge**

Commission and Advisory Board

September 12, 2018

# Ohio Opioid Technology Challenge



**Ohio**

Opioid Technology Challenge



For more information, visit  
[www.opioidtechchallenge.com](http://www.opioidtechchallenge.com)

## The Ohio

## Opioid Technology Challenge :

A 3-phase, prize-based competition to identify and to promote the development and implementation of technology-based solutions that address or improve opioid abuse prevention, treatment and overdose avoidance, and response.





The Challenge Phase consists of four Challenge Topics that address specific areas of unmet needs or concerns related to opioid use, abuse and exposure.

Up to 12 x \$200K prizes across 4 unmet need areas

Feb - Sept 2018

# OOTC – Challenge Phase Focus Topics

## Diagnose



### **Rapidly identify individuals at high risk of addiction.**

- Potential solution spaces included IT, sensors, biological, behavioral or genetic diagnostic technologies, etc.

## Prevent



### **Eliminate or reduce urges, cravings or symptoms of withdrawal.**

- Potential solution spaces included pharmaceuticals or medical devices that specifically address addictive responses, biofeedback, etc.

## Connect



### **Provide immediate and extended access for relapse or overdose interventions.**

- Potential solution spaces included sensors, communication technologies, location technologies, etc. to deliver needed resources (friends, counselling, 911 etc.)

## Protect



### **Protect first responders and medical professionals from inadvertent exposure to toxic opioid levels.**

- Potential solution spaces included ambient or surface detection of opioid residue, medical prophylactics, auto antidote, protective equipment, rapid sensors, etc.



## Outcomes

58 Eligible Entries

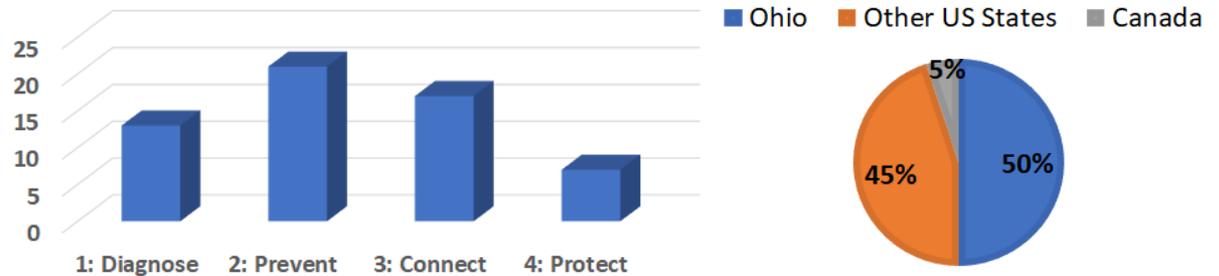
Distribution:

12 External Judges

Accomplished, advance degreed professionals, across disciplines; most from Ohio

2 Rounds of Evaluation

Within and across topic areas



**12 Entries**  
**to be recognized for award**  
**across all 4 topics**



Topic	Organization	Submitter
Connect 	Apportis LLC	Philip Payne
Connect 	Brave Technology Coop	Gordon Casey
Connect 	DynamicCare Health	Eric Gastfriend
Prevent 	Innovative Health Solutions	Brian Carrico
Diagnose 	InteraSolutions	Lee Barrus
Diagnose 	OpiSafe.com	Robert Valuck
Prevent 	Prapela, Inc.	John Konsin
Connect 	relink.org	Bethany Friedrichsen
Diagnose 	University Hospitals	Jori Mintz
Protect 	University of Akron	Abraham Joy
Prevent 	University of Wisconsin	Laura Van Toll
Protect 	Vuronyx Technologies	Sandip Agarwal



Up to 4 x \$1M Awards  
Sept 2018 - Sept 2019



**Apportis LLC**  
**Philip Payne**  
**Dublin, Ohio**

**The Apportis Opioid Solution**



**Brave Technology Coop  
Gordon Casey  
Vancouver, Canada**

**Technological Responses for the  
Overdose Epidemic**



**DynamiCare Health**  
**Eric Gastfriend**  
**Boston, Massachusetts**  
**In partnership with BrightView Health**

## **Automating Contingency Management with DynamiCare Platform at Brightview Health**

**Presenter: Dr. Shawn Ryan, BrightView Health**



Prevent



# **Innovative Health Solutions Brian Carrico Versailles, Indiana**

## **Innovative Health Solutions: NSS- 2 BRIDGE - A New Standard Of Care**



Diagnose



**InteraSolutions**  
**Lee Barrus**  
**Orem, Utah**

**SOAR Ohio – Rapid, Evidence-  
Based Psychological Assessment  
Tool to Screen for Opioid Abuse  
Risk (SOAR)**

**Presenter: Dr. Trish Henrie-Barrus**



**OpiSafe.com**  
**Dr. Robert Valuck**  
**Denver, Colorado**

**OpiSafe: Multidimensional Patient  
Monitoring for Rapid Identification  
of Addiction Risk**



Prevent



**Prapela, Inc.  
John Konsin  
Concord, Massachusetts**

**Prapela™ SVS: A Non-  
pharmacological Product with  
Stochastic Vibro-tactile  
Stimulation to Reduce Opioid  
Withdrawal Symptoms in  
Newborns**



**relink.org**  
**Bethany Friedrichsen**  
**Aurora, Ohio**

## **relink.org Ohio Opioid Technology Challenge Application**

**Presenter: Ray Dalton**



**Diagnose**



# **University Hospitals Jori Mintz Cleveland, Ohio**

## **UH Care Continues**

**Presenter: Dr. Eric Beck**



Protect



**University of Akron  
Dr. Abraham Joy  
Akron, Ohio**

**First Line of Defense: Polymer  
Fiber Gloves that Change Color on  
Opioid Contact**



Prevent



**University of Wisconsin-Madison  
Laura Van Toll  
Madison, Wisconsin**

**Disseminating A-CHESS: A  
Smartphone System for  
Preventing Opioid Abuse in Ohio**

**Presenter: Dave Gustafson, Jr.**



**Vuronyx Technologies**  
**Dr. Sandip Agarwal**  
**Woburn, Massachusetts**

**Paper Analytical Devices for Rapid  
Detection of Opioids under Field  
Conditions**

**Presenter: Melissa O'Meara**

# Ohio Third Frontier

Commission and Advisory Board  
September 12, 2018



Development  
Services Agency



**Third Frontier**  
Innovation Creating Opportunity

# Ohio Third Frontier Funds

\$1.14 Billion	Bond Proceeds
– \$957 Million	Committed
+ \$5.7 Million	Returns (2018 to date)
<b>\$188,980,541</b>	



2018

# MARKETING UPDATE



**Third Frontier**  
*Innovation Creating Opportunity*

**TechOhio**  
*The Voice of Ohio Third Frontier*



**Development  
Services Agency**

## Hear 20 innovators on how to push Northeast Ohio into the future

A scientist changing the way we use radar. A businesswoman transforming wedding dresses into heirloom gifts. An Asian-American artist who adds his flair to posters around [...read more]



# SHARING INNOVATION

## SPOTLIGHTING OHIO'S TECH COMMUNITY



**Third Frontier**  
Innovation Creating Opportunity



**TechOhio**  
The Voice of Ohio Third Frontier

### Most Recent News



## Cincinnati and Indianapolis Combining Forces to

### Ohio Third Frontier Innovation Creativity

TechOhio is part of the Ohio Development Services Agency, and showcases how the Third Frontier initiative is helping grow state's technology economy.

#### Featured Stories

 Safelite AutoGlass K Never Too Big to In

 Cincinnati's Corp Trickle Down to €

 SweatSeal Soh



# CONNECTING WITH OUR AUDIENCE





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# MEET OUR PARTNERS

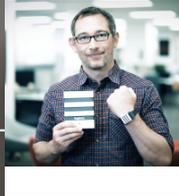


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# WE'VE SEEN THEIR PASSION FIRSTHAND



**Ohio**

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*Innovation Creating Opportunity*

**TechOhio**  
*The Voice of Ohio Third Frontier*

**MEDIA SOURCE**

**BOLD  
IDEAS**



**BIG  
WINS**

**PASSIONATE  
FOUNDERS**



**VIBRANT  
COMMUNITIES**



**INNOVATIVE  
COMPANIES**

**Ohio**

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**MEDIA SOURCE**



*I'm not sure there's a better place to start a business right now than Columbus, Ohio. It's an incredibly supportive community where a win for one is a win for everyone.*

- Alex Timm, co-founder and CEO of Root Insurance

*"If I had to do it all over again, I would absolutely recommend building a tech startup in Ohio because of all the available support. This idea started so simply, and I just threw it around with some friends. When I started to take it seriously, doors began opening given the tremendous resources in northeast Ohio. We're succeeding because of that help.*

- Joel Crites, Founder & CEO of Micro Fantasy.

*Cincinnati believes in us, Ohio believes in us. It's as simple as that. We're building a world-class technology company and we want everyone to know exactly where it started.*

- Rodney Williams, founder and CEO of LISNR



# REACH FAR BEYOND OHIO



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# HUNDREDS OF STORIES SHARED

COUNTLESS MORE TO TELL

Ohio

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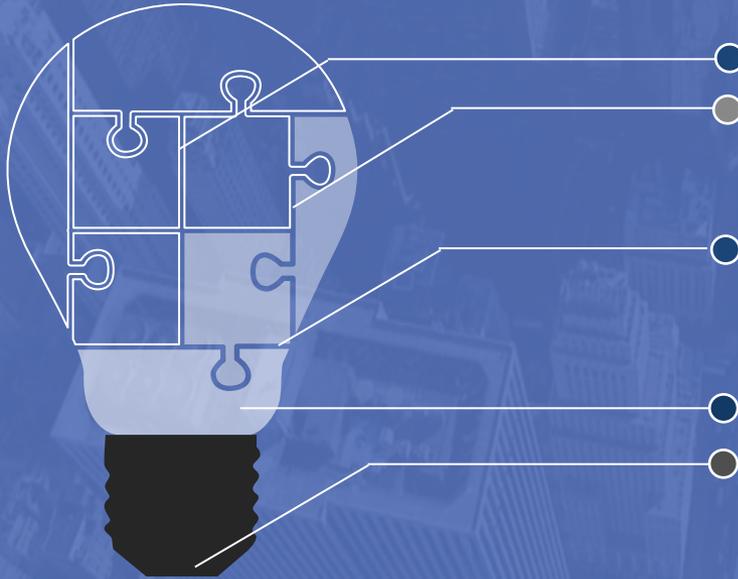
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# NETWORK SUPPORT





# STRATEGIC STORYTELLING

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**MEDIA SOURCE**



CROSS-CHANNEL PROMOTION  
TO REACH YOUR AUDIENCE



Ohio

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MEDIA SOURCE



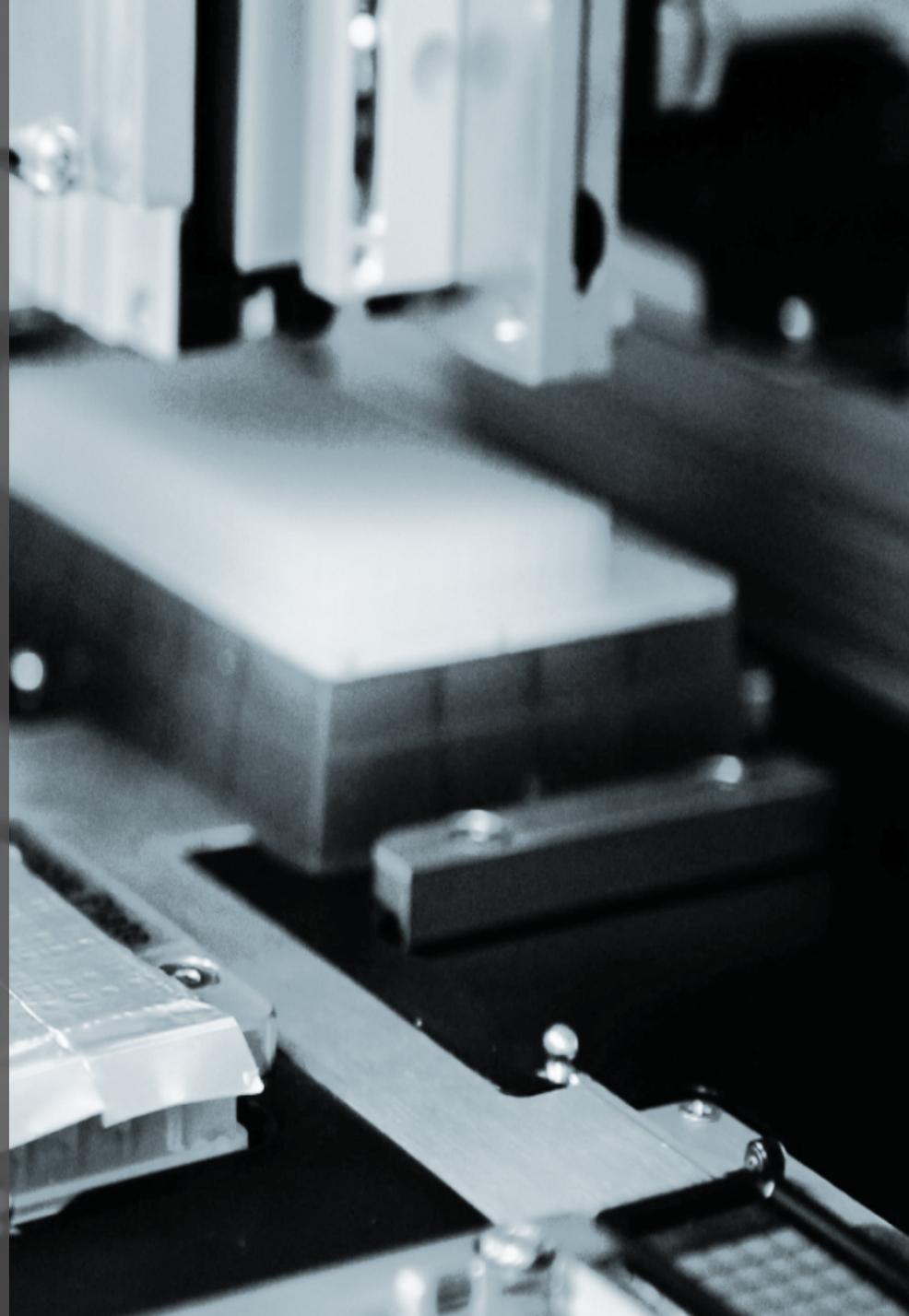
# MEASURING SUCCESS

MAKING REAL IMPACT

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# IMPRESSIVE GROWTH

TECHOHIO WEBSITE

2018 TOTAL SITE VISITS  
+26,000  
= 85% INCREASE



Ohio

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MEDIA SOURCE

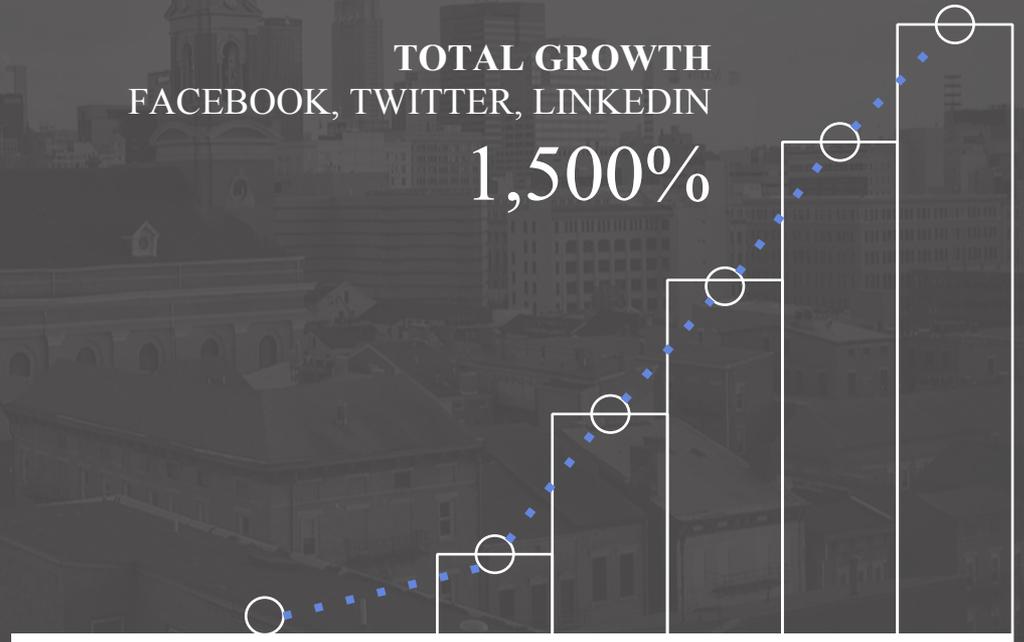


# IMPRESSIVE GROWTH

TECHOHIO SOCIAL  
PLATFORMS

TOTAL GROWTH  
FACEBOOK, TWITTER, LINKEDIN

1,500%



Ohio

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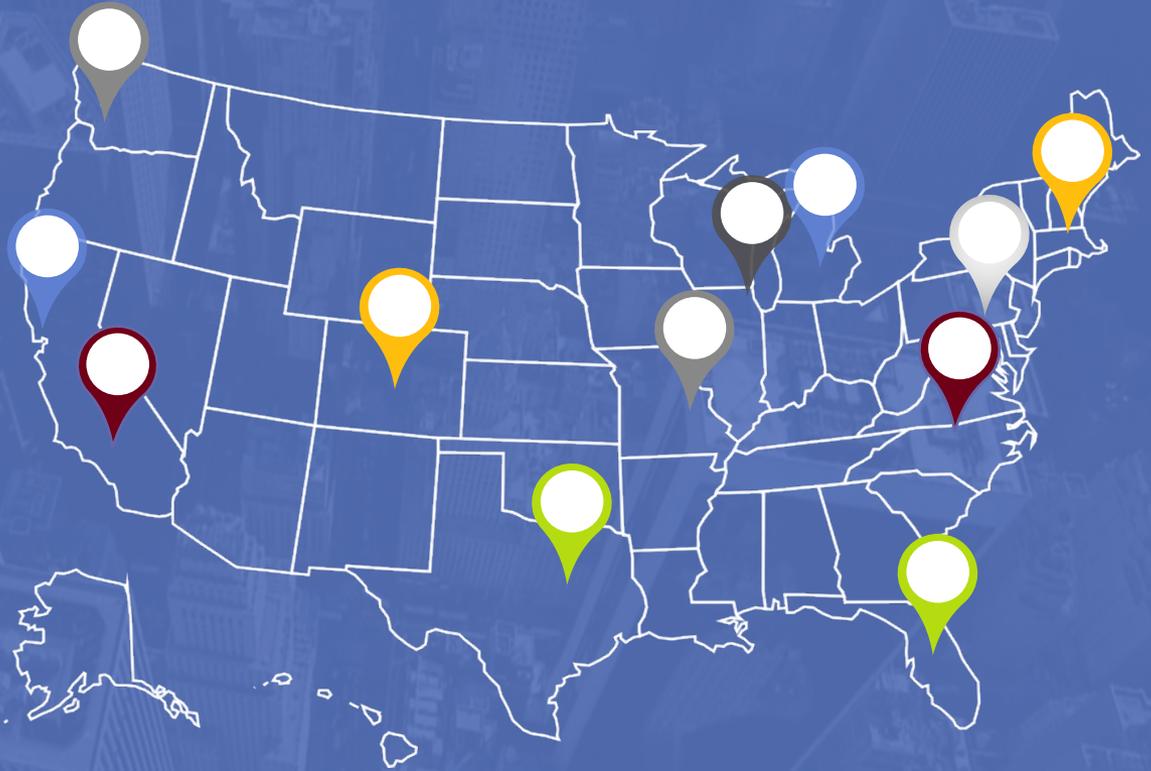
TechOhio  
*The Voice of Ohio Third Frontier*

MEDIA SOURCE



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**REACHING  
KEY TECH  
HUBS  
NATIONWIDE**





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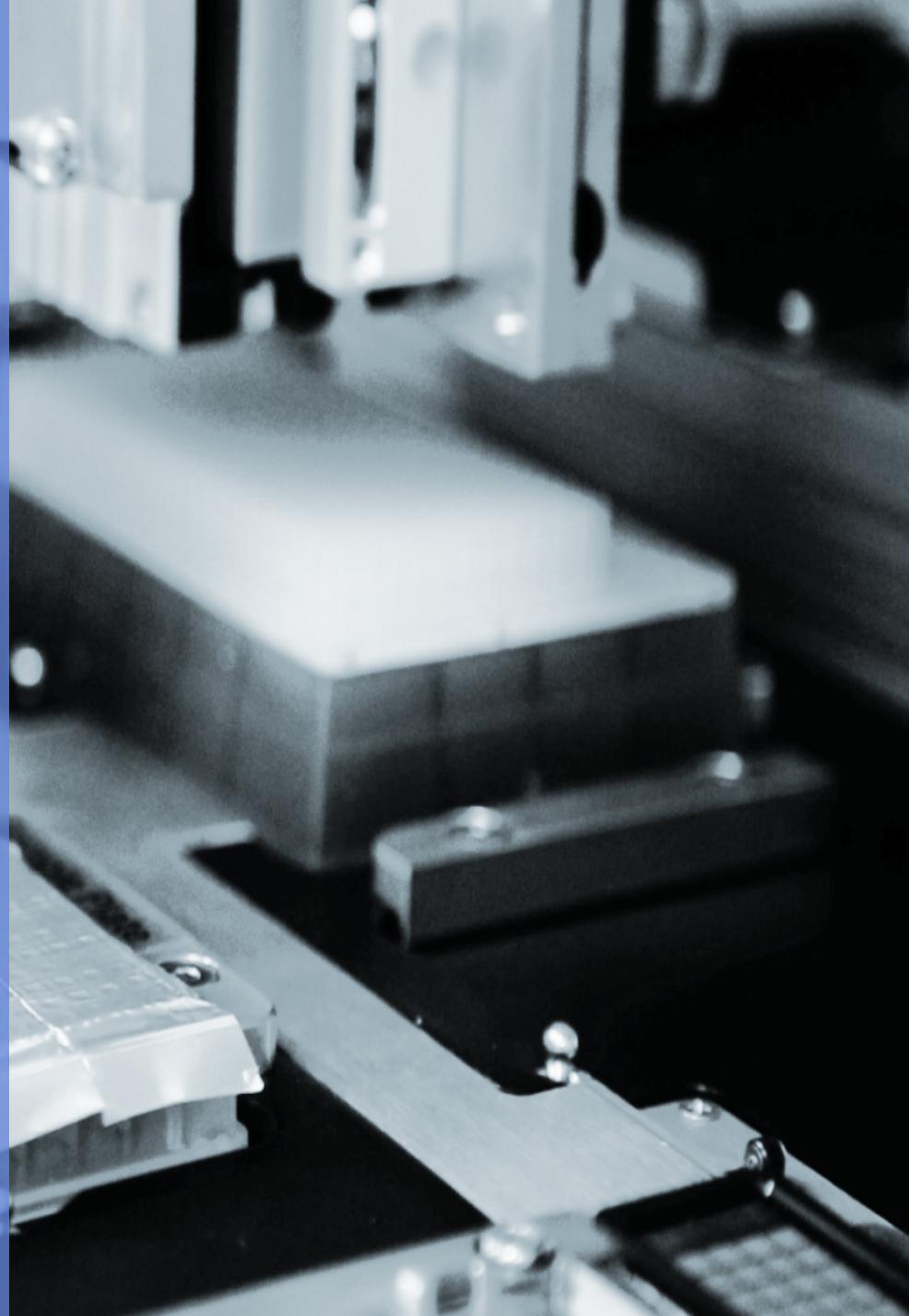
# BIG OHIO WINS

SPREADING THE WORD

Ohio

**Third Frontier**  
*Innovation Creating Opportunity*

**TechOhio**  
*The Voice of Ohio Third Frontier*







Columbus  
Collaboratory

Company Overview

**Matt Wald, President & CEO**



# The Original Collaboratory Concept



## WHY WE WERE FORMED

Solve Common Analytics/Cyber Challenges:

- Develop Collaborative Solutions
- Investigate Nascent Technologies
- High-Tech Jobs Creation
- Workforce Development

## THE OPPORTUNITY

- Advance Maturity of Advanced Analytics/Cyber Applications
- Increase Synergies and Competitiveness
- Create Products / IP Benefitting Members and the Market
- Develop Workforce and Attract Talent

Impact of Innovation

Time

September 12, 2018



# Investors & Stakeholders

## MEMBER/INVESTOR COMPANIES



## BOARD OF MANAGERS



**Michael Krouse**  
Chairman of the Board  
SVP, Chief Strategy &  
Transformation Officer,  
OhioHealth



**Greg Filipkowski**  
Interim VP & CIO,  
AEP



**Paul Heller**  
Senior Executive Vice  
President, Chief Technology  
& Operations Officer,  
Huntington



**Brian Leinbach**  
Executive Vice President &  
CIO,  
L Brands



**Talvis Love**  
Senior Vice President & CIO, Executive Vice President & CIO,  
Pharmaceutical Segment,  
Cardinal Health



**Jim Fowler**  
Executive Vice President & CIO,  
Nationwide

## OTHER STAKEHOLDERS



# Market Challenges We Address



## Leveraging Collaboration to Solve Critical Problems for Tomorrow's Digital Companies

### Building the Culture and Mindset for Digital Business

Facilitating collaboration experiences to share industry knowledge, increase speed, and encourage risk taking

### Big Data and AI Driving Business Innovation

Enabling advanced analytics experimentation<sup>1</sup> and new technology evaluation to derive **business value from data**

### Rising Costs of Managing Cyber Risks

Realizing **increased security ROI** and adapting practices to tomorrow's security operations needs

### Bridging the Talent Gap in the Digital World

Using Experiential Learning to continuously **develop skills & attract talent** for the workforce of the future

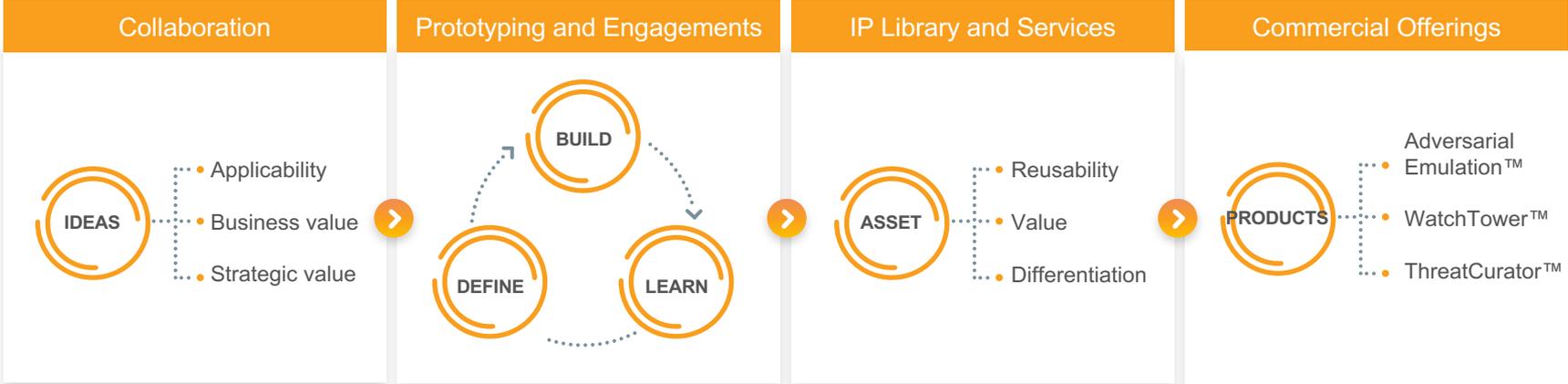
<sup>1</sup> "Biggest challenges organizations face in competing in a digital environment is lack of experimentation"  
*MIT Sloan Management Review, Coming of Age Digitally, 2018*

# What We Do



# How It Works

We identify common challenges, rapidly develop and deploy solutions that generate business value, and introduce resulting innovations into new markets



# What We've Learned



- Nationally unique: cross-industry, for-profit, collaborative tech innovation in digital
- Legal structure and expert resources make cross-company innovation possible



- Advanced analytics value realization relies on focused, iterative experimentation
- Data privacy concerns inhibit innovation, especially in cyber analytics



- Collaboration and trust have surfaced common use cases and accelerated maturity
- Cybersecurity collaboration can improve the risk posture of even the most mature



- Technology focus and variety has made us very attractive to top talent
- Building learning into work more effective for us than developing curriculum

# Collaboratory At-a-Glance

Collaboration		Commercialization		Regional Impact
<p><b>184</b> Member Engagements</p>		<p><b>13</b> Collaborating Companies</p>		<p>PR Coverage &amp; Recognition</p>
<p><b>420</b> Collaboration Sessions</p>		<p><b>59</b> IP Library Assets</p>	<p><b>9</b> Commercial Offerings</p>	<p><b>168</b> Number of Jobs Created</p>
<p><b>\$42M</b> Funding Commitments</p>	<p><b>500+</b> Number of Talent Skilled Up</p>			



### Collaboration Topics

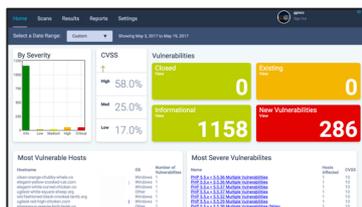
- Security/Threat Analytics
- Threat Intelligence
- Operations Analytics
- Customer Analytics
- Finance Analytics
- HR Analytics



### Regional Support

SmartColumbus, ONG, Pelotonia, CyberOhio, OGA, CSCC, OSU, Miami, OU, Franklin University, Columbus 2020

# Impact of Cyber Security Activities



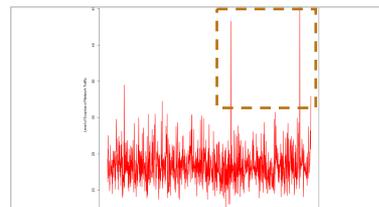
## Continuous Monitoring

External network vulnerability assessments and benchmarking through **Watchtower™**



## Collaborative Exercises

Using coordinated offensive testing to inform defense and immediately adjust controls using a shared **Attack Library**



## Applied Cyber Analytics Research

Network traffic analysis to identify anomalous behavior in real time through **Data Science**



## Elevating the State of Threat Intelligence Practices

Expert-inspired threat intelligence dossiers and info sharing through an **ISAO**, **ThreatCurator™**, and **TruSTAR** (Collab partner)

## Better Prioritize Remediation

## Immediately Optimize Defenses

## Insight-driven Responsiveness

## Improved Threat Understanding

# Sample Analytics Use Cases



## Empower consumers with accurate wait times until service

### Challenge

Consumers become frustrated when they must wait longer than expected for service, negatively impacting their experience.

### Solution

Developed a model that takes numerous factors into account while increasing the accuracy over the original one-variable model.

### Benefit

Improved the consumer experience and perception with objective to contribute to repeat visits and recommendations to others.



## Reduce redundant user groups to limit movement

### Challenge

Employees often have more access than required.

### Solution

Used statistical techniques to quantify the scale of superfluous access permissions.

### Benefit

Work resulted in assignment of resources to actively address over-provisioned access, improving security and maintaining compliance.

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Columbus  
Collaboratory

# Experiential Learning

Accelerating talent development in a learning environment like no other.

- Learning Circles – Learning by doing within a trusted network of peers.
- Cyber Rotational Program – A talent acceleration program for junior cybersecurity professionals.
- Interactive Talks– Qualified, engaged learners and leaders sharing their know-how.

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Talent Solutions

**2000+Hrs**  
Building Skills



**84%**  
Apply New Skills On Job

**150+**  
Experiential Learners

**85%**  
Cyber Rotation Retention

**107**  
Collaborative  
Learning



## Upskilling on:

- Artificial Intelligence
- Chatbots
- CloudDevOps
- Cloud Security Architecture
- Robotic Process Automation
- Security Orchestration & Automation
- ... and more

# How the OTF Grant Accelerated Progress



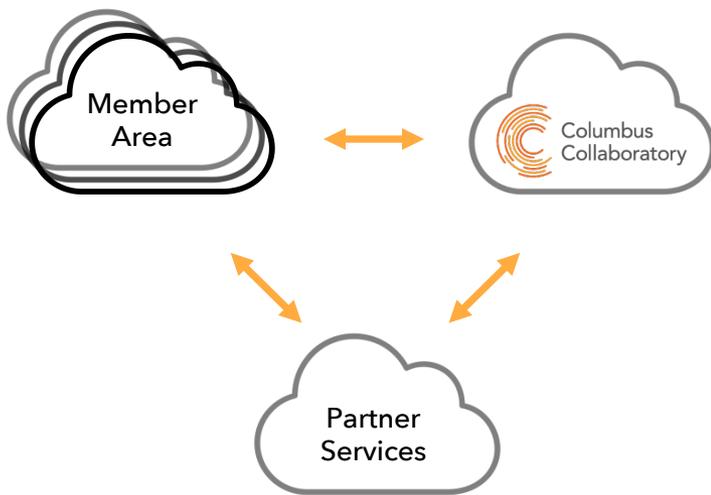
# OTF Grant Enabled a Collaborative Space



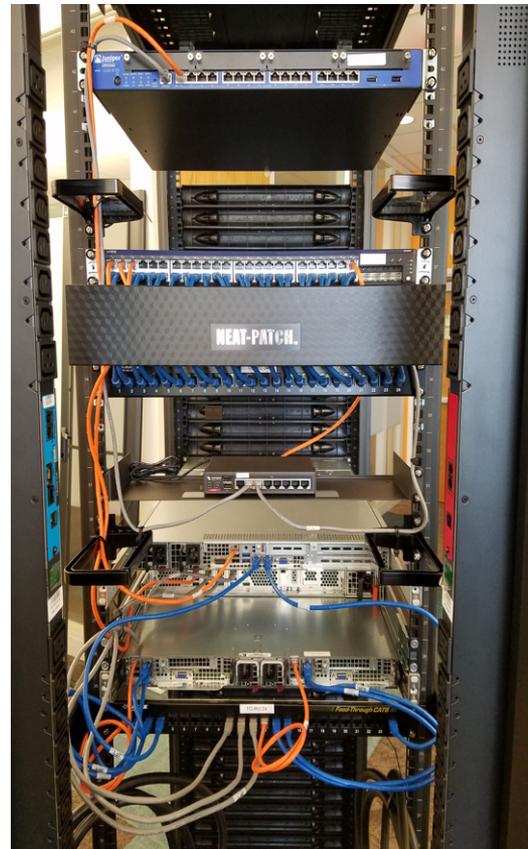
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# ... Accelerated Analytics Development

## Collaboratory Infrastructure



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## Collaboratory Stack Appliance

- Advanced Analytics prototyping
- Cybersecurity testing and assessment
- Managed services

App Delivery

Collaboratory IP

Analytics Tools

Data Sources

# ... and Software-based Products and Services



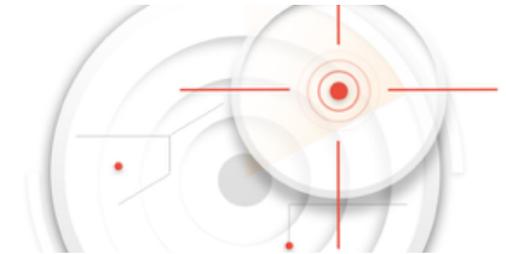
## ThreatCurator™ & TRU\*STAR

Understanding Real-Time  
Threats and Relevance to  
Prioritize Action and Response



## WatchTower™

Reducing Risk Through  
Vulnerability Discovery and  
Remediation



## ThreatProfiler™

Intelligence Data, Including  
Malware Analysis and  
Indicators of Compromise

# OTF Grant Funds Have Had a Major Impact on Jobs



**\$5M**

Ohio Third Frontier grant  
**required** 4:1 match

and

**100**

jobs created

We have significantly exceeded expectations\*:

Achieved

**140%**

of match

(\$28 M vs. \$20 M)

**\$21K**

in Ohio funds spent per created  
job (\$3.6M of funds spent to date)

**>\$90K**

Estimated average salary  
annual payroll of >\$15M,  
\$750K annual taxes

Created

**168**

jobs within member companies and  
the Collaboratory while drawing  
down 72% (\$3.6 M) of grant

\*As of May 31, 2018

Job counts include job creation in Collaboratory and Founding Members.



# Building an Ecosystem in Ohio



# National Visibility for Ohio

**HEARTLAND TECH (Venture Beat)**

## Big data's future is in Ohio

MATT WALD, COLUMBUS COLLABORATORY @CBUSCOLLAB JULY 22, 2018 10:25 AM



Above: Columbus, Ohio.  
Image Credit: Courtesy Shutterstock

For over a decade, a common refrain in the industry has been that as data continues to explode and companies needed the capabilities to manage the challenges of data capture have been met. The industry has become how to get value out of that data.

**siliconANGLE**

HOME + NEWS

**In the Buckeye State, an innovative cybersecurity collaboration experiment takes root**

BY PAUL GILLEN  
UPDATED 10:21 EST, 09 JUNE 2017

Columbus, Ohio, doesn't come immediately to mind as a center of high-tech excellence. But thanks to a thriving new experiment in corporate collaboration, the Buckeye State capital is now beginning to turn some heads in tech — in the increasingly challenging area of information security, no less.

The Columbus Collaboratory<sup>®</sup> was formed three years ago as a for-profit company aimed at developing advanced analytics and cybersecurity technologies and

### Recent Collaboratory Guests



**Devon Bryan**  
CISO  
US Federal Reserve



**John Carlson, Chief of Staff, FS-ISAC**



**Jay Healey**  
Founding Director  
Cyber Statecraft  
Atlantic Council



**Chris Inglis**  
Fmr. Dpty. Director  
NSA



**DJ Patil**  
Fmr. Chief Data  
Scientist  
US OSTP  
(visit pending)



**Greg Shannon**  
Chief Scientist  
CMU CERT, Fmr Asst. Dir.,  
Cybersecurity Strategy  
US OSTP

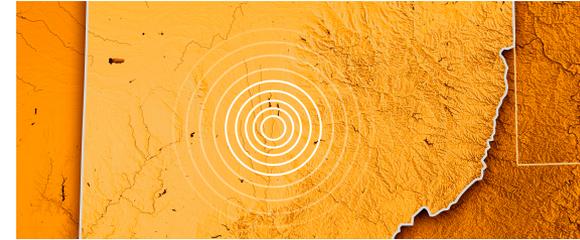
# Our Strategy



Operationalize collaboration  
and create a valuable analytics  
and cybersecurity portfolio



Commercialize portfolio to  
additional collaborators by  
leveraging IP and use cases



Scale-up/expand geographically  
to achieve sustainability and  
drive AI automation

## The Potential

Create an innovation ecosystem in high-growth technology areas that makes Ohio companies stronger

Help position Ohio as a leader in driving innovation in advanced analytics/AI and cybersecurity to create jobs and attract talent

# Technology Validation & Start-up Fund Program

## Lead Applicants

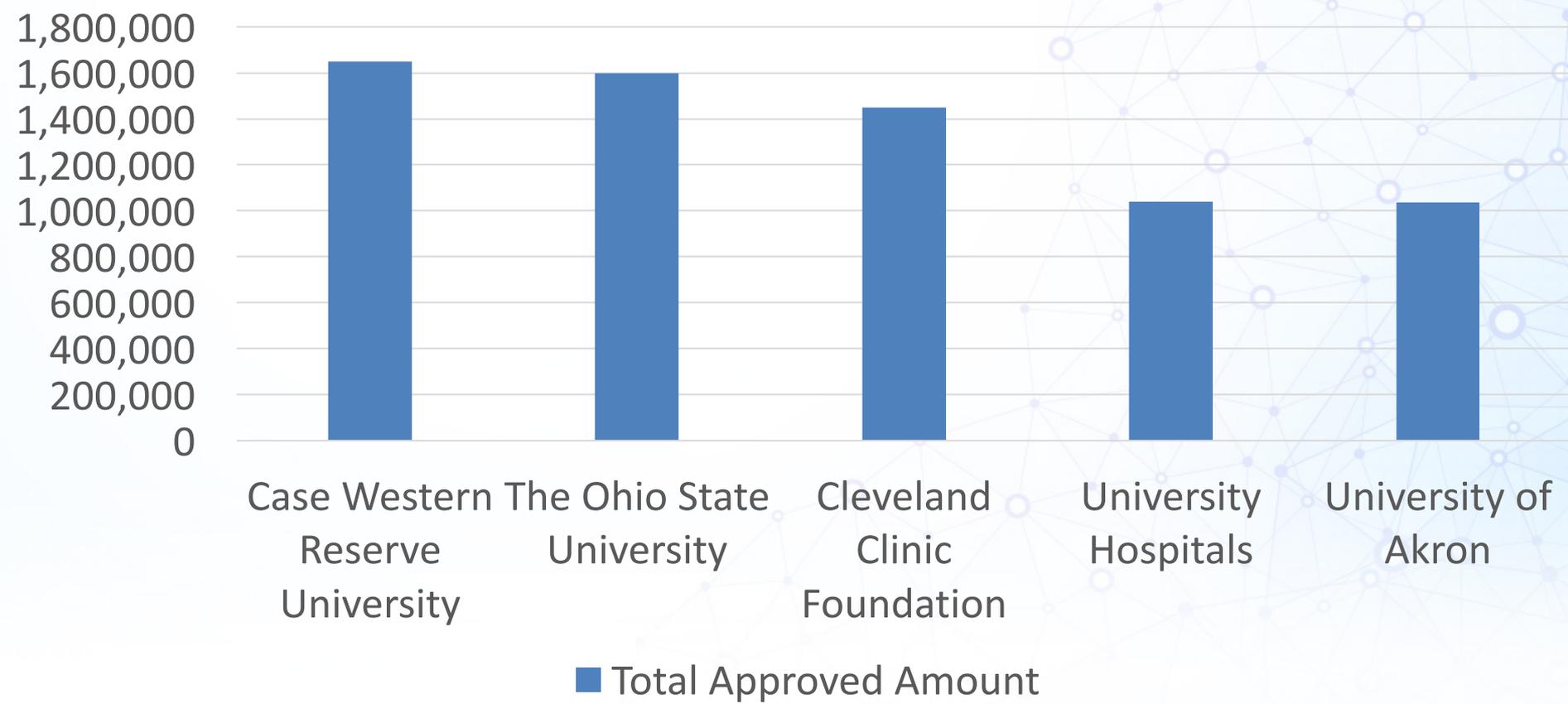
- Ohio research institutions with sufficient internal deal flow to support a multitude of projects. Awards range from \$200,000-\$500,000 with 1:1 cash cost share.
- Ohio start-ups and young companies that are a prospective licensee of a technology from an Ohio institution. Up to \$100,000 (or \$150,000 if in MedTech) as initial capitalization with no cost share.

**Program Manager: Mateo Williamson**

**External Evaluator: Quantum Commerce**

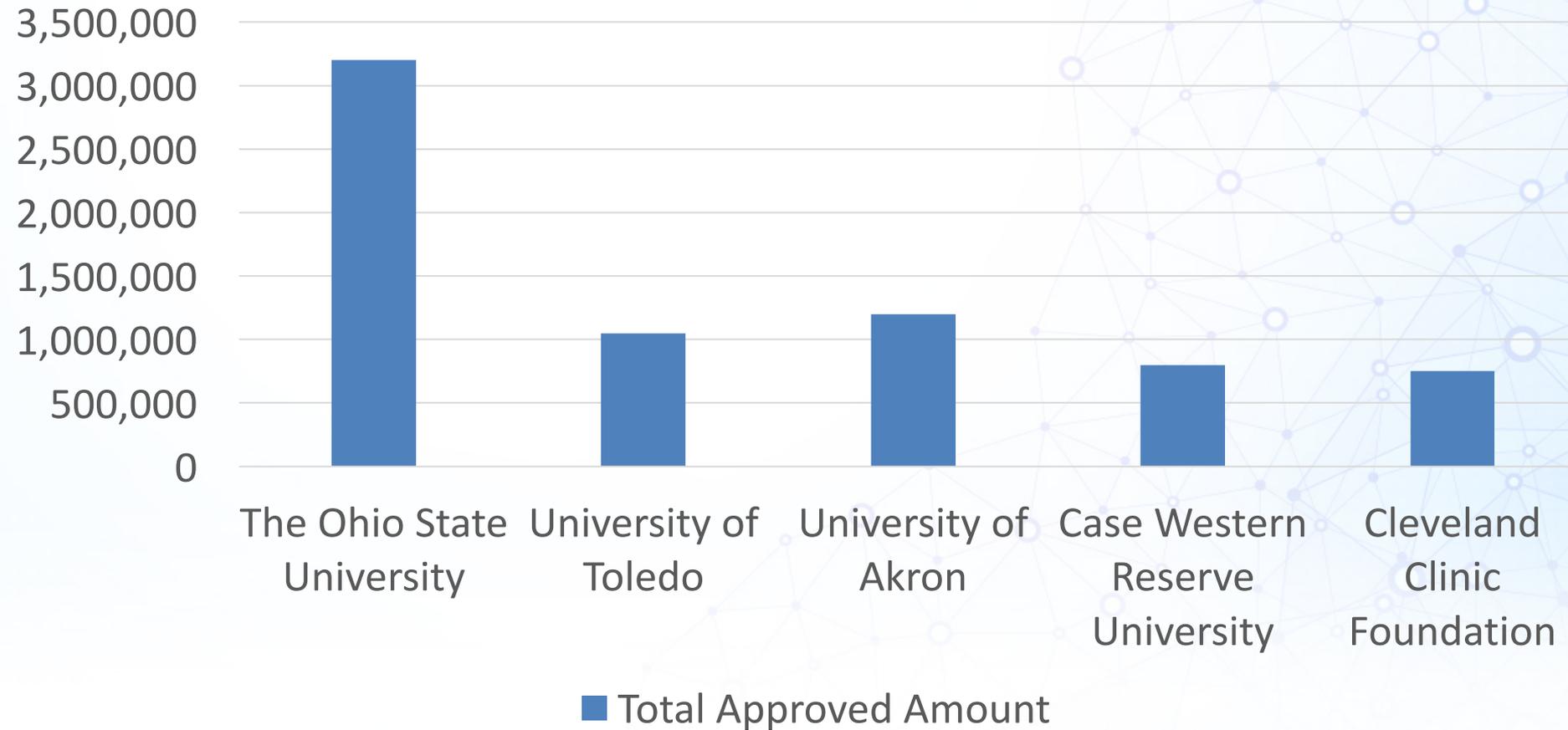
# Technology Validation & Start-up Fund Program: Historical Data

## Top Funded Research Institutions

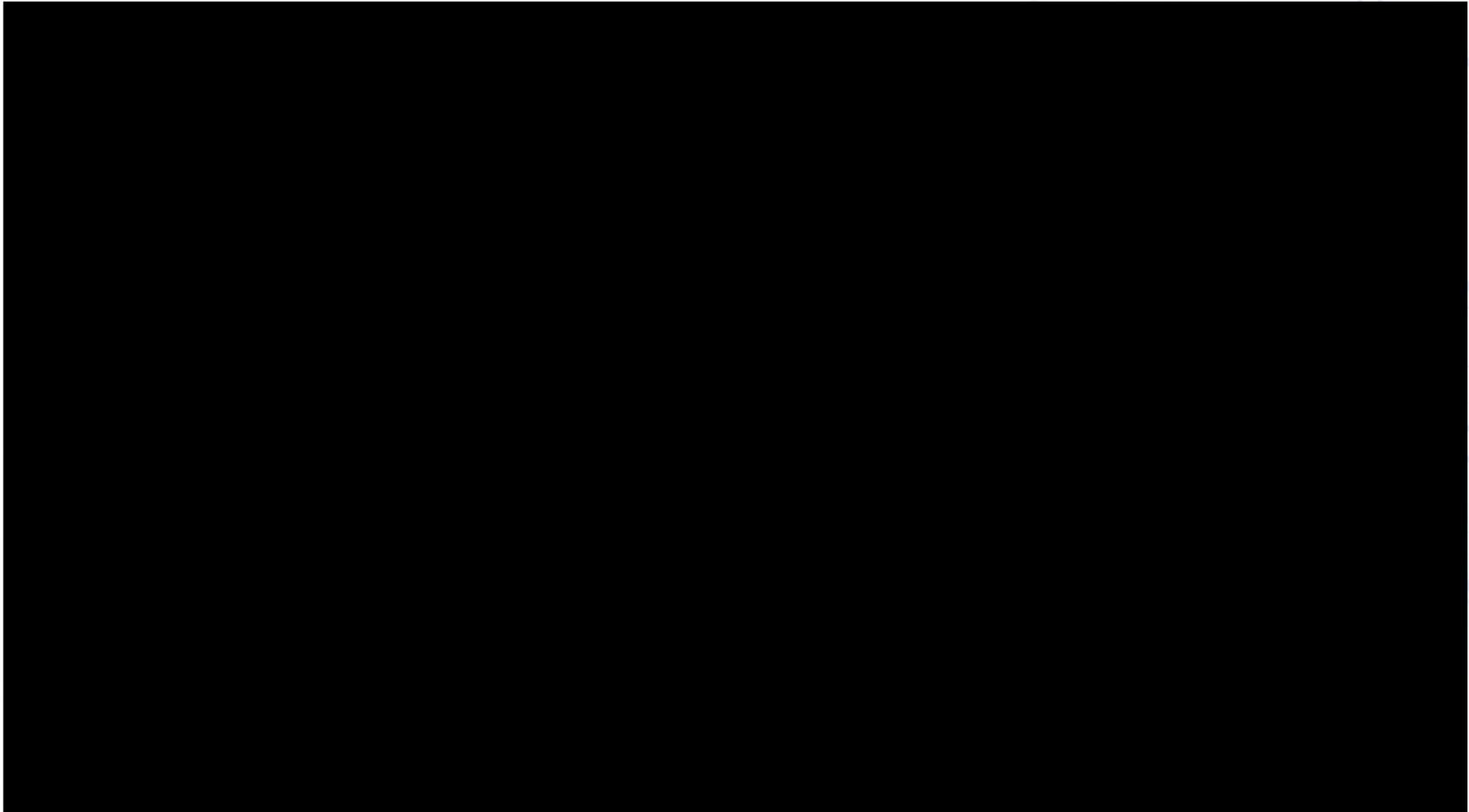


# Technology Validation & Start-up Fund Program: Historical Data

## Top Funded Research Institutions by Start-ups



# Battle Sight Technologies



# Technology Validation & Start-up Fund Program Rounds 18-19 Key Dates

## Round 18

- **Written Questions:**
- September 17, 2018
  
- **Proposals:**
- September 24, 2018
  
- **Awards:**
- December 2018

## Round 19

- **Written Questions:**
- December 14, 2018
  
- **Proposals:**
- December 21, 2018
  
- **Awards:**
- March 2019

QUANTUM COMMERCE, LLC

OTF TVSF – ROUND 17  
EVALUATOR REPORT

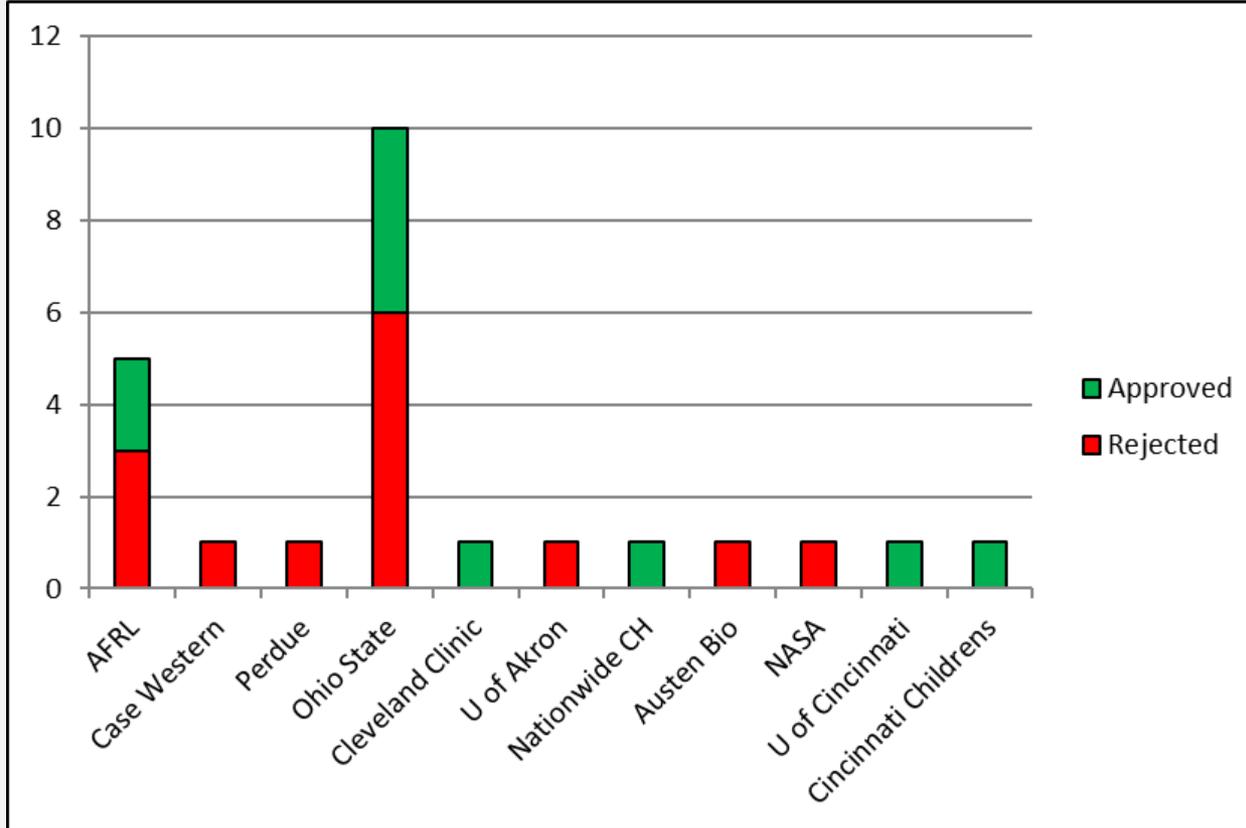
12 SEP 2018

## OVERVIEW – ROUND 17

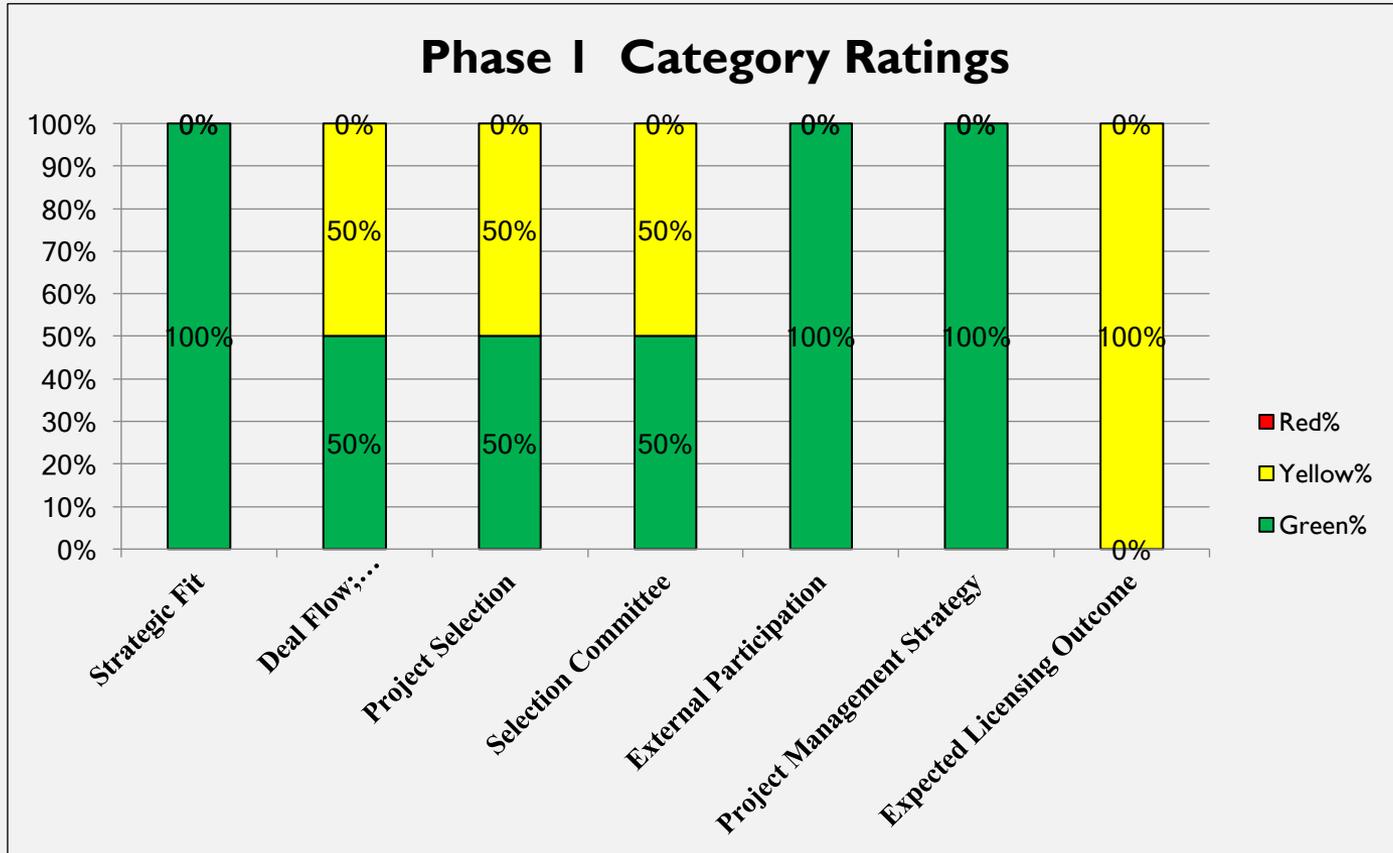
- 10 of 24 proposals submitted this round are recommended for approval.
- Total grant dollars recommended\*\* is \$2,100,000.

Round	Approval Rate	\$\$ Recommended
1 (APR 2012)	35%	\$950,000
2 (AUG 2012)	52%	\$900,000
3 (DEC 2012)	44%	\$610,000
4 (JUN 2013)	30%	\$864,000
5 (FEB 2014)	46%	\$1,462,000
6 (JUN 2014)	39%	\$998,000
7 (OCT 2014)	57%	\$1,100,000
8 (FEB 2015)	37%	\$710,000
9 (JUN 2015)	31%	\$550,000
10 (DEC 2015)	38%	\$925,000
11 ( APR 2016)	46%	\$1,239,000
12 (OCT 2016)	46%	\$3,537,269
13 (MAR 2017)	38%	\$1,567,500
14 (SEP 2017)	27%	\$498,832
15 (DEC 2017)	38%	\$2,250,000
16 (MAR 2018)	52%	\$2,098,600
17 (SEP 2018)	42%	\$2,100,000
<b>Overall</b>		<b>\$22,360,201</b>
<b>Average</b>	<b>41%</b>	<b>\$1,315,306</b>

## ROUND 17 RESULTS - APPLICATIONS BY INSTITUTION



# TRENDS- ROUND 17



Quantum Commerce, LLC

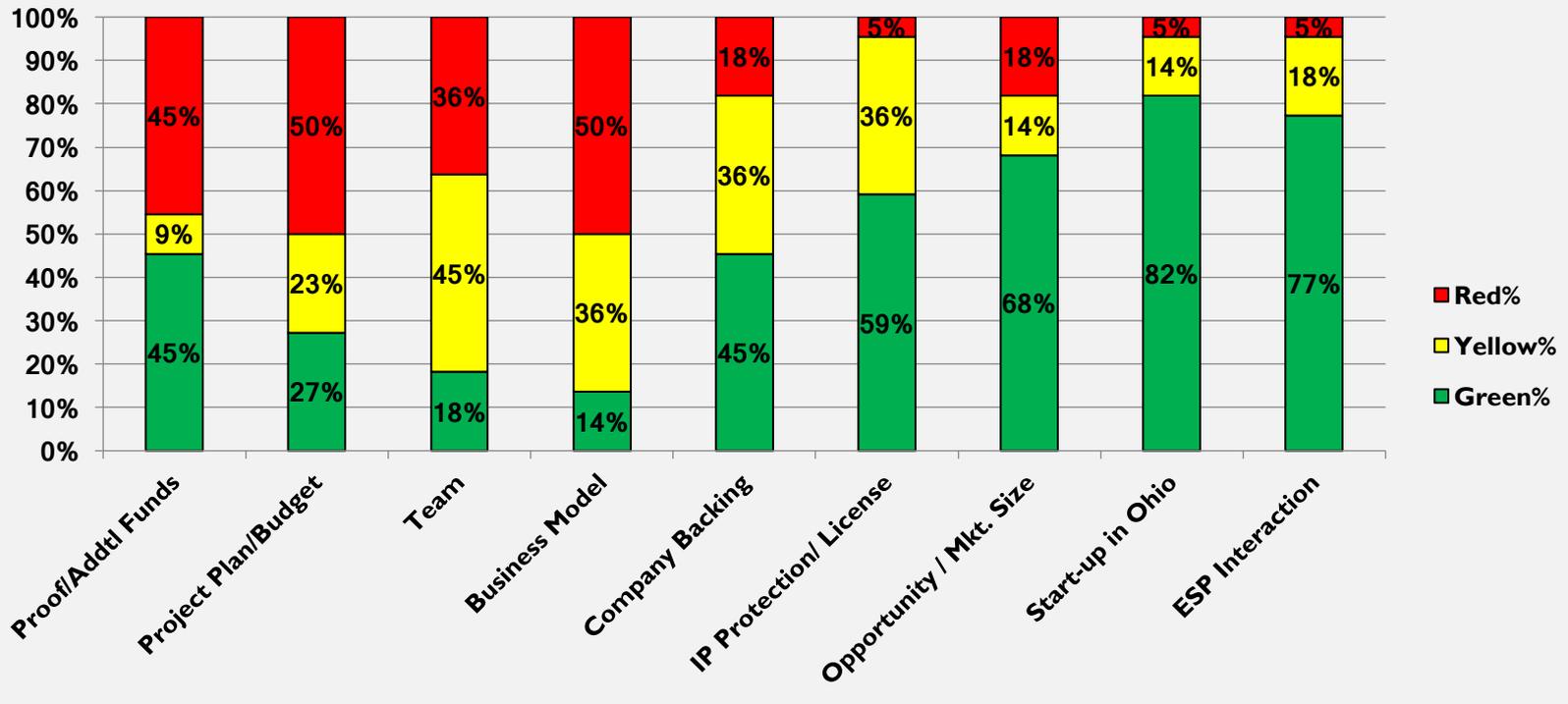
## PHASE I PROPOSALS RECOMMENDED FOR FUNDING

Round 17

Proposal #	Lead Applicant	Title	State Funds Requested	Total Budget	Recommend
19-0159	CCHMC	Cincinnati Children's Innovation Ventures Acceleration Program	\$500,000	\$1,000,000	\$500,000
19-0160	UC	University of Cincinnati TVSF Phase 1	\$500,000	\$1,000,000	\$500,000

# TRENDS- ROUND 17

## Phase 2 Category Ratings



Quantum Commerce, LLC

# PHASE 2 PROPOSALS RECOMMENDED FOR FUNDING

## Round 17

PROPOSAL #	Licensing Institution	Lead Applicant	PROJECT TITLE	State Funds Requested	Total Project Budget	Recommended	Capital Raised to Date	Time to Market	Additional Capital to Market
19-0162	The Ohio State University	AwareAbility Technologies, LLC	Alpha-Ion™ Battery for IoT Devices	\$100,000	\$100,000	\$100,000	\$225K	9mo	\$0
19-0166	The Ohio State University	Invantage Group LLC (on behalf of Pneumcool LLC)	PneumoCool Commercialization	\$150,000	\$150,000	\$150,000	\$0	12mo	\$0
19-0167	Air Force Research Laboratory	LifeFlyte, LLC	Verification of Rotorwing Long Haul UAVs with VTOL for Medical Transport Service	\$150,000	\$150,000	\$150,000	\$150K	21mo	\$12MM
19-0168	Nationwide Children's Hospital	LittleSeed, Inc	Clinician Driven VR Platform	\$150,000	\$150,000	\$150,000	\$0	8mo	\$0
19-0171	Cleveland Clinic Foundation	MediView AR, LLC	Real-Time, Fused Holographic Visualization for Ablation of Cancerous Tumors	\$150,000	\$150,000	\$150,000	\$325K	12mo	\$4.2MM
19-0176	The Ohio State University	Pressure Safe Inc	Sit Smart	\$150,000	\$150,000	\$150,000	\$0	12mo	\$500K
19-0178	The Ohio State University	RedBud SoftWare Inc	Trellis CEA Management Application	\$100,000	\$100,000	\$100,000	\$0	12mo	\$0
19-0180	Air Force Research Laboratory	S.A.Wyze Inc	Validation of Stabilized Antibody Liquid for Infectious Disease Monitoring	\$150,000	\$150,000	\$150,000	\$1.25MM	9mo	\$0

Quantum Commerce, LLC

# RESUBMISSION AND CARRY THROUGH

*Round 17*

## ■ Resubmission

### • *Phase 1*

- Both Phase 1 proposals are resubmissions.
  - Both (100%) are Recommended for Funding.

### • *Phase 2*

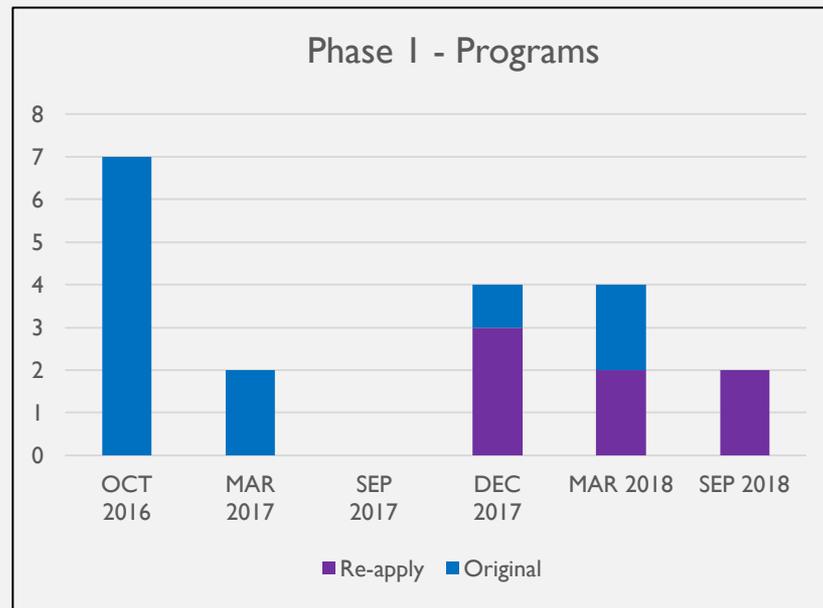
- Six of 22 (27%) Phase 2 proposals are resubmissions.
  - Three of the six (50%) are Recommended for Funding.

## ■ Carry Through

- *Four of 22 (18%) Phase 2 proposals were previous Phase 1 awardees.*
  - One is Recommended (25%) for Funding in this round.

# TRENDS –PHASE I PROGRAMS\* (ALL ROUNDS TO DATE)

## Rounds 12 – 17 Results



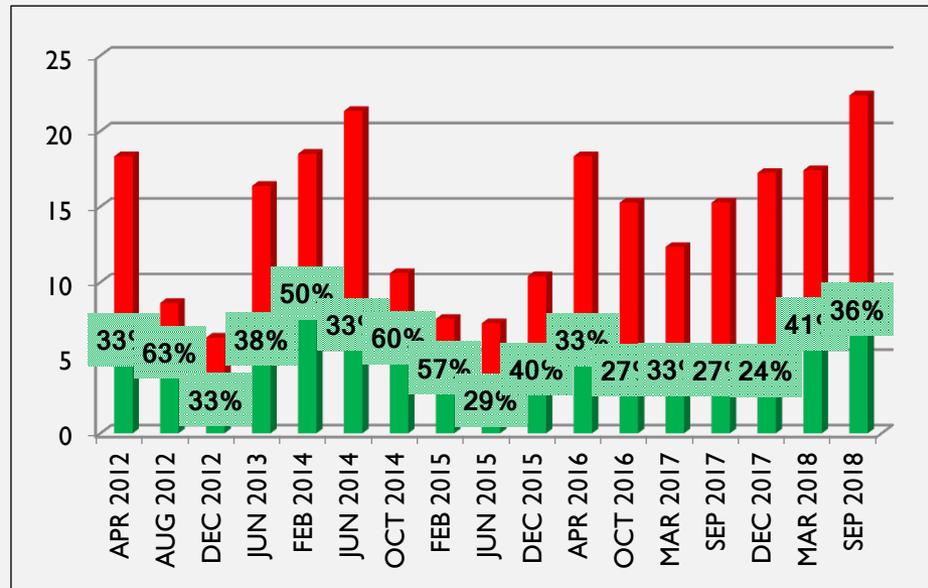
12 Cumulative Programs

\*Originally Known as 'Phase I – Track B'

# TRENDS -COMPARATIVE RESULTS (ALL ROUNDS TO DATE)

## Rounds 1 – 17 Results

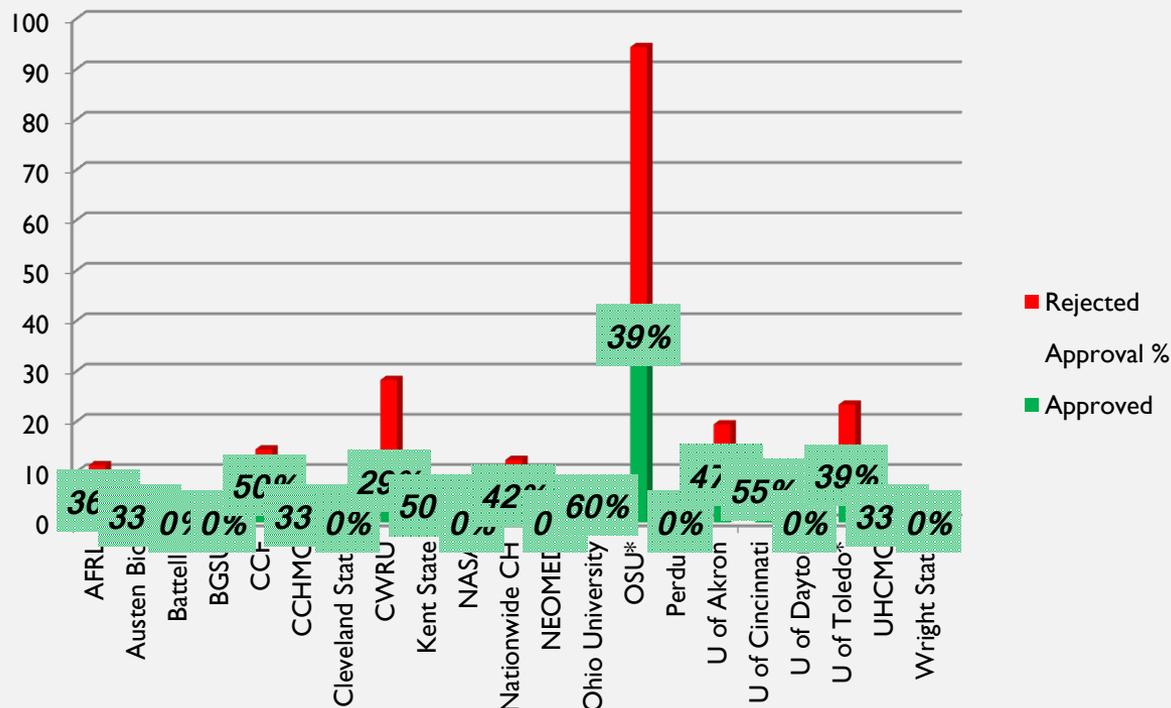
### Phase 2 Applications



37% Cumulative Approval

# CUMULATIVE RESULTS – PHASE 2 (ALL ROUNDS TO DATE)

## Phase 2 Approved/Rejected by Institution



\* one joint/

# Diversity and Inclusion Technology Internship Update





CY 2019

**Entrepreneurial Services Provider (ESP)  
Program**

Evaluators' Recommendations

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September 12, 2018



# About Urban Venture Group (UVG)

- Founded in 2009 and based in Columbus, Ohio
- OTF external evaluators since 2012, including ESP since inception and Incubator and Accelerator programs prior to the ESP program
  - Evaluators for Incubator, ONE Fund, Pre-Seed Fund, CALF, and ESP programs
  - Helped develop initial OTF metrics collection system
- Consulting focus on early stage commercialization
  - Specialty in non-dilutive capital
  - Provide services related to capital, markets, customers, talent, and management
  - International client base includes large and small businesses, non-profits, entrepreneurs and researchers, and state and Federal agencies



# Evaluators

- Burr Zimmerman, Ph.D.
  - Co-Founder of UVG; Pharmaceuticals and med device; Raised \$445 million in grant funds; Ph.D. Chemical Engineering
- David Brownstein
  - Co-Founder of UVG; Software industry serial entrepreneur. M.S. Computer Science
- Phillip Smith, Ph.D.
  - Independent innovation consultant with deep expertise with large corporations. Ph.D. Physics
- **Robert Wilkins, M.D.**
  - **Medical device and therapeutic product development. Institutional fund venture partner. Serial entrepreneur.**
- **Capt. David Whittaker, M.D.**
  - **Practicing vascular surgeon; Expert in defense innovation sourcing and commercialization.**
- Kathleen Repsher
  - Budget and cost share compliance, OTF and federal grant and contract budgeting.



# Review Process

1. Review applicant proposals using a rubric based on the merit criteria defined in the RCP.
2. Conduct rounds of Q&A with each applicant to clarify and probe areas of interest
3. Review budget and cost share against RCP, work with applicants to resolve non-compliant items
4. Visit lead applicant sites to conduct strategic discussions and identify approaches to address areas of concern
- 5. Collaborate with the applicants to address major issues and revise budget**
6. Prepare recommendations for funding and present to the OTF Commission

***New to this review cycle:***  
*DSA requested the evaluators to propose solutions, not just to report strengths and weaknesses*



## 2 CFR 200 and Cost Share

- 2 CFR 200 compliance is a requirement of the ESP Program RCP
  - “Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards”
  - Set of rules that governs budgets and cost sharing
- The budget review process sought to identify major risk factors related to cost compliance.
  - A full audit of applicants’ proposals or accounting systems was not performed.



# Basis for Funding Recommendations

- In compliance with 2 CFR 200, as required by the ESP Program 2019 RCP, funding recommended reflects activities and staffing that are ***reasonable, allocable, necessary, and properly documented***.
  - Activities not accompanied by documentation establishing the reasonableness of the cost have not been recommended for funding.
- ***Allocable***: Funding recommended for ***ESP-specific activities only***.
  - Activities that are not ESP-aligned are not recommended for funding.
- ***Necessary***: Funding recommended for activities that would not occur without ESP funding
  - ESP funding should catalyze ***new activities that would not occur but for ESP funding***



# ESP Funding Recommendations

Applicant	Evaluation Result	CY 2019 State Funding	Total CY 2019 ESP Budget
NextTech (NWO)	Recommended	\$1,624,206	\$3,248,412
TEC (WCO)	Recommended	\$1,474,995	\$2,949,990



# ESP Spending Plan vs. Actual by Year

Annualized Budget (\$ MM)	2017 Plan	2017 Actual	2018 Plan	2018 Actual	2019 Plan	% Change
TEC	\$2.87	\$2.40	\$2.59	\$2.40	\$2.95	+23%

*Current Average Monthly Spend: \$200,000/mo.  
Proposed Average Monthly Spend: \$245,000/mo.*

Annualized Budget (\$ MM)	2017 Plan	2017 Actual	2018 Plan	2018 Actual	2019 Plan	% Change
NextTech	\$3.46	\$1.50	\$5.16	\$1.50	\$3.25	+108%

*Current Average Monthly Spend: \$125,000/mo.  
Proposed Average Monthly Spend: \$270,000/mo.*

*Annualized Budget Actuals calculated based on total spend divided by budget period:*

- TEC: \$3.4 million spent during March 2017 – Aug 2018
- NextTech: \$2 million spent during March 2017 – June 2018 for NextTech)



Funding Recommendation for:

# NextTech (Northwest Ohio)



# NextTech (NWO) Overall Results



Applicant	Funding Recommendation	CY 2019 State Funding	Total CY 2019 ESP Budget
NextTech (NWO)	<b>Recommended</b>	\$1,624,206	<b>\$3,248,412</b>

- Strong regional metrics reinforce the need for and value of an ESP
- Progress in building NWO ESP slower than planned
  - Decentralized structure, conservative financial management, and inefficient processes contributed to the slow pace of progress
- Key changes for 2019:
  - ***JumpStart to manage the Northwest Ohio ESP***
  - Recommended budget increase over JumpStart/NextTech request, including moving a portion of partner programming and services under the NextTech budget
  - The budget recommendation is ***more than doubles*** current spending rate for the region



# NextTech Merit Criteria Evaluation



Applicant	Overall	Impact	Metrics	Management	Sustainability	Inclusion	Cost Share
NextTech Inc. (NWO)	→	↓*	→	→	→	→	→

 Exceeds Requirements	 Meets Requirements	 Does Not Meet Requirements
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\* Funding recommendations include provisions to meet program requirements.



# NextTech Inc. (NWO)



Area		Evaluation	Recommendations
Impact	↓	<ul style="list-style-type: none"><li>• Strong set of regional assets</li><li>• Region is early in establishing ESP infrastructure and operations</li><li>• Impact is nascent.</li></ul>	<ul style="list-style-type: none"><li>• <b>Formalize JumpStart leadership role</b></li><li>• Expand collaboration in sectors that make NWO unique (e.g., ag, mfg, trans)</li></ul>
Metrics	→	<ul style="list-style-type: none"><li>• Metrics exceed goals</li><li>• With low amount of services provided, difficult to attribute these results to NextTech</li></ul>	<ul style="list-style-type: none"><li>• Implement clear success criteria and intermediate/leading success metrics</li></ul>
Management	→	<ul style="list-style-type: none"><li>• Weak central ESP and large partner-centric budgets undermine regional synergy</li><li>• Inefficient structure</li><li>• Regional systems, processes not yet in place</li></ul>	<ul style="list-style-type: none"><li>• Formalize JumpStart leadership role</li><li>• Reinforce regional identity and establish regional infrastructure</li></ul>



# NextTech Inc. (NWO)



Area		Proposal	Recommendations
<b>Sustainability</b>	→	<ul style="list-style-type: none"><li>• <b>Four regional partners provide funding</b></li><li>• Need to validate this model once the ESP is steadily operating</li></ul>	<ul style="list-style-type: none"><li>• Seek cost share providers from regional industrial sectors and charitable/economic development donors</li></ul>
<b>Inclusion</b>	→	<ul style="list-style-type: none"><li>• Inclusion programs limited to outreach</li></ul>	<ul style="list-style-type: none"><li>• Expand inclusive mentoring, capital &amp; talent attraction</li></ul>
<b>Budget and Cost Share</b>	→	<ul style="list-style-type: none"><li>• Partner budgets too high; exacerbates siloes and undermines regional collaboration</li><li>• Cost Share shortfall can be made up with cash from partners</li></ul>	<ul style="list-style-type: none"><li>• Partner budgets reduced and NextTech budget increased</li><li>• Portion of partners' requested purchased services and ESP budgets to be managed by NextTech</li><li>• Non-ESP functions removed from budgets</li></ul>



# NextTech Recommended Budget



<b>Entity</b>	<b>Budget</b>	<b>Activities Funded</b>
<b>NextTech</b>	\$2,141,600	JumpStart request plus additional purchased services and ESP personnel
<b>ProMedica</b>	\$296,516	Enable integration of PMI-centric activities with regional ESP; Move portion of EIR, purchased services, and programming under NextTech budget
<b>Mercy Health</b>	\$188,496	Enable integration of Mercy-centric activities with regional ESP; Move portion of EIR, purchased services, and programming under NextTech budget
<b>UT</b>	\$320,760	Support ESP-specific EIRs, admin, and incubation activities; Enable integration of UT-centric activities with regional ESP
<b>BGSU</b>	\$301,040	Support ESP-specific EIRs, admin, and incubation activities; Enable integration of PMI-centric activities with regional ESP; Equipment to support Collab-Lab
<b>TOTAL</b>	<b>\$3,248,412</b>	



# NextTech Budget Discussion



- Budget recommended intended to enable NextTech to establish itself as a strong regional ESP lead
  - Full funding recommended for JumpStart budget request
  - Portion of partners' EIR and purchased services budgets moved under NextTech
- Funding removed for:
  - Non-ESP technologies and firms
  - Activities that would occur regardless of ESP funding
  - Improperly documented / ineligible items
- Partner budgets reduced and/or reallocated:
  - Requested budget from 2017-2018 (\$8+ million) exceeded the region's demand for services as well as the ESP's capacity to deliver services
  - Funding recommended to enable partners to identify ESP-aligned firms/technologies, transition to ESP support
  - Internally focused and non-ESP firms and activities \*not\* funded (allocable)
- Cost Share issues still must be resolved
  - Substantial cost share sourced from non-ESP personnel
  - New sources will need to be identified to meet obligation; \$400,000 shortfall



Funding Recommendation for:

# TEC (West Central Ohio)



# TEC Funding Recommendation



Applicant	Funding Recommendation	CY 2019 State Funding	Total CY 2019 ESP Budget
TEC (WCO)	Recommended	\$1,474,995	\$2,949,990

- TEC has been successful in establishing ESP operations
  - TEC brand is becoming established and known in the community
  - Onboarding, tracking, and basic business services established
  - Particularly strong defense outreach, with AFRL and defense partners Wright State University and Wright Brothers Institute
  - Complementary defense- and state-funded innovation programs in the region augment the overall regional economy
- Significant cost compliance issues remain unresolved
  - Budget request exceeding \$6 million was not adequately justified
  - Cost share not adequately documented, included unallowable sources
- **Funding recommendation a 23% increase over 2018**
  - A new budget was developed based on current spend and planned activities
  - TEC must work with the state to identify sufficient, compliant cost share



# TEC Merit Criteria Evaluation



Applicant	Overall	Impact	Metrics	Management	Sustainability	Inclusion	Cost Share
TEC	→	→	→	→	→	→	↓*

 Exceeds Requirements	 Meets Requirements	 Does Not Meet Requirements
--	---	--

\* Funding recommendations include provisions to meet program requirements.



# TEC (WCO)



Area		Proposal	Recommendations
<b>Impact</b>	→	<ul style="list-style-type: none"><li>• <b>Successfully establishing core ESP operations</b></li><li>• Strong relationship with AFRL aligns well with regional strengths</li></ul>	<ul style="list-style-type: none"><li>• Transition to focusing on <b>high-quality services</b> for companies with significant growth potential</li></ul>
<b>Metrics</b>	→	<ul style="list-style-type: none"><li>• Current metrics reinforce the message of a revitalized ESP</li></ul>	<ul style="list-style-type: none"><li>• Capital access, talent attraction, and customer access are key needs</li></ul>
<b>Management</b>	→	<ul style="list-style-type: none"><li>• TEC staff split focus between ESP and non-ESP; ESP Executive Director is leaving end of year</li></ul>	<ul style="list-style-type: none"><li>• Seek ESP Executive Director candidates with operational experience</li></ul>



# TEC (WCO)



Area		Proposal	Recommendations
<b>Sustainability</b>	→	<ul style="list-style-type: none"><li>• TEC supported by federal funding;</li><li>• Little ESP-specific regional support</li></ul>	<ul style="list-style-type: none"><li>• Seek cost share providers from regional industrial sectors</li></ul>
<b>Inclusion</b>	→	<ul style="list-style-type: none"><li>• Inclusion focused on company attraction</li><li>• Outsourced to DACC</li></ul>	<ul style="list-style-type: none"><li>• Fund internal staffing focused on inclusion</li><li>• Develop inclusion-aware ESP services</li></ul>
<b>Budget and Cost Share</b>	↓	<ul style="list-style-type: none"><li>• Significant budget and cost share issues</li></ul>	<ul style="list-style-type: none"><li>• Funding recommendation based on historical spend, ESP benchmarks, and allowable sources and uses</li></ul>



# TEC Funding Recommendation



Entity	Budget	Activities Funded
<b>TEC</b>	\$2,680,167	Budget recommended based on ESP-specific TEC personnel and other allowable expenses
<b>WSRI</b>	\$80,538	Funding for personnel to engage with ESP; Enable integration of broader (non-ESP) innovation activities with regional ESP
<b>WBI</b>	\$80,000	Funding for personnel to engage with ESP; Enable integration of broader (non-ESP) innovation activities with regional ESP
<b>DACC</b>	\$109,285	Outreach and integration of non-ESP innovation
<b>TOTAL</b>	\$2,949,990	



# TEC Budget Discussion



- Recommended budget represents increases current spending rate (+23%)
  - TEC requested to more than double its funding (\$6.6 million requested by TEC), but did not provide sufficient justification for the increase
- Budget not recommended to support:
  - Non-ESP activities (such as non-ESP innovation initiatives)
  - Improperly documented / ineligible items
- Other budget changes
  - Create an EIR pool (rather than fixed hires)
  - Increase staffing in inclusion, grant management, partner management, and operational staff
- TEC did not document adequate cost match for the recommended budget
  - In order to avoid a funding gap or delay, the evaluators requested the state allow extra time for TEC to identify and document cost share



## Discussion

CY 2019 Entrepreneurial Services Provider Program

# Ohio Third Frontier

Commission and Advisory Board  
September 12, 2018



Development  
Services Agency



**Third Frontier**  
Innovation Creating Opportunity