

# Ohio Third Frontier Commission Meeting

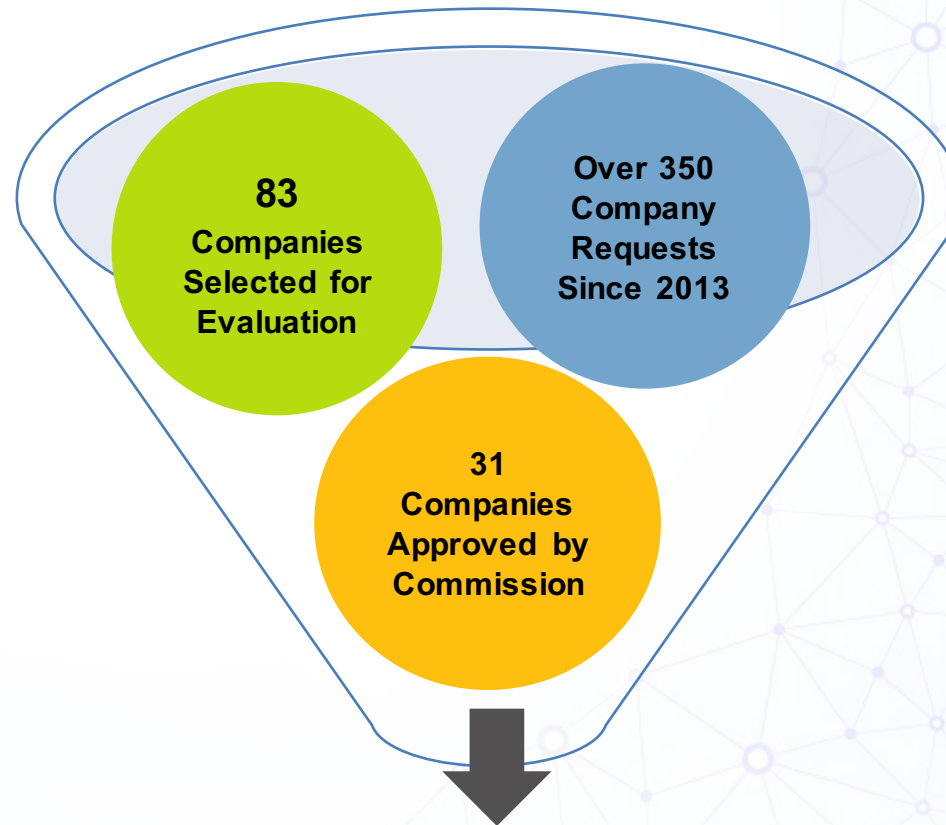
March 29, 2017



# Commercial Acceleration Loan Fund

# Commercial Acceleration Loan Fund

## Historical Program Activity



**24 Active Loans totaling \$28,755,851**

*Less than 10% of companies seeking assistance are recommended for OTF approval*



Development  
Services Agency



Third Frontier  
Innovation Creating Opportunity

# Commercial Acceleration Loan Fund

## Fund Composition

### Revenue Stage of Company at Approval

- 46% Market Entry
- 33% Pre-Revenue, Life Sciences
- 21% Pre-Revenue, Information Technology or Other

### Industry

- 29% Information Technology (General)
- 12.5% Information Technology (Healthcare)
- 46% Life Sciences and Related
- 12.5% Sensing and Automation

### Number of Active/Closing Transactions by Third Frontier Region

- 5 Central Ohio
- 10 Northeast Ohio
- 1 Northwest Ohio
- 1 Southeast Ohio
- 7 Southwest Ohio

# **Commercial Acceleration Loan Fund**

## **Preserved Capital**

**\$10.5 Million of Funds have been preserved to date, including:**

**6 transactions cancelled prior to closing**

- 1 transferred to the Targeted Investment Loan Program (TIP)
- 1 loan cancelled by DSA prior to close (\$1.5 Million)
- 5 transactions likely did not meet milestone objectives (\$6.85 Million)

**\$2.2 Million of milestones from closed transactions have been held to date**

Note: DSA has 3 active requests from companies seeking consideration to release up to \$1 Million of funds



# Commercial Acceleration Loan Fund

## Metrics

### Employment

- 216 out of 597 jobs committed have been created to date (36% of goal)

### Follow On Equity (FOE)

- Generated \$55 Million of FOE with 44% of funds derived from out of state or international sources, including 4 strategic investments

### FDA Regulatory Pathway

- 3 portfolio companies have received 4 FDA approvals for CALF supported project
- 7 more project related FDA approvals are expected within 2 years
- 12 additional FDA approvals are in various stages of R&D

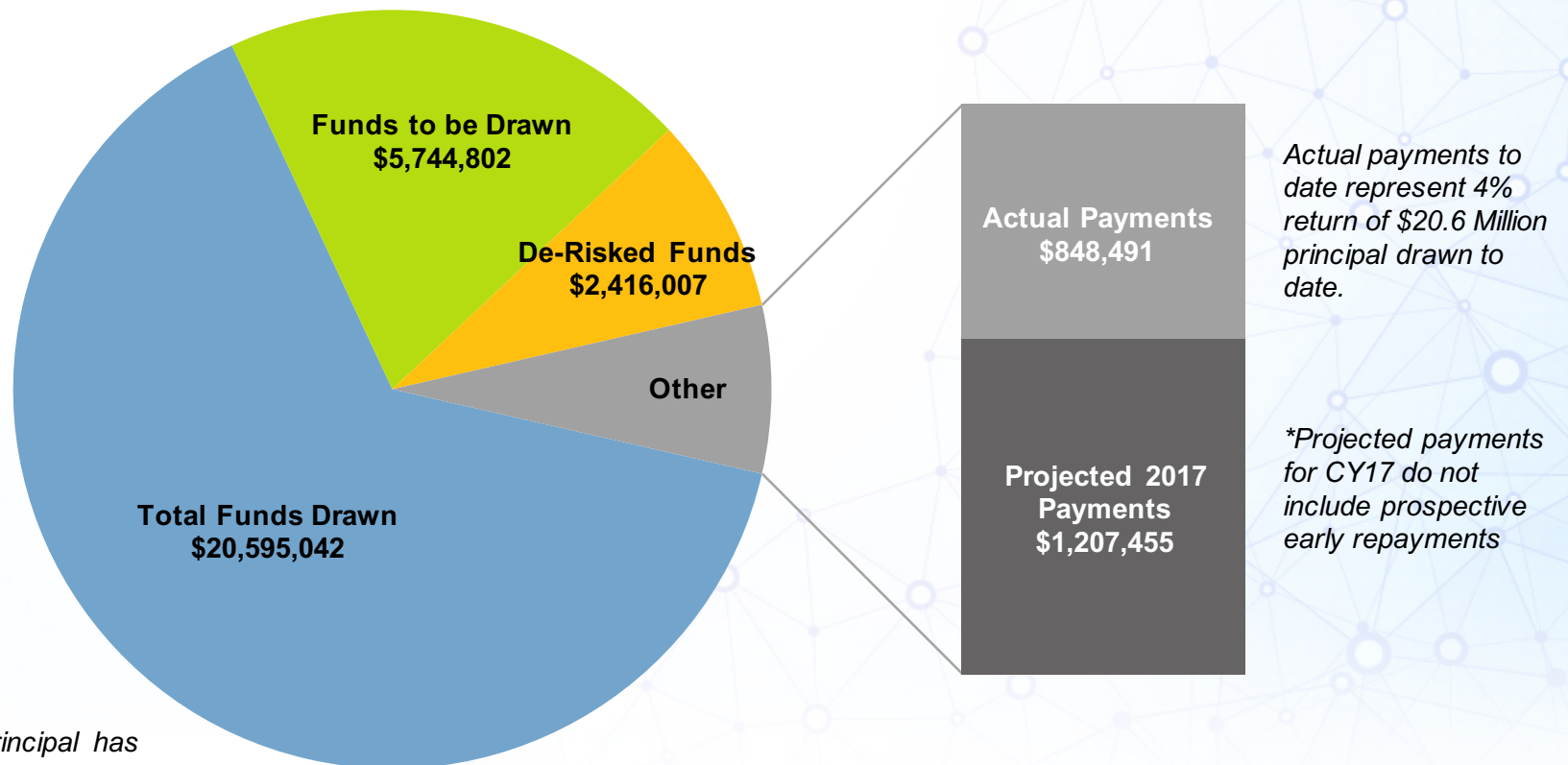
### Intellectual Property and Licensed Technology

- 37 new patents have been earned with more than 100 applications pending
- 9 companies are licensing IP developed at university or research institutions
- 6 companies are commercializing IP developed by physicians, professors and students outside of formal institutions

# Commercial Acceleration Loan Fund

## Portfolio and Repayments

CALF Funds Exposure - Active Loans: \$28,755,851

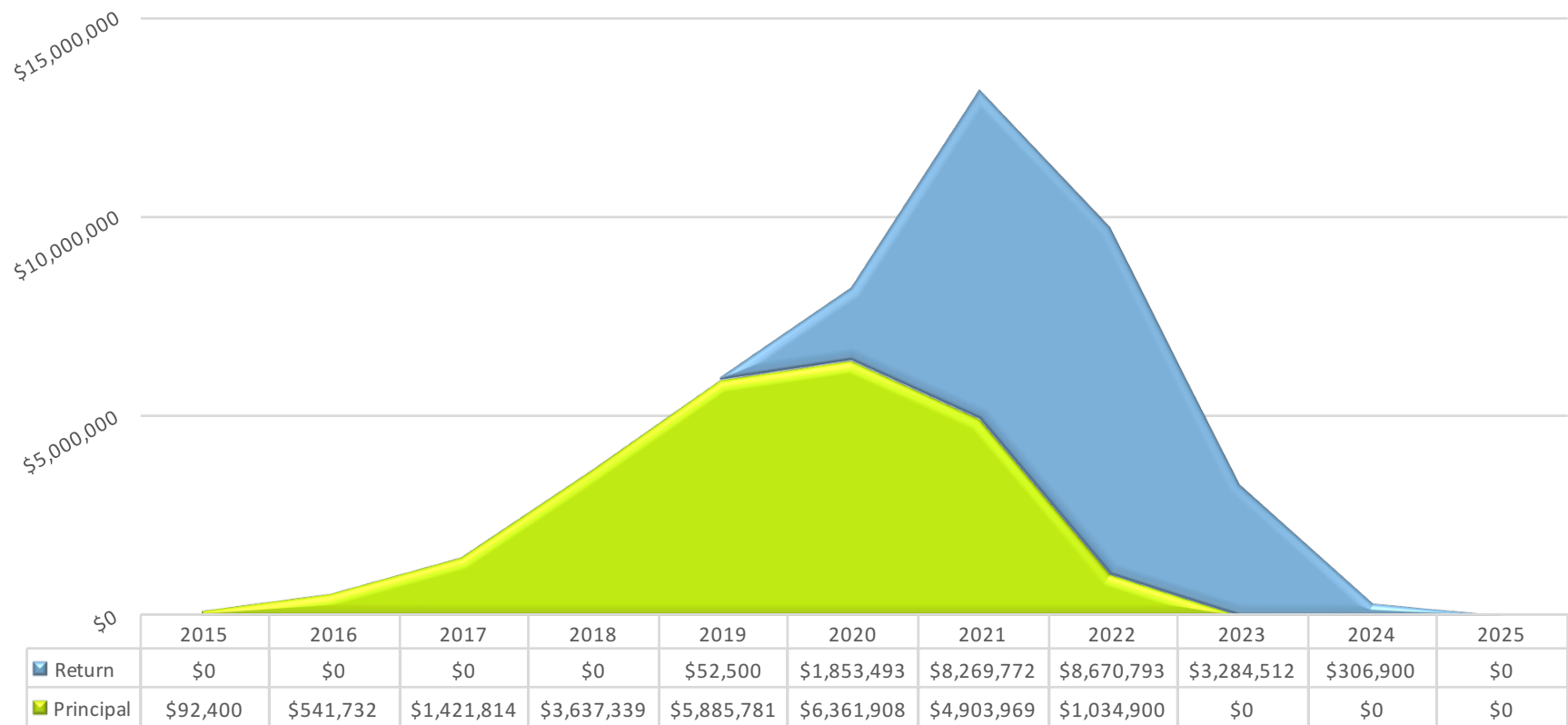


*Note: \$500K of principal has defaulted to date and represents 1% of the total CALF portfolio*

# Commercial Acceleration Loan Fund

**Projected Repayments – Principal vs. Return**  
**\$20.6 Million of CALF Funds Drawn to Date**

**Repayment Summary - Principal vs. Return**  
(Assumes Total Encumbered Funds Drawn)





# Commercial Acceleration Loan Fund

## Centerline Biomedical, Inc.

County	Industry	Project Amount	Loan Award	CALF Project Funding Percentage	New Job Created	Retained Jobs
Cuyahoga	Medical Devices	\$1,680,000	\$1,260,000	75%	15	3

### Summary Evaluator Recommendation

Evaluator: Susan Stanton, Sbc

Management and Team	Capitalization and Fundraising	Market and Industry	Commercialization, Sales and Marketing	Intellectual Property	Product and Technology	Financial Health	Legal	Evaluator Recommendation

# Technology Validation & Start-up Fund Program

# Technology Validation & Start-up Fund Program

## Lead Applicants/Phases

- Phase 1: Track A – Technologies developed at Ohio research institutions needing additional validation/proof before an Ohio start-up company will license. Up to \$50,000 with 1:1 cash cost share.
- Phase 1: Track B – Ohio research institutions with sufficient internal deal flow to support a multitude of Phase 1:Track A type projects. Awards from \$200,000-\$500,000 with 1:1 cash cost share.
- Phase 2 – 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.

**External Evaluator: YourEncore**

# Technology Validation & Start-up Fund Program

**13<sup>th</sup> Cycle of the TVSF program.** To date, including this cycle:

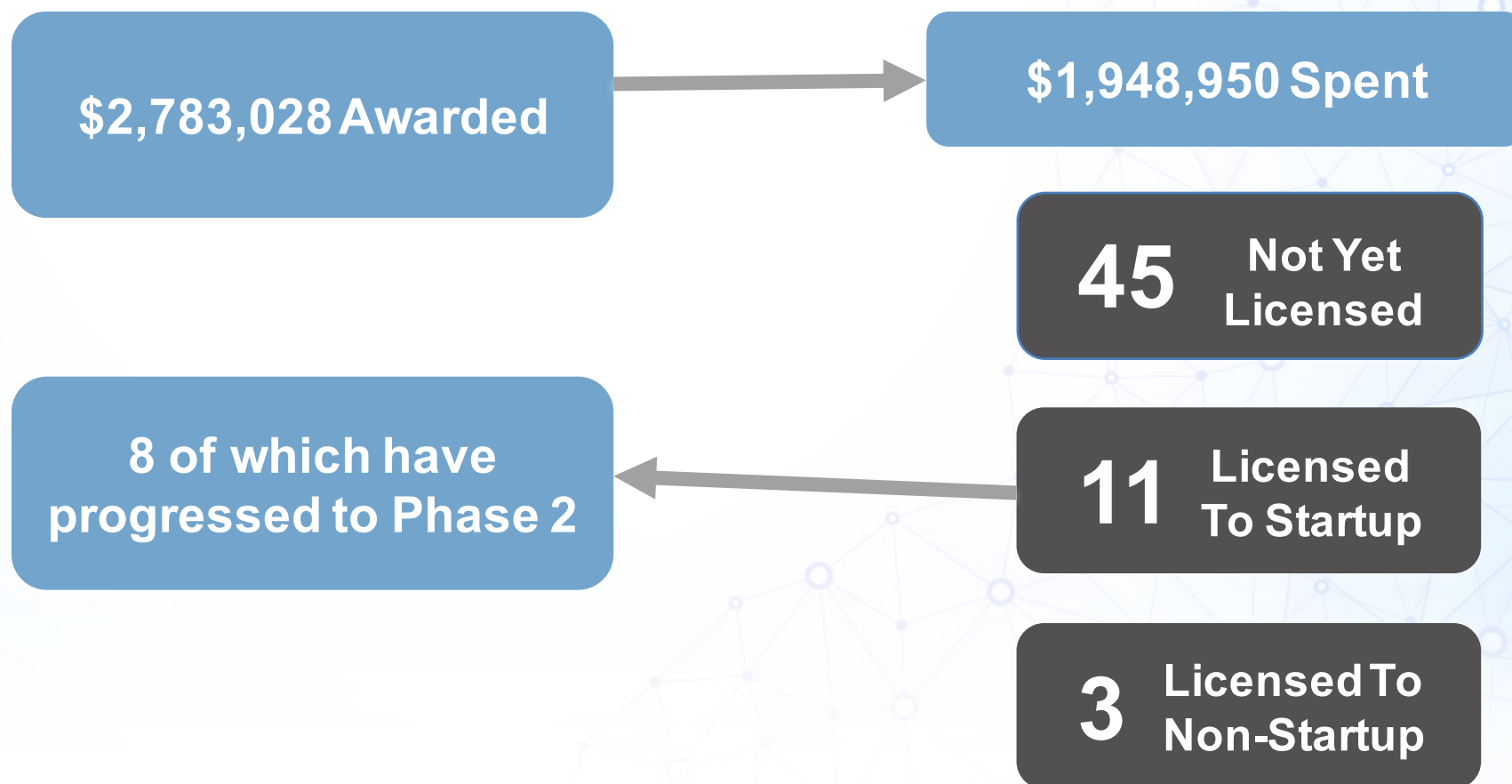
	Proposals	Awards
Phase 1: Track A	232	93
Phase 1: Track B	9	9
Phase 2	167	64

## Current cycle

- 24 proposals with 9 recommended for award
- 8 proposals are re-submits, of which 1 is recommended

# Phase 1 Progress

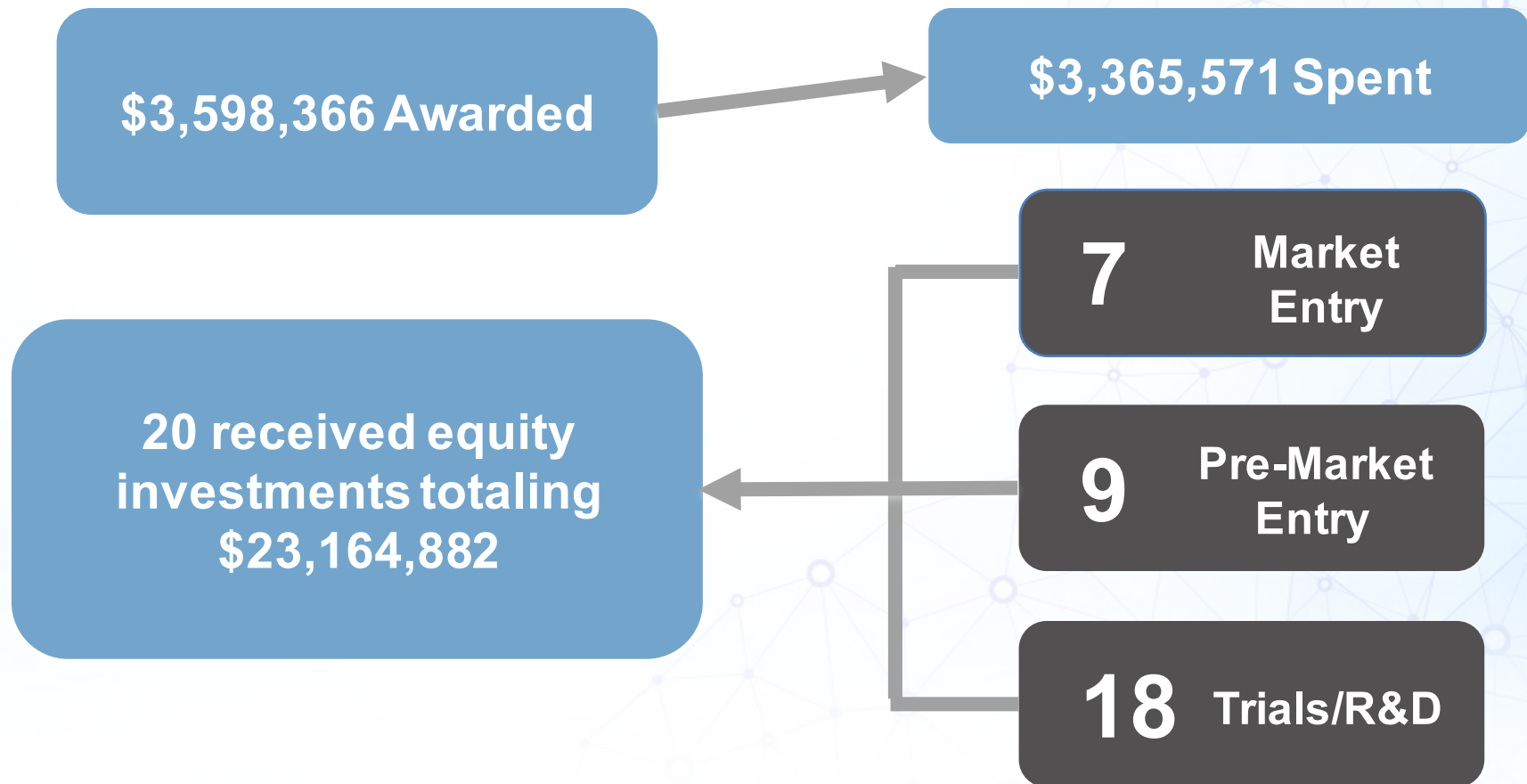
To date, **59** Phase 1 complete.





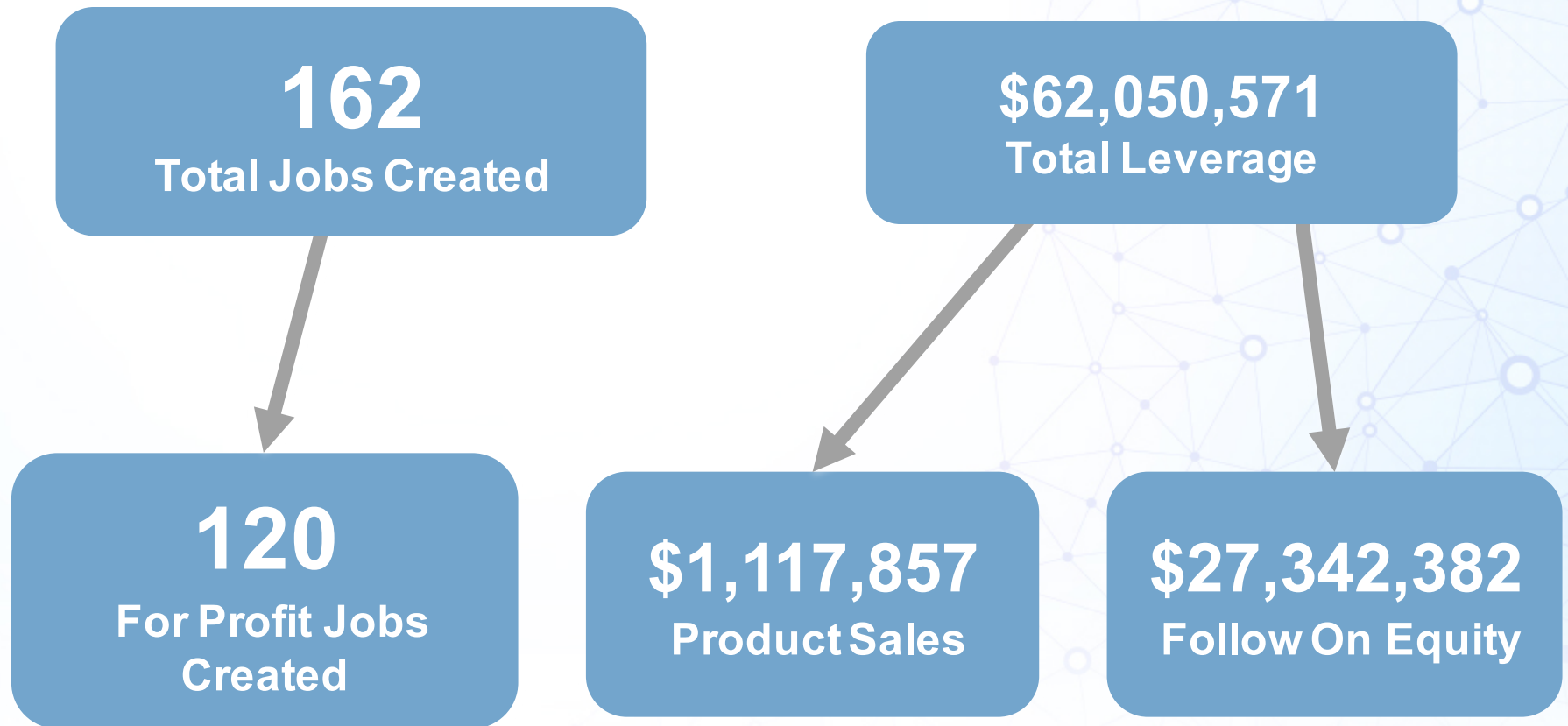
# Phase 2 Progress

To date, **36** Phase 2 complete.



# Overall Metrics

Across the entire program: 120 Projects Reporting





# Technology Validation and Start Up Fund

## Round 13

# Overview

- 9 of 24 proposals submitted this round are recommended for approval.  
Total grant dollars recommended is \$1,567,500.

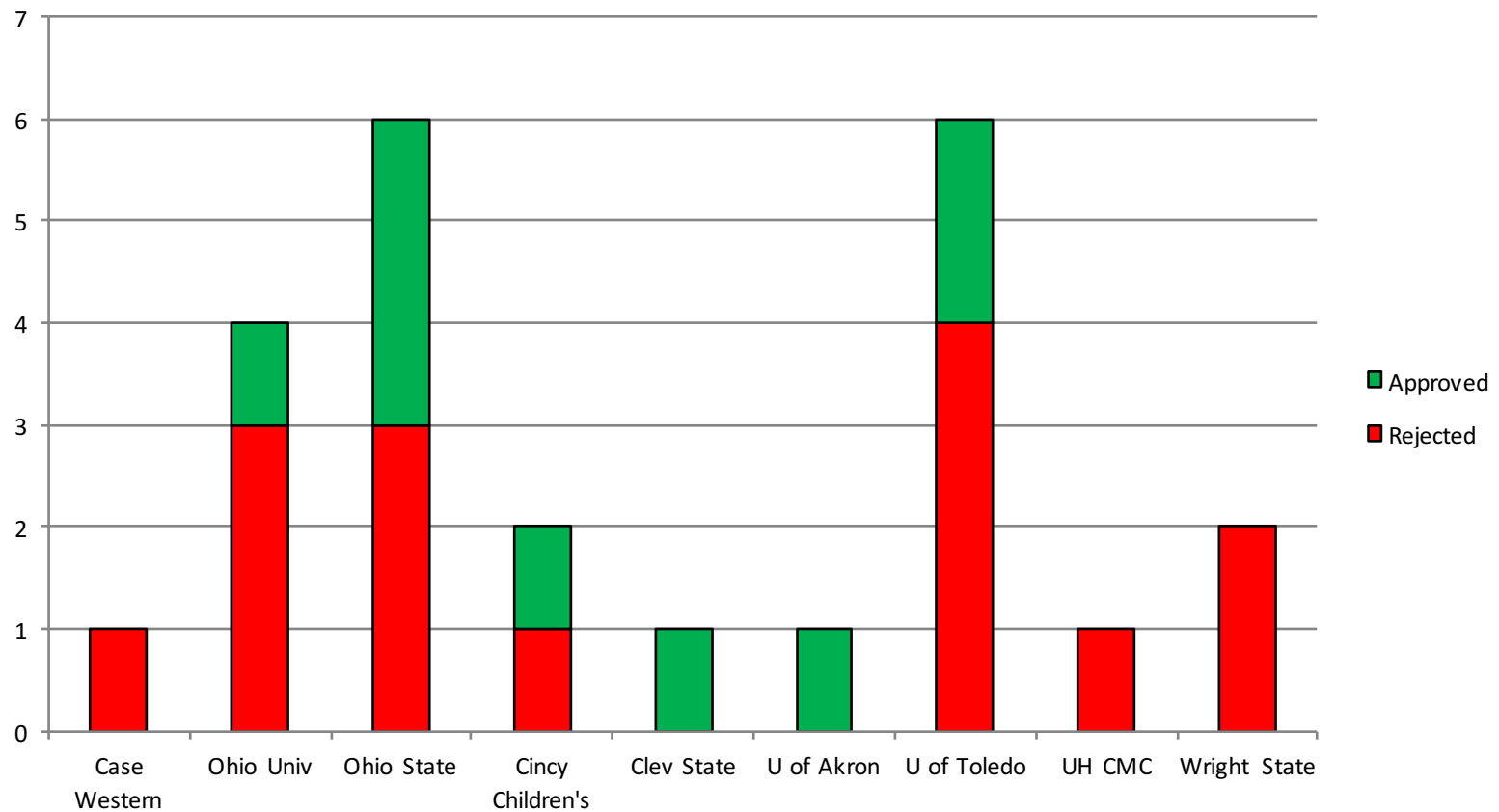
Round	Approval Rate	\$\$ Recommended
1	35%	\$950,000
2	52%	\$900,000
3	44%	\$610,000
4	30%	\$864,000
5	46%	\$1,462,000
6	39%	\$998,000
7	57%	\$1,100,000
8	37%	\$710,000
9	31%	\$550,000
10	38%	\$925,000
11	46%	\$1,239,000
12	46%	\$3,537,269
13	38%	\$1,567,500
Overall	41%	\$15,412,769
Average		\$1,185,598

\*Note 1: \$100K conditional award for 13-541 in round 5 was superseded by 14-524 in round 7 for the same amount.

\*\*Note 2: Larger \$\$ Recommended reflects new Phase 1; Track B option started in round 12.

# Overview

## ■ Round 13 Results: Applications by Institution

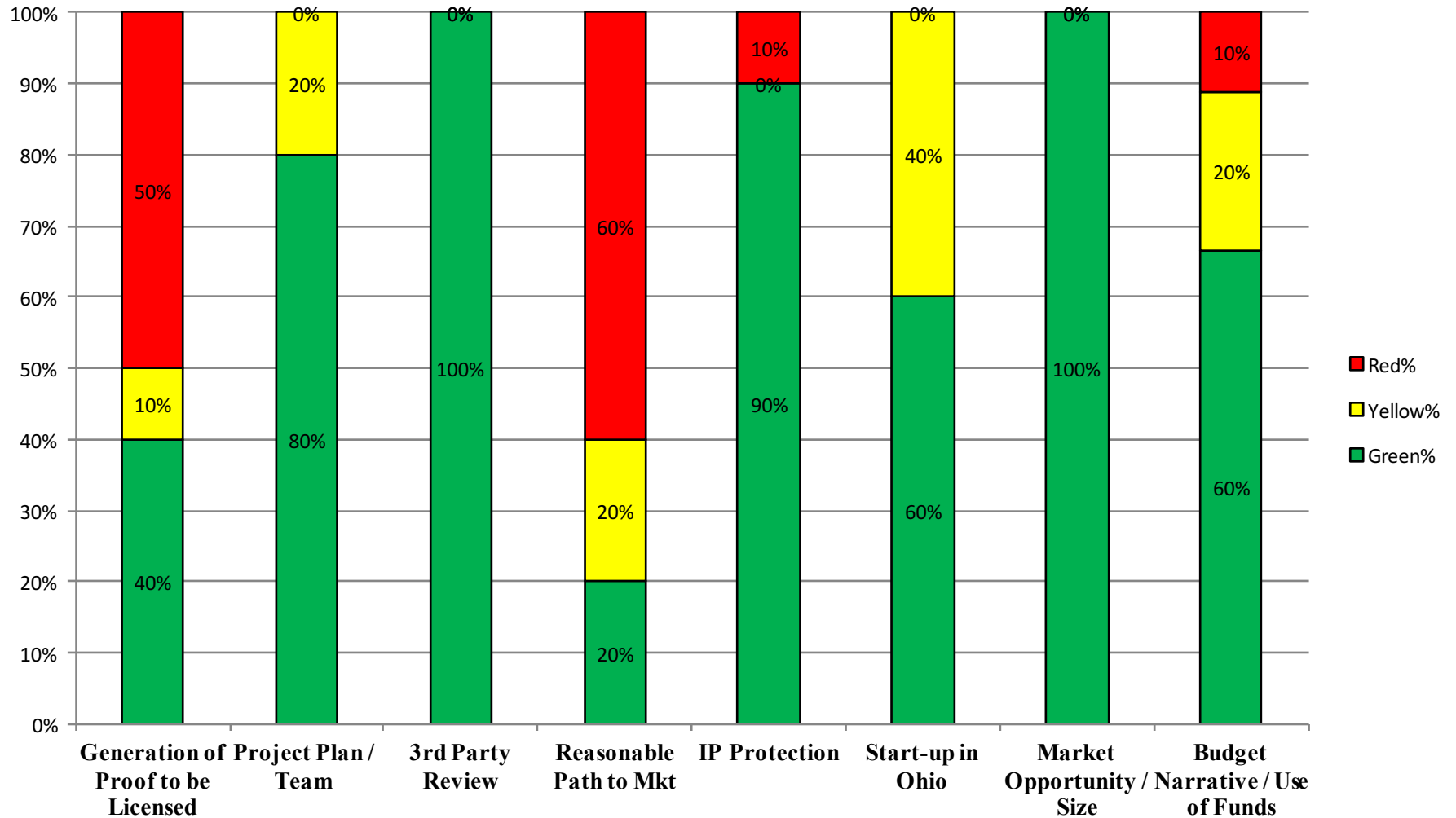




# Trends

## Round 13

### Phase 1 Track A Category Ratings



## Phase 1:A Proposals Recommended for Funding

### Round 13

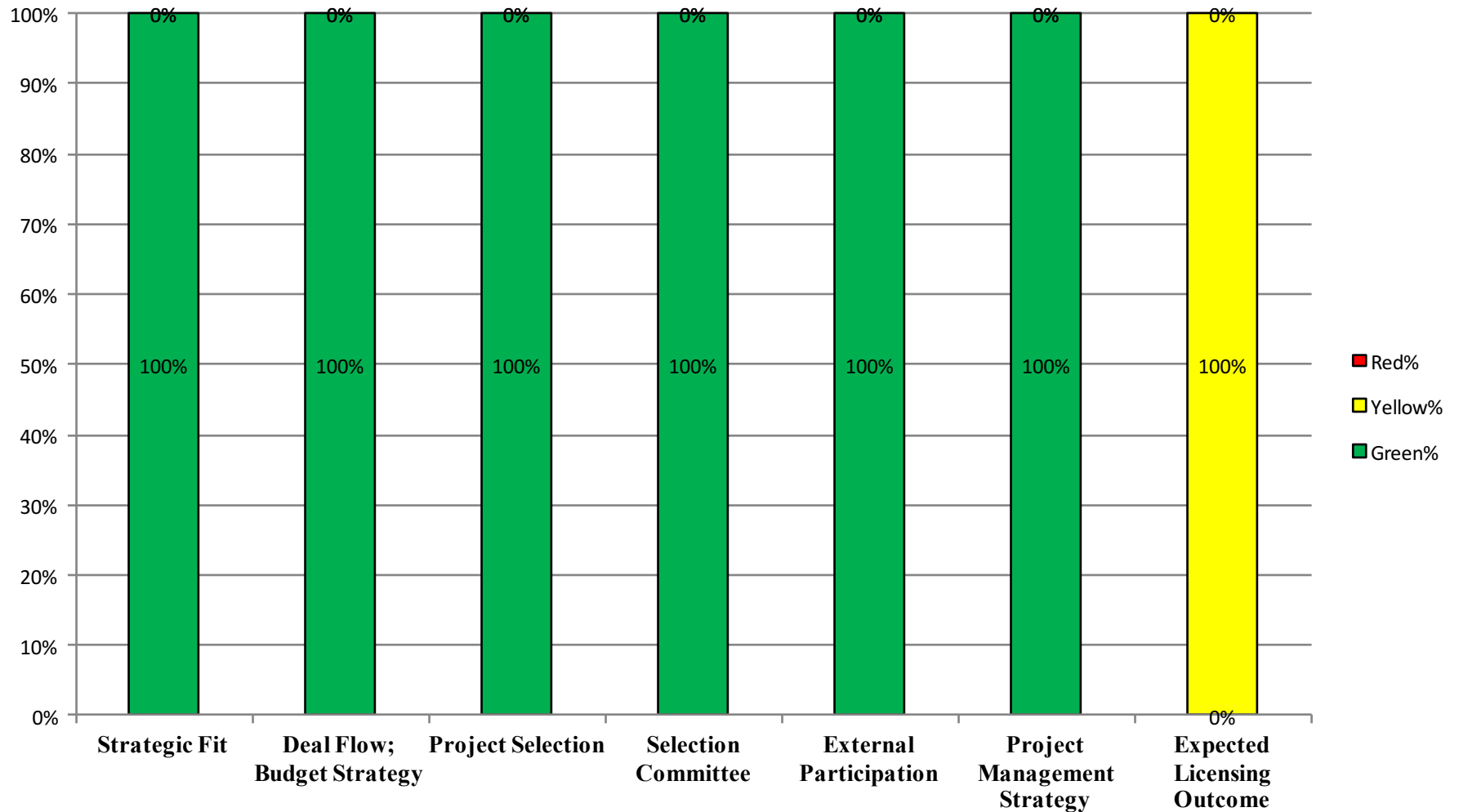
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Proposal #	Lead Applicant	Title	State Funds Requested	Total Budget	Recommend
17-0352	Ohio University	Multi-Channel Copper Heat-Exchangers for High-Performance Thermal Systems	\$75,000	\$100,000	\$67,500
17-0354	University of Toledo	Laryngeal Mechanosensor Stimulator (LMS)	\$50,000	\$100,000	\$50,000
17-0355	University of Toledo	BMP-Replacing Food Additive for Bone Defect Treatment	\$50,000	\$100,000	\$50,000

# Trends

## Round 13

### Phase 1 Track B Category Ratings



## Phase 1:B Proposals Recommended for Funding

### Round 13

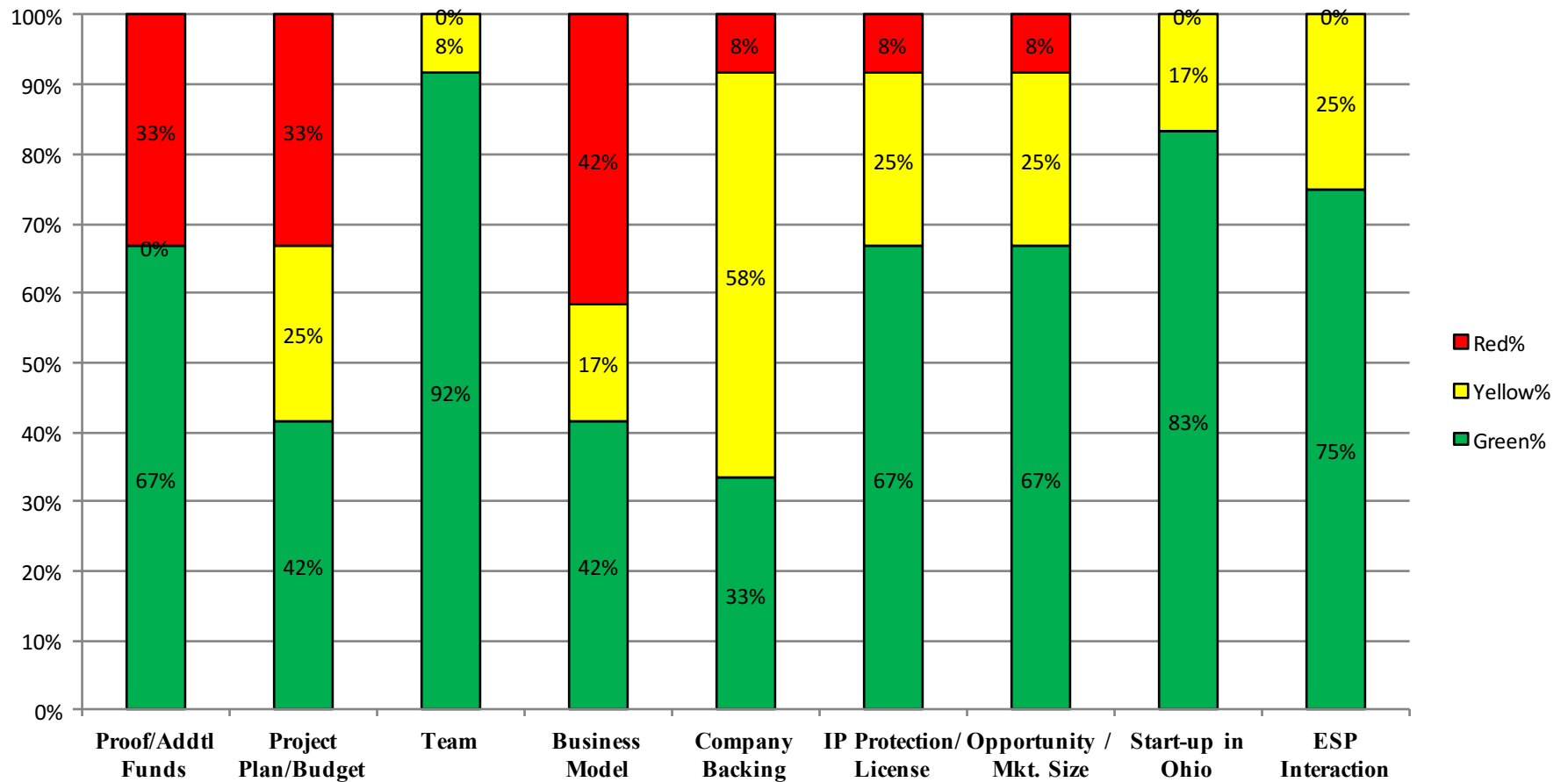
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Proposal #	Lead Applicant	Title	State Funds Requested	Total Budget	Recommend
17-0361	Cincinnati Children's Hospital	Cincinnati Children's Discovery to Impact Initiative	\$500,000	\$1,000,000	\$500,000
17-0362	Cleveland Statue University	CSU & KSU Technology Validation and Start-up Fund	\$400,000	\$800,000	\$400,000

# Trends

## Round 13

### Phase 2 Category Ratings





# Phase 2 Proposals Recommended for Funding

## Round 13

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<i>PROPOSAL #</i>	<i>Licensing Institution</i>	<i>Lead Applicant</i>	<i>PROJECT TITLE</i>	<i>State Funds Requested</i>	<i>Total Project Budget</i>	<i>Recommended</i>	<i>Capital Raised to Date</i>	<i>Time to Market</i>	<i>Additional Capital to Market</i>
17-0367	The Ohio State University	Ghostwave Inc.	RF Noise Radar for ADAS (Advanced Drive Assistance Systems)	\$100,000	\$100,000	\$100,000	\$0	15 mo	\$800,000
17-0370	University of Akron	OncoSolutions LLC	3D Tumor Technology for High Throughput Drug Screening	\$150,000	\$150,000	\$150,000	\$0	30 mo	\$1.5MM
17-0372	The Ohio State University/ University of Toledo	RegenFix LLC	Additive Manufacture of Stiffness-Matched Skeletal Fixation Hardware	\$150,000	\$300,000	\$150,000	\$150,000	24 mo	\$3MM
17-0374	The Ohio State University	ZeoVation Inc.	Nano Zeolite for Improved Sunscreen	\$100,000	\$100,000	\$100,000	\$100,000	25 mo	\$1.9MM

# Resubmission and Carry Through

## Round 13

### ■ Resubmission

- Eight of twenty four (33%) proposals are resubmissions
  - One of those eight (13%) is Recommended for Funding
  - Engagement of ESP resources to be further emphasized during debrief calls
- Phase 1A
  - Three of ten (30%) Phase 1A proposals is a resubmission
  - None are Recommended for Funding
- Phase 2
  - Five of twelve (42%) Phase 2 proposals are resubmissions
  - One of those five (20%) is Recommended for Funding

### ■ Carry Through

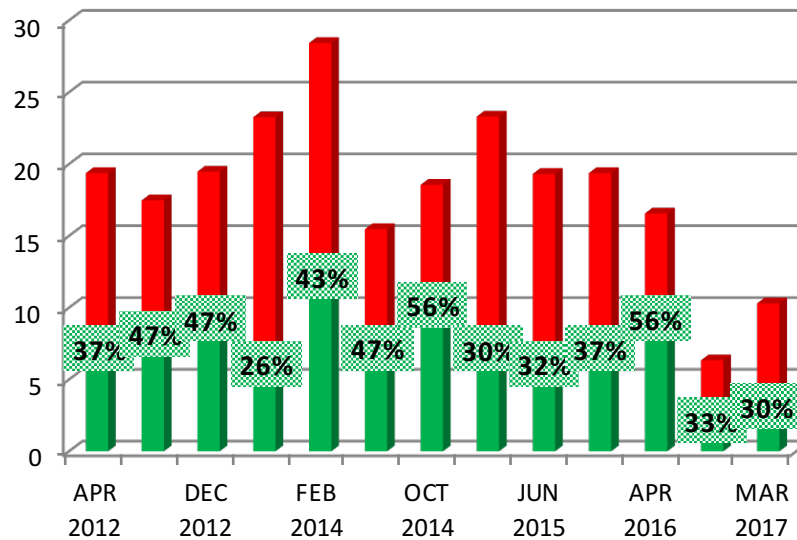
- Four of twelve (33%) Phase 2 proposals were previous Phase 1 awardees
  - Two of those four (50%) are Recommended for Funding in this round.

# Trends

## Comparative Results (all rounds to date)

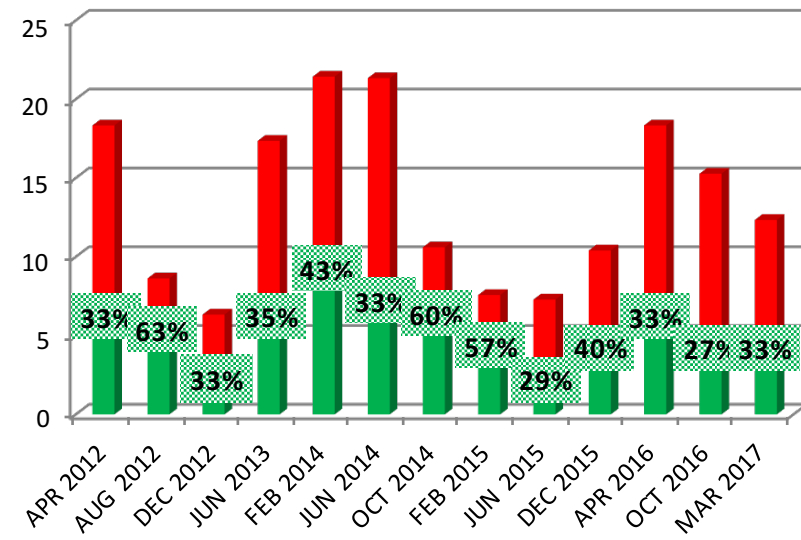
### Rounds 1 – 13 Results

#### Phase 1:A Applications



41% Cumulative Approval

#### Phase 2 Applications

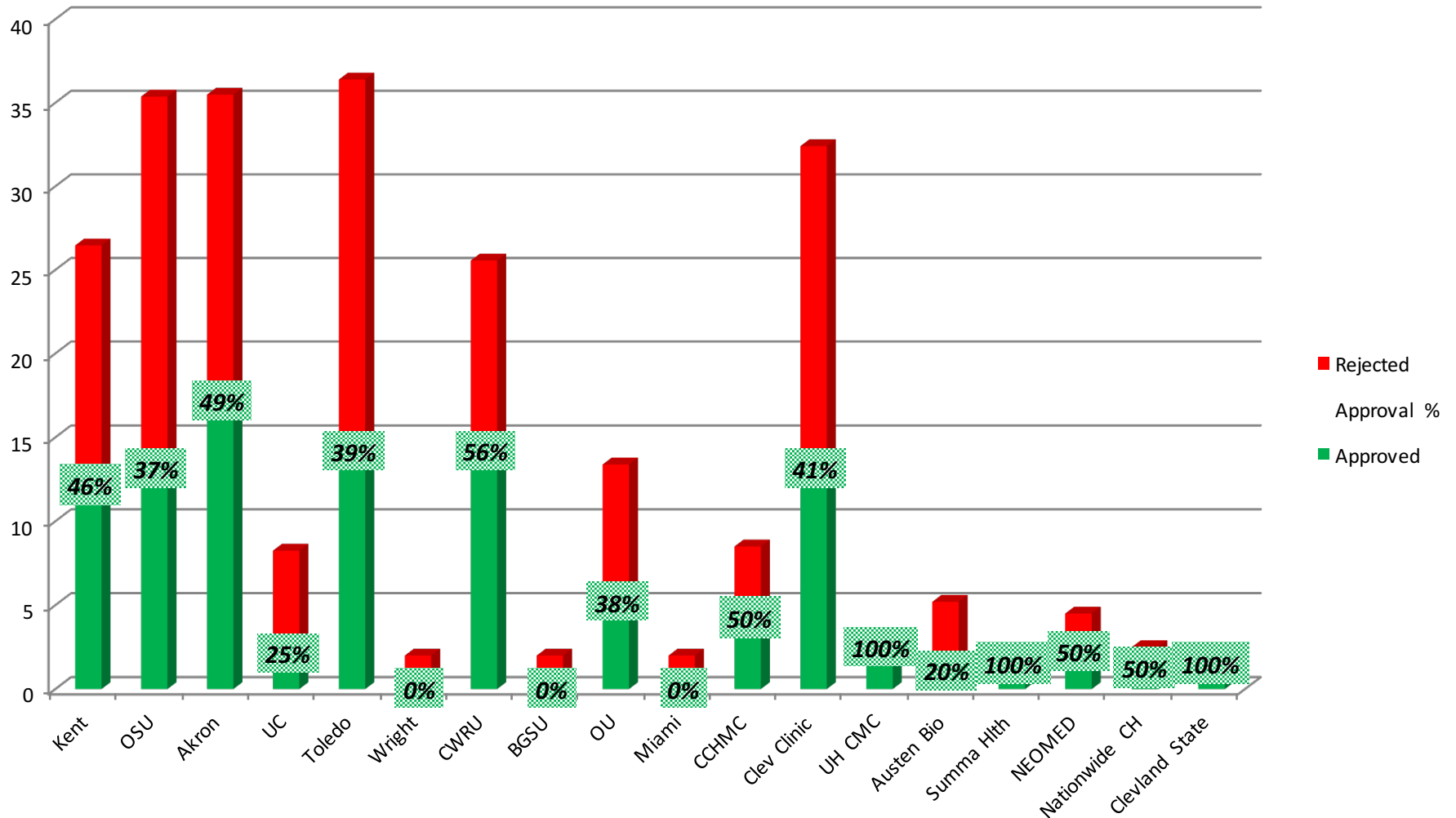


40% Cumulative Approval

# Trends

## Cumulative Results – Phase 1 (all rounds to date)

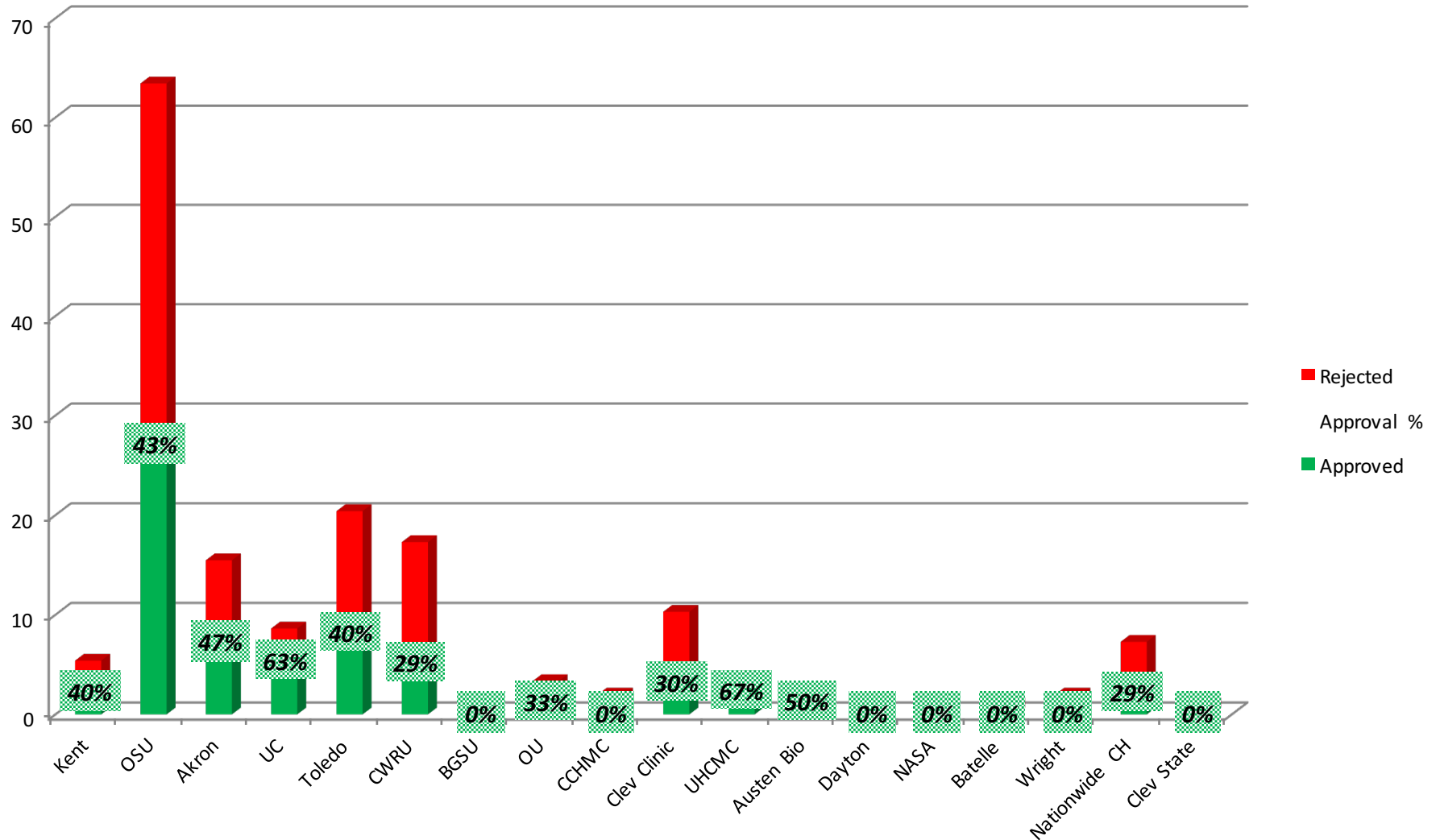
### Phase 1 Approved/Rejected by Institution



# Trends

## Cumulative Results – Phase 2 (all rounds to date)

### Phase 2 Approved/Rejected by Institution







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# Entrepreneurial Services Provider (ESP) Program: CY2017 – 2018

# ESP RFP Release

## **December 8: Commission asks DSA to release new ESP RFP within 30 days**

- To reflect the start-up nature of ESP applicants from Northwest Ohio and West Central Ohio

## **December 28: New RFP released**

- Major changes to structure and approach

# ESP Focus Areas

## Entrepreneurial Services Provider (ESP) Program

### Institutional Technology Commercialization

Tech Screening,  
Grants,  
Voice of Customer

### ESP Cross-Cutting Activities

Inclusion & Diversity, Administration,  
Client Tracking, Branding, Metrics,  
Talent Attraction

### Venture Development Services

Accelerators & Incubators,  
Physical facilities,  
Expert Mentors,  
Customer Access

### Enterprise Development Services

Capital Access,  
Customer Access,  
Mentor Network,  
Professional Services



CY 2017-2018

**Entrepreneurial Services Provider  
Program**

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Final Evaluator Funding Recommendations

March 29, 2017



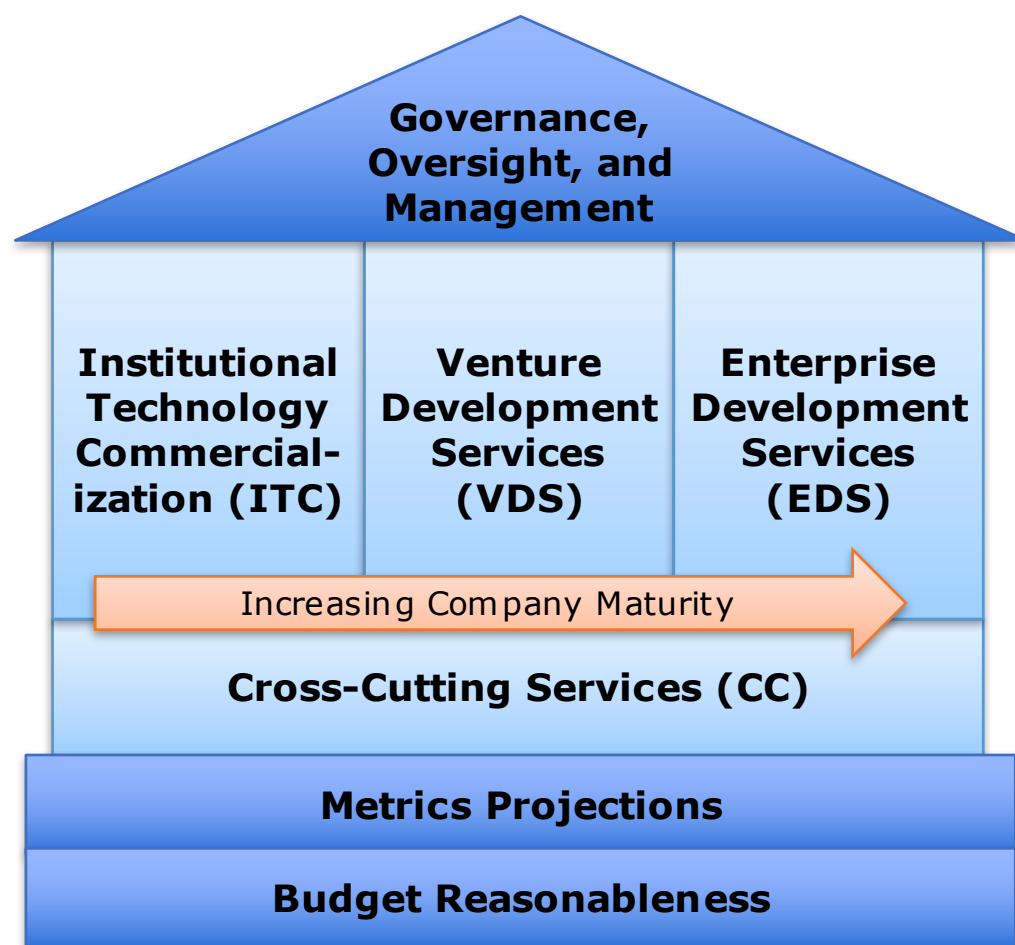
## Urban Venture Group (UVG)

- Consulting firm founded in 2009 to advance the commercialization of early stage technology
  - Provides 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
- Review Team:
  - Dr. Burr Zimmerman
    - Co-Founder of UVG; Background in pharmaceutical and med device industries, serial entrepreneur; Raised \$390 million in grant funds; PhD Chemical Engineering
  - Dr. Marc Malandro
    - University of Pittsburgh Vice Chancellor for Technology Management and Commercialization and Founding Director of the Innovation Institute; PhD Biochemistry
  - Dr. Phil Smith
    - Independent Innovation consultant serving primarily Fortune 500 firms. PhD Physics
  - David Brownstein
    - Co-Founder of UVG; Software industry, serial entrepreneur. MS Computer Science



# Entrepreneurial Services Provider Program (ESP)

- New ESP RFP released
- RFP defines specific client service “Components”
  - Requirements not new
  - Components present a more intuitive organization of ESP services
  - Service Components organized by stage of client firm maturation
- Specific criteria included for Governance and Oversight
- Evaluators’ process and recommendations follow OTF Commission guidance: Criteria and review process should be cognizant of the early stage of establishment of the new ESP applicants





## ESP Program Evaluation Results

Applicant	Funding Recommendation	Total Budget	State Funding
ProMedica Innovations (NWO)	Recommended	\$8,750,000	\$4,375,000
TEC (WCO)	Recommended	\$6,100,000	\$2,900,000
Quality Now (SWO)	Not Recommended		



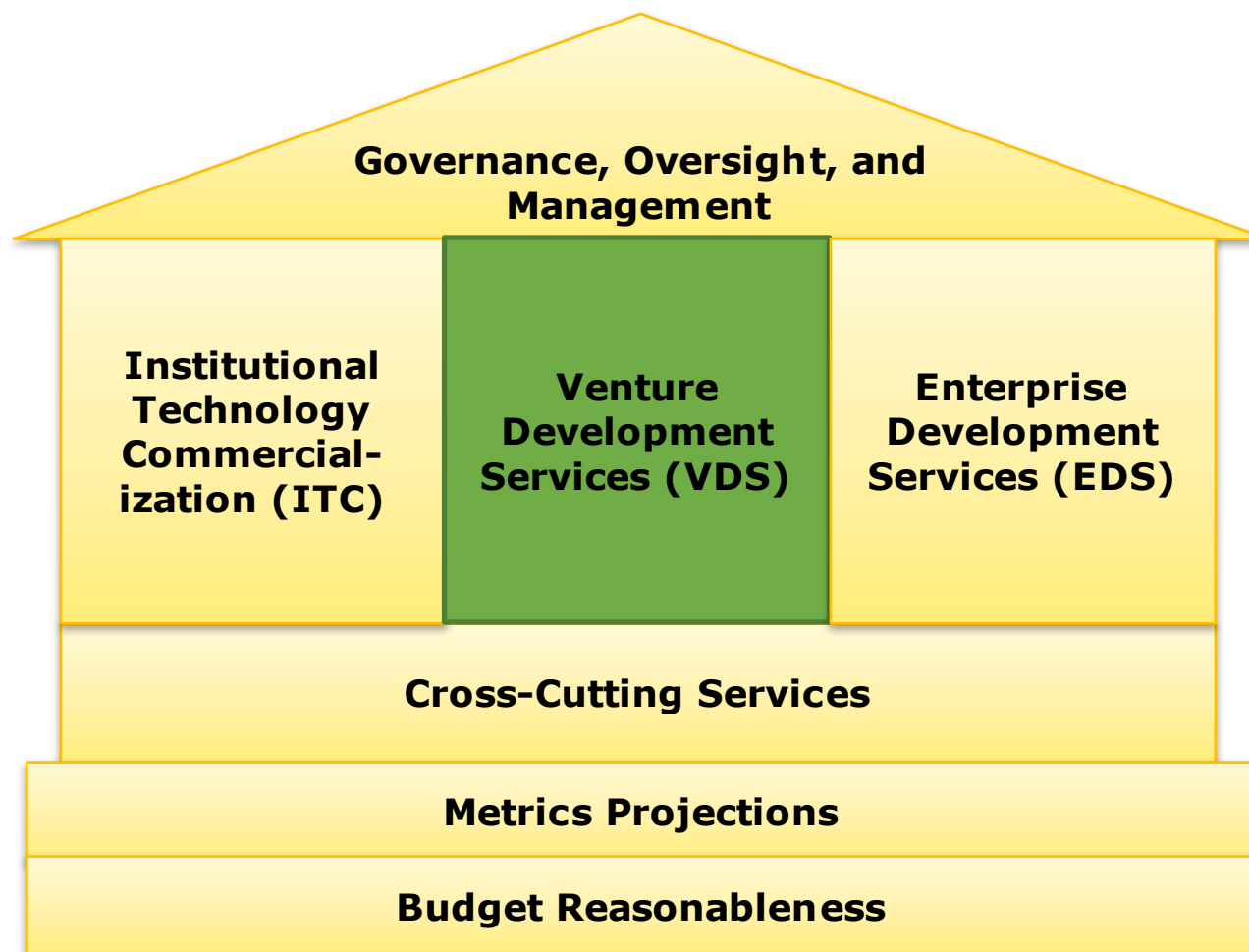
# ESP Program Evaluation Results

Applicant	Funding Recommendation	Organization, Governance, and Administration	Institutional Technology Commercialization	Venture Development Services	Enterprise Development Services	Cross-Cutting Activities	Metrics Projections	Budget Reasonableness
ProMedica Innovations (NWO)	Recommended	→	→	↑	→	→	→	→
TEC (WCO)	Recommended	→	↑	→	↓	→	↓	→
Quality Now (SWO)	Not Recommended							

↑ Exceeds Requirements	→ Meets Requirements	↓ Does Not Meet Requirements
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# ProMedica Innovations: Overview



## ProMedica Innovations: Evaluation Results

Organization, Governance, and Administration	Cross-Cutting Activities	Metrics Projections	Budget Reasonableness
➔	➔	➔	➔
<p>(+) PMI acted to address concerns about COIs and governance.</p> <p>(+) JumpStart supporting ESP operations.</p> <p>(-) Inexperienced ESP leadership</p> <p>(-) Much of ESP staff split duties.</p>	<p>(+) Substantial new investment in the region from ProMedica Innovations and Mercy Health.</p> <p>(-) Siloed partners are a risk, could impede regional cohesion.</p>	<p>(+) Metrics are representative of an ESP at the early stages of formation.</p> <p>(-) Magnitude of proposed impacts is modest.</p>	<p>Funding recommendation reflects removal of specific items of concern.</p>

## ProMedica Innovations: Service Component Results

Institutional Technology Commercialization	Venture Development Services	Enterprise Development Services
➔	⬆	➔
<p>(+) PMI proposal has spurred new activity from regional partners Mercy Health and BGSU.</p> <p>(-) New and emerging ITC activities at Mercy and BGSU may require time to produce results.</p>	<p>(+) PMI brings substantial health-related expertise and resources.</p> <p>(+) UT runs a successful incubator for non-health technologies.</p>	<p>(+) PMI brings substantial health-related expertise and resources.</p> <p>(-) EDS pipeline small compared with budget.</p> <p>(-) EDS expertise should be expanded outside of health/medical.</p>

# ProMedica Innovations: Conclusions

## Strengths

- NextTech, supported by PMI, is likely to offer **valuable services, especially for medical device, health IT**, and related firms.
- PMI has **invested significant capital**, and **attracted new partners** (Mercy Health, BGSU) to the region
- PMI and Mercy bring **valuable health system knowledge** base.
- UT operates a **long-standing incubator** and can expand non-health services throughout the region

## Items to be Monitored

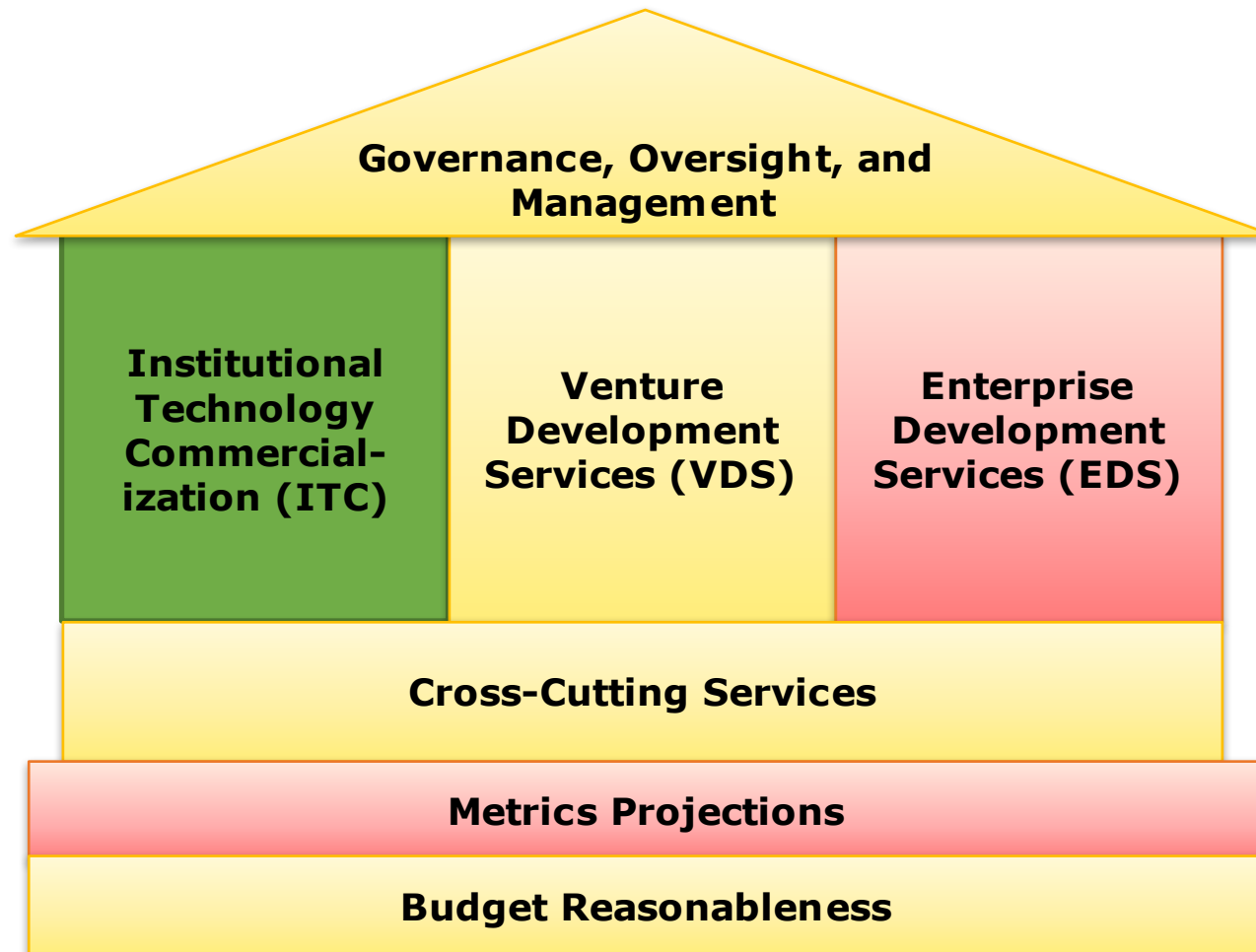
- Significant proportion of staff must split time between ESP and non-ESP duties. **Staffing structure increases risk of Conflicts of Interest.**
  - Lack of focus of core staff could also impede achievement of economic impacts
- Parallel resourcing among regional partners could increase **risk that partners become siloed.** Especially the partners who are new to the ESP program (and to innovation generally) would benefit from greater regional cohesion.



## ProMedica Innovations: Funding Recommendation Changes

Category	Description	Budget Recommendation
<b>Personnel</b>	ProMedica AVP, Exec Assistant: Unclear role in ESP, oversight function not aligned with NextTech independence.	Funding for AVP, Exec Assistant, and associated indirects not recommended. <b>Budget Impact: (~\$500,000)</b>
<b>Purchased Services</b>	The budget request does not align with the pipeline presented: The projected pipeline nearly triples from 2017 to 2018, yet the purchased services budget remains nearly flat.	Funding for 2017 purchased services to align with projected pipeline, along with associated indirects. <b>Budget Impact: (~\$800,000)</b>
	<b>Total Funding Impact:</b>	<b>(~\$1,300,000)</b>
	<b>State Funding Impact:</b>	<b>(~\$650,000)</b>

# TEC: Overview



## TEC: Evaluation Results

Organization, Governance, and Administration	Cross-Cutting Activities	Metrics Projections	Budget Reasonableness
➔	➔	↓	➔
<p>(+) Leadership knowledgeable of and invested in the region.</p> <p>(-) Significant staffing uncertainty; many new hires yet to be made.</p>	<p>(+) Rebranding and community outreach are emphasized.</p> <p>(-) Inadequate inclusion vision: Siloed within DACC and no services tailored for inclusion.</p>	<p>(-) Metrics projections / economic impacts are extremely modest.</p> <p>Appropriate metrics should be revised during contracting with DSA.</p>	<p>Funding recommendation reflects removal of specific items of concern.</p>



## TEC: Service Component Results

Institutional Technology Commercialization	Venture Development Services	Enterprise Development Services
↑	→	↓
<p>(+) Clear programmatic strategy and structure</p> <p>(+) Efforts leverages strong relationships with AFRL, WBI</p> <p>(+) TEC plans to expand and integrate ITC into regional research institutions</p> <p>(+) Efforts leverage Federal grant supporting technology commercialization</p>	<p>(+) Existing, capable incubator</p> <p>(+) Specialized services for SBIR firms are planned.</p> <p>(-) Key VDS personnel (EIRs) yet to be named</p> <p>(-) Risk associated with attracting sufficient entrepreneurial talent to lead new ventures</p>	<p>(-) Region lacks EDS client pipeline</p> <p>(-) Unclear strategy for systematically attracting seasoned leadership to lead high-growth firms</p> <p>(-) Capital attraction efforts focused on pre-EDS support</p>

## TEC: Conclusions

### Strengths

- **TEC leadership is passionate and committed** to the region. TEC has deep ties throughout the region.
- TEC brings strong relationships throughout the region, including **AFRL/WBI**.
- **TEC's focus on ITC is appropriate** for the region. Leveraging Federal programs with ESP investment is a logical approach.

### Items to be Monitored

- Many **new hires** planned: implementation risk
- Risk of COI heightened by the lack of **ESP-focused governance** unit.
  - An independent board, or sub-committee of the board, is recommended.
- TEC's focus on educational programs for **talent attraction** not likely to supply near-term talent needs for VDS or EDS companies.
- Lack of **health-related expertise** and services could impact service quality in those segments



## TEC: Funding Recommendation Changes

Category	Description	Budget Recommendation
EDS	No substantial pipeline of EDS-ready companies. TEC noted: “within the west central region, very few companies fall within the definition of EDS services”.	EDS not funded. <b>Impact: \$617,187</b>
DACC Personnel	Funding is recommended to support a new DACC position dedicated to inclusive attraction of new ESP client firms. Funding for existing staff is not recommended.	Fund new inclusion hire only. <b>Impact: ~\$300,000</b>
OU Personnel	Senior Leadership and Management roles not specific to ESP. <i>Note: This is only cost share, and TEC is over-matched. State funds request not impacted.</i>	<b>Total Impact: ~\$400,000</b>
	<b>Total Budget Impact:</b>	<b>~\$1,350,000</b>
	<b>State Funding Impact (Due to Cost Share Overmatch):</b>	<b>~\$450,000</b> \$300,000 to TEC; \$150,000 to DACC



## Quality Today (SWO)

- Quality Today, LLC proposed a program to help underserved individuals enter Quality Assurance (QA) careers.
  - Program focuses on implementing Curricula and Testing
  - Emphasizes rural workforce development
- Quality Today proposal does not align with the requirements or programmatic intent of the ESP RFP.
  - For this reason, no funding is recommended
- Quality Today's goals are admirable. Quality Today is encouraged to engage with other State agencies and programs to find a better programmatic fit.

# Funding Recommendation Summary

## Funding Recommendations

Applicant	Requested Budget	Recommended Budget	Difference	Requested State Funding	Recommended State Funding	Difference
ProMedica Innovations (NWO)	\$10,074,837	\$8,750,000	(\$1,324,837)	\$5,035,510	\$4,375,000	(\$660,510)
TEC (WCO)	\$7,461,854	\$6,100,000	(\$1,361,854)	\$3,352,888	\$2,900,000	(\$452,888)

## Recommended Funding: Budget Categories

Applicant	2017	2018	Cash Cost Share	Donated Services	Total Cost Share	Recommended State Funds
ProMedica Innovations (NWO)	\$3,750,000	\$5,000,000	\$4,263,000	\$112,000	\$4,375,000	\$4,375,000
TEC (WCO)	\$2,900,000	\$3,200,000	\$2,689,000	\$511,000	\$3,200,000	\$2,900,000

# Ohio Third Frontier 2016 Impact Update

# Startup and Early Stage Portfolio

Over 1,600 companies have received business assistance with roughly 35% receiving some Pre-seed investment.

**Metrics are reported on the 330 receiving over \$100K since 2006**

**1,600+ Companies**

ESP Services and/or  
Pre-Seed Investment

**545 Companies**

Pre-Seed Investment

**330 Companies**

Pre-Seed Investment of  
over \$100,000



# Pre-Seed Investments Since 2006

**330 companies**

**\$175 million total invested**

**3,074**

New Jobs

**\$1.6B**

Follow-on  
Equity

**\$1.6B**

Product  
Sales / Rev.



Development  
Services Agency



**Third Frontier**  
Innovation Creating Opportunity



# Total New Jobs Created

Green indicates net new job creation from the prior year



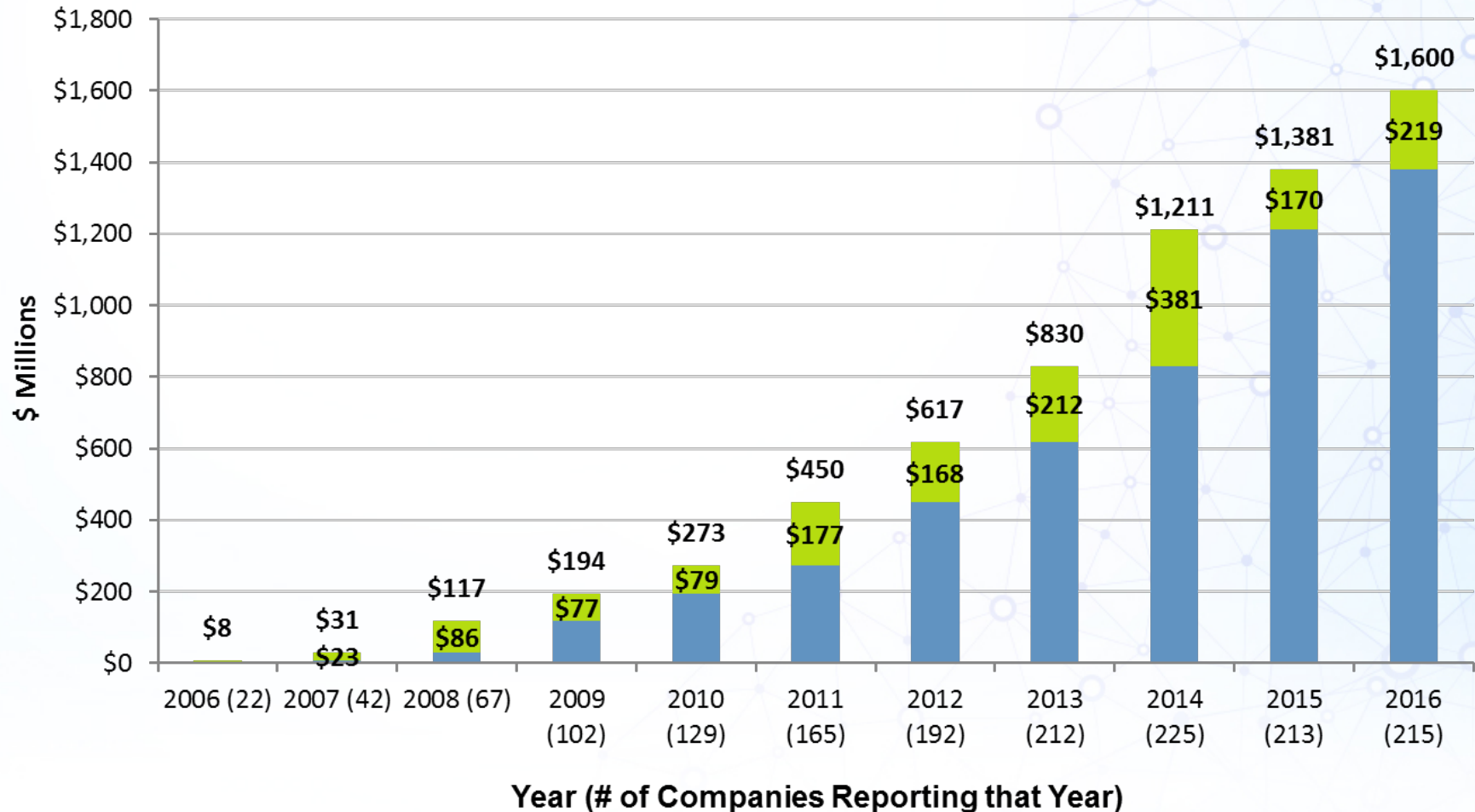
Development  
Services Agency



Third Frontier  
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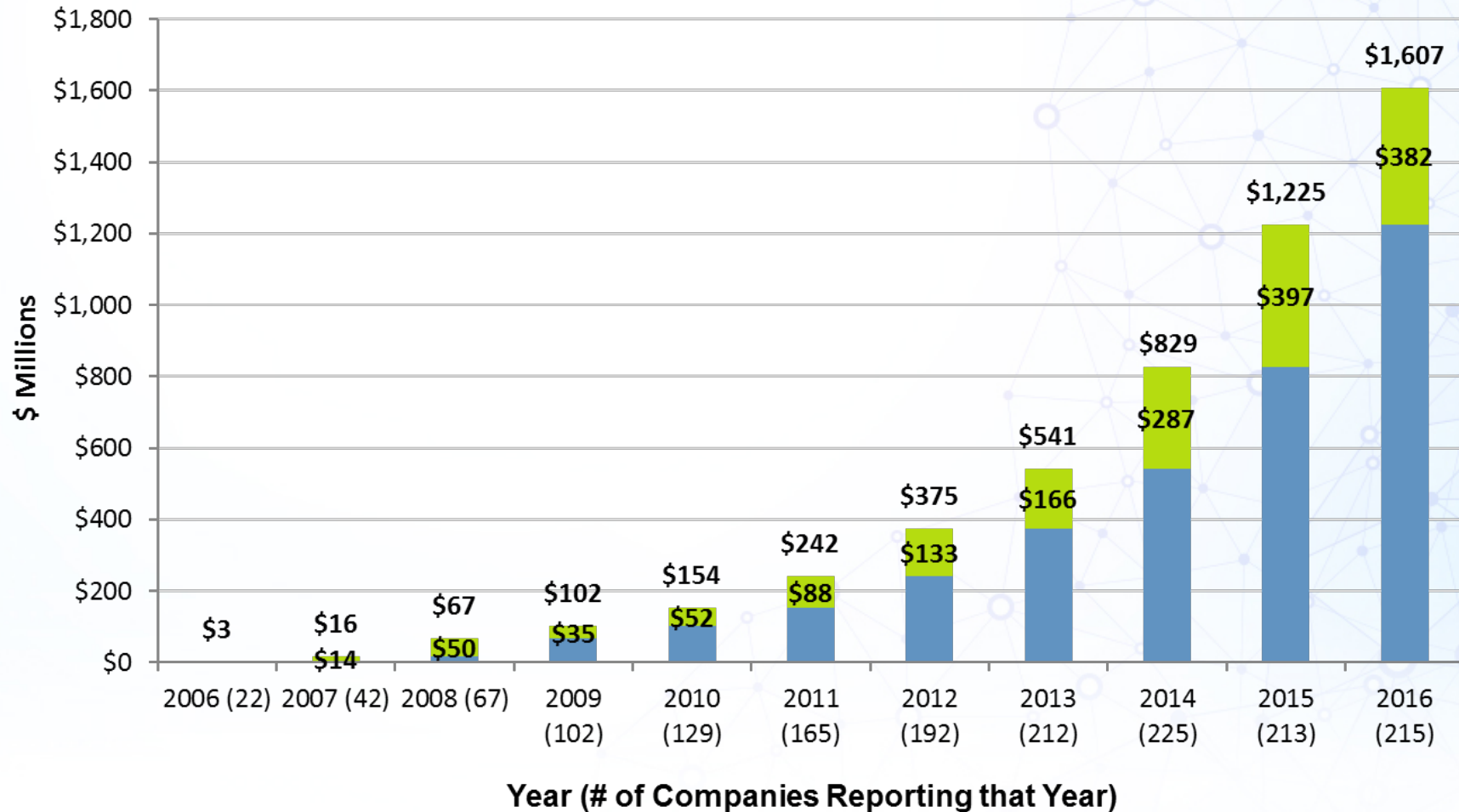
# Follow-on Equity Generated

Green indicates new equity generated in that year



# Product Sales / Revenue Generated

Green indicates new product sales / revenue generated in that year



Development  
Services Agency



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