

# Ohio Third Frontier Retreat

## September 14, 2016



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**Third Frontier**  
Innovation Creating Opportunity

# Joint Meeting Agenda

10:00	Call to Order Approval of 04/09/16 Meeting Minutes (Vote)	Mark Collar
10:05	Meeting Objectives	Mark Collar
10:10	Environment and Context <ul style="list-style-type: none"><li>• Administration Priorities</li><li>• Year In Review/ OTF Funding</li><li>• Pre-seed/Seed+ Fund Tracking</li></ul>	Dawn Larzelere Norman Chagnon Keith Jenkins Norman Chagnon
11:00	Biomedical Commercialization Centers Panel	Aram Nerpouni
12:00	Review of Progress on CY 2015 Strategic Consensus Document	Norman Chagnon
12:10	Strategic Issues	All

# Agenda (Continued)

12:30	Lunch/ Venture for America Fellows Panel	Mike McCann
1:45	Moving Forward for CY 2016–17 Future Opportunities/Directions	All
3:15	Break	
3:30	Priorities/ Consensus on Key Decisions	All
4:25	Other Business	All
4:30	Adjourn	

# Meeting Objectives

# Environment and Context

# Administration Priorities

# Year In Review

# Myriad to Acquire Assurex Health for Up to \$410 Million



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# Assurex Video



# Assurex has been an Ohio Third Frontier Portfolio Company Since 2006

- Wright Center for Computational Medicine: CCHMC
- CincyTech
- Queen City Angels
- Blue Chip Ventures
- CCHMC Tomorrow Fund
- Ohio Tech Angel Fund
- North Coast Angel Fund



# TechOhio

## Central Ohio will get a piece of \$225M Assurex Health sale

August 15, 2016 // 0 Comments



Story excerpt provided by Columbus Business First. Written by Carrie Ghose. Ohio TechAngel Funds will see a portion of the proceeds when the \$225 million acquisition of [...read more]

## Fast-growing startup, Assurex Health, sold to Utah-based Myriad Genetics Inc.

August 4, 2016 // 0 Comments



A Utah company has acquired one of the region's most successful startups, Mason-based Assurex Health, in a deal worth up to \$410 million. Myriad Genetics Inc. is based in [...read more]

## Assurex Health creates 3 new C-suite positions

March 15, 2016 // 0 Comments



Story excerpt provided by Cincinnati Business Courier. Written by Barbara Brunson. Assurex Health, a fast-growing Mason, Ohio firm, has hired its first general manager [...read more]

## Assurex Health's workforce surging along with orders for genetic tests

February 4, 2016 // 0 Comments

## TechOhio

The Voice of Ohio Third Frontier

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Home » Companies » Assurex Health buyer has a Cincinnati connection

## Assurex Health buyer has a Cincinnati connection

Posted on August 17, 2016 by Isaac Albert in Companies // 0 Comments



Story excerpt provided by Cincinnati Business Courier.

Written by Barrett J. Brunson.

Myriad Genetics, the Utah firm that agreed to buy Mason-based Assurex Health in a deal that could be worth up to \$410 million, has a Cincinnati connection.

Dr. Rick Wenstrup, chief medical officer of Myriad (NASDAQ: MYGN), helped invent the technology that Assurex Health's genetic tests are based on when he was a professor at Cincinnati Children's Hospital Medical Center

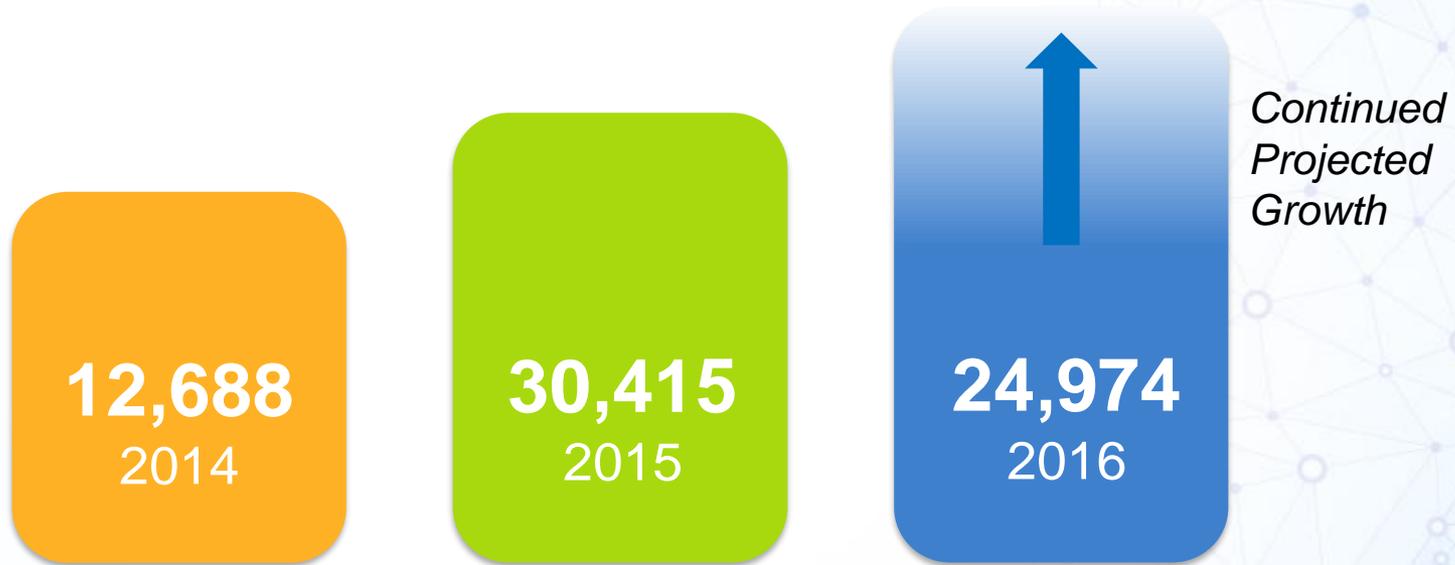


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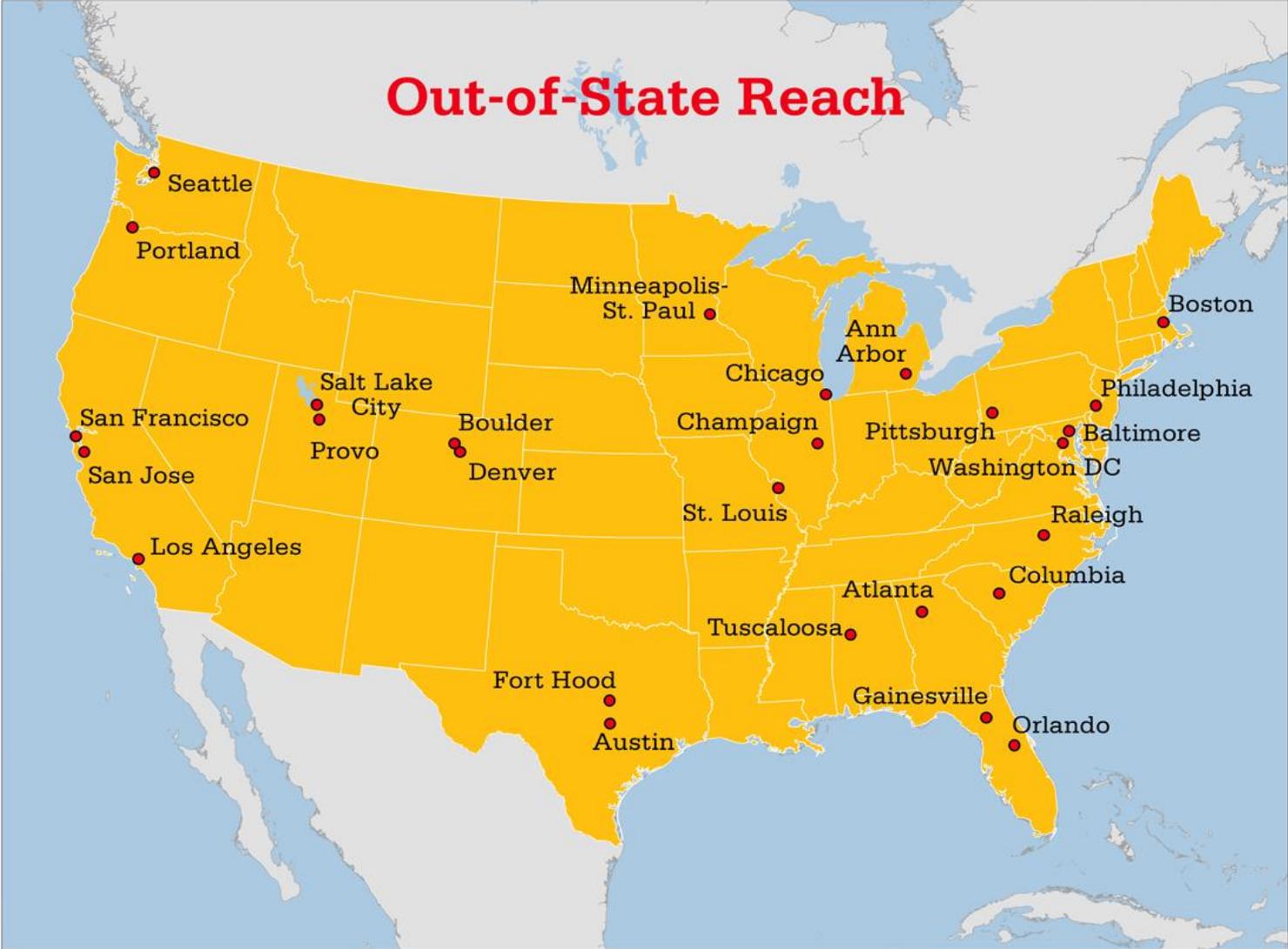
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# Visits to TechOhio



	Q1	Q2	Q3	Q4	YEAR TOTAL	AVERAGE PER QUARTER
2014		4,600	3,603	4,485	12,688	4,229
2015	8,220	7,650	7,109	7,436	30,415	7,604
2016	9,231	9,046			18,277	9,138

# Out-of-State Reach



R082216A



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# TechOhio Video Wins a Telly Award



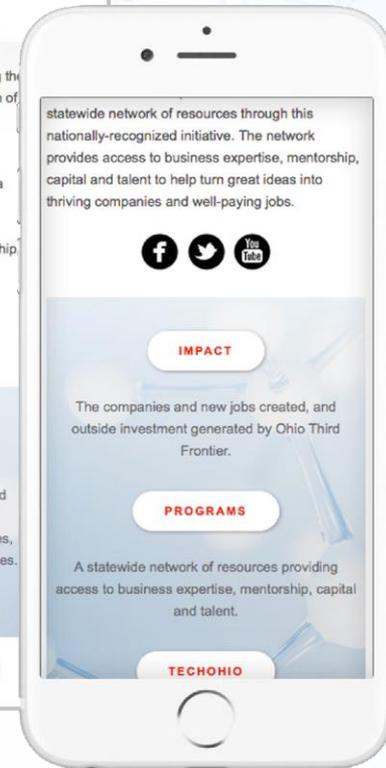
*Building a New Ohio*  
Video - Information Category



# Building a New Ohio

Click here to watch the video  
<https://www.youtube.com/watch?v=MRR9mFQ4ydA>

# Website Upgrades



# Year In Review: Overview

Requests For Proposals were released for all programs planned for CY 2016 and tracked with the established schedule

In the period from January 1, 2016 to December 30, 2016, expect total awards of \$33 million.

# Year In Review: Programs

One round of Technology Validation & Start-up Fund at \$1.25 million. One additional round of Technology Validation & Start-up Fund expected to award a total of \$3.6 million

One CALF deal at \$1.5 million. Thirteen additional CALF deals expected to award nearly \$12 million

Provided additional \$14 million in support for Pre-seed/Seed+, adding to the \$60 million awarded in December 2015

Awarded \$1 million for Ohio Tech Internship program to support 100 interns at 64 companies

# Year In Review: Other

Reviewing 2017–2019 requests for ESP funding, totaling \$27 million per year for the system of six regional networks. Awards will actually accrue to the CY 2017 OTF budget. Deliberations and awards are expected to occur at the October 27, 2016 Commission meeting.

TVSF offered Phase 1 Track B in the current round. Seven Track B fund proposals were submitted. Deliberations and awards are expected to occur at the October 27, 2016 Commission meeting.

# Year in Review

Program	CY 2015	CY2016
Entrepreneurial Signature Program*	24	
Pre-seed Fund Capitalization Fund/Seed Plus	60	14
Increasing Output	**	**
Commercial Acceleration Loan Fund	7	13.5
Technology Validation & Start-up Fund	3	9
Third Frontier Internship Program	–	1
<b>Total</b>	<b>70</b>	<b>33</b>

\* Previously Committed

\*\* Placeholder for proposed ideas to increase output by 50% (Consensus Document)

# OTF Bond Fund Balance CY 2017

**\$264 Million**

# Ohio Third Frontier 2016 Impact Update



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# Startup and Early Stage Portfolio

Over 1,500 companies have received business assistance with roughly 35% receiving some Pre-seed investment.

**This analysis focuses on the 320 receiving over \$100K since 2006**

**1,528 Companies**

ESP Services and/or  
Pre-Seed Investment

**533 Companies**

Pre-Seed Investment

**320 Companies**

Pre-Seed Investment of  
over \$100,000



# Pre-Seed Investments Since 2006

**320 companies**

**\$165 million total invested**

**2,821**

New Jobs

**\$1.6B**

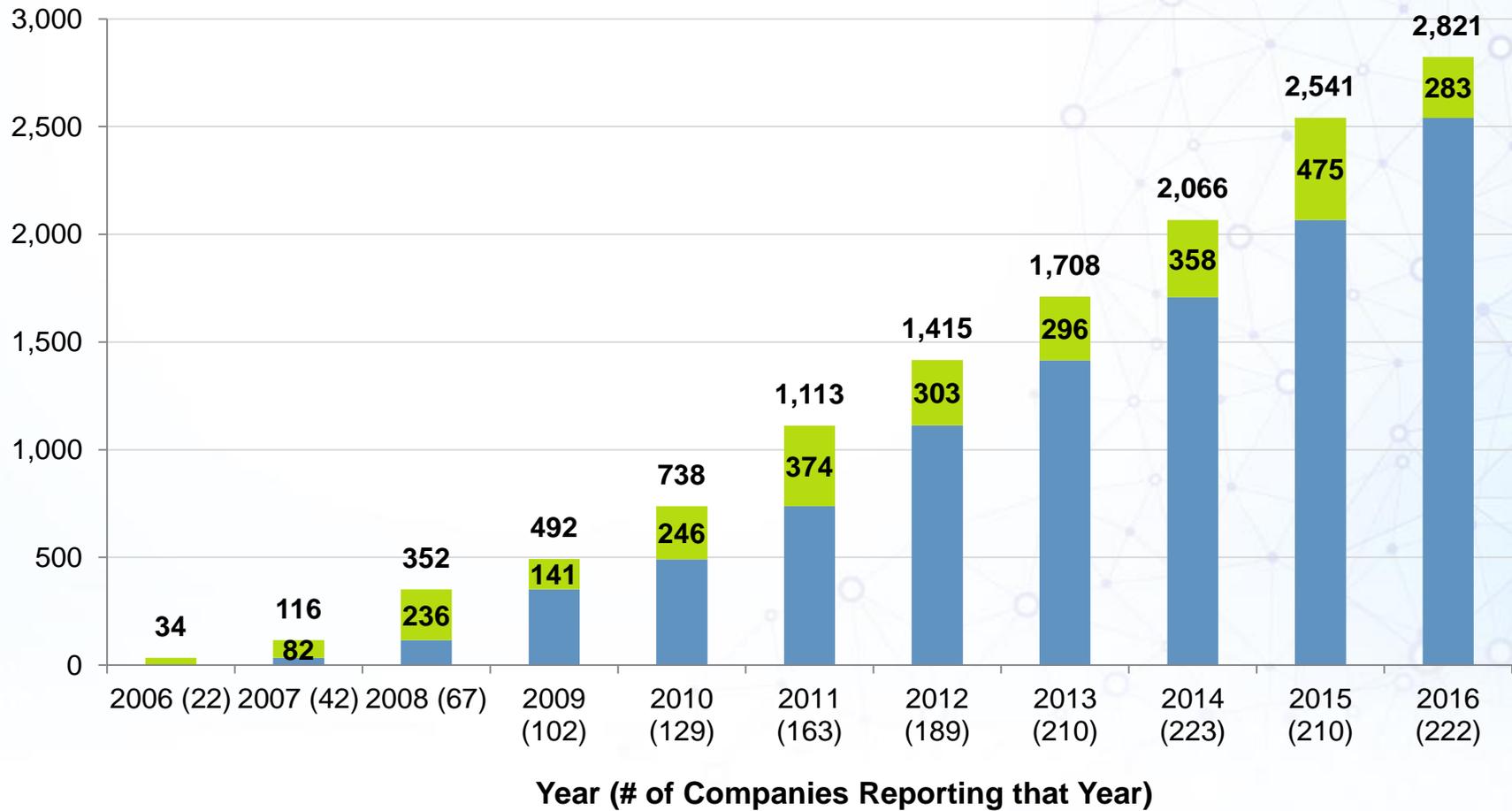
Follow-on  
Equity

**\$1.4B**

Product  
Sales / Rev.

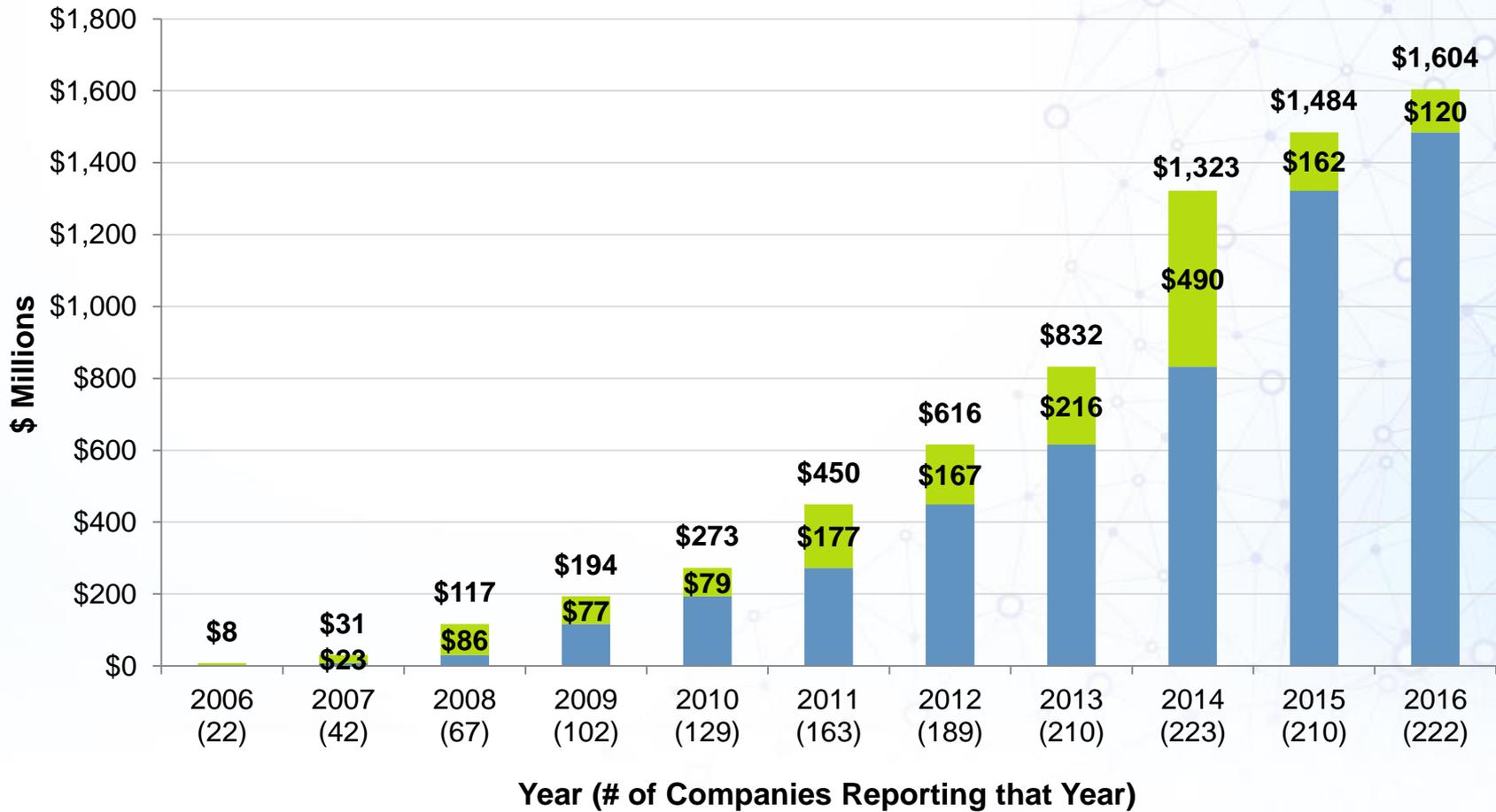
# Total New Jobs Created

Green indicates net new job creation from the prior year



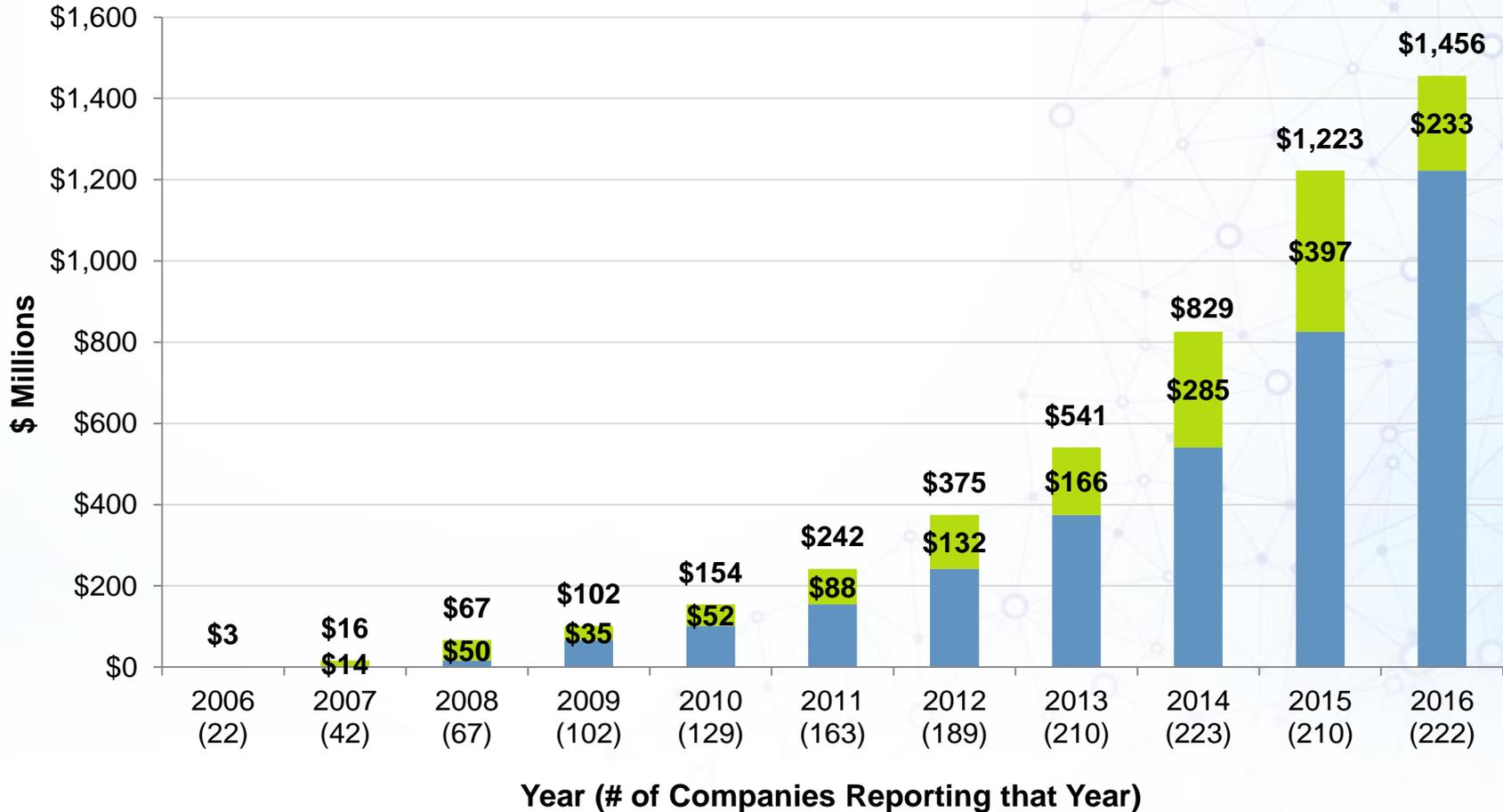
# Follow-on Equity Generated

Green indicates new equity generated in that year



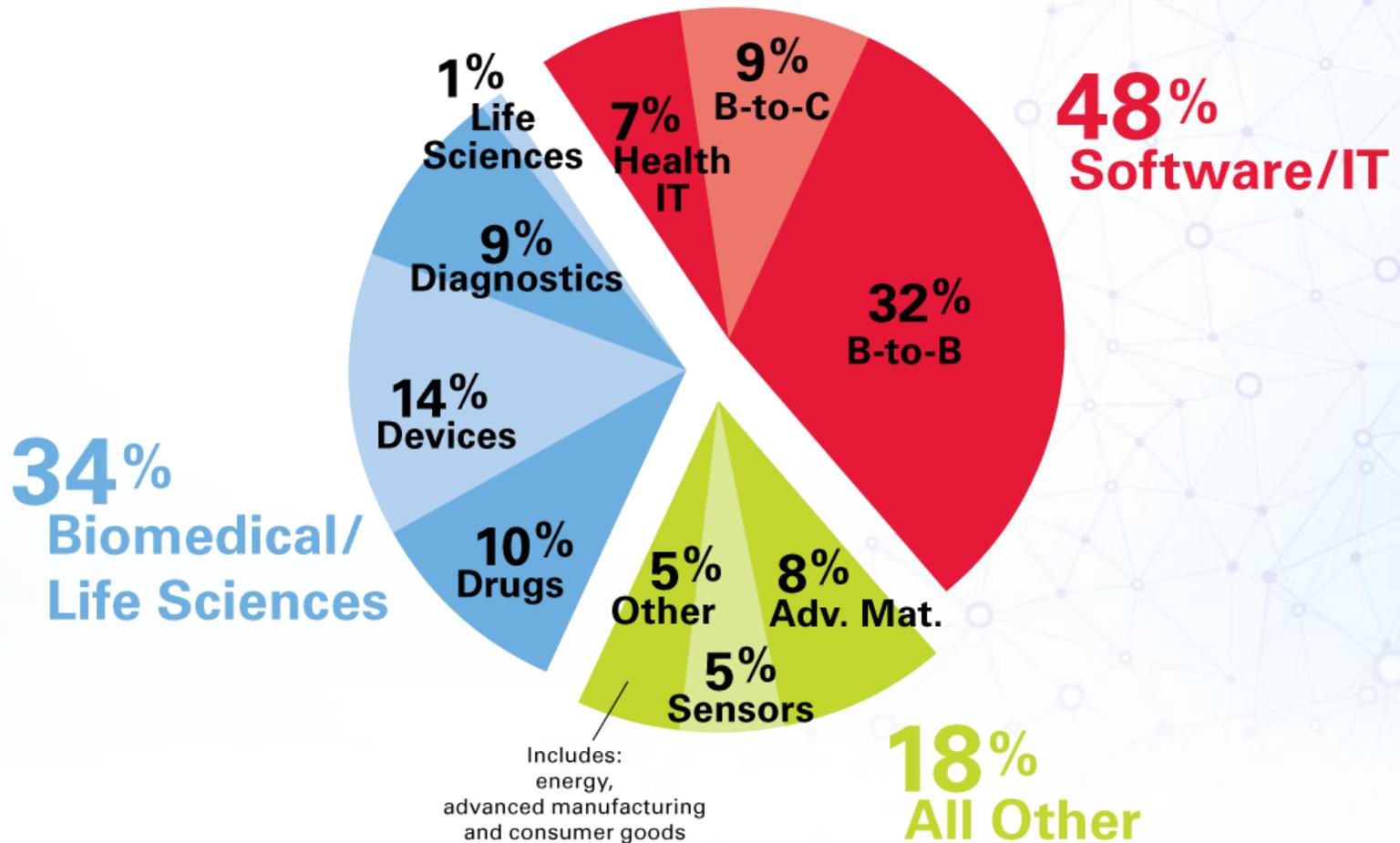
# Product Sales / Revenue Generated

Green indicates new product sales / revenue generated in that year



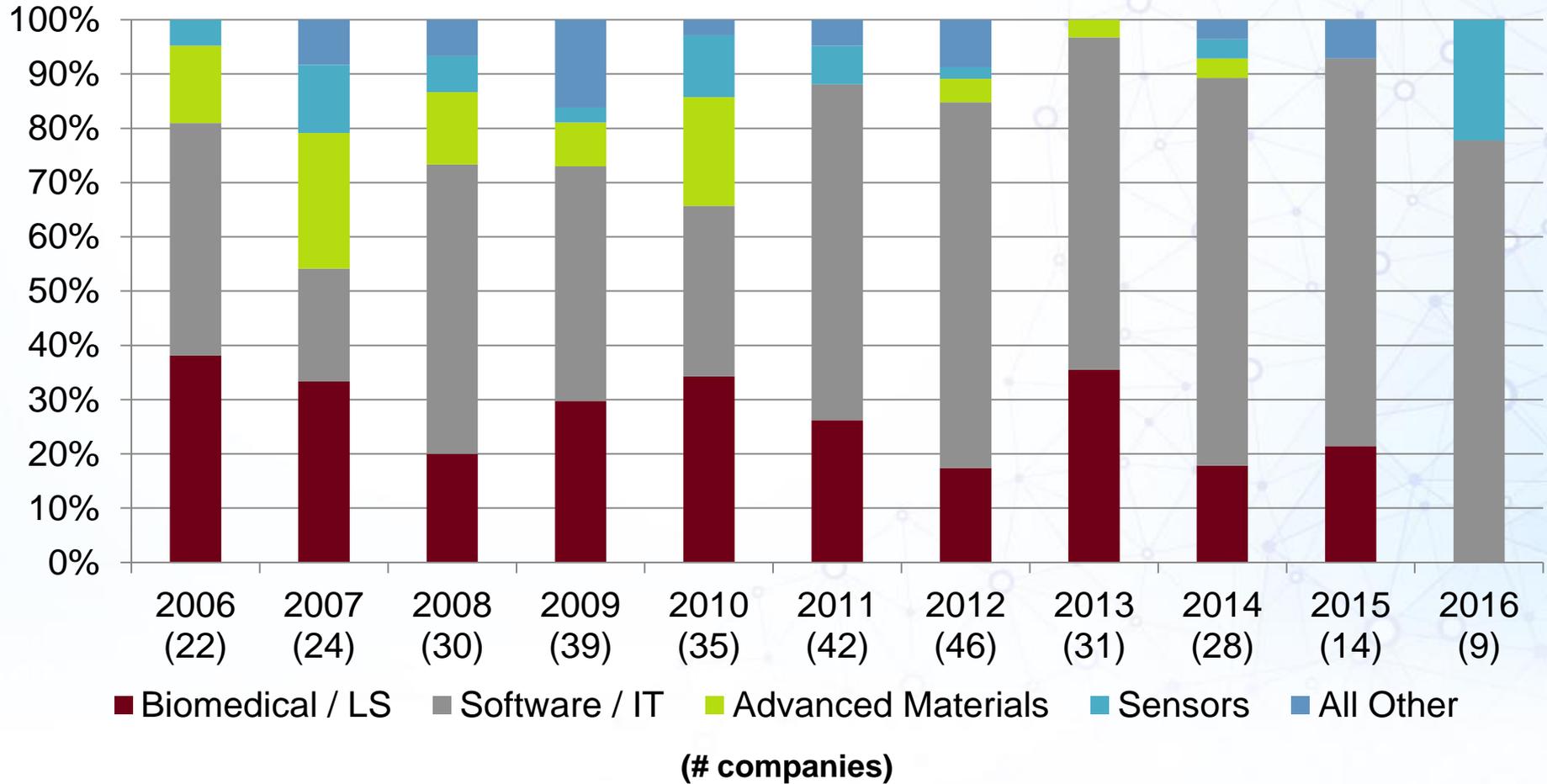
# Portfolio Mix by Tech Focus Area

Percentage of total \$ invested for all companies 2006–2015



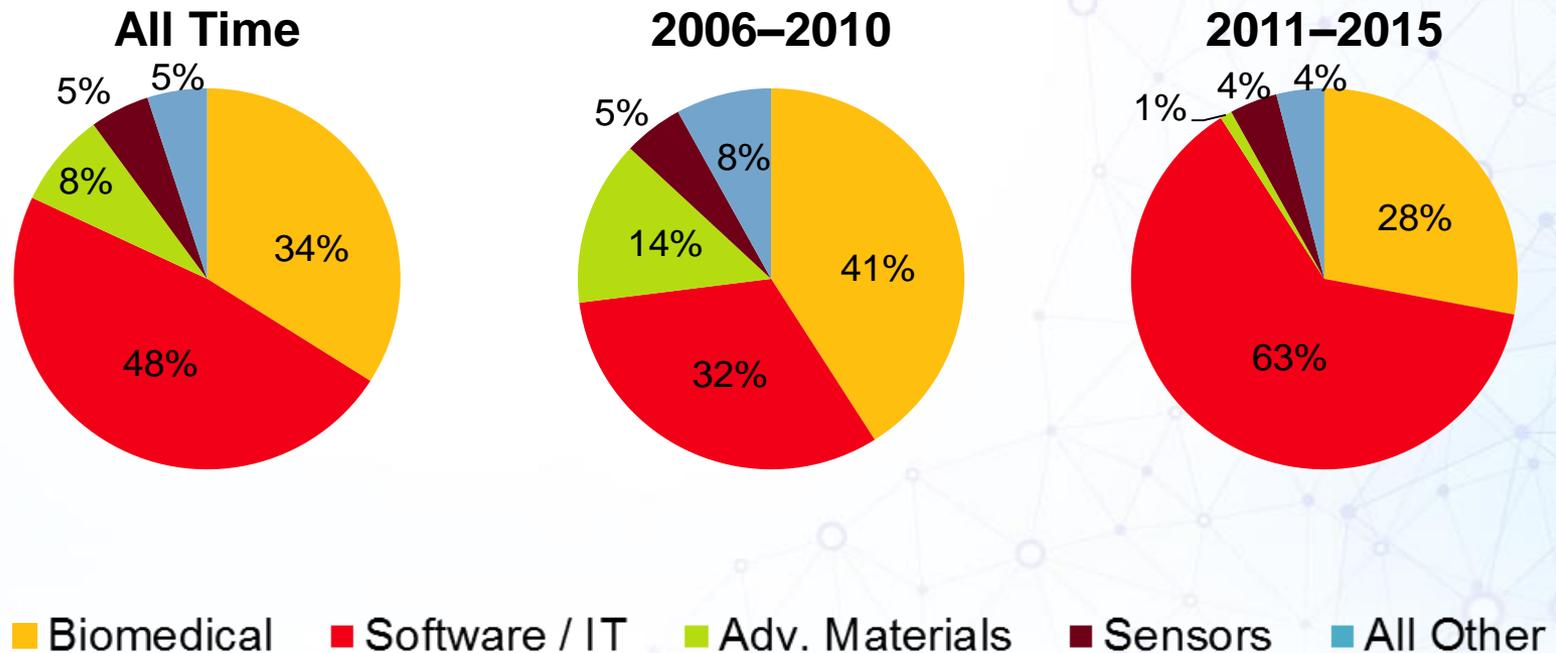
# Vintage by Tech Focus Area

Investments are increasingly concentrated in med tech and IT



# Changes to the Mix over Time

Percentage of total \$ invested for all companies by period of investment

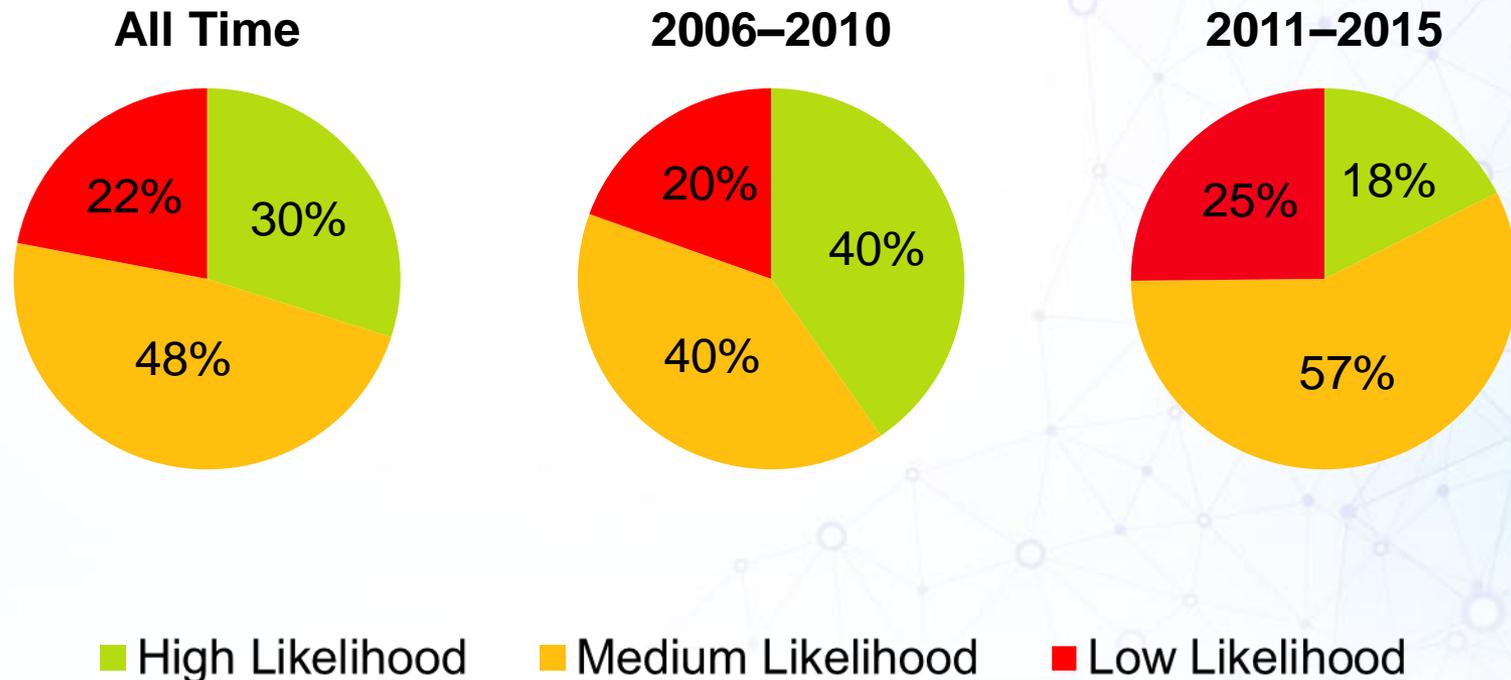


# Platform Likelihood

	Biomedical				Software / IT			Others			
	Drugs	Device	Diag	Life	B-C	B-B	Health	Cons. Good	Energy	Adv. Mat.	Sensors
Platform Likelihood	Low	Med	High	High	Low	Med	High	Low	Med	High	High
Companies %	7%	11%	7%	1%	12%	33%	9%	4%	2%	9%	6%
\$M Invested %	10%	14%	9%	1%	9%	32%	7%	3%	3%	8%	5%
Companies #	22	35	21	5	39	107	27	12	7	27	18
\$M Invested	\$16.1	\$23.1	\$14.7	\$2.0	\$14.6	\$52.0	\$11.8	\$5.4	\$4.5	\$12.6	\$8.4

# Platform Likelihood over Time

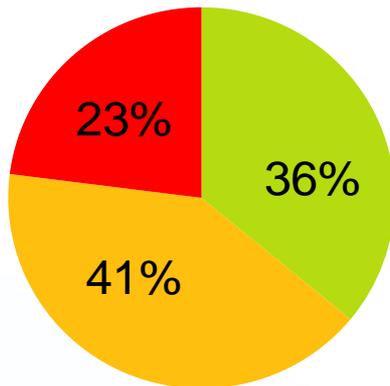
Percentage of total \$ invested for all companies by period of investment



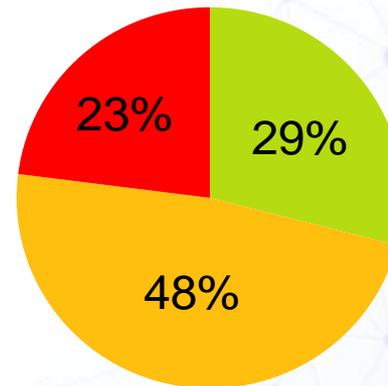
# Platform Likelihood by Follow-on Equity (FoE)

Platform likelihood by FoE high performers (top 20%) and all others

**High Performers (64)**



**All Others (256)**

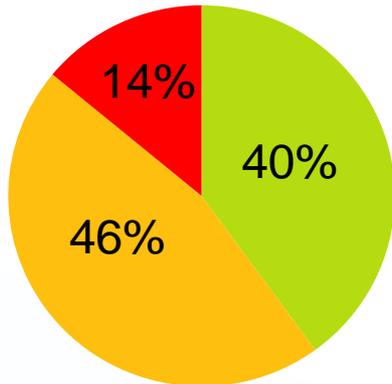


■ High Likelihood    ■ Medium Likelihood    ■ Low Likelihood

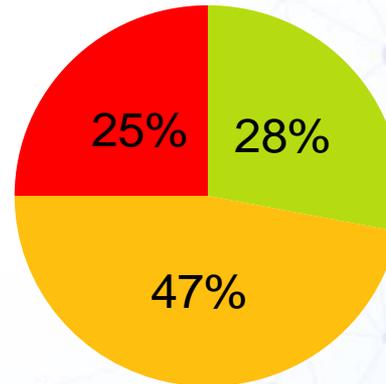
# Platform Likelihood by Jobs

Platform likelihood by jobs created high performers (top 20%) and all others

### High Performers (64)



### All Others (256)

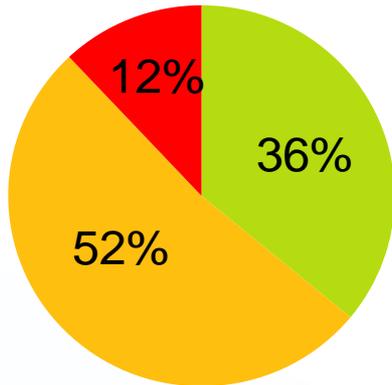


■ High Likelihood    ■ Medium Likelihood    ■ Low Likelihood

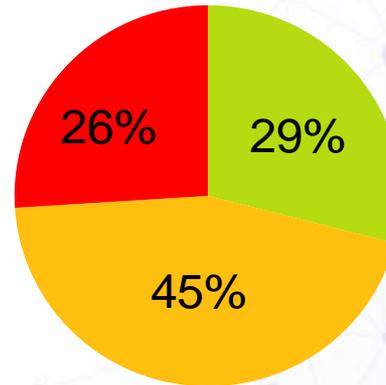
# Platform Likelihood by Sales

Platform likelihood by sales/revenue high performers (top 20%) and all others

### High Performers (64)



### All Others (256)

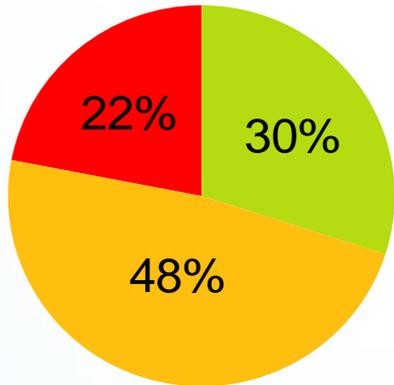


■ High Likelihood    ■ Medium Likelihood    ■ Low Likelihood

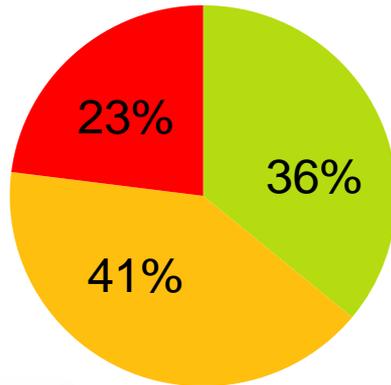
# Platform Likelihood by High Performers

Platform likelihood by all companies and metric-specific high performers

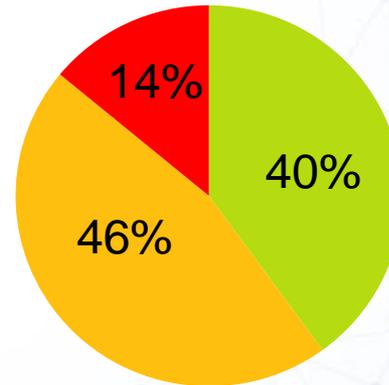
All Companies



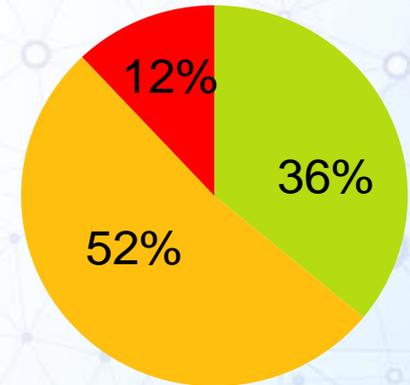
FoE HP



Jobs HP

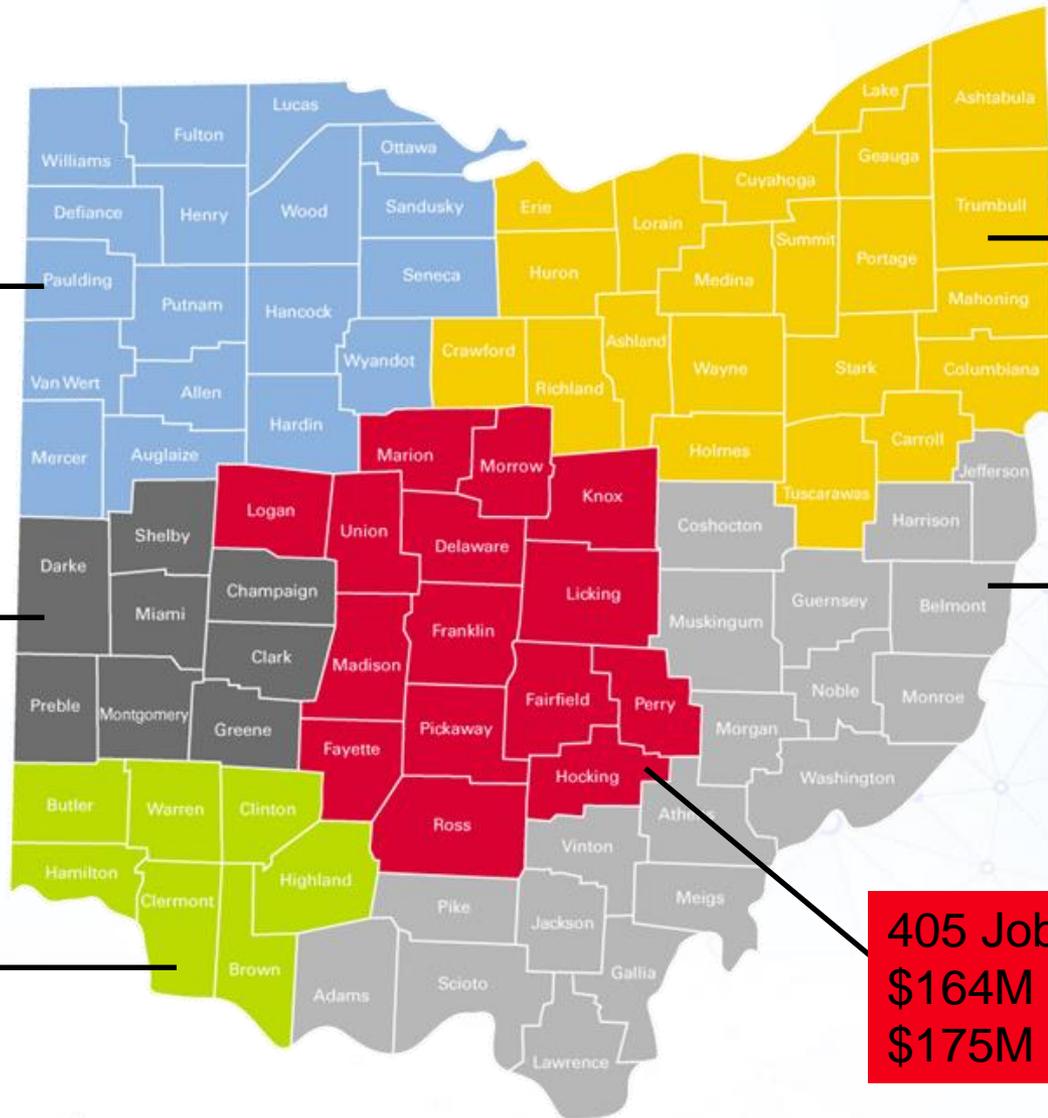


Sales HP



■ High Likelihood   ■ Medium Likelihood   ■ Low Likelihood

# Impact by Region



121 Jobs  
\$76M FoE  
\$101M Sales

1,372 Jobs  
\$776M FoE  
\$670M Sales

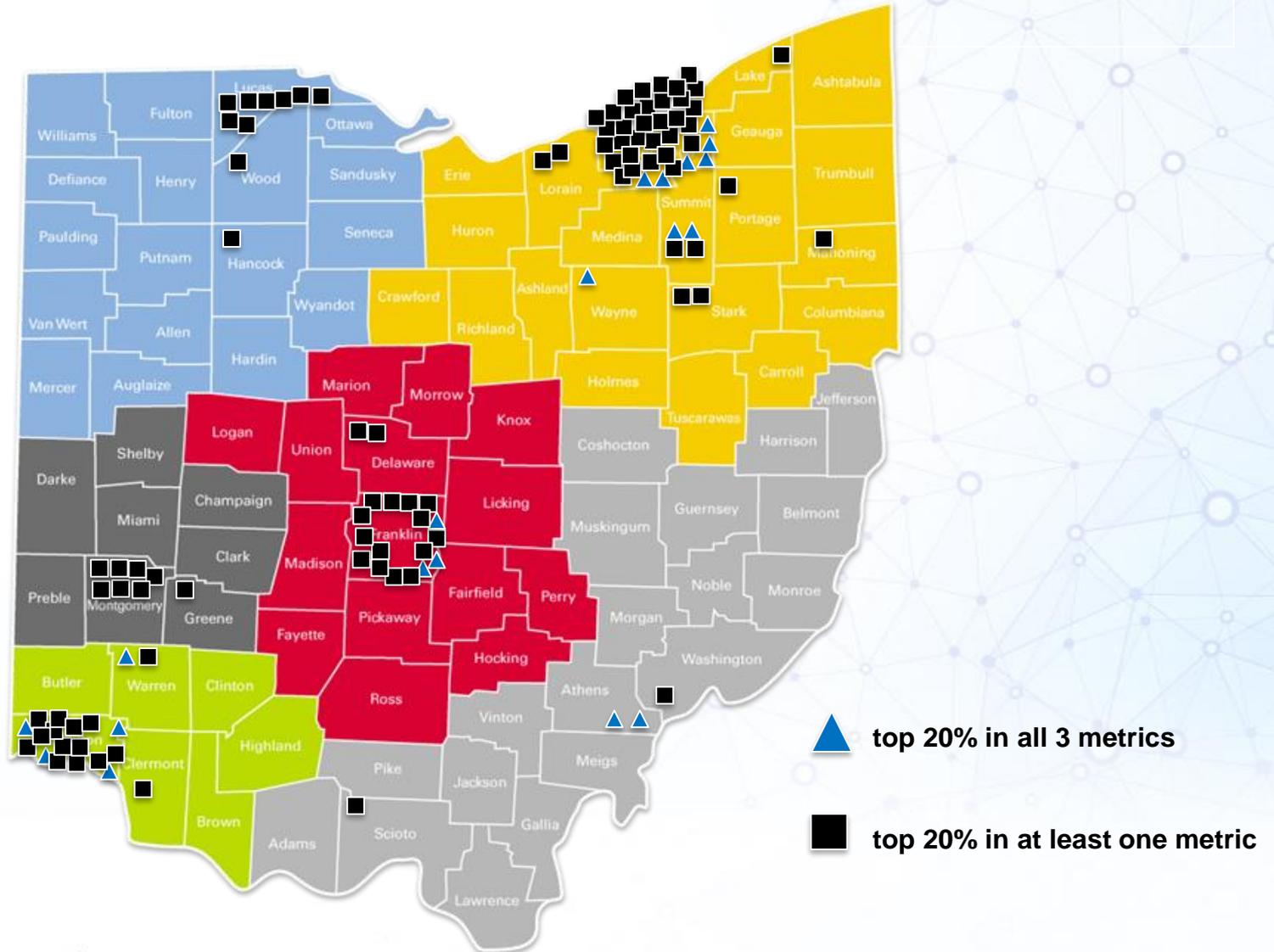
103 Jobs  
\$21M FoE  
\$160M Sales

144 Jobs  
\$28M FoE  
\$94M Sales

676 Jobs  
\$570M FoE  
\$210M Sales

405 Jobs  
\$164M FoE  
\$175M Sales

# High Performers by Region





# Questions?

# Pre-seed/Seed + Fund Tracking

# Pre-seed/Seed + Fund Tracking

The success and principle dynamics of the Ohio Third Frontier will overwhelmingly be embodied in understanding what is happening within the Pre-seed/Seed+ Program:

**\$154 million Invested**

**\$220 million New Deal Activity**

# Pre-seed/Seed + Fund Tracking

- Total Fund Principle
- Total Uncalled Capital
- Number of Deals for Reporting Period
- Amount of Investment for Reporting Period
- Deals by Sector for Reporting Period
- Fund Returns and Distributions
- Return Ratio

# Pre-seed/Seed + Fund Tracking

- Most of the tracking elements can be generated from fund draw requests already being received
- Building IT system to improve collection and automated calculation of other fields
- Standard dashboards will then be developed for regular reporting to Commission/Advisory Board

A decorative background graphic on the right side of the slide, consisting of a network of interconnected nodes and lines in shades of blue and grey, resembling a molecular or data network structure.

# Biomedical Commercialization Center Panel

# Panel Members

**Aram Nerpouni (Moderator)**  
BioEnterprise

**Mark Low**  
Global Cardiovascular Innovation Center

**Kevin Wasserstein**  
Neurotechnology Innovation Translator

**Eli Thomas**  
Harrington Discovery Institute

# TechOhio

## BioEnterprise Company Fundings

January 11, 2016 // 0 Comments



Provided by BioEnterprise, Surgical Theater Raises \$9 Million  
Cleveland-based Surgical Theater raised \$9 million Series A financing from HTC Corporation and Shanghai Creation [...read more]

## BioEnterprise: Investments in local biomedical companies since 2002 surpasses \$2 billion plateau

February 27, 2015 // 0 Comments



Story excerpt provided by Crain's Cleveland Business. Written by Chuck Soder. More than \$2 billion has been invested in local biomedical companies since 2002, according to [...read more]

## BioEnterprise: Local biomedical companies raised \$97.7 million in the first half of 2014

July 29, 2014 // 0 Comments



Story excerpt provided by Crain's Cleveland Business. Written by Timothy Magaw. Local biomedical companies raised \$97.7 million in the first half of 2014 — a 23.5% [...read more]

## Milo Biotechnology Offers Hope to Muscular Dystrophy Patients

August 24, 2016 // 0 Comments



Written by Barb Consiglio. In the Greek legend, Milo of Croton is renowned for his strength and feuded to carry an ox on his shoulders



BioMendics lines up \$7M, tests wound-healing gel



Cincinnati, Ohio, firm lands millions in financing

## Technology Highlight



## Cincinnati High School Wins Award for one of most Innovative High Schools in the Nation

Story excerpt provided by Strikingly. The First-Annual Transformative School Awards recognize innovative high schools that utilize alternative learning and technology to [...read more]

# TechOhio

## Ohio Solidifies Medical Might with Global Cardiovascular Innovation Center

February 26, 2015 // 0 Comments



Written by Kevin Volz. Ohio is home to some of the country's top-rated hospitals and health systems. You'll find the best and brightest scientists and medical researchers [...read more]

## Centerline Biomedical Lessens Radiation Risk, Improves Vision During Heart Surgery

June 23, 2016 // 0 Comments



Written by Kevin Volz. Cardiovascular disease is the leading cause of death in the United States, but thanks to the introduction of catheters and minimally-invasive [...read more]

## Juventas Therapeutics Using Innovative Therapy to Heal Body

February 17, 2016 // 0 Comments



Written by Kevin Volz. After someone experiences a heart attack, the muscle around their heart is often left damaged and not functioning properly, resulting in chronic heart [...read more]

## VentureMed Group's Innovative Technology Launches in Europe

February 8, 2016 // 0 Comments



Written by Kevin Volz. Medical device startup VentureMed Group (VMG) is hoping its innovative FLEX Scoring Catheter will reduce the



therapy machine



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The Voice of Ohio Third Frontier

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Home » Research » Neurobridge breakthrough could help build 'neurotechnology hot spot' in Columbus

## Neurobridge breakthrough could help build 'neurotechnology hot spot' in Columbus

Posted on June 26, 2014 by TechOhio in Research // 0 Comments



Story excerpt provided by Columbus Business First.

Written by Carrie Ghose.

Ohio State neurosurgeon Dr. Ali Rezaei says the Neurobridge system pioneered by Battelle and the OSU Wexner Medical Center is one example of the type of projects that could potentially receive help in regulatory and commercial development from Columbus' new Neurotechnology Innovation Translator.

The Ohio State-led center got off the ground with a \$21 million Ohio Third Frontier grant last week and, with numerous public and private investments, it has a \$161 million budget over four years to help spin off and attract neuroscience companies.

### Technology News



Henry Ford Health System acquires ViewRay's new 'Inac' cancer therapy machine



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Story excerpt provided by Strikingly. The First Annual Transformative School Awards recognize innovative high schools that utilize alternative

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# TechOhio

## UH Harrington Discovery Institute awards grant funding to 10 physician-scientists

January 14, 2016 // 0 Comments



Story excerpt provided by Crain's Cleveland Business. Written by Lydia Coutré. The Harrington Discovery Institute at University Hospitals announced the 2016 recipients of [...read more]

## UH's Harrington Project is gaining traction

March 10, 2015 // 0 Comments



Story excerpt provided by Crain's Cleveland Business. Written by Timothy Magaw. When University Hospitals announced its \$250 million drug development initiative — The [...read more]

## Two CWRU physician-scientists are among recipients of Harrington Scholar-Innovator Awards for 2015

December 11, 2014 // 0 Comments



Story excerpt provided by Crain's Cleveland Business. Written by Timothy Magaw. Eleven physician-scientists from some of the country's premier academic institutions, [...read more]

## BioMotiv secures up to \$10 million investment from Charles River Laboratories

April 15, 2016 // 0 Comments



Story excerpt provided by Crain's Cleveland Business. BioMotiv LLC of Shaker Heights has secured an investment from Wilmington,



technology business



BioMendics lines up \$7M, tests wound-healing gel



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### Technology Highlight

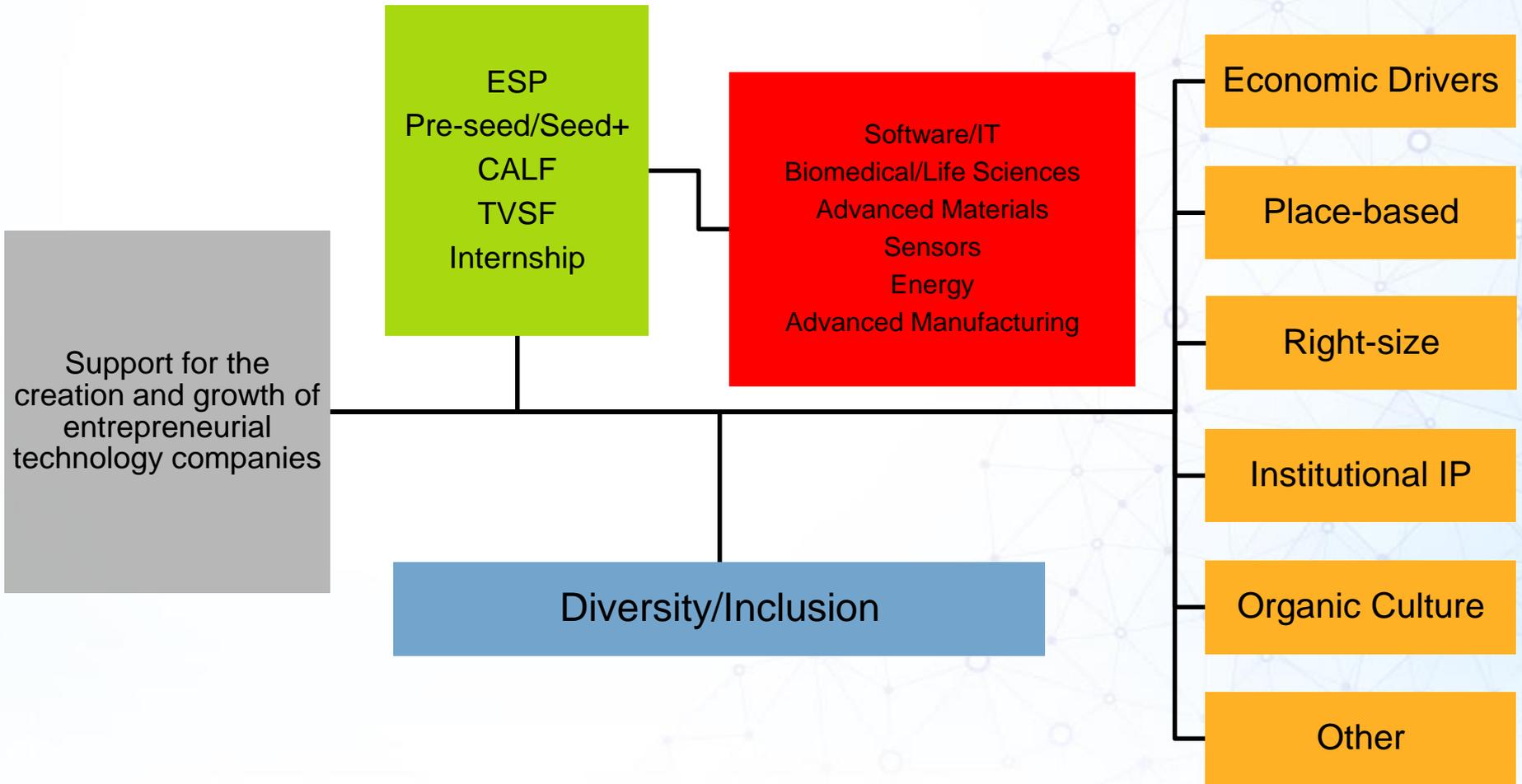


## Cincinnati High School Wins Award for one of most Innovative High Schools in the Nation

Story excerpt provided by Strikingly. The First-Annual Transformative School Awards recognize innovative high schools that utilize alternative learning and technology to [...read more]

# Review of CY 2015 Strategic Consensus Document

# Strategic Issues



# Venture For America Fellows Panel

# Panel Members

**Mike McCann (Moderator)**  
Rev1 Ventures

**Andrew Yang**  
Founder and CEO, VFA

**Ada Sierralta and Ray Shealey**  
SafeWhite

**Peter Spaulding and Gordon Daily**  
Boxcast

**Ben Gregory and Ry Walker**  
Astronomer



# VENTURE FOR AMERICA

Cleveland Columbus Cincinnati



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# Venture for America Video

Click here to watch the video  
<http://www.generationstartupthefilm.com/trailer>

# TechOhio

## Ohio Startups scoop up Venture for America fellows

May 24, 2016 // 0 Comments



Story excerpt provided by Crain's Cleveland Business. Written by Chuck Soder. BoxCast has already hired five fresh college graduates through the Venture for America [...read more]

## Venture for America trying to double number of new grads placed with Central Ohio startups

April 15, 2016 // 0 Comments



Story excerpt provided by Columbus Business First. Written by Carrie Ghose. More than 60 tech startups are conducting 500 interviews with 80 college seniors Friday at this [...read more]

## Venture for America wants to grow program placing grads with startups

April 17, 2015 // 0 Comments



Story excerpt provided by Columbus Business First. Written by Carrie Ghose. Venture for America is conducting one of three national job fairs in Columbus on Friday to match [...read more]

## Columbus, Ohio Welcomes Venture for America Fellows

September 30, 2014 // 0 Comments



Story excerpt provided by TechColumbus. Five Venture for America (VFA) Fellows have joined the Central Ohio startup community since Columbus was approved as one of four new [...read more]



BioMendics lines up \$7M, tests wound-healing gel



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Story excerpt provided by Strikingly. The First Annual Transformative School Awards recognize innovative high schools that utilize alternative learning and technology to [...read more]



# TechOhio

## SafeWhite Developing Quicker, Safer Teeth Whitening

December 23, 2015 // 0 Comments



Written by Jerred Ziegler. Teeth whitening is a \$10 billion market worldwide. Since the 1980s, hydrogen peroxide has been the industry standard, but it poses a number of [...read more]

## Veteran P&G researcher for Crest toothpaste joins startup making teeth whitener from the sea

June 1, 2016 // 0 Comments



Story excerpt provided by Cincinnati Business Courier. Written by Carrie Ghose. The chemist who led development of whitening varieties of Crest toothpaste at Procter & [...read more]

## Startup begins 2016 with another \$1M for its teeth whitener from the sea

January 4, 2016 // 0 Comments



Story excerpt provided by Columbus Business First. Written by Carrie Ghose. SafeWhite Inc. has more money in the bank for a push to get its teeth whitener derived from marine [...read more]

## Teeth whitener from the sea company to reel in \$1.25M Ohio Third Frontier loan

September 21, 2015 // 0 Comments



SafeWhite Inc. is close to landing a \$1.25 million loan toward getting itener derived from marine proteins onto store shelves.



energy medicine



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## Founder Story: BoxCast

June 10, 2016 // 0 Comments



BoxCast in Cleveland, Ohio, lets anyone with a camera deliver live, HD video to anyone else in the world. Used to broadcast church services, sporting events, concerts, [...read more]

## Never Miss a Moment with BoxCast's Video Streaming Service

November 16, 2015 // 0 Comments



Written by Kevin Volz. In our busy, fast-paced, multitasking society, people often struggle to stay connected. Whether you're out of town or have a conflicting engagement, [...read more]

## Content Marketing Institute, Boxcast leaders exemplify entrepreneurs who listen: Tech Czar Talk

August 31, 2015 // 0 Comments



Story excerpt provided by The Plain Dealer. Written by Michael C. DeAloia. Over the years in the entrepreneurial world, I have learned that there are essentially two types of [...read more]

## Ohio Startups scoop up Venture for America fellows

May 24, 2016 // 0 Comments



Story excerpt provided by Crain's Cleveland Business. Written by Chuck Soder. BoxCast has already hired five fresh college graduates through the Venture for America [...read more]



therapy machine



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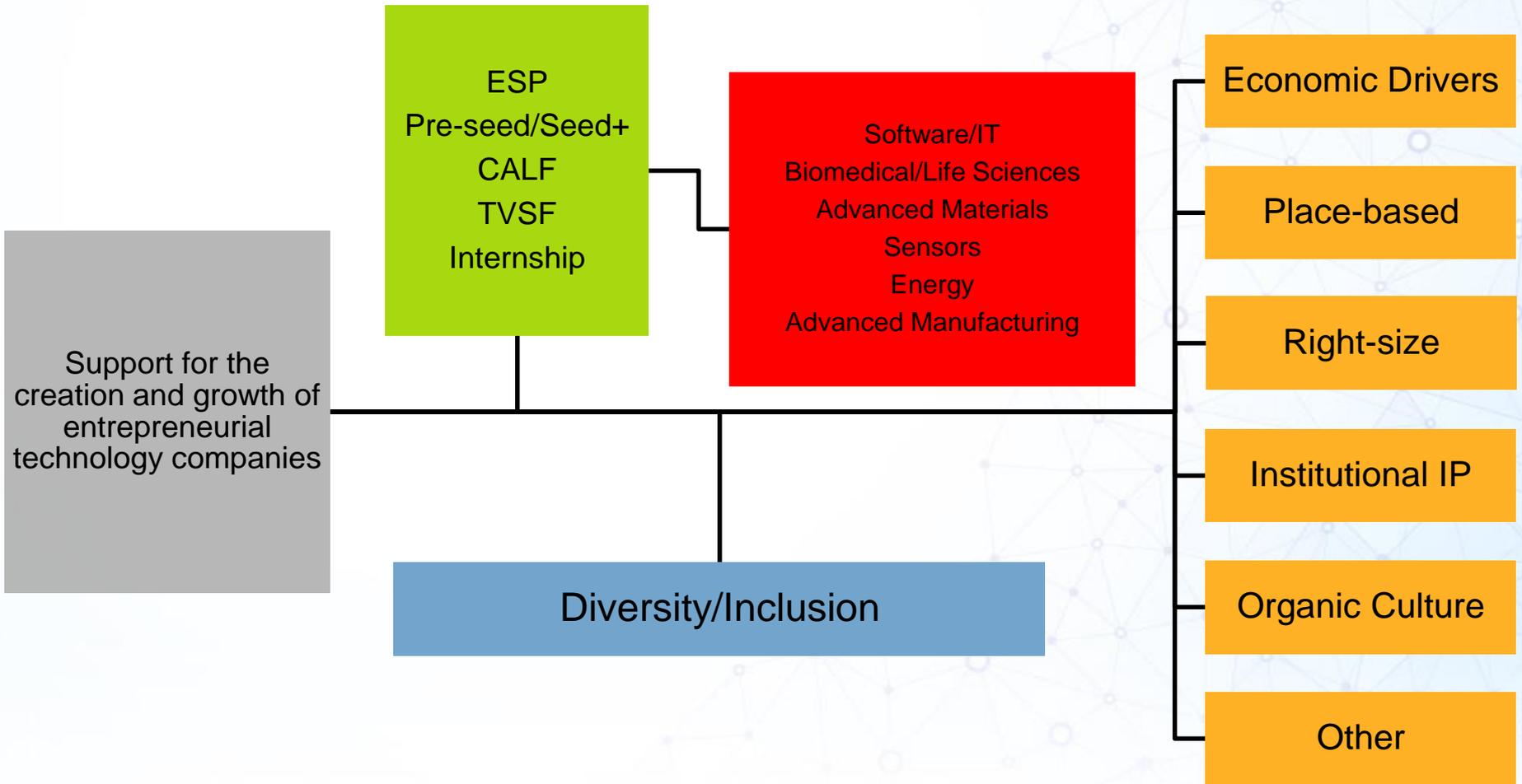
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Story excerpt provided by Strikingly. The First-Annual Transformative School Awards recognize innovative high schools that utilize alternative learning and technology to [...read more]



# Moving Forward for CY 2016–17

## Future Opportunities/Directions



# Breakout Groups

Group 1	Group 2	Group 3
David Goodman	Dawn Larzelere	Dick Seaman
Bill McCreary	Bruce Langos	John Barnard
David Scholl	Gary Lindgren	Gary Cates
Mark Peterson	John Minor	Mark Collar
Bill Beagle	Rick Perales	Roy Church
	Rod McDavis	Mike Sieron

# Priorities