



Ohio Development Services Agency
John R. Kasich, Governor David Goodman, Director

Ohio Third Frontier
Innovation Creating Opportunity
www.OhioThirdFrontier.com

Third Frontier Joint Meeting December 10, 2014

Agenda – Joint Meeting

10:00	Call to Order Approval of 04/09/2014 and 09/16-17/14 Meeting Minutes (Vote)	David Goodman
10:10	Ethics Training	Jonathan Stock
10:20	Entrepreneurial Program Panel - Hesham El Gamal, Inmobly - Doug Harris, NanoDetection Technologies - Rob Underhill, Simple-Fill, Inc. - Bruce Caldwell, 3Bar Biologics - Chris Koenig, OSU/TCO	Paul Jackson
11:15	CY 2015 Program Plan	Norm Chagnon
11:50	Metrics Update	Keith Jenkins

Ohio Development Services Agency **Ohio** Third Frontier
Innovation Creating Opportunity

Agenda – Continued

12:10	Marketing Plan Update	Lisa Colbert
12:25	Other Business	All
12:30	Adjourn	



Development
Services Agency



Third Frontier
Innovation Creating Opportunity

Entrepreneurial Program Panel

- Commercial Acceleration Loan Fund
 - Inmobly, Inc. (Columbus, Ohio)
Hesham El Gamal, Chief Executive Officer
 - NanoDetection Technologies, Inc.
Doug Harris, Chief Executive Officer
- Technology Validation & Start-up Fund
 - Simple-Fill, Inc.
Rob Underhill, President & CEO
 - 3Bar Biologics, Inc.
Bruce Caldwell, CEO
 - OSU Technology Commercialization Office
Chris Koenig, Director of New Ventures



Development
Services Agency



Third Frontier
Innovation Creating Opportunity

CY 2015 Program Plan



Development
Services Agency



Third Frontier
Innovation Creating Opportunity

CY 2015 Program Plan

Current Balance of Unencumbered and Uncommitted Bond Funds

\$350M



Development
Services Agency



Third Frontier
Innovation Creating Opportunity

CY 2015 Program Plan

Development of CY 2015 program plan developed around some key strategic drivers:

- Sharper focus on support of start-up and early stage companies
- Catalyze faster returns in the priority areas of biomedical and software/IT



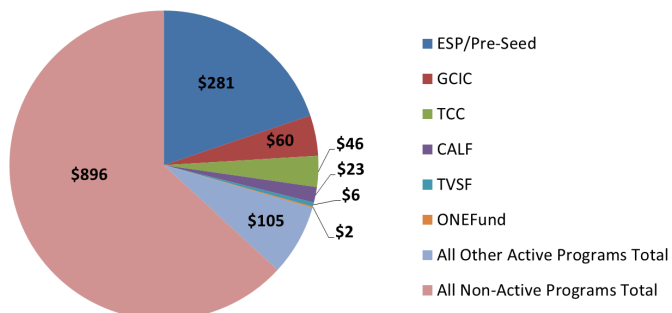
Development
Services Agency



Third Frontier
Innovation Creating Opportunity

Startup & Early-Stage Awards

- Of the \$1.42 billion awarded by OTF, only 29% (\$418 million) has been focused on startup and early-stage companies
 - Startup & early-stage = ESP/Pre-Seed, GCIC, TCC, CALF, TVSF, ONEFund
 - Other Active = IPP, IRDCP, TAG, TIA, OII
 - Non Active = Industry Clusters, Wright Centers, ORSP, RCPs



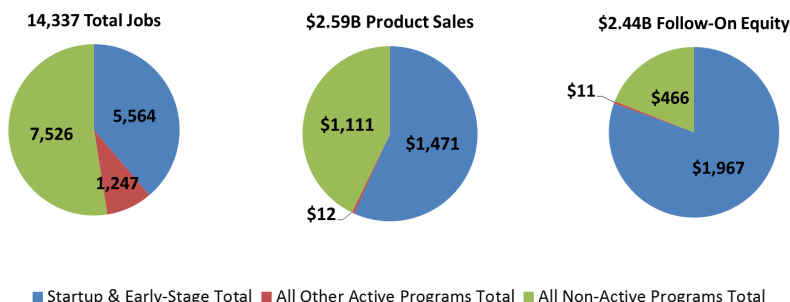
Development
Services Agency



Third Frontier
Innovation Creating Opportunity

Return on Investment

- But startup and early-stage programs account for nearly 40% of jobs, 57% of product sales and 81% of follow-on equity



Development
Services Agency



Third Frontier
Innovation Creating Opportunity

Return on Investment

- Startup and early-stage programs generate a low cost per job and significantly higher leverage ratios

	Startup & Early Stage Programs	All Other Active Programs	All Non-Active Programs
Dollar Awarded per Job Created	\$62,725	\$84,202	\$119,054
Total Leverage Ratio	11.1 : 1	0.8 : 1	4.6 : 1
Follow-on Equity Leverage Ratio	5.6 : 1	0.1 : 1	0.5 : 1
Product Sales Leverage Ratio	4.2 : 1	0.1 : 1	1.2 : 1
Federal Research Leverage Raio	0.8 : 1	0.1 : 1	2.0 : 1



Development
Services Agency



Third Frontier
Innovation Creating Opportunity

Pre-Seed Metrics

- Pre-seed investments over the last ~8 years have generated significant returns, particularly in medical technology and IT
 - Includes 271 companies that have received at least \$100,000 in pre-seed investment

	All	Medical Technology	Software / IT	All Other Tech
Total Companies	271	86	130	55
Total Investment \$M	\$124	\$48	\$51	\$25
Jobs (Total / New)	2,690 / 2,080	811 / 660	1,334 / 1,035	545 / 384
Follow-on Equity \$M	\$1,087	\$668	\$255	\$164
Product Sales \$M	\$625	\$145	\$396	\$111


Notable Successes

- There have been a number of notable successes in the last 9 months


Company	Technology / Market	Outcome
Akebia	Therapies for kidney disease	Completed \$100M IPO
Knotice	Social media marketing software	Acquired by large New York software firm
TOA Technologies	Field service management software	Acquired by Oracle
Aerpio	Therapies for vascular disease	Raised \$22M in second quarter
Cleveland HeartLab	Novel biomarker technologies	Revenue up 883% to \$27M; #543 on Inc. 5,000
CoverMyMeds	Medication benefit automation software	Received significant investment from Calif. PE

CY 2015 Program Plan

Functional Area	Program	CY2014	CY 2015
Innovation			
Continue	Entrepreneurial Signature Program (CY 15-16 support)	48.0	
Consolidate	ONE Fund (CY 2014)	1.0	
Consolidate	Incubation Program (CY 2014)	4.4	
Capital			
Continue	Pre-seed Fund Capitalization Program	26.0	35.0
New	Seed +		25.0
Continue	Commercial Acceleration Loan Fund	25.2	30.0
Commercialization			
Continue	Technology Validation & Start-up Fund	3.5	5.0
Discontinue	Industrial Research and Development Center Program	14.2	
Discontinue	Innovation Platform Program	12.7	
Discontinue	Technology Asset Grant Program	5.0	
Discontinue	Technology Commercialization Center	46.0	
Talent			
Discontinue	Third Frontier Internship Program	3.0	
Research			
	Research Incentive	8.0	
Total		197.0	95.0



Development
Services Agency




Third Frontier
Innovation Creating Opportunity


CY 2015 Program Plan Innovation

Functional Area	Program	CY 2014
Innovation		
	Entrepreneurial Signature Program*	48.0
	- ONE Fund	
	- Incubation Program	

* Two-year funding through CY 2016



Development
Services Agency



Third Frontier
Innovation Creating Opportunity

CY 2015 Program Plan Capital

Functional Area	Program	CY2015
Capital		
	Pre-seed Fund Capitalization Program	35.0
	Seed +	25.0
	Commercial Acceleration Loan Fund	30.0



Development
Services Agency



Third Frontier
Innovation Creating Opportunity

CY 2015 Program Plan Commercialization

Functional Area	Program	CY2015
Commercialization		
	Technology Validation & Start-up Fund	5.0



Development
Services Agency



Third Frontier
Innovation Creating Opportunity

CY 2015 Program Plan

Functional Area	Program	CY2015
Innovation	Entrepreneurial Signature Program	-
Capital	Pre-seed Fund Capitalization Program	35.0
	Seed +	25.0
	Commercial Acceleration Loan Fund	30.0
Commercialization	Technology Validation & Start-up Fund	5.0
Total		95.0



Development
Services Agency



Third Frontier
Innovation Creating Opportunity

Metrics Update

- Focus on active programs, isolating them from older, non-active programs
- Within the active space, isolate and analyze program and tech-specific metrics to understand their impact
- Development of dashboard reports highlighting the key metrics and trends over time
- Benchmarking against other states



Development
Services Agency



Third Frontier
Innovation Creating Opportunity

Active Program Focus

OHIO THIRD FRONTIER - PROGRAM SUMMARY									
Cumulative through June 2014									
Ohio Third Frontier Program	State Funds Awarded	State Funds Expended	Cost Share Reported	Leverage	Jobs Created for Profit	Jobs Created Not for Profit	Jobs Retained	Jobs Total Created/Retained	Avg Salary
A Entrepreneurial Signature Program	\$ 149,189,449	\$ 131,987,738	\$ 85,303,414	\$ 2,731,362,221	3,175	4	2,296	5,517	\$ 58,058
A Pre-Seed Capitalization Fund	\$ 85,288,682	\$ 68,326,190	\$ 217,353,021	\$ 3,217,674,994	4,054	3	948	5,005	\$ 72,325
A Wright Mega Center of Innovation	\$ 99,999,086	\$ 40,364,797	\$ 123,098,067	\$ 469,784,622	461	12	0	473	\$ 75,374
A Industrial Research & Development Center Program	\$ 41,846,133	\$ 13,936,718	\$ 107,180,100	\$ 87,156,202	180	7	242	429	\$ 53,638
A Innovation Platform Program	\$ 34,064,827	\$ 3,800,927	\$ 5,089,727	\$ 24,603,238	51	40	62	153	\$ 63,699
A Targeted Industry Attraction Program	\$ 12,630,000	\$ 12,610,000	\$ 15,105,378	\$ 25,562,280	406	0	381	787	\$ 51,097
A Technology Validation & Startup Fund	\$ 4,183,741	\$ 1,654,575	\$ 836,050	\$ 9,472,469	19	22	32	72	\$ 44,399
A Incubation Program *	\$ 4,900,000	\$ 1,764,415	\$ 1,563,639	\$ -	0	0	0	0	\$ -
A ONEFund *	\$ 1,785,000	\$ 1,785,000	\$ -	\$ 30,722,264	259	0	0	259	\$ 43,278
A Active Programs Totals**	\$ 399,866,918	\$ 276,230,152	\$ 555,529,426	\$ 6,678,433,603	5,328	80	2,271	7,679	\$ 63,434
E Advanced Energy Cluster Program	\$ 41,499,968	\$ 39,958,822	\$ 41,344,751	\$ 167,162,564	229	24	111	365	\$ 55,704
E Advanced Imaging Cluster Program	\$ 13,542,470	\$ 9,599,310	\$ 13,331,907	\$ 53,064,725	97	4	51	151	\$ 94,962
E Advanced Materials Cluster Program	\$ 14,579,674	\$ 14,476,805	\$ 19,294,475	\$ 48,021,807	55	5	43	103	\$ 66,512
E Advanced Sensors Cluster Program	\$ 8,977,738	\$ 8,749,882	\$ 10,299,981	\$ 11,486,331	34	0	57	91	\$ 66,218
E Biomedical Cluster Program	\$ 12,960,148	\$ 11,157,611	\$ 16,807,788	\$ 62,177,733	102	2	46	150	\$ 78,334
E Fuel Cell Cluster Program	\$ 50,762,294	\$ 50,754,207	\$ 40,365,291	\$ 221,243,829	207	14	148	369	\$ 60,201
E Photovoltaics Cluster Program	\$ 10,238,702	\$ 10,238,702	\$ 9,131,921	\$ 10,580,763	36	1	12	49	\$ 58,363
E Open Innovation Incentive	\$ 3,854,663	\$ 712,846	\$ 300,000	\$ 181,058	0	0	0	0	\$ -
E Ohio Third Frontier Internship Program	\$ 8,084,765	\$ 6,494,169	\$ 2,056,453	\$ -	0	0	0	0	\$ -
E Ohio Research Scholars Program	\$ 137,585,334	\$ 103,014,892	\$ 121,796,718	\$ 150,781,614	82	268	87	437	\$ 74,821
E Wright Projects Program	\$ 103,571,597	\$ 94,676,990	\$ 155,967,524	\$ 260,906,579	392	185	136	710	\$ 61,517
E Ending Programs Totals	\$ 405,618,881	\$ 349,837,237	\$ 430,496,908	\$ 985,607,001	1,232	501	690	2,424	\$ 66,265
C Biomedical Research Commercialization Program	\$ 151,749,921	\$ 151,749,921	\$ 218,531,087	\$ 1,048,044,934	255	678	716	1,649	\$ 64,854
C Engineering Research Commercialization Program	\$ 80,677,370	\$ 80,414,188	\$ 99,887,003	\$ 399,741,132	384	40	213	637	\$ 69,122
C Ohio Research Commercialization Grant Program	\$ 13,327,588	\$ 13,320,130	\$ 6,338,982	\$ 209,227,949	202	0	84	286	\$ 57,644
C Third Frontier Action Fund	\$ 18,582,343	\$ 18,582,863	\$ 33,284,792	\$ 138,494,215	279	15	134	429	\$ 52,151
C Wright Centers of Innovation - Biomedical	\$ 87,302,967	\$ 87,302,967	\$ 183,401,015	\$ 441,747,211	227	324	199	750	\$ 100,676
C Wright Centers of Innovation - Engineering	\$ 148,094,201	\$ 139,777,884	\$ 283,701,523	\$ 984,460,641	819	518	135	1,472	\$ 61,238
C Closed Programs Totals	\$ 489,734,489	\$ 491,148,348	\$ 825,144,402	\$ 3,224,726,082	2,186	1,575	1,481	5,239	\$ 68,962
Grand Totals**	\$ 1,299,220,248	\$ 1,117,215,738	\$ 1,811,170,736	\$ 8,885,763,743	8,726	2,156	4,442	15,325	\$ 64,708



Development
Services Agency



Third Frontier
Innovation Creating Opportunity

Program and Tech-Specific Metrics

- Within the active programs, isolate and analyze program and tech-specific metrics to understand their impact
- Protocols for capturing data long-term
 - Collecting data – working with intermediaries to extend data capture period; identifying “pre-high performers” earlier in process so they can be tracked
 - Reporting data – ROI-specific analysis requires stronger protocols for attribution; illustrative examples requires less specificity
- Should match well with TechOhio, marketing efforts



Development
Services Agency



Third Frontier
Innovation Creating Opportunity

Dashboard Reports

- Program or tech-specific highlighting key metrics and trends over time
 - Jobs, sales, equity, other program-specific metrics (commercialization / licensing for TVSF)
- High-level, repeatable
 - Every six months for some, every year for others
- ESP and TVSF underway
 - For ESP, developing process to track progress of current high-performers and identify up-and-coming companies
 - For TVSF, merging technical and metrics progress reports to understand progress through process



Development
Services Agency



Third Frontier
Innovation Creating Opportunity

Benchmarking Other States

- Analyze how Ohio Third Frontier is performing vs. competitor states
 - What are the impacts, what is being measured?
- Important to understand the comparisons are apples-to-apples
 - Many states use economic impact modeling and job creation estimates based on significantly less attribution



Development
Services Agency



Third Frontier
Innovation Creating Opportunity

Questions?



Development
Services Agency



Third Frontier
Innovation Creating Opportunity

Marketing Objectives

- Informing taxpayers Third Frontier impact
- Promoting successes in entrepreneurial markets outside Ohio
- Increasing access, minority and underserved



Development
Services Agency



Third Frontier
Innovation Creating Opportunity

Third Frontier Focus

- Entrepreneurship
- Start-ups
- Early stage companies

TechOhio



Headlines In Ohio

Cincinnati startup inks deal with one of world's largest pharmaceutical firms

CINCINNATI
BUSINESS COURIER

CRAIN'S
CLEVELAND
BUSINESS

Segmint raises \$9 million strategic investment

cleveland.com
CLEVELAND BUSINESS

Cleveland startup BioMotiv attracts \$25 million investment from Japanese pharmaceutical giant

Dublin startup Updox adding 20 jobs in 2015, nearing profitability

COLUMBUS
BUSINESS FIRST

IBmag.com»

2014 Cool Tech Awards | Explorys, Coolest Company Finalist

Ohio

Development
Services Agency

Ohio

Third Frontier
Innovation Creating Opportunity

Headlines Across Country

preVedére

Here are the 6 pitches judges liked best at Plug and Play expo

SILICON VALLEY
BUSINESS JOURNAL

TheStreet

More Technology Startups Are Setting Up Shop In Northern Ohio

Inc.

Roadtrippers

5 Interesting Startups from the Midwest

nature.com

Development hubs: Rust no more

Ohio

Development
Services Agency

Ohio

Third Frontier
Innovation Creating Opportunity

Third Frontier Website



Ohio Development Services Agency

Ohio Third Frontier
Innovation Creating Opportunity

Ohio Development Services Agency

John R. Kasich, Governor

Ohio Third Frontier

Innovation Creating Opportunity

David Goodman, Director

www.OhioThirdFrontier.com

Third Frontier Commission Meeting December 10, 2014

6860 1136

Investment
Cv. 101
60474
640
800001
047797
045344

10477084010
450 432040
0504 433 550
0445414443
04444333
12785
450 42 1327087
VIRIDY/PHOTO/882

Agenda – Commission Meeting

12:45	Call to Order Approval of 11/12/2014 Meeting Minutes (Vote)	David Goodman (Chair)
12:50	Technology Commercialization Center Program: JumpStart Inc., Occeleator	Anthony Howard/ YourEncore
01:20	Entrepreneurial Signature Program: CY 2015 -16 Awards: Accelerant and Rocket Ventures (Vote)	Mihaela Jekic
02:20	Other Business	
02:30	Adjourn	



Development
Services Agency



Third Frontier
Innovation Creating Opportunity



Technology Commercialization Center Program

Proposal: JumpStart, Inc.
Occeleator



4350 Glendale-Milford Rd., Suite 110
Cincinnati, OH 45242
www.yourencore.com

P: 513.794.9777
F: 513.794.9781

September Commission Meeting

Areas of Concern

- The cash **cost share** is not in place – venture capital commitments have to be discounted to account for the conditional nature of the commitment
 - *If discounted appropriately, matching funds gap could easily be in excess of \$15 million*
 - *Involvement of Cleveland Clinic via the Innovations group and the \$900k commitment is important, but overall concerned about lack of high-profile, large-dollar Ohio commitments*
- JumpStart is a valuable participant in the program but not the ideal **lead applicant**, which should have both the resources and expertise of a world-class orthopedics organization, as specified in RFP
- OcelOhio, the development and manufacturing **ecosystem**, is well-described in the proposal but seemingly future-state
 - *It appears Third Frontier money is needed to catalyze Ohio-based commitments, rather than commitments catalyzing Third Frontier support*



33

Occeleator Application Timeline

- June 27, 2013 – Cleveland Clinic submits letter of intent as lead applicant
- July 23, 2014 – JumpStart submits letter of intent as lead applicant
- **July 24, 2014** – JumpStart submits Occeleator grant application for review
- **August 21, 2014** - Cleveland Clinic commits \$900k
- **August 26, 2014** – Review team and applicants review application via phone
- September 17, 2014 – Review team presents initial findings to Commission
- September 24, 2014 – Review team provides follow-up questions to applicants
- **November 12, 2014** – Applicants provide responses to questions
- **November 24, 2014** – Review team and applicants review responses via phone
- **December 1, 2014** – Additional information and letters of support provided by applicants
- **December 8, 2014** – More commitment letters provided



34

Cash Cost Share

	Cash, 4 Installments	VC Conditional	Discounted Services	Donated Time	Potential VC Commitment	TOTAL
Applicants Proposed Allowable	\$16.36 M	\$26.5 M	\$0.56 M	\$1.344 M	\$4.0 M	\$48.764 M
Reviewer Determined Allowable	\$16.36 M	\$13.25 M	\$0	\$0	\$0	\$29.61 M

"All Cost Share must be cash and must be committed and documented in both the budget and the Letters of Commitment at the time of Proposal submission."

Budget Shortfall vs. Application: \$12.47 M

Year 1 budget per application:	\$9.6 M
Non-State portion, 2/3:	\$6.4 M
Year 1 committed, \$16.36/4:	\$4.09 M
Year 1 short fall	\$2.31 M

% commit vs. required	64%
-----------------------	-----

Therefore applicants fail to meet the RFP criteria for Cash Cost Share



Lead Applicant – JumpStart

- Brings process expertise to support spin-outs and oversee program
- Lacks orthopedic expertise and renown
 - *Occelerator leadership and collaborators fill some of this gap*
- Modest financial commitment of \$200k

There is no true Ohio 'Champion' of the initiative, which is needed as catalyst

- Cleveland Clinic \$900k
- JumpStart \$200k
- \$16.36 million derived from more than two dozen sources
- Approximately \$10 million from outside Ohio, and \$6.25 million from within Ohio



OcceleOhio Ecosystem

Per the RFP:

Page 12:

The partnership between the Lead Applicant and all Collaborators must have the capability for commercializing any resulting technology. Collaborators must be committed to the commercialization of the technology and play a significant role in accomplishing that goal. A contribution of Cash Cost Share resources by a Collaborator is strong evidence of that commitment.

Page 10:

The involvement of the private sector must constitute a true partnership in terms of the sharing and contribution of resources...



37

Ecosystem – Partner Commitments

- Applicants have submitted numerous letters of support from their ecosystem partners:
 - Two letters contain investment commitments
 - Three letters offer specified percentage discounts off retail pricing
 - Four letters offer unspecified discounts
 - Nine letters offer support for program with no resource commitments of any kind
 - Three more potential partners have letters pending
- The letters offer very little to demonstrate the private sector partnership described in the RFP
- Given the cash cost share shortfall, lack of significant resource commitments from the ecosystem puts the initiative at risk
 - Per application, “The process of product development and manufacturing, which makes up 90%+ of our activities, must be performed by partner organizations.....”



38

Ecosystem

Development and Manufacturing

Investing \$	Specified Disc. %	Unspecified Disc. %	Interested Supplier	No Letter
Nottingham-\$250K (not 100% ortho)	Jalex-20%*	Norman Noble	RP+M*	CCF (MDS)
CCF - \$900k	Tarolli-15%	ABIA	Valtronic	PCC Airfoils
		Think Box	Zin Tech	Surface Dynamics
		NEOMED	Franz Medical	
			Thogus*	
			Hammill Medical	
* All three companies are part of Thogus			Cleveland Partner	
			Intrepid Ortho	
			Astro	

Review Team Recommendation

- JumpStart Occeleator should not proceed to Phase 2, Due Diligence
 - *Fails to meet fundamental RFP criteria for Cash Cost Share*
 - *The lack of a true Ohio 'Champion' has had an impact*
 - *Significant lack of resource commitment in product development and manufacturing*
 - *The ecosystem appears to be a collection of interested suppliers*
 - *Applicants provided additional time beyond RFP criteria to meet requirements*
 - Review team accepted documentation until Dec 1, 2014
 - Additional information provided on December 8



Visit our website at: www.yourencore.com

Entrepreneurial Signature Program



Development
Services Agency



Third Frontier
Innovation Creating Opportunity