UNIVERSITY OF MICHIGAN

EMBRACING SBIR GRANT-FUNDED STARTUPS

TECH TRANSFER
UNIVERSITY OF MICHIGAN

U-M Tech Transfer – FY15

- $1.3 Billion Research
- 422 inventions reported
- 164 agreements
- 19 new business startups
- $78.8 million in total revenues
- 160 Patents Issued

University of Michigan Startup Track Record

Since 1987:

- Over 200 startups with U-M IP
- Almost 80% still active
- More than 70% have presence in Michigan
- Over $1 Billion in follow-on investment in the last 10 years
- Over 2000 jobs created

OTT's Venture Center

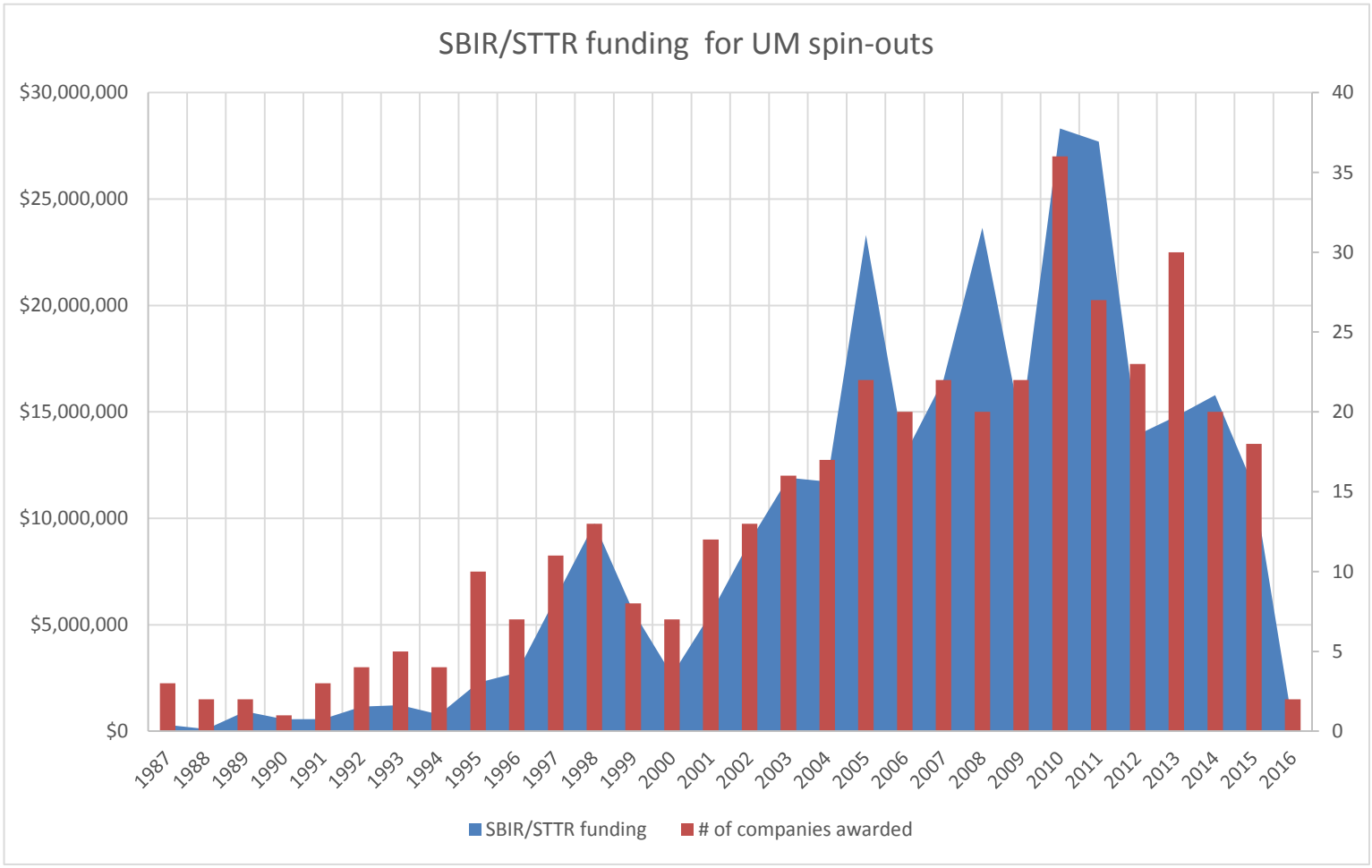
- Makes it easy for entrepreneurs, investors and faculty to work with us
- Provides a one-stop shop for talent and resources for startups
- Proven to be an effective way to create attractive, high quality startup opportunities

Recent U-M Startups News

- Sakti3 – Energy Storage Technology Company Acquired by Dyson for $90M
- Lycera – Therapeutics Collaboration with Celgene
- Histosonics – Medical Device Collaboration with J&J
- Millendo Therapeutics – $62M Series B
- Kura Oncology – Therapeutics $60M Series A; IPO in October
- Crossbar –Random Access Memory (RAM) $35M Series D
- PsiKick – IOT System on a Chip $16.75M Series B
- Ascentage – Therapeutics $15.5M Series A
- Confo Therapeutics – $3.5M Series A
- Resonant Therapeutics – $2M Series A
- Invenio – Medical Device $1M Seed

SBIR Experience

- We have made a lot of progress with startups at the University of Michigan
- We have good experience with SBIR-funded companies
- Our ecosystem is supporting the early development of technologies (translational)


SBIR/STTR funding for UM spin-outs
$30,000,000
$25,000,000
$20,000,000
$15,000,000
$10,000,000
$5,000,000
$0
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2016
SBIR/STTR funding
# of companies awarded

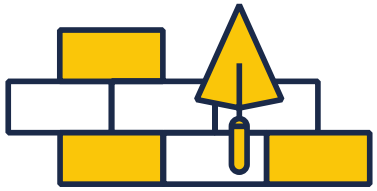
Number of companies with each type of funding

	SBIR/STTR	No SBIR funding
Angel	2	22
VCSeed	8	64
VCSeries	65	56
No other funding	92	85

Status of company with and without SBIR/STTR funding by percentage-separate groups

	SBIR/STTR (92)	No SBIR funding (145)
Acquired/Merged	11%	7%
Ceased/closed	5%	3%
IPO	0%	1%
Not Licensed	18%	2%
Launched/Licensed	65%	86%

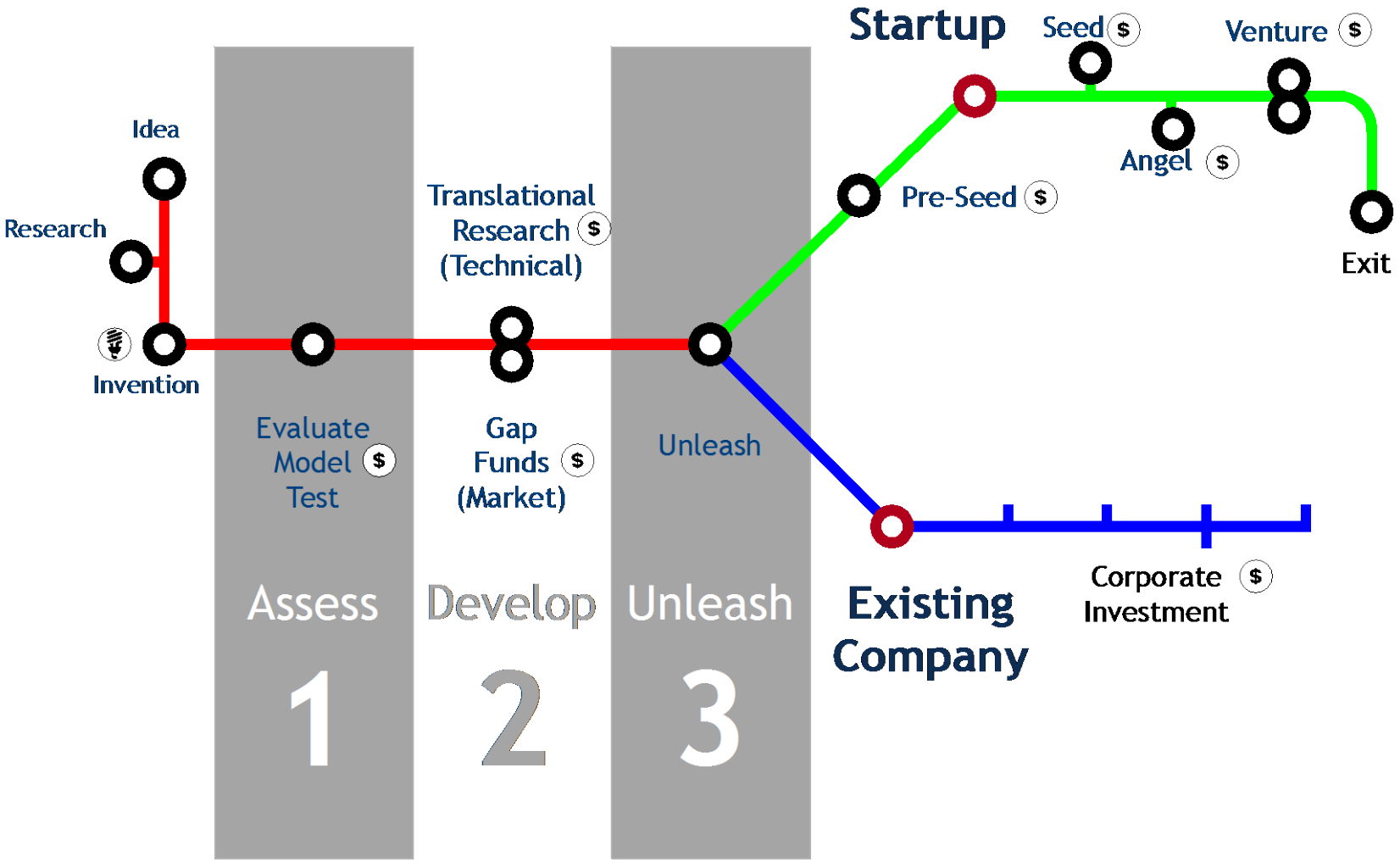
ASSESS



DEVELOP

UNLEASH

Funding Ecosystem Roadmap



SBIR Experience…observations

We have done well, but we think we can do better

- Grants provide for technology derisking (an extension of the lab)
- Starting a company causes focus to change;
  - Hire CEO
  - Work on Logo, website, etc.,
- Public University OTTs have goal incongruence
- Startups are competitively measured (license to newco-AUTM)
- Public assets *shall not* be used to advance private company
- SBIR-funded startups, still require entrepreneurial support

Company Name: Fill in name Sector: Digital

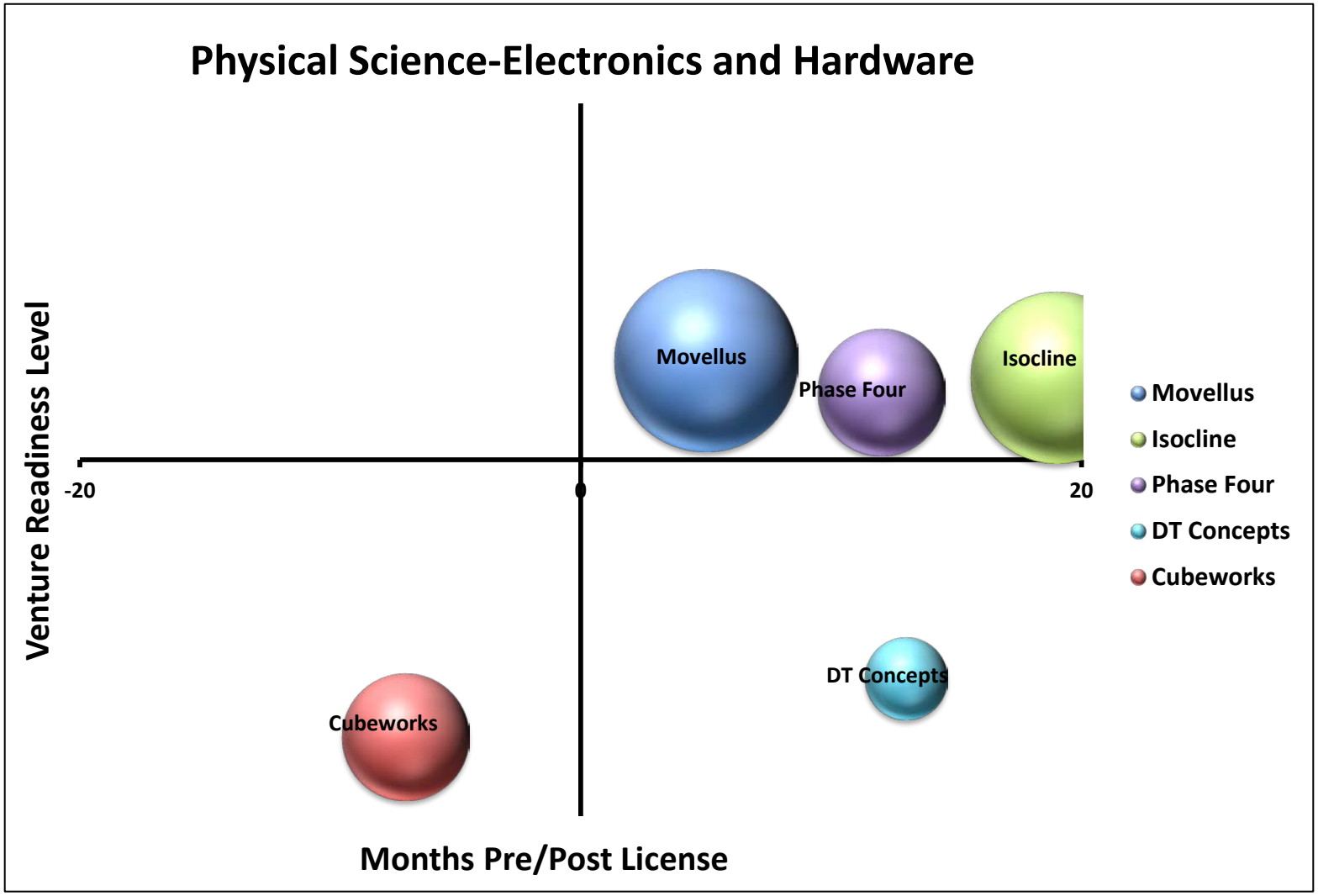
Venture Readiness Level

V=value	R=risk	Criteria	Description	Weight	Rating	Score	Adjusted Score	Comments	Sources
V		IP	*Patent protection, freedom to operate, and patent strategy.*	5%		FALSE	0		
V		Market	*Market savvy-have they identified their TAM, SAM, etc.?*	15%		FALSE	0		
V		Breadth of Technology	*A single product or a platform*	10%		FALSE	0		
V		Exit	*Potential exit valuation*	7%		FALSE	0		
V		Financials	*Are plans based on realistic assumptions and have high returns. Is there at least a P/L for one year. Does it contain reasonable, justifiable projections for 2 to 3 years with assumptions explained?*	15%		FALSE	0		
V		Milestones	*Probability of achieving value-enhancing milestones*	10%		FALSE	0		
R		Founder	*Is there compatibility and can you work together*	10%		FALSE	0		
R		Stage of Technology	*Pre-Seed, Seed, Early, Series A, etc.*	15%		FALSE	0		
R		VC Attractiveness	*Funding/captial availability*	3%		FALSE	0		
R		Executable	*Overall chance of technological success*	10%		FALSE	0		
				100%			0		

Venture Potential

				Rating		Comments	Sources
VP		MARKET	*Market Potential and competitive advantages.*		1 thru 7		
VP		Management Team	*High potential management team, hightly experienceed*		1 thru 7		
VP		Exit	*Potential Exit Valuation*		1 thru 7		
VP		Technology	*Is this a game changing technology?*		1 thru 7		

Next Milestone:

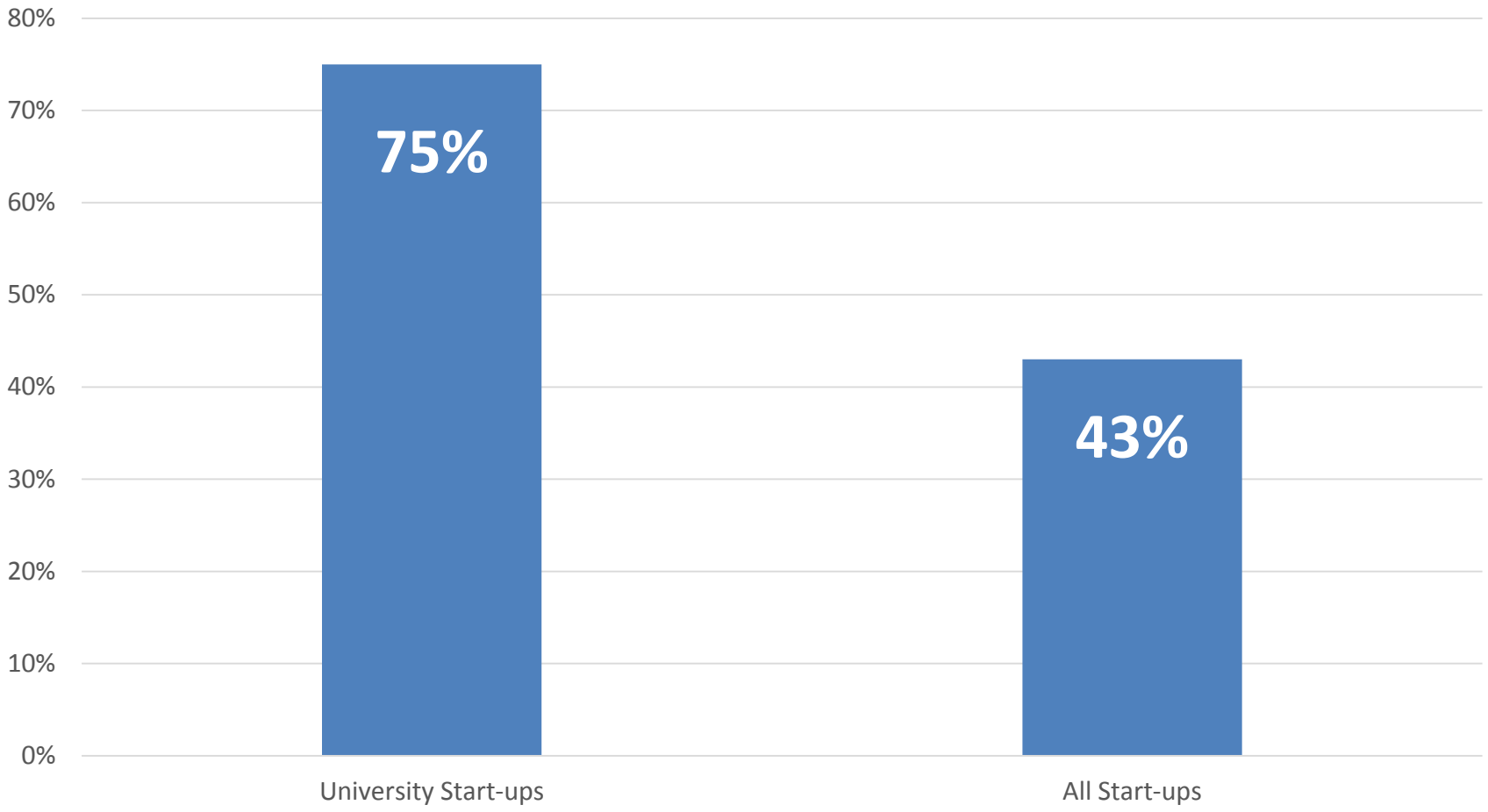

Physical Science-Electronics and Hardware
Venture Readiness Level
Months Pre/Post License
-20
0
20
Movellus
Phase Four
Isocline
DT Concepts
Cubeworks
Movellus
Isocline
Phase Four
DT Concepts
Cubeworks

Recommendations

- Measure the VRL (Venture Readiness) of companies to inform; Licensing, Advancing to Phase II, etc.,
- Use anonymotized inter-institutional data to measure progress of companies
- Public University OTTs should remain engaged during the life of the SBIR grants
- Provide funding or resources for grant-knowledgeable accounting (financial oversight)
- Faculty focusing too much on *commercialization* instead of *technology readiness level*
- Keep prospect of licensing to strategics open (keep cap table clean and include *asset sale clause* in articles of incorporation)

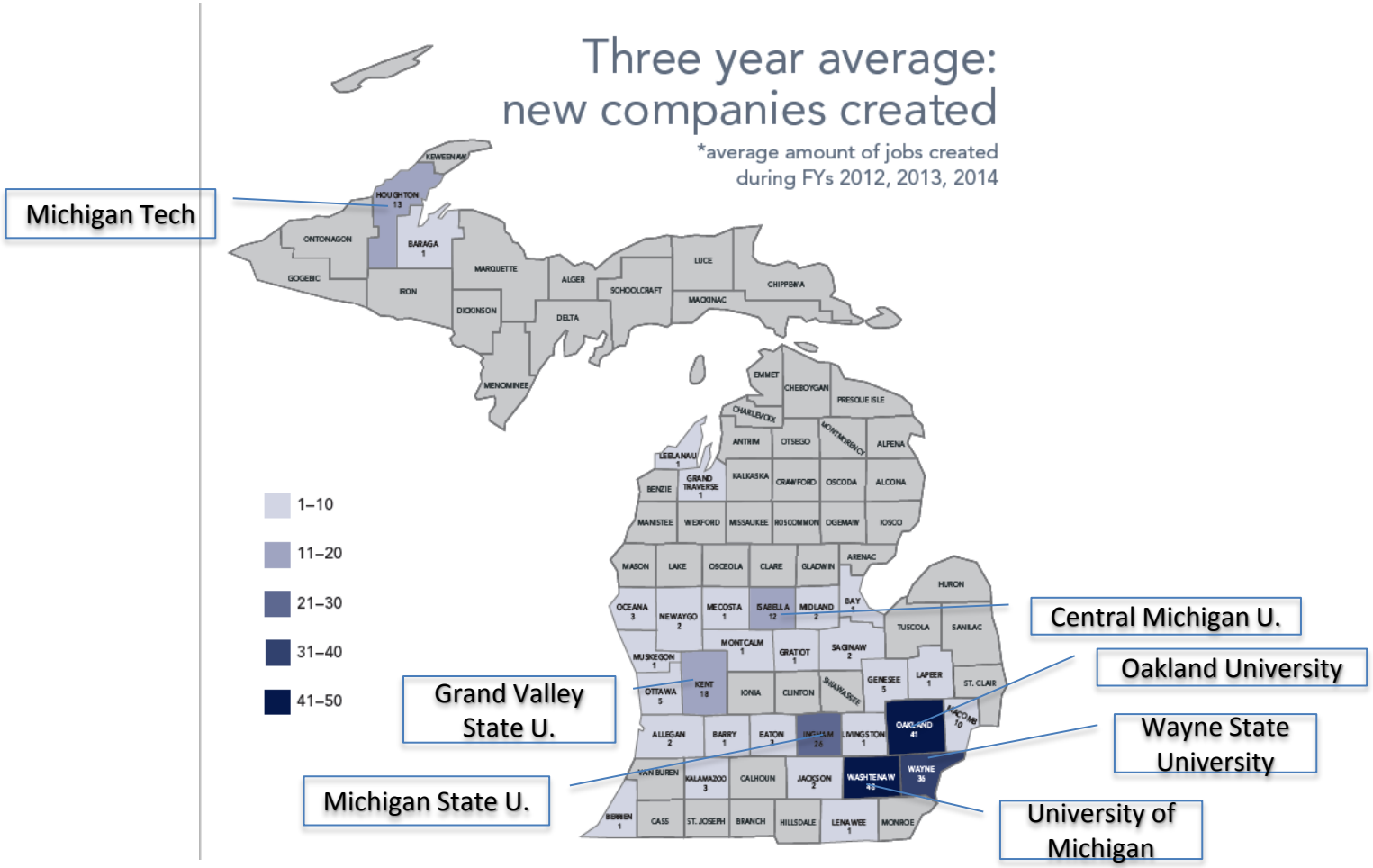
BACKUP SLIDES

University Start-ups are Twice as Likely to Survive 5 Years or More

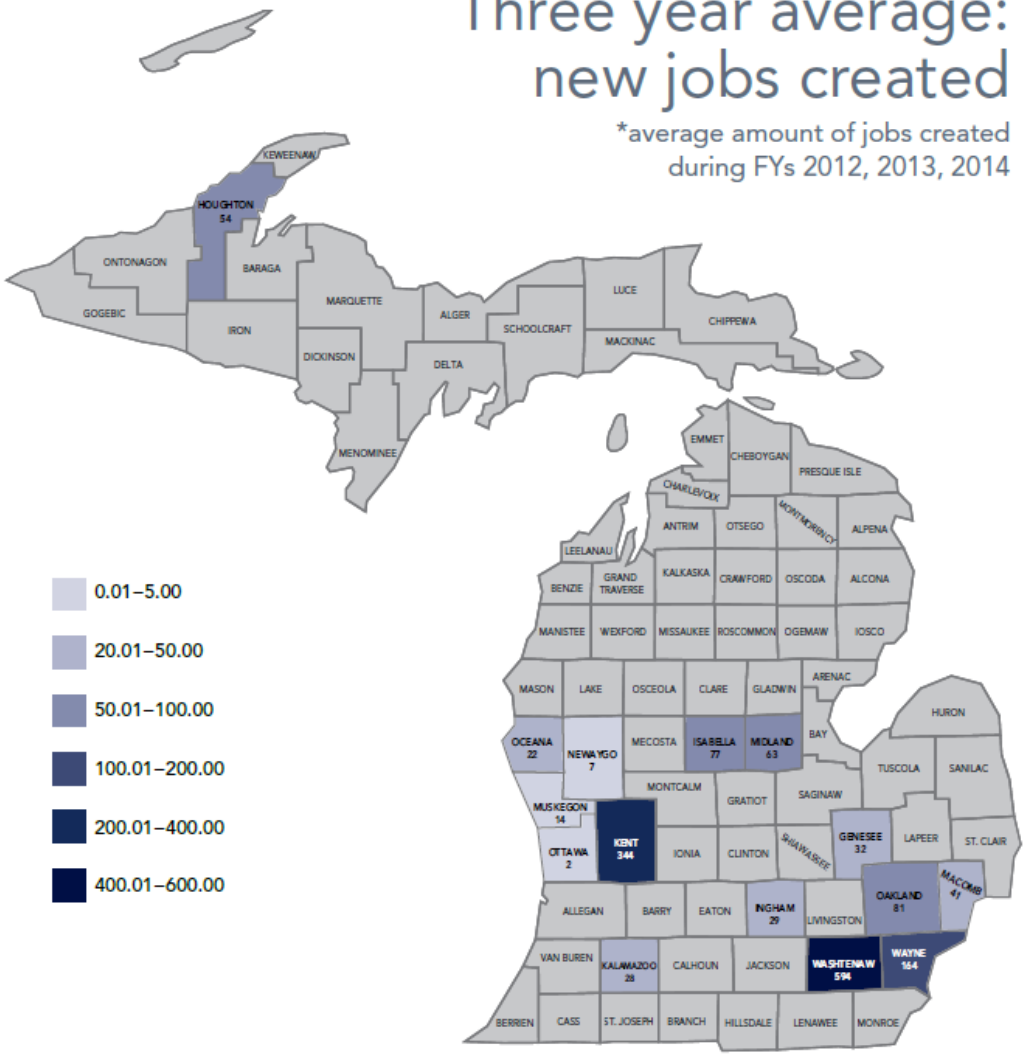


Source: Michigan Economic Development Corporation 10-year view of tech investments

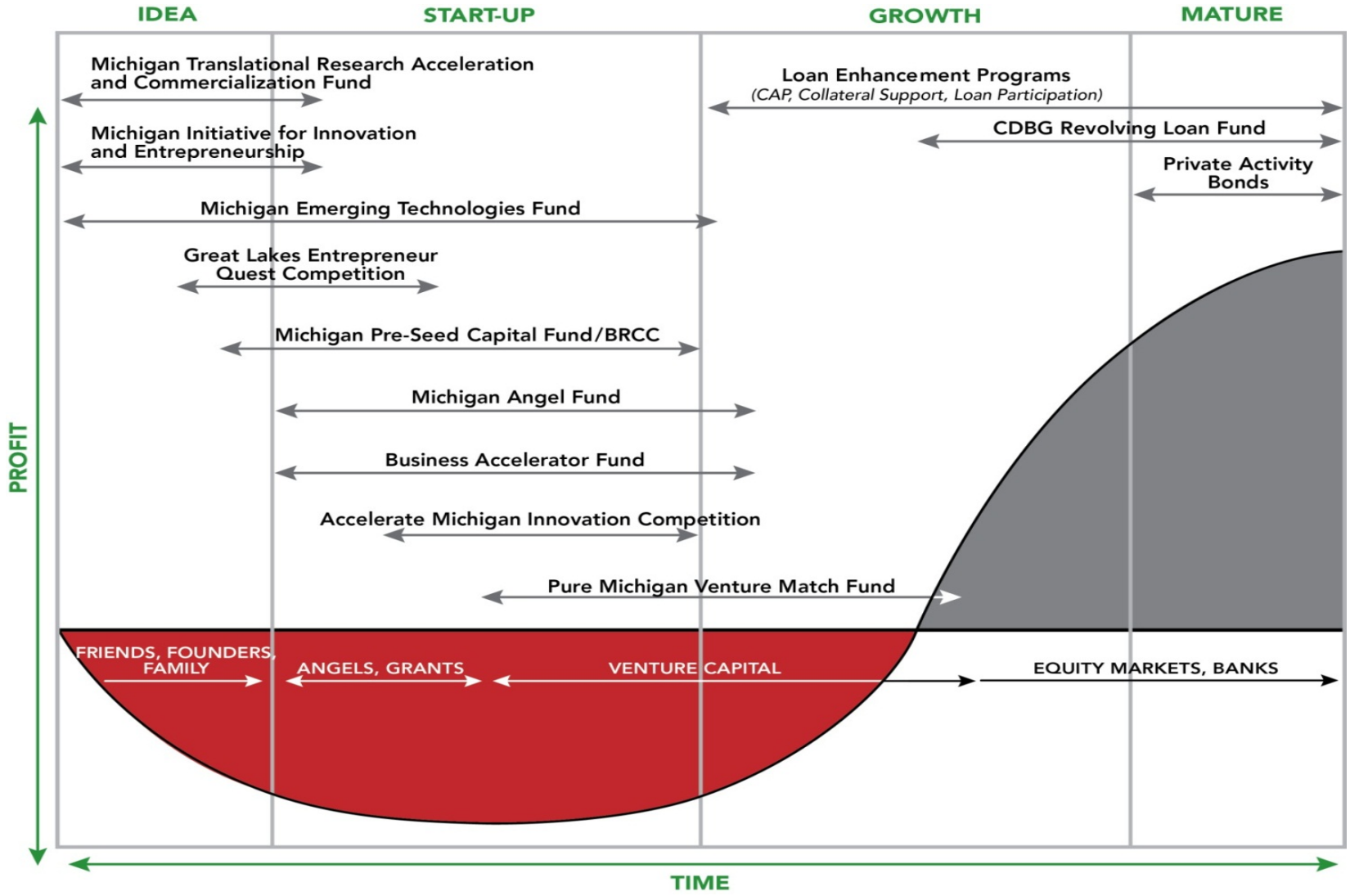
Counties with Public Research Institutions that receive SBIR/STTR Funds Have the Largest Tech Company Creation



They Also Create the Most Tech Jobs



Michigan has been Successful Keeping Companies Alive because State Programs have Filled Gaps, but that is going away



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VCSeries	65	56
No other funding	92	85

Status of company with and without SBIR/STTR funding by number count

	SBIR/STTR (92 of 237)	No SBIR funding (145 of 237)
Acquired/Merged	10	10
Ceased/closed	5	5
IPO	0	1
Not Licensed	17	3
Launched/Licensed	60	125

Status of company with and without SBIR/STTR funding by percentage-separate groups

	SBIR/STTR (92 of 237)	No SBIR funding (145 of 237)
Acquired/Merged	11%	7%
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IPO	0%	1%
Not Licensed	18%	2%
Launched/Licensed	65%	86%

Status of company with and without SBIR/STTR funding by percentage of entire pool

	SBIR/STTR (92 of 237)	No SBIR funding (145 of 237)
Acquired/Merged	4%	4%
Ceased/closed	2%	2%
IPO	0%	0%
Not Licensed	7%	1%
Launched/Licensed	25%	53%
Total	39%	61%