



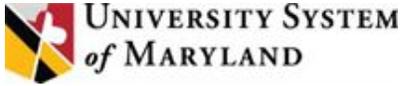
**Board of Regents
Committee on Economic Development and Technology Commercialization**

June 10, 2021

Virtual (public listen only access at 443-353-0686, Conference ID: 638 516 906)
Committee Members will be sent Zoom information

Public Session Agenda

- (1) Featured Startup: CyDeploy – Tina C. Williams-Koroma, CEO (Information Item)
- (2) UMCP Discovery Fund and UMB Baltimore Fund – Ken Ulman, Chief Strategy Officer, Economic Development, University of Maryland, College Park Foundation, and Mary Morris, Director, Baltimore Fund, University of Maryland Baltimore (Action Item)
- (3) Life Sciences Network @ USG – Anne Khademian, Executive Director, Universities at Shady Grove (Information Item)
- (4) USM Office of Economic Development Update – Tom Sadowski, Vice Chancellor for Economic Development and Claire Broido Johnson, Managing Director, USM Maryland Momentum Fund (Information Item)
 - a. USM COVID Research & Innovation Task Force Update
 - b. Legislative Recap
 - c. Army Research Laboratory Collaboration Update
 - d. Momentum Fund



BOARD OF REGENTS

SUMMARY OF ITEM FOR ACTION
INFORMATION OR DISCUSSION

TOPIC: Featured Startup: CyDeploy

COMMITTEE: Economic Development and Technology Commercialization

DATE OF COMMITTEE MEETING: Thursday, June 10, 2021

SUMMARY: Tina C. Williams-Koroma, Esq., CISSP, PMP, President of TCecure and CEO of CyDeploy, will present the progress to date of CyDeploy. CyDeploy is a USM affiliated startup that has developed a cybersecurity solution that deploys security updates to customers with greater frequency and confidence. The company is participating in the Maryland New Venture Fellowship for Cybersecurity at bwtech@UMBC.

ALTERNATIVE(S): This item is for information purposes.

FISCAL IMPACT: There is no fiscal impact.

CHANCELLOR’S RECOMMENDATION: n/a

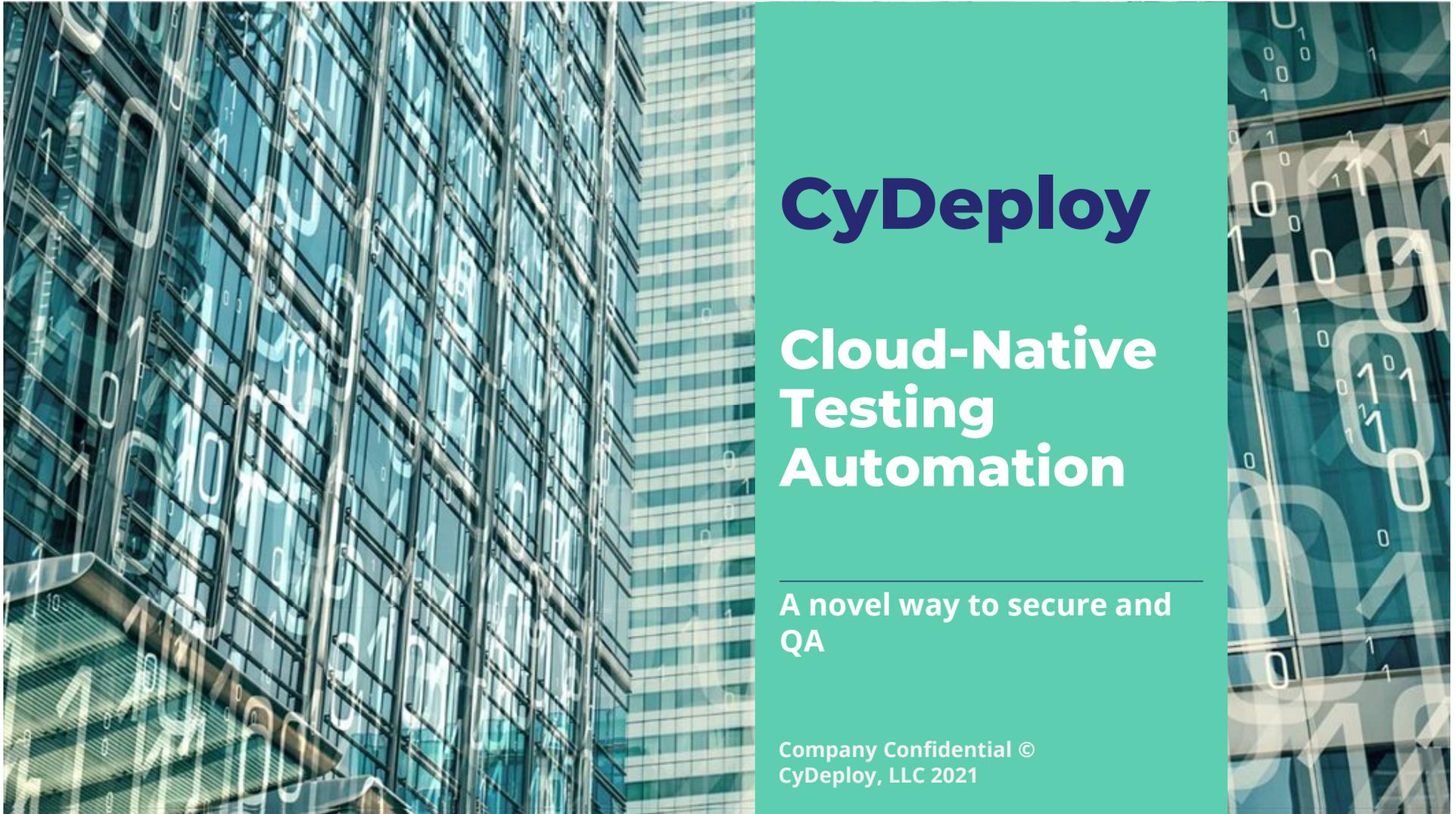
COMMITTEE RECOMMENDATION:

DATE:

BOARD ACTION:

DATE:

SUBMITTED BY: Tom Sadowski 410-576-5742
tsadowski@usmd.edu



CyDeploy

**Cloud-Native
Testing
Automation**

A novel way to secure and
QA

Company Confidential ©
CyDeploy, LLC 2021

Security Breaches – An ever growing problem



Security Breach

80% of security breaches are due to misconfigured systems



Cost

MSP average **\$600k/year** on manual functional testing



Compliance

Increasing need for compliance in regulated information sectors



Economic Impact

Average cost of a breach to U.S. organizations is **\$3.9M.**



Skills Shortage

Cybersecurity talent and IT Operations Team are short staffed



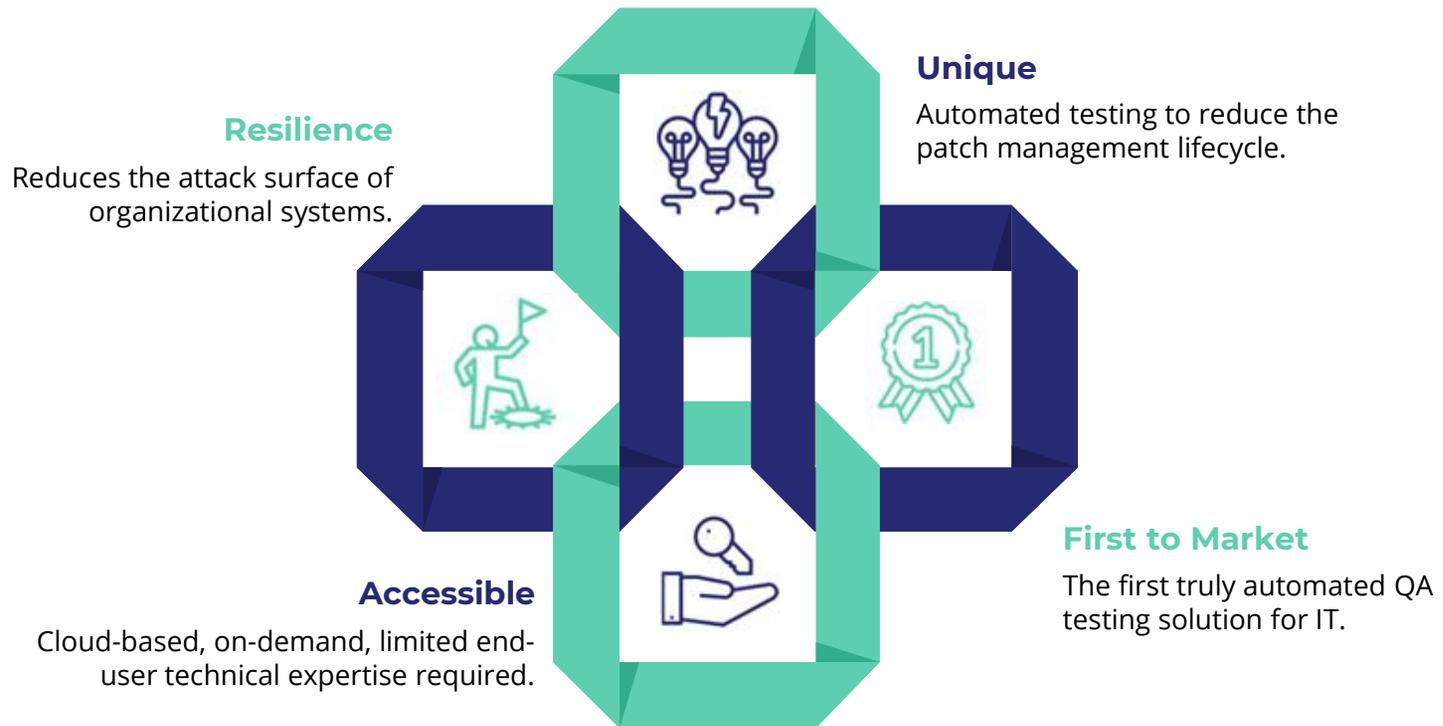


CyDeploy Solution

An intelligent, automated approach to quality assurance (functional) testing, enabling proper and timely security configurations and patches, thereby reducing the likelihood of costly breaches and operational inefficiencies.

CyDeploy Value Propositions

Deploy security updates with confidence and increase update frequency by reducing test time



Competition

		Managed Security Service Provider	In-House Security Team	IT Management Software				Software Testing
	CyDeploy	edgescan		Kaseya	puppet	CHEF	SALTSTACK	functionize
Automated Testing	☑	✘	✘			✘		✘
SaaS Based	☑	☑	✘			☑		☑
Vulnerability Awareness	☑	☑	☑			☑		✘
Patch Management < 24 hrs (*2,174 CVEs in 2021 MTRR 51-84 Days)	☑	✘	✘			✘		☑
Detect and Avoid Breaks in Function	☑	✘	☑			☑		✘
No Disruption or Downtime	☑	✘	✘			✘		☑
Common View of Application and Assets	☑	☑	☑			☑		✘
Endpoint Visibility (Remote, Mobile)	☑	✘	☑			☑		✘
Solves Insufficient Staffing	☑	✘	✘			☑		☑
Provides test Infrastructure	☑	☑	✘			☑		☑
Cost Efficient	☑	✘	☑			✘		☑

Business Model



Large enterprises with multiple unique baselines in development and production.

Sales team focuses on retaining 50%+ of the pilot customers, providing monthly subscription services.



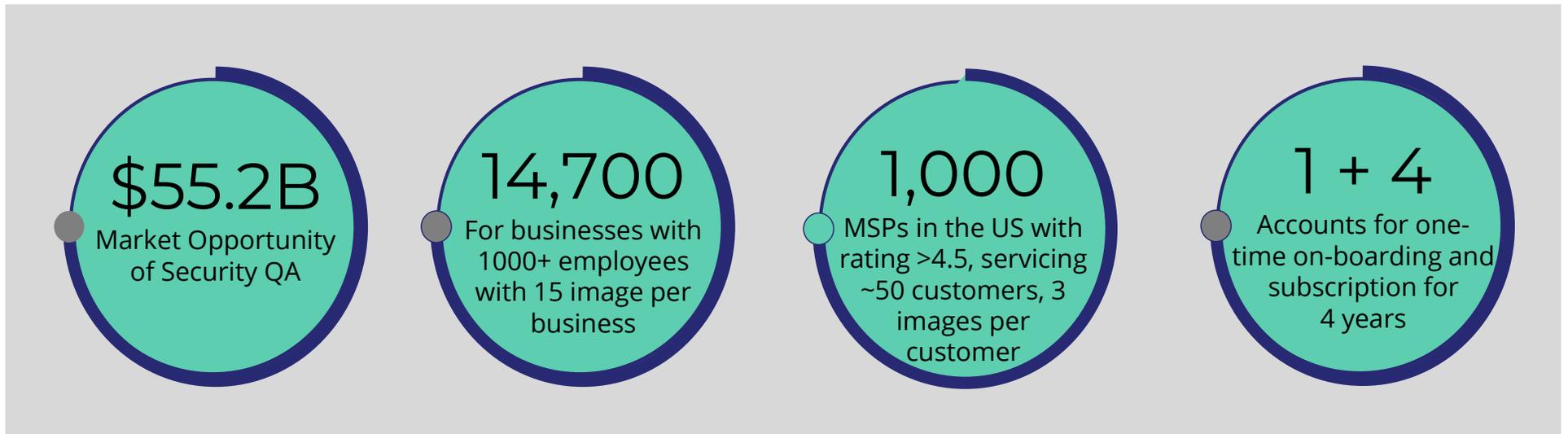
Resellers of our automated service, with discounted subscription fees.

Assume between 11 and 100 clients for most MSPs (average 50), and assume each client has an average of 3 baseline images.

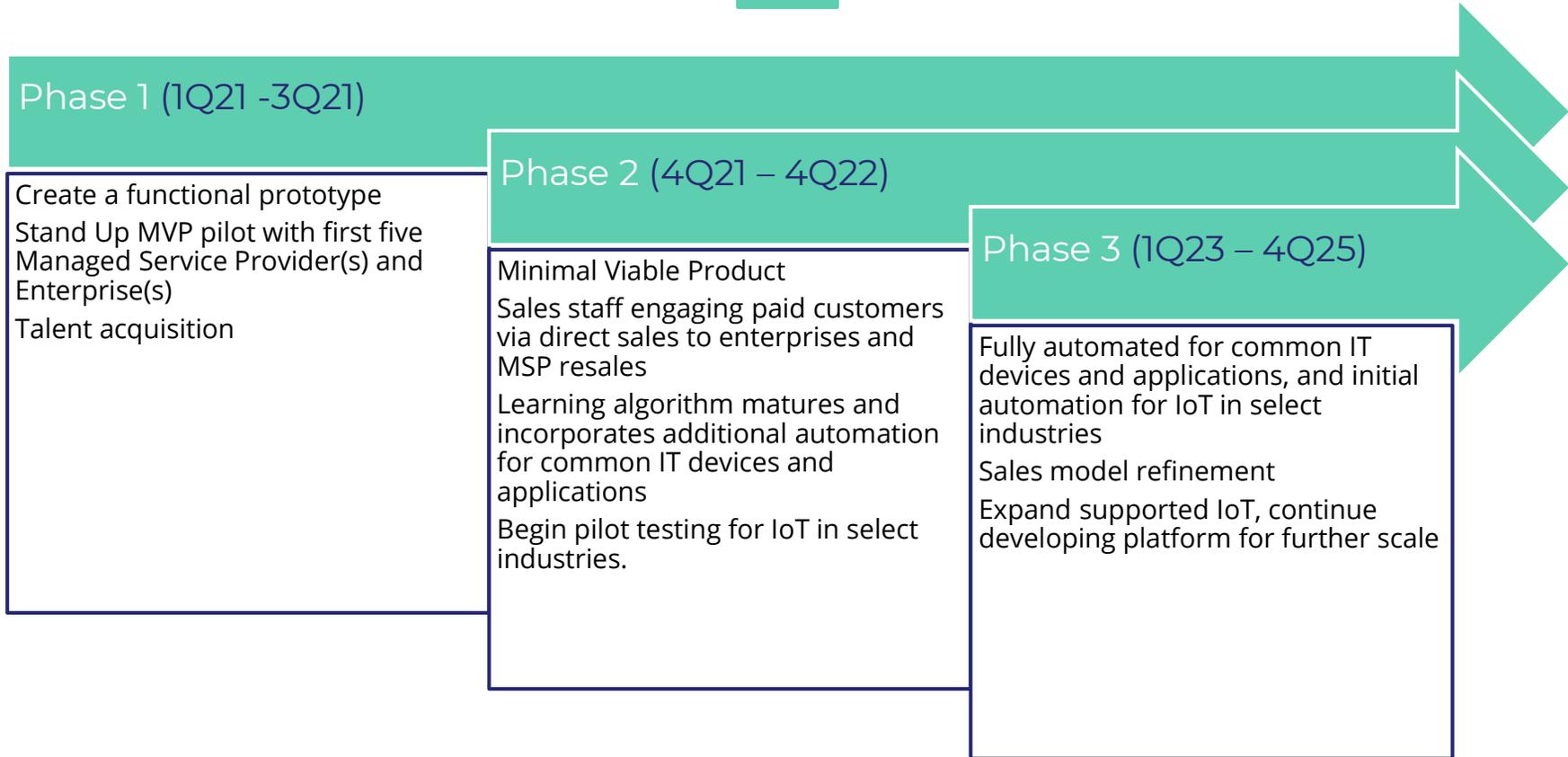


After initial image purchases, engage customers to purchase monthly support services (as new changes are needed on their imaged devices) with varying levels of support.

Market Opportunity (2022 – 2025)



Growth Strategy



Traction for Success



Market Traction

- TCecure is a profitable, growing cybersecurity services company, supporting customers in the Defense Industrial Base, Healthcare, Education, and other critical infrastructure sectors
- CyDeploy will be licensed to TCecure for use with TCecure clients



Data Sources

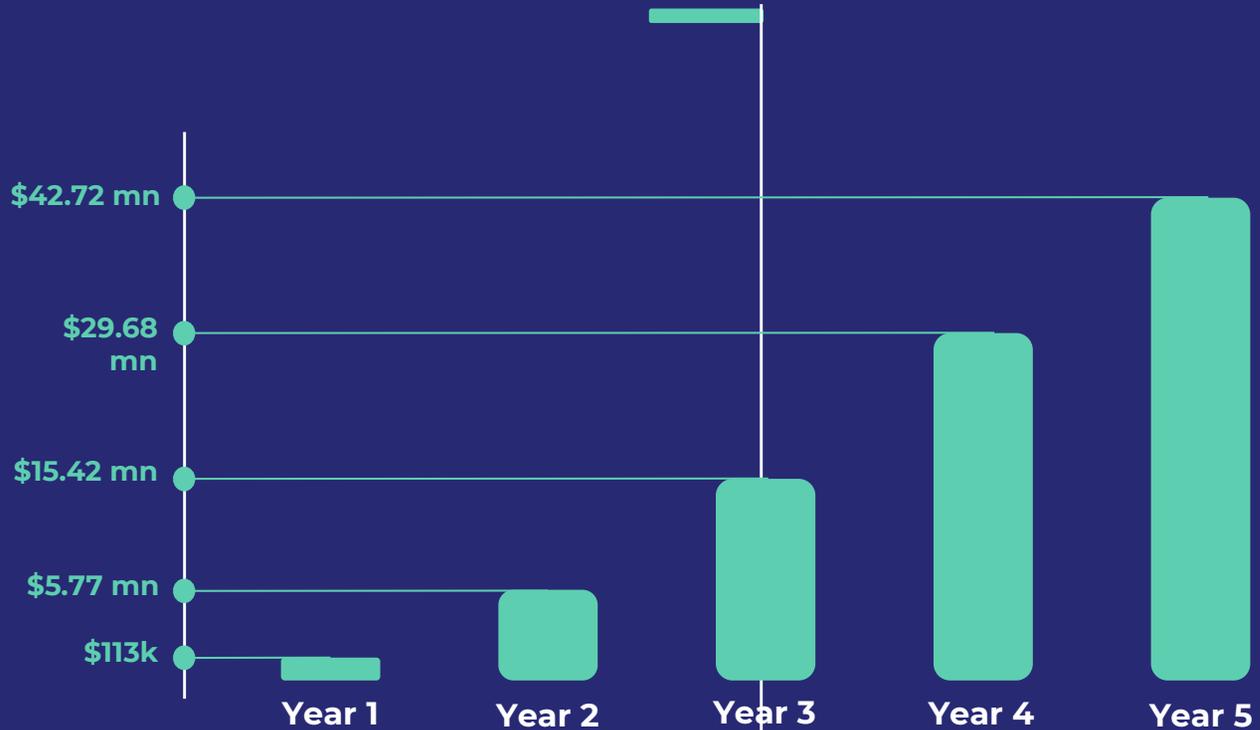
- Publicly Available Sources
 - Experienced in leveraging published artifacts and data to produce work products
 - Will leverage IoT project data for CyDeploy
- Knowledge gained and curated through Founder's work with clients in multiple sectors



Partners

- Sample Strategic Partnerships
 - Channel Partner Alliances
 - Existing relationships with MSPs
 - Entrepreneur growth programs

Financial Highlights



Team of Industry Experts with Proven Results

Founding Team



Tina Williams-Koroma
Founder and CEO

18+ year cyber security
experience

Successful cybersecurity
services entrepreneur



Anupam Joshi
Senior Computer
Researcher

25 years in research; holding 9
patents, 250 publications, and
over 25,000 citations

Advisory Team



Luke Cooper
Chairman and Advisor

Founder of Fixt (Acquired by
Fortune 300), Led CTS to a
\$60M exit

Serial Entrepreneur, Venture
Partner, Advisor, Chairman

CyDeploy IP

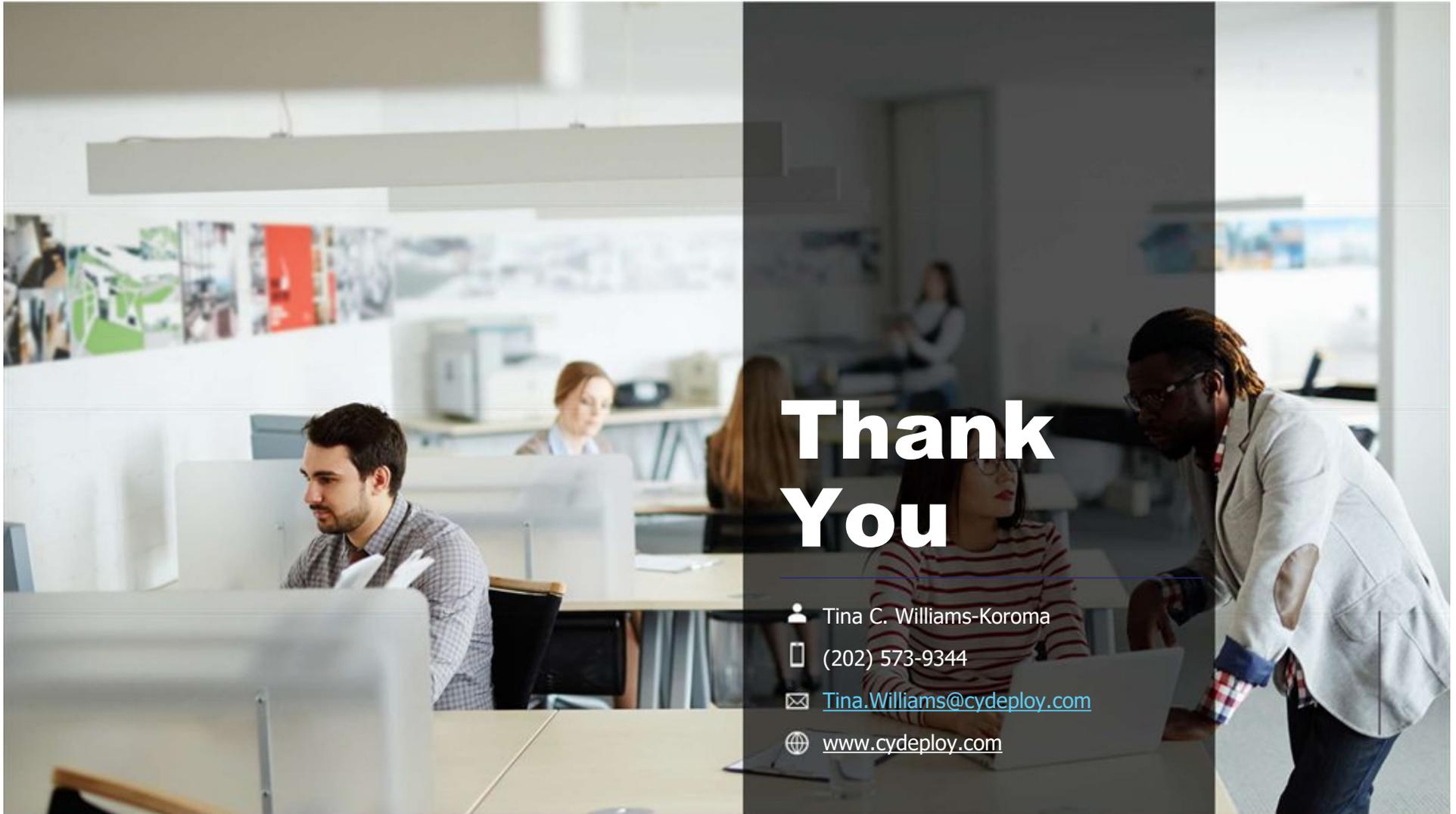


Provisional Patent-filed by
the Inventor / Founder



Patent Scope includes
(Analytics, AI Learning
Models, Use of Data Sources)





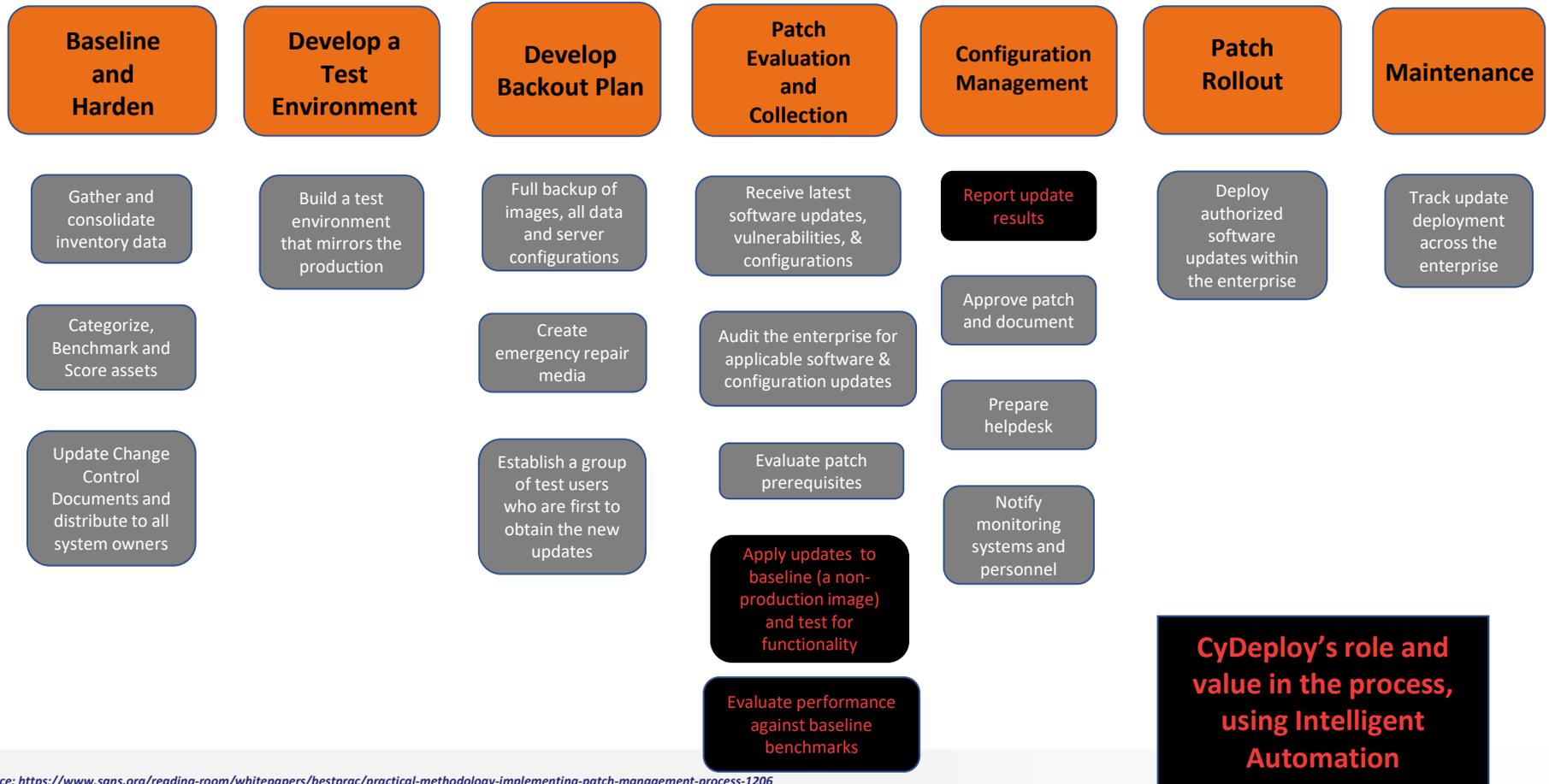
Thank You

 Tina C. Williams-Koroma
 (202) 573-9344
 Tina.Williams@cydeploy.com
 www.cydeploy.com

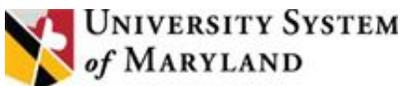


Appendix

Traditional Vulnerability and Patch Management Process



Source: <https://www.sans.org/reading-room/whitepapers/bestprac/practical-methodology-implementing-patch-management-process-1206>



BOARD OF REGENTS

SUMMARY OF ITEM FOR ACTION,
INFORMATION OR DISCUSSION

TOPIC: Approval of Fund Sources for UMCP Discovery Fund and UMB Baltimore Fund under USM Policy VIII-14.00 – Policy on Investments and Loans to Maryland-based Businesses that are Affiliated with USM Institutions

COMMITTEE: Economic Development and Technology Commercialization

DATE OF COMMITTEE MEETING: June 10, 2021

SUMMARY: On February 14, 2014 the Board approved USM Policy VIII-14.00 – Policy on Investments and Loans to Maryland-based Businesses that are Affiliated with USM Institutions. The policy enables USM institutions to invest in, or provide loans to, businesses located in Maryland that “the Board finds that doing so would further one or more goals of the University and is related to the mission of the University.” The University of Maryland, College Park and the University of Maryland, Baltimore—separately and for their own institutions—seek Board approval to make equity investments to attract and retain companies in Prince George’s County, and Baltimore City, respectively, rather than simply make grants, to further the state public policy goals envisioned in the state’s 2016 Strategic Partnership Act.

Under USM Policy VIII-14.00, the Board of Regents must approve the fund source for investments, based on the recommendations of the institution’s president, the Chancellor, and the Finance and Economic Development and Technology Commercialization committees.

This past legislative session the Maryland State Legislature appropriated \$2,500,000 to UMCP for the University of Maryland Center for Entrepreneurship and Economic Development (UMCEED), and \$2,500,000 to UMB for Center for Maryland Advanced Ventures (CMAV). The Strategic Partnership Act includes for both UMCEED and CMAV the goal of encouraging the development and location of University created or sponsored technology companies in Prince George’s County and Baltimore City, respectively.

- UMCP would like to establish the Discovery Fund to fulfill this mission, which would use up to \$1,000,000 of this annual appropriation to make investments and loans to attract and retain companies in Prince George’s County. While the state funding will not be released until FY 2023, UMCP would like to use money (up to \$500,000) from the President’s Initiative Fund to fulfill this mission in FY 2022.
- UMB seeks approval to invest up to \$1,000,000 from the current state appropriated funds to CMAV for FY 2022, and \$1,500,000 annually, beginning with FY 2023, funded from state appropriated funds for CMAV, to make investments and loans to attract and retain companies in Baltimore City.

These investment capacities build on strengths. At UMB, the Baltimore Fund program, part of CMAV, encourages University-created or -sponsored technology companies to locate and expand in Baltimore City and provides programs and resources to facilitate the growth of companies. It has assisted 23 companies and created 690 jobs at an average investment of just \$2,681 per job. At UMD, the Discovery District has attracted and retained some of the state’s most promising companies, with 6 of Governor Hogan’s top 20 companies primed for success located in the Discovery District or on campus incubators.

ALTERNATIVE(S): Should the committee decide not to approve the use of these funds for equity investments, UMCP and UMB would be limited to making grants to companies to attract or retain them in Prince George’s County and Baltimore City, respectively, to meet the intended impacts of the funding from the state legislature.

FISCAL IMPACT: The Discovery Fund would invest up to \$500,000 in FY 2022 from the President’s Initiative Fund and up to \$1,000,000 from state appropriated funds starting in FY 2023 and thereafter. The source of the funding from state appropriated funds would be MPowering the State UMCEED budget. Investments may be used to acquire equity in or make loans to companies locating in Prince George’s County. UMB seeks to invest up to \$1,000,000 of funds currently appropriated to CMAV for FY 2022, and \$1,500,000 annually of funds drawn from the state appropriated funds for CMAV starting in FY 2023. There is the potential for a return on these investments.

CHANCELLOR’S RECOMMENDATION: That the Finance Committee recommend that the Board of Regents approve for UMCP the use of up to \$500,000 of the UMCP President’s Initiative Funds in FY 2022, and up to \$1,000,000 annually from MPowering the State funding through the UMCEED program beginning in FY 2023; and, for UMB the use of state appropriations of no more than \$1,000,000 for FY 2022, and increasing to \$1,500,000 annually in FY 2023, for CMAV, for the purposes described above.

COMMITTEE RECOMMENDATION:

DATE:

BOARD ACTION:

DATE:

SUBMITTED BY: Tom Sadowski 410-576-5742 tsadowski@usmd.edu



REQUEST TO INVEST

BALTIMORE FUND



DISCOVERY FUND



presented to
Committee on Economic Development and Technology Commercialization

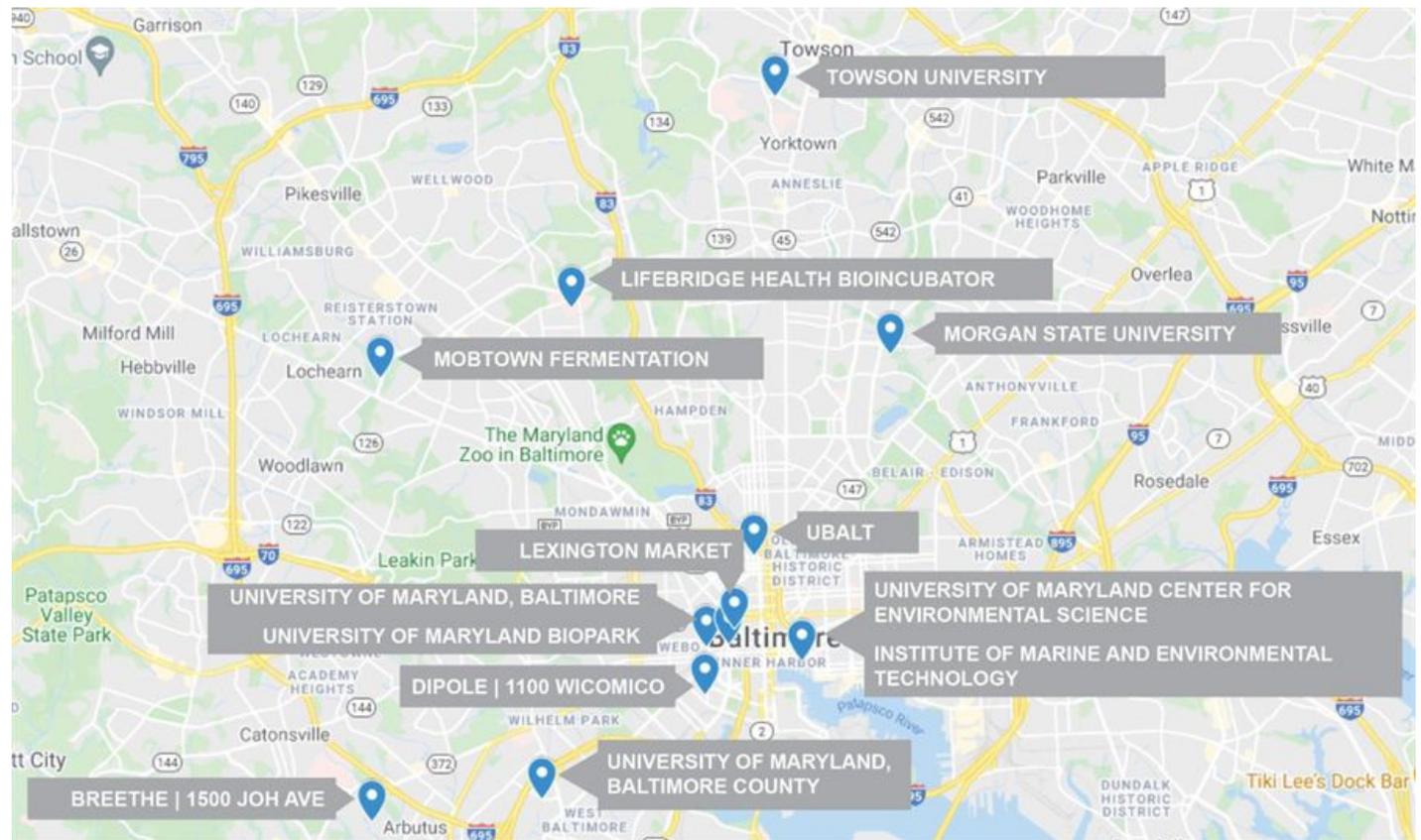
June 10, 2021



Baltimore Fund Locations



The Baltimore Fund encourages University-created or -sponsored technology companies to locate and expand in Baltimore City. Through engagement with Maryland's entrepreneurial ecosystem and its myriad support programs and resources, the Baltimore Fund helps facilitate the growth of companies.



Baltimore Fund Success



Funds Committed to Date

23
COMPANIES



4
YEARS



CREATED
690 JOBS



AVERAGE
INVESTMENT OF
\$2,681
PER JOB



What it was Used For

RETENTION
2



EXPANSION
8



STARTUP/NEW
13



RELOCATION
1



Companies Choosing College Park



FEARLESS IDEAS

Maryland Future 20 List

- Governor Hogan released a list of state's top 20 companies primed for success based on their "innovation, future growth potential, the company's Maryland story and wow factor."
- UMD affiliated companies dominated the list. Of the 20 companies highlighted,
 - 14 are engaged with one or more UMD program
 - 7 are located in Prince George's County, the largest number in any jurisdiction in the state
 - 6 are located in the Discovery District or on campus incubators



FEARLESS IDEAS

“Terrapin Development Eyes Quantum Leap for UMD Discovery District”



“Quantum-Computing Startup IonQ Plans Public Debut in \$2 Billion SPAC Merger”

THE WALL STREET JOURNAL

“Immuta Nabs \$90 Million New Funding for Global Expansion”



“Billion Dollar Startup with UMD Ties Plans to Provide Mobile Internet from Outer Space”

THE DIAMONDBACK

“Cybrary Moves into its New College Park Office”

“UMD Computer Scientist's VisiSonics raises \$3.5M to Amplify 3D Sound Technology”



“IonQ Takes Quantum Computing Public with a \$2 Billion Deal”



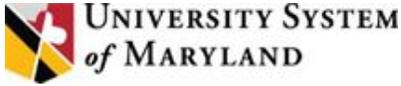
“Inky Closes 2020 with Triple Digit Growth in Enterprise & Midmarket Customers”



“New Leases Bolster Discovery District’s Burgeoning Research Hub in College Park”



FEARLESS IDEAS



BOARD OF REGENTS

SUMMARY OF ITEM FOR ACTION
INFORMATION OR DISCUSSION

TOPIC: Life Sciences Network @ USG

COMMITTEE: Economic Development and Technology Commercialization

DATE OF COMMITTEE MEETING: Thursday, March 25, 2021

SUMMARY: Anne Khademian, Executive Director, Universities at Shady Grove, will present on the key objectives for USG in the area of education and career pathway development, as well as research and workforce development, with a strategic focus on the Life Sciences.

ALTERNATIVE(S): This item is for information purposes.

FISCAL IMPACT: There is no fiscal impact.

CHANCELLOR'S RECOMMENDATION: n/a

COMMITTEE RECOMMENDATION:

DATE:

BOARD ACTION:

DATE:

SUBMITTED BY: Tom Sadowski 410-576-5742
tsadowski@usmd.edu



LIFE SCIENCES NETWORK@USG

Education and Pathways, Research and Workforce Development in Montgomery County: Key Initiatives Coordinated by USG



OVERVIEW

- **USG 2.0**
- **Opportunities in the Life Sciences that connect research, education, pathways, economic development and workforce needs**
- **Time to act is NOW**
- **Life Sciences NetWORK@USG**
 - Rise of life sciences at our doorstep
 - Education and economic recovery: Post-COVID
 - New educational and research leadership direction (USG, IBBR)
 - Pandemic Research and Immunotherapy
- **Next Steps**

WHAT IS USG? 9 UNIVERSITIES, 1 CAMPUS.



The Universities AT SHADY GROVE



WHY USG? LIFE SCIENCES NETWORK@USG



-  Strategic partner to integrate research, education, pathways, & economic and workforce development
-  Talent focus and deep connection to employers
-  USM substantive partner in both education, workforce development & research: USG, IBBR (UMB and UMD)
-  Cornerstone location at the gateway to the life sciences corridor

-  Leader in pathway development and expansion. Connections throughout the County, and support of County leadership for pathways work and Life Sciences talent development
-  Rapid transit development in Montgomery County at USG
-  Leveraging our nine university partners

USG 2.0

A hub of innovation in support of:

The equity, enrollment and educational innovation goals of USM and our academic partners

Public schools, community colleges and USM pathway partners

The educational ecosystem of Montgomery County anchored in equity with an emphasis on lifelong learning to meet the economic and workforce development needs of the County and State (“make Pre-K-J and beyond” REAL)



FIRST STEPS/INSIGHTS

- **Leading in advancing new educational paradigm in Montgomery County focused on equity and economic development:**
 - Institutional collaboration and political will
 - Strong pathway partnerships (give back to Montgomery)
 - Career readiness and success
 - Employer engagement
- **Building the infrastructure through partnerships to connect talent needs and job opportunities to the life sciences for ALL**
 - Life Sciences NetWORK@USG



FIRST STEPS IN PARTNERSHIP: CAPITALIZE ON UNIQUE ADVANTAGES

- 1** **Networking and mentoring opportunities, coupled with experiential learning/internships along the lifelong learning spectrum**
- 2** **Research opportunities with corresponding educational points of focus**
- 3** **USG as a data hub and analytic insights**

BUILDING A SUCCESSFUL WORKFORCE FOR TODAY & TOMORROW: MENTORING AND NETWORKS

- **Building access for all students in the life sciences to businesses in the life sciences and professional associations to secure mentoring and experiential learning before graduation through USG, and to secure a job and a mentor after graduation from USG as well as through career transitions.**
 - What role for MTC, MCEDC, WSM, academic partners, employers?
 - USM-Montgomery County MOU regarding life sciences workforce development
 - What would be the first step toward activation/pilot?



LIFE SCIENCES RESEARCH AND EDUCATION AS ONE



A focus on scaling and manufacturing: research and education

- Research opportunities with IBBR
- Educational opportunities - carving out areas of expertise in business degrees, life science degrees, engineering degrees

A focus on research experience (experiential learning) with an industry focus

- Structured research opportunities for juniors and seniors
- Postdocs to mentor and coordinate
- Industry ready experiential learning
- Coordinated internship website
- Entrepreneurial opportunities

DATA HUB AND ANALYTICS



Data on workforce needs and opportunities for growth



RFPs for partners



Continuous USG weekly engagement



Role for partners in collecting, consolidating, analyzing and sharing





PLANTING OUR FLAG: **THE WORK AHEAD**

Education and Pathways, Research and Workforce Development in Montgomery County: Key Initiatives Coordinated by USG



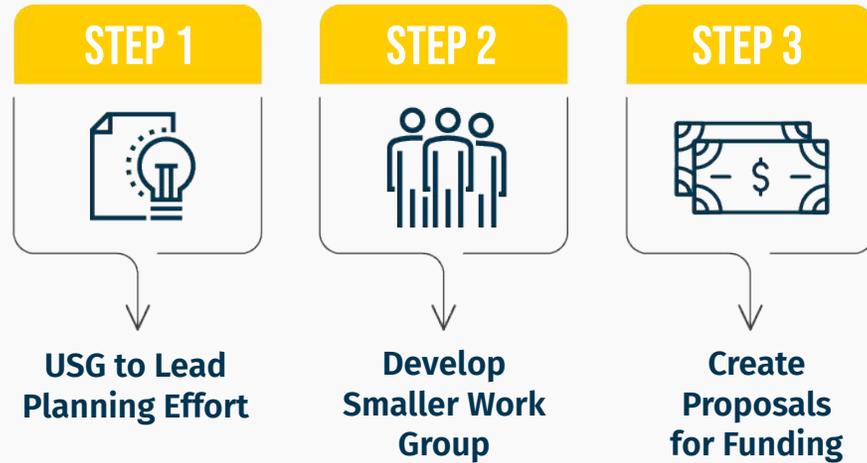
LIFE SCIENCES NETWORK@USG

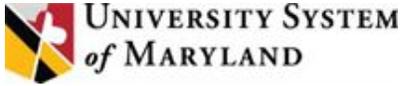
KEY PILOTS CENTERED AROUND...



-  Research
-  Academic Pathways
-  Workforce Development

PROPOSED STEPS





BOARD OF REGENTS

SUMMARY OF ITEM FOR ACTION
INFORMATION OR DISCUSSION

TOPIC: USM Office of Economic Development Update

COMMITTEE: Economic Development and Technology Commercialization

DATE OF COMMITTEE MEETING: Thursday, June 10, 2021

SUMMARY: Vice Chancellor Sadowski will provide an update on the USM COVID Research & Innovation Task Force activities, recap the 2021 legislative session outcomes, and provide information about a partnership with the Army Research Laboratory that continues to grow. Ms. Broido Johnson will provide a Momentum Fund update that will include benchmarking information.

ALTERNATIVE(S): This item is for information purposes.

FISCAL IMPACT: There is no fiscal impact.

CHANCELLOR'S RECOMMENDATION: n/a

COMMITTEE RECOMMENDATION:

DATE:

BOARD ACTION:

DATE:

SUBMITTED BY: Tom Sadowski 410-576-5742
tsadowski@usmd.edu

USM Economic Development

*Briefing for USM Economic Development and
Technology Commercialization Committee*

June 10, 2021



USM Economic Development *Agenda*

- COVID Research & Innovation Task Force Efforts
- Legislative Developments
- Army Research Lab (ARL) Opportunity
- Momentum Fund



USM COVID Research & Innovation Task Force

Ongoing and Forward Initiatives

USM Long-Term Strategy Workshop: Results of two-session internal/external expert discussions have been summarized and are under discussion.

- Completed final USM Pandemic Preparedness report is available.

Pandemic preparedness, Bioproduction and Vaccine Development Strategy: Working with the Governor's Life Science Advisory Board (LSAB), MD Commerce and MD Tech Council on strategy to develop MD's post-pandemic opportunities and related workforce capacity needs; exploring federal funding and industry partnership opportunities.

- Engaged in talent supply / demand analysis, skill-set determination, and related workforce training needs
- Matching up capabilities and programming options at UMB, UM College Park and Shady Grove

Connected DMV Pandemic Center Response Initiative Partnership: USM is lead academic partner in regional strategic planning and federal funding pursuit effort.

- Currently working on Pandemic Center HQ location and federal funding advocacy for strategic preparedness initiatives

USM Legislative Update

Enacted

- **RISE Zones:** [HB1279](#) ([SB0778](#)) Change to matching funding for rental assistance.
- **TEDCO:** [SB0639](#) Inclusion Fund; [HB1211](#) Pre-Seed Builder; [SB0732](#) Enhanced MII support
- **West North Avenue Development Authority** (Coppin): [HB1293](#) ([SB0783](#))
- **MTIP:** [HB0307](#) Lower GPA req.; incl. non-profits, **Modification of U. of Md. Strategic Partnership Act of 2016** (UMB/UMD): [SB0943](#)
 - Also provides Capital funding for development of Discovery District
- **Investment Tax Credits:**
 - [SB0019](#) Biotech. Lowers % back to investor; limits how much any one company can benefit in a given year and over time.
 - [SB0160](#) Cyber. Expands to “innovation” across certain industries (except biotech), determined by the Maryland Economic Development Commission after consulting with DOL. Allows three years of participation, up from one. Extends until 2025.
- **Other Tax Credit Modifications:** [SB0196](#) R&D credit
- **SBIR:** [HB0654](#) incentive/matching; [SB0459](#) assistance bill modification

ARL Opportunity

\$68 Million 5-year Collaboration Agreement

- **UMD and UMBC** interdisciplinary research team will create a new generation of technologies and devices—from wearables to unmanned aircraft.
- **Connects state-wide centers of excellence**
 - APG, Adelphi and Southern MD
- **Expands realm of possible industry partnerships**

UPDATE AND NEXT STEPS

June 2021

Claire Broido Johnson
Managing Director
cbjohnson@usmd.edu



UNIVERSITY SYSTEM
of MARYLAND

MARYLAND MOMENTUM FUND

Overview of Maryland Momentum Fund



- **\$10MM University System of Maryland investment fund**
 - Established by USM Board of Regents June 2016. Investments started 2017
 - Goal of generating at least \$15MM in co-investment from non-USM entities
- **Investing in the most promising USM-affiliated technologies and people**
 - Help promising early-stage companies bridge early-stage funding gaps
 - Support companies so they get to a point where they can raise additional funding with VCs or be acquired
- **Eligibility criteria**
 - Located in Maryland
 - Must have a co-investor(s) that will invest at least as much as MMF
 - Affiliated with one of the 12 USM institutions across the State of Maryland (any **one** of the below):
 - University-owned intellectual property
 - Founded by University faculty, staff, student, or alum
 - Located in a University-affiliated research park or incubator

Main Goals for MMF



1. Returns

- Generate long-term financial returns which will be reinvested in future start-ups (evergreen fund)

2. Expand the Entrepreneurial Ecosystem across the State of Maryland

- Catalyze additional investments from private investors
- Invest in fixture companies (companies that start here, grow here, stay here)
- Create jobs – and retain those jobs
- Grow talent
- Support the development of the innovation ecosystem

3. USM-Specific Indicators:

- Stimulate/improve visibility of USM IP; advance USM status as a research institution and center of excellence
- Support, recruit and retain innovative students and faculty

Accomplishments



- **\$8.2 MM invested and committed** (MMF + University co-investments; \$6 MM just from MMF)
- **28 investments**
 - 22 companies
 - 6 follow-ons
- **100 jobs created**
- **\$6.7 of outside investment for every \$1 MMF invested** into our portfolio companies
- **\$276K average investment**
 - \$2.1 MM average total round deal size
- **35 companies reviewed** by Advisory Board (since July 2019)
- **300 unique expert panelists** have provided due diligence on **39 companies** (since July 2019)

Additional Value



- **Established valuable relationships with investors** including: Squadra; Early Charm, Alexandria Venture Partners, Sanofi, TCP, Abell Foundation, Lord Baltimore Fund, Conscious Venture Labs
- Only USM fund investing in USM startups other than UM Ventures at UMB
- **\$39.6 MM invested by outside entities** like Sanofi, ReThink Education, JDRF T1D, Lord Baltimore Fund, Alexandria Venture Investments, Chesapeake Bay Seed Capital Fund, Dingman Angels, alongside MMF + University investments
- **150 unique investors** (in total) have invested alongside MMF in our investment rounds

Investments

- DeepTech
- Technology
- Consumer Product
- Therapeutic
- Data
- Education Technology
- Aquaculture
- MedTech
- Other Life Science

		2020			
Late 2017-2018	2019	First Half	Second Half	First Half 2021	
MF Fire Nov. 2017, \$192.5K \$1.2MM Round	Retrium May 2019, \$400K \$1.6MM Round	InferCabulary Feb. 2020, \$250K \$783K Round	NextStep Robotics Aug. 2020, \$250K Add-on; \$500K Round	Veralox Jan 2021, \$250K Add-on; \$5MM Round	
NextStep Robotics Feb. 2018, \$250K \$1.14MM Round	Veralox Jun. 2019, \$500K \$5.4MM Round	ARMR Feb. 2020, \$350K \$750K Round	MiRecule Aug. 2020, \$250K \$3.5MM Round	Dynamhex Feb. 2021, \$250K \$800K Round	
PaverGuide Mar. 2018, \$300K \$675K Round	Gemstone Aug. 2019, \$250K \$1.3MM Round	DataKwip Apr. 2020, \$250K \$650K Round	N5 Sensors Sept. 2020, \$300K \$1MM Round	Qualytics Apr. 2020, \$250K \$2.1MM Round	
NAWEC Apr. 2018, \$350K \$1.5MM Round	Neoprogen Oct. 2019, \$245K \$1.5MM Round	Pathotrak May 2020, \$150K \$1.2MM Round	InferCabulary Sept. 2020, \$100K Add-on, \$1MM Round	Target Docs Apr. 2020, \$250K \$850K Round	
MF Fire Oct. 2018, \$500K Add-on \$400K Round	Minnowtech Nov. 2019, \$150K \$600K Round	KaloCyte June 2020, \$300K \$1MM Round	Voxy Engen Oct. 2020, \$500K \$6.75MM Round	KaloCyte Apr 2020, \$300K Add-on, \$500K Round	
Zest Tea Dec. 2018, \$300K \$1.035MM Round	Zest Tea Dec. 2019, \$200K Add-on \$650K round		VisiSonics Nov. 2020, \$500K \$3.5MM Round	Liatris June 2021, \$250K \$800K Round	
				Veralox June 2021, \$500K Add-on, \$16MM Round	

Initial Investment Set Aside (just MMF): \$7MM; \$5.1MM invested



Follow On Investment Set Aside (just MMF): \$3 MM; \$912K invested



Portfolio Companies



UMCP IP and Alum
Advanced wood burning stove



UMB IP, Towson Alum
Exoskeleton robot to reverse foot drop for stroke victims.



UMCP IP, Alum
Advanced pulse jet engine



UMCP Alum
High caffeine tea, energy drink product



UMCP IP
Advanced semipermeable pavement system



UMCP Alum
Agile software development management product



UMBC and UMCP Alums
Tissue regeneration via stem cells



UMB IP and Alum
Anticoagulant drug, therapeutics for rare blood disorders



UMB IP and Faculty
Cell-based therapy for cardiovascular disease



UMCES Alum
Sonar to measure shrimp biomass



UM BioPark Tenant
Next-gen tourniquet



Towson Alum, TU Incubator startup
Ed-tech vocabulary app



UMCP Alum
Software platform to manage energy across buildings



UMCP IP and Faculty
Food safety testing technology



UMB/UMBC Faculty, UM BioPark Affiliate
Dried artificial red blood cell



UMCP Alum
RNA Therapeutics



UMCP IP and Faculty
Semiconductor sensor technology



UMCP IP and Faculty
Spatial and personalized audio solutions



UMCP Alum and Faculty
Language upskilling platform



UBalt Professor
climate change modeling and action platform



UMBC BwTech
Data integrity

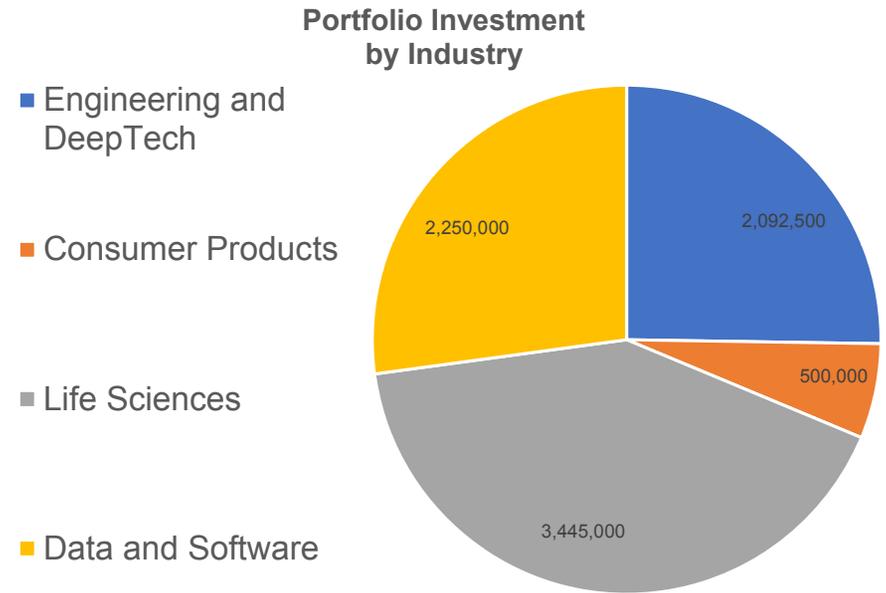
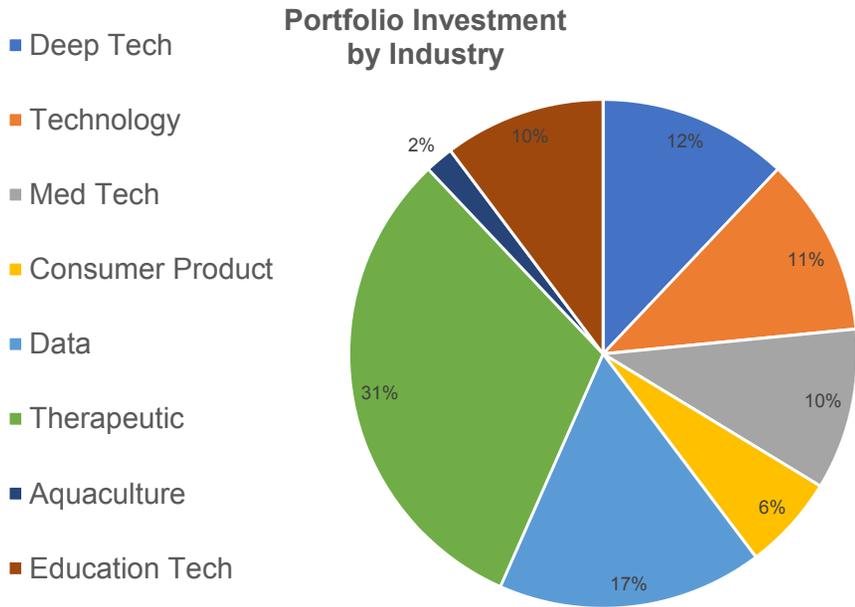


UMCP Alum
Data platform for construction industry

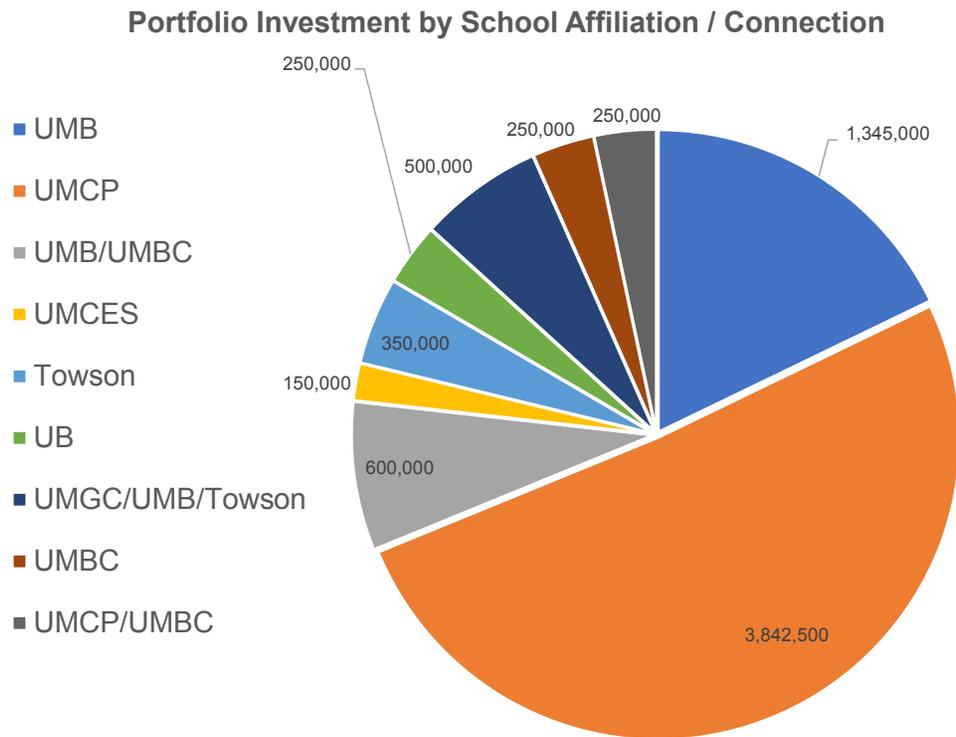


UMCP Employee
Fireproof, lightweight insulation

Investment by Industry – shown two ways



Investment Detail



How You Can Help: Communications



1. Share information with your alumni

- We invest in USM alumni founded companies!
- Let's collaborate on stories in alumni publications, at alumni events, or any other outreach opportunities that exist
- i.e. UMB alumni magazine, [Catalyst](#)

2. Include information on your website

- Share information about MMF on your website(s) including pages dedicated to funding, startup resources, alumni engagement opportunities, technology commercialization

3. Publicize Momentum Fund investments in companies associated with your institution

- The USM communications team writes and releases a press release for each Momentum Fund investment
- We welcome editorial review, quote contribution, etc.
- Please provide a point of contact for releases

4. Invite the Momentum Fund to participate at entrepreneurial events at your institutions

10

Benchmarking MMF to University Funds



We compared MMF to public university funds which invest \$150-500K per investment, and are sector agnostic

- Average size fund: \$10M - \$50M
- Average time between start of fund and first exit: 6 years
- Average time between initial investment and exit: 5-7 years
- Average stage funds invest: Seed-Series A
- Average return on exit: 0.5 - 3X returns
- Investments in earlier stage companies produce lower returns
- More exits if larger funds
- More exits if investing in later stage companies

Conclusions on Reviewing University Funds Structure



- Most university funds utilize an evergreen model, but also include funding from
 - University Endowments
 - Alumni
 - IP licensing
- Half of the universities have more than one fund – some funds are system-wide and some are with just one school
- Funds have strategic partnerships with technology transfer office and VC firms
 - Deal sourcing
 - Promotion
 - Funding
 - Management
- Most university funds have a team of more than two people managing the fund

Universities we are using for benchmarking



Umass Investment Fund
Rochester Institute of Technology Venture Fund
UCLA Ventures
UC San Diego – Triton Technology Fund
University of North Carolina – Carolina Research Ventures
University of Illinois – Illinois Ventures
NYU Innovation Venture Fund
U of Chicago Innovation Fund
Case Western – CWRU Technology Ventures
University of Michigan – Accelerate Blue Fund, MINTS
Red Cedar Ventures: Michigan State University

University of Wisconsin- Madison
University of Texas Horizon Fund
Indiana University – Innovate Indiana
University of Virginia – LVG Seed Fund
University of Washington – the W Fund
Washington Research Foundatoin (WRF) Capital
Duke University – Innovation Fund
Carolina Research Ventures – at Chapel Hill
Ohio Innovation Fund
University of California Ventures Bow Capital
Johnson Business School at Cornell – Big Red Ventures

Benchmarking MMF to Micro VCs...



We compared MMF to VC firms that invest \$50K-500K per investment, are sector agnostic, established in the last 10 years

- Average time between start of fund and first exit: 5-7 years
- Expected returns: 2-3X
- Investments in earlier stage companies produce lower returns
- \$20-30M funds, on average
- Fewer investments per year (5 ish)