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**AGENDA FOR PUBLIC/CLOSED SESSION**

- |   |                                     |
|---|-------------------------------------|
| Call to Order and Welcome to New Committee Members                          | Chair Bill Wood                     |
|   |                                     |
| 1. <a href="#">Approval of Minutes</a>                                      | Regent Bill Wood                    |
|   |                                     |
| 2. <a href="#">Sustainability Strategic Plan and Research</a>               | President Fernando Miralles-Wilhelm |
|   |                                     |
| 3. <a href="#">Climate Innovation Alliance</a>                              | Executive Director Lindsay Ryan     |
|   |                                     |
| 4. <a href="#">Venture Development and Innovation Collaborative Updates</a> | Executive Director Lindsay Ryan     |
|   |                                     |
| 5. <a href="#">Momentum Fund Update</a>                                     | Managing Director Mike Ravenscroft  |
|   |                                     |
| 6.     Research Update and Future Committee Priorities                      | Vice Chancellor Michele Masucci     |
|   |                                     |
| 7. <a href="#">Renew Charge</a>   | Regent Bill Wood                    |



UNIVERSITY SYSTEM  
*of* MARYLAND

BOARD OF REGENTS  
COMMITTEE ON Research and Economic Development

May 6<sup>th</sup>, 2025

Meeting via Video and Conference Call

Minutes of the Public Session

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Regent Wood called the meeting of the Research and Economic Development Committee of the University System of Maryland Board of Regents to order in public session at 10:30 a.m. on May 6th via Zoom.

Those in attendance included William Wood, John Paul Sawyer, Michele Masucci, Anne Khademian, Lindsay Ryan, Julia Chadwick, Aileen Abel, Linda Gooden, Anwer Hasan, Moses Kairo, Jennifer Walsh, Elena Langrill, Jay Perman, Gail Bassette, Sidd Kaza, Amir Ansari, Michael Ravenscroft, Alison Wrynn, Michael Sandler, Ellen Herbst, Harry Coker Jr., Christopher O'Donnell

1. **Approval of Minutes** The Regents reviewed and the meeting minutes from the March 20<sup>th</sup> meeting of the Board of Regents Committee on Research and Economic Development, but the committee did not have a quorum. Regent Wood moved to hear the minutes as the next full board meeting in June

(Regent Wood moved recommendation, seconded by Regent Gooden; approved)

Vote Count = Yeas: 3      Nays: # 0      Abstentions: # 0

2. **Federal Research Landscape Update** Vice Chancellor Masucci presented an update on the current federal research landscape to the committee. Vice Chancellor Masucci went over every change that has happened on the federal level concerning research and research administration since January 2025. She also announced plans for an in-person meeting of all USM Research VPRs to brainstorm ways to support strengths and shore up weaknesses on a system-level. All meeting materials are available to the public on the USM website.
3. **Research Report for University of Maryland Eastern Shore.** Dean for the School of Agricultural and Natural Sciences at the University of Maryland Eastern Shore, Dr. Moses Kairo presented a detailed research report on UMES to the Research and Economic Development Committee. He presented past and ongoing UMES research initiatives in agriculture, human health, environmental science, natural resource management, and sustainable food production. All meeting materials are publicly available on the USM website.
4. **Mid-Atlantic Quantum Alliance.** Executive Director of the Mid-Atlantic Quantum Alliance, Dr. John Sawyer gave a presentation on the growing Quantum ecosystem in Maryland to the Research and Economic Development Committee. The Mid-Atlantic Quantum Alliance is a hub for quantum technology research, development and education that is facilitated by the

University of Maryland College Park and has partnerships and support for numerous universities across the Mid-Atlantic Region. In his presentation, Dr. Sawyer both described what quantum computing is, and its importance to the state of Maryland's specifically. He also highlighted educational programs spearheaded by the alliance, a recent \$1B investment in Quantum by the state of Maryland, and the expansion of quantum computing markets to Maryland and the nearby region. All meeting materials are publicly available on the USM website.

The public meeting was adjourned at 12:10 P.M.

Respectfully submitted,

Regent Bill Wood  
Chair, Committee on Research and Economic  
Development

# Towards a Sustainability Action Plan for the USM

## Briefing for the USM RED Committee

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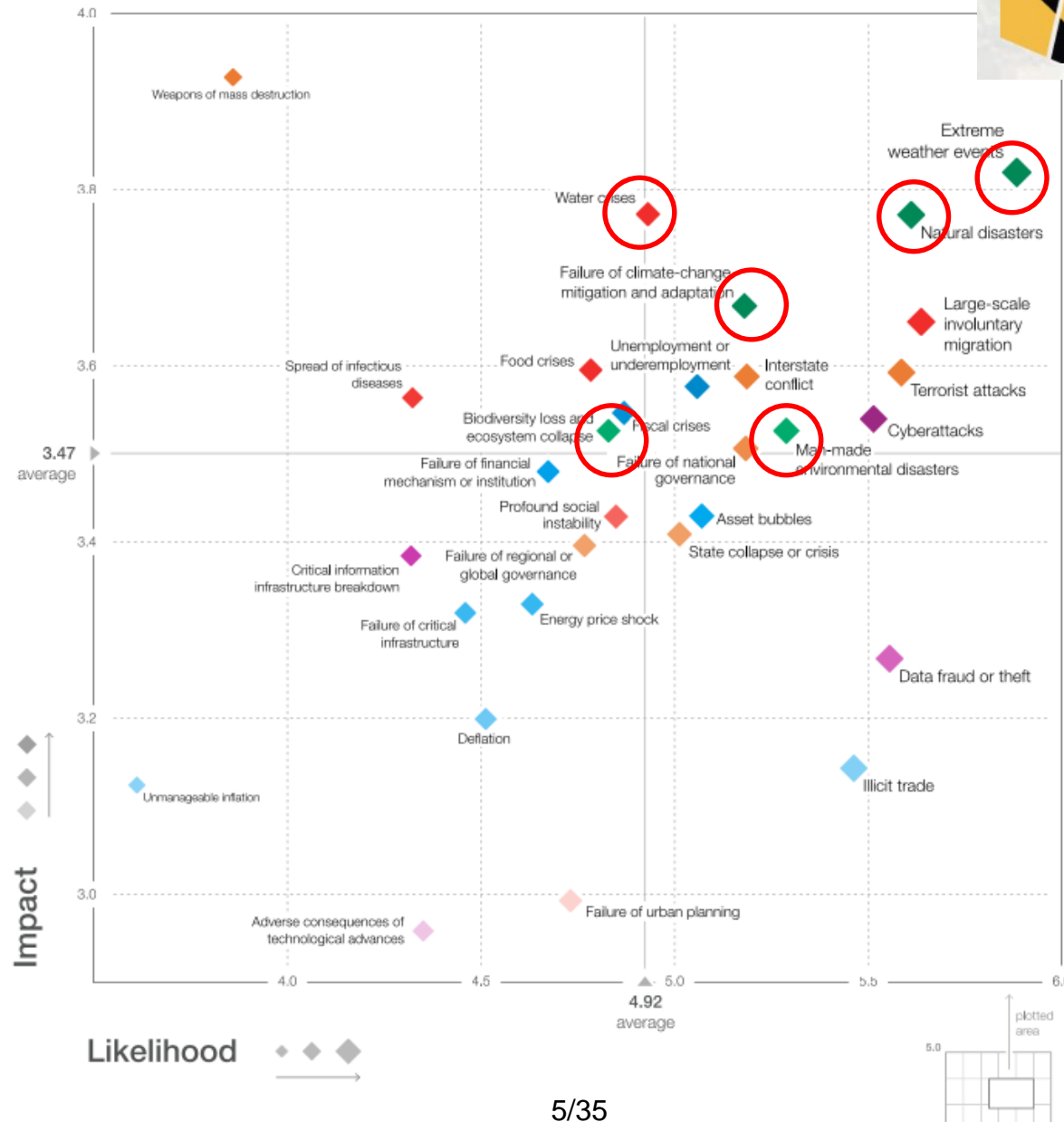
### Proposal for Development and Implementation

October 10, 2025

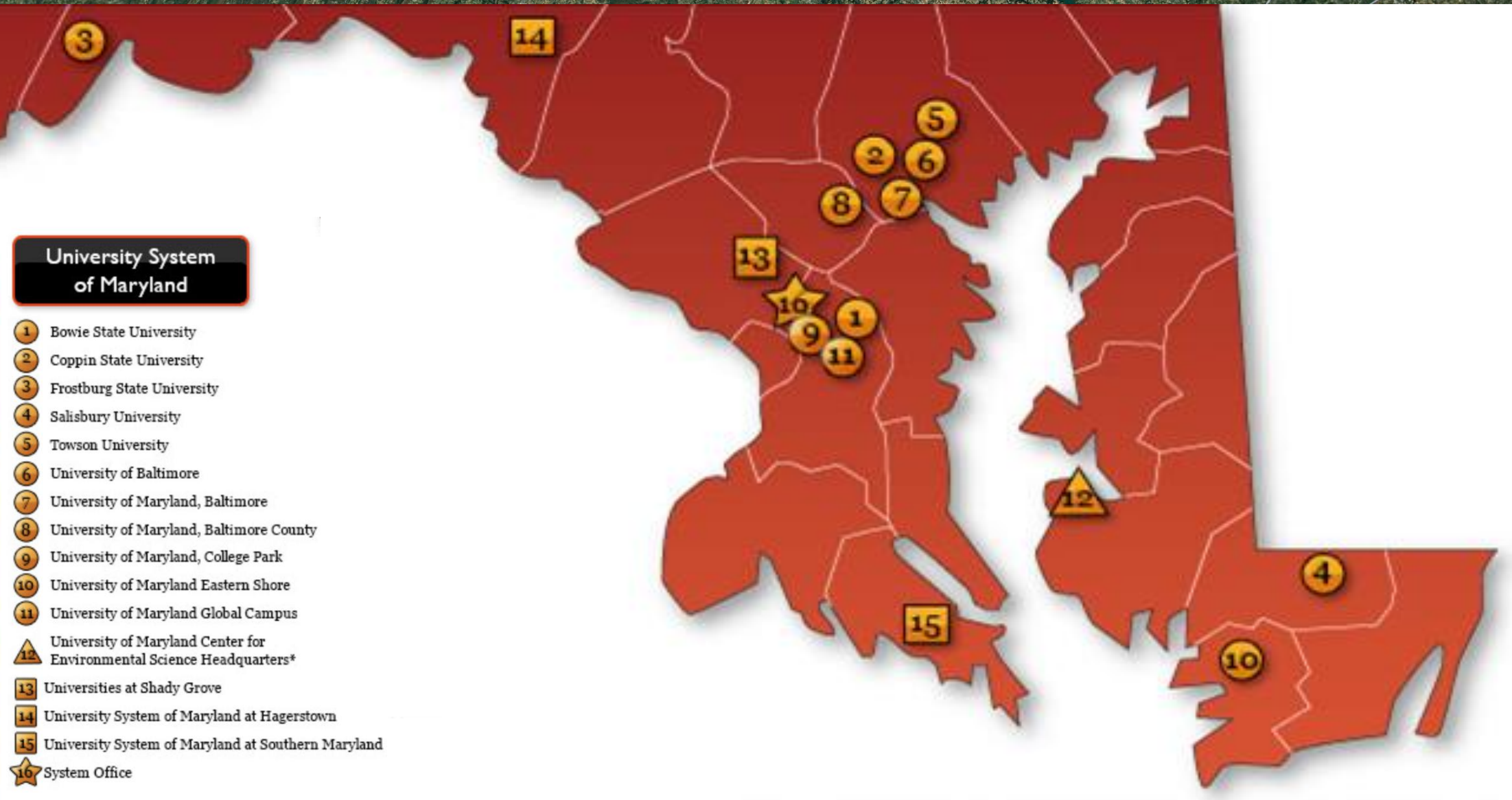




# Global Risks to Businesses (WEF)



# The USM and the Opportunity for Sustainability





# Sustainability at the USM

- Sustainability in our **Vision 2030 Strategic Plan** (mid-term goal 2025-2027, and long-term goal 2027-2030 and beyond).
- Our planned Vision 2030 outcomes focus on reducing **environmental footprint** on natural resources and decrease contributions to **climate change**.
- We are going to **increase our competitive** advantage as a university system by including increased integration in the USM research and education portfolios -> **beyond operational**
- Sustainability is **good business** -> developing a **business plan** that prioritizes cost saving (e.g., energy savings, green procurement) and revenue generating (e.g., new programs, workforce development) opportunities -> **value proposition**.



# Some Examples from other Systems/Institutions

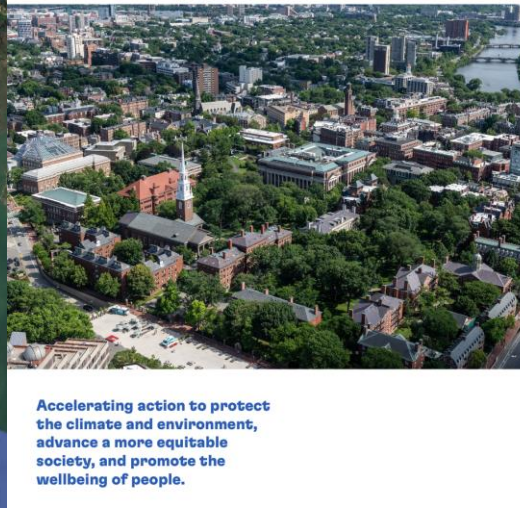
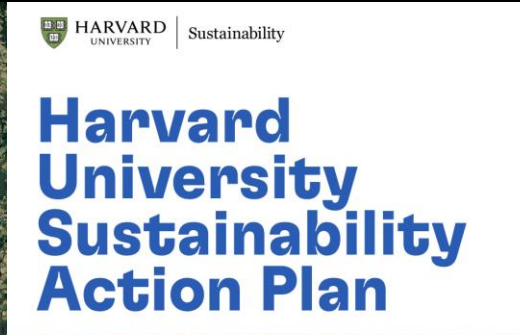
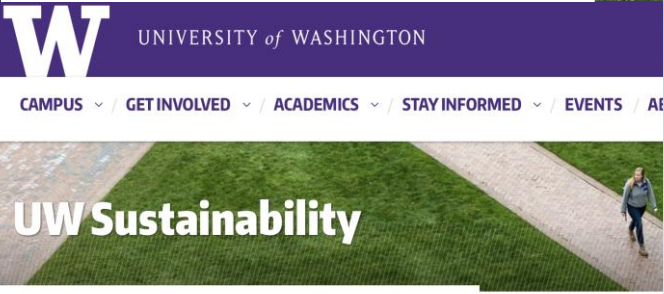


**SUNY  
CLIMATE AND  
SUSTAINABILITY  
ACTION PLAN**

**2025-2030**



THE UNIVERSITY OF ARIZONA



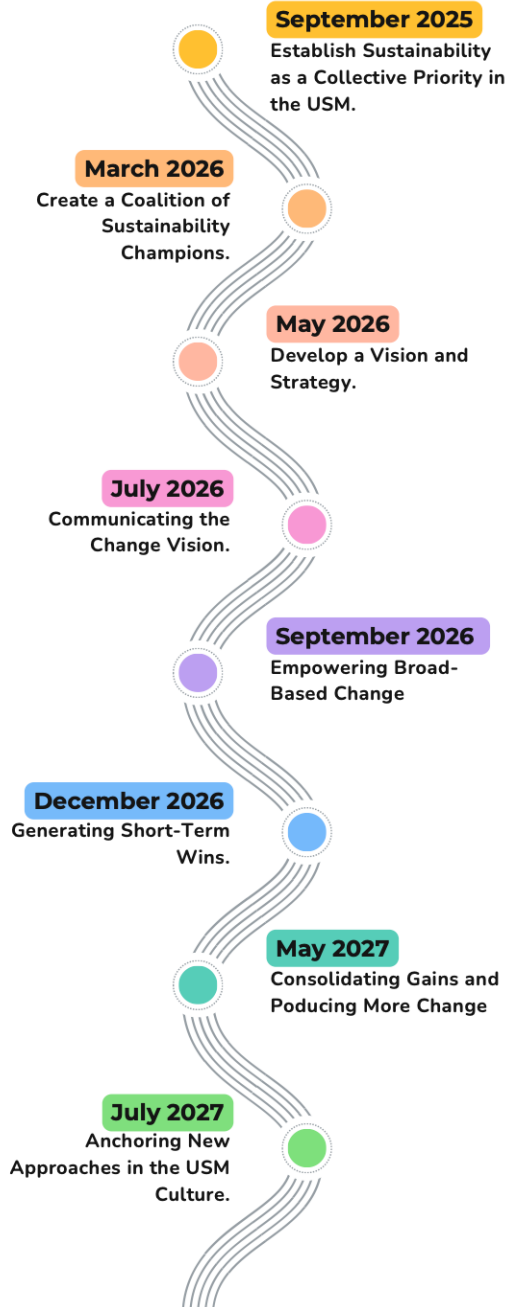


# Internal (USM) and External Scan

- All 15 USM institutions.
- Varying levels of practices and investments.
- Varying levels of awareness and perceived need.
- Good news: buy-in to the VCS role/scope.
- Bad news: maybe implications not fully realized.
- UC, SUNY, 3TX
- Harvard, Princeton, Penn, MIT, Pitt
- UMN, Boulder, ASU, Arizona, Washington, Virginia, GMU



## USM Sustainability Roadmap



## Developing the USM SAP

- 2-year+ process
- Organic, done mostly in house, so it sticks.
- Iterative, adaptive framework -> VCS "office"
- On the operations side, focus on tiered emissions approach: Scope 1 (direct), 2 (indirect), 3 (supply chain).
- Risk factors: engagement/buy-in, investing in change management, data to justify the business case.
- Assessment, evaluation and KPIs: reconcile internal goals/aspirations with established approaches, e.g., AASHE (UMD, UMBC, UMB), SCUP, UN/SDGs.

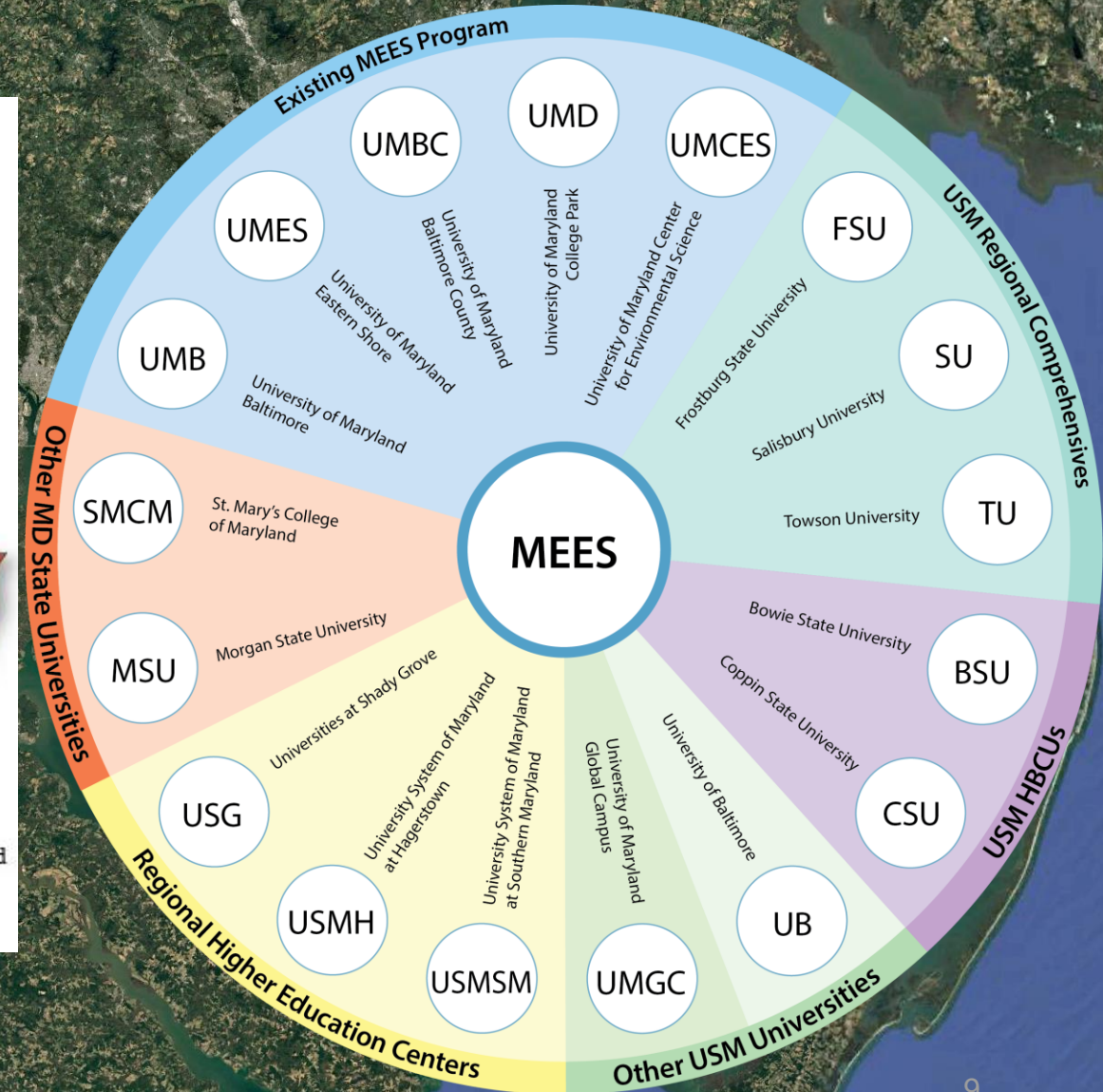
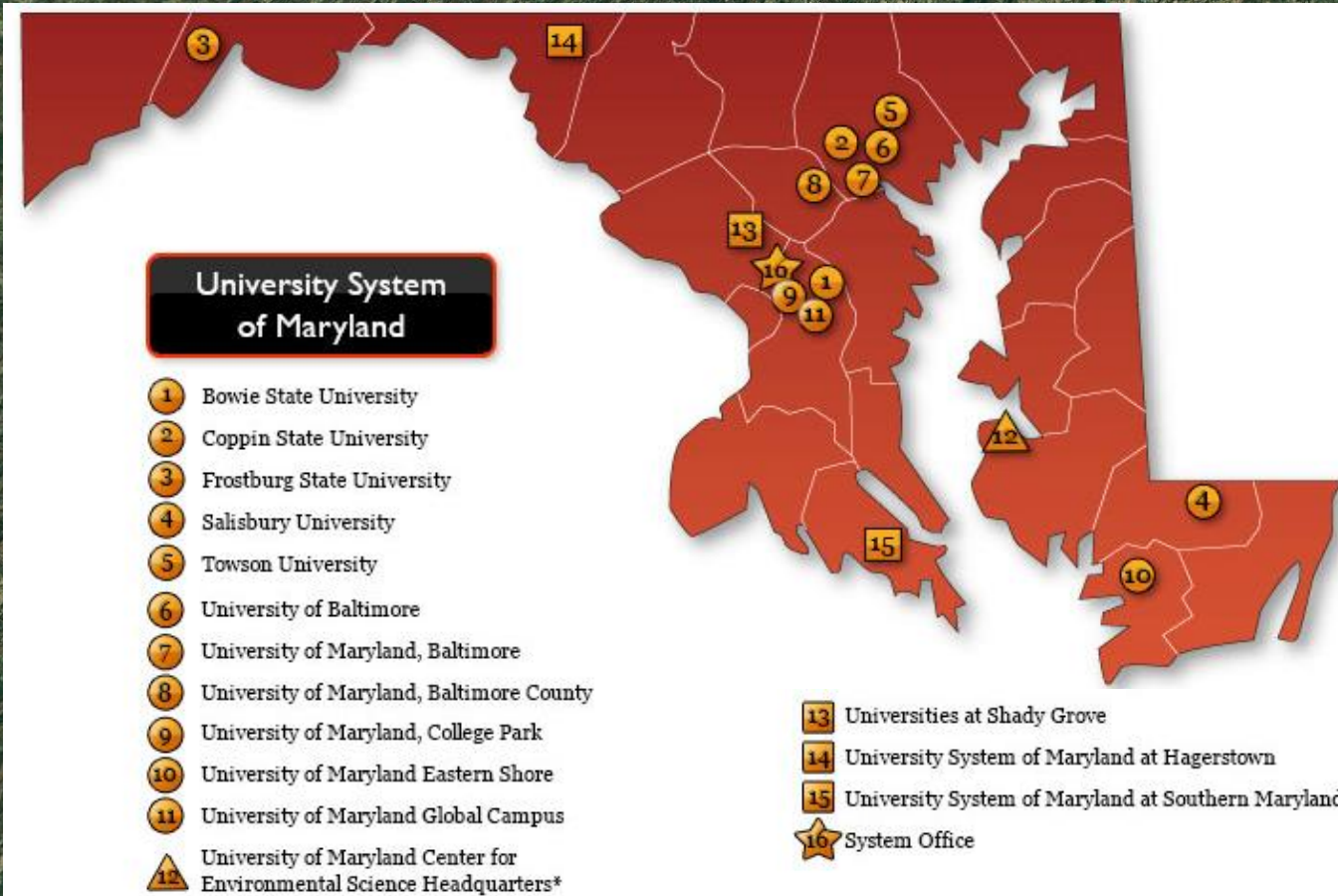


# Next Steps and Additional Considerations

- Vetting, adapting and refining the proposal.
- Several stages: USMO, Presidents, BOR.
- Engage with other parts of the state that are working on similar tasks: MDE, DNR, MDA, MEA, Governor's office.
- In the meantime, work continues, particularly on data gathering and coalition building.
- Building of the teams and planning that need to contribute to this effort: organizational, marketing, financial, communications -> leverage the USMO.



# MEEES as the Environmental Education Hub for the USM





# Global Risks to Businesses (WEF, 2025)

## Risk categories

- Economic
- Environmental
- Geopolitical
- Societal
- Technological

## 2 years

1 <sup>st</sup>	Misinformation and disinformation
2 <sup>nd</sup>	Extreme weather events
3 <sup>rd</sup>	State-based armed conflict
4 <sup>th</sup>	Societal polarization
5 <sup>th</sup>	Cyber espionage and warfare
6 <sup>th</sup>	Pollution
7 <sup>th</sup>	Inequality
8 <sup>th</sup>	Involuntary migration or displacement
9 <sup>th</sup>	Geoeconomic confrontation
10 <sup>th</sup>	Erosion of human rights and/or civic freedoms

## 10 years

1 <sup>st</sup>	Extreme weather events
2 <sup>nd</sup>	Biodiversity loss and ecosystem collapse
3 <sup>rd</sup>	Critical change to Earth systems
4 <sup>th</sup>	Natural resource shortages
5 <sup>th</sup>	Misinformation and disinformation
6 <sup>th</sup>	Adverse outcomes of AI technologies
7 <sup>th</sup>	Inequality
8 <sup>th</sup>	Societal polarization
9 <sup>th</sup>	Cyber espionage and warfare
10 <sup>th</sup>	Pollution

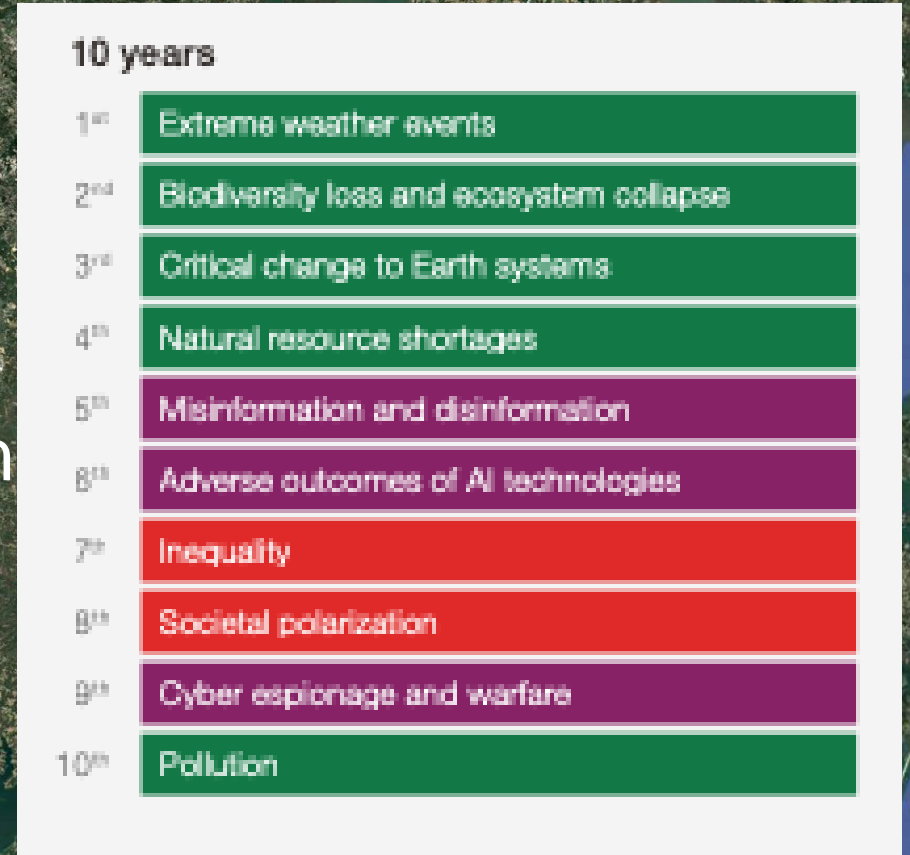
## Source

World Economic Forum Global Risks  
Perception Survey 2024-2025.



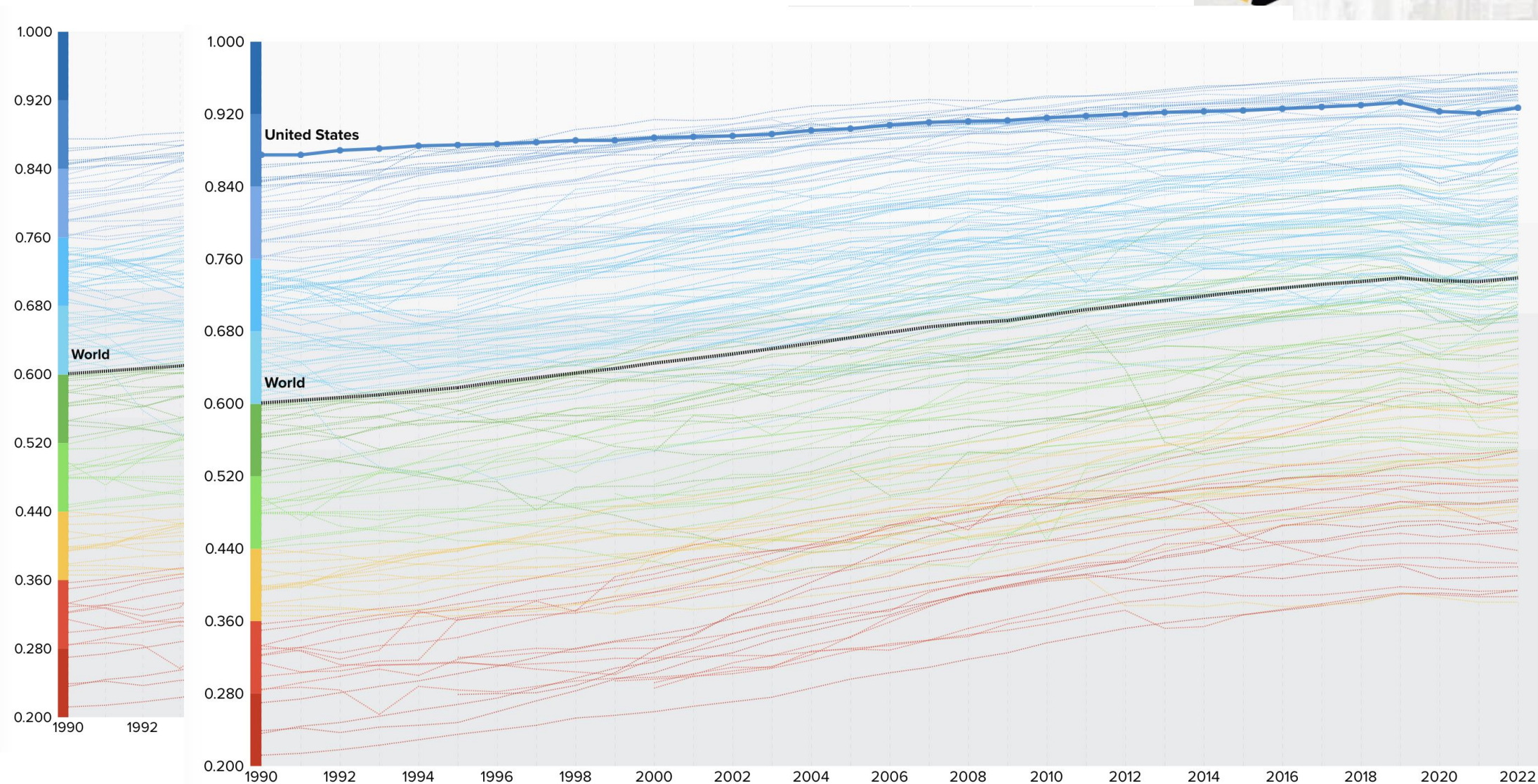
# Private Sector Engagement

- Mapping of potential sectors/customers.
- Research/Applied Opportunities: testing (\$2.2B in 2023, grow to \$3.7B by 2030); monitoring (\$5.4B in 2024, grow to \$9.7B in 2033), just in the US.
- Workforce/Educational Opportunities (online) -> 4% growth in demand 2024-34, ~>8,000 jobs/year in US (BLS)





# Human Development Index (UN)



# Thank you!

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Fernando Miralles-Wilhelm  
Vice Chancellor for Sustainability - USM  
President and Professor - UMCES  
[fernando@umces.edu](mailto:fernando@umces.edu)

# Climate Innovation Alliance

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Prepared by: Lindsay Ryan, Director of Economic Development



# Climate Innovation Alliance

## *Background*

**WHY:** Building environmental and economic resiliency in greater Maryland amidst climate change.

**HOW:** Serving as a platform to spark greater collaboration and collective impact, connecting the dots among existing initiatives & orgs.

**WHO:** 19 leadership members; welcoming academic researchers, startups, economic developers, state agencies, private investors, private companies, public entities, and more.

Website: <https://www.usmd.edu/launch/climate/>



# Climate Innovation Alliance

## *Activities & Impacts*

- Current project to articulate the economic opportunity and strategic plays for the region as a climate innovation hub.
- Generated a Climate Innovator Resource Navigator (see homepage).
- Hosted an innovation-focused DC Climate Week event in collaboration with a corporate partner.
- Share opportunities with 200+ monthly newsletter subscribers.
- Evolution from BlueTech Maryland group, which brought together 60+ individuals in late 2021.

***More coordinated, efficient resources***  
***Greater cohesion and a stronger voice***

### Looking Forward:

- Continue capacity-building and sustainability
- USM as member: scale reach within USM, enhance private sector engagement



# USM Innovation Collective

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Prepared by: Lindsay Ryan, Director of Economic  
Development





# USM Innovation Collective

The **USM Innovation Collective** is the constellation of resources that support inventors, innovators, and entrepreneurs.

## For the Good of ALL Marylanders

- Student, faculty, community
- Developing human capital
- Trusted access, public benefit

## Varied, Distributed, Connected

- Industry, geography, ventures
- USMO-connected leaders
- Resilient, effective, efficient



OpenAI. AI-Generated Image. Created on 12/5/24, via ChatGPT

# USM Innovation Collective

## *A Strong Base*

### *Education*

All 12 institutions support students of all ages with innovation and entrepreneurship education. Many provide venture development training and capital through competitions.



### *Discovery to Creation and Impact*

All 12 institutions create environments that foster discovery, invention, and creation with pathways to impact.



### *Venture Development*

USM adds 150+ startups each year to the portfolio that it significantly supports

- About 1/3 are led by USM students
- 16% are translating USM research discoveries into impact

# USM Innovation Collective

## *23+ Resources, Many OPEN*



- **Research & Innovation.** Includes the Quantum Startup Foundry, U.S. Harmful Algal Bloom Control Incubator, and MIPS program. Also the IMET Ratcliffe Environmental Entrepreneur Fellowship, Maryland and Baltimore Innovation Initiatives, and the UMB/UMBC NIH REACH Hub



- **Training & Talent.** Includes the Innovation Extension and I-Corps, Maryland Technical Internship Program, Small Business Development Centers, Legal Clinics, and StarTUp Accelerator, and Maryland New Venture Program

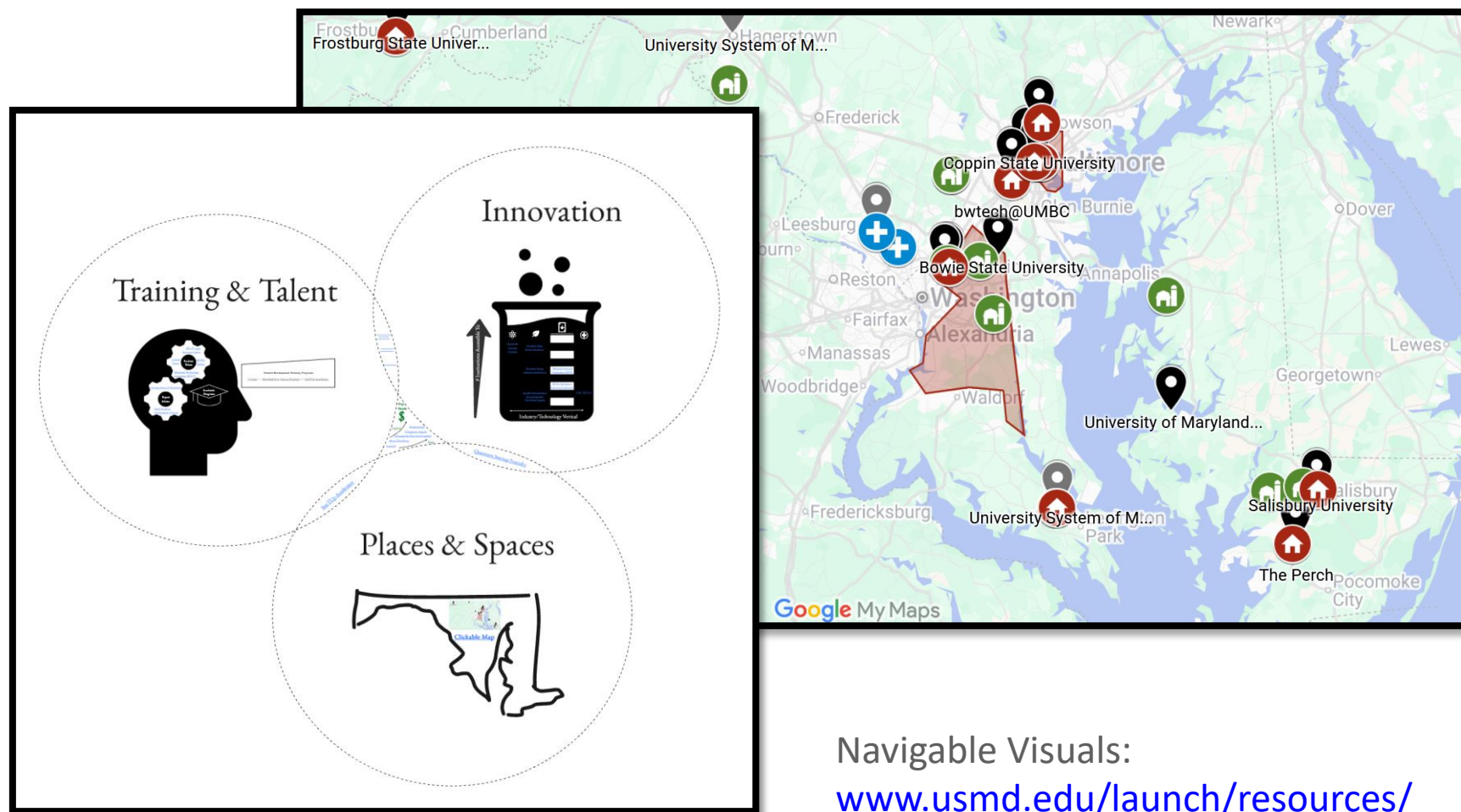


- **Places & Spaces.** Bolstering local economies. Includes the Baltimore Fund, Discovery Fund, StarTUp Armory and Accelerator, SU Shore Hatchery, and Incubators, Research Parks, and Innovation Districts



- **Gap Funding.** Includes the Launch Fund, SU Shore Hatchery, Momentum Fund, and Dingman Angels, and Chesapeake Bay Seed Capital Fund

# USM Innovation Collective



Navigable Visuals:

[www.usmd.edu/launch/resources/](http://www.usmd.edu/launch/resources/)

# USM Innovation Collective

## ***Moving to Preeminence: Updates***

1. Grow research-to-impact capacity
  - *Competitive in-state support (<https://www.tedcomd.com/news-events/press-releases/2025/tedcos-maryland-innovation-initiative-announces-first-round>), but navigating federal impacts*
  - *Growth in research leadership teams is providing opportunity*
2. Maintain connectivity through growth of the USM Innovation Collective
  - *Leadership retreats*
  - *25+ individuals collaborating for efficiency and effectiveness*
  - *Progress toward further intelligent design (e.g., gaps, redundancies)*
3. Explore partnerships with philanthropic and private sector partners in and outside of Maryland

# Appendix: Venture Development Report *January through July of 2025*

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Prepared by: Lindsay Ryan, Director of Economic  
Development





# Ventures Supported

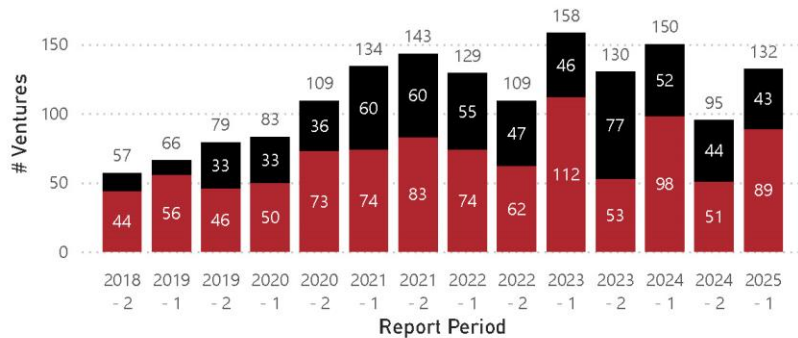
USM Status

All

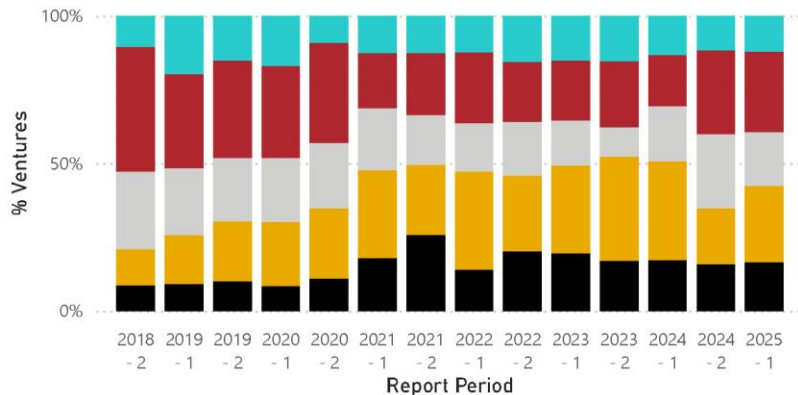
Report Period

All

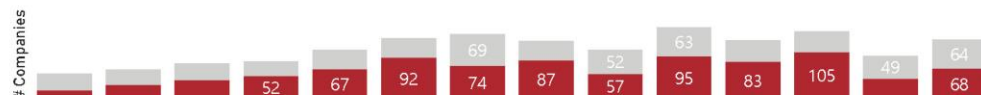
USM Status ● NEW TO USM ● RE-ENGAGED



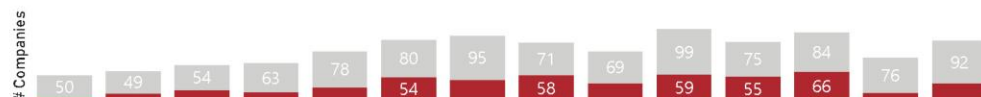
Industry ● Consulting & ... ● Consumer ... ● Information ... ● Life Science ● Sustainabili...



USM Founders (Red)



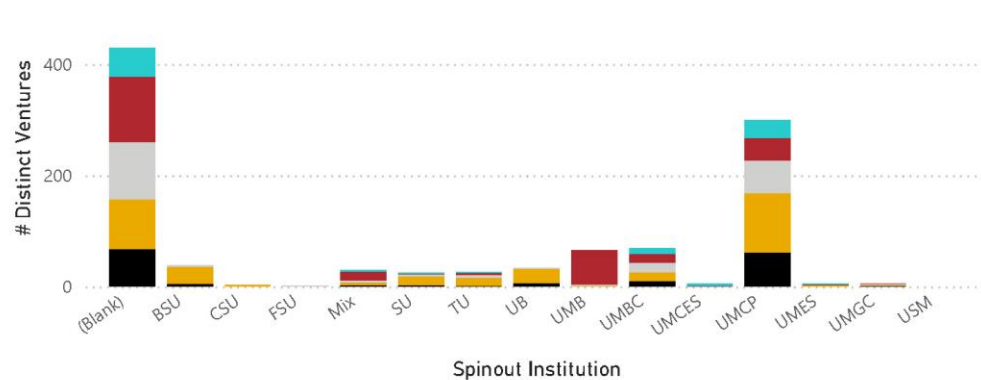
Student Founders (Red)



USM IP (Red)



Industry ● Consulting & Other ● Consumer & Food ● Information Technol... ● Life Science ● Sustainability & ...



# Ventures Supported

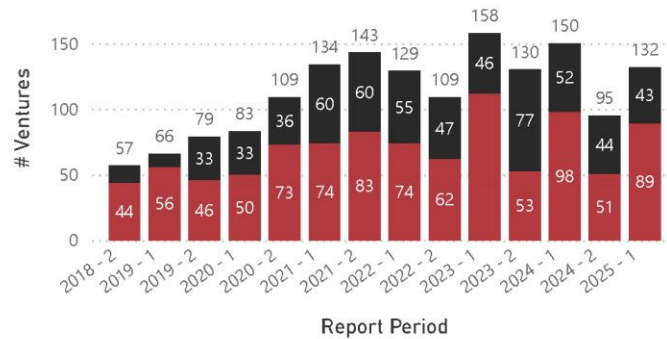
USM Status

All

Report Period

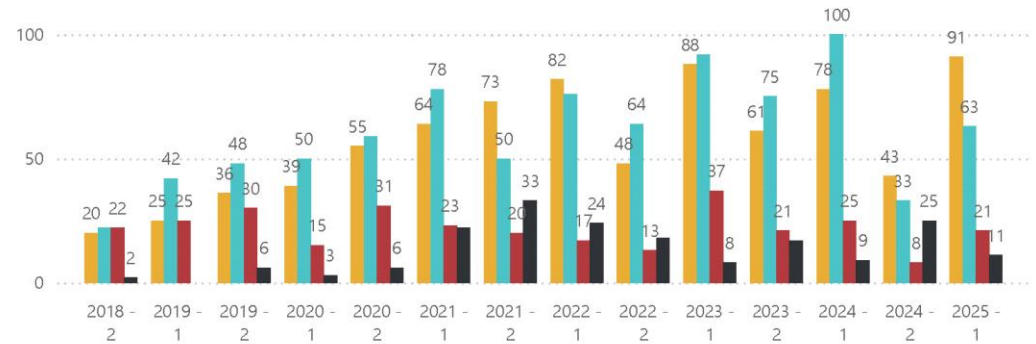
All

USM Status ● NEW TO USM ● RE-ENGAGED



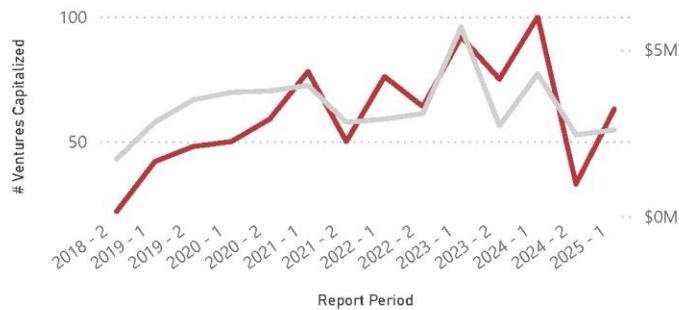
## Support by Type

● Programming & Mentoring ● Capital (In-Kind and Cash) ● Incubator and/or Physical Space ● Talent Assistance



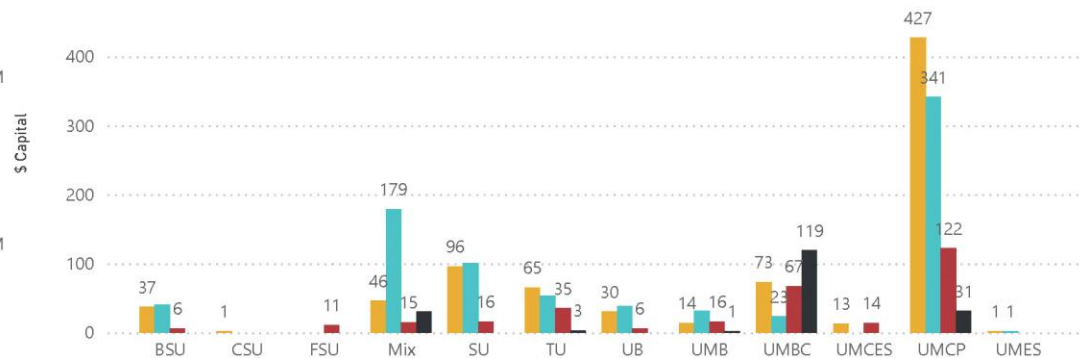
## Capital Support

● # Ventures Capitalized ● \$ Capital



## Support by Type and Institution (All-Time)

● Programming & Mentoring ● Capital (In-Kind and Cash) ● Incubator and/or Physical Space ● Talent Assistance





## Additional State-Wide Venture Support



Helps Maryland retain top tech talent by increasing the number of paid technical internships offered in the state. Administered by UMBC and funded by the State of Maryland, the program offers financial assistance to technology-based businesses, as well as state and local agencies, to hire more interns ([mtip.umbc.edu](http://mtip.umbc.edu)).

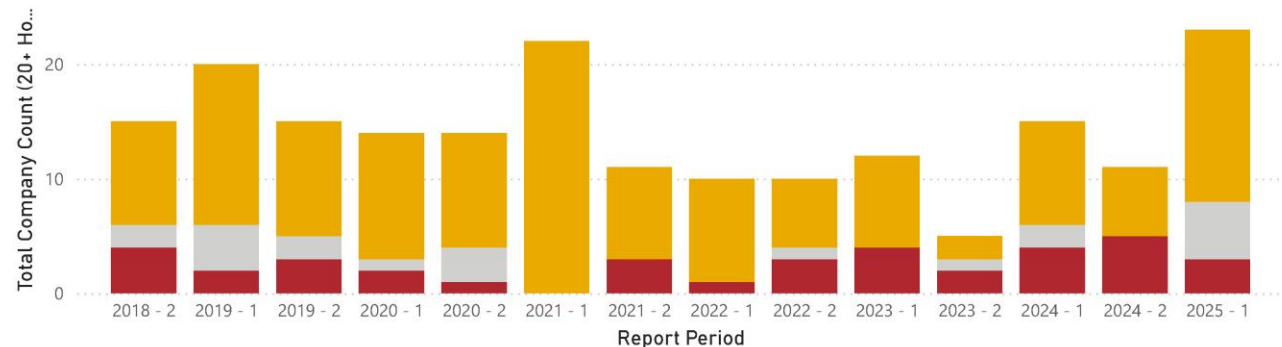
About 30% of startup participants also are USM "spinouts" or "spin-ins".



The Maryland Small Business Development Center (SBDC) is a public-private partnership between the U.S. Small Business Administration, the State of Maryland and UMCP. The Maryland network hosts entrepreneurial assistance programs at a number of USM institutions.

### New Business Starts Receiving Intensive Mentoring

University ● Frostburg State University (FSU) ● Salisbury University (SU) ● University of Maryland



# Maryland Momentum Fund

**Board of Regents  
Q3 2025 Fund Update**

Presented By:  
Mike  
Ravenscroft  
Managing  
Director





# Fund investment activity: FY 24-25

**2 USM  
Institutions**

**\$140M co-  
invested /  
12X ratio  
leveraged  
capital**

**4 investments in FY  
24-25**

**\$840K invested**

**50% technology  
transfer**

**\$11.5M invested by  
MMF**

**\$14.4M invested by  
MMF & USM  
institutions**

**31 active portfolio  
companies, 4  
successful exits**

# Company Spotlight:



**Founded in 2016 by  
UMB faculty inventor  
Stephen Tropello,  
Critical Care  
Physician**

**Seeded by UM  
Ventures and the  
Tech Transfer Fund at  
UMB**

**Raised a successful  
Series B led by Good  
Growth Capital**

**Deployed in health  
systems nationally**



- **Direct hospital cost savings of \$15K-\$30K per patient**
- **5-9 days length of stay reduction per patient**
- **Transforming ICU patient throughput, improving patient safety, and generating true cost-savings to health systems**

**Support from tech transfer office, UM Ventures seed funding, ecosystem engagement, the VC community, and Momentum Fund.**





## Company Spotlight:

# eat omega3

Founded in 2020 by a  
UMD undergraduate  
student

Grand Prize winner of  
the 2022 Pitch  
Dingman Competition

Raised an  
oversubscribed seed  
round in 2025

National sales to K-12  
schools, universities,  
hospitals, and airlines



Support from UMD entrepreneurship resources, UMD faculty advisors, state programs, local angel and seed stage investors, and Momentum Fund.

# Market Updates: Continued Disruption

- As with NIH cuts, current DOE cuts are directly impacting Maryland companies
- High-T Tech, an MMF portfolio company, had its grant terminated and is losing approximately \$1M in funding (at least 3 other College Park programs were cut)
- If the program is not restored, the direct result will be a 50% cut to the company's engineering workforce and delay its infrastructure buildout
- These programs imperil our hardtech / energy / clean-tech startups



**Continued cuts to federal grant programs that fund early-stage technology innovation will have an outsize impact on technology transfer startups. Maryland must continue to double down on efforts to support companies building and creating jobs in our state.**



**UNIVERSITY SYSTEM  
of MARYLAND**

**Board of Regents  
Committee on Research and Economic Development  
Charge, Role, and Responsibilities  
October 10, 2025**

**Charge:**

The Committee on Research and Economic Development shall perform all necessary business and provide guidance to the Board to help deliver strategic leadership for the USM's research, economic development, technology commercialization, innovation, and entrepreneurial initiatives, programs, and policies.

**Role and Responsibilities:**

The Committee on Research and Economic Development shall consider and report or recommend to the Board of Regents on matters concerning economic development and technology commercialization, innovation and entrepreneurial initiatives, and research, including translational research and technology transfer.

Members of the Committee on Research and Economic Development are appointed annually by the Chairperson of the Board. The Committee shall meet as needed, but no fewer than four times during the fiscal year. The members of the Committee may expect to receive information for review in order to consider, and/or act on any of the following matters:

- A. Aligning resources with market demand
- B. Leveraging USM resources through collaborations
- C. Enhancing partnerships with industry, state, and federal entities
- D. Strengthening the USM Research and Innovation ecosystem, including engaging with research funding and commercialization partners, enhancing research administration and compliance infrastructure, and fostering excellence in scholarship, research, creative, and innovation
- E. Strengthening the USM entrepreneurial ecosystem, including engaging the investment community and enhancing access to capital for USM affiliated startups and innovators