UNIVERSITY SYSTEM of MARYLAND

Board of Regents
Committee on Research and Economic Development
2/20/2026
Zoom

AGENDA FOR PUBLIC/CLOSED SESSION

Call to Order		Chair Bill Wood
1.	Approval of Minutes	Regent Bill Wood
2.	Highlights on Research Excellence Across the USM	Vice Chancellor for Research and Economic Development Michele Masucci
3.	Metrics for Research and Economic Development	Vice Chancellor for Research and Economic Development Michele Masucci Executive Director of Economic Development Lindsay Ryan Director of Research Development Julia Chadwick
4.	Metrics as a Driver of Impact	Vice Chancellor for Research and Economic Development Michele Masucci

5. Discussion Topics

   a) Economic Impacts of Research

   b) Research and Economic Development Lab Visits Over the Summer

   c) Research and Economic Development Policies

UNIVERSITY SYSTEM
of MARYLAND

BOARD OF REGENTS
COMMITTEE ON Research and Economic Development
1/9/2026
Meeting via Video and Conference Call

Minutes of the Public Session

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 10:00 a.m. on 1/9/2026 via Zoom.

Those in attendance included Regents Bill Wood, Anwer Hasan, Robert Hur, Dhruvak Mirani, Michele Speaks; Chair Linda Gooden; Vice Chancellors Michele Masucci, Mike Sandler, and Timothy Minor; Lindsay Ryan, Julia Chadwick, Michael Ravenscroft, Jennifer Walsh, Jeffrey Simcoe, Yvonne Harris, Michael Jensen.

1. **Approval of Minutes (action)** The Regents reviewed and approved the minutes for the November 21 meeting of the Research and Economic Development Committee.

(Regent Speaks moved recommendation, seconded by Regent Mirani; approved)
Vote Count = Yeas: 6 Nays: 0 Abstentions: 0

2. **Research Report from Frostburg State University (information)** Senior Associate and Vice President of FSU's Division of Advancement and Regional Engagement Jennifer Walsh and Executive Director of the Frostburg Outdoor Recreation Economy Institute Jeffrey Simcoe gave the research report for Frostburg State University to the Research and Economic Development Committee. Senior Associate Walsh and Executive Director Simcoe highlighted strides FSU has made in furthering Maryland's outdoor recreation economy, focusing on the establishment of the Frostburg Outdoor Recreation Economy Institute (FOREI) and the Outdoor Business Alliance of Appalachia Maryland (OBAAM). All meeting materials are available on the USM website.

3. **Research Report from Bowie State University (information)** Vice President for Research and Innovation Yvonne Harris gave the research report for Bowie State University to the Research and Economic Development Committee. Vice President Harris provided an overview of Bowie State University's student enrollment data from 2025. She also covered Bowie State University's research institutes, notable research projects in biotechnology, artificial intelligence, and cyber security, and research awards and expenditures. Vice President Harris provided data on Bowie State's research awards and expenditures year-by-year from 2021 to 2025, breaking down funding by source and allocation, and highlighting Bowie State's path to becoming and R2 research institution. All meeting materials are available on the USM website.

4. **Salisbury University Innovation Update (information)** Executive Director of Entrepreneurship Michael Jensen provided an update on tech-based economic development initiatives at Salisbury University to the Research and Economic Development Committee. Salisbury University previously gave a research report to the committee on December 10, 2024. Since then, Salisbury

University received a TEDCO Equitech award that allowed for the expansion of several SU technology projects and initiatives. Executive Director Jensen focused on how the $800k award is being allocated on things like the Computer Visioning System for Chick Counting that began with an EPIIC grant, expanding product prototyping and training services, expanding student entrepreneurship competitions, and creating a new Innovation Readiness online training program. All meeting materials are available on the USM Website.

5. **Research Landscape Update (information)** Vice Chancellor for Research and Economic Development Michele Masucci provided an update on the research landscape to the Research and Economic Development Committee. Vice Chancellor Masucci spoke about the NSF survey report for FY2024. In the NSF report, which reports on the previous fiscal year, 10 out of 12 USM universities had enough research expenditures to qualify as a research institution by the Carnegie classifications model. Vice Chancellor Masucci highlighted that all USM institutions now report their research data to the Higher Education Research Development (HERD) survey. Vice Chancellor Masucci also briefly spoke about a joint house/senate committee mini-omnibus that would allow level-funding for most federal science and research agencies should it pass. Vice Chancellor Masucci ended by mentioning the upcoming Research and Economic Development Partners meeting sponsored by TEDCO on January 16, 2026, and the Trust in Science Symposium on March 27, 2026, at UMB's 4MLK building.

6. **Convene (action)** Regent Wood read the closing statement and opened the floor for a motion to adjourn.

(Regent Hasan moved recommendation, seconded by Regent Hur; approved)

Vote Count = Yeas: 6 Nays: 0 Abstentions: 0

The public meeting was adjourned at 11:21 p.m.

Respectfully submitted,

Committee Chair William Wood
Chair, Committee on Research and Economic Development

Office of the Vice Chancellor for Research and Economic Development

Advancing USM Preeminence through Research and Economic Development

Board of Regents Committee on Research and Economic Development

Michele Masucci, Lindsay Ryan, Julia Chadwick

Feb 20, 2026

University System of Maryland

Agenda

1. Action Item: Minutes Approval – Regent Bill Wood
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University System of Maryland

USM Policy and Reporting

Management of BOR Research and Economic Development Committee, reporting metrics for research and development to USM, convening shared governance entities connected to R&D, oversight of USM policies related to research and commercialization

USM Research, Commercialization, and Compliance Administration

Provide support and guidance to the USM and its institutions on grant submission, management, compliance, opportunities, research security, protection of intellectual property, and reporting requirements

USM-Wide Extension Programs

Provide guidance, technical support, and advocacy for USM and statewide research and economic development programs that support investigators, research staff, innovators, entrepreneurs, and economic development

Convene and Connect

Fostering collaboration across stakeholder groups in research, community, industry, and system institutions related to research, innovation, economic development, and research regulatory affairs

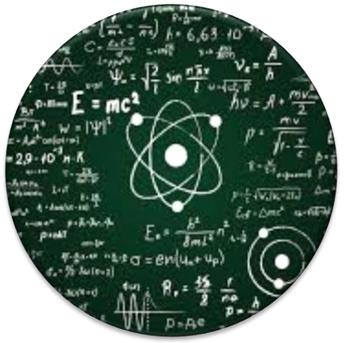
Program Development

Supporting research and economic development communities in MD

Framework for supporting R and D as a driver of impacts

University System of Maryland

Knowledge Scholarship Creative Works → **Applied Research** → **Discovery & Innovation** → **Knowledge Transfer** → **Impacts**



Advancing growth in externally sponsored research and creative activities-

Supporting growth in purpose-driven, mission research programs and collaborations

Fostering a culture of discovery, innovation, scholarship, and creative work

Advancing intellectual property through patents, licenses, and startups

Fostering economic, workforce, and societal impacts

Context for Research Development:
Rapid Growth in advancement of Science and Complexity in Research Administration

Data Driven Discovery:

Rapid growth in fields like AI, Biotech, Nanotech, Quantum, Environmental engineering, Neuro-brain interfaces, Advanced materials

Rapidly changing needs for the pace of scientific change:

Massive data storage; high throughput, distributed, edge and cloud computing; systems interoperability needs

Challenges Associated with Changes:

Need for interoperability standards, data security and privacy, ethical and regulatory frameworks to reflect evolving science

Requirements:

Investments in R & D, accessibility to scientific knowledge, global collaboration and competition, regulation of emerging tech, open science, education

EXAMPLES OF RAPIDLY EMERGING DIRECTIONS IN SCIENTIFIC RESEARCH

ADMINISTRATION ROLES AND REQUIREMENTS CONNECTED TO ACHIEVING SCIENTIFIC GOALS

Federal Agency: Workforce, complex interface with institutions of higher education, interagency inconsistencies, funding to manage priorities, regulations to manage risks

Institutions: Administrative burden of requirements, workforce issues, complex regulatory environment for higher education sector

Investigators: Rapid pace of the advancement of science, challenging pipeline of students and trainees, increased service demands at universities, complexity of managing team science

Commercial and Industry Partners: Lack of capital at early stages of development, challenge of converting IP into innovation and solutions, dominance of large-scale industry

Administration of Federal Funding for Research:
Primary driver for Shared Stakeholder Responsibilities

Institutions With Stakeholder Input: Implementation of federal programs taking into account additional state, local, institution specific requirements

Institution: Institution specific implementation processes, communication, and technical environment for implementing federal awards and programs

Federal With Stakeholder Input: Translation of federal appropriations and requirements into regulations, guidance, agency and program funding, terms and conditions

Institution with Federal Oversight: Oversight and assurance environment for adherence with federal, institutional, disciplinary, and stakeholder requirements connected to funded research

Federal: Appropriation of federal funding; enactment of federal laws pertaining to finance and regulations, budget and compliance requirements; executive public policy

Shared responsibilities environment for implementation of federally funded and regulated research at U.S. colleges and universities

USM Strategic Goals for Research and Economic Development

1. **Alignment**
   Align areas of USM Research Strengths with National Priorities

2. **Environmental Science**
   Advance our leadership in environmental sciences and deepen our international reputation for climate change and sustainability research

3. **Community Research**
   Expand community-based research to strengthen the neighborhoods, towns, and cities where our universities are based

4. **Collaborative Research**
   Grow the number of cross-institutional, interdisciplinary, and inter-professional research collaborations among USM institutions and Centers

5. **Strategic Partnerships**
   Grow the number of research partnerships with industry, agencies, NGOS, and academic institutions, domestically and internationally.

6. **Funding Diversification**
   Diversify and expand our research portfolio, attracting private-sector investment for basic research.

7. **Research for Social Good**
   Develop a nationally significant research initiative on diversity, equity, and justice; globalization; and sustainability, examining the role that race, identity, and systemic racism may play in them.

Functions of OVCRED in Support of Strategic Plan

University System of Maryland

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Program Development

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OVCRED Approach to Support USM R & ED Growth

University System of Maryland

Identify and pursue funding opportunities

Foster and develop research collaborations and partnerships

Enhance USM opportunities:
Research alignment, impact, outcomes
R & D workforce pipelines
Collaborative programs and projects across the USM
Industry partnership to support R & D

Strengthen technology transfer efforts

Enhance philanthropic engagement for R & D

USM Convened Groups

- ***Research and Economic Development Partners*** - USM OVCRED's largest group/convening; including USM professionals in the fields of research strategy and development, grants administration, commercialization, economic development, workforce development, and more to connect, collaborate, learn, and plan. All institutions participate. (Bi-annual in person)

- ***System Research Administrators Group*** - Sponsored Programs pre-award and post-award representatives to exchange information and ideas, collaborate on those issues which impact grant administration, and share best practices to support research and scholarly activities; supports all institutions. (Quarterly in person)

- ***Conflict of Interest and Commitment Leaders*** – Administrators of research COI professionals from research universities, supports all institutions. (Quarterly in person)

- ***NEW in 2024: USM Innovation Collective*** – *Leaders of venture funds, investment programs, and technical support programs for research commercialization, innovation, and startup initiatives, supports all institutions. (As needed)*

- ***NEW in 2025: Vice Presidents for Research/Research leaders*** – *Named Vice Presidents or senior leaders responsible for alignment of research across a university and R & D Development and Strategy (Weekly – virtually, Annual in person)*

- ***New in 2026: Research Advisory Council*** – *Industry, Philanthropy, Policy and Education Leaders providing input on National trends in R & D landscape*

University System of Maryland

Typical measures of research productivity used by institutions:

Publication Counts: The total number of peer-reviewed articles, books, or conference proceedings published.

Publication Citations: Publication count, citation frequency and total citations

Journal Impact Factor (JIF): A measure reflecting the yearly average number of citations to recent articles published in a specific journal.

Rates of Research Productivity: Research productivity and connectedness of scholars, teams

Fractional Scientific Strength: A measure that allocates credit for a publication based on author order, which helps in adjusting for co-authorship.

Funding/Grants: Total amount of research funding secured, number of grants received, research expenditures

Commercialization activity: Intellectual property (IP) developed and disclosed, patents received, liscenced technology, revenue generated from IP

USM Tracks:

- Federal reporting of research expenditures to NSF HERD
- Reporting of commercialization to AUTM
- Recognitions of research excellence across institutions
- Carnegie classification designations

University System of Maryland

Higher Education Research and Development (HERD) Survey2024

The HERD Survey is the primary source of information on research and development expenditures at U.S. colleges and universities.

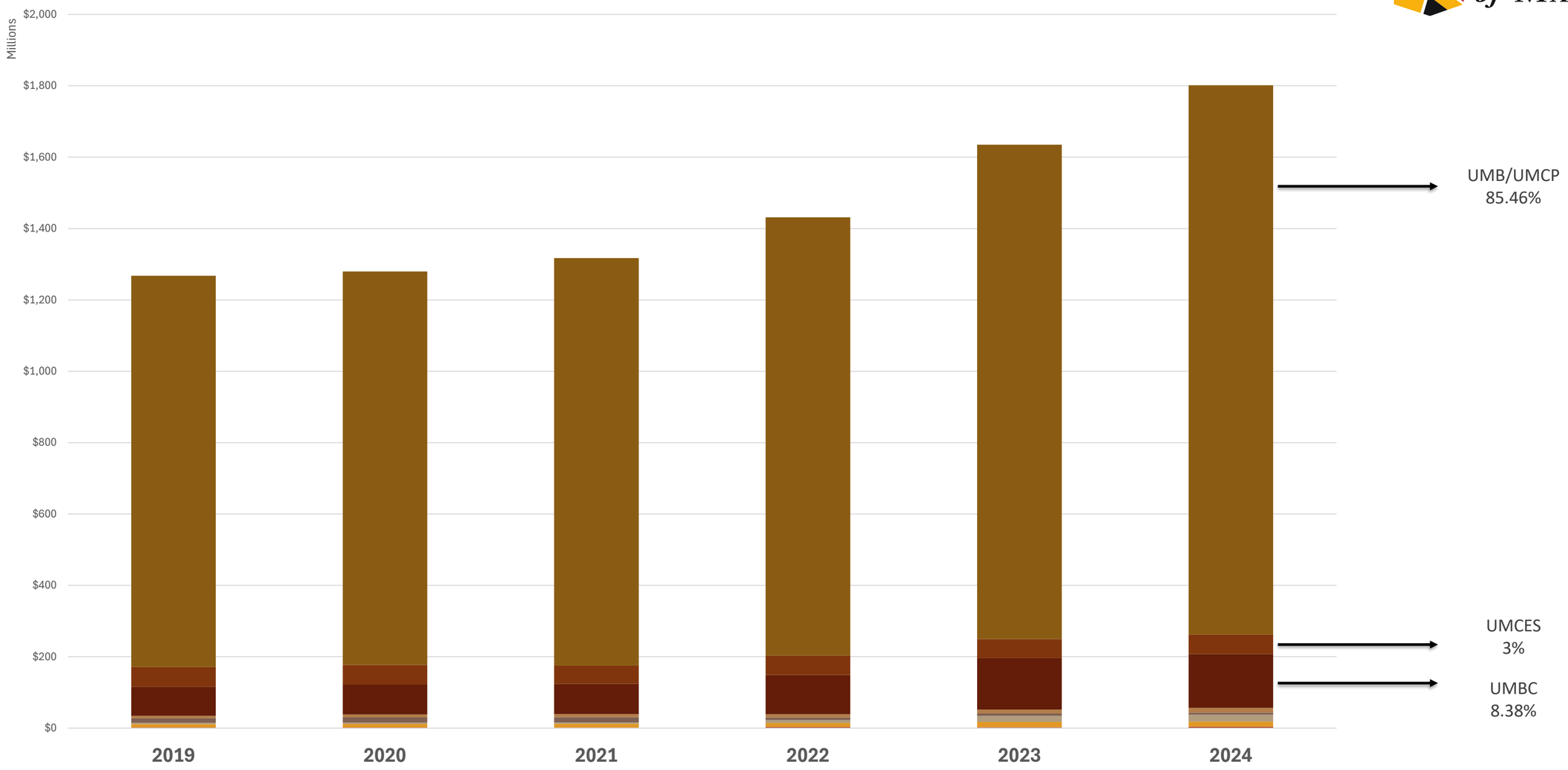
The HERD Survey is an annual census of U.S. colleges and universities that expended at least $150,000 in separately accounted-for R&D in the fiscal year. The survey collects information on R&D expenditures by field of research and source of funds and also gathers information on types of research, expenses, and headcounts of R&D personnel.

Survey Administration

The FY 2024 survey was conducted by ICF under contract to the National Center for Science and Engineering Statistics.

https://ncses.nsf.gov/surveys/higher-education-research-development/2024

USM enterprise HERD expenditures 2019-2024



- U. of Maryland (UMB and UMD)
- U. of Maryland Center for Environmental Science
- U. of Maryland Baltimore County
- U. of Maryland Eastern Shore
- U. of Baltimore
- Towson U.
- Salisbury U.
- Coppin State U.
- Bowie State U.

USM HERD expenditures 2019-2024

	FY2019 $1.350B	FY2020 – $1.148B	FY2021 – $1.407B	FY2022 - $1.550 B	FY2023 – $1.640 B	FY2024 – $1.808 B
COMPREHENSIVE UNIVERSITIES						
Bowie State U.	1,911,000	1,967,000	1,398,000	3,351,000	2,612,000	3,731,000
Coppin State U.	243,000	202,000	299,000	398,000	357,000	304,000
Salisbury U.	9,368,000	9,496,000	10,552,000	10,614,000	14,557,000	14,422,000
Towson U.	3,423,000	3,612,000	3,794,000	8,788,000	17,198,000	19,215,000
U. of Baltimore	12,451,000	15,054,000	14,672,000	6,646,000	6,615,000	5,797,000
U. of Maryland Eastern Shore	7,133,000	8,092,000	8,636,000	9,274,000	10,730,000	13,422,000
RESEARCH UNIVERSITIES						
U. of Maryland Baltimore County	80,632,000	83,867,000	84,418,000	110,319,000	144,262,000	150,908,000
U. of Maryland Center for Environmental Science*	56,033,000	54,560,000	51,201,000	53,718,000	53,233,000	54,036,000
U. of Maryland (UMB & UMCP)	1,096,600,000	1,103,062,000	1,142,264,000	1,228,550,000	1,385,302,000	1,539,520,000
SELF REPORTING UNIVERSITIES						
Frostburg State U.	4,380,893	4,351,025	4,449,179	4,818,999	5,023,819	6,543,173
U. of Maryland Global Campus			204,336	278,053	274,042	568,596

USM Enterprise*: NSF Rankings FY2024

University System of Maryland

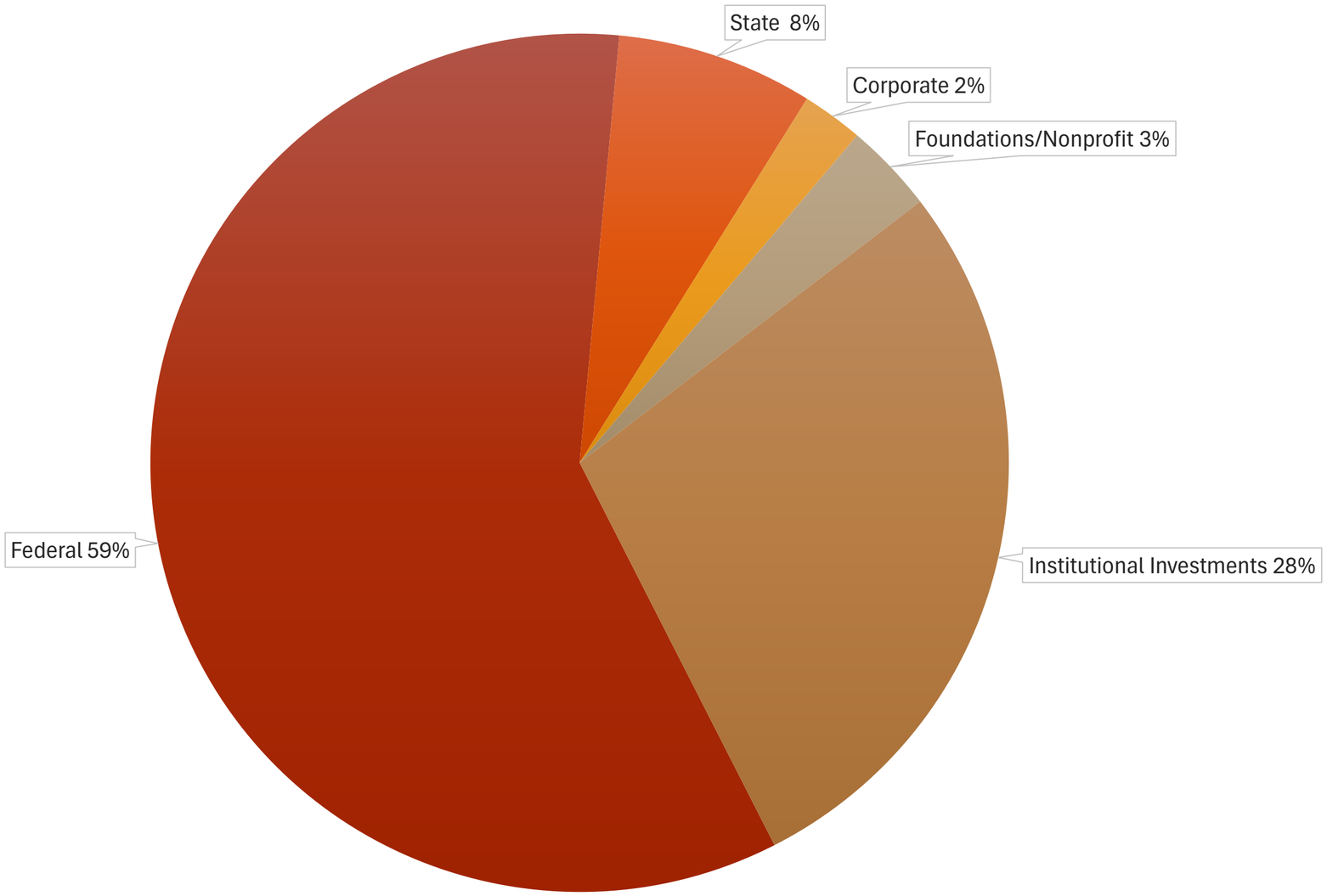
Institution	YoY Difference FY23 to FY24	FY24 HERD Ranking All Institutions	FY23 HERD Ranking All Institutions	FY24 HERD Ranking Public Institutions	FY23 HERD Ranking Public Institutions
Bowie State U.	+42.8%	↗510	531	↗341	360
Coppin State U.	-14.8%	↘869	841	↗499	-
Salisbury U.	-0.9%	↘335	331	↘245	242
Towson U.	+11.7%	↗315	319	↗230	235
U. of Baltimore	-12.4%	↘444	411	↘310	292
U of Maryland Eastern Shore	+25.1%	↗342	355	↗250	259
U. of Maryland (UMB & UMCP)	+11.1%	↗14	18	↗9	11
U. of Maryland Baltimore County	+4.6%	↘160	156	↘115	112
U. of Maryland Center for Environmental Science	+1.5%	↘232	223	↘166	160

USM Enterprise*: NSF Rankings FY2024

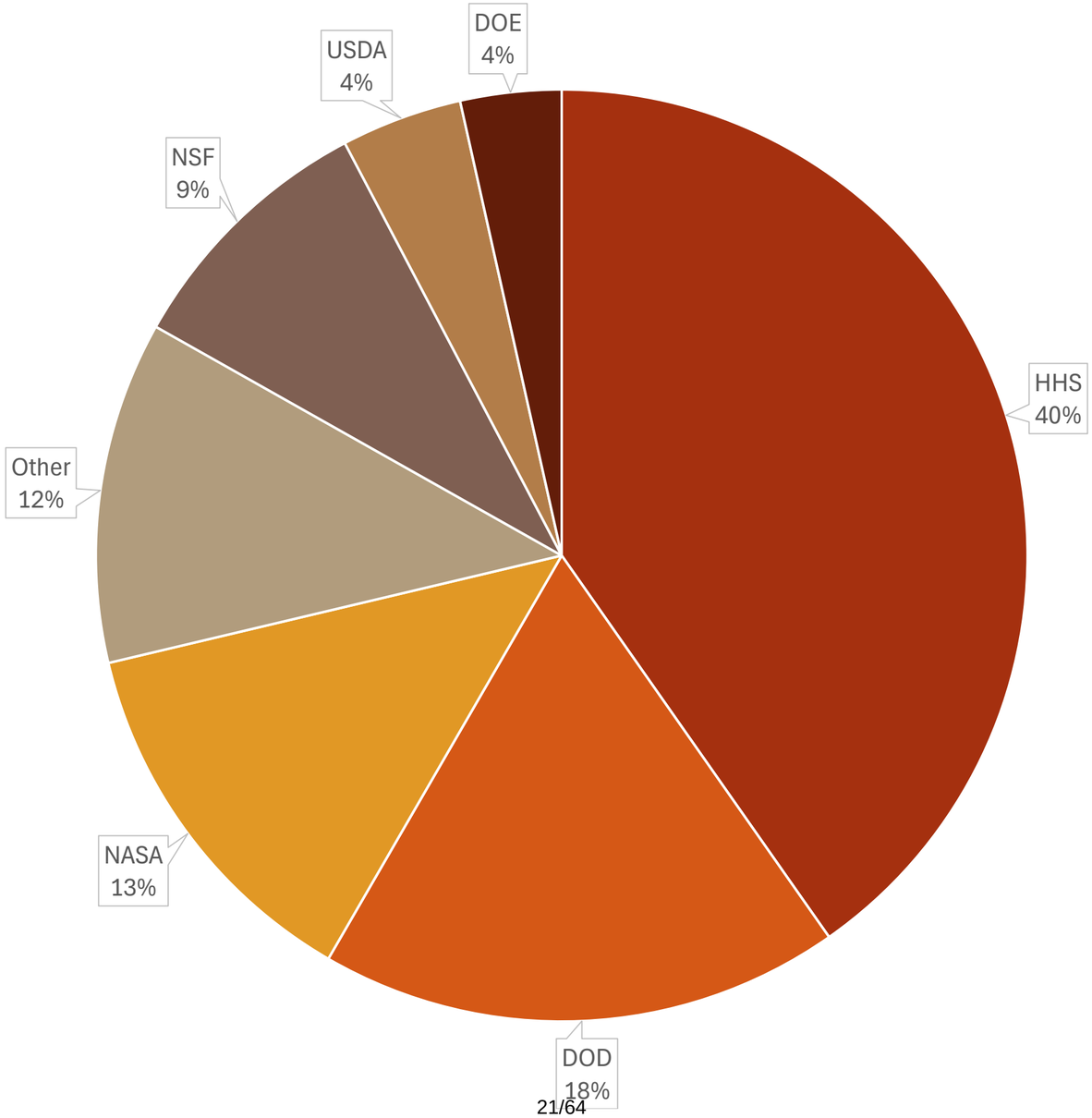
University System of Maryland

Institution	FY24 Ranking by Federal Expenditures	FY23 Ranking by Federal Expenditures	NSF Ranking by Earned Doctorates	Earned Doctorates[1]
Bowie State U.	↗400	436	#402	13.3
Coppin State U.	-	-	-	-
Salisbury U.	↘362	355	-	-
Towson U.	↗356	380	#338	27.2
U. of Baltimore	↘410	372	-	-
U. of Maryland Eastern Shore	↗292	295	#366	21.1
U. Of Maryland (UMB & UMCP)	↘15	14	UMB: #176 UMCP: #22	62.2 95.5
U. of Maryland Baltimore County	↘143	140	#161	65.4
U. Of Maryland Center for Environmental Science	↘261	259	-	-

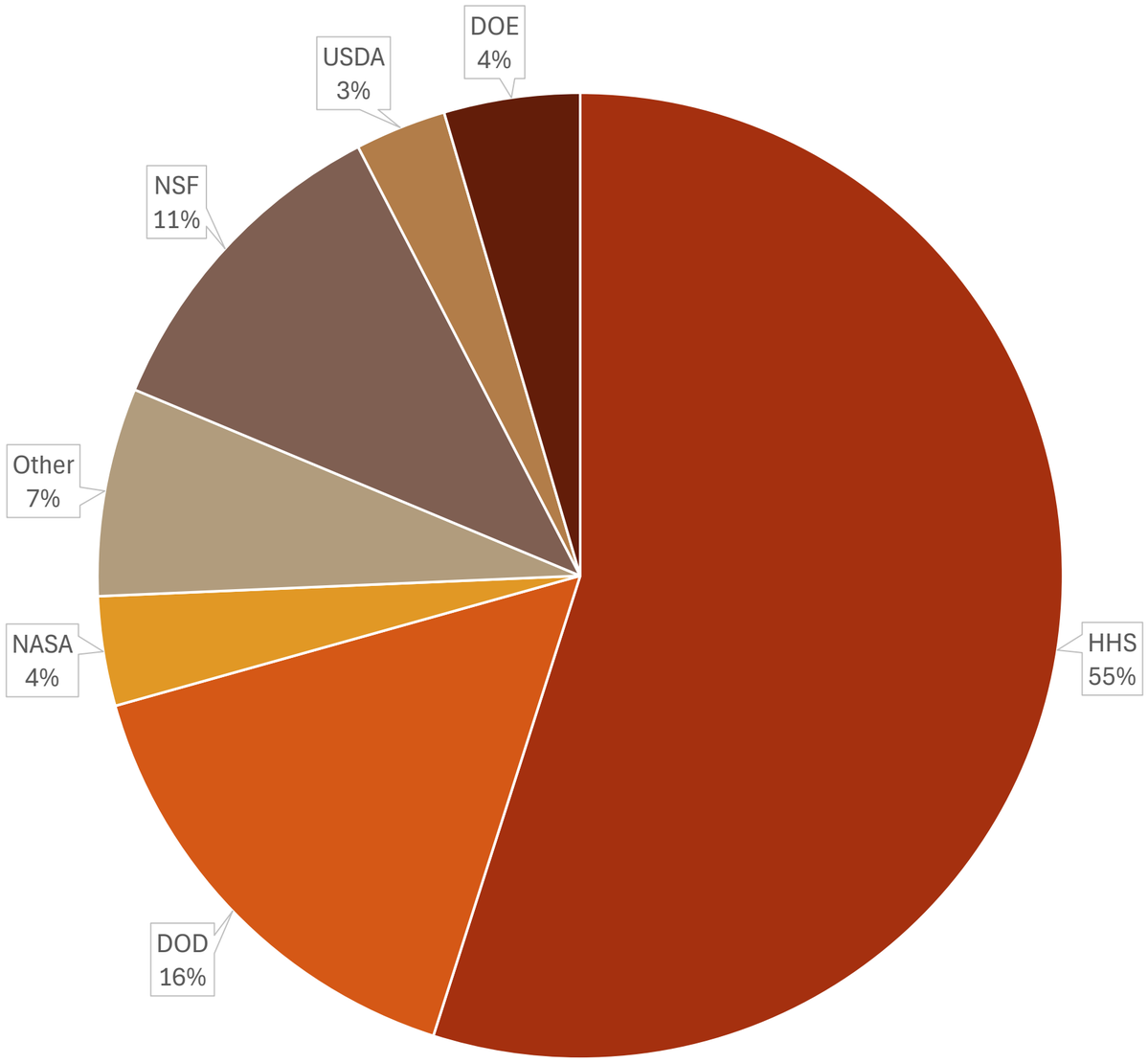
SNAPSHOTS FY2024 HERD: USM expenditures by funding source



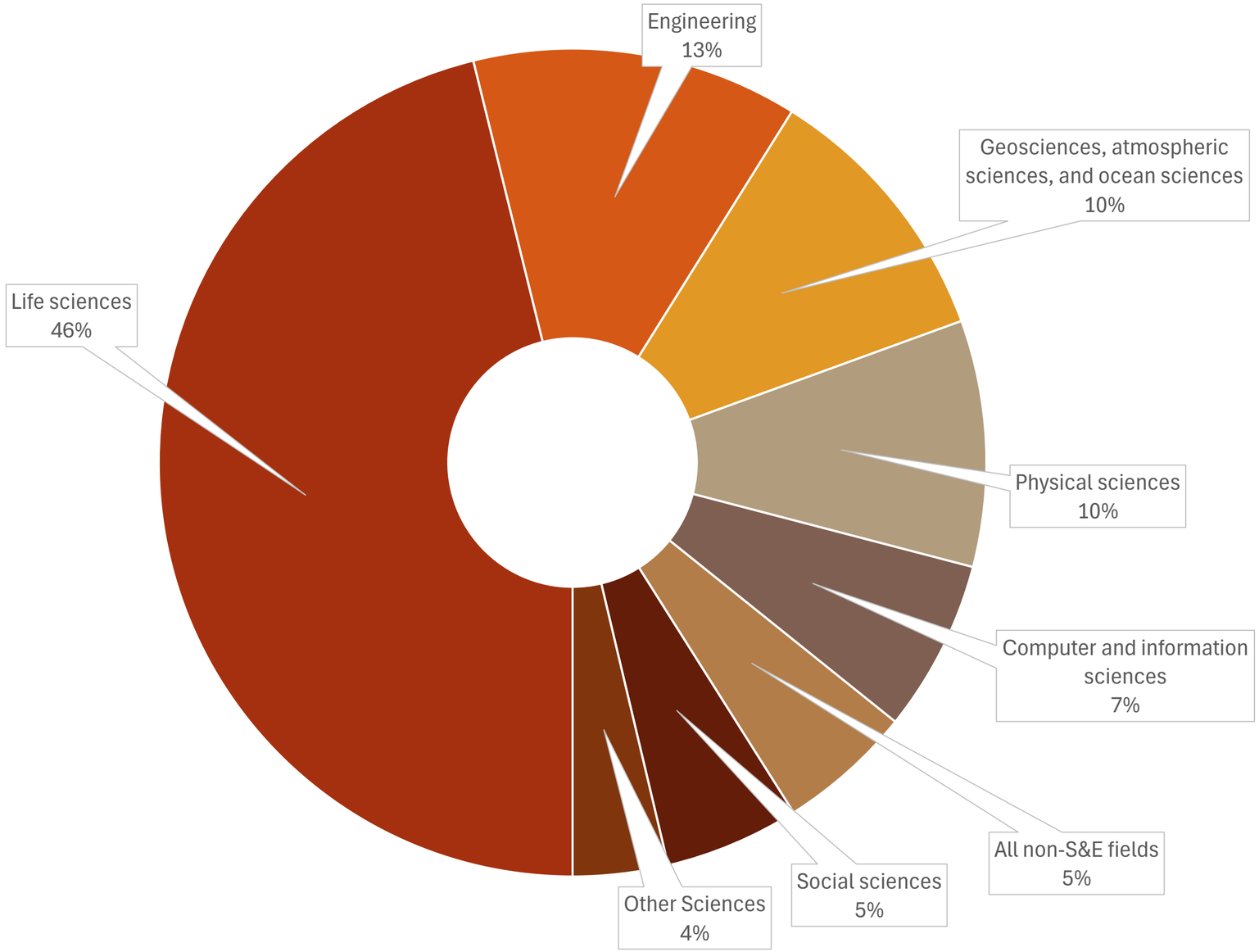
FY2024 HERD: USM Federal expenditures by Agency



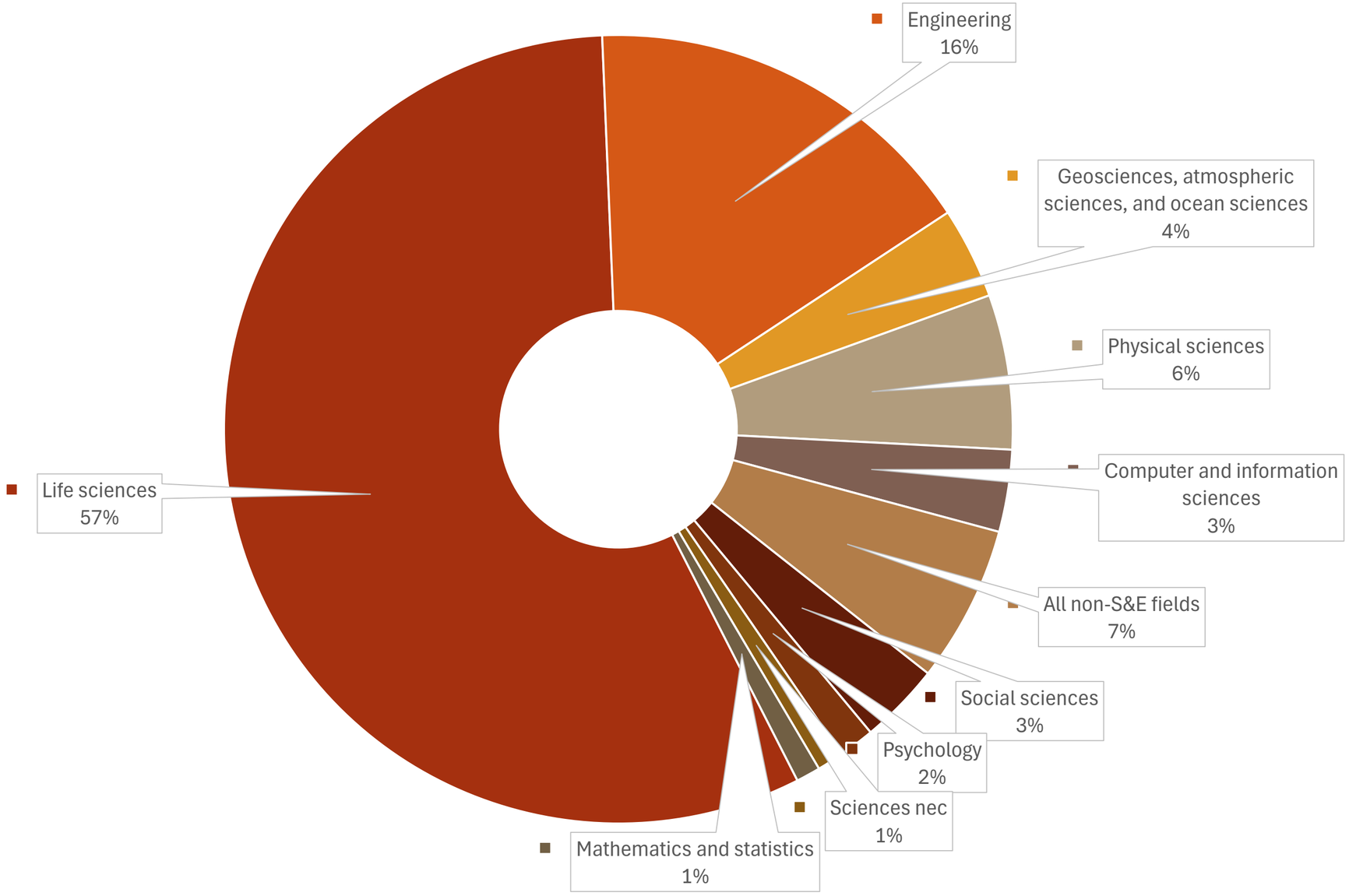
FY2024 HERD: All reporting institutions federal expenditures by agency



FY2024 HERD: USM expenditures by R&D Field



FY2024 HERD: All reporting institutions expenditures by R&D Field



Association of University Technology Managers (AUTM) Licensing Survey

The AUTM Licensing Survey is the primary source of information on intellectual property, protection, licensing, and commercialization at U.S. and Canadian universities, hospitals, and research institutions.

The AUTM Licensing Survey is collected annually from participating AUTM members each spring, which for USM corresponds to the fiscal year ending the summer before. Therefore, the activity shown in the following slides occurred between July of 2023 and June of 2024.

https://autm.net/surveys-and-tools/surveys/licensing-survey/2024licensingsurvey

Technology Transfer Metrics FY 2024

	Licenses and Options	Active Licenses	Gross License Income	Inventions Received	US Patent Applications Filed	Issued US Patents	IP Startups Formed
U. of Maryland College Park	16	195	$1,673,056	110	49	28	7
U. of Maryland Baltimore	23	251	$6,589,436	160	82	66	10
U. of Maryland Baltimore County	1	41	$52,624	36	15	11	3
USM Total*	39	487	$8,315,116	301	143	108	20

In calendar year 2025, USM ranked 11th among U.S. Public Universities in the National Academy of Inventors Worldwide Universities Granted U.S. Utility Patents List

*USM total is less than sum of institutions due to joint activity

USM Venture Development Report CY 2025

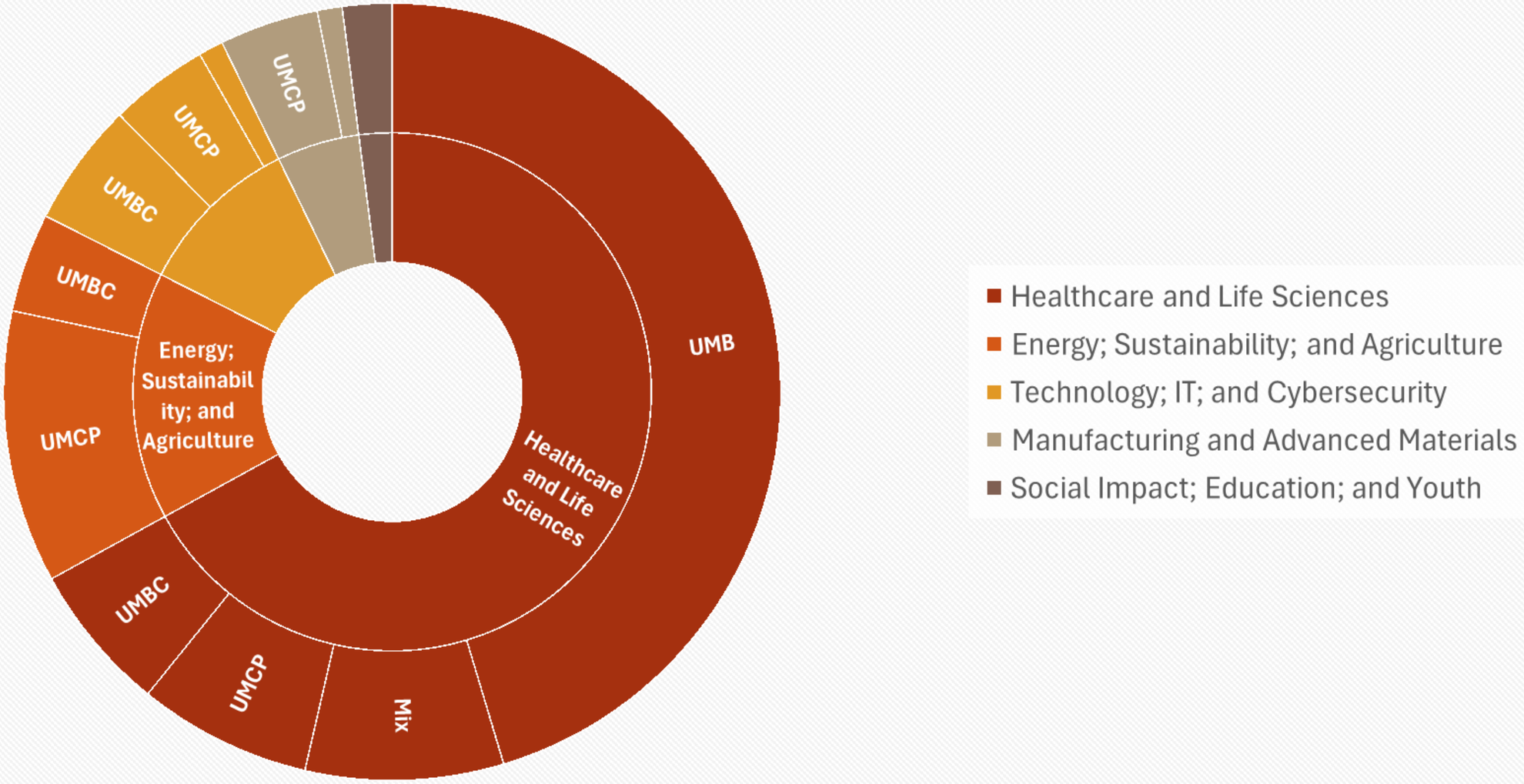
The USM Venture Development Report is the primary source of information on ventures supported across the University System of Maryland.
The USM Venture Development Report tracks which ventures USM institutions significantly report, their ties to USM in terms of founders and/or intellectual property, and how they were supported (e.g., programs, physical spaces, capital, or talent). Information is collected over two periods each year – January through June, and July through December. Ventures include non-profit and for-profit startups and small businesses; ventures reported are primarily located in the state of Maryland. It also includes startups significantly supported by the Small Business Development Centers affiliated with 3 USM institutions, which are included as number-only counts due to federal restrictions on data sharing.

Information from the Venture Development Report is shared in various ways, such as in the Managing for Results information for the Department of Management and Budget or in relation to the USM Strategic Plan. In this report, it is grouped into a calendar year and includes student ventures.

Survey Administration

The USM Venture Development Report is collected by the USM Office of Research and Economic Development.

Technology Transfer Startup Industries 2019-2025 (98 startups)

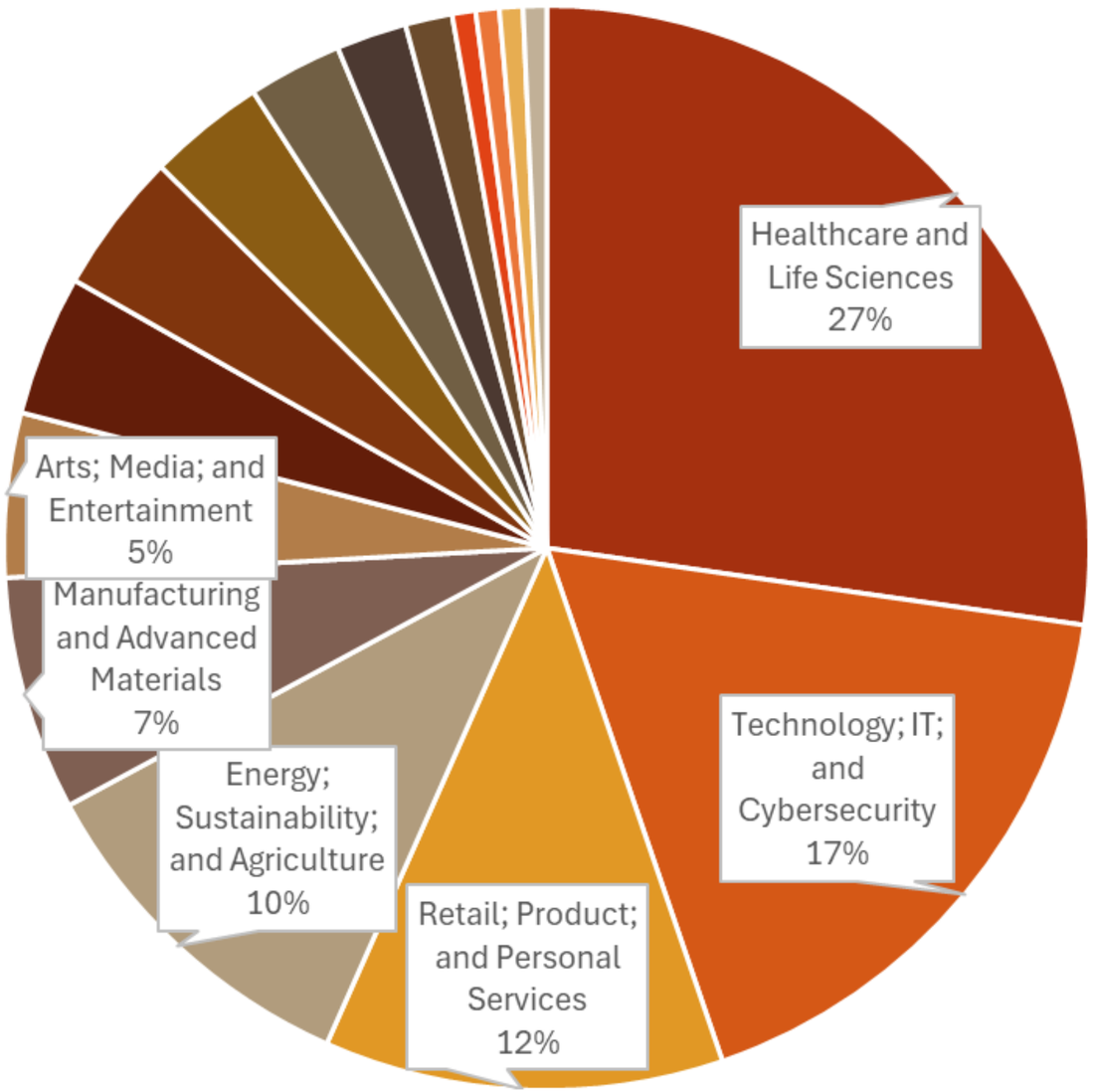


Ventured Supported by USM, CY 2025

Institution	Ventures Supported
Bowie State U.	10
Coppin State U.	0
Frostburg State U.	5
Salisbury U.	24
Towson U.	10
U. Of Baltimore	11
U. of Maryland Baltimore	27
U. Of Maryland College Park	134
U. Of Maryland Baltimore County	95
U. Of Maryland Center for Environmental Science	7
U. of Maryland Eastern Shore	0
U. of Maryland Global Campus	0
USM Office	11
USM Total*	274

*USM total is less than sum of institutions due to joint activity

Industries of Ventures Supported



4. Metrics as a driver of Impacts – Highlighted Rankings across USM

University System of Maryland

NSF HERD Survey 2024

The flagship research institutions, UMB and UMB, are identified 14 for total R & D funds, 15 for Federal Funding; 9 for Public institutions

Times Higher Educational World University Rankings 2026

University of Maryland College Park is ranked 116th; UMBC is ranked in the 601-800th category based on teaching, research, citations, industry income, and international outlooks

Carnegie Classification of Institutions of Higher Ed

USM has 3 R1 designations and 7 Community Engagement Classified campuses

Webometrics Rankings

UMD 31 in US, 53 in world

UMBC 171 – US

Towson - 257

UMCES 317 – US

Salisbury – 426

UMES - 2822

Faculty Excellence in Research

National Academy of Sciences	19 members representing 3 USM universities
National Academy of Medicine	12 members representing 2 USM universities
National Academy of Engineering	11 members representing 2 USM universities
NAI National Academy of Inventors	21 members representing 2 USM universities

Faculty & Student Excellence in Research

FULBRIGHT

In 2025-26, 18 Fulbright U.S. Students &
8 Fulbright U.S. Scholars

AMERICAN ACADEMY OF ARTS & SCIENCES

19 members elected from 2 USM universities

NATIONAL ACADEMY of EDUCATION

6 members elected from 2 USM universities

Office of the Vice Chancellor for Research and Economic Development

Advancing USM Preeminence through Research and Economic Development

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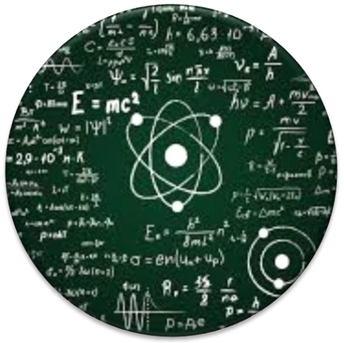

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Fostering economic, workforce, and societal impacts

Context for Research Development:
Rapid Growth in advancement of Science and Complexity in Research Administration

Data Driven Discovery:

Rapid growth in fields like AI, Biotech, Nanotech, Quantum, Environmental engineering, Neuro-brain interfaces, Advanced materials

Rapidly changing needs for the pace of scientific change:

Massive data storage; high throughput, distributed, edge and cloud computing; systems interoperability needs

Challenges Associated with Changes:

Need for interoperability standards, data security and privacy, ethical and regulatory frameworks to reflect evolving science

Requirements:

Investments in R & D, accessibility to scientific knowledge, global collaboration and competition, regulation of emerging tech, open science, education

EXAMPLES OF RAPIDLY EMERGING DIRECTIONS IN SCIENTIFIC RESEARCH

ADMINISTRATION ROLES AND REQUIREMENTS CONNECTED TO ACHIEVING SCIENTIFIC GOALS

Federal Agency: Workforce, complex interface with institutions of higher education, interagency inconsistencies, funding to manage priorities, regulations to manage risks

Institutions: Administrative burden of requirements, workforce issues, complex regulatory environment for higher education sector

Investigators: Rapid pace of the advancement of science, challenging pipeline of students and trainees, increased service demands at universities, complexity of managing team science

Commercial and Industry Partners: Lack of capital at early stages of development, challenge of converting IP into innovation and solutions, dominance of large-scale industry

Administration of Federal Funding for Research:
Primary driver for Shared Stakeholder Responsibilities

Institutions With Stakeholder Input: Implementation of federal programs taking into account additional state, local, institution specific requirements

Institution: Institution specific implementation processes, communication, and technical environment for implementing federal awards and programs

Federal With Stakeholder Input: Translation of federal appropriations and requirements into regulations, guidance, agency and program funding, terms and conditions

Institution with Federal Oversight: Oversight and assurance environment for adherence with federal, institutional, disciplinary, and stakeholder requirements connected to funded research

Federal: Appropriation of federal funding; enactment of federal laws pertaining to finance and regulations, budget and compliance requirements; executive public policy

Shared responsibilities environment for implementation of federally funded and regulated research at U.S. colleges and universities

USM Strategic Goals for Research and Economic Development

1. **Alignment**
   Align areas of USM Research Strengths with National Priorities

2. **Environmental Science**
   Advance our leadership in environmental sciences and deepen our international reputation for climate change and sustainability research

3. **Community Research**
   Expand community-based research to strengthen the neighborhoods, towns, and cities where our universities are based

4. **Collaborative Research**
   Grow the number of cross-institutional, interdisciplinary, and inter-professional research collaborations among USM institutions and Centers

5. **Strategic Partnerships**
   Grow the number of research partnerships with industry, agencies, NGOS, and academic institutions, domestically and internationally.

6. **Funding Diversification**
   Diversify and expand our research portfolio, attracting private-sector investment for basic research.

7. **Research for Social Good**
   Develop a nationally significant research initiative on diversity, equity, and justice; globalization; and sustainability, examining the role that race, identity, and systemic racism may play in them.

Functions of OVCRED in Support of Strategic Plan

University System of Maryland

USM Policy and Reporting

Management of BOR Research and Economic Development Committee, reporting metrics for research and development to USM, convening shared governance entities connected to R&D, oversight of USM policies related to research and commercialization

USM Research, Commercialization, and Compliance Administration

Provide support and guidance to the USM and its institutions on grant submission, management, compliance, opportunities, research security, protection of intellectual property, and reporting requirements

USM-Wide Extension Programs

Provide guidance, technical support, and advocacy for USM and statewide research and economic development programs that support investigators, research staff, innovators, entrepreneurs, and economic development

Convene and Connect

Fostering collaboration across stakeholder groups in research, community, industry, and system institutions related to research, innovation, economic development, and research regulatory affairs

Program Development

Supporting research and economic development communities in MD

OVCRED Approach to Support USM R & ED Growth

University System of Maryland

Identify and pursue funding opportunities

Foster and develop research collaborations and partnerships

Enhance USM opportunities:
Research alignment, impact, outcomes
R & D workforce pipelines
Collaborative programs and projects across the USM
Industry partnership to support R & D

Strengthen technology transfer efforts

Enhance philanthropic engagement for R & D

USM Convened Groups

- ***Research and Economic Development Partners*** - USM OVCRED's largest group/convening; including USM professionals in the fields of research strategy and development, grants administration, commercialization, economic development, workforce development, and more to connect, collaborate, learn, and plan. All institutions participate. (Bi-annual in person)

- ***System Research Administrators Group*** - Sponsored Programs pre-award and post-award representatives to exchange information and ideas, collaborate on those issues which impact grant administration, and share best practices to support research and scholarly activities; supports all institutions. (Quarterly in person)

- ***Conflict of Interest and Commitment Leaders*** – Administrators of research COI professionals from research universities, supports all institutions. (Quarterly in person)

- ***NEW in 2024: USM Innovation Collective*** – *Leaders of venture funds, investment programs, and technical support programs for research commercialization, innovation, and startup initiatives, supports all institutions. (As needed)*

- ***NEW in 2025: Vice Presidents for Research/Research leaders*** – *Named Vice Presidents or senior leaders responsible for alignment of research across a university and R & D Development and Strategy (Weekly – virtually, Annual in person)*

- ***New in 2026: Research Advisory Council*** – *Industry, Philanthropy, Policy and Education Leaders providing input on National trends in R & D landscape*

University System of Maryland

Typical measures of research productivity used by institutions:

Publication Counts: The total number of peer-reviewed articles, books, or conference proceedings published.

Publication Citations: Publication count, citation frequency and total citations

Journal Impact Factor (JIF): A measure reflecting the yearly average number of citations to recent articles published in a specific journal.

Rates of Research Productivity: Research productivity and connectedness of scholars, teams

Fractional Scientific Strength: A measure that allocates credit for a publication based on author order, which helps in adjusting for co-authorship.

Funding/Grants: Total amount of research funding secured, number of grants received, research expenditures

Commercialization activity: Intellectual property (IP) developed and disclosed, patents received, liscenced technology, revenue generated from IP

USM Tracks:

- Federal reporting of research expenditures to NSF HERD
- Reporting of commercialization to AUTM
- Recognitions of research excellence across institutions
- Carnegie classification designations

University System of Maryland

Higher Education Research and Development (HERD) Survey2024

The HERD Survey is the primary source of information on research and development expenditures at U.S. colleges and universities.

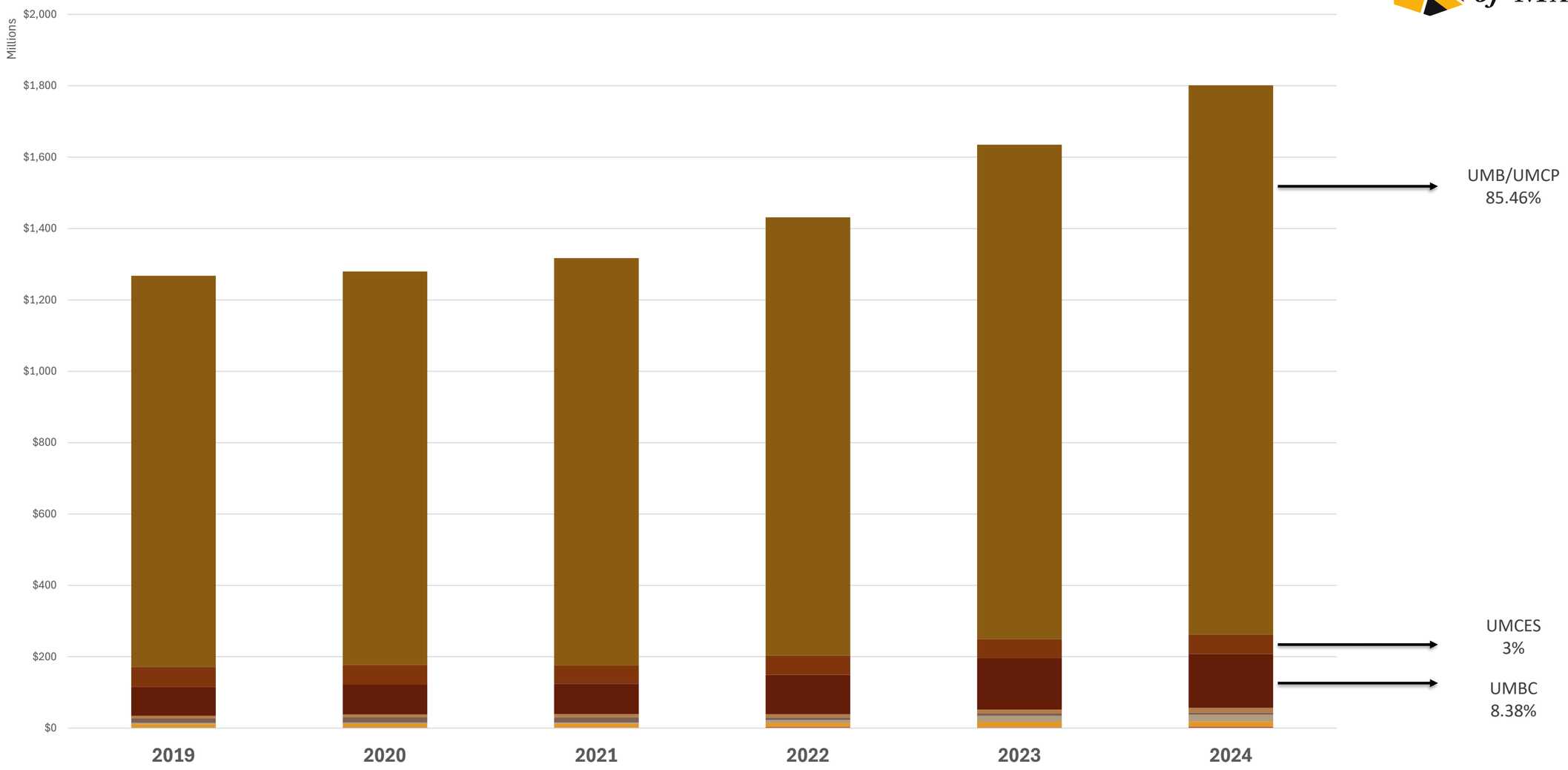
The HERD Survey is an annual census of U.S. colleges and universities that expended at least $150,000 in separately accounted-for R&D in the fiscal year. The survey collects information on R&D expenditures by field of research and source of funds and also gathers information on types of research, expenses, and headcounts of R&D personnel.

Survey Administration

The FY 2024 survey was conducted by ICF under contract to the National Center for Science and Engineering Statistics.

https://ncses.nsf.gov/surveys/higher-education-research-development/2024

USM enterprise HERD expenditures 2019-2024



- U. of Maryland (UMB and UMD)
- U. of Maryland Center for Environmental Science
- U. of Maryland Baltimore County
- U. of Maryland Eastern Shore
- U. of Baltimore
- Towson U.
- Salisbury U.
- Coppin State U.
- Bowie State U.

USM HERD expenditures 2019-2024

	FY2019 $1.350B	FY2020 – $1.148B	FY2021 – $1.407B	FY2022 - $1.550 B	FY2023 – $1.640 B	FY2024 – $1.808 B
COMPREHENSIVE UNIVERSITIES						
Bowie State U.	1,911,000	1,967,000	1,398,000	3,351,000	2,612,000	3,731,000
Coppin State U.	243,000	202,000	299,000	398,000	357,000	304,000
Salisbury U.	9,368,000	9,496,000	10,552,000	10,614,000	14,557,000	14,422,000
Towson U.	3,423,000	3,612,000	3,794,000	8,788,000	17,198,000	19,215,000
U. of Baltimore	12,451,000	15,054,000	14,672,000	6,646,000	6,615,000	5,797,000
U. of Maryland Eastern Shore	7,133,000	8,092,000	8,636,000	9,274,000	10,730,000	13,422,000
RESEARCH UNIVERSITIES						
U. of Maryland Baltimore County	80,632,000	83,867,000	84,418,000	110,319,000	144,262,000	150,908,000
U. of Maryland Center for Environmental Science*	56,033,000	54,560,000	51,201,000	53,718,000	53,233,000	54,036,000
U. of Maryland (UMB & UMCP)	1,096,600,000	1,103,062,000	1,142,264,000	1,228,550,000	1,385,302,000	1,539,520,000
SELF REPORTING UNIVERSITIES						
Frostburg State U.	4,380,893	4,351,025	4,449,179	4,818,999	5,023,819	6,543,173
U. of Maryland Global Campus			204,336	278,053	274,042	568,596

USM Enterprise*: NSF Rankings FY2024

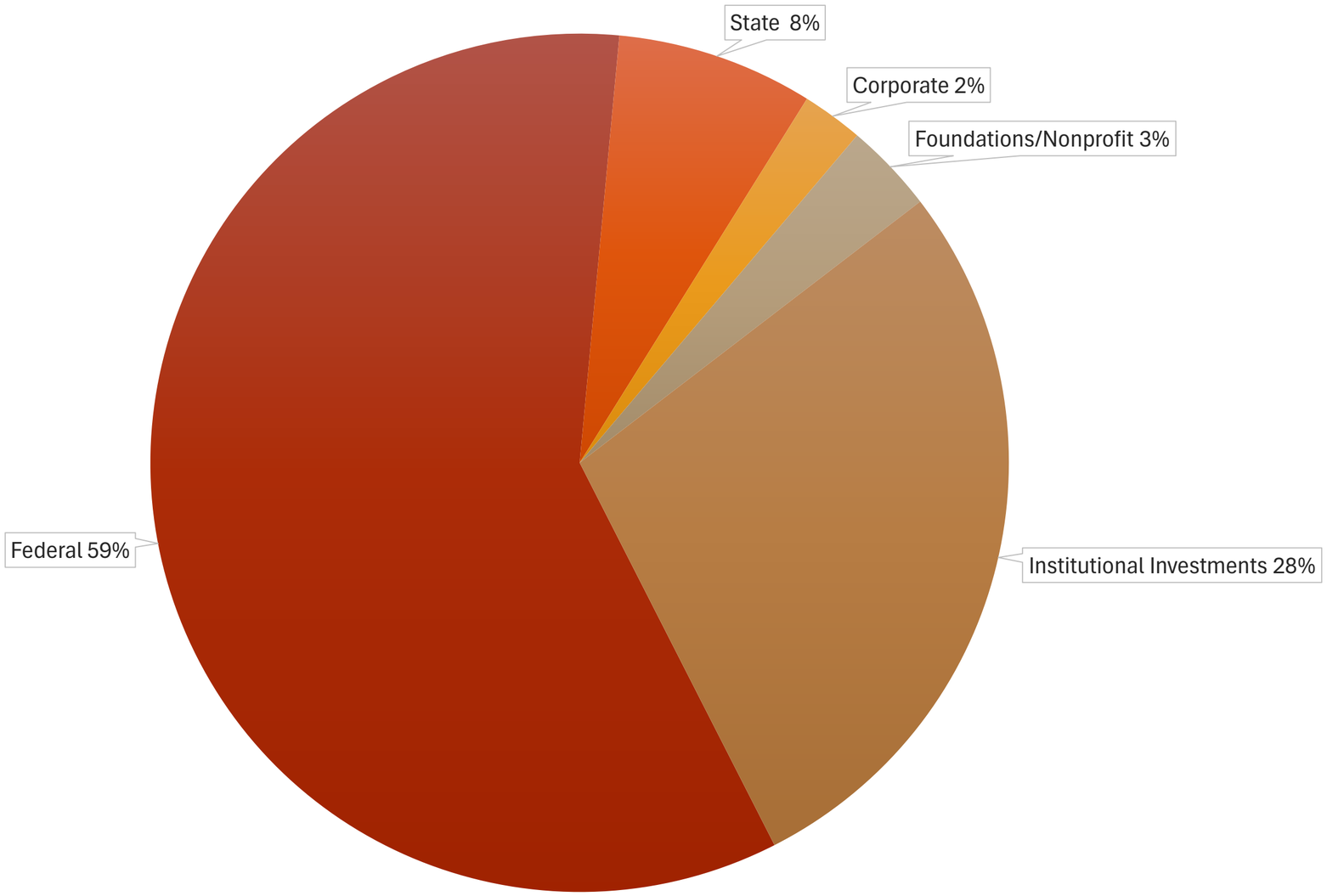
University System of Maryland

Institution	YoY Difference FY23 to FY24	FY24 HERD Ranking All Institutions	FY23 HERD Ranking All Institutions	FY24 HERD Ranking Public Institutions	FY23 HERD Ranking Public Institutions
Bowie State U.	+42.8%	↗510	531	↗341	360
Coppin State U.	-14.8%	↘869	841	↗499	-
Salisbury U.	-0.9%	↘335	331	↘245	242
Towson U.	+11.7%	↗315	319	↗230	235
U. of Baltimore	-12.4%	↘444	411	↘310	292
U of Maryland Eastern Shore	+25.1%	↗342	355	↗250	259
U. of Maryland (UMB & UMCP)	+11.1%	↗14	18	↗9	11
U. of Maryland Baltimore County	+4.6%	↘160	156	↘115	112
U. of Maryland Center for Environmental Science	+1.5%	↘232	223	↘166	160

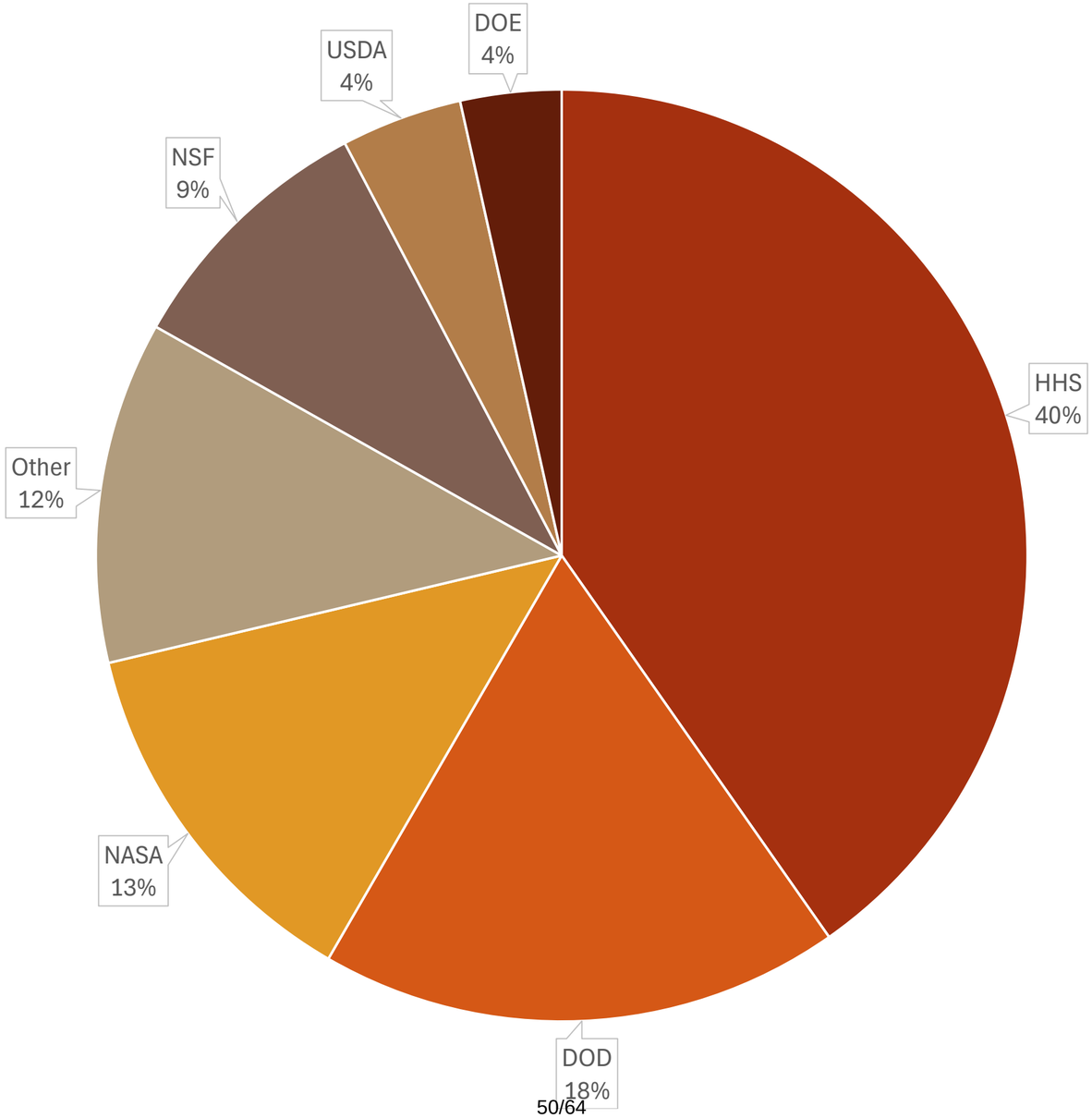
USM Enterprise*: NSF Rankings FY2024

Institution	FY24 Ranking by Federal Expenditures	FY23 Ranking by Federal Expenditures	NSF Ranking by Earned Doctorates	Earned Doctorates[1]
Bowie State U.	↗400	436	#402	13.3
Coppin State U.	-	-	-	-
Salisbury U.	↘362	355	-	-
Towson U.	↗356	380	#338	27.2
U. of Baltimore	↘410	372	-	-
U. of Maryland Eastern Shore	↗292	295	#366	21.1
U. Of Maryland (UMB & UMCP)	↘15	14	UMB: #176 UMCP: #22	62.2 95.5
U. of Maryland Baltimore County	↘143	140	#161	65.4
U. Of Maryland Center for Environmental Science	↘261	259	-	-

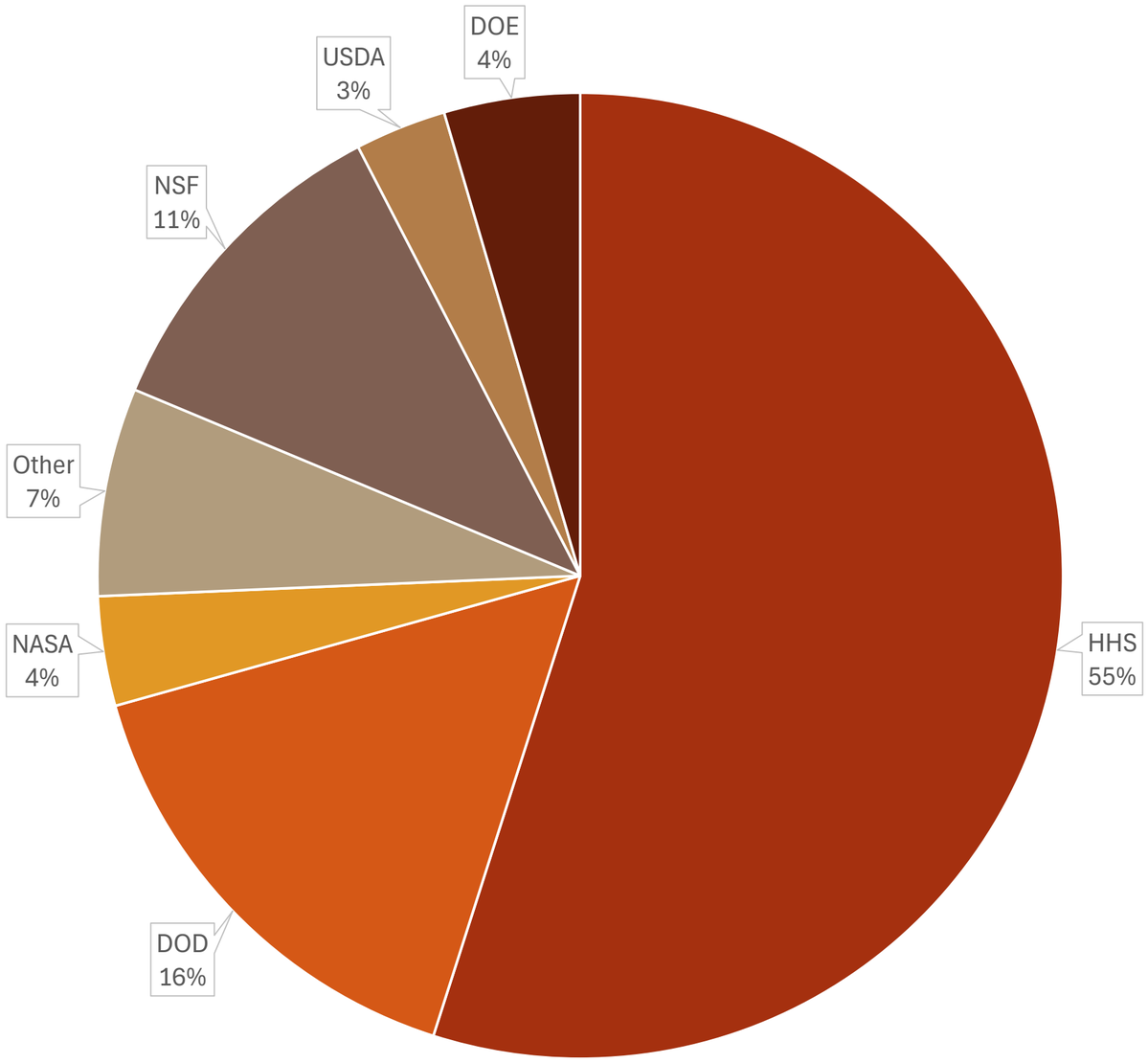
SNAPSHOTS FY2024 HERD: USM expenditures by funding source



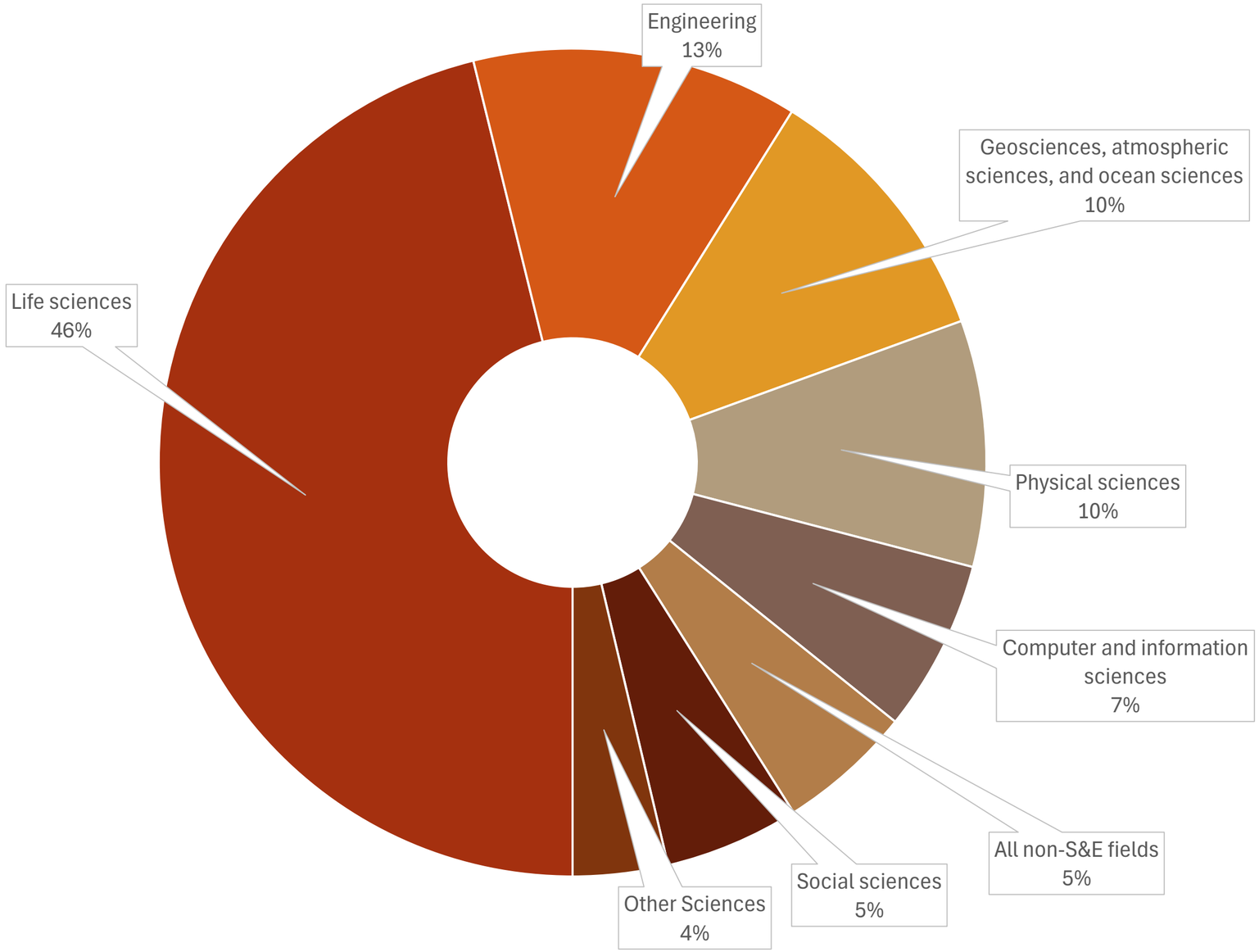
FY2024 HERD: USM Federal expenditures by Agency



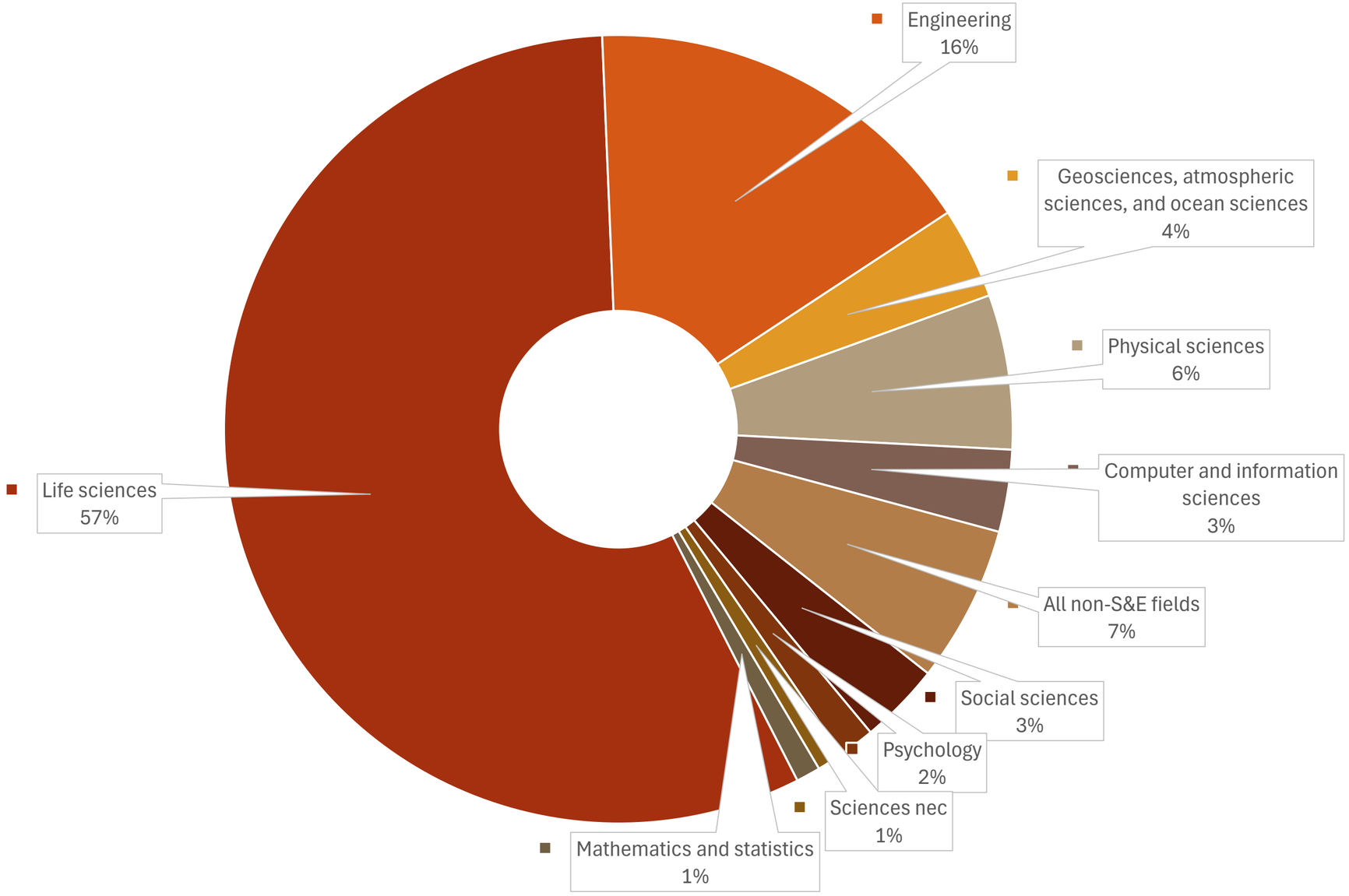
FY2024 HERD: All reporting institutions federal expenditures by agency



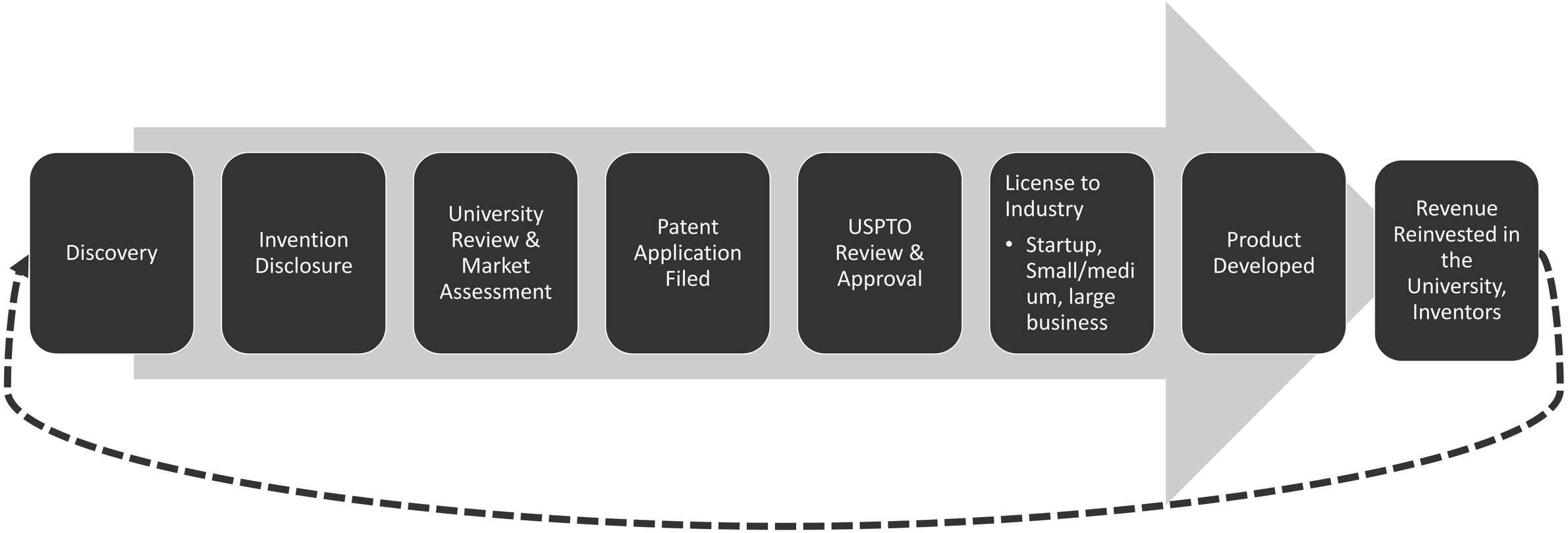
FY2024 HERD: USM expenditures by R&D Field



FY2024 HERD: All reporting institutions expenditures by R&D Field



Simplified Technology Protection and Licensing Process



Licensing revenue is years in the making, after much risk and many checkpoints to ensure most effective allocation of resources.

Association of University Technology Managers (AUTM) Licensing Survey

The AUTM Licensing Survey is the primary source of information on intellectual property, protection, licensing, and commercialization at U.S. and Canadian universities, hospitals, and research institutions.

The AUTM Licensing Survey is collected annually from participating AUTM members each spring, which for USM corresponds to the fiscal year ending the summer before. Therefore, the activity shown in the following slides occurred between July of 2023 and June of 2024.

https://autm.net/surveys-and-tools/surveys/licensing-survey/2024licensingsurvey

Technology Transfer Metrics FY 2024

	Licenses and Options	Active Licenses	Gross License Income	Inventions Received	US Patent Applications Filed	Issued US Patents	IP Startups Formed
U. of Maryland College Park	16	195	$1,673,056	110	49	28	7
U. of Maryland Baltimore	23	251	$6,589,436	160	82	66	10
U. of Maryland Baltimore County	1	41	$52,624	36	15	11	3
USM Total*	39	487	$8,315,116	301	143	108	20

In calendar year 2025, USM ranked 11th among U.S. Public Universities in the National Academy of Inventors Worldwide Universities Granted U.S. Utility Patents List

*USM total is less than sum of institutions due to joint activity

USM Venture Development Report CY 2025

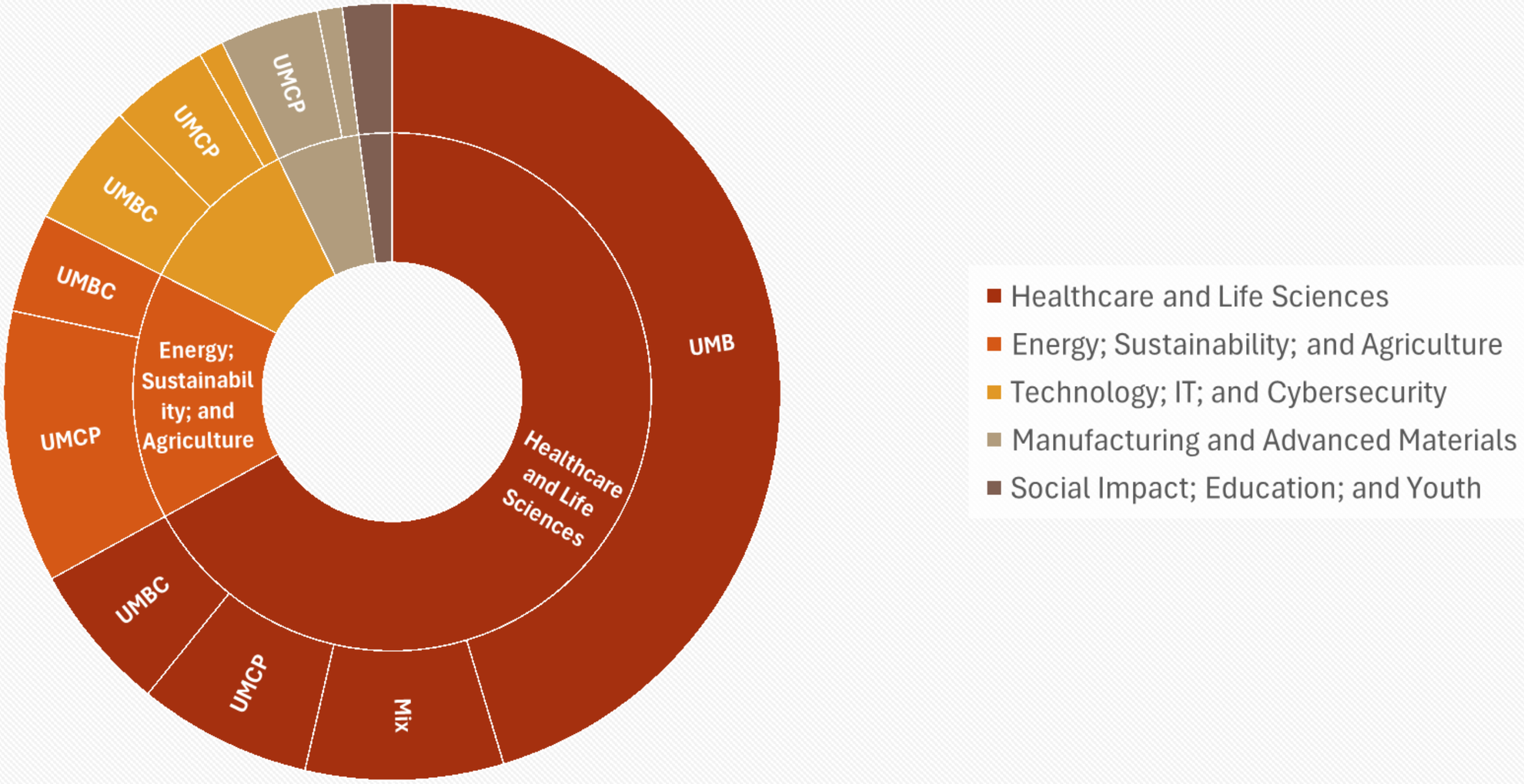
The USM Venture Development Report is the primary source of information on ventures supported across the University System of Maryland.
The USM Venture Development Report tracks which ventures USM institutions significantly report, their ties to USM in terms of founders and/or intellectual property, and how they were supported (e.g., programs, physical spaces, capital, or talent). Information is collected over two periods each year – January through June, and July through December. Ventures include non-profit and for-profit startups and small businesses; ventures reported are primarily located in the state of Maryland. It also includes startups significantly supported by the Small Business Development Centers affiliated with 3 USM institutions, which are included as number-only counts due to federal restrictions on data sharing.

Information from the Venture Development Report is shared in various ways, such as in the Managing for Results information for the Department of Management and Budget or in relation to the USM Strategic Plan. In this report, it is grouped into a calendar year and includes student ventures.

Survey Administration

The USM Venture Development Report is collected by the USM Office of Research and Economic Development.

Technology Transfer Startup Industries 2019-2025 (98 startups)

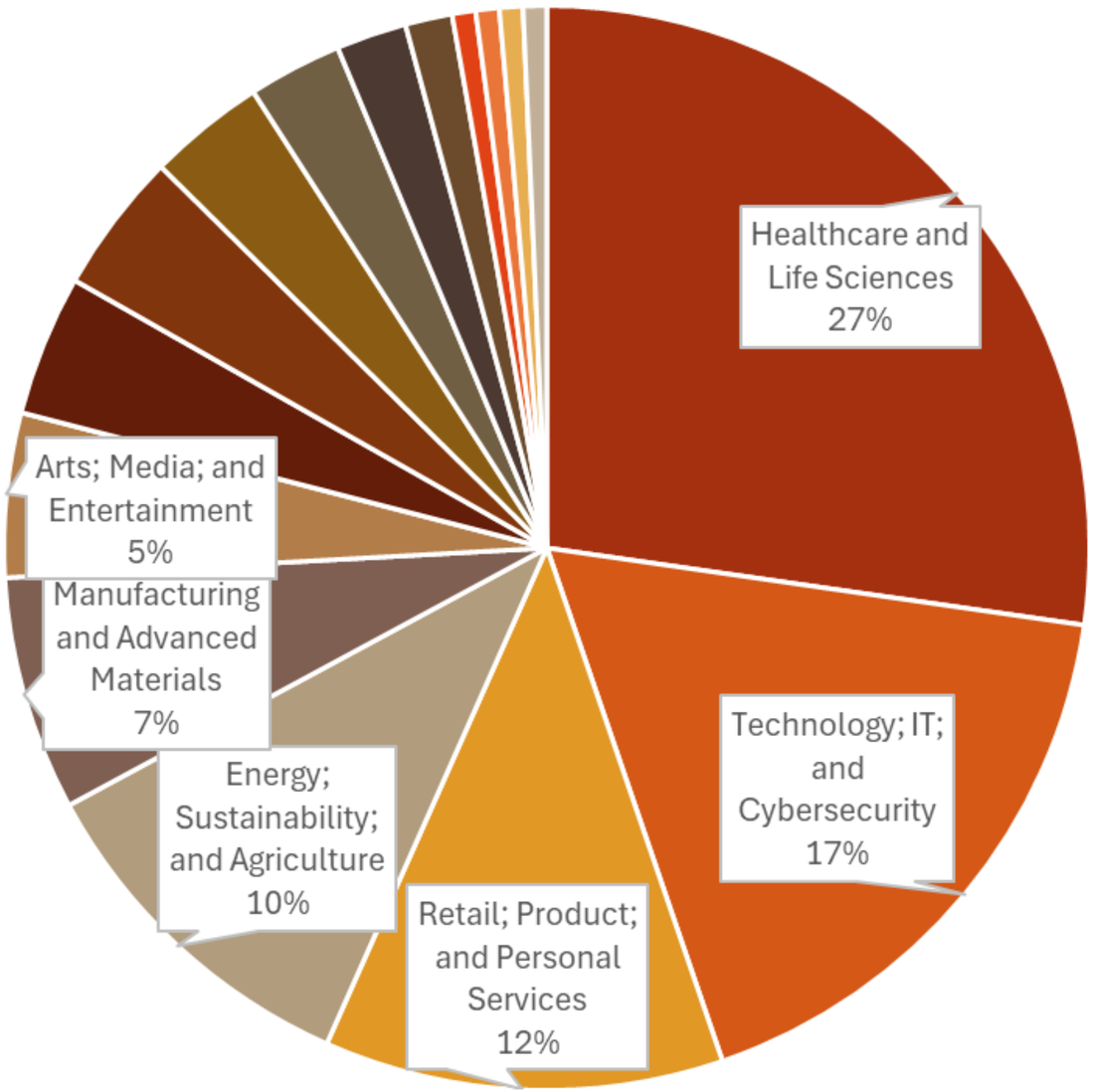


Ventured Supported by USM, CY 2025

Institution	Ventures Supported
Bowie State U.	10
Coppin State U.	0
Frostburg State U.	5
Salisbury U.	24
Towson U.	10
U. Of Baltimore	11
U. of Maryland Baltimore	27
U. Of Maryland College Park	134
U. Of Maryland Baltimore County	95
U. Of Maryland Center for Environmental Science	7
U. of Maryland Eastern Shore	0
U. of Maryland Global Campus	0
USM Office	11
USM Total*	274

*USM total is less than sum of institutions due to joint activity

Industries of Ventures Supported



4. Metrics as a driver of Impacts – Highlighted Rankings across USM

University System of Maryland

NSF HERD Survey 2024

The flagship research institutions, UMB and UMB, are identified 14 for total R & D funds, 15 for Federal Funding; 9 for Public institutions

Times Higher Educational World University Rankings 2026

University of Maryland College Park is ranked 116th; UMBC is ranked in the 601-800th category based on teaching, research, citations, industry income, and international outlooks

Carnegie Classification of Institutions of Higher Ed

USM has 3 R1 designations and 7 Community Engagement Classified campuses

Webometrics Rankings

UMD 31 in US, 53 in world

UMBC 171 – US

Towson - 257

UMCES 317 – US

Salisbury – 426

UMES - 2822

Faculty Excellence in Research

National Academy of Sciences	19 members representing 3 USM universities
National Academy of Medicine	12 members representing 2 USM universities
National Academy of Engineering	11 members representing 2 USM universities
NAI National Academy of Inventors	21 members representing 2 USM universities

Faculty & Student Excellence in Research

FULBRIGHT

In 2025-26, 18 Fulbright U.S. Students &
8 Fulbright U.S. Scholars

AMERICAN ACADEMY OF ARTS & SCIENCES

19 members elected from 2 USM universities

NATIONAL ACADEMY of EDUCATION

6 members elected from 2 USM universities

5. Discussion Topics and Q and A

a) Economic Impacts of Research

b) Research and Economic Development Lab Visits over the Summer

c) Research and Economic Development Policies (see list that follows)

USM Research Policies

1. Research, Commercialization and Economic Development related policies at USM

Policy for the Establishment and Review of Centers and Institutes in the University System of Maryland	IV-1.00 (PDF Download)
Policy on Solicitation and Acceptance of Sponsored Projects	IV-2.00
Policy on Human Subjects of Research	IV-2.10 (PDF Download)
Policy on Classified and Proprietary Work	IV-2.20 (PDF Download)
Policy on Patents	IV-3.00 (PDF Download)
Policy on Copyrights *For works copyrighted before July 1, 2002*	IV-3.10
Policy on Intellectual Property *For works copyrighted on or after July 1, 2002*	IV-3.20 (PDF Download)

2. Related faculty affairs policies

Policy on Misconduct in Scholarly Work	III-1.10 (PDF Download)
Policy on Conflicts of Interest in Research and Development	III-1.11 (PDF Download)

3. Potential new policies or guidelines

Research Security

Export Control