Public Session Agenda

(1) **Featured Startup: Mindful Designs with My Furr’s Guitars** – Brian Furr, CEO (Information Item)

(2) **UBalt’s CEI and the Global Consortium of Entrepreneurship Centers Conference** – Catherine Andersen, Interim Provost, and Henry Mortimer, Director University of Baltimore Center for Entrepreneurship and Innovation (Information Item)

(3) **Momentum Fund Update** – Claire Broido Johnson, Managing Director, USM Maryland Momentum Fund (Information Item)

(4) **USM Office of Economic Development Update** – Lindsay Ryan, USM Venture Development Director (Information Item)
   
   a. Pandemic response and recovery
   b. Technology transfer activity update
   c. Venture development activity and resources report

(5) **New Early-stage Resource(s) Feasibility** – Lindsay Ryan, USM Venture Development Director (Discussion Item)
TOPIC: Featured Startup: Mindful Designs with My Furr’s Guitars

COMMITTEE: Economic Development and Technology Commercialization

DATE OF COMMITTEE MEETING: Thursday, September 2, 2021

SUMMARY: Brian Furr, CEO of Mindful Designs, and a student at the University of Baltimore, will present his entrepreneurial journey, including participation in the Entrepreneurship Fellows Program at UBalt that is supported by the Philip E. and Carole R. Ratcliffe Foundation. Mindful Designs is a for-profit social impact venture that creates S.T.E.A.M. (science, technology, engineering, arts, and math) programs via schools, after school programs, and community workshops. They also sell accompanying product kits, such as My Furr’s Guitar, which uses Mindful Designs’ paint build play model to give children the opportunity to paint and customize their own beginner’s guitar. Finally, Mindful Designs incorporates workforce development into its mission through an apprenticeship program.

FISCAL IMPACT: This item is for information purposes.

CHANCELLOR’S RECOMMENDATION: n/a

SUBMITTED BY: Lindsay Ryan 410-409-2236
lryan@usmd.edu
THE PAINT BUILD PLAY WORKSHOP

STEAM+Music Education = Community Activism

PRESENTED BY BRIAN A. FURR
"Through my journey, I have learned that entrepreneurship is a cumulative process".

B. FURR
BRIAN A. FURR

- E Fellow at The University of Baltimore
- Designer / Carpenter
- Creator of "My Furrs Guitar"
- Founder of The Paint Build Play Workshop. (EST 2021)
- Founder of Mindful Designs Baltimore
- Educator
- Community Advocate
HUSTLE VS BUSINESS

PAST HUSTLES
Street performer 13-18
Professional musician/ manager
Warehouse Art space, 15 units
Furr Guitars sold 20+ guitars $1500
Furr 4 lead performed over 200 certified MDE lead inspections

WHAT WISH I KNEW EARLIER
How to scale
Organization
How to get funding
Create a plan
Network
Financial literacy / Accounting

September 2, 2021 Committee on Economic Development & Technology Commercialization - Public Session
THE PAINT BUILD PLAY WORKSHOP

MISSION

Provide the community with soft skills to have the confidence to seek trade opportunities.

We do this by,

- Manufacturing, My Furrs Guitar.
- Teach tool safety
- Project based classes.
- Offer piece work opportunities for apprentices tools trained on.

September 2, 2021 Committee on Economic Development & Technology Commercialization - Public Session
PRODUCTS AND SERVICES

Tool education and training
Offer paid opportunities
Design thinking and creativity coaching
Business skills/entrepreneurship
Membership/Community
Creativity cultivation
- Encourages collaborative learning
- Challenging youth to problem solve
- Exploration of aptitude

MYFURRSGUITAR.COM

STEAM + MUSIC

FEATURE PRODUCT

MY FURR'S GUITAR

PAINT. BUILD. PLAY.

MYFURRSGUITAR.COM

September 2, 2021 Committee on Economic Development & Technology Commercialization - Public Session
CORE MISSION

Create a Multitude of S.T.E.A.M. programs around our Paint, Build, Play model, and introduce our product to schools, after schools, and community workshops.

My Furrs Guitar partners with organizations to provide science, technology, engineering, arts, and mathematics programming for youth through our award-winning Paint, Build, Play Program. Simply, we manufacture DIY guitar kits and customize our curriculum to fit the needs of organizations with 10-16 year-olds in the DMV area. Our program also introduces our students to music theory concepts through our simple color-coded system embedded on the guitar neck.
2021 MILESTONES

RAISED $25K
Through a series of pitch competitions 2020, we were able to gain the funding to get facility equipment, materials, and COGS.

OPENED FACILITY
Acquired tools, updated electricity raised money for dust collection built tables got furniture.

PRODUCTION RUN OF PRODUCT
Working with interns and engineers we found we are capable of producing 80 guitars in a month.

TRAINED WORKERS
We have been able to train 5 apprentices 3 of whom currently work with us in developing the products.

STARTED WORKSHOPS
We have secured multiple new and repeat contracts and plan to continue to do workshops in and with our community.
**TOPIC:** UBalt’s CEI and the Global Consortium of Entrepreneurship Centers Conference

**COMMITTEE:** Economic Development and Technology Commercialization

**DATE OF COMMITTEE MEETING:** Thursday, September 2, 2021

**SUMMARY:**

Catherine Andersen, Interim Provost, and Henry Mortimer, Director of the Center for Entrepreneurship and Innovation (CEI), will provide information about the CEI, its resources and offerings, and role in supporting entrepreneurship on campus and in the community. They will provide detailed examples of UBalt’s collaborations with other organizations through the CEI, including returning the Global Consortium of Entrepreneurship Centers annual conference to Maryland and its USM roots in October.

**FISCAL IMPACT:** This item is for information purposes.

**CHANCELLOR’S RECOMMENDATION:** n/a

**COMMITTEE RECOMMENDATION:**

**BOARD ACTION:**

SUBMITTED BY: Lindsay Ryan 410-409-2236
lryan@usmd.edu
WELCOME!

Catherine Andersen
Interim Provost

Henry Mortimer
Director, Center for Entrepreneurship & Innovation
Agenda

- Introductions
- CEI Overview
  - Resources & Offerings
- Collaborations
  - REV Fellows
  - GCEC 2021
- Our Success
- Q&A
‘FRONT DOOR’ FOR ENTREPRENEURSHIP

- Provide student- and alumni-owned businesses with a work environment that fosters growth and success
  - Opened in 2006, renovated in 2016
- Goals: to help launch and grow business ventures, provide opportunities to learn, and engage and collaborate with the Baltimore community
OUR ‘CUSTOMERS’

- **Entrepreneurship Fellows** - select students nurture and launch a business in 2 years. Entry based on entrepreneurial acumen, motivation, academics.

- **Students exploring entrepreneurship** - may own businesses, are considering developing businesses, or curious about entrepreneurship as career.

- **Alumni** - looking to access a range of services, from initial counseling to physical space for setting up new businesses.
OUR OFFERINGS

• Campus collaborations: ex., Klein School Design Competition, Real Estate Ventures Fellows
• Workshops, seminars, and networking events
• 2 business pitch competitions each year
• Entrepreneur-in-Residence program: volunteers from SCORE and SBA + specialists: accounting, marketing, technology, etc.
• Local connections: Startup Maryland; the ETC, Impact Hub, Open Works, Betamore; USM+, MICA, Loyola, JHU; TEDCO, etc.
Over the past 5+ years, the CEI has

- supported >850 would-be business owners, on a one-time or ongoing basis
  - Incl. aid >half-dozen companies raise nearly $2M in funding/sales and employ >30 people
- assisted 35+ students develop businesses, w/a 2-year scholarship + stipend via the Philip E. and Carole R. Ratcliffe Foundation Entrepreneurship Fellows program
- awarded >$125,000 to >60 participants in 2 annual investor pitch competitions
• Third year of collaboration with students from CEI + Klein Family School of Communication Design (Integrated Design MA)
• Teams (2-4 design students) work with selected ‘clients’ to develop design and communication material to support an emerging business
• Benefits: Integrated design students work with existing businesses, and founders receive pro-bono professional design work
Real Estate Ventures Fellows program: students, alums working to address critical development needs within Baltimore
10-weeks of mentoring from real estate and other professionals, via CEI
students identity a neighborhood, create a project, complete a development plan, and apply for financing.
each student or team presents in the "Pitch for a Million" competition
  winning proposal receives up to $1M in a Guidance Line of Credit from Baltimore Community Lending for project.
The CEI sponsors two business pitch competitions, one per semester, providing ready access to more than $30,000 in seed funding and professional services.

Pitch competitions afford students the chance to test a concept, meet potential investors, get expert feedback, gain some recognition, and fail in a safe environment.

Additional funding available occasionally through grant opportunities, e.g. UM Ventures-sponsored Baltimore Fund ($20,000).
COACHES & MENTORS

- Coleman Anderson, founder, NewsUp and Further Insights
- Lily Bengfort, Chief Growth Officer, TCecure
- Brenda Dilts, Pitch Creator/CEO, Next Step
- Tony Gasson, President, Soroban Inc.
- Will Holman, Executive Director, Open Works
- Lynda Katz-Wilner, Owner, Successfully Speaking
- Ken Malone, Principal, Early Charm Ventures
- J. Gary McDaniel (MBA ’81), North Coast Angel Fund
- Laura Neuman, Partner, NextGen Venture Partners
- Takia Ross (BA ’11), Owner, Accessmatized
- Lindsay Ryan, Venture Development Director, USM
- Sunwar Sunny, PhD, Founder, Dynamhex/Assistant Professor, UBalt
- Ryan Shuman (MBA ’17), Director of Retail at Hunt A Killer
- Thom Shipley, Entrepreneur-in-Residence, SCORE
- Troy A. Stovall, CEO/Executive Director, TEDCO
- Ronald Stubblefield, Entrepreneur-in-Residence at JumpStart
- Carolyn Yarina, CEO and Co-Founder, Sisu Global
- John Zuknick (MBA ’14/BS ’12), Universities at Shady Grove
UBII COLLABORATION

- Urban Business Innovation Initiative (UBII) was formed in 2021 by TEDCO to provide technical and business assistance to underserved early-stage companies
  - Programs include I-Corps, various funding, partner programs, and other critical pathways
- UBalt will serve as an anchor institution, with Coppin and USM schools, to provide
  - resources, office space for advisors and companies, access to mentors, workshops, pitch competitions, community programs (ex., StartUp MD), networking with business community, and faculty who can provide service to businesses
UBalt and Loyola University selected to serve as hosts for the 2021 Global Consortium of Entrepreneurship Centers (GCEC) Conference, October 13-16, 2021

- Theme “Leading with Entrepreneurship: Succeeding in Revitalization”
  - Showcase how entrepreneurs lead the way to create new companies that are revitalizing + transforming our communities
  - Highlight higher ed’s role in the urgent movement to support underrepresented entrepreneurs, others impacted by economic crisis and hold the most potential for growth
Keynote Speakers

• Nnadagi Isa, Co-founder, lor tush

• Marcus Bullock, CEO, Flikshop

• Philip Gaskin, VP Entrepreneurship, Kauffman Foundation

• Allysa Dittmar, Co-Founder, Clear Mask and Ryan Maliszewski, CEO, Mozzeria
GCEC COLLABORATION

• Once-in-a-generation opportunity – a return to MD; founding GCEC was held at College Park in 1997

• Not merely an academic conference:
  • "a great opportunity ... also for the whole Baltimore business community, bringing together entrepreneurs and thought leaders from around the world, all dedicated to building a brighter future for local, national and global economies.”
    Murray Dalziel, Dean, Merrick School of Business

• Seeking more sponsors:
  • $85K Goal
  • USM, TEDCO+EAGB, JP Morgan Chase, PNC, Kaufman Found, VentureWell
WE ARE ‘A BRIDGE’

- We complement the classroom to help students gain real-world, practical experience to advance their careers.
- Open to everyone on campus, regardless of academic interest. IOW, you don’t need to be a business major. You just need an idea for an enterprise, passion and drive to turn a dream into a reality.
THANK YOU

• Questions?
TOPIC: USM Maryland Momentum Fund

COMMITTEE: Economic Development and Technology Commercialization

DATE OF COMMITTEE MEETING: Thursday, September 2, 2021

SUMMARY:

Claire Broido Johnson, Managing Director of the USM Maryland Momentum Fund, will provide an overview of the fund’s activities and status. The Fund most recently invested in Liatris, an advanced materials startup affiliated with the University of Maryland, College Park.

FISCAL IMPACT: This item is for information purposes.

CHANCELLOR’S RECOMMENDATION: n/a

COMMITTEE RECOMMENDATION: DATE:

BOARD ACTION: DATE:

SUBMITTED BY: Lindsay Ryan 410-409-2236
lryan@usmd.edu
Overview of Maryland Momentum Fund

- **$10MM University System of Maryland investment fund**
  - Funding source is System fund balance
  - Invested in 23 companies in last 24 months
  - $1.6MM left for initial investments (about 8 more companies)
  - Goal of generating at least $15MM in co-investment from non-USM entities; already at ~$57MM

- **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
   • See more and share via BBJ article: https://bizj.us/1qav0h

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

• $8.6 MM invested and committed
  • $6.2 MM from MMF
  • $2.2 MM from affiliated universities that can co-invest alongside MMF

• 29 investments
  • 23 companies; 6 follow-ons

• 120 jobs created

• $6.7 of outside investment for every $1 MMF invested into our portfolio companies

• $266K average investment (MMF+ University co-investments); $196K from MMF

• 37 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 and across ecosystem** including: Abell Foundation, Squadra, Early Light Ventures, Alexandria Venture Partners, Sanofi, TCP, Lord Baltimore Fund, Conscious Venture Labs

- We have developed a network of advisory board members, mentors, entrepreneurs willing to support companies borne out of USM

- We are creating a ‘name’ for Maryland as a reputable entity creating valuable start-ups

- MMF is the only USM fund investing in USM startups other than UM Ventures at UMB, for now

- **$57 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
Responsibly Managing Remaining Funds

- **Initially allocated for first checks and $3 MM for follow on investments** so we have funding to invest in companies that continue to do well

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<th></th>
<th>Initial</th>
<th>Follow On</th>
<th>Sum</th>
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<tr>
<td>Allocated for Initial and Follow On Investments</td>
<td>$7,000,000</td>
<td>$3,000,000</td>
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<td>USMO (Investment+Committed) that does NOT include separate university investments</td>
<td>$5,368,750</td>
<td>$912,500</td>
<td>$6,281,250</td>
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<td>Remaining Left to Invest by USM</td>
<td>$1,631,250</td>
<td>$2,087,500</td>
<td>$3,718,750</td>
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- As discussed last meeting, for comparable funds, the average time between start of fund and first exit is 6 years, and between initial investment and exit is 5-7 years. For MMF, late 2022 to 2024.

- MMF has invested in 16 new companies in the last two years. Keeping that pace and average first check size, and assuming no institutional co-investment, the portion currently dedicated to first checks will be invested by summer 2022.

- If no returns or additional funding, MMF can 1) write fewer first checks, prioritizing deals in some way, e.g. those that need it most; promise most return; strongest USM tie 2) dip into “Follow On” funding – but less money to invest in ‘winners’, so less return. 3) have a gap in first check funding.

- At least 25 companies we would like to engage with in the queue
# Investments

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<th>2019</th>
<th>First Half</th>
<th>Second Half</th>
<th>First Half 2021</th>
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<td><strong>Retrium</strong></td>
<td><strong>InferCabulary</strong></td>
<td><strong>NextStep Robotics</strong></td>
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<td>$1.2MM Round</td>
<td>$1.6MM Round</td>
<td>$783K Round</td>
<td>Add-on; $500K Round</td>
<td><strong>Add-on; $5MM Round</strong></td>
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<td><strong>ARMR</strong></td>
<td><strong>MiReCule</strong></td>
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<td>$5.4MM Round</td>
<td>$750K Round</td>
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<td><strong>Gemstone</strong></td>
<td><strong>DataKwip</strong></td>
<td><strong>N5 Sensors</strong></td>
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<td>$675K Round</td>
<td>$1.3MM Round</td>
<td>$650K Round</td>
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<td>Add-on, $1MM Round</td>
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<td><strong>NAWEC</strong></td>
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<td><strong>Neoprogen</strong></td>
<td><strong>Pathotrak</strong></td>
<td><strong>InferCabulary</strong></td>
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<td>$1.5MM Round</td>
<td>$1.5MM Round</td>
<td>$1.2MM Round</td>
<td>Add-on, $1MM Round</td>
<td>Add-on, $1MM Round</td>
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<td><strong>KaloCyte</strong></td>
<td><strong>Voxy Engen</strong></td>
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<td>Add-on $400K Round</td>
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<td><strong>KaloCyte</strong></td>
<td><strong>VisiSonics</strong></td>
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<td>$1.035MM Round</td>
<td>Add-on $650K round</td>
<td>$1MM Round</td>
<td>$3.5MM Round</td>
<td>$800K Round</td>
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<td><strong>InferCabulary</strong></td>
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<td><strong>VisiSonics</strong></td>
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<td>June 2021, $500K</td>
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**Initial Investment Set Aside (just MMF):**
- $7MM; $5.4 MM invested
- $3 MM; $912K 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 Alum**
- **Advanced pulse jet engine**

**UMBC IP, UMCP Alum**
- **High caffeine tea, energy drink product**

**UMCES Alum**
- **Sonar to measure shrimp biomass**

**UMCP Alum**
- **Tissue regeneration via stem cells**

**UMCP Alum and Faculty**
- **Anticoagulant drug, therapeutics for rare blood disorders**

**UMCP Alum**
- **Cell-based therapy for cardiovascular disease**

**UMCP Alum**
- **Software platform to manage energy across buildings**

**UMCP IP**
- **Food safety testing technology**

**UMCP Alum**
- **RNA Therapeutics**

**UMCP Employee**
- **Fireproof, lightweight insulation**

**UMBC BwTech**
- **Data integrity**

**UMCP Alum**
- **Next-gen tourniquet**

**UMBC and UMCP Alums**
- **Agile software development management product**

**UMCP Alum and Faculty**
- **Spatial and personalized audio solutions**

**UMCP Alum and Faculty**
- **Language upskilling platform**

**UBalt Professor**
- **Climate change modeling and action platform**

**UMCP Alum**
- **Data platform for construction industry**

**UMCP Alum**
- **Fireproof, lightweight insulation**
Investment by Industry – shown two ways

Portfolio Investment by Industry

- Deep Tech
- Technology
- Med Tech
- Consumer Product
- Data
- Therapeutic
- Aquaculture
- Education Tech

- Engineering and DeepTech
- Consumer Products
- Life Sciences
- Data and Software
Investment Detail

Portfolio Investment by School Affiliation / Connection
- UMB: 1,345,000
- UMCP: 3,842,500
- UMB/UMBC: 600,000
- UMCP/UMBC: 150,000
- UMCP/UMBC: 350,000
- Towson: 250,000
- UMGC/UMB/Towson: 250,000
- UMBC: 250,000
- UMGC/UMB/Towson: 500,000
- UMBC: 250,000
- UMCP/UMBC: 250,000

Total: 3,842,500
TOPIC: Office of Economic Development Update

COMMITTEE: Economic Development and Technology Commercialization

DATE OF COMMITTEE MEETING: Thursday, September 2, 2021

SUMMARY:

Lindsay Ryan, Venture Development Director, will provide a briefing on pandemic response and recovery, including USM COVID Research & Innovation Task Force-related activities; recently updated technology transfer metrics; and the biannual venture development activity and resources report.

FISCAL IMPACT: This item is for information purposes.

CHANCELLOR’S RECOMMENDATION: n/a

SUBMITTED BY: Lindsay Ryan 410-409-2236 lryan@usmd.edu
USM Economic Development

Briefing for USM Economic Development and Technology Commercialization Committee

September 2, 2021
USM Economic Development

*Agenda*

- Pandemic Response and Resiliency
- Technology Transfer Activity Update
- Venture Development Activity and Resources Report
Pandemic Response and Resiliency

*USM COVID Research & Innovation Task Force -- Review*

**Mission**
Established in April of 2020 to leverage and mobilize systemwide research and innovations that will engage policymakers, business leaders, and the entrepreneurial community in addressing the COVID-19 pandemic. More information: [https://www.usmd.edu/covid-taskforce/](https://www.usmd.edu/covid-taskforce/).

**Steering Committee**
UMB, UMCP, UMBC, USM and UMD School of Medicine

**Four Pillars of COVID Response Effort**
Convene and Connect
Coordinate –Leverage capabilities, note gaps, redundancies and present/emerging opportunities
Identify Resources –Seed Grants, State/Federal Assistance, Industry partnerships
Amplify –Tell comprehensive story in sustained and purposeful manner

**Strategic Purpose/Objectives**
Mobilize Resources for Positive Impact
Look Long-term and Best Prepare USM to Address Future Pandemics/Crisis
Build awareness of USM’s research and development projects centered on COVID-19
Foster Collaboration, both internal and external to USM
Pandemic Response and Resiliency

USM COVID Research & Innovation Task Force -- Review

Previous Activities

- **USM COVID App Challenge:** Encouraged and rewarded student and faculty mobile app innovations that addressed pandemic impacts. With support and engagement with AWS and IBM and sponsorship by the Alex Brown Center at UMBC. [https://www.usmd.edu/covid-taskforce/app-challenge-winners](https://www.usmd.edu/covid-taskforce/app-challenge-winners)

- **USM Public Health Communication Challenge:** Encouraged and rewarded the USM community to create pandemic-related public health communication materials: [https://www.usmd.edu/covid-taskforce/public-health-challenge-winners](https://www.usmd.edu/covid-taskforce/public-health-challenge-winners)

Ongoing Initiatives

- **USM Long-Term Pandemic Research & Innovation Strategy Workshop:** Results of two-session internal/external expert discussions have been summarized and can be leveraged for specific initiatives.

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

- **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.
Innovation Acceleration: In September, with support from the U.S. Economic Development Administration, UMCP will offer an educational workshop series about federal funding (SBIR) that can further innovations related to pandemic response, recovery, and resiliency.

Montgomery/Maryland Life Sciences Education and Innovation Partnership:

- Created in June via MOU among Montgomery County, the University System of Maryland and Montgomery College: https://www2.montgomerycountymd.gov/mcqportalapps/Press_Detail.aspx?Item_ID=36516
- The global COVID-19 pandemic reinforced our collective leadership role in future evolution of life and regulatory sciences. There is a need to proactively work together to drive inclusive, innovation-led economic growth and meet the needs of our nation amidst the dramatic new opportunities and challenges to address moving forward due to the impacts of the pandemic.
- Goal: Facilitate collaboration among industry and the academic partners on cutting-edge research and allow students from across Maryland opportunities to gain work experience and conduct translational research with Montgomery County’s industry leaders.
The American Rescue Plan has generated several opportunities for economic development.

- USM institutions may be important partners for efforts supported by American Rescue Plan funding provided directly to states and cities.

- The U.S. Economic Development Administration has several opportunities available (https://eda.gov/arpa/), including a program that will award 20-30 regional coalitions $25 million to $75 million, and up to $100 million, to implement projects that grow new regional industry clusters or scale existing ones through planning, infrastructure, innovation and entrepreneurship, workforce development, access to capital, and more.
Tech Transfer Key Indicators

Disclosures by Year

Licensing Income by Year

US Patents by Year

University Technologies Entering the Market by Year

Licenses and Options by Year

IP Startups by Year
Technology Transfer Key Indicators

Takeaways

Participation of Women: For UMCP and UMB, about 50% of disclosures and applications had at least one woman inventor, much better than an estimated 22% U.S.-wide at the end of 2019.

Institutional Dynamics: We report at USM to the national body, the Association of University Technology Managers. However, institutional metrics are tracked, and each has different strengths and challenges. Currently, UMCP, UMB, and UMBC report. Additional USM institutions are currently enhancing tech transfer capacity.

Benchmarking:
- Despite budget and staffing challenges, USM tech transfer offices continue to keep pace in most areas.
- USM overperforms in the area of IP startup formation. Startup formation contributes to the translation of university technology into the market and to economic development through job creation. However, working with startups can be laborious, which can reduce outcomes in terms of licenses/options executed.
- USM licensing income is increasing. It is typically a more volatile metrics, with “big hits” that can skew benchmarking data.
Venture Development Activity & Resources Report

Review

Establishment: Reporting began in 2012 as a way to catalog the new ventures spinning out of USM, and/or coming to USM to join incubators and receiving mentoring.

Revision: In June of 2018, reporting was revised to include the multitude of venture types and resource types that had emerged, including capital.

Uses: In addition to reporting to the Board of Regents EDTC Committee, the underlying database serves as a resource to USMO, its institutions, and partners in better supporting for-profit and non-profit ventures.

Future: This reporting process continues to evolve. In this cycle, we will be reaching out to ventures for optional self-identification into different demographic groups, toward diversity and equity goals.
Ventures Supported
June 2018 through June 2021

272
# Distinct Ventures
Ventures Supported  *(New to USM)*

**USM Status**  
- NEW TO USM

**Report Period**
- 2018-2
- 2019-1
- 2019-2
- 2020-1
- 2020-2
- 2021-1

**USM Founders (Red)**
- # Companies: 30, 25, 28, 25, 48, 64

**Student Founders (Red)**
- # Companies: 38, 42, 28, 43, 50, 39

**USM IP (Red)**
- # Companies: 35, 45, 43, 40, 63, 78

**% Minority Owned (Red)**
- # Companies: 12, 16, 12, 6, 16, 12

**% Woman Owned (Red)**
- # Companies: 20, 30, 31, 32, 50, 54

**Industry**
- Consulting & Other
- Consumer & Food
- Information Technology
- Life Science
- Sustainability & Other

**Report Period**
- 2018-2
- 2019-1
- 2019-2
- 2020-1
- 2020-2
- 2021-1

**Spinout Institution**
- (Blank)
- BSU
- CSU
- FSU
- MD
- SU
- TUP
- UB
- UMB
- UMBC
- UMCP
- UMES
- UMC
- USA

→ Not USM Spinouts  “Spin Ins”
Ventures Supported

Support by Type

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

Support by Type and Institution

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

Capital Support

- # Ventures Capitalized
- $ Capital
Other State-Wide Venture Support from USM

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. In FY2020, the SBDC network supported over 53,000 Maryland jobs, provided direct assistance to more than 9,000 businesses, helped entrepreneurs start 270 business ventures statewide, and helped small businesses secure $148 million in investments and loans.

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The University of Maryland includes specialty counselors, a new CARES ACT-Funded Business Sustainability Center, Howard County, Anne Arundel County, Corridor Export Center (Baltimore City West), Baltimore City, Prince Georges, Montgomery, Frederick County (moved from Frostburg – Western).

*2021 – 1 is preliminary. University of Maryland includes specialty counselors, a new CARES ACT-Funded Business Sustainability Center, Howard County, Anne Arundel County, Corridor Export Center (Baltimore City West), Baltimore City, Prince Georges, Montgomery, Frederick County (moved from Frostburg – Western).
GOOD NEWS! A key state-wide programmatic resource (I-Corps) just received continued support from the National Science Foundation, with UMD leading the $15M, 9-university Mid-Atlantic Hub.

Venture Support Grows: Despite the pandemic, support for ventures across USM continues to grow. Some growth may also reflect more broad inclusion in reporting, which is particularly true for ventures re-engaged.

Institutional Variation: Across the USM, the types of ventures spinning out of and supported by different institutions varies. Resource types and scales also vary.

Institutional Cross-Talk: Numerous resources combine support from different institutions, and some ventures have ties to more than one institution via their founders or intellectual property.

Internal and External Value: USM entrepreneurial support very often extends to ventures that do NOT have a USM-affiliated founder or university-owned intellectual property. In this way, university strengths are leveraged for greater community and economic development.
TOPIC: New Early-stage Resource(s) Feasibility

COMMITTEE: Economic Development and Technology Commercialization

DATE OF COMMITTEE MEETING: Thursday, September 2, 2021

SUMMARY:

In 2016, with support from the Board of Regents, USM launched the Maryland Momentum Fund (MMF) with a $10 million commitment to invest in USM-affiliated companies to support entrepreneurship, catalyze outside investment in early-stage startups, and foster economic development and technology commercialization. As a seed-stage investment fund, the MMF helps promising early-stage companies bridge from grant funding and angel investment to a Series A round of investment.

At an earlier stage than the MMF, across the USM, numerous other resources support more than 100 new ventures each year with capital and other assistance, from business plan competitions to accelerators, incubators, mentoring programs, and more. They support students, faculty, and community entrepreneurs and cultivate and develop more entrepreneurs. However, gaps remain at this earlier stage across a wide range of USM-affiliated ventures.

Therefore, it could be valuable to develop an additional resource(s) that can support entrepreneurial endeavors across USM at an early stage. This resource(s) should have clearly defined goals, address current gaps/challenges in the ecosystem toward obtaining the goals, and include an initial design, business model (including potential funding sources outside USM), and implementation plan that can achieve the goals. The resource(s) will need to balance focus with flexibility, considering the dynamic nature of supporting early-stage entrepreneurial endeavors. The resource(s) should equitably support a diversity of entrepreneurs and ventures. Design should be informed by people from the groups of entrepreneurs and/or ventures that are to be supported.

The Economic Development and Technology Commercialization Committee could encourage USM to study the feasibility of developing a resource(s) that could be actualized in fiscal year 2023.

ALTERNATIVE(S): The Committee could choose to not evaluate the feasibility of an earlier-stage resource(s).

FISCAL IMPACT: There is no fiscal impact.

CHANCELLOR’S RECOMMENDATION: n/a
COMMITTEE RECOMMENDATION:  DATE:

BOARD ACTION:  DATE:

SUBMITTED BY:  Lindsay Ryan 410-409-2236
lryan@usmd.edu
Supporting Early-Stage Entrepreneurship Across USM

Overview

USM provides portfolio of resources to promote and support entrepreneurship among its student, faculty, and community. However, gaps remain, and some potential is untapped.

With the Momentum Fund, USM addressed a specific gap in capital access for venture-backable startups. Looking to earlier points in the process, USM may be able to help develop an additional multi-institution resource(s) to promote and support entrepreneurial success.
Supporting Early-Stage Entrepreneurship Across USM

Study and Development Process

The following elements are part of resource development and need to cohesively align:

- **Goal Development.** Multiple goals can be accomplished at the same time, and some may inherently conflict. It will be important to identify the most important key goals. Examples include:
  - **Internal USM Impacts:** Recruit, retain and/or enhance access for students; Retain faculty; Develop talent; Advance academic innovation; Demonstrate Systemness
  - **External Impacts:** Further develop the innovation ecosystem; Enhance partnerships with industry; Enhance research impact; Enhanced community impact; Create jobs; Generate societal impact

- **Gap Analysis and Design.** For greatest impact, seek to develop solutions that address current gaps/challenges in the ecosystem toward obtaining the desired goals. Determine eligibility and monetary and/or non-monetary resources provided.

- **Business Model and Implementation Plan.** Consider funding source (*including potential sources outside USM*), partners, potential revenue in the case of investing, logistics.

*If participation across all USM institutions is desired, then all USM institutions should be involved from the beginning.*
Appendix
Supporting Early-Stage Entrepreneurship Across USM

**Examples**

Across USM there are examples of models that could be scaled, all the way from:

The REEF program, which works with STEM students curious about entrepreneurship and can result in a seed grant to a newly formed startup to

The Towson University accelerator, which provides $10k, mentoring, office space, and a peer group to help ventures accelerate as they are about to enter the market.

Example models external to USM include:

- Funding for and directed by students (dilutive, non-dilutive)
- General pre-seed investment (various terms); with and without additional mentoring
- Startup studio models; providing many resources in-kind
- Various programs to support specific types of entrepreneurs

*There are no shortage of ideas; prioritization is required!*