



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

**March 29, 2018
The Board Room
Saratoga Building , University of Maryland Baltimore
220 N. Arch Street, Baltimore, MD**

Public Session Agenda

- (1) [Featured Start Up](#): Student Entrepreneur Panel Moderated by Jennifer Reynolds, Director of Venture Creation, bwtech@UMBC (Information Item)

- (2) [TEDCO: Leading Maryland's Innovation Economic Development](#) by George Davis, CEO (Information Item)

- (3) [USM Office of Economic Development Update](#) by Tom Sadowski, Vice Chancellor for Economic Development (Information Item)



BOARD OF REGENTS

SUMMARY OF ITEM FOR ACTION
INFORMATION OR DISCUSSION

TOPIC: Student Entrepreneurship Panel

COMMITTEE: Economic Development and Technology Commercialization

DATE OF COMMITTEE MEETING: Thursday March 29, 2018

SUMMARY: Student Representatives from UMB, UMBC, UMCP, UMB and UMES/Salisbury will discuss their entrepreneurship and technology commercialization activities and the support they have received from their institutions. The panel will be moderated by Jennifer Reynolds from bwtech@UMBC.

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

FISCAL IMPACT: There is no fiscal impact

CHANCELLOR'S RECOMMENDATION: n/a

COMMITTEE RECOMMENDATION:

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SUBMITTED BY: Tom Sadowski (410) 576-5742

Student Entrepreneur Panel, March 29, 2018

BOR Committee on Economic Development



Mustafa Al-Adhami (Ph.D. candidate, Mechanical Engineering, Fall 2019) was born and raised in Baghdad, Iraq. He earned his Bachelor's degree in Mechantronics Engineering from German Jordanian University in Amman, Jordan, during which time he spent a year in Germany working on automated inspection systems for BMW. In 2013, he came to the United States to pursue his Master's degree in Mechanical Engineering at UMBC, and he is currently pursuing his PhD with the University's Center for Advanced Sensor Technology. Through his research, he is developing a device that can revolutionize the treatment of sepsis by rapidly determining effective antibiotic treatment for blood infections. In 2018, he completed the I-Corps program to refine his business model around his product. He has presented his entrepreneurial plans in the Cangialosi Business Innovation Competition (third place) and the UMBC Idea Competition (second place). He hopes to establish his company by the end of 2018. (alad1@umbc.edu)

Nicholas Bentley (B.A., Criminology & Criminal Justice, Fall 2018) – During Nick's time at the University of Maryland, he has had the opportunity to get involved in many extracurriculars and become immersed in the entrepreneurial ecosystem. He has operated a business since high school (the day he turned 18 he filed articles of incorporation) that has pivoted from website design to specialized IT services over the past few years. He hasn't yet decided what he wants to do with it post-graduation. Outside of his own venture, Nick is actively involved in the leadership of Startup Shell – UMCP's student-run incubator. He collaborates with his peers across colleges and departments daily to fold entrepreneurship & innovation initiatives into the core ideology of this campus and it shows. Everywhere you go you'll find students who think about solving the world's multitude of problems through social impact & non-profit ventures – Startup Shell itself is a great example of this. Nick hopes to stay with the University of Maryland in some capacity after graduation to continue this work. (nicholas@startupshell.org)



Rob Figliozzi (B.S. Chemistry, Salisbury University; Ph.D. candidate, Toxicology, UMES, Spring 2018) founded Bio Research Solutions LLC in 2016 with the intent to develop innovative tools and solutions for Bio-Med-Tech academic, government and industry researchers. His UMES mentor, Assoc. Dean James Bresette guided the selection of his first entrepreneurial project, a device that identifies individual laboratory zebrafish ("The new Guinea pig"), based on unique and non-visible biomarkers. Zebrafish are currently used in over 50,000 research labs and are the highest trending animal model of human disease in research publications. Thanks to SU Professor, Bill Burke, and the Economic Development Hub team and programs, Rob received funding awards through the Shore

Hatchery Competition which facilitated R&D progress to IP protection phase. Rob is currently a micro resident entrepreneur at the SU Hub and serves as the Director of R&D for IES Life Sciences. Rob is focused on developing eastern shore Bio-Tech excellence, leveraging his broad network of mentors and stakeholders. (rwingiozzi@gmail.com)



Kayleigh Harkay (B.S. Business Administration Entrepreneurship Specialization, Spring 2019) is the founder of Perdido Fido, a “smart” tech device that tracks a pet’s movements and location, and communicates health vitals to the veterinarian. (The company name stems from the Spanish word for “lost.”) Kayleigh, a finalist in the Attman Business Pitch Competition, plans to create additional features for the device, which attaches to a pet collar, including a self-recharging battery. “Think of it as a Fitbit meeting ‘find my iPhone,’ all worn around your dog’s neck,” she says. Kayleigh works with UB’s Entrepreneur-in-Residence David Dannenbaum, and Jared Marmen, founder of Chord. kayleigh.harkay@ubalt.edu

Nivedita Hegdekar (3rd year Ph.D. candidate, Biochemistry and Molecular Biology). Nivedita’s interest in entrepreneurship began during her grad school education and for the past three years, she has been an active part of the entrepreneurial ecosystem at UMB. She was accepted into the UMB President’s Entrepreneurial Fellowship in Fall 2016, during which she interned with the New Ventures Office to develop a business plan and commercialize an innovation developed by a UMB faculty. Since then she has stayed on as a mentor for the next cohort of entrepreneurial Fellows. She has also participated and won several healthcare case consulting competitions along the East Coast. (nivedita.hegdekar@umaryland.edu)



Moderator:



Jennifer Reynolds, Ph.D., MBA (Director of Venture Creation, bwtech@UMBC Research & Technology Park). Dr. Jennifer Reynolds is an experienced and entrepreneurial executive with more than twenty-five years of experience growing companies in start-up/early stage biotechnology and high technology environments. She is currently overseeing UMBC’s 65+ company incubation/acceleration program in life sciences, cybersecurity and clean technology. Previously, she served in a COO capacity at a molecular diagnostics platform company in MD, growing the company from the ground up. She has also served as a DNA Forensics Expert and Crime Laboratory Director at one of the nation’s most prestigious private forensics testing laboratories. Jennifer has a B.S. in Biology from Virginia Tech, a PhD in Human Genetics from the Medical College of Virginia (VCU), and an MBA degree from the Executive MBA program at Robert H. Smith School of Business, University of Maryland College Park. (jreynolds@umbc.edu)



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SUMMARY OF ITEM FOR ACTION
INFORMATION OR DISCUSSION

TOPIC: TEDCO: Leading Maryland's Innovation Economic Development

COMMITTEE: Economic Development and Technology Commercialization

DATE OF COMMITTEE MEETING: Thursday March 29, 2018

SUMMARY: TEDCO provides a framework of knowledge, funding, and networking to support an innovation eco-system that nurtures researchers, entrepreneurs, start-ups and early stage companies engaged in bringing innovative ideas to market. George Davis, CEO of TEDCO will provide an overview of their activities that support USM and the State of Maryland.

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

FISCAL IMPACT: There is no fiscal impact

CHANCELLOR'S RECOMMENDATION: n/a

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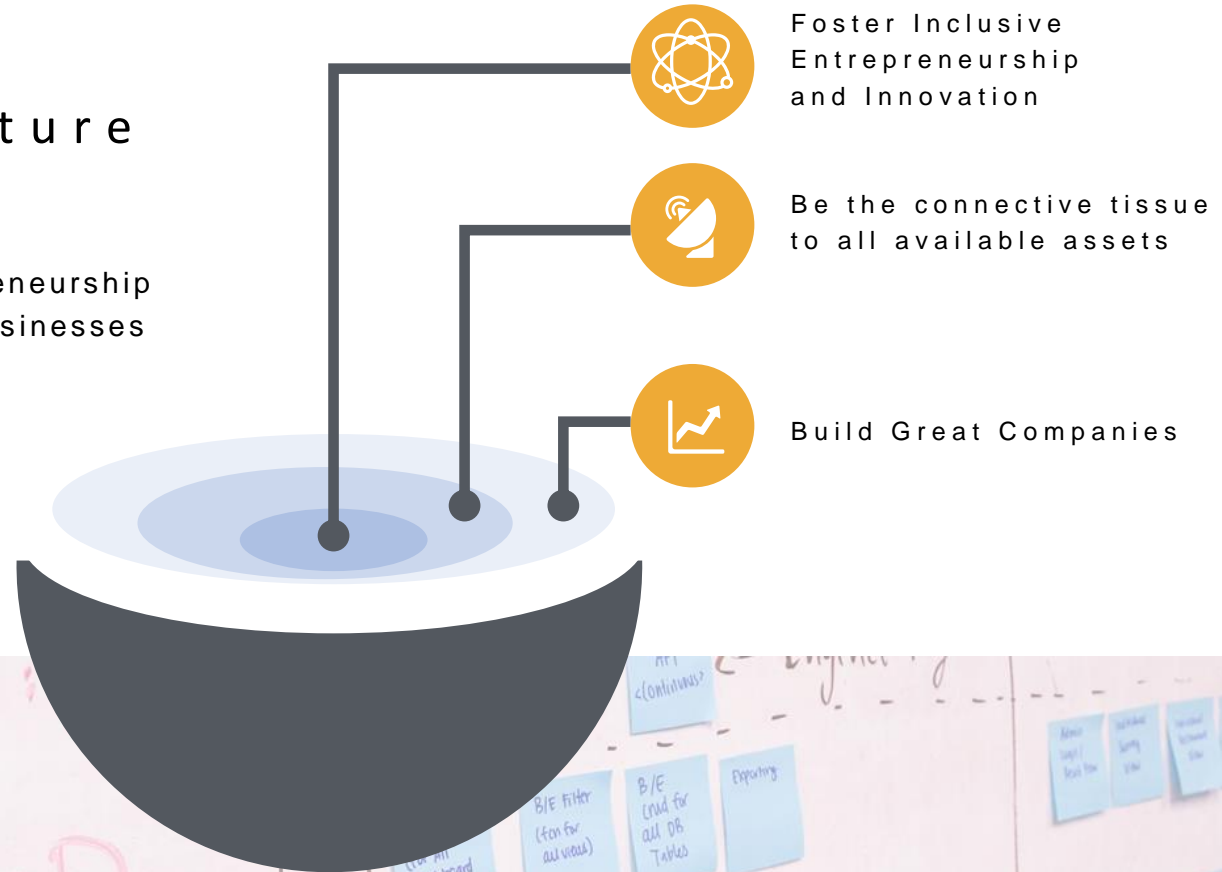
Leading Innovation to Market

Enhance economic development growth through the fostering of an entrepreneurial and innovation ecosystem. Discover, invest in, and help build great Maryland based technology companies.



Champion a Regional Culture

Where innovation, entrepreneurship
and the creation of new businesses
will thrive and grow.





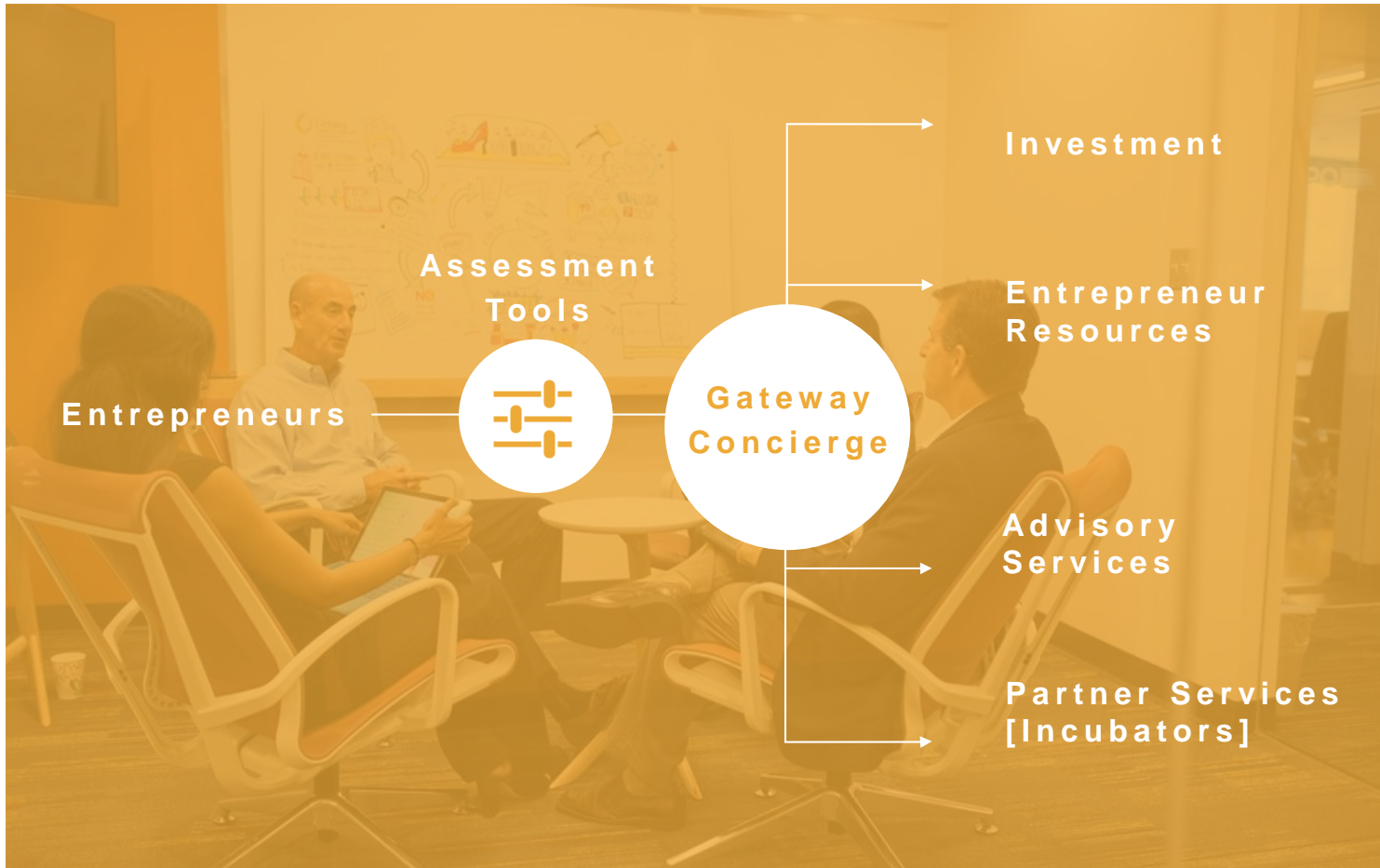


NAVAIR



Tech Transfer

Moving innovations from the research lab to the commercial sector to create new ventures and to make new products and cures available to the public.



The Gateway Concierge

ENTREPRENEUR RESOURCES



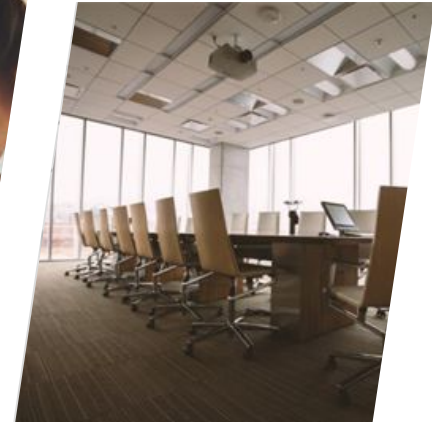
**Assessment
Tools**

**Online
Resources**



**Stage-Gate
Pitch Sessions**

**Pre-Seed
Opportunity Fund**



ADVISORY SERVICES





TEDCO's Innovation Connect, Program has been established to bring like-minded groups together in a mutually beneficial way in order to foster a stronger, more interconnected business community in Maryland.



Large Companies

- Northrop Grumman
- Talos/Cisco
- Thales USA



Innovative Companies

- Company 1
- Company 2
- Company 3



Multiple Pools of Capital

LEGACY MVF

\$110M evergreen fund
\$40M cash on balance sheet
\$500K - \$1.5M initial investment
2-3x for follow-on

Select investments:



OPPORTUNITIES FUND I (VINTAGE 2017)

\$25M traditional 10-year fund
\$21.3M cash available for investment
\$500K - \$1.5M initial investment
2-3x for follow-on

Select investments:



TEDCO SEED FUND

\$6M annual fund
\$100K - \$500K initial investments

Select investments:



MSCRF/MII

\$8.2M annual fund
\$5M annual fund

Select investments:



Representative partners:





EXCEL MD - Setting the Context: Four Critical Points

1. Maryland's economic prosperity is driven by its innovation-led, advanced industries that are anchored by world-class university and federal research assets and sustained by a significant talent base.
2. Maryland's strong base of innovation-led, advanced industries is in part a result of the State of Maryland investing in innovation-led development programs, thereby helping to establish itself as a national leader.
3. **As Maryland looks forward, it cannot become complacent as it competes for national prominence.** Other similar states with a significant base of advanced industries and research institutions continue to grow strongly and to advance large-scale public-private initiatives to further innovation-led development.
4. To ensure the state's future economic competitiveness, ***Maryland must advance strategic public-private, innovation-led partnerships creating the nexus where industry innovation and academic research competencies can come together to drive local economic development.***

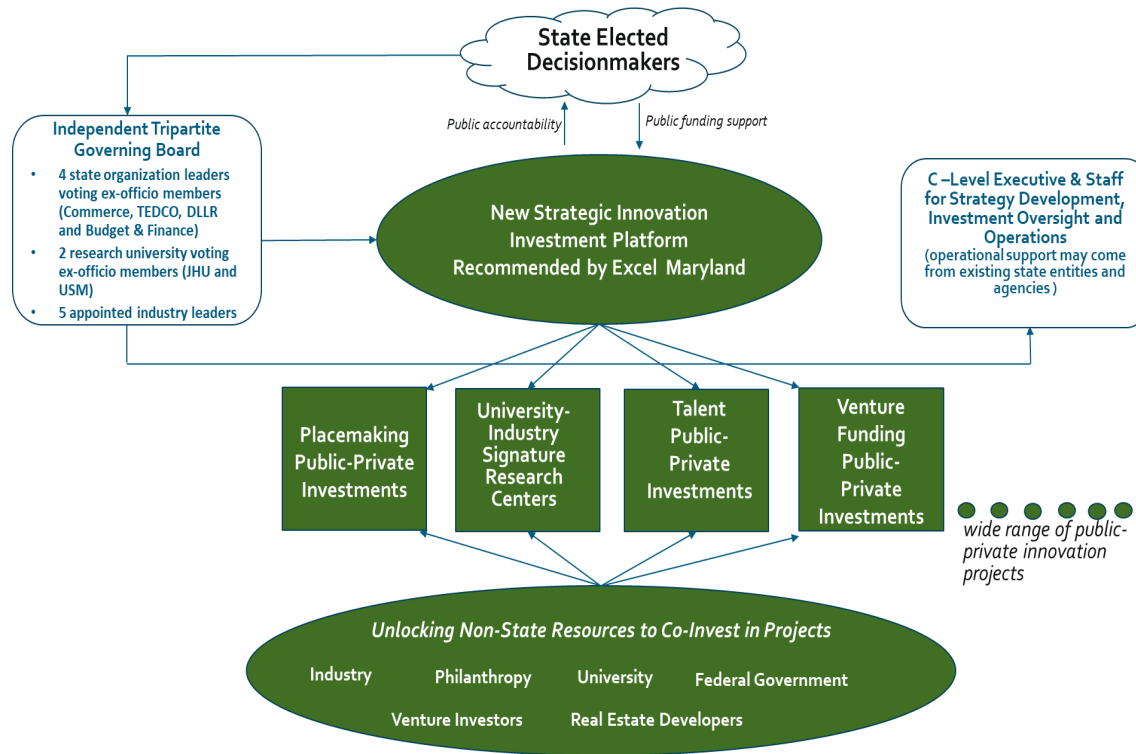


Vision, Approach and Strategic Goals of Excel Maryland

Excel Maryland is not recommending a new or additional service delivery economic development organization, but a **strategy and investment platform for public-private partnerships**

Strategic Goals:

- Be a National Leader in Targeted Advanced Industry Development **55,000 jobs**
- Be a National Leader in High Growth Companies **Double the number of IPOs**
- Be a National Leader in Innovation **Double the level of venture capital investment**
- Be a National Leader in Talent







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SUMMARY: Tom Sadowski will provide an update on activities to include Excel MD, Momentum Fund, RISE Zones, Amazon HQ2, Anchor Ventures, Federal Tech Transfer & Workforce Development.

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USM Economic Development

*Update for Committee on Economic
Development and Tech Commercialization*

March 29, 2018



USM Economic Development Update

- Governor's Excel Maryland Initiative
- Momentum Fund
 - 3rd Investment Pending – UMCP engineering school "jet engine" technology
 - Policies and Procedures Streamlined
 - Alternative Capital Sources Investigation
- Regional Institutional Strategic Enterprise (RISE) Zones
 - Legislation Establishing Income Tax credits for Start-ups approved by Senate Budget & Tax
- Amazon HQ2
 - Site visit held with corporate execs and relocation team March 2nd; final decision due by year-end 2018

USM Economic Development Update

➤ Anchor Ventures

- First 2 events held with excellent participation (more than 325 attendees total)
- Attracts investors, entrepreneurs, mentors, students & entrepreneur supporters
- Upcoming Topics include Talent, Technology Transfer

➤ Federal Tech Transfer Activity

- Finalizing renewal of FDA Partnership Agreement
- Working on Agreement with Army Research Lab (ARL) on new high performance, quantum computing capability at UMCPO and eventually a major Innovation Hub at Aberdeen Proving Ground

➤ Workforce Development

- USM MD Dept. of Labor, Licensing and Regulation (DLLR) Apprenticeship PILOT - applications in to certify UMBC Training Centers and Bowie State programs for Federal Dept of Labor and State DLLR funding