Agenda Item 3

USM Strategic Directions for Economic Development
TOPIC: USM Strategic Directions for Economic Development (information item)

COMMITTEE: Economic Development and Technology Commercialization

DATE OF COMMITTEE MEETING: June 9, 2016

SUMMARY: An increasingly vital strategic imperative for the USM is to build on its success and focus its expertise, programs, and resources even more sharply and strategically on the state’s economic development priorities. Thomas Sadowski, who was recently appointed Vice Chancellor for Economic development, will brief the Committee on the USM’s emerging strategic directions for economic development. In addition to examining the key attributes of innovation hubs, the briefing will include an analysis of regional strengths in the areas of research and development, technology transfer, commercialization, availability of talent, and access to capital.

Prior to joining the USM, Tom Sadowski was the President and CEO of the Economic Alliance of Greater Baltimore since 2008 and has worked in economic development within Maryland for more than 25 years.

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

FISCAL IMPACT: This item is for information purposes.

CHANCELLOR’S RECOMMENDATION: This item is for information purposes.

COMMITTEE RECOMMENDATION: 

BOARD ACTION: 

SUBMITTED BY: Thomas Sadowski / Suresh Balakrishnan (301) 445-2783
Committee on Economic Development and Technology Commercialization

USM Economic Development Objectives Overview

June 2016
Strategic Principles & Focus

**Culture**

“To build on USM’s success and focus its expertise, programs, and resources more sharply and strategically on the state’s economic development priorities...”

**Capital**

... leverage its global assets and transformational work into opportunity for exponential growth.

**Talent**

**Awareness**

**Ecosystem**
USM Strategic Focus Areas

**Internal Ecosystem**
- Strengthen the USM entrepreneurial ecosystem
  - Faculty P&T policy
  - USM Investment Policy
  - Entrepreneurial Education
  - New Company Tracking
- Align resources with market demand
  - Site Miners
  - Senior Licensing Staff
- Leverage USM resources through collaborations
  - UM Ventures

**External Ecosystem**
- Engage the investment community and strengthen business partnerships
  - Investment Fund
  - Networking Events (Healthcare Sciences, Life Sciences and other disciplines)
  - Angel and VC Partnerships
  - Foundation Partnership
  - Crowd Funding
  - Business Partnerships
- Enhance partnerships with state and federal programs
  - Augustine Commission Recommendations (February 2015)
  - E-Novation Initiative (July 2014)
  - RISE Zone Program (June 2014)
  - TEDCO Maryland Innovation Initiative (July 2012)
  - DBED InvestMaryland (July 2011)
  - Strengthening linkages with federal labs
  - Integrate and fund SBDCs
New Companies Semiannual Tracking for the past five calendar years, from 2011 Cumulative Data, including SBDC Companies

Cumulative Data - Calendar Year

- 2011: 16 companies
- 2012: 77 companies
- 2013: 176 companies
- 2014: 310 companies
- 2015: 451 companies

2020 Goal of 325 companies
Examples of Successful Start-Ups

- Squarespace
- ZetaBoards
- Fruigee
- Unum inc.
- FDBK
- BevoMedia
- Dose
- Spot
- OpenGov
- GoMe
- BRAVE UX
- Thumbtack'd
- Investours
- HD Tradeservices
- JavaZen Coffee Blend
- CareerPeer
- Alertus
- Mowing & More
- ZUSIN
- Online Private Practices
- MyFridge Rental.com
- Triumfun
- Walters
- GymQ
- ventureboard
- OneReceipt
- FiscalNote
- YALA
- Daocloud
- Light Point Security
- FINAL
- Grip Boost
- Harpoon Medical
- Gliknik
- Flexel

Browsing the web has never been safer
Key Technology Transfer Indicators
YoY Semi Annual Data Tracking

USM

<table>
<thead>
<tr>
<th>Category</th>
<th>July 1, 2014 to Dec 31, 2014</th>
<th>July 1, 2015 to Dec 31, 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invention Disclosures</td>
<td>150</td>
<td>178</td>
</tr>
<tr>
<td>New Patents Filed</td>
<td>116</td>
<td>102</td>
</tr>
<tr>
<td>Tier 1 Companies</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Licenses + Options Executed</td>
<td>24</td>
<td>19</td>
</tr>
<tr>
<td>US Patents Issued</td>
<td>44</td>
<td>36</td>
</tr>
</tbody>
</table>
## University R&D Activity w/Industry

### Industry Sponsored Research Expenditures

#### Top 20 Rankings

<table>
<thead>
<tr>
<th>Rank</th>
<th>Institution</th>
<th>Industry Research Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Univ. of California System</td>
<td>$355,142,403</td>
</tr>
<tr>
<td>2</td>
<td>University of Texas System</td>
<td>$274,912,291</td>
</tr>
<tr>
<td>3</td>
<td>Duke Univ.</td>
<td>$252,366,000</td>
</tr>
<tr>
<td>4</td>
<td>The Research Foundation for The State University of New York</td>
<td>$175,175,286</td>
</tr>
<tr>
<td>5</td>
<td>Georgia Inst. of Technology</td>
<td>$163,300,000</td>
</tr>
<tr>
<td>6</td>
<td>Ohio State Univ.</td>
<td>$118,296,835</td>
</tr>
<tr>
<td>7</td>
<td>Massachusetts Inst. of Technology (MIT)</td>
<td>$112,378,969</td>
</tr>
<tr>
<td>8</td>
<td>Washington University of St. Louis</td>
<td>$112,270,000</td>
</tr>
<tr>
<td>9</td>
<td><strong>University System of Maryland</strong></td>
<td><strong>$101,912,219</strong></td>
</tr>
<tr>
<td>10</td>
<td>Penn State Univ.</td>
<td>$100,909,000</td>
</tr>
<tr>
<td>11</td>
<td>Univ. of Michigan</td>
<td>$81,353,689</td>
</tr>
<tr>
<td>12</td>
<td>Johns Hopkins Univ.</td>
<td>$78,709,168</td>
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<tr>
<td>13</td>
<td>Univ. of Pennsylvania</td>
<td>$77,317,590</td>
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<tr>
<td>14</td>
<td>Texas A&amp;M Univ. System</td>
<td>$70,607,000</td>
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<tr>
<td>15</td>
<td>Stanford Univ.</td>
<td>$68,174,508</td>
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<tr>
<td>16</td>
<td>The UAB Research Fdn.</td>
<td>$55,432,000</td>
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<tr>
<td>17</td>
<td>Medical Univ. of South Carolina</td>
<td>$52,559,476</td>
</tr>
<tr>
<td>18</td>
<td>Univ. of Utah</td>
<td>$50,974,449</td>
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<tr>
<td>19</td>
<td>Univ. of Washington/Wash. Res. Fdn.</td>
<td>$50,170,000</td>
</tr>
<tr>
<td>20</td>
<td>North Carolina State Univ.</td>
<td>$49,875,919</td>
</tr>
</tbody>
</table>

Source: AUTM Data, FY 2014
Key Findings

• Central Maryland compares well in Talent present and Research conducted

• Less success is shown in Commercialization measures such as capital investment, university startups, and invention disclosures

• Region is not lacking for human capital or technologies required to form an innovation hub. Rather the region needs to invest in catalyzing the next generation of Entrepreneurs.
Central Maryland Innovation Index
BioHealth

Rankings

<table>
<thead>
<tr>
<th>Category</th>
<th>Baltimore/CMD</th>
<th>Boston</th>
<th>New York</th>
<th>Philadelphia</th>
<th>Pittsburgh</th>
<th>Raleigh-Durham</th>
<th>San Diego</th>
<th>San Francisco</th>
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</thead>
<tbody>
<tr>
<td>Talent</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>7</td>
<td>8</td>
<td>5</td>
<td>6</td>
<td>4</td>
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<tr>
<td>R&amp;D</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>7</td>
<td>8</td>
<td>5</td>
<td>2</td>
<td>3</td>
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<tr>
<td>Entrepreneurship</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Capital</td>
<td>6</td>
<td>1</td>
<td>5</td>
<td>7</td>
<td>8</td>
<td>4</td>
<td>5</td>
<td>2</td>
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<tr>
<td>BioHealth Innovation Index</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>7</td>
<td>8</td>
<td>5</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: EAGB and BioHealth Innovation Index, 2015
Central Maryland Innovation Index

Talent

BioHealth Workforce Density
2012

BioHealth Labor Force Density
As a Percentage of All Degree Holders, Aged 25+, 2013

Source: County Business Patterns, US Census Bureau

Source: American Community Survey, US Census Bureau
Central Maryland Innovation Index
Talent Flow

<table>
<thead>
<tr>
<th>Regional Commuters</th>
<th>From Baltimore to:</th>
<th>From MD/DC Suburbs to:</th>
<th>From DC to:</th>
<th>From Northern VA to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baltimore MSA</td>
<td>945,626</td>
<td>117,791</td>
<td>7,150</td>
<td>20,563</td>
</tr>
<tr>
<td>MD/DC Suburbs</td>
<td>149,284</td>
<td>471,745</td>
<td>37,132</td>
<td>86,470</td>
</tr>
<tr>
<td>DC</td>
<td>30,511</td>
<td>202,233</td>
<td>169,915</td>
<td>179,428</td>
</tr>
<tr>
<td>Northern VA</td>
<td>22,260</td>
<td>94,160</td>
<td>35,564</td>
<td>941,196</td>
</tr>
</tbody>
</table>
Universities in the region spent over $1.7 billion on BioHealth R&D in 2013.
Technology Transfer

License Income at Universities
per $100 of Research Expenditure, 2013

Source: Association of University Technology Managers
USM Economic Development Objectives

**Enhance and Promote Culture of Collaboration**

- Within the University of MD System = “Connecting the dots”
- In the business community = Customer relations, strategic outreach, marketing and PR
- Grow partnerships with Industry and Government = “Develop and distribute USM prospectus” ...Creating opportunities to showcase strategic assets and capabilities
- Take summer to reset our strategic plan to reflect current an emerging opportunity

**Strategically Align USM Resources to Meet Market Demands**

- Leverage existing resources, enhance programming and develop new tools to nurture, cultivate and fund entrepreneurial thinking and commercialization activity
- Investment fund, MII “phase two” program, HIEDA utilization, University campus “eco-system”/place making development strategy

**Develop, Grow and Retain Talent**

- Partner with government and industry to better identify, engage and ultimately keep our best and brightest = internships
USM Economic Development Objectives

Tell Our Story ... with consistent message

• Celebrate success, teamwork and enhance opportunity awareness
• Target regional, national, global audience (industry government and education)
• Develop “System brand” ... communicate strategic VISION and objectives
• Amplify Institutional Partners’ success ... rising tide lifts all ships

Strengthen Entrepreneurial Eco-system

• “Connect the dots” and achieve coordinated effort within the USM
• Articulate value proposition to State-wide business community
• Pro-actively partner with Dept. of Commerce and regional Economic Development community ... don’t wait for phone to ring