

**Executive Summary**

# Cultivate



**M A R Y L A N D**

*Advancing a culture of innovation and entrepreneurship across all communities in Maryland and positioning the State as a leading inclusive and global innovation economy by 2040*



**Culture of innovation, entrepreneurship, and leadership**

# How This All Got Started

## 2022 Joint Chairman's Report (JCR)

- Conduct a study on the effectiveness and impact of the **State's current economic development strategy** ("Study") and deliver a report as requested by the JCR
- Draft legislation to make **financial, policy, and governance** recommendations for a 10-year, \$500M Equitech Growth Fund ("Fund")

# Intent of JCR Language

- Increase **Maryland's competitiveness** as an innovation economy to retain and attract trained workers
- **Grow Maryland's innovation economy** to create opportunities for a larger and more diverse workforce
- Increase the number of **underrepresented individuals** (minorities) in high technology-based (STEM) education, careers, and entrepreneurial activity in Maryland
- Increase **wealth in Maryland's underrepresented (minority) communities**

# 10-year Goals

- Maryland is a **top 10 fastest-growing state** in advanced technology industries
- The **share of jobs** at all skill levels, including high-skill jobs, held by **minority workers** equals their overall workforce representation
- The number of **STEM degrees and experiential learning** opportunities for minority students equals their overall presence in the workforce
- The number of **minority entrepreneurs** participating in start-ups equals their overall workforce representation
- Raising the levels of **minority resident-owned businesses and housing** in surrounding neighborhoods



# Current Status

Maryland Innovation Competitiveness Study	Strategic Planning Commission	Maryland Equitech Growth Fund
<ul style="list-style-type: none"><li>• RTI Engaged to conduct study</li><li>• Final Draft of report submitted to DBM – 10-day review is underway</li><li>• <b>Anticipated public release date – around Jan. 20<sup>th</sup>.</b></li></ul>	<ul style="list-style-type: none"><li>• Model for commission socialized with stakeholders and proposed in outline for legislation</li><li>• Bill sponsors secured for House and Senate</li><li>• <b>Outline of legislation submitted to Legislative Services via sponsors</b></li></ul>	

# Maryland Innovation Competitiveness Study

# Six Areas of Analysis Required

1. Maryland's competitiveness
2. Investment by other states
3. Minority participation in advanced technology careers
4. Connection between STEM education and career development
5. Advanced industry start-ups and minority participation
6. Wealth in minority communities – business/home ownership



# Highlights of RTI Report

- MD **ranked 21<sup>st</sup>** in high-tech industry employment, **28<sup>th</sup> in rate of growth** for same
- MD's economic growth rate for its innovation sectors is **1.6%** - it **needs to be 4%** to achieve top 10 status (assuming other states remain constant)
- Competing states are investing heavily – NC, MA - \$1B each; VA - \$15M per year
- MD needs to grow **manufacturing** – where job growth happens

# Highlights of RTI Report

## Concept of “Parity”

- Representation of workforce in technology sectors versus overall representation in workforce

# Highlights of RTI Report

- Black workers in the Life Sciences – **150 years** to parity
- Female workers in Computer/Math – **Diverging** (never reach parity)
- Hispanic workers in Architecture/Engineering – **72 years** to parity

# Highlights of RTI Report

- Hispanic students – BS in Life Sciences – **5 years** to close the gap
- Black students – MS in Engineering – **114 years** to close the gap
- Black business ownership – **47 years** to close the gap
- Hispanic business ownership – **Diverging** (never reach parity)

# Conclusions of RTI Report

- Build in key areas of strength (life sciences, cybersecurity & IT) – **focus on manufacturing**
- Need a **long-term strategic planning** process
- Need **investment** comparable to competing states and MD's goals
- Need to **change growth rates** to change parity

# Maryland Equitech Growth Fund & Strategic Planning Commission

# Background

## Leveraging the Fund

- **The Fund** takes a first step and creates an opportunity to develop and seed a broader innovation strategy for the State of Maryland
- An innovation **strategic planning process** would bring together voices from across the state to build consensus and foster collaboration to address one of Maryland's greatest challenges – its segmentation

## Innovation Strategy Goals

- **Scaling and stitching** of innovation resources across the state
- Top 5 innovation economy by 2040 – long-term horizon



# General Fund Strategy

## Foster Equal Participation in Innovation

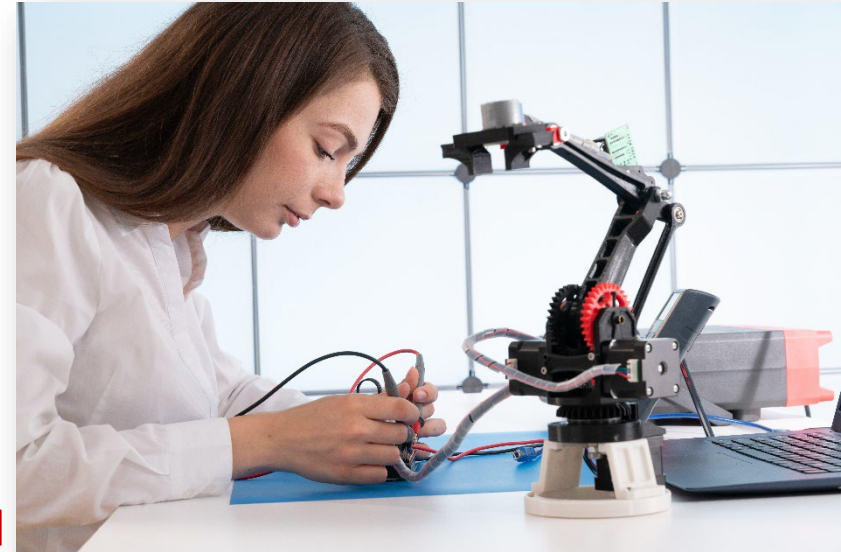
- Create **pathways** to get more diversity into the innovation economy to make Maryland more competitive

## Unify Maryland's Resources – Stitching existing components

- Create **incentives** for various organizations to work together

## Scale Maryland's Innovation Competitiveness

- Leverage the **Fund as an initial investment** to grow Maryland innovation over next 15 - 25 years to accommodate a growing, technology-based, and entrepreneurial workforce
- Establish and foster **a culture of innovation, entrepreneurship, and leadership** in the State
- Position Maryland as a leading **innovation economy with the greatest diversity** in its workforce





# Innovation Strategic Planning Commission

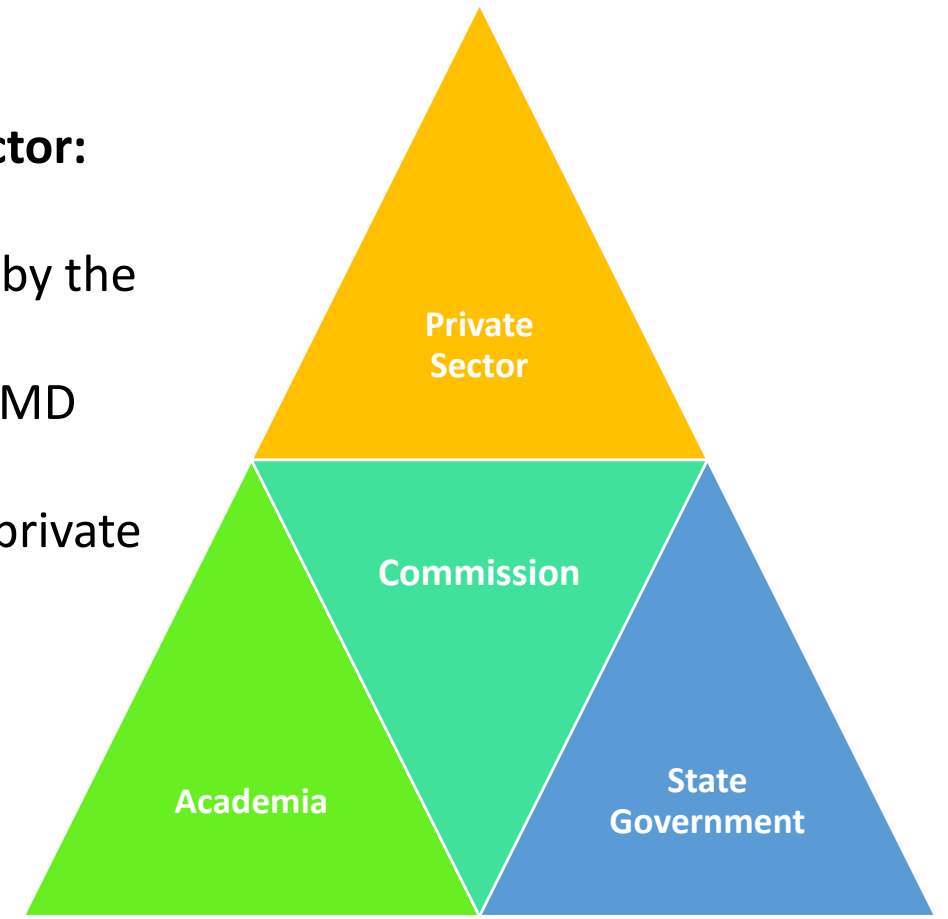


- Legislation will propose the creation of a commission led by industry to develop a **15 to 25-year strategic plan** for Maryland's innovation economy
- The commission will take **up to 24 months** to develop a strategic plan
- The strategic plan will **build on RTI report** and will be used by TEDCO to shape investment policy and programming supported by the Fund and by Commerce and industry to increase Maryland's competitiveness

# Innovation Strategic Planning Commission

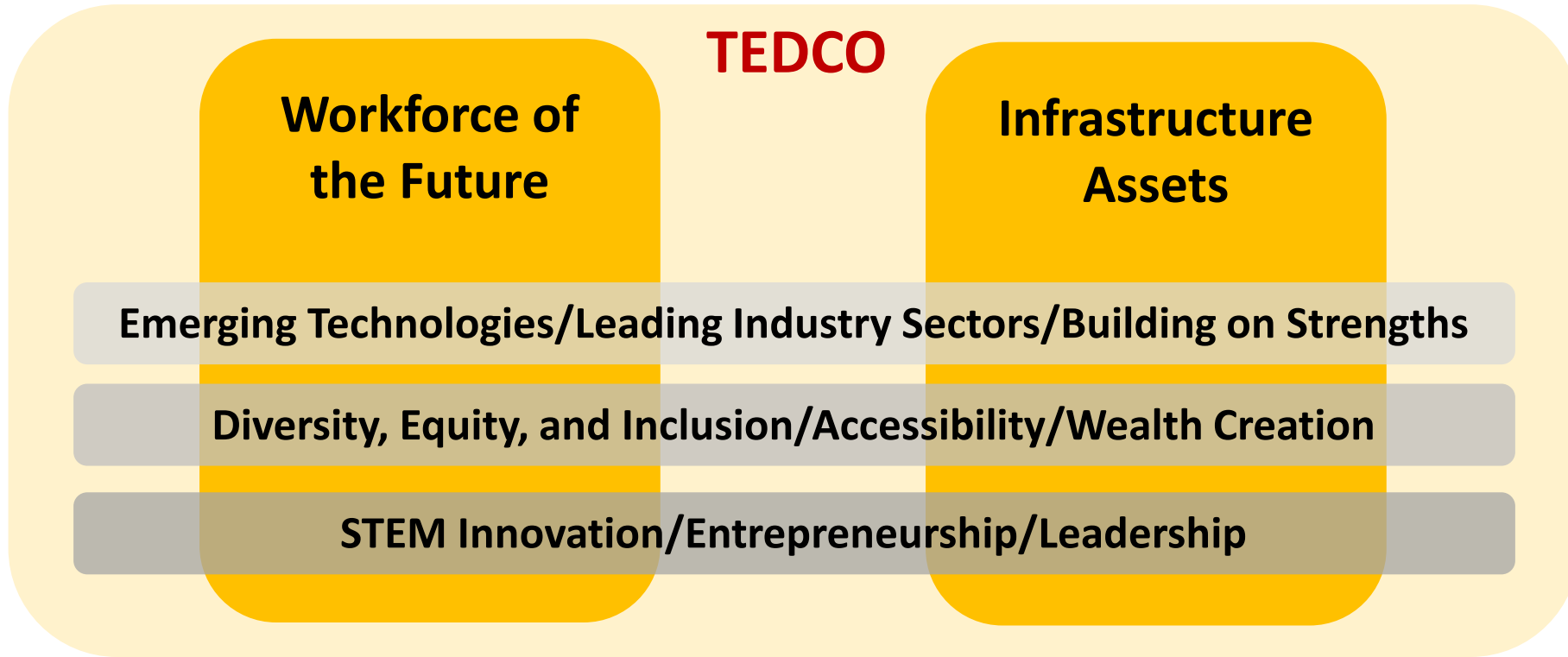
**23 Members** from State government, academia, and the private sector:

- 12 members from the private sector corporations appointed by the Governor, Speaker, and President of the Senate
- Representation from other private sector entities (e.g., GBC, MD Chamber, etc.)
- Representatives from 4-year and 2-year colleges; public and private
- Secretaries from Commerce, Labor, and Education
  
- TEDCO CEO will chair
- Provisions to ensure ethnic, geographic, and gender diversity



# Focus Areas of the Fund

The Fund will have two general areas of focus with three underlying themes:



# Focus Area: **Workforce of the Future**

- Increasing the diversity of Maryland's workforce in terms of STEM degrees, STEM related jobs, and STEM-related entrepreneurial activity
- Workforce includes individuals trained at all levels from certificate programs through 4-year degrees
- Early emphasis on innovation, entrepreneurship, and leadership in STEM/STEAM – elementary, middle, and high schools
- Develop and expand entrepreneur training programs targeting minorities, women, and other underrepresented communities

## **Possible examples:**

- Workforce training program at an HBCU/MSI/CCs in quantum computing
- Laboratory technician training for H.S. graduates
- Experiential training programs & internships
- Afterschool/summer programs in STEM innovation and entrepreneurship for youth

# Focus Area: Infrastructure Assets 1

- Facilitate engagement between HBCUs, community colleges, and industry – research, collaborations, access to students
- Engage in stitching, scaling, and storytelling to foster stickiness – focus on ecosystem efficiencies, data collection, and marketing
- Establish and grow diverse/representative networks that provide mentoring, access to customers, and access to capital
- Develop models for new venture creation leveraging federal laboratory and other research assets in the state

## Possible examples:

- Investment in facilities and equipment at HBCUs and community colleges
- Federal grant matching funds
- Expansion of UBII/RBII Programs
- Builder – Concept-stage Fund
- Leading Women Program
- Pathways to Advance Ventures in an Ecosystem (PAVE)
- Federal laboratory venture creation model
- Makerspace expansion

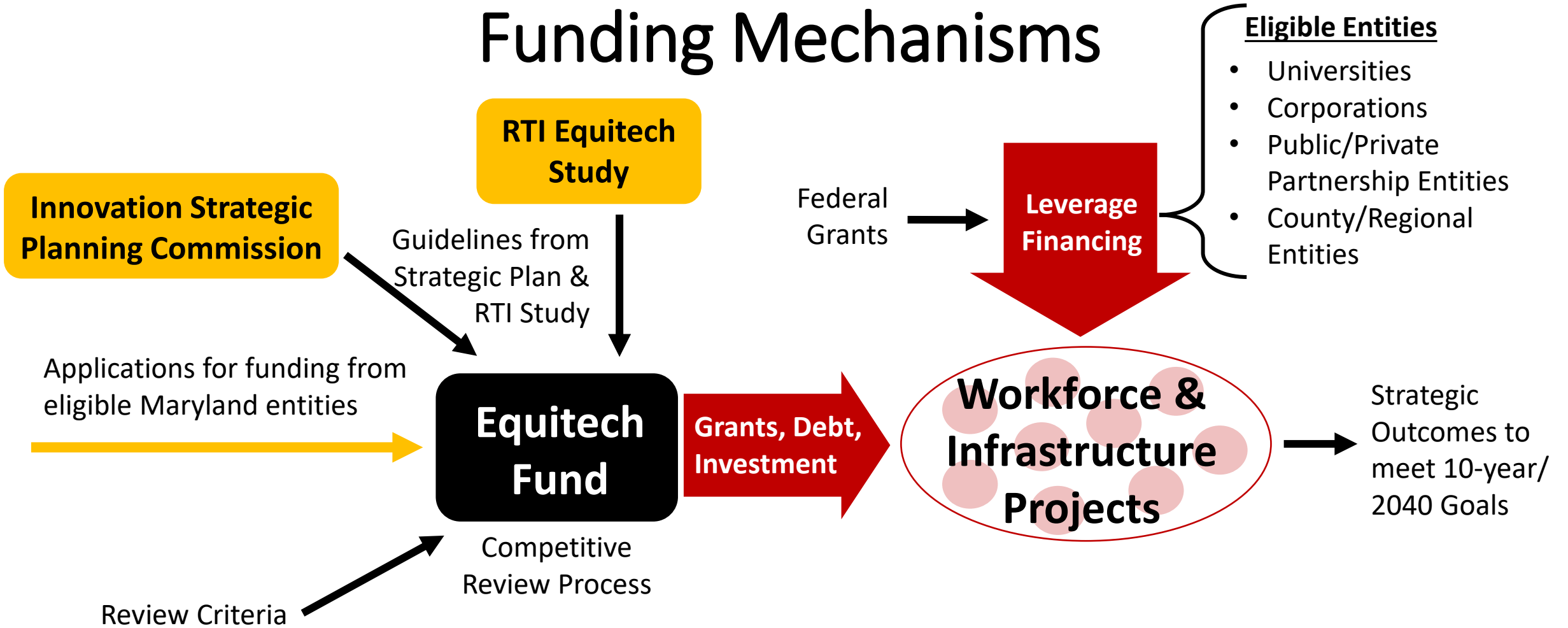
## Focus Area: Infrastructure Assets 2

- Focus on creating pathways to the innovation economy for underrepresented communities
- Focus on developing infrastructure needed in high-technology industries to support growth and attraction of businesses building on key strengths across the State
- Incentives for public-private partnerships in developing manufacturing, core research facilities, and business expansion

### Possible examples:

- Flexible wet lab space for early-stage life science companies
- Incentives for manufacturing renovation and expansion to support growth
- Core facilities shared by universities, federal laboratories, and industry in targeted industry sectors
- Quantum/microelectronics shared resources

# Funding Mechanisms



- Eligible Entities**
- Universities
  - Corporations
  - Public/Private Partnership Entities
  - County/Regional Entities

# Proposed Fund Investment Schedule

Fiscal Year	State Investment	Private/Fed. Leverage	Total Investment	Economic Impact (1.6x)
2024	\$15M	\$30M	\$45M	\$72M
2025	\$30M	\$60M	\$90M	\$144M
2026	\$55M	\$110M	\$165M	\$264M
2027	\$75M	\$150M	\$225M	\$360M
2028	\$75M	\$150M	\$225M	\$360M
2029	\$75M	\$150M	\$225M	\$360M
2030	\$75M	\$150M	\$225M	\$360M
2031	\$55M	\$110M	\$165M	\$264M
2032	\$30M	\$60M	\$90M	\$144M
2033	\$15M	\$30M	\$45M	\$72M
<b>TOTALS</b>	<b>\$500M</b>	<b>\$1B</b>	<b>\$1.5B</b>	<b>\$2.4B</b>

- Economic Impact factor based on total investment - multiple from Mass Life Science Center
- 2:1 leverage over entire fund – leverage amount will vary by project
- 4.8x return on state's original investment



# Discussion

# Specific Legislative Requests for the Study

1. An analysis of Maryland's national competitiveness in cyber, biohealth, and advanced and emerging technology industries, with recommendations to achieve a 10-year goal of making Maryland among the top 10 fastest-growing states in advanced technology industries;
2. An examination of publicly financed advanced industry investment funds in other states, including the role and results of public funds to induce private sector growth;
3. An analysis of current minority participation in Maryland's advanced technology industry careers, with recommendations to achieve a 10-year goal that the share of jobs at all skill levels, including high skilled jobs, for minority workers will equal their overall workforce representation;
4. An assessment of the connection between postsecondary science, technology, engineering, and math (STEM) education and career development for advanced industry jobs with recommendations to achieve a 10-year goal of raising STEM degrees and experiential learning opportunities for minority students equal to their overall presence in the workforce;
5. An evaluation of the current state of advanced industry startups and recommendations to achieve a 10-year goal of minority entrepreneurs participating in startups at levels equal to their overall workforce representation; and
6. An analysis of community wealth in minority communities with recommendations to achieve a 10-year goal of raising levels of resident-owned businesses and housing in surrounding neighborhoods.