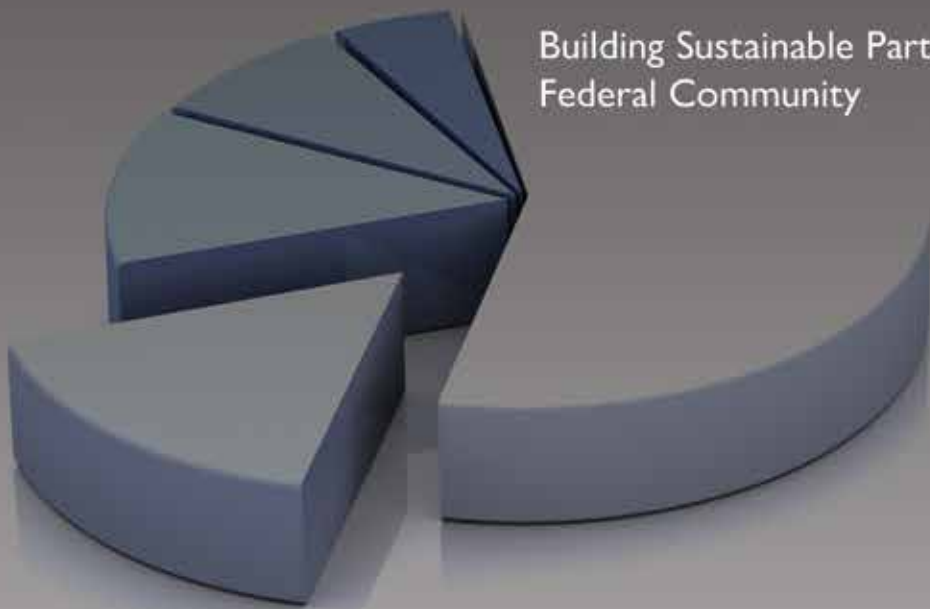


Strategic Business Plan: Supporting Maryland's Federal Facilities



Building Sustainable Partnerships with the
Federal Community

MARYLAND OF OPPORTUNITY.®

Martin O'Malley, Governor

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2010 The Effect of Federal Employment & Spending in Maryland

FFAB Technology Transfer Report

Introduction

Located just 40 miles from the nation's capital, Maryland is home to more than 70 federal agencies and major military installations. Contracting more than \$26 billion and generating more than 800,000 jobs in the State, these organizations have a significant economic impact on Maryland.

To strengthen the State's relationship with the federal agencies and military commands located in Maryland, Governor Martin O'Malley appointed the Federal Facilities Advisory Board (FFAB), chaired by Kevin F. Kelly, Vice President, Van Scoyoc Associates. Governor O'Malley appointed 19 members – educators, entrepreneurs, business leaders and stakeholders – and directed the board to develop recommendations and strategies to build on and enhance Maryland's reputation as a leader in federal contracting, R&D and technological innovations.

The recommendations outlined in this report lay the foundation for launching and furthering innovative initiatives in cybersecurity, technology commercialization, federal contract procurement, federal workforce development and infrastructure improvements.

Methodology

In January 2011, the Federal Facilities Advisory Board kicked off an aggressive federal outreach initiative at the National Institute of Standards and Technology (NIST). Since then, the Board has hosted roundtable discussions at and/or toured NASA Goddard Space Flight Center, Ft. George G. Meade, Social Security Administration (SSA), National Institutes of Health (NIH), Food and Drug Administration (FDA), National Oceanic Atmospheric Administration (NOAA), Naval Air Station Patuxent River, and Beltsville Agriculture Research Center. The events – which included leaders of each facility, as well as business and academic professionals and state and federal congressional staff – were designed to:

- Understand and examine facility programs in areas including cybersecurity, technology commercialization, federal contract procurement, federal workforce development and infrastructure improvements.
- Share best practices for addressing issues in the aforementioned areas and coordinate efforts to work toward accomplishing the objectives of the State and the facility's mission.
- Initiate the development of public-private partnerships.

Understanding Maryland's Federal Assets

In February 2012, the Department of Business and Economic Development (DBED) and the Federal Facilities Advisory Board conducted a comprehensive study of federal employment and spending in Maryland (see appendix). As a result, the following key findings were identified:

Maryland's Highly Skilled Workforce

- **Maryland was home to 314,296¹ federal workers and service members in 2010, 218,416² of whom were employed in Maryland itself.** Most resident federal workers and service members were employed in Maryland (186,000), but 96,000 commuted to Washington, D.C., and 22,000 commuted to Virginia. These workers earned a total of \$25.6 billion in wages, income that was generally spent within Maryland. According to the U.S. Bureau of Economic Analysis, federal workers employed in Maryland in 2010 contributed \$27.3 billion to the state's GDP, or 9.6% of the total.
 - The household spending of the 314,296 federal employees who resided in Maryland supported an additional 149,202 "induced" jobs within the State.³
- In 2010, the #1 federal employment job sector for both defense and non-defense with regard to federal dollars obligated in Maryland was **Professional, Scientific and Technical Services**:
 - Non-Defense Spending: \$7.5 billion – 53.2%
 - Defense Spending: \$5.3 billion – 44.7%

Manufacturing was in second place, with non-defense spending of 8.7% and defense spending, 23.8%.

- **Maryland's federal workforce is predominately comprised of highly-skilled "thinkers" and "doers".** A greater share of federal employees residing in Maryland has advanced degrees than full-time workers in general (57% of federal workers vs. 41% of all full-time workers). While federal workers make up 12% of all full-time resident workers, they make up 14% of all workers with Bachelor's degrees, 18% of workers with Master's or professional degrees, and almost one-third of all resident workers with Doctoral degrees.

Federal Procurement Contract Spending

- The most volatile and consequential federal funding source for the State is federal procurement spending. **Maryland ranks 4th in total federal procurement expenditures, although it ranks 19th in population.** The State receives a disproportionately large share of procurement dollars which will slow down business growth when federal budget cuts take effect.

¹ Analysis of Public Use Microdata Sample (PUMS) data from the 2010 American Community Survey from the U.S. Census Bureau.

² U.S. Bureau of Economic Analysis, Table SA25N

³ DBED analysis using IMPLAN and Public Use Microdata Sample (PUMS) data from the 2010 American Community Survey from the U.S. Census Bureau.

- **Maryland generated \$26 billion in 2010 or 4.8% of the U.S. total procurement expenditures**, down slightly from \$27 billion in 2009.
- **Spending related to procurement contracts in 2010 created an estimated 315,293 jobs:**
 - 171,298 direct – jobs created by employers who directly received procurement contracts
 - 58,410 indirect – jobs at suppliers who worked with direct contract recipients.
 - 85,605 induced – job created by spending from direct and indirect employees.

Federal Grant Activity

- **In 2010, 12,376 grants – with an estimated value of \$10.8 billion – came into the State.** Spending related to grants created 79,648 direct jobs at organizations that received federal grant money. These organizations supported an additional 18,307 indirect jobs. Household spending by employees of these agencies supported an additional 40,177 jobs. **As the result of grant spending in Maryland in 2010, 138,131 jobs were created.**

Federal Research and Development Funding

- In FY 2010, various entities received contract grant monies to perform **\$6.3 billion** worth of research and development in Maryland. Grant- and contract-funded R&D spending in Maryland in 2010 created or supported 42,016 direct jobs; 17,475 indirect jobs; and 26,806 induced jobs; **for a total employment effect of 86,297, representing 2.6% of all jobs.** Note that these jobs are already included in the previous statistics on contract and grant spending.

Total Effect of Federal Employment and Spending in 2010

- Federal operations and spending (excluding spending on direct payments and for various small loan and insurance programs) created an **estimated 821,000 jobs in Maryland in 2010, or 24% of the total jobs in the State.**

Strategy

Priority I | Align State Resources with Federal Priorities and Needs

With more than 70 federal facilities and military installations in Maryland and approximately 14% of the State's employment directly relying on federal activities, Maryland should continue to accelerate its emphasis on building and maintaining good working relationships with federal partners. It is important for state and local government leaders, Maryland's congressional delegation, and business and academic leaders to coordinate and collaborate in a more comprehensive, more structured approach. The following recommendations support the missions of the federal organizations and also capitalize on related opportunities for economic development.



Issue: The federal government has a significant impact on Maryland's economy. To maintain the State's prominence in providing products and services for federal agencies, a more structured approach to building sustainable relationships with the federal community is warranted.

Recommendation #1: Centralize State government efforts related to federal facilities to emphasize the priorities and needs of these organizations and ensure responsiveness and transparency in interactions:

- **Workforce:** Integrate federal workforce needs into the Governor's Workforce Investment Board (GWIB) and assess these workforce needs every two years and provide a report to the General Assembly and Maryland's congressional delegation.
- **Infrastructure:** Conduct an interagency infrastructure assessment (i.e., water, sewer, power, highway and transit) for the top 25 major federal facilities to determine pressing needs over the next 36 months.
- **Agency Leadership:** Establish an Assistant Secretary's position within DBED. The Assistant Secretary would be responsible for developing State strategies for major federal agency installations and an agenda for the Governor that is focused on major federal agencies in the State, including the National

Aeronautics and Space Administration (NASA), NOAA, NIH, SSA, the Department of Health and Human Services apart from NIH, the U.S. Cyber Command and national intelligence agencies, and each of the U.S. military services. These strategies should seek to unite Maryland's federal, academic and private sector interests around each location to fully support each agency's federal mission of each agency and maintain or increase each agency's employment in Maryland.

- **Analytics:** Develop a "State of Federal Facilities" Report that analyzes the strengths, weaknesses, opportunities and threats associated with the major facilities in Maryland. The report would identify potential for expanding the federal facilities' programs to grow jobs in Maryland, protect against the loss of jobs in future defense or civilian BRAC processes, and minimize conflicts that could see Maryland facilities competing for programs.
- **State Ombudsman:** Establish an ombudsman for federal agency issues on the Governor's staff to ensure coordination of interagency priorities and engagements related to federal installations.
- **Funding:** Identify and appropriate the required funding resources for implementing and sustaining federal facility initiatives within DBED.

Issue: Many State incentive programs are not specifically targeted to companies that offer products and services to federal agencies, particularly in core areas such as biotechnology, cybersecurity and aerospace and defense.

Recommendation #2: To encourage the purchase and use of locally-designed and marketed technologies for federal government use, develop a "Made in Maryland" initiative to:

- Target State incentive funds to sectors related to the primary activities of Maryland's federal agencies (e.g., IT, cybersecurity, bioscience, and space-related industries).
- Establish state tax credit incentives or vouchers for cybersecurity and space industry companies that are comparable to the incentives available to biotech companies.
- Ensure that funds from the InvestMaryland program are targeted to the State's most innovative companies in fields critical to the federal government.
- Initiate an aggressive effort to focus acquisition opportunities run from Maryland's federal agencies so that more work is done in proximity to Maryland-based federal facilities.
- Create a bioscience initiative at Maryland universities to capitalize on emerging federal initiatives in translational medicine at NIH and regulatory science reform at the FDA.
- Endorse the sustainability of the Research and Development Tax Credit.

Issue: Based upon analyses prepared by DBED and other organizations, the proposed and pending federal budget reductions could result in significant financial threats and job losses for Maryland.

Recommendation #3: Establish a working group comprising Maryland's congressional delegation, business and academic leaders, FFAB representatives, local government officials, and other partners to assess the greatest near-, mid- and long-term threats from fiscal reductions. Task the working group with identifying those programs and initiatives at greatest risk. Engage stakeholders to protect funding for these initiatives, commencing with federal budget deliberations in fiscal year 2013 and continuing during the fiscal year 2014 and 2015 budget cycles.

Priority II | Promote Cyber Business Innovation and Growth in Maryland

In January 2010, Maryland released *CyberMaryland: Epicenter for Information Security & Innovation*, a strategic plan to position the State as the nation's epicenter of cybersecurity. The State's prominence in cybersecurity has since been enhanced by the U.S. Cyber Command and other military commands, federal agencies' work in the industry, and in a rapidly-growing information technology industry that is a driving force for the State's innovation economy. The following recommendations support the CyberMaryland initiative and aim to create a dynamic network in which partnerships in the cyber community lead to job creation and business innovation.

Issue: There is a need to centralize such functions as tech transfer and commercialization, research and development, information sharing, workforce development, and testing and certification. In response to the *CyberMaryland* report's recommendation to create a National Cyber Center of Excellence (NCCOE), the FFAB cybersecurity sub-committee developed a white paper that called for the creation of the center at NIST. The proper implementation of this initiative will require the collaboration and commitment of resources from federal, state and local government.

Recommendation #4: Establish the NCCOE at NIST as a forum in which government, academia, industry, private businesses, organizations, and associations share information on cybersecurity research efforts and advancements, funding sources, technologies, and specifications and testing of new or improved technologies.



(February 21, 2012) Montgomery County Executive Isiah Leggett, Lt. Governor Anthony Brown, Senator Barbara Mikulski, and Dr. Patrick Gallagher, Director of NIST, sign Memorandum of Understanding for National Cybersecurity Center of Excellence.

Recommendation #5: Establish the NCCOE to support research, development, evaluation, transfer (whether to or from government), and commercialization of cybersecurity technologies by private companies, associations, state governments, and academic institutions – working individually or in partnerships. The NCCOE should facilitate an increased tempo of commercialization of cybersecurity technology by:

- Encouraging Maryland's congressional delegation to lead efforts to affirm NIST's and the National Security Agency's central roles in civil Cyber R&D, innovation, and technology transfer.
- Assisting NIST in establishing more focused research and development programs, such as an enhanced Small Business Innovation Research program and other related R&D programs, to promote innovation and entrepreneurship in cybersecurity and to stimulate the emergence of potential leap-ahead cybersecurity technologies.
- Locating the NCCOE in a separate building or complex, with space to accommodate offices for private sector stakeholders as well as NCCOE offices, test labs and innovation incubators to develop, test and share innovation and research and development, as recommended by the FFAB's Cyber Subcommittee.

Recommendation #6: Leverage NIST's work in developing standards and metrics to drive, measure, and test cybersecurity technology and serve as a clearinghouse for test data.

- Develop a model for a center to support central testing and certification for cybersecurity hardware and software products.
- Develop and issue certification credentials based on conformance with standards and metrics developed at NIST (similar to a UL for electrical products), including accreditation of third-party testing and certification centers, particularly in regional centers.

Recommendation #7: Promote cybersecurity training and education nationally as strategic tools for workforce development. Work with NIST to use the National Initiative for Cybersecurity Education (NICE) as a foundation for this initiative.

- Engage the University System of Maryland to commission an evaluation of the cyber education and training efforts and capabilities of Maryland's academic institutions, to recommend areas of improvement, prevent unnecessary overlap and duplication, and better align degree and certificate programs to meet current and future workforce needs.
- Encourage NIST and stakeholders to develop a lifecycle model for cybersecurity training and education, including K-12 programs for cyber awareness and sensitization, technical training for technicians (from technical specialists up to journeyman level), professional training, and academic research and development.
- Encourage the NCCOE to formulate a coherent national strategy to develop a robust educational pipeline, including training new cybersecurity talent and advanced cyber workforce development.

Issue: Although DBED has taken the lead on CyberMaryland and the State's cybersecurity efforts, no additional State staff or resources have been dedicated to the initiative or the industry.

Recommendation #8: Dedicate DBED resources – including a cyber “champion” – to the agency’s CyberMaryland efforts to better address the cybersecurity industry’s challenges and opportunities.

Recommendation #9: Identify and appropriate funding resources for implementing the CyberMaryland marketing campaign to brand the State as the epicenter of cybersecurity. Encourage jurisdictions, universities and private industry organizations to contribute and adopt the State’s cyber brand and work, in unison, to drive cyber business and industry experts to the area.

Issue: No organization in Maryland is centered around advancing cyber business development, tech commercialization and next-generation technology, and engaging the industry in educating and mentoring emerging business leaders and the general public on cyber goals and initiatives.

Recommendation #10: Establish the Maryland Cyber Business Roundtable, a non-profit organization to promote cyber business innovation and growth in Maryland and to provide a focal point for national and Maryland cyber thought leadership. Involve the Governor’s Office, DBED, FFAB and cyber-related businesses in establishing the organization.

Priority III | Position Maryland’s Federal Contractors for Sustainability and Growth

Maryland has experienced tremendous growth in federal contracting opportunities, with federal procurement dollars spent in Maryland increasing approximately 63% – to \$27 billion – between 2000 and 2009. As the federal government has addressed fiscal challenges, however, agencies have begun to limit procurement expenditures. Thus, contracting opportunities have become more competitive and Maryland companies must find ways to partner and team on federal procurement opportunities. To that end, the FFAB’s Federal Procurement Workgroup created the Team Maryland Network in 2010. The Network requires an ongoing commitment from the State.

Issue: In response to the federal government’s efforts to cut spending, federal procurement dollars coming into Maryland are decreasing. There is now intense pressure for more work to be brought in-house, forgoing the cost of coordinating and managing contracts. As a result, more contracts may be awarded to companies with lower operating costs and pay scales, located outside the region. Federal contractors in Maryland, which helped to create more than 171,000 direct jobs in 2010, must find ways to partner and team on federal procurement opportunities. These efforts will help to stabilize a volatile source of federal funding.

In 2010, the FFAB’s Federal Procurement Workgroup created the Team Maryland Network to assist Maryland businesses in competing for federal contracts; provide small companies with information about and access to federal procurement opportunities; encourage teaming and mentoring among Maryland companies; and help small businesses build relationships with federal agencies’ procurement offices. The Network, which comprises more than 100 federal contractors, has hosted several teaming activities and educational workshops and attracted the attention and support of both public and private sector industry leaders. However, more support is needed to ensure the Network’s continued operation and growth. Financial resources – as well as human capital, time and expertise – are required if the initiative is to continue.

Recommendation #11: Establish the Team Maryland Network as a permanent part of Maryland's economic development efforts. Working under the direction of the proposed Assistant Secretary in DBED, the Network would establish a rotating Board of Directors comprising industry representatives who can help develop industry- and agency-specific plans and strategies to increase teaming among Maryland companies employing Maryland residents.

- **Funding and Marketing of the Network:** DBED should establish an appropriate annual budget allocation to maintain the Team Maryland Network, including hosting at least four Team Maryland events each year; fund marketing activities; and maintain the membership and opportunities database. The Network should also determine ways in which to bolster opportunities for mid-market companies with a large concentration of workers in Maryland, as federal procurement rules often penalize such companies as they progress from small business status.
- **Leadership Support:** The Team Maryland Network benefits from active participation and support by the Governor, DBED and Maryland's congressional delegation. Each major event should include a significant government or business leader to strengthen credibility, and should systematically showcase all major federal agencies with procurement opportunities in Maryland.
- **Evaluation:** On an annual basis, DBED should evaluate the effectiveness of the Team Maryland Network – how many team opportunities were created, how many agencies were impacted and number of jobs created – and report data to the Governor and congressional delegation.

Priority IV | Expedite Federal/State Infrastructure Projects and Improvements

Improved infrastructure is one of the most pressing issues impacting the State's federal facilities as well as federal employees' quality of life. At current funding levels – and using current funding mechanisms – Maryland will be unable to alleviate traffic congestion that continues to grow. The following recommendations address the funding, partnerships and flexibility necessary to improve the quality of life and ensure that our federal facilities remain in Maryland.

Issue: The Maryland Made Easy initiative and State Highway Administration access permit process review are positive steps; however, greater attention is required to address permitting processing times and local jurisdictions' regulatory review.

Recommendation #12: Establish an expedited permit review process specifically for any private sector company seeking to build a facility for a federal contractor or in conjunction with a federal facility. This process will not exempt a company from Maryland's regulatory requirements, but instead guarantee a decision within a fixed period of time to ensure that the permit request does not "fall through the cracks" and critical federal program activities are not placed at risk.

Issue: Coordination between the State and federal agencies on project management, policy development and funding opportunities should be improved.

Recommendation #13: Under the authority of the newly-created Federal Ombudsman in the Governor's Office, work with State agencies to ensure communication and coordination with federal government on project management, policy development and funding opportunities. The Ombudsman should meet with key federal officials on agency retention or relocation matters as appropriate.

Issue: An inventory of local roads and infrastructure requests is necessary to keep abreast of major projects impacting the federal community.

Recommendation #14: Ensure completion of work as part of statewide efforts through existing entities such as the Maryland Military Installation Council, military alliances and State Highway Administration.

Issue: Infrastructure challenges require a comprehensive review of available programs and funding resources.

Recommendation #15: Conduct a comprehensive review of available programs and funding resources, including evaluating the need for and availability of funding at all levels of government.

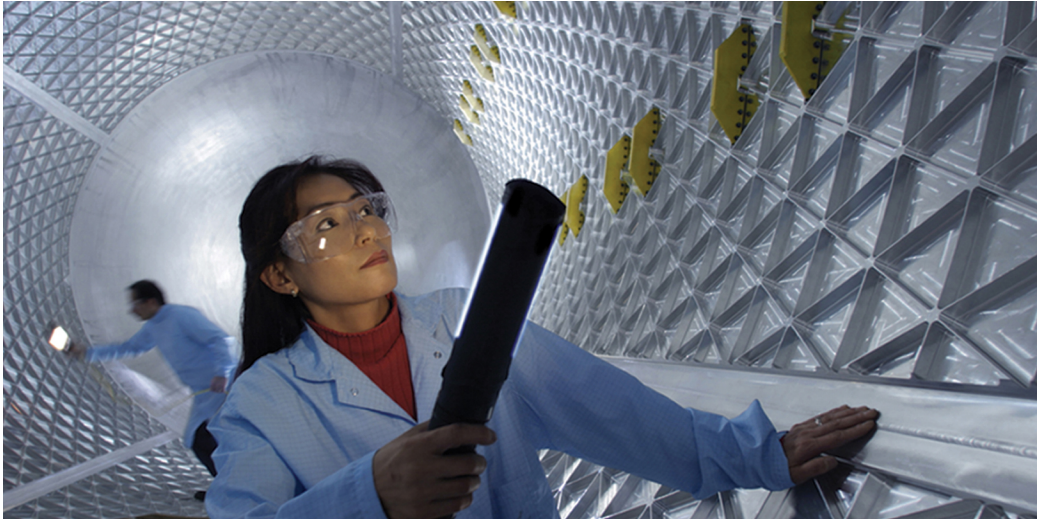
- Continue to advocate local Tax Increment Financing (TIF) and Special Tax District programs such as BRAC Zones within designated Priority Funding Areas;
- Create other programs and/or policy initiatives to build public/private partnerships that leverage private equity investments for state public infrastructure projects (e.g., road, water, sewer, high-speed fiber, power conservation and alternative power generation, etc.);
- Continue to conduct research and foster community work on behalf of infrastructure improvements that leverage or use private funding sources;
- Continue to promote to the federal government available land at or near Transit Oriented Developments (TOD);
- Devise new dedicated sources of revenue for transportation funding as well as public/private partnership initiatives to enable private capital to help close the infrastructure deficit around Maryland's federal facilities; and
- Support federal legislation that enables multiple federal installations to take advantage of enhanced use lease authority when appropriate.

Priority V | Develop a Pipeline of Highly-Qualified workers to Support Federal Workforce Needs

To address the current and future workforce needs of Maryland's federal facilities, it is important that the State understand those requirements. Maryland should continue to develop curriculum to prepare students for the careers of today and tomorrow, encourage students to enroll in Science, Technology, Engineering and Math (STEM) programs, and attract high-value employees to the State. The following recommendations outline the necessary steps to prepare Maryland's federal workforce of tomorrow and to coordinate strategically with the State's federal facilities.

Issue: Maryland must maintain a high quality of life for all workers and position its federal community for prosperity and growth. The public and private workforces that support our federal facilities are national assets that are a critical element of the Maryland economy.

Recommendation #16: Publish available data on Maryland's quality of life attributes in a centralized location in an effort to highlight regulatory, infrastructure and academic advances significant to the federal workforce.



Issue: Maryland must designate resources to gain insight into federal workforce development.

Recommendation #17: To better understand the obstacles to workforce development in this changing economic environment, allocate funding and resources for a comprehensive study of current and future workforce requirements of federal facilities that employ Marylanders.

Recommendation #18: Encourage the Governor's Workforce Investment Board and affiliate programs and organizations to develop targeted workforce development assessments and strategies for cybersecurity, life sciences and space to address the needs of federal agencies, industry and academia, and to ensure a pipeline of qualified and available workers for each sector.

- Align Maryland's educational curriculum at both the K-12 and college level.
- Engage companies, organizations and entities in each industry to ensure that initiatives address both public and private sector workforce requirements.
- Support the Governor's STEM initiatives and the Maryland Business Roundtable for Education to help drive outcomes and align with the workforce needs of federal installations.
- Collaborate with NIST's National Initiative for Cybersecurity Education to establish an operational cybersecurity education program.

Recommendation #19: Assign the Assistant Secretary at DBED with establishing working relationships with the Federal Office of Personnel Management, human capital officers in the U.S. military services, relevant elements of the U.S. intelligence community and other federal agencies as appropriate to review workforce needs each year.

Issue: Maryland academic institutions are currently responding to the needs of the future federal workforce by expanding their emphasis on STEM and cyber education. There could be a similar

opportunity to help shape the future federal workforce in the business management skills as well. For instance, many of the federal organizations based in Maryland have contracting and program oversight authority. Given that federal organizations have many regulations that govern their acquisition practices that are not common to the commercial sector, Maryland-based business schools may be able to design coursework that helps their graduates start a federal career attuned to those contracts and business management needs.

Recommendation #20: Explore the viability of Maryland-based higher education institutions, including Historically Black Colleges and Universities (HBCU), to design a portion of their business curricula toward certifying contracting specialists and optimizing efforts to get highly-qualified workers in the federal acquisition pipeline.

Recommendation #21: Encourage Maryland community colleges to offer accredited technician certification programs in high-tech fields aligned with emerging and sustaining needs of the federal facilities and their programs and missions.

Issue: As a result of recent and proposed future federal budget cuts, federal agencies may in-source more jobs. Marylanders should be specifically equipped to qualify for federal positions, many of which may require the successful completion of the federal job requirement process or Knowledge, Skills and Abilities (KSAs) application process, as well as security clearances and other requirements.

Recommendation #22: Equip Maryland's one-stop career centers with personnel who are on duty daily to assist job-seekers applying for federal job openings, including assistance in completing KSA requirements and who provide information on security clearances and other federal job requirements.



Priority VI | Align Tech Transfer and Commercialization Resources to Accelerate Innovation and Entrepreneurship

The Naval Air Systems Command at Naval Air Station Patuxent River, the Beltsville Agricultural Research Center, the Food and Drug Administration's White Oak campus, the NASA Goddard Space Flight Center, and other federal facilities – as well as renowned research institutions like Johns Hopkins University and the University System of Maryland – conduct innovative research that could lead to new commercial products and technologies. Many of the pieces of an entrepreneurial ecosystem are in place; however, to promote increased commercialization, Maryland should encourage better coordination among institutions, simpler processes, incentives and training for entrepreneurs, and methods to track best practices.

Issue: Existing and future curricula and programs in Maryland's colleges and universities should encourage creativity, innovation and entrepreneurship among faculty and students.

Recommendation #23: Encourage colleges and universities to better promote and manage innovation and entrepreneurship.

- Organize and hold an "Innovation and Entrepreneurship in Academia" conference every two or three years that brings together representatives from Maryland colleges and universities and leading institutions from other states, along with key representatives from government and private laboratories in Maryland, to share best practices in encouraging entrepreneurship and technology transfer in academia. As part of the conference, include best practices in areas such as:
 - Program development focused at encouraging students and faculty to launch and create successful businesses. This could include mentor/protégé programs that match entrepreneurial scientists with industry mentors and externships – six-month programs that place a prospective entrepreneur in a company before the individual spins out on his or her own. This could also include best practices for programs on business plan competitions, incubation and education.
 - Managing technology transfer offices to reduce administrative delays and overhead in filing patents or negotiating licenses, and to balance the transition of technology with revenue gains. Explore creating standardized licensing agreements and other technology transfer processes. Suggest approaches to effectively partnering with incubation sites and local economic development authorities.
 - Creating partnerships with federal and private laboratories.
 - Operating "Offices of Research and Technology" within universities and colleges.
 - Developing faculty policies with respect to entrepreneurship that cover promotion and tenure, leave, conflict of interest, and revenue sharing.
 - Incorporating measures of success that indicate the progress Maryland institutions are making in entrepreneurship and technology transfer and commercialization.

Recommendation #24: Measures of Success – Annually publish results of technology transfer and entrepreneurship achievements at Maryland universities and colleges. Compare Maryland institutions with each other and with benchmark institutions elsewhere.

Recommendation #25: Federal laboratories – Consider supporting the development of a congressionally-chartered Authority to broker to the private sector more effectively federal researcher time, federal lab developed technologies and federal lab equipment. The Authority will:

- Enhance incentives for federal agency researchers to engage in collaborative research and pilots and technology transfer and to launch new businesses.
- View and leverage federal agencies as seeds of innovation clusters, and increase the focus on regional economic development of federal initiatives.

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APPENDIX FOLLOWS

2010 The Effect of Federal Employment & Spending in Maryland

FFAB Technology Transfer Report