



**FISCAL YEAR 2024 ANNUAL REPORT  
OF THE**



**As required by Economic Development Article §3-109**

**Respectfully submitted to the General Assembly of Maryland by**

Secretary Kevin Anderson, Commerce

401 East Pratt Street

Baltimore, MD 21202

December 2024

To: Kevin Anderson, Secretary, Maryland Department of Commerce  
From: Maryland Manufacturing Advisory Board (MMAB)  
Date: October 16, 2024

**Subject: Recommendations to Enhance the Business Environment for Maryland Manufacturers**

Based on the discussions held during meetings in 2023 and 2024, the Maryland Manufacturing Advisory Board (MMAB) has identified several key areas where improvements can significantly enhance the business environment for manufacturers in Maryland. These recommendations address critical issues such as workforce development, funding and technology adoption. While some of these recommendations are for Commerce, some are broader policy recommendations for the administration. We respectfully submit the following recommendations for your consideration:

**Workforce Development:**

Enhance Skills Training and Education:

- Advocate for increased integration of manufacturing skills training within the K-12 education system. The current focus on college preparation overlooks the need for vocational and technical education.
- Modify the Blueprint for Education to reduce the 3.0 GPA requirement for Career and Technology Education (CTE) programs, making them more accessible to a broader range of students.
- Increase funding for educating career coaches, counselors and education of parents in middle and high schools to promote manufacturing careers and facilitate connections between students and manufacturing employers.
- Demonstrate pathways for students to better understand career progression and upward mobility opportunities in Manufacturing.
- Invest in the marketing of Maryland Manufacturing to support these recommendations and ensure a robust future workforce.

Streamline Apprenticeship Programs:

- Simplify the process for establishing apprenticeship programs and increase staffing within the Department of Labor to expedite the processing of apprenticeship paperwork. This will make it easier for smaller manufacturers to participate.

Leverage Immigrant Workforce:

- Establish coordinated efforts to connect immigrants and refugees with job opportunities in manufacturing. Streamline job placement services and create awareness about manufacturing careers within immigrant communities.

**Cost of Doing Business:**

Address Energy Costs:

- Develop initiatives to reduce energy costs for manufacturers, which are a significant factor in the overall cost of doing business in Maryland. Consider incentives for energy efficiency upgrades and the use of renewable energy sources.

Evaluate and Improve Business Competitiveness:

- Conduct a comprehensive analysis of Maryland's business competitiveness factors, including regulatory impacts, and develop strategies to create a more pro-growth, pro-business environment.

### **Technology and Innovation Support:**

#### Increase Investment for Manufacturing 4.0 Grant Program

- Secure additional investment for the Manufacturing 4.0 grant program to support the adoption of advanced manufacturing technologies and continue to streamline the education making it easier and more accessible for companies to apply. This program has shown significant promise in helping manufacturers modernize and remain competitive. For the 2024 program year Commerce received \$20,000,000 in funding requests for the \$1,000,000 grant funds. The department was only able to award 26 companies grants for an average grant amount of \$38,462. We feel these grants would provide a more significant impact if issued at \$100,000 to \$200,000 per recipient. Several competing states grant technology budgets for manufacturers ranging from \$5,000,000 to \$32,000,000 per year. *For example if Maryland offered 100 grants at a \$5,000,000 level of funding it would provide 50 companies with grants of \$100,000 each.*

#### Support New Technology Development:

- Foster the development and adoption of new manufacturing technologies by providing incentives and support for research and development. Encourage collaboration between manufacturers, research institutions, and technology providers.

#### Keep it in Maryland:

- Explore ways to create better linkages between innovation investments and keeping the manufacturing of developed technologies here in Maryland following the pre-revenue phases of development.
  - Create linkages between innovators and developers across all industry subsets with transitional manufacturers (contract manufacturers).
  - Incentivize transitional manufacturing in Maryland.

### **Tax Credits and Other Incentives:**

#### Address Changes to Federal R&D Tax Credit:

- Advocate for state-level measures to counteract the negative impact of recent federal changes to the R&D tax credit, which now requires expenses to be capitalized over five years. This change has reduced the immediate value of the tax credit for manufacturers. By introducing state-specific R&D tax credits or grants, Maryland can provide immediate financial relief and incentivize continued innovation within the manufacturing sector. These measures would help offset the federal limitations, ensuring that Maryland manufacturers remain competitive, can invest in new technologies, and sustain their growth. Supporting R&D through state initiatives not only fosters a vibrant manufacturing industry but also drives economic progress and job creation in Maryland.

#### Buy Maryland Manufacturing Tax Credit Program:

- Encouraging Maryland businesses to purchase products manufactured within the state, this initiative fosters a robust internal market and enhances the competitiveness of local manufacturers. Such a tax credit would not only support local supply chains but also create jobs, increase investments, and drive innovation within the manufacturing sector. Ultimately, this approach strengthens Maryland's economic foundation, ensuring sustainable growth and prosperity for the state's businesses and communities.

#### Explore Tax Incentives to Reuse Vacant Land and Buildings:

- Encouraging the revitalization of unused properties, these incentives can attract new businesses and stimulate local economies, transforming blighted areas into vibrant

manufacturing hubs. This approach not only benefits the economy but also enhances community well-being by fostering innovation and industry.

**Assist with Succession Planning for Legacy Businesses:**

- Assisting with succession planning for legacy manufacturing businesses in Maryland is crucial to ensuring the longevity and stability of highly functioning 2nd and 3rd generation enterprises. By offering succession planning incentives, the state can help these businesses smoothly transition to new leadership, preserving jobs and maintaining economic stability. Such incentives can include tax benefits, training programs, and advisory services designed to equip the next generation with the skills and knowledge needed to sustain and grow their family businesses. This proactive approach not only supports the continuity of established manufacturing operations but also strengthens Maryland's industrial heritage and economic resilience.

These recommendations aim to address the most pressing challenges faced by manufacturers in Maryland. By implementing these strategies, we can create a more supportive and competitive business environment that fosters growth, innovation, and sustainability in the manufacturing sector. These recommendations reflect the insights and priorities discussed in our recent meetings, ensuring that the voice of Maryland's manufacturing sector is heard and acted upon. Thank you for your attention and commitment to supporting Maryland manufacturers.



Monday, September 18, 2023  
3:00-4:00pm

### **Meeting Minutes**

#### **Attendees:**

Lynda Hefner, Clark Machine, Chair  
Suzy Ganz Lion Brothers  
Mina Izadjoo Integrated Pharma Services, LLC  
Kelly Koermer Carroll Community College  
Greg Maxwell Northrop Grumman Corporation  
Delegate David Fraser-Hidalgo MD House of Delegates  
Sue Chambers Strouse  
Luke Chow Prime Manufacturing Technologies, Inc Sam Griffith  
National Jet  
April Richardson Food Opportunity LLC/Sweet Potato Cake

#### **Notable Guest(s)**

Mike Kelleher MD MEP

#### **Commerce Staff:**

Heather Gramm, Assistant Secretary BISD

#### **I. Call to Order & Chairman Remarks**

At 3:05pm Chair Lynda Hefner called the meeting to order. With many new members on the MMAB, each member was given a chance to introduce themselves. Lynda thanked the Maryland MEP for hosting the meeting at their offices.

#### **II. Maryland Manufacturing Extension Partnership Updates**

Mike Kelleher with MD MEP welcomed the MMAB to their offices and provided an overview of their organization. The MD MEP is part of the national NIST network of MEP centers in all 50 states and Puerto Rico. Mike and his team have held the contract with NIST for 10 years, with financial matching contributions from Maryland Department of Commerce. Serving mostly small and mid-size manufacturers (500 employees or less), Maryland MEP provides an array of programs and services to help these local companies operate more efficiently, grow profitability, implement new technologies and create more jobs and opportunities in Maryland. Their services focus on 5 key areas of business: strategy and growth, process and innovation, technology and cybersecurity; supply chain and defense, and workforce.

#### **III. Discussion on MMAB Top Priorities Survey**

Prior to the meeting, a survey was sent out to members of the MMAB to gauge their assess

their priorities for supporting manufacturing in Maryland, and areas that should be a priority for the MMAB's work in 2024. The results of the survey were also distributed to members ahead of the meeting.

Lynda reviewed the results, noting that the 2 areas that had the highest level of interest were Workforce (#1 response) and Industry 4.0/technology adoption for manufacturers (#2 response).

A discussion among the members followed, with a primary focus on workforce. It was acknowledged that workforce is a key issue facing many industries, and that the greatest challenge can be just getting dependable people to show up to work. Skills training was also discussed, as were ideas about reaching both kids and their parents while they are in middle and high school to increase awareness of good job opportunities in manufacturing.

Kelly gave an overview of the Maryland Blueprint for Education, legislation that was passed by the Maryland General Assembly, which includes comprehensive changes to Maryland's early childhood and public schools. Increasing education funding by \$3.8 billion each year over the next 10 years, the Blueprint will enrich student experiences, accelerate student outcomes and improve the overall quality of education in Maryland. The legislation requires that 45% of students earn an industry certification or pre-apprenticeship experience. She noted that every county is implementing this legislation in different ways, but that school systems are required to hire career coaches in middle and high schools (starting this school year). She suggested that these career coaches present an opportunity for Maryland manufacturers to engage – perhaps create modules that career navigators can use to showcase manufacturing to students, or help to create videos, curriculum, host facility tours and develop summer camp programming all focused on awareness of and skill in the manufacturing sector.

Greg noted that reaching students was one aspect of the workforce challenge. From his perspective there are 3 aspects to creating a pipeline of workforce: 1) basic life skills, 2) awareness/interest in the industry, and 3) hard skills/technical training. He also noted that the shift to a work-from-home mentality among the current workforce has created new challenges for the manufacturing industry as employers try to recruit talent.

April stated that from her perspective there should be 2 areas of focus for the MMAB: 1) make sure Maryland leaders recognize the importance of the manufacturing industry, and 2) change the face/perception of manufacturing. She asked the group to think about how the industry could also reach college graduates and get them to think differently about how their knowledge/education translate to manufacturing. She also noted that the HBCUs in Maryland could be a great resource.

Aside from workforce and industry 4.0, it was also noted that new federal legislation changed the federal R&D tax credit, making it much more difficult for manufacturers to realize value from this credit. Expenses must now be capitalized over 5 years.

#### **IV. Transforming Maryland Manufacturing Workgroup (Heather Gramm)**

Heather provided the Board with the final recommendations adopted by the Maryland Transforming Manufacturing Workgroup in December 2022. She noted that, of the 10 recommendations, only one resulted in legislation during the 2023 session – establishing the Manufacturing 4.0 grant program.

After much discussion, it was agreed that the Board would further review these recommendations, and use their next meeting to discuss and make recommendations to the Secretary of Commerce regarding priority focus areas and issues to address in order to strengthen Maryland's manufacturing sector. These recommendations will be used to inform the Department's strategic planning process, which will kick off in early 2024.

#### **V. Maryland Manufacturing 4.0 Program Update**

The group ran out of time, this item will be discussed during the November meeting.

#### **VI. Adjournment of MMAB Business Meeting**

There being no further discussion, the meeting was adjourned at 4:30 p.m. by the Chair.



Thursday November 2, 2023  
3:00-4:00pm

### **Meeting Minutes**

#### **Attendees:**

Lynda Hefner, Chair Clark Machine  
Kelly Koermer Carroll Community College  
Sue Chambers Strouse  
Luke Chow Prime Manufacturing Technologies, Inc Sam Griffith  
National Jet  
April Richardson Food Opportunity LLC/Sweet Potato Cake Bobby Patton  
Patton Electronics

#### **Notable Guest(s)**

Steve Barry, Carroll Community College  
Leslie Cheslie, Carroll County Public Schools  
Angie McCauslin, Carroll County Public Schools

#### **Commerce Staff:**

Heather Gramm, Assistant Secretary BISD

#### **I. Call to Order & Chairman Remarks**

At 3:10pm Chair Lynda Hefner called the meeting to order.

#### **II. Approval of the September 18<sup>th</sup> minutes**

Board members were provided the draft minutes both via email and hard copy at the meeting. Lynda asked the Board to review the minutes, then requested a motion to approve. Sue Chambers made the motion, Kelly Koermer 2<sup>nd</sup> the motion, and with no discussion the minutes were approved unanimously.

#### **III. Manufacturing 4.0 Grant Program Update**

Lynda Hefner provided an update on the Department of Commerce's Manufacturing 4.0 (M4) grant program. Applications for the FY24 funding round closed on October 18<sup>th</sup>. 108 applications were received, and with \$1million in funding available, the maximum numbers of awards possible would be 40. Heather Gramm stated that Commerce expects to make award announcements in January 2024.

#### **IV. Maryland Blueprint for Education Presentation (CCC and CCPS)** Angie McCauslin gave an overview of the Blueprint and the 5 pillars of the plan – 1) early childhood education; 2) high quality and diverse teachers and leaders; 3) college and career readiness; 4) more resources for all students to be successful; 5) governance and

accountability. She then focused on Pillar 3 – College and Career Readiness – as the pillar most relevant to the MMAB’s discussion on workforce. As part of the CCR pillar, all students are expected to meet the CCR standard (PGA of 3.0 or higher) by the end of 10<sup>th</sup> grade. If they don’t meet that standard, they are put into a remedial education plan, and are not eligible to participate in CTE programs. There was a lot of discussion about this new standard, with concerned expressed that a 3.0 GPA is a high standard, and that many kids who might not be able to meet that standard could still be successful in a technical training program. The Blueprint sets a goal for 45% of high school graduates completing an apprenticeship or an industry-recognized occupational credential.

Kelly Koermer asked the group for feedback on industry credentials for manufacturing that are important. Luke Chow noted that there are plastic molding/tubing certifications that are offered through a national association. Many noted that industry certification is not as important as a strong work ethic – if someone will show up and work hard, the employers can usually teach them what they need to know and provide them training necessary specific to their position.

Leslie Cheslie then gave a presentation on the Pre-Apprenticeship program, which does have a requirement for a certification of completion at the end for graduation requirements. Several of the MMAB members noted the challenges for employers to participate in this program, especially small and mid-sized businesses, and that there is not enough incentive built into the program to participate.

Heather Gramm asked the CCPS team how the MMAB or other manufacturers could be helpful in supporting these new goals in the Blueprint. Suggestions included

- Serve as a guest speaker in the high schools
- Provide facility tours to both educators and students
- Provide input on updates to curriculum

#### **V. Discussion on MMAB Recommendations to Secretary of Commerce**

Heather shared the official “duties” of the MMAB from the statute that governs the Board’s activities: The Board shall advise the Secretary on the best methods to implement the policy directives of the action plan for manufacturing competitiveness in the State, including:

- (1) encouraging the development of new manufacturing enterprises and the expansion and retention of existing manufacturing enterprises;
- (2) encouraging and facilitating training and education of individuals for manufacturing jobs;
- (3) producing a climate conducive to the growth and viability of manufacturing enterprises;
- (4) supporting research necessary to evaluate, plan, and execute effective promotion of manufacturing enterprises; and

(5) encouraging, assisting, and coordinating the activities of local, regional, and national public or private organizations that promote manufacturing.

The Board members agreed that they want to prioritize the development of a document to submit to the Secretary of Commerce, that outlines what the MMAB believes to be the most important topics for Maryland manufacturers as well as recommendations for Commerce to consider to support the manufacturing sector in Maryland.

The Board began with a review of the recommendations from the Transforming Manufacturing Workgroup report, which was submitted to the General Assembly in December 2022.

The first recommendation was for increased funding for the Manufacturing 4.0 grant program. Members in attendance were in unanimous support of this recommendation. The second recommendation was for the creation of a Manufacturing Innovation Center. There was a lot of discussion on this, and it was agreed that more information was needed before the group could come to consensus on this recommendation.

In a brief review of the remaining recommendations, it was agreed that the Board members would need more time to review these recommendations, and have further discussion at the next meeting. In addition to the recommendations in the TMW report, the group agreed that a broader conversation was needed about key issues for manufacturing and recommendations that may be more broad in scope than the recommendations in the TMW report.

#### **VI. Adjournment of MMAB Business Meeting**

There being no further discussion, the meeting was adjourned at 5:00 p.m. by the Chair.



Wednesday December 13, 2023  
3:00-4:00pm

### **Meeting Minutes**

#### **Attendees:**

Lynda Hefner, Chair	Clark Machine
Kelly Koermer	Carroll Community College
Mina Izadjoo	Integrated PharmaServices
Sue Chambers	Strouse
Luke Chow	Prime Manufacturing Technologies, Inc
Sam Griffith	National Jet
Greg Maxwell	Northrop Grumman
Bobby Patton	Patton Electronics

#### **Commerce Staff:**

Heather Gramm, Assistant Secretary BISD

#### **I. Call to Order & Chairman Remarks**

At 3:00pm Chair Lynda Hefner called the meeting to order.

#### **II. Approval of the November 2023 minutes**

Board members were provided the draft minutes from the November 2, 2023 meeting both via email. Lynda asked the Board to review the minutes, then requested a motion to approve. Lynda Hefner made a motion to approve, Bobby Patton 2<sup>nd</sup> the motion, and with no discussion the minutes were approved unanimously.

#### **III. Discussion on MMAB Recommendations to Secretary of Commerce**

The Board dedicated the full meeting to discussion of top priorities for Maryland Manufacturers and potential recommendations to be made to the Secretary of Commerce. The discussion began with agreement that 2 top priorities were workforce and increased funding for the Manufacturing 4.0 grant program.

In review of the Transforming Manufacturing Workgroup report, there was discussion around the recommendation to create a Maryland Manufacturing Innovation Center. Topics discussed included the scope, scale and cost of the proposed center, and whether that was the best and most effective use of funds to support the needs of manufacturers; the diversity of manufacturing in the state across various subsectors could make it difficult to create a single center that met the needs of all types of manufacturers; and that such a

center would still leave many needs of the industry unaddressed. Lacking consensus, the Board determined that this would not be included as one of the MMAB recommendations. The Board then discussed several core areas and key issues in which the state should focus and improve to most effectively grow and support the manufacturing sector:

- Having a pro-growth, pro-business strategy
- Analyzing and addressing Maryland's business competitiveness factors
  - Workforce
  - Regulatory environment
  - Cost of doing business – energy a key factor for this industry
  - Supporting new technology development to become more effective/efficient
- Evaluating incentive programs to ensure these programs are effective and enabling reinvestment in the state's manufacturing businesses
- Federal R&D Tax Credit – changes at the federal level related to accelerated depreciation have significantly reduced the value of this tax credit.

On the topic of workforce, it was stated that an untapped source of workforce is immigration. Many immigrants think of agricultural and construction jobs when seeking employment, but are not aware of the opportunities in manufacturing. It appears that the immigration/refugee services are very disjointed, with too many service organizations that are not coordinated, and tend to not focus on job placement and career pathways. The group asked Commerce to research anything that may exist currently in Maryland to coordinate job placement for immigrants/refugees. There was also discussion about whether this population of workers would be enough to make an impact on the worker shortage, and what role the state should or should not play in providing these services to this population.

Education and training was also discussed as part of the workforce conversation. Members of the Board observed that one challenge is the focus within the K-12 system on college preparation rather than skills training. It was acknowledged that the Blueprint is a starting point to address that, but the current 3.0 GPA requirement for CTC programs is a barrier, and that overall the Blueprint is a long-term solution but does not address the immediate workforce needs.

In general, companies have no problem finding engineers and other degree-level employees. The gap is in the skills/technician areas where certifications or even very basic training is required. Other issues facing workforce attraction for manufacturers are how to make the jobs attractive to kids coming out of high school, and how to overcome the high desire for remote work.

It was also noted that the apprenticeship model is a good one, however the process to establish an apprenticeship program needs to be simplified, and additional staffing is needed within the Department of Labor to more quickly process apprenticeship paperwork. It is currently very difficult for smaller employers to implement an apprenticeship program.

As a next step, Commerce staff would take these discussion points and begin to draft an outline of priority topics and potential recommendations for the Board to review and discuss at their next meeting.

#### **IV. Adjournment of MMAB Business Meeting**

There being no further discussion, the meeting was adjourned at 4:00 p.m. by the Chair.



Thursday, June 20, 2024  
11:00-12:30 PM

### **Meeting Minutes**

#### **Attendees:**

Mina Izadjoo, Integrated PharmaServices  
Sue Chambers, Strouse  
Luke Chow, Prime Manufacturing Technologies, Inc  
Sam Griffith, National Jet  
Greg Maxwell, Northrop Grumman  
Bobby Patton, Patton Electronics  
April Richardson, Food Opportunity, LLC  
N. Scott Phillips, Scott Phillips Consulting

#### **Commerce Staff:**

Heather Gramm, Assistant Secretary BISD  
Ulyana Desiderio, Senior Director, OSIE  
Benjamin McGlaughlin, Manufacturing Program Manager OSIE

#### **I. Call to Order & Chairman Remarks**

At 11:02 am Heather Gramm called the meeting to order.

#### **II. Approval of the December 2023 minutes**

Board members were provided the draft minutes from the December 13, 2023 meeting both via email and hard copy at the meeting. Heather asked the Board to review the minutes, then requested a motion to approve. A motion was made to approve by Greg Maxwell, this motion was 2nd ed by Luke Chow, with no discussion the minutes were approved unanimously.

#### **III. Finalizing the MMAB Recommendations to Secretary of Commerce**

The Board dedicated this portion of the meeting to discussion of recommendations to be delivered to the Secretary of Commerce. The discussion began with a draft of the recommendations compiled by Benjamin McGlaughlin using the meeting minutes from the prior year.

A discussion ensued regarding the recommendations draft. The Board discussed several key priorities and recommendations for Maryland's manufacturing sector. They emphasized encouraging biotech (biomanufacturing) companies with the appropriate NAICS codes to participate in the Manufacturing 4.0 Grant Program. Additionally, they

stressed the importance of having a knowledgeable review panel for this program, focusing on impactful grant decisions. Current Maryland companies expressed a preference for these funds to be accessible to them rather than attracting new companies to the state. The Board also recommended that state R&D or innovation investments ensure manufacturing remains tied to Maryland when commercialized. They suggested performing resource mapping to connect communities with contract manufacturing resources and strengthening STEM programs to integrate with community colleges and trade schools. The discussion included investigating past strategies to attract students to manufacturing careers, displaying clearer career pathways, and investing in public relations campaigns to counter outdated perceptions of manufacturing jobs. They addressed the disconnect between federal grants and state-identified manufacturing needs and recommended enhancing school counselors' exposure to manufacturing. Reviewing other states' manufacturing incentives, considering tax incentives for reusing vacant land and buildings, and incentivizing succession planning for second- and third-generation companies were also proposed to ensure business continuity and competitiveness. The agreement was made to compile this additional information where appropriate into the recommendations.

#### **IV. Department of Commerce Manufacturing Program Updates**

Benjamin McGlaughlin provided an update on the current focus on the Department of Commerce's efforts to connect with manufacturers in Maryland, including a review of and changes to the Manufacturing 4.0 Grant Program, a grant received from the US Department of Energy, and some future opportunities to participate in funding from the US Department of Commerce.

#### **V. Public Comments/Discussion**

There were no members of the public in attendance

#### **VII. Adjournment**

Heather Gramm asked for a motion to close the meeting and upon receiving this motion the meeting was adjourned