Transforming Manufacturing Workgroup
Draft Recommendations for Discussion in September 12 Meeting

Number	Policy
	Financial Support For Manufacturers (Tasks 5 and 7 in statute)
1	Immediately fund of $10MM per year for the next 5 years to be used for small and minority manufacturers to be used solely to help purchase and implement industry 4.0 technology. This would include advanced sensors, embedded software, robotics that collect data, ERP and supply chain integration, cloud computing, AI, and the infrastructure needed to implement these solutions. This fund would be granted as a 50/50 match, up to $500,000, and can be utilized be utilized by any manufacturing business that is in good standing with the state, have business operations in MD, be in existence for over one year.
2	Grants for Manufacturers to purchase equipment and training.
3	**4.0 funding and services/guidance** -- the (M3 Pilot) funding program is a great start and hopefully leads to some common things that can be systematized and funded
	Improving Perception of Manufacturing (Task 4 in statute)
4	Develop a Careers in Manufacturing Campaign with the goal to recruit 50,000 new workers, increase the number of students enrolling in technical and vocational schools and/or re-skilling programs by 25% within 3 years; and to increase the positive perception of the industry among the parents who help to guide their children into future careers.
5	**The relationship between the maker movement and manufacturing** -- They are not the same thing, but when talking about a field that needs more people and more innovative people, why not create linkages to the maker community, particularly when the State of Maryland is funding that capacity?
6	Returning citizens using the CTE programs as entry into the manufacturing field.
7	Create a study of the programs that are currently in place to facilitate the entry of more women and minorities into manufacturing. Examine what is working and what is not in those programs and identify ways to expand existing programs or how new programs can fill existing gaps.
8	Reinforce Industry 4.0 marketing and develop strategies to highlight key industries (e.g., focus on people who **make** things (food and beverages, electronics, medicines, etc) rather than the more nebulous term of manufacturing.
9	Create a partnership between industry and educational institutions to increase manufacturing awareness. Partnership should connect with students to increase awareness of the industry as a whole. The partnership should also focus on department heads, professors, career centers, and other education staff to identify ways to highlight manufacturing. Can new hires in manufacturing highlight their stories and why they chose the field?

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10	Develop a manufacturing internship program that connects students with manufacturers. The program should fill the gap where small businesses and small educational institutions often do not participate in intership programs due to lack of awareness/funding. This program could be modeled after the MTIP program at UMBC.
11	Develop an industry partnership for increased outreach at HBCUs
12	Market careers in modern manufacturing. Disabuse citizens of misconceptions that today's manufacturing is dirty work. Example https://youtu.be/GZTICD3qy6s
	Statewide Training Program to Address Skills Gaps (Task 8 in statute)
13	Establish a $100MM fund to establish a Maryland Manufacturing Academy overseen by a non-profit run by manufacturers to help train people aged 16 and above in STEM subjects that pertain to manufacturing. The Academy would be available both physically and virtually. All state high schools, community colleges, correctional institutions, immigrant help centers, community and senior centers, and Maryland's American Job Centers would have access to the program as it would be a "Maryland Eligible Training Provider". Mike Galliazo can provide more details on this as he has preliminary designs that are excellent.
14	Ensure statewide training funding includes various players and places an emphasis on Industry 4.0
15	Support current HS and college CTE programs.
16	Provide funding to colleges for scholarships to make the education more accessible.
17	Create industry buy-in for scholarships similar to recent Xometry partnership with CCBC
	Other Regulatory and Statutory Changes (Task 6 in Statute)
18	Open PEO (professional employer organization) access to any manufacturer under 50 employees. Manufacturers want to offer the best benefits to our employees, but Maryland law currently prohibits manufacturers under 50 employees to get together to offer "large company benefits" to our employees. This seems like a no brainer as it immediately helps Maryland employees.
	Develop P3s to develop curriculums (Task 9 in statute)

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19	Fund curriculum development. a. While each college could get separate funding to develop curriculum, here is a stretch idea of how the state could centralize some of the education and reduce redundancy and enhance scalability across the state. The State could create and provide funding to staff a Maryland Manufacturing Academy to be housed in one of Maryland's community colleges. Here are some high-level concepts of what the MMA would do: • Conduct a needs/gap analysis as to what training is necessary. This is particularly important because of the diversity of manufacturing across the state from bio, chemical, food, textiles, metal, electronics, additive, subtractive and more, we need to get a handle on what curriculum needs to be built to align with the most significant employer needs. It would identify fundamentals and then particular tracks aligned to specific sub-sets of industry. • Create a manufacturing educational resources repository populated by curriculum mapped to diverse manufacturing areas identified in the needs/gap analysis. The curriculum would be modularized so that an institution of higher education can piece together the necessary components to meet its region's workforce training needs. It can also be used to customize training to upskill and employers' incumbent workforces. The curriculum would be competency-based and prepare students with the knowledge, skills and abilities to begin work immediately. • Students completing the curriculum would complete competency assessments and credentials would be based upon competency mastery in a uniform way across the state. • Work with the Department of Labor and MEP to expand registered apprenticeships that map to the needs/gap analysis and or create a RAP that contains foundational manufacturing components with pathways that map to diverse manufacturing industries. Use materials from the manufacturing educational resources repository to build related instructional training delivered by Maryland's community college. • Work with Department of Labor and MEP to sponsor apprenticeships in regions across the state instead of placing the burden on individual employers, which are often very small, to manage apprenticeships.
20	Incentivize companies to release subject matter experts to develop curriculum and teach manufacturing courses.
21	Tie curriculum development initiatives in to existing federally-funded efforts.
22	Ensure programs recommended for curriculum development include support (physical or monetary) for educational institutions.