SENATE BILL 369

C1, C2 0lr2176
CF 0lr2831

By: **Senators West and Hester**
Introduced and read first time: January 24, 2020
Assigned to: Finance

A BILL ENTITLED

AN ACT concerning

Workgroup to Study Maryland's Emerging Digital Economy

FOR the purpose of establishing the Workgroup to Study Maryland's Emerging Digital Economy; providing for the composition, chair, and staffing of the Workgroup; prohibiting a member of the Workgroup from receiving certain compensation, but authorizing the reimbursement of certain expenses; requiring the Workgroup to study and make recommendations regarding certain matters relating to the State's current and future workforce and emerging digital economy; requiring the Workgroup to report its findings and recommendations to the General Assembly on or before a certain date; providing for the termination of this Act; and generally relating to the Workgroup to Study Maryland's Emerging Digital Economy.

Preamble

WHEREAS, The world now stands on the cusp of a technological revolution in artificial intelligence, robotics, and other advanced digital technologies that may prove as transformative for economic growth and human potential as were electrification, mass production, and electronic telecommunications in their eras; and

WHEREAS, There is an imperative for the State to respond to a global digital technology transformation that is occurring within the manufacturing industry; and

WHEREAS, Industry 4.0 refers to a new phase in the industrial revolution that focuses heavily on interconnectivity, automation, artificial intelligence, robotics, 3–D printing, machine learning, and real–time data; and

WHEREAS, Industry 4.0 marries production and operations with smart digital technology, machine learning, and big data to create a more holistic and better connected ecosystem for companies that focus on manufacturing and supply chain management; and

WHEREAS, Industry 4.0 empowers business owners to better control and

EXPLANATION: **CAPITALS INDICATE MATTER ADDED TO EXISTING LAW**.
[Brackets**]** indicate matter deleted from existing law.

understand every aspect of their operation and allows them to leverage instant data to boost productivity, improve processes, and drive growth; and

WHEREAS, For manufacturers, Industry 4.0 presents productive opportunities by ushering in new operational technologies and allowing for enhanced implementation of transformative business and workforce development; and

WHEREAS, In order for the manufacturing industry to capitalize on labor and capital productivity opportunities, a corresponding transformation within the workforce is required to ensure that these skill needs are met in the rapidly evolving and globally competitive environment; and

WHEREAS, While manufacturers move toward new business models built on data, cyber–physical systems, and cloud computing, the demand for skilled and diverse labor with the capabilities and confidence to work alongside new technologies and thrive in a digitized workplace is critical, essential, and imminent; and

WHEREAS, In response, manufacturers will need to partner with industry leaders, education stakeholders, and State representatives to explore new solutions, while also employing viable strategies to match evolving industry trends; now, therefore,

SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND, That:

(a) There is a Workgroup to Study Maryland's Emerging Digital Economy.

(b) The Workgroup consists of the following members:

(1) three members of the Senate of Maryland, appointed by the President of the Senate as follows:

(i) one member of the Education, Health, and Environmental Affairs Committee;

(ii) one member of the Finance Committee; and

(iii) one member of the Budget and Taxation Committee;

(2) three members of the House of Delegates, appointed by the Speaker of the House as follows:

(i) one member of the Ways and Means Committee;

(ii) one member of the Economic Matters Committee; and

(iii) one member of the Appropriations Committee;

(3) the Secretary of Information Technology, or the Secretary's designee;

(4) the Secretary of Commerce, or the Secretary's designee;

(5) the Secretary of Labor, or the Secretary's designee;

(6) one member of the Maryland Manufacturing Advisory Board (MMAB), designated by the Chair of MMAB;

(7) one representative of the Regional Manufacturing Institute of Maryland (RMI), designated by the President of RMI;

(8) one representative of the Maryland Association of Community Colleges (MACC), designated by the Executive Director of MACC;

(9) one representative of the Maryland Independent College and University Association (MICUA), designated by the President of MICUA;

(10) one representative of the University System of Maryland (USM), designated by the Chancellor of USM;

(11) one representative of the Maryland Manufacturing Extension Partnership (MD MEP), designated by the Executive Director of MD MEP;

(12) one representative of the Regional Additive Manufacturing Partnership of Maryland (RAMP MD), designated by the Executive Director of RAMP MD; and

(13) four representatives from manufacturing companies currently in good standing with the Maryland Department of Assessments and Taxation for the last 5 years, designated by the Board of Directors of RMI.

(c) The President of the Senate and the Speaker of the House shall jointly designate the chair and vice chair of the Workgroup from among the members appointed by the President and the Speaker.

(d) The Department of Commerce shall provide staff for the Workgroup.

(e) A member of the Workgroup:

(1) may not receive compensation as a member of the Workgroup; but

(2) is entitled to reimbursement for expenses under the Standard State Travel Regulations, as provided in the State budget.

(f) The Workgroup shall:

(1) examine existing academic research, data, statistics, and industrial

case studies to make recommendations to the General Assembly that manufacturing organizations may use to adequately develop their workforce to meet the skill demands of Industry 4.0;

(2) examine the current curriculums of the State's higher educational institutions to determine whether students are fully prepared for the technology and processes they will be exposed to in future manufacturing;

(3) examine whether current State training programs and resources for the State's current workforce require modifications to prevent worker displacement resulting from Industry 4.0;

(4) examine new strategies and incentives that manufacturers may use to reskill the current workforce and invest in continuing educational training of employees;

(5) examine the research conducted by the Massachusetts Institute of Technology (MIT) on the relationships between emerging technologies and the workforce to enable a future of shared prosperity, entitled "The Work of the Future: Shaping Technology & Institutions", MIT Work of the Future, Fall 2019 Report;

(6) examine existing financial resources available to manufacturers seeking to invest in Industry 4.0 technology;

(7) make recommendations to facilitate the State's robust entry into Industry 4.0 technology to improve the perception of manufacturing careers, including:

(i) promoting the technological advancements of Industry 4.0 to shift the perception of manufacturing careers for the entry–level workforce;

(ii) engaging students and educators through factory tours and industry–sponsored manufacturing and STEM days, externship programs, and student–shadowing days; and

(iii) advancing and creating public–private partnerships between manufacturers, supportive community stakeholders, and education systems;

(8) employ workforce development strategies for manufacturers to attract minorities, women, military veterans, millennials, and other groups to Industry 4.0 careers that do not alienate the current workforce of Generation X and Baby Boomers;

(9) recommend various solutions for manufacturers to prepare for the potential workforce gaps resulting from the loss of current workers by examining increased training opportunities and creating best practices for manufacturers to use for workforce succession planning after the retirement of essential workers, including cross–training and job shadowing to transfer job knowledge from the exiting workforce to younger people entering the workforce;

(10) evaluate and develop recommendations for long–term private–public partnerships between educational institutions and manufacturers to develop curriculums that address the rapidly changing needs of the manufacturing industry, including:

(i) exploring the role of manufacturers to influence the curriculums of educational institutions by providing market feedback and skill requirements to educators, as well as partnering to understand the development needs of the current workforce; and

(ii) examining California's 115th community college, founded in 2018, as a model for possible adoption in the State, which provides training to meet the industry demand for highly trained, high–tech workers in the growing digital economy, while increasing access for traditionally underserved populations through online education and affordable certifications;

(11) propose appropriate annual State grant funding to create a statewide training program to address the growing skills gap in the manufacturing workforce, including the development of operators capable of programming automated equipment, training for the next generation of automation technicians, and revising curriculums for mechanical, electrical, and computer engineering related to industrial automation;

(12) examine formalizing mentorship or apprenticeship programs that match new workers with more experienced and skilled workers to develop practical and relevant skills within the daily production environment;

(13) examine new and viable tax credits and programs for manufacturers to be more competitive and marketable in the new digital economy;

(14) examine the State's current statutory and regulatory authority over manufacturing to examine potential reforms to attract new manufacturing businesses brought by Industry 4.0 to invest in the State's economy and workforce; and

(15) recommend additional financial support delivery mechanisms, as needed, to enable State manufacturers to adopt Industry 4.0 technology and enhance the ability of industry service providers to increase the scope of their industry support.

(g) On or before December 1, 2021, the Workgroup shall report its findings and recommendations to the General Assembly in accordance with § 2–1257 of the State Government Article.

SECTION 2. AND BE IT FURTHER ENACTED, That this Act shall take effect July 1, 2020. It shall remain effective for a period of 2 years and, at the end of June 30, 2022, this Act with no further action required by the General Assembly, shall be abrogated and of no further force and effect.