



Center for Experimental Software Engineering

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**Senate Bill 396/ House Bill 804 (as amended):
Workgroup to Study Maryland's Emerging Digital Economy
SUPPORT
Senate Finance Committee**

February 25th, 2020

Dear Chairwoman Kelley and Committee Members:

It is with great respect that I write this letter of support for Senate Bill 369/ House Bill 804 (as amended), entitled Workgroup to Study Maryland's Emerging Digital Economy. I currently serve as Professor of Computer Science at the University of Maryland, and as the Executive Director of the Fraunhofer USA Center for Experimental Software Engineering (CESE), located in Riverdale, MD. A US 501 (c) 3 not-for-profit corporation, Fraunhofer USA exists to support and advance technological innovation in critical business areas, such as manufacturing. From this vantage point, I have come to see that over the long term, technology advancement is the surest road to more and better jobs for our State's citizens. This requires however, that we also prepare and development qualified workers for the advanced manufacturing employers throughout the state.

More specifically, new and emerging technologies are rapidly changing the manufacturing landscape. While such technologies, including automation and artificial intelligence (AI), are beginning to capture headlines, recent evidence tells a more complex story. While information technology has enabled a digitalization of work that made highly educated workers more productive, it has also made less-educated workers easier to replace with machinery. According to a report published by MIT, entitled *The Work of the Future: Shaping Technology and Institutions*, "outsourcing U.S. production work to China caused, blue-collar manufacturing employment to decline – falling by 1/3 between 1999 and 2010 rapidly." In Maryland, the manufacturing industry has witnessed a severe shortage of skilled workers. Last year, in one month, there were over 5,000 job openings in manufacturing listed by the Maryland Department of Labor's Maryland Workforce Exchange.

Displaced workers, an aging labor force, a shortage of new workers in traditional non-college occupations, and disparities in earnings and career paths for minorities are other adverse consequences of these industrial shifts. These facts may help explain why a substantial majority of young people believe that emerging technologies will magnify inequality and make high-paying jobs harder to find.

Investing and innovating to provide workers with new skills is an urgent and indispensable response to the labor market challenges due to emerging technological changes and advancements.

Yet this will not happen on its own. Manufacturers will need to partner with industry leaders, education stakeholders, and others to explore these recommendations and other new solutions to prepare Maryland's employers and workforce adequately for the future. It is for these reasons why the passage of Senate Bill 369/ House Bill 804 (as amended) is so critical.

As the Executive Director of a non-profit applied research organization devoted to digital transformation of systems within government, academia and industry, I see this situation growing more critical each day. I therefore respectfully submit this letter in support of Senate Bill 369/ House Bill 804 (as amended), and respectfully request this committee to issue a **favorable** report.

Thank you for your consideration.

Sincerely,

Dr. Adam Porter, Executive and Scientific Director
Fraunhofer USA Center for Experimental Software Engineering