

AMERICAN COMPETITIVENESS OF A MORE PRODUCTIVE  
EMERGING TECH ECONOMY ACT

SEPTEMBER 29, 2020.—Committed to the Committee of the Whole House on the  
State of the Union and ordered to be printed

Mr. PALLONE, from the Committee on Energy and Commerce,  
submitted the following

R E P O R T

[To accompany H.R. 8132]

The Committee on Energy and Commerce, to whom was referred the bill (H.R. 8132) to require the Federal Trade Commission and the Secretary of Commerce to conduct studies and submit reports on the impact of artificial intelligence and other technologies on United States businesses conducting interstate commerce, and for other purposes, having considered the same, reports favorably thereon without amendment and recommends that the bill do pass.

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I. PURPOSE AND SUMMARY

H.R. 8132, the “American Competitiveness Of a More Productive Emerging Tech Economy Act” or the “American COMPETE Act”,

was introduced on August 28, 2020, by Representatives Cathy McMorris Rodgers (R-WA), Bobby L. Rush (D-IL), Greg Walden (R-OR), Darren Soto (D-FL), Richard Hudson (R-NC), Robin Kelly (D-IL), Robert E. Latta (R-OH), Michael C. Burgess (R-TX), Fred Upton (R-MI), Brett Guthrie (R-KY), Larry Bucshon (R-IN), Greg Gianforte (R-MT), H. Morgan Griffith (R-VA), and Earl L. “Buddy” Carter (R-GA). H.R. 8132 aims to ensure America leads the world and outpaces the People’s Republic of China in charting the future of emerging technologies. Specifically, H.R. 8132 directs the Department of Commerce (DOC) and the Federal Trade Commission (FTC) to study and report to Congress on the state of artificial intelligence (AI), quantum computing, blockchain, and new and advanced materials. The bill also requires the DOC to study and report to Congress on the state of the Internet of Things (IOT), IOT manufacturing, three-dimensional printing, and unmanned delivery services and directs the FTC to study how AI may be used to address online harms.

## II. BACKGROUND AND NEED FOR THE LEGISLATION

Maintaining U.S. leadership in emerging technologies is essential for American growth, security, and competitiveness in the 21st century. To ensure American leadership and to outpace the People’s Republic of China, who has a stated goal of surpassing the U.S. with its “Made in China 2025” initiative, the U.S. must make it a priority to lead on critical technologies, such as AI.<sup>1</sup>

Although the U.S. is the current leader in AI, such leadership is not guaranteed. In fact, if current growth trends continue, some experts expect China to overtake the U.S. in just five to ten years.<sup>2</sup> Eric Schmidt, Chairman of the National Security Commission on Artificial Intelligence (NSCAI), recently warned, “Americans should be wary of living in a world shaped by China’s view of the relationship between technology and authoritarian governance. Free societies must prove the resilience of liberal democracy in the face of technological changes that threaten it.”<sup>3</sup> The U.S. cannot afford to cede global leadership on AI.

Additionally, American leadership is also important in other emerging technologies such as IOT, unmanned delivery services, quantum computing, three-dimensional printing, new and advanced materials, and blockchain. H.R. 8132, the American Competitiveness on More Productive Emerging Tech Economy, or the American COMPETE Act, aims to ensure American leadership on these technologies by compiling critical information about Federal efforts on these technologies as well as private industry development, integration, and deployment of such technologies.

H.R. 8132 also directs DOC and the FTC to provide recommendations to grow the U.S. economy through the secure advancement of these technologies, to develop national strategies to advance the U.S. global position on these technologies, develop strategies to mitigate current and emerging risks to the marketplace and supply

<sup>1</sup> Council on Foreign Relations, *Is ‘Made in China 2025’ a Threat to Global Trade?* (May 13, 2019) ([www.cfr.org/background/made-china-2025-threat-global-trade](http://www.cfr.org/background/made-china-2025-threat-global-trade)).

<sup>2</sup> *The Arms Race: A Groundbreaking New Index Ranking 54 Countries*, Tortoise Media (Dec. 3, 2019) ([members.tortoisemedia.com/2019/12/03/global-ai-index/content.html](http://members.tortoisemedia.com/2019/12/03/global-ai-index/content.html)).

<sup>3</sup> Eric Schmidt, *Eric Schmidt: I Used to Run Google. Silicon Valley Could Lose to China*, New York Times (Feb. 27, 2020) ([www.nytimes.com/2020/02/27/opinion/eric-schmidt-ai-china.html](http://www.nytimes.com/2020/02/27/opinion/eric-schmidt-ai-china.html)).

chains of these technologies, as well as ways to incentivize expeditious adoption and refinement of such technologies.

Through the various hearings and meetings with stakeholders on these issues, it is clear that such a compendium of information created by H.R. 8132 will advance the development and deployment of these technologies.

### III. COMMITTEE HEARINGS

For the purposes of section 103(i) of H. Res. 6 of the 116th Congress, the following hearings were used to develop or consider H.R. 8132:

In the 114th Congress, the Subcommittee on Commerce, Manufacturing, and Trade held an informational hearing on March 24, 2015. The hearing was entitled, “The Internet of Things: Exploring the Next Technology Frontier.” The Subcommittee received testimony from the following witnesses:

- Daniel Castro, Vice President, Information Technology and Innovation Foundation
- Brian Van Harlingen, Chief Technology Officer, Belkin International, Inc.
- Rose Schooler, Vice President, Internet of Things Group and GM, IoT Strategy and Technology Office, Intel Corporation
- Brad Morehead, Chief Executive Officer, LiveWatch Security, LLC

In the 114th Congress, the Subcommittee on Commerce, Manufacturing, and Trade held an informational hearing on November 19, 2015. The hearing was entitled, “The Disrupter Series: The Fast-Evolving Uses and Economic Impacts of Drones.” The Subcommittee received testimony from the following witnesses:

- Joshua M. Walden, Senior Vice President & General Manager, New Technology Group, Intel Corporation
- John Villasenor, Professor of Public Policy and Electrical Engineering, University of California, Los Angeles, Luskin School of Public Affairs
- Brian Wynne, President and CEO, Association for Unmanned Vehicle Systems International (AUVSI)
- Margot Kaminski, Assistant Professor, Moritz School of Law, Ohio State University

In the 114th Congress, the Subcommittee on Commerce, Manufacturing, and Trade held an informational hearing on February 26, 2016. The hearing was entitled, “The Disrupter Series: 3D Printing.” The Subcommittee received testimony from the following witnesses:

- Alan Amling, Vice President, Global Logistics & Marketing, United Parcel Service, Inc.
- Dr. Edward Herderick, Additive Technologies Leader, GE Corporate Supply Chain and Operations
- Neal Orringer, Vice President, Alliances & Partnerships, 3D Systems Corp.
- Ed Morris, Vice President and Director, America Makes, the National Additive Manufacturing Innovation Institute National Center for Defense Manufacturing and Machining (NCDMM)

In the 114th Congress, the Subcommittee on Commerce, Manufacturing, and Trade held an informational hearing on March 16,

2016. The hearing was entitled, “The Disrupter Series: Digital Currency and Blockchain Technology.” The Subcommittee received testimony from the following witnesses:

- John A. Beccia III, General Counsel and Chief Compliance Officer, Circle Internet Financial *on behalf of the Electronic Transactions Association*
- Jerry Brito, Executive Director, Coin Center
- Jerry Cuomo, Vice President Blockchain Technologies, IBM
- Matthew Roszak, Chairman, Chamber of Digital Commerce, and Co-Founder, Bloq. Inc.
- Paul Snow, Chief Architect, Factom
- Juan Suarez, Counsel, Coinbase
- Dana Syracuse, Counsel, BuckleySandler LLP

In the 114th Congress, the Subcommittee on Commerce, Manufacturing, and Trade Subcommittee held an informational hearing on September 14, 2016. The hearing was entitled, “The Disrupter Series: Advanced Robotics.” The Subcommittee received testimony from the following witnesses:

- Jeff Burnstein, President, Robotic Industries Association
- Meg Jones, Ph.D., Assistant Professor, Communication, Culture, and Technology, Georgetown University
- Dean Kamen, Founder, DeKa Research
- Sridhar Kota, Ph.D., Herrick Professor of Engineering, University of Michigan

In the 115th Congress, the Subcommittee on Digital Commerce and Consumer Protection held an informational hearing on March 15, 2017. The hearing was entitled, “Disrupter Series: Advanced Materials and Production.” The Subcommittee received testimony from the following witnesses:

- James M. Tour, Ph.D., T.T. and W.F. Chao Professor of Chemistry, Professor of Computer Science, and Professor of Materials Science and NanoEngineering, Smalley Institute for Nanoscale Science & Technology, Rice University
- Keith Murphy, Chairman and Chief Executive Officer, Organovo Holdings, Inc.
- Shane Weyant, Chief Executive Officer and President, Creative Pultrusions, Inc.
- Hota GangaRao, Ph.D., Maurice A. and Jo Ann Wadsworth Distinguished Professor of CEE, CEMR, Director, Constructed Facilities Center, Director, Center for Integration of Composites into Infrastructure, West Virginia University
- Afsaneh Rabiei, Ph.D., Professor, Department of Mechanical and Aerospace Engineering, North Carolina State University

In the 115th Congress, the Subcommittee on Digital Commerce and Consumer Protection held an informational hearing on May 23, 2017. The hearing was entitled, “Disrupter Series: Delivering to Consumers.” The Subcommittee received testimony from the following witnesses:

- Brian Wynne, President and CEO, Association for Unmanned Vehicle Systems International (AUVSI)
- Bastian Lehmann, Founder and CEO, Postmates
- Shyam Chidamber, Chief Evangelist and Senior Advisory, Flirtey

- Harry J. Holzer, Ph.D., Jo John LaFarge Jr. S.J. Professor of Public Policy, McCourt School of Public Policy, Georgetown University

In the 115th Congress, the Subcommittee on Digital Commerce and Consumer Protection held an informational hearing on June 13, 2017. The hearing was entitled, “Disrupter Series: Update on IOT Opportunities and Challenges.” The Subcommittee received testimony from the following witnesses:

- William S. Marras, Ph.D., Executive Director and Scientific Director of the Spine Research Institute, The Ohio State University
- Gary D. Butler, Ph.D., Founder, Chairman and CEO, Camgian Microsystems Corporation
- Mark Bachman, Ph.D., CTO and Co-Founder, Integra Devices
- Peter B. Kosak, Executive Director, Urban Active Solutions, General Motors North America
- Cameron Javdani, Director of Sales and Marketing, Louroe Electronics; and
- Bill Kuhns, President, Vermont Energy Control Systems, LLC

In the 115th Congress, the Subcommittee on Digital Commerce and Consumer Protection held an informational hearing on January 18, 2018. The hearing was entitled, “Disrupter Series: The Internet of Things, Manufacturing and Innovation.” The Subcommittee received testimony from the following witnesses:

- Rodney Masney, Vice President, Technology Service Delivery, Information Technology, Owens-Illinois
- Sanjay Poonen, Chief Operating Officer, VMWare
- Thomas D. Bianculli, Chief Technology Officer, Zebra Technology
- Thomas R. Kurfess, Ph.D., P.E., Professor and HUSCO/Ramirez Distinguished Chair in Fluid Power and Motion Control, George W. Woodruff School of Mechanical Engineering, Georgia Institute of Technology

In the 115th Congress, the Subcommittee on Digital Commerce and Consumer Protection held an informational hearing on May 18, 2018. The hearing was entitled, “Disrupter Series: Quantum Computing.” The Subcommittee received testimony from the following witnesses:

- Michael Brett, CEO, QxBranch
- Christopher Monroe, Chief Scientist and Founder, IonQ, Inc. and Professor of Physics, University of Maryland
- Matthew Putman, CEO, Nanotronics. Inc.
- Diana Franklin, Director of Computer Science Education, the University of Chicago

In the 115th Congress, the Subcommittee on Digital Commerce and Consumer Protection held a legislative hearing on May 22, 2018. The hearing was entitled, “Internet of Things Legislation.” The Subcommittee received testimony from the following witnesses:

- Tim Day, Senior Vice President, Chamber Technology Engagement Center, U.S. Chamber of Commerce
- Dipti Vachani, Vice President Internet of Things Group and General Manager of the Strategy and Solutions Engineering Division, Intel

- Michelle Richardson, Deputy Director, Freedom, Security, and Technology Project, Center for Democracy and Technology

#### IV. COMMITTEE CONSIDERATION

Representatives Rodgers (R-WA), Rush (D-IL), Walden (R-OR), Soto (D-FL), Hudson (R-NC), Kelly (D-IL), Latta (R-OH), Burgess (R-TX), Upton (R-MI), Guthrie (R-KY), Bucshon (R-IN), Gianforte (R-MT), Griffith (R-VA), and Carter (R-GA) introduced H.R. 8132, the “American Competitiveness Of a More Productive Emerging Tech Economy Act” or the “American COMPETE Act”, on August 28, 2020, and the bill was referred to the Committee on Energy and Commerce. The bill was referred to the Subcommittee on Consumer Protection and Commerce on August 31, 2020.

On September 9, 2020, the bill was discharged from the Subcommittee on Consumer Protection and Commerce as the bill was called up for markup and consideration by the full Committee. The Committee on Energy and Commerce met in open markup session, pursuant to notice, on September 9, 2020, to consider H.R. 8132. No amendments were offered during consideration of the bill. Mr. Pallone, Chairman of the committee, subsequently moved that H.R. 8132 be ordered reported favorably to the House, without amendment, and the Committee on Energy and Commerce agreed to the motion by a voice vote, a quorum being present.

#### V. COMMITTEE VOTES

Clause 3(b) of rule XIII of the Rules of the House of Representatives requires the Committee to list each record vote on the motion to report legislation and amendments thereto. The Committee advises that there were no record votes taken on H.R. 8132, including the motion for final passage of the bill.

#### VI. OVERSIGHT FINDINGS

Pursuant to clause 3(c)(1) of rule XIII and clause 2(b)(1) of rule X of the Rules of the House of Representatives, the oversight findings and recommendations of the Committee are reflected in the descriptive portion of the report.

#### VII. NEW BUDGET AUTHORITY, ENTITLEMENT AUTHORITY, AND TAX EXPENDITURES

Pursuant to 3(c)(2) of rule XIII of the Rules of the House of Representatives, the Committee adopts as its own the estimate of new budget authority, entitlement authority, or tax expenditures or revenues contained in the cost estimate prepared by the Director of the Congressional Budget Office pursuant to section 402 of the Congressional Budget Act of 1974.

The Committee has requested but not received from the Director of the Congressional Budget Office a statement as to whether this bill contains any new budget authority, spending authority, credit authority, or an increase or decrease in revenues or tax expenditures.

## VIII. FEDERAL MANDATES STATEMENT

The Committee adopts as its own the estimate of Federal mandates prepared by the Director of the Congressional Budget Office pursuant to section 423 of the Unfunded Mandates Reform Act.

## IX. STATEMENT OF GENERAL PERFORMANCE GOALS AND OBJECTIVES

Pursuant to clause 3(c)(4) of rule XIII, the general performance goal or objective of this legislation is to conduct studies and submit reports on the impact of AI and other technologies on United States businesses conducting interstate commerce.

## X. DUPLICATION OF FEDERAL PROGRAMS

Pursuant to clause 3(c)(5) of rule XIII, no provision of H.R. 8132 is known to be duplicative of another Federal program, including any program that was included in a report to Congress pursuant to section 21 of Public Law 111—139 or the most recent Catalog of Federal Domestic Assistance.

## XI. COMMITTEE COST ESTIMATE

Pursuant to clause 3(d)(1) of rule XIII, the Committee adopts as its own the cost estimate prepared by the Director of the Congressional Budget Office pursuant to section 402 of the Congressional Budget Act of 1974.

## XII. EARMARKS, LIMITED TAX BENEFITS, AND LIMITED TARIFF BENEFITS

Pursuant to clause 9(e), 9(f), and 9(g) of rule XXI, the Committee finds that H.R. 8132 contains no earmarks, limited tax benefits, or limited tariff benefits.

## XIII. ADVISORY COMMITTEE STATEMENT

No advisory committee within the meaning of section 5(b) of the Federal Advisory Committee Act was created by this legislation.

## XIV. APPLICABILITY TO LEGISLATIVE BRANCH

The Committee finds that the legislation does not relate to the terms and conditions of employment or access to public services or accommodations within the meaning of section 102(b)(3) of the Congressional Accountability Act.

## XV. SECTION-BY-SECTION ANALYSIS OF THE LEGISLATION

*Section 1. The “American Competitiveness of a More Productive Emerging Tech Economy Act” or the “American Compete Act”*

Section 1(a) designates that the short title may be cited as the “American Competitiveness Of a More Productive Emerging Tech Economy Act” or the “American COMPETE Act”. Section 1(b) provides the table of contents.

*Sec. 2. Study to advance artificial intelligence*

This Section requires a report not later than one year after the date of enactment of this Act. The Secretary of Commerce and the Federal Trade Commission (FTC) shall complete a study on the

state of the AI industry and the impact of such industry on the economy of the United States.

*Sec. 3. Study to advance internet of things in manufacturing*

This Section requires a report not later than one year after the date of enactment of this Act. The Secretary of Commerce, in coordination with the head of any other appropriate Federal agency, shall complete a study on the state of manufacturing in the United States.

*Sec. 4. Study to advance quantum computing*

This Section requires a report not later than one year after the date of enactment of this Act. The Secretary of Commerce and the FTC shall complete a study on the state of the quantum computing industry and the impact of such industry on the economy of the United States.

*Sec. 5. Study to advance blockchain technology*

This Section requires a report not later than one year after the date of enactment of this Act. The Secretary of Commerce and the FTC shall complete a study on the state of the blockchain technology industry and the impact of such industry on the economy of the United States.

*Sec. 6. Study to advance new and advanced materials*

This Section requires a report not later than one year after the date of enactment of this Act. The Secretary of Commerce and the FTC, in coordination with the head of any other appropriate Federal agency, shall complete a study on the state of new and advanced materials industry, including synthetically derived or enhanced natural properties, and the impact of such industry on the economy of the United States.

*Sec. 7. Study to advance unmanned delivery services*

This Section requires a report not later than one year after the date of enactment of this Act. The Secretary of Commerce, in coordination with the head of any other appropriate Federal agency, shall complete a study on the impact of unmanned delivery services on United States' businesses conducting interstate commerce, including the effects on safety, traffic congestion and mitigation, and job gains, losses, or changes. In the report recommendations, the Committee expects the Secretary of Commerce to include strategies to promote public safety and mitigate the effects of job displacement related to the development and adoption of unmanned delivery services.

*Sec. 8. Study to advance internet of things*

This Section requires a report not later than one year after the date of enactment of this Act. The Secretary of Commerce shall conduct a study on the state of the internet-connected devices industry (commonly known as the "Internet of Things") in the United States.

*Sec. 9. Study to advance three dimensional printing*

This Section requires a report later than one year after the date of enactment of this Act. The Secretary of Commerce, in coordination with the head of any other appropriate Federal agency, shall complete a study on the state of the three-dimensional printing industry and the impact of such industry on the economy of the United States.

*Sec. 10. Study to combat online harms through innovation*

This section requires a report not later than one year after the date of enactment of this Act. The FTC shall conduct and complete a study on how AI may be used to address the online harms described in this section, including scams directed at senior citizens, disinformation or exploitative content, and content furthering illegal activity.

XVI. CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

There are no changes to existing law made by the bill H.R. 8132.