



March 13, 2017

Via Electronic Mail

Travis Hall
National Telecommunications and Information Administration
U.S. Department of Commerce
1401 Constitution Avenue, NW
Washington, DC 20230

Re: Comments on *The Benefits, Challenges, and Potential Roles for the Government in Fostering the Advancement of the Internet of Things*
Docket No. 170105023-7023-01 (January 13, 2017); Notice of Extension (February 24, 2017)

Dear Mr. Hall:

The Fashion Innovation Alliance (FIA) submits these comments to the Department of Commerce, National Telecommunications and Information Administration (NTIA) in response to the notice on *The Benefits, Challenges, and Potential Roles for the Government in Fostering the Advancement of the Internet of Things* and the Department's recent Internet of Things (IoT) green paper, referenced in the *Federal Register* on January 13, 2017. See 82 Fed. Reg. 4,313 (January 13, 2017).

The Fashion Innovation Alliance (FIA) represents leaders in fashion and technology committed to shaping the future of fashion tech—encompassing smart accessories and apparel, e-commerce, and interactive retail tech. Since FIA's launch in 2016, the Alliance has brought together visionaries in fashion, technology, government, and academia through numerous initiatives. These include FIA's 2016 Fashion Tech Showcase on Capitol Hill, a post-election event at the National Press Club on American manufacturing, innovation, and immigration, as well as several roundtable discussions.

The economic impact of fashion tech—ranging from smart watches and fitness trackers to connected jewelry and apparel—continues to increase, with the global wearables market estimated to reach a value of \$19 billion in 2018.¹ Fashion tech is generating significant interest and business for both the B2B and B2C sectors. While many consumers enjoy the convenience

¹ Facts and Statistics on Wearable Technology, Statista, available at <https://www.statista.com/topics/1556/wearable-technology/>.

afforded by connected accessories and now smart apparel, established companies are also able to benefit and create new lines of business through partnerships with startups and other emerging entrepreneurs. The Fashion Innovation Alliance recently shared the value of fashion tech in the Alliance's IoT comments to the Department of Commerce in June 2016,² and through participation in the Department's IoT workshop in September 2016.³

DISCUSSION

The Fashion Innovation Alliance appreciates the opportunity to engage with the new Administration on the societal and economic benefits of fashion tech, particularly as it relates to manufacturing, jobs, and innovation in the United States. We greatly value the Department's leadership and commitment to advancing IoT, and we look forward to continuing to work with government, industry stakeholders, academia, and other organizations as the field of IoT continues to evolve.

The Department noted in its *Federal Register* request that "IoT encompasses a widening scope of industries and activities."⁴ Fashion tech, for example, represents one of the many industries significantly contributing to the burgeoning Internet of Things. Industry leaders recently highlighted the power of fashion tech during New York Fashion Week in February, which included the Federal Bar Association/Parson's School of Design fashion law seminar on wearables and IoT, an interactive panel discussion on tech as the new frontier in fashion, as well as features of smart garments and coded couture.

The Alliance has identified below key issues toward encouraging a collaborative approach that will advance IoT for fashion tech while also furthering American innovation.

Manufacturing, Jobs and Innovation

As government and industry work to rebuild and grow American manufacturing, fashion tech—particularly smart accessories and apparel—will play a significant role in contributing to this resurgence. While some of the jobs will result directly from the expansion of innovative startups, partnerships resulting from new fashion tech collaborations will also help to spur new job opportunities. In 2016, the smart fabric company Loomia⁵ successfully secured all domestic supply chain partners, from battery developers, cut-and-sew manufacturers, and custom electronic components producers.

² Comments on the Benefits, Challenges, and Potential Roles for the Government in Fostering the Advancement of the Internet of Things, *available at* <https://www.ntia.doc.gov/federal-register-notice/2016/comments-potential-roles-government-fostering-advancement-internet-of-things>.

³ Fostering the Advancement of the Internet of Things Workshop, Sept. 1, 2016, *available at* <https://www.ntia.doc.gov/other-publication/2016/09012016-fostering-advancement-internet-things-workshop-webcast>.

⁴ *See* The Benefits, Challenges, and Potential Roles for the Government in Fostering the Advancement of the Internet of Things, 81 Fed. Reg. 4313 (Jan. 13, 2016).

⁵ Loomia, *available at* <http://www.loomia.co/>.

Fashion tech entrepreneurs are also designing and making innovative products in cities across the United States, from Brooklyn to Chicago, San Antonio and Anchorage, Alaska.⁶ For example, the New Lab, located in the Brooklyn Navy Yard, supports designers and entrepreneurs in the areas of connected devices, artificial intelligence, and robotics.⁷ In San Antonio, WiseWear—known for its stylish wellness wearables—continues to lead the new wave of industrial innovation by partnering with leading designers and developing health and fitness products with universal appeal.⁸

Thus, given the geographic diversity in fashion tech and other innovators in IoT, supporting and investing in entrepreneurs across the U.S. will be key to jobs and economic growth.

Supporting the Development of IoT Standards

The Department noted in its green paper the importance of a “private-sector led approach to standards development with appropriate government participation” for IoT.⁹ FIA believes that an industry-led approach for developing IoT standards—especially for fashion tech—is particularly beneficial for both public and private stakeholders.

We also recommend that industry continue to consider the diversity of devices and services that comprise the Internet of Things during multi-stakeholder discussions. While several organizations have begun to address standards development for connected devices, ASTM International is the first organization to focus on standards directly impacting fashion tech through its new smart textiles subcommittee.¹⁰ ASTM’s work on smart textiles—along with its continued discussions with FIA and other leaders in fashion tech—will be particularly valuable as connected clothing continues to shape the second wave of wearables.

Smart Fabrics Summit

FIA recommends that the Department of Commerce continue to host the Smart Fabrics Summit, especially as we look to encourage the creation of new jobs and foster public-private partnerships for the broader fashion tech community. The Department hosted its first-ever Smart Fabrics Summit in April 2016, which included panel discussions on manufacturing smart garments, federal investment in smart fabrics, and standards for wearable textiles. The conversations throughout the day—both scheduled presentations and informal discussions—provided an invaluable forum for Washington policymakers to learn more about the innovative products that make up smart fabrics. The Summit also raised awareness of the legal and policy issues

⁶ *With Oil Prices in the Gutter, Alaska Cities Eye Tech*, Bloomberg Markets, Aug. 25, 2016, available at <https://www.bloomberg.com/news/articles/2016-08-25/with-oil-prices-in-the-gutter-alaska-cities-eye-tech>.

⁷ *Brooklyn’s Industrial Revolution*, The Economist, Dec. 9, 2016, available at <https://www.1843magazine.com/design/the-daily/brooklyns-industrial-revolution>.

⁸ *Has This Tech Startup Created The Most Stylish And Functional Wearable For Women?*, Sept. 13, 2016, Forbes, available at <http://www.forbes.com/sites/meggentaylor/2016/09/13/has-this-tech-startup-created-the-most-stylish-and-functional-wearable-for-women/#493728325b0b>.

⁹ *Fostering the Advancement of the Internet of Things*, U.S. Department of Commerce, Jan. 2017 at p. 44.

¹⁰ *How Smart is Your Shirt? ASTM Standardization News*, Sept./Oct. 2016, available at <https://www.astm.org/standardization-news/?q=features/how-smart-your-shirt-so16.html>.

necessary to spur innovation for fashion tech, including intellectual property protection, data security, and consumer privacy.

Cross-Disciplinary Programs for Fashion Tech

As previously stated in the Alliance's June 2016 comments, we would like to reaffirm the importance of supporting cross-disciplinary programs to support the advancement of the Internet of Things for fashion tech. Cross-disciplinary educational programs like Parsons' Design and Technology Program and Drexel University's Haute Technology Laboratory are feeding the future of these industries through educational programs.

While expertise in technology is important to ensure that IoT devices function properly, integrating design into the initial development is key. For consumers are unlikely to purchase a watch, bracelet or article of clothing that is not aesthetically pleasing.

As wearable tech becomes a more industrialized concept, we can see shoemakers working with electrical engineers and fashion designers working with chemists. This kind of cross-disciplinary collaboration is best done domestically, encouraging innovators to re-shore. We see wearables and IoT as an opportunity to bring together innovators from different sectors and to encourage more manufacturing here in the United States.

Conclusion

The Fashion Innovation Alliance appreciates the opportunity to submit these comments and we look forward to working with the new Administration to advance and promote IoT innovation, particularly for fashion tech.

Respectfully submitted,

A handwritten signature in black ink, enclosed in a hand-drawn oval. The signature appears to be "Kenya" followed by a stylized flourish.

Kenya N. Wiley
Founder and CEO
Fashion Innovation Alliance
641 S Street, NW
Washington, DC 20001