Subcommittee on Energy and Commerce – "Disruptor Series" Hearing
Testimony Comments

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Good morning Chairman Burgess, Ranking Member Schakowsky, Members and Staff of the Committee, fellow witnesses and attendees. My name is Alan Amling and I am the Vice President of Marketing for a business unit of UPS called Global Logistics & Distribution. During my 23 year tenure with UPS, I've helped our business develop and grow across all aspects of the e-economy, and to launch innovative new solutions like carbon-neutral shipping.

While you are likely familiar with UPS's fleet of more than 100,000 brown trucks and our 425,000 employees globally, you may not know as much about our supply chain business.

More than 100 years ago, UPS started as a bike messenger service in Seattle. In 2016, we operate one of the largest airlines in the world -- and offer global supply chain services including ocean and air freight, ground freight, brokerage and contract logistics in addition to our more familiar brown package delivery services to your door.

Our global logistics networks – made more intelligent and efficient – have the potential to radically reshape and reinvent economies, as well as the value and supply chains that they serve. That's why UPS is investing heavily in 3-D printing, which could disrupt traditional manufacturing the way that e-commerce disrupted traditional retail.

Certainly, as this new technology becomes more widely available, there will be bumps in the road and hurdles to overcome. But the power of 3-D printing cannot be overstated. It's disruptive not just because it's new, but because it fundamentally helps businesses and entrepreneurs do what that they're already doing, only better or less expensively.

Therefore, as 3-D printing revolutionizes manufacturing, it will also affect our business of supply chains, and eventually product pricing and the end consumer experience. 3-D printing effectively means that businesses will no longer face:

- Minimum quantities – order what you need, when you need it.
- Upfront tooling costs – which is ideal for small batch production runs
- A "tax" on complexity – no corresponding increase in cost for a more complex design

The disruptive nature of 3-D printing, therefore, will create opportunities but also require adjustments, depending on your approach. The more products that can be printed on demand, the less there will be a need for warehousing infrastructure. As it becomes possible to send product design instructions via the Internet and print products locally, small businesses and entrepreneurs will be able to move from the idea phase to the production phase more quickly and cost-effectively. Instead of delivering a product from a warehouse, products could be "delivered" via a 3-D printing service offered at a retail outlet such as The UPS Store or to your door.

Disruptive technology like 3-D printing stands to help our customers do more – with a lower environmental impact – all while benefiting consumers like you or me. 3-D printing will create value for customers beyond traditional delivery services. It has the potential to increase profit margins within the supply chain by reducing cost. That's good news for small businesses and entrepreneurs especially.

Additionally, it's important to understand that disruption will happen – there's almost no stopping the spread of technology and innovation. So we can either be "in the game" or "watching it" – and I know which side UPS wants to be in the game with the customers we serve.

So, in anticipation of 3-D printing's impact, UPS has already started putting 3-D Printers in The UPS Store locations. Our initial customer response was so positive that we have since expanded to more than 60 stores, with plans for continued growth. Likewise through our internal venture capital arm, we

also invested in a 3-D Printing manufacturer named CloudDDM and put their production facilities in the heart of our Louisville supply chain campus, just minutes from our global air hub. The operation has been up and running for a year and allows companies to order parts and prototypes to be printed late into the evening and have them delivered anywhere in the U.S. by the next morning. In doing so, UPS has helped to create a model that actually increases package demand and differentiates the company from other carriers. That's groundbreaking stuff!

Today, UPS is learning and adapting to new technologies – something we've done many times in our more than 100 years of operations. As proven over and over throughout history, those who embrace innovation and change early on often are the most richly rewarded – and disruptive technology - like 3-D printing - has that incredible potential. I commend the Committee for the interest in understanding more about 3-D printing and welcome this opportunity to share what we have learned up to this time.

Thank you for your time today. I look forward to answering your questions.