

**THE COALITION OF SERVICES INDUSTRIES (CSI) EVENT RECAP:
“Redefining Manufacturing: The Service Sector’s Role in Boosting U.S. Competitiveness and Resilience”**

Last week, the Coalition of Services Industries (CSI) hosted two panel discussions, both titled “Redefining Manufacturing: The Service Sector’s Role in Boosting U.S. Competitiveness and Resilience,” which examined the interplay between services and manufacturing, and their complementary roles in further strengthening the U.S. economy.

The first session, cohosted with and at the Wilson Center on June 19, 2017, featured the following panelists, with opening remarks from CSI President, Christine Bliss:

- Sahra English, Vice President of Global Public Policy, MasterCard
- Trevor Gunn, Vice President of International Relations, Medtronic
- Matthew Reisman, Director for International Trade, Microsoft
- Sherry Stephenson, Senior Fellow, ICTSD
- Meg Lundsager, Public Policy Fellow, Wilson Center (moderator)



CSI President Christine Bliss provides opening remarks at the Wilson Center

The second session, held on Capitol Hill on June 22, 2017, included the following panelists:

- Sahra English, Vice President of Global Public Policy, MasterCard
- Stephen Ezell, Vice President of Global Innovation Policy, ITIF
- Sherry Stephenson, Senior Fellow, ICTSD
- Andy York, Executive Director, Federal Affairs, General Motors (GM)
- Christine Bliss, President, CSI (moderator)



CSI President Christine Bliss is joined on the Hill by panelists from ITIF, ICTSD, Mastercard, and GM

How Services Enable Manufacturing

Both discussions began by explaining how services, and particularly digitally enabled services, are a critical engine to the U.S. economy in increasing American competitiveness. Five key themes of the panels include:

1. Manufacturing is relying increasingly on services. These are used all throughout the length of the production process, from the beginning of the supply chain to the end and in after sales. The distinction between manufactures and services is becoming increasingly blurred.
 - Up to 60 percent of employment in manufacturing firms is found in service support functions, like engineering, transportation, marketing, and IT.
2. Services are the hidden elements that make manufacturing more competitive, domestically and on international markets.
 - Over 50 percent of the average cost of manufacturing an automobile is derived from services.
 - Between 25 and 60 percent of employment in manufacturing firms is found in service support functions.
3. Services are essential to improve the profitability of manufacturing firms.
 - A recent study by Deloitte of 80 multinational manufacturing companies from all sectors showed that while services represented on average 25 percent of revenue for these companies, they constituted as much as 46 percent of their profits.
 - The Deloitte study concluded that for many manufacturing companies today, there would be little or no profitability without their service business.
4. The percentage of services bundled in traded manufactured products is growing around the world. On a value-added basis, services are now twice as important as goods in international trade.
 - From the OECD and WTO's new database on trade in value-added, we can now see the "value" contributed by services to intermediate and final merchandise goods, representing over half of world trade.
 - Services represented 50 percent of the value of total U.S. exports in 2013.
5. Services and data flows to produce "smart products" are the way of the future in manufacturing.
 - Digital services provide 25 percent of total input of manufacturing, empowering improvements in efficiency through smart technologies.
 - Underpinning the digital world, cross-border data flows grew by 45 times between 2005 and 2014 and generated \$2.8 trillion in economic value in 2014, contributing more to world GDP than global trade in goods.



Mastercard and GM discuss their partnership with the digital wallet

Manufacturing in the Cloud

Companies represented on each of the panels provided illustrations to showcase just how services, digital and cloud services have been applied to bolster manufacturing outputs.

- Microsoft has worked to develop predictive analytics, using the cloud and data to identify and address problems before they occur.
- MasterCard works with Samsung to enable smart refrigerators to purchase groceries for delivery through FreshDirect.
- MasterCard also works with GM to incorporate a customer's digital wallet into OnStar, introducing convenience and efficiency at a new level.
- Now in the United States are state-of-the-art GM "body shop" facilities, largely run by "robots" (with the use of the cloud and services engineers), digitalizing the process of tuning automobiles. GM has also partnered with insurers providing real-time driver statistics for premium assessments.
- GM works with Boeing to provide sensor detection mechanisms in engines which, in turn, provide predictive analytics and modeling on a virtual basis.
- Medtronic relies on services to not only create and supply their devices, but also requires services for maintenance and other transactional support.

On June 22nd at CSI's Hill event, Stephen Ezell rolled out ITIF's new report, "[How Cloud Computing Enables Manufacturing](#)". The report elaborates on the examples above, further discussing the role of cloud services and how it makes manufacturing more productive, cost- and energy-efficient, safe, and streamlined. Digital services, including cloud-based computing, provide at least 25 percent of the total inputs that go into finished manufactured products, as noted in the report.



Microsoft's Matthew Reisman discusses 21st century worker training programs

The Future of Services in Trade, Investment, and Jobs

Both sessions closed with discussion on how services companies can stay ahead, with particular attention to the free flow of data as a universal issue for all companies.

- Trade agreements make the rules of the road clear and predictable, but the United States has yet to enter an agreement with binding rules on free flow of data.
- All services companies must continue to invest heavily in research and development, helping the United States maintain its edge in innovation.
- As services companies specialize, high-value core functions like research and development and management stay in the United States, creating a demand for skilled domestic workers.
- Microsoft, through DigiGirlz, and MasterCard, through Girls for Tech, are working to expand STEM education from the ground up.

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