



## Minnesota's medical device and health services industries rely on a strong multimodal transportation system

*"It's hard to overstate the vital role that MSP International Airport and the surrounding surface transportation network play in the timely delivery of high-value, time-sensitive products."*

— Lee Munnich, principal investigator

### KEY FINDINGS

**Economic competitiveness:** The Medical Device Industry Cluster (MDIC) plays a vital role in the economic competitiveness of the state. This is largely an export-oriented cluster, so the transportation infrastructure and logistics enterprises need to be well positioned to retain Minnesota's competitive advantage.

**Economic development:** The MDIC has a pronounced economic impact on the Twin Cities, especially because of the presence of major corporate headquarters. Continued economic development involves a range of hard and soft infrastructure items. There are also economic development implications and opportunities in greater Minnesota, particularly in regions that have a significant health care presence (Rochester, St. Cloud) or MDIC-linked industries.

**Transportation:** The MDIC relies on a combination of surface and air transportation. MSP plays a crucial role in enabling the export of MDIC products, and these products represent the highest value shipments at MSP. To date, policy surrounding MSP has

MSP handled **\$8.6 billion** in medical goods in 2015.

had a strong passenger orientation. Given MSP's importance in this cluster, additional attention to the cargo element is warranted. Development of statistical metrics is needed to inform policy.

**Talent/innovation:** The MDIC is highly dependent on a continuous flow of talent and the ability to innovate both at the company level and at the cluster level. New developments in workforce training, product development, distribution, and logistics methods all enhance the extent to which MDIC companies want to start, grow, and stay in Minnesota.

**Data/research:** Lack of comprehensive data impedes a complete understanding of the value that flows from the MDIC—both the economic and community value—as well as the role of transportation and related infrastructure improvements.



## PROJECT BACKGROUND AND DESIGN

Minnesota has one of the highest concentrations of medical device companies in the US, and the value of those medical goods is a major contributor to the state's economy. The medical device industry cluster is also a global leader in the development and distribution of medical devices.

TPEC research analyzed how key industry clusters have developed in Minnesota and the implications for the transportation system. Sources included MSP Export Data, GIS data, interviews, and reports.

A quantitative analysis was conducted to spatially locate medical device companies and medical device industry clusters. The spatial analysis showed that while most medical device companies are located within the seven-county Twin Cities region, industries linked to the MDIC are much more dispersed throughout the state and continue to develop.

Through qualitative research, it was evident that the transportation of medical device goods is inherently multimodal. Air transportation, especially, plays a crucial role to ensure the timely delivery of medical devices nationally and internationally.

## IMPLICATIONS FOR POLICYMAKERS

The research reveals the need to develop and expand air transportation operations in Minnesota. In addition, it indicates that coordination between the different modes of transportation is needed to ensure the efficient distribution of medical devices.

The study also suggests the critical role of partnerships between different divisions within state, regional, and local agencies for a successful multimodal system to support and meet the needs of the medical device industry.

***“The Humphrey School research team has become the control tower for understanding the importance of air and surface transportation to Minnesota’s dynamic medical device and health care industry clusters.”***

*— Bill Goins, freight and commerce leader and member of the TPEC Advisory Board*

TPEC is a program of the State and Local Policy Program at the Humphrey School of Public Affairs and of the Center for Transportation Studies. The University of Minnesota is an equal opportunity educator and employer. This publication is available in alternative formats upon request. • Photo: Shutterstock • Sept. 2019

## FOR MORE INFORMATION

TPEC welcomes public engagement and encourages you to contact us with your questions, comments, and research needs.

### *Lee Munnich*

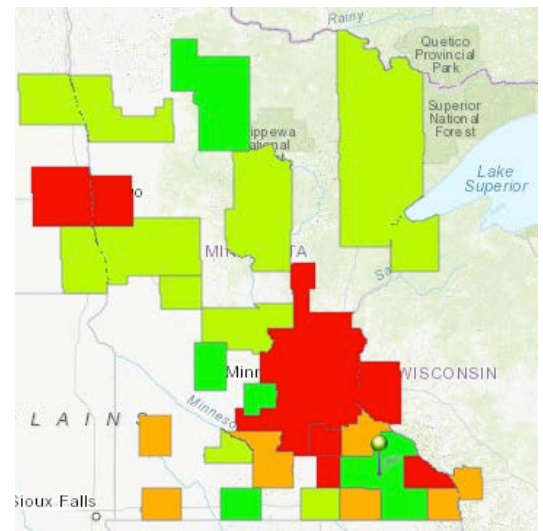
Senior Fellow, State and Local Policy Program  
Humphrey School of Public Affairs  
612-625-7357  
lmunnich@umn.edu

### *Tom Horan*

Visiting Scholar, State and Local Policy Program  
Humphrey School of Public Affairs  
909-748-8748  
Thomas\_Horan@redlands.edu

### *Joanne Cho*

Research Assistant  
Humphrey School of Public Affairs



*This story map from TPEC’s National Freight Economy Atlas shows medical device industry clusters.*