



Future Freight Mobility

Nicole Katsikides, Ph.D.

Texas A&M Transportation Institute

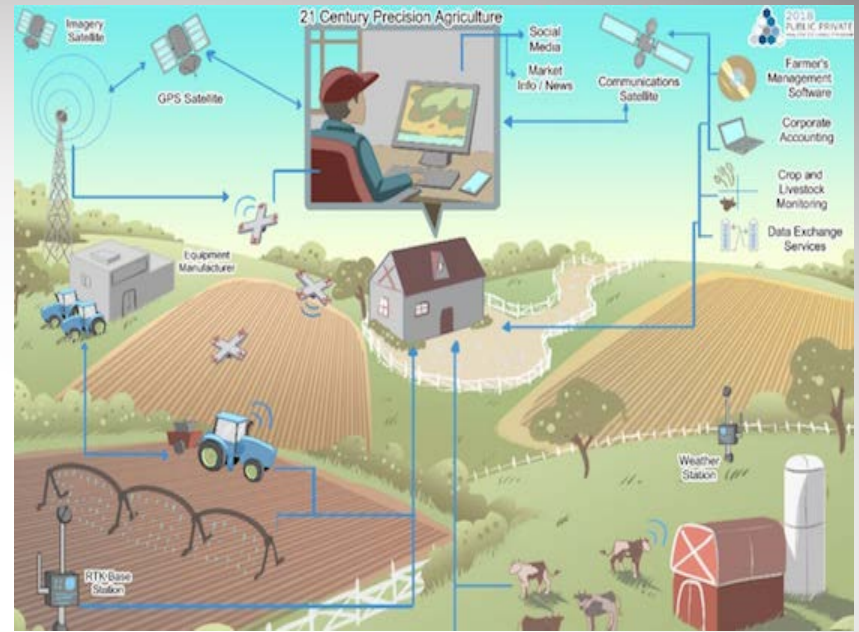
Eastern Shore Land Conservancy Annual Planning Conference

April 18, 2019

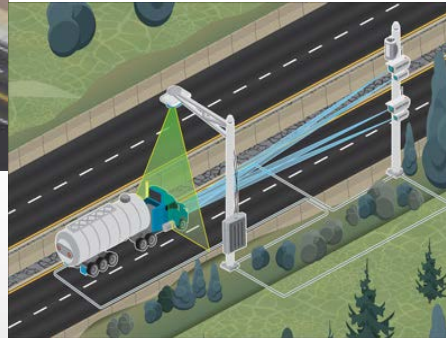
Connected World



<https://www.fhwa.dot.gov/publications/publicroads/17julaug/03.cfm>



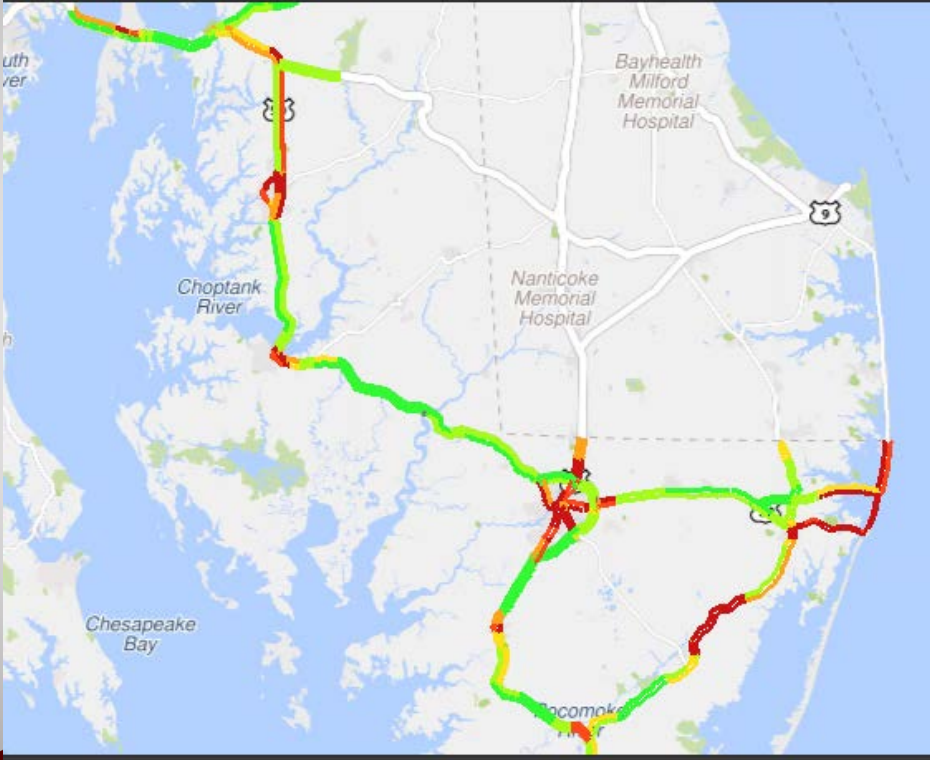
Source: <https://www.issource.com/warning-for-connected-farming-technology/>



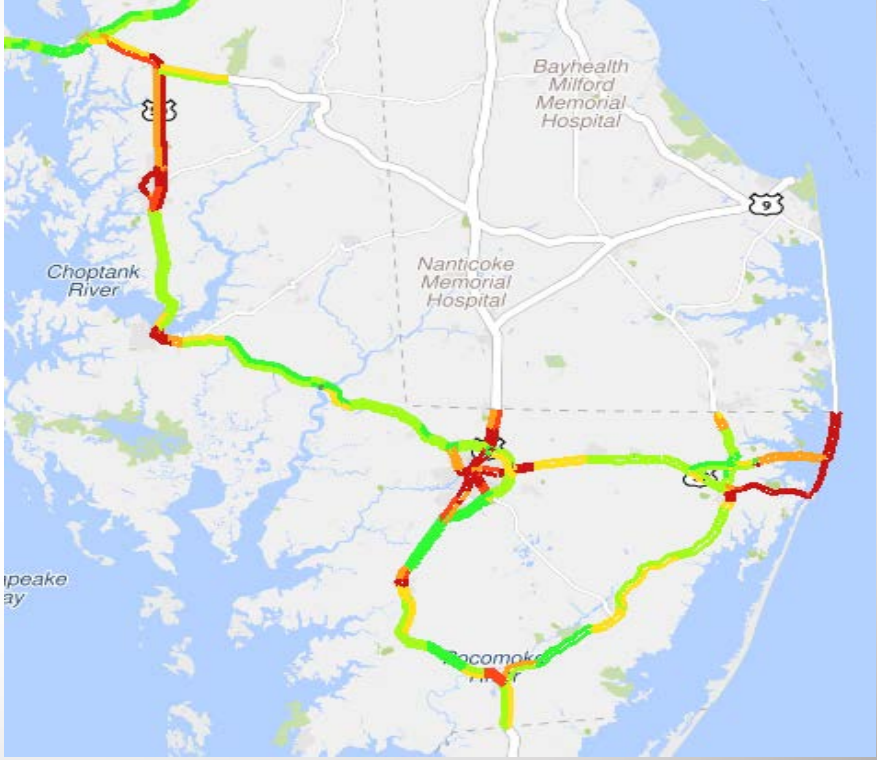
<https://www.fhwa.dot.gov/publications/publicroads/17julaug/03.cfm>

Connected Data

2018 Passenger Traffic Reliability, Noon



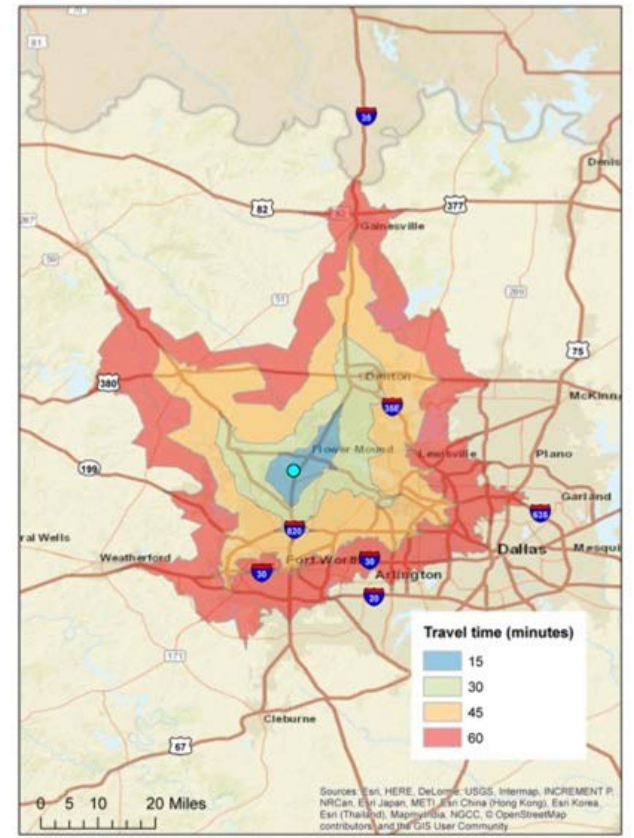
2018 Freight Traffic Reliability, Noon



Connected Data to Tell the Story

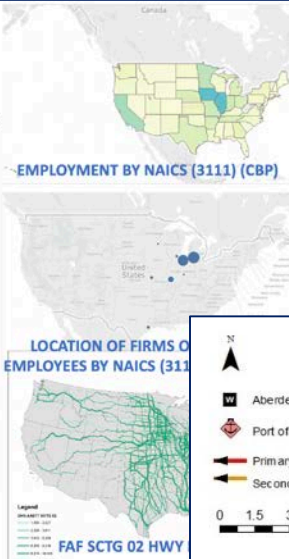
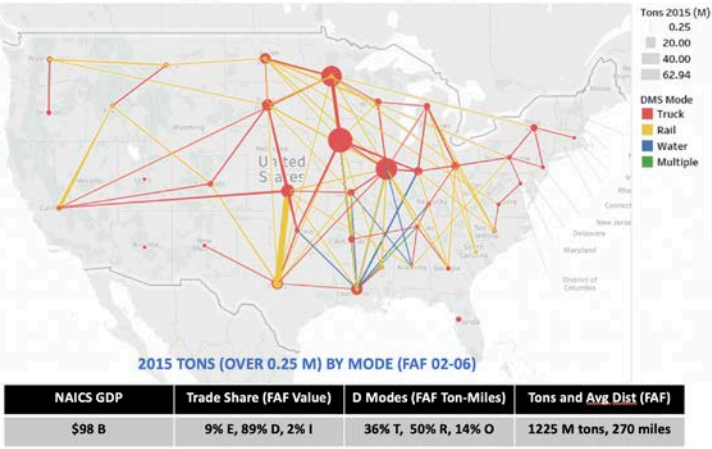


Weekday 5 PM Travel Time Contour from Alliance Airport

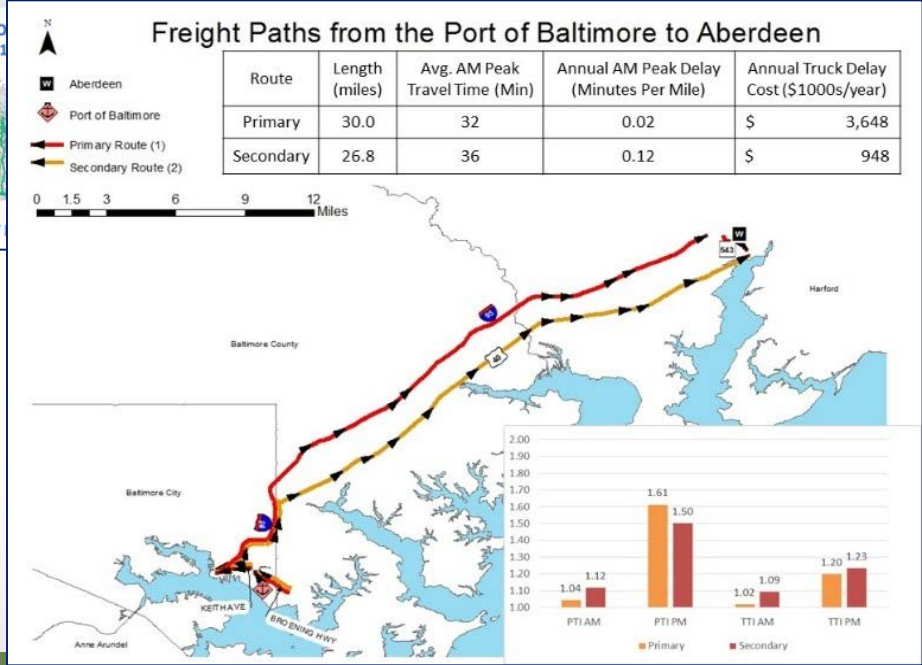


Oilseed & Grain Farming and Production

- Definition: NAICS 1111 & 3112, FAF 02 (Cereal Grains) & 06 (Milled Grains)
- Typical Commodities: wheat, soybeans, rice, milled flour or meal
- Representative Supply Chains: ADM, Perdue, Cargill, ConAgra



Connected Data Reveal Bottlenecks we can fix: Freight Fluidity



Emerging Technology and Data Opportunities – Freight Mobility



Interstate credentialing and permitting for regular and oversize/overweight movements.

Truck parking and reservation systems.

Transponder and roadside detection technology for safety and weight enforcement.

Truck platooning and other commercial motor vehicle automation.

Corridor-wide information on congestion, work zones and weather.

Source: I-10 Connected Freight Corridor

Congestion Reduction Potential



- Arterial system V2I-reduces fuel consumption at intersections by 20%.

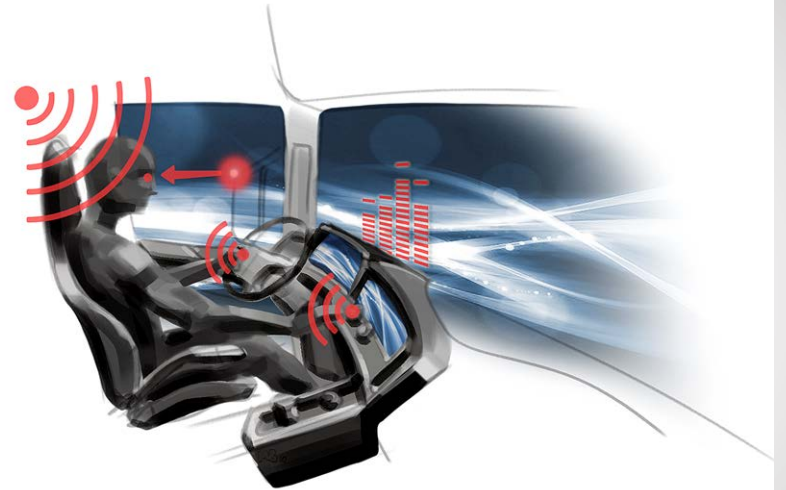


Truck Platooning – 10% fuel savings

Light vehicle platooning – double lane capacity

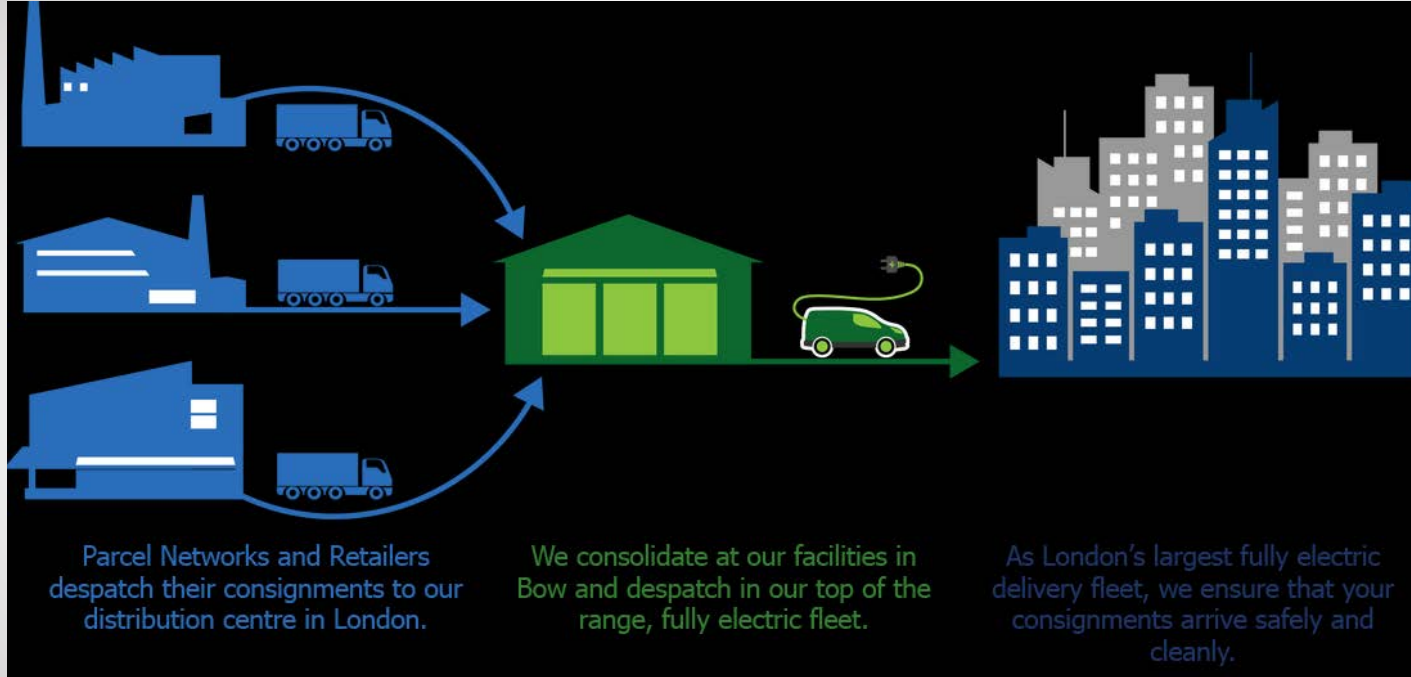


Truck Platooning and Future of Trucking



<https://www.scania.com/group/en/scanias-driver-station-of-the-future/>

Delivery Technology



Ideas

- Get comfortable with data, invest in shared resources
 - Use data to see your world
- Know your supply chains, use data to identify transportation trends and opportunities, inventory capabilities
- Prepare for technology, recognize it is here, it is coming
 - Don't overwhelm, connect to what is meaningful
- Collaborate, partner and identify transportation options, evaluate current infrastructure, solutions
 - Platooning, long haul and circuits
 - Consolidated delivery
 - Smart freight efficiency

Contact Information

Nicole J. Katsikides, Ph.D.

Texas A&M Transportation Institute (TTI)

Baltimore, Maryland

443-652-5911

N-Katsikides@tti.tamu.edu