

Tabletop Questions and Responses – FAC Meeting #14, June 8, 2022

E-Commerce Panel

Q1: What do you see as the greatest impacts that have arisen from the growth in e-commerce? Where are they concentrated?

Table 1:

- Large cities drive change
- Conflicts in downtown areas result in scarce curb space
- Urban/rural differences
- Smaller building footprints likely in future with change in consumer-retailer relationship
- Change in driver schedules
 - Shorter hours
 - Lifestyle expectations
- Greater reliance on intermodal, especially to reach global markets
- Land use planning considerations of ideal siting of facilities
- Rise in automation

Table 2:

- Urban, high population
- Infrastructure prioritized at urban areas
- Modes: intermodal, consumer goods and factory areas, last mile for consumer goods at peak hours
- Brick and mortar: malls closing
- Affecting grocery, restaurants

Table 3:

- More traffic on roads and residential streets
- Amazon with more vehicles, other deliveries using personal vehicles
 - Food deliveries

Table 4:

- Negative impact on commercial real estate
 - Decreases need for storefronts
 - Repurposing of space – will differ depending on location
- Increased packaging waste
- Cultural adoption – we’ve gone from ordering pizza online to now everything that can be purchased online – and either picked up or delivered.
 - Willingness to pay more for curbside deliveries
 - Help with logistics
- Locations – are rural areas more impacted or less? Disparities?
 - Underserved areas
- Loss of small store to big box, now it’s an empty big box and preferred/easier to get directly from distribution center

Table 5:

- Increased delivery vehicle traffic
- Proliferation of new small companies unfamiliar with safety regulations
- Pedestrian/bike concerns due to increased delivery vehicle traffic
- Competing land usage
- “Ripple” effect

Table 6:

- Questions back to the panel:
 - What is the spatial distribution of e-commerce (the “where”)?
 - What is the socio-economic distribution of e-commerce customers (the “who”)?
 - As e-commerce changes freight flows, what are e-commerce businesses using to prioritize their network planning and metrics?
- Negative impacts on commercial real estate: decreasing the need for storefronts
- Increased packaging waste
- Locations: are rural areas or urban areas more impacted by retail changes as e-commerce grows?
- Loss of small stores to big box retail – now big box buildings are emptying as customers choose to get items directly from distribution centers

Tables 7/8:

- Inquiry about safety – the potential increase in accidents with more deliveries, and how to mitigate that.
- UPS uses a multitude of telemetric technologies to help reduce safety issues.
- Due to increased traffic levels UPS has hired more drivers. We have implemented safety technology to indicate potential driving accidents. Traffic-wise it has always been the same for us, we have the safest drivers.
- Jonathan (UPS) mentioned fuel taxation and posed the question of how to maintain infrastructure with reduced revenue with a shift from gas/diesel to EV. Will tax be paid for maintaining the roadways?
- Question about electrification/electric vehicle infrastructure needs (including charging equipment) and if the freight plan will address this. Will haulers use the public access along the interstates or use their own facilities? How would someone pay for charging station usage? How much power/charging would need to be available to charge the vehicles from an electrical transmission standpoint?
- SEWRPC – the state freight plan should delve into the electronification of the infrastructure to supplement the freight companies that would be utilizing alternate power vehicles. Also should cover taxes for supporting infrastructure.
- Jonathan (UPS) noted that they have been beta testing E-bikes for delivery and also use electric delivery vans. They have an active drone delivery service (in very limited locations)
- Jonathan (UPS) also briefly mentioned compressed natural gas (CNG). He also said that 60% of carbon emissions comes from airplanes; testing sustainable aviation fuel that is cleaner burning fuel.
- Also, e-vehicles are a lot heavier and will need more power to move, go through more tires.
- Geographical areas – when new distribution facilities are built is it more important for UPS to look at greenfield areas or brown field areas due to potential restrictions in location.
- Mostly looking at facility placement near package and population driven areas

- Mostly looking for best location due to access to the highway while still being located near high volume package areas
- UPS also considers how a new facility fits with the other facilities they have and are the staff available for the facility.

Q2: What locations or facilities will be most impacted in the next decade?

Table 1:

- More hubs/ “mini” distribution centers
- Downsizing of vehicles
- Change in building footprints
- Facilities in rural but growing areas
 - Rise in traffic

Table 2:

- Local inventories are slim – need to go online
 - Hard to get supplies
 - Companies chose to have less inventory under just-in-time business model
- Less supply (traditional large grocery) – driving local producer sales (C.S.A)
 - When the big stores won’t carry a product, local farms/producers are filling the needs
 - Fewer supply chain miles
- Smaller convenience stores adding more node distribution destinations

Table 3:

- Less retail
- E-commerce competing for drivers and equipment with conventional freight
- Land use changes to hubs
- Will retail spaces be removed?
- Changing landscapes for drones or air-based drones
- Sidewalks and bike paths will be changed
 - Drones now being used
- Bike / pedestrian facilities
- Model for rail or e-commerce on trucks
- If solar generation of electricity becomes more prevalent, the industry will change transport
- What’s the competition on rail for e-commerce?
- The needs are very different
- If e-commerce becomes the preferred means of consumer purchases, then the landscape will change
- Solar/electric power is easier on cars (less maintenance)
- More e-commerce could increase semi traffic, and could lead to calls for expanded roads

Table 4:

- Locations at the edge of major metropolitan centers
 - Places like Eau Claire – 90 miles from the Twin Cities
- Smaller satellite distribution centers
 - Mini warehouses, under 100,000 square feet

- Question of who will provide capital for these properties
- Operations with multiple tenants – but what will that look like?
- As malls decrease retail operations, some may convert space to distribution center uses/operations

Table 5:

- Areas around air/cargo facilities
- Environmental/wetlands
- Strategic locations (population centers)
 - Parking (truck)
 - Public infrastructure

Table 6:

- Smaller satellite distribution centers (closer to customer base)
- Malls reduced in number, occupied square footage – perhaps repurposing some space to use as a distribution center location

Tables 7/8:

- Many major e-commerce locations seem to be located on the interstate and other higher volume roadways. There could also be several smaller facilities. This impacts the other local road systems. Many times locals are not aware of some of these impacts so they are unable to plan and fund these projects.
- What is the thought process of locating processing centers? They are volume driven and near highways, centrally located and near high populations.
- Role of tax incentives.
- EJ impacts are also a concern.
- It is also important to identify sites that are potential employment centers. In terms of addressing that issue, look at local land use decisions and improve public transportation around those centers to support getting employees to the facilities.
- Impact on actual infrastructure, bridges and pavement.

**Q3: How much growth do you think the e-commerce sector will experience in the next decade?
How do you see those businesses responding to that growth?
How will the demand of freight transportation change?**

Table 1:

- Millennials and Gen-Z driving market – changing consumer demographics
- Shift away from brick and mortar
 - Connections to crime and safety
- 50 – 70% growth by 2030
- Growth in e-commerce comes with rise in returns and added trips
- Trends are here to stay because learned by younger generations

Table 2:

- Flexible delivery/online shopping adding shipping/return trips
- Direct sales – manufacturer to consumer – from remote supplier (i.e., coastal fish suppliers)

Table 3:

- Amazon is expanding through non-durable goods sales. If people would start to buy durable goods online, e-commerce would expand
- Elderly now have groceries delivered. Orders continue. This will not change.
- People working from home will change e-commerce
- How will local businesses change/grow from e-commerce?
 - Can we continue to support local?
 - Will consumer intelligence grow?
 - The Midwest is ripe with farmland.
- The convenience is high.

Table 4:

- Business response to e-commerce increases – e-commerce is here to stay
 - Slow to learn – but more online order and pickup
 - No plateau in near future
- Society learned – ease of e-commerce increases.
 - More and more people learning
- Businesses seek presence on web pages – on Amazon, etc.
- Social shopping experience decreases.
- Reverse logistics is challenging waste of products and packaging.
 - People order four items and return three
- Increased costs to receive packages 24/7
- Restocking fees – Impacts on total cost
 - Businesses need to reimpose these costs on the customer
- Revitalize shopping districts for something not conducive for online

Table 5:

- Continued increase
- Use of tech to move products
- Convenience
- Future use of retail space?

Table 6:

- The business response to e-commerce is increasing
- Society has learned about the ease of e-commerce, and more are adopting it as part of buying goods
- Businesses are seeking a presence on the Internet, and through Amazon and other sales sites
- The social shopping experience – going to stores and browsing – is decreasing
- Reverse logistics is challenging – returned goods are a challenge and generate waste of products and packaging
- People are willing to pay more to receive packages 24/7
- Restocking fees will eventually be needed; that will create impacts on total product costs
- There is a need to revitalize shopping districts for operations that don't compete with online retail

Tables 7/8:

- E-commerce facility locations are hard to determine where they best fit. Many times they are located on the outside of the major urban areas. The group felt a lot of this development will occur on the outside of the large urban areas. Find out where the land use exists where the larger centers can be built and close to freeways.
- UPS works with DOT to try and mitigate traffic to reduce the cost to drivers caught in congestion due to traffic impacts. Other companies should also work directly with the DOT to help mitigate traffic impacts due to the number of trucks coming from the larger centers.
- Transportation planning should develop and maintain a traffic model to include the growth of e-commerce and identify potential traffic backups. Include what percentage of people stay at home for shopping rather than driving to physical stores.

Q4: What approaches from the public sector have been the most beneficial at addressing e-commerce issues? What other efforts should the public sector consider?

Table 1:

- Industry has developed the model, public responds
- The permitting process is the primary way the public engages with e-commerce businesses
- Managing curb space
- Collaboration across agencies, municipalities
- Traffic monitoring
- Noise, emissions considerations
- Rapid response
 - Adaptability, and collaboration – key changes over last 15 years
- Creation of open-source solutions

Table 2:

- Need to plan for all additional impacts of extra shipping infrastructure
 - (Ex: truck parking from new distribution centers [on city streets] = problem)
 - Planning (conditional use permits) needed
- Regional planning cooperation/don't give away the store due to city-city competition
- Public sector can inform about development impact (resiliency)
- Should discuss together, sustainability with resiliency
 - Impact on each other

Table 3:

- Public sector had built distribution centers
 - Inform investment decision
- Emphasize flexibility
- Address the problem and be direct for e-commerce plan
- Semi drivers are needing better work/life balance
 - Work with freight providers
- OS/OW offers exemptions for natural disasters
 - For COVID, they implemented restrictions

Table 4:

- Public infrastructure planning to accommodate local need for e-commerce delivery
 - Potential for expedited freight with priority signalization
- Make infrastructure changes without impacting citizen quality of life
 - Parking, congestion management
 - Create freight parking space at smaller scales
 - Pay for non-traditional deliveries (bicycles)
- Use public transit to support inner city congestion
 - Local park-n-ride for residents (shuttle)
- Set truck parking rules ahead of development to keep from putting freight burdens on citizens and/or residential neighborhoods
 - Truck trailers parking on local streets
- Environmental planning increases stormwater management, etc.
 - Remove impermeable pavements; install gravel or permeable pavement to allow ground water recharging

Table 5:

- Loading zones, parking permits
- Workforce training
- Inspection technologies (DSP SWEFS)
- Investment in infrastructure and technologies
 - Charging stations

Table 6:

- Public infrastructure planning to accommodate local needs for e-commerce deliveries
- Make infrastructure changes without impacting citizen quality of life – parking, congestion management as examples
- Use public transit to support inner city congestion management. More park-n-ride opportunities for residents, with shuttle service
- Environmental planning – increased stormwater management, etc.

Tables 7/8:

- Early coordination on freight/traffic impacts of the facilities between communities and WisDOT so locals can prepare. This will be useful in this environment with the new funding opportunities.
- Coordination efforts on e-commerce should also be consistent with local and regional transportation and land development plans.

Q5: What policies for e-commerce should WisDOT consider for the updated State Freight Plan?

Table 1:

- Land use planning and local adaptations
 - Relationship to federal funding
- Open-source solutions
- Intermodal stages of A to B delivery
- Focus on last mile

- Strategies to reduce number of trucks on the road
- Transload facilities
- Passenger/freight rail conflicts
- More support for locals, resources for smaller municipalities
 - Education on freight impacts, planning for e-commerce
 - Locals will play a large part
- Grant-based assistance favors communities with money, resources, and leadership

Table 2:

- Intermodal investments valuable

Table 3:

- Allow flexibility for OSOW and long truck routes
- Identify the **what** and **how** questions
- Freight is truly multimodal. The plan must address them all
- OSOW employees are having trouble addressing a variety of needs
- Protect the freight corridors, including **roundabouts**
 - Roundabouts tie up the system
- Does more plans shift to the local system?
- How will Amazon issue more delivery trucks?
 - Are there restrictions on license plates?
- Can connected infrastructure co-exist?
- Performance measures?
- Can we get Amazon to attend FAC meetings?

Table 4:

- Best Management Practices for public policy
 - Look to other cities for ordinances, policies
 - Coordinate with neighboring states on regional collaboration
- Strategy to improve rail and port relations and usage, to incorporate e-commerce
- Feeder routes – distribution center corridors, fulfillment centers
 - First and last mile – what does that mean for a “freight network?”
 - Focus on the end points and connecting corridors between distribution centers and fulfillment centers
- Understand how e-commerce impacts different sectors uniquely
 - Know which products lend or don’t lend themselves to e-commerce
- Develop a rail strategy
- Containers on barge – address growth potential
- Identify specific industries currently **not** considering intermodal

Table 5:

- Investment in technologies
 - Energy
 - Platooning
 - Infrastructure
 - Transportation modes
- State agency partnerships

- Review state laws that hinder
- Review of revenue sources
 - Fuel tax?
 - User fees?
 - Mileage vs. fuel?
 - Weight?

Table 6:

- Best Management Practices for public policy: states coordinate with neighboring states to collaborate
- Strategy to improve rail relations and usage – to incorporate e-commerce (bring in ports, too)
- Identify feeder routes to distribution centers, corridors to fulfillment centers
- Assess how e-commerce impacts different sectors – which products lend or don't lend themselves to e-commerce
- Containers-on-barges – address the growth potential
- Identify specific industries that are not currently considering intermodal for freight

Tables 7/8:

- Group would like to see the policies, strategies, and goals pertaining to early coordination for e-facilities being constructed.
- Group would also like to see similar investigations into the need for roadway and electrical infrastructure for e-vehicles and how the taxing for e-vehicles will take place.

Resilience and Freight-Environment Interaction Panel

Q1: Based on what you heard today, are there any programs or policies that need better explanation? What do you need to know?

Table 1:

- Will grant money be applied where it is really needed?
- Tracking of **outcomes** from grant money
- Ports' capabilities
- What else can be done?
- How resilience fits in?

Table 2:

- Impacts from BIL regarding ESG?
- Need more specifics for resiliency
- DOT transparencies of projects and implications
- Coordination and alignment of ESG projects across agencies and jurisdictions

Table 3:

- Congestion at the Chicago border is bottlenecked
 - There's no backup terminal
 - The CN railroad is costing the timber industry
 - Must provide multi-modal transportation options
 - Can containers be put on rail instead of trucks?
- Environmental impacts
 - Freight by truck vs. rail. Truck emits more GHG
 - Don't ignore the cost of a Chicago backup due to traffic
- Intermodal facility in Green Bay or the Fox Valley region – take truck to train or vice versa
 - The report looked at the pros and cons
 - It was too close to Chicago. There's no competition in Wisconsin
 - There's a CN railroad they could use
 - CN had no interest. They want everyone to drive to Chicago
 - Could we use WSOR through Oshkosh
 - Lower our carbon footprint
 - The Class 1 rails have a monopoly

Table 4:

- What rainfall prediction are they using? Duration/intensity (SAGE)
- How is spring thaw affecting transportation network
- CO2 emission – info/knowledge gap
- Customer's – advantage to be sustainable to attract business/customer – the organic grower market
- How exactly an ESG improves profit?
- Connecting environmental stewardship as a metric when one business works with another business – accountability
- Know what to track in sustainability
- Funding operations

Table 5:

- ESG: more info on rating system
- ESG: business size?
- ESG: How measuring carbon footprint?
- Future: sample company sustainability report and presentation

Table 6:

- With respect to resiliency, what types of analyses are being conducted on hazard mitigation for infrastructure? What programs are available at the local, county, and state levels? [Response: more information from the WisDOT group assessment will be released as the process gets refined.]
- The ESG concept is new and prompts further exploration to broaden understanding.

Q2: What are your thoughts on the WisDOT resilience policies? What are its strong points? Are there any recommendations you would suggest for changes?

Table 1:

- Further exploration of connectivity/logistics and resiliency
- Intense storms/floods seem more common
- Recommendations:
 - Longer culverts
 - Do a larger scale risk and opportunity analysis
 - Build structures that allow for rapid pivot when conditions change
- Clarification on WisDOT's policy for when to overbuild
- Contingencies not needed for all factors, but ID critical components of structure that can flex

Table 2:

(No responses captured)

Table 3:

- We need a rail terminal in Wisconsin
- Include a resilient supply chain
- We saw a flood study in the Mississippi River RPC
 - Is this more of a study or a plan?
 - Do we have risk plans to mitigate floods?
 - We must be proactive rather than reactive
 - Focus on state highways
 - Lots of rail also goes through wetlands
 - Does construction come into effect?
 - Local programs look into these for a DNR permit
 - To design the road, they will consider proximity to wetland
 - Locals also find ways to adapt

Table 4:

- Cost associated with resilience

- Sharing WisDOT structure GIS data with public
- Narrative to illustrate need for resilience planning and proactive construction – good, bad, ugly
- Identify shipping routes and problem crossings or FP impacts – highways ??? etc.
- Driftless are impacts with washouts
 - Better preparedness for rural impacts

Table 5:

- It is comprehensive
- Re-evaluate after weather event
- Communicate to employees, public, and local governments
 - Provide materials to share – i.e., give to FAC members to take back
- Info on vulnerable areas
- Active mitigation?
- Cost/benefit of options

Table 6:

- Does the risk assessment relate only to structures, or does it relate also to streams?
- Will there be any follow-up on this initiation to review results? To know where we did well or not? [Response: WisDOT will gather performance metrics and is planning to use a continuous improvement approach in implementing the policies.]

Q3: Does the ESG approach to corporate governance make sense? How widely do you expect it will be adopted in the next decade?

Table 1:

- Adoption will be slow
- Demand driven
- Will happen more quickly where it makes financial sense
- Likely adoptions:
 - EV conversion
 - Recycling
- Customer demands can drive change and ESG adoption
- Consumer demands have been light
- Shareholder initiatives larger contributor

Table 2:

- Still not sure how realistic it is to implement
- Likely to be incrementally implemented

Table 3:

- Third party verification
 - Paperwork and audits were complex
- A federal regulation could come in play to get ESG regulated
- ESG will differ from company to company
 - UPS was highly rated
 - Some companies regulate themselves on ESG

- DOT safety
 - If there's one accident in a 10-person company, it would really impact the score

Table 4:

- ESG – making ESG a criterion for grant eligibility
- Trust ESG info – audit feature like they have with ISO 14001!
- 3rd party understanding – how it works, green tier
- A manual of example of things each business can do to improve or meeting ESG
- Adoption will depend on statutory mandate
- Evaluating existing environmental compliance efforts to see how they match up with ESG (within each company)
- What to do when international companies outcompete and don't have ESG requirements
- Company size matters with ability to affect change benefit
 - Will the field be equal for big and small business?

Table 5:

- High likelihood of future requirements
- Need explanation and understanding of evaluation criteria and methodology
- Will inspire use of alternative fuels (e.g., Europe)

Table 6:

- Not surprised that a lot of private businesses are being proactive with ESG effort. Interesting that there is already quite a formal process to be followed. Curious to find out if smaller or mid-sized businesses are aware of ESG and willing to take it on?
- 3 people in the break-out group were just learning about ESG today. One will take it back to her team for further discussion.
- Another person was familiar with ESG and that it has been in use in the European Union. Good to see it moving to the United States.

Q4: What policies, strategies, and goals towards the impacts of freight on the environment should WisDOT consider for the updated State Freight Plan?

Table 1:

- ID ways to make freight more profitable through dissemination of info
 - Find profitable sustainability
 - Process improvements tend to optimize ESG returns
 - Lean, Six Sigma, etc.
 - Resource efficiency
- Disruptive events (i.e., Pandemic) provided opportunity for improvements
 - Ex: slaughterhouse safety improvement led to decrease in transmission of illness
- Potential of waterborne freight as environmental benefit
- Pilot projects to test out unknown ideas
- Improve locks system
- Shift focus from what's important to what is material to environment
 - Will improve returns

Table 2:

- Utilize ports, maritime
- Look at locations of intermodal
- Flood planning maps very helpful
- Review of regulatory barriers
 - Identify any conflicting processes
 - Provide guidance on overlapping jurisdictions and rules

Table 3:

- CN bought tracks of Wisconsin Central
- Class 1 rail companies overtake and take advantage of smaller rail companies
- From a policy standpoint, rail companies have too much control
- Outrageous fees are charges to smaller rail companies
- CP has increased costs to the timber industry in Wisconsin
- Chippewa Falls does not have any freight rail competition
- There must be more competition
- Studies have been conducted, but no tangible effort have been made to boost rail

Table 4:

- Hub/spoke operations – conducive to adoption of alternative fuels/electrification for freight
 - Regionalize movements of products – support for small scale infrastructure need
 - North American Council on Freight Efficiency – Schneider as case study
- Alternative fuels – adoption rests on regionalization
 - WisDOT should work directly with industry where funds are available for air quality improvements
 - Support alternative fuel options or electric fuel options
 - I-94 corridor
- More investment money in ports and rail to reduce truck emissions and road damage
- Improve accessibility to rail – less impact on emissions
- Metrics for food product freight in rural areas

Table 5:

- Increase business input on FAC and plan
- Incorporate elements of ESG where possible
- Key investments to reduce building congestion
- Anticipate future electric vehicle infrastructure needs
- Add power companies to FAC
- Consideration of future revenue sources (gas/fuel taxes vs. UMT)

Table 6:

- Freight Plan should support activity at the ports.
- We need to look towards alternative fuel/energy for the trucking industry.
- WisDOT will likely use the standard types of analyses (air quality, etc.) but wonder if they would consider anything 'new' – related to extreme weather and natural disasters, for example.
- Consider private, public, partnership for logistics servicers/providers, as done by State of Washington. Especially look at alternatives to large trucks for deliveries in urban areas / neighborhoods – down to bikes.

- Charging infrastructure located along the interstate and major highways, also consider recommending fueling and charging stations on other classes of roadways. Build out the local electrification beyond the Interstate Highway charging networks. Spatial analysis would be good to consider equity elements when planning electrification.
- Need/concern to have intermodal facilities for truck and rail in Wisconsin, instead of having to go all the way to Chicago. Drayage to Illinois adds costs and is inconvenient.
- Consider taxing strategies and how that plays into freight, that is if/when the fuel changes to electric.
- Will the freight plan have a section on impacts from the Covid pandemic and how it has affected and changed freight trends and practices? Suggestion to provide statistics in such a section.
- FHWA's Freight Analysis Framework state that rocks are a leading commodity. Does that match the state understanding of freight? Or is this a misunderstanding?
- Address sensitive resources, especially up north, and highlight land bridges for wildlife. BIL has some funds for pilot efforts.