TELECOMMUTING IMPACTS OF COVID-19

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State & Local Policy Program
eWorkplace Phases

Phase I
Marketing, awareness and implementation campaign
Promoted teleworking and flexible work scheduling
Reduced peak period commuting on congested roads

Phase II
Focused on Hennepin County
Aimed to reduce congestion and improve air quality by increasing telework

Phase III
Focused on 35W/94 reconstruction
Collaborated with MnDOT, Hennepin County, City of Minneapolis
Funded by Federal TDM grant and MnDOT till 12/2018
• 43.5% of Household had at least one person telecommuting in MN (BTS)

• 48% full time WFH in May vs. 12% before (Met. Council)

• 12.2% of workers in Minneapolis Downtown this summer of 218,00 in February 2020 (Minneapolis Downtown Council)

• 32% reduction in trips to workplace (Minnesota)

• 45% reduction in trips to workplace (Hennepin County)
  — Google Mobility changes on October 9th vs. baseline

• 35.2% full time WFH in May vs. 8.2% in February (Federal Reserve)

• 71.7% of workers that could work from home effectively did (Federal Reserve)
Reliability Impacts

Twin Cities Interstate Reliability

Target: At least 90% of the system should have a LOTTR less than 1.50

Year's Performance

Target

2019
69.5%

2020
80.1%

Twin Cities Non-Interstate NHS Reliability

Target: At least 90% of the system should have a LOTTR less than 1.50

Year's Performance

Target

2019
80.0%

2020
97.3%

Calculated using 100.00% of miles in Metropolitan Council
Data source: NMRDS INRIX (2019-2020)
District-Specific Fixed Effects

District specific effects are the change in traffic volumes minus caused by unemployment in those districts.
### Race
- **White**: 29.9%
- **Asian**: 37.0%
- **Black**: 19.7%
- **Hispanic**: 16.2%

### Educational Attainment
- **Less than High School**: 4.2%
- **High school graduates**: 12.6%
- **Some college or associate degree**: 24.2%
- **Bachelor’s degree or higher**: 51.9%

### Gender
- More women can work from home
- But more women dropping out of workforce
Recessions of 1990, 2001 and 2008 impacted the top 25% of income earners and bottom 25% income earners at about the same rate.

Covid-19 recession, the top 25% whose jobs can be done remotely has bounced mostly back but for the bottom 25% working at restaurants, hotels, theme parks etc. have experience job losses of more than 20%.
A number of the companies (Target, Facebook, Microsoft etc.) have announced WFH till the middle of 2021 or later.

It will be at least 15 months of WFH. Habits form, new culture?

Banks announced permanent closing of branches, telemedicine approved by Medicare, automation speeding up, iPhone has 5G.
• Long lasting change depends upon how we respond
  – 1973 Oil Embargo
    • 6 months
    • CAFÉ Standards, 55 mph speed limit, alternative modes promoted
  – I-35W Bridge Collapse
    • 14 months
    • Traffic patterns reverted to status quo
  – There are differences in these examples, but the point remains: without long-term responses, behavior reverts to status quo, vulnerabilities remain, and gains from innovation may be lost

“Don’t Let A Good Crisis Go To Waste”
Research Questions

- Potential long-term impact of telecommuting on vehicle miles travel, congestion, transit, finance and emissions
- Impact on women, minority communities, low income and strategies to overcome
- Strategies to sustain environmental benefits achieved by working from home
- Viability of transportation capacity improvement projects
- Strategies to maintain Transit services
THANK YOU! Questions?

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Not All Vehicle Volume is Decreasing

Statewide Heavy Commercial Counter Summary

% change

Data source: MnDOT Continuous Traffic Counter network

The chart displays the average change from 2016-2019 historical averages across well-functioning continuous counters.