

Telework frequency and its effects on travel behavior in the post-COVID-19 era



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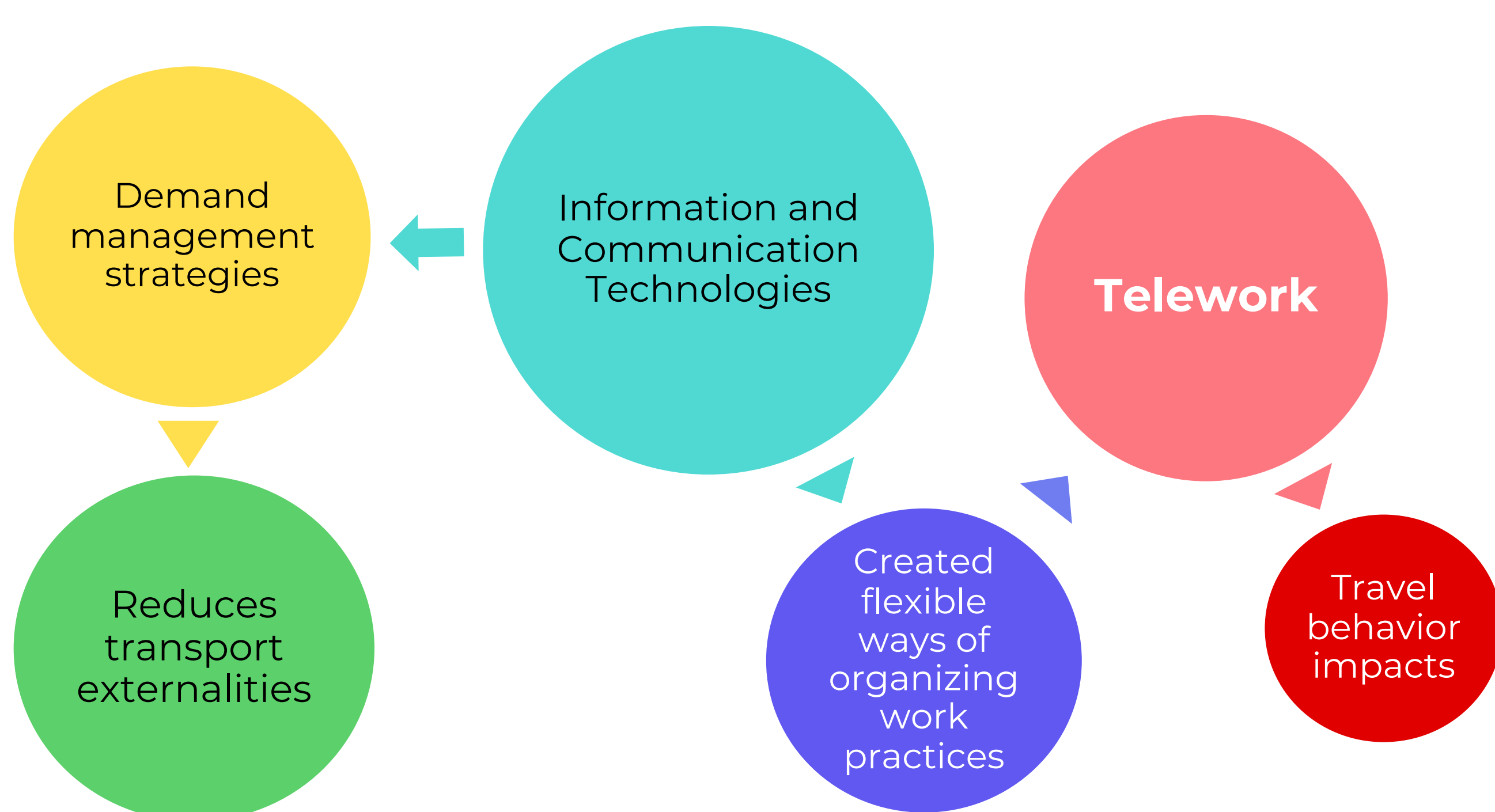
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RESEARCH AIM

Investigate the motivations for adopting telework and its effects on travel behavior, specifically:

- How the increase in the frequency of teleworking can change the total amount of travel and modal shares of teleworkers, change families' location patterns, and increase urban dispersion;
- and to clarify some of the ambiguities of causality between commuting distance and telework adoption and the attitudinal constructs that could explain telework engagement.

LITERATURE REVIEW HIGHLIGHTS



- Until 2020, telework was marginal (less than 3% in Portugal);
- The COVID-19 pandemic enabled a global work from home experience, changing its perceptions and urban patterns;
- It is expected that in the post-pandemic world, telework will increase substantially;
- Empirical evidence has been mixed, both positive and, recently, less advantageous, indicating negative to neutral impacts on travel reduction;
- Telework could incentivize workers to live farther away from their jobs; on the other hand, it could be primarily a response to long commutes;
- The increase in telework frequency could:
 - change the location patterns of households;
 - increase sprawl;
 - change the total amount of travel by different modes;
 - transform activity spaces;
 - and incentivize more sustainable urban mobility patterns.

INTERVIEWS

- In-depth semi-structured interviews with 30 workers in LMA (aged 24-63), between Jun and July 2022;
- Included: socioeconomic characterisation; experience with telework (pre, during, and post COVID-19); experience with e-shopping, and residential preferences.

Main Theme	Sub-themes
Flexibility and autonomy	<ul style="list-style-type: none">▪ More flexibility in the time scheduling of work and home activities▪ Time and money savings in telework▪ Gender disparities▪ Loss of home-work boundaries
Social interaction	<ul style="list-style-type: none">▪ Increased social interaction with the family▪ Loss of social interaction at work / Loss of innovation
Cabin fever and physical and mental well-being	<ul style="list-style-type: none">▪ Urgent need to "get out of the house"▪ Lack of physical exercise▪ Less stressful work experience for teleworkers

- Commuting conveys different individual meanings;
- Teleworkers' mobility patterns may have local impacts, as they will tend to engage in physical activity around their residence;
- This, in turn, may reinvigorate local commerce or accrue to the demand for more green spaces;
- However, teleworkers may engage in more discretionary travel;
- Further research will have to deal with potential changes in land-use and travel patterns due to telework.

EMPIRICAL ANALYSIS ONGOING

- Surveys applied in Lisbon, Porto Alegre, and Istanbul Metropolitan Areas between Apr and Jul 2021 (920 responses);
- About telework adoption, travel behavior, and residential preferences and satisfactions (including a 7-day travel diary);
- Structural Equation Models (SEM) will be developed to analyze the telework engagement with gender and geographical localization; and the telework adoption related commuting patterns.

EXPECTED CONTRIBUTIONS

- Understand the effects of telework frequency on distances traveled by mode, while controlling for intention to telework, telework-related attitudes, residential preferences, and socioeconomic characteristics.

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