



Smart Mobilities: A Gendered Perspective

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Both energy usage and emissions associated with the transport sector can be tackled better if we focus on creating infrastructure design and systems that are in sync with the gendered mobility patterns.

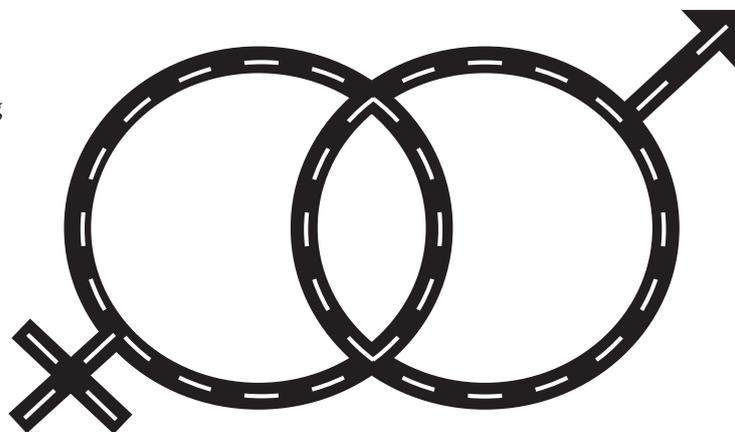
Gender equality and sustainable development are two deeply embedded and central priorities in the Sustainable Development Goals. Simultaneously, the urban and transport planning fields are confronted with demanding challenges in the field of connecting transport, sustainability, and mobility for all.

The intersection of these two fields - sustainable and gender-fair spatial (vis-à-vis mobility) development has so far been neglected and downplayed in research and policy making at all levels. Rooted in the idea of smart, green and integrated transport, this study urges for new conceptualizations on smart cities, transport, mobility and gender equality. Issues regarding safety, affordability, accessibility, availability, acceptability and accommodation are vital and need to be taken into transport design and planning. We need to build transport systems that take these gender specificities into account.

This brief presents some potentials and limitations of upcoming 'smart' solutions in terms of gender equality. The intention is to highlight how smart solutions can be designed to retain inclusivity at its core.

Key messages

- Prioritise public transport over providing for cars.
- Prioritize areas for future growth which support walking and bicycling.
- Encourage and engage women in the transport field.
- Insert inclusive settlements in smart cities and smart mobility solutions.
- Put safe and secure spaces on the agenda in spatial and transport projects.
- Link policies of other social development sectors with the transport sector.
- Include innovative solutions like bike sharing, car sharing and shuttle buses in transport planning discussions at all levels - national, regional and local.





An introduction Women and transport vis-à-vis gender and transport



While the Nordic countries are classic examples of equality between the sexes, even here there are evident examples of differences between men and women on a variety of issues related to both structural conditions and preferences. The sector which underpins all the development agendas, namely energy and transport, have been traditionally operating in strict engineering domains and the societal and gendered ramifications of under-delivery of these services have been not understood and thus remain unaddressed.

Daily mobilities for women hinges on accessibility to local services and sectors where there is a heavy concentration of female employment, trips accompanying elderlies and children and a higher use of public transport, walking and cycling.

The issue of both safety and security remains a highly gendered topic and does not affect the daily mobilities of men to the same extent as women. And even though women are relatively secure in the Nordic countries, the level of perceived physical safety varies.

Women travel shorter distances and their trip duration is also limited as compared to men. This is evident in their commuting or work-related trip patterns but holds true for other trip purposes as well. In comparison to men, long-distance commuting remains restricted for women.

A further layering to the discussion is provided by the 'smart' city agendas and smart mobilities. This policy brief structures its arguments with due regards to the digitalization and smart agendas currently under discussion.

Smart cities and smart mobilities

Smart cities is the buzz word in the world of urban planning today. And while the term 'smart' remains contested, a few things are quite apparent:

- The term smart remains fuzzy and it appears that smart is primarily being interpreted in terms of digitalization and is increasingly being shaped to include 'automation' as well.

- Corporations developing these digital solutions, get a strong foothold in the urban planning world. Their ideal module is to develop systems which can have a standard design solution and can be integrated at a global level.

- Smart mobilities is being developed in a framework where solutions like GPS fitted buses, real-time tracking etc. are being promoted as the smart solutions. In this sense, smart mobility concerns itself primarily with innovative technological or consumer-centric solutions rather than adopting a social sustainability lens to the entire mobility agenda.

Our analysis of approximately 7 million trips taken on Oslo's shared bikes for the year 2017-2018, also revealed a highly gendered narrative. (Priya Uteng et. al. 2020b)

We see a strong correlation between the zones with high concentration of female employment sectors and the dominant female biking routes. There seems to be a high usage of city bikes by women for access-egress purposes (first-last mile) but also for other trip purposes. However, there exists a dissociation between the peripheral location of female-dominant employment sectors (for example, hospitals) and the

heavy central concentration (which also coincides with male-dominated employment sectors) of the docking stations of Oslo's city bikes.

Since the bike-sharing scheme of Oslo is an expanding mission, this mapping exercise should be taken into consideration while planning new docking stations. Sewing in gendered considerations can ensure that the uptake of bike sharing by women is further maintained and bolstered in future.

Before embarking on implementing the upcoming smart solutions, it would be prudent to reflect on the following consistent findings:

- Women's travels are often multi-purpose, complex and resource-constrained (vs the male norm)
- Women undertake a greater share of trips made on sustainable travel modes.
- Even the new 'smart' modes are showing a gender bias in their use patterns.
- Smart mobilities and smart cities do not automatically help the agenda of creating inclusive cities.
- A continuous mapping exercise of needs and preferences, at the macro, meso and micro levels, is needed to design truly inclusive smart solutions.





Conclusions and recommendations

Include both routinised and innovative public transport systems in the national transport plans through specific programs like revising the tax structure for public transport.

Prioritise public transport over providing for cars. Include innovative solutions like bike sharing, car sharing, feeder bus service options like shuttle bus etc. in the different hierarchies of transport planning – from national, regional to local transport plans.

Linking landuse and accessibility planning is an absolute essential. Conduct accessibility mapping for different transport modes and prioritize areas for future growth which support walking and bicycling. In areas which are already built, create infrastructure which allows for safe walking and bicycling. Priya Uteng et. al. (2019c) provides an example of accessibility mapping exercise for E-bikes in the four largest Norwegian cities.

Link policies of other social development sectors with the transport sector. Welfare and social protection programmes can be built around the issue of access to promote access to education, health and employment.

Both personal security and safety in traffic are major concerns for women. Spatial and transport projects need to prioritise creating safe and secure spaces.

Women are poorly represented at all levels of the transport domain. Actively encouraging and engaging women in the transport field, through targeted programs, can have major impact on the future of this field.

Smart cities and smart mobility solutions are emerging fast but they remain locked in a corporate driven

agenda. It is important that the element of inclusive settlements is inserted in this development.

References

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