Action on Transport Urban Infrastructure in Relation to COVID-19 in India

January 20, 2021

COVID 19 & URBAN MOBILITY : IMPACT AND PERSPECTIVES

Since the outbreak of the COVID- 19 pandemic, there has been **significant changes in the urban mobility trends observed by different cities and countries**

Various survey and polls were conducted during the lockdown period to understand the **impact of COVID-19 on road users' choices and behavior and future trends in urban transportation**

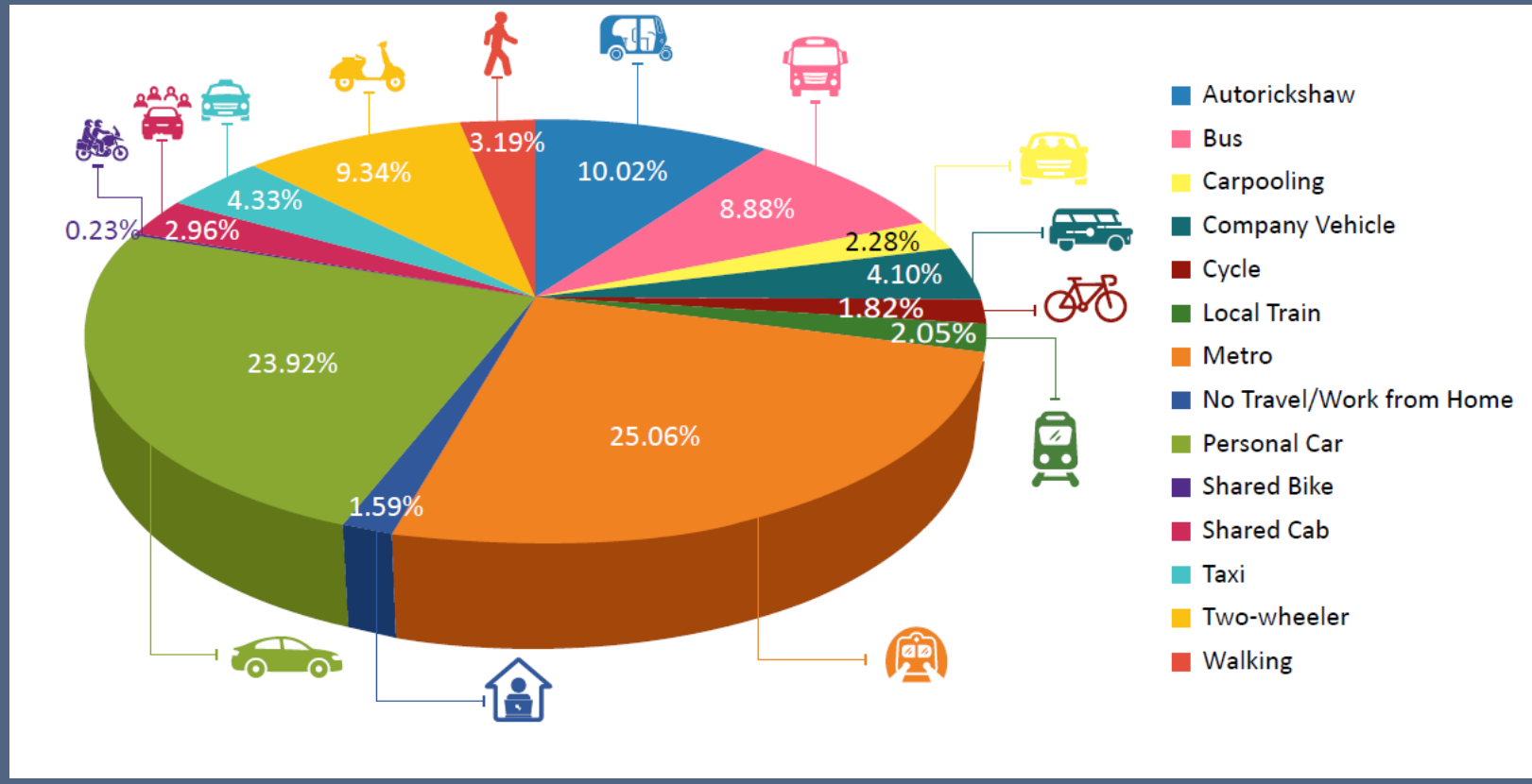
*It is foreseen that the **evolution of urban mobility trends** will depend on the **pre-COVID-19 situation of each city and country and on policies and measures that will be adopted and promoted within these regions**.*

Overview of the **Mobility Trends** (Pre-Covid)

- **high usage of private cars** (**23%** of respondents using their **own cars for work trips)**
- **public transport** was well represented (**metro 25%** and **bus services 9%**, respectively)
- The **intermediate public transport (IPT) modes**, such as private taxis and auto rickshaws constituted about **15%** of the sample

MODE SHARE **BEFORE COVID 19**

Share of different transport modes used by respondents pre COVID-19 (work trips)



A **radical shift** in **mode choice** is perceived post- pandemic

Modal Shift **Post COVID-19**

35%
of respondents likely to change their mode of transport for work trips.

- **65%** respondents said, there would be **no change in their choice**.
- **Only 9%** responded that their **choice would be altered** by the crisis.
- The **rest of the sample (26%)** responded with **maybe**

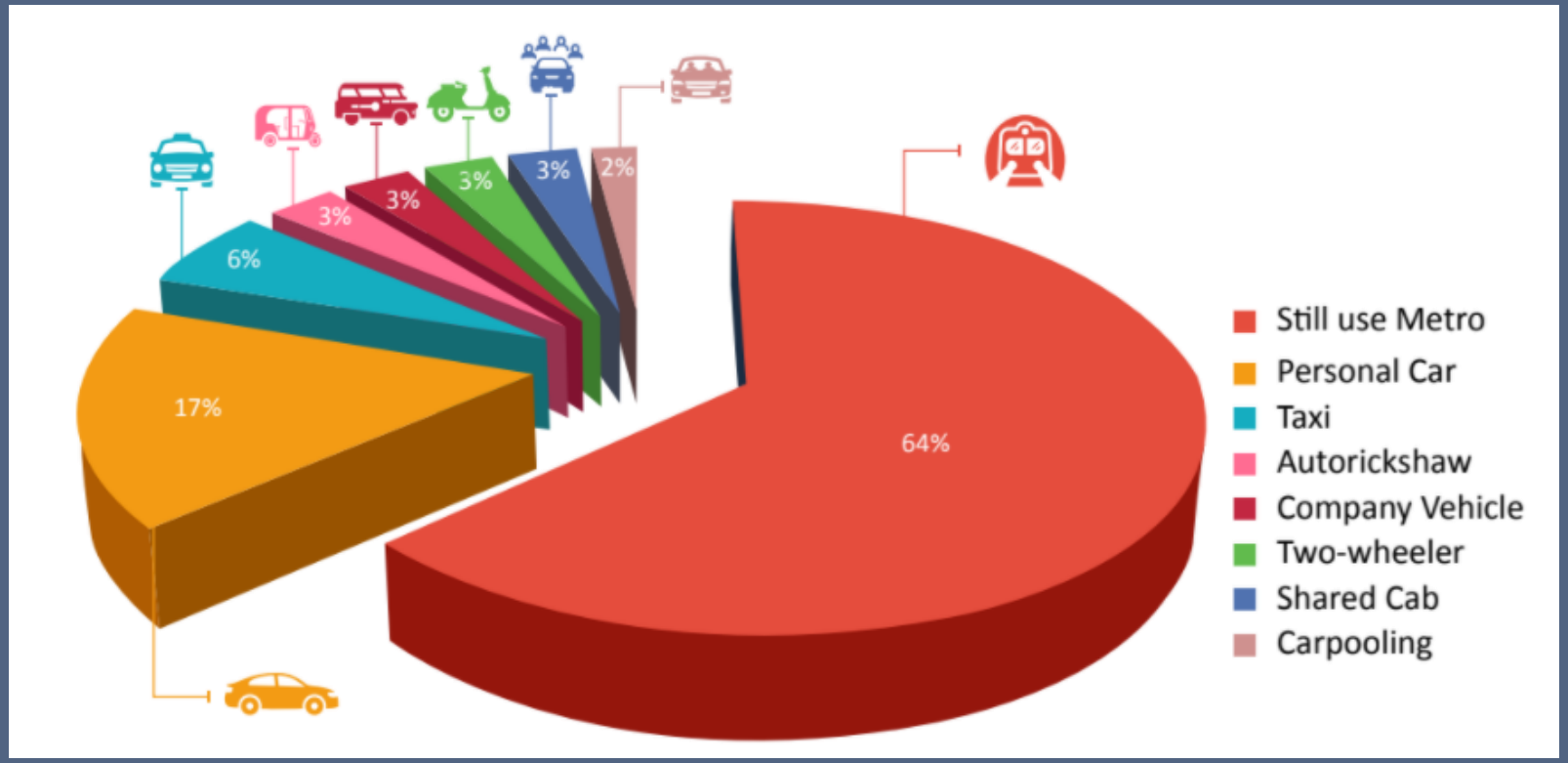
Overall, the results suggest that the transportation demand could be **significantly altered with almost 35%** of the sample potentially switching to different modes.

Mobility Trends (Post-Covid 19)

- About **36% of metro users** said, they would **switch to other options**
- Most respondents, who wished to switch, **preferred to use private cars and two-wheelers**
- **Substitution of metro services with intermediate public transport**, such as auto rickshaws and taxis was also evident

MODE SHARE **POST COVID 19**

Stated post-COVID-19 modal choice of initial metro users (work trips)

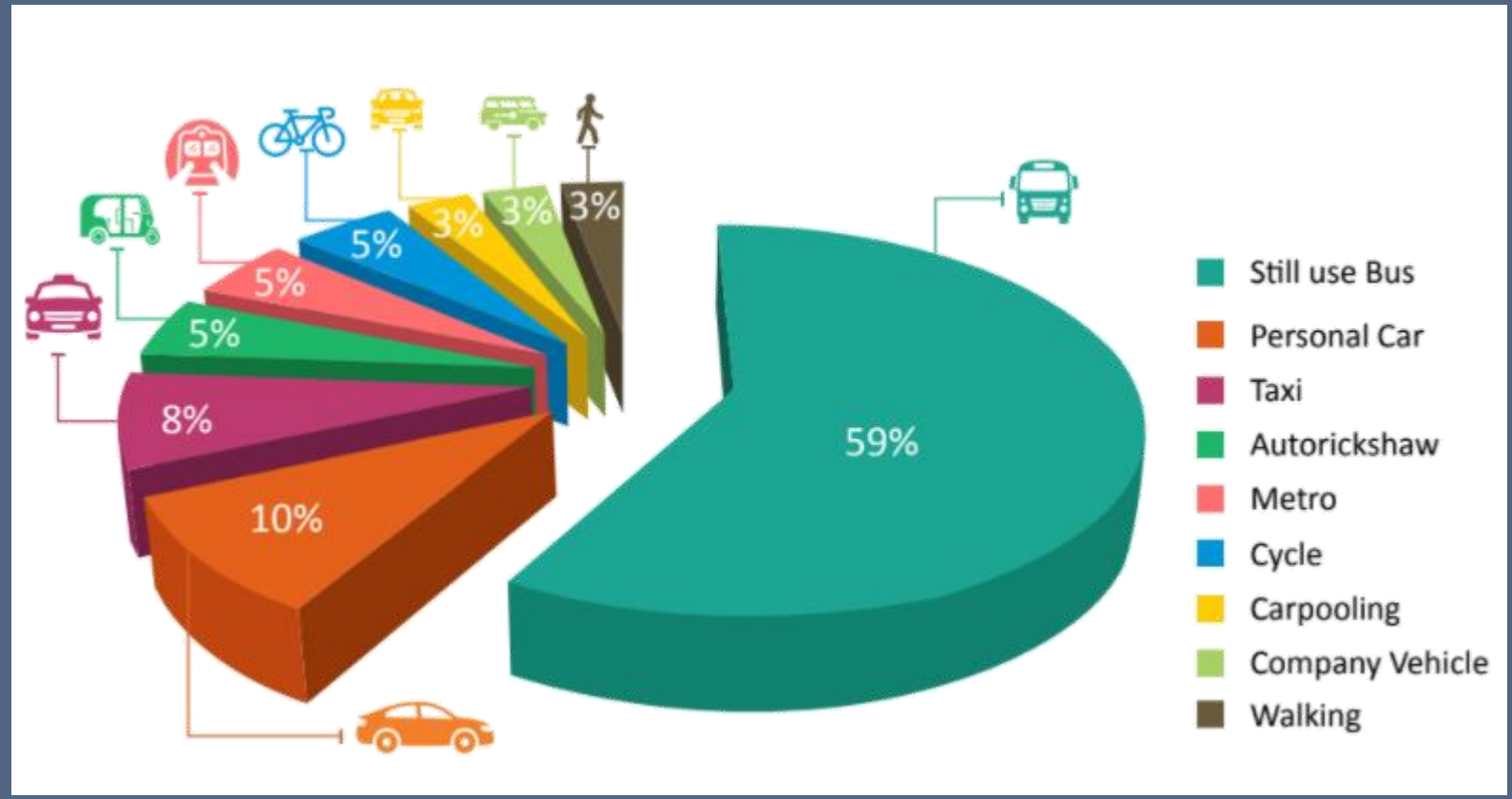


Mobility Trends (Post-Covid 19)

- **41% of initial bus users** stated that they would shift to other modes
- The most common change was a **shift towards private vehicles and intermediate public transport**
- Additionally, some bus users stated, they would **shift to non-motorized modes such as cycling and walking**

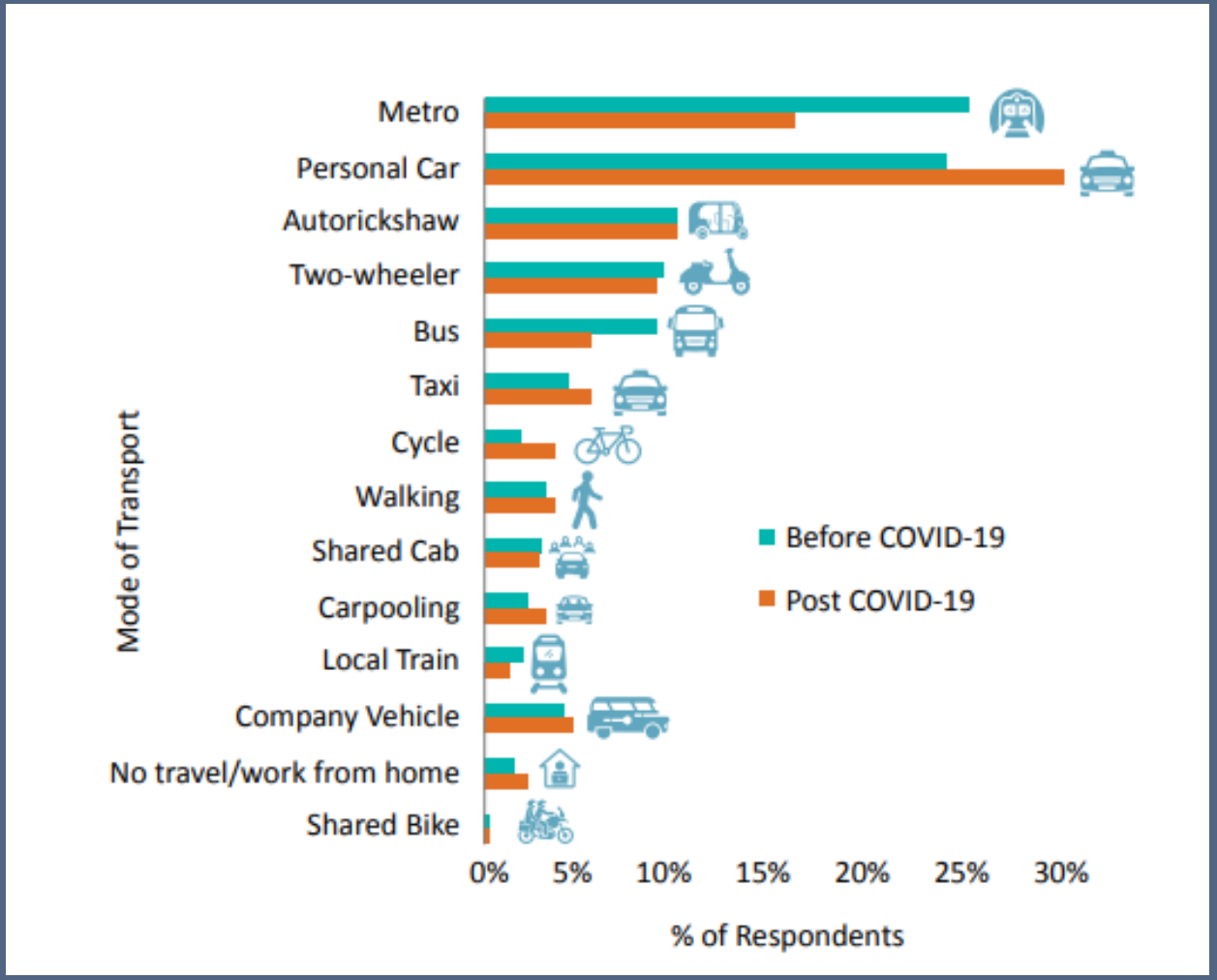
MODE SHARE **POST COVID 19**

Stated post-COVID-19 modal choice of initial bus users (work trips)



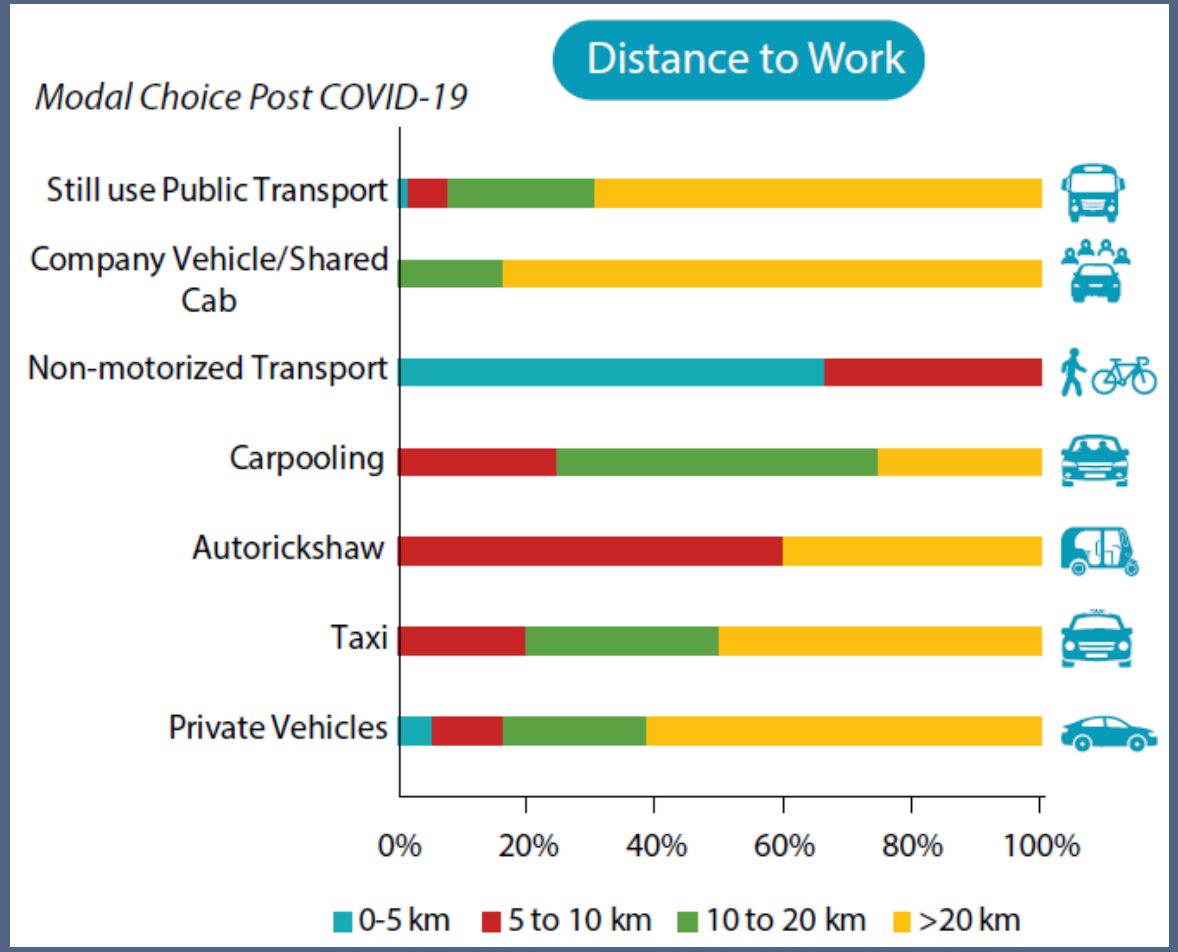
Mobility Trends (Pre- and Post-COVID 19)

Modal share in **Pre- and Post-COVID-19** scenario for the sample



- The **largest decrease** in modal share of **metro services (9%)** followed by **buses (4%),** and **local trains (1%)**
- The decrease in these modes is compensated by a **significant increase in the private modes of travel**
- **Female respondents** indicate a shift from public transport to private/shared mobility options

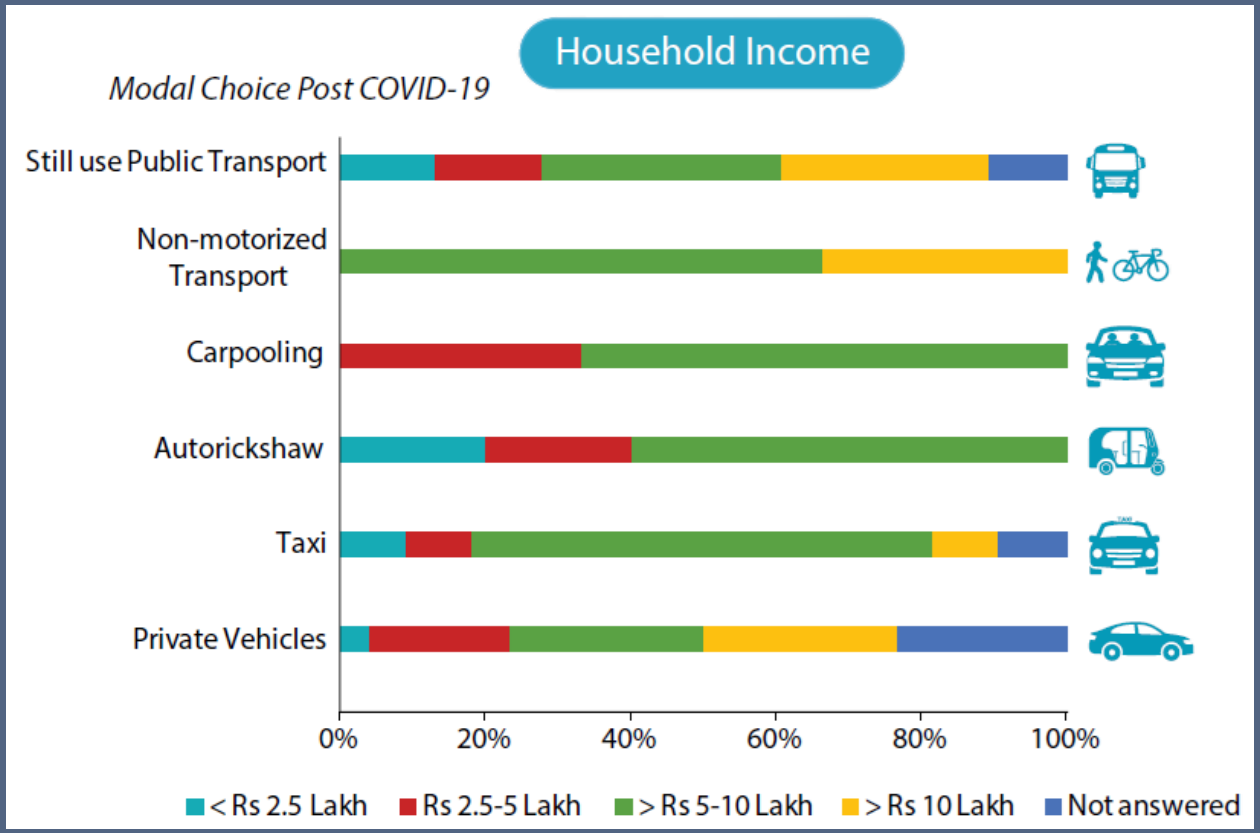
Sample Characteristics and **Modal Shift**



- All initial public transport users, who **planned to switch to NMT, travelled less than 10 km** to reach their workplace.
- A significant number of respondents **shifting to personal vehicles and IPT** also travelled less than 10 km.

Distance to work and post-COVID-19 modal choice of **initial public transport users**

Sample Characteristics and **Modal Shift**

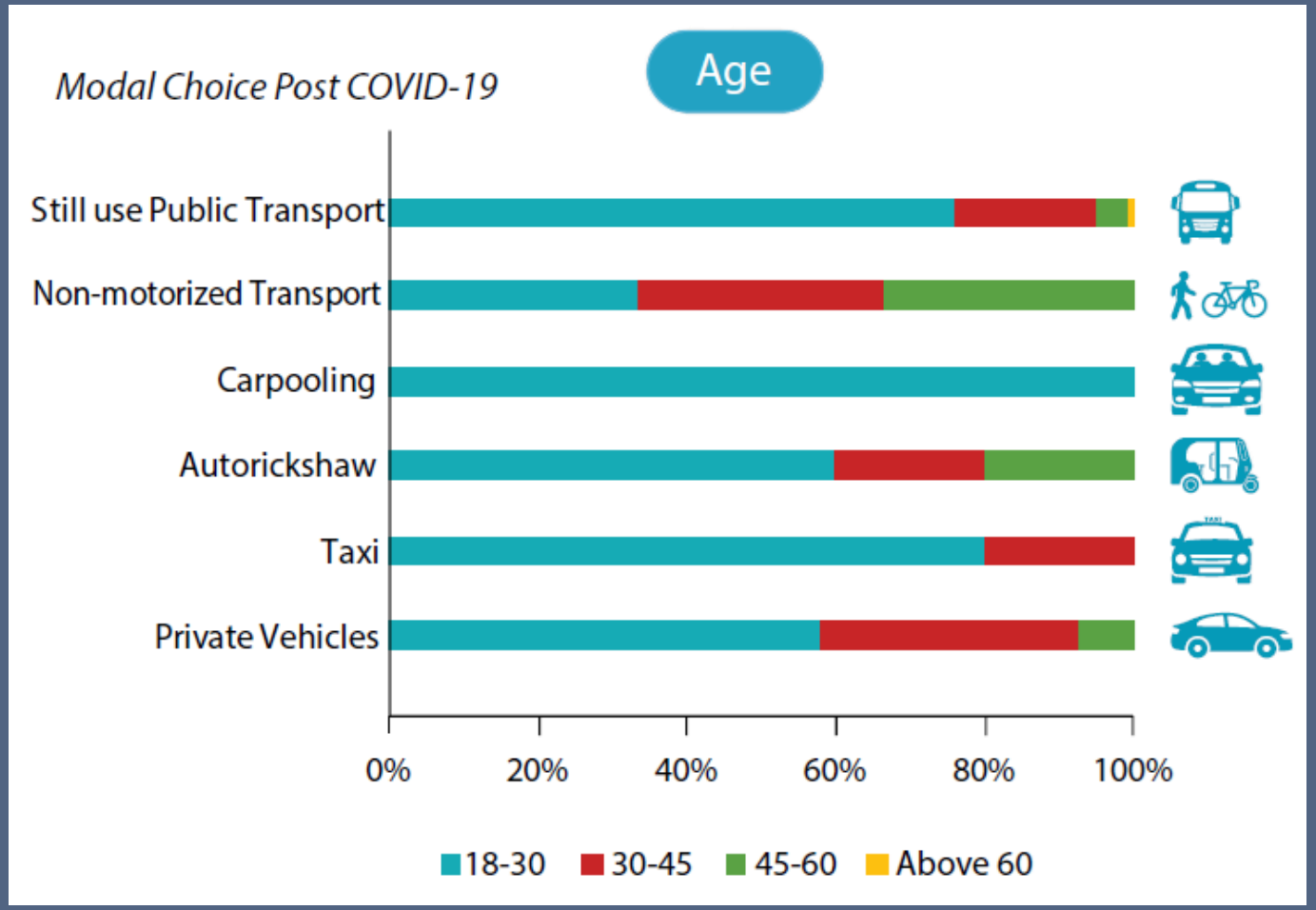


People **shifting to private vehicles** included both **high- and lower-income** respondents;

lower-income respondents mostly **opted for two-wheelers.**

Household income and post-COVID-19 modal choice of **initial public transport users**

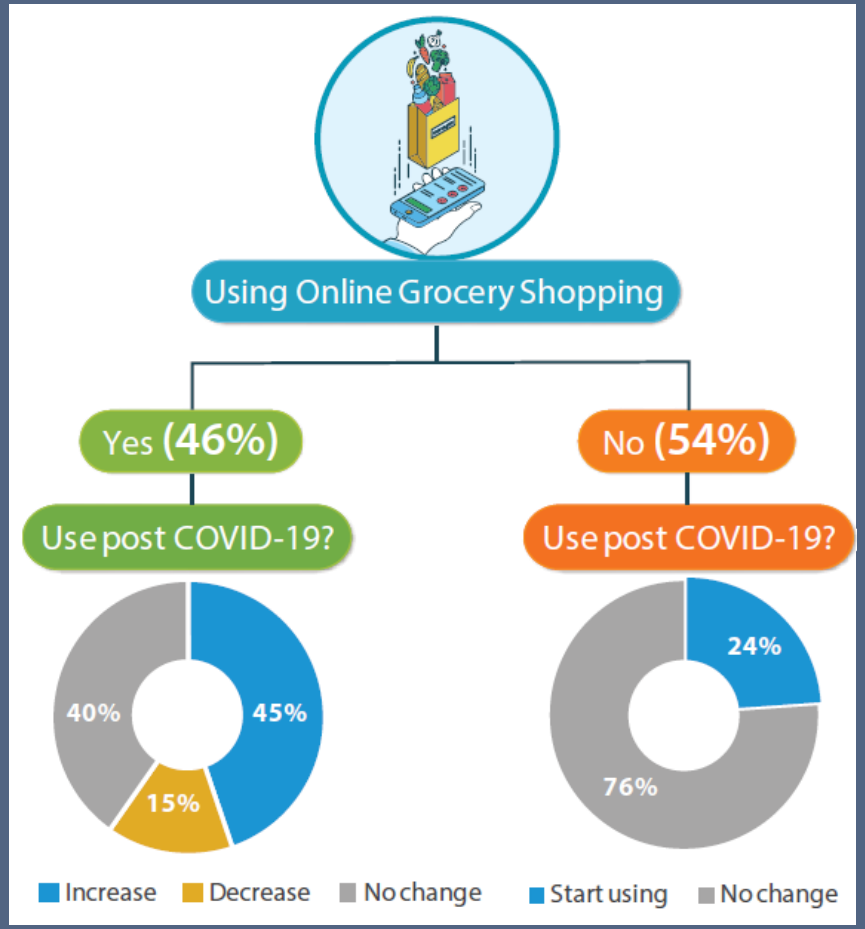
Sample Characteristics and **Modal Shift**



Age and mode choice of initial **public transport users** in the **post-COVID-19** scenario

Urban Freight Demand - Findings

Online Grocery Shopping

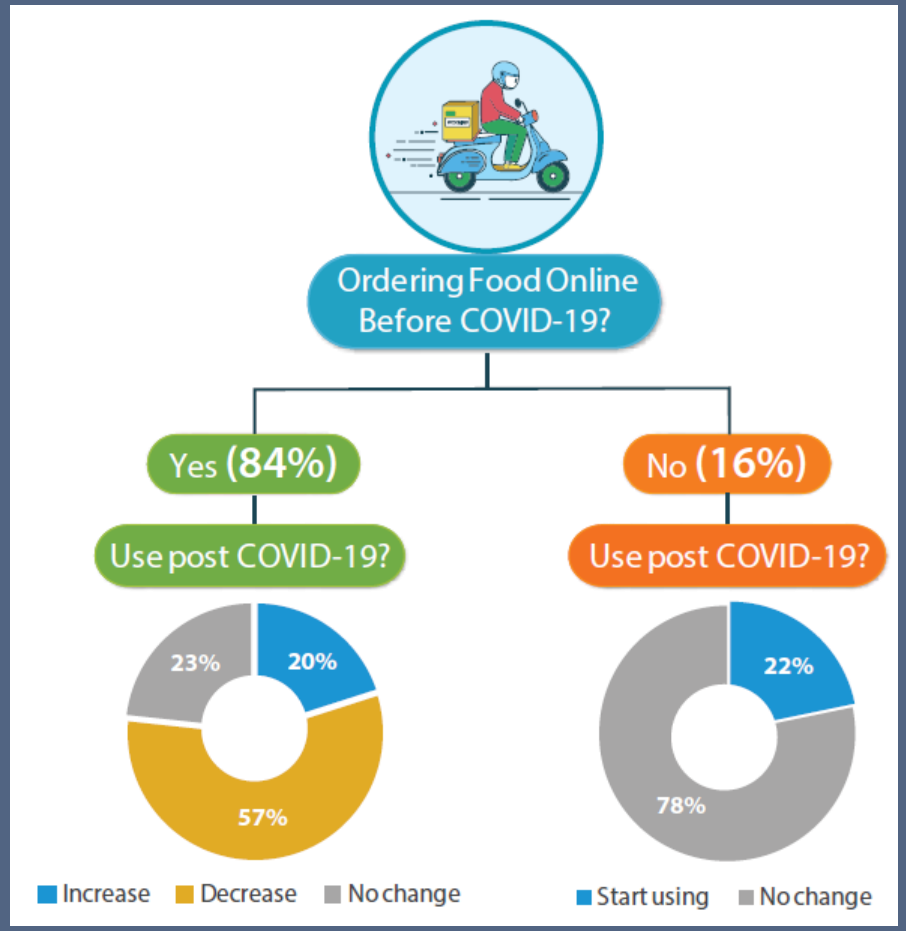


- **Indian e-commerce market** is expected to **more than double** from the current USD 32.7 billion to USD 71.9 billion in 2022 (ET Retail.com, 2019).
- Need for **sustainable urban freight** transportation.

Change in use of **online grocery shopping** services in the **post-COVID-19** scenario

Urban Freight Demand - Findings

Online Food Delivery



- Most respondents **(84%)** said they ordered food online before the COVID-19 crisis
- On average, people ordered food **twice in a week** or eight times in a month.
- However, **only 27% continued to order food online** during the lockdown.

Change in use of **online food delivery services** in the **post-COVID-**19 scenario

Behavioral and **Attitudinal** **Trends**

- The most **significant change in behavior**:
  - **Working remotely from office (non-essential services)**
  - **People favor ways that guarantee adequate physical distancing**, such **as walking, cycling or the use of private cars**, while there was a **drop in the use of PT and shared transport**
  - **Use of bicycles**, as evidenced by the **boom** in purchases in the lockdown and post-lockdown phases, has been chosen by citizens
  - **Online shopping** **continues to grow**
  - **Increasing consciousness** among citizens **about pollution**

Impact, Challenges & Opportunities for different
Passenger Transport Modes and Freight

Public Transport

IMPACT

- About **36% of initial metro users and 41% of initial bus users** said, they would **switch to other options** *(TERI).*
- Compliance with social distancing will require a **drastically reduced public transport service**. In London, estimates suggest a **reduction of 85% in the capacity of the underground and on buses, by 88%.** *(PwC)*
- The distancing measures to prevent new infections afterwards, caused **reductions in vehicle capacity up to 25-50%** and therefore **revenue losses in terms of ticketing** *(European Parliament's Committee on Transport and Tourism)*

CHALLENGES

- Entails **high perceived risk of contagion** given the physical proximity of its users
- **Struggle to regain market shares** in terms of users even after restrictive measures are relaxed.
- The restrictive measures and the negative perception of the **potential risk associated with the use of PT entails serious losses** for PT companies

OPPORTUNITIES

- Various studies suggest that, if preventive measures are in place, the **risk of contagion on PT is very low** and PT vehicles are **potentially safer than other enclosed spaces**
- According to YouGov survey, more than **80% of PT users are willing** to regain previous PT habits if the right precautions are in place
- Public and transport authorities should take a leap in quality to **ensure a safe and comfortable experience** for their passengers

Impact, Challenges & Opportunities for different
Passenger Transport Modes and Freight

Cycling / Walking / NMT

IMPACT

When in need of moving, people **favor ways that guarantee adequate physical distancing,** such **as walking, cycling or the use of NMT**

Substitution of metro services with **intermediate public transport**, such as auto rickshaws and taxis and **bus users to non-motorized modes such as cycling and walking** is evident. (TERI)

CHALLENGES

- The **infrastructure** dedicated to these modes is not adequate
- Many streets in the city **do not provide enough space for safe physical distancing** for pedestrians and cyclists
- **Safety of cyclists** is also a concern

OPPORTUNITIES & MEASURES

- **Wider footpaths** offering more space for people to move
- **Stricter speed limits** (20 or 30 km/h) can permanently support the establishment of residential areas and streets in which **priority is given to pedestrians and cyclists**
- A shift is expected **towards NMT** from both initial PT and Private mode users when the **distance travelled for commuting is less**

Impact, Challenges & Opportunities for different
Passenger Transport Modes and Freight

Shared Mobility Services

IMPACT

The **risk of contagion due to the contact of different users** with the same surfaces **discouraged the use of shared mobility services**

CHALLENGES

- Poor multi-modal and local **transport integration**
- Higher perceived **risk of contagion**

OPPORTUNITIES & MEASURES

- **Strengthening multimodal and complementary integration with PT**, (green) shared mobility service markets could increase its share
- **Careful integration into the local transport**
- **Organised integration through new forms of PPPs**: Subsidies, etc. for the operators who adhere to the scheme
- Local authorities may **promote user-oriented subsidies**, such as **paying part of the price of bike share trips** to the users, rather than providing company-based support

Impact, Challenges & Opportunities for different *Passenger Transport Modes and Freight*

Freight & Logistics

IMPACT

Fragmentation in loads and trips is accentuated by the recent **expansion of e-commerce and instant deliveries** and further accelerated by the COVID-19 lockdown, contributing to

- an **increase in the number of deliveries** and in terms of environmental impact, and
- **adding new types of modes** (cargo-bikes, scooters) for freight movements

CHALLENGES

The sector is **struggling to manage excess demand** due to lack of workforce, assets and resources

OPPORTUNITIES & MEASURES

- Local authorities could **consider encouraging rationalization and optimization of delivery, vehicles utilized, collection times and spaces in cities**
- **Technological and Organizational Innovations:** Greater integration of supply chain, with significant benefits in last mile logistics services
- **Digitalisation** can support the further development of **“contactless” delivery of goods and services** to final consumers

Thank you

Study reference: **https://www.teriin.org/sites/default/files/2020-05/behavioural-effects-covid19_0.pdf**

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