The Mobility Survey:
the cold period of the year
Content

1. Mobility and routes
2. The main trends in the mobility of respondents
3. The ownership of certain transport types
4. The Transport Model of Some Communities of Lviv Agglomeration
5. Survey methodology
Mobility and Routes
The Routes and Mobility Types: The Overflow

% among respondents who moved

**Route Type**
- 3% Home - Daily Shopping
- 7% Daily Shopping - Home
- 10% Other - Other
- 11% Work - Other
- 1% Kindergarten - Home
- 3% Other - Work
- 1% Home - Kindergarten
- 4% Home - Leisure
- 2% Large Purchases - Home
- 7% Leisure - Home
- 1% Home - Large Purchases
- 22% Home - Work
- 1% Home - School
- 6% Home - Other
- 1% HEI - Other
- 14% Work - Home
- 4% Other - Home
- 1% Home - HEI

**Mobility Type**
- 35% Walking
- 19% Own car (as a driver)
- 1% Other car (as a passenger)
- 14% Minibus
- 0.3% Motorcycle
- 5% Bicycle
- 9% Tram
- 3% Own car (as passenger)
- 3% Company car
- 4% Trolleybus
- 7% Bus
Types of Routes and Mobility

How to read the data?
The graph shows the integrated types of routes «from Point A – to point B – to point A» and types of mobility. To the right is the proportion of the total. The sum of the balls in a row sums up to 100%

Integrated mobility types
> Integrated route types

<table>
<thead>
<tr>
<th>Individual Transport</th>
<th>Public transport</th>
<th>Bicycle</th>
<th>Walking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home - Work - Home</td>
<td>32%</td>
<td>48%</td>
<td>5%</td>
</tr>
<tr>
<td>Home - Shop - Home</td>
<td>16%</td>
<td>23%</td>
<td>4%</td>
</tr>
<tr>
<td>Home - Leisure - Home</td>
<td>21%</td>
<td>31%</td>
<td>7%</td>
</tr>
<tr>
<td>Home - Other - Home</td>
<td>28%</td>
<td>42%</td>
<td>5%</td>
</tr>
<tr>
<td>Home - Kindergarten - Home</td>
<td>35%</td>
<td>15%</td>
<td>3%</td>
</tr>
<tr>
<td>Home - School - Home</td>
<td>52%</td>
<td>16%</td>
<td>4%</td>
</tr>
</tbody>
</table>
The graph shows the dynamics of movement types among Lviv residents in the warm (2019) and cold (2021) periods of the year. The data reflect the types of mobility among respondents who indicated that they moved outside their own, family, or workplace.

According to the survey results, the most popular type of movement from conditional point A to point B is walking (35%), road vehicles (buses, minibusses; 21%), as well as own car (19%).

The sum of the values sums up to 100% for each year.
The Main Trends in the Mobility of Respondents
How Do You Usually Move Around the City?

<table>
<thead>
<tr>
<th>Year of the Survey</th>
<th>Bike</th>
<th>Car</th>
<th>Public Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>0%</td>
<td>20%</td>
<td>52%</td>
</tr>
<tr>
<td>2021</td>
<td>6%</td>
<td>24%</td>
<td>46%</td>
</tr>
</tbody>
</table>

- Other: 1% (2019), 0.1% (2021)
- Scooter, moped, etc.: 1% (2019), 1% (2021)
- Taxi: 1% (2019), 1% (2021)
- Bicycle: 6% (2019), 4% (2021)
- Walking: 18% (2019), 24% (2021)
- Car: 23% (2019), 25% (2021)

Note: the indicator was not measured for other modes of transport in 2021.
How Do You Usually Move Around the City?

<table>
<thead>
<tr>
<th>Mobility type</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Transport</td>
<td>40%</td>
<td>50%</td>
</tr>
<tr>
<td>Car</td>
<td>33%</td>
<td>19%</td>
</tr>
<tr>
<td>Walking</td>
<td>20%</td>
<td>27%</td>
</tr>
<tr>
<td>Bicycle</td>
<td>6%</td>
<td>2%</td>
</tr>
</tbody>
</table>

% among all respondents

Year of the survey:
- 2019
- 2021
### How Do You Usually Move Around the City?

<table>
<thead>
<tr>
<th>Mobility type</th>
<th>Lviv (%)</th>
<th>4 communities of the Lviv agglomeration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Transport</td>
<td>45%</td>
<td>49%</td>
</tr>
<tr>
<td>Car</td>
<td>24%</td>
<td>34%</td>
</tr>
<tr>
<td>Walking</td>
<td>25%</td>
<td>14%</td>
</tr>
<tr>
<td>Bicycle</td>
<td>4%</td>
<td>1%</td>
</tr>
</tbody>
</table>
The Ownership of Certain Transport Types
Drivers’ License Availability [A, B Category]

% among all respondents

- **2019**
  - 49%

- **2021**
  - 55%
### Drivers’ License Availability [A, B Category]

#### Possess a driver's license / 2021

<table>
<thead>
<tr>
<th>Gender</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>46%</td>
</tr>
<tr>
<td>Men</td>
<td>65%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lviv</td>
<td>54%</td>
</tr>
<tr>
<td>4 communities</td>
<td>58%</td>
</tr>
</tbody>
</table>
Car Availability in the Family

% among all respondents

- Have 1 car
- Have 2 car
- Have 3+ car
- Have no car

2014:
- Have 1 car: 39%
- Have 2 car: 8%
- Have 3+ car: 52%

2019:
- Have 1 car: 43%
- Have 2 car: 11%
- Have 3+ car: 45%

2021:
- Have 1 car: 48%
- Have 2 car: 11%
- Have 3+ car: 40%

2021:
- Have 1 car: 48%
- Have 2 car: 11%
- Have 3+ car: 40%

- Have no car: 40%
Car Ownership

% among adult respondents

- Have own car

- 2014: 33%
- 2019: 34%
- 2021: 38%
Car Ownership

% among adult respondents, who answered “Yes”

Have own car

<table>
<thead>
<tr>
<th>Gender</th>
<th>2019</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>28%</td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>50%</td>
<td>47%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>2019</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lviv</td>
<td>38%</td>
<td></td>
</tr>
<tr>
<td>4 communities</td>
<td>42%</td>
<td></td>
</tr>
</tbody>
</table>
Own Car Registration Place

% among those who have their own car

- In the city of Lviv: 81%
- In the Lviv region: 11%
- In another region of Ukraine: 7%
- In another country: 1%

MOBILNIST

(Ukrainian: МОБІЛЬНІСТЬ)
Own Car Use

% among those who have their own car

▼ Frequency of car use on weekdays

1. every weekday
2. several times a week
3. once a week
4. do not use

▼ 2019

1. 42%
2. 30%
3. 14%
4. 14%

▼ 2021

1. 37%
2. 42%
3. 15%
4. 6%
Own Car Use

Frequency of car use on weekends

1. every day off
2. one of the days off
3. do not use

% among those who have their own car

2019

- Every day off: 35%
- One of the days off: 54%
- Do not use: 11%

2021

- Every day off: 26%
- One of the days off: 59%
- Do not use: 15%
Bicycle Availability in the Family

<table>
<thead>
<tr>
<th>Year of the Survey</th>
<th>2019</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have a bicycle</td>
<td>51%</td>
<td>53%</td>
</tr>
<tr>
<td>have bicycle</td>
<td>32%</td>
<td></td>
</tr>
<tr>
<td>have bicycles</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>have + bicycles</td>
<td>5%</td>
<td></td>
</tr>
</tbody>
</table>
## Bicycle Availability in the Family

<table>
<thead>
<tr>
<th>Availability of bicycles</th>
<th>Lviv</th>
<th>4 communities of the Lviv agglomeration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have 1 bicycle</td>
<td>32%</td>
<td>34%</td>
</tr>
<tr>
<td>Have 2 bicycles</td>
<td>15%</td>
<td>22%</td>
</tr>
<tr>
<td>Have 3 or more bicycles</td>
<td>4%</td>
<td>10%</td>
</tr>
<tr>
<td>Have no bicycle</td>
<td>49%</td>
<td>34%</td>
</tr>
</tbody>
</table>
Availability of Scooters and E-Scooters in the Family

% among all respondents

- Have this type of transport
- Do not have

<table>
<thead>
<tr>
<th>Year</th>
<th>Have this type of transport</th>
<th>Do not have</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>6%</td>
<td>94%</td>
</tr>
<tr>
<td>2021</td>
<td>9%</td>
<td>91%</td>
</tr>
</tbody>
</table>
# Availability of Scooters and E-Scooters in the Family

% those who have

<table>
<thead>
<tr>
<th>Gender</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>8%</td>
</tr>
<tr>
<td>Men</td>
<td>11%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lviv</td>
<td>9%</td>
</tr>
<tr>
<td>4 communities</td>
<td>14%</td>
</tr>
</tbody>
</table>
The Transport Model of Some Communities of Lviv Agglomeration
The Transport Model of the City in the VISUM

Transport Types

1. Pedestrian Flows
2. Bicycle
3. Public
4. Freight
5. Individual
Elements of the Transport Model

Transport Model

1. Network Data
   - Streets
   - Crossroads
   - Stops
   - Tometables

2. Spatial-Structural Data
   - Working Places
   - Residents
   - Retail Space
   - Places in Educational Institutions

3. Data on Transport Behavior
   - Schoolchildren Mobility
   - Student Mobility
   - Workers’ Mobility

Network Model

Demand Model
Transport Behavior of Respondents on Weekdays

Mobility Index << The Average Number of Movements per Person per Day

<table>
<thead>
<tr>
<th>Survey Period</th>
<th>2014</th>
<th>2019</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.15</td>
<td>2.61</td>
<td>2.23</td>
</tr>
</tbody>
</table>

Age Groups:
- 14-23 years: 2.21
- 24-39 years: 2.37
- 40-59 years: 2.22
- 60 years+: 2.03

Location:
- Lviv: 2.16
- 4 Communities: 2.23

Note: The data represents the average number of movements per person per day for different age groups and locations during survey periods 2014, 2019, and 2021.
Transport Behavior of Respondents on Weekdays

- Work: 36% (2014), 37% (2021)
- Kindergarten: 5% (2014), 3% (2021)
- School: 6% (2014), 2% (2021)
- University: 6% (2014), 1% (2021)
- Shopping: 12% (2014), 13% (2021)
- Leisure Time: 10% (2014), 9% (2021)
- Other: 34% (2014), 37% (2021)
Transport Behavior of Respondents on Weekdays

Distribution by Transport Types [Modal Split]

- Walking: 20% in 2014, 35% in 2021
- Bicycle: 2% in 2014, 5% in 2021
- Public Transport: 54% in 2014, 34% in 2021
- Individual Transport: 23% in 2014, 26% in 2021
Transport Behavior of Respondents on Weekdays

Distribution by Transport Types by Purpose

2014

2021
Transport Behavior of Respondents on Weekdays

Movement Start Time

Survey period

2014

2021

Graph showing the transport behavior of respondents on weekdays with the movement start time plotted from 0 to 24 hours, with two lines representing the response periods of 2014 and 2021.
Transport Behavior of Respondents on Weekdays

The Average Duration of Travel Depending on the Purpose

- Work
- Kindergarten
- School
- University
- Shopping
- Leisure Time
- Other

Travel Movement Duration, min.
Transport Behavior of Respondents on Weekdays

The Average Duration of Movement by Different Transport Types

<table>
<thead>
<tr>
<th>Transport Type</th>
<th>2014</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking</td>
<td>15.4</td>
<td>23.8</td>
</tr>
<tr>
<td>Public Transport</td>
<td>31.6</td>
<td>34.9</td>
</tr>
<tr>
<td>Car [Driver]</td>
<td>29.3</td>
<td>28.5</td>
</tr>
<tr>
<td>Car [Passenger]</td>
<td>26.5</td>
<td>31.0</td>
</tr>
<tr>
<td>Bicycle</td>
<td>25.3</td>
<td>26.2</td>
</tr>
</tbody>
</table>
Survey Methodology
Explanation of Used Categories

Automobile vehicles – bus (large capacity, low-floor; for example, 3A, 5A, 46, etc.) and minibuses (yellow bus "Bogdan" / "Etalon"; for example, 7, 24, etc).

Public transport – trolleybus, tram, minibus, bus.

Individual transport – own car, company car, taxi, motorcycle, scooter.

The route «point A – Leisure» under the latter means a visit to a cultural institution, catering, walking around the city and a private visit.

The route «Home – Other» by the latter means a visit to sports facilities, consumer services, medical facilities, financial institutions, passenger stations, cottages, religious buildings and extracurricular training courses.

The route «... – Other» by the latter means a visit to informal educational institutions, shops, cultural institutions, parks, city walks and a private visit.

The share of ownership of a bicycle, scooter, gyro scooter, etc., indicated without children under 14.
Survey Methodology

The research was implemented within the framework of the Lviv Sustainable Urban Mobility Plan. Involved organizations: «Integrated Urban Development in Ukraine II», implemented by the German government company «Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH» with funding from the Governments of Germany and Switzerland in cooperation with the Lviv City Council, municipal institution City Institute, Lvivavtodor, Lvivelectrotrans, Institute of Spatial Development, Department of Housing and Infrastructure, Department of Transport, Office of Architecture and Urban Planning of the Department of Urban Development, public organizations etc.

The survey was conducted from February 21 to March 19 2021.

The study surveyed 800 people aged 14 and older. Filling of the sample, according to the type of probabilistic one-step, was carried out using a combined method of telephone and mail surveys. The overall response rate is 47.1%. The geographical coverage is Lviv and four communities of the Lviv agglomeration: Vynnyky, Rudno, Bryukhovychi and Dublyany.

Statistical sampling error with a confidence level of 0.954 does not exceed:

- 3.6% for indicators close to 50%;
- 3.2% - for indicators close to 25% and 75%;
- 2.2% - for indicators close to 10% and 90%;
- 1.6% - for indicators close to 5% and 95%;
- 0.8% - for indicators close to 1% and 99%.

Statistical data on socio-demographic characteristics of the population were taken from the Main Department of Statistics in Lviv Oblast and the Central Election Commission of Ukraine.
Our contacts

- Official site
- Official Facebook page
- Contact us