Intermodality - A Solution to the Problems of Large Urban Agglomerations

Author: Eng. Eugenia Alina Roman
- Area: 228 square kilometres

- A major **intersection of Romania’s National Road Network:**
  - 7 national roads
  - 3 highways
Problems of large urban agglomerations

- Sharp increase of individual mobility

- The increasing use of private transport with implications on:
  - Uncontrolled expansion of cities;
  - Traffic congestion;
  - Increased consumption of space;
  - Road infrastructure damaged;
  - Polution.

Volume – Capacity Ratio in Bucharest City Centre
Source: Master Plan de Transport Urban - Bucuresti, Sibiu si Ploiesti
Uncontrolled expansion of cities

- long travel distances
- high dependence on private transport
- reduced traffic safety conditions
- increased congestion
- dangerous conditions for nonmotorised transport
- long walking distances

Solutions to the problems of large urban agglomerations

- reducing travel need;
- encouraging travel on short distances;
- cities with high density;
- mix of urban functions;
- encouraging the use of non-motorized transport;
- increasing the attractiveness of public transport.
The concept of intermodality and its sustainability

- **Definition:**
  Intermodal Passenger Travel: Seamless door-to-door travel using several transport modes

- **Concept:**
  Combination of transport specific advantages for a safer, cleaner, more comfortable and more efficient transport system

- **The advantages of intermodal transport:**
  - decreasing space consumption
  - reduce the traffic congestion
  - decrease the pollution effects
Intermodality problems in Bucharest

- Non provision (or inadequate standard) of the infrastructure for local links;
- Poor design, maintenance or operation of intermodal points;
- Inefficient procedures for interchange (e.g. delays);
- Inadequate provision of local transport services (e.g. no fast public transport from an airport to city centre);
- Local transport services exist but do not serve the needs of connecting long distance travellers (e.g. time tables are uncoordinated, nearest bus stop requires a long walk);
- Inadequate provision of information;
- Unavailability of integrated tickets (covering the local as well as the long distance parts of the journey).
Lack of coordination between local transport and regional transport has led to long paths through city for regional buses.

Regional buses cross the city and generate additional traffic.

They don’t have predetermined stop points and they stop on street along paths.

Small capacity buses with 19 seats are used for passenger regional transport.

Passenger regional transport paths through city
Regional Bus Terminals

- 32 regional bus terminals
- more than 10 bus terminals in Bucharest’s inner ring road
Number of regional bus service trips

- 300 minibuses are crossing the city centre every day

- The biggest minibus traffic flow is on national road DN7 – with 683 minibuses per day

Number of service trips

- Pink: <=50
- Orange: <=100
- Purple: <=300
- Red: <=400
- Green: <=500
- Olive: <=600
- Blue: <=650
- Black: >650
Solution for decreasing minibus traffic inside the city

Replacement of the minibuses with large buses (with a minimum transport capacity of 50 seats)

Traffic flows generated by minibuses will be reduced by 2.5 times

Setting locations for intermodal terminals so the regional buses can no longer enter in the city centre

When choosing the future places for intermodal terminals we should consider the locations:

- next to city borders;
- near or in an local transport network node providing passengers easy access to local and regional transport networks;
- near railway stations or passenger station buildings;
- near the commercial and administrative centre of the village;
- regional buses paths should not cross roads carrying heavy traffic (with large traffic flows).
650 meters – 5 kilometers far from city borders

Proposal for future intermodal terminals locations (regarding only the connection between regional and local transport) situated on main national roads.
Expected results

- Eliminate the regional bus traffic from city centre
- Reduced mobility/ need to travel
- Increased accessibility of public transport
- Increased attractiveness of public transport
- Decreased road traffic
- Increased road safety
- Changing in user behaviors
- Changings in urban form leading to a compact city
Thank you for your attention