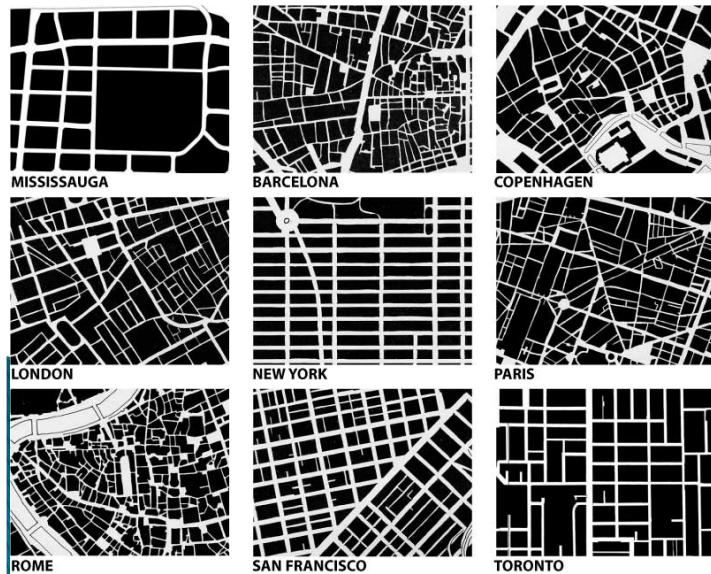




# Tackling the urbanization and the urban mobility in Romania



TRANS  
REGIO



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## CHAPTER 1: URBANIZATION BEFORE AND AFTER 1989

## CHAPTER 2: URBAN MOBILITY BEFORE AND AFTER 1989



# ▶ CHAPTER 1: URBANIZATION BEFORE AND AFTER 1989

## BEFORE 1989...

- Urban growth was largely due to Romanian rural-urban migration;
  - Prerequisites in the urbanization during the communist regime: nationalization of industry and collectivization of agriculture.
  - Intimate link between industrialization and urbanization.
  - 'Urbanization of villages', as the gradual change of the character of rural localities, making them approach urban localities.
  - Discriminatory development policy, concentrating investments to localities with good development prospects, particularly to future towns.
  - Systematization program (1972) and the law on Systematization of the territory and the urban and rural localities (1974)
- 

➤ From 1965 to 1990, almost 300-350 rural localities were planned to be developed into towns.

➤ In urban systematization stress is laid on intensive land use and strict zoning. Residential areas are concentrated and any tendency to urban sprawl is checked.

➤ The law provided also a minimum density criteria for new constructions in towns.

➤ Increased density - higher buildings and closer distances between blocks.

➤ The complete control over places of work and housing provided the government with effective instruments for directing urban growth.

➤ 12 counties more than doubled their population between 1966 and 1977; 3.1% a year the urban population increasing during the 1966-1977 period (Source: Measnicov I., I. Hristache & V. Trebici, 1977, Demografia orașelor României, București: Editura Științifică și Enciclopedică)

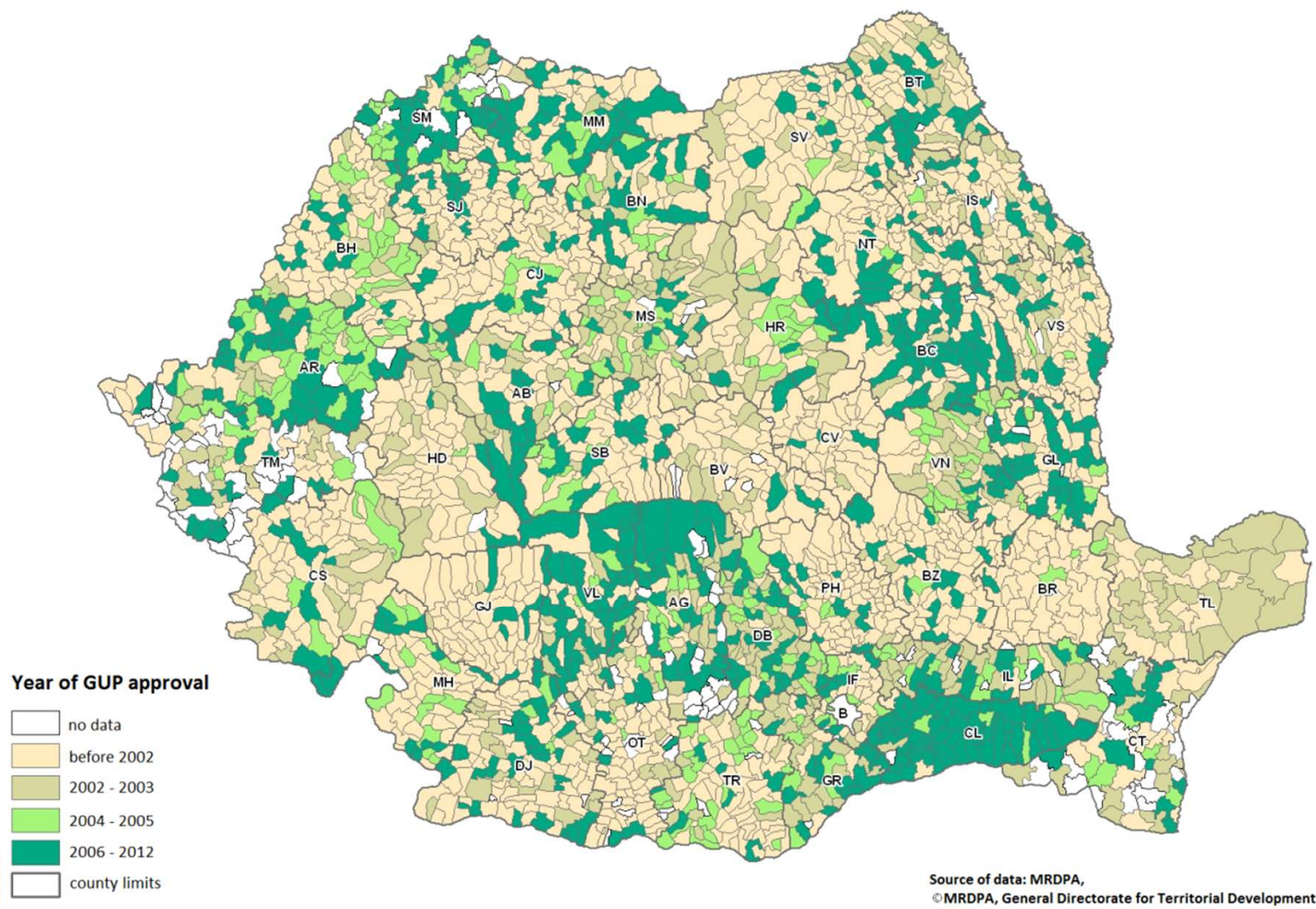
## AFTER 1989...

- After 1989, urban areas are characterized through an extensive spatial development of urban centres;
- The extension of built-in areas led to the emergence of residential areas without infrastructure and necessary services (private-led urban development);
- From 1990 to 2008 the built-in area of the localities increased with 70%. This spatial development process was not correlated with the evolution of urban population (stagnation and even decline).
- Lack of clear urban policies and the forcing of built-in areas through personalized solutions caused an increasing pressure on the environment.
- The green areas are seen as an opportunity for developing new constructions for living and are not perceived as a mixture of functions (environment, leisure, social and economic);

- **Urban extension – from 2002 to 2006- an increasing of towns/cities from 268 to 320.**
- **Political context that promoted administrative division of communes and new towns that do not fulfill totally the minimum standards for having this status: (ex. Pecica și Sântana – jud. Arad, Ștefănești, Bucecea, Flămânzi – jud Botoșani, Bechet și Dăbuleni – jud. Dolj, Popești-Leordeni, Voluntari – jud. Ilfov, Șomcuta Mare, Tăuții Măgheruș, Ulmeni – jud. Maramureș, Sărmașu, Ungheni și Sângeorgiu de Pădure – jud. Mureș, Arduș – jud. Satu Mare, Broșteni și Frasin – jud. Suceava, Gătaia și Receaș – jud. Timiș, Bălcești, Berbești și Băbeni – jud. Vâlcea).**
- **Metropolitan cooperation was not encouraged and asserted by the appropriated instruments;**
- **Planning did not overpass the territorial administrative limits of the localities;**



**67% out of the urban areas and 62% out of the rural areas do not have a General Urban Plan (Source: MDRAP, 2012)**



## Situation of County Territorial Organizing Plans in 2010

|                     | Counties with Territorial Organizing Plans finalized and approved | Counties with Territorial Organizing Plans elaborated before 2000 (expired) | Counties with Territorial Organizing Plans in course of elaboration | Without Territorial Organizing Plans | TOTAL |
|---------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------|-------|
| Number of counties  | 26                                                                | 10                                                                          | 10                                                                  | 5                                    | 41    |
| % from all counties | 63%                                                               | 24%                                                                         | 24%                                                                 | 12%                                  | 100%  |

Source: MDRAP - <http://mdrt.ro/stadiul-realizarii-planurilor-de-amenajare-a-teritoriului-judetean-2010>

## **CHAPTER 2: URBAN MOBILITY BEFORE AND AFTER 1989**

**The Public Transport service before 1989 was developed in 3 stages:**

**1st stage: reconstruction and introduction of State based planning process.**

**2<sup>nd</sup> stage: the creation of a national industry of vehicles (1954-Brasov, trucks, 1955-Craiova tramways, 1958, Bucharest buses) which gave the possibility to develop urban transport in many small and medium sized towns/cities as well as to increase the capacity in big cities.**

**3rd stage: procurement of licences for diesel engines, trucks and buses, new tramway model, the subway, the systematization of cities.**

**During 1972-1980, the ITB (Bucharest Transport Company) was the 4th largest enterprise operating urban transport in the world in terms of the dimension of the vehicles fleet, the operated area and the number of employees (2.500 buses, 800 tramways, 700 trolleybuses, 35.000 employees, Source:**

**<http://www.ratb.ro/historic.php>)**

## **Public transport in Romania (2014)**

- ▶ **Over 40 cities with population between 60.000 and 2.000.000 (about 40% of Romania's population)**
- ▶ **Annual number of trips provided = 1.600.000.000**
- ▶ **Urban public transport network:**
  - **70 km of metro railway**
  - **450 km of trolleybus lines**
  - **750 km of tram lines**
  - **4.800 km of bus lines**
  - ▶ **Over 7.000 public transport vehicles of all kinds**



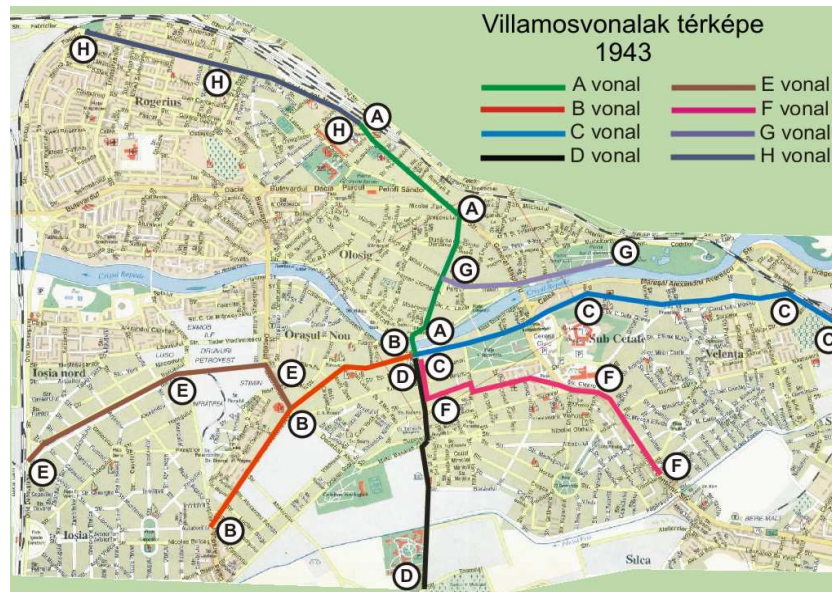
## The first tram in Oradea....

**25-th April 1906**, ceremony of inauguration of first tram line in  
ORADEA

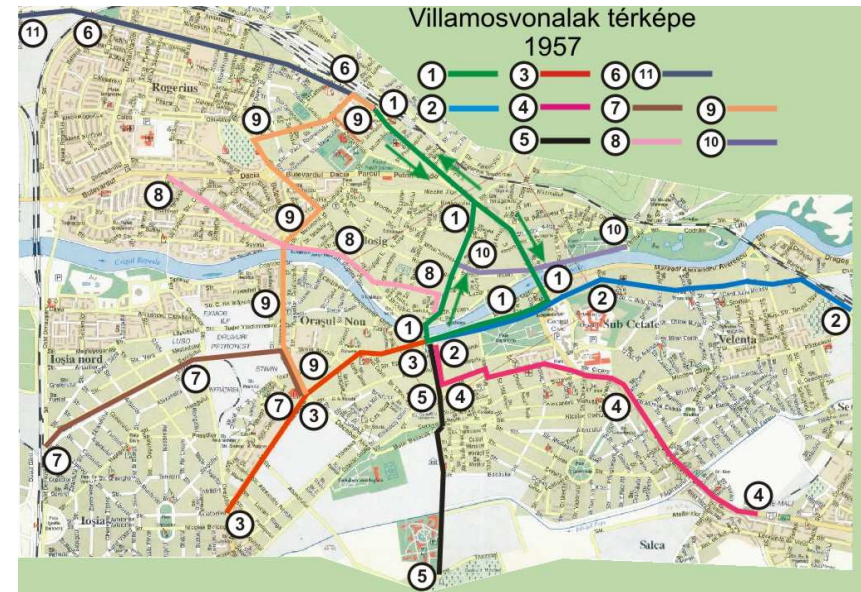


# The evolution of tramway network in Oradea

- ▶ In 1940, the tramway network attains 19,3 km. Total network including also the lines dedicated to the transport of goods: 41,2 km (1943)

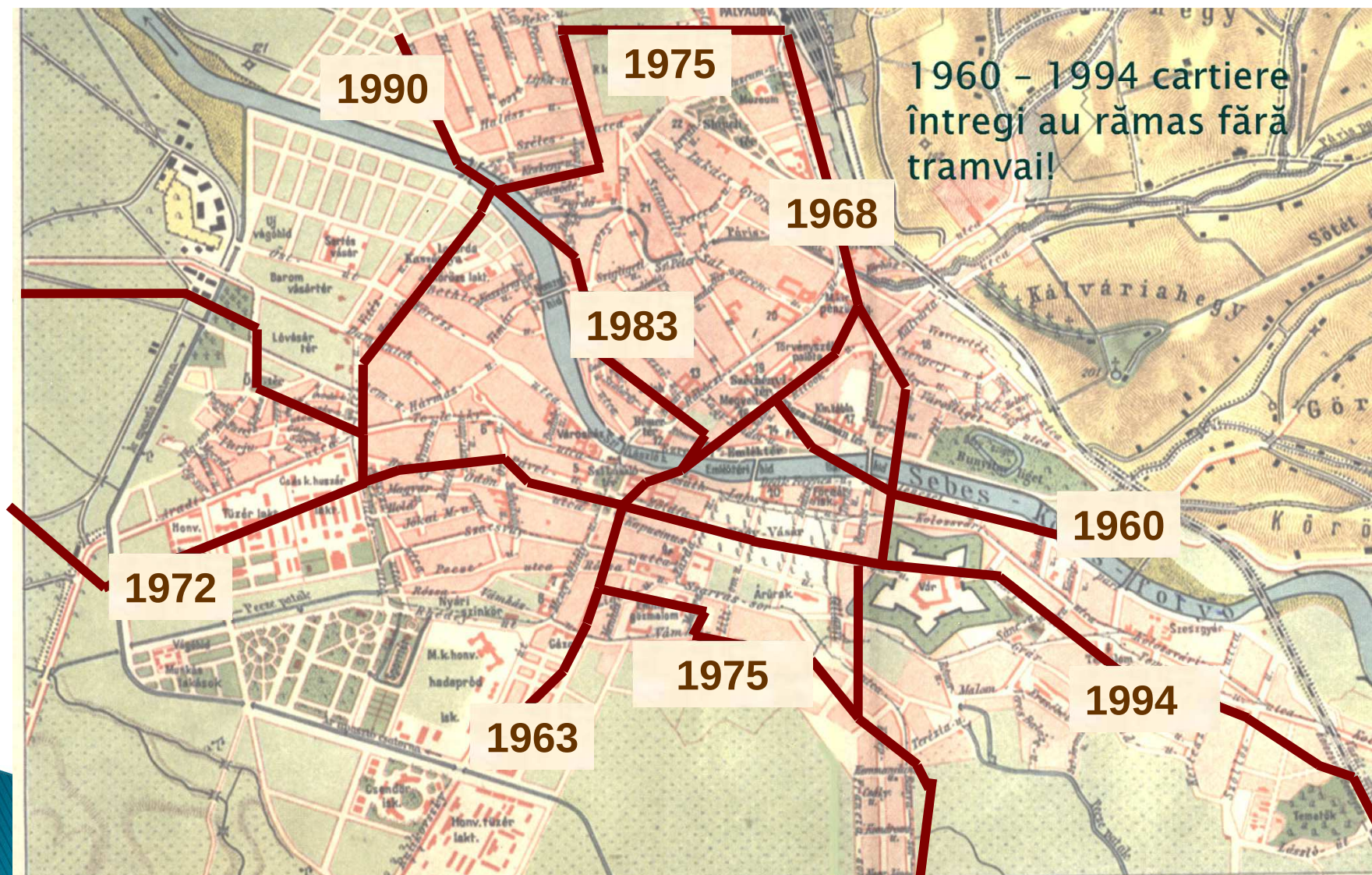


*Tramway lines in 1943*



*Tramway network in 1957, 11 lines*

## After 1960....Tramway is no more a priority

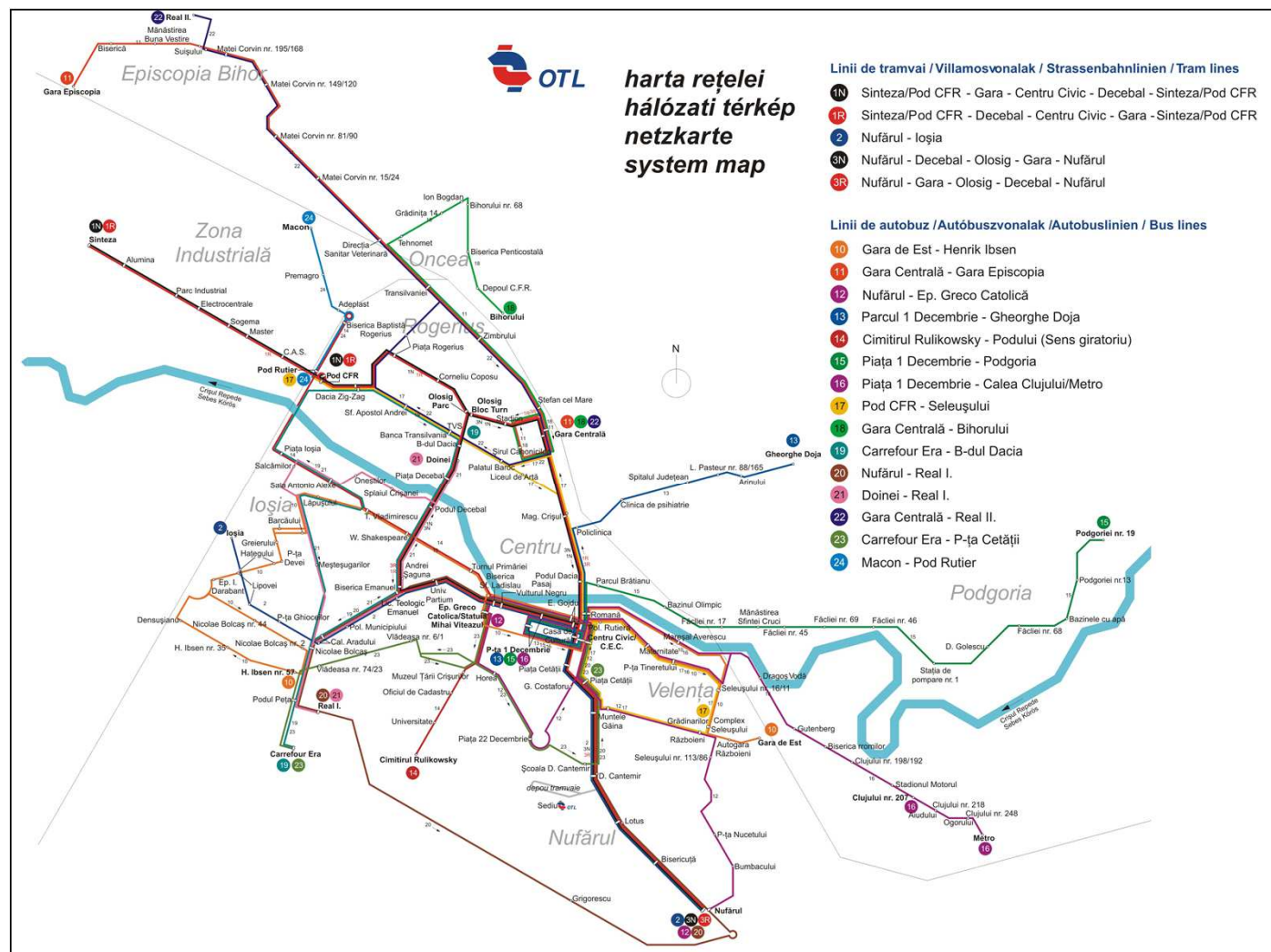




## Current situation regarding the operating fleet

- **TRAMS** (5 tram lines): 73 tramways, 78 tramway stations
  - TATRA T4D + B4D 53 pcs. (1975 –1985)
  - TATRA KT4D 20 pcs. (1977–1980)
  - SIEMENS ULF 151 10 pcs. (2008 – 2009)
- **BUSES** (17 bus lines): 72 buses, 208 bus stations
  - MERCEDES Conecto 26 pcs. (2004)
  - SOLARIS Urbino 12 pcs. (2011)
  - VOLVO ALFA Localo 12 pcs. (2010)
  - Rocar, Liaz, Renault, others.. 22 pcs. (1996 – 2002)

# Current network(2014): 5 tram lines + 17 bus lines



## FROM HERITAGE TO PERSPECTIVES (1)

- ▶ The disappearing of the State-based planning system affected also the PT system in terms of planning and implementing of the investment projects, maintenance of the existing equipments and developing the PT services.
- ▶ After 1990, the local authorities were not prepared (human resources, expertise, willingness, development dimension) to take over the entire responsibility for managing the PT service in a decentralized manner and therefore did not take into account the spatial planning and the mobility needs;
- ▶ Public Transport was not perceived in all of its dimension (spatial, economic, social and environmental).
- ▶ There was/is an important lack of regulation at the national level regarding the operating of PT service, therefore generating huge disparities between the level of services applied by the private and public transport operators;

## FROM HERITAGE TO PERSPECTIVES (2)

- ▶ The tramway played a central role in the urban development process of the City of Oradea as it created the development corridors that strengthened the relation between the centre and the peripheral area, respectively between the neighbourhoods;
- ▶ Due to the need to correlate the E.U. regulations and programs with the increasing needs regarding the modernizing of the PT system, we see a high interest concerning the accessing of E.U. funds by the local authorities in order to modernize their PT networks;
- ▶ With the increasing of commuting rates between the City and the surrounding localities, there is a slight increase of awareness of few political stakeholders regarding the need to better organize the PT services;
- ▶ The exercise of elaborating of SUMP enable to take into consideration all the transportation modes (cars, cycles, PT, pedestrian) as well to facilitate the link between mobility and spatial development;

# Oradea Metropolitan Area (association of 12 local authorities):

## City of Oradea

Population - 196.000

Area – 116 sqkm

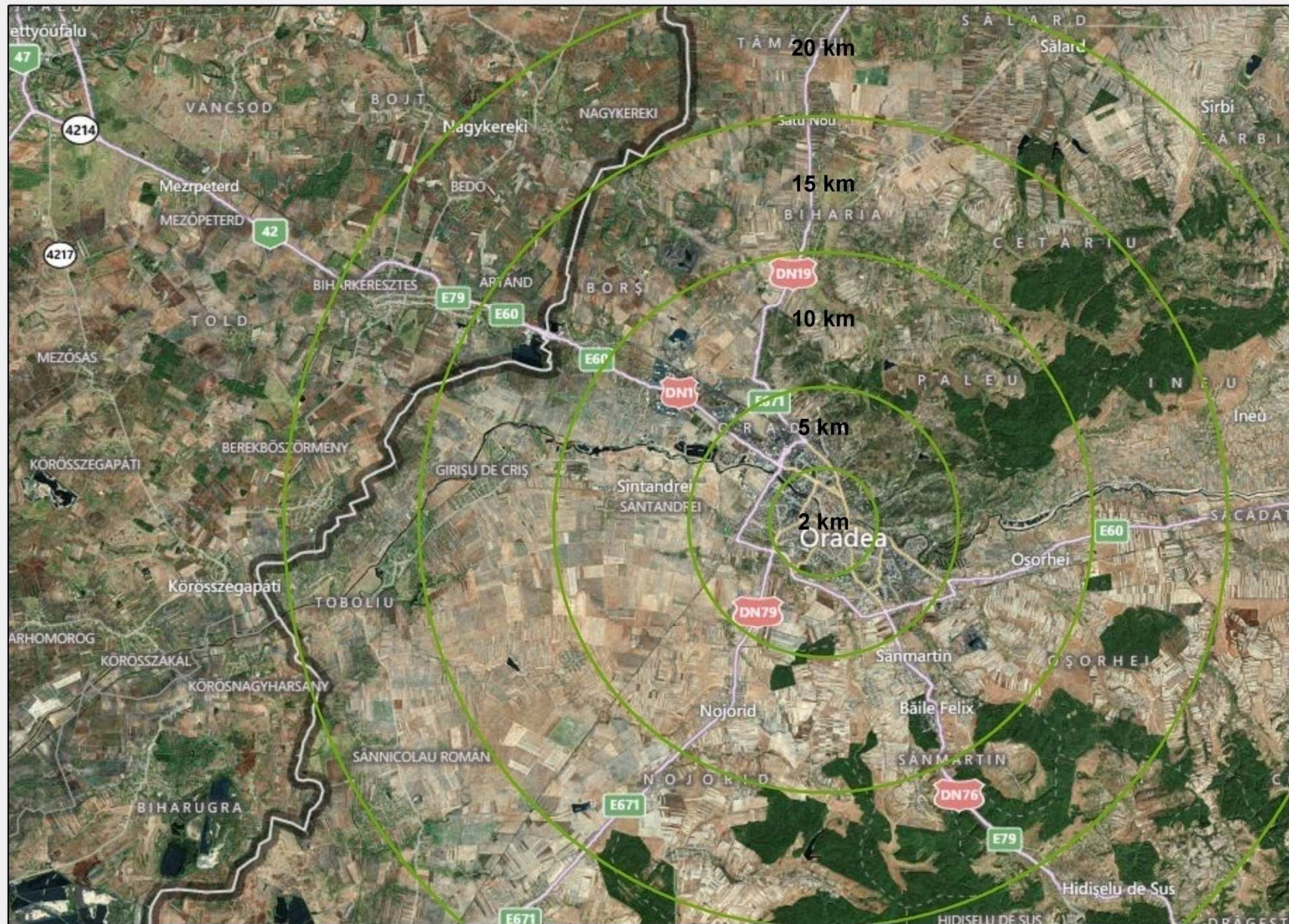
## Oradea Metropolitan Area

Population - 247.000

Area – 704 sqkm



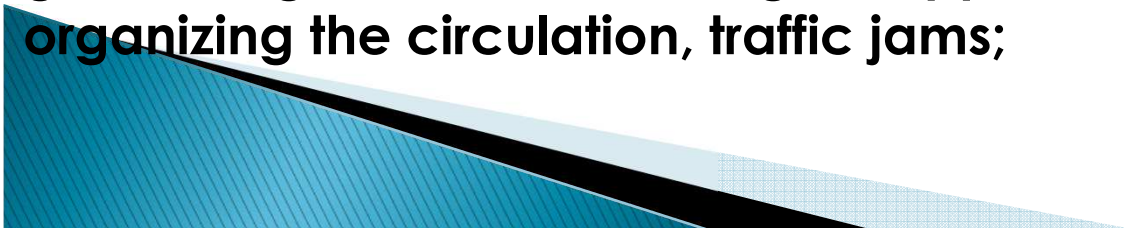
# TERRITORIAL INFLUENCE



# **Approaching the mobility aspects through Public Transport.**

## **Identified problems (1)**

- Lack of an urban mobility dedicated policy;**
- Lack of a spatial planning policy, focus on authorizing procedures and less on integration and correlation of sectoral policies;**
- Main facilities (hospitals, markets and hypermarkets) with an unbalanced spatial distribution at the level of the City;**
- Investments in transport system are more focused on the supply-side measures (new roads, modernizing the road infrastructures, increasing the road capacity, creating more parking places);**
- Lack of dedicated lanes for buses;**
- On few main corridors, tramway shares the road space with the cars generating at each change supplementary problems in terms of organizing the circulation, traffic jams;**

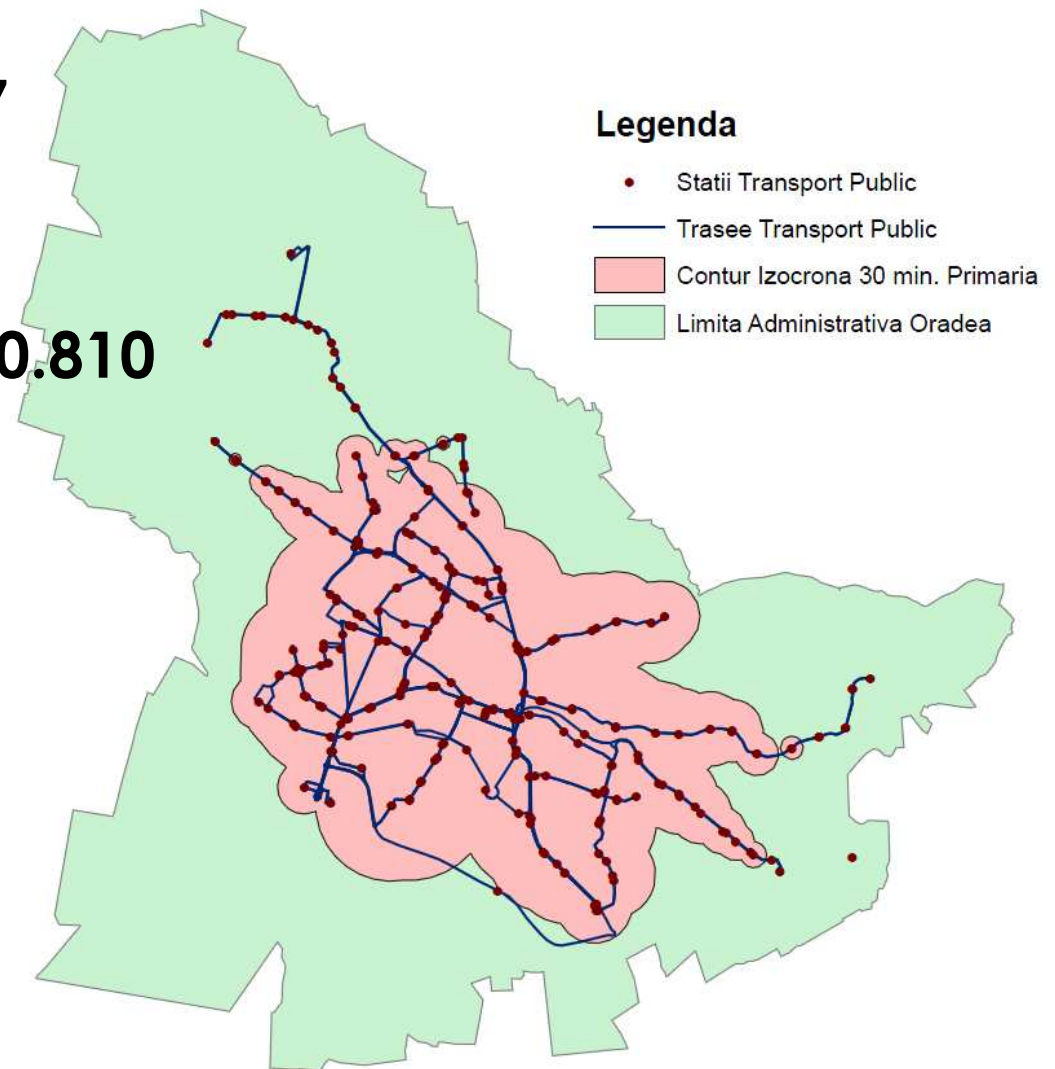


## Identified problems (2)

- **Unbalanced modal split: Increasing motorization in the municipality and also in the Metropolitan Area (about 60.000 cars to about 90.000 families only in the City of Oradea);**
  - **The number of retirees relatively high (46.500 report to 200.000 inhabitants!) that travel free of charge on local public transport system;**
  - **Changes of behavior in the last 20 years (a decline of public transport);**
  - **Private operators contracted by the Bihor County Council stop in 10 bus stations situated within the City of Oradea, generating a loss of income for the Oradea Local Transport Company subsidized by the City of Oradea.**
  - **Urban dispersion shifted about certain linking points toward new areas of economic activities, but without modelling the transportation system on this reality, therefore emphasizing the need for car of the citizens.**
- 

# Covered area by the isochrone of 30 minutes having the polarizing point the City Hall of Oradea

- ▶ **Total travels/day: 174.027**  
**travels/day**
- ▶
- ▶ **Total travels/month: 5.220.810**  
**travels/month**
- ▶ **Tramway: 127. 544**  
**travels/day**
- ▶ **Bus: 46.483 travels/day**



### Identified problems (3)

- Lack of public transport services integration between the internal and extra-urban transport networks (functional integration, fares and timetables);
- The urban sprawl even within the City caused a problem of ensuring the PT service at quality-based parameters, a lot of new quarters couldn't be attained by the PT service, therefore generating increased mobility by car.
- Lack of inter-institutional coordination (County Council-outside the City of Oradea; within the City of Oradea and 2 other communes from the Oradea Metropolitan Area- Transregio Association plays the role of Transport Authority);
- Lack of political will to secure subventions for the public transport by the local authorities (municipalities situated outside the City of Oradea), the current PT system outside the City is organized by Bihor County Council and is totally privatized, without any subsidies and an important lack of coordination.

## Identified problems (4)

- Lack of specific national legislation regarding the organizing of transport at the metropolitan level (harmonized regulations, financing sources);
- Transport Authority can be constituted only on a voluntary basis, through the association of 2 or more municipalities.
- The general condition of the Oradea Local Transport Company (local operator from the City of Oradea and 2 other communes): majority of buses is quite bad, the age and the deteriorated condition of vehicles increasing the operating costs (maintenance, reparations, consumptions);
- The Oradea Local Transport Company owns only 72 buses for operating the PT service at the level of the City of Oradea and 2 communes + special travels for some companies;
- There are huge disparities in terms of public service conditions offered by the local owned PT operator (Oradea Local Transport Company) and the private operators (AVL, e-ticketing system, air-conditioned, low-floor vehicles, etc)

# **TRAFFIC FLOWS ON THE PT NETWORK on the City of Oradea– Bihor County relation**

**418 bus travels/day on the relation between the  
City of Oradea and the other localities from Bihor  
county**

**✓79 bus travels/day on the relation Valea lui Mihai –  
Marghita**

**✓137 bus travels/day on the relation Aleșd – Tileagd**

**✓145 bus travels/day on the relation Salonta – Arad**

**✓57 bus travels/day on the relation Beiuș – Ștei**



# STRATEGY FOR RE-ORGANIZING THE TRANSPORTATION SERVICE TRANSFORMED INTO A SUSTAINABLE URBAN MOBILITY PLAN

## ▶ SHORT AND MEDIUM TERM (1):

- ▶ Developing the axis of urban development toward the municipalities presenting a relevant concentration of activities/functions (economic, residential, touristic) and interested in creating of a Joint Transport Authority in association with the City of Oradea (Bors and Sinmartin municipalities);
- ▶ Transport Authority (TRANSREGIO) to plan the contracting of the PT service in Oradea, Bors and Sinmartin commune, organize the contracting procedures, monitor and regulate the local public transportation in order to create an integrated PT service through a unique information, timetable and fare collection system;
- ▶ Elaboration of Mobility Studies/Plans in order to better identify the main problems at the level of the PT network and better prioritize the investments in the transportation system.
- ▶ Transformation of the Oradea Local Transport Company in a Regional Operator having as shareholders the 3 associated municipalities (Oradea, Bors and Sinmartin).

# THE ORGANIZATIONAL CHART OF THE METROPOLITAN PUBLIC TRANSPORTATION (PHASE 1 – SHORT AND MEDIUM TERM)

MUNICIPALITIES AND

ORADEA

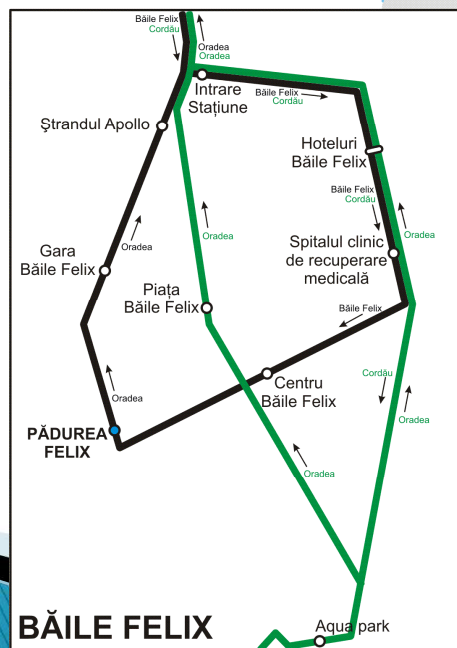
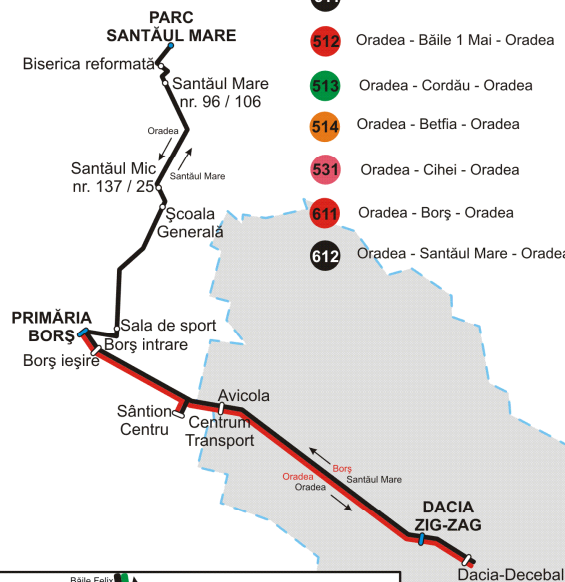
SINMARTIN

BORS

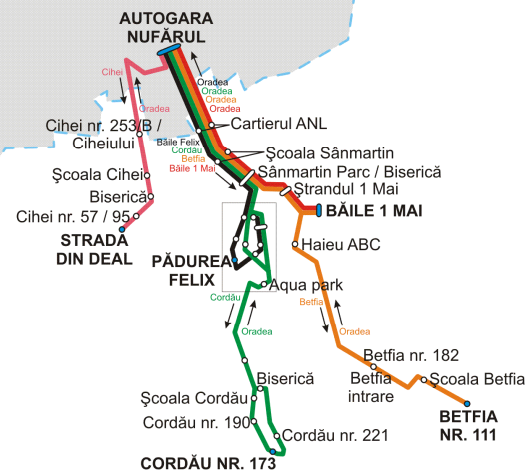
- 511 Oradea - Băile Felix - Oradea
- 512 Oradea - Băile 1 Mai - Oradea
- 513 Oradea - Cordău - Oradea
- 514 Oradea - Betfia - Oradea
- 531 Oradea - Cihei - Oradea
- 611 Oradea - Borș - Oradea
- 612 Oradea - Santăul Mare - Oradea



*harta rețelei  
hálózati térkép  
netzkarte  
system map*



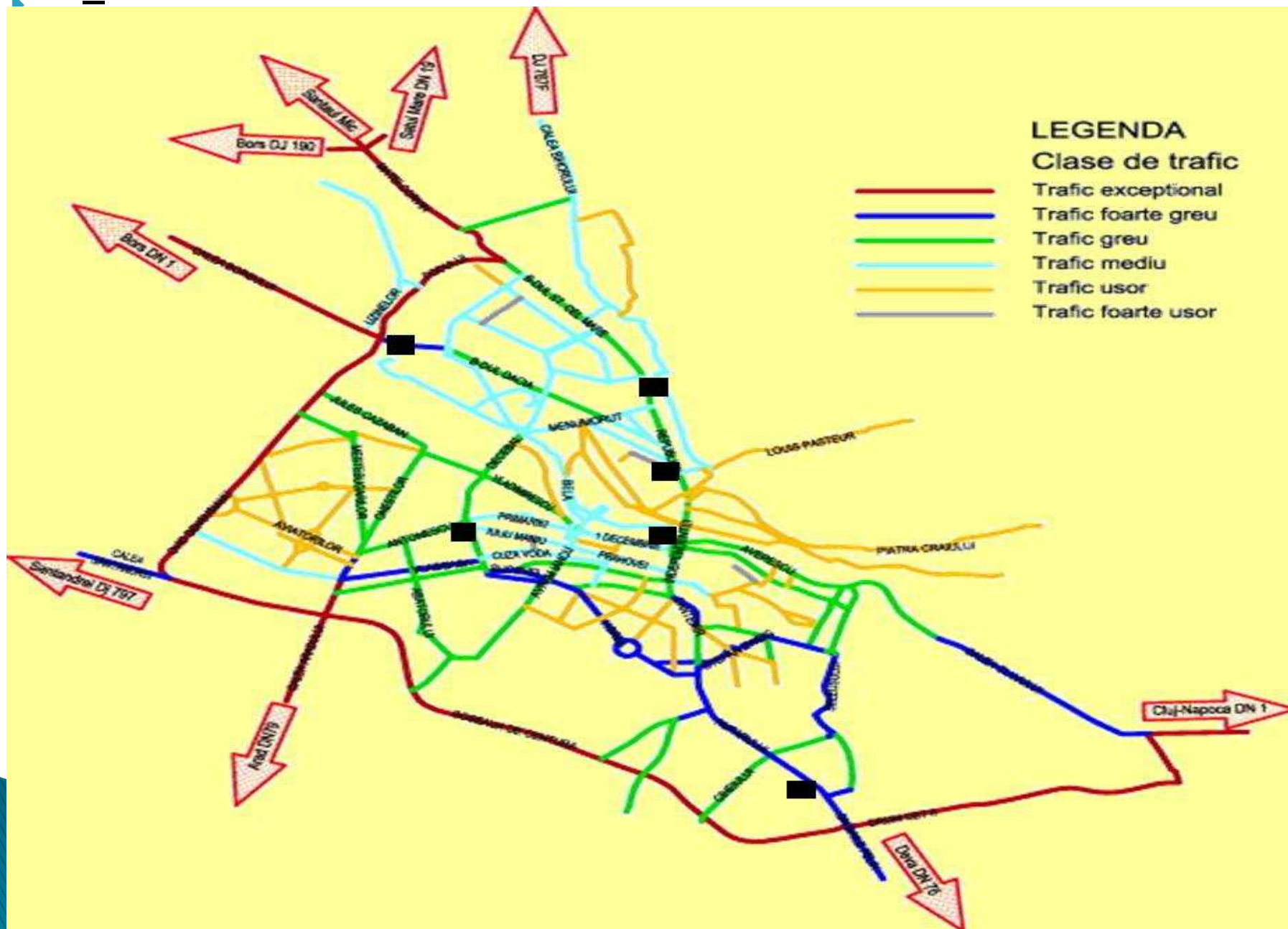
ORADEA



## **SHORT AND MEDIUM TERM (2):**

- **Direct Awarding and contracting the PT service contract by these 3 associated municipalities (through the Transregio Transport Authority) with the Oradea Local Transport Company.**
- **Procuring of new buses and tramways in order to increase the attractiveness of the PT service;**
- **Redesigning the tramway network in order to ensure the attaining of economic concentration situated at the limit between the City of Oradea and the 2 other municipalities.**
- **Investments in building of inter-modality facilities in order to ensure the transfer of passengers coming from Oradea Metropolitan Area and the Bihor County.**
- **Generalizing the installation of Real Time Information Panels in the most important bus stations from the 2 localities that are associated in the Transregio Transport Authority.**
- **Extending of the e-ticketing system from the City of Oradea in the 2 municipalities where the Oradea Local Transport Company will be the new operator.**

LEGEND: WITH BLACK COLOUR, AREAS PROPOSED FOR BUILDING INTERMODAL FACILITIES



### **SHORT AND MEDIUM TERM (3):**

- **Proposing and implementing of 1 integrated fare that will stimulate the residents of Bors and Sinmartin municipalities to use also the City of Oradea's network.**
- **As between the private and the public operators, there are 2 fare barriers due to 2 different Transport Authorities (Transregio and Bihor County Transport Authority), proposing of an integrated fare in association with other private operators that operate within the Oradea Metropolitan Area (e.g., ensuring a reduction of the monthly subscription part for the City of Oradea with 20%) in order to increase the number of citizens coming from outside the City to use the Public Transport within the City and on the relation between the City and its functional area (25.000/day, only 3.800 use Public Transport).**
- **Introducing of bus express lines in order to connect the thermal resorts Baile Felix and 1 Mai (Sinmartin commune) with the most attractive facilities from the City of Oradea (historical centre, citadel, shopping areas, etc.).**
- **Introducing of multifunctional transport subscriptions/tickets (student cards, entry to the museums, concerts, sport events included).**

## **SHORT AND MEDIUM TERM (4):**

- ▶ Investing in the creation of dedicated bus and tramway lanes;
- ▶ Allowing the transportation of cycles by buses and tramways;
- ▶ Introduction of Self-service stations with cycles in proximity of the most frequented PT stations;
- ▶ Procuring of an electric bus in order to be used on a touristic route to be planned and which should be representative for the City;
- ▶ Increasing the regularity and punctuality of the PT service;
- ▶ Setup of an interdisciplinary Working Group at the local level in order to correlate the spatial development with the transport planning.
- ▶ Redesigning the bus network in order to avoid the parallelism with the tramway network;
- ▶ Promoting the “day without cars”(monthly)
- ▶ Introduction of a congestion tax in the “protected area” from the City Centre;

## PROPOSED AREA for introducing the congestion tax



## **LONG TERM:**

- ▶ **Encouraging integrated land use and transport planning so that travel distances are minimized and access to livelihoods, education, and other social needs, is improved.**
- ▶ **Provide adequate capacity by focusing attention on reducing demand to match available capacity.**
- ▶ **Extending the tramway and bus network in the industrial area of Bors and Oradea municipality and in the most touristic area of Sinmartin municipality (Baile Felix and 1 Mai thermal resorts).**
- ▶ **Extending the tramway network in the City of Oradea along the main development directions in correlation with the densification of the areas and diversification of territorial functions.**
- ▶ **Extending the planned PT system to other municipalities from the Oradea Metropolitan Area.**

## CONCLUSIONS

- ▶ The role and the evolution of public transport in Oradea and other cities will depend on the potential demographic mass to be provided with the transport service. Therefore, it supposes an appropriated urban planning which should take into consideration the mobility needs of citizens as well as an array of measures that will balance the transportation modes through: developing the infrastructure for NMT, developing of T.O.D. areas, progressively increase of the parking fares, redesigning the PT network, ensuring the omnipresence of PT service in all economic development zones, investments modernizing/expanding the network and renewal of the fleet through accessing of E.U. funds).
- ▶ Need for courageous measures (e.g. the restriction of circulation in the protected area);
- ▶ Few questions before developing/redesigning the PT network: Where comes the demand/need for transport? Which will be the redistribution between transportation modes? The status of the initial offer in terms of PT, the status of the general network which surround the developing project? And how this PT development project is linked with other development projects of the urban area?



**THANK YOU FOR YOUR ATTENTION !**

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