



## **Shaping Low-carbon Districts**

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#### Low Carbon District for station areas



- There is a need to create steering and planning tools for promoting low carbon targets in land use planning
- The concept will help cities to implement climate strategies
- Focus on development of and around transport nodes
- Aims to transform and empower low carbon station communities







Co-operation - KNOWLEDGE - Commitment

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## www.lowcarbondistrict.com

(Introduction video)

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# Ytterby Station community

**Anna Ulvehed** 

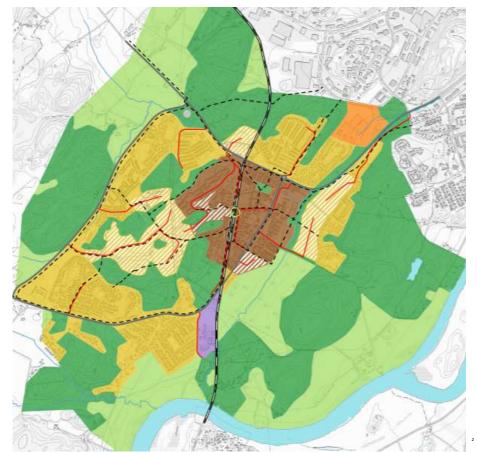
**Urban Planner** 

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#### MASTERPLAN OF YTTERBY



•With agricultural land planned for density according to the guidelines.



# MASTERPLAN WITHOUTH

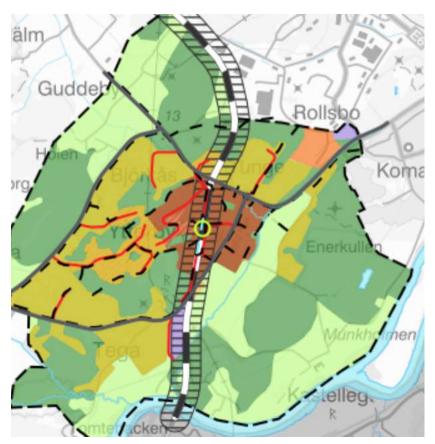


## AGRICULTURAL

# When the Agricultural land is excluded

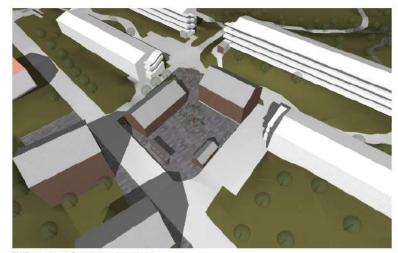
It's a reduction of 360 houses.

And inhabitants goes from 4500 to 3680 people.



#### **DETAILED PLAN**









Vy över utveckling i norr













#### A revolution in the intermodal tariff system of Public Transport

(activity 2 of Porto Action Plan)

#### Carmo Tovar – SMART-MR Project Manager

## A revolution in the intermodal tariff system of Public Transport

#### The main CHALLENGE



(The very quick) INCREASE OF THE USE OF PUBLIC TRANSPORT

Before



# 1 – EXTENSION of the intermodal ticketing system to all metropolitan territory

10 municipalities (60 % of AMP)

• Pop.: 1 326 681 (75 % of AMP)

Area: 886,59 Km2 (43% of AMP)

• Number of operators: 12

• 17 municipalities (100 % of

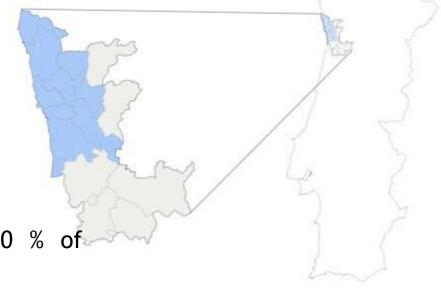
AMP)

Now

• Pop.: 1 759 524 (100 % of AMP)

• Area: 2.041,00 Km2 (100% of

AMP)





#### 2 – SIMPLIFICATION

One Metropolitan Public Transport Pass (to travel in the entire metropolitan area) and a Municipal Pass (to travel in one municipality) instead of

multiple passes.



#### Intermodal ticketing system



#### 3 - REDUCTION OF THE PUBLIC TRANSPORT PRICE

Z4	4 zonas	48,65€	
<b>Z</b> 5	5 zonas	58,85€	
<b>Z</b> 6	6 zonas	68,60€	Andante
<b>Z7</b>	7 zonas	78,35€	Metropolitano
<b>Z</b> 8	8 zonas	88,10€	toda a rede Andante
<b>Z</b> 9	9 zonas	97,85€	40€
Z10	10 zonas	107,60€	
Z11	11 zonas	117,35€	
712	12 zonas	12710€	

	Andante
M	etropolitano
	toda a rede
	Andante
	40€

5 a 8 km	40,00€	
9 a 12 km	50,50€	
13 a 16 km	62,50€	
17 a 20 km	72,50€	
21 a 24 km	83,00€	
25 a 28 km	93,50€	40 €
29 a 32 km	101,30€	70 C
33 a 36 km	110,20€	
37 a 40 km	115,20€	
41 a 44 km	119,75€	
45 a 48 km	124,55€	
49 a 56 km	128,60€	



#### WINS:



#### For the Transport Authority:

- Better monitoring and control compared to the previous situation with the single-mode tariff and the intermodal system
- Improved coordination
- Available information

#### For the operators:

-A more advanced system and no longer worry about the sales network;

#### For the passengers:

-an integrated use of different transport modes that the citizens can use to the different travelled needs with an affordable price.

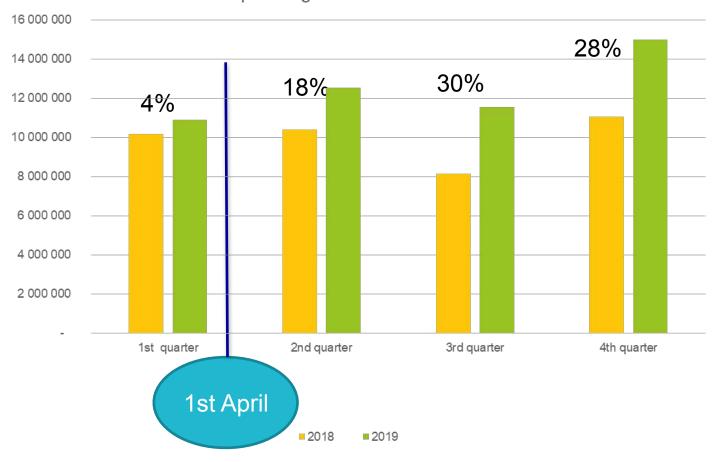






### Metro do Porto

#### All passangers - Metro do Porto







## Action plan and results in Budapest

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## **Managing transportation**

- Transportation is one of the most important infrastructure of the capital city Budapest
- PT system of the 1,8 million city is having a network of 3000 km,
   2200 vehicles performing 5 million daily travels
- The city transport system consists of:
  - metros
  - trams
  - trolleybuses
  - buses
  - supplemented by trains and regional buses from the agglomeration
- The City of Budapest established BKK Centre for Budapest Transport in 2010. as transport organizing authority,













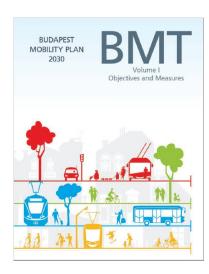
## **Managing transportation**

 Our SUMP, prepared by BKK, was approved in 2019, with the main intervention areas:

- MORE CONNECTIONS
  Safe, high quality, integrated transport infrastructure
- ATTRACTIVE VEHICLES

  Comfortable, environmental friendly vehicles and equipment
- BETTER SERVICES

  Efficient, reliable traffic coordination and services
- **EFFICIENT ORGANIZATION**Consequent regulation and **governance**, regional cooperation



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### Regional cooperation - main goal in our action plan interest

- In the city's catchment area there are further 1,2 million people living
- Every third trip in the city is related to cross city border travels
- The regional cooperation is essential between:
  - **Municipality** of the City of Budapest responsible for local transport
  - Ministry for Innovation and Technology responsible for regional transport
- Recently important steps have been made between the two main stakeholders:
  - New institutions established on the ministry's side
  - New body set up for negotiations between the city and the ministry
  - Regular consultation between the two levels on political and professional level
- Aim is to harmonize local and regional transport developments and services within the city











LJUBLJANA URBAN REGION SUMP
ACTIONS & RESULTS

Klemen Gostič, RRA LUR

oth November 2020 | SMART-MR final web-conference









Sustainable Urban Mobility Plan of the Ljubljana Urban Region

For the people and space in an innovative and advanced region

SUSTAINABLE
URBAN MOBILITY
PLAN OF THE
LJUBLJANA
URBAN REGION
For the people and space in an innovative and







#### **Action plan**

Workshops with (technical) representatives of municipalities

Workshops with PT operators, transport engineers, spatial planners, business and ministries

#### **Mobility priorities**

Online survey on travel habits: N: 1.600

List of priorities from general public

# Verification of measures Interviews with 15 key stakeholders

Vision and goals
5 public workshops along regional corridors
Online GIS portal

#### State-of-the-art analysis

2 workshops with key stakeholders Interviews with all 26 mayors



#### **Public participation**



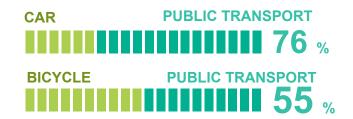
#### WHERE DO YOU THINK INVESTMENTS ARE NEEDED ...

ROAD INFRASTRUCTURE PPT INFRASTRUCTURE

111111111111111111 58 %

ROAD INFRASTRUCTURE CYCLING INFRASTRUCTURE

#### IN PLANNING, THE PRIORITIES SHOULD BE IN ...



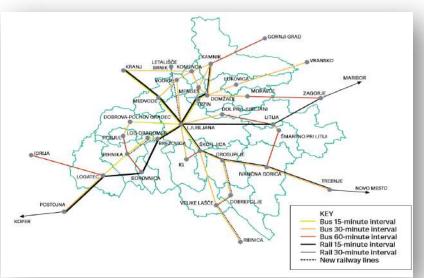


## RRA LUR

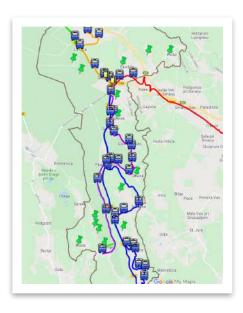
#### **Results of SUMP LUR**



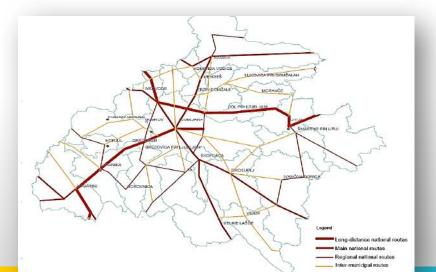
## Proposal for frequency in PPT during peak hours (LUR SUMP, 2018)







Map of proposed and implemented cycling routes in the LUR (LUR SUMP, 2020)











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# Action III Oslo: Implement ITS pilots The proof is in the pudding

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# GO BIG OR GO HOME?



SMART PARKERING I OSLO KOMMUNE

Her er sensorene som KAN gjøre Oslos parkering smart



2019: «Last trial failed. New sensor with radar will help handicapped find parking»

Forrige forsøk feilet. Nå skal ny sensor med innebygget radar hjelpe handikappede å finne parkering

Screen shots: Teknisk ukeblad

# Proof of Concept #1

# SMART-MR Interreg Europe

# Does the tram interferes with the sensor?

- Small scale only five sensors
- Collaboration with local company, Q-Free.
- The trams do interfere, but the technology is up to the challenge.



# Proof of Concept #1



Practical experience went into tendering:

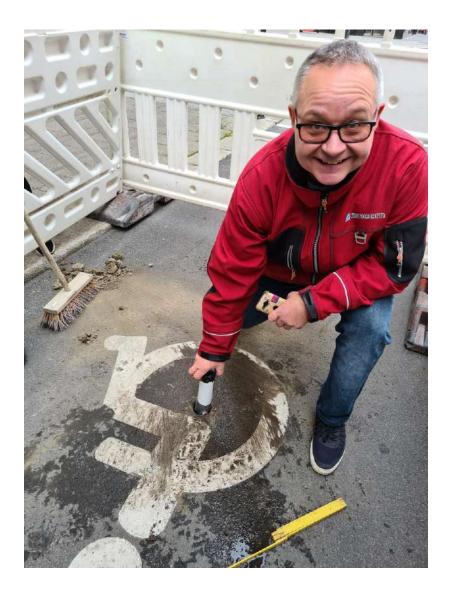
- System needs to handel electromagne ic noise.
- System need to be self sufficient with power.



# Proof of Concept #2



- Second PoC as part of the evaluation of the tender submissions.
- Proximity to tramline.
- Good results from all suppliers.
- The winning tender requires no extra installation of communication, uses NB-IoT



# What's next?



- Installation by Christmas.
- Sharing data
- Launching new feature in City of Oslo's parking app
- Evaluation and user testing







Thank you!

**Questions welcome**