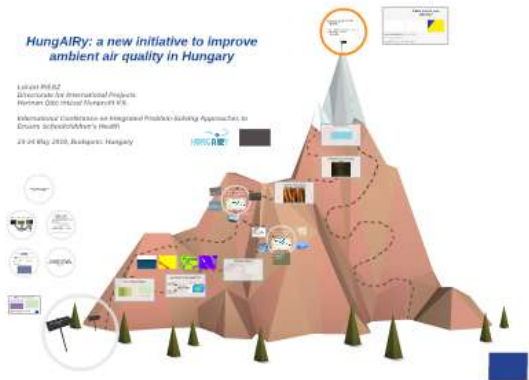


HungAIRy: a new initiative to improve ambient air quality in Hungary

László PEREZ
Directorate for International Projects
Hungary 0200-10000 Budapest Hungary 10
International Cooperation as Integrated Problem-solving Approach to
Ensure Sustainable Development's Health
29 of May 2010, Budapest, Hungary



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International Conference on Integrated Problem-Solving Approaches to
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**10 Municipalities decided to
improve air quality**

HUNGAIRY: a new initiative to improve ambient air quality in Hungary

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e for International Projects
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2019, Budapest, Hungary



Challenges of local level
Quality of air for citizens
Lack of quality based information
Lack of quality based information
Lack of quality based information

Improving air quality at regional level
Improving air quality at regional level
Improving air quality at regional level



Reduce emission and improve air quality:

- *annual concentration of:*

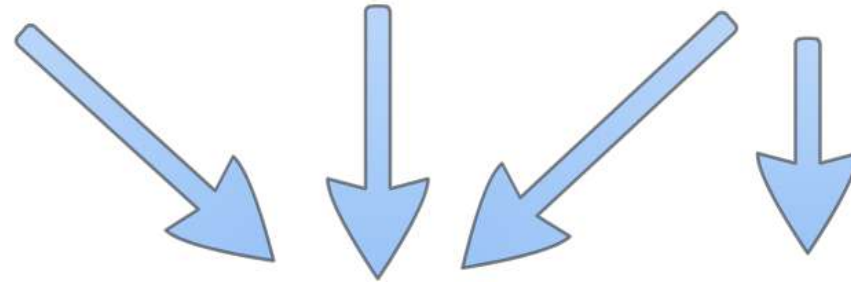
- NO₂: 2-13%
- PM₁₀: 0,5-2%

- *change in annual no of day with exceedances of the daily pollutant limit values:*

- NO₂: 25-100%
- PM₁₀: 1-100%



Main challenges, emission sources



PM10

NO2

Challenges at local level - results of our gap-analysis

1. **Lack of scientific background:** emission and immission data for local planning to define the most effective actions
2. **Lack of financial resources** – several projects were dedicated to improve air quality without deep analysis of the given air quality or the AQP
3. **Inadequate knowledge** on environmentally friendly, energy-efficient residential heating and green waste management
4. **Cooperation difficulties between actors**

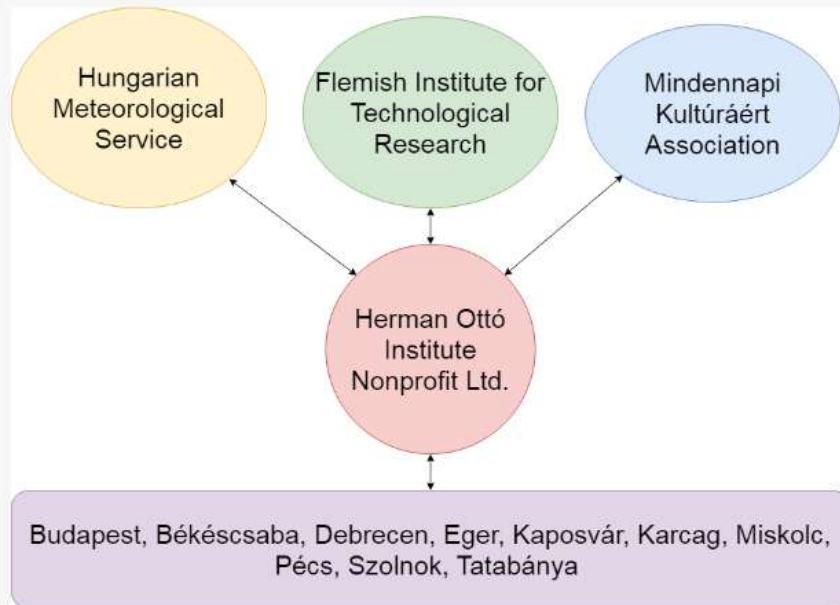
Tools of the municipalities - Air Quality Plans

- deep assessment of the situation + concrete measures
- responsible for the development: County Government Offices with the involvement of the Municipalities
- regular revision



**Improving air quality at eight
Hungarian regions through the
implementation of air quality plan
measures**

Partnership - 19+1 beneficiaries




Project duration: 2019-2026 – 4x2 years phases

Project budget: ~ 16 million Euro



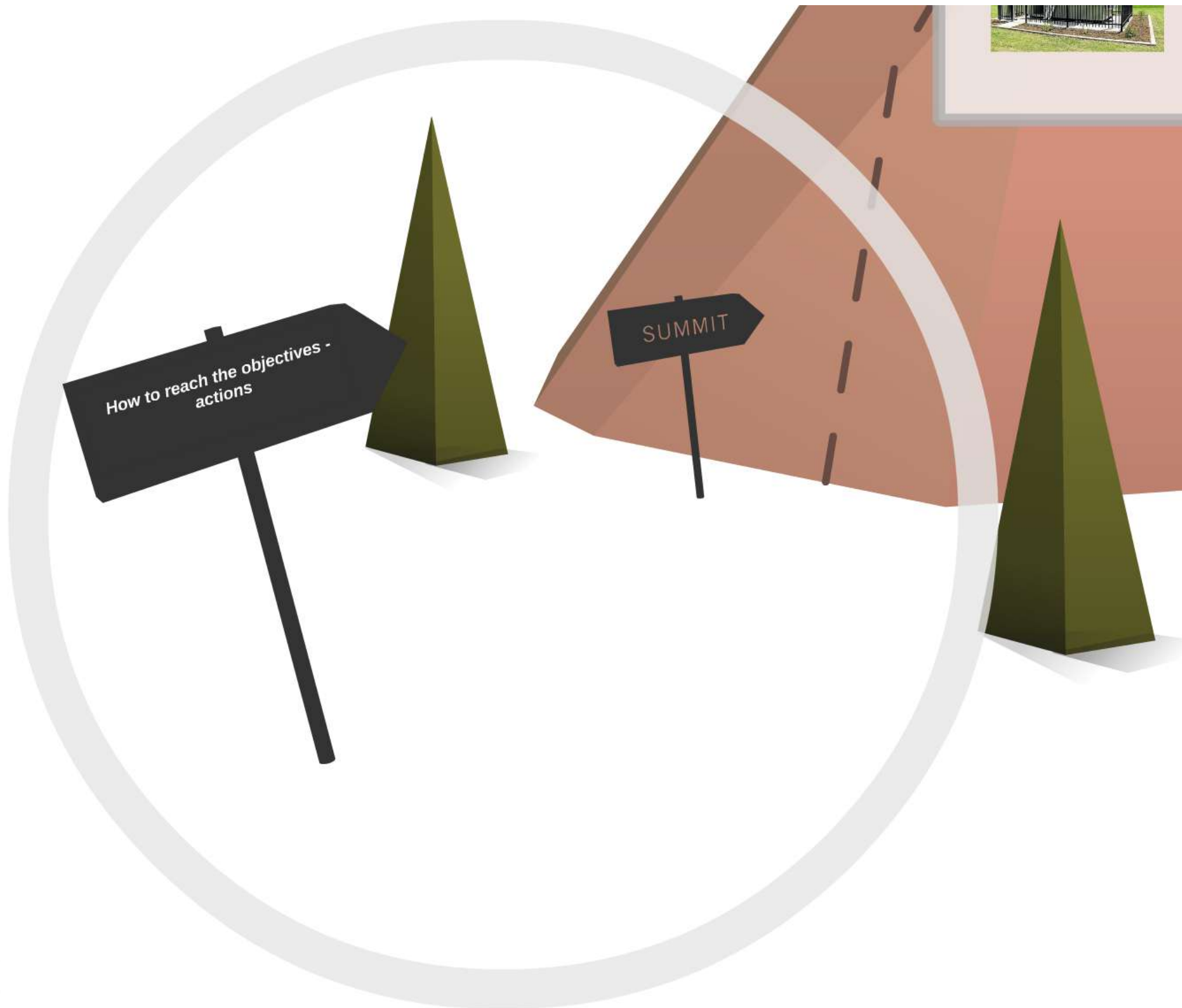

Beneficiaries



Slovakia

Hungary

phases



New monitoring stations



Békéscsaba and Kaposvár

User friendly decision support tool

Downscaled, **high resolution emission database** for Hungary

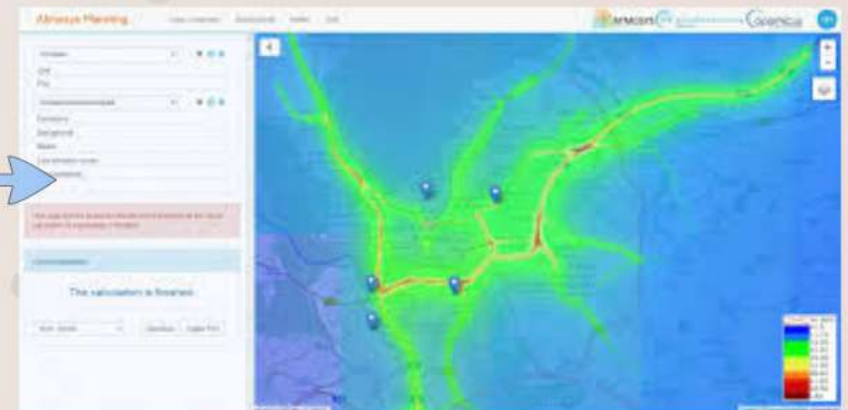


Regional to urban background-scale **air pollutant concentration maps** with high resolution zooms (~20 m) over key cities

Detailed traffic, industrial, residential **emission database**



User friendly decision support tool



URBAN AIR QUALITY MANAGEMENT - SYSTEMATIC APPROACH

Selection of hotspots in the area of interest



Selection of feasible policy measures



Combining measures into scenarios

Package 1: Measures at city level

- Extension local mobility plan
- Changing traffic circulation
- Speed limits: 30 km/h in the inner-city
- Defining traffic areas: car free, low traffic...
- Reducing number of heavy duty vehicles in the city
- Expanding and improving public transport: trams + P&R
- Greening the car fleet of the municipality
- Ecofriendly buses
- Lower speed limits

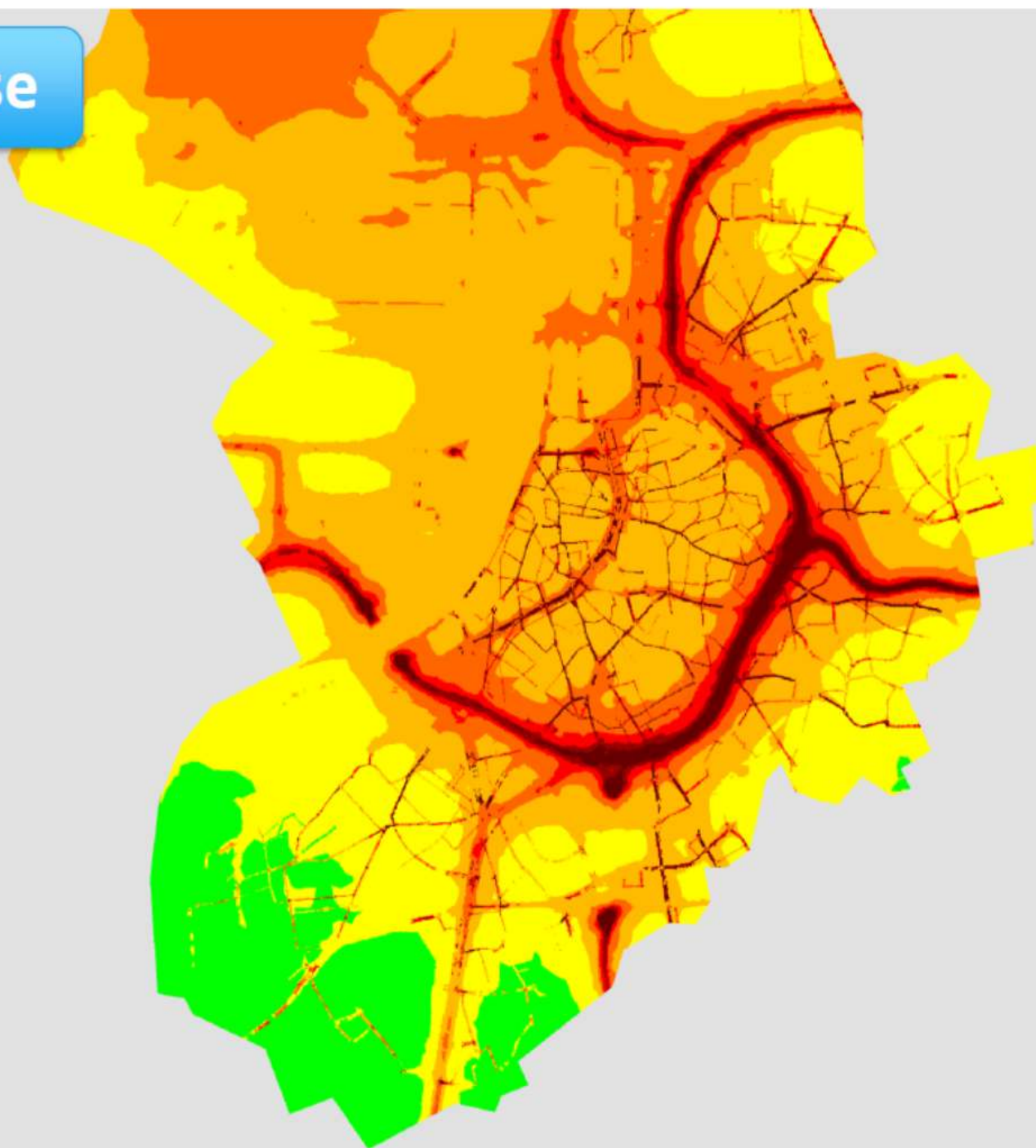
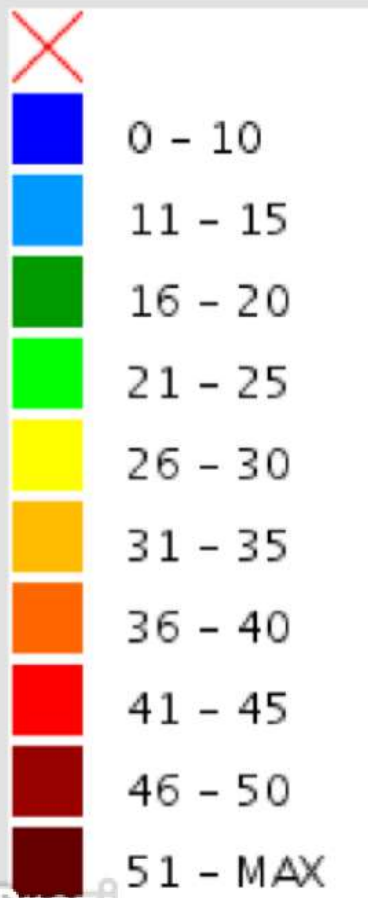
Package 2: Low Emission Zone (e.g. London, Stockholm...)

Package 3: Measures in the industrial sector

- Strict supervision on sources of particulate matter
- Demanding implementation of best available technologies

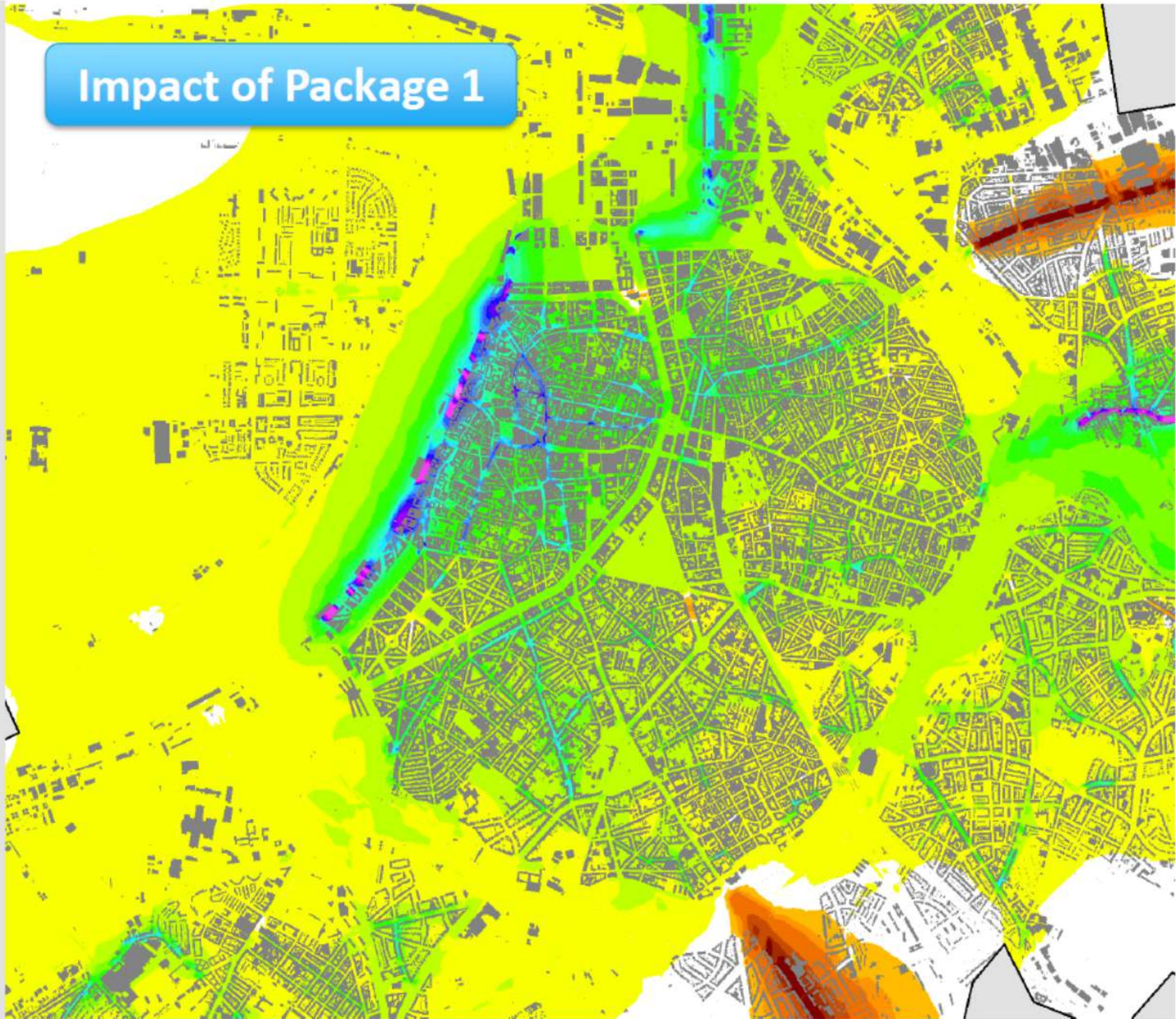
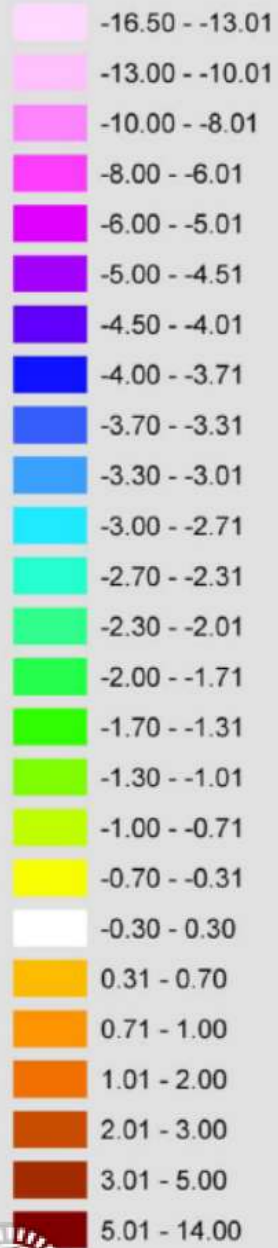
Reference case

NO2 2016
VMM - IRCEL
ATMO-street
 $\mu\text{g}/\text{m}^3$

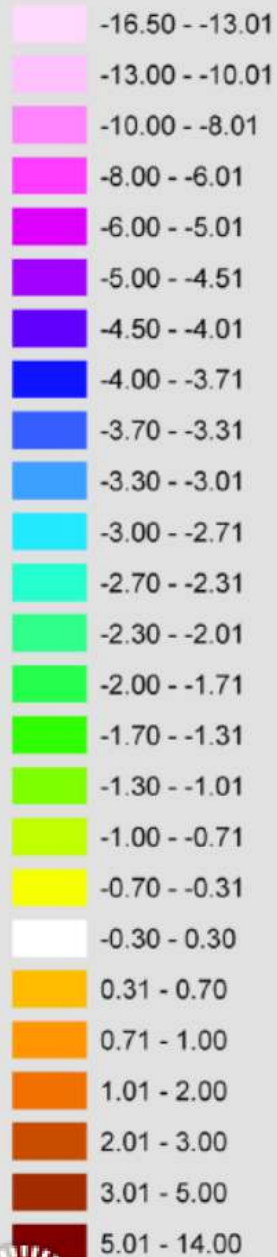


Impact of Package 1

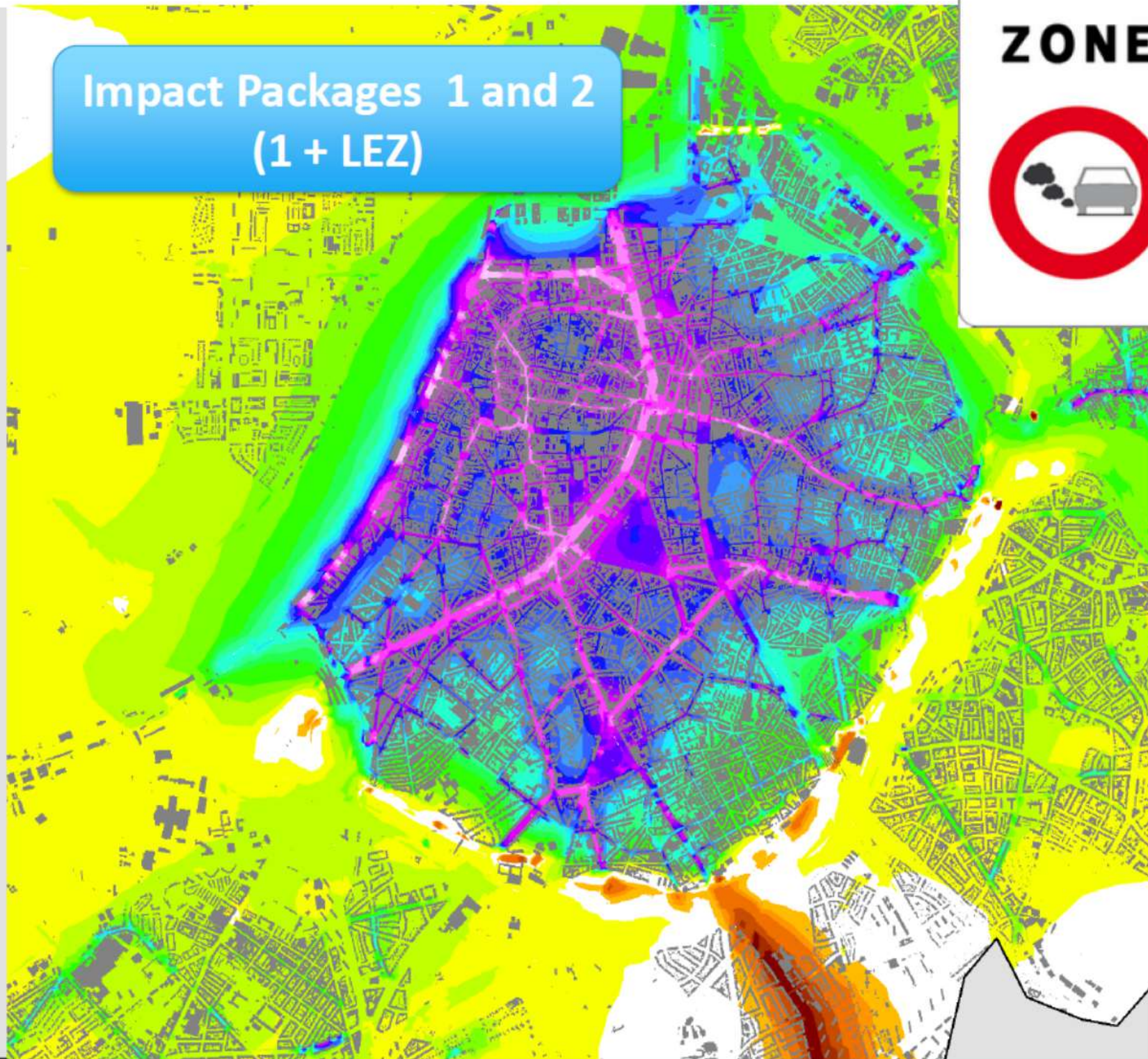
NO2 (%)
Pkt1-basis



NO2 (%)
Pkt2-basis



Impact Packages 1 and 2
(1 + LEZ)



ZONE



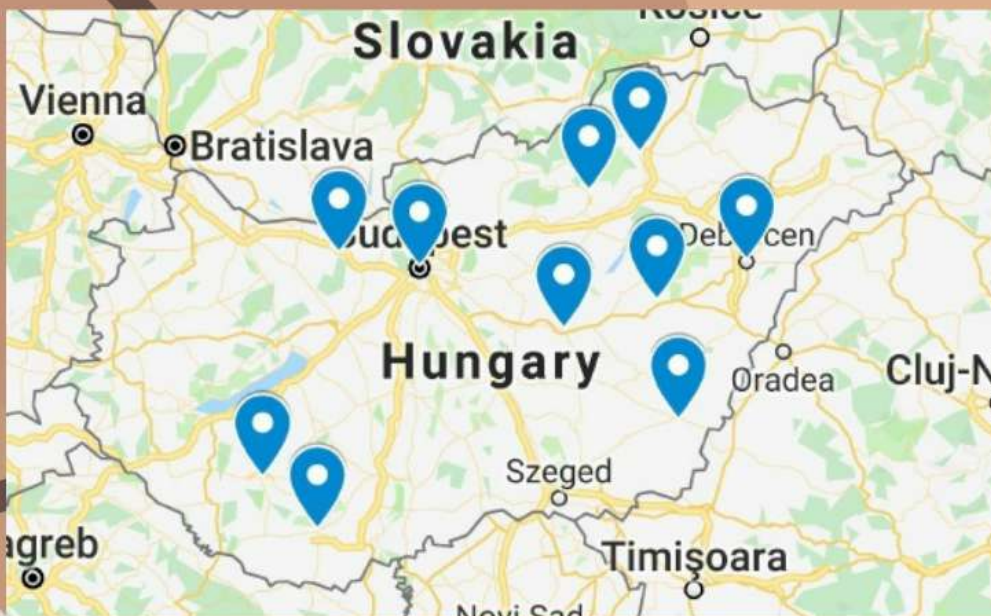
Eco-manager Network

1. Monitoring of potential financial sources for environmental and air protection related projects
2. Revision of AQPs
3. Consulting
4. Awareness raising

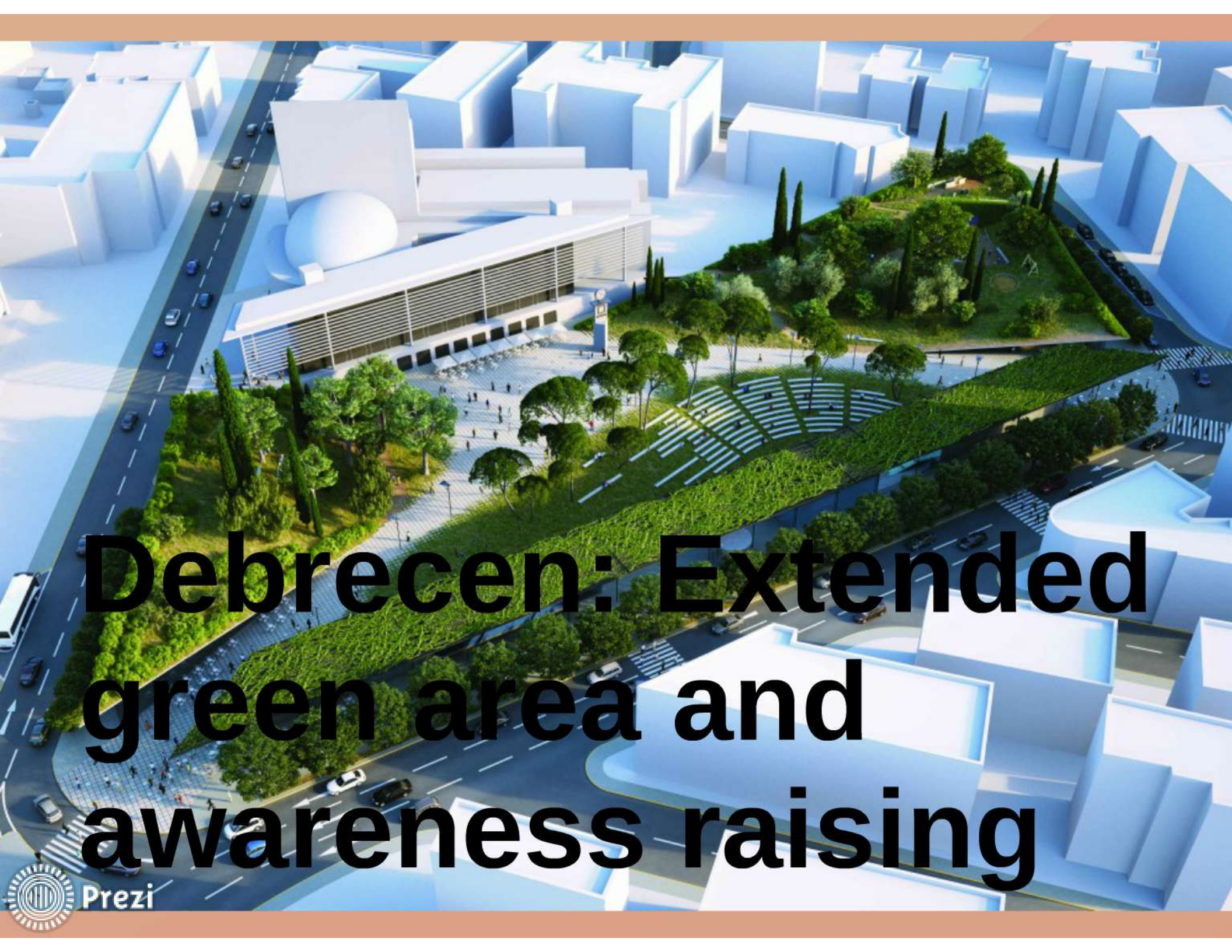




Reduce residential emission by local actions



Miskolc: Composting program



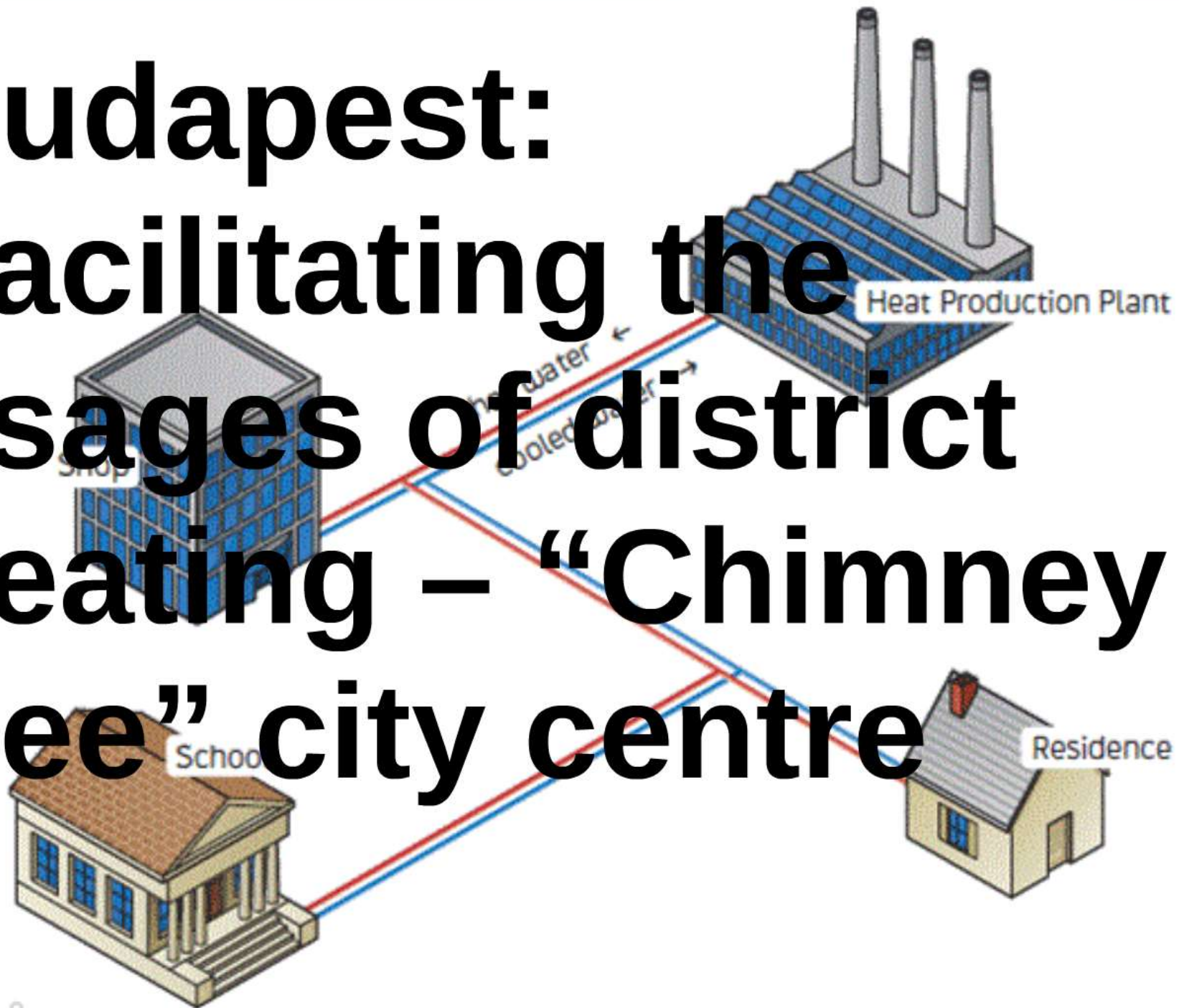
Debrecen: Extended green area and awareness raising



Pécs: Roof and Green cadastre

Kaposvár and Miskolc: Real- time air quality monitoring system

Budapest: Facilitating the usages of district heating – “Chimney free” city centre



Reduce transport emission by local actions



Szolnok: Intelligent Transport System

Cluj-Napoca



Pécs: Smart City Application

Békéscsaba, Eger, Tatabánya: Mini public bike system



Tatabánya: Measuring and information gates



Budapest: Intelligent freight system

Promotion of low emission agricultural technologies



Optimization of biomass supply chain



Awareness raising



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***Thank you for your
attention!***



<http://www.hungairy.hu> *from June, 2019*

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