

PAKS

az együttműködés városa



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The Paks case: e-bus development with continuous stakeholder and citizen involvement – Paks Transport Ltd. (PTO of Paks)

Balázs Kiss

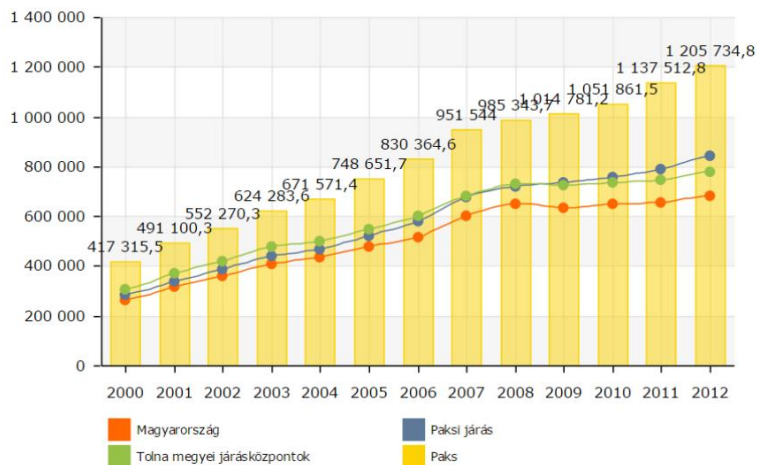
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31.03.2021. eBussed South Transdanubian interregional learning event

The Municipality of Paks - general issues in the local transport system

- **18,788 (2018) inhabitants;**
- **154,08 km²;**
- **Around 1500 local businesses, the biggest is by far the Nuclear Power Plant**
- **Favorable income situation – high car ownership rates**
- **Construction of a new nuclear power plant – but also developing a local smart grid (Protheus Holding Plc. -> Paks Transportation Ltd.)**
- **Increased population, increased traffic**





Planning ahead

Initiated by the Municipality of Paks:

- **Involvement of ELENA-funding as part of a bigger smart-grid project**
 - Protheus Holding Plc. and later the Paks Transportation Ltd.
- **SUMP & Transportation Intervention Plan outlining main activities**
 - In anticipation of the new Nuclear Power Plant, therefore:
 - New roads
 - New buses & routes
 - Facilities, bicycle roads, parking spaces, traffic management in the city centre, bottlenecks, etc.
 - Accounting for around roughly 15 million EUR



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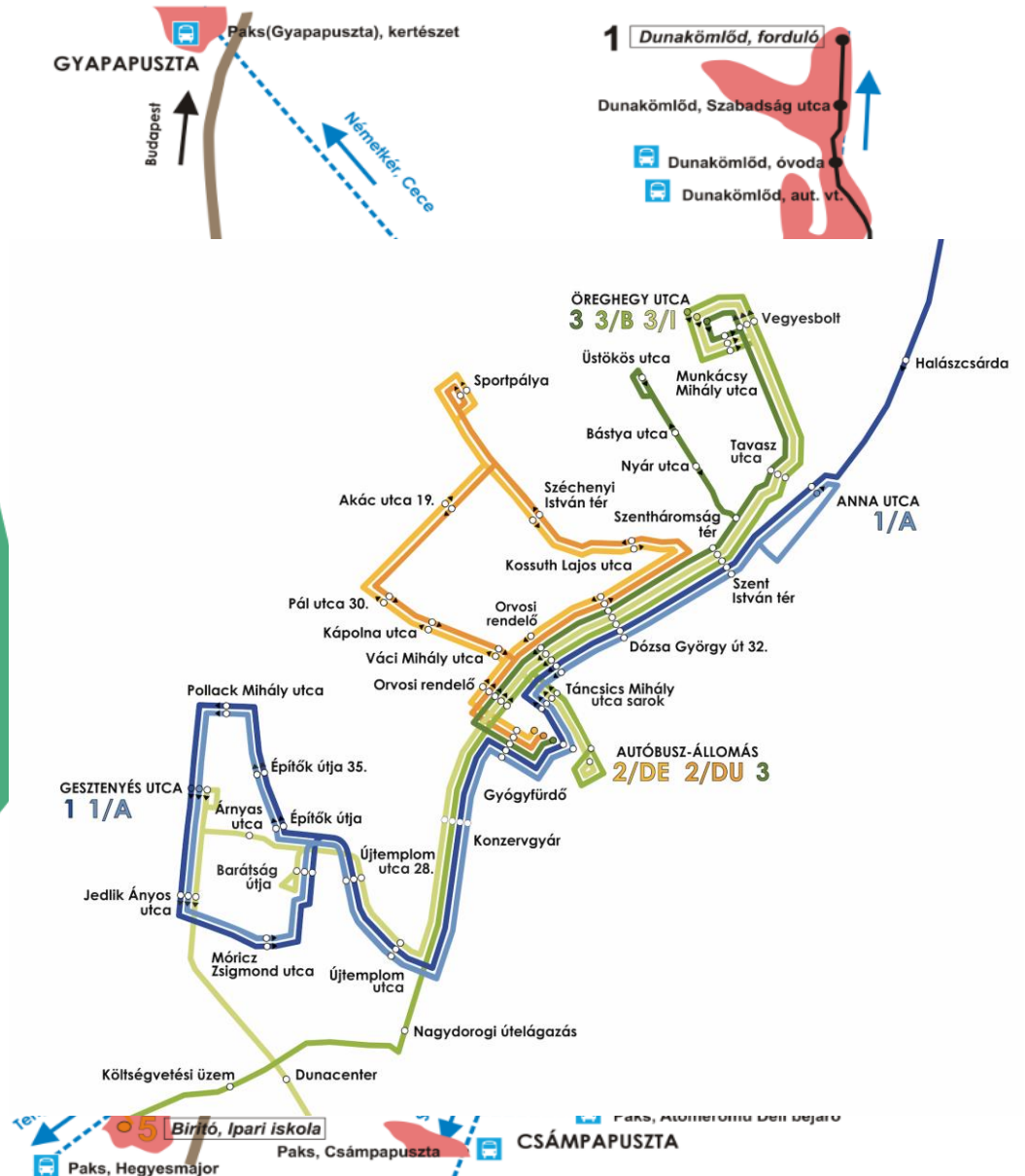


European Union
European Regional
Development Fund

Implementing the Plan

Creating a new network

The Municipality of Paks ordered a concept from the Institute for Transport Science to recreate and refresh the public transportation system





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Implementing the Plan

Creating a new image

6 solo and 4 mid-sized buses were procured, with 63 and 44 passenger capacities, respectively

- Training for the drivers long before the procurement
- Setting up management





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Implementing the Plan

Creating a new company

The Municipality and the Transportation Ltd. signed a contract for performing public services in terms of public transport management and supplying local public transportation

- As planned in the ELENA application, a separate entity manages local public transportation
- Procurement processes are handled by the Municipality



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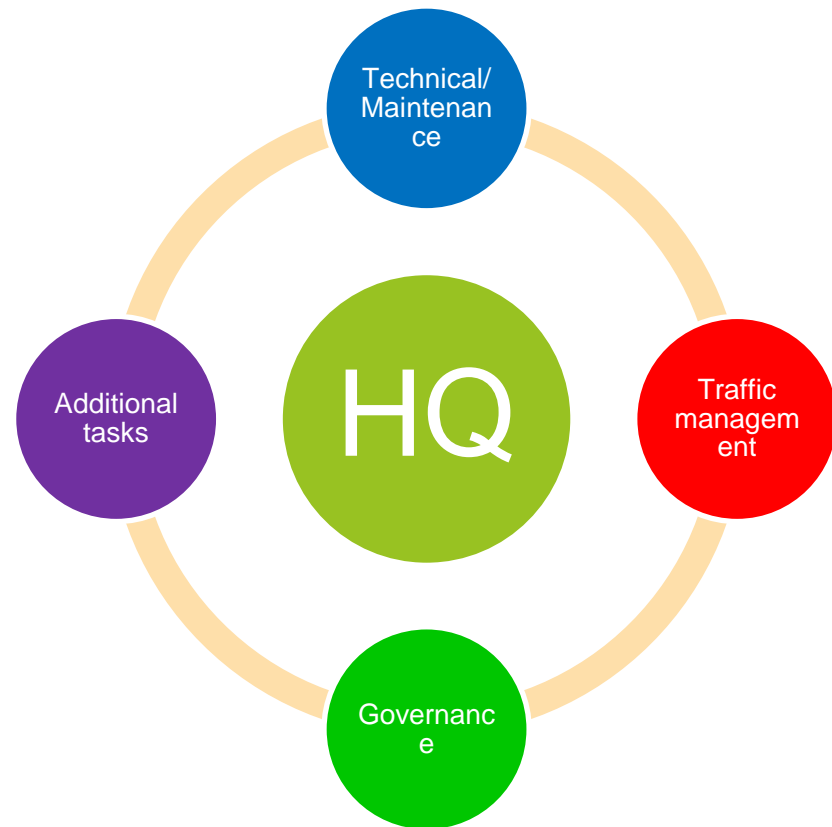
Implement the plan

Establishing new premises

Charging, maintenance works and regular checks will be done at the new headquarters as well as offices spaces will be provided



Paks Város Önkormányzata megkezdte a járművek tárolására és javítására szolgáló telephely kialakítását.





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The public transport service was launched on the 1st of February, 2021

- **200km with one charge**
- **Driver are happy, buses are easy to drive**
- **Number of passengers is hard to tell due to lockdown**
- **User are generally happy, clock-face scheduling makes planning easier, the new network is more usable**
- **Unexpected criticism: families with 2 or more cars don't see why this is useful**

Source: Paks II



Further along the way

The Protheus project

The Protheus Smart Grid project does have several more elements:

- **Further charging points (public/semi-public) to boost transition/electrification**
- **Creating e-mobility plans in the Central Danube Region (99 settlements)**
- **Establishing community car-sharing systems**
- **Creating a regional energy map**
- **Pinpointing bottlenecks in the regional distribution network**
- **Creating network development plans**
- **Energy community (University of Pécs, PIP Nonprofit Zrt., E-ON, Protheus Holding)**



Further along the way

The Protheus project

Charging services for electric vehicles:

- Paks 2 related regional public transport
- Paks, Szekszárd and Kalocsa public transport
- Regional car sharing
- Local taxi service
- Private electric car owners

System reserve service for the system operator (TSO)

- Automatic Frequency Restoration Reserve (aFRR+) service based on the PV panels and storage system

Saving costs of system usage fee

- System usage fee is bonded to the use of power grid, paid by the consumer for the TSO
- Electricity produced by PV systems can be used by the EV chargers directly or indirectly through the energy storage system
- Due to local energy consumption, operation of chargers requires less supply from the power grid which results in lower costs by saving system usage fee



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Thank you!

Questions are welcome!



Project smedia