

ENVIRONMENT-FRIENDLY DEVELOPMENT OF PUBLIC TRANSPORT IN DEBRECEN.

22 01 2013 Szeged

**Presented by: Mr. Csaba Pongor
Technical Director**



Presentation topics

- 1. Historical review, main activities of DKV Zrt.**
- 2. Recent development of community transport in Debrecen:**
 - Trolleybus vehicle-reconstruction program in 2005-2007**
 - Construction of the CIVITAS II. GPS-based traffic control and passenger information system in 2006**
 - Modernization of passenger transport by buses in 2009**

Presentation topics

3. Large-scale European Union projects:

- **Development of public tramway network in Debrecen, construction of Tramway No.2.**
- **Realization of a Multimodal Transport Centre (under preparation)**



Debrecen is the second largest city in Hungary.
Population: 210 thousand people
With agglomeration: 430 thousand people



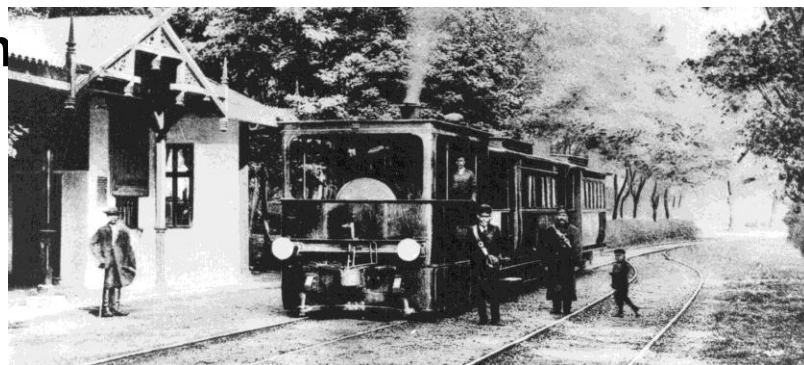
1. Historical review

- **DKV Zrt. and its legal predecessors in the service of the population for 129 years (1884.07.02 DHV Rt.)**

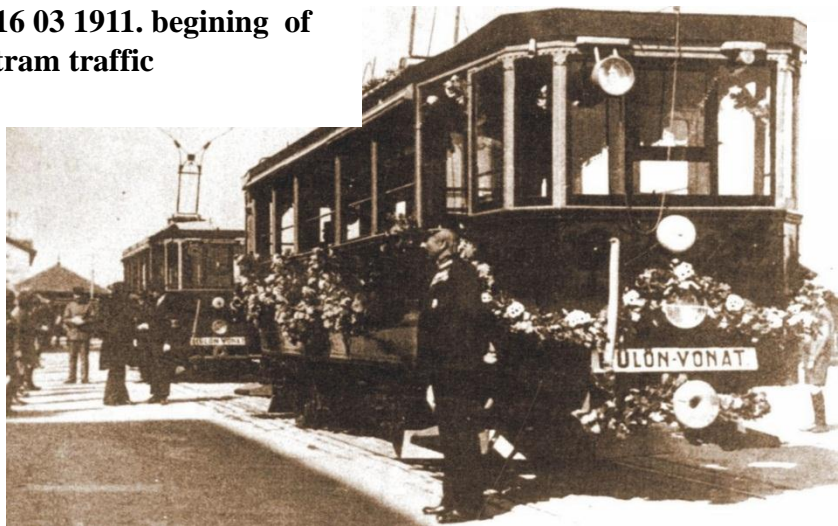
Omnibusz 1863



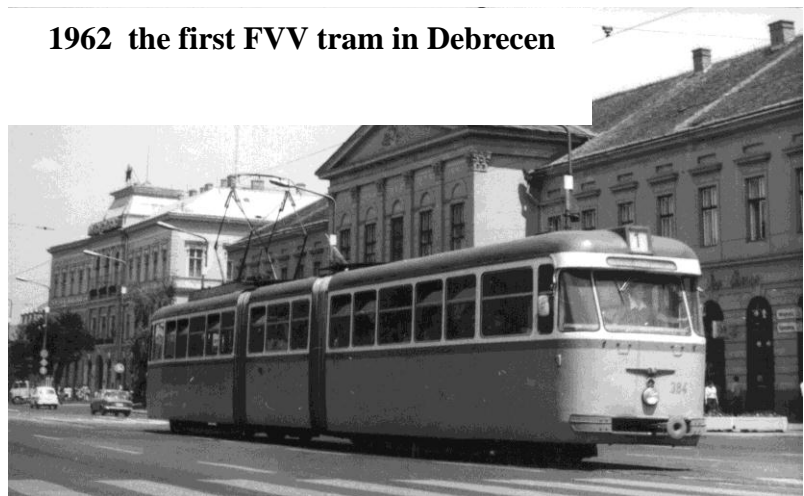
10. 02. 1884. DHV Co. stem traction city tram



16 03 1911. begining of tram traffic



1962 the first FVV tram in Debrecen



1. DKV Debrecen Transport Service Co. 1884-2013



1. Main activities of DKV Zrt.

a, features of tramway traffic

- one route
- length of tramway: 10.3 km
- number of passengers carried per year: 18.200 thousand
- 11 pc of KCSV6 and 8 pc of FVV type vehicles



1. Main activities of DKV Zrt.

b, features of trolleybus traffic

- three routes
- length of catenary network: 12.2 km
- number of passengers carried per year 13.700 thousand
- 5 pc of Ganz-Solaris T12; 5pc of Ganz-Solaris T12-D; 11 pc Ganz-Skoda Solaris T12-D2; 1pc of MAZ 103T; 6 pc of ZIU-9; 4 pc of IK 280-T type vehicles



1. Main activities of DKV Zrt.

c, features of bus traffic

- 46 routes
- number of passengers carried per year 75.000 thousand
- 100 pc of VOLVO B9L – ALFA CIVIS 12 type solo buses,
- 40 pc of VOLVO B9L – ALFA CIVIS 18 type articulated buses



1. Main activities of DKV Zrt.

d, Operation of pay parking lots

- 5128 pc of pay parking lots
- 124 pc of Siemens prism parking machines
- mobile phone parking system





1. Main activities of DKV Zrt.

e, operation of deep garages

- 4 pc of deep garages, 557 parking

Bethlen utcai



„Halköz”



Kölcsey Központ



„Táblabíróság”



2. Trolleybus vehicle-reconstruction (2005-2007)

- 5 pc of Ganz Solaris Trollino 12-type trolleybuses of normal operation mode (2005)
- 5 pc of „self-propelled” Ganz Solaris Trollino 12D-type trolleybuses (2005)
- 11 pc of „self-propelled” Ganz Skoda Trollino 12-D-2 (2007)
- 1 pc of Ganz MAZ 103T-2-type trolleybus (2007)
- Total volume of investment: 1.800 M HUF



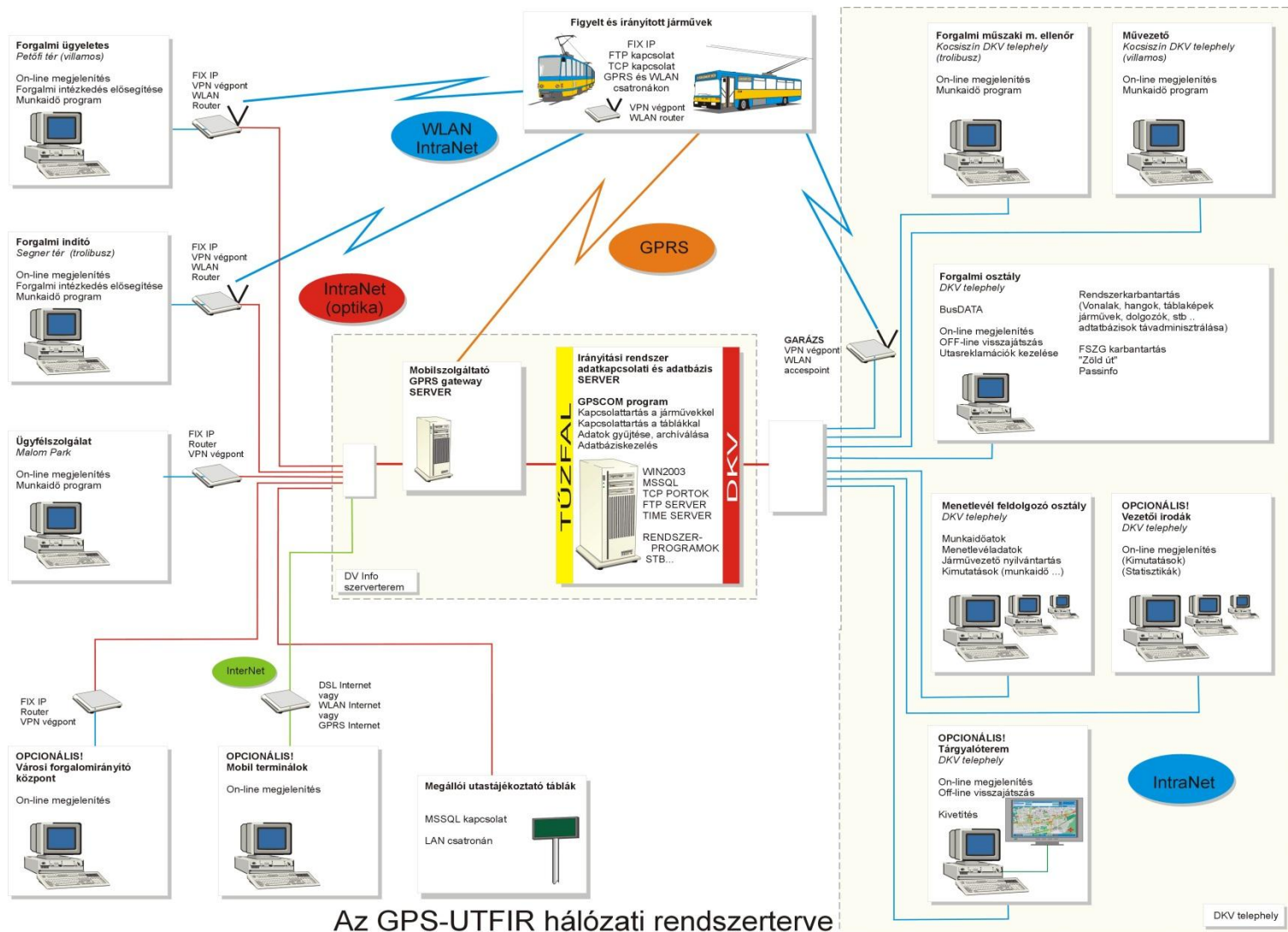


2. Trolleybus vehicle-reconstruction (2005-2007)

Out of the procured 22 vehicles 16 are also capable of self-propelled Diesel aggregate operation mode



2. CIVITAS II (2006) Construction of a traffic control and passenger information system



Az GPS-UTFIR hálózati rendszerterve



2. CIVITAS II.

Real-time passenger information system on trams and trolleybuses and in tram stopping points. (2006)

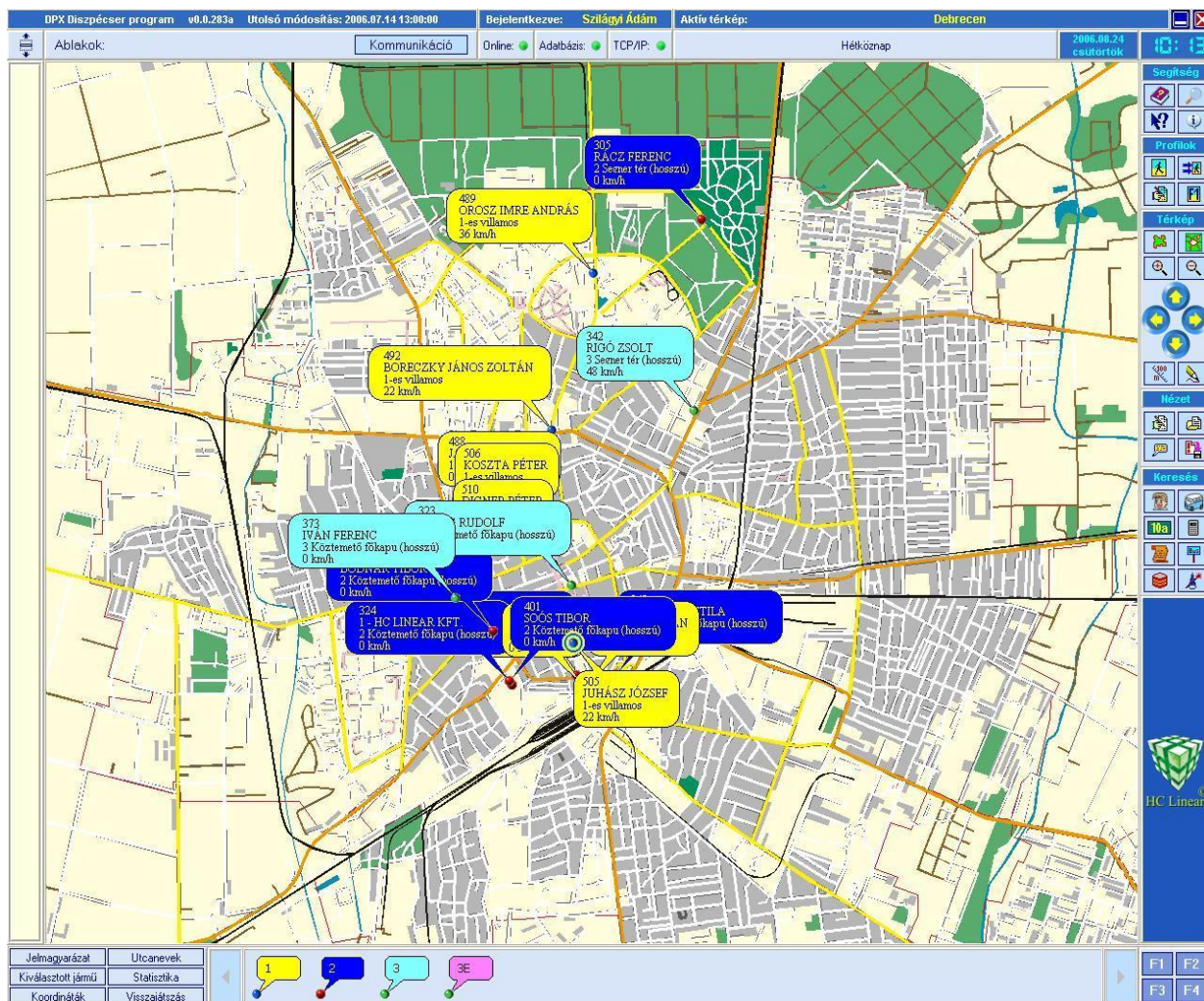
Total amount of project: 160 M HUF

EU support: 36 %



2. CIVITAS II.

GPS -based traffic control system

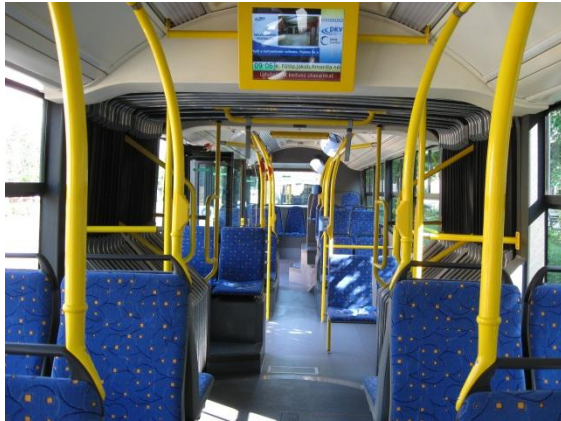




Intertanker



2. Modernization of bus traffic (2009)



Preliminaries – „milestones”

- **The General Assembly of Debrecen Town of County Rank, in compliance with Article 6. Act of XXXIII. of 2004, brought its decision on announcing a tender on the performance of scheduled passenger transport by bus in the framework of a public service contract in the administrative area of Debrecen Town of County Rank on 21 February 2008.**
- **The invitation of tenders is published on 19 March 2008.**
- **In accordance with the decision of the General Assembly of Debrecen Town of County Rank on 25 September 2008, the successful tenderer was the Cívisbusz Konzorcium.**
- **The first CÍVISBUSZ bus-line was launched at service start on 01 July 2009.**
- **Volume of development: 11.000 M HUF**

Most significant tasks included in the tender

- Construction of a GPS-based traffic control system.,
- **Operation of a bus fleet of 100% uniformly manufactured, air-conditioned, low floor vehicles in compliance with EURO 5 environmental standards.**
- Introduction of GPS-based acoustic and visual passenger information system in the vehicles.
- Development of an electronic passenger information system of higher quality than the present system of information boards at stopping points, in Nagyállomás, Segner Square, Doberdó Street terminal points, and also in Kossuth St., and at the Klinika (Clinics) stops.
- The deviation of the planned passenger capacity from the present one will not exceed 5 % on a yearly basis.
- The rate of annual tariff rise will not exceed current inflation.



Intertanker 

Start (3.30.00 01 07 2009)





Distribution of tasks in the Consortium

Intertanker



- **INTER TAN-KER Tanácsadó és Kereskedelmi (Consulting and Trading) Zrt.:**
 - provision of the vehicle fleet, construction of premises; maintenance, cleaning, overhaul and repair of vehicles, operation of routes.
- **DKV Debreceni Közlekedési Zrt.:**
 - planning of community transport tasks, preparation of time-tables, organization and control of traffic, human resources management (drivers, dispatcher personnel), sale of passes.



Intertanker 

Bus depot



GPS-based acoustic and visual passenger information system on vehicles





Intertanker



Modernization of bus traffic

Real-time passenger information system at stopping points



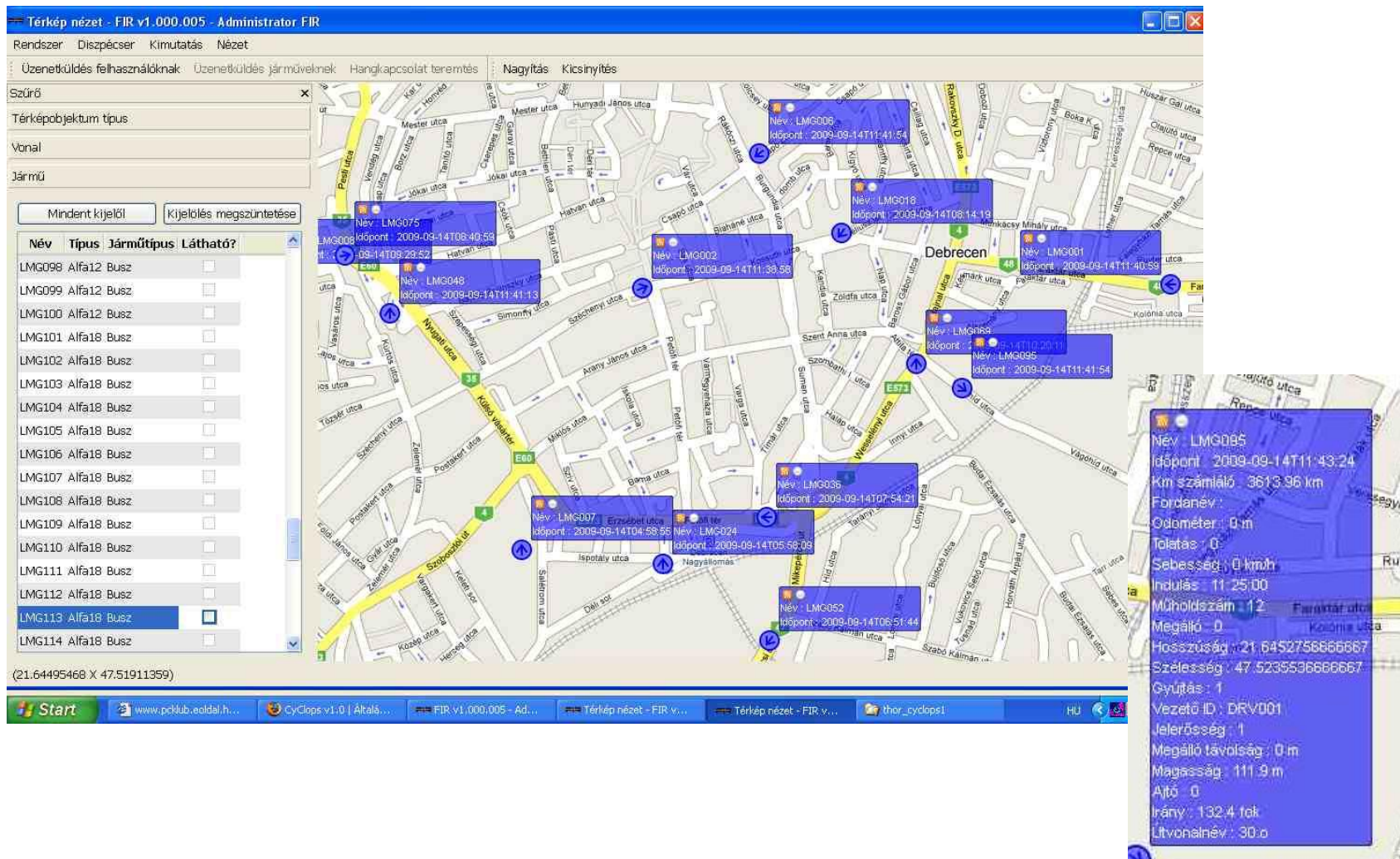


Intertanker



Modernization of bus traffic

GPS-based traffic control system





3. Construction of Tramway No. 2. in Debrecen

Key elements of project:

- **Number of population directly affected by the project: 80.000 people**
- **Number of total affected population: 150.000-200.000 people**
- **Total investment costs:**
17. 569 M HUF (with the procurement of 18 tramcars)
- **Rate of support: (89.7%, there of 80% EU)**
- **Realization of project: 2010-2014**



Planned track of Tramway No.2.

- Nagyállomás
- Piac u.
- Hunyadi u.
- Csemete u.
- Dózsa György u.
- Nádor u.
- Thomas Mann u.
- Mikszáth K. u.
- Békeassy u.
- Kartács u.
- Doberdó u.



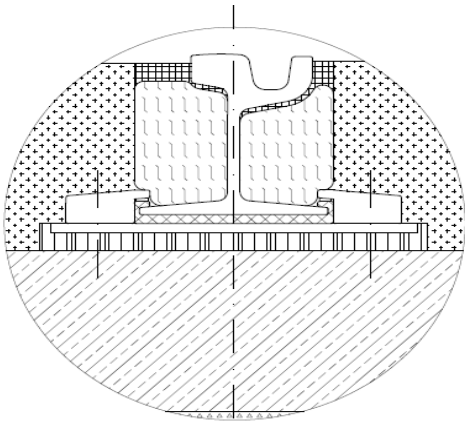


3. Construction of Tramway No.2.

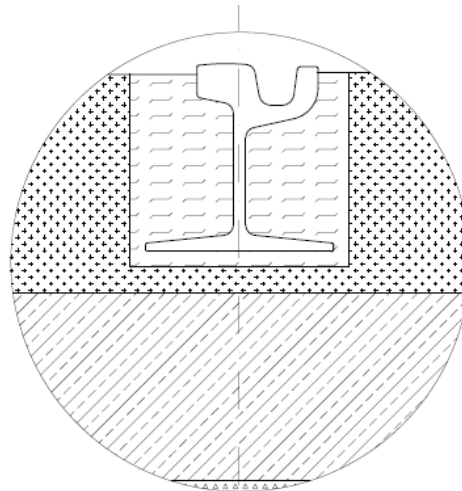
Most significant elements of the project

- Construction of tramway (up to 8.000 of track linear meter, 11 group detours)

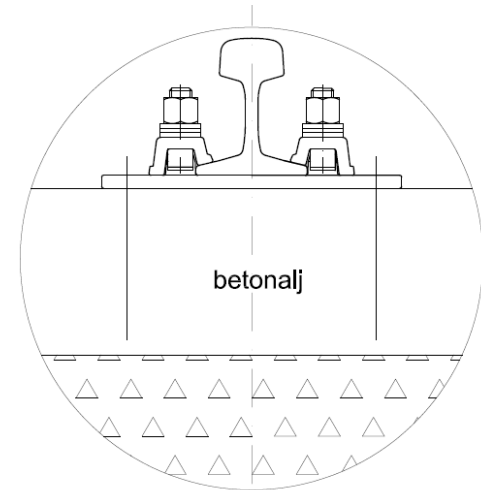
Track structures of flexible abutment and continuous track-bedding



Ortec isolast



Edilon



Grass-covered track



3. Construction of Tramway No.2.

Most significant elements of the project

- **Construction of tramway catenaries and an energy supply system (two transformers, up to 9.000 m of catenary, 250 pc of catenary bearing columns)**
- **Reinforcement of the current supply network for the joint section of tramways No.1 and No. 2. (modernization of feeder and forth rail cable network in the length of up to 1.500 m)**
- **Platform construction (31 pc)**
- **Other additional constructions, necessary public utility renovations (utility relocation along up to 9.000 m, road construction of 25.000 m²)**
- **Procurement of tramcars (18 pc)**
- **Technology development on premises, construction of a depot**



3. Construction of Tramway No.2.

Current status of project

- **The public procurement process for the selection of the enterprise to perform implementation has ended.**
- **Successful tenderer: ATK-Debrecen Konzorcium
(Name of Leader: Arcadom Építőipari Zrt., Name of Member 1.: Tóth T. D. Kft., Name of Member 2.: Keviép Építőipari és Kereskedelmi Kft.)**
- **Net offer price: 7.547.051.200.- HUF**
- **Expected date of completion: december 2013**



What is ready....



What is not.....





The new tram-depot.



3. Construction of Tramway No.2.

Projekt status: - procurement of vehicles

Technical requirement of new trams car.

- **18 pc equivalent production,**
- **passenger cabin in one block**
- **100% low floor,**
- **normal rail-gauge,**
- **maximum 32.5 m length**
- **2650 mm width,**
- **air conditioner,**
- **600 V DC,**
- **two driver cabs and two sides doors**
- **delivery of vehicles spert parts**
- **delivery of technical equipment**



3. Construction of Tramway No.2.

Current status of project: - Production of vehicles

- Company awarded under the best-value-for-money procedure:
- Construcciones y Auxiliar de Ferrocarriles S. A. (CAF)
- Net offer price: 37.155.146 €





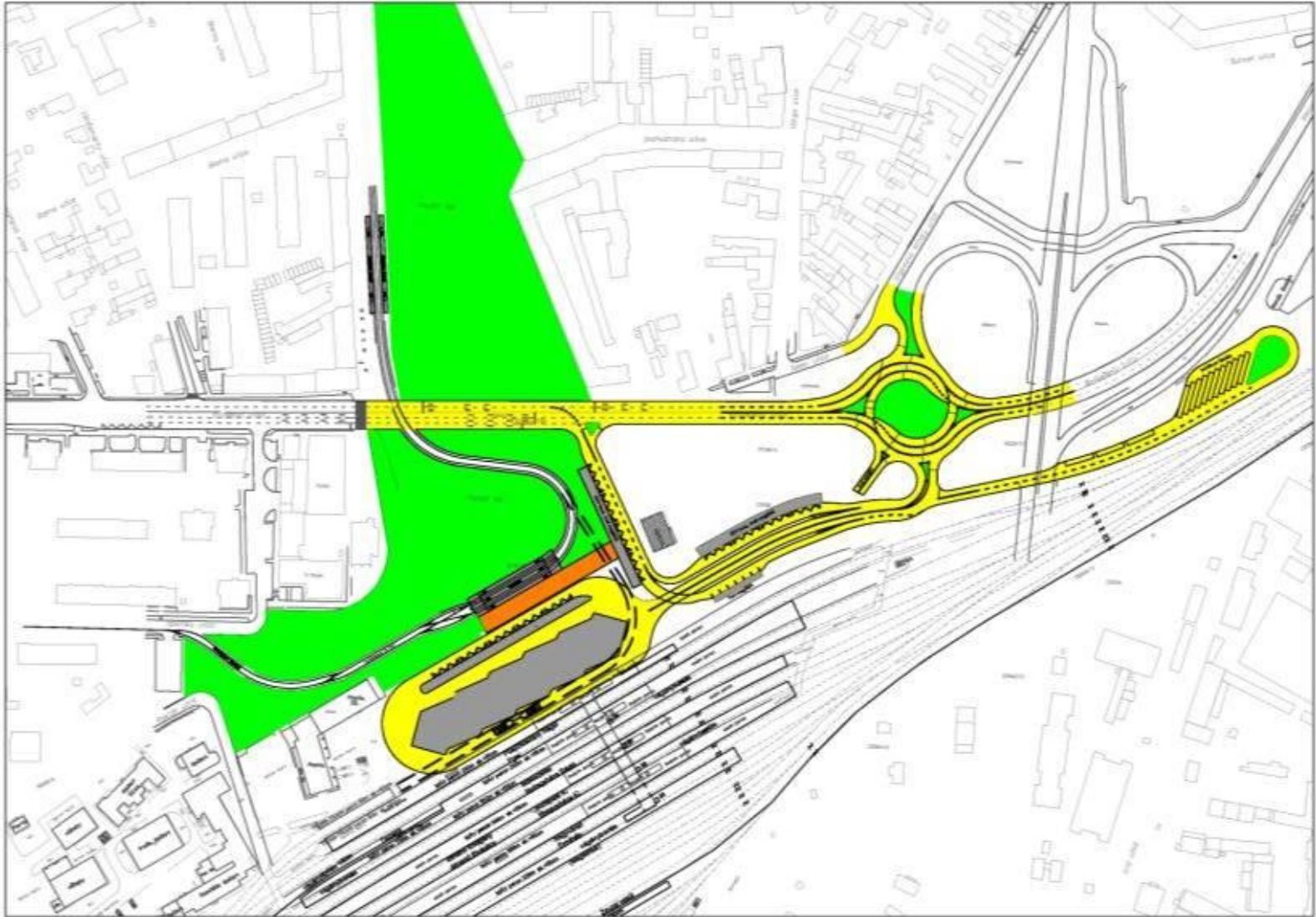
3. Construction of Tramway No.2. Production of vehicles

- **Date of signing the contract: May 2011.**
 - **Delivery of prototype vehicles in May 2013.**
 - **Delivery of the last (18.) vehicle in December 2013.**
 - **Placing the last (18.) vehicle into operation end of March 2014.**



3. Implementation of the Multimodal Transport Centre

- **Rational transport system**
- **Model-like community interconnection point**
- **Placement of inter-urban bus terminal**
- **Improvement of services for customers**
- **Centralized and uniform services for customers**
- **High-level environmental renewal**
- **Well-arranged pedestrian pathways and commercial areas**
- **Planned site: Petőfi Square**







Intermodális személyszállítási központ létrehozása Debrecenben III. változat

Látványterv 02 2011.07.20.





Lessons from developments:

The infrastructures of public transport let be establishment or rolling stock, is not enough to build or renovate, but operating these projects should be sustained and financed in the long run.

Vision of Debrecen public transport

The public transport let be:

- modern
- competitive over private traffic
- affordable for passengers
- financed by order
- sustainable in the long run



Thank you for your kind attention!