

Peripheral Access



TAKING  
COOPERATION  
FORWARD

📍 CITY INDUSTRY DIALOGUE - CONFERENCE: THE FUTURE OF PUBLIC TRANSPORT NOT ONLY IN CITIES - MODERN TECHNOLOGIES IN PUBLIC TRANSPORT

Brno, 5th of June 2019

● **Electronic ticketing based on bank cards in the South Moravian Region**

● KORDIS JMK, Květoslav Havlík



European Union  
European Regional  
Development Fund

Past

Present

Future

Of the electronic ticketing  
in the South Moravian Region and Brno



# INTEGRATED PUBLIC TRANSPORT SYSTEM

- the integrated public transport is operated already 15 years in the South Moravian Region and in Brno.
- unified ticketing and the same ticket price - regardless to operator.
- most of the tickets are still on paper
- vast majority of users has a seasonal tickets (Brno 80%, Region 60%)
- for a long time we consider to introduce the electronic ticketing but the technology was still not developed enough.



# FIRST ATTEMPTS

- about 4 operators already had smart cards for their cities when they enter the integrated system. Security was not sufficient, not possible to combine more operators under one card.
- first attempts - about 10 years ago – still based on smart cards, no other solution possible. The tenders were not successful.
- even in that time it was clear, that new solutions will come very soon – quick internet via mobile phone and contactless smart cards.



[www.mifare.net](http://www.mifare.net)

# POSEIDON APP + SMS TICKETING

- **SMS ticketing – simple solution but not suitable for regional transport, difficult ticket inspection.**
- **2014 - the Poseidon App – the mobile phone based ticketing and information system.**
- **first system in Central Europe that covered all types of public transport – trains, buses, city public transport.**
- **simple but robust solution, very easy for implementation.**
- **based on prepaid model**
- **rapid growth of users last year**



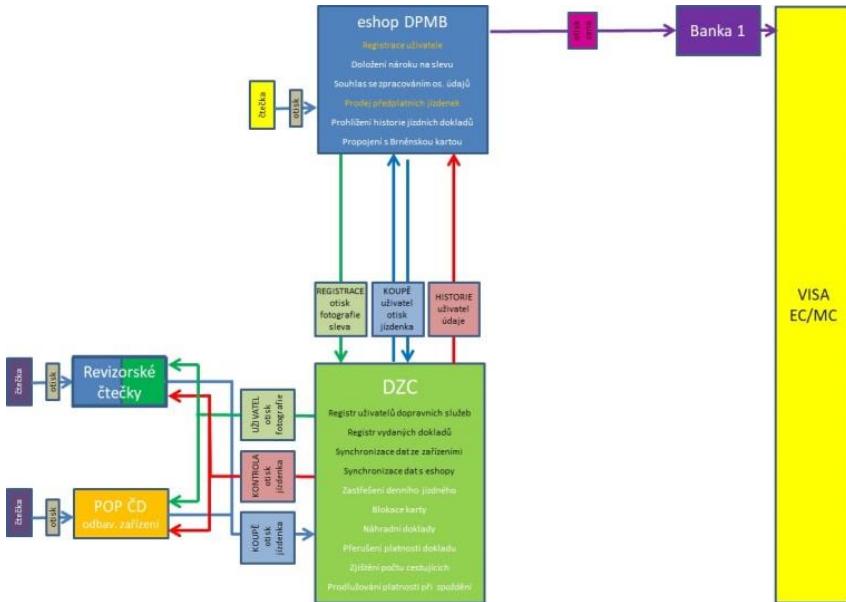
# TICKETING BASED ON BANK CARDS

- 2015 - KORDIS and Brno PT company started to think about centralized system based on bank card as an identifier.
- Working group on the national level set up some rules and ideas.
- The most important for Brno and IDS JMK – to introduce solution for seasonal tickets.
- From January 2017 the system started in Brno but the tickets are checked in all the region.

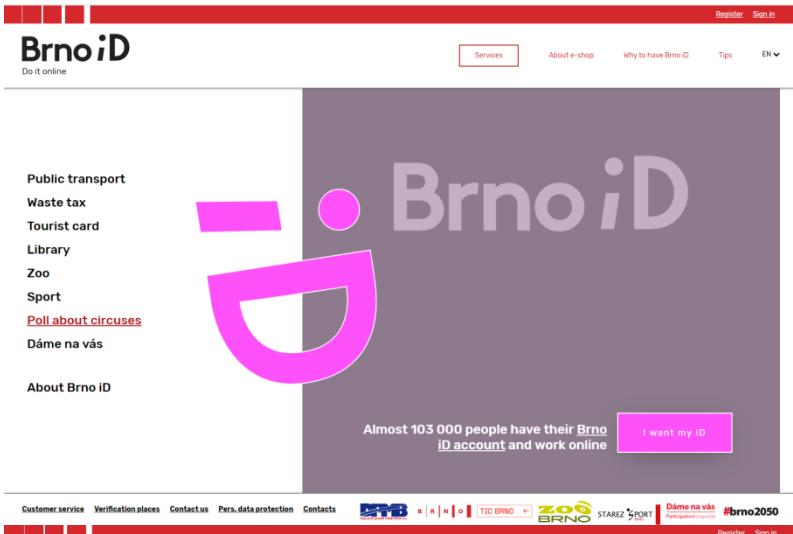


# FIRST PHASE

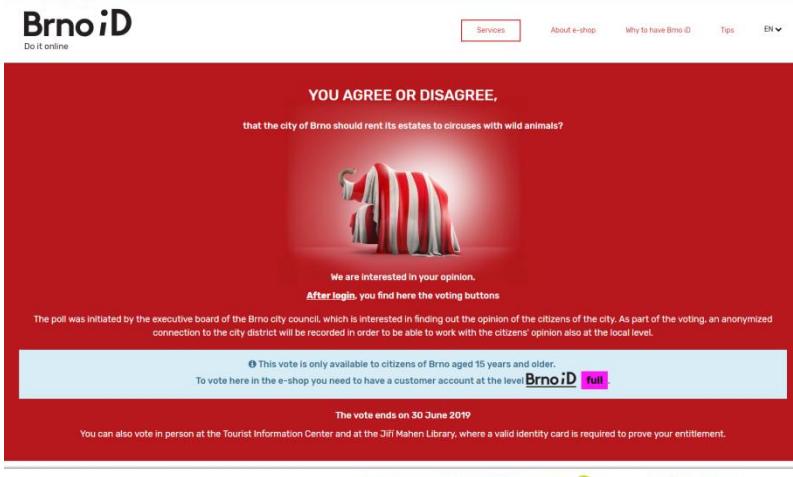
- Bank card = identifier, nothing is loaded in it.
- Two main players:
  - KORDIS - back office and distribution centre
  - DPMB - eshop for Brno tickets
- Other players:
  - ticket inspectors DPMB + KORDIS
  - train inspectors and drivers
- Not only bank card - but QR or mobile possible.



- The city-environment growing on the electronic ticketing system.
- At the moment >97.000 users.
- Tourist Card, Libraries, Zoo, sport activities included.
- Payments for city waste disposal.
- Polls
- Many possible add ons.
- The system is operated by Brno public transport company.



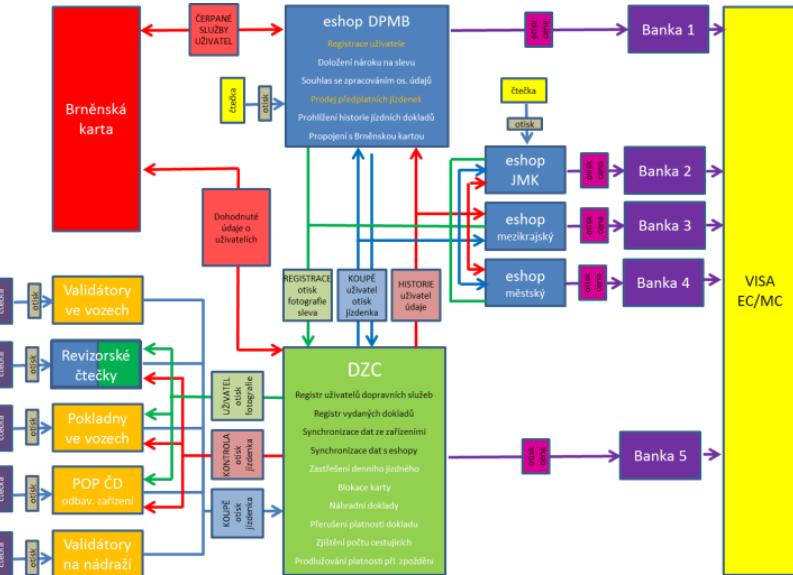
The screenshot shows the BrnoID homepage. The top navigation bar includes links for 'Register', 'Sign in', 'Services', 'About e-shop', 'Why to have Brno ID', 'Tips', and 'EN'. The main content area features a large BrnoID logo with a pink and grey design. To the left, a sidebar lists services: 'Public transport', 'Waste tax', 'Tourist card', 'Library', 'Zoo', 'Sport', 'Poll about circuses' (underlined in red), and 'Dáme na vás'. Below the sidebar is a link to 'About Brno ID'. A text box in the center states 'Almost 103 000 people have their Brno ID account and work online' with a 'I want my ID' button.



The screenshot shows a poll page on the BrnoID website. The top navigation bar is identical to the homepage. The main content features a large image of a white elephant with red and white stripes. Text above the image reads 'YOU AGREE OR DISAGREE, that the city of Brno should rent its estates to circuses with wild animals?'. Below the image, a message says 'We are interested in your opinion. After login, you find here the voting buttons'. A note at the bottom states 'The poll was initiated by the executive board of the Brno city council, which is interested in finding out the opinion of the citizens of the city. As part of the voting, an anonymized connection to the city district will be recorded in order to be able to work with the citizens' opinion also at the local level.' A blue button at the bottom right says 'BrnoID full'. The bottom navigation bar includes links for 'Customer service', 'Verification places', 'Contact us', 'Pers. data protection', 'Contacts', 'DPMB', 'TIC BRNO', 'ZOO BRNO', 'STAREZ SPORT', 'Dáme na vás', '#brno2050', 'Register', and 'Sign in'.

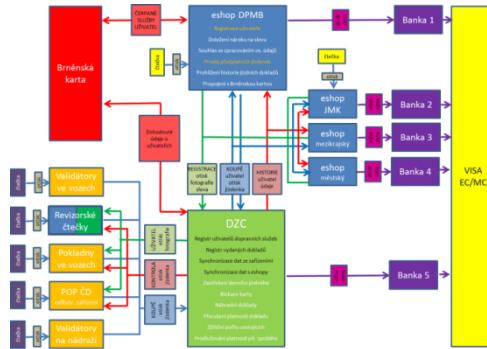
# CLOSE FUTURE

- electronic seasonal tickets will be sold for all system including the other cities with public transport
- e-shop operated by KORDIS which will sell prepaid tickets for all the region
- new on-board computers for regional buses
  - QR code reader
  - bank card reader
  - central database of tickets



# NEXT DEVELOPMENT

- single ticketing
- Brno PT company's vehicles equipped by validators
- for travelling within Brno just approaching the card needed
- for travelling outside Brno to choose the ticket needed
- similar equipment for railway stations / trains
- daily capping calculated by KORDIS's system.



# WHAT COULD COME NEXT?

- Tarif and ticketing systems are changing approx. once per 10 years.
- be in be out systems (Galileo)?
- free tickets?
- IoT?
- Mobile phone as ticket?
- Face recognition?



# THANK YOU FOR YOUR ATTENTION!



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