

# Towards the Information Society!

## ICT & HighTech for Transportation and Utilities

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# Content

- Changes in public transport
- AFC advantages
- Sofia AFC system
- Best of practice

# Changes in public transport

- General automatization of FC systems
- Demand for precise operational data
- Increased flexibility – tariffs, lines, ...
- Service to passenger » service to citizen
- Integration of transport systems
- Effort to make public transport more attractive



# AFC advantages for operator

- Precise data for transport optimization and financial support from public resources
- Fast and easy system update
- Easy monitoring of fare collection devices
- Smoother integration of other transp. companies
- Easier work for drivers, inspectors and other employees
- Decrease of deadheads



## AFC advantages for passengers

- Card is always in hand, no need to buy tickets
- Passenger can buy most suitable tariff on board
- No need to put the card out of the wallet
- Only one card for various transport operators
- Possibility to pay for fellow passengers
- Possibility to pay only for travelled distance

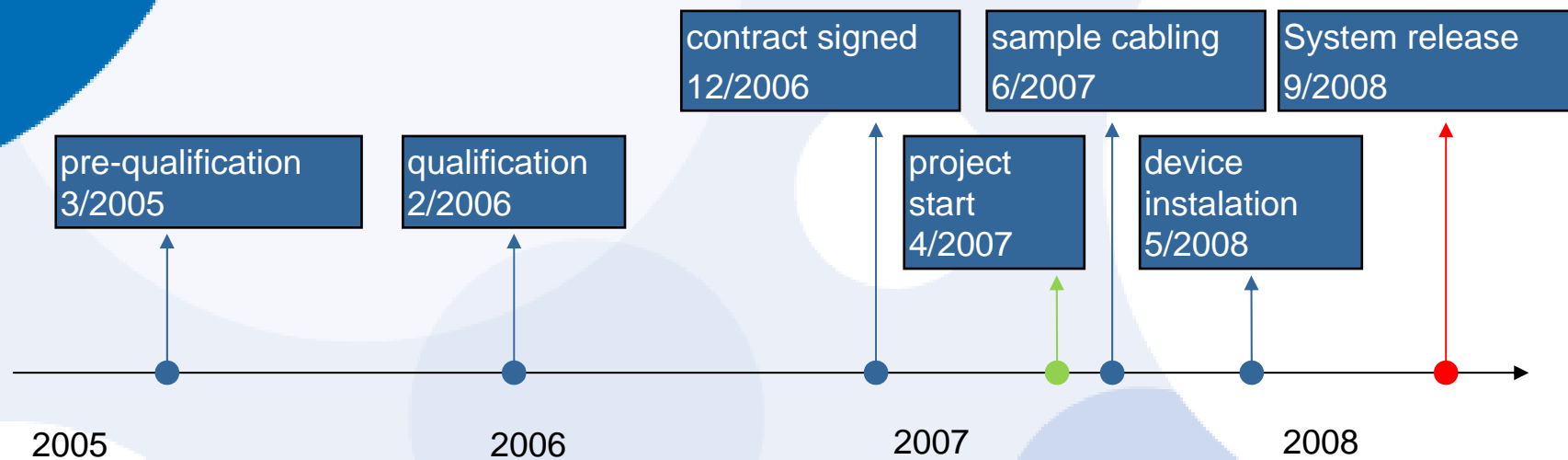


# Sofia ticketing system – Basic Features

- 466 trams and trolleybuses
- 1830 card validators
- 466 control units
- **275 000 issued cards**
- 120 vehicle inspection readers
- 73 POSes



# Time schedule



## Further development

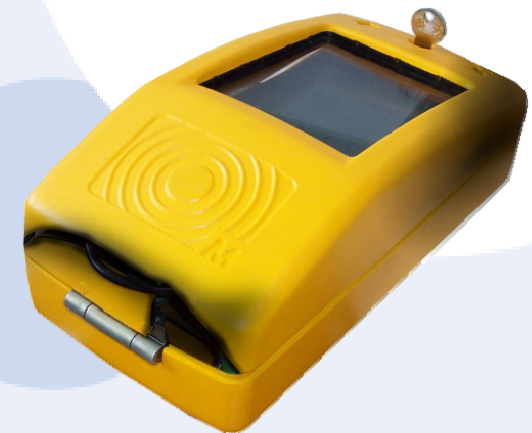
- city card project – parking, library, cultural institutions, sport institutions, schools, government, ...
- enhancement to whole transport system
- self service kiosks/TVM
- internet applications: e-shop
- commercial applications on card





## Crucial points

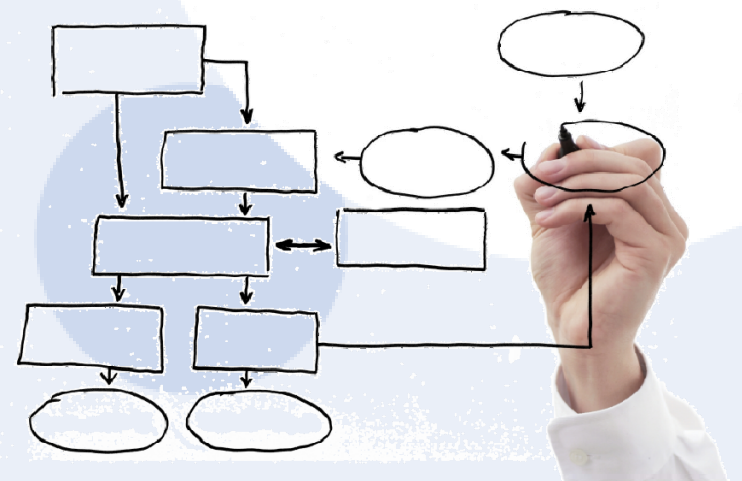
- Language barrier (verbal, in writing)
- Passenger habits
- Lower computer knowledge
- Vandalism (e.g. stolen and damaged devices)
- Fiscalization law
- Old vehicle fleet
- Unstable voltage of onboard power supply - trams



## Best of practice - timing

- Analysis, approving of technical specification – 3 months
- Production and delivery of HW – 6 months
- Vehicle cabling - 50pcs/month
- Network infrastructure - 1÷2months
- Implementation, training – 1÷2 months
- Testing period 1÷3months

**TOTAL ~ 1 YEAR**



## Best of practice - general

- FIND EXPERIENCED LOCAL ADVISOR
- STUDY LEGAL ASPECTS (technical, financial)
- EXPECT FREQUENT CHANGES
- TECHNICAL SPECIFICATION IN ADVANCE
- DIFFERENT CULTURE

**Thank you for your attention**

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