

Kapsch Telematic Services

Current challenges of Kapsch ETS in the Czech Republic.

Karel Feix, CEO Kapsch CZ, ASECAP Day Paris, May 31, 2017

125%
dedication
125 years of Kapsch

Agenda.

1. Current e-toll situation in CZ.

2. Results of e-toll system in CZ.

3. Finalizing EETS implementation in CZ.

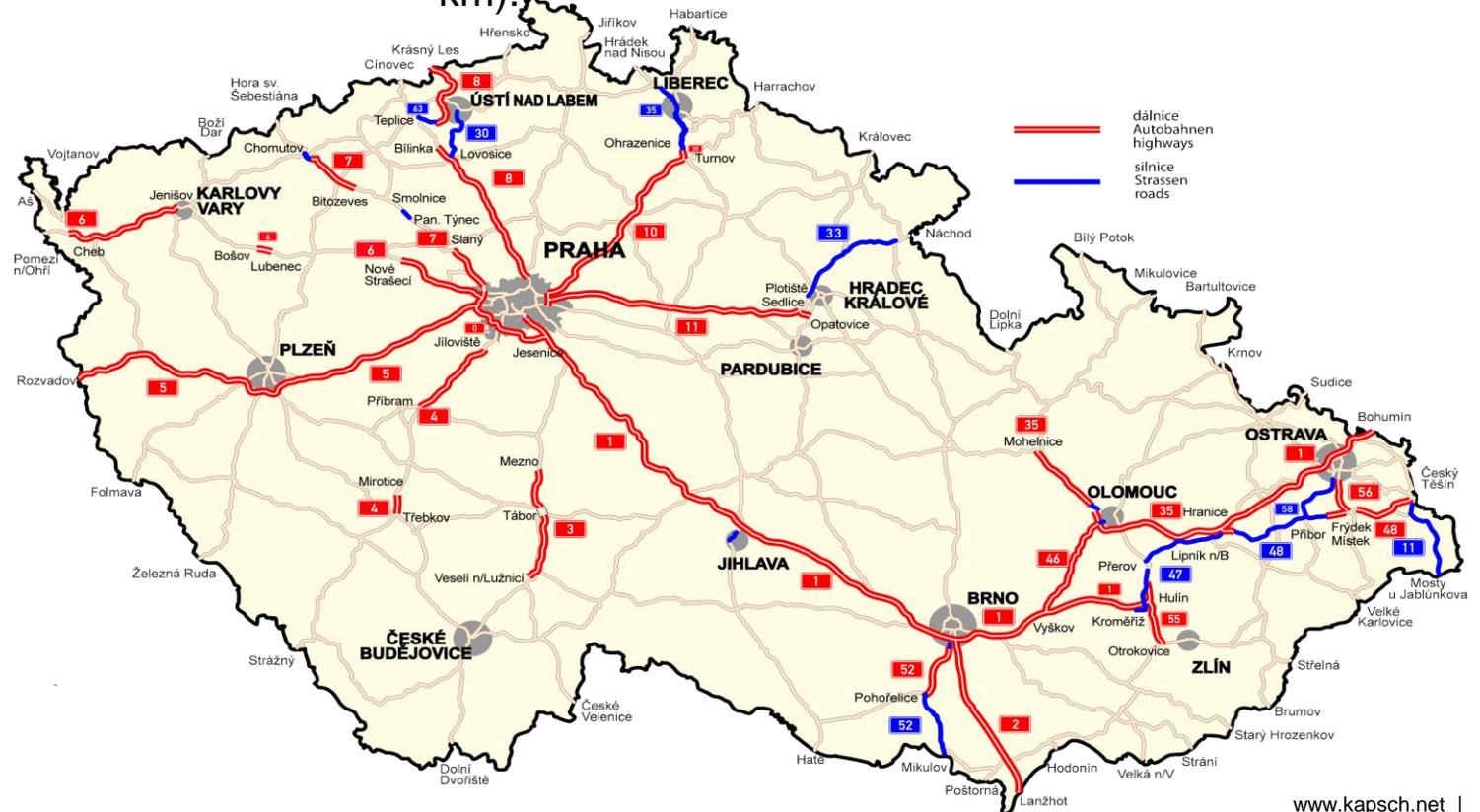
4. Environmental effects of CZ e-toll.

5. Customer care for CZ e-toll users.

1. Existing toll system in the CZ.

Brief overview of basic facts and data.

- > Toll has been collected on the Czech backbone motorway network since **1 January 2007**. Heavy trucks, vans and buses with a mass of over **3.5 tons** are obliged to pay toll.
- > The CR uses **DSRC**, the most widespread open-architecture technology, which **covers several traffic lanes without the need to stop (MLFF)**, with high efficiency in toll collection and the detection of non-payers.
- > **On-board units (OBU) are mandatory** and can be obtained against a 1,550 CZK deposit. Around 500,000 active OBU accounts are registered on the toll system.
- > **Tariffs favour buses and trucks with environmentally-friendly engines.**
- > Toll is paid on motorways and selected first-class roads which replace motorways in some places, with a total length of **c. 1,430 km** (motorways 1,227 km, 1st class 203 km).



Overview of current toll situation in CZ.

In 2006 the Czech Republic established an electronic toll system using DRSC technology, the commonest system worldwide. The system was set up by supplier and operator, Kapsch, in a record nine months. Since its launch on 1 January 2007 the system has performed reliably, with no outages in its ten years of operation.

- > **Risk-free “PPP” financing** – successful cooperation between the private and public sectors, in which the supplier financed and realised the project while bearing the entire risk of implementation and launch.
- > **High efficiency of toll collection** – over the long-term the overall efficiency of the Czech system has exceeded 99.5 % (according to an independent auditor).
- > **Source of data and information** – the toll infrastructure has for several years been a key supplier of data to the NTIC. Data gathered is used by the RMD as a planning tool for engineering works on the backbone D1 motorway. Following the addition of telematic functions the toll system is used to manage traffic, provide drivers with online information on traffic or risks in the road ahead and inform drivers of journey times to selected destinations based on the current situation.
- > **Detection of vehicles in wrong lane** – since 2012 the enhanced toll infrastructure has protected motorists on the D1, D2 and D5 motorways with a detection system for vehicles travelling in the wrong lane.
- > **Detection of overloaded trucks (WIM)** – the toll system has successfully tested the re-weighing of trucks and detection of overloaded underneath control gates during travel. Connection to enforcement means that offenders can be fined immediately.
- > **Detection of speeding motorists** – the Ministry of Transport has used, and intends to continue using, the toll infrastructure to detect speeding vehicles in modified sections of motorway.

2. Results of existing toll system in CZ.

Numbers and statistics from the previous ten years of operation.

3.02 billion

EUR collected for the SFDI roads budget during the toll system's ten years of operation.

14 %

of money collected goes toward the operation of the Czech national toll system.

1/2

of toll in the Czech Republic paid by Czech buses and trucks.

99.5 %

Is the long-term average efficiency rate of toll collection, measured by an independent auditor.

0 days

Period during which there was any kind of outage in the toll collection system during a ten-year period.

2.5 billion

kilometres on average travelled on tolled roads by trucks.

Overview of current toll situation in CZ.

The state as a good manager

The continuous modernisation and renewal of the system has ensured that the state has in its possession a consistently reliable national infrastructure system worth 222-296 million EUR, which must be taken into account by a prudent manager, as is the case in Austria, which decided to use the existing system for a further fifteen years.

Source of finance for transport

Almost 2.87 billion EUR in toll has been collected from trucks. With a good tariff policy (tolls still lower than abroad) and the opening of new motorways, the state will collect a further 1.48 billion EUR in the next three years. With minimum investment the CR can collect further billions of EUR following the tender in 2020.

Interoperability of the toll system

The Czech system is seeing the accelerated implementation of the EU directive on EETS, separating the roles of the toll system operator and service provider. It further increases the role of the RMD and reduces the dependency of the state on a single entity e.g. When purchasing OBU or ancillary services.

Toll as an ecological tool

Toll in the CR has proven itself as a major ecological tool. Tariff levels have motivated transport operators to modernise their fleets. The result? Since 2011 CO emissions by road-based goods transport have fallen by 21 %, NO by 40 % and HC by 28 %.

3. EETS opens the Czech toll system to the world.

- > **Interoperability of toll** – The CR was behind schedule on interoperability and the EC was even threatening infringement proceedings due to legal breaches. Amendments in August 2016 opened the doors to the rapid implementation of EETS. During 2017 the Czech toll system shall be modified so as to meet the legal and technical requirements for interoperability. The market in on-board units shall be opened up and the RMD shall be further emancipated in the operation of the toll system.

Date	Implementation phase
1/9/2016	Start of work on EETS
09-10/2016	Analysis and proposed EETS solution
11/2016-03/2017	Technical implementation of EETS
01-04/2017	EETS integration tests
03-06/2017	EETS acceptance tests
07-08/2017	EETS pilot operation
1/9/2017	Launch of EETS in the CR



4. Toll in the CR made a major contribution to the environment.



While toll is not suitable for the regulation of truck traffic in the regions, it has been highly effective in the Czech Republic as a tool for environmental protection. The government decided **in 2011 to use tariffs to motivate transport operators to change their vehicle fleets** for more environmentally-friendly trucks **more quickly**.

- > In the first few years, vehicles **in the EURO V emission class** were preferred through inclusion in the lowest toll-per-kilometre tariff band. The measure worked and the proportion of toll collected from EURO V vehicles quickly accelerated, culminating at **63 %** at the end of **2015**.
- > Starting in **2015** the state introduced preferred tariffs for vehicles in the **EURO VI** class. Within two years (to the end of 2016) these ecological vehicles have come to constitute **43 % of toll collected**. While the major increase in vehicles with lower tariff rates naturally reduces the absolute amount of toll collected, this is balanced by the considerable effect on the environment:

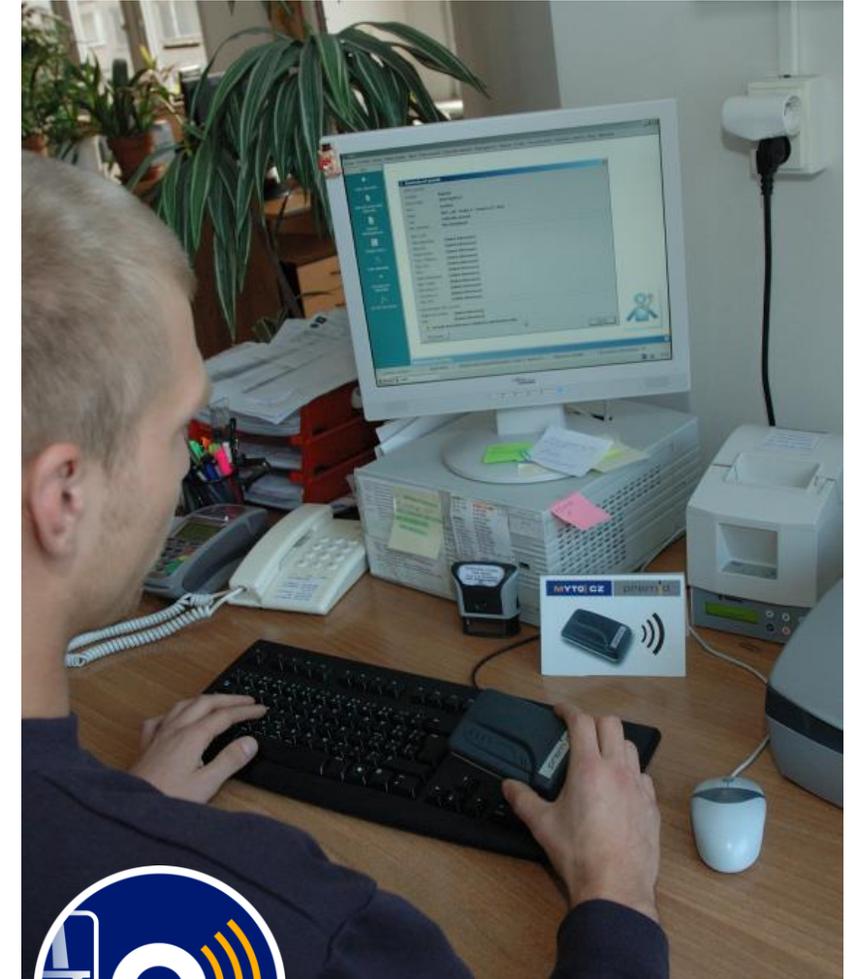
Harmful emissions from trucks	Reduction compared to 2011 and 2015
CO - carbon monoxide	- 21 %
HC - hydrocarbons	- 28 %
NO – nitrogen oxides	- 40 %

Note: with the increase in toll transactions by 15%

5. Customer care for CZ e-toll users.

Caring for the Czech toll user is one of the pillars of operating the system. Satisfied customers mean lower rates of debtors and higher state revenues. The success of the toll also depends on the positive consensus with the general public:

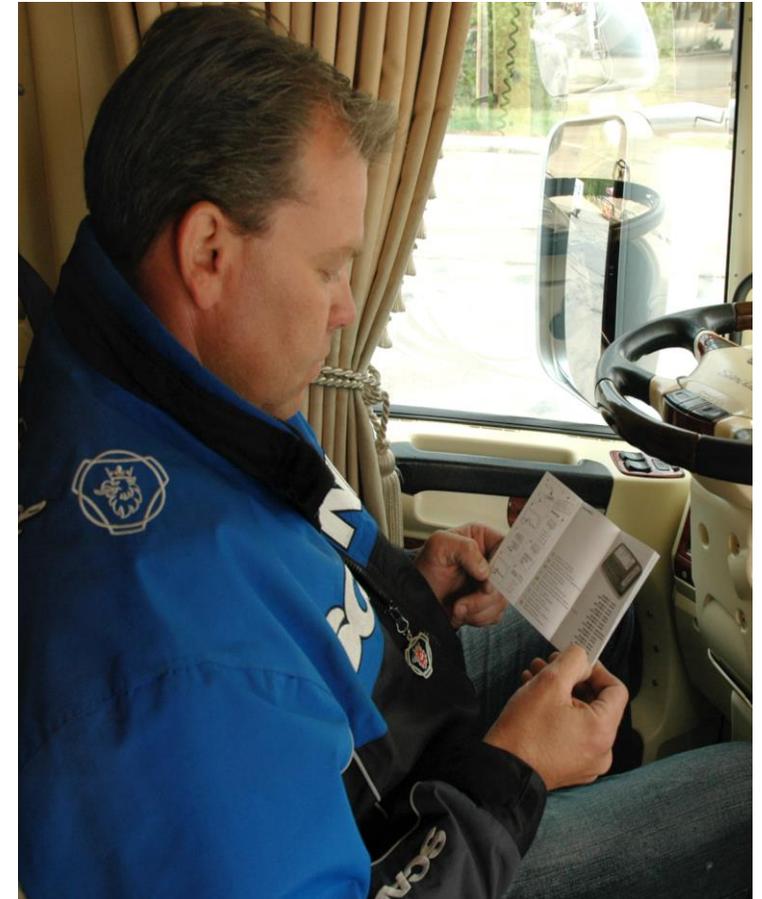
- > the media and the public are regularly informed each month of the toll results
- > Users are informed by means of awareness campaigns about changes or improvements in the system and about legislative changes to toll collection
- > running MYTO CZ mobile app for operation systems Android, Windows Phone and iOS
 - > provides drivers with access to current vehicle account information, but above all learns about the current status of credit in the prepaid OBU, shows up-to-date information on toll changes and an interactive map of service locations, calculates tolls among the specified motorway exits and provides a brief guide how to deal with the most common situations that users may encounter when paying a toll
- > quantity discounts on tolls – introduced by state introduced for users with higher tolls as a compensation for the increase in toll tariffs. Every year, about EUR 10 million is reimbursed to the carriers.
- > fails of deposits and credits - for several years it is known, that for more then one year unused OBU fails the deposit. Since the end of 2016, users who are not using the OBU are also paying for unspent toll credits as a benefit for the state. Motivation measures serve to eliminate the surplus number of OBUs in the system that are not actively used.



Users are satisfied with the toll in the Czech Republic.

Since 2012, the Czech Republic has decided to regularly check with domestic carriers and neighbouring countries how satisfied they are with the toll system, whether they have enough information, what they say about the implemented or prepared changes, etc. The annual survey, which is done by phone inquiry on the sample of 1000 respondents from the Czech Republic and five EU countries (Slovakia, Poland, Germany, Austria and Hungary) and is provided by the largest global research agency IPSOS.

- > The purpose of the research is to help identify areas that by appropriate improvements can contribute to increasing the satisfaction of users of the toll system.
- > The Czech toll system has long been perceived as very good. Carriers evaluate it as the 2nd most enjoyable system of all rated (better only German).
- > The awareness of the toll system in the Czech Republic reaches high levels and can be considered comparable to the level in Germany and Austria.
- > The maximum majority of carriers use the website as a source of information, with the quality they are very satisfied. The vast majority of carriers found all the information they were looking for. The least used source of information is MYTO CZ's mobile application.





***Thank you
for your attention.***

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