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TOLL ROAD PROJECTS

# EETS BACK-OFFICE DATA EXCHANGE BETWEEN TC AND TSP

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# EETS back-office data exchange between TC and TSP

- Current situation

- EasyGo provides a common interface between 7 TCs and 14 TSPs

- Austria
    - Denmark
    - Slovenia (in preparation)
    - Sweden

- Otherwise: Separate interfaces between TC and TSP **or no EETS implementation yet**

- Germany
    - Belgium
    - Norway (based on EasyGo)
    - Poland
    - ...

# EETS back-office data exchange between TC and TSP



- European requirement

- The EETS directive 2019/520 requires a common back-office interface between TC and TSP
  - CEN TS 16986:2015 defined in implementing act 2020/204
  - Each TC and TSP shall implement it **until 19<sup>th</sup> October 2026**
  - This European standard is outdated!
- The new European standard **EN 16986:2024** will be ready end of 2023



# EETS back-office data exchange between TC and TSP

- EN 16986:2024 was developed with participation from

- Austria
- Belgium
- Denmark
- France
- Germany
- Italy
- (Sweden)

**Their requirements are covered!**

- **No other country participated in its development!**

- Czech Republic
- Hungary
- Poland
- Slovakia
- Portugal
- Spain
- ...

**Are their requirements covered?**

# EETS back-office data exchange between TC and TSP

- What can be expected from EN 16986:2024?
  - It is not backwards compatible to CEN TS 16986:2015, defined in the implementing act
    - It does not make sense to start a new implementation of the old standard now!

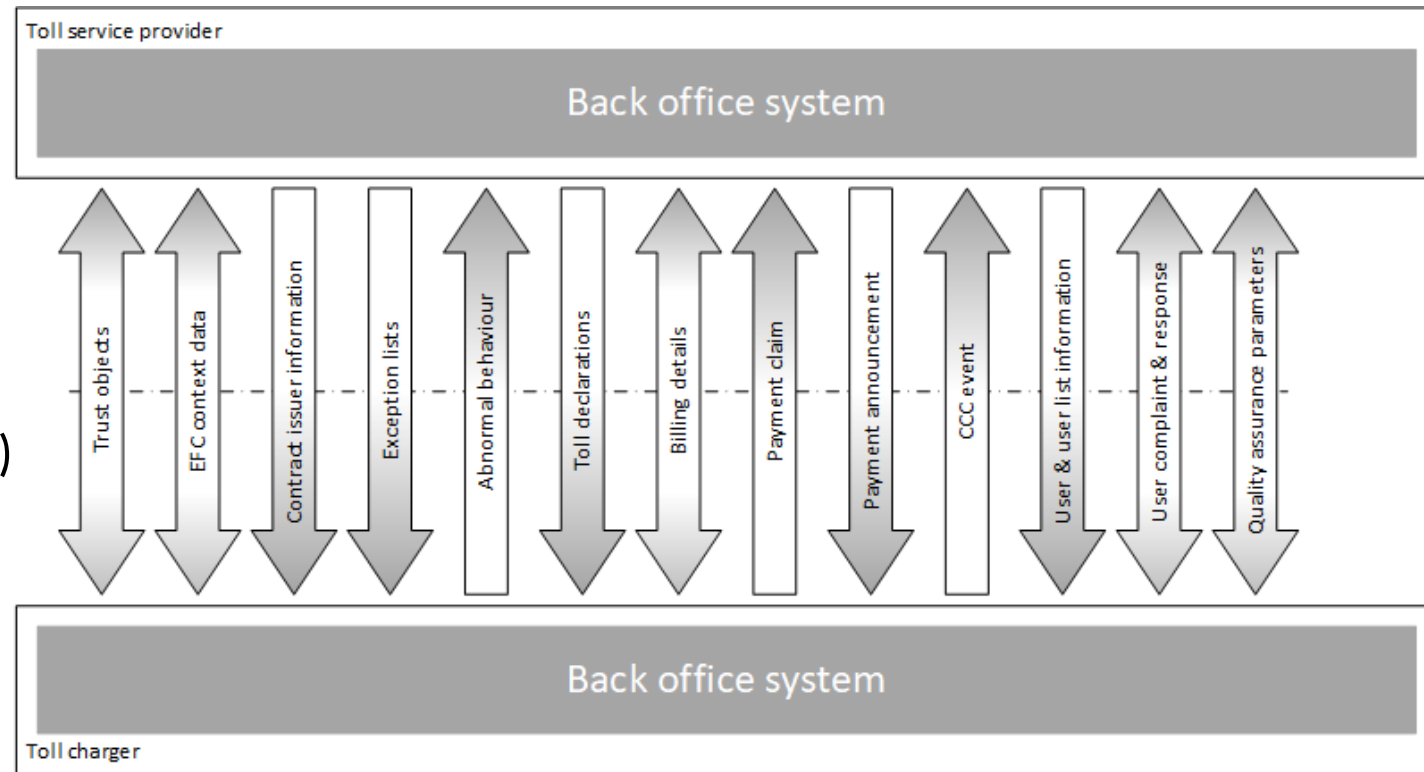
- It provides 4 profiles

| Profile                  | Tolling policy                      | Technology   | Countries              |
|--------------------------|-------------------------------------|--------------|------------------------|
| Section discrete         | Toll sections                       | DSRC, (ANPR) | AT, DK bridges, SE, FR |
| Section autonomous       | Toll sections                       | GNSS         | DE, DK truck           |
| Section meshed           | Mesh of toll stations (entry, exit) | DSRC         | IT                     |
| Area distance autonomous | Distance in a toll area             | GNSS         | BE, (CH)               |

- No information about other countries
- Each profile defines the required interfaces

# EETS back-office data exchange between TC and TSP

- What can be expected from EN 16986:2024?
  - **Mandatory interfaces**
    - Information about the TC and TSP (company, keys, context data)
    - Black list / White list / Discounted user list
    - Billing and payment information
  - **Optional interfaces**  
(depending on profile)
    - Contract issuer information (OBUs)
    - Abnormal behaviour (OBUs, users)
    - Toll transactions (GNSS position data)
    - Enforcement data
    - Additional user details
    - User complaints
    - Quality parameters



# EETS back-office data exchange between TC and TSP

- What can be expected from EN 16986:2024?
  - Data exchange based on XML
    - 10 times more data than text file based interfaces
    - (Germany and Belgium already use XML)
    - Example for EasyGo

```
130841722001421816919401C04001710006C04001001B0AB0469D000000000
130841722001422928949401C04001710006C04001001B0AB04645000000000
130841722001423226759001C04001710005C04001000111240141000000000
```



```
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                  <alphabetIndicator><latinAlphabetNo 1/></alphabetIndicator>
                  <licencePlateNumber>572D3734 31353547</licencePlateNumber>
                </licencePlateNumber>
              </obeId>
```

# EETS back-office data exchange between TC and TSP

- What can be expected from EN 16986:2024?

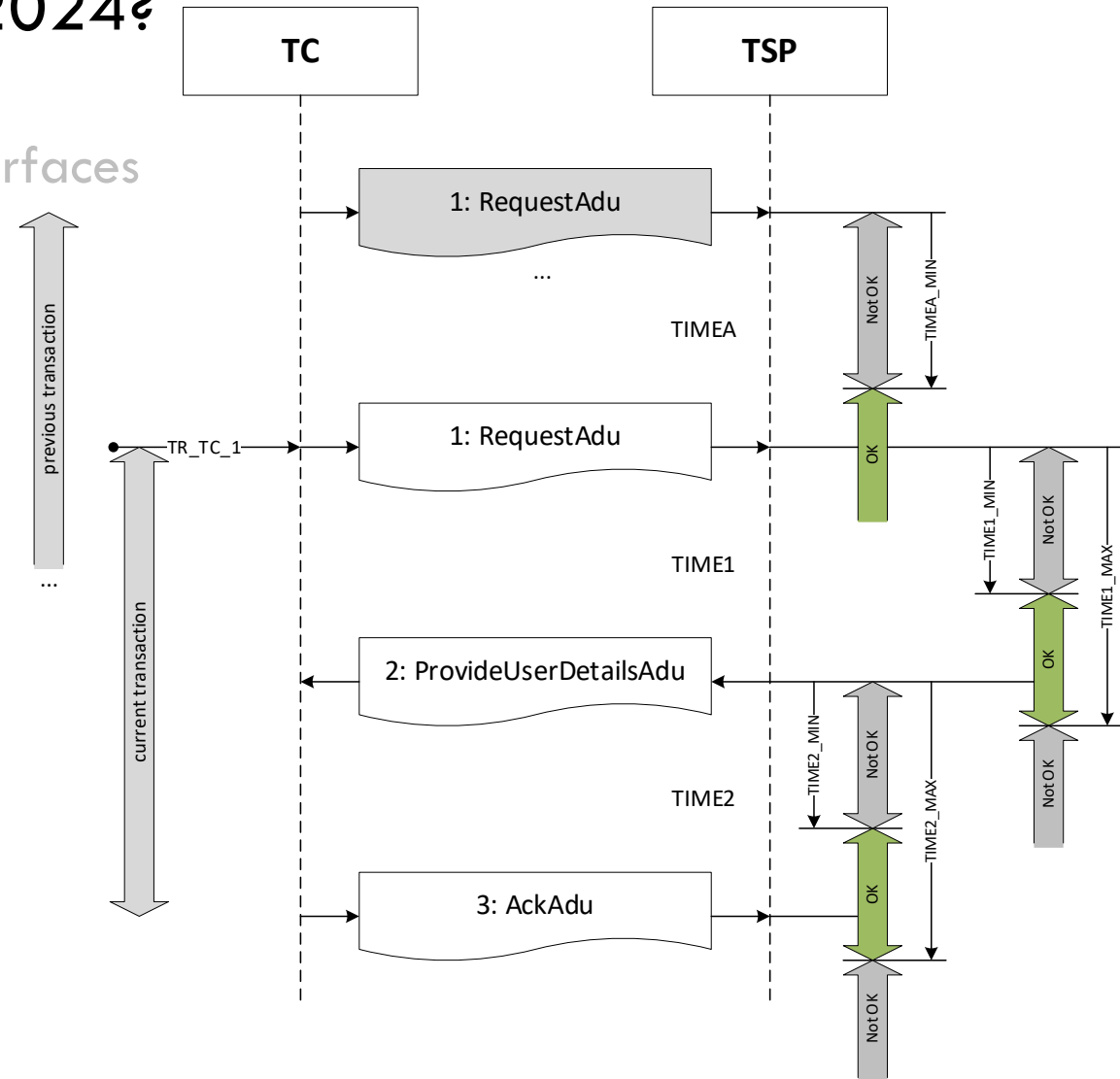
- Data exchange based on XML
  - 10 times more data than text file based interfaces
  - (Germany and Belgium already use XML)

- Transactional model with

- (Request for data)
- Provide data
- Acknowledge data

- Timing parameters

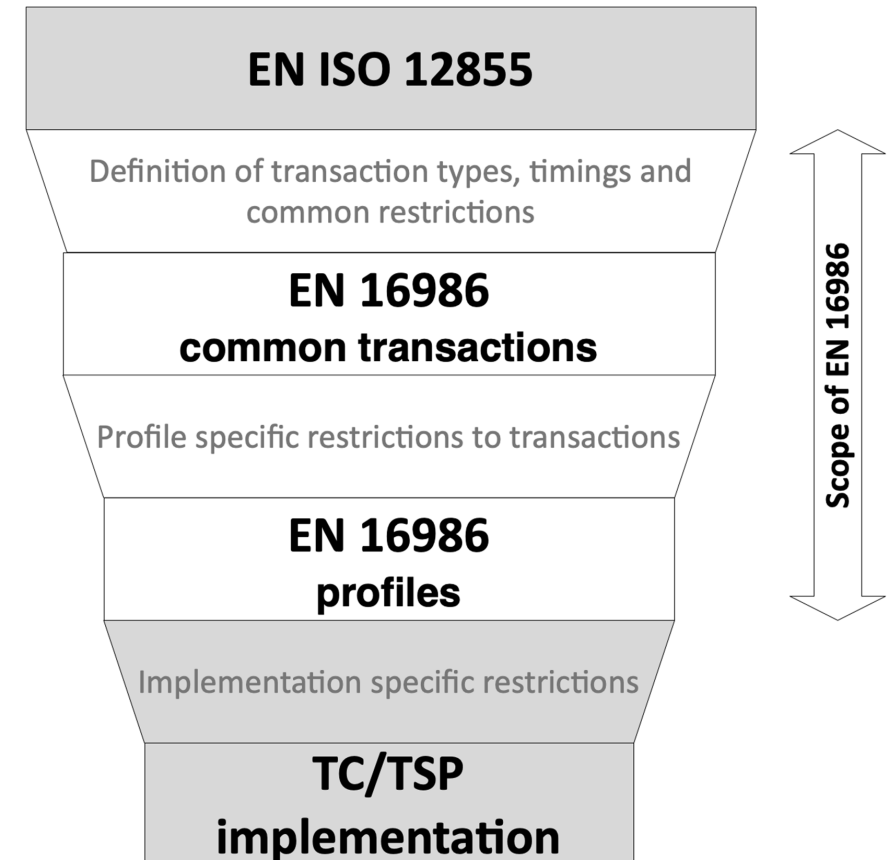
- **Could potentially require a new architecture of the TCs toll system!**





# EETS back-office data exchange between TC and TSP

- What cannot be expected from EN 16986:2024?
  - It is no implementation specification for a TC interface to the TSP
    - Further TC-specific definitions have to be done
      - optional interfaces
      - optional data fields
      - Definition of data content
        - Definitions of the toll domain
        - Tariff scheme
        - Toll domain specific limitations
        - Billing rules
        - Discounts



# EETS back-office data exchange between TC and TSP



- Open issues
  - When will EN 16986:2024 become mandatory?
    - **This is currently unclear!**
    - No update of EETS from the EU Commission before 2025
      - CEN TS 16986:2015 based interfaces have to be supported for a minimum of two more years (only relevant for DE)
    - Grace period will probably be included
  - When will ANPR be full covered?
    - Probably in 2025 with the next update of EN 16986

# EETS back-office data exchange between TC and TSP



- Main takeaways
  - Get a good look at EN 16986:2024!
    - **It will become mandatory!**
    - **It may have a huge influence on your toll system!**
    - **It will require a lot of planning before implementation!**
  - **Get ready for the future data transfer of EETS!**

# THANK YOU

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