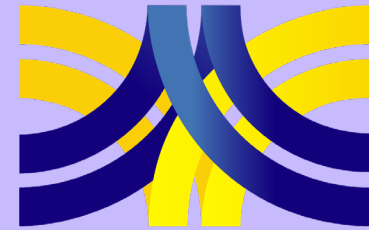


# 49<sup>th</sup> ASECAP DAYS

*Decarbonizing Road Infrastructure : Challenges,  
Perspectives and Actions in Tough Economy*

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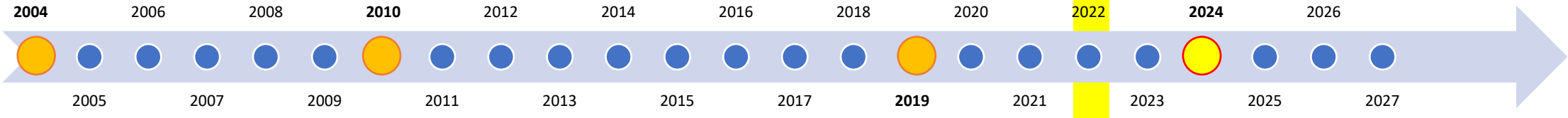
**BRUSSELS 2022**

# Toll Charger implementation of CO<sub>2</sub> tariffication

Franz Hlava

ASFINAG Maut Service GmbH

# A|S|F|i|N|A|G Toll Charger: Implementation of CO<sub>2</sub> tariffication

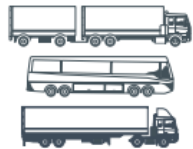



## REVIEW


... tariff relevant attributes of vehicles ...

## OUTLOOK

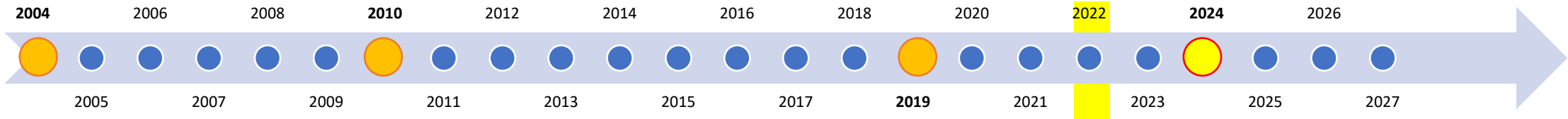
2004      2010      2019      2024

Vehicle Characteristic				2004	2010	2019	2024
	variable	<b>Axes</b>	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4
	fix	<b>Euro-Emmission Class</b>	EEK I - VI		EEK I - VI	EEK I - VI	CO2-cl 1
	fix	<b>Engine</b>	E/H2			E/H2	-
	fix	<b>CO2-class</b>	1-5				CO2-cl 5

Time							
	variable	<b>time</b>	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night

Toll section/Special toll routes (e.g. A13 Brenner)							
	fix	<b>Special toll routes</b>	yes/no	yes/no	yes/no	yes/no	yes/no

# A|S|F|i|N|A|G Toll Charger: Implementation of CO<sub>2</sub> tariffication



REVIEW

... tariff relevant attributes of vehicles ...

OUTLOOK

*... new tariff relevant attributes of vehicles?*

- Toll Chargers and EETS Provider have the experience to handle new requirements...

	2004	2010	2019	2024
Vehicle Charge				
Time	variable	time	Day/Night	Day/Night
Toll section/Special toll routes (e.g. A13 Brenner)	fix	Special toll routes	yes/no	yes/no

## OVERVIEW: Documents to proof...

2005/55/EG	2005/78C/EG	Euro IV
2005/55/EG	2005/78D/EG	Euro V
2005/55/EG	2005/78E/EG	Euro V
2005/55/EG	2005/78F/EG	Euro V
2005/55/EG	2005/78G/EG	Euro V
2005/55/EG	2005/78H/EG	EEV
2005/55/EG	2005/78I/EG	EEV
2005/55/EG	2005/78J/EG	EEV
2005/55/EG	2005/78K/EG	EEV
2005/55/EG	2006/51A/EG	Euro III
2005/55/EG	2006/51B/EG	Euro IV
2005/55/EG	2006/51C/EG	Euro IV
2005/55/EG	2006/51D/EG	Euro V
2005/55/EG	2006/51E/EG	Euro V
2005/55/EG	2006/51F/EG	Euro V
2005/55/EG	2006/51G/EG	Euro V
2005/55/EG	2006/51H/EG	EEV
2005/55/EG	2006/51I/EG	EEV
2005/55/EG	2006/51J/EG	EEV
2005/55/EG	2006/51K/EG	EEV
2005/55/EG	2006/81A/EG	Euro III
2005/55/EG	2006/81B/EG	Euro IV
2005/55/EG	2006/81C/EG	Euro IV
2005/55/EG	2006/81D/EG	Euro V
2005/55/EG	2006/81E/EG	Euro V
2005/55/EG	2006/81F/EG	Euro V
2005/55/EG	2006/81G/EG	Euro V
2005/55/EG	2006/81H/EG	EEV
2005/55/EG	2006/81I/EG	EEV
2005/55/EG	2006/81J/EG	EEV
2005/55/EG	2006/81K/EG	EEV

### ... the Euro Emission Class

- Registration Document

[V.9] 2005/55/EC - 2006/81G/EC = Euro V

if Euro Emission Class is not stated in Reg. Doc.:

- COC – Document
- CEMT – Document (for Trucks)

### ... the CO<sub>2</sub> Class

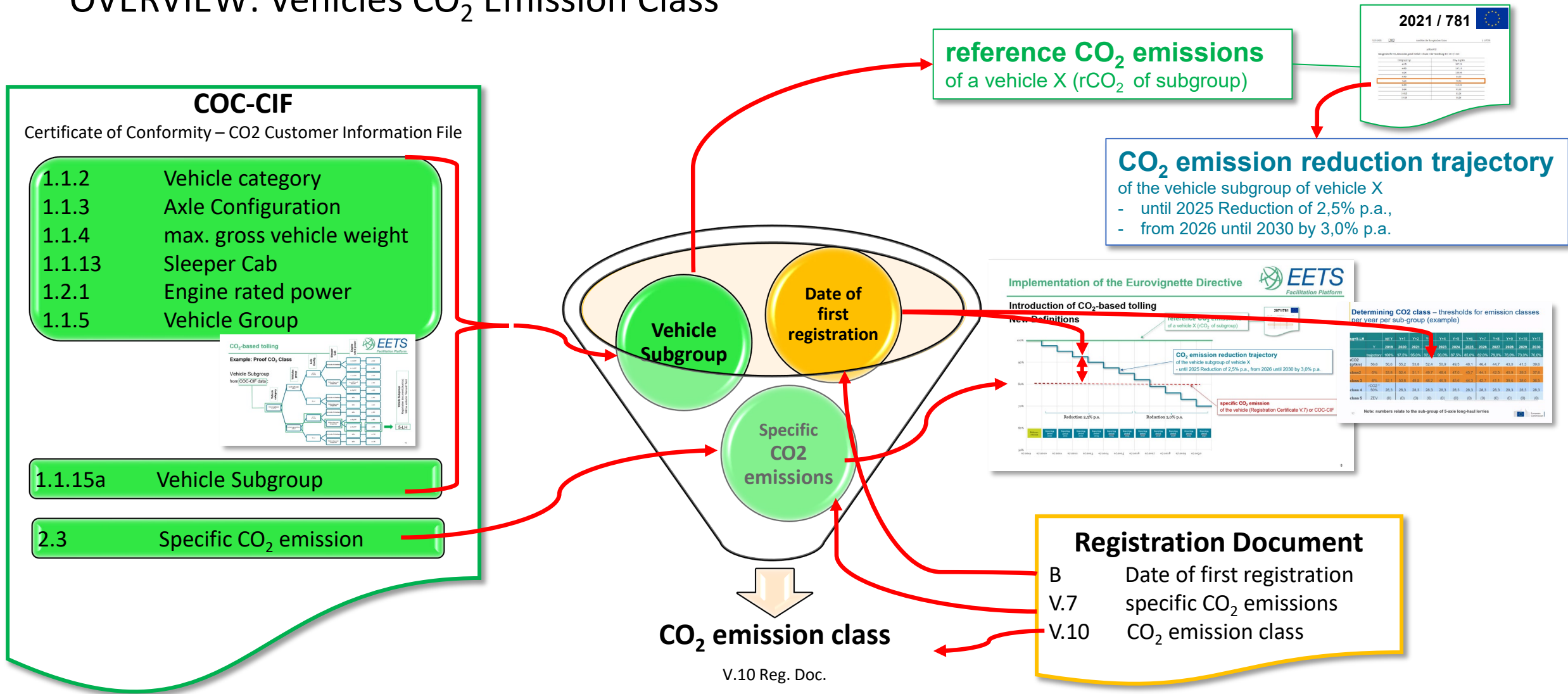
- Registration Document

[V.10] CO2 Class 2

if CO<sub>2</sub> Class is not stated in Reg. Doc.:

- COC – Document

## OVERVIEW: Vehicles CO<sub>2</sub> Emission Class



## OVERVIEW: Vehicles CO<sub>2</sub> Emission Class

*...if the CO<sub>2</sub> Class is not stated in the Registration Document...*

**2 Documents**

- Registration Document
- COC-CIF Document

**3 Values**

- Vehicle Subgroup
- Date of first registration
- specific CO<sub>2</sub> emission of the vehicle

**an already defined way to evaluate/assign the CO<sub>2</sub> Class**

spec. CO<sub>2</sub> emissions <> CO<sub>2</sub> emission reduction trajectory

reference CO<sub>2</sub> emissions

2021 / 781

reduction trajectory

vehicle X  
2,5% p.a.,  
3,0% p.a.

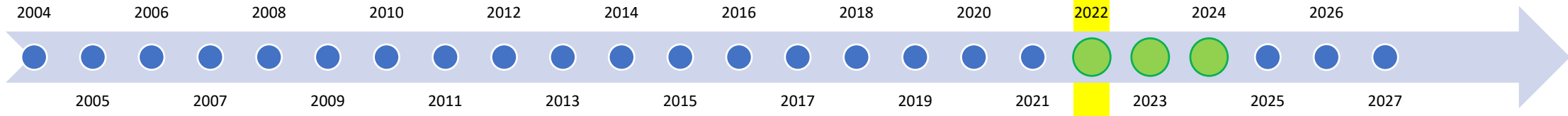
ETS

Determining CO<sub>2</sub> class – thresholds for emission classes per year per sub-group (example)

COC-CIF

ment  
ation  
ons

# A|S|F|i|N|A|G Toll Charger: Implementation of CO<sub>2</sub> tariffication



Implementation – which data are needed for CO<sub>2</sub> tolling?

## Provider

complete CO<sub>2</sub> data set for CO<sub>2</sub>-Class classification

- Vehicle category: N3 (CIF 1.1.2)
- Axle configuration: 4x2 (CIF 1.1.3)
- Max. gross vehicle weight: 18,0 t (CIF 1.1.4)
- Sleeper cab: yes (CIF 1.1.13)
- Engine rated power: 330 kW (CIF 1.2.1)
- **Specific CO<sub>2</sub> Emission** 54,6 gCO<sub>2</sub>/tkm (CIF 2.3)
- Vehicle's Group: 5 (CIF 1.1.5)
- **Vehicle Subgroup** 5-LH (CO<sub>2</sub> proof/Reg. Doc.)
- **CO<sub>2</sub> Class** 1 (CO<sub>2</sub> proof/Reg. Doc.)
- **Date of first registration** 1.8.2021 (Reg. Doc.)
- CO<sub>2</sub> reduction trajectory 53,8 gCO<sub>2</sub>/tkm (public)
- VIN (relation: Reg. Doc. <> COC-CIF) (Reg. Doc.)

OBE / Back Office  
Data exchange

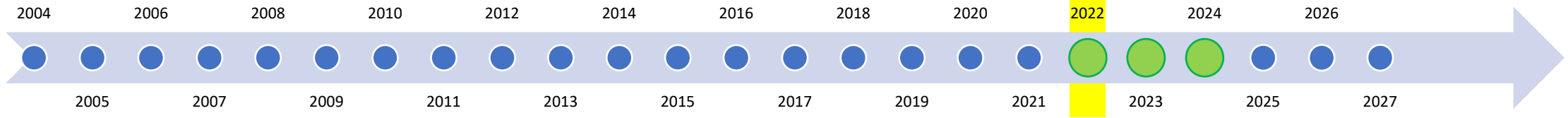
## Toll Charger

minimum CO<sub>2</sub> data set for CO<sub>2</sub>-Class for...

- **Tarif Calculation**
- Check CO<sub>2</sub> Class assignment (done by EETS Provider)



# A|S|F|i|N|A|G Toll Charger: Implementation of CO<sub>2</sub> tariffication



Implementation – which data are needed for CO<sub>2</sub> tolling?

OBE / Back Office  
Data exchange

**Provider**

complete CO<sub>2</sub> data set

- Vehicle category:
- Axle configuration:
- Max. gross vehicle w
- Sleeper cab:
- Engine rated power:
- **Specific CO<sub>2</sub> Emission**
- Vehicle's Group:
- **Vehicle Subgroup**
- **CO<sub>2</sub> Class**
- **Date of first registra**

*Which data are needed for CO<sub>2</sub> tolling?*

**EETS Provider**

- complete data set (if necessary) -> to assign the CO<sub>2</sub> Class

**Toll Charger**

- CO<sub>2</sub> Class -> to calculate the CO<sub>2</sub> tariff

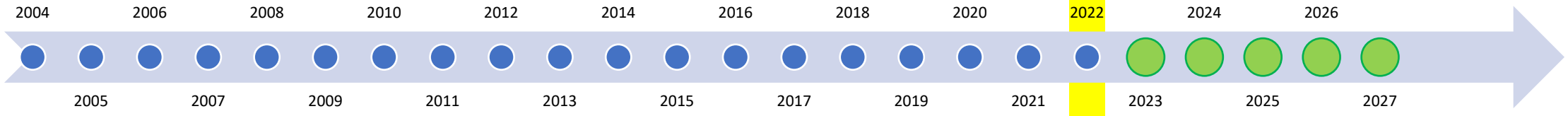
**Charger**

complete data set for CO<sub>2</sub>-Class for...

- Check CO<sub>2</sub> Class assignment (done by EETS Provider)

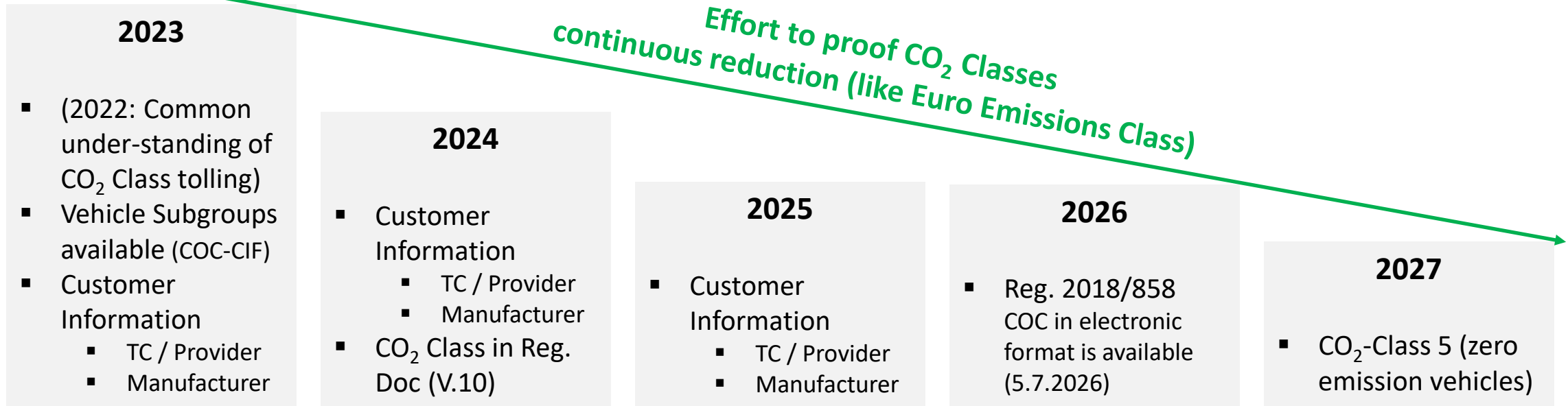
- CO<sub>2</sub> reduction trajectory      53,8 gCO<sub>2</sub>/tkm (public)
- VIN (relation: Reg. Doc. <> COC-CIF)      (Reg. Doc.)

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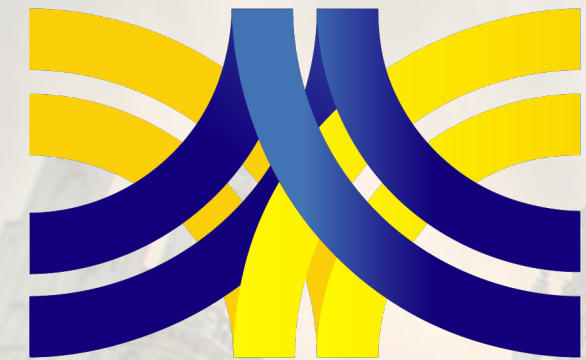


How will it look like in the next 5 years? What are the main challenges in CO<sub>2</sub> tolling?

## ■ CO<sub>2</sub> emission class proof of a vehicle



**ASECAP DAYS**



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**THANK YOU FOR  
YOUR ATTENTION**

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