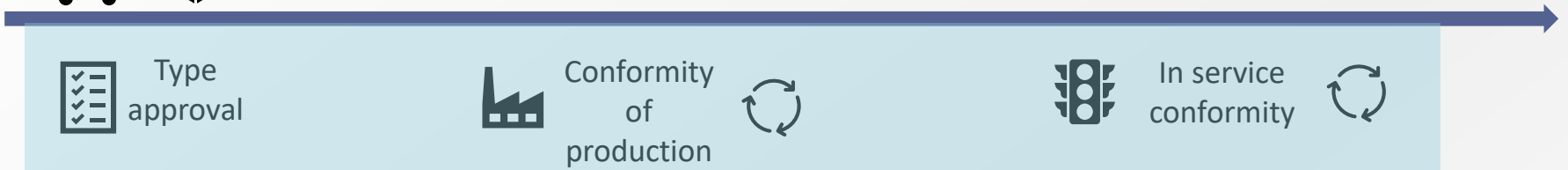




Type approval process

Regional process: European Union

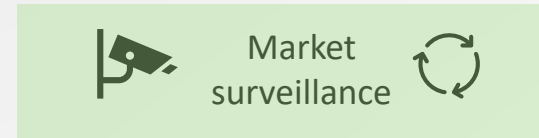
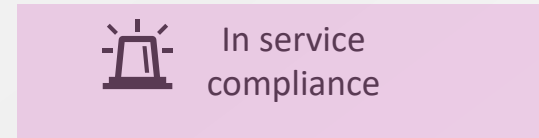
Approval process (vehicle/component)



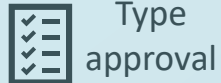
Type approval process
→ Granting TAA and OEM

In service verification
→ Roadside test / PTI

Market surveillance
→ Independent of the TA process



Approval process (vehicle/component)



Type approval



Conformity
of
production



In service
conformity



Type approval

- ⇒ Who ? TAA/TS
- ⇒ How? Selection of a vehicle/component representative of the type and test
- ⇒ What? Test and check the compliance with limits/thresholds
- ⇒ Uncertainty and tolerance?
 - Ex.: 2018/858 refer to ISO 17025 for TS (uncertainties are included)
 - Ex.: R51, average several tests (L/R) \leq limits
 - Ex.: 2017/1151:
 - results \leq 99% declaration for CO₂
 - Till 2 tests if measurement is close to the limits (90%) for pollutants
 - Analyser margin included in the not to exceed values = (1+margin) * limits for RDE
- ⇒ Consequence of non compliance: no approval

Approval process (vehicle/component)



Type approval



Conformity
of
production



In service
conformity



COP

- ⇒ Who ? OEM with TAA/TS approval and TAA/TS
- ⇒ How? Sampling / statistical approach
- ⇒ What? Test and check the compliance with limits/thresholds
- ⇒ Uncertainty and tolerance?
 - Ex.: R51, average several test (L/R) \leq limits + 1 dB
 - Ex.: 2017/1151: results * 0,98 \leq limits
- ⇒ Consequence of non compliance: remedial measure/recall/withdrawal

Approval process (vehicle/component)



Type approval



Conformity
of
production



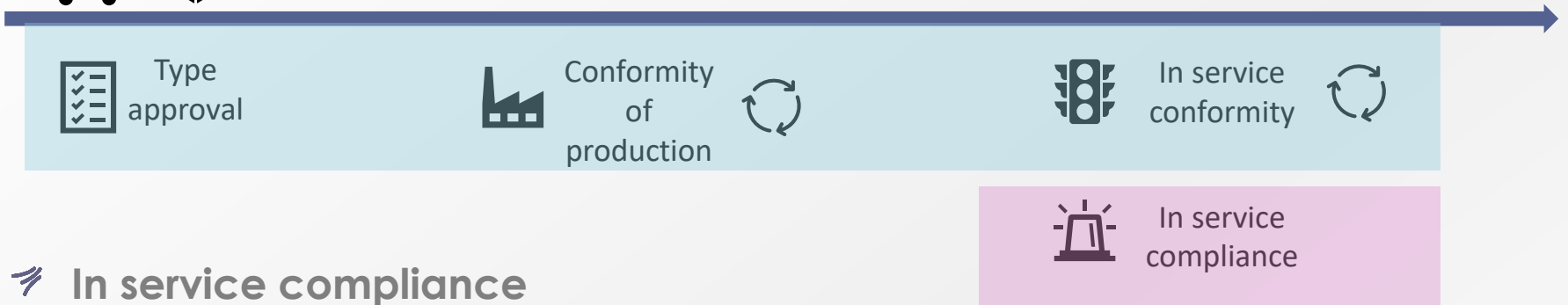
In service
conformity



In service conformity: emission ONLY

- ⇒ Who ? TAA/TS/accredited labs
- ⇒ How? Sampling / statistical approach
- ⇒ What? Test and check the compliance with limits/thresholds of vehicles/components **in use** (years/mileage)
- ⇒ Uncertainty and tolerance?
 - Ex.: 2017/1151:
 - Chassis dyno: results \leq limits + statistical
 - Analyser margin included in the not to exceed values = $(1 + \text{margin}) * \text{limits for RDE}$
 - R83: results \leq limits + statistical
- ⇒ Consequence of non compliance: withdrawal/recall

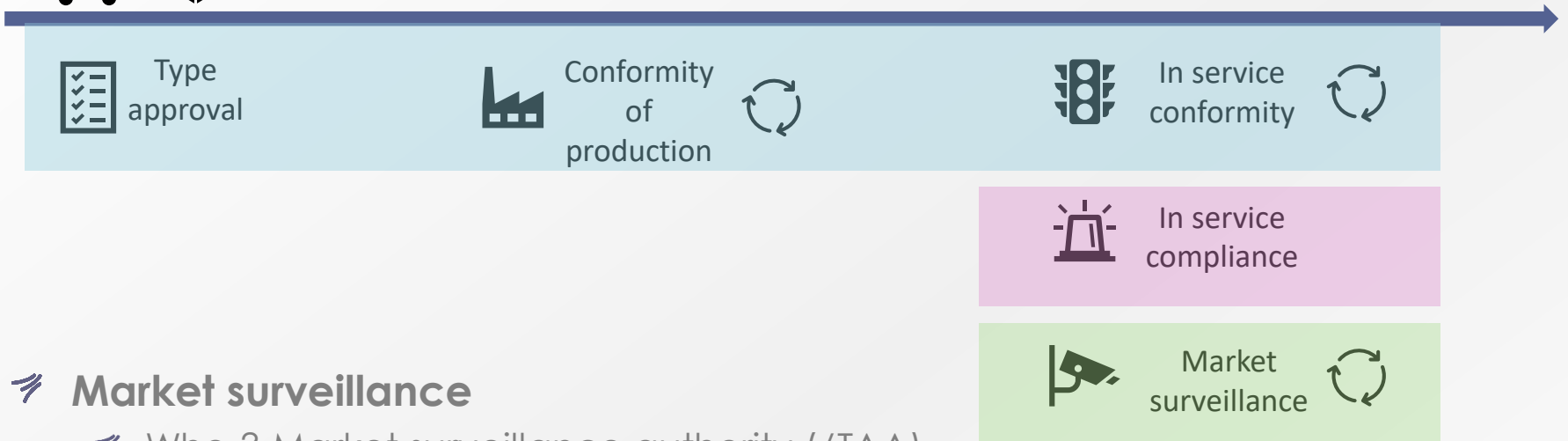
Approval process (vehicle/component)



In service compliance

- Who ? Police and/or PTI
- How? Roadside or during PTI
- What? Check maintenance and manipulation of vehicles/components **in use**
- Uncertainty and tolerance?
 - Ex. R83: idle CO emission level for PTI
 - Ex. R51: stationary sound emissions compared to approved one (+5dB)
- Consequence of non compliance: fee/traffic removal for the concerned individual vehicle

Approval process (vehicle/component)



Market surveillance

- ⇒ Who ? Market surveillance authority (≠TAA)
- ⇒ How? sampling
- ⇒ What? Check the conformity of vehicles/components **put in the market (new)**
- ⇒ Uncertainty and tolerance?
 - WVTA : 2018/858 (M, N ,O), 168/2013 (L), 167/2013
 - Refer to
- ⇒ Consequence of non compliance: remedial measures/withdrawal/recall/market removal