



Statens vegvesen

Norwegian Public Roads
Administration

Tunnel Safety Audits in Norway

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Inspection Entity
Norwegian Public Roads Administration
Directory of Public Roads

Tunnels in Norway

- NPRA manages ca 1150 road tunnels on the national and county highways
- These differs greatly in age, standard and AADT
- From low trafficked rural highway tunnels to high trafficked urban motorway tunnels



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Tunnel safety management

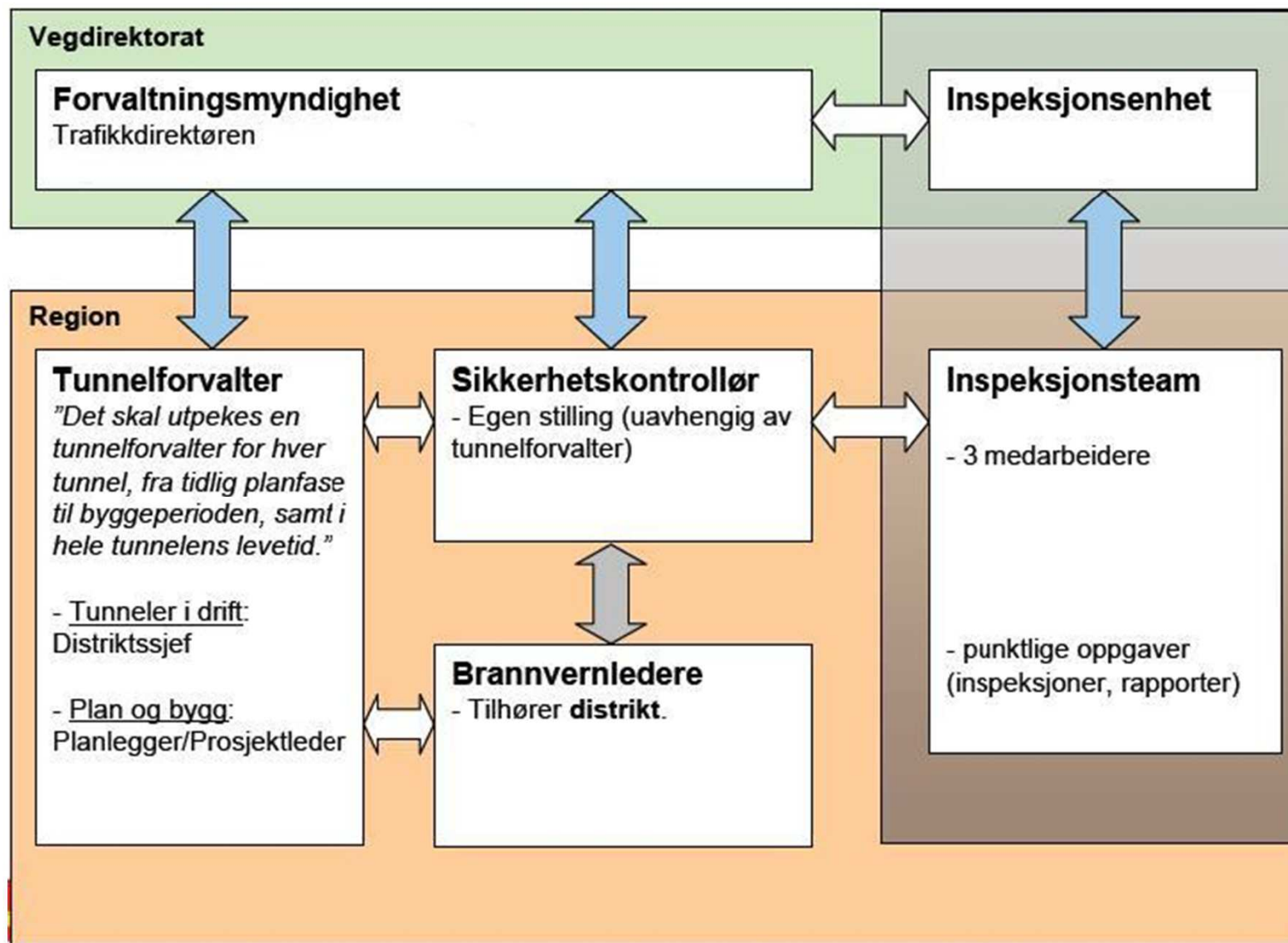
- The Directive 2004/54/EC was made Norwegian law the 15. May 2007 with the ratification of the Norwegian Tunnel Safety statute
- The NPRA are given responsibilities to effectuate these through its management of tunnels
- Two of NPRA`s manuals are especial central
 - Manual 021 Road tunnels (the road tunnel norm)
 - Manual 269 Safety management of road tunnels

Norwegian tunnel inspections

- Organisation
- Methodology
- Example

Organisation

- Inspection Entity at DPR coordinating
- 5 Regional Inspection teams



Inspection teams

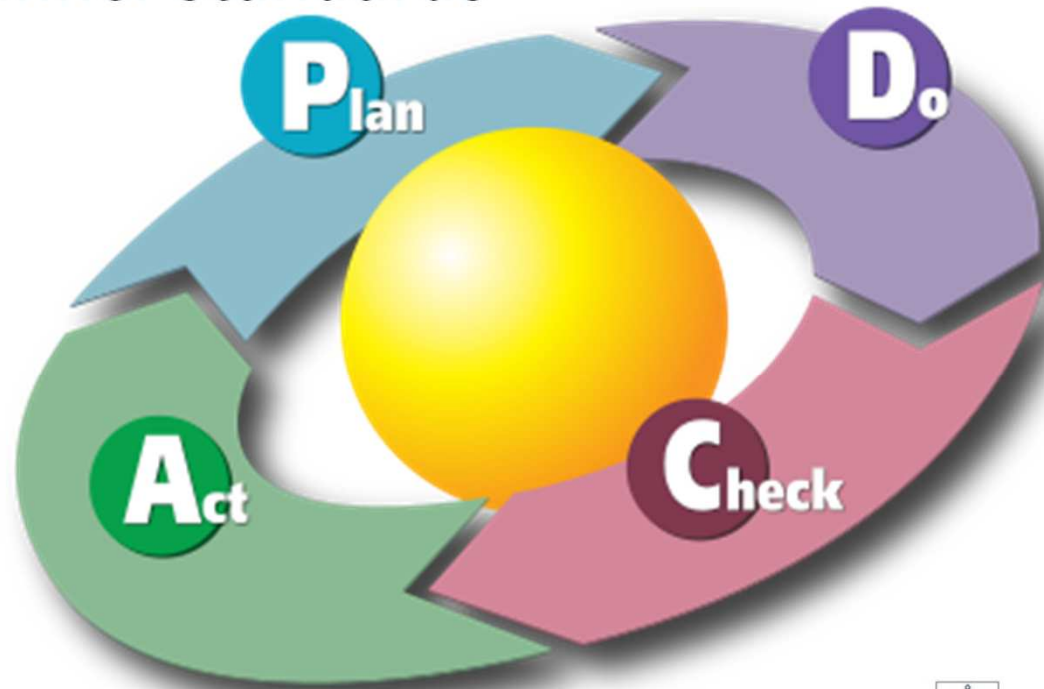
- Each responsible for their own region (30-250 tunnels each)
- 3 or more members with different background;
 - Tunnel management
 - Tunnel building
 - Electro

Inspection team

- Inspection team meetings
- Quality audit course
- Workshops
- Audits and inspections

Tunnel Inspection=Quality audit

- Methodology based on ISO 9001 and ISO 19011
- Directive 2004/54/EC
- Norwegian road tunnel standards



A Tunnel Safety Audit

- ✦ Opening meeting
- ✦ Collecting and verifying information (Tunnel safety information)
- ✦ Interview
- ✦ Inspection
- ✦ Closing meeting
- ✦ Preparing the audit report

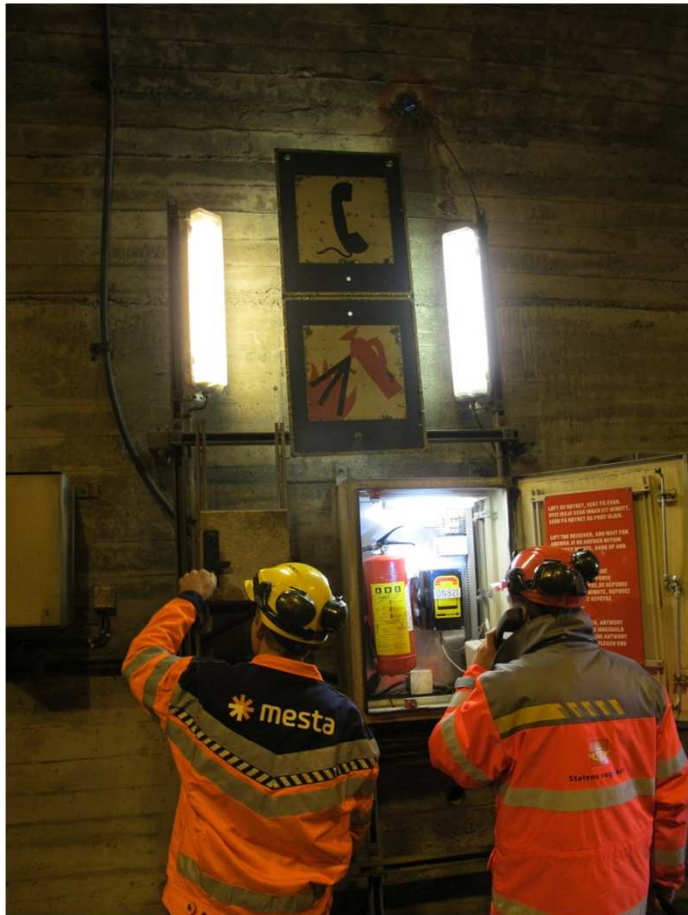
Collecting and verifying information

Control of Tunnel management documentation

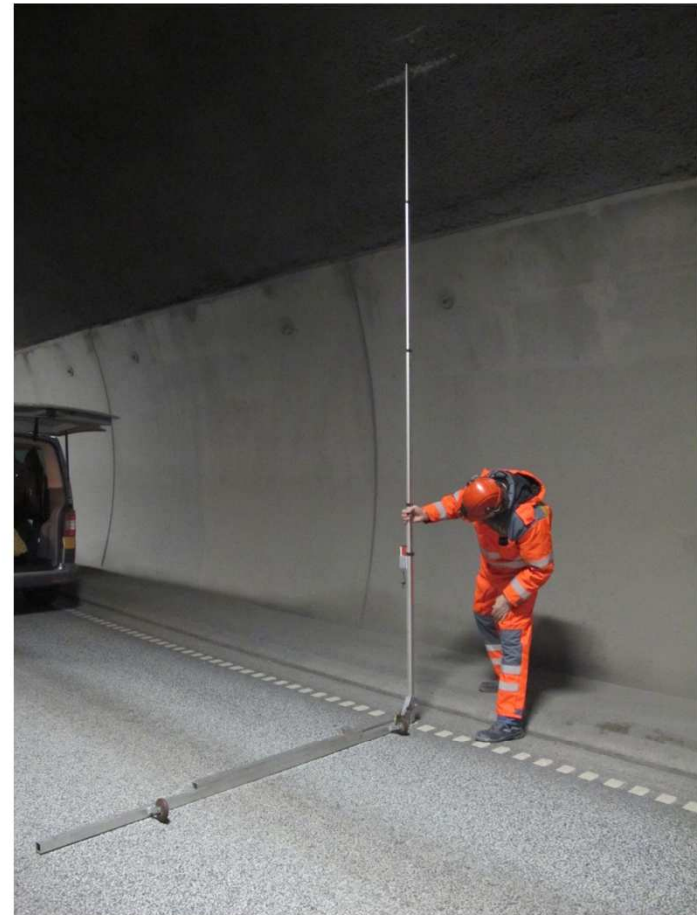
Benchmarking of Tunnels (NPRA Manual 021
Road tunnels 2010)

Inspections





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Audit form

Region	Fylke	Vegtype (E, R, Fv)	Vegnummer
Vest	Sogn og Fjordane	TERN	16

Tunnelnavn	Lengde (m)	Tunnelklasse 2011	Tung trafikk andel 2011 (%)
BORGUNDTUNNELEN	3050	B	22

Inspeksjonsleder	Inspeksjonsdeltaker
Hovland Sveinung	Petter Hole

Dato (DD.MM.AAAA)	Sist inspeksjon (DD.MM.AAAA)
30.08.2011	

- General information
- Safety documentation
- Benchmarking
- Special concerns
- Findings (at inspection)

E6 Eidet tunnel

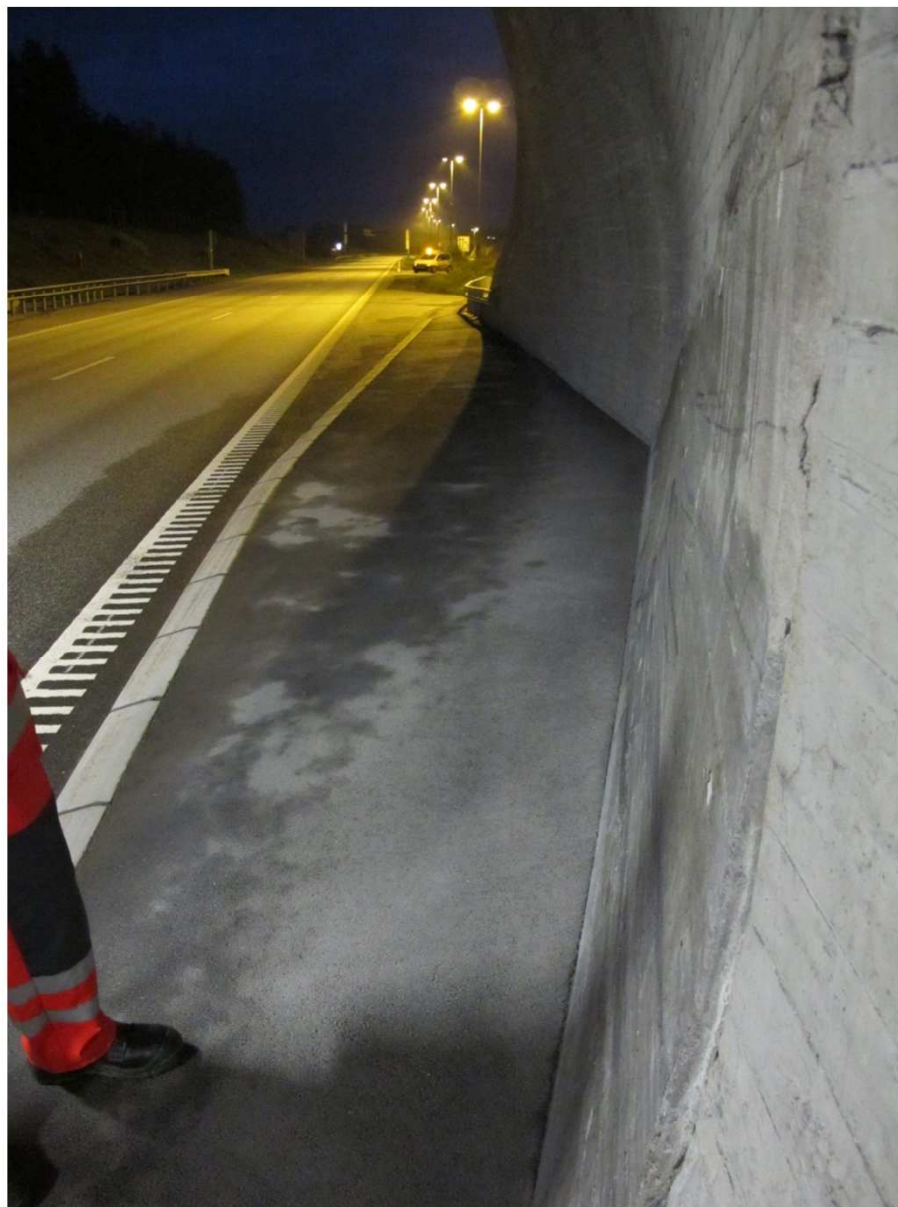




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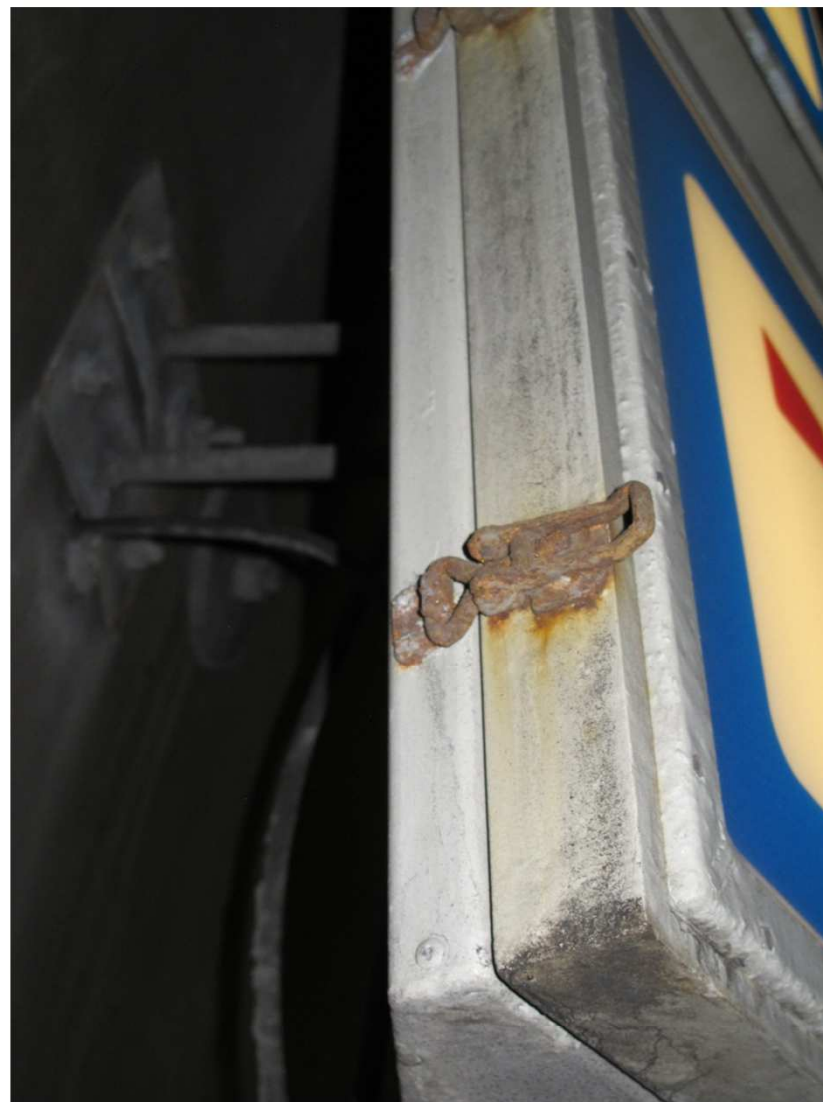


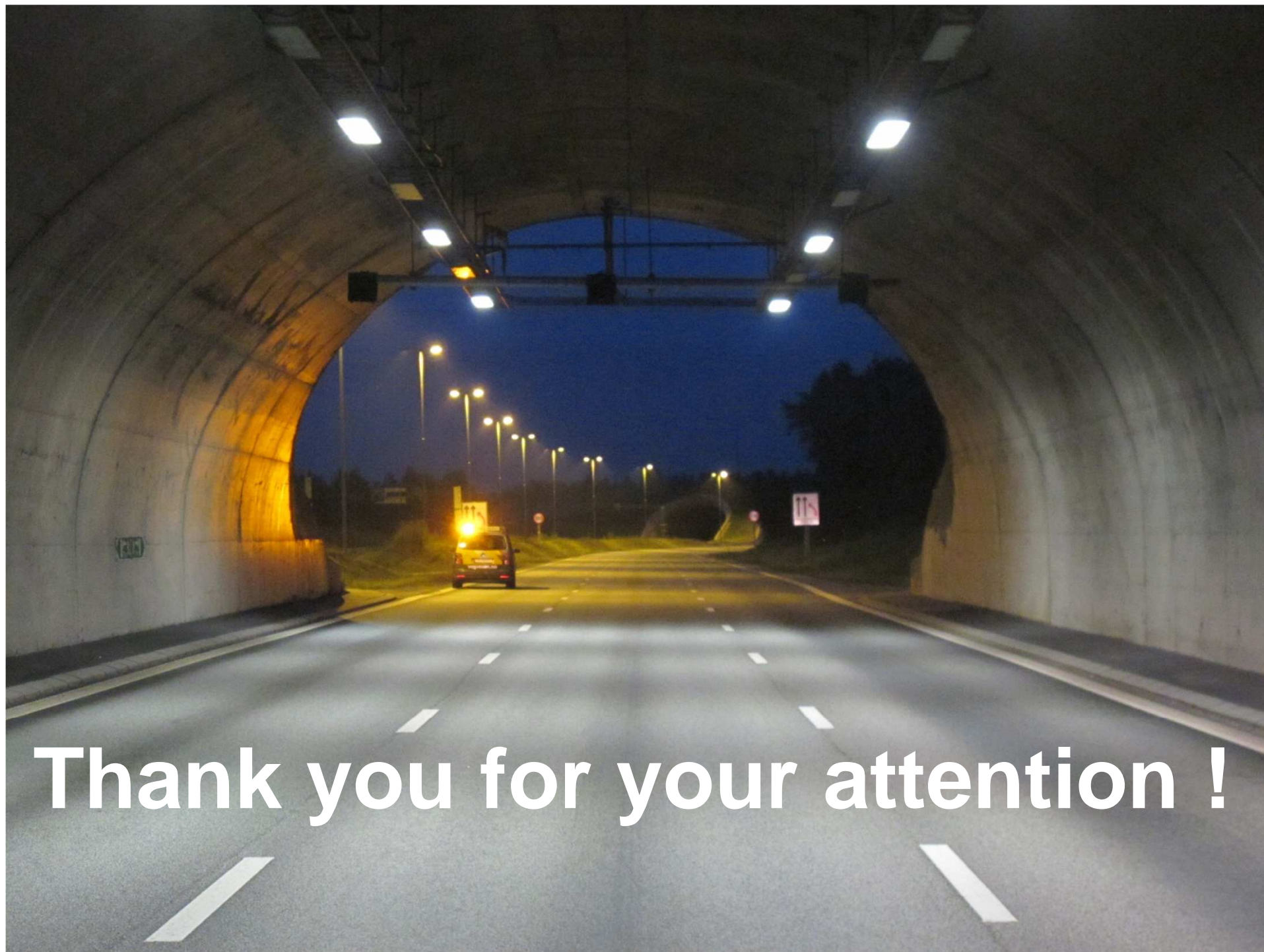
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Thank you for your attention !