

# Open discussion on next PIARC work programme (2020-2023)

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# Objectives of the presentation

- Provide a brief overview of the next PIARC Work programme
- Organise discussions between the tunnel community & TC D5 members
- Collect reactions and additional inputs ...

# Next PIARC work programme

- Mainly based on the 1st thoughts of the tunnel Committee.
- These proposals are still to be discussed within the PIARC executive committee

# Priority topics

## Intelligent Transportation Systems:

- Considerable technological advances in this field
- In a road tunnel environment, these systems can have a significant impact on operation and user safety
- Objective: to focus on the impacts of such systems on road tunnel operations and safety

# Priority topics

## Intelligent Transportation Systems:

- Main issues:
  - **how can service continuity of such systems be guaranteed** in the specific context of road tunnels?
  - **What are the tunnelling community's expectations** with regard to these ITS: safety distance control, lane departure warning systems (LDWS), heavy vehicle guidance systems, vehicle localization and counting systems, identification of hazardous goods vehicles....
  - More generally speaking, **how can these ground-breaking systems improve user safety** in road tunnels?

# Priority topics

## New propulsion technologies (NPT):

- considerable headway has been made in this field
- road tunnel context: potentially **significant impact on user safety**
- objective: to focus on the **impacts of NPT** on road tunnel operations and safety.
- technologies include: hydrogen, liquefied natural gas (LNG), compressed natural gas (CNG), biodiesel, ethanol and electric vehicles.

# Priority topics

## New propulsion technologies

- Lack of knowledge of the potential consequences of incidents involving alternative fuel vehicles and related phenomena
- Main issues :
  - additional risks for tunnel users
  - difficulties in taking possible consequences into account in safety management systems
  - difficulties in providing appropriate information and establishing intervention strategies for emergency response teams.

# Specific topics (continuous work)

## Large underground and interconnected infrastructures:

- **Update of report Part A “Case studies”**, including additional monographs. This issue will be partly covered during the current cycle and it should be further analysed during the next cycle.
- **Part B: “Specific analysis” and recommendations**. This issue will be partly covered during the current cycle (ventilation) and it should be further analysed during the next cycle (geometry – cross section - signage; traffic management; operation; fire fighting safety).



# Specific topics (continuous work)

## «Updates and improvements of the web-based Road Tunnels Manual»:

- current cycle: more comprehensive TOC and additional links to reports recently published.
- next cycle, the manual might be improved with updated links to new technical reports and additional contributions.
- additional content might be based on various new outputs
- other improvements to the Manual (indication of the last update of each page, to encourage more frequent contributions).

# Specific topics (continuous work)

## New specific issues which should be introduced in the Strategic Plan?

- (In addition to ITS & NPT ...)
- Risk reduction measures and associated risk analysis methods
- How should maintenance be managed in urban or heavy traffic tunnels?

# **Thank you for your attention**

Comments, suggestions, additional inputs ... ?