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 ... ?