



## **Technical Committee 2.4: Road Network Operations and ITS for Sustainability New Cycle 2024-27 Kick-off Meeting Paris, France 7-9 February 2024**

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### **Executive Summary**

The strategic objectives of PIARC Technical Committee 2.4 Road Network Operations/ITS for Sustainability of the New Cycle 2024-2027 are to enable the effective integration of new mobility modes and optimisation of network operations through new technologies and innovations. This cycle is also dedicated to exploring the wider-ranging benefits, encompassing environmental sustainability as well as social and community impacts, arising from the implementation and optimisation of ITS technologies.

The Kick-off meeting of ST2 and TC2.4 were held on 7-9 Feb 2024 in Paris France. The aims of TC2.4 Kick-off meeting are:

- Review deliverables of last cycle and approve the ToR for the new cycle
- Establishment of WGs ensuring their cooperation
- Development of work method and schedule for WG deliverables including reports, seminars, workshops and conferences
- Confirm roles and responsibilities including the appointment of WG leaders, secretaries, terminology representative, webmaster and other contacts
- Next meeting of the TC (potential date, place, program and work to present)

Dr Clarissa Han (NTRO) was invited by PIARC to continue her leadership role in TC2.4, as the WG2.4.2 Lead for the new cycle. Clarissa participated the KOM conference in Paris 7-9 Feb 2024.

During the KOM, Clarissa presented the core deliverables and findings of the strategic cycle of 2019-23. Clarissa also presented the sustainability, circular economy and decarbonisation journey of the Australian transport industry, aiming to inspire the minds of broader TC members.

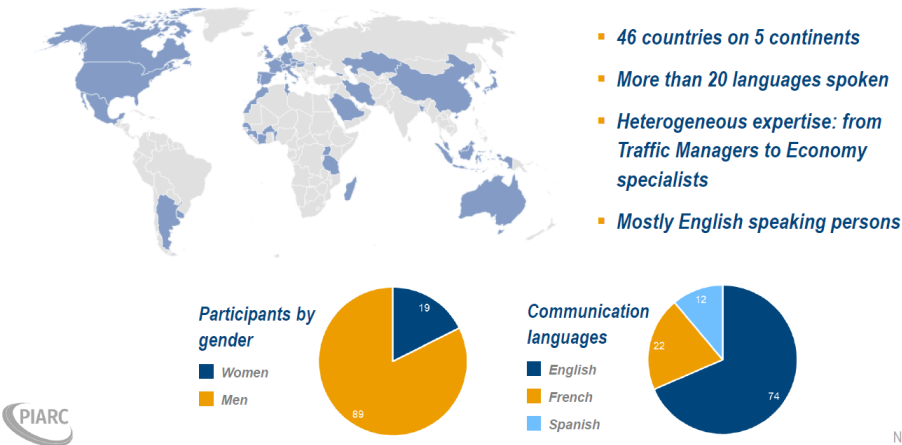
### **Overview of TC2.4**

TC 2.4 - Road Network Operations and ITS for Sustainability is part of Strategic Theme 2 – Mobility.

In the new cycle, the TC have representatives from 46 countries in 5 continents, and with more than 20 languages spoken. The TC composed of a mixed expertise from traffic managers, system engineers, big data specialist, economists and sustainability experts.

The promotion of gender inclusion and diversity team (PGIDT) was assigned as permanent group to the PIARC executive committee since April 2021. This is a new topic for PIARC within the strategic plan and all TCs are expected to address this issue properly.

## TC 2.4: composition



### Review of the Last Cycle

The TC2.4 strategic cycle of 2019-2023 successfully published a number of case study collections and best practice reports, also delivered our scheduled seminars, workshops and facilitated the preparation and delivery of the two major international conferences for PIARC. The TC also worked actively as part of the PIARC COVID19 response team and published a special edit of Routes/Roads magazine. These products contain rich contents and are ready to be shared and used by practitioners and young professionals around the world (refer to the PIARC publications webpage).



Figure 1: TC2.4 publications in the strategic cycle 2019-23



Figure 2 TC2.4 workshops, seminars and magazines



Figure 3 TC2.4 Morocco International Seminar “Innovative Concepts in Road Operations for Safe and Sustainable Mobility” in 2023

## Work Program

During the KOM, the TC work program has been discussed and confirmed. The work will cover 5 major components as shown in the figure below.

## TC 2.4: Work Program

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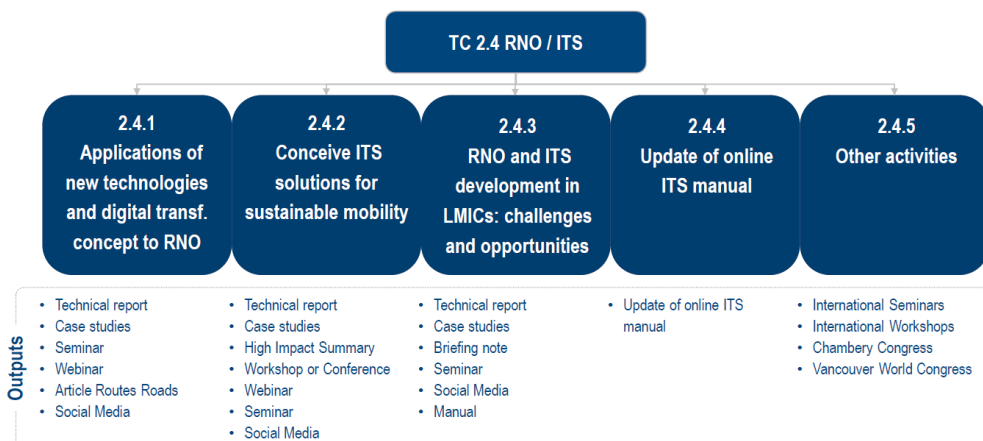


Figure 4 TC2.4 work program for 2024-27

Three Working Groups were formed to deliver the work program:

#### WG 2.4.1 Application of new technologies and digital transformation concept to road network operations

The purpose of this WG is to investigate the application of new technologies and digital transformation concept to Road Network Operations, identifying concrete applications for Road Operators and analyse the following aspects:

- The digitalization rate
- In what new technologies are used and how they can enhance road operations
- What are the opportunities identified and the challenged ahead for the ones that are putting in place digitalisation processes
- How digital technology can improve the sustainability of road operations (more for WG2 to consider)
- What is the impact of new mobility forms on the digitalization of operations (from MaaS to Digital Services).

#### WG 2.4.2 Conceive ITS solutions for sustainable mobility

The purpose of this WG is to investigate how ITS technologies will continue to improve and evolve at a phenomenal rate, providing more services to the transport industry. The benefits of deploying ITS technologies could be significant, if a focused, systematic and incremental approach is taken.

In this context ITS is the cornerstone of future transport and mobility policies, as:

- ITS can contribute to reduce carbon emissions by optimising mobility management
- ITS can be of great help to manage congestions and increase safety along the network
- ITS can provide users with digital services that makes the transport system more inclusive and sustainable
- ITS development has a great social impact for communities and cities.

#### WG 2.4.3 RNO and ITS development in LMICs: challenges and opportunities

The purpose of this WG is to better understand the rules for RNO and ITS development in Low Middle Income Countries. In this context key aspects are:

- The role of new technologies and innovations for LMICs: what are the differences in processes and applications
- Consideration about sustainability in LMICs in relationship of the deployment of RNO and ITS systems
- Definition of challenges, benefits and opportunities for LMICs for the implementation of RNO and ITS systems
- Knowledge sharing and best practices exchange.

### **Proposed Work Schedule**

TC members discussed the work program deliverables, methods and proposed schedule. A Gantt chart that reflects main milestones is shown below.

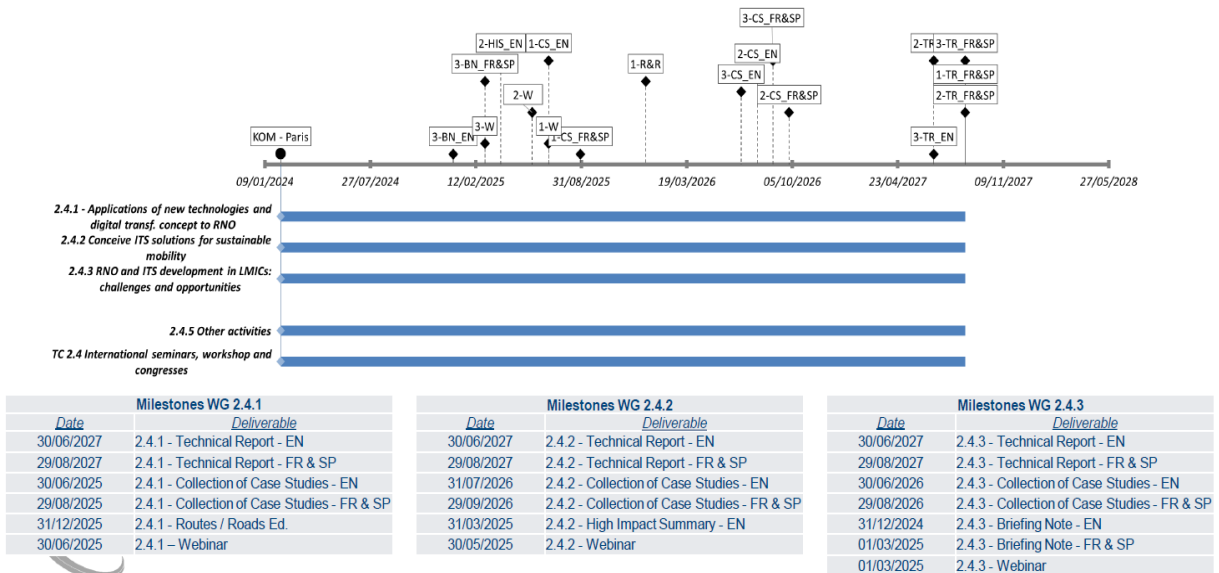


Figure 5 TC.4 work schedule

### Planned Event including Workshops, Seminars and Conferences

In accordance with PIARC policy, the TC is required to hold two meetings per year. Additionally, the TC should organise two international seminars per cycle, preferably in low- and middle-income countries (LMICs), and at least one workshop. The TC will also facilitate the organisation and delivery of two PIARC international conferences, namely the 2026 Road Resilience Congress in Chambéry, France and the 2027 World Road Congress in Vancouver, Canada. The proposed event schedule is shown in the figure below.

## TC 2.4 Events: Final Schedule proposed

**Might vary during the cycle**  
**Please check updated Schedule from time to time**

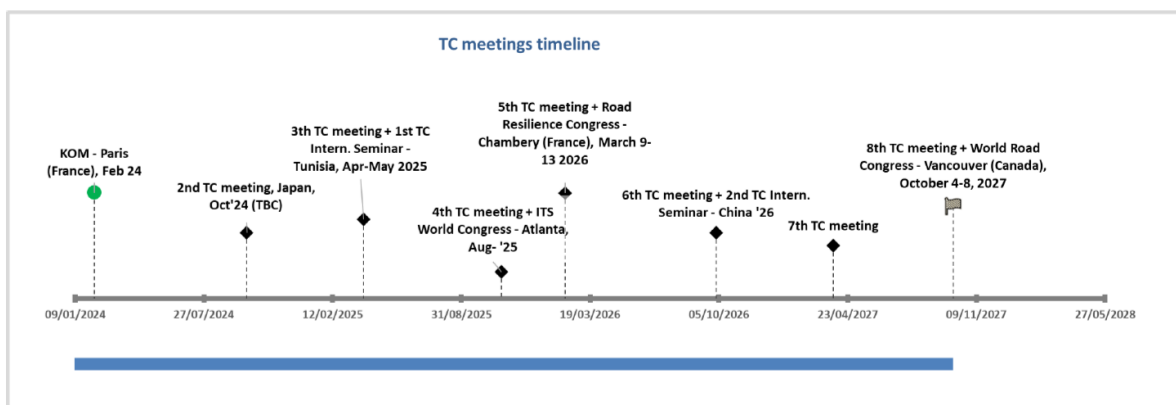


Figure 6 TC.4 event planner

## TC2.4 Roles and Responsibilities

The TC members also nominated the followed key roles for the new cycle:

TC Roles	Name	Country
TC Chair	Valentina Galasso	Italy
WG2.4.1 Lead	Jianming Ma Karamjeet Deogan Yan ST-YVES	US Canada Canada-Quebec
WG2.4.2 Lead	Clarissa Han Jill Hayden	Australia UK
WG2.4.3 Lead	Siveshni Pillay Soumia Jannan	South Africa Morocco
Secretaries EN-speaking	Sene Peach Hounkpe Wendeou	
Secretaries FR-speaking	Kauther Machta	Tunisia
Secretaries SP-speaking	Luz Angelica Gradilla Hernandez	
Communication contact	Mohamed Zemrli	Tunisia
Partnership contact	Valentina Glasso	Italy
Terminology correspondent	Francesco Lupi	Italy
Webmaster	Richard Denis Adibako	Uganda
Academic contact	Martin Margreiter	Germany
Gender and inclusive correspondent	Siveshni Pillay	South Africa

## TC Involvement in Special Projects

1. **Artificial Intelligence in the road sector**– Several states (Valentina, Clarissa and Yan)
2. **Rapid Impact Assessment** - First Delegate of Spain in PIARC (John M and Michal Z)

## Actions and the Next Meeting

- The TC2.4 leadership team will convene for its inaugural meeting in March or April 2024 to coordinate the collection of case studies.
- All TC members to confirm their participation in the three WGs via the workspace links ASAP.
- Japan representative to confirm with their first delegate for hosting the next TC meeting in Oct 2024.

**Dr Clarissa Han**  
**National Leader / Chief Technology Leader**  
**Sustainability and Materials Performance**  
**National Transport Research Organisation**

March 2024