

**PIARC Technical Committee 3.3 – Asset Management**  
**Michelle Baran, Queensland Department of Transport and Main Roads**  
**English-speaking Secretary**  
**Kick-off Meeting: Paris, France, 31 January – 2 February 2024**

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### **Executive Summary**

The kick-off meeting of Technical Committee 3.3 was held in Paris, France from 31 January to 2 February 2024. Michelle Baran, from the Queensland Department of Transport and Main Roads (TMR) attended the meeting as English-speaking secretary representing Australia.



*Figure 1: Strategic Theme 3 Technical Committee Members*

The main objectives of this meeting were to:

- Provide new members with an overview of PIARC and its operations
- Meet fellow Technical Committee members
- Present and review the Terms of Reference
- Finalise Technical Committee organisation (establish working groups, appointments, meeting schedule, seminar planning)
- Commence initial work group scoping
- Finalise Technical Committee Work Plan

### **Background**

The PIARC Strategic Plan 2024–2027 was drafted by the Strategic Planning Commission and the Strategic Planning Working Group. It was approved by the PIARC Council in September 2023. During 2023, the Chair and Secretaries of Technical Committee 3.3 worked with the PIARC General Secretariat and Theme Coordinator to develop and refine the committee's Terms of Reference contained within the Strategic Plan. The Terms of Reference define the work program for the committee over the 2024-2027 work cycle.

### **Work Program**

Good asset management is fundamental to every road authority to ensure it can effectively manage its assets through the asset lifecycle. Asset management requires the ability to balance cost, risk and performance. Technical Committee 3.3 is looking to further improve the collective understanding of asset management with a view to more effective management of assets to optimise asset performance.

The first stream of work will investigate how digital technologies can improve an asset manager's understanding of the asset base, its condition and its predicted performance. The second stream of work will continue to build upon the body of knowledge on the use of risk and resilience analysis metrics. The third stream of work will look to identify successful approaches for renewal and rejuvenation of ageing infrastructure. Where relevant, case studies developed through the aforementioned work streams will be incorporated within updates to the Road Asset Management Manual. The Committee is also aiming to organise an international conference for road asset management to share learnings from the committee's work activities.

During the meeting, the Technical Committee reviewed the Terms of Reference. As part of this review, a few minor changes will be recommended. To deliver the work of the Committee, five working groups were established with members nominating a preferred group. Although members will focus on one working group, it is expected that members will contribute across all aspects of the work program. The committee's Communications Coordinator will utilise online collaboration tools to ensure all members are able to contribute across the work program.

The five working groups are:

#### Work Group 3.3.1a: Leveraging Technology to Improve Asset Management Practice

*Austroroads representation: Paul Geck, NZ*

The purpose of this work is to investigate how digital technologies can improve the way asset management is undertaken. This sub-group will focus on Building Information Management in the context of asset management. It will investigate opportunities and emerging trends.

#### Work Group 3.3.1b: Leveraging Technology to Improve Asset Management Practice

*Austroroads representation: Michelle Baran, Australia*

This sub-group will focus on emerging digital technologies (data science, visualisation techniques, the use of big data, artificial intelligence applications and automated data collection methods) and how these may be used to improve asset management decision making.

#### Work Group 3.3.2: Measuring for reducing risk and improving the resilience of road networks

The purpose of this work is to continue to build the body of knowledge on the use of risk and reliance analysis metrics and tools for managing transportation assets. This can help increase the resilience of road network to climate change and other stressors.

#### Work Group 3.3.3: Renewal and Rejuvenation of Ageing Infrastructure

The purpose of this work is to continue to identify successful approaches for considering the renewal and rejuvenation of ageing infrastructure managing transportation assets in asset management.

#### Work Group 3.3.4: Update the content of the Road Asset Management Manual

The purpose of this work is to continue to update the content of the Road Asset Management Manual. The update will include increasing the number of case studies and include additional sections based on the knowledge gained through the other Technical Committee activities.

## Meeting outputs

The kick-off meeting provided the committee the first opportunity to meet to discuss the committee's Terms of Reference as outlined in the PIARC Strategic Plan. Whilst the Chair and Secretaries have met a number of times virtually prior to the meeting, the full Committee had not previously met.

The kick-off meeting also provided members new to PIARC, the opportunity to learn about the organisation and to understand their roles and responsibilities over the coming four-year cycle.

The primary objective of the meeting was for the Technical Committee to finalise the work plan for the cycle and to commence activities of the individual work groups.

## Emerging issues

It was very clear from the overwhelming interest in the work group associated with emerging digital technologies (BIM, data science, visualisation approaches, big data, artificial intelligence and automated data collection) that this is a key need amongst road authorities. Asset managers are looking to leverage new technologies to improve decision making, with an aim to optimise investment across transport assets.

## Learnings for Australia and/or New Zealand

Although early in the four-year cycle, discussions amongst Committee members identified a few emerging technologies in the network data collection. Although only briefly described during the meeting, more detailed presentation will be shared at future meetings.

### Danish LiRA Project

<https://lira-project.dk/>

*The LiRA project was a 3-year project managed under the Danish Road Directorate. Its primary objective was to develop an approach to road network surveys using conventional sensors installed in modern vehicles, such as roughness (IRI), rutting depth, texture depth, noise, friction, rolling resistance, cracked surface and potholes. The member from Denmark has agreed to present an overview of this project and its findings at the next meeting.*

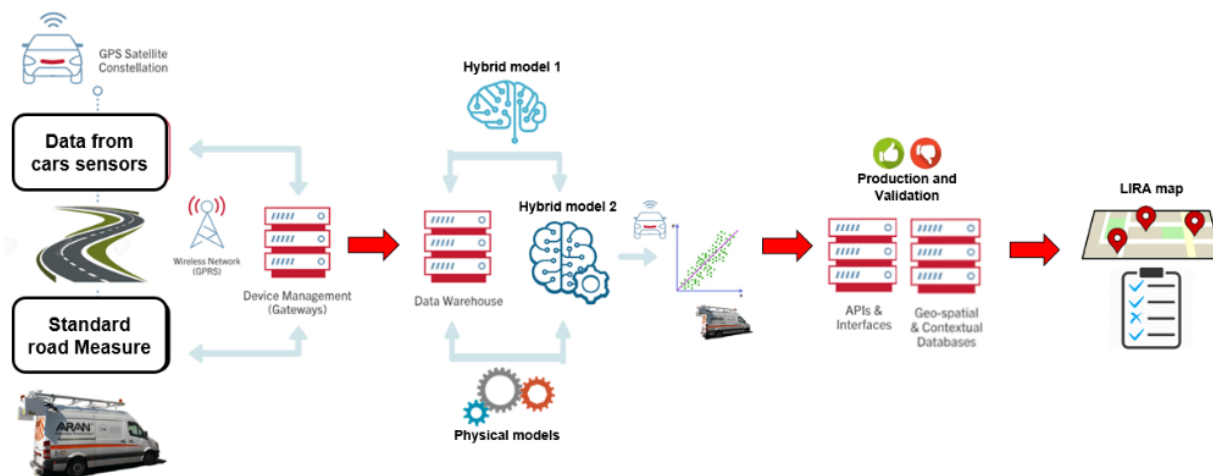


Figure 2: LiRA Project Overview

## NIRA Dynamics

### [NIRA Dynamics AB](#)

*The member from Sweden discussed the emerging use of vehicle telematics to measure road condition by the company NIRA Dynamics. This company accesses vehicle telematic data predominantly from Volkswagen and is able to provide real-time road surface information (roughness and friction). This area is of particular interest to TMR. A previous project undertaken through the National Assets Centre of Excellence (NACOE) research program (a joint initiative of TMR and ARRB), was established to investigate the feasibility of using in-car telematics to assess skid risk across the network. A literature review yielded promise, however, it was not possible to obtain the participation of car companies, despite initial interest, for in-field trials.*

### **Benefits from other associated activities**

On a personal note, as a former secondee to PIARC as a Technical Advisor in 2008-09, it was a pleasure to return to Paris and become involved in PIARC activities again. I was happy to be able to reconnect with colleagues I worked with during that time and also to engage with new staff and fellow members of the Technical Committee. Following the meeting, I am motivated to begin work on the Committee's deliverables.

### **Conclusions and recommendations**

At the completion of the meeting, each of the five working groups had developed an initial plan and have commenced work. Plans have been made for future meetings including:

- Workgroup meetings – virtual meetings ~ monthly
- Steering group (Chair and Secretaries) – virtual meeting ~ fortnightly
- Technical Committee Virtual Meeting – April 2024
- Technical Committee In-Person – 13-15 October, Birmingham UK.

Work will continue online over the next few weeks to finalise the Work Plan prior to sending it to the PIARC General Secretariat.

**Michelle Baran**

**PIARC Technical Committee 3.3 – Asset Management**

**English-speaking Secretary**