



International
Railway
Research
Board



INTERNATIONAL UNION
OF RAILWAYS

INTERNATIONAL RAILWAY RESEARCH BOARD (IRRB) ANNUAL REPORT 2022

ROBERT MOFFAT,
IRRB Vice Chair

MARTIN BRENNAN
IRRB Secretary

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Coordination of interaction among UIC Regions

Improving coordination in rail research among UIC regions through IRRB support

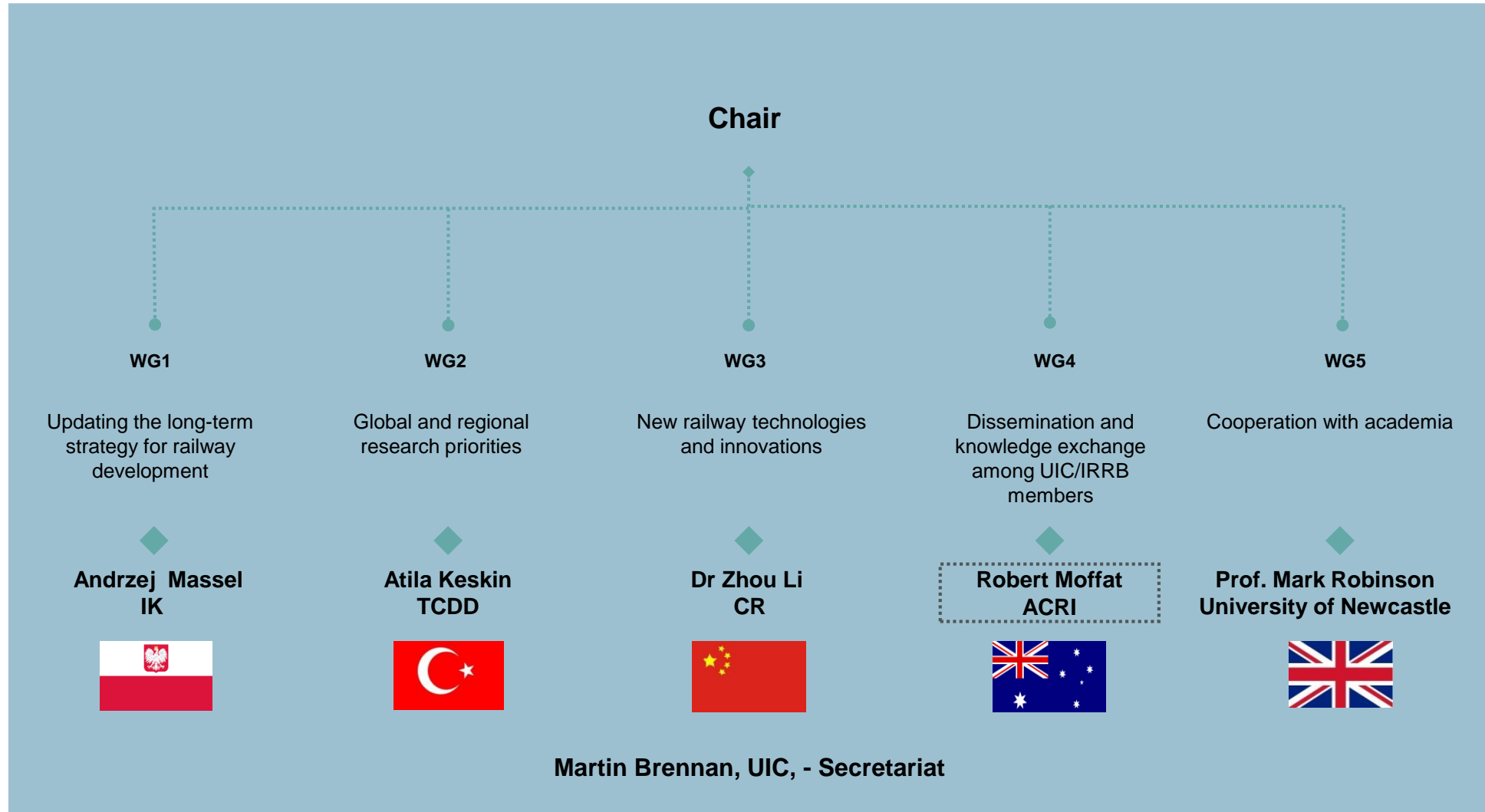
Promotion of global collaboration

Managing global collaboration in the area of rail research, development and innovation

Global platform for collaboration of all stakeholders

Involving all stakeholders in joint activity on global level in the area of R&D, including rail supply industry and academia

UIC IRRB STEERING GROUP 2022



WORKING GROUP No1



OBJECTIVE

Drawing up a medium to long term forecast of the expected railway system development level (5, 10, 15, 20 years ahead)



RESULTS



Annex to the UIC document, 'Global Vision for Railway Development 11' prepared - reflecting foresight of the long-term prospects and vision for global railway development (5, 10, 15, 20 years ahead), with a brief description of the future railway system.

WORKING GROUP No2



OBJECTIVE

Creating a fundamental view of research and technological breakthroughs in the rail sector, taking into account global and regional trends



RESULTS



- Report: “List of main perspective areas of research and technological breakthrough in the railway sector considering global and regional trends and challenges” The areas reported are: Pandemic; Assets for automatic & autonomous operation; Railways digital twin, simulation & virtualization; vision to disruptive transformation of rail mobility; Smart asset management; Smart integration for door to door (D2D) mobility; Multimodal transportation; Environmentally friendly and attractive sustainable mobility; Rail freight - the backbone of a green logistic chain
- Webinar on ‘Assets for Automated and Autonomous Operations’ delivered in November 2022

WORKING GROUP No3**OBJECTIVE**

Based on the principle of "achieving shared growth through joint efforts and win-win cooperation" to strengthen exchanges, cooperation, and information sharing among International Railway Research Board (IRRB) Members on development of new technologies and innovative ideas

**RESULTS**

The increasing use of the new online platform for the development of world new railway technologies (www.worldrailtech.com) has achieved 30,000 hits per month



Research on projects of new railway technologies tracking carried out with collaboration from around the globe

The 2nd workshop on development of new railway technologies held via web-conference on July 8, 2022 'Digital Tools for Railway Operations, Maintenance and Safety'

WORKING GROUP No4



OBJECTIVE

Raised knowledge of UIC members about current and prospective research, through ACRI's Rail Knowledge Bank and RSSB's SPARK databases



RESULTS



Workshop held in November 2022 for all UIC stakeholders, to disseminate knowledge of the SPARK and Rail Knowledge Hub databases - what they are, what they offer, how to access them and their current and future potential to support activities across diverse domains.



Planning for future developments to enhance the databases with more sophisticated visualisation capability, to enable deeper analysis and insight.

WORKING GROUP No5

A circular icon with a crosshair, representing a target or objective.

OBJECTIVE

Development of an Academic Network, at Regional and Global level, that will be able to support the work of UIC and all its stakeholders involved in railway R&D



RESULTS



Academic institutions and academics involved in railway research identified and canvassed for involvement in this initiative, in all UIC Regions – Africa, Middle East, Asia-Pacific, North America, Latin America, Europe. Positive responses progressed and included in plans for further development, and inclusion in Regional strategic plans.



Exemplar presentations (Asia/Pacific Region) made at IRRB Plenary November 2022.



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Thank you for your attention.