

# Public Works Foundations Program



## Course Outline

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### Traffic & Transport Foundations

#### What is the Traffic & Transport Foundations course?

This course is one of eight **Public Works Foundations Program** courses curated by IPWEA Victoria to develop the skills of public works professionals in key responsibility areas. Each course comprises four 4-hour sessions presented over consecutive weeks.

#### Course Overview

This course will cover optimal transport network planning and traffic management considerations for developing or managing a community transport integrated network.

#### Modules

Session 1: **Integrated Transport Planning**

Session 2: **Traffic Management**

Session 3: **User Safety**

Session 4: **Active Travel**

#### Learning Objectives

By the end of this course participants should have an introductory level of understanding of:

- road space requirements for general traffic, freight, public transport, cyclists and pedestrians
- best-practice traffic management principles, objectives and approaches
- The safe systems approach to user safety and road safety engineering
- Accommodating active travel in road infrastructure using a safe systems approach

#### Integrated Transport Planning

- Introduction to transport planning
- Movement and place
- Emerging advancements

#### Traffic Management

- Local Government Roads
  - Traffic Management Fundamentals
    - Traffic Data Collection
    - Local Road intersections and design considerations
  - Treatments to reduce crash risk
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## User safety

- Local Government and Road Safety, Road Safety Tools
- How do we make the road system safer for road users?
- Road safety tools and investigations

## Active Travel

- Safe system approach for active travel
- Pedestrian Infrastructure and application
- Cycling Infrastructure and application

## Delivery

The course is presented online to maximise accessibility for regional & interstate participants.

## Facilitators

### Melanie Venter

Melanie is part of the Safer Smarter Infrastructure team working as a traffic and transport principal engineer. Melanie has worked across the full range of transport network planning including all modes of transport, route choice determination, transport policy aspects and infrastructure requirements while considering sustainable and safe outcomes. Melanie has led multi-disciplinary teams and is well acquainted with all project management aspects.

### Dr. Ronny Kutadinata

Dr Ronny Kutadinata specialises in mathematical modelling of physical systems for optimisation, control and automation. His research interests include vehicle and traffic modelling, traffic network control and transport optimisation. Ronny has worked on various projects in the ITS field, which included applications of advanced techniques for intersection control, intelligent mobility on demand, and CAV trials and roadmap. He has also taken a role as an NTRO Research & Development Program Leader focusing on infrastructure productivity through integrated mobility management and optimisation.

### Ali Raza

Ali is a Principal Professional at ARRB in the Safer Smarter Infrastructure Team. He is currently delivering traffic and road safety-related projects for state departments and is also actively involved in research projects and project development. Before joining ARRB, Ali worked in Australia and overseas with consultants, local governments and state organisations gaining sound knowledge and expertise in traffic engineering and road safety.

Ali holds a Master and Bachelor of Transportation Engineering from UET Lahore and is an accredited Senior Road Safety Auditor. He is also a registered Chartered member (CPEng) of Engineers Australia.

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## **Karen Cogo**

Karen Cogo is a Principal Professional Leader at ARRB and has 25 years' experience in designing a wide range of road infrastructure projects in local, arterial and freeway environments for all road users. She has diverse skills in day-to-day transport management and operation and has extensive experience in road safety and congestion projects, intersection design and long route improvements across a broad range of transport infrastructure treatments for all road users.

Karen's well-rounded experience ensures any work, including designs, are cost-effective, constructible and user-friendly with the aim of a Towards Zero target. She has led major project teams and was the lead verifier for the transport component of the Western Roads Upgrade Project in Melbourne where she was responsible for the design and modelling of 45 traffic signal designs that fulfilled the design requirements across eight arterial road projects in the western suburbs.

## **Paul Hillier**

Paul Hillier joined the Australian Road Research Board (ARRB) in July 2005 under a formal collaboration agreement with TRL UK. He has assumed various senior positions within the organisation's road safety management disciplines in his 17 years with the organisation. He is one of ARRB's Principal Professional Leaders and is a trusted mentor to younger and less experienced colleagues.

His technical expertise is in road safety engineering (including the application of the Safe System) and associated site and network level risk and safety assessments, risk/hazard mitigation and infrastructure-based countermeasures, network management (strategy, policy, practice and research) and more generically, capacity building and knowledge transfer.

Paul is consistently among ARRB's highest ranked presenters/speakers, trainers and facilitators. In 2017, he was awarded the inaugural ARRB award for Commitment to Knowledge Transfer. He has experience of working in more than 20 countries in the developed and developing world, including extensively in SE Asia, often for International Development Banks.

## **Who should enrol?**

This course has been developed for engineers, technical officers, coordinators and supervisors engaged with the design and construction of community infrastructure.

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## CPD and Badge

The course provides 16-hours of structured professional development. A digital badge is provided on completion for social media application and Public Works Foundations Program graduates will be awarded a **Certificate of Public Works Engineering**.

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## Course Partner

The logo for NTRO, consisting of the letters 'N', 'T', 'R', and 'O' in a bold, sans-serif font. The 'N' and 'T' are blue, while the 'R' and 'O' are a teal color.