



# Human Factors in the land transport system

A one-day highly interactive and practical short course introducing human factors to transport professionals with the goal of thriving people and communities.

Learn about how people work, designing effective solutions for people, and how this leads to lower human costs, more user-friendly and efficient projects, and more focused spending.

Suitable for transport and road safety engineers, health and safety professionals, planners, managers, leaders, and other transport system designers.

The course will equip participants to:

- ✓ approach projects and work with a human factors lens
- ✓ identify where human factors input can improve usability and efficiency, and reduce risk and cost
- ✓ assemble teams that can apply human factors methods to improve human and system performance.

## Objectives

- Introduce the discipline of human factors, key theory and principles, and why it is crucial for thriving transport and communities
- Examine how human factors can benefit road safety, transport health and safety, and integrated land transport
- Develop awareness of basic human factors methods to improve practice in design, engineering, and planning in the transport system
- Learn about system approaches, and how they can be used for more effective outcomes
- Explore the human factors ecosystem to further advance knowledge and practice.
- Make a start on your real-world human factors related problems

**Date and location:** Thursday, 29 May, in-person only

8.30am to 5pm

Auckland Transport, 20 Viaduct Harbour, Auckland Central

**Course convenor and presenters:** Dr Hamish Mackie (Certified Professional Member, HFESNZ) and Director of Mackie Research is the course convenor. Hamish will be supported by a range of government and other experienced human factors and experts.

## Following this course:

- Specialised human factors courses and teams tailored to demand (e.g. Human Factors in work-related road safety, human factors in road design)
- Participation in the Human Factors community (e.g. HFESNZ Transport special interest group)
- Continuing university education.



## Outline

Item	Description
Introduction to Human Factors and its role in the transport system	<ul style="list-style-type: none"> <li>• Definition, the discipline, society, professionals and the human factors ecosystem</li> <li>• Human factors role in the transport system - the value proposition</li> <li>• Typical applications in road safety, transport health and safety, and transport system design.</li> <li>• What human factors isn't, acknowledging related disciplines</li> </ul>
Principles	<ul style="list-style-type: none"> <li>• Key human factors principles applied to transport examples</li> <li>• Key aspects of human behaviour in transport environments</li> <li>• Examples from road safety, work related road safety, urban design, health and safety</li> </ul>
Methods	<ul style="list-style-type: none"> <li>• Driver and road user-behaviour models, error models – why people do what they do</li> <li>• Understanding how people perceive, process, and behave</li> <li>• Information collection and analysis methods</li> <li>• Tools for designing for people</li> <li>• Road design features and how people interact with them</li> <li>• Human Factors evaluation tools</li> <li>• Tools for understanding organisational needs assessment</li> </ul>
System approaches	<ul style="list-style-type: none"> <li>• The Safe System and System Thinking, system principles and methods</li> </ul>
Real-world transport problems	<ul style="list-style-type: none"> <li>• Working on real world problems together</li> </ul>
Where to go for further knowledge and help	<ul style="list-style-type: none"> <li>• HFESNZ website, university education</li> <li>• Membership types, Society activities, Certification</li> <li>• Building a transport human factors special Interest group...continuing the conversations.</li> <li>• Ideas for specific areas that may need more focus</li> </ul>