

PIARC (World Road Association) Strategic Plan - 2024-2027

Technical Committee 2.1 – Roads for Accessibility and Mobility in Urban and Peri-Urban Areas

Overview

In the new Strategic Plan the TC 2.1 roads for accessibility and mobility in urban and peri-urban areas will start from the results obtained in the previous one with a specific focus on coordination with other TCs. The new title of the TC 2.1 underlines the three pillars of the TC's work: Roads, accessibility and mobility.

The first topic cooperation between transport modes in urban and peri-urban areas has the goal to ensure equity between urban and peri-urban areas through a better cooperation between transport modes and a new paradigm for road space and multimodal transit centre design. This topic will develop in cooperation and coordination with TC 2.2.

The second topic urban vehicle access regulations (UVARs) has the purpose to study different solution of urban vehicle access restrictions and regulations: low emission zones, pedestrian zones and congestion charging zones. The goal is to evaluate the effectiveness in terms of congestion mitigation also from the point of view of an integrated urban transportation plan, to analyse the benefits and potential neglected cost. This work will be made in coordination with zero/low emission zones treated in TC 3.4

Finally, the third topic Securing mobility of vulnerable road users in crowded street and for highly frequented infrastructures will focus on some arguments dealing with the specific aspects of safety in urban areas:

- vulnerable users facing public transport (bus, tram, etc.)
- new forms of mobility in crowded street and in district development
- traffic and crowd management for highly frequented infrastructures.

This topic is strictly connected with the TC 3.1 Road Safety and it should be done in relation with it.

2.1.1 Cooperation between transport modes in urban and peri-urban areas

Purpose: The purpose of this work is to start from the main aim of the TC activity proposal that will focus on roads for accessibility and mobility in urban and peri-urban areas. The goal is to reduce car traffic, congestion and greenhouse gas emission and to ensure equity between urban and peri-urban areas, through a better cooperation between transport modes and a new paradigm for road space and multimodal transit centre design. In cooperation and coordination with TC2.2

Preliminary research questions:

- What kind of accessibility/mobility problems are there in urban and peri-urban areas in relation with population density, location of urban services and availability of transport modes? Daily life services or commuting/schooling?
- To what spatial extent should urban services be made available at a certain level by means of providing transportation services?
- Is multimodal route attractive for trip makers compared with driving a car door-to-door? If so, on what conditions?
- What are the definitions for accessibility and mobility and formulas for comparison?

- What are the methods to evaluate solutions for a better cooperation between transport modes?

Importance to roads agencies: This work is important to road agencies and public administration both if you refer to external or internal challenges. Between the external challenges we could cite EC2 – reducing greenhouse gases from the road sector, and EC8 – improving the image of the road sector. Between the internal challenges this kind of work is connected to IC3 – Improving productivity of road administrations driven by digital transformation.

Audience: The work will be fruitful both for road agencies, practitioners and researchers. The cooperation between transport modes is the future for responding to extreme weather events but also for seizing national-level infrastructure investment planning for a better equity between all the citizens.

For road agencies the work could improve the effectiveness and the benefit of large-scale national infrastructure investment programs that are underway in several member countries. For practitioners and researchers, the work could increase the awareness on equity for the mobility solutions in urban and peri-urban areas. For all citizens the aim is to show how it is possible to improve mobility and accessibility fairly, enabling all people to participate in socio-economic life.

Deliverables: Literature review, case studies, briefing note, seminar.

Background to TC's work on this topic: The previous technical committee have already worked on data collection and analysis of inhabitants' mobility daily needs and accessibility for an adequate level of urban and peri-urban mobility with the WG 2.1.1 Accessibility and mobility facing land use in urban and peri-urban development.

Very important references and background should be found also in the work that has been made by the WG 2.1.2 Integrated transportation systems, multimodality on the issue "Identify good practices of optimization of road networks through better integration with other forms of transport (rail, active modes, etc.) in terms of efficiency, resilience and sustainability".

Low and lower-middle income countries: Equity is the keyword to take into account the low and lower-middle income countries. Mobility is one of the main needs of all the people from all over the world and the difference in the liveability of urban and peri-urban areas are strictly connected with the transport availability for all users.

Gender inclusion & diversity: Equity is also the keyword to take into account the gender inclusion and the diversity. Equity is a principle or concept that is often considered synonymous with fairness. It can be conceived socially, spatially, and procedurally. Equity recognizes that different people have different needs, particularly those belonging to disadvantaged groups, such as low-income earners, women, immigrants, older adults and children. Structurally, equity works to repair the damages imposed upon such groups, from factors including decades of disparate investment, redlining and displacement.

Potential duration: 36 months.

2.1.2 Urban vehicle access regulations (UVARs)

Purpose: The purpose of this work is to study different solutions of urban vehicle access restrictions and regulations. Low emission zones, pedestrian zones and congestion charging zones are all examples of this kind of solutions.

The goal is to evaluate the effectiveness in terms of congestion mitigation also from the point of view of an integrated urban transportation plan, to analyse the benefits and potential neglected cost. It is noted that UVARs will be more effective if introduced along with alternative multimodal solutions.

This work will be made in coordination with zero/low emission zones treated in TC3.4.

Preliminary research questions: Many cities struggle with the balance of congestion, “liveability”, air pollution, noise levels, accessibility, damage to historic building and other pressures of urban life. The effects of these phenomena highlight the problematic reigning in urban areas across the World.

Is it possible to avoid the risk of creating a fragmented patchwork of urban areas with new 'border lines' across urban and peri-urban areas in metropolitan regions? In order to enable a wide use of UVARs without creating disproportionate barriers to mobility for citizens and goods, it's important to study guidance for the development of harmonised UVARs.

Importance to roads agencies: This work is important for road agencies and municipalities. The growing number of schemes for Urban Vehicle Access Regulations (UVARs) within the World may create confusion for citizens and businesses. This topic is created to increase transparency and, where possible, support the effectiveness of existing approaches to UVARs. This work is important to road agencies and public administration both if you refer to external or internal challenges. Between the external challenges we could cite: EC22 – reducing greenhouse gases from the road sector and EC4 – responding to increased automation of driving. Between the internal challenges this kind of work is connected to IC1 – increasing use of varying funding models for road investment.

Audience: The work will be fruitful both for road agencies, practitioners and researchers that are involved in Urban vehicle access regulations (UVARs). Is important to acknowledge the environmental, social and environmental objectives of these actions.

Deliverables: Literature review, seminar.

Low and lower-middle income countries: Urban vehicle access restrictions and regulations could have a direct impact on daily mobility needs. The deliverables should alleviate the possible impact of these kind of policies on people and citizens that live in low and lower-middle income countries.

Gender inclusion & diversity: Women generally have different trip chains, shorter trips close to home and other mobility characteristics. All these aspects should be included as a guidance for the Urban vehicle access regulations (UVARs) technical report.

Potential duration: 24 months.

2.1.3 Securing mobility of vulnerable road users in crowded streets and for highly frequented infrastructures

Purpose: This topic is recommended for the TC 3.1 Road Safety and it should be done in relation with it. Our work will focus on some arguments dealing with the specific aspects of safety in urban areas:

- vulnerable users facing public transport (bus, tram, etc.)
- new forms of mobility in crowded street
- traffic and crowd management for highly frequented infrastructures.

The purpose of this work is to evaluate new ways and new guidelines of improving secure and safe mobility for all vulnerable road users (including new mobilities) in some specific conditions.

More than half of the total number of victims in traffic are so called vulnerable road users: children, the elderly, pedestrians, users of a two-wheeler and of new forms of electrical so-called soft mobilities (e-scooters, e-bicycles, monowheel) which require a specific approach. Despite that, vulnerable road users receive only limited research and policy attention, both from developed countries and LMIC.

Up to now, there is a worldwide lack of methodical and practical support for the planning and handling of crowded situations and highly frequented infrastructures. TC 2.1 will therefore address all aspects that can contribute to a safe and efficient planning for and management of crowded situations and highly frequented infrastructures.

Importance to roads agencies: This work is important for road agencies and road administration because the systematically classified information could be used in a Design for All approach. In this vision, measures are not taken for the good of a specific group, but for the securing of vulnerable road users as a whole. The plan is to cross-check information in the Fact sheet on joint causal factors, quality needs and current policies. In this way one can possibly identify measures that are beneficial for more than one group. The efficiency and acceptance of measures in a policy program can be improved in this way.

It is important to draw concrete lessons from what has happened for the planning and implementation of future events and to provide the practice with new professional knowledge, guidelines and specifications. While evacuation and the dimension of emergency exits are regulated by ordinances in many countries around the world, standards for traffic management and crowd management to prevent disasters are largely lacking.

This work is important to road agencies and public administration both if you refer to external or internal challenges. Between the external challenges we could cite first of all: EC6) Securing mobility and safety of vulnerable road users but also EC5) Tackling worsening road traffic safety. Between the internal challenges this kind of work is connected to IC2) Securing diverse human resources by creating an attractive and inclusive workplace.

Audience: The work will be fruitful both for road agencies, practitioners and researchers that are involved in securing mobility of vulnerable road users. It is important to acknowledge the environmental, social and environmental objectives of these actions.

Deliverables: Literature review, seminar.

Low and lower-middle income countries: Mobility of vulnerable road users could have a direct impact on safety, security and accessibility especially for LMIC. The deliverables should all evaluate the possible impact of these kind of policies on people and citizens that live in low and lower-middle income countries.

Gender inclusion & diversity: Women and other group of users generally have different trip chains, shorter trips close to home and other mobility characteristics. All these aspects should be included as a guidance for the securing mobility technical report.

Potential duration: 18 months.