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PIARC STRATEGIC OUTSOURCED TASKS

CALL FOR PROPOSALS

Deadline for submission of proposals:
23 August 2024

1 PURPOSE AND STRATEGIC SIGNIFICANCE

1.1 Introduction

PIARC (World Road Association) has established a Strategic Outsourced Tasks ("SOT") mechanism to enable it to outsource some activities in order to support the work of the Technical Committees on some priority topics of the Strategic Plan, that operate on four year cycles.
This document is a Call for Proposals to identify a contractor that will deliver the Strategic Outsourced Tasks.

1.2 Context

The World Road Association (PIARC) establishes Technical Committees and Task Forces, which are made up of international experts appointed by PIARC member countries. Over the course of a 4-year work cycle, the Technical Committees and Task Forces will discuss a certain number of issues, deliver reports, organise seminars or workshops, and contribute to the World Road Congresses. These objectives are presented in an official PIARC document called the "Strategic Plan". The current Strategic Plan covers the 2024-2027 period. It is available from this link:
https://www.piarc.org/en/PIARC-Association-Roads-and-Road-Transportation/strategic-plan

PIARC relies on the time and goodwill that experts from Technical Committees ("TCs") and Task Forces ("TFs") volunteer for PIARC. Thanks to them, PIARC was able to publish 95 reports and organise 44 events over the 2020-2023 work cycle.

PIARC has to produce very good knowledge-sharing reports and other outputs on very important topics, such as resilience, disaster management, decarbonization. Some of those topics require a holistic approach, and represent a significant commitment for Committee members.
If intermediate individual tasks such as literature reviews or surveys can be outsourced to contractors, then Committee members can focus on real discussions between themselves, and on ensuring timely delivery of quality products. As a result, this would enhance the quality of knowledge-sharing reports and other outputs, and would be beneficial to member countries.
It is important to highlight that such strategic outsourced tasks would only support the work of the Committees, and they would not diminish the role of the Committees. Committees remain fully in charge of the products that are published by PIARC.

As an example, one of the tasks that could be outsourced relates to the Technical Committees 2.1 & 3.5. A literature review could address decarbonization of road passenger and freight transport. - National strategies and policies Solutions with focus on road users including technology solutions (e.g., static or dynamic charging, hydrogen, battery swapping) and financial dis/incentives (e.g., road pricing models). This is provided here as an example only; more detail is available in the Appendix.

Technical Committees have already submitted their wishes for Strategic Outsourced Tasks, and they have been prioritized by PIARC decision-making bodies. This list is presented in the Appendix.

1.3 Purpose of the project

PIARC is looking to identify one contractor that will deliver all SOTs.

As a minimum, this project should deliver Tasks SOT 1 (Literature review on the best practices related to coping with extreme weather, disaster management, and effects of climate change for enhancement of organizational and road network resilience) and SOT 2 (Literature review on decarbonization of road passenger and freight transport. - National strategies and policies Solutions with focus on road users including technology solutions (e.g., static or dynamic charging, hydrogen, battery swapping) and financial dis/incentives (e.g., road pricing models)). They are presented in more detail in the annex.

The purpose of this project is to deliver the SOTs within the available budget. The bid will indicate which tasks, starting with SOT 1 and SOT 2, can be delivered within the budget.

1.4 Out of scope

Translations from English to Spanish or French is out of scope. It can be presented by the tenderer as an option.

2 BUDGET AND LETTER OF SERVICE

2.1 Budget for SOT1 and SOT2

The funding requested from PIARC for SOT 1 and SOT 2 should not exceed 19,000 Euros all taxes included for all tasks. The above amount is the budget available at the time of publishing this Request for Proposals.

2.2 Description of costs

The proposal shall also provide estimated cost (man-month and euros) for each task, SOT1 & SOT2 and other(s) if any.

This is because additional budget may become available to PIARC at a later stage. This is not certain and the available amounts are not known. If so, PIARC would proceed to order additional tasks, in addition to the SOTs covered by the initial contract, referring to the provided estimated costs.

2.3 Payment schedule and penalties

The proposal shall include an invoicing schedule, based on the delivery of final deliverables.

In line with EU regulations, the payment will take place 60 days after the acceptation of the invoice by the POT.

Since a timely delivery of the tasks is at the essence of the SOT mechanism, late penalties could be applied if the external consultant fails to deliver the outputs in the proposed milestones. In line with French regulations, if the delay is the contractor's responsibility, the penalties will be 1% of the budget per week of delay, with a grace period of 15 days, and up to a maximum of 5% of the budget.

2.4 Letter of service

Based on the final proposal, PIARC will establish an Order of Service to award the contract.

3 PIARC PROJECT OVERSIGHT TEAM

The project will be overseen by a project evaluation and steering committee called “Project Oversight Team” (POT). It will be chaired by Setsuo Hirai, the Vice Chair of the Strategic Planning Commission. It will comprise representatives from all relevant PIARC TCs. Some experts will be nominated by member countries and PIARC General Secretariat staff. The POT will select the preferred tenderer and assist in the development of the project.

The POT will oversee progress of the Project, including participating in meetings, reviewing interim and final products. The POT and PIARC will also provide relevant information from the PIARC work to the selected tenderer for use in the project. In addition to review and oversight by the POT, input may also be sought from the PIARC Executive Committee.

The contractor will organise a progress meeting with the POT every month.
These meetings will serve to review overall progress and to review draft deliverables.
Relevant documents shall be distributed 3 business days in advance of POT meetings.
Within 5 business days after the meeting, the Contractor shall submit the meeting minutes to the Project Oversight Team (POT) for review. The POT will respond to the meeting minutes within 1 week of receipt with either changes or acceptance.

4 METHODOLOGY

The proposal will present the methodology that the tenderer will follow.
It is expected to include the following steps:

Duration of the contract and dates

The deadline for final deliverables is expected to be 4 months after the kick-off meeting. Nevertheless, the contractor can propose the envisaged start and end date for the work to be negotiated with POT.

Regular POT meetings

The contractor will organise a progress meeting with the POT every month.
See a description in Chapter 3 above

Task 1: Kick-off Meeting

The contractor shall hold a general kick-off meeting with the Project Oversight Team, within 2 weeks of task order award. The kick-off meeting will be held virtually.
The Contractor shall provide a proposed schedule for task order completion, which shall be discussed and finalized during the kick-off meeting. This schedule shall cover all Strategic Outsourced Tasks that will be included within the budget. The comprehensive schedule shall be distributed 1 week in advance of the kick-off meeting.

Task 2: Deliver SOT1

SOT1 is " Literature review on the best practices related to coping with extreme weather, disaster management, and effects of climate change for enhancement of organizational and road network resilience". It is described in more detail in the annex.

Task 2 will include the following sub-tasks and deliverable.

Task 2.1 - Define the scope of the literature review

Deliverable: The contractor will propose a scope of the literature review, including which exact detailed topics will be covered and which sources will be covered.

The draft scope shall be distributed 1 week in advance of the relevant POT meeting. The POT will respond within 1 week of receipt with either changes or acceptance. Within 5 business days after the meeting, the Contractor shall submit the final scope to the Project Oversight Team (POT) for review.

Task 2.2 - Organise the literature review

Deliverable: The contractor will conduct the literature review and will deliver a short summary table for each reviewed literature.

The format of the short summary table (word or excel or database, volume) shall be agreed between the POT and the contractor.

The draft report shall be distributed 1 week in advance of the relevant POT meeting. The POT will respond within 1 week of receipt with either changes or acceptance. Within 5 business days after the meeting, the Contractor shall submit the final report to the Project Oversight Team (POT) for review.

Task 2.3 – Summarizing emerging trends.
Deliverable: The contractor will analyze the literature during its review in Task 2.2 in order to identify emerging trends.

The draft report shall contain short summary tables and summary of emerging trends produced in the Task 2.2. and the Task 2.3.

The format of the emerging trends report shall be agreed between the POT and PIARC. It could be in Word, database or excel format, integrated or not in the literature review.

The draft report shall be distributed 1 week in advance of the relevant POT meeting. The POT will respond within 1 week of receipt with either changes or acceptance. Within 5 business days after the meeting, the Contractor shall submit the final report to the Project Oversight Team (POT) for review.

Task 3: Deliver SOT2
SOT2 is "Literature review on decarbonization of road passenger and freight transport. - National strategies and policies Solutions with focus on road users including technology solutions (e.g., static or dynamic charging, hydrogen, battery swapping) and financial dis/incentives (e.g., road pricing models)". It is described in more detail in the annex.

Task 3 will include the following sub-tasks and deliverable.

Task 3.1 - Define the scope of the literature review
Deliverable: The contractor will propose a scope of the literature review, including which exact detailed topics will be covered and which sources will be covered.

The draft scope shall be distributed 1 week in advance of the relevant POT meeting. The POT will respond within 1 week of receipt with either changes or acceptance. Within 5 business days after the meeting, the Contractor shall submit the final scope to the Project Oversight Team (POT) for review.

Task 3.2 - Organise the literature review
Deliverable: The contractor will conduct the literature review and will deliver a short summary table for each reviewed literature.

The format of the short summary table (word or excel or database, volume) shall be agreed

between the POT and the contractor.

The draft short summary shall be distributed 1 week in advance of the relevant POT meeting. The POT will respond within 1 week of receipt with either changes or acceptance. Within 5 business days after the meeting, the Contractor shall submit the final report to the Project Oversight Team (POT) for review.

Task 3.3 – Summarizing emerging trends.
Deliverable: The contractor will analyze the literature during its review in Task 2.2 in order to identify emerging trends.

The draft report shall contain short summary tables and summary of emerging trends produced in the Task 3.2. and the Task 3.3.

The format of the emerging trends report shall be agreed between the POT and PIARC. It could be in Word, database or excel format, integrated or not in the literature review.

The draft report shall be distributed 1 week in advance of the relevant POT meeting. The POT will respond within 1 week of receipt with either changes or acceptance. Within 5 business days after the meeting, the Contractor shall submit the final report to the Project Oversight Team (POT) for review.

Task XX: Deliver SOT-X Survey

The following is the expected methodology in case the contractor undertakes additional task(s) which are surveys (SOT4, for example).

Task XX.1 - Define the scope of the survey
Deliverable: The contractor will propose a scope of the survey, including which exact questions will be asked and which organisations and persons will be invited to answer.

The draft scope shall be distributed 1 week in advance of the relevant POT meeting. The POT will respond within 1 week of receipt with either changes or acceptance. Within 5 business days after the meeting, the Contractor shall submit the final scope to the Project Oversight Team (POT) for review.

Task XX.2 - Organise the survey
Deliverable: The contractor will conduct the survey and will deliver a comprehensive report of the output.

In this task the contractor will agree the methodology/tool with the POT. It could be a Word document to be filled in, or it could be an online tool, for example. The contractor will be in charge of setting up the tool and of distributing the survey. This survey will be organised in English, French and Spanish. The translations of the questions and of the replies will be organised by the contractor.

The draft report shall be distributed 1 week in advance of the relevant POT meeting. The POT will respond within 1 week of receipt with either changes or acceptance. Within 5 business days after the meeting, the Contractor shall submit the final report to the Project Oversight Team (POT) for review.

Task XX.3 - Analyse the survey results

Deliverable: The contractor will analyse the output of the survey produced in Task 3.2 in order to identify emerging trends.

The draft report shall be distributed 1 week in advance of the relevant POT meeting. The POT will respond within 1 week of receipt with either changes or acceptance. Within 5 business days after the meeting, the Contractor shall submit the final report to the Project Oversight Team (POT) for review.

5 FINAL DELIVERABLES

5.1 The final deliverables and formats will include the following

Task 1 – Kick-off Meeting

- Conduct Kick-Off Meeting and provide meeting agenda, any updated discussion materials, including the deliverable schedule.
- Provide a comprehensive draft outline to the Project Oversight Team one week in advance of the kick-off meeting

Task 2 - SOT1

- Agreed scope of the literature review
- Comprehensive data from the literature review
- Analysis report of the data from the literature review

Task 3 - SOT2

- Agreed scope of the literature review
- Comprehensive data from the literature review
- Analysis report of the data from the literature review

Optional deliverables as defined in the contract.

5.2 Intellectual property

The deliverables will be owned by PIARC.

5.3 No publication

These deliverables will not be published by PIARC as such. They will be used by the relevant PIARC TCs for their work, which will lead to published reports and to events.

The input of the Contractor will be acknowledged.

The outsourced outputs will be exclusively accessible to the PIARC countries funding these tasks and to related TC members.

6 OPTIONS

The proposal can be structured as a core proposal plus additional options.

The proposal would then include a core proposal within the proposed budget, plus some options which would be described in detail as well as priced separately.

Typically, options can be SOTs beyond SOT1 and SOT2. If the proposal includes additional SOT(s) to SOT1 and SOT2, descriptions for those tasks should be regarded as similar to the Task 2 and Task XX in the Section 5.

If the proposal is selected, PIARC would place the order for the core proposal, and for options at PIARC's discretion.

7 TO BE INCLUDED IN THE PROPOSAL

The proposal shall include the following elements as a minimum.

7.1 Methodology

The proposal should include a detailed methodology as presented in chapter 4.

7.2 Schedule and Key dates

The proposal should include a proposed work schedule including milestones for each task. The schedule should identify deadlines or timeframes for accomplishing major milestones an deliverables in the project.

PIARC expects SOT1 and SOT2 to be delivered within 4 months after the kick-off meeting, at the latest. Nevertheless, the contractor can propose the envisaged start and end date for the work to be negotiated with POT.

The work schedule will include a kickoff meeting and a progress meeting every month.

It should also include dates or timeframe for each task that allows adequate time for review and feedback prior to the final deliverable.

The schedule must be completed, and all tasks shall be delivered by the deadline, so that relevant PIARC Committees can incorporate the deliverables in their own work.

7.3 Budget

As presented in Chapter 2, the proposal shall provide a general budget for the project. The budget should include a general itemization of the costs of the major work elements of the project and a provisional schedule of invoicing.

The budget should present a budget breakdown: How many person x days are included in the proposal, per task, distinguishing between senior and junior experts, as well as a budget breakdown in Euros.

The proposal should include the minimum number of literature items that will be analyzed (in the case of literature reviews) and the minimum number of organizations that will be interviewed (in the case of surveys).

The proposal shall also provide standard unit offers for a standard survey and for a standard literature review.

The price offered by the tenderer should reflect that there may be future work commissioned by PIARC to the same contractor.

7.4 Proposed Experts

The proposal should include a description of the relevant expertise that qualifies the contractor to undertake the project. Specifically:

- Describe any past or current work projects that relate to the subject matters and processes (surveys and literature reviews) of this proposal.
- Identify the person or persons who will be working on this project, describing their roles and estimated contribution to the project, and providing information on their backgrounds, experience and expertise.

7.5 Size

The text of the proposal should not exceed 20 pages, excluding annexes.

8 PROPOSAL EVALUATION

The POT will assess proposals and select the preferred tenderer on the basis of the following criteria:

a) Technical approach and methodology (up to 35 points): how the tenderer addresses the project objectives and deliverables, how effective and resilient the proposed approach and methodology are, how adequate the schedule is
b) Experience and availability of the proposed team (up to 30 points): technical capabilities, translation experience, international experience, network/breadth;
c) Value for money offered by the tenderer (up to 20 points): including the time offered by different contributors of the tenderer's team; and
d) Proposed work plan including intermediate milestones of the schedule (up to 15 points).

9 PROPOSAL SUBMISSION

Proposals shall include all the elements identified in this Call for Proposals.

Proposals shall be submitted electronically in English to PIARC at: gen-sec-piarc@piarc.org
No later than 23 August 2024

For any questions, please send an E-mail to gen-sec-piarc@piarc.org

10 APPENDIX - Comprehensive list of Strategic Outsourced Tasks

Nb	*Strategic Outsourced Task*	*PIARC TC*	*Category*
SOT1	Literature review on the best practices related to coping with extreme weather, disaster management, and effects of climate change for enhancement of organizational and road network resilience	1.4&1.5	Resilience
SOT2	Literature review on decarbonization of road passenger and freight transport. - National strategies and policies Solutions with focus on road users including technology solutions (e.g., static or dynamic charging, hydrogen, battery swapping) and financial dis/incentives (e.g., road pricing models).	3.5&2.1	Decarbonization
SOT3	Literature review on low-carbon practices on construction sites	4.3&4.5	Decarbonization
SOT4	Survey on the best practices in organizational resilience for enhancement of road network resilience	1.4	Resilience
SOT5	Literature review on extreme weather events	1.5	Resilience
SOT6	Literature review on the carbon footprint calculators for pavements	4.1	Decarbonization
SOT7	Survey on Alternative Energy Solutions for Road Transport	3.5	Decarbonization
SOT8	Literature review on the innovation in the earthwork equipment fleet	4.3	Decarbonization
SOT9	Survey on the Winter maintenance in urban areas	3.2	Resilience
SOT10	Literature review related to the preparedness, mitigation, response, and recovery measures for securing short-term resilience of road networks to support supply chain continuity.	1.5	Resilience
SOT11	Survey on Electric Road Solutions	3.5	Decarbonization
SOT12	Survey on current earthworks machinery fleet	4.3	Decarbonization
SOT13	Survey on the skill and resources for winter service	3.2	Resilience

Detailed task descriptions are presented on the following pages.

SOT6 will be delivered by another in-kind contribution and is out of the scope of this request for proposals. It is mentioned here for information only.

10.1 SOT1 Literature review on the best practices related to coping with extreme weather, disaster management, and effects of climate change for enhancement of organizational and road network resilience, TCs 1.4&1.5, Resilience

1. Background and Objective:

The PIARC Technical Committee 1.4 WG2 and Technical Committee 1.5 WG2 are committed to advancing road network resilience. The objective of this study is to identify best practices in coping with extreme weather, disaster management, and organisational resilience that can enhance the robustness of road networks worldwide. Specifically, the consultant will focus on producing a Context Scanning Literature Review, identifying concepts of extreme weather and organizational resilience as well as concepts for developing a maturity matrix.

2. Scope of Work:

Organisational resilience:

Conduct an extensive context scanning to facilitate focussed literature review on organisational resilience, emphasizing its application to road networks. Questions that the literature search should consider are:

- How do road authorities assess themselves to determine how resilient they are?
- How do road (as well as public transport or other) authorities (as well as their supply chain) organize to promote/address resilience?
- How can road authorities organize themselves to become resilient?
- How can road authorities organise their activities (including improvement of road infrastructure and its operation) to ensure that road networks are resilient ?

The consultant will synthesize findings related to organisational resilience practices, frameworks, and maturity models. The maturity model should cover key dimensions such as leadership commitment, risk management, resource allocation, and adaptive capacity and consider the PIARC Climate Change adaptation framework produced in the previous cycle.

Social resilience for coping with extreme weather:

- How can road authorities collaborate and communicate with road users, communities and public authorities to enhance road traffic, and coping with extreme weather within communities.
- This review should include the areas of enhancement of road traffic resilience by social capital and enhancement of social resilience by road or road facilities.
- The consultant will consider to extract findings from diverse income levels, including both high-income and low- to middle-income countries.

This review should include the areas of enhancement of road traffic resilience by social capital and enhancement of social resilience by road or road facilities

3. Deliverables:

Comprehensive Literature Review Report:

- A well-structured document presenting identified literatures for review with categorisation based on relevant research questions, sourcing countries – high or low- and medium-income countries, search methodology, limitations, and opportunities etc.
- A separate section presenting shortlisted ideas or models and identified indicators for developing resilience maturity matrix including the list of literatures.

10.2 SOT2 Literature review on decarbonization of road passenger and freight transport. - National strategies and policies Solutions with focus on road users including technology solutions (e.g., static or dynamic charging, hydrogen, battery swapping) and financial dis/incentives (e.g., road pricing models), TCs 3.5&2.1, Decarbonization

1. Compliance with Paris Agreement

Specific commitments, National decarbonization plans, Regional plans/ urban plans (cities)

2. Institutions committed to the decarbonization

Organizations hold the responsibility of decarbonizing transportation, Collaborations exist between different levels of government, Public existence, possible role of public discussions/ decarbonization plans

3. Financing and costs

Economic costs of programs / Schemes, Financial resources, Road users incentives/ disincentives (Including BEVs) , Business models of low emissions schemes/ use of revenues.

4. Technology

National charging station plans, Incentives to charge off-peak, Home charging, Battery swapping, Scheme for pollution based pricing, Non-electric fuels

5. Legal Policy

Specific laws of group of laws passed in association with decarb goals; ideally, the research should be extended to the main regions/states, depending on the organization of the Country, Emission trading schemes (carbon trade, carbon credits, etc.) , Restrictions/ schemes to older vehicles, Restrictions/ schemes to freight transport,
Restricted areas (Zero emission/ low emission zones)
How national policies reflect decarbonization

6. Stakeholders

Identification and, possibly, roles of independent organizations (think tanks, non-governmental associations, universities, ...) in the process of decarb of the transport system; existence of regularly issued reports on the topic, Industry-led decarbonization plans?

7. Examples of case studies in the country

Contribution to the reduction of greenhouse gases, Benefits under climate change, Which country is potential have related cases, How do different case studies measure success with decarbonization programs

10.3 SOT3 Literature review on low-carbon practices on construction sites, TCs 4.3&4.5, Decarbonization

The objective of this literature review is to find guides or standards for low-carbon works, and to find best practices that emits less CO2 during construction works. Literature review should be realized in terms of new technologies, materials, earthworks techniques, site methodologies.

The list of best practices can be based on the following questions:
- Are there guides or standards for low-carbon works?
- Find out which companies have virtuous practices when it comes to reducing greenhouse gases from their construction sites. What practices are highlighted? How much does it cost to implement these practices? (a few key words: eco-driving, limiting travel, reducing fuel consumption, optimizing fuel consumption, optimizing machine idling, stop-and-go, etc.).
- Are there references to building sites where the construction project was optimized to reduce the carbon footprint? How were the calculations carried out? What tools do they practice?
- What are the CO2 emissions of an earthworks site per km of site or per cubic meter (m^3) of earthworks? Can we find articles with CO2 emission data for earthworks?
- What is the decarbonizing nature of the new technologies of stabilizing soils, such as alternatives to the conventional lime and cement stabilizers for loess or red clay.
- Is there any research or reports on the volume of earthworks done in the past and future estimation ?
- Is there any research or reports on the comparison of volume of earthworks by continent ?

10.4 SOT4 Survey on the best practices in organizational resilience for enhancement of road network resilience, TC 1.4, Resilience

1. Objective:

The objective of this study is to identify best practices in organizational resilience that can enhance the robustness of road networks worldwide. Specifically, the consultant will focus on producing a survey to assess organisational resilience within road agencies.

2. Scope of Work:

- In collaboration with respective TC working group, the consultant will support the design of a comprehensive survey instrument to assess current and aspirational state regarding organizational resilience of road agencies, and to identify potential case studies to be studied by the respective working group.
- The Consultant will collaborate with respective TC working group to ensure the survey to capture relevant aspects of resilience including and related to :
- Governance structures and decision-making processes.
- Involved stakeholders, staffing and work culture to progress climate resilience.
- Risk identification, assessment, evaluation, and mitigation strategies.
- Communication and collaboration mechanisms during disruptions.
- Available resources and technical capacity to support resilience.
- Learning and continuous improvement practices.
- Potential works/reforms/projects worth of considering as relevant case studies.
- Available matrices or tools to assess/develop organisational maturity matrix.

3. Deliverables: Survey Report:

- A detailed report summarising survey objective, questionnaire development, survey administration and general findings.
- Structured presentation of inputs and outputs to facilitate detailed analysis of organisational resilience across income levels.
- Identification of common challenges and successful practices.

10.5 SOT5 Literature review on extreme weather events, TC 1.5, Resilience

Countries' recent (about 10 years) experience of flooding, geo-hazard due to heavy rain, heat, strong wind, and wildfire. Experience includes human / economic damage, recovery actions, financial burdens, specific administrative frameworks etc.

10.6 SOT6 Literature review on the carbon footprint calculators for pavements, TC 4.1, Decarbonization

SOT6 will be delivered by another in-kind contribution and is out of the scope of this request for proposals. It is mentioned here for information only.

The purpose is to get an as comprehensive as possible overview of existing carbon footprint calculators.

The report should have for each tool:
- a (short) description
- which organization developed it
- which stage(s) of the pavements' life cycle are covered (product stage, construction stage, use stage, end of life stage)
- what data sources are used
- which indicator(s) are used to express the result
- a brief evaluation of the pros and cons.

10.7 SOT7 Survey on Alternative Energy Solutions for Road Transport, TC 3.5, Decarbonization

1. Technology

What kind of energy produced, Which used in usual, Technical Ready Level, How to make use sustainable, CO2 avoidance costs of each technology compared to ICE, Different countries, different approaches? Or is there a common understanding what the goal(s) should be?

2. Finance

Economic phase, LCA, Measurement and payment models,
Low-income country deployment

3. Legal / Policy

Are there already existing policies to foster and deploy technologies?, EU: Stop of the sale of combustion engines in 2035. What could change after the election on EU-level in June 2024?
US: The government has slowed down the pace of the transition to electric mobility.

4. Models

Measurement and payment models, Business Cases and models

5. Examples of case studies in the country

Contribution to the reduction of greenhouse gases, Benefits under climate change, Which country is potential have related cases

10.8 SOT8 Literature review on the innovation in the earthwork equipment fleet, TC 4.3, Decarbonization

The topic of this work is to find how equipment companies adapt their fleet to the constraint of reducing GHG emission. This review will find the good practices, the trends within the equipment companies and where in the world, companies are the most active to reduce their GHG emission.

The literature review can be based on the following questions:
- What technological developments and innovations have been identified between 2020 and 2023 for the typical earthwork equipment, that reduce CO2 emissions?
- Which manufacturers, and for which equipment, are announcing a reduction in their carbon footprint in terms of energy consumption or are going to reduce their carbon footprint?
- What new energies are on the market? For example: biofuel (B100), hydrogen, HVO, etc.
- What earthworks equipment uses new energies, and how much of it is actually in use?

10.9 SOT9 Survey on the Winter maintenance in urban areas, TC 3.2, Resilience

Survey on the very different approaches winter service can take in a city.

Due to the complex layout of roads, pavements, pedestrian zones, bikeways and public transport challenges in winter service are different from rural roads or highways.

Special attention will be on the topics:
• Strategy to deal with the dense road network with large variations in traffic volume
• Optimization and minimization of the routes for maintenance vehicles.
• Treatment methods and vehicles for winter on bicycle lanes
• How to create a continuous bicycle lane network with different types of infrastructure?
• Sidewalk and pedestrian areas, accessibility (for those with reduced mobility), tactile paving.
• Equipment and layout of urban areas, what to do with the snow, remove or thaw?
• Solutions to ploughing different surfaces without disadvantaging any transport mode
• How to treat complains and communicate with road users and passengers of the public transport
• How to get accepted by winter service operators as well as users (ex. gritting a bikeway might be good for operators but not so good for bicyclists)

The outsourced work includes support in spreading the survey, addressing the target group and getting replies, analyse them and put it in a format. The schedule for the survey is June 2024 until April 2025.

10.10 SOT10 Literature review related to the preparedness, mitigation, response, and recovery measures for securing short-term resilience of road networks to support supply chain continuity, TC 1.5, Resilience

This review should include the areas of training, technologies, tools, and management strategies/actions regarding infrastructure resilience for supporting supply chain.

10.11 SOT11 Survey on Electric Road Solutions, TC 3.5, Decarbonization

1. Technology

Technical Ready Level, Advantages/Disadvantages of ERS, ERS challenges

2. Finance/Models

Low-income country deployment, Business Cases and models, Cost-benefit analysis

3. Legal/Policy

Policy and strategy regarding ERS, Social exclusion: Under-represented population groups, Consideration/ interest for ERS

4. Market

Policy and strategy regarding ERS, Social exclusion: Under-represented population groups, Consideration/ interest for ERS

5. Examples of case studies in the country

ERS Feasibility studies, Experiments

10.12 SOT12 Survey on current earthworks machinery fleet, TC 4.3, Decarbonization

The evolution of Earthworks companies is to compare to a reference.

This survey is to analyze the earthworks plants currently on the market, by continent which could be a reference. The idea is to show the disparities in terms of equipment on the different continents, particularly between high-income countries and low- and middle-income countries. This can help to determine where the efforts are to be done. For example, old machinery emit probably more CO2 than new plants, while the renewal of a fleet is expensive and need time.

The questions that can be asked in this survey: Using a list of typical equipment given by TC, count the number of machines present and their energy sources, assess the number of machines present per continent (or countries), their average power, their age and/or an evaluation of their CO2 emission.
Typical equipment list may include: Excavators, Articulated dumpers, Rigid dumpers, Bulldozers, Scrapers, Single drum vibratory compactors, Static tamping foot compactors, Vibratory tamping compactors, Horizontal shaft soil stabilisers

10.13 SOT13 Survey on the skill and resources for winter service, TC 3.2, Resilience

Survey to get basic information, i.e. problems the member countries see on staff resources and training for winter service.

This survey can be seen as a „fact-collecting“ or „setting the scene“-survey to get a good situational view, differences between countries, size of company, structure, etc.. This survey will help to develop relevant output of the working group ‘Skill and Resource for Winter Service’ of TC3.2 Winter Service, by giving a clearer view on the demands and requests as well as the possible helpful content of the output of the working group.

The outsourced work contains support in spreading the survey, addressing the target group and getting replies, analyse them and put it in a format, that helps the working group to get a clear view.
The survey should be started in the year 2024.