



Business Plan 2023 – 2025
Agile Innovation RAPTOR Call
Call Manual
(Amended version 07/03/2023)

EIT Urban Mobility - Mobility for more liveable urban spaces

EIT Urban Mobility

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eiturbanmobility.eu

History of changes

| Version | Publication Date | Change |
|---------|------------------|--|
| 1.0 | 06.03.2023 | Initial version |
| 1.1 | 07.03.2023 | <ul style="list-style-type: none">• Updated section “2.2. Evaluation of proposals: Second phase – Panel Hearing”• Updated section “2.3 Communication of Results to Applicants”• Typo correction in Annex 1• Added Annex 2 |

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Glossary

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| Project Leader | <p>The Project Leader is the central contact point for EIT Urban Mobility from the proposal submission stage to the end of the project implementation.</p> <p>The Project Leader represents the project and the consortium partners (the other partners participating in the project) towards EIT Urban Mobility, and has also the responsibility for creating and submitting a proposal.</p> <p>For mono-beneficiary grants, the mono-beneficiary (the single legal entity involved in the project) also has the Project Leader role.</p> |
| Call for Proposals | <p>The Call for the proposals is the instrument used to allocate funding by EIT Urban Mobility to third parties to support the deployment and development of the Strategic Agenda through projects. EIT Urban Mobility uses 3 different types of calls following the provisions included in the specific rules for EIT KIC actions in HE MGA Annex 5: (1) Regular Open Calls (2) Calls for partners (3) Permanently Open Calls/Permanently Open Calls for partners.</p> |
| Call Manual | <p>The Call Manual is the document where the terms, conditions, and criteria of any call for proposals are defined and stated according to the principles of transparency, equal treatment, open competition, and sound procedural management.</p> |
| Deliverable | <p>Deliverables are tangible or intangible good or service produced at a given moment during the project implementation. Deliverables chart the path to reach project objectives and could be a report, a document, a software product, a course, an event or any other building block of a project. The deliverables specified need to fully demonstrate the achievements of the activity and judicious use of public funds.</p> |
| EIT KPIs | <p>Set of Key Performance Indicators (KPIs) defined by the EIT that reflects the EIT operational objectives for education, entrepreneurship, and innovation. These KPIs are used to measure how effectively a KIC/project is meeting the objectives of the EIT.</p> |
| Evaluation Process | <p>Process by which EIT Urban Mobility examines the quality of a proposal to decide if it should be selected to receive EIT funding.</p> |
| Evaluation Panel | <p>Group of external expert evaluators (EEEs), usually 3 EEs and 1 rapporteur, with specific expertise in a specific area/segment of the call, aiming to evaluate a set of eligible proposals submitted to a call. In the case of Calls with proposals below 60.000 EUR of EIT funding allocation, the evaluation panel is composed of at least one external expert evaluator.</p> |
| Evaluation results list | <p>List of proposals in order of scoring, based on the quality evaluation process results.</p> |
| Horizon Europe Model Grant Agreement | <p>The Horizon Europe Model Grant Agreement (HE MGA) sets out the rights and obligations and terms and conditions applicable to the grant awarded.</p> |
| KIC Specific KPIs | <p>Set of indicators defined by EIT Urban Mobility that reflects the societal challenge that the KIC is trying to address.</p> |

| | |
|---------------------------------------|--|
| Knowledge triangle integration | EIT Urban Mobility aims to gather close-knit partnerships of European education, research and business entities (knowledge triangles) and also involves cities, either in the composition of the members of the projects or in the expected impact of the projects' results. |
| Milestone | Control points to chart progress. They may correspond to the completion of a key deliverable that allows the next phase of work to begin. |
| Panel review | The process by which the evaluation panel reviews the evaluation for all eligible submitted proposals. |
| Ranking list | List of proposals in order of scoring after the selection committee assessment. |
| Selection Committee | The Selection Committee is responsible for the selection of shortlisted proposals and the definition of requirements for the inclusion of the selected proposals in the final EIT Urban Mobility's portfolio of projects. The Selection Committee is composed of the CEO, COO and at least 3 Thematic Leads. In the case of Calls with proposals below 60.000 EUR of EIT funding allocation, the selection and definition of the requirements is done by the Thematic Lead. |
| Summary Evaluation Report | A single and final Summary Evaluation Report (SER) per proposal is produced by the Rapporteur after the consensus meetings. This document summarizes the final score, the strengths, weaknesses, risks, and potential recommendations of a proposal. |
| Thematic Lead | Director of a EIT Urban Mobility Thematic Area and/or relevant Head who is actively involved in content development of a call for proposals. |
| City | The municipality/city/town that defined a niche urban mobility challenge to be addressed within a RAPTOR project by start-up or SME |
| Applicant | Start-up or SME who applies formulating a solution so to a RAPTOR challenge |
| Subgrantee | The Applicant that has the best solution to address the challenge and is selected to participate on a RAPTOR project |
| City Challenge | A niche urban mobility challenge issued by a participating City to which Applicants can submit their Solution |
| Solution | A solution is an innovative good, product or service that addresses the challenge defined by the city. The minimum RAPTOR output required is an in-situ testable Minimum Viable Product. |

Introduction

Within EIT Urban Mobility, cities are our driving force and enabler of faster adoption of innovation.

To harness the wider city innovation capacity and ensure innovation closer to citizens, we developed a Rapid Application for Transport (RAPTOR) Pilot in 2020. This pilot helped 4 cities/towns identify niche mobility issues in specific locations with defined parameters and clear success criteria. Once these niche city mobility challenges were defined, a competition was launched for local innovators, teams, and start-ups to propose any solution as long as the original issue and outcomes were addressed. This provided space for lateral thinking beyond our own networks. The initial pilot was extended to a total of 13 cities and 19 niche mobility challenges in 2022.

Each city, supported by technical and business advisors, selected the most promising solution to receive an award, in-kind and cash, to advance the proposal to a Solution to be tested in the city within four months of award. For the Innovation Programme of EIT Urban Mobility, agile entrepreneurial innovation based on problem/challenges with rapid development timelines closer to citizens and in a named location, has the potential to become a powerful tool in our innovation agenda.

RAPTOR as an agile innovation sub-project, is compatible with, and complements our traditional larger scale projects funded in the Business Plan. Moreover, the internal competition in RAPTOR both promotes the wider urban mobility agenda and draws cutting edge innovators/ SMEs into our community. With the new edition of the RAPTOR programme in 2023, EIT Urban Mobility will select up to 12 Applicants from across Europe to develop solutions to niche mobility challenges. Existing documentation and lessons learned from RAPTOR 2022 will be key in ensuring an acceleration of innovation in cities, closer to citizens and closer to the innovation's edge.

We look forward to seeing exactly what our cities, partners, start-ups & SMEs can achieve under this successful agile innovation set-up.

Call Summary

| Call for Proposals Main Features ¹ | |
|--|--|
| Key dates of the call calendar | <ul style="list-style-type: none"> • Call opening: 6 March 2023 • Call closing (submission of completed application): 6 May 2023 at 23:59 CET • Eligibility and admissibility check: First half of May 2023 • Evaluation of proposals: May – June 2023 • Panel hearing: May – June 2023 • Communication of results: By end of June 2023 • Tentative start of the projects: August 2023 |
| Total estimated EIT Funding allocated to this call | 420,000€ |
| Project duration | RAPTOR projects will last from August to December 2023. |
| Submission portal | EIT Urban Mobility AwardsPlatform |
| List of documents to be submitted | <ul style="list-style-type: none"> • Application form is available on the Awards platform • Legal incorporation documents and VAT number |
| List of documents to take into consideration | <ul style="list-style-type: none"> • Call Manual • EIT Urban Mobility Strategic Agenda 2021-2027 • Eligibility of expenditure • Appeal procedure • Template of the Financial Support Agreement • Horizon Europe Model Grant Agreement (specifically Articles 16 and 17) |
| Short summary of the topics to be addressed | Each City has issued a City Challenge, found at www.raptorproject.eu and in Annex II, highlighting their niche city mobility challenges and information necessary to assess their issue and location. |
| Evaluation criteria | <ul style="list-style-type: none"> • Excellence, novelty, and innovation, • Impact and financial sustainability, and • Quality and efficiency of the implementation |

¹ Please note that this calendar is indicative. Dates might be subject to slight changes.

1. Call Requirements

1.1. Applicant's eligibility and membership

Who can apply

The Agile Innovation RAPTOR Call for Proposals is an open call targeted at start-ups and SMEs.

Additionally:

- They should be registered as legal entities not more than 10 years ago from the official closing date of the call
- SMEs applying may be registered as legal entities in either an EU Member State or any third country associated to Horizon Europe, in addition to UK and Switzerland.

All applicants must be fully registered in the EU Participant Portal² and include their PIC number in their application.

Applicants must respond to the city challenges defined for the RAPTOR programme. Submissions to multiple city challenges are allowed, but only one award per Applicant can be given.

Applicants must plan to develop and test their proposed solution with the city corresponding to the City Challenge to which they apply.

The call is addressed to single legal entities -mono-beneficiary scheme- and, consequently, there is no need to develop a consortium with additional entities.

Call objective

The primary focus of the Agile Innovation RAPTOR call will be on EIT Urban Mobility Strategic Objectives **SO3/TSO3 Deploy and scale green, safe and inclusive and mobility solutions for people and goods** and **SO4/TSO4 Accelerate market opportunities with an agile innovation approach**.

Attention should be paid to the requirements outlined in this Call Manual to ensure the Agile Innovation RAPTOR Call mechanism is suited to your company and/or product/service/solution.

- A) Develop a new or significantly improved product/service/solution

² <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home>

The key project output for option A) will be the launch into the market of an innovation according to the following Key Performance Indicators (KPI) definition with the required supporting evidence:

| KPI | KPI Definition | Supporting evidence |
|---|---|--|
| EITHE02.4 Marketed Innovations | Number of innovations introduced on the market during the project duration or at the latest within 18 months from the start of the project with a documented sales revenue of at least 10 000 EUR. Innovations include new or significantly improved products (goods or services) and processes sold. | <ul style="list-style-type: none"> • Declaration of the product owner describing the innovativeness (new or significant improvement in terms of physical or functional parameters) of a product/process, link to the KIC societal challenge and the KAVA, as well as information on the KAVA investment in the innovation development. • Documented proof demonstrating that purchases of at least 10,000 EUR have been made by a customer/s. It should include: <ul style="list-style-type: none"> ○ Official purchase order from the buyer including buyer invoice details (name, VAT, etc.) ○ Acceptance of invoice by the buyer AND/OR paid confirmation of the invoice (bank note) |

1.2. Project scope

Rapid Applications for Transport (RAPTOR) is the challenge-based, city-driven agile innovation programme created and managed by the Innovation Thematic Area of EIT Urban Mobility. RAPTOR takes the urban mobility challenges of cities and runs a competition to find the best solutions from start-ups and SMEs and then supports a period of solution development which results in an in-situ demonstration of 1 week minimum. The defining feature of RAPTOR is its agility – cities and start-ups and SMEs in the programme work collaboratively, communicatively, and swiftly to bring about and to test either a new or improved/customised product or service.

To meet the general fit of the Agile Innovation RAPTOR Call, the applicants should comply with all the following points:

- a) Each RAPTOR Subgrantee must develop their Solution to solve the City Challenge between August and December 2023.
- b) RAPTOR Subgrantees must conduct an in-situ demonstration of the Solution for a minimum of one week by 15 December 2023, including the evidence for KPI EITHE02.4.
- c) Provide full usage and testing of the product/service/solution with **the city** within the project implementation period.
- d) Have not received funding from EIT Urban Mobility S.L. for the same product development.

Each City has issued a City Challenge, found at www.raptorproject.eu and attached in Annex II, highlighting their niche city mobility challenges and information necessary to assess their issue and location.

Communication/dissemination specific provisions

EIT Urban Mobility will maintain the website and social media channels for the RAPTOR program

Additionally, RAPTOR Subgrantees will be required to post about their official selection for the RAPTOR program and disseminate at least 1 news or blog item on their website about their involvement in the RAPTOR program.

Financial aspects

The **total maximum EIT funding** allocated to this call is up to 420,000 €. The amounts will be allocated to up to 12 niche challenges (up to 35,000 € each).

The default finance model for the Agile Innovation RAPTOR Call will be to provide a lump sum to beneficiaries. More information on the lump sum design and processes can be found in Annex I at the end of this document

For information on the eligibility of costs of your project's budget, please refer to the document *Eligibility of expenditure* published on the Call webpage.

Contribution to EIT Urban Mobility Financial Sustainability

EIT Urban Mobility has developed a Financial Sustainability (FS) Strategy. This FS strategy aims to create a perpetual innovation fund that will sustain innovation beyond the predefined 14-year cycle of European Commission block grants. This financial independence will be based on a mix of both active earned income and passive investment revenue.

Applicants should also indicate how a small contribution towards achieving EIT Urban Mobility's financial sustainability could be made.

Once the Subgrantees are selected for each niche city mobility challenge, a negotiation phase will begin to propose a suitable financial sustainability mechanism (FSM) that provides a Return on Investment (ROI) for EIT Urban Mobility via:

This is often done via:

- Revenue share
- Fee per transaction
- Options of equity purchase might be also available upon internal evaluation by EIT Urban Mobility.

For this Agile Innovation RAPTOR call, the initial proposed financial sustainability contribution will be revised during the negotiation phase (prior to the project start in July) and during the project implementation. It is mandatory for all applicants to sign a Commercial Agreement with EIT Urban Mobility before the end of the

project, by 15 December 2023. The Commercial Agreement will be monitored for a minimum of five years after the end of the project.

Additionally, sales enablement can be supported via the Innovation Advisory Service, during or after the commercial agreement negotiation

NB: Start-ups and SMEs already part of EIT Urban Mobility equity portfolio are only eligible to the equity purchase option.

1.3. Support on proposal preparation

The call manual and supporting documents to take into consideration, as listed in the Call Summary chart, will be on the EIT UM website as well as the RAPTOR Project website. Any call updates will be additionally published on both the EIT UM and the RAPTOR Project websites.

To help applicants with the preparation and submission of their proposals, EIT Urban Mobility will host one call launch information session as well as two live Q&A online. These online information events will be focused on the call content, the challenges as well as on the submission and evaluation procedures and the financial aspects. These three events will be recorded and made available on the EIT UM YouTube and the RAPTOR Project website in the News section.

Please find the calendar of events and the link to register in the table below:

| Type of event | Topic covered | Date and time (CET) | Access to platform |
|---------------|--|---------------------|--------------------|
| Webinar | Call info session | March 2023 | Zoom |
| Webinar | Live Q&A – Challenge description (first half) | March 2023 | Zoom |
| Webinar | Live Q&A – Challenge description (second half) | March 2023 | Zoom |

In parallel to the call information sessions, all applicants may contact EIT Urban Mobility to resolve any concerns or doubts on the general/technical procedures and call content. These are the key contact details of the EIT Urban Mobility team for questions related to this call:

| Type of contact | Email |
|---|--|
| Legal, Financial, Administrative and general procedures | pmo@eiturbanmobility.eu |
| RAPTOR Team | raptor@eiturbanmobility.eu |

2. Evaluation and selection process

Once the applicants have submitted their proposals, the EIT Urban Mobility team will proceed to:

- Check specific call eligibility criteria of those proposals and, if successful:
- Initiate the evaluation of the content by external experts.

2.1. Eligibility and admissibility check

A proposal will be eligible if:

| | | | |
|----------------------------------|--|---------------------|--------|
| 1. Completeness | The submitted proposal is completed and submitted in time via the AwardsPlatform submission tool, in English, with all its mandatory sections. | | |
| 2. Applicant Eligibility | Applicants respect the requirements defined in 1.1. Applicant's eligibility and membership | | |
| 3. KPI addressed | All proposals must identify and address one mandatory KPI. | | |
| | KPI Code | KPI title | Target |
| | EITHE2.4 | Marketed Innovation | 1 |
| 4. Mandatory deliverables | All proposal must include the following mandatory deliverables: <ul style="list-style-type: none"> • DEL 1: KICK-OFF REPORT • DEL 2: Final performance report • DEL 3: Report on KPIs | | |

Proposals containing one or more ineligible elements will receive an official communication from EIT Urban Mobility setting out the outcome of the admissibility and eligibility check and explaining why the proposal failed to meet the criteria.

The applicant of any proposal deemed inadmissible/ineligible who disputes the ineligibility decision, may appeal. This appeal must be made within 5 calendar days of the official EIT Urban Mobility notification of ineligibility (see document *Appeal procedure* published on the Call webpage).

2.2. Evaluation of proposals

The evaluation of applications will be conducted in two phases.

The first phase will be a quality evaluation carried out by three external expert evaluators and one city representative, and will weight 80% of the total scoring of the project proposal.

The top three applications from each challenge will be invited to the second round (threshold).

The second round will consist of a panel hearing, assessed by one external expert evaluator, one city representative, and one EIT UM business specialist, and will weight the 20% of the total scoring of the project proposal.

Each evaluation phase is integrated by different groups of criteria and sub-criteria which will be assessed according to the following scores:

| Score | Description | |
|-------|------------------|--|
| 0 | <i>None</i> | The information requested is missing or incomplete |
| 1 | <i>Very poor</i> | The information provided is considered irrelevant or inadequate compared to the specific call provisions |
| 2 | <i>Poor</i> | The information provided lacks relevant quality and contains significant weaknesses, compared to the specific call provisions |
| 3 | <i>Fair</i> | The overall information provided is adequate, however, some aspects are unclearly or insufficiently detailed, compared to the specific call provisions |
| 4 | <i>Good</i> | The information provided is adequate with sufficiently outlined details, compared to the specific call provisions |
| 5 | <i>Excellent</i> | The information provided is outstanding in its details, clarity and coherence, compared to the specific call provisions |

First phase - Quality Evaluation

The online application has four sections: administrative information, excellence, quality and efficiency of the implementation, and impact.

All eligible applications will be evaluated by a selection panel comprised of **three external expert evaluators and one city representative**. Evaluation will be made on three criteria:

| Excellence: novelty and innovation (15 points) | Max Points |
|---|------------|
| <ul style="list-style-type: none"> The proposal clearly understands the city challenge and has identified key issues that they aim to resolve. | 5 points |
| <ul style="list-style-type: none"> The proposal defines a clear solution, how it will work, technical design and highlights the most innovative elements. | 5 points |
| <ul style="list-style-type: none"> The proposal provides clear information on the product's current status, including IP expectations and provisions, and describes what they will add/develop during RAPTOR | 5 points |

| Implementation: planning and sound financial management (20 Points) | Max. scoring |
|--|--------------|
| <ul style="list-style-type: none"> The proposal has identified their assumptions with regards to accessible information, infrastructure, facilities, etc. Specific software, communication systems, etc. That maybe required are identified (if relevant) | 5 points |

| | |
|---|----------|
| <ul style="list-style-type: none"> The proposal clearly defines reasonable timelines and milestones including a feasible in-situ demonstration. | 5 points |
| <ul style="list-style-type: none"> The start-up/SME has experience in the relevant field and biographical information of key team members has been provided. | 5 points |

| Impact: social, economic, financial, and general sustainability (15 points) | Max. scoring |
|---|--------------|
| <ul style="list-style-type: none"> The proposal has outlined the expected potential impact resulting from a successful solution implementation. Possible benefits for other cities have been identified. | 5 points |
| <ul style="list-style-type: none"> The proposal provides a credible commercialisation and development strategy for the specific solution. This includes providing an outline of sales strategy and go-to-market approach to business acceleration and the preferred contribution mechanism to EIT Urban Mobility financial sustainability. | 5 points |
| <ul style="list-style-type: none"> The costs identified in the proposed budget are reasonable and represent good value for money | 5 points |
| <ul style="list-style-type: none"> The proposal has identified their expected next steps in the market and has specified a preferred commercial approach. Market analysis has been described including the identification of direct competitors. | 5 points |

The total scoring of 50 points is distributed as follows:

| | Max score |
|---------------------|------------------|
| Excellence | 15 points |
| Impact | 15 points |
| Implementation | 20 points |
| Total points | 50 points |
| Total weight | 80% |

The proposal will be ranked according to their scores.

The top 3 proposals of each challenge (ranked in order of score) will be invited to the Panel hearing. In case of clustered or similar scoring in the first phase of the evaluation process, prioritization will be given according to the following order: Impact, Excellence, and Implementation.

All applicants will receive feedback (Summary Evaluation Report) on their Quality Evaluation for each of the three evaluation criteria: Excellence, Impact, and Implementation.

Second phase – Panel Hearing

The panel hearing will consist of one external expert evaluator, one city representative, and one EIT UM business specialist. The panel hearing will take place remotely on Zoom. Each Applicant will have five minutes to pitch their solution and team, followed by 10 minutes of questions from the hearing panel.

Thereafter the panel will have a closed discussion for 20 minutes about the proposed solutions.

The 3 top proposals assigned to each challenge will be ranked in order of scoring according to the following criteria and scoring:

| Assessment factor | Description of the assessment | Max score |
|-------------------------------|--|-------------------------------------|
| Results of the Hearing | <ul style="list-style-type: none"> • Credibility and quality of the pitch delivered. • Clarity on the responses to questions asked by the Selection Committee • Responses to issues and concerns expressed by the expert evaluators, if applicable. | Up to 10 points (up to 5 points x2) |
| Portfolio Fit | <ul style="list-style-type: none"> • Complementarity of the proposal within the current/past portfolio of the Thematic Area and/or the EIT Urban Mobility. • Relevance and fit of the solution for the City Challenge | Up to 10 points (up to 5 points x2) |

The total scoring of 20 points is distributed as follows:

| | Max score |
|------------------------|------------------|
| Results of the Hearing | <i>10 points</i> |
| Portfolio Fit | <i>10 points</i> |
| Total points | <i>20 points</i> |
| Total weight | <i>20%</i> |

In case of a tie, the city will have the deciding vote. There will be one panel hearing per City Challenge.

The minuted note of the Panel Hearing will be provided to each of the 3 finalists to compliment the original first phase Summary Evaluation Report.

2.3. Communication of results to Applicants

All applicants will receive an email notification with the final evaluation results (SER of the Quality Evaluation + Pitch Panel Hearing Evaluation) by end of June.

Following the Panel Hearings, follow-up calls might be organised between the City and the pre-selected applicant by EIT Urban Mobility if operational elements need to be confirmed before the final portfolio selection.

If the pre-selected applicant fails to confirm operational elements with the city by the time allocated. EIT Urban Mobility reserves the right to withdraw the conditional notification. In such a case, the next proposal on the portfolio list will be contacted following the ranking list defined after the Panel Hearings.

2.4. Appeal on Evaluation Results

The applicant of a rejected proposal who disagrees with the decision may appeal only in the event where Quality Evaluation results comment is in clear contradiction with the information provided in the proposal. In this case, the applicant will have 5 calendar days after receipt of the final evaluation results to submit an appeal to the Evaluation (see document *Appeal procedure* published on the Call webpage).

Annex I - Lump Sum Funding

The aim of the use of this lump sum funding is reducing administration and financial errors, as well as to simplify complex and time-consuming reporting, making the participation in the EIT Urban Mobility community more accessible.

Budget main features

All project proposals must provide a detailed cost estimation, which must be an approximation of the actual costs. The estimation provided must be:

- subject to the same eligibility rules as in actual costs grants, i.e. cost estimations can be included only if the same cost item/type of cost would be eligible in an actual cost grant
- detailed in terms of tasks: applicants must identify the budget assigned to each task and the expected ending date of the task.
- must be in line with normal practices
- must be reasonable/not excessive
- must be in line with and necessary for the activities proposed

Payments

Types of payments:

First payment

The first payment of the total budget assigned to the project will be done according to the following schedule:

| First Payment | Estimated date |
|---|---------------------------------|
| 50% of the EIT UM contribution to be received | At the beginning of the project |

Final payment (payment of the balance)

It closes the financial aspects of the grant and takes place after the official closing of the project.

The remaining amount of the EIT UM contribution to be received by the beneficiary - Up to 50% of EIT UM contribution remaining to be received- will be paid according to the following mandatory deliverables (mandatory deliverables below) declared fully completed and approved by the EIT UM, as well as declared partially completed and approved or completely rejected. The project performance and percentage on KPIs achievement declared within the mandatory deliverables might affect the balance payment (i.e. application of the performance rate methodology to the balance payment).

Mandatory deliverables

To prove the successful implementation of the activity, and consequently to have the right to receive the EIT UM contribution according to its defined value, the following compulsory deliverables will have to be submitted and successfully approved by the EIT UM:

| | Value assigned to deliverables regarding to total EIT UM contribution to be received |
|---|--|
| <p>DEL 1: KICK-OFF REPORT</p> <p>The report will contain:</p> <ul style="list-style-type: none"> • A digital version of business registration documentation. • A copy of the signed sub-grant agreement • A letter of intent about the Financial Sustainability Mechanism selected. | 20% of the total subgrant |
| <p>DEL 2: Final performance report</p> <p>The report will contain:</p> <ul style="list-style-type: none"> • Financial sustainability agreement • City acceptance letter • Proof on addressing the branding requirements | 40% of the total subgrant |
| <p>DEL 3: Report on KPIs</p> <p>The report should include:</p> <ul style="list-style-type: none"> • KPI reporting templates filled in • Invoice(s) from marketed innovation | 40% of the total EIT UM subgrant |

Reporting

Reporting periods and technical reporting follow to the rules and procedures established in the *EIT UM Project Implementation Handbook* with the focus on successful completion and approval of the mandatory deliverables.

Before a mandatory deliverable is rejected as incomplete, the applicant is invited to respond to the observations of the EIT UM project officer/s.

If a mandatory deliverable is declared incomplete or needs to be improved, it will be rejected by the EIT UM, and the lump sum amount concerned will be not paid at that point in time. Accordingly, the beneficiary will have to complete/improve the mandatory deliverable later and resubmit it at the end of any subsequent reporting period for its approval and subsequent payment.

If the rejection of the mandatory deliverable is confirmed, the total project budget (or the percentage) linked to it is not paid/refunded.

Furthermore, EIT Urban Mobility will monitor all activities up to 5 years after activity completion to track long-term impact and the status of commercialisation and to ensure the achievement of KPIs after the activity end.

Assessment

EIT UM will assess the status of the mandatory deliverables at the end of the project. For each mandatory deliverable submitted, EIT UM will assess and choose between ‘completed’, partially completed’ and ‘not completed’. In case the EIT UM declares a mandatory deliverable as ‘partially completed’, the percentage of completion will be calculated according to the specific grant reduction methodologies established below:

| DEL | Indicator | Weight (%) |
|-------|--|------------|
| DEL 1 | 1. KICK-OFF REPORT <ul style="list-style-type: none"> KICK-OFF REPORT is submitted: no reduction. KICK-OFF REPORT not submitted: 20% reduction | Up to 20% |
| DEL 2 | 2. Financial sustainability agreement <ul style="list-style-type: none"> Agreement is signed: no reduction. Agreement not signed: 10% reduction. 3. Proof on addressing the branding requirements <ul style="list-style-type: none"> The branding reduction will be done proportionally and according to documents “EIT Urban Mobility 2023-2025 Brand Book” and “EIT Urban Mobility 2023-2025 Communication guidelines”. | Up to 40% |
| DEL 3 | KPIs <ul style="list-style-type: none"> EIT KPIs: 40% <ul style="list-style-type: none"> All KPIs achieved: no reduction. No KPIs achieved: 40% reduction. Some EIT KPIs achieved: reduction proportional to underachievement. | Up to 40% |

The EIT UM will reject a mandatory deliverable when a significant or essential part of the information has not been provided or is not completed, and this has not been justified or accepted. If EIT UM intends to reject a mandatory deliverable, the beneficiary will have the opportunity to react to the observations of the EIT UM. In this case, the EIT UM will either send the beneficiary a request for additional information and ask the beneficiary to justify the completion of the mandatory deliverable.

Annex II – City Challenges

RAPTOR Niche Urban Mobility Challenges

| | |
|---|---|
| City | Municipality of Ajka |
| Area (neighbourhood/ zone of city, if relevant) | <ul style="list-style-type: none"> • The public transportation network of the city, especially in the City centre • Adaption of public transportation |
| Challenge Statement (Question format) | <ul style="list-style-type: none"> • How can we optimize public transport routes using the possibility of a new bridge? |
| Challenge name (Max three words) | <ul style="list-style-type: none"> • Public transport optimization |
| Situation as-is (Description of the challenge you want to address 300 words max.) | <p>The City of Ajka (Hungary), has a population of 28,000 inhabitants.</p> <p>The city is a central hub for work, health, and educational services. It has merged from 6 villages and therefore more than 14 000 citizens commute to Ajka city centre every day.</p> <p>Over the last 10 years the number of cars in the city has increased by 24%.</p> <p>The Municipality of Ajka has decided to re-organize and optimize the public transportation system to address the local and regional mobility issues that arise from high congestion rates and insufficient public transportation routes. The construction of a new bridge in the city is at the heart of this challenge as it will restructure the public transportation network and improve mobility flows in the city.</p> |
| Expected to-be situation (How does success look like? How success could | <ul style="list-style-type: none"> - Improved public transport timetables that reflect the needs of the residents of the city - Increased accessibility and reliability of the railway station - Enhanced information and communication channels to keep residents up to date with changes within the urban mobility system. |

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| be measured? – max. 5 bullet points) | - Increased number of public transport users, leading to reduced congestion and car use |
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| City | Akureyri, Iceland |
| Area (neighbourhood/ zone of city, if relevant) | The whole city |
| Challenge Statement (Question format) | How can intermodality between public transport and micro-mobility solutions be optimised? |
| Challenge name (Max three words) | Optimising transport intermodality |
| Situation as-is (Description of the challenge you want to address 300 words max.) | <p>Iceland’s current government has committed to cut emissions by 55% by 2030 (according to ESR 2005 numbers) and to become carbon-neutral by 2040. It has also set the ambitious goal of phasing out all use of fossil fuels by 2040.</p> <p>Today, the transport sector is a significant source of emissions in Iceland. In 2021, it accounted for 31% of all emissions included in the ESR targets. Private cars accounted for approximately 75% of all motorized vehicles in Iceland and 58% of total emissions from the transportation sector in Iceland.</p> <p>Urban planning and development in Iceland for the last 50 years has resulted in around 85% of the population now living within 100 kilometres of the capital city, Reykjavík. The town of Akureyri is therefore by far the largest urban area outside the capital area with just under 20.000 residents (about 8% of the population).</p> |

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| | <p>In Akureyri, public transport is available via a free-of-charge bus system. However, most residents prefer to travel by private car and average ownership is more than 8 private vehicles for every 10 residents.</p> <p>Particulate matter pollution frequently increases as a result of the widespread use of winter tires with studs for motorized vehicles. People are hesitant to use bicycles or other micromobility options in the winter, even though it is possible and convenient with winter tires with studs for bicycles.</p> <p>The free bus system is perceived as being unreliable and not operating frequently enough and is not utilised as much as it should be. The current bus system consists of six lines that go in large circles around the town. In 2020, a new system with only two bus lines that would run more frequently was introduced, but later withdrawn by the City Council due to high implementing costs.</p> <p>The City of Akureyri has been pursuing the shift towards sustainable transportation for several years and introduced various solutions for reducing the high number of private car trips. Apart from the free public transportation, the town launched an app and a website which show the time it takes to walk or cycle from one location to another. Although it clearly reveals that cycling across town only takes about 15 minutes, the introduction of these measures has not yet proven fruitful.</p> <p>The only shared micromobility solution available in Akureyri are electric scooters during summertime.</p> <p>Other services available: traditional taxis are available and a service for people living with a disability is operated by the municipality.</p> |
| <p>Expected to-be situation</p> <p>(How does success look like? How success could be measured? – max. 5 bullet points)</p> | <p>Enhanced intermodality between public buses and micromobility solutions and/or an increase in their modal share compared to private car trips through the integration of technology, infrastructure and/or gamification:</p> <ol style="list-style-type: none"> 1. Provision of real-time information about the availability of public buses and micromobility solutions that can help users make informed decisions about the mode of transport they choose. This can be achieved by integrating data from multiple sources such as GPS, traffic |

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| | <p>data and passenger demand through e.g. the development of an app. Alternatively, data-driven tools that provide smart solutions for an expansion of the micromobility infrastructure are interesting</p> <ol style="list-style-type: none"> 2. Creating intermodal hubs that serve as transfer points between public buses and micromobility solutions, e.g. through secure storage facilities for micromobility devices as well as amenities such as charging stations, bike racks or shared micromobility solutions 3. Encouraging intermodal trips through incentives or gamification tools to increase the modal share of buses and micromobility, as well as their intermodality |
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| City | Ankara |
| Area (neighbourhood/ zone of city, if relevant) | City Central Area, around metro stations |
| Challenge Statement (Question format) | How to increase efficiency in e-bike field operations? |
| Challenge name (Max three words) | Optimising Micro-Mobility Operations |
| Situation as-is (Description of the challenge you want to address 300 words max.) | <p>In the city of Ankara, the existing electric bike sharing system includes more than 500 bikes, 40 charging stations, management, and end-user mobile applications. Bicycle charging stations are located at the metro exits. The implemented free-floating e-bike sharing scheme provides the availability of bikes at various stations within the system. Compared to the Station-based scheme, it represents the more flexible model by enabling users to pick up and drop off e-bikes at any desired station with available bikes or parking spaces. However, our system lacks a decision-support feature, making it incapable of automatically optimizing field operations.</p> <p>Field operations consist of collecting, balancing, replacing batteries, on-site maintenance, returning to workshop etc. and these are done by carrying vehicles. Since such operations create the highest costs to the budget the route</p> |

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| | <p>optimization of the vehicles is important and required for an efficient and smart management. Therefore, the goal is to establish an optimization system for the e-bikes field operations through an integrated software that includes parameters derived from the existing system such as location, charge status, availability of e-bikes</p> <p>Attachment: Sample Visual Scenario</p> |
| <p>Expected to-be situation</p> <p>(How does success look like? How success could be measured? – max. 5 bullet points)</p> | <ul style="list-style-type: none"> • Operation Optimization Software • Reducing operational costs. • Increase in the number of e-bikes in service. • Increase the usage time of renting e-bikes. • Reducing fossil waste. |

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| <p>City</p> | <p>Barcelona Metropolitan Area (AMB)</p> |
| <p>Area (neighbourhood/zone of city, if relevant)</p> | <p>Badalona, Barcelona, Castelldefels, Esplugues de Llobregat, Hospitalet de Llobregat, Sant Joan Despí, Sant Just Desvern, Santa Coloma de Gramenet, Sant Boi de Llobregat and El Prat de Llobregat</p> |
| <p>Challenge Statement</p> <p>(Question format)</p> | <p>How might we leverage data collected in loading/unloading zones to improve city logistics policies in the metropolitan area?</p> |
| <p>Challenge name</p> <p>(Max three words)</p> | <p>City logistics data-driven</p> |
| <p>Situation as-is</p> <p>(Description of the challenge you want to</p> | <p>AMB is facing several challenges in getting the most value from the data collected by their own app (SPRO) to monitor loading/unloading zones.</p> <p>One of the major problems is the complexity and volume of the data collected. Another problem is the need to ensure the privacy and security of the data</p> |

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| <p>address 300 words max.)</p> | <p>collected. This is particularly important when the data contains sensitive information such as personal information or business-critical data.</p> <p>Furthermore, AMB needs to prioritize investments in the right technology and infrastructure to support the use of data collected through the app. This includes data storage and processing capabilities, as well as tools for data visualization and analysis. Without the right technology and infrastructure, AMB may not be able to analyze the solution performance and to fully realize the potential of the data collected through the app.</p> |
| <p>Expected to-be situation</p> <p>(How does success look like? How success could be measured? – max. 5 bullet points)</p> | <ul style="list-style-type: none"> • The output should be and improved data visualization and analysis: <ul style="list-style-type: none"> ◦ enabling the AMB to share to different stakeholders the system performance • Enabling AMB and other stakeholders (local authorities...) to better understand and interpret the data and make data-driven decisions. • We would like to get accurate and reliable data, ensuring that the data collected by the app is accurate, complete, and reliable, and free from errors and inconsistencies. • We look for improved data management, increasing the capacity of processing large volumes of data collected. • All data process must ensure data privacy and security, protecting sensitive information and minimizing the risk of unauthorized access or misuse. |

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| <p>City</p> | <p>Copenhagen – Capital Region of Denmark</p> |
| <p>Area (neighbourhood/ zone of city, if relevant)</p> | <p>City-wide</p> |
| <p>Challenge Statement</p> <p>(Question format)</p> | <p>How can overpriced EV charging be avoided and price transparency be ensured for users?</p> |

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| <p>Challenge name (Max three words)</p> | <p>EV charging price transparency</p> |
| <p>Situation as-is (Description of the challenge you want to address 300 words max.)</p> | <p>Denmark has a goal to electrify 1.5 million vehicles by 2030. For that, electric vehicle (EV) charging infrastructure and its accessibility and transparency is key for the EV driver to make the right decision.</p> <p>When using a private electric vehicle, charging can happen at home, at work or at public charging stations. The public and on-street charging infrastructure in Denmark is well developed and is frequently located throughout Copenhagen in parking lots, along streets and at various other locations.</p> <p>The price of EV charging in Copenhagen is regulated by charging operators themselves, rather than by the government. There are several different charging operators and providers in Copenhagen, and each has its own pricing policy. The consequence of this is that the price of charging an electric vehicle in Copenhagen can vary a lot, depending on factors such as the time of day, the amount of energy used and the type of charging station, operator and roaming policies.</p> <p>Besides each operator’s own app, different E-Mobility Solution Providers provide apps that allow EV drivers to find charging stations, leave reviews and connect with other plug-in vehicle owners.</p> <p>But there is currently no solution that provides a holistic, real-time overview of the price of charging of all different EV charging operators, and this often results in EV drivers paying too much.</p> <p>To support the electrification necessary to reach climate goals and to ensure that the charging infrastructure can keep pace with demand, it is necessary to ensure price transparency and offer EV drivers the best conditions to charge their vehicle at a fair price.</p> |

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| <p>Expected situation</p> <p>(How does success look like? How success could be measured? – max. 5 bullet points)</p> | <p>to-be</p> <p>The development of a solution, preferably an app, that can scan the existing apps of different Charging Point Operators, E-Mobility Service Providers and other actors for their prices for ad hoc charging on their network.</p> <p>The solution would make sure to propose price transparency for EV charging, giving the opportunity for drivers to take the most convenient decisions based on their locations, it includes price, charging time, battery capacity. As such, improving the EV vehicle ownership experience.</p> <p>Providing a solution to the problem would solve a major problem in today's market where EV drivers are confused and frustrated by the multitude of options and apps, and regularly pay more than they should for charging.</p> |
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| <p>City</p> | <p>Debrecen, Hungary</p> |
| <p>Area (neighbourhood/ zone of city, if relevant)</p> | <p>Low density, remote neighbourhoods</p> |
| <p>Challenge Statement</p> <p>(Question format)</p> | <p>How to connect citizens from low density areas to the public transport network through active mobility?</p> |
| <p>Challenge name</p> <p>(Max three words)</p> | <p>Integration of remote neighbourhoods through active mobility</p> |
| <p>Situation as-is</p> <p>(Description of the challenge you want to address 300 words max.)</p> | <p>Mobility problems, namely the excessive growth of car traffic, pose a significant challenge to the city of Debrecen. In the 90's, est. 50 000 cars were used in the streets of the city. This number has doubled by today and will increase rapidly in the forthcoming years without innovative actions.</p> |

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| | <p>That is why the Municipality of Debrecen has a significant goal to reduce the city's car traffic and allow space for sustainable and alternative modes of transport through sustainable and innovative methods. A large part of the city, especially the South and the East and beyond the metropolitan area have low density residential areas. A large number of people commute daily from these areas to the center and to the West part of the city to work and shop. For these reasons, the urban car traffic is a painful challenge for Debrecen, impacted by severe daily road congestions, especially in the central area and other frequently used roads.</p> <p>The city is looking for ways to connect the commuters from these areas to the PT network with alternative sustainable ways and to engage them to leave their cars at home.</p> <p>Part of the problem is that many people use their bicycles for urban travel, but their destination is too far for bike only and they are not able leave their bicycles safely near bus stops and frequent transportation hubs. Therefore, people tend to use their cars overall instead of PT or their bicycles.</p> |
| <p>Expected to-be situation</p> <p>(How does success look like? How success could be measured? – max. 5 bullet points)</p> | <ul style="list-style-type: none"> • Increased active mobility / micro mobility usage in the city • Safe, green, and user-friendly storage solutions for micro mobility vehicles • Decreased car usage in the city • Increase in active mobility modes of transport • Increased number of public transport users in target areas |

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| <p>City</p> | <p>Dubnica nad Váhom</p> |
| <p>Area (neighbourhood/ zone of city, if relevant)</p> | <p><i>To be specified later after the analysis</i></p> |

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| <p>Challenge Statement (Question format)</p> | <p>Helping Dubnica nad Váhom improve the city’s infrastructure conditions to improve micro-mobility usage</p> |
| <p>Challenge name (Max three words)</p> | <p>Micro-mobility usage uptake</p> |
| <p>Situation as-is (Description of the challenge you want to address 300 words max.)</p> | <p>Dubnica nad Váhom is a city in central part of Slovakia (The Self-Governing Region of Trenčín) with population of around 25 000 inhabitants. It is an industrial city with A class logistic facilities, located near D1 highway. Conditions of the city are rather favorable for higher rate of active mobility and the city is currently building its first bicycle infrastructure while working on more strategical and long-term approach to increase the bicycle modal share.</p> <p>One of the challenges is to provide a safe and accessible infrastructure for active mobility users living in the wider city centre, including residential buildings.</p> <p>The city’s challenge is to analyse the current cycling infrastructure in the city and provide solution for modular low scale bicycle parking facility, which, if successful, could be replicated in other city areas.</p> <p>The city is open for sustainable solutions which could include bicycle parking solution but also access control, payment options and usage monitoring.</p> |
| <p>Expected to-be situation (How does success look like? How success could be measured? – max. 5 bullet points)</p> | <ul style="list-style-type: none"> • Analysis of current active mobility infrastructure in the city • Data driven tools that provide smart solutions for an expansion of the active mobility infrastructure • Replicable, modular and sustainable solution that helps to increase active mobility and modal share • Solutions for safer active mobility infrastructure • The solution shall integrate payments, usage monitoring and access control mechanisms. Successful project will change long term habits of citizens towards active mobility and will create conditions for higher percentage of bicycle use in the city |

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| City | The Hague |
| Area (neighbourhood/ zone of city, if relevant) | Scheveningen recreational area with beach access points Noordboulevard, Kurhaus and Scheveningen haven. |
| Challenge Statement (Question format) | How do we improve the in-city customer journey to the main Scheveningen recreational area by modes of sustainable transport on peak days? |
| Challenge name (Max three words) | Improving Sustainable Journeys to the Beach |
| Situation as-is (Description of the challenge you want to address 300 words max.) | <p>Scheveningen beach is a highly popular recreational area, especially on nice weather and event days. On these peak days, large amounts of visitors can be a challenge (think of crowded public transportation and long traffic jams).</p> <p>There are several different transport connections to Scheveningen beach. The Hague wants travelers to choose sustainable ways of transport (to mean: bike, public transport, shared mobility or a combination of these modes) to reduce CO2-emissions as The Hague has the objective to be climateneutral in 2030. We see valuable opportunities in improving the customer journey of the various sustainable transport modes (in combination) and would like to explore these specifically on peak days (on average 20-30 days a year).</p> <p>On peak days, it is noticeable that mostly out-of-city visitors skip on sustainable modes of transportation and last-mile solutions. The beach area also accommodates car drivers by e.g. having garages close to popular spots.</p> <p>Concerning sustainable modes of transportation: there are cycling highways connecting Scheveningen to the rest of the city. There are public bike parking spaces available. People can park their bicycle here for free. They are sometimes experienced as hard to find or far away from the recreational areas. There are also different public transportation options, see image below. For more information about accessibility at Scheveningen, check the following website: Den Haag - Bereikbaarheid Haagse stranden.</p> |

In the Hague, shared mobility is available in different forms (e-mopeds, bikes, cargo bikes, shared cars). E-mopeds have proven to be very popular over the last two summers to reach Scheveningen from other parts of the city. From the outskirts of and outside the city it becomes more complicated due to different providers and high costs. To encourage proper e-moped parking, geofenced mobility-hubs have been introduced in Scheveningen.

People can enter the city by train (The Hague CS, The Hague laan van NOI, The Hague HS), Car (A12, N44, A4) or bike (metropolitan biking routes/star biking routes). People arriving by train require a transfer to bus, tram or bike. There is also an express service on summer days by tram to the beach. These can be crowded on peak days.

Figure 1: Different train stations, transit routes and (bike) parking areas leading to/from Scheveningen recreational area

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| <p>Expected situation</p> <p>(How does success look like? How success could be measured? – max. 5 bullet points)</p> | <p>to-be</p> <p>More sustainable customer journeys to and from Scheveningen beach.</p> <p>We want users of sustainable modes of transportation (public transportation, shared mobility and bicycles (e-bike, cargo bike, normal bike) to experience the trip to the beach area to be as easy, accessible and pleasant as possible. This includes removing all identified barriers we can address. This with the objectives to incentivise beach goers to travel sustainably and to improve clean and safe ways of transportation between Scheveningen and the rest of the city. This is part of the municipal objective for citywide climate neutral mobility by 2030.</p> <p>Specific indicators of success are solution-specific and are expected to be suggested in challenge applications. The following ways to measure success are suggested:</p> <ul style="list-style-type: none"> - Identified problems in the customer journey that can be adressed both physically, and/or by signaling and/or online solutions - Improved attractiveness of sustainable travel on aforementioned route; - People using the solution find it helpful in their customer journey - Concrete and realistic (in terms of implementation and costs) suggestions to improve sustainable traveling between the Hague centre and Scheveningen. <p>We look for solutions that have (indications of) a CO2 reduction potential in complete lifecycle, not just the usefase.</p> <p>We are <i>not</i> looking for:</p> <ul style="list-style-type: none"> - Mobility-as-a-service apps as a solution - Electric scooters as a solution |
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| <p>City</p> | <p>The City of Helsingborg, Sweden</p> |
| <p>Area (neighbourhood/ zone of city, if relevant)</p> | <p>The whole city can be included, or parts can be chosen.</p> |

| Challenge Statement (Question format) | How can the city of Helsingborg establish a bicycle culture? | | | | | | | | | | | | | | |
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| Challenge name (Max three words) | Bicycle culture know-how | | | | | | | | | | | | | | |
| Situation as-is (Description of the challenge you want to address 300 words max.) | <p>Despite substantial investments in infrastructure and mobility management and considering the current climate crisis and high fuel costs, the people of Helsingborg are travelling by bicycle to a lesser extent than people in same-sized cities and in the region (Skåne) in general, as shown below:</p> <table border="1" data-bbox="521 793 1385 1171"> <thead> <tr> <th colspan="2" data-bbox="521 793 1385 842">Share of trips made by bicycle in comparable cities and in the region Skåne (%):</th> </tr> </thead> <tbody> <tr> <td data-bbox="521 842 781 898">Helsingborg</td> <td data-bbox="781 842 1385 898">11</td> </tr> <tr> <td data-bbox="521 898 781 955">Skåne</td> <td data-bbox="781 898 1385 955">15</td> </tr> <tr> <td data-bbox="521 955 781 1012">Malmö</td> <td data-bbox="781 955 1385 1012">25</td> </tr> <tr> <td data-bbox="521 1012 781 1068">Lund</td> <td data-bbox="781 1012 1385 1068">27</td> </tr> <tr> <td data-bbox="521 1068 781 1125">Uppsala</td> <td data-bbox="781 1068 1385 1125">33</td> </tr> <tr> <td data-bbox="521 1125 781 1171">Örebro</td> <td data-bbox="781 1125 1385 1171">26</td> </tr> </tbody> </table> <p>The City of Helsingborg lacks knowledge of possible incentives for and barriers against increased cycling. What is stopping families with children from commuting by bicycle and children from cycling to school? What is limiting recreational cycling in Helsingborg?</p> <p>Considering the significant investments in infrastructure, including dedicated bike lanes and bike parking facilities as well as different promotion campaigns by the city, the focus of this challenge is to understand the behavior of citizens and be able to develop a “bicycle culture” in Helsingborg, including ways to define and measure it.</p> <p>Possible solutions could involve education, gamification and providing people with resources and support that make cycling more accessible and appealing to a wider range of citizens. The city has access to real-time traffic flow data, but</p> | Share of trips made by bicycle in comparable cities and in the region Skåne (%): | | Helsingborg | 11 | Skåne | 15 | Malmö | 25 | Lund | 27 | Uppsala | 33 | Örebro | 26 |
| Share of trips made by bicycle in comparable cities and in the region Skåne (%): | | | | | | | | | | | | | | | |
| Helsingborg | 11 | | | | | | | | | | | | | | |
| Skåne | 15 | | | | | | | | | | | | | | |
| Malmö | 25 | | | | | | | | | | | | | | |
| Lund | 27 | | | | | | | | | | | | | | |
| Uppsala | 33 | | | | | | | | | | | | | | |
| Örebro | 26 | | | | | | | | | | | | | | |

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| | <p>data for cycling is only collected from approximately ten different spots in the city.</p> <p>Possible presented solution can be applicable for standard bikes, e-bikes and/or cargo bikes, which are popular in Helsingborg.</p> |
| <p>Expected to-be situation</p> <p>(How does success look like? How success could be measured? – max. 5 bullet points)</p> | <ul style="list-style-type: none"> • Increased cycling in the city • Easier access to bicycles • Improved/increased communication on cycling • Increased cycling tourism • Improved data collection on cycling traffic |

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| <p>City</p> | <p>City of Mechelen (with replication possibility to other cities).</p> |
| <p>Area (neighbourhood/ zone of city, if relevant)</p> | <p>The whole city with a focus on the inner city. The inner city is situated within the ring road around the city and makes a connection to the central train station. In the inner city there is also a shopping area concentrated in 3 streets that form a triangle. These streets cope with a lot of deliveries and logistics traffic. These streets are: Bruul, Ijzerenleen and Onze-Lieve-Vrouwestraat.</p> |
| <p>Challenge Area</p> <p>(Select one)</p> | <p>Select from</p> <ul style="list-style-type: none"> • Mobility and energy, • Sustainable Urban Logistics • Mobility infrastructure • Future Mobility • Active Mobility |
| <p>Challenge name</p> <p>(Max three words)</p> | <p>Measuring Freight CO2 Emissions</p> |

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| <p>Challenge Statement (Question format)</p> | <p>How to measure the CO2 emissions and its possible reduction for freight transport?</p> |
| <p>What is the problem? (Description of 300 words max.)</p> | <p>The city of Mechelen has signed a covenant with 33 logistics service providers and interest organizations to realize zero emission city logistics by 2030. In doing so, we have aligned ourselves with the European guidelines as defined in the 2011 white paper <i>‘Roadmap to a single European Transport Area’</i>. This document urges us to: <i>‘.....set the goal of achieving essentially CO2-free city logistics in major urban centres by 2030.’</i></p> <p>Mechelen is pursuing the following transition, taking into account the technical evolutions and availability in relation to zero-emission vehicles:</p> <ul style="list-style-type: none"> – 2023: 20% of deliveries to be made with 0-emission vehicles – 2027: 50% of deliveries to be made with 0-emission vehicles – 2030: 100% of deliveries to be made with 0-emission vehicles <p>The covenant was signed in September 2020. In the meantime, a lot of negotiating has took place between the city and logistics companies concerning the switch of fleet to 0-emission vehicles. Bpost, the largest courier company in Belgium, is already delivering the whole of Mechelen with electric vans or electric cargobikes and -trailers. DPD is experimenting with an electric van. Efforts are taking place, but for the moment there is no monitoring or analysis of the actual impact on CO2 emissions. A baseline also hasn’t been set.</p> <p>In the current situation there is no collection, follow-up nor analysis on data level of the goal of zero emission city logistics, so the gradual transition as defined here above isn’t being monitored.</p> <p>Therefore the city is looking for a ‘simple’ solution to be able to start with this monitoring, define a baseline and follow the evolution in CO2 emissions.</p> <p>NB: zero emission is defined as follows in the covenant:</p> |

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| <p>Expected Outputs</p> <p>(Potential solution objectives – max. 5 bullet points)</p> | <ul style="list-style-type: none"> – Development of a ‘device’ to measure CO2 emissions of logistics traffic – Making a baseline measurement as a starting point that can be used for comparison. – Measurement and analysis of the envisaged transition – A software tool, for example a dashboard, that shows the CO2 and its evolution |
| <p>Expected impacts</p> <p>(Measurable KPIs -) (max. 5 bullet points)</p> | <ul style="list-style-type: none"> – Depending on the developed device: installation of a minimum of 4 measurement points or installation of a device on a representative number of logistics vehicles. – Achievement of the following transition: <ul style="list-style-type: none"> *2023: 20% of deliveries to be made with 0-emission vehicles *2027: 50% of deliveries to be made with 0-emission vehicles *2030: 100% of deliveries to be made with 0-emission vehicles – Engagement of a minimum of 30 logistics service providers. – Engagement of a minimum of 30 shop owners. – Making the promise of our Covenant concrete, ‘alive’ and tangible. – Creation of sense of urgency with the logistics sector – Creation of more involvement of the logistics sector – Actually lowering the zero-emissions following the procentual transition as defined in the covenant |

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| <p>City</p> | <p>Munich</p> |
| <p>Area (neighbourhood/zone of city, if relevant)</p> | <p>Munich and surrounding areas If necessary and possible, the area can be narrowed down in the course of the cooperation.</p> |
| <p>Challenge Statement</p> <p>(Question format)</p> | <p>How can individual mobility patterns in a city like Munich be identified based on a data model? How can data on the movement of people with different modes of transport (walking, means of sharing, Public Transport, private car or bike) be</p> |

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| | <p>used by SWM/MVG to adapt their offers and to create new offers, considering certain requirements such as:</p> <p>On an average workday during and not during the holidays, on Saturdays, on Sundays</p> <ul style="list-style-type: none"> • On certain days/dates for example during major events in the city (Soccer Games, Oktoberfest) • On a special time scale (hourly, 15-minute scale...) • Differentiated in the modes of transport What can be measured/analysed with the data? <p>Goal is primarily a concept with which data or combination of data can be used to get the necessary information.</p> |
| <p>Challenge name (Max three words)</p> | <p>Smart Data on Mobility Patterns</p> |
| <p>Situation as-is (Description of the challenge you want to address 300 words max.)</p> | <p>The city of Munich with 1,5 Mio inhabitants is facing environment and traffic challenges due to growing numbers of inhabitants and of private vehicles causing an increase in CO2 emissions. Approx. 400.000 commuters from surrounding areas come to Munich daily. To adapt to the passengers' needs and to improve SWM/MVG's offer it is crucial to know how passengers use the PT and other means of traffic in order to attract more people to environmentally friendly means of transportation. At the moment there is only data available that is evaluated/collected from counting devices installed in Public Transport which can count passengers getting on and off the subway/bus/tramway at the stations. There is no evaluation of other means of transport. Only 15-60% of all PT vehicles are equipped with counting devices. This is why only long-term average values can be calculated whereas specifications for a certain day/date are not possible. Mobile providers can show streams of movement almost in real time, but do not record short distances (under 1 km) and are not able to differentiate the means of transport. App based solutions very often have the problem that there are not enough users and in addition to that, those users are not representative for the residential population and the tourists. The correct projection therefore is hardly possible</p> |
| <p>Expected to-be situation (How does success look like? How success could</p> | <p>How does success look like?</p> <ul style="list-style-type: none"> • Methods to evaluate the available data to answer the questions above are found |

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| <p>be measured? – max. 5 bullet points)</p> | <ul style="list-style-type: none"> • Data from different sources and providers, including data of the automatic counting systems of the MVG, are combined and data quality is ensured • Concept of how to combine data of different sources to reach the above mentioned goals • Proof of concept with real or generated, near-reality data How success could be measured? • Solution is tailored to the requirements of SWM (City Utilities public company of Munich) and the City of Munich • Number of modes of transport identified • Number of different time-slots covered (workdays, Saturdays, Sundays,...) • Roadmap for implementing the concept is set up |
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| <p>City</p> | <p>Stuttgart Region</p> |
| <p>Area (neighbourhood/ zone of city, if relevant)</p> | <p>The solution might be demonstrated in an area with a sports stadium, in an area with a event venue or in an area where both is located. This will depend on the solution and on the time where we will demonstrate it.</p> |
| <p>Challenge Statement (Question format)</p> | <p>How can we change the arrival and departure culture to big events, what can be done to diversify transportation options, and relieve congestion on such events?</p> |
| <p>Challenge name (Max three words)</p> | <p>Rethink your Ride</p> |
| <p>Situation as-is (Description of the challenge you want to address 300 words max.)</p> | <p>The Stuttgart Region with its 179 municipalities is an innovative business location with an international gearing and highly qualified specialists. The region is one of Germany’s top-ranking locations for labour, competitiveness, dynamism and quality of life. It is home to international market leaders, hidden champions and global players as well as to numerous small and medium-sized enterprises, some of which are highly specialised. Leading research and educational institutions make the Stuttgart Region a university and science location of international repute.</p> |

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| | <p>In the Region of Stuttgart we have plenty of big events throughout the year (60000 to a few 1000 or less visitors several times weekly and also the Euro 2024 coming up). This includes sport events, culture events, conferences, festivals,...etc.</p> <p>Most of the visitors use their car to reach the event and accept traffic jams or use crowded public transport (if available). Other mobility solutions play hardly a role, even not the own bike or shared mobility. There are also few conditions available to diversify transportation options, e.g. barely safe places to park a bike or scooter.</p> <p>Large events should be an enjoyable experience for everyone, and congestion can detract from that experience. Congestion caused by large events can also create safety risks for drivers, pedestrians, and other road users. It can also make it difficult for people with mobility issues to access the event. By diversifying transportation options, we can provide more accessible options for everyone, regardless of their mobility needs.</p> <p>Large events can have a significant environmental impact, especially if transportation options are not sustainable. By diversifying transportation options and promoting sustainable modes of transportation, we can reduce the environmental impact of large events. Changing the arrival and departure culture to big events, diversifying transportation options, and relieving congestion is important for safety, efficiency, sustainability, economic benefits, accessibility, and overall experience.</p> |
| <p>Expected situation</p> <p>(How does success look like? How success could be measured? – max. 5 bullet points)</p> | <p>to-be</p> <p>At least one event should be piloted (if possible more than one, depends on the solution)</p> <p>The event should be as big as manageable</p> <p>From one to all modes of transport should be implemented (depends on the solution)</p> |

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