

**CURRITS - 101112953**

**Technical Description (Part B)**

(SMP STAND Standard)

**Version 1.0**

**28 February 2023**

**PROJECT FACT SHEET**

**STF 640**

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| Reference Body  | TC RT/JTFIR  |
| EC/EFTA Funding  | Manpower: 117 120€ Travels (estimated): 14 000€ **Total Budget:                                      131 120€**  |
| Project Duration  | **16 months**  |
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| **WP1: Management and coordination activities**  | T0  | Project Management  | 8 960€  |
| **WP2: Study on Road-ITS and Urban Rail ITS coexistence**  | T1   | CURRITS - investigations  | 50 560€  |
| **WP3: Requirements for Urban Rail ITS/ Road ITS shared use of spectrum**  | T2  | Sharing mechanism  | 22 400€  |
| T3  | APIs Description  | 35 200€  |

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# TECHNICAL DESCRIPTION (PART B)

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| **HISTORY OF CHANGES** |
| VERSION | PUBLICATION DATE | CHANGE |
| 1.0 | 28.02.2023 | Part B for EISMEA Portal and Grant Agreement preparationWP1: Deliverable D1.1 renamed as EISMEA Progress Report instead of EISMEA Interim Report Deliverable D1.2 removed as it is a contractual document Following Evaluation Summary Report:* More description added on the roles of the Team
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**TABLE OF CONTENTS**

[TECHNICAL DESCRIPTION (PART B) 2](#_Toc129959083)

[PROJECT SUMMARY 4](#_Toc129959084)

[1. RELEVANCE 4](#_Toc129959085)

[1.1 Background and general objectives 4](#_Toc129959086)

[1.2 Needs analysis and specific objectives 6](#_Toc129959087)

[1.3 Complementarity with other actions and innovation 6](#_Toc129959088)

[2. QUALITY 6](#_Toc129959089)

[2.1 Concept and methodology 6](#_Toc129959090)

[2.2 Consortium set-up 9](#_Toc129959091)

[2.3 Project teams, staff and experts 9](#_Toc129959092)

[2.4 Consortium management and decision-making 10](#_Toc129959093)

[2.5 Project management, quality assurance and monitoring and evaluation strategy 11](#_Toc129959094)

[2.6 Cost effectiveness and financial management 12](#_Toc129959095)

[2.7 Risk management 13](#_Toc129959096)

[3. IMPACT 14](#_Toc129959097)

[3.1 Impact and ambition 14](#_Toc129959098)

[3.2 Communication, dissemination and visibility 16](#_Toc129959099)

[3.3 Sustainability and continuation 16](#_Toc129959100)

[4. WORKPLAN, WORK PACKAGES, ACTIVITIES, RESOURCES AND TIMING 17](#_Toc129959101)

[4.1 Work plan 17](#_Toc129959102)

[4.2 Work packages, activities, resources and timing 18](#_Toc129959103)

[Work Package 1 18](#_Toc129959104)

[Work Package 2 20](#_Toc129959105)

[Work Package 3 22](#_Toc129959106)

[Total Project costs 25](#_Toc129959107)

[Total Project costs 25](#_Toc129959108)

[Subcontracting 27](#_Toc129959109)

[Timetable 28](#_Toc129959110)

[5. OTHER 29](#_Toc129959111)

[5.1 Ethics 29](#_Toc129959112)

[5.2 Security 29](#_Toc129959113)

[6. DECLARATIONS 29](#_Toc129959114)

## PROJECT SUMMARY

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| The project intends to identify a solution for the coexistence of Urban Rail Intelligent Transport Systems and Road Intelligent Transport Systems in the 5,9 GHz frequency bandThe objective of the project is to perform standardisation activities to identify and design a mitigation technique enabling co-channel coexistence of Urban Rail and Road Intelligent Transportation Systems. Two standardisation deliverables will be developed:1. A Technical Report on Road-ITS and Urban Rail ITS coexistence in 5,9 GHz (to be published as TR 103 580 V1.2.1)
2. A Technical Specification specifying a technical solution and its related minimum requirements for the shared use of the 5855-5925 MHz frequency band by Road-ITS and Urban Rail ITS for safety related applications(to be published as TS 103 745 V 1.1.1).
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## 1. RELEVANCE

### 1.1 Background and general objectives

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| **Background:**In October 2017, the EC mandated CEPT/ECC (RSCOM17-26 rev.3) to provide the Commission with the necessary information to consider the amendment of Commission Decision 2008/671/EC on the harmonised use of radio spectrum in the 5875 - 5905 MHz frequency band for safety-related applications of Intelligent Transportation Systems (ITS).CEPT/ECC concluded in CEPT Report 71 and requested ETSI to define sharing and interference mitigation techniques between Urban Rail ITS and Road ITS: these techniques would enable co-channel coexistence of both systems in the frequency range 5875 MHz to 5925 MHz.COMMISSION IMPLEMENTING DECISION (EU) 2020/1426 of 7 October 2020 on the harmonised use of radio spectrum in the 5 875-5 935 MHz frequency band for safety-related applications of intelligent transportation systems (ITS) and repealing Decision 2008/671/EC, defines a priority regime thereby enforcing that both systems remain confined to their prioritized spectrum until suitable mitigation techniques are defined.The development of the mitigation technique is ongoing at ETSI, and a first technical report (ETSI TR 103 580 v1.1.1) was published in August 2019. This report proposes different methods to allow efficient sharing of the frequency band 5.9 GHz between Urban-Rail-ITS and Road-ITS and also concluded that complementary studies including “A measurement campaign […] to define the proper mitigation area to protect Urban Rail communications” are needed.The measurement campaign, co-funded by the Commission through ETSI Special Task Force 603, was completed during the autumn 2021, validating a methodology to identify protected zones where mitigation techniques are required.As a next step, the preferred mitigation technique can be identified, and its design elements outlined.The scope of the project covers standardisation activities to update ETSI TR 103 580 and deliver TS 103 745 which specifies the selected mitigation technique.**Link with the Commissions’ priorities:**Intelligent Transportation Systems, and in particular the increased efficiency of public transportation, including Urban Rail, relates directly to three of the six Commission priorities for 2019-2024, also identified in DG MOVE strategic plan for 2020-2024:**A European Green Deal:** Urban Rail Intelligent Transport Systems increase the capacity of a clean mass transit alternative to congested roads, hence reducing transport impact on the environment and providing healthier and cleaner alternatives to mobility.**A Europe fit for the digital age:** Intelligent Transport Systems make the smart and innovative transport sector a reality, leveraging digitalisation and automation.**An economy that works for people:** As stated in DG MOVE strategic plan, “*Transport has always played and continues to play an essential role in the life of Europeans as the backbone of the internal market. […] Transport also enables people to enjoy the benefits of decades of successful European integration by providing them with the goods they need, the means to go to work or to travel. In other words, transport allows people to go about their daily lives*”. More specifically, Urban Rail Intelligent Transport Systems are vital to meet mass transit capacity requirements in densely populated cities, and transport smoothly millions of passengers daily to their workplace.**Link with the SMP:** The outcomes of this project are prerequisites for the development of a harmonized standard for making available the necessary radio equipment on the market and putting them into service, as per DIRECTIVE 2014/53/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL.The specific objectives of the Programme include the effective functioning of the internal market by ensuring the financing of European standardisation and the participation of all relevant stakeholders in setting up European standards.The proposed project is therefore in the scope of the REGULATION (EU) 2021/690 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 28 April 2021, Article 3-2-c(i).**Link with the ICT Rolling Plan 2022:**The project is covered by the ICT Rolling Plan 2022, under the Action 3 of clause 3.4.5, which states:**“Action 3:** *SDOs are invited to develop and perform an in-depth scrutiny of CCAM services from the standardization standpoint [...] The analysis should […] build upon the principles and results of the RSCOM Mandate to CEPT (RSCOM17-26 rev.3) with the aim at achieving interoperability between various services.”*In response to the aforementioned mandate, the CEPT Report 71 invites ETSI to develop coexistence solutions between Urban Rail and Road ITS applications (see extract of the executive summary below), which is the goal of the proposed project.*“CEPT invited ETSI to develop sharing and interference mitigation techniques within 3 years, for ensuring co-channel coexistence in the frequency range 5875-5925 MHz between Road ITS and Urban Rail ITS applications and between Road ITS radio technologies, otherwise solutions may need to be defined directly within the regulation, noting that two new work items have been created in ETSI to develop two new Technical Reports. The goal with the two Technical Reports is to specify technical details for road ITS coexistence to be implemented later in a standard.”*This project is in response to **Topic 20-2022-STA** (“Standards supporting Coexistence solution for Urban Rail and Road Intelligent Transport Systems”) as described in the invitation to submit proposals for EU **action grants.** The call relies onEuropean Standardisation actions under the Internal Market, Standardisation, Consumers and other end-user financial services, part of the **Single Market Programme (SMP-STAND-2022-ESOS-02-IBA).** This project addresses the objectives described in this call with the development of a Technical Report and a Technical Specification related to the coexistence of Urban Rail Intelligent Transportation Systems and Road Intelligent Transportation Systems. With the development of these deliverables, this project will contribute to the EU Agenda for the digital single market will respond to the following Commission priorities: i) A European Green Deal, ii) A European fit for the digital age, iii) An economy that works for people.  |

### 1.2 Needs analysis and specific objectives

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| The overall goal of the project is to identify and design a mitigation technique enabling co-channel coexistence of Urban Rail and Road Intelligent Transportation Systems. The results will be delivered as follows:1. A Technical Report on Road-ITS and Urban Rail ITS coexistence in 5,9 GHz (to be published as TR 103 580 V1.2.1)
2. A Technical Specification specifying a technical solution and its related minimum requirements for the shared use of the 5855-5925 MHz frequency band by Road-ITS and Urban Rail ITS for safety related applications (to be published as TS 103 745 V 1.1.1).

The Project team will realise and maintain the documents during the realisation process according to the project plan and as clarified in clause 2.1. Drafting and reviewing sessions will be organised in ETSI TC RT JTFIR (Joint Task Force between TC ITS and TC RT) in accordance with the needs for the quality of the documents and the need of the technical community.The objectives will be realised in accordance with the ETSI drafting rules.The effectiveness of the project will be measured by the following set of Performance Indicators:* The number of presentations made on the activity, at the technical meetings and at the dissemination events, at least **4**.
* The ability of the project to achieve the objectives within the project plan (on-time delivery)
* The number of drafts for consultation: including early draft, stable draft, final draft (for approval) of the 2 technical deliverables, for a total of at least 6 consultations with ETSI TC RT and ETSI TC ITS.
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### 1.3 Complementarity with other actions and innovation

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| The proposed project will elaborate on some preliminary solutions laid out in of ETSI TR 103 580 V1.1.1. In addition, the developments will take into consideration the results of a field measurement campaign, outcome of which are recorded in ETSI TR 103 704 V1.1.1 (Urban Rail ITS and Road ITS applications in the 5,9 GHz band; Measurement campaign to confirm simulation parameters to define Urban Rail ITS protected zones in 5 915 MHz to 5 925 MHz).The proposed project is also complementary to the sharing studies performed by CEPT which ended with the publication of CEPT Report 71 in 2019: *Report from CEPT to the European Commission in response to the Mandate to study the extension of the Intelligent Transport Systems (ITS) safety-related band at 5.9 GHz*. The proposed project intends to define the technical solution for the shared use of the 5855-5925 MHz frequency band by Road-ITS and Urban Rail ITS for safety related applications which is the baseline for the development of the related Harmonised Standard for placing on the market the necessary radio equipment, as per DIRECTIVE 2014/53/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL |

## 2. QUALITY

### 2.1 Concept and methodology

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| The TC RT JTFIR is the ETSI joint task force between TC RT (Rail Telecom) and TC ITS (Intelligent Transport System), responsible for investigating the shared usage of 5GHz frequency band for Urban Rail and Road ITS. In this task force all activities related to the coexistence and sharing mechanisms are bundled and coordinated. The joint task force regularly reports to the participating TCs and experts from the different TCs directly participate in the JTFIR meetings and activities.In addition to the ETSI supporting staff, the project will rely on a small team of experts, hence agile organisation will be predominant. However, guidance and progress monitoring are achieved through coordination with TC RT-JTFIR.1. Experts will attend ETSI TC RT JTFIR meetings where the technical work will be coordinated and reported to both TC RT and TC ITS.2. Progress will be monitored by means of contributions (progress reports) delivered by individual or group of experts to TC RT-JTFIR meetings, where targeted requests and feedbacks will be discussed.Additional project internal coordination will be undertaken remotely, within the resources allocated to each task. The project leader will be responsible for interfacing with ETSI secretariat as appropriate, collect KPIs, report and liaise with external bodies.For the development of standards ETSI has a qualified process in place to ensure the usability of realized standards. Any standard is a collection of requirements which, if implemented correctly, achieves certain objectives (often a certain level of interoperability to enable open markets) in a product or in a service. These requirements shall be unambiguous, precise, and consistent. Standards follow established principles of standards writing as identified by the ETSI drafting rules, as follows:* a well-defined and precise terminology should be used consistently in the standard;
* requirements should be clearly identified as mandatory, optional or conditional;
* different configurations and their associated parameters should be well-defined;
* the means of conforming to the standard should be clearly identified;
* definitions and requirements should not conflict with each other.

The purpose of validation is to ensure as far as possible that the requirements expressed in the standard do meet the objectives. Even a simple validation of a standard will identify specification errors that can be easily rectified and that, when corrected, will improve the overall quality of the document. Such improvements make the standard easier to understand and to implement in a product or a service, thus reducing the number of potential interoperability problems that might occur.Problems found during validation can be classified as editorial or technical. Editorial issues can be easily resolved, and they do not usually have an impact on the overall technical content of the standard. Technical issues are more damaging than editorial problems and it is important to find and correct them prior to real deployments. Examples include:* Requirements that are incomplete or omitted from the specification;
* Requirements that are implied rather than expressly specified;
* Requirements that conflict with other requirements in the same or a referenced standard;
* Incorrect semantics used in a specification language;
* Requirements that cannot be achieved practically.

In order to improve the quality of the deliverables, the validation process shown in the Figure below will be used for all of the Specifications falling under this project proposal:Four different phases can be envisaged:1. *Planning*

 A leader for the review process will be assigned by the project leader. A date for the review will be scheduled when the deliverable under validation reached the status “stable draft”1. *Preparation for the review*

All the reviewers will scrutinize the deliverable and prepare comments and questions to be addressed to the drafting team (i.e. to those who contributed to the deliverable under validation)1. *Document review meeting*

All the comments/questions will be discussed and change proposals will be prepared/agreed 1. *Processing change proposals*

change proposals will be implemented and the so modified deliverable will be reviewed. Since the normative deliverable (i.e. TS 103 745) that will be produced under this project proposal will be the first version resulting in first implementations, this is the most suitable validation method aiming at minimizing the technical errors and improve the overall quality of the project deliverables  |

### 2.2 Consortium set-up

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| Not Applicable for ETSI |

### 2.3 Project teams, staff and experts

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| Name and function | Organisation | Role/tasks/professional profile and expertise  |
| Léa BelloulouHead of Funded Activities | ETSI | Head of ETSI funded Projects planning and control❖ Management of the project costs and funding❖ Responsible for the Reporting to ETSI Management and EC/EFTA.❖ Management of audit processes on Funded projects❖ Management of contracual aspects ❖ Monitoring of the administrative and financial tasks of the projects❖ Validation of milestones, payments  |
| Andrea LorelliTechnical Officer | ETSI  | ETSI Technical officer for the Technical Committee Rail Telecom and Intelligent Transport System.* Act as prime ETSI Secretariat contact for the standardization activity.
* Supervise the operation of the standardization activity under the relevant Directives, monitor progress of work programme.
* Advise the group on the application of the relevant directives, drafting rules, and common best practice.
* Ensure that deliverables are fit for purpose, and in line with the relevant directives, drafting rules and quality recommendations, and accompany them through the drafting and publication phases.
* Act as secretary where appropriate, provide official reports of the group's meetings, highlighting actions and decisions.
* Ensure that decisions, actions, approval of new work items and deliverables are properly recorded and communicated within the Secretariat.
* Monitor activities of other relevant groups, both inside and outside of ETSI and advise of relevant activities as required.

Take appropriate actions to develop and maintain personal expertise in the relevant technical areas, and associated regulatory and market affairs |

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| **Outside resources (subcontracting, seconded staff, etc)**  |
| According to ETSI Technical working procedure on the selection of the service providers, ETSI will issue a call for expertise to get the necessary skills and resources as described below.The ETSI Staff will be integrated to guarantee the proper support and management. The project team will be made of up to 5 experts to ensure the following mix of skills:* Organizational and consensus building skill (for the project leader)
* Urban Rail operational expertise
* Knowledge of ITS communication technologies and protocols
* Hands-on experience with simulation tools (Mathematics-oriented programming language and radio simulation tool)
* Software architecture with hands-on experience with databases (setup) and public key infrastructures
* Hands-on experience with geographic information systems and APIs
* Experience with spectrum regulation
* Proficient in English writing
* Experience in the drafting of ETSI standards
* Ability to work in a team and in an international environment

, A Project Leader will be appointed from one of the service providers and will be responsible for co-ordinating the execution of the tasks assigned to the individual Service Providers, according to the project requirements and following the technical direction given by ETSI TC RT-JTFIR. The Project Leader will possess project management experience, report-writing skills, experience of consensus building, presentation skills, experience of working in an international environment, and in liaising with other international organisations.  |

### 2.4 Consortium management and decision-making

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| Not applicable for ETSI |

### 2.5 Project management, quality assurance and monitoring and evaluation strategy

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| According to ETSI Technical working procedures on the selection of the service providers, ETSI will issue a call for expertise to get the necessary skills and resources as described below.CURRITS is a project aimed at developing European Standardisation Deliverables related to Urban Rail and Road ITS coexistence under the supervision of ETSI TC RT-JTFIR. Coordinating such a project is a composite task that requires an efficient management and decision-making structure to ensure: * A consolidation of a unified view of the overall CURRITS approach and objectives, at all times.
* An alignment with the results of relevant CEPT studies and the requirements defined in the Commission Implementing Decision (EU) 2020/1426
* An oversight and completion of objectives (within agreed calendar, budget, and quality of deliverables) both internally (within the consortium commitments) and externally (with respect to EISMEA, EU, the stakeholder community, the general audience).
* An early identification, management, and mitigation of risks.
* An efficient and effective collaboration between the involved entities.

CURRITS proponents have committed to collaborate for the timely implementation of the work plan, preparation of the deliverables and quality of results. Next to the risk management, the quality assurance is essential for reaching the overall project targets. The main target is to monitor the achievements of the project, i.e. the deliverables and milestones, and to use established processes to get an optimum of high-quality results (confirmed by earlier work). A combination of frequent on-line progress meetings, face-to-face meetings and internal progress reports will create a clear view of the progress. Over and above the management of individual WPs, a lean, yet rigorous management framework linking the project components will be implemented.From previous projects in ETSI, a formal internal review process has proven to be the most effective way to ensure a high-quality orientation throughout the project. The main instrument will be the peer-review by at least two technical experts from within the project, the formal check of the deliverables by the ETSI Secretariat and a final check by the CURRITS Coordinator and WP1 leader. In the initial phase the WP1 leader takes care for a harmonised peer-review process, i.e., the evaluation against defined scientific criteria and quality standards as proposed in the table below.

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| --- | --- | --- | --- | --- | --- |
| Criteria  | Definitely  | Satisfactorily  | Somewhat  | Not at all  | Not applicable |
| Deliverable matches the expected requirements  |  |  |  |  |  |
| Objectives are clear and in line with the planned activities?  |  |  |  |  |  |
| Issues at project level are properly treated?  |  |  |  |  |  |
| Author responds to readers’ needs?  |  |  |  |  |  |
| Technical approaches used are appropriate?  |  |  |  |  |  |
| Content is well organised?  |  |  |  |  |  |
| Issues raised are relevant?  |  |  |  |  |  |
| Contents contribute to the state of the art? |  |  |  |  |  |
| Conclusions (if any) are valid? |  |  |  |  |  |
| Deliverable is complete (no major parts missing)? |  |  |  |  |  |
| Deliverable is formally correct. |  |  |  |  |  |

The deliverables will be presented at the regular status meetings of the CURRITS and at ETSI TC RT /ETSI TC ITS. The compliance to the plan will be reported in the Periodic Internal Reports.Quality assurance: The deliverables linked to this project will be developed according to the ETSI Technical Working Procedures defined in the ETSI Directives. The drafts approved and adopted by ETSI TC RT and TC ITS will be submitted to the ETSI Secretariat within fourteen 14 days of the approval. Providing that the drafts comply with the ETSI Drafting Rules and following a quality check, the Secretariat will publish the deliverables within 30 days. The ETSI drafting rules are specified rules for the structure and drafting of documents intended to become ETSI deliverables and are intended to ensure that all ETSI deliverables are drafted in as uniform a manner as is practicable, irrespective of the technical content. The quality check of a deliverable is related to the overall structure of the document, the completeness, and the accuracy of all the requirements necessary to achieve its objectives and the consistency of its content. A quality check together with the application of the ETSI drafting rules will guarantee that the published deliverables will be of high quality (world class standards). The evaluation methods will be as follows: For the 2 objectives indicated in Section 1.2, the progress of the work will be monitored based on Milestones for the Work Items linked to the project deliverables as follows (see Section 4.2).The quality of the objectives (deliverables) is ensured by the process as specified in clause 2.1. |

### 2.6 Cost effectiveness and financial management

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| The methodology of development of CURRITS specifications is well consolidated as described in section 2.1; ETSI experience with the approach described in section 2.5 is a long-lasting approach already optimized and assure cost effectiveness. The support of the overall ITS community will assure the best possible results. With regards to the financial aspects the following core aspects can be identified.* ETSI has a well-defined experts selection process by which the experts are selected according to the required skills. To ensure that the right resources are selected to realize the work without interference and therefore most cost effective.
* Based on the continues STF activities there is a special department at ETSI having installed automated processes and control mechanisms to manage time writing and project expenses to ensure that time and expenses are managed according to plan.
* Taking into account the needed expertise, the daily rate is assumed to be 640 EUR and is based on the average market price.
* Travels costs are strongly reduced as teleconferences will be the most common tool for organising technical meetings. Travels are accounted to consider the participation of the experts to the drafting sessions, to report on the progress of work and to conduct the dissemination activities described in Section 3.2. Section 4 provides the budget for this project.

Each subcontractor is allocated to specific tasks with an expected level of contribution. The financial resources allocated to the subcontractor are calculated on this principle.At the start of the project, ETSI develops a baseline cost plan. It is calculated with the cost of the tasks and the scheduled progress of task at each milestone cut-off date. This baseline cost plan provides the costs at each milestone cut-off date.The milestone payment schedule for each subcontractor is then calculated by taking into account the baseline cost plan and the expected level of contribution. The milestone payment schedule is contractual.The subcontractor’s payments are submitted to the validation of the project milestones. TC RT, TC ITS and ETSI proceed to the validation of the milestones. |

### 2.7 Risk management

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| Risk No | Description | Work package No | Proposed risk-mitigation measures |
| **1** | Availability of the experts: the competences required are very specific and only a few people could bring their expertise to this work.Likelihood[[1]](#footnote-2): LowImpact [[2]](#footnote-3): Severe | **All** | A communication to the different concerned Technical Committees in ETSI (TC RT JTFIR, TC RT, TC ITS, TC ERM (TG37) has already been done to inform the different expert of this technical proposal demand and will be confirmed as soon as EISMEA confirm it. At the same time a mailing to the experts involved in the previous STF would also be sent to inform them directly.If needed, the call for expertise could be extended. |
| **2** | Project delays due to external reasons (e.g. COVID)Likelihood1: Low Impact2: Medium  | **All** | Such events are monitored by all Project members and reported to the WP1 leader which will manage the specific situation. WP1 leader will take required action toward members of the group, the ETSI TC RT/ITS or ETSI responsible and commonly resolve the issue.In almost all cases these issues can be resolved with additional effort. ETSI TC RT/TC ITS members will contribute on a voluntary basis in order to minimise the delay.As for COVID, the experts will work mainly remotely and only a few physical meetings are expected to take place. ETSI has already demonstrated its ability to perform in these conditions in 2020-2021, when all events and meetings took place online |
| **3** | Technical work diverges from project initial objectives. Essential technical items not adequately addressed to meet the project objectives.Likelihood1: Low Impact2: Medium | **WP2/WP3** | Within the project: Frequent communication between the WP1 leader and the other WP leaders (document rapporteurs) will be essential to minimize the risks of inconsistencies and incompatibility between the different objectives. The progress of the work for the 2 deliverables (objectives) will be monitored step-by-step by the project leader as well as by ETSI TC RT and TC ITS. ETSI TC RT and TC ITS will review the deliverables each time a milestone is reached and at each ETSI TC RT/ITS plenary meeting to manage deviations with respect to the scope, timeline, and content. |
| **4** | Financial Resources not sufficient to complete the workLikelihood1: Moderate Impact2: Medium | **All** | The work will be completed on a voluntary basis with the support of ETSI TC RT and ITS delegates. |

## 3. IMPACT

### 3.1 Impact and ambition

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| The harmonised usage and coexistence conditions of the frequencies available to intelligent transportation systems throughout Europe would ensure the legal certainty to urban rail operators and urban rail intelligent transportation system providers that the spectrum will remain available, hence fostering investments.Simultaneously, road Intelligent Transportation Systems would benefit from additional spectrum enabling innovative use cases.**Background on Urban Rail ITS:**There are currently more than 150 metro lines in operation in Europe (see [www.urbanrail.net/eu/euromet.htm](http://www.urbanrail.net/eu/euromet.htm)).About 70 projects have been already recorded on operators’ side for operational Urban Rail Intelligent Transportation Systems:* 18 until 2015
* 12 between 2016 and 2020
* additionally, around 40 beyond 2020

The market for unattended urban rail operations as of 2013 was 32 cities, 674 km track length, 48 lines and with 700 stations. It has increased by more than 25% over the last 15 years. With the increasing intensification of urban areas, it is expected to grow to nearly 2 000 km of track lines in 2025.Figure 1: *Urban Rail in Europe (source:* [*www.urbanrail.net/eu/euromet.htm*](http://www.urbanrail.net/eu/euromet.htm)*)*Urban Rail Intelligent Transportation Systems represent investments of hundreds of millions of euros and are enablers of efficient operations of lines representing billions of euros of infrastructure investments, carrying more than 5 million passengers every working day.Automation maximises capacity by enabling minimum headways and higher commercial speed, thanks to consistently optimised speed curves and dwell times, and continuous reporting of accurate train location across the service. Full automated operation systems can achieve up to 30% capacity increase compared with a conventional line. Moreover, automation’s flexibility facilitates delivering capacity ‘when’ (peak hour, but also better levels of service off-peak) and ‘where’ (inner loops) it is most needed. Line capacity is increased by enabling minimum headways at peak hours. The service can achieve headways as low as 60-90s (with the minimum theoretical limit just constrained by train length).Automation minimises operational disruption, thanks to the increased reliability, regularity and built-in redundancy in the system, and the reduction of customer-related disruptions through the secure platform/track interface. It eases responsiveness in case of incidents providing overall higher service availability.**Background on Road Intelligent Transportation Systems:**Beside Rail ITS also Road ITS is already using the 5.9 GHz band, even though on a different channel so far. For example, Volkswagen on its own expects to deploy 3 million cars using the Car2X technology until the end of 2023. In order to maximize the full potential of Road ITS more spectrum than the currently used one is needed as described in the C2CC TR 2050 Spectrum needs.[[3]](#footnote-4). Automotive industry is currently planning to introduce new services and use cases, together with infrastructure partners, which will use additional channels within the current 5.9 GHz safety ITS range. Looking further ahead, on the road to automated and autonomous driving, additional use cases will be rolled-out, which will require additional spectrum. The 5915 to 5925 MHz channel is a vital frequency resource in this respect, particularly in areas in which urban rail is not in operation, such as in rural areas and in particular for communication with infrastructure. Sufficient spectrum is essential to roll-out life-saving Road ITS services and to avoid any delay of the automated and autonomous driving.However, if no optimal spectrum sharing technique between Urban Rail and Road ITS is defined, the economic and societal benefits brought by either or both ITS applications may be compromised. Failing to undertake the proposed work, the appropriate mitigation technique may not be developed by ETSI as expected by CEPT, and “*Road ITS and Urban Rail ITS applications* *shall remain confined to their respective prioritised frequency range*” as per ECC Decision (08)01, clause 3, recital 5.  |

### 3.2 Communication, dissemination and visibility

|  |
| --- |
| Information will be provided on the effectiveness of activities related to the dissemination of project deliverables and efforts made to raise industry awareness of the activity. The project intends to disseminate results as follows:* At least one news release on the work, detailing the achievement of important results on the ETSI Website.
* At least one article in Enjoy!, the ETSI official magazine;
* At least one presentation to ETSI TC ERM
* At least 2 presentations to relevant ECC groups (WG FM,)
* By means of Liaison Statements for review of the documents to relevant external organisations such as Car2Car Communication consortium, 5GAA, UITP (Union Internationale des Transports Publics),

In all these dissemination activities the EU flag logo and the CURRITS grant number will be made visible so as to highlight the fact that the project is an EU-funded project.  |

### 3.3 Sustainability and continuation

|  |
| --- |
| The results of the project will be the technical report TR 103 580 and the technical specification TS 103 745, describing the main characteristics of a sharing operation between Urban Rail and Road ITS in the band 5.9 GHz with the goal to guarantee a smooth and safe operating of the different systems in the band. Once the deliverables falling under this project have been published:1. ETSI TC ITS might have to update the relevant ITS standardisation deliverables.

 1. ETSI and the relevant stakeholders intend to arrange plug test events and field tests to evaluate the performance of the chosen solution under real conditions. Since these events have also the purpose to validate the standards, this will further improve the quality of the standardisation deliverables.

As for 2), if editorial errors are discovered (after the publication of the specifications or after the interoperability events above mentioned), the deliverables can be updated and published with a minimal additional effort. However, if the interoperability events will point out technical errors, more effort will be needed since different standardisation deliverables might be impacted. All these activities will guarantee that ITS equipment on the European market will comply with the sharing requirements between the different ITS applications (Road ITS, Urban Rail ITS) as part of the European ITS spectrum regulation framework. The results of the project will directly be used in the update of the future European ITS spectrum regulation and this will lead to a stable legal and operational framework for the applications in the 5.9 GHz band. |

## 4. WORKPLAN, WORK PACKAGES, ACTIVITIES, RESOURCES AND TIMING

### 4.1 Work plan

|  |
| --- |
| The CURRITS project is defined in three Work Packages (WP). Based on the ETSI organisational structure in which ETSI facilitates the development of standards in technical committees the project structure can be characterized by a management and two technical Work Packages (WPs). By separation of the responsibilities the project and its content is managed qualitatively.The CURRITS WPs and their relations is organised according to the figure below: The management WP: * WP1: Consist of ETSI STF staff, the chair of ETSI TC ITS/TC RT Joint Task Force (JTFIR) and the contracted Project Leader. ETSI STF staff is responsible for the organisational and financial management of the project. It supervises the project execution and communicates with EISMEA and general dissemination via ETSI organisational dissemination methods such as ETSI website. It is responsible for managing the contracting of the experts and the contracts themselves. The chair of ETSI TC RT JTFIR, together with ETSI Stuff, is responsible for the selection of the experts, including the Project Leader, and for the supervision of the qualitive reviewing and realisation of the objectives. The Project Leader is responsible for the daily management of the project, realisation of all reporting and communication with external stakeholders e.g., the European Commission, Car and Train manufacturers and relevant Authorities for alignment on the content.

The two technical WPs: * WP2 will develop a technical report covering further investigations to identify solutions to protect Urban Rail ITS in 5915-5925 MHz.
* WP3 will develop a technical specification related to the Requirements for the shared use of spectrum between road and urban rail ITS.

The leaders of WP2 and WP3 are the rapporteurs of the two deliverables. They align the progress on daily bases with the Project Leader  |

### 4.2 Work packages, activities, resources and timing

#### Work Package 1

|  |
| --- |
| **Work Package 1: Management and coordination activities** |
| **Duration:** | M1 – M16  | **Lead Beneficiary:** | ETSI |
| **Objectives***List the specific objectives to which this work package is linked.* |
| - Coordination, reporting and leading of the project team activities, in collaboration with the ETSI Staff, TC RT and TC ITS.- Intermediate and final reporting to EISMEA |
| **Activities and division of work (WP description)** |
| Task No(continuous numbering linked to WP) | Task Name | Description | Participants - NA | In-kind Contributions and Subcontracting(Yes/No and which) |
| Name | Role(COO, BEN, AE, AP, OTHER) |
| T1.1 | Project Setup | ETSI Staff will arrange a call for experts.ETSI RT JTFIR chair will interview the potential candidates and select those to best meet the work plan, including the assignment of the Project LeaderETSI Staff will make arrangements for project members (service contracts, etc.).The ETSI RT JTFIR chair (with the help of the assigned Project Leader) checks that the objectives of all WPs are clearly recognised by the participants. The corresponding milestone is therefore set at Month 2 (MS1) in alignment with standard ETSI procedures.  | ETSI StaffETSI TC ITS chairProject Leader | COO | YES (In-kind) |
| T1.2 | Project Management | The overall management of the project will be under the responsibility of the Project Leader. He or she will ensure an effective coordination among the different Tasks, working in close collaboration with the different Task Leaders and supervising them if needed, but also with ETSI RT JTFIR, TC RT , TC ITS and ETSI Staff representatives.The overall management of the project consists in:* Planning the work of the project members, ensuring that the timescales of the project deliverables are met
* Organizing meetings to discuss the drafts, recording any major issues and resolutions of issues
* Reporting to RT JTFIR, TC RT and TC ITS on the progress of work
* Presenting the project results in other external meetings as appropriate e.g., EU Commission and business stakeholders.
* providing the project Reports to the ETSI Staff and ETSI RT JTFIR, TC RT and TC ITS: the Progress Report (to be submitted to EISMEA after 12 months) and the Final Report (to be submitted to EISMEA at the end of the project).

This task realises all ETSI Milestone reporting related to this project during the period from Month 3 till Month 16.  | Project Leader | OTHER | YES (subcontracting) |
| **Milestones and deliverables (outputs/outcomes)** |
| Milestone No(continuous numbering not linked to WP) | Milestone Name | Work Package No | Lead BeneficiaryNA | Description | Due Date(month number) | Means of Verification |
| MS1 | Intermediate results have been delivered | 1 | ETSI  | Mid-term Progress Report with the achieved results approved by RT JTFIR and TC RT and sent to EISMEA | M12 | Report by ETSI Staff to EISMEA |
| MS2 | Final results have been delivered | 1 | ETSI  | Final Report approved by RT JTFIR and TC RT and sent to EISMEA | M16 | Report by ETSI Staff to EISMEA |
| Deliverable No (continuous numbering linked to WP) | Deliverable Name | Work Package No | Lead Beneficiary | Type | Dissemination Level | Due Date(month number) | Description (including format and language) |
|  |  |  |  | *[*R *—* Document,report*]* *[*DEM *—* Demonstrator, pilot, prototype*]* *[*DEC —Websites, patent filings, videos, etc*] [*DATA *—* data sets, microdata, etc*] [*DMP *—* Data Management Plan*]* *[*ETHICS*] [*SECURITY*] [*OTHER*]* | *[*PU *—* Public] *[*SEN *—* Sensitive*]* *[*R-UE/EU-R — EU Classified*]* *[*C-UE/EU-C — EU Classified*]**[*S-UE/EU-S — EU Classified*]*  |  |  |
| D1.1 | EISMEA Progress Report  | 1 | ETSI  | R — Document, report  | SEN — Sensitive | M12 | * The activities performed until month 12, the coordination work of the activities and the production of the expected deliverables anticipated in the work-plan.
* The latest drafts of the deliverables are available according to the time plan.
* Overview of ad-hoc meetings if necessary.
* The plan for the future activities to complete the deliverables and further expected (coordination) meetings.
* Quality intermediate report.
* Standard EISMEA reporting

English |
|  |  |  |  |  |  |  |  |

#### Work Package 2

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| --- |
| **Work Package 2: Study on Road-ITS and Urban Rail ITS coexistence**  |
| **Duration:** | M3 – M12 | **Lead Beneficiary:** | **ETSI** |
| **Objectives***List the specific objectives to which this work package is linked.* |
| * Define a process to compute the zones where Urban Rail and Road Intelligent Transportation Systems are likely to interfere, based on the outcome of the measurement campaign
* Define the principles governing the sharing solution and outline the design of the technical infrastructure allowing Road ITS equipped vehicles to have access to up to date sharing information.
* Define the appropriate mitigation features to be implemented. These are mode of operations that Road ITS equipped vehicles would activate to avoid interfering with Urban Rail ITS.
 |
| **Activities and division of work (WP description)** |
| Task No(continuous numbering linked to WP) | Task Name | Description | Participants - NA | In-kind Contributions and Subcontracting(Yes/No and which) |
| Name | Role(COO, BEN, AE, AP, OTHER) |
| T2.1 | CURRITS - investigations | To develop a technical report running further investigations to identify solutions to protect Urban Rail ITS in 5915-5925 MHz:1. Define a process to compute the zones where Urban Rail and Road Intelligent Transportation Systems are likely to interfere, based on the outcome of the measurement campaign.
2. Define the principles governing the sharing solution and outline the design of the technical infrastructure allowing Road ITS equipped vehicles to have access to up to date sharing information.

Define the appropriate mitigation features to be implemented. These are mode of operations that Road ITS equipped vehicles would activate to avoid interfering with Urban Rail ITS.  | ETSI | OTHER | YES (subcontracting) |
| **Milestones and deliverables (outputs/outcomes)** |
| Milestone No(continuous numbering not linked to WP) | Milestone Name | Work Package No | Lead BeneficiaryNA | Description | Due Date(month number) | Means of Verification |
| MS3 | CURRITS - investigations Early Draft | 2 | ETSI | An early draft including at least a high-level description of the expected content  | M5 | Review by ETSI RT JTFIR, TC RT, TC ITS and the ETSI Staff |
| MS4 | CURRITS – investigations Stable Draft | 2 | ETSI | A stable version where all the expected content has been added and no major technical changes are foreseen. | M8 | Review by ETSI RT JTFIR, TC RT, TC ITS and the ETSI Staff |
| MS5 | CURRITS – investigations Final Draft | 2 | ETSI | A final document approved by TC RT and TC ITS for publication. | M11 | Review and formal acceptance by ETSI RT JTFIR, ETSI RT, TC ITS as well as the ETSI Staff |
| Deliverable No (continuous numbering linked to WP) | Deliverable Name | Work Package No | Lead Beneficiary | Type | Dissemination Level | Due Date(month number) | Description (including format and language) |
| D2.1 | Urban Rail ITS and Road ITS applications in the 5,9 GHz band; Further investigations to identify solutions to protect Urban Rail ITS in 5915-5925 MHz TR 103 580  | 2 | ETSI | R — Document, report | Public | M12 | Following a final check by the project team, the ETSI RT JTFIR, TC RT ,TC ITS members as well as the ETSI Staff, the deliverable is approved and published by ETSI. |

#### Work Package 3

|  |
| --- |
| **Work Package 3: Requirements for Urban Rail ITS/Road ITS shared use of spectrum** |
| **Duration:** | M7– M16  | **Lead Beneficiary:** | **ETSI** |
| **Objectives***List the specific objectives to which this work package is linked.* |
| To specify a technical solution and its related minimum requirements for the shared use of the 5855-5925 MHz frequency band by Road-ITS and Urban Rail ITS for safety related applications. |
| **Activities and division of work (WP description)** |
| Task No(continuous numbering linked to WP) | Task Name | Description | Participants - NA | In-kind Contributions and Subcontracting(Yes/No and which) |
| Name | Role(COO, BEN, AE, AP, OTHER) |
| T3.1 | Sharing mechanism | Development of sharing solutions to guarantee the protection of urban rail, based on the distribution of databases with the protection zones and actions to be done in by Road ITS in these ones to protect Urban Rail communication  | ETSI | OTHER | YES (subcontracting) |
| T3.2 | APIs Description | Description of Application Programming Interface (APIs) as a solution for distributing and exchanging up to date information for sharing principles | ETSI | OTHER | YES (subcontracting) |
| **Milestones and deliverables (outputs/outcomes)** |
| Milestone No(continuous numbering not linked to WP) | Milestone Name | Work Package No | Lead BeneficiaryNA | Description | Due Date(month number) | Means of Verification |
| MS6 | CURRITS - requirements Early Draft | 3 | ETSI | An early draft including at least a high-level description of the expected content (identification of the clauses and initial content)  | M9 | Review by ETSI RT JTFIR, TC RT, TC ITS and the ETSI Staff |
| MS7 | CURRITS – requirements Stable Draft | 3 | ETSI | A stable version where all the expected content has been added and no major technical changes are foreseen. | M12 | Review by ETSI RT JTFIR, TC RT, TC ITS, and the ETSI Staff |
| MS8 | CURRITS – requirements Final Draft | 3 | ETSI | A final document approved by TC RT and TC ITS for publication. | M15 | Review and formal acceptance by ETSI RT JTFIR, ETSI RT, TC ITS as well as the ETSI Staff |
| Deliverable No (continuous numbering linked to WP) | Deliverable Name | Work Package No | Lead Beneficiary | Type | Dissemination Level | Due Date(month number) | Description (including format and language) |
| D3.1 | Urban Rail ITS and Road ITS applications in the 5855-5925 MHz frequency band; Requirements for the shared use of spectrumTS 103 745  | 3 | ETSI | R — Document, report | Public | M16 | Following a final check by the project team, the ETSI RT JTFIR, TC RT ,TC ITS members as well as the ETSI Staff, the deliverable is published |

## Total Project costs

|  |
| --- |
| Provide detailed project costs according to the project breakdown structure and the resources estimated |
| *Travels and Work Packages*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | Working Days | Total Personnel € | Travel Costs | Total Costs |
| WP1: Project management and coordination | 14 |  - €  |  6 000,00 €  |  6 000,00 €  |
| WP2: Urban Rail -Road ITS coexistence study | 79 |  - €  |  4 000,00 €  |  4 000,00 €  |
| WP3: Urban Rail -Road ITS coexistence solution | 90 |  - €  |  4 000,00 €  |  4 000,00 €  |
| **TOTAL** | **183** |  **- €**  |  **14 000,00 €**  |  **14 000,00 €**  |
| EC contribution |   |   |   |  13 300,00 €  |
| EFTA contribution |   |   |   |  700,00 €  |

Each travel is quoted for a cost of 1000 EUR. **Amount manpower: 117 120 €****Amount travels (estimated): 14 000 €****Total amount 131 120 €** |

#### Subcontracting

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Work Package No | Subcontract No(continuous numbering linked to WP) | Subcontract Name(subcontracted action tasks) | Description (including task number and BEN to which it is linked) | Estimated Costs(EUR) | Justification(why is subcontracting necessary?) | Best-Value-for-Money(how do you intend to ensure it?) |
| 1-3 | N/A | N/A |  | 131 120€  | Expertise not available in ETSI Secretariat | Subcontractors are selected on a case-by-case basis in the context of an open call through a clearly defined process (typically one or more of the following, publication of the call through ETSI Collective letters to the membership, Technical Body mailing lists or explicit calls for tender).Travel costs included. |
| Other issues:*If subcontracting for the project goes beyond 30% of the total eligible costs, give specific reasons.* | ETSI Secretariat (Funded Activities, Technical officers…) will ensure the project planning and controlling with the Technical Committee without charging the related costs to the project whereas subcontractors will perform the development and technical execution of the project. |

#### Timetable

|  |  |
| --- | --- |
| **ACTIVITY** | **MONTHS** |
| **M 1** | **M 2** | **M 3** | **M 4** | **M 5** | **M 6** | **M 7** | **M 8** | **M 9** | **M 10** | **M 11** | **M 12** | **M 13** | **M 14** | **M 15** | **M 16** |
| **Task 1.1 - Project Setup**  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| **Task 1.2 - Project Management** |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| **Task 2.1 - investigations** |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| **Task 3.1 - Sharing mechanism** |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| **Task 3.2 – APIs Description** |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

## 5. OTHER

### 5.1 Ethics

|  |
| --- |
| Not applicable. |

### 5.2 Security

|  |
| --- |
| Not applicable. |

## 6. DECLARATIONS

|  |
| --- |
| **Double funding** |
| **Information concerning other EU grants for this project**  | **YES/NO** |
| We confirm that to our best knowledge neither the project as a whole nor any parts of it have benefitted from any other EU grant *(including EU funding managed by authorities in EU Member States or other funding bodies, e.g. Erasmus, EU Regional Funds, EU Agricultural Funds, European Investment Bank, etc)*. If NO, explain and provide details. | YES |
| We confirm that to our best knowledge neither the project as a whole nor any parts of it are (nor will be) submitted for any other EU grant *(including EU funding managed by authorities in EU Member States or other funding bodies, e.g. Erasmus, EU Regional Funds, EU Agricultural Funds, European Investment Bank, etc)*. If NO, explain and provide details. | YES |

|  |
| --- |
| **Financial support to third parties (if applicable)** |
|  |

**Annex I Response to the Request for Proposals
CfE – STF 640 (REFERENCE BODY RT) Deadline: 02/06/2023**

**If you are an ETSI Member \***

**ETSI membership status (Indicate your status):**

 Full

 Associate

 Observer

**If you are not an ETSI Member \***

Please indicate:

**Full name of the ETSI member supporting the application (list of ETSI members on etsi.org):**

-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Official contact name of the ETSI member supporting the application:**

-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Note: A formal confirmation of the support from the Official contact is required (e.g. by e-mail sent to STFLINK@etsi.org) and an “ETSI Member Support Letter” will be required if you are selected.*

|  |
| --- |
| **Contractor information \*** |
|  |
| **Contractor name \*:***Indicate the Company/Organization Name* |  |
|  |
| **Contact person for the technical aspects** | **Contact person for Decision on ETSI financial offer to this project (if any)** |
| Title |  | Title |  |
| First name |  | First name |  |
| Last name  |  | Last name  |  |
| Role |  | Role |  |
| e-mail |  | e-mail |  |
| Phone |  | Phone |  |
|  |
|  | **Yes** | **No** |
| Do you or any employee of your Company/Organization hold an elected or appointed position in the Reference Body requesting the STF 640 creation? | oIndicate in which position:----------------------------------- | o |
| **If you are self-employed candidate:**Do you currently have other contracts in progress with ETSI? | o | o  |

All fields marked with an asterix (\*) are mandatory

**1.1 Introduction**

A short presentation of the technical structure responsible for this activity, e.g.:

* Business area, number of employees, link to WEB site,
* Department(s)/team(s)/experts in charge of the technical activities related to this Project,
* Reference to products/services of your Company/Organization or supporting Member to which the standards developed by this Project will apply,
* Motivation for your Company/Organization or supporting Member to participate in this Project.

**1.2 Proposed approach**

**Proposed contribution to tasks & related cost**

Identify the tasks to which your Company/Organization is proposing to contribute by filling-in the table below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tasks No** | **Tasks Description** | **Max Budget****Allocated in Euro** | **Amount in Euro****(mandatory)** | **% of whole Task (mandatory)** |
| 00 | Project Management  | 8 960 | . | . |
| 01 | CURRITS - investigations  | 50 560 | . | . |
| 02 | Sharing mechanism  | 22 400 | . | . |
| 03 | APIs Description  | 35 200 | . | . |
|  | **TOTAL** | **117 120** |  |  |

***Amount in Euro (mandatory)***: *Indicate the price offered for your contribution to the task(s)*

***% of whole task (mandatory)***:  *Indicate to which percentage of the execution of the whole task your offer corresponds*

Provide a description of the proposed approach, competences, reference to related activities:

* Explain which part of the task is corresponding to the requested percentage that your Company/Organization will handle,
* Explain the scope that your Company/Organization will cover,
* Explain your approach to the management of the quality and,
* Explain your approach to the management of the risks and their mitigation,
* Describe and justify the proposed costs to achieve this project objectives.

**Annex II Terms and Conditions
CfE – STF 640 (REFERENCE BODY RT) Deadline: 02/06/2023**

**2.1 Submission of Proposals**

All proposals in response to this CfE shall be submitted before the deadline indicated in thisCollective Letter, using exclusively the WEB application on the ETSI Portal at the following address: <https://portal.etsi.org/cfe>.

Proposals shall be composed of Curriculum Vitae of the proposed service providers’ personnel and the Annex I of this CfE duly filled-out.

Proposals that will be partial or incomplete at the deadline will not be accepted.

The Terms and Conditions in this Annex will apply.

**2.2 Modification and Withdrawal of Proposals**

Applicants may, without prejudice to themselves, modify or withdraw their proposal by written request, provided that the request is received by ETSI prior to the due date and time, at the address to which their proposal was submitted. The applicant may submit a new proposal provided that such new proposal is received prior to the deadline for responding which is specified in this Collective Letter.

**2.3 Assessment of Proposals**

The ETSI Director-General, in consultation with the Reference Body Chairman, is responsible for the selection of the service providers that will be contracted to perform this Project work. The ETSI Director-General and the Reference Body Chairman may be assisted by a Selection Panel to assess the applications received and make the final decision.

As per article 1.10.4 of the ETSI Directives, the Director-General may discard proposals that could be identified as creating potential conflict of interest.

The ETSI Secretariat will only communicate to the applicants the result of the selection (accepted or not accepted). Should applicants need more information on the rationale for the selection, they must address a formal request to the ETSI Director-General.

* The following evaluation criteria will be applied to all proposals, in order of priority:
* Evidence that the applicant has the necessary structure and expertise to ensure delivery
* Reference to current or previous activities in the specific technical domain of this project
* Critical review of the most efficient way to achieve the objectives in this Project ToR
* Effective proposed approach/methodology for the execution of the tasks
* Implementation schedule
* Clear pricing policy

Compliance with the first two (2) criteria is mandatory.

Proposals that are not considered compliant with these criteria will be discarded.

Priority will be given to technical quality of the proposals. Pricing considerations will be taken into account to ensure that the best value for money is achieved. Compatibility with the maximum budget allocated to this Project will be verified before placing a Service Contract.

Following the assessment process, ETSI reserves the right to grant contracts to other than the cheapest proposals, to accept or reject any offer completely or in part, or to reject all proposals, without providing the reasons. If no offer is accepted, ETSI may decide to abandon the work or proceed in any other manner ETSI may select.

**2.4 IPR and confidentiality Agreements**

The information provided in this CfE, as well as the fact that the applicant has received the CfE, is considered confidential and protected under copyright laws. The applicant may not discuss, share, or use the information in this CfE for any purpose other than the response to this CfE.

ETSI will not disclose the content of any proposals to other applicants or any other party, with the exception of the persons involved in the assessment process described in §2.3 above.

However, ETSI reserves the right to make use of the information provided in this proposal to improve this project definition for the purpose of this CfE or any other manner in which ETSI may decide to proceed to select the service providers.

If successful, the applicant will be required to sign a Service Contract, which includes IPR and Confidentiality clauses aligned with the relevant policies in the ETSI Directives.

**2.5 Preparation cost**

ETSI will not be responsible for any costs or expenses that the applicant may incur in preparing and/or submitting the proposal.

**2.6 Service Contract**

A Service Contract will be proposed to the applicants that will be selected to perform the work.

Details on the Terms and Conditions of this contract can be found on the ETSI Portal, at the following address: <https://portal.etsi.org/STF/STFs/Contracts.aspx>

1. Levels: Low / Moderate / High [↑](#footnote-ref-2)
2. Levels: Mild / Medium / Severe [↑](#footnote-ref-3)
3. [↑](#footnote-ref-4)