



## Connecting Europe Facility (CEF)

### Call for proposals

CEF 2 Transport - Actions related to smart and interoperable mobility - General envelope

**(CEF-T-2021-SIMOBGEN)**

Version 1.0  
16 September 2021



HISTORY OF CHANGES			
Version	Publication Date	Change	Page
1.0	16 September 2021	▪ Initial version (new MFF).	
		▪	
		▪	
		▪	



## EUROPEAN CLIMATE, INFRASTRUCTURE AND ENVIRONMENT EXECUTIVE AGENCY (CINEA)

CINEA.B – Sustainable networks and investments

CINEA.B.1 – CEF Transport: Northern Europe, Austria + MoS and ERTMS

### CALL FOR PROPOSALS

#### TABLE OF CONTENTS

0. Introduction .....	4
1. Background.....	6
2. Objectives — Themes and priorities — Activities that can be funded .....	8
3. Available budget .....	25
4. Timetable and deadlines .....	26
5. Admissibility and documents .....	26
6. Eligibility.....	27
Eligible participants (eligible countries).....	27
Eligible activities.....	28
Geographic location .....	28
Duration (for SESAR-Actions).....	28
Project budget (for SESAR-Actions).....	28
7. Financial and operational capacity and exclusion.....	29
Financial capacity .....	29
Operational capacity .....	29
Exclusion .....	30
8. Evaluation and award procedure .....	31
9. Award criteria.....	31
10. Legal and financial set-up of the Grant Agreements.....	33
Starting and end dates .....	33
Milestones and deliverables.....	33
Form of grant, funding rate and maximum grant amount.....	33
Budget categories and cost eligibility rules.....	34
Reporting and payment arrangements.....	36
Prefinancing guarantees .....	36
Certificates .....	37
Liability regime for recoveries .....	37
Provisions concerning the project implementation.....	37
Other specificities .....	38

Non-compliance and breach of contract .....	38
11. How to submit an application.....	38
12. Help .....	39
13. Important .....	40

## 0. Introduction

This is a call for proposals for EU action grants in the field of Transport under the Connecting Europe Facility (CEF).

The regulatory framework for this EU Funding Programme is set out in:

- Regulation 2018/1046 ([EU Financial Regulation](#))
- the basic act (CEF Regulation [2021/1153](#)<sup>1</sup>).

The call is launched in accordance with the 2021-2027 Work Programme<sup>2</sup> and will be managed by the European Climate, Infrastructure and Environment Executive Agency (CINEA) ('Agency').

The call covers the following topics:

- CEF-T-2021-SIMOBGEN-ERTMS-UNITS - Smart applications for transport - ERTMS – unit contribution
- CEF-T-2021-SIMOBGEN-ITS-WORKS - Smart applications for transport - ITS – works or mixed
- CEF-T-2021-SIMOBGEN-ITS-STUDIES - Smart applications for transport - ITS – studies
- CEF-T-2021-SIMOBGEN-SESAR-DSDU-WORKS - Smart applications for transport- SESAR-DEMONSTRATORS U - works
- CEF-T-2021-SIMOBGEN-SESAR-DSDA-WORKS - Smart applications for transport- SESAR-DEMONSTRATORS A – works
- CEF-T-2021-SIMOBGEN-RIS-WORKS - Smart applications for transport - RIS – works or mixed
- CEF-T-2021-SIMOBGEN-RIS-STUDIES - Smart applications for transport - RIS – studies
- CEF-T-2021-SIMOBGEN-EMSWe-WORKS - Smart applications for transport - EMSWe – works or mixed
- CEF-T-2021-SIMOBGEN-EMSWe-STUDIES - Smart applications for transport - EMSWe – studies
- CEF-T-2021-SIMOBGEN-VTMIS-WORKS - Smart applications for transport - VTMIS – works or mixed

<sup>1</sup> Regulation (EU) 2021/1153 of the European Parliament and of the Council of 7 July 2021 establishing the Connecting Europe Facility (OJ L 249, 14.7.2021, p. 38–81).

<sup>2</sup> COMMISSION IMPLEMENTING DECISION C(2021) 5763 final of 5.8.2021 on the financing of the Connecting Europe Facility - Transport sector and the adoption of the work programme for 2021-2027.

- CEF-T-2021-SIMOBGEN-VTMIS-STUDIES - Smart applications for transport - VTMIS – studies
- CEF-T-2021-SIMOBGEN-eFTI-WORKS - Smart applications for transport - eFTI – works or mixed
- CEF-T-2021-SIMOBGEN-eFTI-STUDIES - Smart applications for transport - eFTI – studies
- CEF-T-2021-SIMOBGEN-DATA-WORKS - Smart applications for transport – data - works or mixed
- CEF-T-2021-SIMOBGEN-DATA-STUDIES - Smart applications for transport – data - studies
- CEF-T-2021-SIMOBGEN-NEWTECH-WORKS - New technologies and innovation – works or mixed
- CEF-T-2021-SIMOBGEN-NEWTECH-STUDIES - New technologies and innovation – studies
- CEF-T-2021-SIMOBGEN-REMIB-WORKS - Removing interoperability barriers-works or mixed
- CEF-T-2021-SIMOBGEN-REMIB-STUDIES - Removing interoperability barriers–studies

**NOTE:** The term 'project' used in this application form and other documents is synonymous to the term 'action' used in the CEF Regulation 2021/1153.

Each project application under the call must address only one of these topics. Applicants wishing to apply for more than one topic, must submit a separate proposal under each topic.

We invite you to read the call documentation carefully, and in particular this Call Document, the Model Grant Agreement, the [EU Funding & Tenders Portal Online Manual](#) and the [EU Grants AGA – Annotated Grant Agreement](#).

These documents provide clarifications and answers to questions you may have when preparing your application:

- the [Call Document](#) outlines the:
  - background, objectives, scope, activities that can be funded and the expected results (sections 1 and 2)
  - timetable and available budget (sections 3 and 4)
  - admissibility and eligibility conditions (including mandatory documents; sections 5 and 6)
  - criteria for financial and operational capacity and exclusion (section 7)
  - evaluation and award procedure (section 8)
  - award criteria (section 9)
  - legal and financial set-up of the Grant Agreements (section 10)
  - how to submit an application (section 11)

- the Online Manual outlines the:
  - procedures to register and submit proposals online via the EU Funding & Tenders Portal ('Portal')
  - recommendations for the preparation of the application
- the AGA — Annotated Grant Agreement contains:
  - detailed annotations on all the provisions in the Grant Agreement you will have to sign in order to obtain the grant (*including cost eligibility, payment schedule, accessory obligations, etc*).

You are also encouraged to visit the [CINEA website](#) to consult the list of projects funded previously.

## **1. Background**

This call resorts under the Connecting Europe Facility 2021-2027 – multiannual work programme for the transport sector. The programme has the general objective to build, develop, modernise and complete the trans-European networks, taking into account the Union long-term decarbonisation commitments, and thus to contribute to smart, sustainable and inclusive growth and to enhance territorial, social and economic cohesion. It shall contribute to the development of projects of common interest relating to efficient, interconnected, and multimodal networks and infrastructure for sustainable, smart, interoperable, inclusive, accessible, resilient, safe and secure mobility. It shall contribute to more sustainable modal composition of the transport system, in order to meet EU climate neutrality and zero pollution ambitions by 2050.

CEF contributes to the EU goal of climate-related spending and decarbonising transport. In accordance with the European Green Deal, CEF 2021-2027 will target a contribution of 60% of its overall financial envelope to co-financing Actions supporting climate objectives and moving fast towards zero-emission mobility. A methodology to track climate expenditures against the targets set has been developed by the Commission and will be applied to all Actions under CEF.

The implementation of the multiannual work programme aims at contributing to the completion of the Trans-European Networks - Transport (TEN-T), thereby further enhancing sustainable and smart mobility. It is expected that granting of support on the basis of this multiannual work programme will contribute to the timely and efficient development of the TEN-T Core Network, support the realisation of a robust and resource-efficient European transport system and address climate change in accordance with the European Green Deal.

The granted support will directly contribute, inter alia, to the achievement of important transport policy objectives, such as establishing major interoperable transport axes interconnecting national networks and facilitating the functioning of the internal market, the optimal use of existing infrastructure capacities, improving the safety and reliability of the network, fostering cohesion and cross-border mobility, enhancing accessibility of peripheral areas of the Union, enhancing an integrated multimodal approach aiming at shifting a considerable part of transport that currently takes place by road towards more sustainable transport modes, increasing the capacity and performance of rail, inland waterways and short sea shipping infrastructure, contributing to a more balanced modal distribution, and reducing the negative environmental impacts of transport, in particular as regards GHG emissions.

### **Background specific to SESAR - Digital Sky Demonstrators (DSD) on U-space and urban air mobility and on Aviation Green Deal:**

The Digital European Sky Programme is structured into three main R & I phases (Exploratory Research, Industrial Research and Validation and Digital Sky Demonstrators) that aim to deliver through a pipeline of innovations addressing the thematic defined in the Strategic Research and Innovation Agenda (SRIA)<sup>3</sup>. This matures operational and technological solutions through the Technology Readiness Levels (TRL).

As such, for the Digital European Sky Programme, the pipeline is constructed from four categories of activities, categories 2 and 3, below, are within the Industrial Research Phase:

1. Exploratory Research (TRL 0-2);
2. Industrial Research and Validation (TRL 3-6)
3. Fast-Track Innovation and Uptake(TRL 2-7);
4. Digital Sky Demonstrators (TRL 7-8).

Many of the innovations needed to deliver the digital European sky are not “business as usual”, but breakthrough solutions that combine digital and physical infrastructure capabilities. Bringing these innovations to scale in the market is challenging considering the high degree of technological, regulatory or market risk the aviation industry faces, which has so far deterred or delayed private investment in its infrastructure.

The establishment of a Europe-wide network of large-scale digital sky demonstrators offers a viable means to build confidence and bridge from research, through industrialisation to implementation. As such, the demonstrators will be closely connected to the standardisation and regulatory activities, and will provide a platform for a critical mass of “early movers” representing a minimum of 20% of the targeted operating environment to accelerate market uptake. Demonstrators will take place in live operational environments and put to the test the concepts, services, technologies and standards necessary to deliver the digital European sky. This will help create buy-in from the supervisory authorities and operational staff, providing tangible evidence of the performance benefits in terms of environment, capacity, safety, security and affordability. Typically, these activities address up to TRL-8. This covers:

- TRL-7 System demonstration in an operational environment (ground or airborne),
- TRL-8 Actual system completed and "mission qualified" through test and demonstration in an operational environment (ground or airborne).

To achieve the Digital European Sky (Phase D of the **European ATM Master Plan**), nine research and innovation flagships have been identified in the Strategic Research and Innovation Agenda (SRIA) with their underlying R & I needs/challenges. The SRIA presents the strategic research and innovation (R & I) roadmaps for the years 2021 to 2027 to deliver on the implementation of the Digital European Sky (i.e. fully scalable services supported by a digital ecosystem minimising the environmental footprint of aviation), including the integration of drones, matching the ambitions of the ‘European Green Deal’ and the ‘Europe fit for the digital age’ initiative. The activities

---

<sup>3</sup> The SRIA details the research and innovation roadmaps to achieve the Digital European Sky. The document is [available on the SESAR JU website \(https://www.sesarju.eu/sria\)](https://www.sesarju.eu/sria).

outlined in the SRIA to build a digitalised infrastructure are also critical for a post-COVID recovery, enabling aviation to become more scalable, economically sustainable, environmentally efficient and predictable.

The Digital Sky Demonstrators under this call contributes to two SRIA research and innovation flagships, namely U-space and urban air mobility and Aviation Green Deal:

- U-space and urban air mobility: Over the next 10 years, the implementation of this SRIA aims to unlock the potential of the drone economy and enable urban air mobility (UAM) on a wide scale. To that end, a new air traffic management concept for low-altitude operations needs to be put in place to cater safely for the unprecedented complexity and high volume of the operations that are expected. This concept, referred to as U-space, will include new digital services and operational procedures and its development has already started within the SESAR 2020 programme. U-space is expected to provide the means to manage safely and efficiently high-density traffic at low altitudes involving heterogeneous vehicles (small unmanned aerial vehicles, electric vertical take-off and landing – eVTOLs – and conventional manned aircraft), including operations over populated areas and within controlled airspace. U-space will have to integrate seamlessly with the ATM system to ensure safe and fair access to airspace for all airspace users, including UAM flights departing from airports;
- Aviation Green Deal: The objective of net-zero greenhouse gas emissions by 2050 set by the European Green Deal, in line with the EU's commitment to global climate action under the Paris Agreement, requires accelerating the shift to smarter and more sustainable mobility. This implies the need for aviation to intensify its efforts to reduce emissions. To this end, a set of operational measures to improve the fuel efficiency of flights will have to be put in place with the aim of enabling aircraft to fly their optimum fuel efficient 4D trajectory. At the same time, to ensure sustainable air traffic growth, it is necessary to speed up the modernisation of the air infrastructure to offer more capability and capacity, making it more resilient to future traffic demand and adaptable through more flexible air traffic management procedures. Furthermore, reducing aircraft noise impacts and improving air quality will remain a priority around airports.

## **2. Objectives – Themes and priorities – Activities that can be funded**

### **CEF-T-2021-SIMOBGEN-ERTMS-UNITS: Smart applications for transport - ERTMS – unit contribution**

Objective: The general objective is to modernise transport infrastructure on the Core and Comprehensive Networks of the TEN-T.

Scope: In accordance with the Article 9(2)(b)(ii) of the CEF Regulation, the following Actions will be supported:

- European Rail Traffic Management Systems (ERTMS) on-board and track-side deployment with a priority to rolling out ERTMS on the entire Core Network. Actions shall be:
  - compliant with Commission Regulation (EU) No 2016/919 (Commission Regulation (EU) 2016/919 of 27 May 2016 on the technical specification for



interoperability relating to the 'control-command and signalling' subsystems of the rail system in the European Union (OJ L 158, 15.6.2016, p. 1)) as amended by Commission Implementing Regulation 2019/776 (Commission Implementing Regulation (EU) 2019/776 of 16 May 2019 amending Commission Regulations (EU) No 321/2013, (EU) No 1299/2014, (EU) No 1301/2014, (EU) No 1302/2014, (EU) No 1303/2014 and (EU) 2016/919 and Commission Implementing Decision 2011/665/EU as regards the alignment with Directive (EU) 2016/797 of the European Parliament and of the Council and the implementation of specific objectives set out in Commission Delegated Decision (EU) 2017/1474 (OJ L 139 I, 27.5.2019, p. 108)), or subsequent versions, and with Directive (EC) No 2008/57 (Directive 2008/57/EC of the European Parliament and of the Council of 17 June 2008 on the interoperability of the rail system within the Community (Recast) (OJ L 191, 18.7.2008, p. 1)) and Directive (EC) No 2004/49 (Directive 2004/49/EC of the European Parliament and of the Council of 29 April 2004 on safety on the Community's railways and amending Council Directive 95/18/EC on the licensing of railway undertakings and Directive 2001/14/EC on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and safety certification (Railway Safety Directive) (OJ L 164, 30.4.2004, p. 44)), or Directive (EU) No 2016/797 (Directive (EU) 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system within the European Union (OJ L 138, 26.5.2016, p. 44)) and Directive (EU) No 2016/798 (Directive (EU) 2016/798 of the European Parliament and of the Council of 11 May 2016 on railway safety (OJ L 138, 26.5.2016, p. 102)) or subsequent versions;

- o baseline 3 (B3) compliant - the set of specifications #2 or #3 in table A2.2 or A2.3 of the Annex of Commission Regulation (EU) No 2016/919 as amended by Commission Implementing Regulation 2019/776 (Commission Implementing Regulation (EU) 2019/776 of 16 May 2019 amending Commission Regulations (EU) No 321/2013, (EU) No 1299/2014, (EU) No 1301/2014, (EU) No 1302/2014, (EU) No 1303/2014 and (EU) 2016/919 and Commission Implementing Decision 2011/665/EU as regards the alignment with Directive (EU) 2016/797 of the European Parliament and of the Council and the implementation of specific objectives set out in Commission Delegated Decision (EU) 2017/1474 (OJ L 139 I, 27.5.2019, p. 108)), or subsequent versions;
- o supported in the form of unit contributions as defined in the Commission Decision authorising the use of unit costs to support the deployment of ERTMS under the Connecting Europe Facility (CEF) - Transport (<https://ec.europa.eu/transport/sites/default/files/2021-07-22-ertms-af-noise.pdf>).

Where relevant, ERTMS actions will be coordinated with 5G corridors deployment.

Where relevant, the above mentioned actions shall take into account the innovative new technologies and solutions in the fields of smart applications for transport resulting from Horizon Europe activities.

Digital platforms supported under CEF must be accessible for use by all operators on a non-discriminatory basis.

The foreseen duration of the action should be 4-5 years maximum.

### **CEF-T-2021-SIMOBGEN-ITS-WORKS: Smart applications for transport - ITS – works or mixed**

Objective: The general objective is to modernise transport infrastructure on the Core and Comprehensive Networks of the TEN-T.

Scope: In accordance with the Article 9(2)(b)(ii) of the CEF Regulation, works, with the possibility to include studies, related to the following Actions will be supported:

- Intelligent Transport Services for road (ITS):
  - Actions related to the deployment or upgrade of ITS infrastructure and services (including eCall) related to the priority areas of Directive 2010/40/EU (Directive 2010/40/EU of the European Parliament and of the Council of 7 July 2010 on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport (OJ L 2017, 6.8.2010, p. 1)).
  - Actions related to deployment of cooperative ITS (C-ITS) services may be funded. Actions shall deploy C-ITS stations to provide C-ITS services based on the hybrid communication approach defined in the European C-ITS Strategy (COM (2016) 766 "A European strategy on Cooperative Intelligent Transport Systems, a milestone towards cooperative, connected and automated mobility").

Where relevant, ITS actions will be coordinated with 5G corridors deployment.

Where relevant, the above mentioned actions shall take into account the innovative new technologies and solutions in the fields of smart applications for transport resulting from Horizon Europe activities.

Digital platforms supported under CEF must be accessible for use by all operators on a non-discriminatory basis.

The foreseen duration of the action should be 4-5 years maximum.

### **CEF-T-2021-SIMOBGEN-ITS-STUDIES: Smart applications for transport - ITS – studies**

Objective: The general objective is to modernise transport infrastructure on the Core and Comprehensive Networks of the TEN-T.

Scope: In accordance with the Article 9(2)(b)(ii) of the CEF Regulation, studies related to the following Actions will be supported:

- Intelligent Transport Services for road (ITS):

- o Actions related to the deployment or upgrade of ITS infrastructure and services (including eCall) related to the priority areas of Directive 2010/40/EU (Directive 2010/40/EU of the European Parliament and of the Council of 7 July 2010 on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport (OJ L 2017, 6.8.2010, p. 1)).
- o Actions related to deployment of cooperative ITS (C-ITS) services may be funded. Actions shall deploy C-ITS stations to provide C-ITS services based on the hybrid communication approach defined in the European C-ITS Strategy (COM (2016) 766 "A European strategy on Cooperative Intelligent Transport Systems, a milestone towards cooperative, connected and automated mobility").

Where relevant, ITS actions will be coordinated with 5G corridors deployment.

Where relevant, the above mentioned actions shall take into account the innovative new technologies and solutions in the fields of smart applications for transport resulting from Horizon Europe activities.

Digital platforms supported under CEF must be accessible for use by all operators on a non-discriminatory basis.

The foreseen duration of the action should be 2-3 years maximum.

### **CEF-T-2021-SIMOBGEN-SESAR-DSDU-WORKS - Smart applications for transport- SESAR-DEMONSTRATORS U – works**

#### Objective:

The Digital Sky Demonstrators (DSD) on **U-space and urban air mobility**, supported by the new regulatory framework and a set of new standards, will support the implementation of U1/U2 services across Europe ensuring safety and interoperability. U-space will have to integrate seamlessly with the ATM system to ensure safe and fair access to airspace for all airspace users.

U-space is expected to have a profound socio-economic impact, enabling the creation of a new marketplace for U-space service provision and accelerating the advent of the drone and urban air mobility economy. The objective of the digital sky demonstrators is to accelerate the transition towards deployment of a number of U-space services and capabilities:

- **Environment:** U-space shall not increase the environmental footprint of the air transportation system. Specific metrics will be defined, tailored to the U-space environment and the types of vehicles operating within it (most of them are expected to be zero emissions aircraft). Special consideration should be given to the noise impact of low-level operations enabled by U-space. The growing use of zero-emission UAVs enabled by U-space may also contribute to reducing the environmental footprint of the overall transportation system, for example by reducing road traffic levels.
- **Passenger experience:** In terms of passenger experience and overall socio-economic contribution, U-space will enable and accelerate the drone economy, opening the way to new services (delivery, inspection, security, UAM, etc.) that will increase the wellbeing of European citizens. U-space

will foster the development of a new high-tech economic sector in Europe, leading to wealth and job creation. Particular attention must, however, be paid to safeguarding privacy and ensuring social acceptance.

- **Capacity:** U-space shall not negatively affect the capacity of the ATM system and will enable additional system capacity by enabling large volumes of unmanned aircraft to access the airspace. Specific capacity metrics shall be defined for U-space defined in terms of safety or other concerns such as noise.
- **Cost efficiency:** U-space shall not negatively affect the cost of providing ATM services. Specific cost-efficiency metrics shall be defined for U-space, focusing on the cost of delivering U-space services.
- **Operational efficiency:** U-space shall substantially reduce the costs of operating unmanned aircraft in the European airspace and will not negatively affect the operating costs of other airspace users. Specific operational efficiency metrics shall be defined for U-space, including fairness aspects.
- **Safety:** U-space shall not negatively affect the safety of the ATM system. Specific safety metrics shall be defined for U-space,
- **Security:** U-space shall not negatively affect the security of the ATM system. Cybersecurity will be a key area to consider in U-space, especially regarding the interaction (data exchange) between U-space services and ATM systems.

#### Themes and priorities:

To successfully address the expected outcomes, all or some of the following sub-R&I needs should be addressed (Traceability to the SRIA R&I Needs is ensured and referred to in *italic*):

- **Market Uptake of U1 and U2 U-space services:** U1 includes services such as registration, remote identification and geo-fencing; U2 encompasses services such as flight planning, flight approval, tracking, and the basic interface with conventional air traffic control. This demonstration includes the final definition of the safety and performance requirements of U1 and U2 services, based on their demonstration and pilot implementation in an integrated environment. Service definition shall include nominal and contingency situations. This addresses as well:
  - **U1 and U2 U-space services architecture, cross-border interoperability and standardization:** includes close coordination with ICAO and EASA to ensure global interoperability. Also includes full mechanisms for interoperability with manned aviation (ATC and other AUs), as well as contingencies. In these activities, the focus is on the definition of the services and the interoperability requirements in support of an open architecture, rather than the requirements of the services themselves. The output will contribute to the standardization of U-space services.
  - **Multiple basic U-space services:** Although descriptions of many services exist at U1, U2 levels, different U-space architecture options still require to be further developed to ensure meeting the full range of requirements by the different types of operations and guarantee safe and secure interoperability. In particular, one of the challenges is to enable the simultaneous operations of multiple U-space service providers (USSP) in the same airspace.

- **Legal and financial aspects of U-space at U1 and U2 level:** detailed look at the legal and financial aspects of U1 and U2 U-space operations, including normal and aviation law, also covering safety and security issues, liability issues, certification issues and U-space services financing models. This is a transversal activity, which will need to get input from the two previous research activities.
- **Support to deployments and regulation: Integrated demonstrations of U-space services:** potentially starting with demonstration in a controlled environment (U-space test centres), and then moving on to the real environment

The objective of these demonstrations is to ensure that the service definition is coordinated across Europe and that early movers are incentivised in order to accelerate the uptake (*R&I need: Mature basic U-space services*).

- **Demonstration of U-space/ATC interoperability:** building on the previous validation activities, this element covers the demonstration of advance U-space/ATC interoperability concept, including in particular demonstration of simultaneous and safe provision of ATC and U-space services in the same airspace. This could also cover the transfer of U-space operational concepts or technologies to ATM or the transfer of ATM concepts or technologies to U-space (*R&I need: ATM/U-space integration*).
- **Demonstration on U-space for UAM:** Urban Air Mobility (UAM) refers to the provision of mobility services in an urban environment using air vehicles, which encompass everything from manned helicopters, as currently flown, through small inspection and delivery drones to 'flying taxis', with or without a pilot. The demonstrations shall aim at showcasing concepts that contribute to safely integrate UAM with manned aviation and air traffic control, defining new operational concepts (underpinned by existing and new technologies) while contributing to the definition of the required standards and regulations (e.g. recommendations for associated means of compliance). The demonstrations shall perform a significant number of flights, in coordination with relevant stakeholders; they could use one or more eVTOL platforms (or advanced prototypes), potentially including vehicles with fully autonomous capabilities, or could be limited to manned helicopters or non eVTOL drones subject to UAM (in the event eVTOL are not mature). Close coordination with EASA is required to ensure complementarity and consistency with EASA activities (*R&I need: Urban Air Mobility*).

Activities that can be funded:

### **Target maturity levels required**

The activities shall address up to TRL-8. This covers:

- TRL-7 System demonstration in an operational environment (ground, airborne or space): The system is at or near scale of the operational system, with most functions available for demonstration and test and with EASA proof of concept authorisation if necessary. Well integrated with collateral and ancillary systems, although limited documentation available.
- TRL-8 Actual system completed and "mission qualified" through test and demonstration in an operational environment (ground or airborne): End of system development. Fully integrated with relevant operational systems (people, processes, hardware and software), most user documentation, training documentation, and maintenance documentation completed. All

functionality tested in simulated and operational scenarios. Verification, Validation (V&V) and Demonstration completed, regulatory needs and standards are finalised.

### **Standardisation and Regulatory activities**

The demonstrators shall be closely connected to the standardisation and regulatory activities. Early engagement with the regulator during the demonstration process can significantly de-risk subsequent issues related to regulatory needs, approvals, safety assessments etc. for the SESAR solutions under scope. With this in mind EASA and/or NSA involvement through the partners shall be envisaged at the level of advising on the suitability of the safety assessments as well as risk and hazard identification and mitigation approaches required for the solution. The potential need for future rulemaking to support the eventual implementation of the solution shall be identified along with the development of standards through the EUROCAE process. The work of the project shall then be appropriately focused on delivering the material that could form the basis for this standardisation and regulatory development.

The following two specific deliverables addressing the regulatory activities and standards will have to be provided by the Digital Sky Demonstrators in order to guarantee the adequate consideration by the projects of the needs to coordinate closely with EASA and EUROCAE:

- REG: proposed SESAR Acceptable Means of Compliance to EASA to illustrate means to establish compliance with the Basic Regulation and its Implementing Rules;
- STAND: proposed SESAR Input to Standardisation activities (e.g. EUROCAE).

### **Airspace Users contribution**

The proposed topic will require the contribution from Airspace Users (AUs). It is expected that the proposals will therefore include the required AU contribution.

### **Duration:**

The Digital Sky Demonstrators shall deliver their full results no later than end of Q3 2025.

### **Maximum EU-contribution:**

For the Digital Sky Demonstrators on U-space and urban air mobility the maximum EU requested contribution per proposal is limited at 7 M€.

### **Expected impact:**

Demonstrators will take place in live operational environments and put to the test the concepts, services, technologies and standards necessary to deliver the digital European sky. This will help create buy-in from the supervisory authorities and operational staff, providing tangible evidence of the performance benefits in terms of environment, capacity, safety, security and affordability.

The establishment of a Europe-wide network of large-scale digital sky demonstrators offers a viable means to build confidence and bridge from research, through industrialisation to implementation.

## **CEF-T-2021-SIMOBGEN-SESAR-DSDA-WORKS - Smart applications for transport- SESAR-DEMONSTRATORS A – works**

### Objective:

The objective of the demonstrations under this topic is to contribute to achieve the objective of net-zero greenhouse gas emissions by 2050 set by the European **Green Deal**, in line with the EU's commitment to global climate action under the Paris Agreement. This implies the need for aviation to intensify its efforts to reduce emissions, in line with the targets set in Flightpath 2050.

To this end, a set of operational measures to improve the fuel efficiency of flights will have to be put in place. At the same time, to ensure sustainable air traffic growth, it is necessary to speed up the modernisation of the air infrastructure to offer more capability and capacity, making it more resilient to future traffic demand and adaptable through more flexible air traffic management procedures. Furthermore, reducing aircraft noise impacts and improving air quality will remain a priority around airports

- **Environment:** proposed operational measures shall enable gate-to-gate optimal flight trajectories and demonstrate improvements on fuel efficiency of flights, and thus CO<sub>2</sub> (and non-CO<sub>2</sub>) reductions.
- **Capacity and operational efficiency:** the higher level of automation supporting the solutions under demonstration will make it possible to go beyond the current limits of sector capacity due to controller workload, which will allow optimal and environmentally- friendly flight trajectories.
- **Cost-efficiency:** saving fuel for airspace users will reduce CO<sub>2</sub> emissions and related costs (ETS).
- **Safety:** Safety levels are maintained or improved in case of a higher level of automation.

The objective is to achieve, for the scope under this topic, a TRL-8 maturity level ("actual system completed and "mission qualified" through test and demonstration in an operational environment").

The Digital Sky Demonstrator instrument will be closely connected to the standardisation and regulatory framework, and will provide a platform for a critical mass of "early movers" representing at least 20% of the targeted operating environment to accelerate market uptake.

### Themes and priorities:

To successfully address the expected outcomes, all or some of the following sub-R&I needs should be addressed (Traceability to the SRIA R&I Needs is ensured and referred to in *italic*):

- **Formation flight demonstrators:** the novel airborne station keeping capabilities in support of the Wave Energy Retrieval concept will allow aircraft to cruise closely behind another aircraft on the same route, thereby realising fuel savings. This activity will contribute to the operational validation of the station keeping capabilities and pave the way to their certification and their market uptake. The scope should also address the airborne systems and ATC systems and ATC operational procedures. It is expected that these demonstrations will allow for a limited local initial

implementation of this concept that will already realize environmental benefits (R&I need: formation flight).

- **Integrated 4D for green trajectories:** this activity will demonstrate the operational benefits of ADS-C when integrated in the ground systems beyond the 2D flight plan consistency check, with a focus on the environmental benefits, based for example on facilitating airline's preferred trajectory using the TOD information, improved arrival management, enhanced vertical clearances delivered via R/T or CPDLC. The demonstration may combine live trials for concepts having reached TRL6 maturity in Wave 1 with real time simulations for the more advanced concepts. The potential scope includes alternative ATN B2 standards (ATN B2 Revision A) and/or non-European airborne platforms operating in Europe (potentially connecting via VDL2/IPS), military aircraft and business aviation aircraft. The distribution of the EPP data through the ADS-C common service between ATSUs and to NM and its operational use in support of network operations is also in scope (R&I need: Optimum Green Trajectories).
- **Satellite-based innovation for green trajectories:** this activity will demonstrate the environmental benefits of introducing direct-controller-pilot-communication (DCPC) via VHF voice (with the ground antennas being substituted by LEO satellite antennas, but no change to the aircraft avionics) in combination with satellite-based ADS-B, satellite-based VHF-voice and potentially satellite-based VDL2 in order to dramatically increase the airspace capacity, thereby enabling AU to fly closer to their preferred routes. The activity includes both the technical demonstration and an initial assessment of the potential for reducing separation minima (building on the current work in ICAO on reduction of separation based on satellite-based ADS-B without DCPC, but now adding the DCPC element) and a quantification of the environmental benefits. The use of CPDLC or ADS-C via LEO satellite based VDL2 (IPS and/or OSI based) could be included in the scope of this demonstration. The activity must contribute to ICAO and all relevant standardization and international coordination groups (R&I need: Optimum Green Trajectories).
- **Green approaches through second runway aiming point and increased glide-slope concepts:** these demonstrations aim at increasing the available approach vertical path options to European airports; this increased flexibility will allow airports to reduce the environmental impact on the airport neighbouring communities. These procedures can be based on basic RNP, or require the addition of SBAS and/or GBAS. The demonstration will take place in a real environment and make an assessment of the environmental benefits of the new procedures (R&I need: Advanced RnP green approaches).
- **Green approaches through GNSS as primary navigation means with reversion scenario in operational Environment:** this activity will demonstrate the environmental benefits brought by the advanced use of GNSS in the approach phase of flight, including the consideration of reversion scenarios; the scope includes GBAS - GAST D (Cat II/III) GPS and upgradable to Galileo, SBAS / GBAS Complementarity, reversion from GNSS to ILS and from GNSS area navigation to A-PNT (modular A-PNT and multi-DME). The demonstration should investigate the ATC procedures for vectoring to join the GNSS procedures, so as to develop rules as those existing for the ILS, e.g. vector must be maximum XX degrees to intercept the RNP approach YY NM before the start of the FAP or before the beginning of an RF turn; the potential need for new phraseology (e.g.



Established-on-RNP phraseology) should be assessed (R&I need: Advanced RNP green approaches).

- **Green approaches through improved speed and aircraft configuration management on arrival:** this demonstration aims at investigating the impact of the throttle, high-lift-device and landing gear extension management on the environment. It will aim at demonstrating quick-win airborne and ground procedures that reduce the impact on the environment without the need for an update to the avionics or ground systems (R&I need: Advanced RnP green approaches).
- **Green climb-via and descend-via procedures including descent-via with re-cruise options:** this demonstration builds on the SESAR SES-award winning Optimized Descent Profiles demonstration. It will support the implementation of the 2020 European CDO/CCO Action Plan recommendation to implement the ICAO descend-via procedures, potentially in combination with advanced FMS descent profile management functions, e.g. re-cruise FMS function. The focus of the demonstration will be on addressing the ground and airborne challenges in order to allow the widespread adoption of the descend via procedures in Europe and the adoption of the re-cruise concept in order to mitigate the negative impact on the environment of early descent clearances (R&I need: Environmentally optimised climb and descent operations (OCO and ODO)).
- **Initial ATN B2 datalink green trajectory revision concepts:** this activity will demonstrate of the uplink via ATN B2 CPDLC of an ATC clearance containing a revision of the 2D route or a vertical clearance with a vertical constraint. The activity should consider both ATN B2 and ATN B2 Revision A standards (with DRNP). These clearances will be auto-loaded in the FMS. The demonstration will make an assessment of the environmental benefits and of the impact on the flight-crew workload and crew resource management (R&I need: Optimum Green Trajectories).
- **TBO for green trajectories in the planning phase (FF-ICE 1):** this activity will demonstrate the environmental benefits of the enhancements to the planning phase brought by the FF-ICE 1 concepts, in particular the extended flight plan. The demonstration should in particular develop and demonstrate concepts for allowing AU to load less fuel thanks to the reduced uncertainty for the AU, potentially incorporating information like planned departure and arrival runways, foreseen SID and STAR, intelligent prediction of ASMA time (prediction derived from demand data using machine learning), etc. (R&I need: Optimum Green Trajectories).
- **Green taxiing:** this element aims at implementing reduced emissions or emissions free taxi operations at medium and large European airports, applying any of the available technologies (engine-off taxi out and taxi-in, taxibots, auxiliary engines in the undercarriage), or a combination thereof. The demonstrators focus will be on addressing the ATM aspects as required to make it possible to scale up the operations to all AU at the airport. Attention will be paid to consider both nominal and adverse conditions, in particular with de-icing process where relevant. These demonstrators will pave the way for the large-scale implementation across Europe (R&I need: Accelerating decarbonisation through operational and business incentivisation).
- **Integrated ATM/apron management for green surface management:** this element is based on the use of cameras and machine learning/artificial intelligence to optimise turn around operations, linking landside and airside

processes to increase predictability of operations, improve on time performance and optimise the use of resources such as parking stands. The concept includes the development of an operational strategy based on environmental criteria to optimise operations and mitigate environmental impact. Monitoring and promoting the reduction of operations which may have a negative environmental impact such as the use of APUs should also need be addressed. (R&I need: Accelerating decarbonisation through operational and business incentivisation).

- **Aviation-induced cloudiness (AIC) data collection and analysis:** This demonstration will collect equip aircraft with advanced sensors in order to collect data relevant for the assessment of the non-CO2 impact of aviation, e.g. humidity, temperature, cloudiness...and integrate it with satellite imagery data and data from other MET sources/databases. The aim is to set up a data collection and data analysis concept that can continue beyond the life of the demonstration, in order to support the continuous assessment of the evolution of the atmospheric metrics that are relevant to better understand the non-CO2 impact of aviation and the impact of the policy actions (R&I need: Non-CO2 impacts of aviation).

Activities that can be funded:

### **Target maturity levels required**

The activities shall address up to TRL-8. This covers:

- TRL-7 System demonstration in an operational environment (ground, airborne or space): The system is at or near scale of the operational system, with most functions available for demonstration and test and with EASA proof of concept authorisation if necessary. Well integrated with collateral and ancillary systems, although limited documentation available.
- TRL-8 Actual system completed and "mission qualified" through test and demonstration in an operational environment (ground or airborne): End of system development. Fully integrated with relevant operational systems (people, processes, hardware and software), most user documentation, training documentation, and maintenance documentation completed. All functionality tested in simulated and operational scenarios. Verification, Validation (V&V) and Demonstration completed, regulatory needs and standards are finalised.

### **Standardisation and regulatory activities**

The demonstrators shall be closely connected to the standardisation and regulatory activities. Early engagement with the regulator during the demonstration process can significantly de-risk subsequent issues related to regulatory needs, approvals, safety assessments etc. for the SESAR solutions under scope. With this in mind EASA and/or NSA involvement through the partners shall be envisaged at the level of advising on the suitability of the safety assessments as well as risk and hazard identification and mitigation approaches required for the solution. The potential need for future rulemaking to support the eventual implementation of the solution shall be identified along with the development of standards through the EUROCAE process. The work of the project shall then be appropriately focused on delivering the material that could form the basis for this standardisation and regulatory development.

The following two specific deliverables addressing the regulatory activities and standards will have to be provided by the Digital Sky Demonstrators in order to guarantee the adequate consideration by the projects of the needs to coordinate closely with EASA and EUROCAE:

- REG: proposed SESAR Acceptable Means of Compliance to EASA to illustrate means to establish compliance with the Basic Regulation and its Implementing Rules;
- STAND: proposed SESAR Input to Standardisation activities (e.g. EUROCAE).

### **Airspace Users contribution**

The proposed topic will require the contribution from Airspace Users (AUs). It is expected that the proposals will therefore include the required AU contribution.

### **Duration:**

The Digital Sky Demonstrators shall deliver their full results no later than end of Q3 2025.

### **Maximum EU-contribution:**

For the Digital Sky Demonstrators on Aviation Green Deal the maximum EU requested contribution per proposal is limited at 15 M€.

### Expected impact:

Demonstrators will take place in live operational environments and put to the test the concepts, services, technologies and standards necessary to deliver the digital European sky. This will help create buy-in from the supervisory authorities and operational staff, providing tangible evidence of the performance benefits in terms of environment, capacity, safety, security and affordability.

The establishment of a Europe-wide network of large-scale digital sky demonstrators offers a viable means to build confidence and bridge from research, through industrialisation to implementation.

## **CEF-T-2021-SIMOBGEN-RIS-WORKS: Smart applications for transport - RIS – works or mixed**

Objective: The general objective is to modernise transport infrastructure on the Core and Comprehensive Networks of the TEN-T.

Scope: In accordance with the Article 9(2)(b)(ii) of the CEF Regulation, works, with the possibility to include studies, related to the following Actions will be supported:

- Actions supporting the implementation of River Information Services (RIS), inland single window, inland port community systems.

Where relevant, the above mentioned actions shall take into account the innovative new technologies and solutions in the fields of smart applications for transport resulting from Horizon Europe activities.

Digital platforms supported under CEF must be accessible for use by all operators on a non-discriminatory basis.

The foreseen duration of the action should be 4-5 years maximum.

### **CEF-T-2021-SIMOBGEN-RIS-STUDIES: Smart applications for transport - RIS – studies**

Objective: The general objective is to modernise transport infrastructure on the Core and Comprehensive Networks of the TEN-T.

Scope: In accordance with the Article 9(2)(b)(ii) of the CEF Regulation, studies related to the following Actions will be supported:

- Actions supporting the implementation of River Information Services (RIS), inland single window, inland port community systems.

Where relevant, the above mentioned actions shall take into account the innovative new technologies and solutions in the fields of smart applications for transport resulting from Horizon Europe activities.

Digital platforms supported under CEF must be accessible for use by all operators on a non-discriminatory basis.

The foreseen duration of the action should be 2-3 years maximum.

### **CEF-T-2021-SIMOBGEN-EMSWe-WORKS: Smart applications for transport - EMSWe – works or mixed**

Objective: The general objective is to modernise transport infrastructure on the Core and Comprehensive Networks of the TEN-T.

Scope: In accordance with the Article 9(2)(b)(ii) of the CEF Regulation, the following Actions will be supported:

- works, with the possibility to include studies, related to the implementation of the European Maritime Single Window environment (EMSWe) (as defined in the Regulation (EU) 2019/1239 establishing a European Maritime Single Window environment (OJ OJ L 198, 25.7.2019, p. 64)).

Where relevant, the above mentioned actions shall take into account the innovative new technologies and solutions in the fields of smart applications for transport resulting from Horizon Europe activities.

Digital platforms supported under CEF must be accessible for use by all operators on a non-discriminatory basis.

The foreseen duration of the action should be 4-5 years maximum.

### **CEF-T-2021-SIMOBGEN-EMSWe-STUDIES: Smart applications for transport - EMSWe – studies**

Objective: The general objective is to modernise transport infrastructure on the Core and Comprehensive Networks of the TEN-T.

Scope: In accordance with the Article 9(2)(b)(ii) of the CEF Regulation, the following Actions will be supported:

- Studies supporting the implementation of the European Maritime Single Window environment (EMSWe) (as defined in the Regulation (EU) 2019/1239 establishing a European Maritime Single Window environment (OJ OJ L 198, 25.7.2019, p. 64)).

Where relevant, the above mentioned actions shall take into account the innovative new technologies and solutions in the fields of smart applications for transport resulting from Horizon Europe activities.

Digital platforms supported under CEF must be accessible for use by all operators on a non-discriminatory basis.

The foreseen duration of the action should be 2-3 years maximum.

#### **CEF-T-2021-SIMOBGEN-VTMIS-WORKS: Smart applications for transport - VTMIS – works or mixed**

Objective: The general objective is to modernise transport infrastructure on the Core and Comprehensive Networks of the TEN-T.

Scope: In accordance with the Article 9(2)(b)(ii) of the CEF Regulation, works, with the possibility to include studies, related to the following Actions will be supported:

- Actions supporting the implementation of Vessel Traffic Monitoring and Information Systems (VTMIS), maritime port community systems, and relevant customs information systems.

Where relevant, the above mentioned actions shall take into account the innovative new technologies and solutions in the fields of smart applications for transport resulting from Horizon Europe activities.

Digital platforms supported under CEF must be accessible for use by all operators on a non-discriminatory basis.

The foreseen duration of the action should be 4-5 years maximum.

#### **CEF-T-2021-SIMOBGEN-VTMIS-STUDIES: Smart applications for transport - VTMIS – studies**

Objective: The general objective is to modernise transport infrastructure on the Core and Comprehensive Networks of the TEN-T.

Scope: In accordance with the Article 9(2)(b)(ii) of the CEF Regulation, studies related to the following Actions will be supported:

- Actions supporting the implementation of Vessel Traffic Monitoring and Information Systems (VTMIS), maritime port community systems, and relevant customs information systems.

Where relevant, the above mentioned actions shall take into account the innovative new technologies and solutions in the fields of smart applications for transport resulting from Horizon Europe activities.

Digital platforms supported under CEF must be accessible for use by all operators on a non-discriminatory basis.

The foreseen duration of the action should be 2-3 years maximum.

### **CEF-T-2021-SIMOBGEN-eFTI-WORKS: Smart applications for transport - eFTI – works or mixed**

Objective: The general objective is to modernise transport infrastructure on the Core and Comprehensive Networks of the TEN-T.

Scope: In accordance with the Article 9(2)(b)(ii) of the CEF Regulation, works, with the possibility to include studies, related to the following Actions will be supported:

- Actions supporting Member States to develop and implement IT platforms in accordance with the eFTI Regulation (Regulation (EU) 2020/1056 of the European Parliament and of the Council of 15 July 2020 on electronic freight transport information (OJ L 249, 31.7.2020, p. 33)).

Where relevant, the above mentioned actions shall take into account the innovative new technologies and solutions in the fields of smart applications for transport resulting from Horizon Europe activities.

Digital platforms supported under CEF must be accessible for use by all operators on a non-discriminatory basis.

The foreseen duration of the action should be 4-5 years maximum.

### **CEF-T-2021-SIMOBGEN-eFTI-STUDIES: Smart applications for transport - eFTI – studies**

Objective: The general objective is to modernise transport infrastructure on the Core and Comprehensive Networks of the TEN-T.

Scope: In accordance with the Article 9(2)(b)(ii) of the CEF Regulation, studies related to the following Actions will be supported:

- Actions supporting Member States to develop and implement IT platforms in accordance with the eFTI Regulation (Regulation (EU) 2020/1056 of the European Parliament and of the Council of 15 July 2020 on electronic freight transport information (OJ L 249, 31.7.2020, p. 33)).

Where relevant, the above mentioned actions shall take into account the innovative new technologies and solutions in the fields of smart applications for transport resulting from Horizon Europe activities.

Digital platforms supported under CEF must be accessible for use by all operators on a non-discriminatory basis.

The foreseen duration of the action should be 2-3 years maximum.

### **CEF-T-2021-SIMOBGEN-DATA-WORKS: Smart applications for transport – data - works or mixed**

Objective: The general objective is to modernise transport infrastructure on the Core and Comprehensive Networks of the TEN-T.

Scope: In accordance with the Article 9(2)(b)(ii) of the CEF Regulation, works, with the possibility to include studies, related to the following Actions will be supported:

- Where complementary and consistent with the activities supported by the Digital Europe Programme regarding Common Data Spaces, actions to support the creation, collection, management, sharing and dissemination of accurate and up-to-date transport, traffic and travel data for all modes, in particular enabling interoperability and through digitisation of processes, such as Actions related to increasing availability of data for transport safety, urban vehicle access regulations, collaborative logistics and multimodal travel with the aim to make them available to relevant public and/or private stakeholders, in particular for mobility and traffic management purposes and the implementation of sustainable urban mobility indicators (SUMI).

Where relevant, the above mentioned actions shall take into account the innovative new technologies and solutions in the fields of smart applications for transport resulting from Horizon Europe activities.

Digital platforms supported under CEF must be accessible for use by all operators on a non-discriminatory basis.

The foreseen duration of the action should be 4-5 years maximum.

### **CEF-T-2021-SIMOBGEN-DATA-STUDIES: Smart applications for transport – data - studies**

Objective: The general objective is to modernise transport infrastructure on the Core and Comprehensive Networks of the TEN-T.

Scope: In accordance with the Article 9(2)(b)(ii) of the CEF Regulation, studies related to the following Actions will be supported:

- Where complementary and consistent with the activities supported by the Digital Europe Programme regarding Common Data Spaces, actions to support the creation, collection, management, sharing and dissemination of accurate and up-to-date transport, traffic and travel data for all modes, in particular enabling interoperability and through digitisation of processes, such as Actions related to increasing availability of data for transport safety, urban vehicle access regulations, collaborative logistics and multimodal travel with the aim to make them available to relevant public and/or private stakeholders, in particular for mobility and traffic management purposes and the implementation of sustainable urban mobility indicators (SUMI).

Where relevant, the above mentioned actions shall take into account the innovative new technologies and solutions in the fields of smart applications for transport resulting from Horizon Europe activities.

Digital platforms supported under CEF must be accessible for use by all operators on a non-discriminatory basis.

The foreseen duration of the action should be 2-3 years maximum.

### **CEF-T-2021-SIMOBGEN-NEWTECH-WORKS: New technologies and innovation - works or mixed**

Objective: The general objective is to modernise transport infrastructure on the Core and Comprehensive Networks of the TEN-T.

Scope: Works, with the possibility to include studies, related to the following Actions will be supported:

- Actions supporting new technologies and innovation, including automation, integrated infrastructure capacity and traffic management, enhanced transport services, modal integration in accordance with Article 9(2)(b)(iv) of the CEF Regulation, including aspects of the Mobility as a Service (MaaS) development, such as combined and e-ticketing for passengers or track and tracing features for goods (except for the alternative fuels which are supported by the Alternative Fuels Infrastructure Facility).

Investments concerning rolling stock, notably the installation of sensors or other devices on wagons, will not be supported.

The foreseen duration of the action should be 4-5 years maximum.

### **CEF-T-2021-SIMOBGEN-NEWTECH-STUDIES: New technologies and innovation – studies**

Objective: The general objective is to modernise transport infrastructure on the Core and Comprehensive Networks of the TEN-T.

Scope: Studies related to the following Actions will be supported:

- Actions supporting new technologies and innovation, including automation, integrated infrastructure capacity and traffic management, enhanced transport services, modal integration in accordance with Article 9(2)(b)(iv) of the CEF Regulation, including aspects of the Mobility as a Service (MaaS) development, such as combined and e-ticketing for passengers or track and tracing features for goods (except for the alternative fuels which are supported by the Alternative Fuels Infrastructure Facility).

Investments concerning rolling stock, notably the installation of sensors or other devices on wagons, will not be supported.

The foreseen duration of the action should be 2-3 years maximum.



### **CEF-T-2021-SIMOBGEN-REMIB-WORKS: Removing interoperability barriers-works or mixed**

Objective: The general objective is to modernise transport infrastructure on the Core and Comprehensive Networks of the TEN-T.

Scope: Works, with the possibility to include studies, related to the following Actions will be supported:

- Actions removing interoperability barriers in compliance with the Technical Specifications for Interoperability (TSI) adopted by Directive 2016/797 on the interoperability of the rail system (Directive 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system within the European Union which replaces Directive 2008/57/EC as of 16 June 2020 (*OJ L 138, 26.5.2016, p. 44*)), including automatic gauge-change facilities in rail freight traffic in accordance with Article 9(2)(b)(v) of the CEF Regulation.

Investments concerning rolling stock, notably the installation of sensors or other devices on wagons, will not be supported.

The foreseen duration of the action should be 4-5 years maximum.

### **CEF-T-2021-SIMOBGEN-REMIB-STUDIES: Removing interoperability barriers– studies**

Objective: The general objective is to modernise transport infrastructure on the Core and Comprehensive Networks of the TEN-T.

Scope: Studies related to the following Actions will be supported:

- Actions removing interoperability barriers in compliance with the Technical Specifications for Interoperability (TSI) adopted by Directive 2016/797 on the interoperability of the rail system (Directive 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system within the European Union which replaces Directive 2008/57/EC as of 16 June 2020 (*OJ L 138, 26.5.2016, p. 44*)), including automatic gauge-change facilities in rail freight traffic in accordance with Article 9(2)(b)(v) of the CEF Regulation.

Investments concerning rolling stock, notably the installation of sensors or other devices on wagons, will not be supported.

The foreseen duration of the action should be 2-3 years maximum.

## **3. Available budget**

The available call budget is **EUR 400.000.000.**

We reserve the right not to award all available funds or to redistribute them between the call topics, depending on the proposals received and the results of the evaluation.

#### 4. Timetable and deadlines

Timetable and deadlines (indicative)	
Call opening:	16 September 2021
<u>Deadline for submission:</u>	<u>19 January 2022 – 17:00:00 CET</u> <u>(Brussels)</u>
Evaluation:	January -May 2022
Information on evaluation results:	June 2022
GA signature:	September/October 2022

#### 5. Admissibility and documents

Proposals must be submitted before the **call deadline** (see *timetable section 4*).

Proposals must be submitted **electronically** via the Funding & Tenders Portal Electronic Submission System (accessible via the Topic page in the [Search Funding & Tenders](#) section). Paper submissions are NOT possible.

Proposals (including annexes and supporting documents) must be submitted using the forms provided *inside* the Submission System (⚠ NOT the documents available on the Topic page — they are only for information).

Proposals must be **complete** and contain all the requested information and all required annexes and supporting documents:

- Application Form Part A — contains administrative information about the participants (future coordinator, beneficiaries and affiliated entities) and the summarised budget for the project (*to be filled in directly online*)
- Application Form Part B — contains the technical description of the project (*to be downloaded from the Portal Submission System, completed and then assembled and re-uploaded*)
- **mandatory annexes and supporting documents** (*to be uploaded*):
  - detailed budget table per WP/calculator (*template available in the Submission System*)
  - activity reports of last year
  - list of previous projects (key projects for the last 4 years) (*template available in Part B*)
  - timetable/Gantt chart
  - agreement by the concerned Member States (letters of support)
  - environmental compliance file (for works and for studies with physical interventions)

Please note that the amounts entered into the summarised budget table (filled in directly online) must correspond to the amounts calculated in the detailed budget table. In case of discrepancies, the amounts in the online summarised budget table will prevail.

At proposal submission, you will have to confirm that you have the **mandate to act** for all applicants. Moreover you will have to confirm that the information in the application is correct and complete and that the participants comply with the conditions for receiving EU funding (especially eligibility, financial and operational capacity, exclusion, etc). Before signing the grant, each beneficiary and affiliated entity will have to confirm this again by signing a declaration of honour (DoH). Proposals without full support will be rejected.

Your application must be **readable, accessible and printable**.

Proposals are limited to maximum **120 pages** (Part B). Evaluators will not consider any additional pages.

You may be asked at a later stage for further documents (*for legal entity validation, financial capacity check, bank account validation, etc.*).

 For more information about the submission process (including IT aspects), consult the [Online Manual](#).

## 6. Eligibility

### Eligible participants (eligible countries)

In order to be eligible, the applicants (beneficiaries and affiliated entities) must:

- be legal entities (public or private bodies)
- be established in one of the eligible countries, i.e.:
  - EU Member States (including overseas countries and territories (OCTs))
  - third countries associated to the CEF (list [none]).

Beneficiaries and affiliated entities must register in the [Participant Register](#) — before submitting the proposal — and will have to be validated by the Central Validation Service (REA Validation). For the validation, they will be requested to upload documents showing legal status and origin.

Other entities may participate in other consortium roles, such as associated partners, subcontractors, third parties giving in-kind contributions, etc (*see section 13*).

### *Specific cases*

**Exceptional funding** — Entities from other countries (not listed above) are exceptionally eligible for projects of common interest in the field of transport, energy and digital and for cross-border projects in the field of renewable energy, if the granting authority considers their participation essential for the implementation of the action.

**Natural persons** — Natural persons are NOT eligible (with the exception of self-employed persons, i.e. sole traders, where the company does not have legal personality separate from that of the natural person).

**International organisations** — International organisations are eligible. The rules on eligible countries do not apply to them.

Entities without legal personality — Entities which do not have legal personality under their national law may exceptionally participate, provided that their representatives have the capacity to undertake legal obligations on their behalf, and offer guarantees for the protection of the EU financial interests equivalent to that offered by legal persons<sup>4</sup>.

EU bodies — EU bodies (with the exception of the European Commission Joint Research Centre) can NOT be part of the consortium.

Countries currently negotiating association agreements — Beneficiaries from countries with ongoing negotiations (*see above*) may participate in the call and can sign grants if the negotiations are concluded before grant signature (with retroactive effect, if provided in the agreement).

EU restrictive measures — Special rules apply for certain entities (*e.g. entities subject to [EU restrictive measures](#) under Article 29 of the Treaty on the European Union (TEU) and Article 215 of the Treaty on the Functioning of the EU (TFEU)*<sup>5</sup> and entities covered by Commission Guidelines No [2013/C 205/05](#)<sup>6</sup>). Such entities are not eligible to participate in any capacity, including as beneficiaries, affiliated entities, associated partners, subcontractors or recipients of financial support to third parties (if any).

 For more information, see [Rules for Legal Entity Validation, LEAR Appointment and Financial Capacity Assessment](#).

### Eligible activities

Eligible activities are the ones set out in section 2 above.

Projects should take into account the results of projects supported by other EU funding programmes. The complementarities must be described in the project proposals (Part B of the Application Form).

Financial support to third parties is not allowed.

### Geographic location

Proposals must relate to activities taking place in the eligible countries (*see above*).

### Duration (for SESAR-Actions)

Projects submitted under the SESAR related topics should normally range up to 36 months (extensions are possible, if duly justified and through an amendment).

### Project budget (for SESAR-Actions)

Project budgets (maximum grant amount) for SESAR related Actions are expected to be around EUR 7 000 000 per project (for projects submitted under CEF-T-2021-SIMOBCOEN-SESAR-DSDU-WORKS) or EUR 15 000 000 per project (for projects submitted under CEF-T-2021-SIMOBCOEN-SESAR-DSDA-WORKS) per project.

---

<sup>4</sup> See Article 197(2)(c) EU Financial Regulation [2018/1046](#).

<sup>5</sup> Please note that the EU Official Journal contains the official list and, in case of conflict, its content prevails over that of the [EU Sanctions Map](#).

<sup>6</sup> Commission guidelines No [2013/C 205/05](#) on the eligibility of Israeli entities and their activities in the territories occupied by Israel since June 1967 for grants, prizes and financial instruments funded by the EU from 2014 onwards (OJEU C 205 of 19.07.2013, pp. 9-11).

## 7. Financial and operational capacity and exclusion

### Financial capacity

Applicants must have **stable and sufficient resources** to successfully implement the projects and contribute their share. Organisations participating in several projects must have sufficient capacity to implement all these projects.

The financial capacity check will be carried out on the basis of the documents you will be requested to upload in the [Participant Register](#) during grant preparation (*e.g. profit and loss account and balance sheet, business plan, audit report produced by an approved external auditor, certifying the accounts for the last closed financial year, etc*). The analysis will be based on neutral financial indicators, but will also take into account other aspects, such as dependency on EU funding and deficit and revenue in previous years.

The check will normally be done for all beneficiaries, except:

- public bodies (entities established as public body under national law, including local, regional or national authorities) or international organisations
- if the individual requested grant amount is not more than EUR 60 000.

If needed, it may also be done for affiliated entities.

If we consider that your financial capacity is not satisfactory, we may require:

- further information
- an enhanced financial responsibility regime, i.e. joint and several responsibility for all beneficiaries or joint and several liability of affiliated entities (*see below, section 10*)
- prefinancing paid in instalments
- (one or more) prefinancing guarantees (*see below, section 10*)

or

- propose no prefinancing
- request that you are replaced or, if needed, reject the entire proposal.



For more information, see [Rules for Legal Entity Validation, LEAR Appointment and Financial Capacity Assessment](#).

### Operational capacity

Applicants must have the **know-how, qualifications** and **resources** to successfully implement the projects and contribute their share (including sufficient experience in projects of comparable size and nature).

This capacity will be assessed together with the 'Quality' award criterion, on the basis of the competence and experience of the applicants and their project teams, including operational resources (human, technical and other) or, exceptionally, the measures proposed to obtain it by the time the task implementation starts.

If the evaluation of the award criterion is positive, the applicants are considered to have sufficient operational capacity.

Applicants will have to show their capacity via the following information:

- description of the consortium participants, if applicable
- applicants' activity reports of last year
- list of previous projects (key projects for the last 4 years).

Additional supporting documents may be requested, if needed to confirm the operational capacity of any applicant.

Public bodies, Member State organisations and international organisations are exempted from the operational capacity check.

### Exclusion

Applicants which are subject to an **EU exclusion decision** or in one of the following **exclusion situations** that bar them from receiving EU funding can NOT participate<sup>7</sup>:

- bankruptcy, winding up, affairs administered by the courts, arrangement with creditors, suspended business activities or other similar procedures (including procedures for persons with unlimited liability for the applicant's debts)
- in breach of social security or tax obligations (including if done by persons with unlimited liability for the applicant's debts)
- guilty of grave professional misconduct<sup>8</sup> (including if done by persons having powers of representation, decision-making or control, beneficial owners or persons who are essential for the award/implementation of the grant)
- committed fraud, corruption, links to a criminal organisation, money laundering, terrorism-related crimes (including terrorism financing), child labour or human trafficking (including if done by persons having powers of representation, decision-making or control, beneficial owners or persons who are essential for the award/implementation of the grant)
- shown significant deficiencies in complying with main obligations under an EU procurement contract, grant agreement, prize, expert contract, or similar (including if done by persons having powers of representation, decisionmaking- or control, beneficial owners or persons who are essential for the award/implementation of the grant)
- guilty of irregularities within the meaning of Article 1(2) of Regulation No [2988/95](#) (including if done by persons having powers of representation, decisionmaking- or control, beneficial owners or persons who are essential for the award/implementation of the grant)
- created under a different jurisdiction with the intent to circumvent fiscal, social or other legal obligations in the country of origin or created another entity with this purpose (including if done by persons having powers of representation, decisionmaking- or control, beneficial owners or persons who are essential for the award/implementation of the grant).

Applicants will also be refused if it turns out that<sup>9</sup>:

---

<sup>7</sup> See Articles 136 and 141 of EU Financial Regulation [2018/1046](#).

<sup>8</sup> Professional misconduct includes: violation of ethical standards of the profession, wrongful conduct with impact on professional credibility, false declarations/misrepresentation of information, participation in a cartel or other agreement distorting competition, violation of IPR, attempting to influence decision-making processes or obtain confidential information from public authorities to gain advantage.

- during the award procedure they misrepresented information required as a condition for participating or failed to supply that information
- they were previously involved in the preparation of the call and this entails a distortion of competition that cannot be remedied otherwise (conflict of interest).

## 8. Evaluation and award procedure


The proposals will have to follow the **standard submission and evaluation procedure** (one-stage submission + one-step evaluation).

An **evaluation committee** (assisted by independent outside experts) will assess all applications. Proposals will first be checked for formal requirements (admissibility, and eligibility, *see sections 5 and 6*). Proposals found admissible and eligible will be evaluated against the operational capacity and award criteria (3 phases: individual evaluation, consensus phase and panel review) and then ranked according to their scores (*see sections 7 and 9*).

For proposals with the same score a **priority order** will be determined according to the following approach:

1. Score obtained under the 'Priority and urgency' criterion
2. Score obtained under the 'Maturity' criterion
3. Score obtained under the 'Catalytic effect' criterion
4. Score obtained under the 'Impact' criterion
5. Score obtained under the 'Quality' criterion.

All proposals will be informed about the evaluation result (**evaluation result letter**). Successful proposals will be invited for grant preparation; the other ones will be put on the reserve list or rejected.

 No commitment for funding — Invitation to grant preparation does NOT constitute a formal commitment for funding. We will still need to make various legal checks before grant award: *legal entity validation, financial capacity, exclusion check, etc.*

**Grant preparation** will involve a dialogue in order to fine-tune technical or financial aspects of the project and may require extra information from your side. It may also include adjustments to the proposal to address recommendations of the evaluation committee or other concerns. Compliance will be a pre-condition for signing the grant.

If you believe that the evaluation procedure was flawed, you can submit a **complaint** (following the deadlines and procedures set out in the evaluation result letter). Please note that notifications which have not been opened within 10 days after sending are considered to have been accessed and that deadlines will be counted from opening/access (*see also [Funding & Tenders Portal Terms and Conditions](#)*). Please also be aware that for complaints submitted electronically, there may be character limitations.

## 9. Award criteria

---

<sup>9</sup> See Article 141 EU Financial Regulation [2018/1046](#).



The **award criteria** for this call are as follows:

- **Priority and urgency:** evaluating the correspondence of the proposal with the sectoral policy objectives and priorities, measuring its EU added-value and where applicable assessing the possible synergies with other sectors; (5 points)
- **Maturity:** assessing the maturity of the action in the project development. The criterion will measure, among others: i) the readiness/ability of the project to start by the proposed start date and to complete by the proposed end date, ii) the status of the contracting procedures and of the necessary permits, and iii) information on the financial availability needed to complement the CEF investment; (5 points)
- **Quality:** evaluating the soundness of the implementation plan proposed, both from the technical and financial point of view, the architecture and design approach, the organisational structures put in place (or foreseen) for the implementation, the risk analysis, the control procedures and quality management and the communication strategy of the applicant. Moreover, when applicable, it will also assess the information related to the maintenance strategy proposed for the completed project; (5 points)
- **Impact:** assessing, when applicable, the economic, social and environmental impact, including the climate impact, and other relevant externalities. This criterion may be substantiated by a Cost Benefit Analysis (CBA) or, in the absence of such tools, other forecast of end-user take-up, in which case the evaluation will look at the soundness, comprehensiveness, and transparency of the analysis as well as proposed means to monitor its impact. Moreover, when applicable, the criterion will assess, among others, the innovation and digitalisation, safety and interoperability and accessibility aspects of the proposal, as well as its cross-border dimension, effect/contribution to the network territorial accessibility; (5 points)
- **Catalytic effect:** evaluating the financial gap (for instance the need to overcome financial obstacles generated by insufficient commercial viability, high upfront costs or the lack of market finance), the capacity to mobilise different investments sources, the capacity to trigger important overall investments with limited EU support and when appropriate the extent to which externalities justify the CEF financial support. It shall assess the catalytic effect of the EU financial support and determine whenever possible the actual co-funding rate to be granted. (5 points)

Award criteria	Minimum pass score	Maximum score
Priority and urgency	3	5
Maturity	3	5
Quality	3	5
Impact	3	5
Catalytic effect	3	5
<b>Overall (pass) scores</b>	<b>15</b>	<b>25</b>



Maximum points: 25 points.

Individual thresholds per criterion: 3/5, 3/5, 3/5, 3/5 and 3/5 points.

Overall threshold: 15 points.

## **10. Legal and financial set-up of the Grant Agreements**

If you pass evaluation, your project will be invited for grant preparation, where you will be asked to prepare the Grant Agreement together with the EU Project Officer.

This Grant Agreement will set the framework for your grant and its terms and conditions, in particular concerning deliverables, reporting and payments.

The Model Grant Agreement that will be used (and all other relevant templates and guidance documents) can be found on [Portal Reference Documents](#).

### Starting and end dates

The starting date shall not be earlier than 1st January 2021 and the end date shall not be later than 31 December 2026. During implementation, in duly justified cases, the end date may be postponed through an amendment of the grant agreement.

For SESAR-related Actions, the project duration is limited to 36 months.

### Milestones and deliverables

The milestones and deliverables for each project will be managed through the Portal Grant Management System and will be reflected in Annex 1 of the Grant Agreement.

Beneficiaries will also be invited to provide and update information regarding network allocation and output indicators.

### Form of grant, funding rate and maximum grant amount

The grant parameters (*maximum grant amount, funding rate, total eligible costs, etc*) will be fixed in the Grant Agreement (*Data Sheet, point 3 and art 5*).

Project budget (maximum grant amount): in general, projects of any budget are admitted. In order to ensure efficiency in EU funding interventions, applicants are strongly encouraged to submit applications for projects with a total requested EU contribution to the eligible costs of no less than €1,000,000. Where possible, related projects should be grouped and submitted as one proposal.

Project budgets (maximum grant amount) for SESAR related Actions are expected to be around EUR 7 000 000 per project (for projects submitted under CEF-T-2021-SIMOBCOEN-SESAR-DSDU-WORKS) or EUR 15 000 000 per project (for projects submitted under CEF-T-2021-SIMOBCOEN-SESAR-DSDA-WORKS) per project.

The grant awarded may be lower than the amount requested.

### **For all topics except ERTMS:**

The grant will be a budget-based **actual cost grant**. This means that it will reimburse ONLY certain types of costs (eligible costs) and costs that were *actually* incurred for your project (NOT the *budgeted* costs).

The costs will be reimbursed at the funding rates fixed in the Grant Agreement (maximum **50%** for the costs of studies, maximum **70%** for the costs of works in

outermost regions (not applicable for projects related to 'removing interoperability barriers' and 'RIS') and maximum **50%** for all other costs categories ('project funding rate')).

Grants may NOT produce a profit (i.e. surplus of revenues + EU grant over costs). For-profit organisations must declare their revenues and, if there is a profit, we will deduct it from the final grant amount (*see art 22.3*).

Moreover, please be aware that the final grant amount may be reduced in case of non-compliance with the Grant Agreement (*e.g. improper implementation, breach of obligations, etc*).


**For ERTMS:**

The grant will be a unit grant. This means that it will reimburse a fixed amount per unit, based on unit costs, unit contributions or financing not linked to costs.

**Budget categories and cost eligibility rules**

The budget categories and cost eligibility rules are fixed in the Grant Agreement (*Data Sheet, point 3, art 6 and Annex 2*).

**For all topics except ERTMS:**

 Please be aware that project management costs (including related tasks, such as consortium-internal progress meetings, project reporting etc) should not exceed 10% of total costs for the project. Costs exceeding this limit will be rejected during grant preparation.

*Budget categories:*

- A. Personnel costs
  - A.1 Employees,
  - A.2 Natural persons under direct contract,
  - A.3 Seconded persons
  - A.4 SME owners and natural person beneficiaries
- B. Subcontracting costs
- C. Purchase costs
  - C.1 Travel and subsistence
  - C.2 Equipment
  - C.3 Other goods, works and services
- D. Other cost categories
  - D.1 Financial support to third parties
  - D.2 Studies
  - D.3 Synergetic elements
  - D.4 Work in outermost regions (not applicable for projects related to 'removing interoperability barriers' and 'RIS')
- E. Indirect costs

*Specific cost eligibility conditions:*

- personnel costs:
  - average personnel costs (unit cost according to usual cost accounting practices): Yes
  - SME owner/natural person unit cost<sup>10</sup> : Yes
- subcontracting costs:
  - country restrictions for subcontracting costs: yes, subcontracted work must be performed in the eligible countries or target countries
- travel and subsistence unit cost<sup>11</sup>: No (only actual costs)
- equipment costs: full cost
- other cost categories:
  - costs for financial support to third parties: not allowed
  - studies: yes
  - synergetic elements: yes (only for 'Works' Actions, not for 'Studies')
  - work in outermost regions: yes (not for projects related to 'removing interoperability barriers' and 'RIS')
  - land purchases: no
- indirect cost flat-rate: 0% of the eligible direct costs (categories A-D, except volunteers costs and exempted specific cost categories, if any)
- VAT: VAT is NOT eligible
- other:
  - in-kind contributions for free are allowed, but cost-neutral, i.e. they cannot be declared as cost
  - project websites: communication costs for presenting the project on the participants' websites or social media accounts are eligible; costs for *separate* project websites are not eligible
  - eligible cost country restrictions: yes, only costs for activities carried out in eligible countries or target countries are eligible

**For ERTMS:**

*Unit cost categories for this topic<sup>12</sup>:*

- A. Contributions for on-board ERTMS
  - A.1 Retrofitting

---

<sup>10</sup> Commission [Decision](#) of 20 October 2020 authorising the use of unit costs for the personnel costs of the owners of small and medium-sized enterprises and beneficiaries that are natural persons not receiving a salary for the work carried out by themselves under an action or work programme (C(2020)7715).

<sup>11</sup> Commission [Decision](#) of 12 January 2021 authorising the use of unit costs for travel, accommodation and subsistence costs under an action or work programme under the 2021-2027 multi-annual financial framework (C(2021)35).

<sup>12</sup> [Decision](#) of 22 July 2021 authorising the use of unit contributions to support the deployment of ERTMS, electric vehicles recharging infrastructure and the retrofitting of noisy wagons under the Connecting Europe Facility (CEF) – Transport Sector.

- A.2 Upgrade
- A.3 Fitment
- B. Contributions for track-side ERTMS
  - B.1 Deployment
  - B.2 Upgrade

*Specific cost eligibility rules for this topic:*

- eligible cost country restrictions: Yes, only costs/contributions for activities carried out in eligible countries or target countries are eligible

### Reporting and payment arrangements

The reporting and payment arrangements are fixed in the Grant Agreement (*Data Sheet, point 4 and art 21 and 22*).


After grant signature, you will normally receive a **prefinancing** to start working on the project. The amount will be established based on the grant type or estimated project duration at the time of grant signature and will vary between 25% and 50%. The prefinancing will be paid 30 days from entry into force/financial guarantee (if required — whichever is the latest).

There will be one or more **interim payments** (with detailed cost reporting).

In addition, you will be expected to submit one or more progress reports not linked to payments.

**Payment of the balance:** At the end of the project, we will calculate your final grant amount. If the total of earlier payments is higher than the final grant amount, we will ask you (your coordinator) to pay back the difference (recovery).

All payments will be made to the coordinator.

 Please be aware that payments will be automatically lowered if one of your consortium members has outstanding debts towards the EU (granting authority or other EU bodies). Such debts will be offset by us — in line with the conditions set out in the Grant Agreement (*see art 22*).

Please also note that you are responsible for keeping records on all the work done and the costs or units declared.

### Prefinancing guarantees

If a prefinancing guarantee is required, it will be fixed in the Grant Agreement (*Data Sheet, point 4*). The amount will be set during grant preparation and it will normally be equal or lower than the prefinancing for your grant.

The guarantee should be in euro and issued by an approved bank/financial institution established in an EU Member State. If you are established in a non-EU country and would like to provide a guarantee from a bank/financial institution in your country, please contact us (this may be exceptionally accepted, if it offers equivalent security).

Amounts blocked in bank accounts will NOT be accepted as financial guarantees.

Prefinancing guarantees are formally NOT linked to individual consortium members, which means that you are free to organise how to provide the guarantee amount (*by one or several beneficiaries, for the overall amount or several guarantees for partial*

*amounts, by the beneficiary concerned or by another beneficiary, etc).* It is however important that the requested amount is covered and that the guarantee(s) are sent to us in time to make the prefinancing (scanned copy via Portal AND original by post).

If agreed with us, the bank guarantee may be replaced by a guarantee from a third party.

The guarantee will be released at the end of the grant, in accordance with the conditions laid down in the Grant Agreement.

### Certificates

Depending on the type of action, size of grant amount and type of beneficiaries, you may be requested to submit different certificates. The types, schedules and thresholds for each certificate are fixed in the Grant Agreement (*Data Sheet, point 4 and art 24*).

### Liability regime for recoveries

The liability regime for recoveries will be fixed in the Grant Agreement (*Data Sheet point 4.4 and art 22*).

For beneficiaries, it is one of the following:

- limited joint and several liability with individual ceilings — *each beneficiary up to their maximum grant amount*
  - unconditional joint and several liability — *each beneficiary up to the maximum grant amount for the action*
- or
- individual financial responsibility — *each beneficiary only for their own debts*.

In addition, the granting authority may require joint and several liability of affiliated entities (with their beneficiary).

### Provisions concerning the project implementation

Security rules: *see Model Grant Agreement (art 13 and Annex 5)*

IPR rules: *see Model Grant Agreement (art 16 and Annex 5):*

- rights of use on results: yes

Communication, dissemination and visibility of funding: *see Model Grant Agreement (art 17 and Annex 5):*

- communication and dissemination plan: no
- additional communication and dissemination activities: yes

Specific rules for carrying out the action: *see Model Grant Agreement (art 18 and Annex 5):*

- Member State information: Yes
- specific rules for digital infrastructure projects: No
- specific rules for ATM common projects: No
- durability: Yes

- specific rules for blending operations: No

### Other specificities

n/a

### Non-compliance and breach of contract

The Grant Agreement (chapter 5) provides for the measures we may take in case of breach of contract (and other non-compliance issues).



For more information, see [AGA – Annotated Grant Agreement](#).

## **11. How to submit an application**

All proposals must be submitted directly online via the Funding & Tenders Portal Electronic Submission System. Paper applications are NOT accepted.

Submission is a **2-step process**:

### **a) create a user account and register your organisation**

To use the Submission System (the only way to apply), all participants need to [create an EU Login user account](#).

Once you have an EU Login account, you can [register your organisation](#) in the Participant Register. When your registration is finalised, you will receive a 9-digit participant identification code (PIC).

### **b) submit the proposal**

Access the Electronic Submission System via the Topic page in the [Search Funding & Tenders](#) section (or, for calls sent by invitation to submit a proposal, through the link provided in the invitation letter).

Submit your proposal in 3 parts, as follows:

- Part A includes administrative information about the applicant organisations (future coordinator, beneficiaries, affiliated entities and associated partners) and the summarised budget for the proposal. Fill it in directly online
- Part B (description of the action) covers the technical content of the proposal. Download the mandatory word template from the Submission System, fill it in and upload it as a PDF file
- Annexes (see *section 5*). Upload them as PDF file (single or multiple depending on the slots). Any template made available in Excel has to be uploaded in this format.

The proposal must keep to the **page limit** (see *section 5*); excess pages will be disregarded.

Documents must be uploaded to the **right category** in the Submission System otherwise the proposal might be considered incomplete and thus inadmissible.

The proposal must be submitted **before the call deadline** (see *section 4*). After this deadline, the system is closed and proposals can no longer be submitted.

Once the proposal is submitted, you will receive a **confirmation e-mail** (with date and time of your application). If you do not receive this confirmation e-mail, it means your proposal has NOT been submitted. If you believe this is due to a fault in the Submission System, you should immediately file a complaint via the [IT Helpdesk webform](#), explaining the circumstances and attaching a copy of the proposal (and, if possible, screenshots to show what happened).

Details on processes and procedures are described in the [Online Manual](#). The Online Manual also contains the links to FAQs and detailed instructions regarding the Portal Electronic Exchange System.

## 12. Help

As far as possible, ***please try to find the answers you need yourself***, in this and the other documentation (we have limited resources for handling direct enquiries):

- [Online Manual](#)
- FAQs on the Topic page (for call-specific questions in open calls; not applicable for actions by invitation)
- [Portal FAQ](#) (for general questions)
- call information on the [CINEA website](#).

Please also consult the Topic page regularly, since we will use it to publish call updates.

### Contact

For individual questions on the Portal Submission System, please contact the [IT Helpdesk](#).

Non-IT related questions should be sent to the following email address: [CINEA-CEF-TRANSPORT-CALLS@ec.europa.eu](mailto:CINEA-CEF-TRANSPORT-CALLS@ec.europa.eu).

Please indicate clearly the reference of the call and topic to which your question relates (*see cover page*).

### 13. Important



#### IMPORTANT

- **Don't wait until the end** — Complete your application sufficiently in advance of the deadline to avoid any last minute **technical problems**. Problems due to last minute submissions (*e.g. congestion, etc.*) will be entirely at your risk. Call deadlines can NOT be extended.
- **Consult** the Portal Topic page regularly. We will use it to publish updates and additional information on the call (call and topic updates).
- **Funding & Tenders Portal Electronic Exchange System** — By submitting the application, all participants **accept** to use the electronic exchange system in accordance with the [Portal Terms & Conditions](#).
- **Registration** — Before submitting the application, all beneficiaries, affiliated entities and associated partners must be registered in the [Participant Register](#). The participant identification code (PIC) (one per participant) is mandatory for the Application Form.
- **Consortium roles** — When setting up your consortium, you should think of organisations that help you reach objectives and solve problems.

The roles should be attributed according to the level of participation in the project. Main participants should participate as **beneficiaries** or **affiliated entities**; other entities can participate as associated partners, subcontractors, third parties giving in-kind contributions. **Associated partners** and third parties giving in-kind contributions should bear their own costs (they will not become formal recipients of EU funding).

- **Coordinator** — In multi-beneficiary grants, the beneficiaries participate as consortium (group of beneficiaries). They will have to choose a coordinator, who will take care of the project management and coordination and will represent the consortium towards the granting authority. In mono-beneficiary grants, the single beneficiary will automatically be coordinator.
- **Affiliated entities** — Applicants may participate with affiliated entities (i.e. entities linked to a beneficiary which participate in the action with similar rights and obligations as the beneficiaries, but do not sign the grant and therefore do not become beneficiaries themselves). They will get a part of the grant money and must therefore comply with all the call conditions and be validated (just like beneficiaries); but they do not count towards the minimum eligibility criteria for consortium composition (if any).
- **Associated partners** — Applicants may participate with associated partners (i.e. partner organisations which participate in the action but without the right to get grant money). They participate without funding and therefore do not need to be validated.
- **Consortium agreement** — For practical and legal reasons it is recommended to set up internal arrangements that allow you to deal with exceptional or unforeseen circumstances (in all cases, even if not mandatory under the Grant Agreement). The consortium agreement also gives you the possibility to redistribute the grant money according to your own consortium-internal principles and parameters (for instance, one beneficiary can reattribute its grant money to another beneficiary). The consortium agreement thus allows you to customise the EU grant to the needs inside your consortium and can also help to protect you in case of disputes.



- **Balanced project budget** — Grant applications must ensure a balanced project budget and sufficient other resources to implement the project successfully (*e.g. own contributions, income generated by the action, financial contributions from third parties, etc*). You may be requested to lower your estimated costs, if they are ineligible (including excessive).
- **No-profit rule** — Grants may NOT give a profit (i.e. surplus of revenues + EU grant over costs). This will be checked by us at the end of the project.
- **No double funding** — There is a strict prohibition of double funding from the EU budget (except under EU Synergies actions). Outside such Synergies actions, any given action may receive only ONE grant from the EU budget and cost items may under NO circumstances declared to two different EU actions.
- **Completed/ongoing projects** — Proposals for projects that have already been completed will be rejected; proposals for projects that have already started will be assessed on a case-by-case basis (in this case, no costs can be reimbursed for activities that took place before the project starting date/proposal submission).
- **Combination with EU operating grants** — Combination with EU operating grants is possible, if the project remains outside the operating grant work programme and you make sure that cost items are clearly separated in your accounting and NOT declared twice (see [AGA — Annotated Model Grant Agreement, art 6.2.E](#)).
- **Multiple proposals** — Applicants may submit more than one proposal for *different* projects under the same call (and be awarded a funding for them).  
Organisations may participate in several proposals.  
BUT: if there are several proposals for *very similar* projects, only one application will be accepted and evaluated; the applicants will be asked to withdraw one of them (or it will be rejected).
- **Resubmission** — Proposals may be changed and re-submitted until the deadline for submission.
- **Rejection** — By submitting the application, all applicants accept the call conditions set out in this Call Document (and the documents it refers to). Proposals that do not comply with all the call conditions will be **rejected**. This applies also to applicants: All applicants need to fulfil the criteria; if any one of them doesn't, they must be replaced or the entire proposal will be rejected.
- **Cancellation** — There may be circumstances which may require the cancellation of the call. In this case, you will be informed via a call or topic update. Please note that cancellations are without entitlement to compensation.
- **Language** — You can submit your proposal in any official EU language (project abstract/summary should however always be in English). For reasons of efficiency, we strongly advise you to use English for the entire application.

- **Transparency** — In accordance with Article 38 of the [EU Financial Regulation](#), information about EU grants awarded is published each year on the [Europa website](#).

This includes:

- beneficiary names
- beneficiary addresses
- the purpose for which the grant was awarded
- the maximum amount awarded.

The publication can exceptionally be waived (on reasoned and duly substantiated request), if there is a risk that the disclosure could jeopardise your rights and freedoms under the EU Charter of Fundamental Rights or harm your commercial interests.

- **Data protection** — The submission of a proposal under this call involves the collection, use and processing of personal data. This data will be processed in accordance with the applicable legal framework. It will be processed solely for the purpose of evaluating your proposal, subsequent management of your grant and, if needed, programme monitoring, evaluation and communication. Details are explained in the [Funding & Tenders Portal Privacy Statement](#).