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EUROPE'S RAIL INFO DAY

ONLINE
10
October
2025



@EURail_JU



Europe's Rail Joint Undertaking

AGENDA

Europe's Rail JU Info Day 2025-2

| | |
|---------------|---|
| 9.00 - 9.30 | <p>Opening remarks</p> <p><i>Kristian Schmidt, Director for Land Transport, DG MOVE, European Commission</i></p> <p><i>Andrea Gentili, Deputy Head of Unit of Clean Transport Transitions, DG RTD, European Commission</i></p> <p><i>Giorgio Travaini, Executive Director, Europe's Rail Joint Undertaking</i></p> |
| 9.30 - 10.00 | <p>Presentation of the Call for Proposals 2025-2</p> <p><i>Nicolas Furio, Head of Innovation Pillar, Europe's Rail Joint Undertaking</i></p> |
| 10.00 - 10.15 | <p>Coffee break</p> |

AGENDA

Europe's Rail JU Info Day 2025-2

10.15 – 11.30

Europe's Rail Programme Sessions - Presentation of the activities of each Destination

- **DESTINATION 1:** HORIZON-JU-ER-2025-FA1-TT-01: NETWORK MANAGEMENT PLANNING AND CONTROL & MOBILITY MANAGEMENT IN A MULTIMODAL ENVIRONMENT AND DIGITAL ENABLERS
- **DESTINATION 2:** HORIZON-JU-ER-2025-FA2-01: DIGITAL & AUTOMATIC UP TO AUTOMATED TRAIN OPERATIONS

Léa Paties, Senior Programme Manager, Europe's Rail Joint Undertaking

- **DESTINATION 3:** HORIZON-JU-ER-2025-FA3-01: INTELLIGENT & INTEGRATED ASSET MANAGEMENT
- **DESTINATION 4:** HORIZON-JU-ER-2025-FA4-01: A SUSTAINABLE AND GREEN RAIL SYSTEM

Sébastien Denis, Senior Programme Manager, Europe's Rail Joint Undertaking

- **DESTINATION 5:** HORIZON-JU-ER-2025-FA5-01: SUSTAINABLE COMPETITIVE DIGITAL GREEN RAIL FREIGHT SERVICES

Javier Ibáñez de Yrigoyen, Senior Programme Manager, Europe's Rail Joint Undertaking

AGENDA

Europe's Rail JU Info Day 2025-2

| | |
|---------------|---|
| 10.15 – 11.30 | <p>Europe's Rail Programme Sessions - Presentation of the activities of each Destination</p> <ul style="list-style-type: none">• DESTINATION 6: HORIZON-JU-ER-2025-FA6-01: REGIONAL RAIL SERVICES / INNOVATIVE RAIL SERVICES TO REVITALISE CAPILLARY LINES <p><i>Judit Sandor, Programme Manager, Europe's Rail Joint Undertaking</i></p> <ul style="list-style-type: none">• DESTINATION 8: EXPLORATORY RESEARCH AND OTHER ACTIVITIES<ul style="list-style-type: none">- HORIZON-JU-ER-2025-EXPLR-01: STUDIES ON RAIL INDUSTRY 5.0- HORIZON-JU-ER-2025-EXPLR-02: STUDIES ON INNOVATION IN CLIMATE FINANCE FOR RAIL- HORIZON-JU-ER-2025-EXPLR-03: EXTENDING THE RAIL NETWORK OF PHDS- HORIZON-JU-ER-2025-EXPLR-04: SUPPORT TO THE EUROPEAN FRMCS DEPLOYMENT GROUP <p><i>Sébastien Denis, Senior Programme Manager, Europe's Rail Joint Undertaking</i></p> |
| 11.30 – 11.50 | Q&A |

AGENDA

Europe's Rail JU Info Day 2025-2

| | |
|----------------------|---|
| 11.50 - 12.00 | Presentation of GREENET, the network of Cluster 5 National Contact Points <i>Magdalena Glogowska, Representative from National Centre for Research and Development and Member of Europe's Rail State Representatives Group (SRG)</i> |
| 12.00 – 13.00 | Lunch break |
| 13.00 – 13.30 | Europe's Rail Programme Sessions – Legal and Financial guidelines <i>Anna Maria Torres, Grant & Legal Officer, Europe's Rail Joint Undertaking</i> <i>Sandro Benidio, Financial Officer, Europe's Rail Joint Undertaking</i> |
| 13.30 – 13.45 | Q&A |
| 13.45 – 14.00 | Closing remarks |
| 14.00 – 15.00 | Match-making session |

EUROPE'S RAIL INFO DAY CALL 2025-02

OPENING REMARKS

EUROPE'S RAIL INFO DAY CALL 2025-02

OPENING REMARKS

Kristian Schmidt

Director for Land Transport, DG MOVE, European Commission

EUROPE'S RAIL INFO DAY CALL 2025-02

OPENING REMARKS

Andrea Gentili

Deputy Head of Unit of Clean Transport Transitions, DG RTD,
European Commission

EUROPE'S RAIL INFO DAY CALL 2025-02

OPENING REMARKS

Giorgio Travaini

Executive Director, Europe's Rail Joint Undertaking

Vision

To deliver a **fully integrated European railway network** for citizens and cargo.

*Rail Research and Innovation
to Make Rail the Everyday
Mobility*

High capacity



Flexible



Interoperable



Multimodal



Sustainable



Reliable



Competitive



Inclusive





EU-Rail, a R&I **integrated** Programme and a **cooperation** to deliver

- ❖ Adapt to changing customer requirements
- ❖ More cost-efficient solutions and services compared to today
- ❖ Need for improved performance and capacity
- ❖ Addressing workforce shortage
- ❖ Climate change adaptation and environmental sustainability
- ❖ Increased competitiveness
- ❖ Interaction with other modes, make rail central to future mobility
- ❖ Addressing legacy systems and obsolescence



Europe's Rail Members



One integrated R&I programme

Private Members contribution, at least **€615 million**

EU contribution, up to **€615 million**

Flagship Areas :

- Traffic Management
 - Automation and digitalization
 - Integrated assets management
 - Sustainable technologies
 - Competitive freight
 - Cost-effective regional services
 - Innovation on guided transport
- + Launching **Exploratory calls**

- Ensure the functional system architecture
- Input to standards and regulations
- migration considerations



INNOVATION

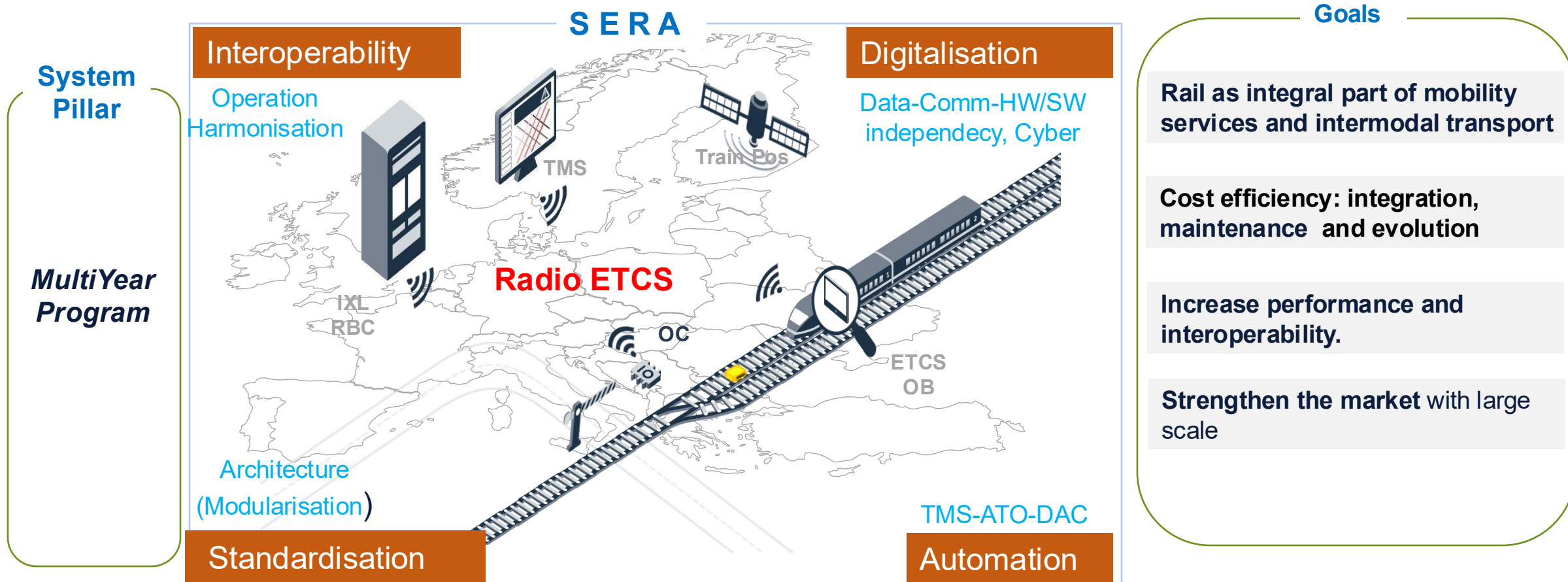
SYSTEM

DEPLOYMENT

Bridge research and innovation
to future coordinated deployment

Europe's Rail - System Pillar

The **European Commission**, the **European Union Agency for Railways** (ERA), **Member States**, and the **rail Sector** agreed on a dedicated structure - System Pillar - to provide a unique opportunity to allow the Rail sector to converge on a strategic vision for the evolution of the **Single European Rail Area** (SERA).



EU-RAIL Deployment Group

From Talking to Testing to implementing

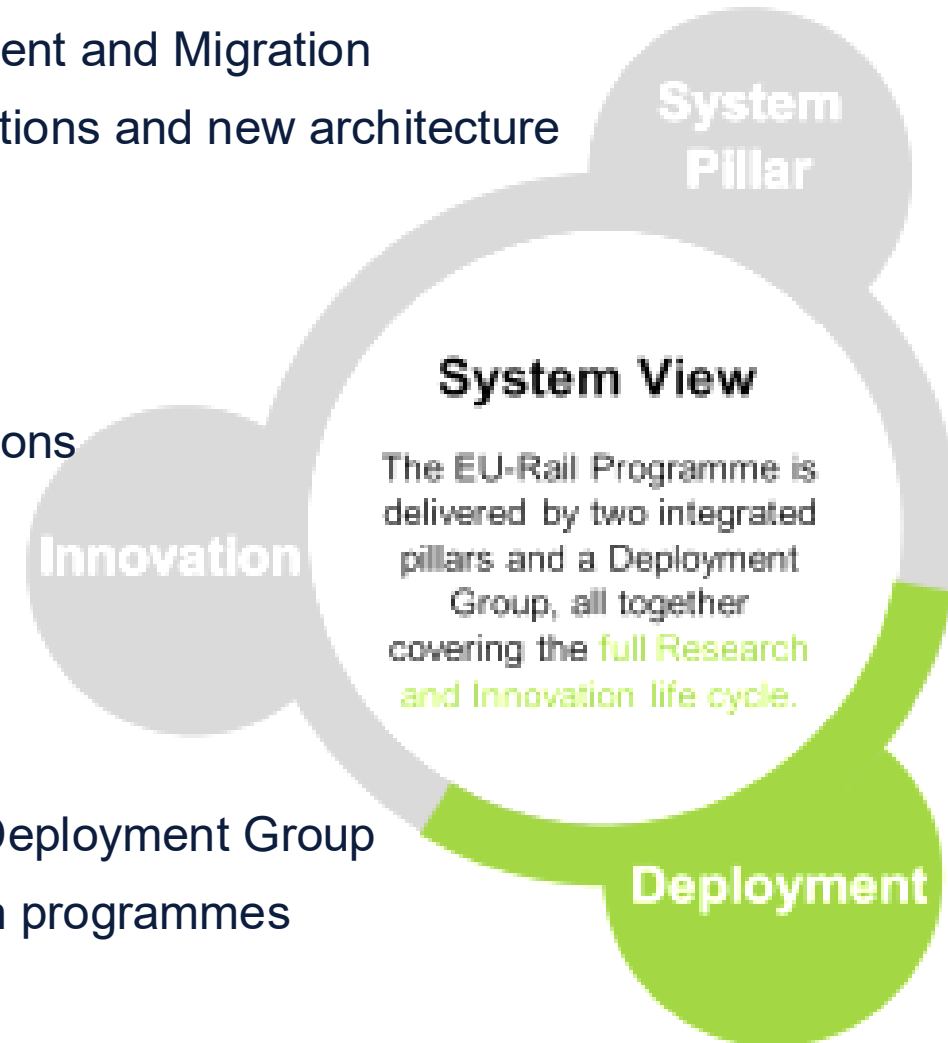
- Objective is to close gap between R&I activities and Deployment and Migration
- Support smooth, fast and cost effective introduction of Innovations and new architecture
- Open group, contributing to whole railway sector and industry

Examines and provides recommendations on:

- Scenarios and analyses for the fast rollout of innovative solutions
- authorisation, cost-drivers, capacity and migration risks

Main sub programme's:

- European DAC Delivery Programme (EDDP)
- European FRMCS (next European Communication system) Deployment Group
- Coordination in deploying different big (digital) Transformation programmes



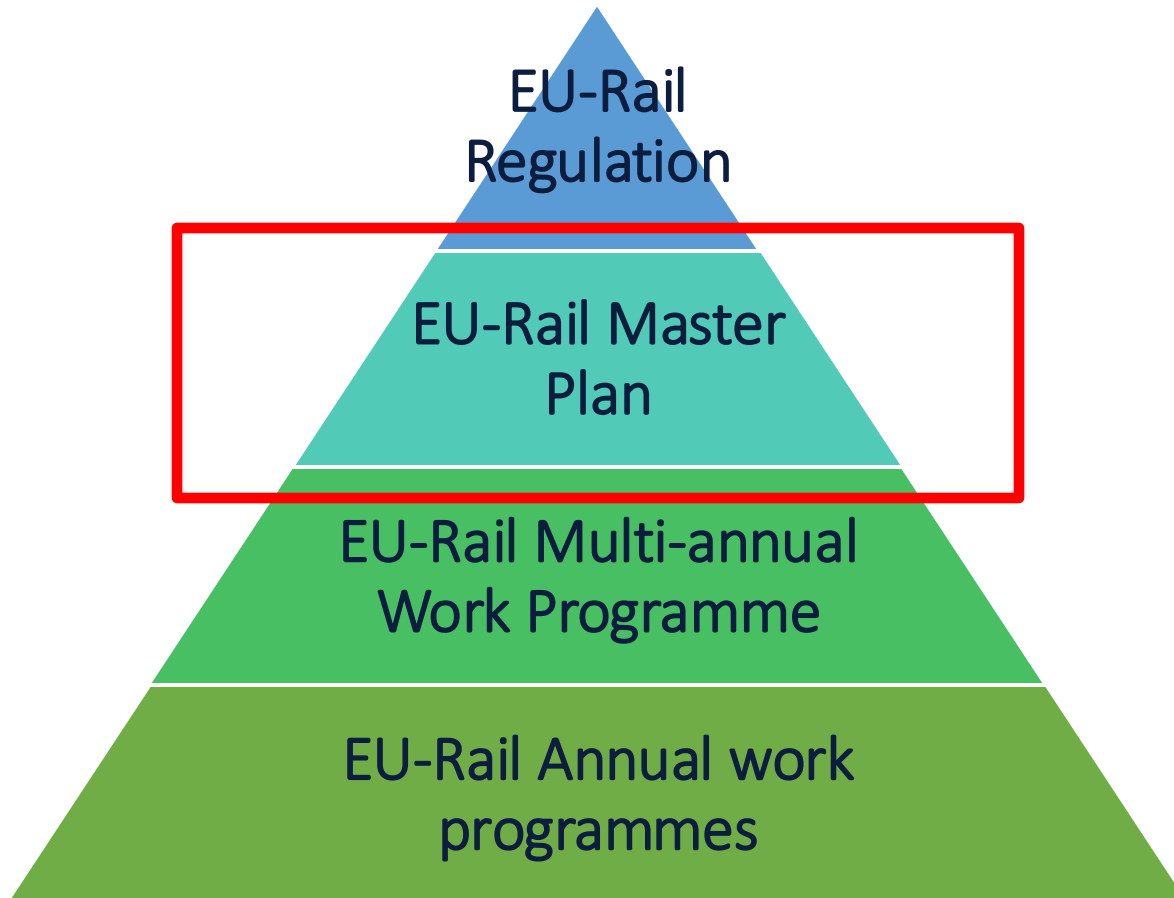
EUROPE'S RAIL INFO DAY CALL 2025-2

PRESENTATION OF THE CALL FOR PROPOSALS 2025-02

Nicolas Furio

Head of Innovation Pillar, Europe's Rail Joint Undertaking

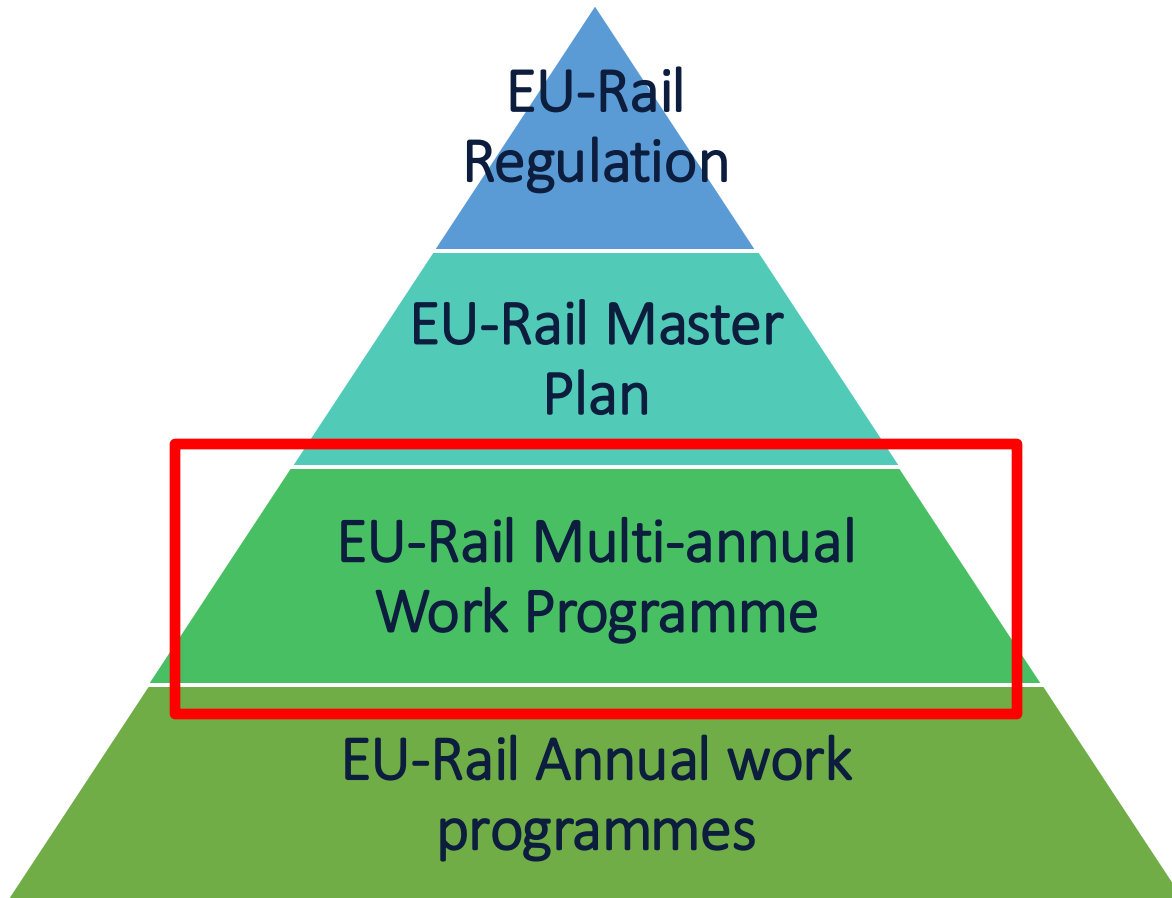
Navigating the EU-Rail key documents of a Programme approach



Focus on the EU-Rail **Master Plan**:

- A common, forward-looking roadmap based on a system view, presenting the areas of intervention within the scope of the Joint undertaking;
- Give guidance on how to invest the €1,2 billion (EU funding 50%);
- Based on two integrated pillars, System and Innovation Pillars, complemented by the Deployment Group

Navigating the EU-Rail key documents of a Programme approach



Focus on the **EU-Rail Multi-annual Work Programme**:

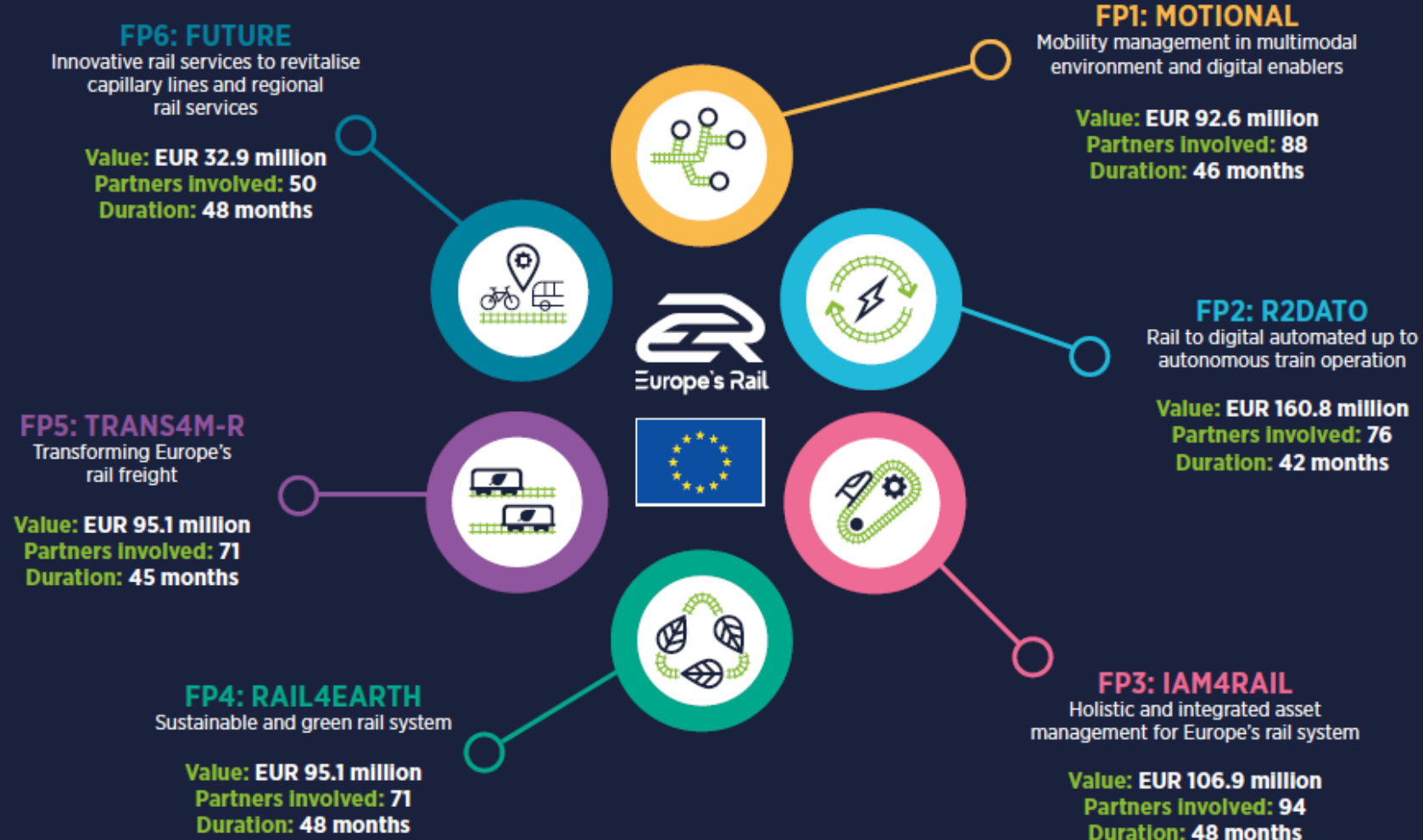
- It defines how the EU-Rail JU has designed its R&I activities to achieve the general and specific objectives set out in the SBA through an Integrated Programme:
 - *System Pillar (tasks)*
 - *Innovation Pillar*
 - *7 Flagship Areas (FAs) + Transversal Topics (TT)*
 - *Exploratory and Other activities*
 - *Deployment group*

Multi-Annual Programme Implementation

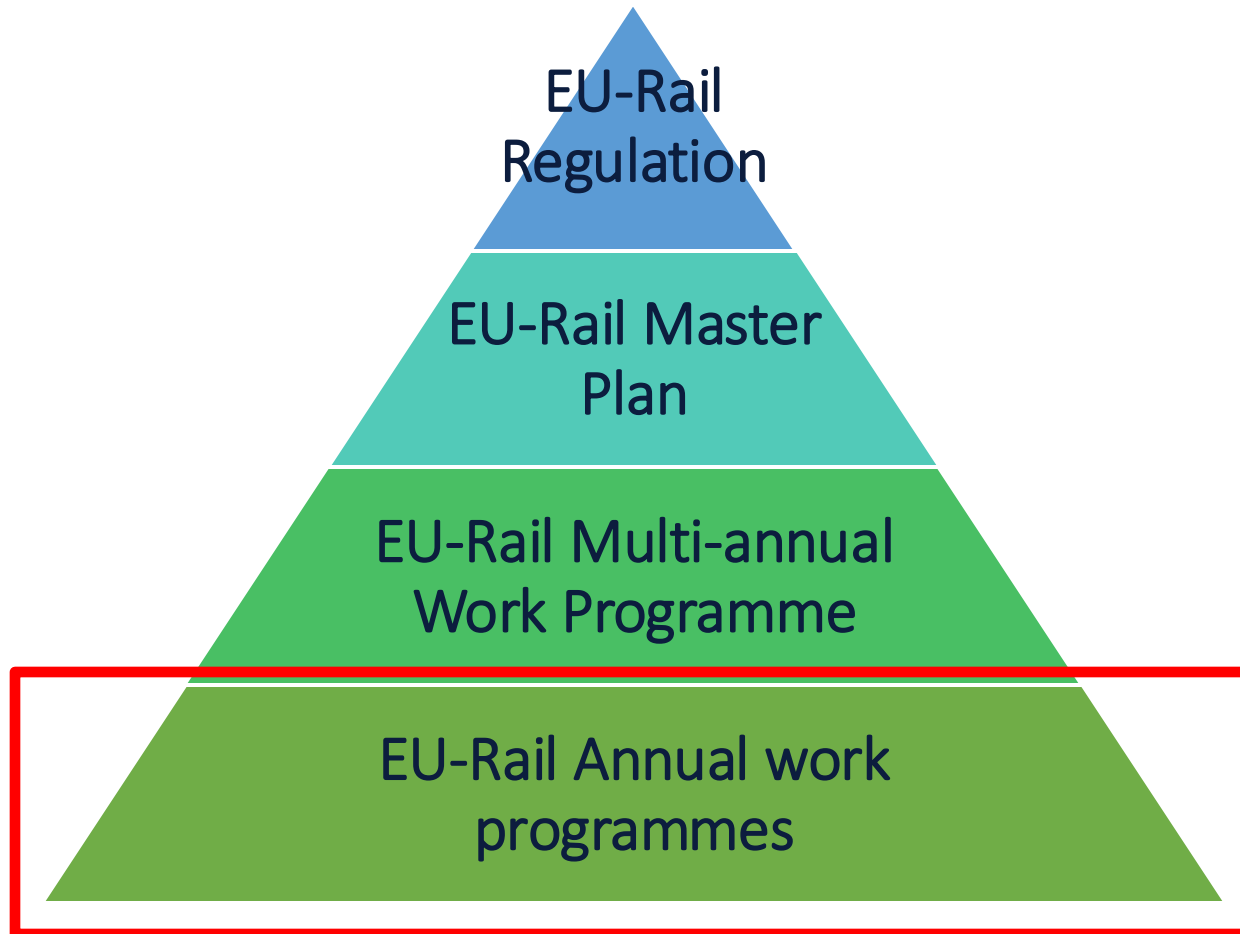
- **System Pillar activities:** the implementation via framework contract (procurement).
- **Innovation Pillar activities:** This constitutes the core of the Programme, where the private Members are expected to provide their contribution up to EUR 576 million.
 1. **Past:** Call 2022-01 covered up to 50% of the research and innovation activities value of 6 Flagship Areas+TT
 2. **Published with opening for submission foreseen for October 30th:** Call 2025-02 to cover around 30% of the research and innovation activities of 6 Flagship Areas+TT
 3. **Call 2027** expected to cover the remaining part of 6 Flagship Areas+TT activities to be performed until 2031
- **Deployment Group activities:** to bridge research and innovation to the future coordinated deployment and they will be defined in line with the evolution of the Programme.

Europe's Rail Flagship Projects - Phase 1

Rail Research and Innovation to make Rail the Everyday Mobility



Navigating the EU-Rail key documents of a Programme approach



Focus on the **[Annual] Work Programme**:

- the set of [annual] activities that the JU undertake to implement the Programme;
- it includes the calls for proposals and tender.

Reference Documents:

- Master Plan (<https://rail-research.europa.eu/about-europes-rail/europes-rail-reference-documents/europes-rail-key-documents/>)
- Revised Multi-Annual Work Programme (<https://rail-research.europa.eu/about-europes-rail/europes-rail-reference-documents/europes-rail-key-documents/>)
- Europe's Rail Work Programme 2025-2026 (<https://rail-research.europa.eu/about-europes-rail/europes-rail-reference-documents/europes-rail-annual-work-plan-and-budget/>)

EU-Rail performs its activities via calls for proposals and calls for tenders:

The current 2025 Call for Proposals (HORIZON-JU-ER-2025-02) is structured around one topic for each of the Destinations 1 to 6, as well as 4 topics under Destination 8:

- **Destination 1** – Network management planning and control & Mobility Management in a multimodal environment and Digital Enablers.
- **Destination 2** - Digital & Automated up to Autonomous Train Operations
- **Destination 3** - Intelligent and integrated asset management
- **Destination 4** - A sustainable and green rail system
- **Destination 5** – Sustainable Competitive Digital Green Rail Freight Services
- **Destination 6** – Regional Rail Services / Innovative rail services to revitalise capillary lines
- **Destination 8** – Exploratory Research and other activities

**THE EU-RAIL CALL 2025-02 IS OPEN TO
ALL ELIGIBLE ENTITIES IN ACCORDANCE
WITH HORIZON EUROPE**

NO ADDITIONAL CONDITIONS

EU-Rail Call 2025-2 – General Conditions

(See [Work Programme 2025-2026](#))

| | |
|---|--|
| Admissibility conditions | The conditions are described in part A of the General Annexes to the Horizon Europe Work Programme 2023-2025. |
| Eligibility conditions | The conditions are described in part B of the General Annexes to the Horizon Europe Work Programme 2023-2025. |
| Financial and operational capacity and exclusion | The criteria are described in part C of the General Annexes to the Horizon Europe Work Programme 2023-2025. |
| Award criteria | The criteria included in part D of the General Annexes to the Horizon Europe Work Programme 2023-2025 are complemented with additional elements as specified in Annex VIII to the Work Programme 2025-2026 . |
| Documents | The documents are described in part E of the General Annexes to the Horizon Europe Work Programme 2023-2025. |
| Procedure | The procedure is described in part F of the General Annexes to the Horizon Europe Work Programme 2023-2025. |
| Legal and financial set-up of the Grant Agreements | The rules are described in part G of the General Annexes to the Horizon Europe Work Programme 2023-2025. |

EU-Rail Call 2025-2 – Specific Conditions

(See [Work Programme 2025-2026](#))

| | |
|--|---|
| Expected contribution per project | EU-Rail estimates that an EU contribution of EUR [XX] million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts. |
| Indicative budget | <p>The total indicative budget for the topic is EUR [XX] million.</p> <p>Applicant Private Members of the EU-Rail JU part of consortia responding to this topic should provide in-kind contributions to additional activities to be declared via the template model available on the F&T portal. The amount of total in-kind contributions (i.e. in-kind contributions for operational activities and in-kind contributions for additional activities) should be no less than 1.263 times the funding request, in aggregate, of these applicant Private Members. Any discrepancy shall be well and duly justified.</p> <p>In this respect, the grant agreements will set, in principle, annual deliverable on in-kind contributions for the projects selected under this topic, as well as mandatory reporting requirements, for those applicants who are Private Members of EU-Rail.</p> |

| | |
|--|--|
| Indicative project duration | X months |
| Type of Action | Innovation Action / Research and Innovation Action / Coordination and Support Action |
| Technology Readiness Level | Activities are expected to achieve a minimum between TRL X and TRL Y, depending on the enabler addressed, or higher by the end of the project – see General Annex B for a guide to the TRL definitions and criteria to be used. |
| Admissibility conditions | Regarding admissibility conditions and related requirements, part A of the Horizon Europe Work Programme 2023-2025 General Annexes applies with the following exception: the limit for a full Innovation Action application is set to 120 pages (Innovation Action) or 70 pages (Research and Innovation Action / Coordination and Support Action). |
| Special skills and/or capabilities expected from the Applicant(s) | <p>Applicants shall ensure that their proposals and consortium reflect the aggregated expertise to perform the activities and achieve the objectives set by the Destination:</p> <ul style="list-style-type: none"> • Expertise from rail infrastructure managers and railway undertakings, • Expertise from rail suppliers (system integrators, manufacturers and/or technology providers), • Expertise from research institutes and academia, • Complementary expertise from other sectors and parties, with particular attention to SMEs and Start-ups, which may contribute to enhance the actions' outcome. |

Contribution to the monitoring and implementation, standardisation, of the EU-Rail Programme (*not applicable for RIA and CSA*)

The action resulting from this topic is identified as a “flagship project” expected to perform, by the completion of the research and innovation lifecycle, “large scale demonstrations”, in the meaning of Council Regulation (EU) 2021/2085. Hence, the action is a key contributor to the achievement of the objectives identified in the Master Plan as further detailed in the revised Multi-Annual Work Programme .

In this respect, applicants are expected to deliver relevant information (data, results, etc.) as mutually agreed, to the JU and the Linked Project[s] to contribute to the advancement of the Innovation and System Pillars activities, as well as in view of the development and implementation of EU policy and legislation (including Technical Specifications for Interoperability and Common Safety Methods) and the development of European standards. As specified in section 2.3.8.1 of the Work Programme, and to facilitate contributions to European or international standards, the EU-Rail grant agreements will include an additional information obligation related to standards. Beneficiaries must inform EU-Rail (up to four years after the end of the action) if the results can be reasonably expected to contribute to European or international standards.

As part of its internal control and management framework, the JU will perform series of reviews and maturity checkpoints to assess the overall progress against the project plan and against the performance and TRL targets. Depending on the outcome of these reviews and maturity checkpoints(s), the scope of the project may be revised and/or funding reduced in accordance with the provisions of the relevant grant agreement. Mitigation actions may be requested by the JU as condition for continued funding.

The proposal shall consider the necessary resources – FTE and/or other – to ensure the monitoring of the “Flagship Project” via regular reporting, reporting of data for the Programme KPIs, etc. A EU-Rail Governance and Process Handbook is available here: https://rail-research.europa.eu/wp-content/uploads/2025/10/ED-DECISION-ED-25-09_Annex_Gov.Proc_.Handbook_2.7.pdf

| | |
|---|---|
| Linked Projects <i>(not applicable for all RIA)</i> | <p>As specified in section 2.3.8.1 of the Work Programme, in order to facilitate the contribution to the achievement of the EU-Rail JU objectives, the options regarding 'linked actions' of the EU-Rail Model Grant Agreement and the provisions therein, is enabled in the corresponding EU-Rail JU Grant Agreements.</p> <p>The action that is expected to be funded under this topic will be complementary to the actions that are expected to be funded under the following topics:</p> <ul style="list-style-type: none"> • [xxxxxx] <p>Please note that the list non-exhaustive as additional Linked Projects may follow at a later stage of the programme implementation to complement the activity.</p> |
| Funding of only one project per topic <i>(not applicable for RIA)</i> | <p>EU-Rail JU may award up to one project with funding depending on the outcome of the evaluation and the complementarity of the proposed actions.</p> |
| Retroactive starting date of the grant | <p>The starting date of grants awarded under this topic may be as of the submission date of the application. Applicants must justify the need for a retroactive starting date in their application. Costs incurred from the starting date of the action may be considered eligible.</p> |

| | |
|--|---|
| Lump Sum grant | Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). This decision is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions. |
| Lower funding rate <i>(not applicable for RIA and CSA)</i> | The funding rate of the action is 60% of the eligible costs to achieve the leverage effect established in the SBA. Each Consortia may decide internally different funding rates in line with the provisions of Article 34 of Horizon Europe nevertheless complying with the overall funding rate of 60% |
| Award criteria additional details | The award criteria included in the General Annexes of the Horizon Europe – Work Programme 2023 – 2025 are complemented with additional criteria as specified in Annexe VIII this Work Programme |
| Additional dissemination obligations <i>(not applicable for RIA and CSA)</i> | <p>In addition, as specified in section 2.3.8.1 of the Work Programme, and to facilitate contributions to considering the key contributing role of this topic, in designing the dissemination and communication activities, the proposal shall consider that the “Flagship Project” will be part of the overall EU-Rail Programme and the planning of key events – demonstrations, participations to fair, etc. – will be coordinated at Programme level and by the “Stakeholder Relations and Dissemination” structure of the JU.</p> <p>The proposal shall consider the KPIs metrics on dissemination and communication included in the EU-Rail Governance and Process Handbook available here: https://rail-research.europa.eu/wp-content/uploads/2025/10/ED-DECISION-ED-25-09_Annex_Gov.Proc_.Handbook_2.7.pdf</p> |

EU-Rail Call 2025-02

| DESTINATION Topics | Type of Action | Expected TRL | Expected EU contribution per project (EUR million) | Number of projects expected to be funded |
|------------------------------|--|--------------|--|--|
| | Publishing: 8 October 2025; Submission from: End of October 2025; Deadline: 11 February 2026 | | | |
| HORIZON-JU-ER-2025-FA1-TT-01 | IA | 6 to 8 | 22.4 | 1 |
| HORIZON-JU-ER-2025-FA2-01 | IA | 5 to 7 | 33.1 | 1 |
| HORIZON-JU-ER-2025-FA3-01 | IA | 6 to 8 | 32.8 | 1 |
| HORIZON-JU-ER-2025-FA4-01 | IA | 6 to 9 | 26.6 | 1 |
| HORIZON-JU-ER-2025-FA5-01 | IA | 5 to 8 | 20.4 | 1 |
| HORIZON-JU-ER-2025-FA6-01 | IA | 5 to 7 | 10.0 | 1 |
| HORIZON-JU-ER-2025-EXPLR-01 | RIA | 1 to 2 | 0.6 | N/A |
| HORIZON-JU-ER-2025-EXPLR-02 | RIA | 1 to 2 | 0.6 | N/A |
| HORIZON-JU-ER-2025-EXPLR-03 | RIA | 1 to 2 | 1.0 | N/A |
| HORIZON-JU-ER-2025-EXPLR-04 | CSA | N/A | 0.7 | 1 |



EU Funding & Tenders Portal

Access to the Call topics ✓

Start session for application – end of October 2025

Programme

Horizon Europe (HORIZON)

Call

EU-RAIL JU Call Proposals 2025-02 (HORIZON-JU-ER-2025-02)

Type of action

HORIZON-JU-IA HORIZON JU
Innovation Actions

Type of MGA

HORIZON Lump Sum Grant
[HORIZON-AG-LS]

 Forthcoming

Deadline model

single-stage

Planned opening date

30 October 2025

Deadline date

11 February 2026 17:00:00 Brussels
time

EU-Rail Call 2025-02

Call structure (see also annex VII of the EU-Rail [Work Programme 2025-2026](#)):

- ❖ **Destination (in the topic update on the Portal):** indicates the objectives as well as clear and quantified targets in term of KPIs to be reach with the R&I activities.
- ❖ **Expected outcome:** describes the expected demonstrations, the expected preparatory works to be launched for the future set of demonstration foreseen in the MAWP and the input/output expected with the linked actions from other Destinations.
- ❖ **Scope:** identifies the expected capabilities/enablers that should be developed through R&I activities for achieving the expected demonstrators. It also highlight other requirements, as the need to measure and monitor KPI, contribute to standards and interact with the System Pillar activities.

Q&A Procedure - EU-Rail Call 2025-02

- ❖ **Contact:** Questions from applicants must be addressed to the EU-RAIL JU Call Functional Mailbox (info-call@rail-research.europa.eu).
- ❖ **Deadline:** The deadline for submitting queries related to EU-RAIL JU call for proposals to the Q&A Functional Mailbox (info-call@rail-research.europa.eu) is Wednesday **28 January 2026** at 17:00 (Brussels Local Time).
- ❖ **Publication of answers:** The EU-RAIL JU will publish answers on the EU Funding & Tenders Portal and the Europe's Rail website on a regularly basis.

EUROPE'S RAIL INFO DAY 2025

DESTINATION 1

HORIZON-JU-ER-2025-FA1-TT-01

Network management planning and control & Mobility Management in a multimodal environment and Digital Enablers

Léa Paties

Senior Programme Manager

Europe's Rail Joint Undertaking

SPECIFIC CONDITIONS

Expected EU contribution 22.4 EUR million

Indicative project duration 30 months

TRL 6-8

Type of action Innovation Action

Linked actions and expected interactions

The action that is expected to be funded under this topic will be complementary to the *following projects*:

- FP1 - MOTIONAL (GA number: 101101973)
- FP2- R2DATO (GA number: 101102001)
- FP3 – IAM4RAIL (GA number:101101966)
- FP4 – RAIL4EARTH (GA number: 101101917)
- FP5-TRANS4M-R (GA number: 101102009)
- FP6-FutuRe (GA number: 101101962)
- FP7-Pods4Rail (GA number: 101121853)

The action that is expected to be funded under this topic will be complementary to the actions that are expected to be funded under the *following topics*:

- HORIZON-JU-ER-2025-FA2-01: Digital & Automatic up to Automated Train Operations
- HORIZON-JU-ER-2025-FA3-01: Intelligent & Integrated asset management
- HORIZON-JU-ER-2025-FA4-01: A sustainable and green rail system
- HORIZON-JU-ER-2025-FA5-01: Sustainable Competitive Digital Green Rail Freight Services
- HORIZON-JU-ER-2025-FA6-01: Regional rail services / Innovative rail services to revitalise capillary lines

EXPECTED OUTCOME & SCOPE (1/2)

Workstream 1: Network management planning and control & Mobility Management in a multimodal environment:

- *WS1.1: Improving strategic and tactical planning of the rail network (TRL7):*
 - Functional system for strategic, tactical and short-term planning considering ERTMS and ATO evolution and their related effects on capacity; planning using integrated feedback loops from operations, including TMS and C-DAS/ATO; using ATO journey profiles for timetabling.
- *WS1.2: Increasing the resilience of a connected 'real time' rail network (TRL6/7):*
 - TMS at regional area with decision support and interaction between actors, including integration with incident management and handling of maintenance, cooperative planning for improved interaction between nodes (important yards and stations) and rail network as well as cross-border operations and asset conditions for rolling stock and infrastructure in real-time
 - TMS at global area: decision support and automation and overall real-time traffic plan, with feedback loops from operation to planning, showcasing the capabilities:
 - Real-time connection of the networks
 - Improved modelling for cross-border
 - Integration of energy management (Electric Traction System)
 - Real-time crew / rolling stock dispatching
 - Cooperative planning multi-actors
 - Dispatching, incident management and customer information
 - Disruption management
 - Increased automation in decision support
 - Conflict detection & resolution
- *WS1.3: Integrated rail traffic within door-to-door mobility (TRL7/8):*
 - Improved long-term demand driven predictions considering short term demand forecast and disruption management and using additional data sources and external data (e.g., public events, seat availabilities); Use of Digital Twins for the visualisations and modelling of movements at train stations
 - Cross-border travel within Europe and the connection of rural areas to create an inclusive mobility network, with focus on PRM guidance based on real-time data

EXPECTED OUTCOME & SCOPE (2/2)

Workstream 2: Digital Enablers:

- Connectors for Federated Data Spaces (TRL7)
- Common Domain Ontology, building upon Shift2Rail works on Conceptual Data Model (CDM) and ERA Ontology (TRL 7)
- Digital Twin support, development and execution environment (TRL6)
- Cybersecurity (TRL 6): demonstrate Shared Cybersecurity Services for the Rail System

EUROPE'S RAIL INFO DAY 2025

DESTINATION 2

HORIZON-JU-ER-2025-FA2-01

Digital & Automated up to Autonomous Train Operations

Léa Paties

Senior Programme Manager

Europe's Rail Joint Undertaking

SPECIFIC CONDITIONS

Expected EU contribution 33,1 EUR million

Indicative project duration 30 months

TRL 5-7

Type of action Innovation action

Linked actions and expected interactions

The action that is expected to be funded under this topic will be complementary to the following projects:

FP1 - MOTIONAL (GA number: 101101973)
 FP2-R2DATO (GA number: 101102001)
 FP2-MORANE 2 (GA number: 101196125)
 FP3 – IAM4RAIL (GA number:101101966)
 FP4 – RAIL4EARTH (GA number: 101101917)
 FP5-TRANS4M-R (GA number: 101102009)
 FP6-FutuRe (GA number: 101101962)

The action that is expected to be funded under this topic will be complementary to the actions that are expected to be funded under the *following topics*:

- HORIZON-JU-ER-2025-FA1-TT-01: Network management planning and control & Mobility Management in a multimodal environment
- HORIZON-JU-ER-2025-FA3-01: Intelligent & Integrated asset management
- HORIZON-JU-ER-2025-FA4-01: A sustainable and green rail system
- HORIZON-JU-ER-2025-FA5-01: Sustainable Competitive Digital Green Rail Freight Services
- HORIZON-JU-ER-2025-FA6-01: Regional rail services / Innovative rail services to revitalise capillary lines

EXPECTED OUTCOME & SCOPE (1/2)

- **Automating functions**, such as the wake-up and train preparation capability is needed to start operation (TRL6)
- Trains must be **continuously traceable for traffic control** and train operators in automated operation:
 - Absolute Safe Train Positioning (TRL6)
 - Train integrity (TRL7) and Train Safe Length Determination (TRL6)
 - ATO technology (TRL6/7)
- **Connectivity solutions**: FRMCS (TRL7), Multiconnectivity Platform (formerly ACS) (TRL6), Satellite Communications (TRL4) and V2X (TRL6).
- **Safe environment perception**, including signal reading (when applicable) and obstacle detection (including for level crossing), supporting cooperative awareness, supported by virtual certification (TRL6).
- **Remote driving and command**, for depots, for lines with low traffic, and for fallback operations as well as for shunting (TRL6).
- **Autonomous route setting**, on low traffic/regional networks, in terminals, in depots and in urban environment (TRL5).
- **Digital Register**, acting as a central data source for, e.g., safe train positioning, ATP, TMS and DATO (TRL6).

EXPECTED OUTCOME & SCOPE (2/2)

- **ETCS Hybrid Train Detection** and **Moving block systems**, taking into account aspects related to relative braking distance (TRL6)
- **A fully fledged Virtual coupling**, another key element to achieve shorter headways and operational flexibility, supported by enhanced connectivity and localization (TRL5)
- Self-driving freight wagons, supporting cooperative awareness (TRL5)
- New generation of **brake systems** for adjustable/configurable emergency brake control, the holding brake function and integrated adhesion management etc. (TRL6)
- A novel platform and facilities for **testing, validation and (virtual) certification** (TRL6)
- Modular platform based on next generation ATC architectures (TRL6)
- Evolved onboard communication networks (TRL7)
- **Stable ETCS onboard**: activities can foresee rationalisation and consolidation of mature and generic ETCS onboard related interfaces (e.g. interface to TCMS, TIMS, localisation, ATO, FRMCS, HMI) (TRL3)
- Deployment and migration strategic plans, including training and human factors

EUROPE'S RAIL INFO DAY 2025

DESTINATION 3

HORIZON-JU-ER-2025-FA3-01

Intelligent & Integrated asset management

Sébastien Denis

Senior Programme Manager

Europe's Rail Joint Undertaking

SPECIFIC CONDITIONS

Expected EU contribution 32,8 EUR million

Indicative project duration 30 months

TRL 6-8

Type of action Innovation action

Linked actions and expected interactions

The action that is expected to be funded under this topic will be complementary to the following projects:

FP1 - MOTIONAL (GA number: 101101973)
 FP2-R2DATO (GA number: 101102001)
 FP3 – IAM4RAIL (GA number:101101966)
 FP4 – RAIL4EARTH (GA number: 101101917)
 FP5-TRANS4M-R (GA number: 101102009)
 FP6-FutuRe (GA number: 101101962)

The action that is expected to be funded under this topic will be complementary to the actions that are expected to be funded under the *following topics*:

- HORIZON-JU-ER-2025-FA1-TT-01: Network management planning and control & Mobility Management in a multimodal environment
- HORIZON-JU-ER-2025-FA2-01: Digital & Automatic up to Automated Train Operations
- HORIZON-JU-ER-2025-FA4-01: A sustainable and green rail system
- HORIZON-JU-ER-2025-FA5-01: Sustainable Competitive Digital Green Rail Freight Services
- HORIZON-JU-ER-2025-FA6-01: Regional rail services / Innovative rail services to revitalise capillary lines

EXPECTED OUTCOME & SCOPE (1/2)

Delivering **by 2028** solutions that can be demonstrated by system approaches of the various developments targeting up to **TRL 7/8** as European common integrated solutions, on :

- 1. Asset Management & TMS.** The main aim of the demonstrator shall be to show the integration between the Intelligent Asset Management System (IAMS) and the Traffic Management System (TMS) enabling the share of data and optimising decisions using common metrics – **TRL7**.
- 2. Asset Management & Rolling Stock.** The main objective of this demonstrator shall be to present the monitoring of rolling stock (including on board and wayside technologies) leading to decisions and planning of interventions, and redirecting rolling stock to workshops to execute the (re)scheduled work both manually as well as by new technologies and solutions to conduct inspection tasks automatically – **TRL7**.
- 3. Long Term Asset Management.** Development of Life Cycle Cost (LCC) models for infrastructure. This demonstrator shall include cross-border infrastructure remaining useful-life analysis and space-time cross-analysis and visualisation – **TRL7**.

EXPECTED OUTCOME & SCOPE (2/2)

4. **Asset Management & Infrastructure.** The objective shall be to integrate on field and on board systems with central platforms capable of managing Big Data to enable prescriptive interventions, minimising dangerous situations (as extreme climate events) and service disruptions during operation – **TRL7.**
5. **Asset Management & Digital Twins.** The focus shall be on design, maintenance, upgrade and renewal interventions driven by Digital Twins for the optimisation of processes, maintenance planning and involved logistics. This shall enforce the use of BIM to standardise system configuration and AI tools to execute simulations and predictions. The Digital Twin demonstrator shall include visualisation, prediction and simulation – **TRL7.**
6. **Design & Manufacturing.** This demonstrator shall be the showcase of eco-friendly production of resilient assets supported by new fabrication techniques such as additive manufacturing (focussed on infrastructure assets) – **TRL6/7**
7. **Robotics & Interventions.** The focus of this demonstrator shall be the showcase of high-tech automated execution solutions for construction and interventions supported by robotics and wearables, among other devices, building a safer and more automated railway environment.- **TRL6/7**

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DESTINATION 4

HORIZON-JU-ER-2025-FA4-01

A sustainable and green rail system

Sébastien Denis

Senior Programme Manager

Europe's Rail Joint Undertaking

SPECIFIC CONDITIONS

Expected EU contribution 26,6 EUR million

Indicative project duration 30 months

TRL 6-9

Type of action Innovation action

Linked actions and expected interactions

The action that is expected to be funded under this topic will be complementary to the following projects:

FP1 - MOTIONAL (GA number: 101101973)
 FP2-R2DATO (GA number: 101102001)
 FP3 – IAM4RAIL (GA number:101101966)
 FP4 – RAIL4EARTH (GA number: 101101917)
 FP5-TRANS4M-R (GA number: 101102009)
 FP6-FutuRe (GA number: 101101962)

The action that is expected to be funded under this topic will be complementary to the actions that are expected to be funded under the *following topics*:

- HORIZON-JU-ER-2025-FA1-TT-01: Network management planning and control & Mobility Management in a multimodal environment
- HORIZON-JU-ER-2025-FA2-01: Digital & Automatic up to Automated Train Operations
- HORIZON-JU-ER-2025-FA3-01: Intelligent & Integrated asset management
- HORIZON-JU-ER-2025-FA5-01: Sustainable Competitive Digital Green Rail Freight Services
- HORIZON-JU-ER-2025-FA6-01: Regional rail services / Innovative rail services to revitalise capillary lines

EXPECTED OUTCOME & SCOPE (1/2)

- 1. Alternative energy solutions for the rolling stock at TRL7/8, covering:**
 - High performances Batteries Electric Multi-Unit (BEMU) train;
 - Hydrogen hybrid trains with test of heavy-duty inspection vehicle and loco for freight-passengers;
 - Auto adaptive train energy consumption to various services situations

- 2. A holistic approach to energy in rail infrastructure (design, production, use and intelligent management) at TRL6/8, covering:**
 - Rail Power Smart Grid in different systems as well as the integration of energy storage solutions;
 - Development of a universal hydrogen refuelling interface, with a specific focus on the development of digital algorithms to improve refuelling efficiency

- 3. Sustainability and resilience of the rail system in a holistic approach to asset management, delivering more value at TRL6/7**
 - Development of solutions and models for the reduction of noise and vibrations from railway infrastructure and rolling stock and to predict the effect of degradation, of maintenance and of noise perception as well as ensuring resilience to external risks, such as climate change;

EXPECTED OUTCOME & SCOPE (2/2)

- 4. Improvement of electro-mechanical components and sub-systems for the rolling stock, at TRL7/9, covering:**
 - Technological solutions for the migration to the airless train: Electro-mechanical braking system and novel electro-mechanical pantograph;
 - Optimised motors and gearboxes, high performance bogies, suspensions and new materials;
 - Eco-friendly HVAC system technologies;
 - Aerodynamic certification with experimental and numerical methods;
- 5. Healthier and safer rail system at TRL7/9, covering:**
 - Solutions for improving the air quality in trains, stations and tunnels
- 6. Attractiveness, at TRL7/8, covering:**
 - Modular rolling stock interiors providing new design and new architectures (including drivers' cabin), respecting PRM requirements and enhancing accessibility with innovative solutions.

EUROPE'S RAIL INFO DAY 2025

DESTINATION 5

HORIZON-JU-ER-2025-FA5-01

Sustainable Competitive Digital Green Rail Freight Services

Javier Ibáñez de Yrigoyen

Senior Programme Manager

Europe's Rail Joint Undertaking

SPECIFIC CONDITIONS

Expected EU contribution 20.4 EUR million

Indicative project duration 30 months

TRL 5-8

Type of action Innovation Action

Linked actions and expected interactions

The action that is expected to be funded under this topic will be complementary to the *following projects*:

- FP1 – MOTIONAL (GA number: 101101973)
- FP2 – R2DATO (GA number: 101102001)
- FP3 – IAM4RAIL (GA number:101101966)
- FP4 – RAIL4EARTH (GA number: 101101917)
- FP5 – TRANS4M-R (GA number: 101102009)
- FP5 – DACTiVate (GA number: 101195671)

The action that is expected to be funded under this topic will be complementary to the actions that are expected to be funded under the *following topics*:

- HORIZON-JU-ER-2025-FA1-01: Network management planning and control & Mobility Management in a multimodal environment and Digital Enablers
- HORIZON-JU-ER-2025-FA2-01: Digital & Automatic up to Automated Train Operations
- HORIZON-JU-ER-2025-FA3-01: Intelligent & Integrated asset management
- HORIZON-JU-ER-2025-FA4-01: A sustainable and green rail system

EXPECTED OUTCOME & SCOPE (1/2)

Workstream 1: Full Digital Freight Train Operations (FDFTO)

- **European full digital freight train operations:**
 - Deliver a follow-up large-scale demonstrator from EU-Rail FP5-TRANS4M-R including FDFTO based on DAC Type 4 and Type 5 (**TRL 8**), train composition detection/management system, automated / automatic brake test system (**TRL 8**), and train integrity / train length determination (**TRL 7**)
 - Deliver a demonstrator for technical solutions upgrading available functionality (**TRL 6-7**) for automated parking brake system, digital wagon inspection (including RST+INF assets) concepts and solutions, and distributed power concepts and solutions (**TRL 5-6**) and electro-pneumatic brake (**TRL 5-6**) as well as demonstration of innovative concepts for efficient, high-performing freight assets and self-propelled wagons (**TRL 5-6**) and automated/autonomous loading/unloading technologies (**TRL 7-8**) for last mile distribution
- **Yard automation:**
 - Demonstration of fully automated shunting loco (and wagons) movements, yard digitalisation and full automated train composition and dispatching, as well as yard automation equipment and data exchange on wagon condition (**TRL7**) are expected to be addressed. Demonstrators will focus on full functionality (meeting customer needs), safe system integration, interoperability, harmonised (cross-border) operation

EXPECTED OUTCOME & SCOPE (2/2)

Workstream 2: Seamless freight

- **Seamless freight corridor (TRL 5-8):**
 - Demonstrate cross-border freight trains on (parts of) two European corridors and demonstrate: integrated cross-border timetable planning, management and path ordering systems taking into account Digital Capacity Management and especially the specific needs of short-term path requests for (international) freight services, as well as for real-time interaction between various TMS (including yards/terminals)
 - Including technologies for standardised European Railway checkpoints at borders or other operational stop points, replacing manual process by digitalisation and automation, using innovative technologies and processes connected with other supporting implementations like certified translation tools or harmonised processes.
- **Seamless customer freight (TRL 6-8):**
 - Demonstrate seamless planning management and booking of multimodal rail-based transport integrating multi-actors to simplify the way of organising transport and integrating rail in modern supply chains
 - Based on increased data quality and availability as well as on improved routing engines, to prove how transport planning can respond to changing demand, disruptions and customer requirements.

EUROPE'S RAIL INFO DAY 2025

DESTINATION 6

HORIZON-JU-ER-2025-FA6-01

Regional rail services / Innovative rail services to revitalise capillary lines

Judit Sandor

Programme Manager

Europe's Rail Joint Undertaking

SPECIFIC CONDITIONS

| | |
|--|--|
| Expected EU contribution | 10 EUR million |
| Indicative project duration | 30 months |
| TRL | 5-7 |
| Type of action | Innovation Action |
| Linked actions and expected interactions | <p>The action that is expected to be funded under this topic will be complementary to the <i>following projects</i>:</p> <ul style="list-style-type: none"> • FP1 - MOTIONAL (GA number: 101101973) • FP2- R2DATO (GA number: 101102001) • FP2-MORANE 2 (GA number: 101196125) • FP3 – IAM4RAIL (GA number:101101966) • FP4 – RAIL4EARTH (GA number: 101101917) • FP5-TRANS4M-R (GA number: 101102009) • FP6-FutuRe (GA number: 101101962) • FP7-Pods4Rail (GA number: 101121853) <p>The action that is expected to be funded under this topic will be complementary to the actions that are expected to be funded under the <i>following topics</i>:</p> <ul style="list-style-type: none"> • HORIZON-JU-ER-2025-FA1-01: Network management planning and control & Mobility Management in a multimodal environment and Digital Enablers • HORIZON-JU-ER-2025-FA2-01: Digital & Automatic up to Automated Train Operations • HORIZON-JU-ER-2025-FA3-01: Intelligent & Integrated asset management • HORIZON-JU-ER-2025-FA4-01: A sustainable and green rail system • HORIZON-JU-ER-2025-FA5-01: Sustainable Competitive Digital Green Rail Freight Services |

EXPECTED OUTCOME & SCOPE (1/2)

CCS & Operations:

- Building upon the work developed within S2R, FP2-R2DATO, FP6-FUTURE as well as in other research and innovation activities, the actions stemming from this destination shall review and amend if necessary the system requirements (technical and operational) which will be integrated and used by the other FAs in their relevant developments on TMS, CCS and vehicles as well as a data sharing and analysis platform. In addition, this destination shall demonstrate the technical enablers in a cost efficient and customer centric manner.
- Develop a Destination 6 specific application based on respectively improving generic application developed in Destinations 1 and 2 of several technical enablers and components including ATO, hybrid train detection, cost-effective communications, absolute safe train positioning, fail-safe train integrity for a cost-efficient performant control command and signalling system adapted to Regional Lines **(TRL5-7 in 2028)**.
 - Traffic Management Systems for regional lines improving resilience of a connected rail network, optimizing train operations including disturbing events taking into account high/low-demand situations (disturbance and distraction) **(TRL 6)**
 - ATO over ETCS up to GoA3/4 adapted to regional operations a specific application for safe environment perception solutions **(TRL6)**
 - Hybrid train detection and moving block for regional services **(TRL6)**
 - Cost-efficient communications (Train to Train, Train to Tracksides – wayside assets, Tracksides to Tracksides) with the use of mobile networks or communication infrastructure from third parties (e.g. 4G, 5G, satellite comms) **(TRL6/7)**
 - Absolute safe train positioning, based on among others hybrid, multi sensor technologies, digital maps, onboard database **(TRL6)**
 - Cost effective communications such as Gigabit radio supporting the application of FRMCS e.g. multi-connectivity, minimizing civil works and energy consumption, to the achievement of cost-effective digital operations and Gigabit Train applications **(TRL6/7)**
 - Specific application for fail-safe train integrity for regional trains **(TRL7)**
 - Specific application for Train length detection for regional trains **(TRL6)**
 - Digital platform for CCS validation & TSI certification and authorization for Regional Lines **(TRL5)**
- Develop a single integrated Operations Control Centre (OCC) covering interlocking, radio blocking and traffic management for regional lines that are not functionally/operationally connected with mainline **(TRL6 in 2028)**.

EXPECTED OUTCOME & SCOPE (2/2)

Assets

- Focus on demonstrating cost-efficient components including wireless and energy self-sufficient infrastructure components and trackside wireless communications to decrease the operational and overhead cost.
- Develop a Smart Wayside Object Controller (**TRL5/6**) and/or infrastructure components and wayside elements focused on Regional Railway cost drivers (e.g. level crossings, switches) which are energy self-sufficient and/or wireless enabled (by using the simplified communication system developed in CCS and Operations; enable remote control or full or partial automation and/or autonomous operation (**TRL6**).
- Develop a concept for alternative fueling/charging stations for regional railway being interoperable with other road/rail vehicles (**TRL3**)

Customer service:

- On-board and/or personal devices information of multimodal services integrating regional multimodal services based on demand responsive transport (**TRL7**)
- Passenger congestion rate monitoring, flow optimization application as well as a low-cost passenger information system (**TRL6**)

EUROPE'S RAIL INFO DAY 2025

DESTINATION 8

HORIZON-JU-ER-2025-EXPLR-01

STUDIES ON RAIL 5.0

Sébastien Denis

Senior Programme Manager

Europe's Rail Joint Undertaking

SPECIFIC CONDITIONS

| | |
|---------------------------------|-----------------|
| Expected EU contribution | 0,6 EUR million |
|---------------------------------|-----------------|

| | |
|------------------------------------|-----------|
| Indicative project duration | 30 months |
|------------------------------------|-----------|

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|------------|-----|
| TRL | 1-2 |
|------------|-----|

| | |
|-----------------------|--------------------------------------|
| Type of action | Research and Innovation Action (RIA) |
|-----------------------|--------------------------------------|

| | |
|---|---|
| Linked actions and expected interactions | - |
|---|---|

EXPECTED OUTCOME & SCOPE

The expected outcome of this Research and Innovation Action is a study that identifies the key challenges, drivers, and expected measurable outcomes/benefits related to the application of the new concepts introduced by the 5.0 Industry principles to the rail sector.

The study shall provide recommendations for the implementation of Industry 5.0 vision that will lead to a significant improvement of safety, reliability, and efficiency in rail operations.

- Identification of practices and drivers required for the implementation of the Industry 5.0 principles in the European rail sector
- Definition of success factors for the implementation of the Industry 5.0 principles in the rail sector, including: stimulating competitiveness, reputation, talent attraction, job creation, meeting climate goals, etc.
- Identification of internal and external factors with the potential to impact (positively or negatively) the implementation of Industry 5.0 in rail industry.
- Progress and benefits measurement: develop a framework for the measurement of progress towards the implementation of the Industry 5.0 in the rail sector within its three main dimensions: safety, reliability and efficiency.
- Recommendations for pilot projects showcasing the implementation of Industry 5.0 principles and leading towards a human centric rail system.

EUROPE'S RAIL INFO DAY 2025

DESTINATION 8

HORIZON-JU-ER-2025-EXPLR-02

STUDIES ON INNOVATION IN CLIMATE FINANCE FOR RAIL

Sébastien Denis

Senior Programme Manager

Europe's Rail Joint Undertaking

SPECIFIC CONDITIONS

| | |
|---------------------------------|-----------------|
| Expected EU contribution | 0,6 EUR million |
|---------------------------------|-----------------|

| | |
|------------------------------------|-----------|
| Indicative project duration | 30 months |
|------------------------------------|-----------|

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|------------|-----|
| TRL | 1-2 |
|------------|-----|

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|-----------------------|--------------------------------------|
| Type of action | Research and Innovation Action (RIA) |
|-----------------------|--------------------------------------|

| | |
|---|---|
| Linked actions and expected interactions | - |
|---|---|

EXPECTED OUTCOME & SCOPE

Development of new knowledge with the identification of the key challenges, drivers, and expected measurable outcomes/benefits of implementing the new concepts of environmental economy, including recommendation for implementation. The studies can include:

- Identifying strategies to leverage green bonds and sustainability-linked financing instruments for railway projects. This includes investigating solutions for an increased use of “carbon credits” by rail companies as a means to generate revenue and contribute to meeting climate targets in Europe.
- Researching and provide recommendations for standardised methodologies for measuring and verifying greenhouse gas emission reductions from rail investments to facilitate access to carbon markets and results-based climate finance. Consideration of EU Taxonomy, as well as in-depth clarification of avoided emissions from modal shift should be part of the research.
- Develop reporting guidelines enabling the alignment with Corporate Sustainability Reporting Directives (CSRD) regarding the climate finance instruments.
- Analysis of current climate financing criteria and provide recommendations for bridging the gaps and better accommodate rail projects in order to encourage the investment and use of low-carbon transport modes. Provide where relevant policy recommendations.

EUROPE'S RAIL INFO DAY 2025

DESTINATION 8

HORIZON-JU-ER-2025-EXPLR-03

EXTENDING THE RAIL NETWORK OF PHDS

Sébastien Denis

Senior Programme Manager

Europe's Rail Joint Undertaking

SPECIFIC CONDITIONS

| | |
|---|--|
| Expected EU contribution | 1 EUR million |
| Indicative project duration | None |
| TRL | 1-2 |
| Type of action | Research and Innovation Action (RIA) |
| Linked actions and expected interactions | <p>The action that is expected to be funded under this topic will be complementary to the following projects: Academics4Rail (GA number 101121842) PhDs EU-Rail (GA number 101175856)</p> <p>The action that is expected to be funded under this topic will be complementary to the actions that are expected to be funded under the following topics: - HORIZON-JU-ER -2025-FA4-01: A sustainable and green rail system</p> |

EXPECTED OUTCOME & SCOPE

Further extend the rail research and innovation “community” (cooperation/network/alliance) of scientific research entities (cooperation/network) that was initiated with the award of the EU-Rail project Academics4Rail (GA 101121842) and continued with PhDs EU-Rail (GA 101175856).

Realisation of 3-5 PhD positions, teaming up with the industry.

Proposed areas (additional or different scientific areas to be proposed, always in relation to the EU-Rail Programme) :

- *PhD Topic - Low-Height Noise Reduction Barriers in Rail Transport* : investigation of relevant noise reduction techniques, design, construction and validation requirements for low-height noise barriers solutions in the rail sector
- *PhD Topic – smart grids and micro smart grids in the railway system* : Energy Market Segment Analysis in the Concept of Smart Grids and Micro Smart Grids for Railways ; Impact assessment of new power supply sources/technologies on the current Regulatory Framework and its capacity to adapt to energy innovations in railways ; Commercialization and Standardization Roadmap for a self-sustained, integrated rail power supply grid.

EUROPE'S RAIL INFO DAY 2025

DESTINATION 8

HORIZON-JU-ER-2025-EXPLR-04

SUPPORT TO THE EUROPEAN FRMCS DEPLOYMENT GROUP

Léa Paties

Senior Programme Manager

Europe's Rail Joint Undertaking

SPECIFIC CONDITIONS

| | |
|--------------------------|-----------------|
| Expected EU contribution | 0,7 EUR million |
|--------------------------|-----------------|

| | |
|-----------------------------|-----------|
| Indicative project duration | 24 months |
|-----------------------------|-----------|

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|-----|---|
| TRL | - |
|-----|---|

| | |
|----------------|---------------------------------------|
| Type of action | Coordination and Support Action (CSA) |
|----------------|---------------------------------------|

| | |
|--|---|
| Linked actions and expected interactions | <p>The action that is expected to be funded under this topic will be complementary to the following projects:</p> <ul style="list-style-type: none">- FP2-R2DATO (GA number: 101102001)- FP2-MORANE-2 (GA number: 101196125) |
|--|---|

| | |
|--|--|
| | <p>The action that is expected to be funded under this topic will be complementary to the actions that are expected to be funded under the following topics:</p> <ul style="list-style-type: none">- HORIZON-JU-ER-2025-FA2-01: Digital & Automatic up to Automated Train Operations |
|--|--|

EXPECTED OUTCOME & SCOPE (1/2)

- **Programme Management Office (PMO) Functions:**
 - Set up and operate a central coordination function to oversee timelines, dependencies, and progress across planning of FRMCS future deployment activities.
- **Capacity Mapping & Planning Analysis:**
 - Develop and distribute sector-wide surveys (by sending out questionnaires) to gather data on deployment plans, readiness, and capacity. Analyse responses and identify gaps and challenges across Member States and cross-border situations.
- **Independent Cost and Time Driver Study:**
 - Conduct a study to assess cost structures and investment drivers relevant to FRMCS implementation across different operational contexts (in particular on-board assets).
 - To Conduct relevant Cost Business Analyses. Analyse main factors that determine the required rollout timeline and measures to optimise those.
- **Stakeholder Management:**
 - Facilitate cooperation among rail and telecom stakeholders, as well as with relevant associations.
- **Communication & Dissemination:**
 - Support targeted communications for the FRMCS Deployment Group and Organise outreach and engagement with the broader sector to raise awareness and share developments.

EXPECTED OUTCOME & SCOPE (2/2)

- **Deployment Guidelines Toolbox:**
 - Support the development a non-binding set of practical guidelines and migration scenarios to support railway undertakings and infrastructure managers in their transition to FRMCS.
- **Expertise & Technical Support:**
 - Provide subject-matter expertise on key domains including, but not exclusive: System authorisation, Cybersecurity, RAMS (Reliability, Availability, Maintainability, and Safety)
- **European Deployment Dashboard:**
 - Support the establishment and maintenance an online dashboard to: Report on deployment readiness and progress and track national initiatives and alignment with European goals
- **Knowledge Sharing and Acceleration:**
 - Gather and share test results, best practices, and lessons learned and promote early implementation and innovation in FRMCS assets.
- **Risk & Deviation Management:**
 - Support the development of frameworks for identifying, reporting, and mitigating risks and deviations across the deployment chain.
- **Develop market readiness:**
 - Support the identification of measures needed to be address by the market for ensure a swift FRMCS deployment. This activity should be framed in the context of the anticipated short time frame to conduct the migration from GSM-R to FRMCS that may lead to a high demand on scarce resources in different fields.

EUROPE'S RAIL INFO DAY CALL 2025-02

Q&A

EUROPE'S RAIL INFO DAY 2025-02

Presentation of GREENET, the network of Cluster 5
National Contact Points

Magdalena Glogowska

Representative from National Centre for Research and Development
and Member of Europe's Rail State Representative Group

Greenet



The network of Horizon Europe Cluster 5
National Contact Point.



GREENET – The network of Cluster 5 National Contact Points


Empowering Horizon Europe applicants through national contact points' tools and services

NCBR National Contact Point
for EU Research Programmes
Magdalena Glogowska



The GREENET project has received funding from the EU Horizon Europe programme under Grant Agreement No 101069604

The role of the NCPs in Horizon Europe (HE)

- NCPs provide guidance, practical information and assistance on all aspects of participation in HE.
 - NCPs are national structures established by governments of the 27 EU member states, the countries associated to the framework programme, as well as many non-EU and non-associated countries ("third countries").
 - NCPs give personalised support on the spot and in applicants' own languages.
 - NCPs are bound to the **Minimum standards and Guiding principles** set by the European Commission
- Confidentiality!
- In HE, just like in H2020, NCPs are organized in networks according to the cluster they cover.



GREENET in a nutshell

- Network of National Contact Points (NCPs) for Cluster 5 “Climate, Energy and Mobility
- Funded by the European Commission under the Horizon Europe Framework Programme for Research and Innovation.
- Launched on the 1st Jul. 2022 - Closing on 31st Dec. 2027
- 19 beneficiaries + extended CL5 NCPs community



The consortium

- | | | | |
|-----------------------|--|------------|---|
| 1. APRE (coordinator) |  | 11. ANI |  |
| 2. Hub.brussels |  | 12. Rannis |  |
| 3. RIF |  | 13. EI |  |
| 4. FZJ |  | 14. LXI |  |
| 5. ETAG |  | 15. MESRI |  |
| 6. PRAXI |  | 16. BF OY |  |
| 7. CDTI |  | 17. TC CAS |  |
| 8. RVO |  | 18. MEYR |  |
| 9. NCBR |  | 19. UKRI |  |
| 10. TUBITAK |  | | |

**19 BENEFICIARIES/
PARTNERS**
(52% NEW
ENTRIES)
+
**EXTENDED
CL5 NCPS
COMMUNITY**
(all other officially
appointed NCPs
from MS, AC and
TC)



Objectives

The **aim of GREENET** is to improve the professionalisation of the CL5 NCPs:

- Raising the general standard of support to applicants by **enhancing the competences of the Cluster 5 NCPs**.
- **Raising applicants' awareness on HE funding opportunities as well as their knowledge** by the provision of a **suite of tools** to better tackle the challenges posed by the CL5 of HE.
- **Lowering the entry barriers** for newcomers and participants from widening countries.
- Increasing the quality and inclusiveness of international consortiums **supporting matchmaking among the CL5 applicants**.



Virtual tools overview 1/2



TOOLBOX

[\(link\)](#)



NEWSLETTER

[\(link\)](#)

GREENET Partner Search Tool

The GREENET Partner Search Tool brings together organisations (Coordinators and Partners) to generate new contacts and collaborate on potential Horizon Europe projects (inc

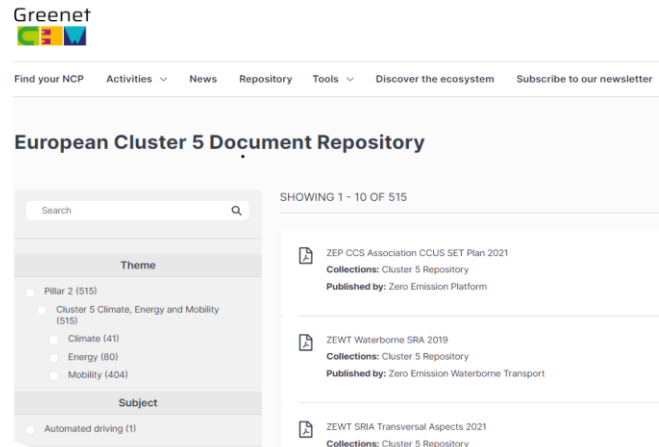


**PARTNER SEARCH
TOOL**

[\(link\)](#)

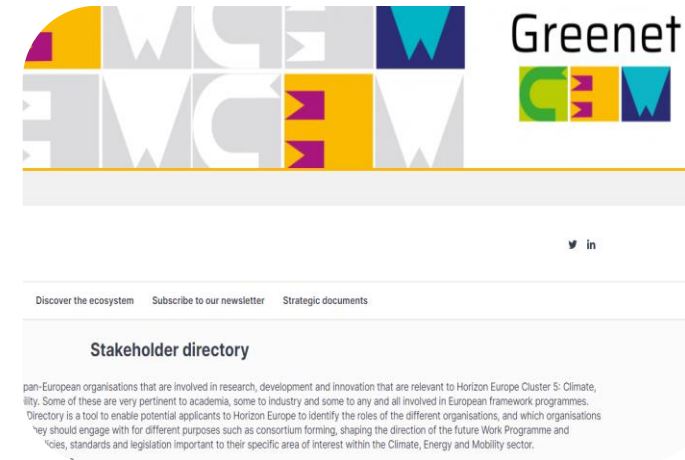


Virtual tools overview 2/2



EUROPEAN CL5 DOCUMENT REPOSITORY

[\(link\)](#)



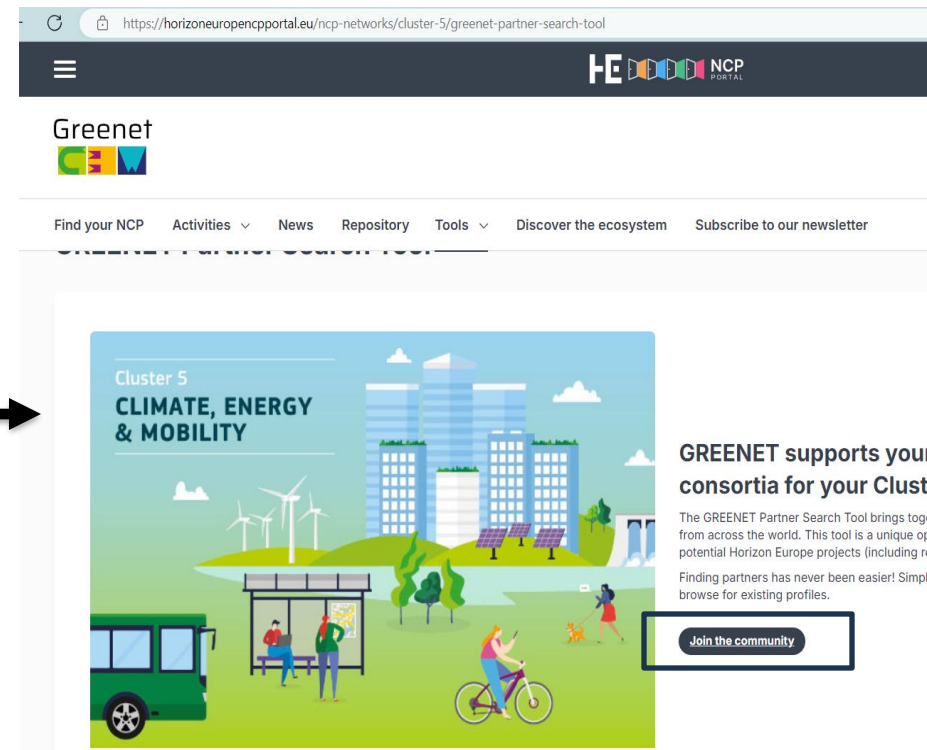
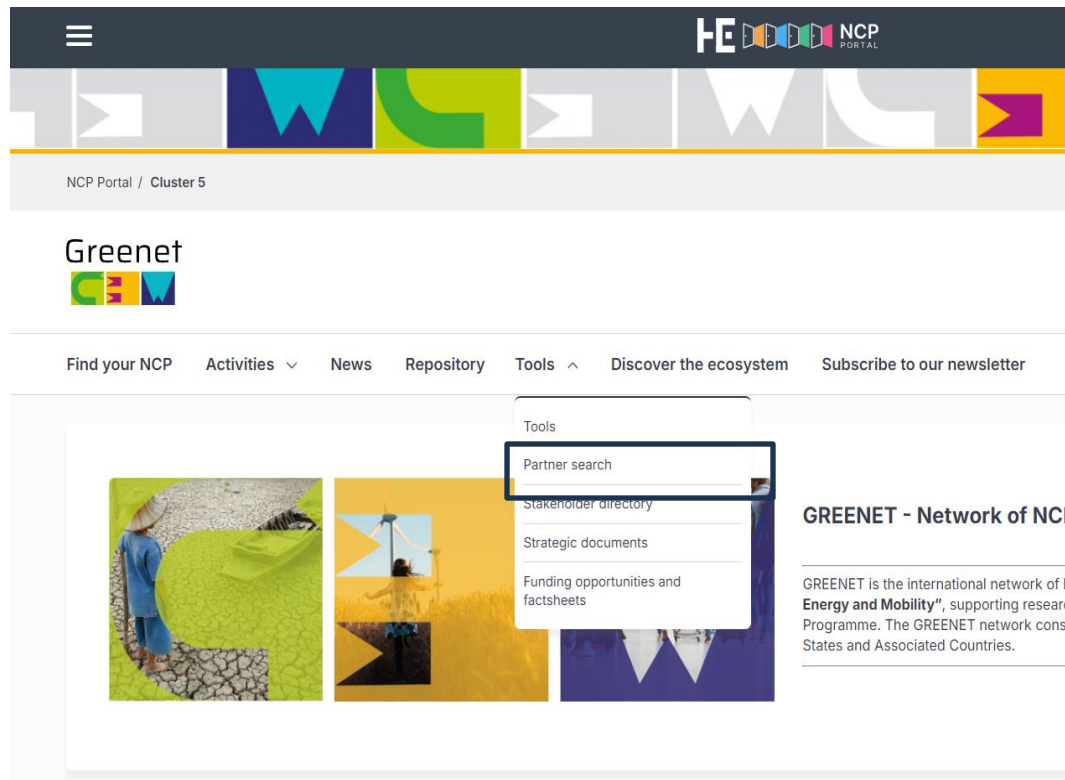
STAKEHOLDER DIRECTORY

[\(link\)](#)



GREENET NCP website

- Website Demo (from NCP portal) <https://horizoneuropencppportal.eu/cluster-5>



GREENET Partner Search Tool

- Register on the [GREENET Partner Search Tool - Info \(b2match.io\)](https://b2match.io)



Greenet



The network of Horizon Europe Cluster 5
National Contact Point.

Thanks for the attention

Do not hesitate to contact us



The GREENET project has received funding from the EU Horizon Europe programme under Grant Agreement No 101069604

CONTACTS



GREENET



@NCP_GREENET



<https://horizoneuropencppportal.eu/cluster-5>



EUROPE'S RAIL INFO DAY CALL 2025-02

Lunch Break

EUROPE'S RAIL INFO DAY CALL 2025-02

Europe's Rail Programme Sessions - Legal and
Financial guidelines

Anna Maria Torres

Grant and Legal Officer, Europe's Rail Joint Undertaking

Where to find EU-Rail's 2025-02 Call for proposals?

- **Funding and Tenders Portal**
- **EU-Rail website > 'Calls' tab**

Before submitting your proposal

- **Participant Register (PIC)**
- **Checks:**
 - ✓ **1. Exclusion**
 - ✓ **2. Admissibility**
 - ✓ **3. Eligibility**
- **Follow rules described in Call for proposals**

Exclusion

- EDES-DB check: before evaluation, before award and before GA signature
- Applicants who are subject to EU administrative sanctions or in certain exclusion situations cannot participate, e.g.:
 - ✓ bankruptcy
 - ✓ in breach of social security or tax obligations
 - ✓ grave professional misconduct
 - ✓ fraud/corruption
 - ✓ significant deficiencies in complying with main obligations under another EU GA/contract
- Applicants will also be refused if :
 - ✓ they misrepresented information required for participating or failed to supply that info
 - ✓ are in a situation of conflict of interest (Col)

Admissibility

- Applicants must submit their proposals **before the deadline** and electronically via the Funding & Tenders Portal
- Applications must be **complete** and contain a **dissemination and exploitation plan**
- Applications must correspond to the **page limit**

Eligibility – *to participate & to receive funding*



EU COUNTRIES

- Member States (**MS**)
- Overseas Countries and Territories (**OCT**) linked to MS



NON-EU COUNTRIES

- Countries **associated** to Horizon Europe (**AC**)
- **Low & middle-income** countries
- Other countries when announced **in the call** or **exceptionally** if their participation is **essential**



SPECIFIC CASES

E.g.,

- EU bodies
- (IO):
 - International European research organisations are eligible for funding
 - Other IO can be eligible for funding only exceptionally

Associated Countries to Horizon Europe



- **20 Associated Countries (AC):** *Albania, Armenia, Bosnia and Herzegovina, Canada, Faroe Islands, Georgia, Iceland, Israel, Kosovo, Moldova, Montenegro, New Zealand, North Macedonia, Norway, Republic of Korea, Serbia, Tunisia, Turkey, Ukraine and United Kingdom.*
- **Transitional arrangements (3):** An applicant/legal entity based in a third country **officially candidate for association** to Horizon Europe **is eligible** (*Egypt, Morocco, Switzerland*).
 - Those applicants will be treated as entities established in an Associated Country, if the **Association Agreement** with the third country concerned **applies at the time of signature of the Grant Agreement**.
 - ❖ *Other countries are negotiating their accession to HE (e.g., Japan) or expressed their interest to join HE (e.g., Singapore) > not eligible*

Eligibility – *to participate (only)*

Non-Associated Third Countries

- **Any legal entity, regardless of its place of establishment** - including legal entities or international organisations from “non-associated third countries” - is **eligible to participate** (*whether it is eligible for funding or not*).
- “Non-associated third country” applicants must submit their proposals as **Associated Partners**.
- **EXCEPTION: entities from countries subject to EU restrictive measures**

Gender Equality Plan

- Having a gender equality plan is an **eligibility criterion** for **Public bodies, Higher Education establishments and Research organisations from Member States and Associated Countries.**
- **It must cover:**
 - ✓ publication: formal document published on the institution's website and signed by the top management
 - ✓ dedicated resources: commitment of resources and expertise in gender equality to implement the plan
 - ✓ data collection and monitoring
 - ✓ sex/gender disaggregated data on personnel and annual reporting based on indicators
 - ✓ training: awareness raising/training on gender equality and unconscious gender biases for staff
- A **self-declaration** will be requested at **proposal stage.**
- **If the proposal is selected, having a GEP in place will be necessary before GA signature.**

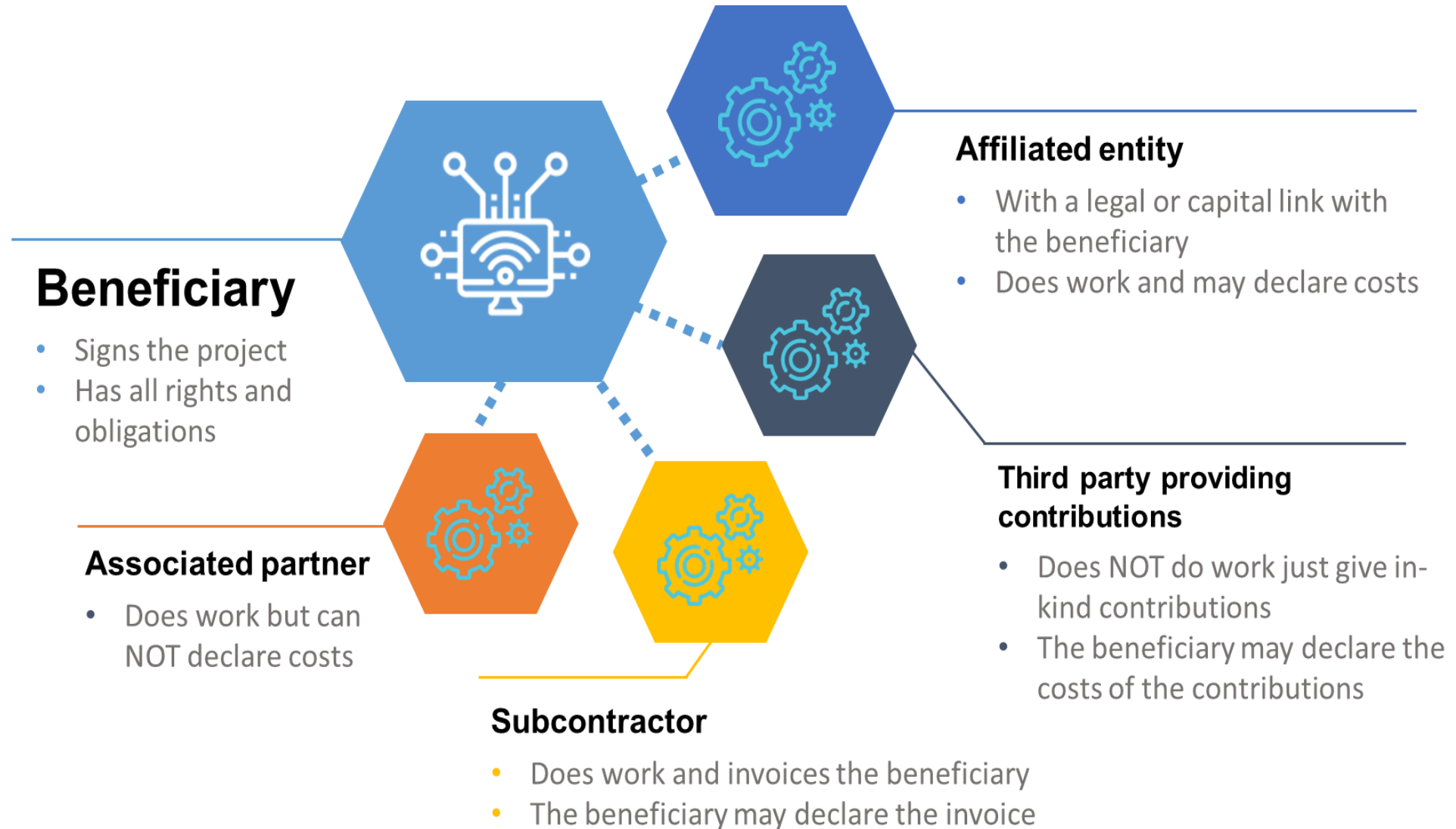
Forming a Consortium of applicants is also an eligibility criterion, with:

- ✓ At least **one independent legal entity** established in an EU Member State
+
- ✓ At least **two other independent legal entities** established either in a different EU Member State or in an Associated Country

Specificity for Coordination and Support Actions (CSA):

Applications may be submitted by **one or more legal entities**, which may be established in an EU Member State, Associated Country or, in exceptional cases and if provided for in the specific call/topic conditions, in another third country.

How can you participate in a Consortium?



Structure of proposals in HE



NEW IN PART A

- Researchers table – needed to follow up researchers careers (HE indicator)
- Role of participating organisations
- Self-declaration on gender equality plan



FIELDS MOVED FROM PART B TO PART A

- Ethics self-assessment
- Security questionnaire



NEW IN PART B

- Glossary of terms
- Consistency on the use of terminology is ensured in all project phases
- Explanations on what exactly should be included in each section

Ethics review

- EU funded activities must comply with fundamental ethical principles and legislation, including adherence to the highest standards of **research integrity** as described in the **European Code of Conduct for Research Integrity**.
- An ethics review process is carried out systematically in ALL HE proposals, based on a **self-assessment** included in the proposal.

For more information > [How to complete your ethics self-assessment.](#)

- Projects involving ethics issues will have to undergo an ethics review to authorise funding and may be made subject to specific ethics requirements, which become part of the grant agreement as **ethics deliverables** (e.g., ethics committee opinions or authorisations required under national or EU law).

Security scrutiny

- Security issues will be checked **systematically** in ALL HE proposals.
- The checks are based on a **self-assessment** included in the proposal.
- **The focus is on:**
 - Whether the proposal uses or generates EU classified information
 - Potential of misuse of results (that could be channeled into crime or terrorism)
 - Whether activities involve information or materials subject to national security restrictions

Checks based on self-assessment may trigger an in-depth security.

Evaluation of proposals

3 award criteria: 'Excellence', 'Impact' and 'Quality and efficiency of implementation'

> But specific EU-Rail sub-criteria - Annex VIII of the EU-RAIL WP 2025-2026

Part D of '*Horizon Europe Work Programme 2023-2025 General Annexes*' applies regarding the award criteria, scores and weighting, **with the following additions**:

- Excellence: '*quality of the proposed joint activities to achieve the deliverables*'
- Impact: '*quality and credibility of the action to contribute achieving the EU-Rail Master Plan objectives and the expected impact of the EU-Rail Multi-Annual Work Programme*'
- Quality and efficiency of the implementation: '*appropriateness of the project management structure and quality of the proposed coordination*'

Evaluation process: Award criteria (as per Horizon Europe + JU specificities as per Annex VIII of EU-RAIL AWP)

Research and Innovation Actions (RIA) & Innovation Actions (IA)

EXCELLENCE

- ✓ Clarity and pertinence of the **project's objectives**, and the extent to which the proposed work is ambitious, and goes beyond the state-of-the-art.
- ✓ Soundness of the proposed **methodology**, including the underlying concepts, models, assumptions, interdisciplinary approaches, appropriate consideration of the **gender dimension** in research and innovation content, and the quality of **open science practices** including sharing and management of research outputs and engagement of citizens, civil society and end users where appropriate.
- ✓ **Quality of the proposed joint activities to achieve the deliverables.**

IMPACT

- ✓ Credibility of the **pathways** to achieve the expected **outcomes and impacts** specified in the work programme, and the likely scale and significance of the contributions from the project.
- ✓ Suitability and quality of the **measures to maximize expected outcomes and impacts**, as set out in the dissemination and exploitation plan, including communication activities.
- ✓ **Quality and credibility of the action to contribute achieving the EU-Rail Master Plan objectives and the expected impact of the EU-Rail Multi-Annual Work Programme.**

QUALITY AND EFFICIENCY OF THE IMPLEMENTATION

- ✓ Quality and effectiveness of the **work plan**, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall.
- ✓ Capacity and role of each **participant**, and extent to which the **consortium** as a whole brings together the necessary expertise.
- ✓ **Appropriateness of the project management structure and quality of the proposed coordination.**

Evaluation process: Award criteria

(as per Horizon Europe + JU specificities as per Annex VIII of EU-RAIL AWP)

Coordination and Support Actions (CSA)

EXCELLENCE

- ✓ Clarity and pertinence of the **project's objectives**.
- ✓ **Quality** of the **proposed coordination** and/or support measures including soundness of **methodology**.
- ✓ **Quality of the proposed joint activities to achieve the deliverables**.

IMPACT

- ✓ Credibility of the **pathways** to achieve the expected **outcomes and impacts** specified in the work programme, and the likely scale and significance of the contributions from the project.
- ✓ Suitability and quality of the **measures to maximize expected outcomes and impacts**, as set out in the dissemination and exploitation plan, including communication activities.
- ✓ **Quality and credibility of the action to contribute achieving the EU-Rail Master Plan objectives and the expected impact of the EU-Rail Multi-Annual Work Programme**.

QUALITY AND EFFICIENCY OF THE IMPLEMENTATION

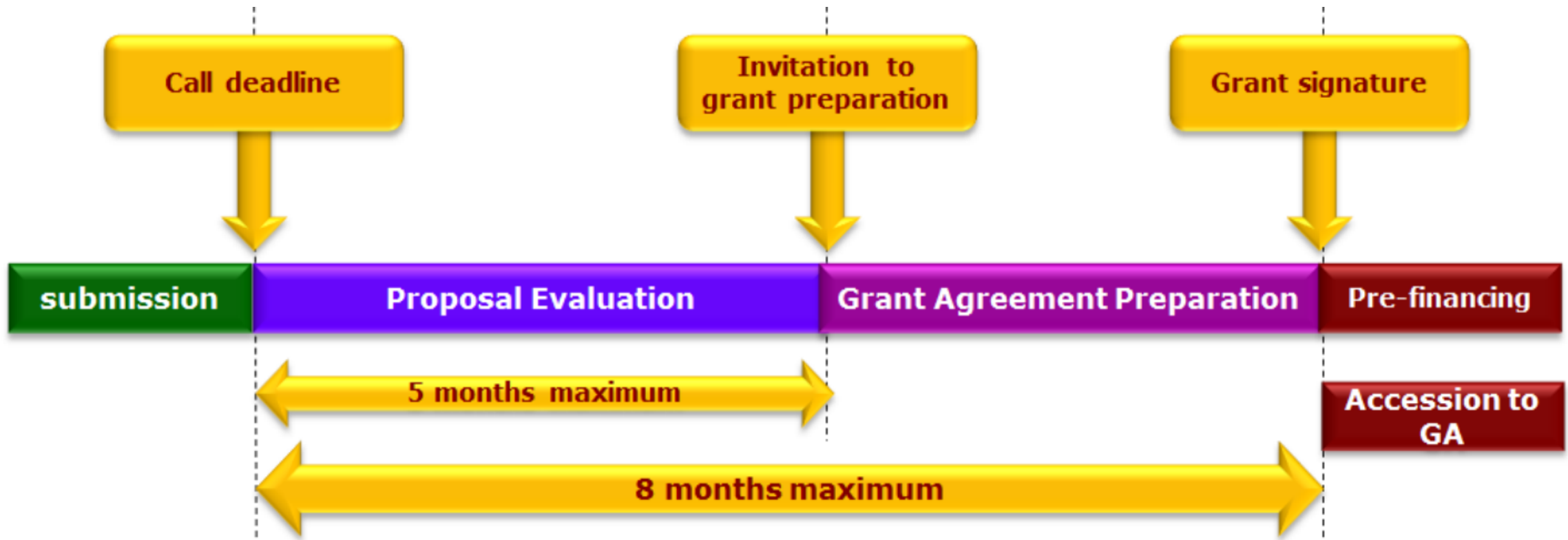
- ✓ Quality and effectiveness of the **work plan**, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall.
- ✓ Capacity and role of each **participant**, and extent to which the **consortium** as a whole brings together the necessary expertise.
- ✓ **Appropriateness of the project management structure and quality of the proposed coordination**.

Scores and weighting

- Evaluation **scores** will be awarded for the criteria
- For full applications, **each criterion** will be scored **out of 5**
- The **threshold** for individual criteria will be **3**
- The **overall threshold**, applying to the sum of the three individual scores, will be **10**
- To determine the **ranking for IAs**, the score for '**Impact**' will be given a **weight of 1.5**
- Weighting is only used for the ranking (not to determine if the proposal passed the thresholds)
- Proposals that pass the individual threshold *AND* the overall threshold will be **considered for funding**, within the limits of the available call budget

Time to Grant

- Information on the outcome of the evaluation: around 5 months from the deadline for submission
- Indicative date for the signing of grant agreements: around 8 months from the deadline for submission



What does the HE Grant Agreement looks like?



e-GRANT

The HE grant agreement and its management are **fully electronic**: from the signature of the grant until its end. All actions and communications will flow via the F&T Portal.



CORPORATE STRUCTURE

The HE grant agreement is based on a **Commission-wide model** (so-called '**Corporate Model Grant Agreement**').



SPECIFIC ANNEX 5

Some important rights and obligations are part of Annex 5:

- **Security**
- **Ethics**
- **Values**
(i.e. *gender mainstreaming*)
- **IPR**
- **Communication, Dissemination, Open Science and Visibility**
- **Specific rules for carrying out the action**

EUROPE'S RAIL INFO DAY 2025-02

Europe's Rail Programme Sessions - Legal and
Financial guidelines

Sandro Benidio

Financial Officer

Europe's Rail Joint Undertaking

FINANCIAL GUIDELINES

Horizon Europe - The next EU Research and Innovation investment Programme (2021-2027) and EU-Rail JU

1. Lump sum Grants - Overview
2. Lump sum - Detailed Budget table
3. Private Members' contributions

1. Lump sum Grants - Overview

Sandro Benidio

Financial Officer

Europe's Rail Joint Undertaking

Why do we use lump sum funding?

Significant simplification potential

- Despite all simplification, funding based on reimbursement of incurred costs remains complex and error-prone
- Lump sum project funding removes all obligations on actual cost reporting and financial ex-post audits – i.e. a major reduction of administrative burden
- Access to the programme becomes easier, especially for small organisations and newcomers

Focus on content

- Less focus on financial management, and more focus on the scientific-technical content of projects

Writing a lump sum proposal

- To write a lump sum proposal, you:
 - Use the standard Horizon Europe application form
 - Present the objectives and methodology of your project and address the expected outcomes and impacts as in any Horizon Europe proposal
 - Describe in detail the activities covered by each work package.
- To define and justify the lump sum, you need to provide a **detailed budget table** with cost estimations.
- The detailed budget table is an **Excel file**. You must download it from the online submission system, fill it and submit it as an annex to the Part B of your application form.

Writing a lump sum proposal

- In this detailed budget table, you provide **cost estimations for each cost category** per beneficiary (and affiliated entity if any) and per work package.
- The cost estimations must be an **approximation of your actual costs**. They:
 - are subject to the same eligibility rules as in actual costs grants
 - must be in line with your normal practices
 - must be reasonable / non-excessive
 - must be in line with and necessary for your proposed activities.
- The cost estimations are used to generate in the detailed budget table a **breakdown of lump sum shares** per work package and per participant.
- If the budget table contains ineligible costs, the grants may be reduced (even later on during implementation of the project, or after they end).
- Details and instructions on how to fill in the lump sum detailed budget table are provided in the [Funding & Tenders portal](#).

Writing a lump sum proposal

Work package distribution



As many as needed but no more than what is manageable

A work package (WP) is a major sub-division of the work plan of your project.

- A single activity is not a WP
- A single task is not a WP
- A % of progress is not a WP (e.g. 50 % of the tests)
- A lapse of time is generally not a WP (e.g. activities of year 1)

Work packages with a long duration **may** be split along the reporting periods (e.g., Management, Dissemination and Exploitation, etc.). In this way, the relevant activities can be paid at the end of the reporting period.

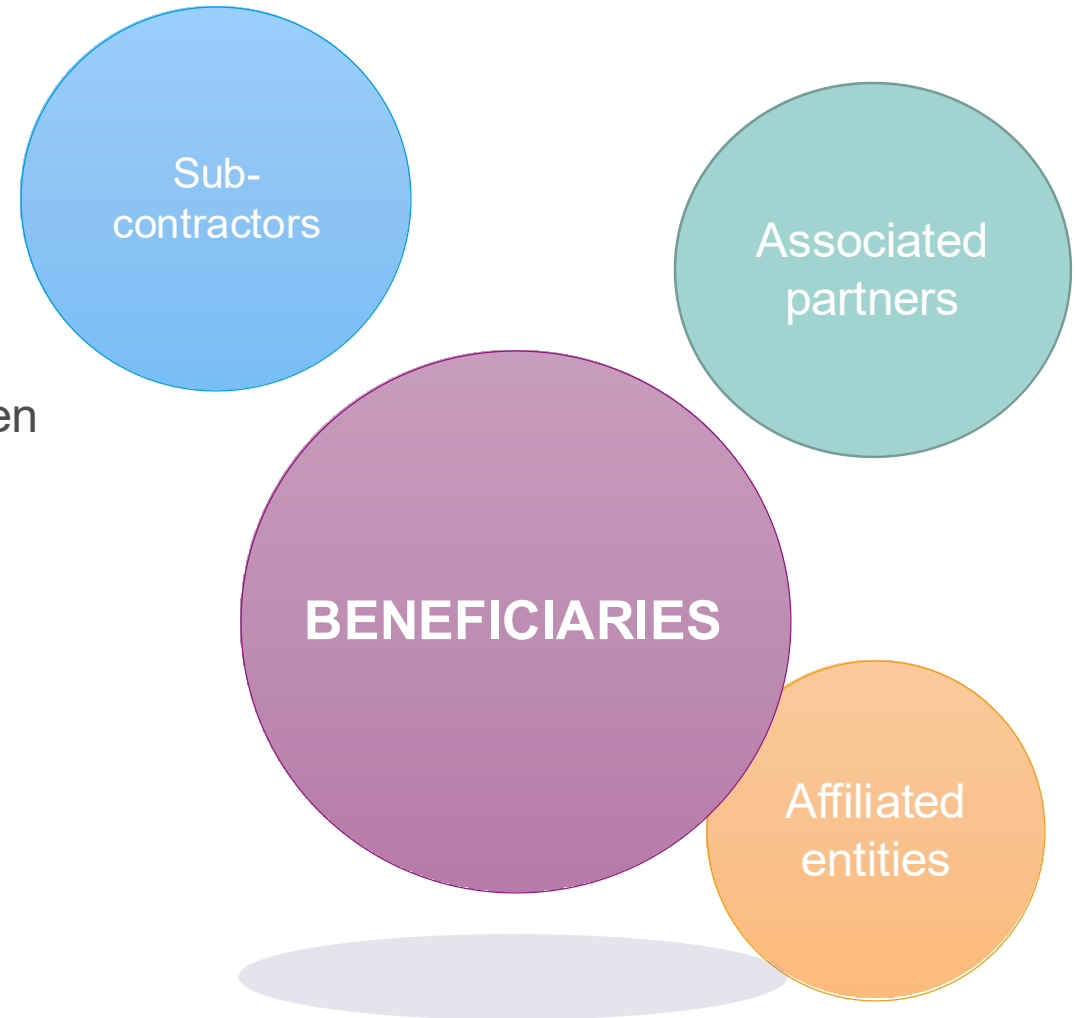
Financial aspects – types of participation

Costs actually incurred are not relevant.

Who does the work still is!

- You need to know which participant does what when carrying out the project (see bubbles to the right).
- The partner organisations and their activities are specified in the grant agreement. This includes:
 - Beneficiaries
 - Affiliated entities (if any)
 - Associated partners (if any)
 - Subcontractors (if any)*

* Subcontracted activities must be in the grant agreement, but the subcontractor may or may not be named.



Financial aspects – Type of costs



PERSONNEL COSTS

- ❖ Cost of the time worked for the project by:
 - **A.1** Employees
 - **A.2** Natural persons under direct contract
 - **A.3** Seconded persons
 - **A.4** SME owners and natural person beneficiaries



SUBCONTRACTING COSTS

- ❖ You sub-contract another entity to do part of the work allocated to you in the description of the action
- ❖ The principles of subcontracting (ensuring **best value for money, no Col**, subcontracting of only a limited part of the action, etc.) are still compulsory



PURCHASE COSTS

- ❖ **Travel and subsistence costs** for trips necessary for the project
- ❖ **Equipment** used for the project. In most cases, check if depreciation /full costs are eligible
- ❖ **Other goods, works and services**



OTHER COST CATEGORIES

e.g.

- ❖ **Financial support to third parties (if applicable)**
- ❖ **Internal invoices**
Cost charged internally from one department to another of the same beneficiary; but only if you have a defined cost accounting method

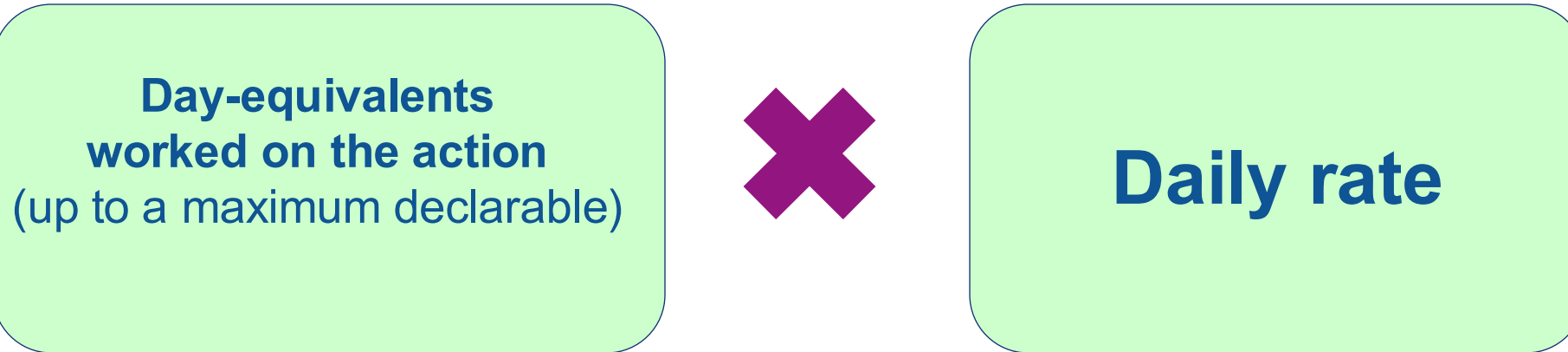


INDIRECT COSTS

- ❖ **25% flat rate** applied on most of the other budget categories. When reporting, the IT system will calculate this automatically!

Financial aspects – Personnel costs

Corporate formula



Basic principles

- *Simplification → Commission-wide formula (valid across EU programmes)*
- *Single calculation for the reporting period as a rule*
- *Per person who worked in the action*
- *Maximum declarable day-equivalents per year: pro-rata of 215 days*

Financial aspects – Calculation of the daily rate



Financial aspects – Subcontracting

- The principles of subcontracting (**ensuring best value for money, no Col, subcontracting of only a limited part of the action, etc.**) are still compulsory
- BUT are not considered to be additional cost eligibility condition.
- The estimated costs for each subcontract have to be included in Annex 1 and the total estimated costs of subcontracting per beneficiary are displayed in Annex 2.
- The **costs of subcontracting MUST BE** indicated in the “**Financial Excel table**” and are part of the lump sum.

Financial aspects – Purchase costs



C.1 Travel and subsistence

- Travel costs
- Accommodation costs
- Subsistence costs



C.2 Equipment

- Depreciation costs (by default)
- Full costs for all or some equipment (3 options)



C.3 Other goods, works and services

- e.g. consumables and supplies

COMMON ELIGIBILITY RULES for purchase costs

- must fulfil the general eligibility conditions and
- be bought using the beneficiary's usual purchasing practices, provided the following is ensured:
 - ✓ **best value for money (or if appropriate the lowest price) and**
 - ✓ **no conflict of interests**



Evaluation of a lump sum proposal

- Your proposal will be evaluated by independent experts against the **standard evaluation criteria**: excellence, impact, and implementation.
- The cost estimations will be assessed against the proposed activities under the **implementation** criterion.
- Experts will:
 - ensure that the cost estimations are **reasonable and non-excessive**
 - evaluate whether the proposed resources and the split of the lump sum **allow completing the activities described in the proposal**.
- If the experts find overestimated costs, they make **concrete recommendations** on the budget that are recorded in the Evaluation Summary Report. This will be reflected in a modified lump sum amount in the grant agreement.
- Cost estimations that are clearly overestimated or underestimated lead to a **decreased score** under the implementation criterion.

Grant preparation

- We follow the **standard process to prepare the grant agreement**.
- The grant agreement for your project will be based on the [Model Grant Agreement for lump sum grants](#).
- The **'no negotiation' principle** applies. The grant agreement is prepared on the basis of the proposal you submitted. However, some changes might be necessary:
 - correcting obvious errors and inconsistencies
 - other changes necessary to comply with applicable rules
 - adjustment of the lump sum to the amount specified in the Evaluation Result Letter
- The **breakdown of lump sum shares per beneficiary and per work package** is included in the grant agreement as Annex 2.
- Once the lump sum is fixed in the grant agreement, **it will not be questioned** if the prices for goods or services change later on.

Grant preparation - Budget allocation

Budget allocation (annex 2 to the grant agreement)

| | WP1 | WP2 | WP3 | WP4 | WP5 | WP6 | WP7 | WP8 | Total | |
|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|--|
| Beneficiary A | 250.000 | | | 50.000 | 300.000 | 250.000 | | 300.000 | 1.150.000 | Shares of the lump sum per beneficiary |
| Beneficiary B | | 250.000 | 350.000 | 50.000 | | | 100.000 | 150.000 | 900.000 | |
| Beneficiary C | 100.000 | 100.000 | | 50.000 | | 280.000 | | | 530.000 | |
| Beneficiary D | | 120.000 | | 50.000 | | | 100.000 | 150.000 | 420.000 | |
| Total | 350.000 | 470.000 | 350.000 | 200.000 | 300.000 | 530.000 | 200.000 | 600.000 | 3.000.000 | |

Shares of the lump sum per WP

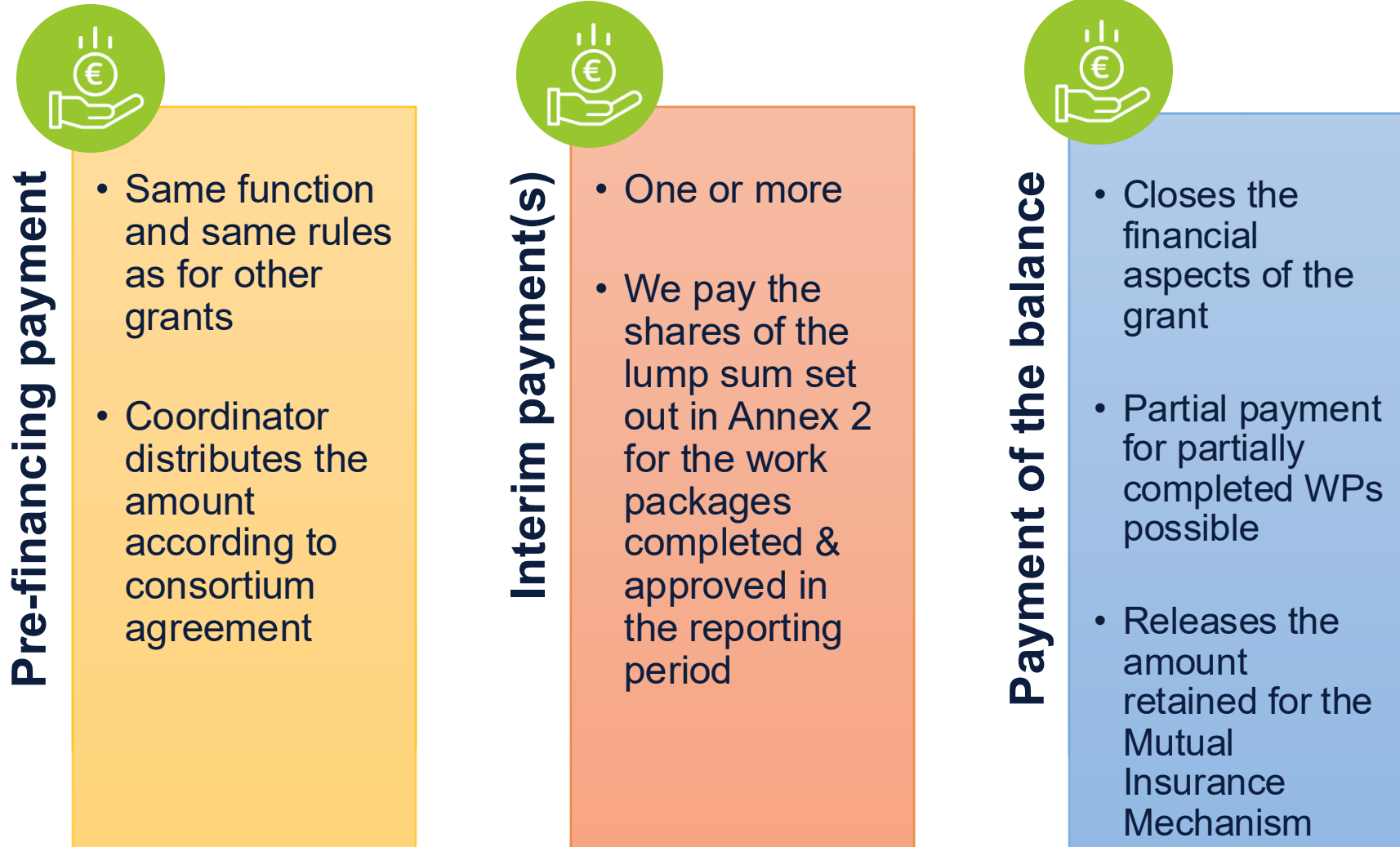
Lump sum
=
Maximum grant amount

You can **use the budget as you see fit** as long as the project is implemented as agreed.

Budget transfers between work packages and/or partners require an amendment if the consortium wants to reflect them in the grant agreement.

Payment schedule

Types of payments:



Reporting and payment

- Use the **standard reporting template**
- The coordinator declares work packages as **Completed** or **Not Completed**. This should be justified by the technical periodic report.
- An incomplete work package can be completed and paid in a subsequent reporting period.
- At the final reporting period, it is possible to declare **Partially Completed** work packages, and to enter the percentage of completion.

Status of completion SAVE

| Number | Title | Lead Beneficiary | Status of Completion | Completion % |
|--------|-------|------------------|----------------------|--------------|
| WP1 | wp1 | AST GmbH | Partially Completed | 60.00 |
| WP2 | wp2 | AAA | Completed | 100.00 |
| WP3 | wp3 | AST GmbH | Partially Completed | 50.00 |
| WP4 | wp4 | AAA | Not Completed | 0.00 |
| WP5 | wp5 | AST GmbH | Not Completed | 0.00 |



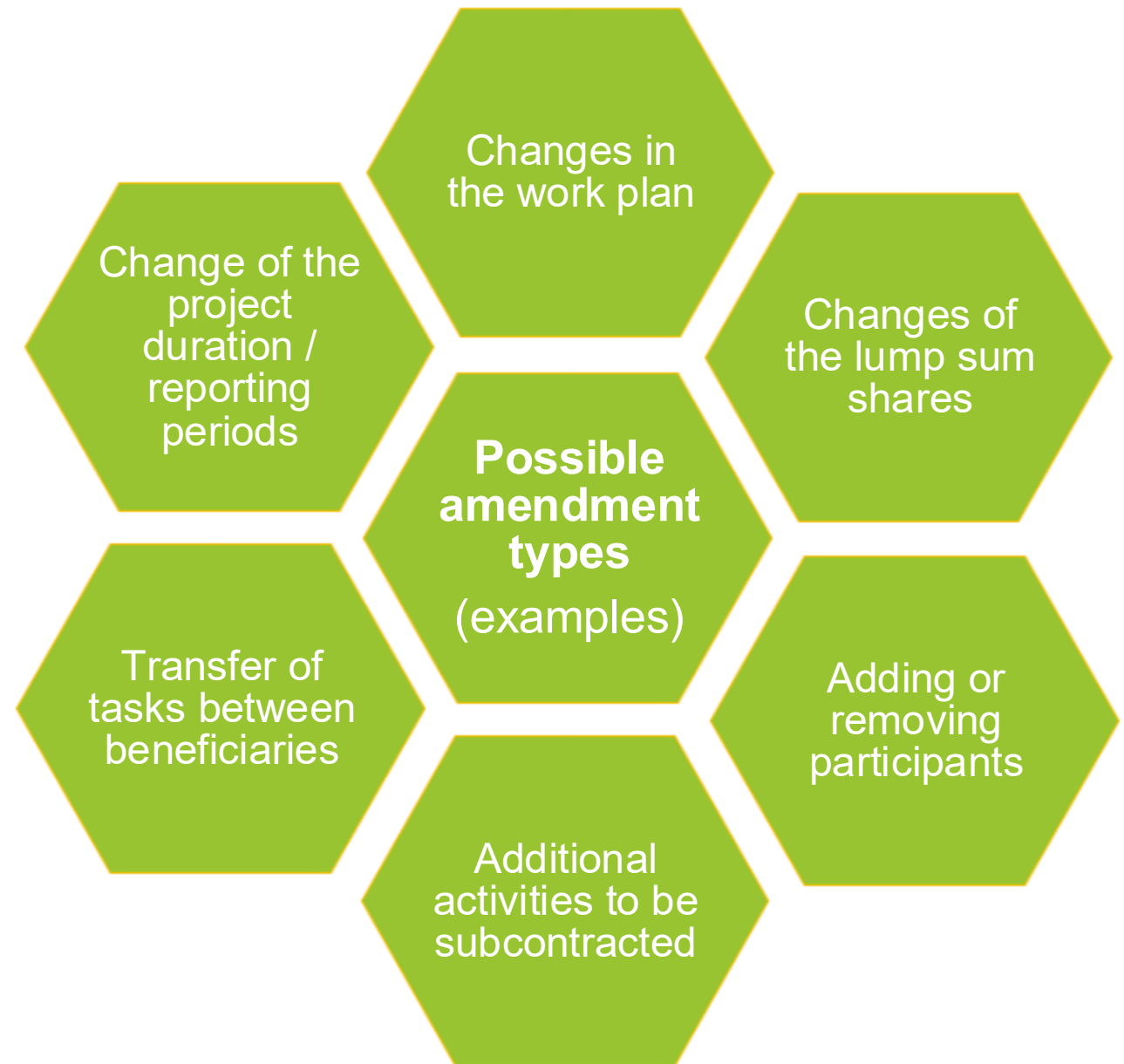
The completion of work packages is not based on a successful outcome, but on the **completion of activities** as described in the description of action.

Acceptance of work packages

- Work packages are **accepted if the activities have been carried out**. We can also accept them when all essential tasks have been completed, when equivalent tasks have been carried out, or when deviations have been justified.
- **Lump sum projects can be amended** according to scientific-technical needs (or deviations can be justified in the reports). Use these mechanisms to make completion of work packages feasible.
- Before a lump sum work package (that you declared completed) is rejected as incomplete, you are invited to **respond to the observations of the project officer**.
- If the rejection is upheld the lump sum share concerned is not paid at that point in time. You should **complete the work package later** and declare it at the end of any subsequent reporting period.
- If it is not possible to complete a work package by the end of the project (e.g., for technical reasons or due to force majeure), the **lump sum is paid partially** in line with the degree of completion. The decision on the partial amount is taken on a case-by-case basis. You will be able to provide observations.

Amendments

- Lump sum grants **can be amended**.
- **Same procedure and conditions** as for all Horizon grants.
- Lump sum work packages that have already been paid **cannot be amended**.
- **Deviations** from the work plan can also be flagged in the periodic report (**simplified procedure**).



Ex-post technical reviews

Checks, reviews and audits for:



Proper implementation of the action (e.g. technical review)



Compliance with the other non-financial obligations of the grant, e.g.



IPR obligations

Ethics and integrity

Open science

Dissemination

Etc.



No financial ex-post audits by EC, only ex-post technical reviews by the JU services based on a sampling

Keeping records

Consortium **needs to keep**
(e.g.)



- ☐ Technical documents
- ☐ Publications, prototypes, deliverables
- ☐ Documentation required by good research practices such as lab books
- ☐ ...any document proving that the work was done as detailed in Annex 1

Same as for all Horizon Europe grants

Consortium **keeps but we won't require them during the course of the Action***



- ☐ Time-sheets
- ☐ Pay-slips or contracts
- ☐ Depreciation policy
- ☐ Invoices
- ☐ ...any documents proving the actual costs incurred

*Participants still need to comply with financial record keeping **obligations outside the grant agreement**, if any (e.g., under national law or internal procedures)

2. Lump Sum detailed Budget table

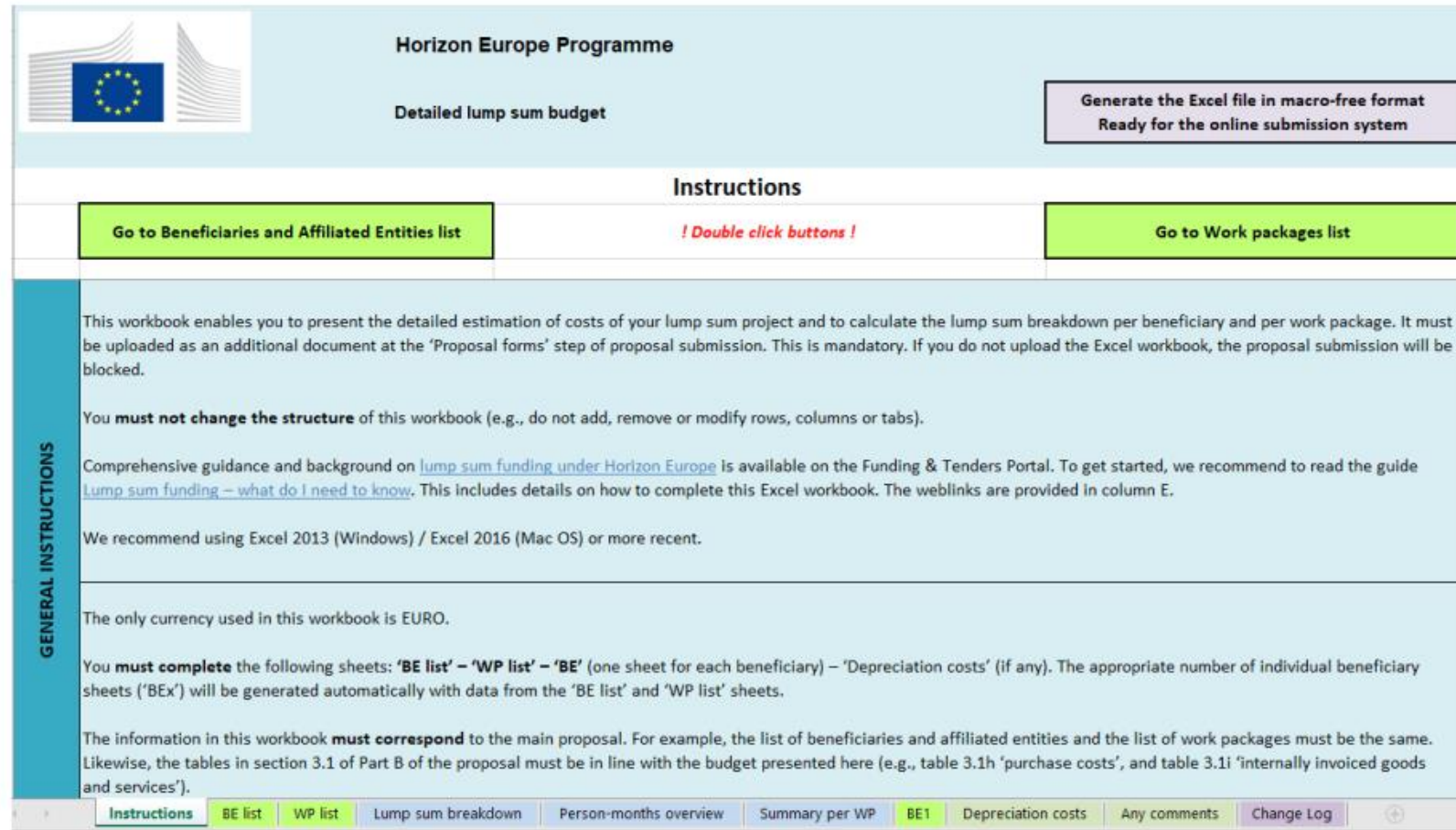
Sandro Benidio

Financial Officer

Europe's Rail Joint Undertaking

Instructions:

- In this tab, **all the necessary instructions** on how to fill in the table are shown
- For your proposal, you must **always use the file provided in the online submission system**. For information only, the template is available on the [Funding & Tenders Portal](#).



The screenshot shows the 'Horizon Europe Programme' interface for the 'Detailed lump sum budget'. At the top right, there is a button: 'Generate the Excel file in macro-free format Ready for the online submission system'. Below this, the 'Instructions' tab is active, showing two green buttons: 'Go to Beneficiaries and Affiliated Entities list' and 'Go to Work packages list', with a red warning text '! Double click buttons !' between them. The main content area is titled 'GENERAL INSTRUCTIONS' and contains the following text:

This workbook enables you to present the detailed estimation of costs of your lump sum project and to calculate the lump sum breakdown per beneficiary and per work package. It must be uploaded as an additional document at the 'Proposal forms' step of proposal submission. This is mandatory. If you do not upload the Excel workbook, the proposal submission will be blocked.

You **must not change the structure** of this workbook (e.g., do not add, remove or modify rows, columns or tabs).

Comprehensive guidance and background on [lump sum funding under Horizon Europe](#) is available on the Funding & Tenders Portal. To get started, we recommend to read the guide [Lump sum funding – what do I need to know](#). This includes details on how to complete this Excel workbook. The weblinks are provided in column E.

We recommend using Excel 2013 (Windows) / Excel 2016 (Mac OS) or more recent.

The only currency used in this workbook is EURO.

You **must complete** the following sheets: 'BE list' – 'WP list' – 'BE' (one sheet for each beneficiary) – 'Depreciation costs' (if any). The appropriate number of individual beneficiary sheets ('BEx') will be generated automatically with data from the 'BE list' and 'WP list' sheets.

The information in this workbook **must correspond** to the main proposal. For example, the list of beneficiaries and affiliated entities and the list of work packages must be the same. Likewise, the tables in section 3.1 of Part B of the proposal must be in line with the budget presented here (e.g., table 3.1h 'purchase costs', and table 3.1i 'internally invoiced goods and services').

At the bottom, there is a tab bar with the following tabs: 'Instructions' (selected), 'BE list', 'WP list', 'Lump sum breakdown', 'Person-months overview', 'Summary per WP', 'BE1', 'Depreciation costs', 'Any comments', and 'Change Log'.

BE List:

In this tab, you should add all the beneficiaries and affiliated entities and **chose the respective funding rate (open field)**. Once completed click on the button “apply changes” and the table will now include a tab for each beneficiary.



| List of beneficiaries (BE) and affiliated entities (AE) | | | | | | Add BE | Delete OLD_BE backup sheets | Apply changes |
|---|-------------------|-------------------------|---------|------------------|--------------|---------------|--------------------------------|---------------|
| BE/AE nr | Role | BE/AE name | Acronym | Country | Funding rate | | | |
| BE1 | Coordinator | University 1 | Uni1 | Belgium (BE) | 100% | | | |
| BE1-AE2 | Affiliated entity | Laboratory 1 | Lab1 | Netherlands (NL) | 100% | Clear BE1-AE2 | Add AE to BE1 | |
| BE3 | Beneficiary | SME 1 | SME1 | Croatia (HR) | 100% | Clear BE3 | Add AE to BE3 | |
| BE4 | Beneficiary | Research organisation 1 | RES1 | Ireland (IE) | 70% | Clear BE4 | Add AE to BE4 | |
| BE5 | Beneficiary | University 2 | Uni2 | Estonia (EE) | 100% | Clear BE5 | Add AE to BE5 | |
| BE6 | Beneficiary | SME 2 | SME2 | Luxembourg (LU) | 100% | Clear BE6 | Add AE to BE6 | |

WP List:

In this tab, you should add all the work packages defined for the project and their description. Once completed click on the button “apply changes” and the table will now be ready to complete with the financial information from the beneficiaries and their affiliated entities.

| List of Work Packages | | <div><div>Add WP</div><div>Double click buttons</div><div>Apply changes</div></div> | |
|-----------------------|-------------------------------|---|-----------|
| WP number | WP name | | |
| WP1 | Analysis | | |
| WP2 | Technical part | | Clear WP2 |
| WP3 | Experiment 1 | | Clear WP3 |
| WP4 | Experiment 2 | | Clear WP4 |
| WP5 | Communication & dissemination | | Clear WP5 |
| WP6 | Project management 1 | | Clear WP6 |
| WP7 | Project managmeent 2 | | Clear WP7 |

Individual beneficiary sheets– with or without AE:

- The financial information for each beneficiary and their AE (when applicable) should be added in each respective tab and for each respective work package.
- Only the yellow cells can be filled and all the calculations are based on pre-defined formulas
- At the end of the sheet, you can find a summary with the information concerning all work packages and the total costs foreseen for each beneficiary or affiliated entity

| Beneficiary: BE3 - BUDGET SHEET | | View Summary | | |
|--|--|--------------|---------------|----------------|
| | | SME 1 | | |
| COST CATEGORY | | ITEMS | COST PER ITEM | BE TOTAL COSTS |
| COSTS WORK PACKAGE 1: WP1 name | | | | |
| A. DIRECT PERSONNEL COSTS | | | | |
| A.1 Employees (or equivalent) | | | | |
| SENIOR SCIENTISTS (or equivalent in the private sector) | | 5.0 | 7000 | 35000.00 |
| JUNIOR SCIENTISTS (or equivalent in the private sector) | | 10.0 | 4900 | 49000.00 |
| TECHNICAL PERSONNEL (or equivalent in the private sector) | | 5.0 | 5300 | 26500.00 |
| ADMINISTRATIVE PERSONNEL (or equivalent in the private sector) | | | | 0.00 |
| OTHERS | | | | 0.00 |
| A.2 Natural Persons under direct contract | | | | 0.00 |
| A.3 Seconded Persons | | | | 0.00 |
| A.4 SME owners and natural person beneficiaries | | | 4798 | 0.00 |
| B. DIRECT SUBCONTRACTING COSTS | | | | 0.00 |
| C. DIRECT PURCHASE COSTS | | | | |
| C.1 Travel and subsistence | | 5.0 | 1500 | 7500.00 |
| C.2 Equipment (complete 'Depreciation costs' sheet) | | | | |
| Equipment | | 2.0 | 3000 | 6000.00 |
| Infrastructure | | | | 0.00 |
| Other assets | | | | 0.00 |
| C.3 Other goods, works and services | | | | |
| Consumables | | 1.0 | 7500 | 7500.00 |
| Services for meetings, seminars | | | | 0.00 |
| Services for dissemination activities (including website) | | | | 0.00 |
| Publication fees | | | | 0.00 |
| Other (shipment, insurance, translation, etc.) | | | | 0.00 |
| D. OTHER COST CATEGORIES | | | | |
| D.1 Financial support to third parties (if applicable in the topic specific conditions) | | | | 0.00 |
| D.2 Internally invoiced goods and services | | | | 0.00 |
| D.3 Transnational access to research infrastructure unit costs (if mentioned as eligible in the topic specific conditions) | | | | 0.00 |
| D.4 Virtual access to research infrastructure unit costs (if mentioned as eligible in the topic specific conditions) | | | | 0.00 |
| D.5 PCP/PPI procurement costs (if mentioned as eligible in the topic specific conditions) | | | | 0.00 |
| TOTAL DIRECT PERSONNEL COSTS AND PURCHASE COSTS (A+C) | | | | 131500.00 |
| Instructions BE list WP list Lump sum breakdown Person-months overview Summary per WP BE1 BE3 BE4 BE5 BE6 Depreciation | | | | |

Fill in the individual beneficiary sheets ('BEx' tab) – affiliated entities

| Coordinator: BE1 - BUDGET SHEET | View Summary | | | BE1-AE2 | | | |
|--|--------------|---------------|----------------|--------------|---------------|----------------|-------------------|
| | University 1 | | | Laboratory 1 | | | |
| COST CATEGORY | ITEMS | COST PER ITEM | BE TOTAL COSTS | ITEMS | COST PER ITEM | AE TOTAL COSTS | BE+AE TOTAL COSTS |
| COSTS WORK PACKAGE 1: WP1 name | | | | | | | |
| A. DIRECT PERSONNEL COSTS | | | | | | | |
| A.1 Employees (or equivalent) | | | | | | | |
| SENIOR SCIENTISTS (or equivalent in the private sector) | | | 0.00 | | | 0.00 | 0.00 |
| JUNIOR SCIENTISTS (or equivalent in the private sector) | | | 0.00 | | | 0.00 | 0.00 |
| TECHNICAL PERSONNEL (or equivalent in the private sector) | | | 0.00 | | | 0.00 | 0.00 |
| ADMINISTRATIVE PERSONNEL (or equivalent in the private sector) | | | 0.00 | | | 0.00 | 0.00 |
| OTHERS | | | 0.00 | | | 0.00 | 0.00 |
| A.2 Natural Persons under direct contract | | | 0.00 | | | 0.00 | 0.00 |
| A.3 Seconded Persons | | | 0.00 | | | 0.00 | 0.00 |
| A.4 SME owners and natural person beneficiaries | | 5990 | 0.00 | | 6685 | 0.00 | 0.00 |
| B. DIRECT SUBCONTRACTING COSTS | | | 0.00 | | | 0.00 | 0.00 |
| C. DIRECT PURCHASE COSTS | | | | | | | |
| C.1 Travel and subsistence | | | 0.00 | | | 0.00 | 0.00 |
| C.2 Equipment (complete 'Depreciation costs' sheet) | | | | | | | |
| Equipment | | | 0.00 | | | 0.00 | 0.00 |
| Infrastructure | | | 0.00 | | | 0.00 | 0.00 |
| Other assets | | | 0.00 | | | 0.00 | 0.00 |
| C.3 Other goods, works and services | | | | | | | |
| Consumables | | | 0.00 | | | 0.00 | 0.00 |
| Services for meetings, seminars | | | 0.00 | | | 0.00 | 0.00 |
| Services for dissemination activities (including website) | | | 0.00 | | | 0.00 | 0.00 |
| Publication fees | | | 0.00 | | | 0.00 | 0.00 |
| Other (shipment, insurance, translation, etc.) | | | 0.00 | | | 0.00 | 0.00 |
| D. OTHER COST CATEGORIES | | | | | | | |
| D.1 Financial support to third parties (if applicable in the topic specific conditions) | | | 0.00 | | | 0.00 | 0.00 |
| D.2 Internally invoiced goods and services | | | 0.00 | | | 0.00 | 0.00 |

- If a beneficiary has an affiliated entity, columns for this entity are generated automatically in the 'BEx sheet'.
- Enter the cost estimations of the affiliated entity in the same way as for the main beneficiary.

Fill in the individual beneficiary sheets – personnel costs

| | A | B | C | D |
|----|--|--------------|----------------------|-----------------------|
| 1 | Beneficiary: BE3 - BUDGET SHEET | | View Summary | |
| 2 | | SME 1 | | |
| 3 | COST CATEGORY | ITEMS | COST PER ITEM | BE TOTAL COSTS |
| 4 | | | | |
| 5 | COSTS WORK PACKAGE 1: WP1 name | | | |
| 6 | | | | |
| 7 | A. DIRECT PERSONNEL COSTS | | | |
| 8 | A.1 Employees (or equivalent) | | | |
| 9 | SENIOR SCIENTISTS (or equivalent in the private sector) | 5.0 | 7000 | 35000.00 |
| 10 | JUNIOR SCIENTISTS (or equivalent in the private sector) | 10.0 | 4900 | 49000.00 |
| 11 | TECHNICAL PERSONNEL (or equivalent in the private sector) | 5.0 | 5300 | 26500.00 |
| 12 | ADMINISTRATIVE PERSONNEL (or equivalent in the private sector) | | | 0.00 |
| 13 | OTHERS | | | 0.00 |
| 14 | A.2 Natural Persons under direct contract | | | 0.00 |
| 15 | A.3 Seconded Persons | | | 0.00 |
| 16 | A.4 SME owners and natural person beneficiaries | | 4798 | 0.00 |

- Enter the **total number of items and the average cost per item** for each category of personnel costs
- **1 item = 1 person-month**
- For 'A4. SME Owner and natural person beneficiaries', the cost per item is predefined
- Personnel costs will be evaluated by experts using the [Horizon dashboard for lump sum evaluations](#), an orientation tool that shows the average monthly costs for personnel by country and organisation type
- If your personnel costs are higher than the values in the dashboard, you must **justify them in the 'Any comments' tab**

Fill in the individual beneficiary sheets – subcontracting costs

| | | | | |
|----|--------------------------------|-----|-------|----------|
| 17 | B. DIRECT SUBCONTRACTING COSTS | | | |
| 18 | | 1.0 | 30000 | 30000.00 |

- There is one line for subcontracting per beneficiary and work package (i.e., the amount entered covers all subcontracting activities for the beneficiary in a work package).
- Enter the number of subcontracted tasks for a given beneficiary and a given work package as number of items. The cost per item will be an average of the costs of all subcontracted tasks. No more detailed information is required in the Excel file.
- The tasks to be subcontracted and their costs must be described and justified in the **table 3.1g in the part B of the application form**

Table 3.1g: 'Subcontracting costs' items

For each participant describe and justify the tasks to be subcontracted (please note that core tasks of the project should not be sub-contracted).

| Participant Number/Short Name | | |
|-------------------------------|----------|--|
| | Cost (€) | Description of tasks and justification |
| Subcontracting | | |

The costs entered here must match the costs entered in the Excel file

Fill in the individual beneficiary sheets – direct purchase costs

| 3 | COST CATEGORY | ITEMS | COST PER ITEM | BE TOTAL COSTS |
|----|--|-------|---------------|----------------|
| 19 | C. DIRECT PURCHASE COSTS | | | |
| 20 | C.1 Travel and subsistence | 5.0 | 1500 | 7500.00 |
| 21 | C.2 Equipment (complete 'Depreciation costs' sheet) | | | |
| 22 | <i>Equipment</i> | 2.0 | 3000 | 6000.00 |
| 23 | <i>Infrastructure</i> | | | 0.00 |
| 24 | <i>Other assets</i> | | | 0.00 |
| 25 | C.3 Other goods, works and services | | | |
| 26 | <i>Consumables</i> | 4.0 | 1000 | 4000.00 |
| 27 | <i>Services for meetings, seminars</i> | 1.0 | 3000 | 3000.00 |
| 28 | <i>Services for dissemination activities (including website)</i> | | | 0.00 |
| 29 | <i>Publication fees</i> | 2.0 | 1500 | 3000.00 |
| 30 | <i>Other (shipment, insurance, translation, etc.)</i> | | | 0.00 |

- Enter the **total number of items** and the **average cost per item** for each relevant cost category.
- The cost per item will be an average of the prices of all items in the given category for a given beneficiary and a given work package. No more detailed information is required in the Excel file.
- If purchase costs exceed 15% of the personnel costs of a given beneficiary, this beneficiary must complete table **3.1h of Part B of the proposal template**

Table 3.1h: 'Purchase costs' items (travel and subsistence, equipment and other goods, works and services)

| Participant Number/Short Name | | |
|--|----------|---------------|
| | Cost (€) | Justification |
| Travel and subsistence | | |
| Equipment | | |
| Other goods, works and services | | |
| Remaining purchase costs (<15% of pers. costs) | | |
| Total | | |

Fill in the individual beneficiary sheets – depreciation costs list

| TOOL: DEPRECIATION COSTS LIST | | | | | | | | | | | |
|-------------------------------|------------------|-------|-------------------|-----------------|-----------------------------------|---|---------------|------------------------|--|---|---|
| BE nr | Beneficiary name | WP nr | Work Package name | Resource type | Short name of the investments | Date of purchase (real or planned date of purchase) | Purchase cost | % used for the project | % of useful life of the equipment in the project | Charged depreciation costs per investment | Justification: Needed info for depreciation |
| BE1 | University 1 | WP1 | Work package 1 | Infrastructures | Description of the infrastructure | 22-04-2024 | 20000.00 | 100.00% | 40.00% | € 8,000.00 | |
| BE3 | SME 1 | WP2 | Work package 2 | Equipment | Description of the equipment | 01-02-2024 | 6000.00 | 100.00% | 50.00% | € 3,000.00 | |
| | | | | | | | | | | € - | |
| | | | | | | | | | | € - | |
| | | | | | | | | | | € - | |
| | | | | | | | | | | € - | |

- For the category 'equipment' (equipment, infrastructure, other assets) you must enter the **depreciation costs** in the individual beneficiary tabs.
- Use the '**Depreciation costs**' tab to calculate the depreciation costs:
 - Fill in the information about the beneficiary, the work package, the resource type, the name of the investment and the date of purchase
 - Encode the (estimated) price of the equipment in the column 'Purchase cost'
 - Encode the percentage of usage of the equipment for the project in the column '% used for the project'
 - Divide the period (in months) during which the equipment is used for the project by the depreciation period (in months) for the equipment. Multiply the results by 100%. Encode the result in the column '% use for lifetime of the investment'
- This amount is **NOT** automatically transferred to the respective 'BEx' tab. You have to **add manually** the depreciation costs in the dedicated section of the 'BEx' tab. If you have several items in the 'Depreciation costs' tab for one single section (same beneficiary, same work package and same resource type), you must enter the number of items and add the average of the depreciation costs as 'cost per item'.

Fill in the individual beneficiary sheets – other direct costs and indirect costs

| 3 | COST CATEGORY | ITEMS | COST PER ITEM | BE TOTAL COSTS |
|----|--|-------|---------------|----------------|
| 31 | D. OTHER COST CATEGORIES | | | |
| 32 | D.1 Financial support to third parties (if applicable in the topic specific conditions) | 1.0 | 6000 | 6000.00 |
| 33 | D.2 Internally invoiced goods and services | | | 0.00 |
| 34 | D.3 Transnational access to research infrastructure unit costs (if mentioned as eligible in the topic specific conditions) | | | 0.00 |
| 35 | D.4 Virtual access to research infrastructure unit costs (if mentioned as eligible in the topic specific conditions) | | | 0.00 |
| 36 | D.5 PCP/PPI procurement costs (if mentioned as eligible in the topic specific conditions) | | | 0.00 |
| 37 | | | | |
| 38 | TOTAL DIRECT PERSONNEL COSTS AND PURCHASE COSTS (A+C) | | | 134000.00 |
| 39 | TOTAL DIRECT COSTS (A+B+C+D) | | | 170000.00 |
| 40 | | | | |
| 41 | E. INDIRECT COSTS (25% * (A+C)) | | | 33500.00 |
| 42 | | | | |
| 43 | F. TOTAL COSTS (A+B+C+D+E) | | | 203500.00 |

- Certain types of costs can be entered only if they are **explicitly allowed for in the specific conditions of your topic**:
 - Financial support to third parties
 - Transnational access to research infrastructure' and 'Virtual access to research infrastructures
 - PCP/PPI procurement costs
- Indirect costs are calculated automatically.
- Total costs are calculated automatically.

Summary per WP:



In this tab, after completing the individual beneficiary sheets, you will find a summary of the participation of all beneficiaries (including affiliated entities) for all the work packages

| SUM OF ALL BENEFICIARIES (including AFFILIATED ENTITIES) FOR ALL THE WORK PACKAGES | | | | | | | |
|---|--|----------------|-------------------------|----------------|---|--------------------------|-------------------|
| COST CATEGORY | ALL BENEFICIARIES (without affiliated entities) | | ALL AFFILIATED ENTITIES | | ALL BENEFICIARIES (with affiliated entities) | | BE+AE TOTAL COSTS |
| | UNITS | BE TOTAL COSTS | UNITS | AE TOTAL COSTS | UNITS (TOTAL) | AVERAGE COST PER UNIT | |
| COSTS WORK PACKAGE: 1 WP1 | | | | | | | |
| A. DIRECT PERSONNEL COSTS | | | | | | | |
| A.1 Employees (or equivalent) | | | | | | | |
| SENIOR SCIENTISTS (or equivalent in the private sector) | 30.00 | 240,000.00 | 0.00 | 0.00 | 30.00 | 8,000.00 | 240,000.00 |
| JUNIOR SCIENTISTS (or equivalent in the private sector) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| TECHNICAL PERSONNEL (or equivalent in the private sector) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| ADMINISTRATIVE PERSONNEL (or equivalent in the private sector) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| OTHERS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| A.2 Natural Persons under direct contract | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| A.3 Seconded Persons | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| A.4 SME owners and natural person beneficiaries | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| B. DIRECT SUBCONTRACTING COSTS | | | | | | | |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| C. DIRECT PURCHASE COSTS | | | | | | | |
| C.1 Travel and subsistence | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| C.2 Equipment (complete 'Depreciation cost' sheet) | | | | | | | |
| Equipment | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| Infrastructure | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| Other assets | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| C.3 Other goods, works and services | | | | | | | |
| Consumables | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| Services for meetings, seminars | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| Services for dissemination activities (including website) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| Publication fees | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| Other (shipment,insurance, translation, etc.) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| D. OTHER COST CATEGORIES | | | | | | | |
| D.1 Financial support to third parties (if applicable in the topic specific conditions) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| D.2 Internally invoiced goods and services | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| D.3 Transnational access to research infrastructure unit costs (if required in the topic specific conditions) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| D.4 Virtual access to research infrastructure unit costs (if required in the topic specific conditions) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| D.5 PCP/PPI procurement costs (if mentioned as eligible in the topic specific conditions) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| | | | | | | | |
| TOTAL DIRECT PERSONNEL COSTS AND PURCHASE COSTS (A+C) | | 240,000.00 | | 0.00 | 0.00 | | 240,000.00 |
| TOTAL DIRECT COSTS (A+B+C+D) | | 240,000.00 | | 0.00 | 0.00 | | 240,000.00 |
| | | | | | | | |
| E. INDIRECT COSTS (25% * (A+C)) | | 60,000.00 | | 0.00 | 0.00 | | 60,000.00 |
| | | | | | | | |
| F. TOTAL COSTS (A+B+C+D+E) | | 300,000.00 | | 0.00 | 0.00 | | 300,000.00 |

BE-WP person months:

In this tab, after completing the individual beneficiary sheets, you will find a summary of the effort allocated for all beneficiaries (including affiliated entities) for all the work packages



| TOTAL PERSON/MONTHS FOR ALL BENEFICIARIES (INCLUDING AFFILIATED ENTITIES) PER WP | | | | | |
|--|---------------|---------------|---------------|--------|------------|
| WORK PACKAGES | Beneficiary 1 | Beneficiary 2 | Beneficiary 2 | Total | Percentage |
| WP1 | 10.0 | 10.0 | 10.0 | 30.0 | 40.0% |
| WP2 | 10.0 | 10.0 | 0.0 | 20.0 | 26.7% |
| WP3 | 5.0 | 5.0 | 5.0 | 15.0 | 20.0% |
| WP4 | 5.0 | 5.0 | 0.0 | 10.0 | 13.3% |
| Total | 30.0 | 30.0 | 15.0 | 75.0 | 100.0% |
| Percentage | 40.0% | 40.0% | 20.0% | 100.0% | |

Lump Sum Breakdown:

In this tab, after completing the individual beneficiary sheets, you will have the necessary information to fill in your annex 2 with a clear description of how much funding will be allocated per beneficiary and affiliated entities based on their declared funding rate

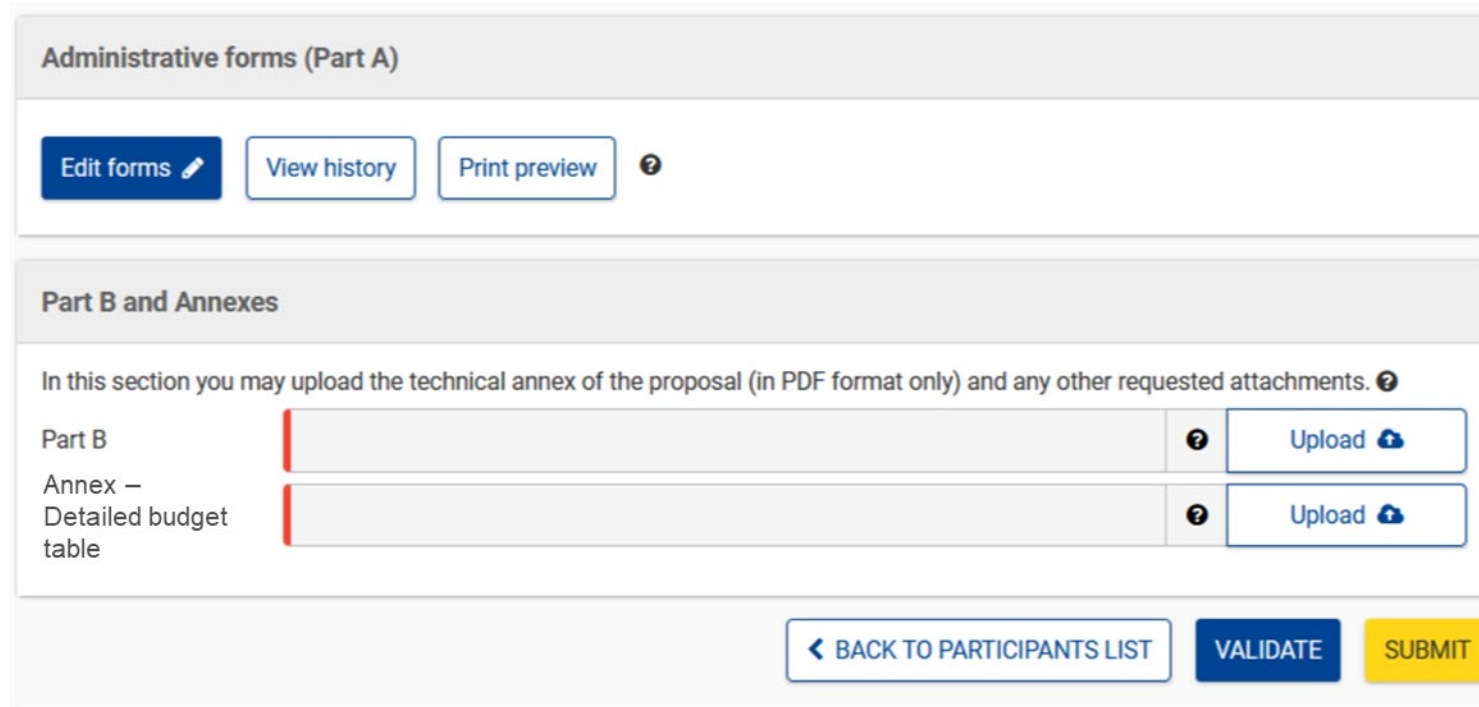


| ESTIMATED BREAKDOWN OF THE LUMP SUM PER WORK PACKAGE AND PER BENEFICIARY | | | | | | |
|---|------------|------------|------------|-----------|------------|--------|
| BENEFICIARIES | WP1 | WP2 | WP3 | WP4 | Totals | Pct |
| Beneficiary 1 | 60,000.00 | 0.00 | 30,000.00 | 0.00 | 90,000.00 | 16.2% |
| AE 1 (ben1) | 0.00 | 100,000.00 | 0.00 | 50,000.00 | 150,000.00 | 27.0% |
| Beneficiary 2 | 100,000.00 | 0.00 | 50,000.00 | 0.00 | 150,000.00 | 27.0% |
| AE 1 (ben2) | 0.00 | 70,000.00 | 0.00 | 35,000.00 | 105,000.00 | 18.9% |
| Beneficiary 2 | 40,000.00 | 0.00 | 20,000.00 | 0.00 | 60,000.00 | 10.8% |
| Totals: | 200,000.00 | 170,000.00 | 100,000.00 | 85,000.00 | 555,000.00 | 100.0% |
| Pct: | 36.0% | 30.6% | 18.0% | 15.3% | 100.0% | |

Lump sum share
per beneficiary for
the GA

Uploading the Excel file:

- Once you completed the detailed budget table, **upload it in the online submission system**, as annex to the part B template.



The screenshot shows a web interface for uploading documents. At the top, there's a section titled "Administrative forms (Part A)" with buttons for "Edit forms", "View history", and "Print preview". Below this is a section titled "Part B and Annexes" with a descriptive text: "In this section you may upload the technical annex of the proposal (in PDF format only) and any other requested attachments." There are two rows for uploads. The first row is for "Part B" and the second row is for "Annex – Detailed budget table". Each row has a text input field, a question mark icon, and an "Upload" button with a cloud icon. A red arrow points to the "Upload" button for the "Annex – Detailed budget table". At the bottom of the form, there are three buttons: "BACK TO PARTICIPANTS LIST", "VALIDATE", and "SUBMIT".



The format of the Excel template is .xlsm because it uses macros. While you work on it, always save it as .xlsm.

Upload the Excel file in .xlsx or .xls format. For security reasons, you cannot upload the file in .xlsm format.

Always keep a copy of the original .xlsm file.

3. Private Members Contribution

GA – table for Annex I Part B

“Estimated Members’ Contributions”

- In accordance with the call conditions:

*“The amount of total in-kind contributions (i.e. in-kind contributions for operational activities and in-kind contributions for additional activities) should be no less than **1.263 times the funding request**, in aggregate, of these applicant Private Members.”*

- Any discrepancy shall be well and duly justified.
- **For 1€ of JU contribution, the Private Member shall contribute in addition of 1.263€.** Consequently, with a Total Project Costs for the action and additional activities of 2.263€

GA – table for Annex I Part B

“Estimated Members’ Contributions”

| ESTIMATED MEMBERS' CONTRIBUTIONS INDICATIVE VALUE PER MEMBER - PROJECT ACRONYM | | | | |
|---|--|--|-------------------------|------------------------------------|
| Members The amount of total in-kind contributions (i.e. in-kind contributions for operational activities and in-kind contributions for additional activities) should be no less than 1.263 times the funding request, in aggregate, of these applicant Private Members. Any discrepancy shall be well and duly justified. (A) | Maximum grant amount - JU contribution (Total value of the lump sum shares for all WP) (B) | Total Contributions of private members - Indicative value (C) | Pct (D) = (B+C)/B | Justification if applicable (E) |
| Member 1 (aggregated, of the applicant Private Member) | 100,00 | 126,30 | 2,2630 | |
| Member 2 (aggregated, of the applicant Private Member) | 1.000,00 | 1.263,00 | 2,2630 | |
| Member 3 (aggregated, of the applicant Private Member) | 10.000,00 | 12.630,00 | 2,2630 | |
| Member 4 (aggregated, of the applicant Private Member) | 125.000,00 | 157.875,00 | 2,2630 | |
| Member 5 (aggregated, of the applicant Private Member) | | - | - | |
| Member 6 (aggregated, of the applicant Private Member) | | - | - | |
| Member 7 (aggregated, of the applicant Private Member) | | - | - | |
| Member 8 (aggregated, of the applicant Private Member) | | - | - | |
| Member 9 (aggregated, of the applicant Private Member) | | - | - | |
| | | - | - | |
| | | - | - | |

1. Fill in the project acronym

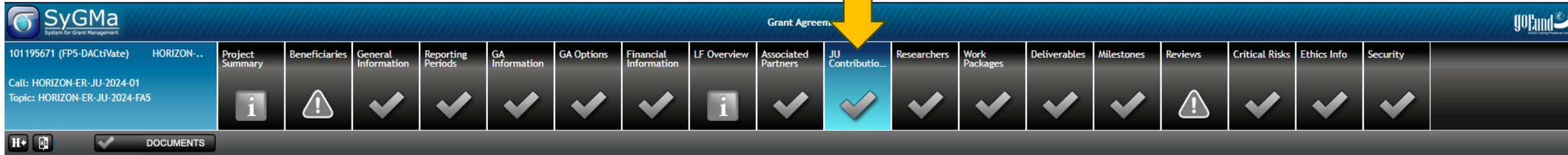
4. Any discrepancy shall be well and duly justified (in case % below 2.263)

2. Fill in the Members name

3. Enter the JU contribution (LS share)

The indicative value of contribution and % are automatically calculated

Members contributions in the GAP phase



JU Contributions

| Number | | PIC | Legal Name | JU Membership | Participates in Project | IKOP | Financial Contributions G | IKAA |
|--------|---|-----|------------|-----------------------------------|-------------------------|--------------|---------------------------|--------------|
| 1 | ✓ | | | Yes (Associated Member) | Yes | 774,404.53 € | 0.00 € | 421,017.93 € |
| 2 | ✓ | | | Yes (Associated Member) | Yes | 794,858.87 € | 0.00 € | 0.00 € |
| 3 | ✓ | | | Yes (Founding Member Affiliate) | Yes | 191,480.63 € | 0.00 € | 104,101.64 € |
| 4 | ✓ | | | Yes (Founding Member) | Yes | 230,532.41 € | 0.00 € | 0.00 € |
| 5 | ✓ | | | Yes (Founding Member) | Yes | 688,694.40 € | 0.00 € | 0.00 € |
| 6 | ✓ | | | Yes (Founding Member Affiliate) | Yes | 157,603.16 € | 0.00 € | 85,683.59 € |
| 7 | ✓ | | | Yes (Associated Member Affiliate) | Yes | 330,918.75 € | 0.00 € | 179,909.49 € |
| Total | | | | | | 3168492.75 € | 0 € | 790712.65 € |

During the GAP phase, the tab “**JU Contribution**” should be filled in with the **IKOP** and **IKAA** for the members participating in the project.

Filling in this information is **mandatory**!

The figures encoded should be in line with the figures declared in the table “**Estimated Members Contribution**”.

Resources available

One dedicated [lump sum page](#) on the Funding & Tenders Portal with:

Video tutorials

- [Overview of lump sum funding](#)
- [Detailed budget table](#)
- [Horizon dashboard for lump sum evaluations](#)

Guidance documents

- [What do I need to know? & Quick guide](#)
- [Frequently asked questions](#)
- [Detailed guidance for participants](#)
- [Lump sum briefing slides for experts](#)

Reference documents

- [Model Grant Agreement Lump Sum](#)
- [Decision authorising the use of lump sum contributions under the Horizon Europe Programme](#)

Studies

- [European Commission assessment](#) (Sep 2024)
- [European Commission assessment](#) (Oct 2021)
- [European Parliament \(STOA\) study on lump sums in Horizon 2020](#) (May 2022)

Events

- Future events
- Past events and recordings



EUROPE'S RAIL INFO DAY 2022-02

Q&A

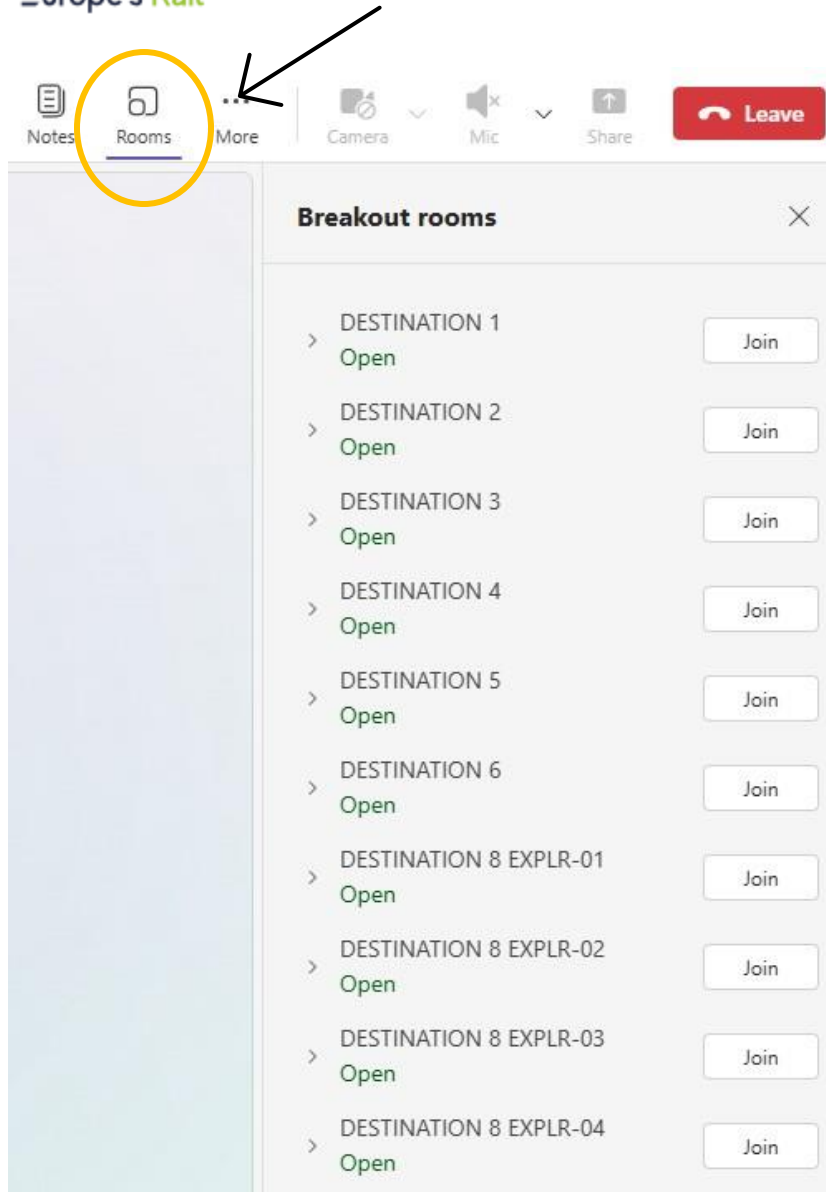
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CLOSING REMARKS

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MATCH-MAKING SESSION

Click on 'Rooms' at the top to view the available breakout rooms



- ❖ **DESTINATION 1:** NETWORK MANAGEMENT PLANNING AND CONTROL & MOBILITY MANAGEMENT IN A MULTIMODAL ENVIRONMENT AND DIGITAL ENABLERS
- ❖ **DESTINATION 2:** DIGITAL & AUTOMATIC UP TO AUTOMATED TRAIN OPERATIONS
- ❖ **DESTINATION 3:** INTELLIGENT & INTEGRATED ASSET MANAGEMENT
- ❖ **DESTINATION 4:** A SUSTAINABLE AND GREEN RAIL SYSTEM
- ❖ **DESTINATION 5:** SUSTAINABLE COMPETITIVE DIGITAL GREEN RAIL FREIGHT SERVICES
- ❖ **DESTINATION 6:** REGIONAL RAIL SERVICES / INNOVATIVE RAIL SERVICES TO REVITALISE CAPILLARY LINES
- ❖ **DESTINATION 8: EXPLORATORY RESEARCH AND OTHER ACTIVITIES:**
 - EXPLR-01: STUDIES ON RAIL INDUSTRY 5.0
 - EXPLR-02: STUDIES ON INNOVATION IN CLIMATE FINANCE FOR RAIL
 - EXPLR-03: EXTENDING THE RAIL NETWORK OF PHDS
 - EXPLR-04: SUPPORT TO THE EUROPEAN FRMCS DEPLOYMENT GROUP

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Thank you for your attention