EUROPE’S RAIL INFO DAY

ONLINE
16 March 2022

@EURail_JU  Europe’s Rail Joint Undertaking
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speakers</th>
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</thead>
</table>
| 09.00 - 09.20 | Opening remarks                                           | Kristian Schmidt  
Director for Land Transport, DG MOVE, European Commission  
Rosalinde van der Vlies  
Director for Clean Planet, DG RTD, European Commission  
Carlo M. Borghini  
Executive Director, Europe’s Rail Joint Undertaking |
| 09.20 - 10.00 | Presentation of the Call for Proposals 2022              | Carlo M. Borghini  
Executive Director, Europe’s Rail Joint Undertaking  
Giorgio Travaini  
Head of Programme, Europe’s Rail Joint Undertaking |
<p>| 10.00 - 10.15 | Coffee break                                              |                                                                                           |</p>
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<tr>
<th>Time</th>
<th>Session</th>
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</table>
| 10.15 - 11.15 | Europe’s Rail Programme Sessions  
Presentation of the activities of each Destination  
*Europe’s Rail JU Programme Managers:*  
Gorazd Marinic (Destination 1), Léa Paties (Destination 2), Sébastien Denis (Destination 3), Javier Ibáñez de Yrigoyen (Destination 4), Manuel Alarcón Espinosa (Destination 5), Judit Sándor (Destination 6) |
| 11.15 - 11.45 | Q&A                                                                      |
| 11.45 - 12.45 | *Lunch break*                                                           |
| 12.45 - 14.15 | Europe’s Rail Programme Sessions  
Legal and Financial Guidelines  
*Vincent Declerfayt*  
Head of Corporate Services, *Europe’s Rail Joint Undertaking*  
*Valérie Lorgé*  
Grant and Legal Officer, *Europe’s Rail Joint Undertaking* |
| 14.15 - 14.45 | Q&A                                                                      |
| 14.45 - 15.00 | Closing remarks                                                         |
EUROPE’S RAIL INFO DAY CALL 2022-1

OPENING REMARKS
What is about EU-Rail

VISION
To deliver, via an integrated system approach, a high capacity, flexible, multi-modal, sustainable and reliable integrated European railway network by eliminating barriers to interoperability and providing solutions for full integration, for European citizens and cargo

MISSION
Rail Research and Innovation to make Rail the everyday mobility
EU-Rail organisation and its key Programme operational aspects
EUROPE’S RAIL INFO DAY 2022

CALL FOR PROPOSALS 2022-1

carlo m borghini
Executive Director
THE EU-RAIL CALL 2022-1 IS OPEN TO ALL ELIGIBILE ENTITIES IN ACCORDANCE WITH HORIZON EUROPE

NO ADDITIONAL CONDITIONS
## EU-Rail Call 2022-1 – Conditions
(see [Work Programme 2022 2024](#))

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admissibility conditions</td>
<td>The conditions are described in part A of the General Annexes to the Horizon Europe Work Programme 2021-2022.</td>
</tr>
<tr>
<td>Eligibility conditions</td>
<td>The conditions are described in part B of the General Annexes to the Horizon Europe Work Programme 2021-2022.</td>
</tr>
<tr>
<td>Financial and operational capacity and exclusion</td>
<td>The criteria are described in part C of the General Annexes to the Horizon Europe Work Programme 2021-2022.</td>
</tr>
<tr>
<td>Award criteria</td>
<td>The criteria are described in part D of the General Annexes to the Horizon Europe Work Programme 2021-2022.</td>
</tr>
<tr>
<td>Documents</td>
<td>The documents are described in part E of the General Annexes to the Horizon Europe Work Programme 2021-2022.</td>
</tr>
<tr>
<td>Procedure</td>
<td>The procedure is described in part F of the General Annexes to the Horizon Europe Work Programme 2021-2022.</td>
</tr>
<tr>
<td>Legal and financial set-up of the Grant Agreements</td>
<td>The rules are described in part G of the General Annexes to the Horizon Europe Work Programme 2021-2022.</td>
</tr>
</tbody>
</table>
## EU-Rail Call 2022-1 – Conditions

(see [Work Programme 2022-2024](#))

<table>
<thead>
<tr>
<th>Expected EU contribution per project</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Indicative budget</strong></td>
<td>The total indicative budget for the topic is EUR [XX] million.</td>
</tr>
<tr>
<td></td>
<td>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&amp;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.</td>
</tr>
<tr>
<td></td>
<td>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 the EU-Rail JU.</td>
</tr>
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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 the EU-Rail JU. |
<p>| Indicative project duration        | 48 months |
| Type of Action                     | Innovation Action |</p>
<table>
<thead>
<tr>
<th>Technology Readiness Level</th>
<th>Activities are expected to achieve a minimum between TRL 5 and TRL 7, 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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admissibility conditions</td>
<td>Regarding admissibility conditions and related requirements, part A of the Horizon Europe Work Programme 2021-2022 General Annexes applies with the following exception: the limit for a full Innovation Action application is set to 120 pages.</td>
</tr>
</tbody>
</table>
| Special skills and/or capabilities expected from the Applicant(s) | Applicants shall ensure that their proposals and consortium reflect the aggregated expertise to perform the activities and achieve the objectives set by the Destination:  
  • Expertise from rail infrastructure managers and railway undertakings, which should allow  
  • Expertise from rail suppliers (system integrators, manufacturers and/or technology providers), which should allow, jointly,  
  • Expertise from research institutes and academia, which should allow  
  • Complementary expertise from other sectors and parties, with particular attention to SMEs and Start-ups, which may contribute to enhance the actions’ outcome. |
| **Linked Projects** | As specified in section 2.3.3.2 of the AWP 2022, 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.

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:

- [ xxxxx ]

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. |
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Funding of only one project per topic</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Retroactive starting date of the grant</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Lump Sum grant</strong></td>
<td>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’]]</td>
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</tr>
<tr>
<td><strong>Lower funding rate</strong></td>
<td>The funding rate of the action is 60% of the eligible costs to achieve the leverage effect established in the SBA. Each Consortium 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%</td>
</tr>
<tr>
<td><strong>Award criteria additional details</strong></td>
<td>The award criteria included in the General Annexes of the Horizon Europe – Work Programme 2021 – 2022 are complemented with additional criteria as specified in Annexe 8 this Work Programme</td>
</tr>
<tr>
<td><strong>Additional dissemination obligations</strong></td>
<td>In addition, as specified in section 2.3.3.2 of the AWP 2022, 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</td>
</tr>
</tbody>
</table>
EUROPE’S RAIL INFO DAY 2022

CALL FOR PROPOSALS 2022-1

Giorgio TRAVAINI
Head of Programme
Europe’s Rail JU
Navigating the EU-Rail key documents of a Programme approach

Focus on the

• **MP**: 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
EUROPE'S RAIL: ONE INTEGRATED R&I PROGRAMME

SYSTEM PILLAR

OPERATIONAL CONCEPTS

FUNCTIONAL SYSTEM ARCHITECTURE

A SINGLE COORDINATING BODY FOR THE WHOLE SECTOR EVOLUTION

OPEN INTERFACES TO OTHER TRANSPORT MODES AND BUSINESSES

SYSTEM REQUIREMENT SPECIFICATIONS

INNOVATION PILLAR

TECHNOLOGICAL AND OPERATIONAL SOLUTIONS FOR SERVICES OF FUTURE

FLAGSHIP PROJECTS

LARGE-SCALE DEMONSTRATIONS

EXPLORATORY AND FUNDAMENTAL R&I

1

EUROPEAN RAIL TRAFFIC AND MOBILITY MANAGEMENT

Manage and improve rail traffic at EU level

Adjust rail traffic management in function of the mobility demand

2

DIGITALISATION & AUTOMATION IN TRAIN OPERATIONS

ATO implementation

Digital train operations

3

SUSTAINABLE AND DIGITAL ASSETS

Integrated assets testing & life-cycle framework

Zero-emission, silent rail system

4

COMPETITIVE, DIGITAL, GREEN RAIL FREIGHT

New digital customer interaction & innovative rail freight services

Multimodal and rail freight innovation integration

5

REGIONAL RAIL SERVICES IN LOW DENSITY AREAS

New system approach to regional rail services in low density areas

DEPLOYMENT GROUP

FUTURE SOLUTIONS DEPLOYED IN A COORDINATED AND CONSISTENT WAY AT EUROPEAN LEVEL, TAKING INTO ACCOUNT ALTERNATIVE ROLLOUT SCENARIOS, BEHAVIOURAL AND ORGANISATIONAL CHANGES, SYNERGIES WITH OTHER MODES OF TRANSPORT

DELIVER AN INTEGRATED EUROPEAN RAILWAY NETWORK BY DESIGN

DEVELOP A UNIFIED OPERATIONAL CONCEPT AND A FUNCTIONAL SYSTEM ARCHITECTURE FOR INTEGRATED EUROPEAN RAIL TRAFFIC AND CCS/AUTOMATION

DELIVER A SUSTAINABLE AND RESILIENT RAIL SYSTEM

DELIVER A COMPETITIVE, GREEN RAIL FREIGHT FULLY INTEGRATED INTO THE LOGISTICS VALUE CHAIN

DEVELOP A STRONG AND GLOBALLY COMPETITIVE EUROPEAN RAIL INDUSTRY
EU-Rail expected system impacts from the Programme

- Meeting evolving customer requirements
- Improved performance and capacity
- Reduced costs
- More sustainable and resilient transport
- Harmonised approach to evolution and greater adaptability
- Reinforced role for rail in European transport and mobility
- Improved EU rail supply industry competitiveness
Navigating the EU-Rail key documents of a Programme approach

Focus on the

- **MAWP**: 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 + TT
    - Exploratory and Other activities
  - **Deployment group**
EU-Rail Multi-Annual Work Programme

**The System Pillar activities:**

- **Task 1:** develop a EU-Rail system architecture for a rail system which is
  - Open access to SERA
  - Performant and competitive;
  - Synchronised deployment
  - Full alignment with the future system

- **Task 2:** develop a harmonised functional and technical CCS+ architecture managing the complexity of interaction between the different sub-systems and with appropriate separation of safety-related and non-safety-related layers.

  - Guide the migration strategy in Europe implanting newly defined operational concepts
  - Inputs to Technical Specifications for Interoperability and harmonised standards
**EU-Rail Multi-Annual Work Programme**

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

Network management planning and control (new processes and automation for decision support) & rail management in a multimodal environment (real-time demand-driven operations, including demand from other transport modes).

**Digital & Automated up to Autonomous Train Operations**

Digital “Automated & Autonomous” Train Operations building upon the next gen Automatic Train Control based on ERTMS + enhancements on TCMS for integration at the on-board level.

**Intelligent & Integrated asset management**

Knowledge from the digital transformation will feed back into the design, construction, manufacturing as well as into operation and maintenance processes.

**A sustainable and green rail system**

Innovative solutions and services based on leading edge technologies to minimize the overall energy consumption and environmental impact of the railway system.

**Digital Enablers**

Provide Digital Twins Design toolbox for design as well as for validation, verification and test + a Federated dataspace where all digital elements of the system can play together in a coherent and interoperable way.

**Innovation on new approaches for guided transport modes**

Explore non-traditional and emerging flexible and/or high-speed guided transport systems, as well as to create opportunities for innovators to bring forward ideas for shaping those future systems.

**Regional rail services / Innovative rail services to revitalise capillary lines**

Decreasing cost while offering a high quality of service and operational safety + increase customer satisfaction and attractiveness.

**Sustainable Competitive Digital Green Rail Freight Services**

Digitalization and automation of operational functions (e.g. DAC) and processes as well as increasing the efficiency of the immaterial (information/data) layer of transport in logistic
Multi-Annual Programme Implementation

• **System Pillar activities:** the implementation via framework contract (procurement). The first call for tenders is expected to be launched by the end of the first quarter 2022.

• **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. **Published and open for submission:** Call 2022-1, to cover up to 50% of the research and innovation activities value of 6 Flagship Areas
  2. Call 2025/2026, expected 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 activities to be performed until 2031
  • In addition, EU-Rail will launch on a regular basis calls for proposals to explore new areas of rail research and innovation or perform studies and any other relevant activities that would contribute to the achievement of its Programme → next call 2022-2 to be published Q3 this year

• **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.
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.
## EU-Rail Work Programme 2022-2024 Budget

<table>
<thead>
<tr>
<th>Year 2022</th>
<th>Type of call</th>
<th>Value of the actions</th>
<th>Maximum EU-Rail co-funding</th>
<th>Non-funded activities</th>
<th>Target contributions from Members in case of award</th>
<th>Indicative publication date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-annual Call for Proposals</td>
<td>Open</td>
<td>390.0</td>
<td>234.0</td>
<td>156.0</td>
<td>302.0</td>
<td>Q1</td>
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<tr>
<td>Call for Proposals—Exploratory Research</td>
<td>Open</td>
<td>14.5</td>
<td>12.5</td>
<td>2.0</td>
<td>4.3</td>
<td>Q3</td>
</tr>
<tr>
<td>Call for Tenders</td>
<td>Open</td>
<td>15.5</td>
<td>13.7</td>
<td>1.8</td>
<td>0.0</td>
<td>Q1–Q4 &amp; implementation of new and ongoing contracts/framework contracts</td>
</tr>
</tbody>
</table>
## EU-Rail Call 2022-1

<table>
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<tr>
<th>DESTINATION Topics</th>
<th>Type of Action</th>
<th>Expected TRL</th>
<th>Expected EU contribution per project (EUR million)</th>
<th>Number of projects expected to be funded</th>
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<td></td>
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<td>Opening: 10 March 2022; Deadline: 23 June 2022</td>
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<tr>
<td>HORIZON-ER-JU-2022-FA1-TT-01</td>
<td>IA</td>
<td>5 to 7</td>
<td>38.0</td>
<td>1</td>
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<td>HORIZON-ER-JU-2022-FA2-01</td>
<td>IA</td>
<td>5 to 7</td>
<td>54.3</td>
<td>1</td>
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<td>HORIZON-ER-JU-2022-FA3-01</td>
<td>IA</td>
<td>5 to 8</td>
<td>46.3</td>
<td>1</td>
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<td>HORIZON-ER-JU-2022-FA4-01</td>
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<td>5 to 7</td>
<td>38.3</td>
<td>1</td>
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<tr>
<td>HORIZON-ER-JU-2022-FA5-01</td>
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<td>5 to 8/9</td>
<td>40.6</td>
<td>1</td>
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<tr>
<td>HORIZON-ER-JU-2022-FA6-01</td>
<td>IA</td>
<td>5 to 7</td>
<td>16.5</td>
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</tr>
</tbody>
</table>

### Call structure (see also annex VII of the EU-Rail Work Programme 2022-2024):

- **Destination**: 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.
EUROPE’S RAIL INFO DAY 2022

DESTINATION 1

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

Gorazd MARINIC
Programme Manager
Europe’s Rail JU
EU-Rail Call 2022-1

DESTINATION 1 – Network management planning and control & Mobility Management in a multimodal environment and Digital Enablers

WS1: Network management planning and control & Mobility Management in a multimodal environment

Deliver by 2025 innovative solutions to be demonstrated with:

• Tactical and short-term timetable planning including cross-borders with improved models and functions; use of decision support to support integrated capacity planning of the rail network and operations for yards, stations, terminals [TRL6/7];

• HMI for TMS with decision support modules, based on User Experience (UX) Design and human-in-the-loop awareness [TRL6-8]

• Demand-driven predictions to improve operations and service offers, considering information about events across modes. Effect of cross-regional, multimodal travels in combination with demand forecast and disruption handling on improvement of daily operations, benefit on customers (accessibility and attractiveness). [TRL 7-8]
**EU-Rail Call 2022-1**

**DESTINATION 1 – Network management planning and control & Mobility Management in a multimodal environment and Digital Enablers**

**WS1: Network management planning and control & Mobility Management in a multimodal environment**

Preparatory works needed to be launched for the future set of demonstration foreseen in the MAWP:

- Functional system for strategic, tactical and short-term planning
- Planning using integrated feedback loops from operations
- Using ATO journey profiles for timetabling
- TMS at regional area with decision support and interaction between actors
- TMS at global area with decision support and automation and overall real-time traffic plan, with feedback loops from operation to planning
- Improved long-term demand driven predictions
- 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
DESTINATION 1 – Network management planning and control & Mobility Management in a multimodal environment and Digital Enablers

WS2: Digital Enablers

Deliver by 2025 the following outcome:

• Develop data federation, access and processing services through standardized interfaces
• Develop a common machine-readable domain ontology
• Ensure a powerful, secure and reliable data and communication infrastructure.
DESTINATION 1 – Network management planning and control & Mobility Management in a multimodal environment and Digital Enablers

WS2: Digital Enablers

Preparatory works needed to be launched for the future set of demonstration foreseen in the MAWP:

• For modular built-up of Digital Twin within the development environment
• Use of Artificial Intelligence to collect and analyse data patterns and support decision making process
• Real time algorithms using Digital Twins
EUROPE’S RAIL INFO DAY 2022

DESTINATION 2
Digital & Automated up to Autonomous Train Operations

Léa PATIES
Programme Manager
Europe’s Rail JU
EU-Rail Call 2022-1

DESTINATION 2 – Digital & Automated up to Autonomous Train Operations

Deliver by 2025 at least the following:

- Demonstrate technical and functional enablers such as ATO GoA3/4 over mixed radio based ETCS levels (TRL7 or higher), Hybrid Level 3, moving block and TIMS (TRL6), connectivity (TRL7), perception (TRL6), train positioning (TRL6), automated functions and digital register (TRL6).
- Demonstration of the remote driving and command in depots and yards, including perception systems (TRL6).
- A first demonstrator on next generation ATC, with modular onboard and trackside ATC architectures, at proof-of-concept stage, in close collaboration with the EU Rail System Pillar.
- A proof-of-concepts and/or validation in laboratory and field (i.e., up to TRL5 in Lab and TRL6 on site) for the following new functions and technical enablers:
  - Virtual Coupling Train Set
  - Self-driving wagon
  - autonomous path allocation (linked to input from Destination1)
  - validation and certification
  - Demonstrate a Functional Open Coupling System prototype covering all required subsystems in an operational environment (TRL7)
  - Demonstrate a modular hardware platform using architectural software design patterns and methods (TRL7) allowing SIL2 respective SIL4 (depending on the application)
In addition:

The proposal shall cover important preparatory works to be launched for the future set of demonstration foreseen in the Multi-Annual Work programme in view of the evolutions of the solutions:

• Integration of technical enablers and functions to enhance the performance and capabilities of next generation ATC supporting migration and enlarging the deployment scope of automation.

• ATO GoA3/4 in depots, yards and specific lines without train protection, shunting and stabling operations, and starting from ETCS L1 and non-supervised modes.

• Preparation of next generation ATC with generic solutions and applications tailored to regional low-density traffic lines and first steps in highly automated urban light-rail operations.
EUROPE’S RAIL INFO DAY 2022

DESTINATION 3
Intelligent & Integrated Asset Management

Sébastien DENIS
Programme Manager
Europe’s Rail JU
DESTINATION 3 – Intelligent & Integrated asset management

Deliver by 2025 solutions that can be demonstrated by system approaches of the various developments targeting up to TRL 6 as European common integrated solutions on:

1. **Asset Management & TMS.** Demonstrator showing 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 – **TRL6**

2. **Asset Management & Rolling Stock.** Demonstrator presenting 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 – **TRL6**

3. **Long Term Asset Management.** Development of Life Cycle Cost (LCC) models for infrastructure and rolling stock. This demonstrator shall include cross-border infrastructure remaining useful-life analysis and space-time cross-analysis and visualisation – **TRL6**

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 and service disruptions during operation – **TRL6**.
EU-Rail Call 2022-1

DESTINATION 3 – Intelligent & Integrated asset management

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) – TRL5

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 – TRL5/6

In addition of the above, the proposal shall cover important preparatory works needs to be launched for the future set of demonstration foreseen in the Multi- annual Work programme in view of the evolutions of the solutions – higher TRLs
EUROPE’S RAIL INFO DAY 2022

DESTINATION 4
A sustainable and green rail system

Javier IBÁÑEZ DE YRIGOYEN
Programme Manager
Europe’s Rail JU
EU-Rail Call 2022-1

DESTINATION 4 – A sustainable and green rail system
Deliver by 2025 innovative solutions to be demonstrated by:

1. Alternative energy solutions for the rolling stock at TRL6, covering:
   - High performances Batteries Electric Multi-Unit (BEMU) train (reaching TRL6/7);
   - Hydrogen hybrid trains with test of heavy-duty inspection vehicle and loco for freight-passengers;
   - Sub-urban catenary trains with on board Energy Storage Systems (ESS);
   - 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, covering:
   - Rail Power Smart Grid in different systems as well as the integration of energy storage solutions;
   - Application of solutions for the production, storage and refuelling of hydrogen for railway vehicles on the example of a prototype refuelling station;

3. Sustainability and resilience of the rail system in a holistic approach to asset management, delivering more value:
   - 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 (TRL6);
DESTINATION 4 – A sustainable and green rail system

4. Improvement of electro-mechanical components and sub-systems for the rolling stock, at TRL6, covering:
   - Technological solutions for the migration to the airless train: Electro-mechanical braking system and novel electro-mechanical pantograph and suspensions;
   - 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, covering:
   - Simulation tools for improving the air quality in trains, stations and tunnels (reaching TRL7);

6. Attractiveness, at TRL6, covering:
   - Modular rolling stock interiors providing easy access (incl. PRM) and new architectures for drivers’ cabin.
In addition:

The proposal shall cover important preparatory works needs to be launched for the future set of demonstration foreseen in the Multi-Annual Work Programme in view of the evolutions of the solutions:

- Integration of technical enablers for high performances BEMU trains to enhance standardised and interoperable batteries charging interfaces and data protocol to ensure cost efficiency.
- Scalability of H2 refueling station solutions and energy storage applications.
- Airless train components’ evolution and technologies used for the reduction of noise, weight and energy consumption.
- Preparation and/or simulation of the integrated demonstration in real environment of modular rolling stock.
EUROPE’S RAIL INFO DAY 2022

DESTINATION 5
Sustainable Competitive Digital Green Rail Freight Services

Manuel ALARCÓN ESPINOSA
Programme Manager
Europe’s Rail JU
WS1 Full digital Freight Train Operations with DAC as enabler for full digital freight train operation
Deliver by 2025 the following demonstrators:

- **European full digital freight train operations: (TRL 8-9)** Large-scale demonstrator showing full digital freight train operations based on DAC Type 4 (incl. energy supply & data/communication solution and Type 5 upgradability, DAC wagon retrofitting and DAC – Hybrid for locomotives) in different regions with several train sets under real operational conditions including technical enablers described in scope section.

- **European full digital freight train operations: (TRL 7)** Proposals are expected to deliver a second demonstrator with a lower TRL level for technical solutions for parking brake system, digital wagon inspection (including rolling stock and infrastructure assets), DAC based telematic applications for customer requirements (goods monitoring) / for asset performance management /CBM / for safety related applications, distributed power system and electro-pneumatic brake.

- **European full digital freight train operations: (TRL 8 – some functionalities at lower TRL, see enabler section)** Demonstration of Yard automation equipment, wagon identity system allowing automated shunting, video gates and way side check points with visual recognition and AI tools for yard automation.
EU-Rail Call 2022-1

DESTINATION 5 – Sustainable Competitive Digital Green Rail Freight Services

WS2 Seamless Freight: with easy access and reliable (intermodal) transport service offering digital solutions.
Deliver by 2025 at least the following:

• **Seamless freight corridor (TRL 5-8)** The comprehensive innovations for planning and operation of cross-border freight trains should be demonstrated on (parts of) two European corridors. Freight specific pilot implementations of key enablers for improved cross-border timetable planning, management and path ordering systems taking into account also last mile service, as well as for real-time interaction between various TMS (including yards/terminals). Digital technologies for standardized European Railway checkpoints at borders or other operational stop points. Integrating and connecting the last mile (accession lines/shunting/yards/ terminals) slot planning directly or via interfaces.

• **Seamless customer freight (TRL5-8)** seamless planning, management and booking of multimodal rail-based transport integrating multi-actors, should be demonstrated integrating rail in modern supply chains. Improved routing engines more responsive to changing demand, disruptions and customer requirements. This demonstrator will ease end customers to interface with rail. Dynamic dispatching tools for the optimal automation of yards and last mile operations.
In addition:

The proposal shall cover important preparatory works needs to be launched for the future set of demonstration foreseen in the Multi-Annual Work Programme in view of the evolutions of the solutions:

- Train integrity + train length determination.
- Rail freight operation with ATO Low-weight, low-energy, low-noise, high performing wagon concepts.
- Self-propelled wagon concepts.
- Automated/autonomous loading/unloading technologies for last mile distribution.
- Fully automated shunting loco movements (GoA4)
- Seamless freight corridor and Seamless customer freight
EUROPE’S RAIL INFO DAY 2022

DESTINATION 6
Regional rail services / Innovative rail services to revitalise capillary lines

Judit SÁNDOR
Programme Manager
Europe’s Rail JU
DESTINATION 6 – Regional rail services / Innovative rail services to revitalise capillary lines

Deliver by 2025 demonstrations under the following scenarios:

1. Regional Railway System (CCS & Operations) Demonstration
   • Demonstrate a single integrated Operations Control Center covering interlocking, radio blocking and traffic management for regional lines that are not functionally/operationally connected with mainline (TRL 4/5)
   • Demonstrate simple on-track radio network based on the findings in Destination 2 related with cost effective communications, supporting all FRMCS applications, minimizing civil works and energy consumption, to the achievement of cost effective Gigabit Train, the use of public network coverage and compatibility with main lines (TRL4/5)
   • Demonstrate a specific application for 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 5)
   • Demonstrate a specific application for safe environment perception solutions (TRL5), of FRMCS specifications V2X, 5G (TRL5), for train positioning (TRL5), for train integrity (TRL5), for train length detection (TRL4) and of a digital platform for CCS validation & TSI verification and authorisation for regional (TRL5).
DESTINATION 6 – Regional rail services / Innovative rail services to revitalise capillary lines

Deliver by 2025 demonstrations under the following scenarios:

2. Assets Demonstration
   - Demonstrate a systemic approach with the implementation of different railway assets in particular for cost-efficient wireless, energy self-sufficient wayside components in particular CCS track-side components (e.g. switches, level crossings) and if applicable for track vacancy detections and signalling shall be evaluated and demonstrated (TRL 4/5)

3. Suitable customer services
   - Demonstrate cost-efficient integration of on-board information of multimodal services integrating regional multimodal services such as carsharing (TRL4/5)
   - Demonstrate passenger congestion rate monitoring, flow optimization application as well as a low-cost passenger information system for regional services developed within this action (TRL4/5)

   • An important outcome of this destination is the preparatory work for integrated demonstrators within the duration of the programme to showcase a high number of solutions developed and adapted for regional services can be deployed under operational conditions. In particular taking into account the European dimensions.
EUROPE’S RAIL INFO DAY 2022

Europe’s Rail Programme Sessions
Presentation of the activities for proposals 2022

Q&A
EUROPE’S RAIL INFO DAY 2022

LEGAL AND FINANCIAL GUIDELINES

Starting at 12:45
EUROPE’S RAIL INFO DAY CALL 2022-1

LEGAL GUIDELINES

Valérie LORGÉ
Grant and Legal Officer
Europe’s Rail JU
New features in the Horizon Europe proposal

NEW FIELDS IN PART A
- Researchers table – needed to follow up researchers careers (HE indicator)
- Role of participating organisation
- Self-declaration on gender equality plan

FIELDS MOVED FROM PART B TO PART A
- Ethics self-assessment
- Security questionnaire (NEW! in all HE proposals)

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.
Exclusion

- EDES-DB check: before evaluation, before award and before GA signature
- Applicants subject to administrative sanctions or in the following exclusion situations cannot participate:
  ✓ 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
  ✓ shell company
- Applicants will also be refused if:
  ✓ during award, they misrepresented information required for participating or failed to supply that info
  ✓ previously involved in the preparation of the call, entailing a distortion of competition (conflict of interest).
Admissibility

Same general admissibility conditions

- submitted before the call deadline
- electronically via the Funding & Tenders Portal
- complete, readable, accessible and printable
- plan for the exploitation and dissemination of results.

Proposal page limit:

- Exceptions specified in the call text:
  - limit for a IA application is set at 120 pages in the Application from template for Part B.
Eligibility - Consortium composition

- at least one independent legal entity established in a Member State

AND

- at least two other independent legal entities each established either in a different Member State or an Associated Country.
Eligibility – 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

• This eligibility criterion does not apply to other categories of legal entities, such as private for-profit organisations, including SMEs, non-governmental or civil society organisations
Eligibility – Gender Equality Plan

• A self-declaration will be requested at proposal stage (for all types of participants).

• If the proposal is selected, having a GEP will be necessary before Grant Agreement signature.

• An organisation may not yet have a GEP at proposal submission stage, but it must have a GEP in place at the time of the Grant Agreement signature.

• Support to draft the gender equality plan can be requested at the European Institute for Gender Equality.
Who is eligible for funding?

**EU COUNTRIES**
- Member States (MS)
- Overseas Countries and Territories (OCTs) linked to MS.

**NON-EU COUNTRIES**
- Countries associated to Horizon Europe (AC)
- Low and middle income countries: See [HE Programme Guide](#).
- Other countries when announced in the call or exceptionally if their participation is essential.

**SPECIFIC CASES**
- Affiliated entities established in countries eligible for funding.
- EU bodies
- International organisations (IO):
  - International European research organisations are eligible for funding.
  - Other IO are not eligible (only exceptionally if participation is essential).
Associated Countries

➢ For the purposes of the eligibility conditions, a legal entity based in a third country officially candidate for association to Horizon Europe is eligible.

➢ However, the signature of the grant agreement will be subject to the positive conclusion of the association negotiation.

➢ They will be treated as entities established in an Associated Country, if the Horizon Europe Association Agreement with the third country concerned applies at the time of signature of the Grant Agreement.

➢ A legal entity based in a third country which is not candidate for association to Horizon Europe can apply as part of a consortia in which the minimum number of EU or Associated Country partners are present.
Associated Countries

➢ The association agreements with the following countries have now started to produce legal effects (either through provisional application or their entry into force):


➢ Until association agreements start producing legal effects either through provisional application or their entry into force, the transitional arrangement set out in the General Annexes to the Horizon Europe Work Programme 2021-2022 is applicable with regard to the following countries, with which association negotiations are being processed or where association is imminent:


➢ The UK is expected to become an associated country to HE. UK entities can take part in the first calls for proposals of Horizon Europe
Specific Situation - CH

• Legal entities established in Switzerland are currently not covered by the transitional arrangement.

• Switzerland is currently considered a non-associated third country for Horizon Europe and related programmes with call identifier 2021 and 2022.

• Can Swiss entities (including companies and SME) participate in Horizon Europe? Yes, entities based in Switzerland can participate in Horizon Europe. Any legal entity, regardless of its place of establishment, including legal entities from non-associated third countries or international organisations, is eligible to participate (whether it is eligible for funding or not), provided that the conditions laid down in the HE Regulation are met, along with any other conditions laid down in the specific call topic. However, as Switzerland is considered a non-associated third country, Swiss applicants must submit their proposals as participants from a non-associated third country (‘Associated Partner’).
Evaluation – award criteria

Same criteria as in H2020

Same three award criteria: ‘Excellence’, ‘Impact’ and ‘Quality and efficiency of implementation’.

But specific EU-Rail sub-criteria - Annex VII of the EU-RAIL AWP

Part D of the Horizon Europe Work Programme 2021-2022 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 – Award criteria - IAs

**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, inter-disciplinary 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 due to 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.

Proposals aspects are assessed to the extent that the proposed work is within the scope of the work programme topic.
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.
Ethics review

Same criteria as in H2020

For all activities funded, ethics is an integral part of research, and ethical compliance is essential to achieve research excellence.

An ethics review process is carried out systematically in all HE proposals, based on a self-assessment included in the proposal.

Ethical research conduct implies the application of 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.

Adapted following lessons learnt

- Focus mainly on complex/serious cases
- Reduce number of ethics requirements in funded projects.
Ethics review

• Projects must comply with ethical principles and applicable EU, international and national law.
• Applicants must have completed the ethics self-assessment as part of their application.
• For more information, see 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.
• These requirements become part of the grant agreement as ethics deliverables, e.g. ethics committee opinions/authorisations required under national or EU law
Security scrutiny

New in Horizon Europe

Security issues will be checked **systematically** in all Horizon Europe proposals (in H2020 only proposals submitted to topics flagged as ‘security-sensitive’ were checked). 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**

The checks based on the self-assessment may trigger an in-depth security scrutiny.
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 look 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
How can I participate in the grant agreement?

**Beneficiary**
- Signs the project
- Has all rights and obligations

**Affiliated entity**
- With a legal or capital link with the beneficiary
- Does work and may declare costs

**Associated partner**
- Does work but can NOT declare costs

**Third party providing contributions**
- Does NOT do work just give in-kind contributions
- The beneficiary may declare the costs of the contributions

**Subcontractor**
- Does work and invoices the beneficiary
- The beneficiary may declare the invoice
Affiliated entities

Article 187 (1)(b) of the EU Financial Regulation:

Entities ‘that have a link with the beneficiary, in particular a legal or capital link, which is neither limited to the action nor established for the sole purpose of its implementation’.

Affiliated entities in Horizon Europe = Linked third parties in Horizon 2020

(alignment of labelling/definition in the corporate context)

Disclaimer: Information not legally binding
Associated Partner (AP)

- Inherited and derived from the ‘International partner’ status in H2020 MGA

- Corporate terminology and status with the following features:
  - AP mentioned in Art. 9 and implements action tasks listed in Annex I
  - But without receiving EU funding (costs are not eligible)
  - The beneficiaries must ensure that some of MGA obligations also applied to AP (i.e. Articles 11 (proper implementation), 12 (conflict of interests), 13 (confidentiality and security), 14 (ethics), 17.2 (visibility), 18 (specific rules for carrying out action), 19 (information) and 20 (record-keeping)
EUROPE’S RAIL INFO DAY 2022

Legal Guidelines

Q&A
EUROPE’S RAIL INFO DAY CALL 2022-1

FINANCIAL GUIDELINES

Vincent DECLERFAYT
Head of Corporate Services
Europe’s Rail JU
Horizon Europe - The next EU Research and Innovation investment Programme (2021-2027) and EU-Rail JU

1. Model Grant Agreement (MGA) and eligibility criteria
2. Lump sum detailed Financial Excel table
3. Estimated Members’ contributions
1. Model Grant Agreement (MGA) and eligibility criteria
What is the grant agreement and why do I need it?

The grant agreement is the contractual document signed with a ‘granting authority’ (e.g. the Commission or one of its executive agencies) defining

**YOUR RIGHTS**

e.g.:
- To receive EU funding, under the terms and conditions defined in the grant agreement, to help you to accomplish your project
- To own the results of the project that you have generated
- To ask for amendments of the grant agreement (if something needs to be changed)

**YOUR OBLIGATIONS**

e.g.:
- To Implement the project as planned in the description of the action (Annex 1 to the grant agreement)
- Submit reports at the time and for the periods defined in the grant agreement
- Display the EU-Rail JU logo and reference to EU Rail Programme / Horizon Europe funding (e.g. information material, equipment funded by the grant, major results);

**HOW MUCH MONEY YOU CAN GET**

Overall, the granting authority can never pay:
- more than the maximum grant amount fixed in the grant agreement.
- But it may pay less; e.g. if the project costs at the end are less than budgeted
**Corporate structure of the Horizon Europe MGA**

**Core Part**

**Datasheet**
- a summary of the specific data of the grant agreement

**Articles**
- grouped in six chapters

1. General Data
2. Participant
3. Grant
4. Reporting, payment and recoveries
5. Consequences of non-compliance, applicable law and dispute settlement forum
6. Specific rules Annex 5 & Standard time-limits after project end

**Chapter 1** – General (Articles 1-2)
**Chapter 2** – Action (Articles 3-4)
**Chapter 3** – Grant (Articles 5-6)
**Chapter 4** – Grant Implementation (Articles 7-26)
**Chapter 5** – Consequences of non-compliance (Articles 27-35)
**Chapter 6** – Final provisions (Articles 36-44)
Lump sum – main differences with standard MGA

Work Package and its work (deliverable, milestones, etc.) importance

WP 8 NOT fully completed
Lump sum – main differences with standard MGA

The grant agreement will set out the lump sum (Max contribution: co-funding) corresponding to the full accomplishment of the work committed in Annex 1.

The lump sum for the grant is set out at its signature.
Submission – Lump Sum Grants

• For lump sum grants, when the amount of the lump sum is not fixed in advance, the estimated budget must be described in a detailed budget table.
• This will be used as a basis for fixing the lump sum amount.
• Decision authorizing the use of lump sum contributions under the HE/EU-Rail Programme:

“The detailed cost estimation per work package and per beneficiary and affiliated entity (if any) shall include only costs that would be considered eligible in an actual costs grant. [...] Where relevant, applicants shall declare that they have followed their own accounting practices for the preparation of the estimated budget”
As the lump sum is an approximation of the costs actually incurred, the costs included in this detailed budget table must comply with the basic eligibility conditions for EU actual cost grants (see AGA — Annotated Grant Agreement, article 6).

This is particularly important for purchases and subcontracting, which must ensure best value for money (or, if appropriate, the lowest price) and be free from any conflicts of interest.

If the budget table contains ineligible costs, the grants may be reduced (even later on during implementation of the project or after they end).
Lump Sum - Subcontracting

• The principles of subcontracting (ensuring best value for money, no CoI, subcontracting of only a limited part of the action, etc.) are still compulsory

• BUT are not considered to be additional cost eligibility conditions

• Consequence: in case of breach, JU may reduce the grant in proportion to the seriousness of the breach instead of rejecting costs.

• The estimated costs for each subcontract DO NOT have to be included in Annex 1 and the total estimated costs of subcontracting per beneficiary are not displayed in Annex 2.

• Nevertheless, costs of subcontracting MUST BE indicated in the “Financial Excel table” and are part of the lump sum.
Lump Sum Grants: why?

- Lump sum project funding removes all obligations on actual cost reporting and financial audits (Certificate of Financial Statement and ex-post audits) at project implementation phase – i.e. a major reduction of administrative burden
- Focus on performance: shift from focus on financial management and checking costs to focus on scientific-technical content of the projects
- One lump sum share is fixed in the grant agreement for each work package: this amount is paid when the activities in the work package are completed (the payment does not depend on a successful outcome, but on the completion of activities, as confirmed by the JU)
Lump Sum Grants: keeping records

**We need**
- Technical documents
- Publications, prototypes, deliverables
- Who did what?
- ...any document proving that the work was done as detailed in Annex 1

**We don't need**
- Time-sheets
- Pay-slips or contracts
- Depreciation policy
- Travel invoices
- ...actual costs

Art 20 lump sum MGA
HE specific provisions
to be considered in submitting the Lump Sum Proposals

Personnel costs
The situation tomorrow...
Personnel costs new calculation

NEW

Corporate approach with Personnel costs =

\[ \text{Daily rate} \times \text{Days worked} \]

Daily rate = \frac{\text{annual personnel costs for the person}}{215} \\
with no more obligation to use the 'last closed financial year'!
Daily rate calculation

When?

- **per calendar year** (from January to December)
- except for the months running from the end of the last calendar year until the end of the reporting period. For those months, you must calculate a separate partial daily rate as follows:

  \[
  \text{partial daily rate} = \frac{\text{actual personnel costs of the person incurred over those months}}{\frac{215}{12} \times \text{number of months from the January until the end of the reporting period}}
  \]
Personnel costs: main differences with H2020

- Discontinuation of the different formulas (annual and monthly) and options for productive hours (entailing difficult and error-prone calculations)
- No more ‘last closed financial year’ rule
- Instead, use of a single corporate daily rate and calendar year approach
HE specific provisions
to be considered in submitting the Lump Sum Proposals

Equipment costs
Equipment costs

Depreciation costs are by default eligible.

By exception, full costs may be eligible.

Optional provisions addressing the specific case of assets under construction (e.g. prototype) and their related capitalised costs:

• The full construction costs (typically the costs of the personnel involved in the construction of the prototype)

• The full purchase costs (typically any component, pieces of equipment bought for the prototype)
HE specific provisions

Indirect costs
Indirect costs

*What?* Costs that are only indirectly linked to the action implementation (Art. 6(1) General eligibility conditions of the Horizon Europe MGA)

*Flat-rate of 25% of the eligible direct costs*, except subcontracting costs, financial support to third parties and exempted specific cost categories, if any. (Art. 6(2)(E) Indirect costs of the Horizon Europe MGA)

*Possibility to accept actual indirect costs* allocated via beneficiary’s usual key drivers in the unit cost calculation for *internally invoiced goods and services*
Lump Sum Grant Agreements

Evaluation
Lump Sum - evaluation

• In complement to the explanation provided in the legal part about the evaluation criteria (previous chapter “excellence / impact / quality and efficiency of the implementation”, for each WP, experts shall in addition:

✓ Check the budget estimate on the basis of relevant statistical data or historical data on previously funded and comparable actions (or based on relevant benchmarks on costs and resources such as market prices)

✓ Assess whether the resources proposed and the split of lump sum shares allows achieving the activities and expected outputs

✓ Verify that proposals include the declaration by beneficiaries of having used their own accounting practices.
Lump Sum Grant Agreements

Ex-post controls
Lump Sum – ex-post controls

Checks, reviews and audits for:

- Proper implementation of the action (e.g. technical review)
- Compliance with the other obligations of the grant:
  - IPR obligations
  - Obligations related to third parties (e.g. financial support)
  - Other obligations (e.g. ethics, visibility of EU funding, etc.)

No financial audits anymore
Lump Sum Grant Agreements

Amendment
Lump Sum - Amendments

• During the life of the project, consortia can change the number, descriptions and values of LS shares (e.g. budget transfers)

• CONDITIONS:
  ✓ Via a request for amendment
  ✓ On the condition it does not breach the award decision
  • Changes will enter in force after the approval of the amendment.

HOWEVER:
• Transfers from COMPLETED & PAID WPs are not possible
• Transfers between WPs can only be accepted in exceptional circumstances, if duly justified and after a project review.
• Lump sum shares of a terminated beneficiary cannot be changed (termination amendment must include all necessary updates for that beneficiary in the budget table)
• Partial lump sum shares in the last reporting period are an exception i.e. for technical reasons
2. Lump Sum detailed Financial Excel table
Instructions:

In this tab, all the necessary instructions on how to fill in the table are shown.
In this tab, you should add all the beneficiaries and affiliated entities and choose 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.
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.
BE1, 2, 3 and so on – 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.
Depreciation cost:

In this tab, you have a tool where you can calculate the depreciation costs of any equipment to be used in the action. This will help you define the amounts to be added in the individual beneficiary sheets concerning depreciation.

<table>
<thead>
<tr>
<th>WP nr</th>
<th>Beneficiary name</th>
<th>WP nr</th>
<th>Work Package name</th>
<th>Resource type</th>
<th>Short name of the Investments</th>
<th>Date of purchase (real or planned date of purchase)</th>
<th>Purchase cost</th>
<th>% used for the project</th>
<th>% use for lifetime of the investment</th>
<th>Charged depreciation costs per investment</th>
<th>Justifications Needed info for depreciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ren 1</td>
<td>1</td>
<td>work package 1</td>
<td>Equipment</td>
<td>equipment 1</td>
<td>10/09/2020</td>
<td>€ 100,000.00</td>
<td>45%</td>
<td>55%</td>
<td>€ 24,750.00</td>
<td></td>
</tr>
</tbody>
</table>
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.
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.

<table>
<thead>
<tr>
<th>WORK PACKAGES</th>
<th>Beneficiary 1</th>
<th>Beneficiary 2</th>
<th>Beneficiary 2</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>WP1</td>
<td>10.0</td>
<td>10.0</td>
<td>10.0</td>
<td>30.0</td>
<td>40.0%</td>
</tr>
<tr>
<td>WP2</td>
<td>10.0</td>
<td>10.0</td>
<td>0.0</td>
<td>20.0</td>
<td>26.7%</td>
</tr>
<tr>
<td>WP3</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>15.0</td>
<td>20.0%</td>
</tr>
<tr>
<td>WP4</td>
<td>5.0</td>
<td>5.0</td>
<td>0.0</td>
<td>10.0</td>
<td>13.3%</td>
</tr>
<tr>
<td>Total</td>
<td>30.0</td>
<td>30.0</td>
<td>15.0</td>
<td>75.0</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>BENEFICIARIES</th>
<th>WP1</th>
<th>WP2</th>
<th>WP3</th>
<th>WP4</th>
<th>Totals</th>
<th>Pct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beneficiary 1</td>
<td>60,000.00</td>
<td>0.00</td>
<td>30,000.00</td>
<td>0.00</td>
<td>90,000.00</td>
<td>88.2%</td>
</tr>
<tr>
<td>AE 1 (ben1)</td>
<td>0.00</td>
<td>100,000.00</td>
<td>0.00</td>
<td>50,000.00</td>
<td>150,000.00</td>
<td>145.0%</td>
</tr>
<tr>
<td>Beneficiary 2</td>
<td>100,000.00</td>
<td>0.00</td>
<td>50,000.00</td>
<td>0.00</td>
<td>150,000.00</td>
<td>142.8%</td>
</tr>
<tr>
<td>AE 1 (ben2)</td>
<td>0.00</td>
<td>70,000.00</td>
<td>0.00</td>
<td>55,000.00</td>
<td>105,000.00</td>
<td>101.5%</td>
</tr>
<tr>
<td>Beneficiary 2</td>
<td>40,000.00</td>
<td>0.00</td>
<td>10,000.00</td>
<td>0.00</td>
<td>50,000.00</td>
<td>48.5%</td>
</tr>
<tr>
<td>Totals:</td>
<td>200,000.00</td>
<td>170,000.00</td>
<td>100,000.00</td>
<td>85,000.00</td>
<td>555,000.00</td>
<td>100.0%</td>
</tr>
<tr>
<td>Pct:</td>
<td>36.0%</td>
<td>30.8%</td>
<td>18.2%</td>
<td>15.3%</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

Lump sum share per beneficiary for the GA.
The lump sum breakdown is used in the budget proposal table for the calculation of the Requested grant amount.

<table>
<thead>
<tr>
<th>No</th>
<th>Name of Beneficiary</th>
<th>Country</th>
<th>Role</th>
<th>Requested grant amount</th>
<th>Financial contributions</th>
<th>Other sources of funding - IKOP</th>
<th>Own resources</th>
<th>Total estimated income</th>
<th>IKAA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Baard Consulting Sca</td>
<td>BE</td>
<td>Coordinator</td>
<td>60.00</td>
<td>40</td>
<td></td>
<td>100.00</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Test Camelia-valeria</td>
<td>BE</td>
<td>Partner</td>
<td>120.00</td>
<td>80</td>
<td></td>
<td>200.00</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Sme Test</td>
<td>BE</td>
<td>Affiliated</td>
<td>30.00</td>
<td>0</td>
<td>0</td>
<td>30.00</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Charalampis Xenogiannis</td>
<td>BE</td>
<td>Associated</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td>210.00</td>
<td>0</td>
<td>120</td>
<td>330.00</td>
<td>13</td>
<td></td>
</tr>
</tbody>
</table>

- The IKOP shall be introduced in the budget proposal table.
- Indicative IKAA could be introduced as well.
- A dedicated table for the contribution of the Members is also needed (see next slides)
3. EU-Rail Programme: Specific provisions to be considered by the EU-Rail Private Members’ intending to join a consortia for the submission of a proposal
Single Basic Act (SBA) & In-kind contribution

- Contributions from members other than the Union and contributing partners as per Art 11 of SBA - the contributions of private members shall consist of IKOP, IKAA and financial contributions.

- Programme approach:

<table>
<thead>
<tr>
<th>“Total Project Costs”</th>
<th>IKAA</th>
</tr>
</thead>
<tbody>
<tr>
<td>HE Eligible costs</td>
<td>IKOP – 40%</td>
</tr>
<tr>
<td>HE Max Contribution (co-funding) – funding rate 60% and = [44.5% Total Project Costs]</td>
<td>“If Applicable – linked to the project or activities” - Own accounting practice</td>
</tr>
</tbody>
</table>

- Letter of Commitments and Final contributions per Members agreed with expected leverage effects calculated at Programme level
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”

<table>
<thead>
<tr>
<th>Members</th>
<th>Maximum grant amount - JU contribution (Total value of the lump sum shares for all WP)</th>
<th>Total Contributions of private members - Indicative value</th>
<th>Pct ((\text{D}) = \frac{\text{B+C}}{\text{B}})</th>
<th>Justification if applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member 1 (aggregated, of the applicant Private Member)</td>
<td>100,00</td>
<td>126,30</td>
<td>2,263</td>
<td></td>
</tr>
<tr>
<td>Member 2 (aggregated, of the applicant Private Member)</td>
<td>1,000,00</td>
<td>1,263,00</td>
<td>2,263</td>
<td></td>
</tr>
<tr>
<td>Member 3 (aggregated, of the applicant Private Member)</td>
<td>10,000,00</td>
<td>12,630,00</td>
<td>2,263</td>
<td></td>
</tr>
<tr>
<td>Member 4 (aggregated, of the applicant Private Member)</td>
<td>125,000,00</td>
<td>157,875,00</td>
<td>2,263</td>
<td></td>
</tr>
<tr>
<td>Member 5 (aggregated, of the applicant Private Member)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Member 6 (aggregated, of the applicant Private Member)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Member 7 (aggregated, of the applicant Private Member)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Member 8 (aggregated, of the applicant Private Member)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Member 9 (aggregated, of the applicant Private Member)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Fill in the project acronym
2. Fill in the Members name
3. Enter the JU contribution (LS share)
The indicative value of contribution and % are automatically calculated
4. Any discrepancy shall be well and duly justified (in case % below 2.263)
EUROPE’S RAIL INFO DAY 2022

Financial Guidelines

Q&A