1. **THEME: UTRAIN ("UNIQUE TRAIN" – NEXT GENERATION OF TRAIN TRACKING)**

1.1 Objectives pursued

The main objective of the prize is to develop an innovative solution that will allow tracking all commercial freight trains\(^1\), from all railway undertakings, covering the whole European network. The aim is to provide real-time information about the train, accessible to all, including information on the location, departure, destination, composition and punctuality. The desired solution must take into account the national messages compliant with Commission Regulation (EU) No 1305/2014 of 11 December 2014\(^2\) on the technical specification for interoperability relating to the telematics applications for freight subsystem of the rail system in the European Union and repealing the Regulation (EC) No 62/2006 (hereinafter TAF-TSI) and the existing interfaces with multimodal hubs (terminal, ports authorities, etc.).

In particular, the single solution (interface, tools, etc.) will ensure:

- a seamless tracking (possibly from path request until operation) of commercial trains across Europe in Infrastructure Managers networks and beyond, in synergy with “Telematics Applications for Freight services” (hereinafter TAF) compatible messages and existing online tools.

- a service to track commercial trains across Europe, including tailor-made access to data within TAF environment Railway Undertakings (RU), Infrastructure Managers (IM), TIS (Train Information System from Rail Net Europe (RNE)), terminals, port authorities and combined transports operators, etc. adaptable to the needs of different users.

1.2 Expected results

It is expected that a single solution for the implementation of efficient methods and tools to track commercial trains, across IM networks and Terminals, in synergy with the TRAIN ID and train data-related activities managed by the Joint Sector Group Rail Net Europe (RNE), and Forum Train Europe taking stock of the Telematics Application for Freight TSI (TAF TSI) for mainstreaming, will be the final result of the prize.

The solution should demonstrate its technical validity and universality while at the same time it should provide a viable path (of measures and advantages) to go beyond the current state of play and open to further developments of the single Train ID.

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\(^1\) 'commercial train': Defined as a seamless offer of transport for the passengers or freight loads between origin and destination of the ‘commercial train’, including intermediate stops. The ‘commercial train’ receives a number used by the client or loader to find information about the journey.

2. **PRIZE AMOUNT(S):**

A total budget of 500,000 EUR is available for this prize, offering 2 (two) awards as follows:

- 400,000 EUR for the winner,
- 100,000 EUR for the 1st runner-up.

3. **DEADLINES & ADMISSIBILITY**

<table>
<thead>
<tr>
<th>Deadlines</th>
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<tbody>
<tr>
<td>Opening of the submission:</td>
<td>22\textsuperscript{nd} October 2020</td>
</tr>
<tr>
<td>Closing date for submission:</td>
<td>\textbf{21 September 2021} at 17:00:00 CET\textsuperscript{3}</td>
</tr>
<tr>
<td>Hearings and Final evaluation</td>
<td>October-November 2021</td>
</tr>
<tr>
<td>Award Ceremony</td>
<td>December 2021</td>
</tr>
</tbody>
</table>

Joint applications by a group of participants are admitted. In this case, the participants must appoint a ‘lead participant’ to represent them towards the Shift2Rail Joint Undertaking. The participants will be jointly responsible and must all fulfil and respect the conditions set out in these Rules of Contest.

Applications must be submitted by the (lead) participant via the Participant Portal Submission Service. Applications must be readable, accessible and printable. Incomplete applications may be considered inadmissible if essential elements are missing (see General Annex B to the Main Work Programme).

The page-limit for your prize application (Part B) is: 60 pages. (excluding annexes and appendices).

Sample application forms will be available on the Participant Portal Reference documents page.

4. **ELIGIBILITY**

4.1 Eligibility criteria

The contest is open to any legal entity (including natural persons) or group of legal entities established in an EU Member State or in a country associated to Horizon 2020.

Please note however that special rules may apply for entities from certain countries (see General Annex C to the Main Work Programme). Please also be aware that participants that have already received an EU or Euratom prize cannot receive a second prize for the same activities.

4.2 Exclusion criteria

Participants will be excluded if they (or one of them):

- are subject to an administrative sanction (i.e. exclusion)\textsuperscript{4}

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\textsuperscript{3} Central European Time = Brussels local time.

\textsuperscript{4} See Articles 131(4) and 106(1) Financial Regulation.
are in one of the following situations:\(^5\):

- bankrupt, being wound up, having their affairs administered by the courts, entered into an arrangement with creditors, suspended business activities or subject to any other similar proceedings or procedures under national law (including persons with unlimited liability for the participant’s debts)

- declared in breach of social security or tax obligations by a final judgment or decision (including persons with unlimited liability for the participant’s debts)

- found guilty of grave professional misconduct\(^6\) by a final judgment or decision (including persons having powers of representation, decision-making or control)

- convicted of fraud, corruption, involvement in a criminal organisation, money laundering, terrorism-related crimes (including terrorism financing), child labour or human trafficking (including persons having powers of representation, decision-making or control)

- shown significant deficiencies in complying with main obligations under a procurement contract, grant agreement or grant decision financed by the EU or Euratom budget (including persons having powers of representation, decision-making or control)

- found guilty of irregularities within the meaning of Article 1(2) of Regulation No 2988/95 (including persons having powers of representation, decision-making or control)

- have misrepresented information required for participating in the contest or fail to submit such information

- were involved in the preparation of the prize documents and this entails a distortion of competition.


\(^6\) Professional misconduct includes: violation of ethical standards of the profession, wrongful conduct with impact on professional credibility, false declarations/misrepresentation of information, participation in a cartel or other agreement distorting competition, violation of IPR, attempting to influence decision-making processes or obtain confidential information from public authorities to gain an advantage.
5. AWARD CRITERIA

The proposed solution should fulfil the following minimum requirements:

- Independently from technological choices, relevant standards for design, development, implementation and testing need to be followed as much as possible as well as technology-related relevant standards.

- Compliance with relevant EU legislation (protection of commercial interest) should be demonstrated.

The prize will be awarded to the entity that best addresses the following 4 (four) cumulative criteria:

- **Applicability**
  - **Ready to use. Plug and Play.** Basis for possible future legislation.
  - Easily exportable to a data hub manager, not created for a single IM, suitable for data exchange between IMs.
  - Scalable and Usable by all actors of the logistic chain.
  - While the reuse of TAF elements and messages is encouraged, this shall not prevent in any manner the improvement, also substantial, and extension of the TAF elements/messages or synergies with other relevant data models (existing or available in short/medium term).

- **Interoperability and Openness**
  - Interoperable with different existing systems and standards, i.e. systems in use by IMs and/or RUs, Hermes 30, EDIGES, port community systems, TIS.
  - Not dependent on proprietary solutions, using open standards. Potentially exportable to a "data hub manager".

- **Affordability** - (maintenance, cost per train...).

- **Reliability, Security, Privacy and Data protection.**

6. DOCUMENTS

The mandatory supporting documents are set out in the application form.

Participants may be asked at a later stage for further documents (for legal entity validation, bank account validation, ethics review, declaration of honour on exclusion grounds, etc.).

7. PROCEDURE

All applications will be submitted to a jury review.

The jury evaluation is planned to take place between **September 2021 and November 2021**.

The jury will evaluate each application against the 4 award criteria and score them as follows (half marks are possible decimals are not):
<table>
<thead>
<tr>
<th>Criterion</th>
<th>Threshold</th>
<th>Maximum points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Applicability</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>2. Interoperability and Openness</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>3. Affordability</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>4. Reliability, Security, Privacy and Data protection</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>50</td>
</tr>
</tbody>
</table>

For applications with the same score, the jury will determine a priority order according to the following approach: The score for the criterion No 1 will be given a weight of 2 and the score for criterion No 2 will be given a weight of 1.5.

The applications that pass the threshold will be invited to demonstrate their solution.

The 2 best applications shall be invited as finalists in an event with stakeholders to demonstrate their solution and for a hearing with the jury. On the basis of the evaluation report, the Shift2Rail JU will decide on the award of the prize.

All participants will be informed by end 2021 on the outcome of their application.

### 8. OTHER CONDITIONS

#### 8.1 Special conditions for the Shift2Rail Joint Undertaking Members other than the Union:

Please bear in mind that if the prize will be awarded to one or more of the following entities:

1) Members of the Shift2Rail Joint Undertaking (founding or associated),

2) constituent entities of Members in the form of consortia or groupings,

3) affiliated entities either to the Shift2Rail Joint Undertaking Members or to the constituent entities of Members in the form of consortia or groupings,

those legal entities shall submit to the Shift2Rail Joint Undertaking relevant documents including the amount received via the prize and their formal engagement to contribute through IKOP in other parts of the Shift2Rail Joint Undertaking Programme in accordance with the relevant membership agreement\(^7\). Failure to provide such documents within 15 calendar days from the reception of the payment will lead to the situation referred to in Art. 8.11 of these Rules of Contest.

\(^7\) See Article 16 (3) of Annex I Council Regulation (EU) No 642/2014 of 16 June 2014 establishing the Shift2Rail Joint Undertaking
8.2 Payment arrangements
The prize money (EUR 400,000, and 100,000 for the winner and the 1st runner-up respectively) will be paid to the (lead) participant in one instalment after the award ceremony by bank transfer, provided all the requested documents have been submitted.

8.3 Publicity — Promoting the prize — Visibility of EU funding

8.3.1 Publicity by the winner(s)
Both finalists shall promote the prize and its results, by providing targeted information to multiple audiences (including the media and the public) in a strategic and effective manner.

Unless the Shift2Rail Joint Undertaking requests or agrees otherwise or unless it is impossible, any communication activity related to the action (including in electronic form, via social media, etc.) must:

(a) display the EU emblem and the Shift2Rail logo, and

(b) include the following text:

“This action was finalist for/winner of the TRAIN ID from the European Union’s Horizon 2020 research and innovation programme”.

When displayed together with another logo, the EU emblem must have appropriate prominence.

For the purposes of their obligations, the finalist and winner may use the EU emblem without first obtaining approval from the Shift2Rail Joint Undertaking.

This does not, however, give it the right to exclusive use.

Moreover, they may not appropriate the EU emblem or any similar trademark or logo, either by registration or by any other means.

8.3.2 Publicity by the Shift2Rail Joint Undertaking
The Shift2Rail Joint Undertaking may use, for its communication and publicising activities, information relating to the prize, documents, summaries for publication as well as any other material, such as pictures or audio-visual material that it receives from the participants (including in electronic form).

The Shift2Rail Joint Undertaking will publish the name of both the finalist(s) and the winner, their origin, the amount of the prize and its nature and purpose — unless they have requested to waive this publication (because disclosure risks threatening its security and safety or harm its commercial interest).

Photos and videos taken by the Shift2Rail Joint Undertaking either in preparation of the award ceremony or during the award ceremony are the sole property of the Shift2Rail Joint Undertaking.

8.4 Dissemination and exploitation of results
The winner(s) must comply with the obligations set out in Title III of the Horizon 2020 Rules for Participation Regulation No 1290/2013\(^8\) For more information and best practice, see Articles 23a-31 of the H2020 AGA — Annotated grant agreement.

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8.5 Processing of personal data

8.5.1 Processing of personal data by the Shift2Rail Joint Undertaking

Any personal data will be processed by the Shift2Rail Joint Undertaking under Regulation No 45/2001⁹ and in accordance with the Participant Portal privacy notice(s).

All finalist(s) and winner consent that the Shift2Rail Joint Undertaking publishes the following information:

- name
- Member State of origin (address or NUTS 2 region)
- their activities in relation to the award of the prize (via the summary for publication they provided)
- prize amount

in whatever form and medium.

8.5.2. Processing of personal data by the participants

The participants must process personal data in compliance with applicable EU and national law on data protection (including authorisations or notification requirements, if any).

8.6 Ethics

The activities must be carried out in compliance with:

(a) ethical principles (including the highest standards of research integrity) and
(b) applicable international, EU and national law.

No prize will be awarded for activities carried out outside the EU, if they are prohibited in all Member States.

The participants must ensure that the activities have an exclusive focus on civil applications.

The participants must ensure that the activities do not:

(a) aim at human cloning for reproductive purposes
(b) intend to modify the genetic heritage of human beings which could make such changes heritable (with the exception of research relating to cancer treatment of the gonads) or
(c) intend to create human embryos solely for the purpose of research or for the purpose of stem cell procurement, including by means of somatic cell nuclear transfer.

Research activities involving human embryonic stem cells (hESC) are moreover subject to the conditions set out in the Statement of the Commission related to research activities involving human embryonic stem cells.

The participants must respect the highest standards of research integrity — as set out, for instance, in the European Code of Conduct for Research Integrity⁸.

For more information and best practice, see the Participant Portal Online Manual, the Guidance — How to complete your ethics self assessment and the Guidance note — Research focusing exclusively on civil applications.

8.7 Security

The activities must be carried out in compliance with Commission Decision 2015/444, i.e. security-sensitive information must be EU-classified, if its unauthorised disclosure could adversely impact the interests of the EU or of one (or more) of its Member States. Applications that are too security-sensitive cannot be awarded a prize.

For more information and best practice, see the Guidance — Guidelines for the classification of information in research projects, the Guidance — Guidelines for the handling of classified information in EU research projects, the Guidance note — Potential misuse of research results and the Guidance note — Research involving dual use items.

8.8 Conflict of interests

The participants must take all measures to prevent any situation where the impartial and objective award of the prize is compromised for reasons involving economic interest, political or national affinity, family or emotional ties or any other shared interest (‘conflict of interests’).

They must inform the Shift2Rail Joint Undertaking without delay of any situation constituting or likely to lead to a conflict of interests and immediately take all the necessary steps to rectify this situation.

The Shift2Rail Joint Undertaking may verify that the measures taken are appropriate and may require additional measures to be taken by a specified deadline.

8.9 Liability for damages

The Shift2Rail Joint Undertaking cannot be held liable for any damage caused to the participants or to third parties as a consequence of the prize, including for gross negligence.

The Shift2Rail Joint Undertaking cannot be held liable for any damage caused by any of the participants in the context of the prize.

8.10 Checks, audits and investigations

The Shift2Rail Joint Undertaking, the European Commission, the European Anti-Fraud Office (OLAF) and the European Court of Auditors may carry out checks, audits and investigations in relation to the prize.

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⁸ European Code of Conduct for Research Integrity of ALLEA (All European Academies) and ESF (European Science Foundation) of March 2017
8.11 Withdrawal of the prize — Recovery of undue amounts

The Shift2Rail Joint Undertaking may withdraw the prize after its award and recover all payments made, if it finds out that:

(a) false information, fraud or corruption was used to obtain it
(b) a winner was not eligible or should have been excluded
(c) a winner is in serious breach of its obligations under these Rules of Contest.

8.12 Administrative sanctions

If a participant has committed irregularities or fraud or has made false declarations, the Shift2Rail Joint Undertaking may also:

(a) exclude the participant from all future contracts, grants and contests financed from the EU or Euratom budget for a maximum of five years (or 10 years in case of repetition) and/or
(b) impose a financial penalty between 2% and 10% of the value of the prize (or between 4% and 20% in case of repetition).

8.13 Cancellation of the contest

The Shift2Rail Joint Undertaking may cancel the contest or decide not to award the prize — without any obligation to compensate participants —, if:

(a) no applications are received
(b) the jury does not find a winner
(c) the winner is not eligible or must be excluded
(d) the objective of the contest has already been achieved.

8.14 Complaints

Complaints against decisions negatively affecting the rights of a participant or winner can be brought before the General Court — or, on appeal, the Court of Justice of the European Union — under Article 263 of the Treaty on the Functioning of the EU (TFEU).

9. CONTACT

For more information, please see the S2R website.

In case of questions, please contact Info-Call@s2r.europa.eu.