

Making the railway system  
work better for society.

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Valenciennes, 11<sup>th</sup> November 2022

### TAF TSI Compliance Test Results – CEF Grant Agreement INEA/CEF/TRAN/M2016/1349973

To whom it may concern,

I confirm and certify herewith that the following TAF TSI functionalities implemented by the company Hellenic Railways Organization S.A. – OSE (Greece), within the project “TAF/TAP-TSI implementation in Greece: Design and development of scalable TAF/TAP - TSI systems”, co-financed by the Connecting Europe Facility Fund, are compliant with the appropriate provisions of the TAF-TSI Regulation 1305/2014 and its Technical Documents.

Details of the Action:

<b>Name of the Action:</b>	"TAF/TAP-TSI implementation in Greece: Design and development of scalable TAF/TAP - TSI systems"
<b>No. of the Action:</b>	2016-EL-TMC-0232-M
<b>No. of the Grant Agreement:</b>	INEA/CEF/TRAN/M2016/1349973

<b>Duration of the Action:</b>	01/10/2017-30/09/2022
<b>Verified Activity:</b>	<ul style="list-style-type: none"> <li>• Activity 3: Plan and Development of Telematics Platform</li> <li>• Activity 5: Plan and Development of internal path request application</li> <li>• Activity 6: Plan and Development of Train Running Forecast Information System</li> <li>• Activity 10: Plan and Development of a Reporting and Contract Server</li> </ul>
<b>Verified Milestones and TAF TSI Functionalities:</b>	<ul style="list-style-type: none"> <li>• Mil. 14: Telematics Platform completed</li> <li>• Mil. 16: Path Request application completed</li> <li>• Mil. 17: Train Preparation, Train Disruption, Train Location and Train Running Forecast Informationing systems completed</li> <li>• Mil. 21: Reporting and Contracts Information System completed</li> </ul>

Table 1 Action details

The detailed results of the verification process are concluded as follows:

OSE has sent to the European Union Agency for Railways on 28, 29 and 30 September 2022, for verification, the following attached documents:

<b>TAF TSI function / specification</b>	<b>Content description</b>
<b>Activity 3: Plan and Development of Telematics Platform</b>	<ol style="list-style-type: none"> <li>1. Pdf document with the full description for certification for the Infrastructure (it includes telematic platform)</li> </ol>
<b>Activity 5: Plan and Development of internal path request application</b>	<ol style="list-style-type: none"> <li>1. Word document with the full description for certification</li> <li>2. Technical documents of ERA and JSG Sector Handbook that are referenced in the document above</li> <li>3. Technical proof messages – logs</li> <li>4. XSD 3.1.0 files</li> </ol>
<b>Activity 6: Plan and Development of Train Running Forecast Information System</b>	<ol style="list-style-type: none"> <li>1. Word document with the full description for certification</li> <li>2. Technical documents of ERA and JSG Sector Handbook that are referenced in the document above</li> <li>3. Technical proof messages –Train running- logs</li> <li>4. XSD 3.1.0 Train running files</li> </ol>
<b>Activity 10: Plan and Development of a Reporting and Contract Server</b>	<ol style="list-style-type: none"> <li>1. Pdf document with the full description for certification for the Reporting server</li> </ol>

Table 2 Documents for verification

ERA has verified the compliance of these messages with the TAF TSI and its Technical Document data catalogue V3.1.0<sup>1</sup>. The following messages were verified with following conclusions:

For **Activity 3 Plan and Development of Telematics Platform** and **Activity 10: Plan and Development of a Reporting and Contract Server** ERA has checked the documents “OSE\_TAF\_TAP\_TSI\_Infrastructure Documentation” and “OSE\_TAF\_TAP\_TSI\_Report server”.

The content of these documents is ***much broader*** as the requirements laid down in the TAF TSI regulation 2021/541.

Nevertheless, based on the content of the documents (and in particular of the document “OSE\_TAF\_TAP\_TSI\_Infrastructure Documentation”) the implemented TAF TSI IT infrastructure ***meets the requirements*** of the TAF TSI regulation, namely chapters

- 4.2.11. Networking & Communication
- 4.2.11.1. General Architecture
- 4.2.11.2. Network and Security
- 4.2.11.3. Encryption
- 4.2.11.4. Central Repository
- 4.2.11.5. Common Interface
- 4.2.11.6. Protocols .

For **Activity 5 Path Request** ERA has checked document “OSE\_TAF\_TAP\_TSI\_PathRequest\_Cert\_Test\_Protocol”, CI logs, other logs and the provided XML messages (and XSDs).

1. Based on above document and the log files it can be confirmed that OSE ***uses the reference installation of the TAF TSI common interface*** (provided by RNE) for the exchange of TAF TSI based messages.

In above document it is also visible that for the various Test Cases OSE uses the TAF TSI path request messages in the ***sequences as described in the TAF TSI*** regulation 2021/541 and in its Technical Documents.

2. The XML messages have been also tested. ***They are all fully compliant with the provided V3.1.0 TAF TSI data catalogue (XSD).***

XML messages tested for compliance against the TAF TSI regulation:

#### **TC1**

- PathRequestMessage\_v1
- 2022-09-06T14.07.40-PathDetailsMessage(draft)
- 2022-09-07T13.30.54-PathDetailsMessage(final)
- 2022-09-07T13.31.08-PathDetailsMessage(book)
- IM-RCM (receptit confirmation)
- PathConfirmedMessage

#### **TC2**

- PDRM (path details refused)
- PRM-one-more-day

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<sup>1</sup> in line with the provisions of chapter 6.2. of the TAF TSI <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R0541&from=EN>  
120 Rue Marc Lefrancq | BP 20392 | FR-59307 Valenciennes Cedex  
Tel. +33 (0)327 09 65 00 | era.europa.eu

- ReceiptConfirmationMessage\_090922

**TC3**

- ALL Days
  - PathCanceledMessage
- Selected Days
  - 2022-09-13T15.40.37-PathDetailsMessage

**TC4**

- PathNotAvailableMessage\_150922

**TC5**

- 2022-09-14T13.06.41-PathDetailsMessage .

For ***Activity 6 Train Running Information and Forecast*** ERA has checked the document “OSE\_TAF\_TAP\_T rainMovement-Cert\_Test\_Protocol”, CI logs and the provided XML messages (and XSDs).

1. Based on above document and the log files it can be confirmed that OSE ***uses the reference installation of the TAF TSI common interface*** (provided by RailNetEurope (RNE)) for the exchange of TAF TSI based messages. ***This common interface is connected on the one hand directly to RNE’s Train Information System (TIS) and on the other hand with OSE’s Web Application.***

In above document it is also visible that OSE sends from its own Web Application XML messages according to the regulation 2021/541 and in its Technical Documents to its common interface which then sends the validated outbound messages to above TIS system. Within the framework of this activity ***following messages*** are sent from OSE to the common interface and to the TIS system:

- Path details message
- Train running information
- Train Delay Cause
- Train Running Forecast .

2. The XML messages have been also tested. ***They are all fully compliant with the provided V3.1.0 TAF TSI data catalogue (XSD).***

XML messages have tested for compliance against the TAF TSI regulation:

- PathDetailsMessage\_rne\_tis\_50\_21092022
- Train\_DELAY\_Cause\_417\_230922\_v1
- Train\_DELAY\_Cause\_238\_230922\_v1
- TRAIN\_FORECAST\_238\_230922\_v1
- TRAIN\_FORECAST\_417\_230922\_v1
- Train\_RUNNIN\_INFO\_106\_230922\_v1
- Train\_RUNNIN\_INFO\_417\_230922\_v1 .

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