

Making the railway system
work better for society.

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Valenciennes, 10th September 2021

TAP TSI Compliance Results – CEF Grant Agreement INEA/CEF/TRAN/M2015/1138635

To whom it may concern,

I confirm and certify herewith that the following TAP TSI functionalities implemented by the company Železničná spoločnosť Slovensko (Slovakia), within the project *“Implementation of the technical interoperability for TAP TSI subsystem at ZSSK”*, co-financed by the Connecting Europe Facility Fund, are compliant with the appropriate provisions of the TAP-TSI Regulation 454/2011 and its Technical Documents, with scope limitations and remarks given below.

Details of the Action:

Name of the Action:	Implementation of the technical interoperability for TAP TSI subsystem at ZSSK
No. of the Action:	2015-SK-TM-0321-W
No. of the Grant Agreement:	INEA/CEF/TRAN/M2015/1138635
Duration of the Action:	2019-2020
Verified Activity:	Activity 2: Master Plan Part 1 TAP-TSI
Verified TAP TSI Functionalities:	Common Interface, Reference Files

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

ZSSK has sent to the European Union Agency for Railways on 14 September 2020, 04 May 2021 and 30 July 2021, for verification, the following documents:

TAF TSI function / specification	Content description
Common Interface - Description and version	Documents : <ul style="list-style-type: none"> • “RNE CI signedZSSK.pdf” • “BSP GX sub agreementZSSK.pdf” to demonstrate the usage of the RNE supported version of Common Interface.
Common Reference Data	Screenshots (enclosed in the Annex 1) from the Common Interface to demonstrate the usage of reference codes for Company, Country, Primary Location, Subsidiary Location and Subsidiary Location Type. Samples of messages (enclosed in the Annex 1) using the mentioned Reference Data: TrainRunningForecastMessage.xml, TrainRunningInformationMessage.xml, TrainDelayCauseMessage.xml

Table 1 Documents for verification

1. Scope and findings

As explained by ZSSK the current “Activity 2” covers:

- reference data unified in Common Interface (countries/locations/companies)
- creation of ZSSK own codes and internal data integration within ZSSK IT legacy systems.

As an evidence the ZSSK provided the document “RNE CI signedZSSK.pdf” which is a copy of an RNE Common Components System (CCS) supplier license and service agreement between RNE and GX SOLUTIONS a.s.

As regards the Common Interface, the provided license and service agreement covers either the RNE Common Interface (CI) or the “Services provided by RNE in case that CCS User do not use the Common Interface Reference Implementation (RNE CI)”. Based on information provided in the Annex 3 to the document provided, those services are understood as enabling use of the other part of Common Components System which is the Reference Files (CRD) through the web services with the use of the non-RNE Common Interface software solution. However, as explained by ZSSK “CI is key part of the implemented solution. In our solution we assume all TSI traffic will be routed exclusively via CI. This is documented in the technical specification of the project and this was subject of the project acceptance process. (...) the use of CI is fixed in the technical specification between ZSSK and BSP. Naturally CI can be used and will be used with partners who already implemented TSI TAP/TAF.” Further document provided by ZSSK “BSP GX sub agreementZSSK.pdf” confirms the GX Solutions obligation to deliver CI to ZSSK in the frame of works related to the corresponding Grant Agreement, and subcontracted to GX Solutions.

ZSSK provided also the Agency for information with a copy of a corresponding Grant Agreement no. INEA/CEF/TRAN/M2015/1138635. According to the Agreement, P12 “to comply with the above requirements it is necessary to design, build, implement and deploy a System of Reference Data, as a part of ZSSK TIF platform (TSI Interoperability Framework) based on Common “Information Exchange Architecture”. ZSSK system will facilitate the exchange of data and its synchronization as well as its harmonization with other operating entities such as infrastructure managers.” It is also stated in the same agreement that “the activity will be implemented by an external supplier. The process of implementation will be managed and administrated by the ZSSK internal resources”.

The RNE Common Interface compliance with TAF TSI have been assessed by the Agency. The corresponding report is available at the Agency website here: <https://www.era.europa.eu/content/compliance-reports>.

This Test Report from 2013 contains the results of test performed by ERA to evaluate the compliance of the CCG (now RNE) Common Interface Reference Implementation. Meanwhile some improvements based on ERA recommendation have been implemented in newer releases of the Common Interface including the CRD. Meanwhile the TSI has been updated as well.

The test cases performed confirmed that the Common Interface was able to connect to the CRD database to receive regularly updates for the main reference data: country reference data, company reference data, location reference data (Primary location data, subsidiary location data).

The Common Interface from RailNetEurope enables download and update of the reference data in the local interface. Reference data download and update comes from the Common Reference Database, and is limited to the country reference data, company reference data, location reference data (Primary location data, subsidiary location data), which are used mainly for the message exchange between Railway Undertakings and Infrastructure Managers. It does not cover complete reference files to be used for the data exchange for the TAP TSI. Part of those not covered data include the reference files for timetabling, tariff exchange and reservation systems which according to the information provided by ZSSK are subject of different project milestone/activities. The remaining part of not covered data according to the information provided by ZSSK were not part of the project as are maintained by the Infrastructure Manager (ŽSR).

The Common Interface does not also provide functionality of creation of own Reference data - country reference data, company reference data, location reference data (Primary location data, subsidiary location data) since those functionalities are assured elsewhere in the TAP TAF TSI implementation architecture. The aspect of “creation of own Reference data” within this “Activity 2” is understood as a part of

b) creation of ZSSK own codes and internal data integration within ZSSK IT legacy systems -

The private codes as well as IT legacy systems are not regulated by TAP & TAF TSI and unknown to the Agency. The scope of Agency check with regard to the Common Interface from RailNetEurope was limited to the select legacy connectors to connect to legacy systems and transform the legacy messages to the ones used in the TAF TSI. The following legacy connectors were checked and concluded functional: File-system, JMS & SMTP. The corresponding report is available at the Agency website here:

<https://www.era.europa.eu/content/compliance-reports>.

Screenshot from the Common Interface (enclosed in the Annex 1) show that the mentioned reference data can be downloaded from the CRD at RNE. The Agency has also verified the delivered messages (enclosed in the Annex 1) and concludes that the messages are in line with the TAF/TAP TSI regulation and that they transmit the mentioned reference data.

2. Conclusions

Within the scope as described in the Chapter 1, the evidence provided proves compliance of the technical solution with the appropriate provisions of the TAP-TSI Regulation 454/2011 and its Technical Documents.



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Annex 1. Screenshots of the Common Interface. Samples of the messages.

Reference Data | History

Countries | Companies | Locations

Reference Data >> Countries

+ Filter

All Selected Seite 1 von 25

Actions	Country Name	Country Code (ISO)	Country Code (UIC)	Allow Subsidiary Location Change	Add Date	Modified Date
<input type="checkbox"/>	United Kingdom of Gr...	GB	70	No	2011-11-15 12:28:44.0	2016-01-31 16:34:49.0
<input type="checkbox"/>	LIECHTENSTEIN (Fürst...	LI		Yes	2011-11-15 12:28:44.0	2015-09-17 10:56:28.0
<input type="checkbox"/>	Luxemburg	LU	82	No	2011-11-15 12:28:44.0	2014-04-16 08:44:45.0
<input type="checkbox"/>	burma	AF		No	2011-11-15 00:00:00.0	2013-11-03 17:12:18.0
<input type="checkbox"/>	United States	US		No	2011-11-15 12:28:44.0	2013-11-03 17:11:44.0
<input type="checkbox"/>	South Africa	ZA		No	2011-11-15 00:00:00.0	2013-11-03 17:10:41.0
<input type="checkbox"/>	Canada	CA		No	2011-11-15 12:28:43.0	2013-11-03 17:09:52.0
<input type="checkbox"/>	Australia	AU		No	2011-11-15 12:28:43.0	2013-11-03 17:09:24.0
<input type="checkbox"/>	Switzerland	CH	85	No	2011-11-15 12:28:44.0	2013-07-31 13:23:33.0
<input type="checkbox"/>	Germany	DE	80	Yes	2011-11-15 12:28:44.0	2013-04-05 18:28:32.0

Seite 1 von 25

Reference Data | History

Countries | Companies | Locations

Reference Data >> Companies

+ Filter

All Selected Seite 1 von 143

PRU: Passenger RU FRU: Freight RU IM: Infrastructure OT: Other Company NE: National Entity CE: Central Entity

Actions	Company Code	Company Name	Country	Principle Activity	Contact Person	Add Date	Modified Date	Status
<input type="checkbox"/>	0054	Správa železnic, sta...	Czech Republic - CZ	PRU,FRU,IM,NE	Radek Cech	2011-11-15 12:35:54.0	2020-07-09 16:06:23.0	Active
<input type="checkbox"/>	3039	Wiener Lokalbahnen C...	Austria - AT	IM	Mr Norbert Moller	2011-11-15 12:35:54.0	2020-07-09 16:02:45.0	Active
<input type="checkbox"/>	3374	MERCITALIA Shunting ...	Italy - IT	FRU,OT	Francesco Parodi	2015-02-09 13:51:06.0	2020-07-09 15:45:57.0	Active
<input type="checkbox"/>	3833	Korea Railroad Corpo...	Korea, Republic of - ...	PRU,FRU	Kang Jimyeong Diana	2020-06-17 09:03:26.0	2020-07-09 15:45:07.0	Active
<input type="checkbox"/>	2151	PKP Cargo Spółka Akc...	Poland - PL	FRU	unknown	2011-11-15 12:35:55.0	2020-07-09 15:45:07.0	Active
<input type="checkbox"/>	3489	Retrack Slovakia s.r...	Slovakia - SK	FRU	Mr Tibor Kardoš	2017-02-07 09:22:17.0	2020-07-09 15:45:07.0	Active
<input type="checkbox"/>	1182	Société Nationale de ...	Luxemburg - LU	PRU	Marc Hoffmann	2020-02-11 09:40:24.0	2020-07-09 15:45:07.0	Active
<input type="checkbox"/>	3795	Weser Ems Eisenbahn ...	Germany - DE	PRU,FRU	Daniel Wulfing	2020-03-26 15:10:30.0	2020-07-09 15:45:07.0	Active
<input type="checkbox"/>	3580	Rail Cargo Carrier - ...	Poland - PL	FRU	Barbara Dunaszewska	2018-06-01 15:38:07.0	2020-07-09 15:45:07.0	Active
<input type="checkbox"/>	3608	WIENER LOKALBAHNEN G...	Austria - AT	PRU,FRU,IM	Mr Peter Hollos	2018-11-14 13:50:54.0	2020-06-17 09:21:50.0	Active

Seite 1 von 143

Reference Data | History

Countries | Companies | Locations

Reference Data >> Locations >> Primary Location

Primary Location | Subsidiary Location | Subsidiary Type

+ Filter

All Selected Seite 1 von 6.377

CH: Container Handling HP: Handover Point FP: Freight Possible PP: Passenger Possible

Actions	Location Code	Location Name	Location Name(ASCII)	Country	Responsible IM	Location Activity	Add Date	Modified Date	Status
<input type="checkbox"/>	1	Kobenhavn H	Koebenhavn H	Denmark - DK	Banedanmark-0086	FP,PP	2013-10-28 23:21:55.0	2020-05-15 13:57:17.0	Active
<input type="checkbox"/>	1	KM. 19.2	KM. 19.2	Spain - ES	ADIF-0071		2014-04-29 12:39:04.0	2020-07-17 12:54:36.0	In-active
<input type="checkbox"/>	1	Rosny-Aéroport-CDG ...	ROISSY-AÉROPORT-CDG ...	France - FR	SNCF Réseau-0087		2014-06-11 18:06:28.0	2018-04-03 16:58:03.0	Active
<input type="checkbox"/>	1	VILLADOSSOLA	VILLADOSSOLA	Italy - IT	FS-0083	FP,PP	2013-11-12 12:21:18.0		Active
<input type="checkbox"/>	1	Helinski asema	Helinski asema	Finland - FI	FTA-3109	PP	2013-09-20 16:21:32.0	2018-11-28 15:20:38.0	Active
<input type="checkbox"/>	10	Szczecin Port Centra...	SZCZECIN PORT CENTRA...	Poland - PL	PKP PLK S.A.-0051	FP,PP	2013-09-24 16:41:53.0	2016-09-27 11:41:48.0	Active
<input type="checkbox"/>	10	AARSELE	AARSELE	Belgium - BE	Infrabel-0088	PP	2014-10-02 19:26:50.0	2020-05-15 13:35:05.0	Active
<input type="checkbox"/>	10	Borup	Borup	Denmark - DK	Banedanmark-0086	FP,PP	2013-10-28 23:21:55.0	2020-05-15 13:57:17.0	Active
<input type="checkbox"/>	10	Basel SBB	Basel SBB	Switzerland - CH	SBB Infrastructure-0...	FP,PP	2020-01-09 02:07:16.0		Active
<input type="checkbox"/>	10	ALHONDIGUILLA-VILLAV...	ALHONDIGUILLA-VILLAV...	Spain - ES	ADIF-0071	FP,PP	2014-04-29 12:39:04.0	2020-07-17 12:54:37.0	Active

Seite 1 von 6.377

Reference Data >> Locations >> Subsidiary Location

Primary Location Subsidiary Location Subsidiary Type

Filter

Export to CSV Export to XML Export XSD

Seite 1 von 4.178

Actions	Subsidiary Location Code	Subsidiary Location Name	Subsidiary Location Type	Country	Responsible IM	Primary Location	Allocation Company	Add Date	Modified Date	Status
<input type="checkbox"/>	8340	St. Gallen GB	DILM stations - Places of acce...	Switzerland - CH	SBB Infrastructure-0...	St. Gallen GB-8340	SBB CFF FFS Cargo-21...	2020-07-22 03:01:45.0		Active
<input type="checkbox"/>	301	Rheinfelden	DILM stations - Places of acce...	Switzerland - CH	SBB Infrastructure-0...	Rheinfelden-301	SBB CFF FFS Cargo-21...	2020-07-22 03:01:44.0		Active
<input type="checkbox"/>	7290	Zwissimmen	DILM stations - Places of acce...	Switzerland - CH	BL5-0063	Zwissimmen-7290	SBB CFF FFS Cargo-21...	2020-07-22 03:01:44.0		Active
<input type="checkbox"/>	8206	Wf SG	DILM stations - Places of acce...	Switzerland - CH	SBB Infrastructure-0...	Wf SG-8206	SBB CFF FFS Cargo-21...	2020-07-22 03:01:43.0		Active
<input type="checkbox"/>	5403	Riazzo-Cugnacco	DILM stations - Places of acce...	Switzerland - CH	SBB Infrastructure-0...	Riazzo-Cugnacco-54...	SBB CFF FFS Cargo-21...	2020-07-22 03:01:43.0		Active
<input type="checkbox"/>	8253	Hamborg	DILM stations - Places of acce...	Switzerland - CH	BL5-0063	Hamborg-8253	SBB CFF FFS Cargo-21...	2020-07-22 03:01:43.0		Active
<input type="checkbox"/>	2004	Dagmersellen	DILM stations - Places of acce...	Switzerland - CH	SBB Infrastructure-0...	Dagmersellen-2004	SBB CFF FFS Cargo-21...	2020-07-22 03:01:42.0		Active
<input type="checkbox"/>	8295	Wilsau	DILM stations - Places of acce...	Switzerland - CH	BL5-0063	Wilsau-8295	SBB CFF FFS Cargo-21...	2020-07-22 03:01:42.0		Active
<input type="checkbox"/>	6317	Heertrugg	DILM stations - Places of acce...	Switzerland - CH	SBB Infrastructure-0...	Heertrugg-6317	SBB CFF FFS Cargo-21...	2020-07-22 03:01:41.0		Active
<input type="checkbox"/>	5000	Luzern	DILM stations - Places of acce...	Switzerland - CH	SBB Infrastructure-0...	Luzern-5000	SBB CFF FFS Cargo-21...	2020-07-22 03:01:41.0		Active

Seite 1 von 4.178

Reference Data >> Locations >> Subsidiary Type

Primary Location Subsidiary Location Subsidiary Type

Filter

Export to CSV Export to XML Export XSD

Seite 1 von 6

Actions	Subsidiary Type Name	Subsidiary Type Code	Add Date	Modified Date
<input type="checkbox"/>	Location ENEE Code	66	2020-07-20 16:59:22.0	2020-07-20 16:59:25.0
<input type="checkbox"/>	Company specific Identifier	41	2013-06-06 13:13:22.0	2016-07-29 12:58:48.0
<input type="checkbox"/>	Relation to Station	90	2011-11-15 15:06:36.0	2014-05-13 17:35:13.0
<input type="checkbox"/>	Freight yard	38	2011-11-15 15:06:36.0	2014-04-09 14:44:23.0
<input type="checkbox"/>	Loading point	37	2011-11-15 15:06:36.0	2013-10-21 08:25:18.0
<input type="checkbox"/>	Reservation code	39	2011-11-21 13:51:51.0	2013-04-26 11:38:10.0
<input type="checkbox"/>	Private Loading Places	07	2011-11-15 15:06:36.0	2013-04-05 17:41:47.0
<input type="checkbox"/>	Block section	26	2011-11-15 15:06:36.0	2012-12-11 11:46:43.0
<input type="checkbox"/>	Depot	09	2011-11-15 15:06:36.0	2012-12-11 11:45:18.0
<input type="checkbox"/>	Balise	32	2011-11-15 15:06:36.0	2012-02-28 09:47:09.0

Seite 1 von 6

Train Running Forecast Message¹

```

<TrainRunningForecastMessage xmlns="http://taf-jsg.info/schemes" xmlns:ns="http://taf-
jsg.info/schemes" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <MessageHeader>
    <MessageReference>
      <MessageType>4004</MessageType>
      <MessageTypeVersion>2.2.3</MessageTypeVersion>
      <MessageIdentifier>6200a614-ffea-452d-84b3-
18c350da8925</MessageIdentifier>
      <MessageDateTime>2020-02-20T00:12:20.853+01:00</MessageDateTime>
    </MessageReference>
    <Sender>0000</Sender>
    <Recipient>0000</Recipient>
  </MessageHeader>
  <MessageStatus>1</MessageStatus>
  <TrainOperationalIdentification>
    <TransportOperationalIdentifiers>
      <ObjectType>TR</ObjectType>
      <Company>0000</Company>
      <Core>----00000000</Core>
      <Variant>00</Variant>
      <TimetableYear>2020</TimetableYear>
      <StartDate>2020-02-20</StartDate>
    </TransportOperationalIdentifiers>
  </TrainOperationalIdentification>
  <OperationalTrainNumberIdentifier>
    <OperationalTrainNumber>0000</OperationalTrainNumber>
  </OperationalTrainNumberIdentifier>
  <TrainLocationReport>
    <Location>
      <CountryCodeISO>00</CountryCodeISO>
      <LocationPrimaryCode>00000</LocationPrimaryCode>
      <PrimaryLocationName>00000</PrimaryLocationName>
      <LocationSubsidiaryIdentification>
        <LocationSubsidiaryCode>
ns:LocationSubsidiaryTypeCode="1">2</LocationSubsidiaryCode>
        <AllocationCompany>0000</AllocationCompany>
      </LocationSubsidiaryIdentification>
    </Location>
    <LocationDateTime>2020-02-20T13:50:00+01:00</LocationDateTime>
    <TrainLocationStatus>03</TrainLocationStatus>
    <BookedLocationDateTime>2020-02-20T13:40:00+01:00</BookedLocationDateTime>
    <TrainDelay>
      <AgainstBooked>+0010</AgainstBooked>
    </TrainDelay>
  </TrainLocationReport>
</TrainRunningForecastMessage>

```

¹ Confidential data is replaced

Train Running Information Message¹

```

<TrainRunningInformationMessage xmlns="http://taf-jsg.info/schemes"
xmlns:ns="http://taf-jsg.info/schemes" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
  <MessageHeader>
    <MessageReference>
      <MessageType>4005</MessageType>
      <MessageTypeVersion>2.2.3</MessageTypeVersion>
      <MessageIdentifier>3ef914fe-c1bd-4789-a7b8-
86d6885a62dd</MessageIdentifier>
      <MessageDateTime>2020-02-25T00:02:43.711+01:00</MessageDateTime>
    </MessageReference>
    <Sender>0000</Sender>
    <Recipient>0000</Recipient>
  </MessageHeader>
  <MessageStatus>1</MessageStatus>
  <TrainOperationalIdentification>
    <TransportOperationalIdentifiers>
      <ObjectType>TR</ObjectType>
      <Company>0000</Company>
      <Core>---00000000</Core>
      <Variant>00</Variant>
      <TimetableYear>2020</TimetableYear>
      <StartDate>2020-02-25</StartDate>
    </TransportOperationalIdentifiers>
  </TrainOperationalIdentification>
  <OperationalTrainNumberIdentifier>
    <OperationalTrainNumber>0000</OperationalTrainNumber>
  </OperationalTrainNumberIdentifier>
  <ResponsibleRU>0000</ResponsibleRU>
  <TrainLocationReport>
    <Location>
      <CountryCodeISO>SK</CountryCodeISO>
      <LocationPrimaryCode>00000</LocationPrimaryCode>
      <PrimaryLocationName>00000</PrimaryLocationName>
      <LocationSubsidiaryIdentification>
        <LocationSubsidiaryCode
ns:LocationSubsidiaryTypeCode="1">3</LocationSubsidiaryCode>
        <AllocationCompany>0000</AllocationCompany>
      </LocationSubsidiaryIdentification>
    </Location>
    <LocationDateTime>2020-02-25T12:46:00+01:00</LocationDateTime>
    <TrainLocationStatus>02</TrainLocationStatus>
    <BookedLocationDateTime>2020-02-25T12:46:00+01:00</BookedLocationDateTime>
    <TrainDelay>
      <AgainstBooked>00000</AgainstBooked>
    </TrainDelay>
  </TrainLocationReport>
</TrainRunningInformationMessage>

```

Train Delay Cause Message¹

```
<TrainDelayCauseMessage xmlns="http://taf-jsg.info/schemes" xmlns:ns="http://taf-jsg.info/schemes" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <MessageHeader>
    <MessageReference>
      <MessageType>4001</MessageType>
      <MessageTypeVersion>2.2.3</MessageTypeVersion>
      <MessageIdentifier>fd720966-fc3f-48a8-b9f5-0462fb324a61</MessageIdentifier>
      <MessageDateTime>2020-02-25T10:55:36.997+01:00</MessageDateTime>
    </MessageReference>
    <Sender>0000</Sender>
    <Recipient>0000</Recipient>
  </MessageHeader>
  <MessageStatus>1</MessageStatus>
  <TrainOperationalIdentification>
    <TransportOperationalIdentifiers>
      <ObjectType>TR</ObjectType>
      <Company>0000</Company>
      <Core>----0000000</Core>
      <Variant>00</Variant>
      <TimetableYear>2020</TimetableYear>
      <StartDate>2020-02-25</StartDate>
    </TransportOperationalIdentifiers>
  </TrainOperationalIdentification>
  <OperationalTrainNumberIdentifier>
    <OperationalTrainNumber>2051</OperationalTrainNumber>
  </OperationalTrainNumberIdentifier>
  <ResponsibleRU>1156</ResponsibleRU>
  <DelayEventReport>
    <DelayLocation>
      <CountryCodeISO>SK</CountryCodeISO>
      <LocationPrimaryCode>00000</LocationPrimaryCode>
      <PrimaryLocationName>00000.</PrimaryLocationName>
    </DelayLocation>
    <TrainLocationStatus>02</TrainLocationStatus>
    <DelayCauseTime>
      <DelayCause>95</DelayCause>
      <DelayMinutes>0017</DelayMinutes>
      <DelayEventDateTime>2020-02-25T13:00:00+01:00</DelayEventDateTime>
      <InternalReferenceIdentifier>91960989</InternalReferenceIdentifier>
    </DelayCauseTime>
  </DelayEventReport>
</TrainDelayCauseMessage>
```