Israel Railways Ltd.
Procurement & Contracting Division

Request for Information
(RFI)

<u>Concerning</u> Rail Journey Planning Engine (RJPE)

March, 2020

<div align="center">

Request for Information ("RFI")

Concerning Rail Journey Planning Engine ("RJPE")

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1. Introduction

Israel Railways Ltd. ("ISR") requests information and an overall analysis regarding Rail Journey Planning Engine ("RJPE").

ISR seeks such information from Startups and other Companies that have a compatible solution for public transportation such as trains, aviation, buses etc, all as generally defined in *Appendix A* attached hereto (the "Technical Attachment") and as further described below.

2. Objective of RFI

The objective of this RFI is to enable ISR to explore the option of acquiring the proposed RJPE, as well as to review and estimate to costs involved.

This RFI is not to be considered as a request for proposals, nor as a tender and the provisions of neither the Israeli *Mandatory Tenders Law 5752-1992,* nor the Government Procurement Agreement shall apply hereto.

Notwithstanding the aforesaid, ISR may, as a result of this RFI, at its sole and absolute consideration, approach one or more of the Respondents to this RFI and/or to any other party, in order to obtain additional information.

Notwithstanding the aforesaid, ISR may, as a result of this RFI, at its sole and absolute consideration, conduct an additional procedure, *inter alia*, tender procedure, and may use, at its sole consideration, any of the information provided in this RFI.

This RFI shall not, under any circumstance, constitute any commitment on ISR's part to negotiate with any or all interested parties, nor to enter into any agreement for the assistance and/or design of the Stations.

3. Response

The Respondent is invited to submit ISR data and any technical and commercial information regarding the project.

The information should be delivered in accordance with the Technical Requirements specified in *Appendix A* and by filling out the tables provided in *Appendix B*.

4. Language of Response

Responses shall be in English or in Hebrew only.

5. Submission of a Response

Responses are to be submitted in writing (also in soft copy – in PDF format in USB memory stick) and/or by email mirelah@rail.co.il, to the attention of Ms. Mirela Halfim, no later than **April 30, 2020**, at the following address:

> **ISRAEL RAILWAYS LTD - Procurement and Contracting Division**
>
> **Yoseftal 1, Lod**
>
> **7136801, ISRAEL**
>
> **To the attention of Mrs. Mirela Halfim**

6. Additional Information

Should Respondent require clarifications relating to this RFI, or if any questions arise with respect thereto, respondent may contact, in writing only, Mrs. Mirela Halfim - International Procurement Coordinator, via e-mail: mirelah@rail.co.il .

7. General

i.   This RFI shall not be construed under any circumstances as a pre-requisite or pre-qualification procedure.

ii. This RFI is merely for the purpose of obtaining any relevant information for consideration purposes only, and ISR shall not be construed as having taken any commitment to enter in a contractual relationship, nor to publish any tenders or any other further procedure.

iii. ISR may, as a result of this RFI, approach, at its sole discretion, one or more of the Respondents and/or any other party, in order to obtain additional information, commercial proposals and/or to conduct negotiations with respect to the technical and/or commercial terms, and enter into a contractual relationship with one and/or more Respondents or any other party it finds suitable to conduct any other procedure it deems necessary.

iv. It is hereby clarified that ISR shall not be obligated to engage in any contract on the basis of this RFI and that any information presented and/or submitted to ISR through this RFI is provided voluntarily. ISR shall not be charged in any manner for the submission of information in accordance with this procedure and every Respondent shall bear its own costs with respect to this RFI.

v.   Moreover, to preclude any doubt, it is emphasized that ISR shall have the right to reject, in whole or in part, any opinion, conclusion or information delivered to it through this RFI. ISR shall also have the right to use the information presented and/or submitted to it for the purpose of planning and preparing a tender or any other procedure, should ISR decide to implement one.

vi. ISR may at its sole discretion, request from any of the Respondents, additional information, details, approvals, recommendations and/or certificates, as required by ISR.

vii. ISR may ignore any Response which lacks information or has unclear details.

viii. ISR shall not be bound to accept and/or consider any Response and it does not undertake herein any commitment whatsoever towards any of the interested parties.

ix. ISR reserves the right, at any time and at its sole discretion, to amend this RFI or any aspect thereof, as well as to extend the date for submittal of the Responses. In addition, ISR reserves the right to cancel this RFI in its entirety at its sole discretion, without providing the Respondent(s) any (or no) reason or explanation.

x. This RFI process is undertaken by ISR for the purpose of receiving data and information, and it does not create any obligation on ISR's part to commence, continue or complete any purchase procedure and/or to act in any other method of acquisition, and ISR shall act at its sole and absolute discretion in this respect.

xi. ISR reserves the right to accept, in future stages, information and/or any commercial proposals from entities which did not participate in this RFI process, as ISR shall deem fit.

xii. ISR reserves the right, as a result of this RFI, at its sole consideration to conduct an additional procedure, including, inter alia, tender procedure, and may use, at its sole consideration, any of the information provided in this RFI.

Rail Journey Planning Engine ("RJPE")

1. Introduction

The RJPE system is a central planning system that provides journey planning information to train passengers (from origin to destination at specific date), ISR's users and authorized external systems (B2B).

The RJPE receives information from Floor Management Systems ("FMS") and from other relevant systems, calculates the best journey planning and returns it evenly to be consumed by various systems and costumers.

2. Background

ISR currently has an RJPE system that has been operable for over eight (8) years.
The system is located on a private cloud and consume information from FMS.
The data is transferred to the RJPE system via web service and FTP protocols.

The RJPE system imports data, such as:

- Seasonal and daily timetables
- Timetable updates
- Future time tables
- List of stations
- Tariffs
- Platforms
- Train passenger's statistical loads
- Updates of change/cancellation of trains
- Data about stations
- Data about trains' current location (for trains that move at current time)
- Etc.

The results provided by RJPE are useful for customers, internally and externally.

Refer to the schematic RJPE inputs and outputs diagram:

Where:

Inputs to the RJPE is supplied from internal ISR computing systems, such as Main Operational System, Aramis server and ticketing information server.

Output from the RJPE is provided as XML from a web service to consumers such as PIS system (passenger information system), mobile application, web site, call center and other B2B/B2C.

Schematic RJPE inputs and outputs
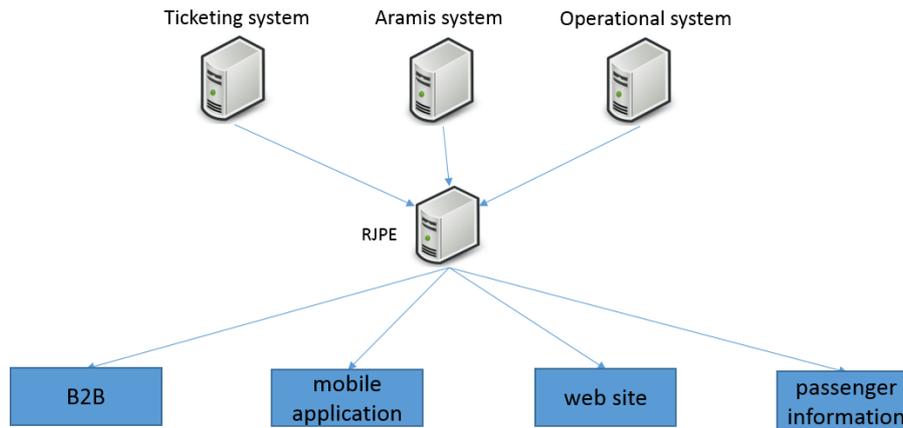
ISR is interested in implementing a new robust RJPE software system, that will support future growth of users and will get the inputs from FMS seamlessly.

Currently, the RJPE system serves the following clients:

- Web site journey planner
- Mobile device applications
- Call center
- External authorized customers that use the service via WS or REST API

Current average usage (December 2019) of the RJPE system is approximately 500,000 transactions per day.

Expected usage in 2030 is of more than 1,000,000 transactions a day.

3. RJPE Requirements

3.1. RJPE Solution

1. Must remain active without downtime (99.999%) at all time, including during updates from the FMS and other input systems, in order to prevent service interruption.
2. Must provide a passenger journey plan result in less than 1 second.
3. The new RJPE system should be an "off the shelf" solution.
4. The decision algorithm will rely on data that will be supplied by FMS and a set of parameters, filters and rules that will be set by the RJPE administrator.
5. Will calculate the fastest route with the fewest train transfers (connections) for a passenger trip.
6. Must manage schedules history and should be able to calculate retroactively a journey plan according to past schedules.
7. Should be able to provide supplementary data to the suggested journey plan such as: station accessibility, parking info, train occupancy, current location and etc.
8. Should be able to support more than one future timetable.
9. Should be able to function in cloud environment (such as Microsoft azure) and/or local networks installations (on premises).
10. Must support receiving input data from FMS via FTP/WS/Rest API.
11. Able to update the system data without interrupting the service to customers
12. Use of third party solutions or components must be noted by the solution provider.

13. Supports scalability and redundancy mechanisms.
14. The administration environment must support web browser UI.

3.2. RJPE Nice to have

The solution shall be able to calculate trips including alternative transport, such as bus shuttles.

3.3. RJPE Supplier

ISR seeks such information from Startups and other Companies that have a compatible solution for public transportation such as trains, aviation, buses etc.

RJPE supplier shall prove experience of at least two (2) years in RJPE solutions, preferably for Railway's companies.

4.Response Format

Responses shall be submitted in writing (also in soft copy – in PDF format in USB memory stick) and/or by email mirelah@rail.co.il.

Responses shall fill out tables in Appendix B.

Appendix B
Rail Journey Planning Engine (RJPE)

Respondents are requested to submit the following information:

- General information concerning the respondent, including Respondent main fields of expertise, Respondent professional certifications, Respondent past experience in the development and supply of RJPE solutions, etc (see Table I in *Appendix B*).

- Information Concerning Past Experience, including costumers' details, Mass transportation industry type, supplied solution description, etc (see Table II in *Appendix B*).

- Information regarding the proposed solution.

- Respondents are requested to fill out the following tables.

A	General Information Concerning the Respondent		
A1	Vendor name		
A2	Respondent address/location		
A3	Respondent contact person		
A4	Contact person	Telephone No:	E-Mail:
A5	Respondent main fields of expertise		
A6	Respondent professional certifications (Such as ISO 9001:2008/2015, IRIS, etc.)		
A7	Exemplary main customers		
A8	Please specify respondent past experience in the development and supply of RJPE solutions.		

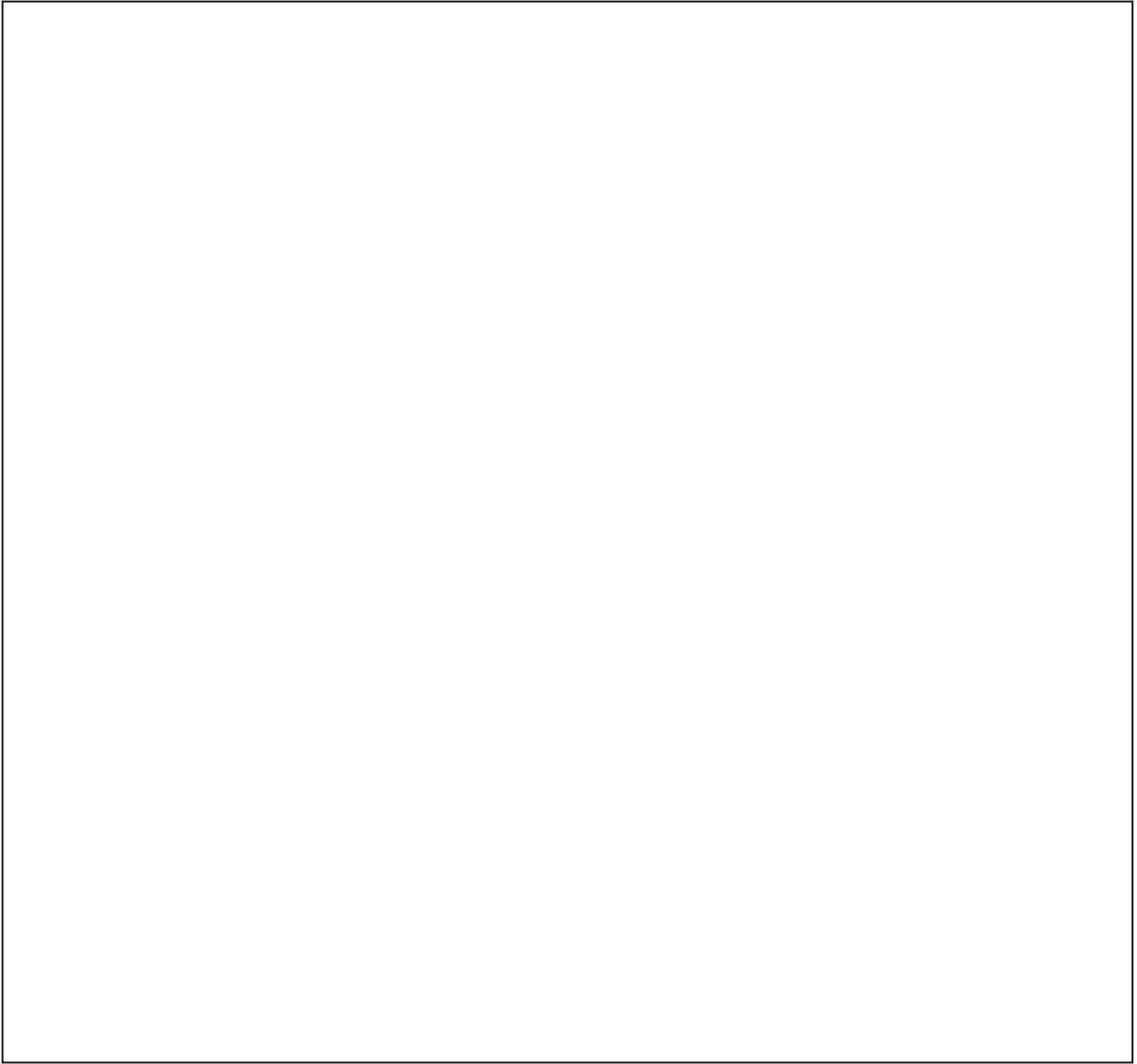Please specify for each solution, the following information:
Customer No. [ ] :

B	Information Concerning Past Experience	
B1	Name of customer	
B2	Address of customer	
B3	Customer contact person (name, title)	
B4	Contact person telephone	E-Mail
B5	Mass transportation industry type (such as Railways, Airports, other)	
B6	Supplied solution description	

Please duplicate this table for each different customer.

Information regarding the proposed solution

Please provide a detailed description of the infrastructure requirements for the solution, and best practice architecture suggestion
Please submit any additional relevant technical information to the proposed solution such as drawings, technical requirements, number of data records and transactions, that can be processed at one time unit, etc.

*** Last page ***