Israel Railways Ltd.
Procurement & Contracting Division

Request for Information
(RFI)

Concerning Israel Railways – Next-Generation Railway Structure Management System

July, 2026

Request for Information ("RFI")

Israel Railways – Next-Generation Railway Structure Management System

Executive Summary

Building the Intelligent Rail Network of the Future

Israel Railways is launching a strategic exploration into modern, digital structure-management capabilities. Our bridges, tunnels and supporting structures are vital national assets, yet traditional inspection and maintenance methods leave gaps in efficiency, predictability and lifecycle insight.

This RFI seeks information about advanced platforms—cloud-native, AI-enabled and mobile-ready—that can transform raw inspection data into operational intelligence.

Our Vision:

Automatically ingests data from inspectors, sensors and drones

Turn images, sketches and notes into clear engineering assessments

Predicts deterioration before it becomes a safety risk

Help engineers prioritize interventions and optimize maintenance budgets

Role of AI:

We aim to leverage predictive analytics, automated anomaly detection and natural-language interfaces so engineering teams spend less time searching for information and more time acting on insights.

Technology Principles:

Cloud-first architecture for elasticity and rapid upgrades

Hybrid capability where security or legacy require it

Full ecosystem connectivity via Application Programming Interfaces (GIS, ERP, sensors, mobile)

Enterprise-grade cybersecurity and privacy protections

Vendor Participation:

Submitters should provide clear yes/no compliance responses, concise documentation and examples demonstrating technological maturity, scalability and security readiness.

1. Introduction

Israel Railways Ltd. ("**ISR**") is interested in receiving information regarding advanced, AI-enhanced platforms for the management of structural railway assets, including bridges, culverts, tunnels and retaining walls. ISR requests information and an overall analysis of available options for a Next-Generation Railway Structure Management System (the "**System**"), in order to examine the range of systems available in the market and their ability to meet ISR's technical and operational requirements and needs, all as generally defined in ***Appendix A*** attached hereto (the "**Technical Requirements**") and as further described below.

2. Objective of RFI

2.1. The objective of this RFI is to enable ISR to explore the option of acquiring Next Generation Railway Structure Management System by receiving information from manufacturers and/or suppliers of the System ("**Respondent/s**""").

2.2. 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.

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

2.4. ISR may, as a result of this RFI, at its sole and absolute discretion, conduct an additional competitive procedure, *inter alia*, tender procedure, and in such scope any of the information provided in this RFI may be utilized.

2.5. 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 acquisition of the proposed Systems.

3. Response

3.1. The Respondents are invited to submit to ISR data and any technical and commercial information regarding the System.

3.2. The information should be delivered in accordance with the Technical Requirements specified in ***Appendix A***.

3.3. Respondents are encouraged to submit their Response even in case of slight deviation from the requirements listed herein and/or in the Technical Requirements. ISR will consider such Response/s as long as the Respondent is able to demonstrate that its proposed System will provide ISR with substantial economic or other advantages.

4. Language of Response

Responses shall be submitted in English only.

5. Submission of a Response Responses are to be submitted in writing, to the attention of Ms. Li Or Shmayovich, at the following email address: liors7@rail.co.il , no later than **September 8, 2026**, or by the Electronic Box in the Sourcingvision system of "Mashik Ltd.", as described below:

5.1. Submission by Sourcingvision System of Mashik Ltd.

RFI documents are available via ISR's website: rail.co.il or via the electronic box in the Sourcingvision system of "Mashik Ltd." (the "**Electronic Box**"), at the following address: https://account.sourcingvision.com//Site/SelfSignIn/SelfSignInGetStarted.aspx?IsNoSummonProject=1&IsSealed=1&IsArchived=0&dup&x=UJxKrC7JbJjxdsSt3bc5bA%3d%3d after completing the registration process. The Respondent's registration will be carried out through the link available at Sourcingvision' system.

5.2. Submission of Responses

5.2.1. All Responses are to be submitted to the e-mail mentioned above liors7@rail.co.il, or to the Electronic Box of Israel Railways at the Sourcingvision system, starting from **September 6, 2026, 08:00 (Israel Time) and until September 8, 2026, 23:59 (Israel time)** (the **"Final Submission**

Date"). After this deadline, it will not be possible to submit Responses to the Electronic Box

5.2.2. Respondents are advised to enter the Sourcingvision system in advance and perform all necessary preparations to ensure that the Responses are submitted on time and to avoid delays due to various technical issues.

5.2.3. The clock of the Electronic Box is the official clock for the submission deadlines in this RFI.

5.2.4. It is hereby emphasized that it is the Respondent's responsibility to ensure that the forms that were scanned and uploaded to the system are legible and clear.

5.2.5. It is recommended that the Respondent will retain a copy of the Response submitted to the Electronic Box.

5.2.6. For any technical assistance regarding the use of the Sourcingvision system, the Respondent may contact the support representatives of Mashik Ltd. By email at: service@mashiktech.com, or by phone at +972-50-9029376, from Sunday to Thursday between 08:00 and 17:00 Israel Time (excluding holiday eves and holidays).

5.2.7. The Respondent's Response shall include the following documents:

5.2.7.1. A signed and complete copy of the Technical Requirements (***Appendix A***);

5.2.7.2. Respondent General Information (***Appendix B***).

5.2.7.3. Any other relevant information requested under this RFI

6. Request for Clarification and/or Additional Information

6.1. Any Respondent may submit to ISR, in writing, inquiries and/or requests for clarification and/or additional information regarding the RFI or relating to the RFI documents, as specified herein below (a "**Request for Clarification**").

6.2. A Request for Clarification shall clearly specify to which RFI clause it refers.

6.3. Respondent shall submit Requests for Clarification with respect to any errors, ambiguities, inconsistencies, omissions, erroneous, unclear or imperfect provisions

("**Errors**") in the RFI documents. It is clarified that by submitting its Responses, Respondent irrevocably and unconditionally waives any claim, demand or legal or administrative proceeding alleging or claiming that the selection process in the RFI has been influenced or based by an Error and/or that Respondent has suffered any damages as a result of such Error.

6.4. All Requests for Clarification relating to the RFI shall be submitted in English by the Electronic Box of ISR in the Sourcingvision system **or** by e-mail to: liors7@rail.co.il .

7. General

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

7.2. 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 procure such System nor to publish any tender or any other further competitive procedure.

7.3. Participation in this RFI does not and shall not provide a Respondent or any other entity with any advantage, nor shall it confer upon a Respondent any right with respect to the System (or any part thereof) or any future proceedings conducted with respect thereto (if any), including with respect to any pre-qualification process and/or tender process, should ISR decide to implement one.

7.4. 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 ISR finds suitable, and/or to conduct any other procedure it deems necessary.

7.5. 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.

7.6. 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.

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

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

7.9. 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 Respondents and/or any other interested parties.

7.10. 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.

7.11. 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.

7.12. 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.

Appendix A

Technical Requirements

Request for Information (RFI) on Next-Generation Railway Structure Management System

RFI Introduction

The specification reflected in this RFI originates from an existing, fully operational railway structure management system currently used by inspectors, engineers, and asset managers across the national network.

Any proposed enhancement or replacement must respect these established operational processes, user habits, and data dependencies.

Alignment with Israel's adopted UK ADEPT (Formerly CSS) standard for roadway structure condition assessment is mandatory, as the current railway structure management system and SOP is built on this standard.

Goals:

ISR is interested in information about advanced, AI-enhanced platforms for managing structural railway assets (bridges, culverts, tunnels, retaining walls).

Core Requirements:

- Railway structure management with detailed structure elements and attributes.
- Secured management of inspection data, images, and sensor feeds
- Engineering analysis & evaluation
- Dashboards, GIS visualization and reporting
- Maintenance planning and decision-support tools
- Integration into the company's ERP system –SAP

AI & Automation Requirements:

- Predictive analytics for deterioration and Remaining Useful Life (RUL)
- Automated anomaly and defect detection
- Natural-language interaction for search, reporting, and field notes
- Adaptive, AI-driven workflows
- Automated data QA/QC

Technology Requirements:

- Cloud-native SaaS architecture (with hybrid/on-prem option)
- Mobile and tablet-ready for field inspectors
- IoT, drones, and sensor network integration
- REST APIs, SDKs
- Open data formats: CSV, JSON, IFC, GeoJSON, etc.

Security Requirements:

- Encryption at rest and in transit
- RBAC/ABAC authorization
- Federated identity (SAML, OIDC, Oauth2)
- Full audit trail and tamper-evident logs
- Multi-tenant data isolation
- ISO 27001 / NIST / SOC2 compliance
- Backup, DR

Response Instructions:

Vendors indicate YES/NO per requirement and describe delivery (native vs integration vs development).

Attachment of technical documentation and architecture diagrams is encouraged.

Detailed Technical Appendix

Detailed Technical Appendix

Please use: Fully supported, partially supported, Integration, Development

5. Vendor Response Matrix

Structure Management System Specification	Vendor Response	Notes
1. Structure Management System		
1. Sub Module: **Structure Inventory**		
1. New structure definition based on structure type templates: bridges, culverts, tunnels, retaining walls.		
2. Attributes values management		
3. Location coordinates management, geographic and linear.		
4. Attachments management (doc, cad, media, BIM)		
5. Maintenance history log		
6. Predicted service life time values		
7. Structure sub elements list, versioned.		
8. Multi hierarchy inventory representation (by location, by type, by supervisor)		
9. Structure Inventory query (textual, graphic explorer, agentive)		
10. Integral inventory interface to an external ERP system		
11. Structure file printout report		
12. Structure type management by attributes, sub elements, and attribute values.		
13. Sub element's graphic scheme management		
14. Load capacity management		
15. CAD viewer		
16. BIM viewer		
16. Agentive data monitoring, critical alerting system.		
2. Sub Module: **Documentation System**		

1. By interface to DMS		
2. Attachment to a structure (images, videos, sketches, CAD, BIM)		
3. Attachment to a structure type		
4. Attachment to an inspection		
5. Attachment to a defect found in an inspection		
6. Attachment to a defect type		
7. Attachment query		
3. Sub Module: **Inspection Management**		
1. Inspection type definition		
2. Data collection definition for inspection type		
3. Condition indicators collected in inspection type, condition indicators based on Severity & Extent as defined by the British ADEPT methodology.		
4. Inspection form printout		
5. Inspection scheduling for structure		
6. Inspection results input screen		
7. Inspection results batch input interface		
8. Graphic defect location acquisition on element scheme or CAD drawing		
9. Inspections plan vs execution representation		
10. Optimization of inspection plan and auto allocation to inspectors		
11. Agentive monitoring on inspection plan attainment		
12. Structures condition report		
4. Sub Module: **Defect Catalogue**		
1. Defect type definition for specific structure element		
2. Defect type definition for element types		
3. Severity and extent definitions and values for each defect type		
4. Repair procedure definition for each defect type including cost estimations		

5. Document attachment for defect types.		
6. Automated anomaly and defect detection using ML		

5. Sub Module:	**Deterioration Model and PCI**	
1. Performance condition indicator definition for structures and structure types.		
2. Aggregated PCI rules and formulas for structures		
3. Rebuild and repair trigger PCI values management for structures and structure types		
4. Deterioration model parameters and coefficients settings and audit trail for each deterioration model		
5. Chloride ingress model		
6. Corrosion model		
7. AS reaction model		
8. Predictive analytics for deterioration and Remaining Useful Life		

6. Sub Module:	**Maintenance Management**	
1. Repair activities management: resources, defects repairs and methods, costs, scheduling.		
2. Maintenance activity prioritization by PCI and cost benefit calculations		
3. Automatic rebuild and replace recommendations		
4. Maintenance master planning according to allocated budget		
5. Long term maintenance planning and budget predictions using agentive simulations		
6. Budget utilization tracking		
7. Integrated interface to the ERP system.		

2. ERP/SAP Interface

1. The system shall have inventory (Equipment and Functional Locations) Interface between SAP and the proposed system. i.e. The system shall link railway structures to the SAP functional locations or equipment.		
2. Work History- The system shall display work history (including current work being done) from SAP (location, date, treatment etc.)		
3. Treatment Recommendations- The system shall transfer treatment recommendations (including emergency treatments) produced according to its models to SAP.		
4. The system shall enable exporting status updates of treatments/projects from SAP into the system.		
5. The system shall support importing inspection activity completion from the system to SAP.		
6. The system shall enable batch updating or online updating capabilities.		
7. The system shall have an interface for inspections plans including status updates etc.		
8. The system shall have an interface for the treatments catalogue		
9. The Vendor shall specify interfaces with other ERP or external systems.		
3. GIS Interface		
1. Sub Module: **GIS Interface- Inventory**		
1. The supposed system shall incorporate GIS windows and functionalities within the proposed system.		
2. The layers in the system will support segments of 100m for gauge values, 200m for any other values and the sections created by the dynamic segmentation procedure.		
3. The system shall have the ability for users to switch between GIS view and linear view for a specific part of the network.		
4. Inventory, inspections, maintenance and inventory groups locating and detailed views of:		
1. Work History (Per time)		

2. Work\inspection Plan (Per time)		
3. Curves		
4. Slopes		
5. Track Layout		
6. Israel Map		
7. Track attributes		
8. Rail Segments		
9. Turnouts		
10. Railway Stations		
11. Bridges		
12. Culverts		
13. Tunnels		
14. Walls		
15. Additional Layers that are not managed in the system		
5. The system shall enable CAD imports and output procedures based on inventory management and GIS data		
6. The system shall enable exception reports for nongeographic inventory.		
4. Reporting		
1. The report module shall enable the authoring of reports in the system		
2. The system shall support both textual, graphical and GIS reports.		
3. The report module shall consist of:		

1. Report studio for report development		
2. Query Studio for ad-hoc reports		
3. Framework\Dictionary Manager equipped with package ready for report developing		
4. The system shall support at least the following reports:		
1. Structure file printout		
2. Inspection Printout		
3. Inspection plan		
4. Inspection plan vs execution		
5. Structure inventory condition report		
6. Structure condition alerts		
5. Data Integration and Uploading		
1. The system shall have the ability to upload and integrate data from GIS, ERP(SAP), Drones, Sensors or any other system that interfaces with the system proposed.		
2. The system shall have bi-directional connection to SAP And GIS for updating in both systems as described in the clauses above		

3. The system shall support uploading data via Excel (with the support of uploading data with GPS coordinates only- without KM coordinates)		

6. General System Requirements

Following are general system requirements

1. Sub Module:	**General Technical System Specification**	
1. Worldwide installations		
2. Over 5,000 structures managed worldwide		
3. Hybrid SaaS architecture		
5. Silent active directory login – SSO		
6. ESRI compliant		
7. Geographic location based on linear referencing		
8. Data Base and Data dictionary		
9. Web based GUI		
10. Client Server architecture		
11. Common data format export/import		
12. Concurrent licensing		
13. Compatible with metric and imperial scale units		
14. External GIS Compatibility (i.e. ESRI, Google Maps)		
15. Compatibility with CAD and BIM tools		
16. Ability to export data to an excel spreadsheet		
17. The system must optimize the download of large amounts of data such as raw data.		
18. The system shall be able to utilize multiple processors		
19. The system shall be scalable to support increasing number of users and functionalities.		
2. Sub Module:	**General System Usability**	

1. Help- available help on each system's screen including explanation on the business process related to the window.		
2. Help- search and index functions		
3. System GUI Modification- ability to modify system's terminology (i.e. column names), add/delete menus and create new windows		
4. User management- Manage usernames, passwords and screen permissions, including passwords expiration and maximum number of login attempts		
5. Hebrew Language (right to left) GUI support		
6. Hebrew Language Database and application support (sorting and data extraction issues)		
7. Ergonomic and intuitive user interface		
8. The system shall provide job scheduling mechanism, for running jobs at a specific time or in a batch		
9. The system shall run all jobs in the background, transparent to the user. The user shall receive a notification when the job is finished.		
10. The system shall be able to create logs for all activities in the system with sufficient detail level.		
11. The system shall provide a ACL- Access Control List, for operations permitted per user/profile on any object in the system.		
12. System Flexibility:		
1. The user will be able to add/hide fields in any window		
2. The window layout could be set for each user group differently or for all user groups.		
3. The user will be able to set fields as mandatory/optional or set a default value.		
4. The system should support adding calculated fields/columns in any window which could be calculated from any data in the system (such as assets, defects etc.).		
13 Natural-language interaction for search, reporting, and field notes		
14 Vendor management and support services shall be provided in English or Hebrew		

7. Vendor's Proposed System and Customers

Please provide a list of 5-10 customers who have acquired and installed the proposed software. The list should include the following:

Company name	Contact name	Contact's title	Contact Information: Address, Telephone Number and Email	Description of modules installed	Timeframe for implementing software	The period in which the system has been fully operational	Cost for implementing software	Number of culverts and bridges	Length of the track network	Number of active users	Systems Integrator

1. Age of proposed system	
2. Last date Upgrade of supposed system	
3. Number of implementations supposed system	
4. Questions about support abilities	

5. The finance estimation for full system license for X employee	
7. The cost estimation of a service and maintenance agreement for a period of 5 years.	

8. Additional Comments

The vendor is requested to provide any additional relevant information, features ,assumptions, dependencies, limitations, and indicative costs that may impact the proposed solution.
Where applicable, please provide ranges or estimates rather than general statements.

Appendix B

Israel Railways – Next-Generation Railway Structure Management System

Respondents are requested to submit the following information:

A	General Information Concerning the Respondent (Table I)		
A1	Respondent name (Company's 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		