Planning

Southern Line Blockage Tool

Network Rail Infrastructure Ltd

F04: Periodic indicative notice – utilities
Periodic indicative notice only
Notice identifier: 2024/S 000-029983
Procurement identifier (OCID): ocds-h6vhtk-049c2e
Published 19 September 2024, 11:36am

Section I: Contracting entity

I.1) Name and addresses

Network Rail Infrastructure Ltd

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London

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Email

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Telephone

+44 1908781000

Country

United Kingdom

Region code

UK - United Kingdom

Internet address(es)

Main address

https://www.networkrail.co.uk/

I.3) Communication

Additional information can be obtained from another address:

Kishan Rajapaksa

London

Email

kishan.rajapaksa@networkrail.co.uk

Country

United Kingdom

Region code

UK - United Kingdom

Internet address(es)

Main address

https://www.networkrail.co.uk/

I.6) Main activity

Railway services

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

Southern Line Blockage Tool

II.1.2) Main CPV code

- 72000000 - IT services: consulting, software development, Internet and support

II.1.3) Type of contract

Services

II.1.4) Short description

Line blockage irregularities pose significant risks to the safety of track workers and the safe passage of trains. An analysis of line block irregularities in the Southern region has identified root causes in the quality of planning, plan validation, and plan execution.

The Southern region seeks a line blockage tool that enables signallers to rely on the capability and integrity of the signalling system to identify omissions in either the planning or execution of line blockages. This tool must demonstrably reduce the risk of line blockage irregularities through improved or simplified processes enabled by technology. It should validate planned protection limits relative to a given worksite to calculate the 'minimum protection requirements' and suppress route-setting commands that could compromise worksite safety.

The tool must be compatible with existing Network Rail line blockage systems and offer a user-friendly interface for operational deployment. It should also be modular, allowing for future functionality enhancements.

The desired outcome of deploying this system is a reduction in irregularities and an increased likelihood of delivering planned work efficiently and safely. To facilitate prompt rollout to the operational railway, any future procurement will prioritize tools that are substantially developed, have a clear route to ergonomic approval and product acceptance, or are already product approved.

The supplier of this tool must have a proven track record of delivering software and/or safety-critical systems within Network Rail, demonstrating an understanding of product acceptance, relevant safety authorization processes, and stakeholder acceptance.

Full product requirements are explained later in this document.

Project Objectives:

1. Safety Enhancement:

o Suppress route-setting commands that could compromise worksite safety.

o Provide additional protection to reduce the risk of line blockage irregularities.

2. System Integration:

o Compatibility with multiple signalling interlocking systems.

o Capability to function across multiple workstations.

3. Operational Efficiency:

o Deploy protection to the signaller's workstation with minimal process steps.

o Store and manage a library of cyclical and pre-planned line blockages.

o Provide an overview of all active and planned line blockages to signallers.

4. User Interface and Ergonomics:

o Design with ergonomics approval to minimize user interface risks.

o Validate requests before deployment to the signaller's workstation.

5. Modular and Extensible Design:

o Modular structure to link or update additional functionalities.

o Potential to link to Railhub or similar platforms.

6. Emergency Management:

o Capability to manage emergency requests and ensure safe system reset.

o Provide appropriate alerts and system health indications.

Functional Requirements:

• Suppress unsafe route-setting commands.

• Integrate with multiple signalling interlocking systems.

• Provide demonstrable additional protection and risk reduction.

• Deploy protection with minimal process steps and a single command.

• Store cyclical and pre-planned line blockages.

• Validate planned protection limits to calculate minimum protection requirements.

• Operate across multiple workstations.

• Offer an overview of active and planned blockages.

• Validate requests before deploying to the signaller workstation.

• Ensure ergonomics-approved design.

Non-Functional Requirements:

• System should be modular and easily extendable.

• Capability to manage emergency requests.

• Compatible with existing Network Rail line blockage systems.

• Provide alerts, indications, and health status across workstations.

• Safely reset after a failure.

Supplier Capability and Experience Requirements:

• Demonstrate active development in relevant areas for rapid progression to deployment.

• Present a realistic development and trial plan within CP7.

• Proven track record in delivering software and safety-critical systems for Network

II.1.6) Information about lots

This contract is divided into lots: No

II.2) Description

II.2.2) Additional CPV code(s)

- 72000000 - IT services: consulting, software development, Internet and support

II.2.3) Place of performance

NUTS codes

- UK - United Kingdom

II.2.4) Description of the procurement

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II.3) Estimated date of publication of contract notice

26 September 2025

Section IV. Procedure

IV.1) Description

IV.1.8) Information about the Government Procurement Agreement (GPA)

The procurement is covered by the Government Procurement Agreement: Yes