Invitation to Tender for a New Radio System at London Gateway Port Ltd

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1. Introduction

DP World London Gateway is the largest UK terminal and identified by the UK government as forming critical national infrastructure. The business requires a suitable radio system to remain operational on a 24 x 7 basis; as such we are seeking proposals for the procurement, installation, and ongoing support of a suitable long term radio solution.

2. Project Overview

London Gateway has expansion plans recently backed by a billion-pound investment from DP World, along with various government backed initiatives to develop the surrounding area. For example, the creation of the Thames Freeport zone to attract transient trade through the UK.

The existing Motorola system has been deemed to be no longer sufficient and as such, we are seeking proposals for a replacement radio system that will align to future expansion plans. As part of this process, we are also looking to align with a suitable partner that can provide a suitably scaled support and maintenance contract for the next 5+ years.

3. Requirements

3.1 System Capabilities

We are vendor agnostic and focused on finding the best solution possible to meet the demanding business requirements.

We have two purpose-built data centres on site approximately 5k apart, connected by diverse fibre with sub millisecond latency in which this equipment will be located. Both data centres have dual power feeds, UPS system, standby generator, resilient air conditioning systems, fire suppression, redundant PDU's, restricted biometric access to IT staff only and CCTV.

Our entire site is covered by both Wi-Fi and a Private 5G network which are also available for the proposed solution to benefit from if needed. We own all buildings on site so the installation of antennas etc is not an issue but should be highlighted so we are aware of all requirements when evaluating responses.

The existing Motorola Capacity Plus system also makes use of a 3rd site midway between the data centres which can be used again should the suggested system require a third site.

- The proposed solution must be highly resilient with no single point of failure. Redundancy must be factored in at all levels with a failover mechanism in place for seamless transition in the event of a failure.
- The system needs to be capable of withstanding a total data centre outage without impact to operational functionality. System uptime and resiliency are critical to the radio system as without it the terminal cannot operate. Typical, acceptable up-time targets are 99.98%
- The system must be capable of supporting a minimum of 1200 radio devices and have the capacity for 100 devices to start communication (key up) simultaneously.
- The system should be self-healing, meaning minor faults should be automatically detected and corrected without manual intervention.
- The system should have a regular patch programme, including recognised and approved standard operating system updates.
- Must have disaster recovery capabilities, with a documented plan and periodic testing.
- The customer should be advised of new software versions, which would be beneficial to deploy
- It is a requirement that all devices can be centrally managed with the ability for all firmware updates to be centrally pushed to devices along with any configuration changes etc.
- The system must be capable of generating detailed reports which will form part of the quarterly review process, reporting on areas such as peak usage, average usage, hardware faults, none communicating devices, failed transmissions etc.
- It is a requirement that we have the ability to record all communications for either training, troubleshooting or incident reports.
- The solution should also be capable of producing email alerts giving warnings of system issues, e.g. Service down.
- The radio system should not be considered limited to ‘radio waves’ and alternatives such as 4G / 5G shall be considered equally
- Energy Efficiency: Equipment should be designed for optimal power usage, especially for battery-operated mobile units.
- The system must meet ISO 27001 (Information Security), ETSI, and OFCOM regulations.

3.2 Operating Capabilities

As a minimum requirement for this support contract we would expect the following, however, please feel free to add any additional benefits or services we might want to consider.

- As the radio equipment will be used in various roles throughout the business the hardware must be available in various formats ranging from a desk type scenario in a heavily populated control room, or large industrial equipment as an example a quay crane, or smaller mobile equipment for example an empty container handler, a member of staff that would be in the office environment but not at a desk requiring a small portable device, to a member of staff out working on a ship in all weather conditions where the radios need to be very rugged.
- All radio equipment must comply with necessary safety regulations
- It is expected that the tender vendor provides regular recommendations, based on new/available technology as it becomes available
- Radios should be trackable and support GPS positioning, with central view, with ability to geo-fence radios
- The ability to over-ride the radios, as an 'all-call' should be available
- The radios must support a 'man down' function
- The radios must be able to work within buildings
- Calls should be encrypted and require multi-factor authentication to access historical calls
- All initiated communications should pass through the system with sub second latency
- Audio clarity must meet at least ITU-T P.862 PESQ (Perceptual Evaluation of Speech Quality) standards to ensure optimal voice transmission.
- Interference management: The system should include intelligent frequency management to minimize interference and optimize channel usage.
- Seamless handover between different communication zones (e.g., moving from quay cranes to buildings) should not interrupt conversations.
- All communication recordings and logs should be encrypted, available for immediate play back and stored securely for a minimum of 12 months.

3.3 Support and Maintenance

As part of this process, we are looking to foster a long-term relationship with a suitably skilled and resourced support / maintenance partner and as such we are requesting a 5-year agreement to be included (billed annually). As a minimum requirement for this support contract we would expect the following, however, please feel free to add any additional benefits or services we might want to consider.

- 24 x 7 365 System support with the following SLA's

  Critical issues: 1-hour response time, 4-hour resolution.
  High priority issues: 2-hour response time, 6-hour resolution.
  Medium priority issues: 4-hour response time, resolution within 24 hours.
  Low priority issues: Response within 8 hours, resolution within 72 hours.

- 24 x 7 365 Hardware support with the following SLA's
  Same-day on-site hardware replacement for critical infrastructure failures.
  Loan equipment availability in case of extended repairs.

- Ticketing system for calls to be logged and tracked.
- Quarterly report to be produces and presented which will include but not limited to the following

  System performance statistics
  System usage metrics
  Overall health, providing recommendations on any alerts received.
  Hardware/ software or firmware upgrades to be considered.
  Configuration changes
  Report on Professional services hours used
  Vendors must notify DP World at least 30 days in advance before any major update

- Annual Preventative Maintenance Inspection which covers all infrastructure components followed by the submission of a findings report.
- The quotation and repair of physically damaged end point equipment.
- Team of suitably skilled engineers that have up to date site knowledge within 2 hours commute to site.
- 100 Hours of professional services to be called off by the hour for assistance with ad hoc tasks

As part of this agreement, London Gateway Port Ltd intends to establish a long-term procurement partnership with the successful supplier for a period of five (5) years. During this period, we will prioritise the purchase of relevant equipment from the selected supplier, subject to performance, quality, and commercial terms being maintained to a mutually acceptable standard.

We are open to structuring the pricing arrangement in one of the following ways:

1. Fixed Pricing Model – A predetermined pricing structure for the duration of the agreement, subject to agreed-upon review mechanisms (e.g., annual adjustments based on predefined indices).

2. Open Book Pricing – A transparent pricing model where cost breakdowns are shared, allowing both parties to collaboratively manage cost fluctuations and ensure fair market pricing.

Please highlight and make allowance for any training course DP World staff should attend.

Please highlight any potential buy back options for the existing Motorola hardware.

From conception through to project sign off we expect a suitably skilled and experienced project manager to be assigned to be assigned.

3.4 Documentation

Full high-level, low-level, and as-built documentation to be provided along with how to guides where necessary.

4. Submission Requirements

4.1 Proposal Format

Executive Summary

Detailed Technical Proposal

Project Plan and Timeline indicating realistic lead times for hardware

Test and Migration plan

Support and Maintenance Plan

Training Plan if applicable

Buy-back Options for Existing Hardware

Cost Breakdown

All technical capabilities of the proposed solution must be highlighted within the proposal. For example, integration with a phone system, available desktop or phone applications, ability to communicate outside of private network, ability to send images / video or text, any AI advancements etc.

Reference site. Please provide details of an existing customer using the proposed solution. Please give details of the extent of your involvement and ongoing support.

4.2 Evaluation Criteria

Technical Compliance

Cost Effectiveness

Support and Maintenance Capabilities

Vendor Experience and References

Documentation Quality

5. Timeline

ITT Release Date: 28-02-2025

Submission Deadline: 28-03-2025

Evaluation Period: 3 weeks (requirement for demonstration or presentation)

Vendor Selection: 28-04-2025

Project Commencement: ASAP dependant on lead times or infrastructure requirements