Planning

PIN - SONIC Lab Products for Open RAN Outdoor Network (Site 4)

Digital Catapult

F01: Prior information notice
Reducing time limits for receipt of tenders
Notice identifier: 2023/S 000-013028
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Section I: Contracting authority

I.1) Name and addresses

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NUTS code

UKI31 - Camden and City of London

Internet address(es)

Main address

www.digicatapult.org.uk

Buyer's address

https://www.mytenders.co.uk/search/Search_AuthProfile.aspx?ID=AA37289

I.3) Communication

Additional information can be obtained from the above-mentioned address

Tenders or requests to participate must be submitted electronically via

www.mytenders.co.uk

I.4) Type of the contracting authority

Body governed by public law

I.5) Main activity

Other activity

Research and Innovation

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

PIN - SONIC Lab Products for Open RAN Outdoor Network (Site 4)

II.1.2) Main CPV code

- 32400000 - Networks

II.1.3) Type of contract

Supplies

II.1.4) Short description

The SmartRAN Open Network Interoperability Centre Laboratories (SONIC Labs) is a joint programme between Digital Catapult (DC) and Ofcom. The programme creates a range of platforms for existing and emerging vendors to test the interoperability and integration of open and software-centric networking solutions, starting with 5G Open RAN technology. Launched in February 2022, the DSIT-funded SONIC Labs will be deployed across indoor and outdoor locations, providing a unique opportunity for UK-based operators and Open RAN vendors to get involved and showcase their capabilities.

Additionally, SONIC Labs will provide a testing ground for longer-term advanced technologies, expanding to other use cases and open networking technologies.

This opportunity specifically relates to the low level design, supply, implementation and support of an OpenRAN outdoor mobile network. Digital Catapult is seeking to engage with outdoor OpenRAN vendor(s) who have the capability to design, supply, Install, configure and Integrate different Open RAN components - hardware (Radio Units) and software Centralised Unit (CU), Distributed Units (DU) and RAN Intelligent Controllers (RIC). The vendor(s) shall provide services to build, implement and integrate an outdoor 5G Open RAN system. In addition, we require services for ongoing support and maintenance for a two year period following go-live.

This network will need to be a representative of an outdoor 5G SA deployment in the ‘real’ live environment, which means a combination of micros at street level and macros on rooftops/towers which would be the optimum requirement to represent the Open RAN solutions in outdoor field trial conditions.

Attached to this notice you can find more detailed document containing:

Figure 1 (An example of an outdoor private mobile network);

Figure 2 (High level architecture for outdoor SONIC Open RAN network);

Appendix A (High Level Outdoor Reference Network architecture);

II.1.6) Information about lots

This contract is divided into lots: No

II.2) Description

II.2.2) Additional CPV code(s)

- 32412000 - Communications network
- 32412100 - Telecommunications network
- 32418000 - Radio network
- 32420000 - Network equipment
- 32422000 - Network components

II.2.3) Place of performance

NUTS codes

- UKI - London

II.2.4) Description of the procurement

The primary objective of the SONIC Labs Outdoor Standalone (SA) Network is to evaluate the deployment, scalability and manageability of Open RAN systems in an outdoor environment reflecting the typical challenges seen in a real network.

The outdoor site will host Open RAN systems constituting multiple Radio Units (RUs), Distributed Units (DUs),Centralised Units (CUs) and RAN Intelligent Controllers (RICs) to support outdoor field testing at a moderate scale. It is to be assumed by the vendor that the passive infrastructure and power for the vendor products will be in place (except Antennas) for this network.

SONIC Labs Outdoor Field Testing for the 5G Standalone Network will be used to undertake the following experimentation and testing:

- Assess the maturity of Open RAN implementations for outdoor radio equipment of different physical sizes, including where possible MIMO and mMiMo capabilities;

- Assess the scalability of Open RAN systems by deploying multiple RUs in a medium-scale outdoor environment, including the RU-DU-CU ratios;

- Assess the operational stability of Open RAN networks in an urban outdoor deployment;

- Assess the viability of disaggregated RAN functions and corresponding interfaces (Open RAN networks) in an outdoor field environment;

This will include the ability of the vendor to introduce variants or partners for the CU, DU, RU and RIC to demonstrate Open RAN standards.

We do not envisage frequent RU swap experiments for the high-power outdoor RUs, not more than twice a year, anticipating a longer-lived installation.

The Open RAN products deployed at the field site should be mature enough for operator-like testing in an outdoor environment.

- Conduct handover/mobility experiments in a medium-scale outdoor Open RAN deployment. Mobility would be tested from Macro to Micro and Micro to Micro in the proposed architecture.

- Verify whether Open RAN maintains the coverage and capacity KPIs in an outdoor environment against best predicted performance/ RF budgets (subject to product maturity).

- Verify open RAN RIC xApps and rApps applications such as traffic steering in a medium-scale outdoor Open RAN environment.

- Assess the feasibility of different deployment scenarios of Open RAN networks in a medium-scale outdoor Open RAN deployment, i.e. co-located and geographically distributed RAN components.

- Assess the constraints on the service management and orchestration (SMO) systems as Open RAN functions are scaled up to outdoor deployments.

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Start date

25 July 2023

End date

1 September 2025

II.2.13) Information about European Union Funds

The procurement is related to a project and/or programme financed by European Union funds: No

II.3) Estimated date of publication of contract notice

13 June 2023

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

IV.2) Administrative information

IV.2.5) Scheduled date for start of award procedures

28 June 2023

Section VI. Complementary information

VI.3) Additional information

NOTE: To register your interest in this notice and obtain any additional information please visit the myTenders Web Site at https://www.mytenders.co.uk/Search/Search_Switch.aspx?ID=229222.

(MT Ref:229222)

VI.4) Procedures for review

VI.4.1) Review body

High Court

London

Country

United Kingdom

VI.4.2) Body responsible for mediation procedures

CEDR

London

Country

United Kingdom

VI.4.3) Review procedure

Precise information on deadline(s) for review procedures

In the first instance, all appeals should be promptly brought to the attention of Digital Catapult, and will be dealt with in accordance with the requirements of the

Public Contracts Regulations 2015. Any appeals must be brought within the timescales specified by the applicable law, including without limitation, the Public Contracts Regulations 2015.

In accordance with the Public Contracts Regulations 2015, the contracting authority will also incorporate a minimum 10 calendar day standstill period from the date information on award of contract is communicated to tenderers.