



SPECIFICATIONS ATTACHED TO THE INVITATION TO TENDER

SJU/LC/0026-CFP

PERFORMANCE OF A WIRELESS COMMUNICATION STUDY

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1. INTRODUCTION

The SESAR (Single European Sky ATM Research) Programme has been launched as a critical part of the Single European Sky initiative (SES). The SESAR Joint Undertaking (SJU) was created under Council Regulation (EC) No 219/2007 of 27 February 2007 amended by Council regulation (EC) No 1361/2008 of 16 December 2008, with EUROCONTROL and the European Community as founding members, in order to manage the SESAR Development Phase. The Development phase (2008-2013) will produce the required new generation of technological systems, components and operational procedures as defined in the SESAR ATM Master Plan and Work Programme.

The aim of the SESAR Joint Undertaking is to ensure the modernisation of the European air traffic management system by coordinating and concentrating all relevant research and development efforts in the Community.

SESAR represents the technological pillar of the Single European Sky (SES) and aims at developing a modernised and high-performance Air Traffic Management (ATM) system which will enable the safe and environmentally friendly development of air transport. A new concept of operation will be the basis of this new ATM system relying on the implementation of new features such as the 4D trajectory management, and integration of aircraft in the ATM system. Data exchanges will be central in this new concept. They will require adapted wireless communication systems which will fundamentally differ from those actually used today.

The evaluation of new wireless communication infrastructure is on-going at the international level (ICAO) through e.g. a common initiative known as Future Communication Infrastructure (FCI) [Ref 2] of the US Federal Aviation Administration (FAA) and EUROCONTROL. The SESAR Definition Phase recognised the need to develop a new wireless communication infrastructure which will be composed of 3 segments:

- A 'ground-based segment' using line of sight connections between aircraft and ground stations and between aircraft. This segment is referred in this document as "Ground-based segment",
- A 'satellite-based segment' which is connecting aircraft and ground system through a satellite resource. This segment is referred in this document as "Space-based segment", and
- A 'dedicated airport segment' based on WiMax standards which is connecting aircraft and ground systems while the aircraft is at the airport. This segment is referred in this document as "airport segment".



2. OVERVIEW OF THIS TENDER

2.1. DESCRIPTION OF THE CONTRACT – DIVISION INTO LOTS

The purpose of this call for tender is to **award a service contract for the performance of a wireless communication Study** for the SJU.

The services required by the SJU under this contract are described in the Terms of reference in Section 3 below.

This call for tender is divided into the following lots:

- Lot 1 – Requirement, service and technology assessments
 - § Work Package 1 - Characterisation of the ATM services to be supported in the long term
 - § Work Package 2 - FCI study Technology finding review
 - § Work Package 3 - Consideration of “Non-ATM” wireless technologies
 - § Work Package 4 - Consideration of commercial telecommunication services
- Lot 2 - Appropriateness of L band for Ground based segment
- Lot 3 - Voice services evolution

The tenderer may submit a tender for one lot, several or all the lots.

2.2. TIMETABLE

Milestones	Deadline
Launch of this call for tender	17 July 2009
Deadline for requesting additional information/ clarifications from the SJU	No later than 15 calendar days before the closing date for submission of tenders
Last date on which clarifications are issued by SJU	No later than 6 calendar days before the closing date for submission of tenders
Closing date for submission of tenders	21 September 2009 at 1.00 p.m. at the latest.
Notification of contract award	13 October 2009 (<i>Estimate</i>)
Contract signature	After standstill period of at least 14 calendar days following the date on which notification of the contract award decision is sent



2.3. PARTICIPATION IN THE TENDER PROCEDURE

In addition, tenderers must not be in any of the exclusion criteria indicated in section 5.2 below of these tender specifications and must have the legal, economic, financial, technical and professional capacity to allow them to participate in this tender procedure (see section 5.3 below).

The SJU draws the attention of the tenderers to the fact that, for the adequate performance of the activities under the contract(s) to be awarded, they shall:

- not be bound by any instructions,
- be completely independent, and
- act in the general interest of the SESAR Joint Undertaking.

In particular, the following cases are considered by the SJU as conflict of interest; participation in activities which will be reviewed by this study (for example, development of the Communication Operating Concept and Requirements document (COCR) [Ref 1] and/or participation in the joint FAA/EUROCONTROL initiative in the framework of the ICAO known as FCI (Future Communication Infrastructure) [Ref 2]) or work on the previous recommendation for a communication system operating in L band.

For this purpose, any tenderer shall make a declaration stating the absence of any interest which might be considered prejudicial to the tenderer's independence or performance of the activities under the contract(s) to be awarded (Annex IV). Absence of conflict of interest will be assessed under the selection criteria (see section 5.3 below).

Please note that any attempt by a tenderer to obtain confidential information, enter into unlawful agreements with competitors or influence the evaluation committee or the SJU during the process of examining, clarifying, evaluating and comparing tenders will lead to the rejection of its tender and may result in administrative penalties.

All tenderers may bid either as an individual company to offer on one or more lots, or as a consortium (see Section 2.4 below) to address a large part or preferably the whole of the scope of this call for tender.

2.4. PARTICIPATION OF CONSORTIA- JOINT TENDERS

Consortia may submit a tender on condition that they comply with the rules of competition.

A consortium may be a permanent, legally-established grouping or a grouping which has been constituted informally for a specific tender procedure.

Such grouping (or consortia) must specify the company or person heading the project (the coordinator) and must also submit a copy of the document authorising this company or person to submit a tender.



All members of a consortium (i.e., the leader and all other members) are **jointly and severally liable to the SJU**. Therefore, tenders stating that:

- one of the member of the consortium will be responsible for some part of the contract and another one for the other part, or
- more than one contract should be signed if the joint tender is successful,

are incompatible with the principle of joint and several liability.

The SJU will consequently disregard any such statement contained in a tender and reserves the right to reject such offers without further evaluation on the grounds that they do not comply with the call for tender specifications.

In addition, each member of the consortium must provide the required evidence for the exclusion and selection criteria (see Sections 5.2 and 5.3 of these tender specifications).

Concerning the selection criteria “technical and professional capacity”, the evidence provided by each member of the consortium will be checked to ensure that the consortium as a whole fulfils the criteria.

The participation of an ineligible person will result in the automatic exclusion of that person. In particular, if that ineligible person belongs to a consortium, the whole consortium will be excluded.

2.5. SUB-CONTRACTING

Sub-contracting is allowed under this tender procedure.

The tenderer must indicate clearly, which parts of the work will be sub-contracted.

Sub-contractors must satisfy the eligibility criteria applicable to the award of the contract.

If the identity of the intended sub-contractor(s) is already known at the time of submitting the tender, the tenderer must furnish a statement guaranteeing the eligibility of the sub-contractor.

If the identity of the sub-contractor(s) is not known at the time of submitting the tender, the tenderer who is awarded the contract will have to seek SJU's prior written authorisation before entering into a sub-contract.

Where no sub-contractor is given, the work will be assumed to be carried out directly by the bidder.



2.6. CONTACTS BETWEEN THE SJU AND THE TENDERERS

2.6.1. Before the opening of the offers

Upon request of the tenderers, the SJU may provide additional information solely for the purpose of clarifying the content of this call for tender. Any request for additional information must be made by e-mail at the following e-mail address: procurement@sesarju.eu or by fax at the following number: +32.2.507.80.01. Request for additional information should indicate the reference number of the call for tender and its title.

Requests for additional information received after the date mentioned in the timetable (Section 2.2. hereabove) will not be processed.

The SJU may, on its own initiative, inform interested parties of any error, inaccuracy, omission or other clerical error in the text of the call for tender.

Any additional information will be published on the SJU website http://www.sesarju.eu/public/standard_page/procurement.html. The tenderer must ensure that they visit regularly these websites for updates.

2.6.2. After the opening of the offers

If, after the offers have been opened, some clarification is required in connection with a tender, or if obvious clerical errors in the submitted offer must be corrected, the SJU may contact in writing the tenderer. Such contact may not lead to any alteration of the terms of the submitted offer since the submitted offers will be considered by the SJU as final and will not be subject to change or negotiation. Any clarification to be provided in this context by the tenderer shall not involve substantial changes to the basic features of the tender submitted.

2.7. PERIOD DURING WHICH THE TENDERS ARE BINDING

The period of validity of the tenders, during which candidate members may not modify the terms of their tenders in any respect, is ninety (90) days after the deadline for the submission of tenders.

In exceptional cases and before the period of validity expires, the SJU may ask each tenderer to extend the period of validity of its tender for a specific number of days, which may not exceed forty (40) days.

The selected tenderer must maintain its tender for a further sixty (60) days from the date of notification that its offer has been recommended for the award of the contract.

The further period of sixty (60) days is added to the initial period of ninety (90) days irrespective of the date of notification.



2.8. CONTRACT VALUE

The total maximum budget of the contract(s) to be awarded as a result of this call for tender is €600.000 (six hundred thousand EURO).

The maximum budget per lot is:

Lot 1	€460.000
Lot 2	€95.000
Lot 3	€45.000

2.9. CONTRACT PROVISIONS

In drawing up its tender, the tenderer should bear in mind the provisions of the draft service contract (see Annex V to these tender specifications), which details in particular the method and conditions for payment of the selected contractor(s).

Please note that the attached draft service contract has been developed to cover the specificities of the SESAR Programme and its Development Phase taking into consideration the Community Body status of the SJU. Therefore, the SJU reserves the right to reject offers stating that the provisions of the draft service contract are accepted subject to a number of conditions.

2.10. VARIANTS

In the absence of any such indication in the terms of reference (see Section 3 below), the tender should not deviate from the services requested.

2.11. CONFIDENTIALITY, PROCESSING OF PERSONAL DATA AND PUBLIC ACCESS TO DOCUMENTS

In the general implementation of its activities and for the processing of procurement procedures in particular, the SJU observes the rules established in:

- Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 and Regulation (EC) No 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regards to the processing of personal data by the Community institutions and bodies and on the free movement of such data;
- Council Regulation (EC) No 1049/2001 of 30 May 2001 regarding public access to European Parliament, Council and Commission documents.



2.12. ACRONYMS

AOC	Airline Operational Communications
ATM	Air Traffic Management
COCR	Communication Operating Concept and Requirements
DME	Distance Measuring Equipment
ECAC	European Civil Aviation Conference
ESA	European Space Agency
FAA	Federal Aviation Administration
FCI	Future Communication Infrastructure
GNSS	Global Navigation Satellite System
ICAO	International Civil Aviation Organisation
JTIDS	Joint Tactical Information Distribution System
QoS	Quality of Service
SES	Single European Sky
SESAR	Single European Sky ATM Research
SSR	Secondary Surveillance Radar
TCAS	Traffic alert and Collision Avoidance System
UAT	Universal Access Transceiver
WiMax	Worldwide Interoperability for Microwave Access
WRC	World Radio Conference



3. TERMS OF REFERENCE

The Terms of Reference will become part of the contract that may be awarded as a result of this call for tender.

This study is complementing the current activities. It shall undertake a top-down approach, considering from the future ATM concept, to assess what are the necessary functions and performances of the future wireless communication infrastructure to support the future concept of operation across all types of airspace (e.g. En-route, Terminal, Oceanic).

The findings of this study will be a direct input to the SESAR Project 15.2.4. A definition of this project can be found on the SESAR public website:

<http://www.sesarju.eu/gallery/content/public/doc/SJU%20DoW%20WP15%20V4.0.pdf> .

The findings of this study will also contribute to the preparation of the European participation to the next WRC.

To realise this objective, the study will:

- characterise the future communication services applicable to all three segments (Lot 1, Work Package 1);
- verify that the technologies being currently identified will be in a position to support these future services (Lot 1, Work Package 2);
- consider if technologies/systems which have not yet been considered would be able to support efficiently the services (Lot 1, Work Package 3);
- investigate if commercial service providers could be in a position to deliver the required service as an alternative to aviation service providers (Lot 1, Work Package 4);
- assess the capability of the currently targeted spectrum band (L Nav band) to support the Ground based segment (Lot 2); and
- investigate how voice communications will evolve in the far future (Lot 3).

The results of Lots 1 and 2 will be an input to the work to be undertaken in SESAR (Project 15.2.4), while Lot 3 will be used for considering strategy evolution in the ATM operating concept if required. The arguments provided shall be commensurate to achieve this goal and detailed analyses are not required except if strictly necessary to support the argument.

The timescales proposed for deliverables within each lot in 3.2 shall be considered as guidance with the tenderer confirming their detailed study plan for all lots offered as part of the response to this call.

3.1. SCOPE OF THE STUDY

The study shall address the wireless communication infrastructure in the context of supporting ATM and AOC services. The study should however consider the feasibility and possible benefits of the shared use of data link technologies which could also support other (commercial) services. It shall consider all types of airspace and the airspace users within.

The timeframe to be considered is an evolution from now with key deployment steps in technology being made over the period up to 2030.

Although SESAR is scoping the ECAC region extended to include the North Atlantic, a wireless communication system for aircraft shall be operated globally. As a consequence, any performance standards defining the communications system (e.g. MOPS) shall be globally applicable except if duly justified.

3.2. DETAILED LOTS

The indicative schedule and dependencies between the lots in the study is shown below, where T0 is defined as the start of the study period:

	T0		T0+3			T0+6		T0+8
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8
Lot 1 WP1	X	X	X					
Lot1 WP2			X	X	X			
Lot 1 WP3					X	X	X	X
Lot 1 WP4					X	X		
Lot2	X	X	X	X				
Lot3					X	X		

3.2.1. Lot 1, Requirement, service and technology assessments

3.2.1.1. Work Package 1 - Characterisation of the ATM services to be supported in the long term

The methodology used so far to approach the requirements for the ATM wireless communication infrastructure has generally been an extrapolation of the current practices e.g. in term of functionalities as well as in term of traffic to be supported. The more recent repository of these requirements is the COCR [Ref 1] which results from a joint FAA/EUROCONTROL initiative in the framework of the ICAO known as FCI (Future Communication Infrastructure) [Ref 2].

However, to meet the challenging objectives set by the aviation community, SESAR will introduce fundamental changes through the implementation of new concept elements. Such changes will imply fundamental evolutions to the supporting Data-Link Services which in turn will impose new or different requirements on the wireless communication infrastructure: for example, new functions could be required, the required quality of service could be more stringent, the quantity of information to be exchanged could significantly differ from the current one, the symmetry of the exchanges could evolve and different exchange topology mechanisms (broadcast / multicast rather than point-to-point) might be appropriate. An initial assessment of these changes has been made in the COCR [Ref 1].

The objective of this lot is to move away from the traditional way of extrapolating the future Data-Link Services to characterise them through a top-down approach based on the analysis of the concept. These services will be collectively applicable to the 3 segments (Ground, Satellite and Airport based). This lot will:

- a) Based on the SESAR ATM concept, identify Data-Link Services which are drivers for dimensioning the systems composing the wireless communication infrastructure, and in particular the services which have not been identified in the COCR [Ref 1]; the lot will also proceed to a critical review of the COCR,
- b) Organise the Data-Link Services (i.e. new Data-Link Services and COCR Services) in representative categories and characterise these categories. The parameters used to characterise the categories (e.g. required QoS, required capacity, security level) will be discussed and justified.

It is not expected in this lot to go into the details for each criterion but to provide order of magnitude and windows of characteristics.

DELIVERABLES

The deliverable will consist of a report addressing the two items a) and b) identified above and is expected to be developed over a period of 3 months.

As guidance, the report is not expected to be larger than 50 pages (including annexes).

*An **intermediate draft of the report should be delivered at T0+2 months** for review (including organisation of a review meeting) with the **final report to be delivered at T0+3 months**.*

3.2.1.2. Work Package 2 - FCI study Technology finding review

The FCI study [Ref 2] has identified an infrastructure composed of three segments: Ground, Satellite and Airport based.

- For the Ground based segment, two systems (known as L-DACS1 and L-DACS2) have been identified and are currently being specified and evaluated.
- For the Satellite segment, the current focus is on the ESA Iris system.
- For the Airport based segment the use of WiMax (the IEEE 802.16e standard) is the focus.

The objective of this lot is to provide recommendation on the capability of these systems/technologies to meet the categories of services identified in Work Package 1 b).

A detailed analysis is not required at this stage, but application of expertise on the issue is expected.

If issues to be solved are identified, a proposal for further work to clarify them will be provided as part of this study.

DELIVERABLES

The deliverable will consist in a report addressing the points described above and is expected to be developed over a period of 3 months beginning with the issue of the draft report from Work Package 1.

As guidance, the report is not expected to be larger than 50 pages (including annexes).

*An **intermediate draft of the report should be delivered at T0+3 months** for review (including organisation of a review meeting) with the **final report to be delivered at T0+5 months**.*

3.2.1.3. Work Package 3 - Consideration of “Non-ATM” wireless technologies

The FCI study [Ref 2] has investigated the capability of several wireless technologies to support ATM services. However, this study did not extend to the whole range of potential useful wireless systems and technologies being used or being under development in the telecommunication industry for public or restricted usages and spectrum bands.

The objective of this lot is to:

- a) Identify which systems/technologies used or under development in the wireless telecommunication industry have not been addressed by the FCI.
- b) Investigate which of them could have the capability of fulfilling the requirements of the categories of Data-Link Services as identified in Work Package 1, including recommendations for tailoring their design. At this stage, an initial evaluation is required addressing relevant technical and non technical aspects (e.g. spectrum efficiency). The relevance of the types of issues which are to be investigated will be justified beforehand and approval from the SJU will be sought.
- c) Proposal for further work (if any) will be provided.

DELIVERABLES

The deliverable will consist of a report addressing the 3 items a), b), and c) identified above and is expected to be developed over a period of 3-4 months beginning with the issue of the final report from Work Package 1, the intermediate draft report from Work Package 2 and ideally the final report from Lot 2.

As guidance, the report is not expected to be larger than 50 pages (including annexes).

*An **intermediate draft of the report should be delivered at T0+6 months** for review (including organisation of a review meeting) with the **final report to be delivered no later than T0+8 months**.*

3.2.1.4. Work Package 4 - Consideration of commercial telecommunication services

The current ATM consideration for future ground-based wireless system currently focuses on operational/technological capabilities. Final conclusions on the opportunity to rely on commercially provided communication services have not yet been achieved at this stage.

The objective of this Workpackage is to assess if current or future (commercial) telecommunication service providers would be in a position to provide the necessary services. The following aspects will be considered:

- a) What are the main issues to be cleared to feed the decision process for using commercial service provision, (e.g. financial aspects, business model, cost, business case, cost recovery, institutional implications including the identification of early regulatory actions if needed, liability, reliability, long term commercial availability, certification, standardisation, regulation, compatibility with requirements, spectrum (protected Vs unprotected)?

- b) Identify different relevant provider categories (e.g. cellular telephone service providers)
- c) Discuss the different categories in the light of the main issues identified in a) hereabove
- d) Proposal for further work (if any) will be provided.

DELIVERABLES

The deliverable will consist of a report addressing the four items a), b), c) and d) identified above and is expected to be developed over a period of 2 months beginning with the issue of the final report from Work Package 1, the intermediate draft report from Workpackage 2 and ideally the final report from Lot 2.

As guidance, the report is not expected to be larger than 50 pages (including annexes).

*An **intermediate draft of the report should be delivered at T0+5 months** for review (including organisation of a review meeting) with the **final report to be delivered at T0+6 months**.*

3.2.2. Lot 2 - Appropriateness of L band for Ground based segment

The systems considered for the Ground based segment (in the FCI study) rely on the L Nav band (960-1215 MHz) which is foreseen to be opened to support AMRS services. This band is currently supporting different ATM and non-ATM systems (e.g. DME, GNSS, TCAS, SSR, UAT, JTIDS). The success factor for the future ground-based wireless communication systems will depend 1) on the capability of the L Nav band to support the considered systems (access to the necessary “quantity” of spectrum resource) and 2) on the capability of these systems to be spectrally collocated with other ATM systems.

The objective is:

- a) To identify the different issues to be addressed to support the decision making for a communication system operating in this band (e.g. strategy concerning system operating in this band and potential evolution (e.g. design, deployment, decommissioning), capability of the signal in space to share the same band, institutional issues, ...)
- b) Rank them in terms of severity,
- c) Discuss the most severe issues (including mitigation, resolution),
- d) Identify the further steps to clear all the issues (as an example, evolution of the design of CNS systems operating in the band could be recommended for spectrum efficiency) and/or to propose alternative

DELIVERABLES

The deliverable will consist of a report addressing the four items a), b), c) and d) identified above and is expected to be developed over a period of 3-4 months.

As guidance, the report is not expected to be larger than 30 pages (including annexes).

*An **intermediate draft of the report should be delivered at T0+2 months** for review (including organisation of a review meeting) with the **final report to be delivered at T0+3-4 months**.*

It has to be noted that Lot 2 is considered as the highest priority and the results are expected before the end of the study period.

3.2.3. Lot 3 - Voice services evolution

The current ATM system relies on voice exchanges between pilots and controllers. In the future, Data-Link Services will play a growing role in the exchanges of information. Considering long time frame (2030), it is still unclear how voice exchanges between pilots and controllers will evolve.

The objective of this lot is to describe the concept of operation of voice services beyond 2025. Questions such as “in which circumstances voice will be used?”, “for which purpose?”, “who will be the users?” will be answered.

DELIVERABLES

The deliverable will consist in a report addressing the points described above and is expected to be developed over a period of 2 months beginning with at least the final report from lot 1, Work Package 1 and the draft report from lot 1, Work Package 2.

As guidance, the report is not expected to be larger than 10 pages (including potential annexes).

*An **intermediate draft of the report should be delivered at T0+5 months** for review (including organisation of a review meeting) with the **final report to be delivered at T0+6 months**.*

3.3. DURATION OF THE CONTRACT

SJU intends to award a maximum of three (3) contracts for the performance of the activities under each lot. Each contract will be concluded for a maximum duration of **eight (8) months** with effect from the date it is signed by the parties (T0).

3.4. REFERENCES

[Ref 1]: COCR

<http://www.eurocontrol.int/communications/gallery/content/public/documents/COCR%20V2.0.pdf>

[Ref 2]: FCI – Action Plan 17 Final Report

http://www.eurocontrol.int/communications/gallery/content/public/documents/AP17_Final_Report_v11.pdf

Additional documents at:

http://www.eurocontrol.int/communications/public/standard_page/General_FCI_Library.html

4. FORM AND CONTENT OF THE OFFER

4.1. GENERAL

Tenderers may submit an offer for one lot, several or all lots.

However, a separate tender must be submitted for each lot.

Each tender must cover all of the services of the lot to which it refers.

Submission of a tender for only some of the services in a lot is explicitly excluded and will lead to exclusion of the tender.

The tenders must be presented in the requested format and include all the documents necessary so as to enable the SJU Proposal Analysis Board (PAB) to properly assess them.

Failure to respect these requirements will constitute a formal incompliance and may result in the rejection of the tender.

4.1.1. Format of the offers

Tenders must be written in **English** and submitted:

- in paper format in **one (1) original and four (4) copies**, and
- in **one (1) CD-ROM** containing the electronic version of the offer, in PDF format.

Tenders must be clear and concise, with continuous page numbering, and assembled in a coherent fashion (e.g., bound or stapled, etc.). Since tenderers will be judged on the content of their written bids, they must make it clear that they are able to meet the requirements of the specifications.

4.1.2. Identification of the original offer

The original paper copy of the offer must be marked "ORIGINAL" and signed by the duly empowered representative of the candidate member.

4.1.3. Practical procedure

Each offer must be submitted in accordance with the double envelope system:

- The outer envelope or parcel should be sealed with adhesive tape and signed across the seal and carry the following information:
 - o the reference number of the call for tender (SJU/0026-CFP) and the lot number this tender is referring to.
 - o the name of the tenderer
 - o the indication "Tender - Not to be opened by the internal mail service"
- The inner envelope must contain the following elements:
 - o The one (1) CD-ROM containing the information as described in section 2.7.1 above
 - o The five (5) paper copies as described in section 2.7.1 above

4.2. STRUCTURE OF THE TENDER

All tenders must include a **cover letter** (see section 4.2.1 below) **and three volumes**, i.e.:

- Volume 1 – Administrative Proposal (see section 4.2.2 below)
- Volume 2 – Technical Proposal (see section 4.2.3 below)
- Volume 3 – Financial Proposal (see section 4.2.4 below)

4.2.1. Cover letter

The cover letter shall be signed and contain the following elements:

- The names, telephone and fax numbers of the persons who will be responsible for the technical and contractual management of any resulting contract and who would be nominated as such in the contract,
- The name, address, fax and telephone number of the contact person to whom all communications relating to this call for tender should be addressed,
- A reference number for the tender, identical throughout all parts of the tender,
- The reference number of the SJU call for tender,
- The name of the person empowered to sign a potential contract with the SJU,
- the proposed Firm Fixed Price as defined in Article I.3 of the Draft Contract attached to this Call for Tender, and
- the tenderer's acceptance of the proposed contractual terms and conditions.

4.2.2. Volume 1 - Administrative Proposal

This section must provide the following information, set out in the standard identification form attached to these tender specifications:

- Tenderers' identification form (Annex I)
- Financial identification form (Annex II), and
- if applicable, power of attorney (joint offers) or letter of intent (subcontracting).

All tenderers must also provide:

- proof of **registration**, as prescribed in their country of establishment, on one of the **professional or trade registers**, or a declaration or certificate;
- two references of similar experience;
- a **declaration on their honour** (see model in Annex III), duly signed and dated, stating that they are not in one of the situations referred to above.

The SESAR Joint Undertaking reserves the right, however, to request additional evidence in relation to the bid submitted for evaluation or verification purposes within a time-limit stipulated in its request.

4.2.3. Volume 2 - Technical Proposal

4.2.3.1. General

The assessment of the technical quality will be based on the ability of the tenderer to meet the purpose of the contract as described in section 3.1 and potentially 3.2 above. To this end, the technical proposal shall contain the following information to allow evaluation of the tenders according to the award criteria mentioned in section 5.4 below.

4.2.3.2. Tenderer's understanding of the call for tender

The tender shall contain any comments on the terms of reference (see section 3 above) of importance for the successful execution of the contract, thus demonstrating the tenderer's degree of understanding of:

- the proposed draft contract,
- the objectives of the study, and
- the needs and requirements of the SJU.

The tenderer shall give in its Technical Proposal an opinion on the key issues related to the achievement of the contract objectives and expected results as well as an explanation of the risks and assumptions affecting the execution of the contract.

4.2.3.3. Expertise of the proposed project team

The tenderer shall provide:

- information on the relevant experience of the company(s) to be involved in the execution of the contract;
- CV's of key members of staff involved in the execution of the contract.

4.2.3.4. Organisation and management of the activities

The tenderer shall provide:

- a description of the proposed approach to the Contract so that the services outlined in section 3 above (terms of reference) are carried out as efficiently as possible in terms of cost, timescales and quality;
- a detailed description of the proposed team, detailing the role and responsibilities of each team member and how the contract will be managed in general;
- with regard to day-to-day contract management, the tenderer must show how it will be able to work closely with the responsible services of the SJU;
- a description of the proposed progress reporting and deliverable review planning;
- in the case of a tender being submitted by a consortium, a description of the input from each of the consortium members and the distribution and interaction of tasks and responsibilities between them;
- a description of sub-contracting arrangements foreseen, if any, with a clear indication of the tasks that will be entrusted to a sub-contractor¹.

¹ A statement by the tenderer guaranteeing the eligibility of any sub-contractor (in accordance with the in accordance with the principles listed in section 5.2 below) shall be included as well, in case the subcontractor/s are not known at the moment of the tender submission.



4.2.4. Volume 3 - Financial Proposal

4.2.4.1. General

All tenders must contain a separate financial proposal detailing the price of each task.

Prices must be quoted in EURO, including the countries which are not in the EURO-area. As far as the tenderers of those countries are concerned, they cannot change the amount of the bid because of the evolution of the exchange rate. The tenderers choose the exchange rate and assume all risks for opportunities relating to the rate fluctuation.

The price must be clearly indicated and broken-down per task. It shall be fixed and inclusive of all costs (e.g. project management, training of the SJU staff, etc.) and expenses (e.g. companies' management, secretariat, social security, salaries, etc.) directly or indirectly connected with the provision of the service.

All prices must be quoted exclusive of all taxes and dues:

- VAT
- No fee (profit) shall be allowed under this call for tender;
- The type of price is defined in the Draft Contract attached to this call (see Article III).

Please note that costs incurred in preparing and submitting tenders are borne by the tenderer and shall not be reimbursed.

5. ASSESSMENT AND AWARD OF THE CONTRACT

5.1. GENERAL

The assessment will be strictly based on the content of the received tenders and in the light of the criteria set out hereunder.

The assessment procedure will be carried out in three consecutive stages:

- Stage 1 – assessment in the light of exclusion criteria (see section 5.2 below),
- Stage 2 – assessment in the light of selection criteria (see section 5.3 below) and
- Stage 3 – assessment in the light of award criteria (see section 5.4 below).

The aim of each of these stages is:

- to check on the basis of the exclusion criteria, whether tenderers can take part in the tendering procedure;
- to check on the basis of the selection criteria, the technical and professional capacity and economic and financial capacity of each tenderer;
- to assess on the basis of the award criteria each bid which has passed the exclusion and selection stages.

5.2. STAGE 1 – ASSESSMENT IN THE LIGHT OF EXCLUSION CRITERIA

To be eligible for participating in this contract award procedure, tenderers must not be in any of the following exclusion grounds:

- (a) they are bankrupt or being wound up, are having their affairs administered by the courts, have entered into an arrangement with creditors, have suspended business activities, are the subject of proceedings concerning those matters, or are in any analogous situation arising from a similar procedure provided for in national legislation or regulations;
- (b) they have been convicted of an offence concerning their professional conduct by a judgement which has the force of *res judicata*;
- (c) they have been guilty of grave professional misconduct proven by any means which the contracting authority can justify;
- (d) they have not fulfilled obligations relating to the payment of social security contributions or the payment of taxes in accordance with the legal provisions of the country in which they are established or with those of the country of the contracting authority or those of the country where the contract is to be performed;

Nota Bene:

The tenderer to whom the contract is to be awarded shall provide, within 15 days following notification of award and preceding the signature of the contract, the following documentary proofs to confirm the declaration referred to above:

- For points a) and b) above a recent extract from the judicial record or, failing that, an equivalent document recently issued by a judicial or administrative authority in the country of origin or provenance showing that those requirements are satisfied.
- For point d) a recent certificate issued by the competent authority of the State concerned.

Where the document or certificate referred to above is not issued in the country concerned, it may be replaced by a sworn or, failing that, a solemn statement made by the interested party before a judicial or administrative authority, a notary or a qualified professional body in its country of origin or provenance.

5.3. STAGE 2 – ASSESSMENT IN THE LIGHT OF SELECTION CRITERIA

The tenderer must have the overall capabilities (legal, economic, financial, technical and professional) to perform the contract.

If one of the selection criteria listed below is not positive, the tender may not be further evaluated.

5.3.1. Legal capacity

Any tenderer is asked to prove that it is authorised to perform the contract under the national law as evidenced by inclusion in a trade or professional register, or a sworn declaration or certificate, membership of a specific organisation, express authorisation or entry in the VAT register.

The tenderer shall provide a dully filled in and signed **Legal Entity Form** (see Annex I) accompanied by the documents requested therein.

5.3.2. Economic and financial capacity

In order to prove its sufficient economic and financial capacity to perform the contract, the tenderer will be asked to present the following documentation:

- Evidence of professional risk indemnity insurance;
- Balance sheets (or extracts from balance sheets) for at least the last two years for which accounts have been closed;
- Statement of overall turnover and turnover concerning the services/supplies to be covered by the contract(s) during the last three financial years;
- If the tenderer relies on the capacity of other entities (e.g. partners in a joint offer or subcontractor(s)), a written undertaking on the part of those entities confirming that they will place the resources necessary for performance of the contract, at the tenderer's disposal.

If, for some exceptional reason which the SJU considers justified, the tenderer is unable to provide the references requested hereabove, the tenderer may prove its economic and financial capacity by any other means which the SJU considers appropriate.

5.3.3. Technical and professional capacity

Tenderers are required to prove that they have sufficient technical and professional capacity to perform the contract.

To that end, they are requested to present the following documentation:

- A detailed account of the main current activities of the tenderer,
- A brief presentation of the structure of the company and, where it is proposed to present a joint offer or subcontract part of the lots, the structure of the extended

- group, ideally by means of charts which clearly show the lots to be undertaken by each company;
- Evidence of the tenderer’s expertise and experience delivering similar services (e.g. list of main contracts achieved in the past three years, specifying the value, dates, recipients of the supplies and/or services of the type required in these tender specifications;
 - The declaration of absence of Conflict of Interest using the template attached in Annex IV.

5.4. STAGE 3 – ASSESSMENT IN THE LIGHT OF AWARD CRITERIA-EVALUATION IN TERMS OF QUALITY & PRICE

Only the offers meeting the requirements of the exclusion and selection criteria will be evaluated in terms of quality and price for the award of the contract. The evaluation in light of the award criteria and evaluation in terms of quality and price will be performed for each lot respectively.

The contract(s) will be awarded according to the specific criteria given below, on the basis of the **economically most advantageous offer of activity**.

5.4.1. Technical evaluation - Quality assessment

The quality of each technical offer covering the services will be evaluated in accordance with the award criteria and the associated weighting detailed in the table below:

N°	Award criteria	Weighting
1.	Understanding of SESAR and the SJU framework. Understanding of the ATM context with a special focus on exchanges between aircraft and ground (applicable to each Lot);	20
2.	Relevant experience and expertise of the proposed project team: <ul style="list-style-type: none"> • For Lot 1: Datalink requirements, Datalink technologies, capability to investigate additional added-value data-link technologies, • For Lot 2: Radio Frequency issues and system spectrum integration, • For Lot 3: Voice communication systems. 	40
3.	Understanding of the communication operational context: <ul style="list-style-type: none"> • For Lot 1: Datalink services operation, • For Lot 2: Spectrum evolution considering CNS and other services • For Lot 3: Operation of voice communication in the framework of ATM. 	40
Total number of points		100

For all tenderers, whether offering the full scope of the study (3 lots) or individual lots, the quality of the offer will be scored against the specific award criteria listed above for each lot, given the scope of the offer made.



5.4.2. Financial evaluation

Only tenders scoring 70 points or more of a maximum of points 100 against the technical award criteria will have their financial proposal evaluated.

5.4.3. Recommendation of award of the contract

5.4.3.1. Award of the contract

The Proposal Analysis Board then identifies the most economically advantageous offer by applying the following formula:

$$\text{Ratio quality/price for offer "Y"} = \text{lowest price} / \text{price of offer "Y"} \times \text{total quality score for offer "Y"}$$

ANNEX I - IDENTIFICATION OF THE TENDERER

(Each service provider, including subcontractor(s) or any member of a consortium or grouping, must complete and sign this identification form)

Call for tender SJU/0026-CFP

Identity	
Name of the tenderer	
Legal status of the tenderer	
Date of registration	
Country of registration	
Registration number	
VAT number	
Description of statutory social security cover (at the level of the Member State of origin) and non-statutory cover (supplementary professional indemnity insurance) ²	
Address	
Address of registered office of tenderer	
Where appropriate, administrative address of tenderer for the purposes of this invitation to tender	
Contact Person	
Surname: First name: Title (e.g. Dr, Mr, Ms) : Position (e.g. manager): Telephone number: Fax number: E-mail address:	
Legal Representatives	
Names and function of legal representatives and of other representatives of the tenderer who are authorised to sign contracts with third parties	
Declaration by an authorised representative of the organisation ³	
I, the undersigned, certify that the information given in this tender is correct and that the tender is valid.	
Surname: First name:	Signature:

² For natural persons

³ This person must be included in the list of legal representatives; otherwise the signature on the tender will be invalidated.



ANNEX II - FINANCIAL IDENTIFICATION

<u>ACCOUNT HOLDER</u>	
	POSTCODE
	VAT NUMBER

CONTACT		
TELEPHONE		FAX :
E - MAIL		

<u>BANK</u>		
BANK NAME		
BRANCH ADDRESS		
TOWN/CITY		POSTCODE
COUNTRY		
ACCOUNT N° NUMBER		
IBAN CODE		
BIC CODE		

<u>BANK STAMP + SIGNATURE of BANK REPRESENTATIVE</u> <u>(Both Obligatory)</u>

<u>DATE + SIGNATURE of ACCOUNT HOLDER :</u> <u>(Obligatory)</u>
DATE _____



ANNEX III- DECLARATION ON HONOUR

To be completed and signed by the tenderer (by each Consortium member, in case of Consortia)

The undersigned:

Name of the individual/company/ organisation:

Legal address:

Registration number/ID Card No.:

VAT number:

Declares on oath that the individual/company/organisation mentioned above is not in any of the situations mentioned below:

- a) they are bankrupt or being wound up, are having their affairs administered by the courts, have entered into an arrangement with creditors, have suspended business activities, are the subject of proceedings concerning those matters, or are in any analogous situation arising from a similar procedure provided for in national legislation or regulations;
- b) they have been convicted of an offence concerning their professional conduct by a judgement which has the force of *res judicata*;
- c) they have been guilty of grave professional misconduct proven by any means which the SJU can justify;
- d) they have not fulfilled obligations relating to the payment of social security contributions or the payment of taxes in accordance with the legal provisions of the country in which they are established or with those of the country of the contracting authority or those of the country where the contract is to be performed;

I the undersigned understand that contracts may not be awarded if during the procurement procedure the individual/company/organisation mentioned above:

- is subject to a conflict of interest;
- is guilty of misrepresentation in supplying the information required by the contracting authority as a condition of participation in the contract procedure or fail to supply this information;

Full name:

Date & Signature:



ANNEX IV- DECLARATION OF ABSENCE OF CONFLICT OF INTEREST

<Letterhead of the Tenderer>

I, the undersigned [name] acting as [title/position] representing [company /consortium], being the authorised signatory for the above-mentioned [company/consortium] for the tender SJU/LC/0026-CFP “Performance of a wireless communication study”, for⁴

- Lot 1 – Requirement, service and technology assessments
- Lot 2 - Appropriateness of L band for Ground based segment
- Lot 3 - Voice services evolution

I hereby solemnly declare that we are not in any situation which could give raise to a conflict of interest in what concerns the implementation of the contract and, in particular, I confirm that⁵:

- we did not perform any activity on previous studies (as described in section 3.2.1 of the SJU specifications attached to call for tender ref SJU/LC/0026-CFP) such as the development of the Communication Operating Concept and Requirements document (COCR) [Ref 1] and/or the participation in the joint FAA/EUROCONTROL initiative in the framework of the ICAO known as FCI (Future Communication Infrastructure) [Ref 2],
- we did not take part in work leading to the previous recommendation for a communication system operating in L band.

In the event of the contract being awarded to us, we commit ourselves to act with complete impartiality and in good faith in what concerns its performance and technical/operational/commercial outcome.

.....
Date and Signature

⁴ Please tick the correct answer.
⁵ Please tick the box corresponding to your situation.



ANNEX V - DRAFT SERVICE CONTRACT