



Request For Information (RFI)

**CSIR is requesting information from interested service providers, product suppliers, research organisations and technology developers on:
Radio Frequency Electronic Warfare (EW) payloads for unmanned airborne and spaceborne platforms**

RFI No. 7046/30/09/2026

Date of Issue	14 September 2026	
Enquiries	Strategic Procurement Unit	E-mail: tender@csir.co.za
	Please use RFI No and RFI Description as subject reference	
Last date for submission of enquiries/clarifications	28 September 2026 E-mail: tender@csir.co.za	
Electronical Submission	tender@csir.co.za (If tender submission exceeds 25MB multiple emails can be sent)	
CSIR business hours	08h00 – 16h30	
Category	Electronic Warfare	
Closing Date and Time	30 September 2026 @ 16h30	

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SECTION A – TECHNICAL INFORMATION

1 INTRODUCTION

The Council for Scientific and Industrial Research (CSIR) is one of the leading scientific research and technology development organisations in Africa. In partnership with national and international research and technology institutions, CSIR undertakes directed and multidisciplinary research and technology innovation that contributes to the improvement of the quality of life of South Africans. The CSIR's main site is in Pretoria while it is represented in other provinces of South Africa through regional offices.

Within the CSIR, the Defence and Security (D&S) Cluster fulfils the role of the Electronic Defence Evaluation and Research Institute (EDERI) for the Department of Defence (DoD). The EDERI mandate includes sustaining strategic technological capabilities for the DoD, acting as an independent engineering and scientific advisor, technology forecasting in terms of opportunities and threats as an input into South African National Defence Force (SANDF) strategic planning, and acquisition support including the translation of operational requirements into technical requirement statements.

In discharging this mandate, the CSIR supports the SANDF in being a smart user, a smart buyer and a smart decision maker with respect to defence technology. This RFI is issued in direct fulfilment of that role. It is an information-gathering exercise only: the CSIR is not acting as a prospective purchaser in issuing it. Respondents are referred to clause 2 and clause 18.

2 BACKGROUND

Unmanned aerial vehicles (UAVs) have moved rapidly from niche to mainstream military use, a trend underscored by the ongoing conflict between Russia and Ukraine. A parallel trend is evident in the proliferation of low earth orbit (LEO) satellites and the associated shift towards small, hosted and rideshare payloads. Both unmanned airborne and spaceborne platforms present an opportunity for the hosting of EW payloads at size, weight, power and cost (SWaP-C) points that were previously impractical.

The electromagnetic spectrum (EMS) is increasingly recognised as a military domain in its own right, and one that is increasingly contested, congested, constrained and shared. EW capability hosted on unmanned platforms is therefore of direct interest to the SANDF, both as an emerging capability and as an emerging threat.

Under its current research planning, the CSIR is conducting an investigation into EW payloads for unmanned airborne and spaceborne platforms. The objectives of the investigation are to:

- investigate EW payloads for unmanned airborne and spaceborne platforms;
- include sovereign technology considerations; and
- include work already undertaken by the CSIR and by South African (RSA) industry.

The CSIR holds existing capability in EW and related disciplines , which this RFI is intended to complement rather than duplicate. The purpose of this RFI is to supplement that internal CSIR landscape with an informed and current view of the wider RSA landscape.

2.1 Purpose of this RFI — no procurement will result

This RFI is issued purely for information gathering and technology landscaping purposes, in fulfilment of the CSIR's EDERI role described in clause 1. It is not a tender, a request for proposal, a request for quotation, or an invitation to bid, and it does not initiate or form part of any procurement process.

No commitment to procure, no shortlisting, no pre-qualification, no supplier database listing and no contract will result from this RFI or from any response to it. No selection criteria apply to this RFI. Responses will not be scored, ranked or evaluated for the purpose of selecting or preferring any supplier.

Responding to this RFI, or electing not to respond, will have no bearing whatsoever on any organisation's eligibility to participate in, or standing within, any future competitive process that the CSIR or any other organ of state may separately elect to run. Equally, no information submitted in response to this RFI will confer any advantage in any such future process.

Where the CSIR subsequently advises the DoD or the SANDF on this technology area, it does so on the basis of the landscape as a whole and without vested interest in any respondent.

3 INVITATION FOR REQUEST FOR INFORMATION

Information is hereby requested from suitably qualified service providers, product suppliers, research organisations, academic institutions and technology developers able to provide information on EW payloads for unmanned airborne and spaceborne platforms, as specified in this Request for Information (RFI) to the CSIR.

Respondents are not required to have a payload in production, in service, or at any particular level of maturity in order to respond. Information on experimental, developmental, laboratory and prototype payloads is expressly invited alongside information on mature and fielded systems. A response describing early-stage research with possible time lines and roadmaps is as useful to this investigation as one describing a qualified product.

Responses are invited from RSA-registered entities. Foreign-based organisations are welcome to respond and are requested to identify if any RSA-based partner, subsidiary, agent or representative through which the technology would be made available in South Africa.

Respondents may respond in respect of one capability or several. Where a respondent holds more than one distinct payload or capability, a separate capability response block should be completed for each, as set out in clause 4.6 and Annexure C.

Respondents are reminded that this RFI will not result in any contract, shortlist or supplier listing. See clause 2 and clause 18.

4 RFI SPECIFICATIONS (OVERVIEW OF REQUIREMENTS)

All expressions of interest are to be submitted in a format specified in this enquiry (as applicable). However, service providers are welcome to submit additional or alternative expression of interest over and above the originally specified format (e.g. other capabilities that you may be deemed to be relevant).

Clause 4.1 defines what the CSIR does and does not regard as an EW payload for the purposes of this RFI. Clauses 4.2 to 4.5 set out the functional and technical information requested. Clause 4.6 and Annexure C set out the response format.

4.1 Scope of this RFI

For the purposes of this RFI, an EW payload is a payload that exploits, attacks or protects against the use of the electromagnetic spectrum by others. A payload that performs active remote sensing in its own right is not an EW payload for the purposes of this RFI, irrespective of how sophisticated its signal processing may be.

The distinction matters, and is drawn deliberately. For example, a multifunction radar or a synthetic aperture radar being a sensor that radiates in order to observe its own reflections is out of scope. On the other hand, a radar warning receiver, a radar electronic support measures system or a radar jammer acts upon the emissions of others is in scope. Respondents are asked to apply this test rather than to assume that any particular product category is included or excluded.

The scope is summarised in Table 1.

Table 1: Scope of this RFI by domain

Domain	In scope	Out of scope
Radar	EW against radar emitters: radar warning receivers (RWR); radar electronic support measures (R-ESM); radar ELINT; radar electronic attack, both denial and deception; radar-directed electronic protection techniques. Passive emitter tracking (PET). Passive radar / passive coherent location (PCL).	Radar systems as sensing payloads in their own right, including multifunction radar (MFR), synthetic aperture radar (SAR) and other imaging radar, and radar altimeters.

Domain	In scope	Out of scope
Communications	Communications intelligence (COMINT); direction finding and geolocation of communications emitters; denial and deception jamming of communications links, including UAV command-and-control and video downlinks; anti-jam, low probability of intercept / low probability of detection (LPI/LPD) and resilient waveform techniques as electronic protection.	Satellite communications (satcom) links and satcom terminals.
Positioning, Navigation and Timing (PNT)	Detection, characterisation, geolocation and electronic attack of GNSS interference and spoofing; denial jamming; spoofing and meaconing; anti-jam and anti-spoof techniques; resilient and alternative PNT as electronic protection.	—
Identification and cooperative surveillance broadcast	Passive reception and exploitation of cooperative broadcast traffic; false track and false identity injection; denial of the broadcast channel; broadcast authentication and spoof resilience. Examples include ADS-B (aviation), VDES and AIS including VDE-SAT (maritime), and IFF.	—
Radio frequency effectors	RF decoys, RCS augmentation, including expendable, towed and air-launched decoys, and configurations in which the unmanned platform itself acts as the decoy. High power microwave (HPM).	—
Electro-optical and infrared (EO/IR)	—	The EO/IR domain in its entirety, including directed infrared countermeasures (DIRCM), infrared countermeasures (IRCM), missile approach and laser warning receivers, high energy lasers (HEL) and free-space optical links.

4.2 Functional Requirements — EW function

Respondents are asked to classify each capability against the three established sub-divisions of EW. Electronic attack is separated into denial and deception, where inducing a false position, time or track is a materially different effect from suppressing a signal.

Table 2: EW functions for the purposes of this RFI

Function	Description	Illustrative techniques
Electronic Support (ES)	Actions to search for, intercept, identify, characterise and geolocate sources of radiated electromagnetic energy, for the purposes of immediate threat recognition, situational awareness, targeting or planning. Includes ELINT and COMINT functions where performed by the payload.	Wideband search and intercept; parameter estimation; emitter classification and identification; direction finding; single-platform and multi-platform geolocation (AoA, TDOA, FDOA).
Electronic Attack – Denial (EA-D)	Use of electromagnetic energy to degrade, disrupt or prevent an adversary's effective use of the spectrum.	Spot, barrage, swept, gated and reactive noise jamming; power-managed and precision jamming; channel denial.
Electronic Attack – Deception (EA-X)	Use of electromagnetic energy to induce a false or misleading picture in an adversary system or operator, as distinct from denying it information.	False targets and false tracks; range and velocity gate pull-off/pull-in; GNSS spoofing and meaconing; false identity or position injection into cooperative broadcasts; protocol-level deception; decoys.
Electronic Protection (EP)	Actions taken to protect friendly use of the spectrum against adversary or friendly electronic attack, and to reduce own susceptibility and signature.	Anti-jam and anti-spoof receiver techniques; LPI/LPD waveforms; frequency agility and spread spectrum; controlled reception pattern antennas; emission control; signature management.

4.3 Technical Requirements — information requested per capability

For each capability declared, respondents are asked to address the following to the extent that the information is unclassified, releasable and not subject to export control restriction. Respondents should state clearly where information cannot be provided for any of those reasons rather than omitting the item silently.

Platform and hosting.

- Airborne: intended UAV class or classes, maximum take-off mass, endurance and altitude band; whether the payload is internally integrated, podded or externally mounted.
- Spaceborne: whether offered as a hosted payload or on a dedicated bus; intended orbit regime; form factor (for example CubeSat unit count or small-satellite class), associated antennas, radiation hardening, and qualification.
- SWaP-C envelope: mass, volume, prime power, thermal dissipation and cooling approach, and indicative unit cost band.

Radio frequency performance.

- Frequency coverage, frequency extensions, antennas and instantaneous bandwidth.

- For ES: sensitivity, dynamic range, probability of intercept, direction finding and geolocation mechanism/accuracy, and handling of dense, overlapping and low probability of intercept signal environments.
- For EA: offense/defensive EA, effective isotropic radiated power, technique repertoire, response latency, and simultaneous transmit and receive or look-through approach.
- For EP: jamming and spoofing mitigation performance, and the conditions under which it was measured.
- Antenna approach, including polarisation and any electronically scanned array.

Architecture and enabling technology.

- Receiver and transmitter architecture, including whether direct RF sampling is used and on what device family.
- Digital processing approach: FPGA, system on chip, GPU, heterogeneous processing; DRFM where applicable.
- Use of artificial intelligence or machine learning, and where in the processing chain it is applied.
- Degree of autonomy: whether the payload requires an operator in the loop, operates autonomously, or operates under mission-level tasking. This is of particular relevance to unmanned platforms with constrained or contested data links.

Processing and algorithm maturity.

Respondents are asked to indicate maturity across the processing chain relevant to their capability, and to identify which steps are performed on board the platform and which require ground or off-board processing:

- signal detection and channelisation;
- signal parameter estimation;
- signal sorting, separation and deinterleaving;
- emitter parameter estimation;
- emitter classification and identification;
- threat or situation assessment;
- technique or response decision making;
- technique or waveform generation; and
- assessment of effectiveness.

Integration, support and qualification.

- Mechanical, electrical, data, timing and tasking interfaces, and any standards complied with.
- Mission data and library generation, update and reprogramming approach, including who is able to perform updates and on what timescale.

- Mission planning and post-mission analysis provisions.
- Environmental and airworthiness qualification status; for spaceborne payloads, radiation tolerance and space qualification status. (MIL-810 and or RTCA-DO-160, MIL-STD-461)
- Test and evaluation evidence available, including any measured range, flight or on-orbit results.
- Spectrum, regulatory (ICASA), safety and range-clearance considerations.

4.4 Technology Readiness Level

Respondents are asked to declare a Technology Readiness Level (TRL) for each capability, using the nine-level definitions in Annexure A, together with a brief statement of the evidence that substantiates the level claimed, for example the test, demonstration, trial or flight that was conducted, and in what environment.

A declared TRL without supporting evidence is of limited value to this investigation. The CSIR is equally interested in low TRL work: a TRL 3 capability with a clear description of what has been demonstrated is more useful than an unsubstantiated claim of TRL 8.

4.5 Sovereignty classification

Sovereign technology considerations are an explicit objective of this investigation. Respondents are asked to classify each capability against the four-tier scheme in Annexure B, and to substantiate the tier claimed against at least two of the five evidence axes set out in that annexure.

The CSIR notes that a self-declared tier, unsupported, is not testable. The evidence axes are therefore the substance of this question rather than an optional addition to it. In the EW domain in particular, the ability to independently modify threat libraries, algorithms and techniques without recourse to a foreign original equipment manufacturer is itself a sovereignty question, and one that is distinct from where the hardware was manufactured.

This information is requested solely to inform the CSIR's understanding of the sovereign technology landscape in support of its EDERI role. It will not be used to shortlist, rank, score, prefer or select any respondent for any current or future contract. Respondents must not disclose information they are not lawfully entitled to disclose, and are referred to clause 15 (Confidentiality, Proprietary Information and Export Control).

4.6 Response format

So that responses can be read against one another, respondents are asked to use the structured pro forma in Annexure C, which comprises:

- Part 1: respondent particulars, completed once;
- Part 2: a capability response block, completed once for each distinct payload or capability offered for information;
- Part 3: optional general observations on the RSA landscape, sovereignty and technology trends in this area; and
- Part 4: additional information, in free format and of unrestricted scope.

The structured parts exist for comparability and are not intended to constrain what a respondent may say. Part 4 is deliberately open: respondents should use it for anything relevant that the pro forma does not accommodate, including alternative capability framings, adjacent capability the CSIR has not asked about, views on where the technology is heading, or commentary on the scope of this RFI itself.

Respondents are asked to keep the technical description within each capability block to approximately half a page, with supporting detail attached separately and cross-referenced. There is no page limit on Part 4.

SECTION B – TERMS AND CONDITIONS

5 SUBMISSION OF INFORMATION

- 5.1 All information/proposals are to be submitted electronically to tender@csir.co.za. No late proposals will be accepted.
- 5.2 All proposals will only be considered if received by the CSIR before the closing date and time (***as indicated on the cover page***). The CSIR business hours are between **08h00** and **16h30**.
- 5.3 All proposal submissions are to be clearly subject-referenced with the **RFI number and RFI Description**.
- 5.4 Proposals submitted must be signed by a person or persons duly authorised.
- 5.5 Proposals submitted at incorrect location and/or address, will not be accepted for considerations and where practicable, will be returned unopened to the Bidder(s).
- 5.6 Proposals received after the closing date and time, at the address indicated in the bid documents, will not be accepted for consideration and where practicable, will be returned unopened to the Bidder(s).
- 5.7 All dates and times in this bid are South African standard time.
- 5.8 Any time or date in this bid is subject to change at the CSIR's discretion. The establishment of a time or date in this bid does not create an obligation on the part of the CSIR to take any action or create any right in any way for any bidder to demand that any action be taken on the date established. The bidder accepts that, if the CSIR extends the deadline for bid submission (the Closing Date) for any reason, the requirements of this bid otherwise apply equally to the extended deadline.
- 5.9 Documents submitted via cloud solutions such as: WeTransfer, Google Drive, Dropbox, etc. will not be considered.
- 5.10 The naming / labelling syntax of files or documents must be short and simple.

6 VALIDITY PERIOD OF RESPONSES

Each **information/proposal** shall be valid for a period of three (3) months calculated from the closing date.

7 ENQUIRIES AND CONTACT WITH THE CSIR

- 7.1 Any enquiry regarding this RFI shall be submitted in writing to CSIR to the email and format outlined in the table on cover page of this RFI document.
- 7.2 Any other contact with CSIR personnel involved in this tender is not permitted during the RFI process other than as required through existing service arrangements or as requested by the CSIR as part of the RFI process.

8 MEDIUM OF COMMUNICATION

All documentation submitted in response to this Expression of Interest must be in English.

9 COST OF EXPRESSION OF INTEREST

Service providers are expected to fully acquaint themselves with the conditions, requirements and specifications of this RFI before submitting responses. Each service provider assumes all risks for resource commitment and expenses, direct or indirect, of RFI preparation and participation throughout the RFI process. The CSIR is not responsible directly or indirectly for any costs incurred by service providers.

10 CORRECTNESS OF RESPONSES

- 10.1 The service provider must confirm satisfaction regarding the correctness and validity of their RFI.

11 VERIFICATION OF DOCUMENTS

- 11.1 Service providers should check the numbers of the pages to satisfy themselves that none are missing or duplicated. No liability will be accepted by the CSIR in regard to anything arising from the fact that pages are missing or duplicated.

12 ENGAGEMENT OF CONSULTANTS

All potential service providers need to note that consultants will only be remunerated at the rates:

- 12.1 Determined in the "Guideline for fees", issued by the South African Institute of Chartered Accountants (SAICA); or
- 12.2 Set out in the "Guide on Hourly Fee Rates for Consultants", by the Department of Public Service and Administration (DPSA); or
- 12.3 Prescribed by the body - regulating the profession of the consultant.

13 TRAVEL EXPENSES

All potential service providers need to note that travel expenses will be managed as followed should they need to travel on behalf of the CSIR in future:

- 13.1 All travel expenses for the CSIR's account, be it directly via the CSIR's travel agent or indirectly via re-imbursements, must be in line with the CSIR's travel policy. The following will apply:
 - 13.1.1 Only economy class tickets will be used.
 - 13.1.2 A maximum of R1400 per night for accommodation, dinner, breakfast and parking will be allowed.
 - 13.1.3 No car rentals of more than a Group B will be accommodated.

14 ADDITIONAL TERMS AND CONDITIONS

- 14.1 Service providers shall not assume that information and/or documents supplied to CSIR, at any time prior to this request, are still available to CSIR, and shall consequently not make any reference to such information document in its response to this request.
- 14.2 Copies of any affiliations, memberships and/or accreditations that support your submission must be included in the response.
- 14.3 An omission to disclose material information, a factual inaccuracy, and/or a misrepresentation of fact may result in the disqualification of a response, or cancellation of any subsequent contract.
- 14.4 Failure to comply with any of the terms and conditions as set out in this document will invalidate the response.

15 CONFIDENTIALITY, PROPRIETARY INFORMATION AND EXPORT CONTROL

- 15.1 Respondents should submit unclassified, releasable information only. Classified information must not be submitted in response to this RFI under any circumstances.
- 15.2 Respondents are responsible for ensuring that any information they disclose may lawfully be disclosed by them. This includes obligations arising under the National Conventional Arms Control Act, the Non-Proliferation of Weapons of Mass Destruction Act, and any foreign export control regime to which the respondent or the technology is subject, including but not limited to the United States International Traffic in Arms Regulations (ITAR) and Export Administration Regulations (EAR), and the Wassenaar Arrangement.
- 15.3 Controlled technical data must not be included in a response unless the respondent holds the necessary authorisations to disclose it to the CSIR for the purposes described in clause 2.
- 15.4 Where a respondent is unable to answer any part of this RFI because the information is classified, export controlled or otherwise restricted, the respondent is asked to state that this is the case, without disclosing the restricted detail. Such a statement is a useful and complete answer for the purposes of this RFI. Where appropriate, the CSIR may thereafter arrange a separate engagement through the correct channel.
- 15.5 Respondents should clearly mark any information they consider proprietary or commercially confidential. Information so marked will be used by the CSIR only for the internal research, analysis and advisory purposes described in clause 2, and will not be disclosed to third parties save where the CSIR is obliged to do so in law, including under the Promotion of Access to Information Act, 2000.
- 15.6 Respondents should not submit information that is so commercially sensitive that its disclosure to the CSIR would be prejudicial to them. This RFI is a landscaping exercise; a response at the level of capability, maturity and provenance is sufficient, and detailed design disclosure is neither required nor requested.

16 CSIR RESERVES THE RIGHT TO

- 16.1 Extend the closing date;
- 16.2 Verify any information contained in a response;
- 16.3 Request documentary proof regarding any tendering issue;
- 16.4 Cancel or withdraw this RFI as a whole or in part; and

- 16.5 Not to include any supplier on the list of suppliers on the approved database based on functional criteria not met.

17 PERSONAL INFORMATION

- 17.1 Each Party consents to the other Party holding and processing “personal information” (as defined in the POPI Act) relating to it for legal, personnel, administrative and management purposes (including, if applicable, any “special personal information” relating to him/her, as defined in the POPI Act). Notwithstanding the generality of the aforesaid, each Party hereby undertakes to comply with all relevant provisions of the POPI Act and any other applicable data protection laws. The bidder further agrees to comply with all CSIR’s reasonable internal governance requirements pertaining to data protection.
- 17.2 Each Party consents to the other Party making such information available to those who provide products or services to such parties (such as advisers, regulatory authorities, governmental or quasi-governmental organisations and potential purchasers of such Party or any part of their business).
- 17.3 While performing any activity where a Party is handling personal information as a “responsible party” (as defined in the POPI Act), each Party undertakes that it will process the personal information strictly in accordance with the terms of the POPI Act, this Contract, and the other Party’s instructions from time to time, and take appropriate operational measures to safeguard the data against any unauthorised access.
- 17.4 Each Party acknowledges that in the course of conducting business with each other, each Party intends to maintain and process personal information about the other Party in an internal database. By signing this Contract, each Party consents to the maintenance and processing of such personal information.

Where relevant, the bidder shall procure that all of its personnel, agents, representatives, contractors, sub-contractors and mandataries shall comply with the provisions of this clause 30 (Personal Information). The CSIR shall be entitled on reasonable notice to conduct an inspection or audit bidders compliance with the requisite POPI Act safeguards.

18 DISCLAIMER

This RFI is an expression of interest only and not an offer document; answers to it must not be construed as acceptance of an offer or imply the existence of a contract between the parties. By submission of its RFI, service providers shall be deemed to have satisfied themselves with and to have accepted all Terms & Conditions of this RFI. The CSIR makes no representation,

warranty, assurance, guarantee or endorsements to service provider concerning the RFI, whether with regard to its accuracy, completeness or otherwise and the CSIR shall have no liability towards the service provider or any other party in connection therewith.

For the avoidance of doubt, and as set out in clause 2: this RFI is issued by the CSIR in fulfilment of its EDERI role as an independent technical advisor to the Department of Defence. It is not a procurement action. No contract, order, shortlist, pre-qualification, supplier listing or commitment of any kind will arise from this RFI or from any response to it, and no respondent will acquire any right, expectation or preference in respect of any future process by virtue of having responded.

19 ANNEXURE A — TECHNOLOGY READINESS LEVEL (TRL) DEFINITIONS

Respondents are asked to declare a TRL for each capability using the definitions below, and to state briefly what evidence substantiates the level claimed. These definitions follow the widely used nine-level scale. Where a respondent applies a different TRL framework, the framework used should be identified.

Table A1: Technology Readiness Levels

TRL	Definition
1	Basic principles observed and reported.
2	Technology concept and/or application formulated.
3	Analytical and experimental proof of concept demonstrated.
4	Component and/or subsystem validated in a laboratory environment.
5	Component and/or subsystem validated in a relevant environment.
6	System or subsystem model or prototype demonstrated in a relevant environment.
7	System prototype demonstrated in an operational environment.
8	Actual system completed and qualified through test and demonstration.
9	Actual system proven in an operational environment (for example flight proven, or proven on orbit).

20 ANNEXURE B — SOVEREIGNTY CLASSIFICATION AND EVIDENCE

Respondents are asked to declare, for each capability, the tier in Table B1 that best describes it, and to substantiate that declaration against at least two of the five evidence axes in Table B2.

Where a capability does not fall cleanly into one tier, respondents should select the closest tier and explain the deviation. Where different sub-elements of a single capability sit at different tiers, this should be stated — that is itself a useful and realistic answer.

Table B1: Sovereignty tiers

Tier	Description	Characterisation
Tier 1 Resale	Foreign-developed technology resold or distributed by an RSA entity under an agency, reseller or distribution arrangement.	No local intellectual property, no local modification rights and no local production. The RSA entity adds distribution, contracting and logistics value.

Tier 2 Foreign core, local addition	Foreign technology with RSA-based additions, such as local integration, local software or interface development, or a locally provided test and support layer around a foreign core.	Core intellectual property remains foreign owned and controlled. Local value-add is real but peripheral to the core capability.
Tier 3 Local IP, foreign components	Locally developed technology with RSA-owned architecture and intellectual property, built using foreign-sourced sub-components (for example RF front-ends, FPGAs, data converters, RF system-on-chip devices).	Local design authority and IP ownership. Dependency sits at the component and supply-chain level rather than the design level.
Tier 4 Fully sovereign	Locally developed technology, RSA-owned intellectual property, locally manufactured including critical components.	No material foreign encumbrance. Full local design, production and sustainment authority.

A tier declaration on its own is not testable. Respondents are therefore asked to substantiate the tier claimed against at least two of the following axes.

Table B2: Sovereignty evidence axes

Axis	What the CSIR is asking
1. Intellectual property and algorithm access	Does the respondent hold rights to, and working access to, the source code and algorithms; or is the processing chain (signal sorting, emitter classification, technique selection, decision logic) a foreign black box? Can threat libraries, techniques and mission data be independently created and updated without recourse to a foreign OEM?
2. Export control status	Is the technology encumbered by ITAR, EAR, Wassenaar Arrangement or other controls that would require third-country authorisation to acquire, use, modify, integrate, re-export or resupply? State the regime and the practical effect, not merely whether controls exist.
3. Local production content	Approximate percentage by value of locally manufactured versus imported content, together with the criticality of the imported elements. A locally manufactured enclosure around an imported RF front-end is a materially different claim from the reverse.
4. Sustainment independence	Can the capability be maintained, repaired, recalibrated and upgraded in South Africa without foreign OEM sign-off, foreign-held test equipment, or foreign-held calibration or programming tools?
5. Security of supply	Exposure to sanction, export prohibition, single-source dependency or extended lead times on critical components, and any mitigation in place. Respondents may cite known lead-time risk on advanced RF and data-converter device families.

The CSIR reiterates that this information is requested for landscape understanding only, in support of its EDERI advisory role, and will not be used to shortlist, score, rank or select any respondent. Respondents are referred to clause 15.

21 ANNEXURE C — RESPONSE PRO FORMA

Respondents are asked to complete Part 1 once, Part 2 once per distinct capability, and Part 3 and Part 4 at their discretion. The pro forma may be reproduced electronically; respondents need not use this document as a form.

PART 1 — RESPONDENT PARTICULARS (complete once)*Table C1: Respondent particulars*

Item	Response
Organisation name	
Country of registration and registration number	
RSA-based partner, subsidiary, agent or representative (if the respondent is foreign-based)	
Organisation type (industry / SMME / research organisation / academic institution / other)	
Physical address	
Contact person, designation, telephone and e-mail	
Approximate number of technical staff working in this field	
Existing or prior collaboration with the CSIR in this or an adjacent field (if any)	
Number of capability blocks submitted (Part 2)	

PART 2 — CAPABILITY BLOCK (complete once per distinct payload or capability)

Copy this block as many times as required. Where a field is not applicable, mark it "N/A". Where a field cannot be answered for classification or export control reasons, mark it "restricted" rather than leaving it blank — see clause 15.4.

Table C2: Capability block — reproduce once per capability

Field	Response
C2.1 Capability / payload designation	
C2.2 Domain(s) — select all that apply: Radar EW Communications PNT Identification / cooperative broadcast RF effector	
C2.3 Function(s) — select all that apply (see Table 2): ES EA-Denial EA-Deception EP	
C2.4 Platform — airborne (state UAV class, MTOW, endurance) and/or spaceborne (state hosted payload or dedicated bus, orbit regime, form factor)	
C2.5 SWaP-C — mass, volume, prime power, thermal dissipation, indicative unit cost band	
C2.6 Frequency coverage and instantaneous bandwidth	
C2.7 Key performance parameters (as applicable per clause 4.3)	
C2.8 Architecture and enabling technology (direct RF sampling, processing devices, DRFM, antenna approach, AI/ML use, degree of autonomy)	
C2.9 Processing chain — which steps are implemented, and which are performed on board versus off board (per clause 4.3)	
C2.10 Interfaces, mission data / library update approach, mission planning and post-mission analysis	
C2.11 Qualification status (environmental, airworthiness; radiation tolerance and space qualification for spaceborne payloads)	

C2.12 TRL declared (1–9, per Annexure A)	
C2.13 TRL evidence — what test, demonstration, trial, flight or on-orbit activity substantiates the declared level, and in what environment	
C2.14 Sovereignty tier declared (1–4, per Table B1)	
C2.15 Sovereignty evidence — substantiation against at least two axes from Table B2 (state which axes are addressed)	
C2.16 Technical description (approximately half a page; attach and cross-reference supporting material if required)	
C2.17 Any restrictions on further discussion of this capability, and the channel through which such discussion would need to take place	

PART 3 — GENERAL OBSERVATIONS (optional)

Respondents are invited, but not required, to comment on any of the following. Responses to this part are of particular value to the CSIR's advisory role and need not relate to the respondent's own products.

- the current state of RSA capability in EW payloads for unmanned airborne and spaceborne platforms, including gaps;
- practical barriers to developing or sustaining sovereign capability in this area;
- component and supply-chain dependencies that materially constrain RSA industry;
- where the respondent expects this technology area to move over the next five to ten years;
- skills, infrastructure or test and evaluation facility constraints; and
- opportunities for collaboration between the CSIR, RSA industry and academia in this field.

PART 4 — ADDITIONAL INFORMATION (free format, no page limit)

Respondents may use this part for anything relevant that the structured parts above do not accommodate. This includes alternative ways of framing the capability, adjacent capability the CSIR has not asked about, technology or product literature, published papers, and commentary on the scope or framing of this RFI itself.

The CSIR would specifically welcome being told where it has framed this enquiry poorly, or where a significant capability area has been wrongly excluded by the scope in Table 1.