

# REQUEST FOR INFORMATION



The purpose of this **Request for Information (RFI)** is to identify possible suppliers with the specialized core capabilities, that will be able to supply the required services or products to Denel Guided Weapons as indicated in this RFI.

Denel Guided Weapons, a division of Denel SOC Ltd, an innovative leader in advanced systems technology. Our core business includes tactical missiles, precision guided weapons, unmanned aerial vehicle systems. Our products are designed, developed and manufactured in South Africa. Denel Guided Weapons is a strategic partner of the South African National Defence Force.

RFI Reference Number	EO-SAT1-20240912/1
Denel Guided Weapons, a division of Denel SOC Ltd	<b>Address:</b> Nelmapius Drive, Centurion, Pretoria <b>Websites:</b> <a href="http://www.deneldynamics.co.za">www.deneldynamics.co.za</a> / <a href="http://www.denel.co.za">www.denel.co.za</a>
Description of RFI:	Locally design, manufacture, test and commission a flight model satellite with similar specifications defined in Annexure F.
Issue date of RFI:	12 September 2024
RFI supporting documents (If applicable):	EO-SAT1 Specifications (See Annexure F)
Clarification questions:	Open until 20 September 2024
RFI closing date and time:	27 September 2024 @ 12H00
<i>Suppliers should ensure that information is delivered timeously and to the correct email address (reflected on the cover page of this RFI document). If the information is late, it will not be considered for evaluation.</i>	
RFI evaluation completion date:	11 October 2024
<i>Denel Guided Weapons may seek clarification from and enter into discussions with any or all of the Suppliers in relation to their RFI information provided. Denel Guided Weapons may use the information obtained when clarification is sought or discussions are held in interpreting the RFI information and evaluating the cost and risk of accepting the RFI information. Failure to supply clarification to the satisfaction of Denel Guided Weapons may render the RFI information liable to disqualification.</i>	
RFI delivery e-mail address:	procadmin@denel.co.za
RFI enquiry email address:	
ALL RFI RESPONSES MUST BE COMPLETED USING THE ENGLISH LANGUAGE	

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## SECTION 1: DEFINITIONS

1.1	SOC	State Owned Company, as defined by the Companies Act;
1.2	Compulsory documents	List of compulsory schedules and documents set out in annexure C;
1.3	SARS	South African Revenue Service;
1.4	RFI	Request for information.
1.5	MC	Major Component of a Satellite
1.6	ADCS	Attitude Determination and Control System
1.7	C&DH	Command and Data Handling
1.8	COMMS	Communications System
1.9	AIT	Assembly, Integration & Testing
1.10	FDR	Flight Design Review
1.11	FMR	Flight Model Review
1.12	LEOP	Launch and Early Operations

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## SECTION 2: OVERVIEW OF REQUIREMENT

Denel Guided Weapons is a supplier of Conventional Missile Systems, Unmanned Aerial Vehicles, satellite systems and defence related solutions.

The purpose of this RFI document is to identify suppliers that:

- a. Possess the relevant knowledge and previous experience to design, manufacturing, assembly, integration, testing, training and mission operations of satellite.
- b. Can provide services in alignment with satellite production phases such as assembly, integration, training and mission control experience.
- c. Can ensure that the Satellite System Engineering processes are completed during the requisite satellite production phases.
- d. Can locally manufacture a flight ready Satellite with a locally sourced Satellite Mechanical Structure, Bus Framework, Major Components (MCs) and satellite service vendors with no additional development work as close as possible to the specifications contained in Annexure F.
- e. Will be able to train a minimum of 30 previously disadvantaged persons as per the training requirement contained in Section 5.3.
- f. Can complete the manufacture and commissioning of the Flight Model Satellite in collaboration with Denel and local partners within the delivery date as contracted (Maximum 24 months from the start of the contract).
- g. Can deliver the requisite mission control software, management, maintenance and commissioning of the satellite throughout its life cycle.
- h. Can provide the satellite data pack, requisite manuals and all test documentation as required during the various phases of the satellite program.
- i. Can provide the required data for creating the software driver for interfacing the Denel's Mission Control Software.

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## SECTION 3: INFORMATION REQUESTED

As outputs to the RFI, the Supplier(s) shall provide the following:

1. Technical satellite system specification of the proposed flight model satellite and directly related ground segment aspects, detailing it's functional and physical architecture, mechanical structure and major components.
2. Design satellite and its major components with indication of the lifespan impacting constraints and drivers of each.
3. A project lifecycle schedule and key risk indicator (KRI) for the production of the FM Satellite in accordance with program priorities similar to Table 3.1 below:

Item no.	Description	Timeline (in Months)
1	<b>SATELLITE FLIGHT MODEL DELIVERY AND COMMISSIONING:</b>	
1.1	Satellite Flight Model Project Overview Review – SFMPOR	
1.2	Flight Model Detail Design – FDR	
1.3	Fabrication, Qualification – FMR	
1.4	Assembly, Integration & Testing – FAR	
1.5	Human Capital Development (HCD)	
1.6	Launch And Early Operations (LEOP) which includes:	
1.6-1	Launch Campaign – FRR	
1.6-2	Commissioning – ORR	
1.6-3	Early Operations - PLAR	

**Table 3.1: Satellite Flight Model Project Lifecycle**

4. A list of all Major Components (MC's) that will be provided by the supplier. The Supplier shall state if the MC's are tested flight ready models (Y/N) and has flight heritage (Y/N).
5. The Supplier shall disclose manufacturing origin of all the MC's within the Satellite as defined in Table 3.2.

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ITEM	MC	Description	Flight Model (Y/N)	Flight Heritage	Local/Foreign Manufacturer	Country of Origin
1	ADCS	Attitude Determination & Control System				
1.1	STARCAM	Star Camera				
1.2	FSS	Fine Sun Sensor				
1.3	MAGN	Magnetometer				
1.4	MTC	Magnetic Torque Coils				
1.5	RW	Reaction Wheels				
2	C&DH	Command and Data Handling				
2.1	OBC	On-Board Computer & Bus Structure				
2.2	OBS	On-Board Storage Unit				
2.3	GPS	Global Positioning System				
3	POWER	Power System Unit				
3.1	BAT	Satellite Batteries				
3.2	SOLAR	Solar Panels				
3.3	PCU	Power Conditioning Unit				
4	COMMS	Communications System Unit				
4.1	CTS	Command Transceiver (S-Bands)				
4.2	DTX	Data Transmitter (X-Band)				
5	PROPULSION	Propulsion device				
6	HI-RES PAYLOAD	Hi-Resolution Payload				
7	DE-ORBIT DEVICE	De-orbit device				
8	MECH-STRUCTURE	Satellite Primary Structure				
9	OPTICAL-PAYLOAD	Optics for Hi-Res Payload				

**Table 3.2: Flight Model Satellite Major Components**

## Notes:

1. MCs in Table 3.2 shall collectively adhere as closed as possible to the specifications defined in Appendix F. The Supplier shall provide the specification of the MCs they supply.
2. Where applicable, should the supplier change the specifications of the overall Satellite, each MC specifications are required to be documented and provided.
3. Suppliers that only supplies certain MCs shall be checked/validated for systems interface compatibility with the primary structure and satellite bus framework.
4. Flight Model Ready MCs (As-Built) – The MCs are required to be configured Flight Models and standard COTS products. No additional development work is required.

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## SECTION 4: RESPONSE EXPECTATIONS

Please supply the following information regarding your companies' resource, facility and capabilities related to the supplied Flight Model Satellite. Mark the applicable box with a "Y" or "N".

No	Capability Requirement	Indicate your companies' capability
<b>1</b>	<b>Engineering</b>	<b>Yes / No</b>
1.1	Manufacturer can supply the Satellite Bus and locally integrate MCs and test the Satellite.	
1.2	Manufacturer can supply the MC(s) and integrate them in the Satellite.	
1.3	The Satellite's Major Components can be sourced locally as far as practically possible.	
1.4	Supplier has the requisite manpower to build and commission the satellite.	
1.5	Include the Certificate of Conformance (CoC) and Test Results for each Major Component (MC).	
1.6	Provide the Satellite Data Packs and User Manuals for the built satellite.	
1.7	Provide the Satellite Mission Control Software (Windows 10/11 or Linux based) to perform diagnostics, control the satellite, setup payload image acquisition at specific locations, store acquisitioned images on the Satellite storage unit and download the payload image data.	
1.8	Provide the required data pack to enable Denel to create a software driver for interfacing the supplied satellite control and data acquisition with its internal Mission Control Software (MCS).	

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<b>2</b>	<b>Experience</b>	<b>Yes / No</b>
2.1	Previously launched and commissioned the proposed satellite bus framework and its Major Components.	
2.2	Previously launched and commissioned Satellite Major Components.	
2.3	Supplier has experience in Satellite Manufacturing Services such as Integration, Testing and/or commissioning.	
2.4	Supplier has experience in building and testing satellite major components locally.	
<b>3</b>	<b>Manufacturing: Equipment and Facilities</b>	<b>In-house (Y/N)</b>
3.1	Supplier has facilities to build and calibrate Satellite Major Components.	
3.2	Supplier has facilities to test and integrate the flight model satellite.	
3.3	Supplier has the requisite calibrated instruments to test the flight model satellite and the sub-systems.	
<b>4</b>	<b>Local Industry Participation</b>	<b>Local Participation (Y/N)</b>
4.1	Supplier can align with the local Industry Development Directive using MCs or local industry expertise/services in the Satellite Manufacturing Process.	
<b>5</b>	<b>Human Resource Development</b>	<b>Y/N</b>
5.1	Supplier can align with the Human Capital Training Program as defined in the Table 5.3.	
<b>6</b>	<b>Processes</b>	<b>In-house (Y/N)</b>
6.1	Configuration Management implemented.	
6.2	Satellite Major Component Build history record keeping.	
6.3	Quality Management Certification.	
<b>7. References:</b>		
Complete Annexure B and supply info of at least 3 references.		

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## SECTION 5: RFI CLARIFICATION

- 5.1 The Supplier's shall provide the specification of the Satellite Bus Framework and MC's they can manufacture and integrate locally. Should any of the parameters differs from the specification detailed in Annexure F, the supplier is required to list the differences in a comparative table.
- 5.2 The Supplier(s) shall consider the following project objectives and goals and complete the checklist listed below:

No	Objective Description	Parameter Description	Y/N
1	Flight Model Satellite Structure, Bus Framework and MCs	a. As built Data-packs, Mission Control Software, Test Software, Test Results and CoC provided. b. Supplier manufactured or locally source as far as practically possible.	
2	Minimum Design Satellite Mission Lifespan	5yrs	
3	Compulsory Payload	Hi-Res Imager (maximum compliant to definition in Annexure F).	
4	Human Capital Development Program (HCD)	Training and development program during the satellite build and commissioning in line with the BBBEE score card as contracted.	
5	Industrial participation	Supplier is required to procure satellite parts, subsystems, MC's and manufacturing from local suppliers as far as practically possible.	
6	SA Technology & Industrial Development	Supplier is required to contract local industrial resources and services as far as practically possible	
7	Flight Model Satellite manufacturing and commissioning schedule	Timeline provided and 24 months max.	
8	Reliability	The Supplier is required to specify MCs inherent reliability, which MCs have redundancy and/or has historical heritage.	
9	Quantity and quality of image data	Minimum 7 Spectral Bands with 30km effective system swath & <=2m PAN GSD from nominal 500km orbit and a lossless compression.	
10	Minimum hi-res image satellite to ground station downlink speed	400Mbits or higher.	
11	Satellite Orbital Parameters	Orbital Parameters specified.	
12	Launch vehicle interface of proposed satellite.	Launch vehicle interface and cradle design specified.	
13	Satellite System Engineering from Satellite Bus Supplier	System Engineer to complete all SE activities on product supplied and liaise with Client SE.	

**Table 5.2: FM Satellite Program Objectives**

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- 5.3 The Supplier/Manufacturer of the satellite mechanical structure, bus, and external locally sourced MCs shall train a minimum of 30 previously disadvantaged persons either at their facility or with a local University/Technikon or accredited industry training partner. Training shall include the design, manufacturing, assembly, integration, testing and mission operations of the satellite in accordance with *Table 5.3* below. The sub-contractor shall provide DENEL with a draft Training & Development Plan addressing the following requirement:

No	Engineering: Satellite-Built & Mission Control	Total Number	No. Women	No. Black	% Women	% Black
1.	Mechanical Structure & Mechanisms	2	2	2	100	100
2.	Thermal Control System	2	2	2	100	100
3.	Electrical Power System (PCU)	2	2	2	100	100
4.	Attitude Control System (ADCS)	4	2	2	50	50
5.	Propulsion System	4	2	2	50	50
6.	Communication System (COMMS)	4	2	2	50	50
7.	Command & Data Handling System	4	2	2	50	50
9.	Flight Software	4	2	2	50	50
9.	Assembly, Integration & Testing (AIT)	4	2	2	50	50
10.	Optical Payload	2	2	2	50	50
<b>TOTAL (Engineering: Satellite Built)</b>		<b>28</b>	<b>20</b>	<b>20</b>	<b>71</b>	<b>71</b>
11.	Mission Control Specialist	2	2	2	100	100
<b>TOTAL (Mission Control)</b>		<b>2</b>	<b>2</b>	<b>2</b>	<b>100</b>	<b>100</b>
<b>TOTAL HCD</b>		<b>30</b>	<b>22</b>	<b>22</b>	<b>73</b>	<b>73</b>

**Table 5.3: Satellite HCD Skills Development Table**

From Table 5.3, the Supplier shall focus training on the major components, satellite manufacturing and phases listed above. Outputs for the above shall include (but not limited to):

- Training courses including learning outcomes and goals in line with internal accreditation standards.
- Training certificates for all the students when completing the course(s).

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- c. It is recommended that Institutional Partners such as Universities/Technikons be considered due to their adherence to SAQA accreditation standards.

5.4 The Supplier shall use the Hi-Res Imager Capture Specifications in Table 5.4 as a guideline including that listed in Annexure F. In a case where any of the specifications differ, the Supplier should highlight the differences in a comparative table.

Characteristic	Value / Description				
Optical Configuration	Astrograph				
Focal plane	Flat focal plane containing four sensors:4 x 7 Band Linear TDI sensors				
Spectral bands	7 spectral bands				
Swath	>=30km from orbit height of 500km				
Pan Band	P1 = 480nm – 690nm				
MS Bands	SPECTRAL BANDS		EO-Sat1 at 700 km orbital altitude		
	Band	$\lambda_c$ (nm)	$\lambda_w$ (nm)	HiRes GSD	MedRes GSD
	Deep Blue	425	50	10 m	60 m
	Blue	490	65	10 m	60 m
	Green	560	35	10 m	60 m
	Yellow	605	40	10 m	60 m
	Red	660	60	2.5 m	15 m
	Red Edge-1	703	25	2.5 m	15 m
	Red Edge-2	745	25	10 m	60 m
	NIR-1	783	40	10 m	60 m
	NIR-2	865	40	10 m	60 m
	NIR-3	910	40	10 m	60 m
GSD PAN	2m @ 700km orbit height				
GSD MS	2m or 4m binned @ 700km orbit height				
Re-focus Mechanism	Yes				
Mode of operation	Line Scan (TDI sensors) / Forward Motion Compensation (FMC) or other methods				
Downlink Transfer Speed	400Mbits or higher				

**Table 5.4: Hi-Res Instrument Characteristics Guideline**

5.5 Documentation: The Supplier shall provide the requisite documentation for each phase of the manufactured satellite lifecycle and its sub-systems including test results and CoC's as defined in their Statement of Work.

The table below serves as a guideline on the expected (and not limited to) documentation during the Satellite program.

Item	Description	Supplied (Y/N)
1	Statement of Work (SOW)	
2	System Engineering Management Plan (SEMP)	
3	System Requirements Specification	
4	System Interface Control Database (ICD)	
5	Product Breakdown Structure (PBS)	
6	Work Breakdown Structure (WBS)	
7	Satellite User Manual	
8	Environmental Test Plan	
9	Environmental Test Report(s)	
10	Risk Management Plan	
11	Project Management Plan	
12	Project Plan	
13	Configuration Management Plan	
14	Product Assurance Plan	
15	Reliability Management Plan	
16	Satellite Build Data Pack	
17	Major Component (MC) Build Data Pack	

**Table 5.5: Satellite Documentation Guideline**

- 5.6 The Supplier who supplies the Satellite Mechanical Structure and Bus Framework shall be required to possess the manpower to build and commission the FM Satellite and utilize Denel's expertise as well in a partnership agreement (work packages) with other local vendors during certain phases of the Satellite build. Complete the table below to indicate the available resources.

Area of expertise	Number of Employees
ADCS	
C&DH	
Optical	
Mechanical	
Power	
Communication	
Production	
System Engineering	
Mission Control	
Software Engineering	
Configuration Management	
Risk Management	
Quality Assurance	
Reliability Engineering	
Assembly, Integration & Testing	
Integrated Logistics Support	

**Table 5.6: Manpower Allocation for the FM Satellite**

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## ANNEXURE A: SUPPLIER DETAILS

The following particulars must be furnished and where required supplier must provide supporting documentations. **Failure to do so may result in supplier RFI being disqualified.**

NAME OF SUPPLIER:	
POSTAL ADDRESS:	
STREET ADDRESS:	
CONTACT PERSON (FULL NAME):	
E-MAIL ADDRESS:	
TELEPHONE NUMBER:	
FAX NUMBER:	
WEBSITE / COMPANY PROFILE: <i>Supplier must submit website address and if no website company profile detailing core business.</i>	Compulsory – submitted with this RFI
TAX CLEARANCE STATUS: <i>Supplier must submit tax reference number and SARS good standing tax pin for verification. <b>Supplier must be tax compliant when submitting RFI proposal.</b></i>	Compulsory – submitted with this RFI
B-BBEE STATUS: <i>Supplier to submit Affidavit or B-BBEE certificate that is still valid.</i>	Compulsory – submitted with this RFI
REGISTERED WITH THE NATIONAL TREASURY CENTRAL SUPPLIER DATABASE (CSD). <i>Supplier to submit detailed CSD report that includes verified banking details.</i>	Compulsory – submitted with this RFI
HOW LONG IN BUSINESS:	
HOW MANY EMPLOYEES:	
FULL NAME OF AUTHORISED REPRESENTATIVE:	
CAPACITY IN WHICH AUTHORISED REPRESENTATIVE SIGNS:	
SIGNATURE OF AUTHORISED REPRESENTATIVE:	
DATE OF SIGNATURE	
Does supplier have a valid National Conventional Arms Control (NCAC) permit in place?	YES <input type="checkbox"/> NO <input type="checkbox"/>

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## ANNEXURE B: SUPPLIER REFERENCES

Supplier to provide references (maximum 3) for same or similar work already executed.

*Failure to do so may result in your RFI being disqualified.*

NAME OF SUPPLIER (1):	
CONTACT PERSON (FULL NAME):	
STREET ADDRESS:	
EMAIL ADDRESS:	
TELEPHONE / CELL NUMBER:	
NAME OF SUPPLIER (2):	
CONTACT PERSON (FULL NAME):	
STREET ADDRESS:	
EMAIL ADDRESS:	
TELEPHONE / CELL NUMBER:	
NAME OF SUPPLIER (3):	
CONTACT PERSON (FULL NAME):	
STREET ADDRESS:	
EMAIL ADDRESS:	
TELEPHONE / CELL NUMBER:	

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## ANNEXURE C: COMPULSORY AND SUPPLIER SUPPORTING DOCUMENTS

Supplier to submit compulsory documents and list all other supporting documents submitted with this RFI for evaluation.

COMPULSORY DOCUMENTS TO BE SUBMITTED BY SUPPLIER		
Should all of these documents not be included, the RFI may be disqualified on the basis of non-compliance.		
1	Denel Guided Weapons RFI document completed	<input type="checkbox"/>
2	Project Plan	<input type="checkbox"/>
3	Project Management Plan	<input type="checkbox"/>
4	B-BBEE Affidavit or Certificate that has not expired.	<input type="checkbox"/>
5	SARS Tax document listing supplier's [1] tax reference number and valid [2] Good Standing pin for online verification.	<input type="checkbox"/>
6	Central Supplier Data (CSD) summary report that must show verified banking details.	<input type="checkbox"/>
7	Supplier website or company profile clearly stating core business.	<input type="checkbox"/>
SUPPLIER SUPPORTING INFORMATION / DOCUMENTS		
8	Suppliers Conditions of Sale if in place	<input type="checkbox"/>
9		<input type="checkbox"/>
10		<input type="checkbox"/>
11		<input type="checkbox"/>
12		<input type="checkbox"/>
13		<input type="checkbox"/>
14		<input type="checkbox"/>
15		<input type="checkbox"/>

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## ANNEXURE D: SUPPLIER DECLARATION

1. Does the enterprise/duly authorized representative, and/or any of its employees, management, partners, members, directors, shareholders, trustees and/or beneficiaries have any relationship (family, friend, business or financial interest) with a person(s) in the employ of Denel SOC Ltd and/or in the employ of any entity acting on behalf of Denel SOC Ltd, who may directly or indirectly be involved in or may be in a position to influence the awarding of any future contracts or tender(s)/bid(s)?

☐ Yes ☐ No

If 'Yes', state the full particulars of the person(s) with whom the relationship exists, the nature of the relationship and the current position/status of such employee(s) of Denel SOC Ltd and/or the entity acting on behalf of Denel SOC Ltd herein. (If insufficient space, please attach signed supporting documentation on a company letterhead.)

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2. Can the above relationship potentially give the enterprise or its representative(s) access to information emanating from Denel SOC Ltd business units(s) who may be the custodian of any future contracts or bids?

☐ Yes ☐ No

Company Name: \_\_\_\_\_

Company Address: \_\_\_\_\_

I, THE UNDERSIGNED (FULL NAME) \_\_\_\_\_

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS COMPLETE, TRUE AND CORRECT.

\_\_\_\_\_  
Managing Director or duly authorized representative

\_\_\_\_\_  
Date

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## ANNEXURE E: RFI IMPORTANT INFORMATION

### E1: STATUS OF REQUEST FOR INFORMATION

This RFI is an invitation for person(s) to submit information for the provision of the services as set out in this RFI. Accordingly, this RFI must not be construed, interpreted, or relied upon, whether expressly or implicitly, as an offer capable of acceptance by any person(s), or as creating any form of contractual, promissory, or other rights. No binding contract or other understanding for the supply of products/services will exist between Denel Guided Weapons and any Supplier unless and until Denel Guided Weapons has executed a formal written contract with the successful Supplier.

### E2: ACCURACY OF THE RFI

Whilst all due care has been taken in connection with the preparation of this RFI, Denel makes no representations or warranties that the content in this RFI or any information communicated to or provided to Suppliers during the RFI Process is, or will be, accurate, current or complete. Denel Guided Weapons, and its officers, employees and advisors will not be liable with respect to any information communicated which is not accurate, current or complete.

If a Supplier finds or reasonably believes it has found any discrepancy, ambiguity, error or inconsistency in this RFI or any other information provided by Denel Guided Weapons (other than minor clerical matters), the Supplier must promptly notify Denel Guided Weapons in writing of such discrepancy, ambiguity, error or inconsistency in order to afford Denel Guided Weapons an opportunity to consider what corrective action is necessary (if any).

Any actual discrepancy, ambiguity, error or inconsistency in this RFI or any other information provided by Denel Guided Weapons will, if possible, be corrected and provided to all Suppliers without attribution to the Supplier who provided the written notice.

### E3: ADDITIONS AND AMENDMENTS TO THE RFI

Denel Guided Weapons reserves the right to change any information in, or to issue any addendum to this RFI before the Closing Date and Time. Denel Guided Weapons and its officers, employees and advisors will not be liable in connection with either the exercise of, or failure to exercise this right.

If Denel Guided Weapons exercises its right to change information, it may seek amended RFI from all Suppliers.

### E4: CONFIDENTIALITY

All persons (including all Suppliers) obtaining or receiving this and any other information about this RFI must keep the contents of the RFI and other such information confidential, and not disclose or use the information except as required for the purpose of developing feedback in response to this RFI.

### E5: UNAUTHORISED COMMUNICATIONS

Communication (including promotional or advertising activities) with staff of Denel Guided Weapons or their staff assisting with the RFI Process is not permitted during the RFI Process. Nothing in this Clause 11 is intended to prevent communications with staff of, or advisors to, Denel Guided Weapons to the extent that such communication is not related to this RFI Process.

Suppliers must not otherwise engage in any activities that may be perceived as, or that may have the effect of, influencing the outcomes of the RFI in any way.



## **E6: IMPROPER ASSISTANCE, FRAUD AND CORRUPTION**

Suppliers may not seek or obtain the assistance of employees of Denel Guided Weapons in the preparation of their RFI responses.

Denel Guided Weapons may in its absolute discretion, immediately disqualify a Supplier that it believes has sought or obtained such improper assistance.

Suppliers are to be familiar with the implications of contravening the Prevention and Combating of Corrupt Activities Act, 2004 and any other relevant legislation.

Any improper communication, canvassing, or engagement with any Denel Guided Weapons people/person/representative will result in immediate disqualification from the RFI process.

## **E7: COMPLAINTS ABOUT THE RFI PROCESS**

Any complaint about the RFI or the Information Gathering Process must be submitted to the Tender Office via the RFI Response email address, by email only, immediately upon the cause of the complaint arising or becoming known to the Supplier.

- The written complaint must set out:
- the basis for the complaint, specifying the issues involved;
- how the subject of the complaint affects the organisation or person making the complaint;
- any relevant background information; and
- the outcome desired by the person or organisation making the complaint.

If the matter relates to the conduct of an employee of Denel Guided Weapons, the complaint should be addressed in writing marked for the attention of the Chief Executive Officer of Denel Guided Weapons, and delivered to the physical address of Denel Guided Weapons, as notified.

## **E8: CONFLICT OF INTEREST**

A Supplier must ensure that its officers, employees, agents and advisors do not place themselves in a position that may give rise to actual, potential or perceived conflict of interest between the interests of Denel Guided Weapons and the Supplier's interests during the RFI Process.

The Supplier is required to provide details of any interests, relationships or clients which may or do give rise to a conflict of interest in relation to the supply of the products/services under any contract that may result from this RFI.

- **Supplier to complete annexure D Supplier Declaration.**

If the Supplier submits its RFI and a subsequent conflict of interest arises, or is likely to arise, which was not disclosed in the RFI, the Supplier must notify Denel Guided Weapons immediately in writing of that conflict.

Denel Guided Weapons may immediately disqualify a Supplier from the RFI Process if the Supplier fails to notify Denel Guided Weapons of the conflict of interest as required.

## **E9: LATE SUBMISSION OF INFORMATION**

Information must be delivered by the Closing Date and Time. The Closing date and time may be extended by Denel Guided Weapons in its absolute discretion by providing written notice to Suppliers.

Information delivered after the Closing date and Time or lodged at a location or in a manner that is contrary to that specified in this RFI will be disqualified from the Information Gathering Process and will be ineligible for consideration. No Late submissions will be accepted.

The determination by Denel Guided Weapons as to the actual date and time that the information is submitted is final.

## **E10: SUPPLIER'S RESPONSIBILITIES**

Suppliers are responsible for:

- Examining this RFI and any documents referenced or attached to this RFI and any other information made or to be made available by Denel Guided Weapons to Suppliers in connection with this RFI;
- Fully informing themselves in relation to all matters arising from this RFI, including all matters regarding Denel Guided Weapons requirements for the provision of the Services;
- Ensuring that their Submitted information are accurate and complete;
- Making their own enquiries and assessing all risks regarding this RFI, and fully considering and incorporating the impact of any known and unknown risks into their submitted information;
- Submitting all Compulsory Documents.

## **E11: ILLEGIBLE CONTENT, ALTERATION AND ERASURES**

Denel Guided Weapons may disregard any content in a RFI response that is illegible and will be under no obligation whatsoever to seek clarification from the Supplier.

Denel Guided Weapons may permit a Supplier to correct an unintentional error in its RFI response where that error becomes known or apparent after the closing time, but in no event, will any correction be permitted if Denel Guided Weapons reasonably considers that correction would materially alter the substance of the RFI response or affect the fairness of the RFI process.

## **E12: OBLIGATION TO NOTIFY ERRORS**

If, after a Supplier's Response has been submitted, the Supplier becomes aware of an error in its Response (including an error in pricing, but excluding clerical errors which would have no bearing on the evaluation of the RFI), the Supplier must promptly notify Denel of such error before closing date and time of the RFI.

## **E13: RESPONSIBILITY FOR RFI COSTS**

The Suppliers participation or involvement in any stage of the RFI Process is at the Suppliers sole risk, cost and expense. Denel Guided Weapons will not be held responsible for, or pay for, any expense or loss that may be incurred by Suppliers in relation to the preparation or lodgement of their RFI information.

Denel Guided Weapons is not liable to the Supplier for any costs on the basis of any contractual, promissory or restitution grounds whatsoever as a consequence of any matter relating to the Supplier's participation in the RFI Process, including without limitation, instances where:

- the Supplier is not engaged to perform under any contract; or
- Denel Guided Weapons exercises any right under this RFI or at law.

## **E14: DISCLOSURE OF RFI CONTENTS AND RFI INFORMATION**

All the RFI information received by Denel Guided Weapons will be treated as confidential. Denel Guided Weapons will not disclose contents of any RFI and any RFI information, except:

- as required by law;
- for the purpose of investigations by other government authorities having relevant jurisdiction;
- to external consultants and advisors of Denel Guided Weapons engaged to assist with the RFI Process; or for the general information of Suppliers required to be disclosed as per National Treasury Regulations, Guidelines, Instruction Notes or Practice Notes.

## **E15: USE OF RFI INFORMATION**

Upon submission in accordance with the requirements relating to the submission of RFIs, all RFI information submitted become the property of Denel. Suppliers will retain all ownership rights in any intellectual property contained in the RFI information.

Each Supplier, by submission of their RFI information, is deemed to have licensed Denel to reproduce the whole, or any portion, of their RFI information for the sole purposes of enabling Denel to evaluate the RFI feedback.

## **E16: RFI INFORMATION ACCEPTANCE**

All RFI information received must remain open for acceptance for a minimum period of 30 (thirty) days from the Closing Time. This period may be extended by written mutual agreement between Denel Guided Weapons and the Supplier.

## **E17: CLARIFICATION OF RFI INFORMATION**

Denel Guided Weapons may seek clarification from and enter into discussions with any or all of the Suppliers in relation to their RFI information.

Denel Guided Weapons may use the information obtained when clarification is sought or discussions are held in interpreting the RFI information and evaluating the cost and risk of accepting the RFI information.

Failure to supply clarification to the satisfaction of Denel Guided Weapons may render the RFI information liable to disqualification.

Denel Guided Weapons is under no obligation to seek clarification of anything in a RFI information and reserves the right to disregard any clarification that Denel Guided Weapons considers to be unsolicited or otherwise impermissible or irrelevant in accordance with the rules set out in this RFI.

## **E18: DISCUSSION WITH SUPPLIERS**

Denel Guided Weapons is under no obligation to discuss the outcome of the RFI process with any of the Suppliers.

## ANNEXURE F: EO-SAT1 SPECIFICATION

## EO-Sat1

HIGH PERFORMANCE  
EARTH-OBSERVATION SATELLITE

## PAYLOAD

EO-Sat1 carries two imaging instruments: a high resolution (HiRes) and a medium resolution (MedRes) instrument. The HiRes consists of a modified Ritchey-Chrétien astrograph front end, while the MedRes consists of a Double Gauss refractive front end. Both instruments provide large focal planes and low optical aberrations, while delivering true diffraction limited performance over the full spectral range from 400 to 930 nm. Two identical sets of Time Delayed Integration (TDI) capable sensors provide 10 spectral bands for each instrument. The number of TDI stages are in-flight configurable to allow optimisation of the dynamic range and signal to noise ratio per band.

The HiRes swath is centred within the MedRes swath, and the two instruments can be operated simultaneously or separately.



The dual-redundant on-board data storage can store up to 700 square scenes, which equates to 23.7 million km<sup>2</sup> of MedRes imagery, or 0.7 million km<sup>2</sup> of HiRes imagery.



SPECTRAL BANDS EO-Sat1 at 700 km orbital altitude

Band	$\lambda_c$ (nm)	$\lambda_w$ (nm)	HiRes GSD	MedRes GSD
Deep Blue	425	50	10 m	60 m
Blue	490	65	10 m	60 m
Green	560	35	10 m	60 m
Yellow	605	40	10 m	60 m
Red	660	60	2.5 m	15 m
Red Edge-1	703	25	2.5 m	15 m
Red Edge-2	745	25	10 m	60 m
NIR-1	783	40	10 m	60 m
NIR-2	865	40	10 m	60 m
NIR-3	910	40	10 m	60 m

In a lower orbit, EO-Sat1 will gain GSD at the cost of swath. At 500 km, for example, the HiRes has GSDs of 1.8 and 7.2 m with a swath of 22 km, while the MedRes has GSDs of 11 and 43 m with a swath of 131 km.

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