

Work Package for ECFM – EU Software development for 03 years

Part I – Standard Terms and Conditions

The Bidder is required to give confirmation of their acceptance of the Standard Terms and Conditions of the RFP mentioned below which will automatically be considered as part of the Contract concluded with the successful Bidder as selected by the Buyer. Failure to do so may result in rejection of the Bid submitted by the Bidder.

1. **Effective Date of the Contract (Acceptance of Contract/SO):** In case of placement of service order, the date of acceptance of the service Order or the Project Start Date would be the effective date. In case a contract is to be signed by both the parties, the Contract shall come into effect on the date of signatures of both the parties on the Contract (Effective Date) or as agreed by both the parties. The performance of the services shall commence from the effective date of the Contract.

**Note:** Discrepancies, if any, should be brought to the notice within 7 days from the date of Contract/Supply order else it will be presumed as Contract/Supply Order is accepted

2. **Law:** The Contract shall be considered and made in accordance with the law of the Republic of India and shall be governed by and interpreted in accordance with the law of the Republic of India.
3. **Arbitration:** All disputes or differences arising out of or in connection with the Contract shall be settled by bilateral discussions. Any dispute, disagreement or question arising out of or relating to the Contract or relating to product or performance, which cannot be settled amicably, shall be resolved by arbitration in accordance with the applicable following provision:

“The case of arbitration may be referred to respective CFA or a person appointed by him who will be sole arbitrator and the proceedings shall be conducted in accordance with procedure of Indian Arbitration and Conciliation Act, 1996 as amended”.

OR

“The case of arbitration may be referred to International Centre for Alternative Dispute Resolution (ICADR) for the appointment of arbitrator and proceedings shall be conducted in accordance with procedure of Indian Arbitration and Conciliation Act, 1996, as amended.”

OR

The case of arbitration may be conducted in accordance with the rules of arbitration of the International chamber of consumers by one or more arbitrators appointed in accordance with the said rules in India. However, the arbitrations proceedings shall be conducted in India under Indian arbitration and conciliation Act 1996.

4. **Penalty for Use of Undue influence:** The Seller undertakes that he has not given, offered or promised to give, directly or indirectly, any gift, consideration, reward, commission, fees, brokerage or inducement to any person in service of the Buyer or otherwise in procuring the Contract or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of the Contract or any other contract with the Government of India for showing or forbearing to show favour or disfavour to any person in relation to the Contract or any other contract with the Government of India. Any breach of the aforesaid undertaking by the Seller or anyone employed by him or acting on his behalf (whether with or without the knowledge of the Seller) or the commission of any offers by the Seller or anyone employed by him or acting on his behalf, as defined in Chapter IX of the Indian Penal Code, 1860 or the Prevention of Corruption Act, 1986 or any other Act enacted for the prevention of corruption shall entitle the Buyer to cancel the contract and all or any other

contracts with the Seller and recover from the Seller the amount of any loss arising from such cancellation. A decision of the Buyer or his nominee to the effect that a breach of the undertaking had been committed shall be final and binding on the Seller. Giving or offering of any gift, bribe or inducement or any attempt at any such act on behalf of the Seller towards any officer/employee of the Buyer or to any other person in a position to influence any officer/employee of the Buyer for showing any favour in relation to this or any other contract, shall render the Seller to such liability/ penalty as the Buyer may deem proper, including but not limited to termination of the contract, imposition of penal damages, forfeiture of the Bank Guarantee and refund of the amounts paid by the Buyer.

5. **Agents / Agency Commission:** The Seller confirms and declares to the Buyer that the Seller has not engaged any individual or firm, whether Indian or foreign whatsoever, to intercede, facilitate or in any way to recommend to the Government of India or any of its functionaries, whether officially or unofficially, to the award of the contract to the Seller; nor has any amount been paid, promised or intended to be paid to any such individual or firm in respect of any such intercession, facilitation or recommendation. The Seller agrees that if it is established at any time to the satisfaction of the Buyer that the present declaration is in any way incorrect or if at a later stage it is discovered by the Buyer that the Seller has engaged any such individual/firm, and paid or intended to pay any amount, gift, reward, fees, commission or consideration to such person, party, firm or institution, whether before or after the signing of this contract, the Seller will be liable to refund that amount to the Buyer. The Seller will also be debarred from entering into any contract with the Government of India for a minimum period of five years. The Buyer will also have a right to consider cancellation of the Contract either wholly or in part, without any entitlement or compensation to the Seller who shall in such an event be liable to refund all payments made by the Buyer in terms of the Contract along with interest at the rate of 2% above MCLR (Marginal Cost of Funds based Lending Rate) declared by RBI pertaining to State Bank of India for Indian bidders. The Buyer will also have the right to recover any such amount from any contracts in vogue with the Government of India.

Or

The Seller confirms and declares in the Techno-Commercial bid that they have engaged an agent, individual or firm, for promotion of their product. In such case, following details are to be submitted in the Techno-Commercial bid:

- a) Name of the Agent
  - b) Agency Agreement between the seller and the agent giving details of their contractual obligation
  - c) PAN Number, name and address of bankers in India and abroad in respect of Indian agent
  - d) The nature of services to be rendered by the agent and
  - e) Percentage of Commission payable to the agent
6. **Access to Books of Accounts:** In case it is found to the satisfaction of the Buyer that the Bidder/Seller has violated the provisions of Para 4 and/or Para 5 above to obtain the Contract, the Bidder/Seller, on a specific request of the Buyer, shall provide necessary information/ inspection of the relevant financial documents/information/Books of Accounts.
7. **Non-disclosure of Contract Documents:** Except with the written consent of the Buyer/Seller, other party shall not disclose the Contract or any provision, specification, plan, design, pattern, sample or information thereof to any third party.
8. **Withholding of Payment:** In the event of the Seller's failure to submit the Bonds, Guarantees and Documents, supply the stores/goods/services and conduct trials, installation of equipment, training, etc. as specified in the Contract, the Buyer may, at his discretion, withhold any payment until the completion of the Contract.

9. **Liquidated Damages:** The buyer reserves the right to impose LD in case of delay in supply attributable to the seller, liquidated damages at the rate of 0.5% per week or part thereof, for stores/services which the Vendor has failed to deliver within the period agreed for delivery in the contract subject to maximum of 10% of the total order value (excluding taxes and duties) LD shall also be levied on the basic cost of the stores supplied partially within the scope of the order/contract that could not be put to use due to the late delivery of remaining stores.
10. **Termination of Contract:** The Buyer shall have the right to terminate the Contract in part or in full in any of the following cases:-
- i) The store/service is not received/rendered as per the contracted schedule(s) and the same has not been extended by the Buyer.
- Or
- The delivery of the store/service is delayed for causes not attributable to Force Majeure for more than 6 months after the scheduled date of delivery and the delivery period has not been extended by the Buyer.
- ii) The delivery of store/service is delayed due to causes of Force Majeure by more than 6 months provided Force Majeure clause is included in the contract and the delivery period has not been extended by the Buyer.
  - iii) The Seller is declared bankrupt or becomes insolvent.
  - iv) The Buyer has noticed that the Seller has violated the provisions of Para 4 (Use of Undue Influence) and/or Para 5 (Employment of Agent) above to obtain the Contract.
  - v) The Buyer is entitled at their option, to cancel the order or a portion thereof, due to not meeting any of the terms and conditions of the order / delayed execution of the order by the Seller beyond reasonable time as may be considered by the Buyer, without prejudice to the terms and conditions of this order.
  - vi) As per decision of the Arbitration Tribunal.
11. **Notices:** Any notice required or permitted by the Contract shall be written in English language and may be delivered personally or may be sent by FAX or registered pre-paid mail/ airmail, addressed to the last known address of the party to whom it is sent.
12. **Transfer and Sub-letting:** The Seller has no right to give, bargain, sell, assign or sublet or otherwise dispose of the Contract or any part thereof, as well as to give or to let a third party take benefit or advantage of the Contract or any part thereof without written consent of the Buyer.
13. **Use of Patents and other Industrial Property Rights:** The prices stated in the Contract shall be deemed to include all amounts payable for the use of patents, copyrights, registered charges, trademarks and payments for any other Industrial Property Rights. The Seller shall indemnify the Buyer against all claims from a third party at any time on account of the infringement of any or all the rights mentioned in the previous paragraphs, whether such claims arise in respect of manufacture or use. The Seller shall be responsible for the completion of the supplies including spares, tools, technical literature and training aggregates irrespective of the fact of infringement of the supplies or any or all the rights mentioned above.
14. **Amendments:** No provision of the Contract shall be changed or modified in any way (including this provision) either in whole or in part except when both the parties are in written agreement for amending the Contract.

**15. Taxes/Duties****i) General**

- a) Bidders must indicate separately the relevant taxes/duties likely to be paid in connection with delivery of completed goods specified in RFP. In absence of this, the total cost quoted by them in their bids will be taken into account in the ranking of bids.
  - b) The taxes levied by Central/State/Local Government on the final product will be paid by the buyer on actuals, based on relevant documentary evidence, wherever applicable. Taxes and duties on input items will not be paid by Buyer and they may not be indicated separately in the bids. Bidder are required to include the same in the pricing of their product.
  - c) TDS as Income Tax rules will be deducted and a certificate to that effect will be issued by the buyer.
  - d) The vendor should quote the GST registration number in all as per the GST notification of Government of India.
- 16. Denial Clause:** Variations in the rates of statutory levies within the original delivery schedule will be allowed if taxes are explicitly mentioned in the contract / supply / services order and delivery has not been made till the revision of the statutory levies. Buyer reserves the right not to reimburse the enhancement of cost due to increase in statutory levies beyond the original delivery period of the supply /services order / contract even if such extension is granted without imposition of LD.
- 17. Undertaking from the Bidders:** The Bidder/Firm/Company will submit an undertaking that in the past, they have never been banned/debarred for doing business dealings with Ministry of Defence / Govt. of India / any other Govt. organization and that there is no enquiry going on by CBI / ED / any other Govt. agency against them.
- 18. Handling of Classified Information by Indian Licensed Defence Industry:** Any classified document/information/ equipment being shared with Indian Licensed Defence Industries will be protected / handled to prevent unauthorized access as per provisions of Chapter 5 of Security Manual for Indian Licensed Defence Industries issued by MoD (Department of Defence Production).
- 19. Liability Clause:**
- a. Any damage caused to the property or suffered by the personnel of Buyer during the execution of Contract shall remain the liability of the Buyer. Such liability shall be fixed on Seller in case of grossly negligent act or omission on the part of Seller.
  - b. This provision is limited to the relations between the Parties. It is without prejudice to the rights and actions to which the victims of damage, or any Social Security Organizations could prevail themselves legally.
  - c. Either party would provide reasonable assistance to resolve the claim of other Party to mitigate loss or damage.
  - d. Neither, the Seller shall be liable to the Buyer, nor shall the Buyer be liable to the Seller for any immaterial, punitive, indirect, special, incidental, or consequential loss or damage. This will hold good irrespective of whether such liability is based or claimed to be based on any breach of a Party's obligation under the Contract, or any negligent act or omission of a Party, its employees, servants, appointed representatives, sub-contractor or professional consultants, or such liability arises otherwise out of or in connection with the Contract.

- e. The Buyer shall not be liable for any compensation in any manner to the Seller for whatsoever reason.
  - f. The Seller shall be liable to the Buyer for any compensation in any manner for whatsoever reasons for a sum not exceeding value of the Contract.
- 20. Risk and Expense Purchase:** In case the vendor fails to honor the contractual obligations within the stipulated delivery period and as amended, Buyer may procure the said contracted goods/services through a fresh Service Order/contract and the defaulting vendor has to bear the excess cost incurred, if any.
- 21. Franking Clause:**
- i) **In Case of Acceptance of Store(s):** “The fact that the goods have been inspected after the delivery period and passed by the Inspecting Officer will not have the effect of keeping the contract alive. The goods are being passed without prejudice to the rights of the Buyer under the terms and conditions of the Contract”.
  - ii) **In Case of Rejection of Store(s):** “The fact that the goods have been inspected after the delivery period and rejected by the Inspecting Officer will not bind the Buyer in any manner. The goods are being rejected without prejudice to the rights of the Buyer under the terms and conditions of the contract.”
- 22. Claims:**
- i) The quantity claims for deficiency of quantity and/ or the quality claims for defects or deficiencies in quality noticed during the inspection shall be presented within 45 days of completion of inspection.
  - ii) The Seller shall collect the defective or rejected goods from the location nominated by the Buyer and deliver the repaired or replaced goods at the same location, within mutually agreed period, under Seller’s arrangement without any financial implication on the Buyer.

**Part II - Special Terms and Conditions**

The Bidder is required to give confirmation of their acceptance of Special Terms and Conditions of the RFP mentioned below which will automatically be considered as part of the Contract concluded with the successful Bidder as selected by the Buyer. Failure to do so may result in rejection of Bid submitted by the Bidder.

Sl. No.	Description	Standard Terms	Compliance by the Firm (If Not Agreed, give reasons)
1.	Prices	The prices should be firm and fixed.	
2.	EMD Details	As per Clause 24 of Special Terms and Conditions	
3.	Currency	Indian Currency only	
4.	Inspection & Acceptance	As per Scope of Work	
5.	Terms of Delivery	The prices quoted are at ADA, Bangalore To = Deployment of all resources and Start of the project, <b>T0 should not be more than 21 days from the Date of Purchase Order.</b>	
6.	Work to be carried out	ADA Bangalore	
7.	Validity of Quotation	90 days from the last date for submission of bids.	
8.	Ordering Information	(Indicate Name and Address of Firm on whom the Order is to be placed)	
9.	Work Package Period	The contract is for a period of 3 years	
10.	Payment Terms	Milestone payments along with applicable GST shall be paid within 30 days against Successful completion of each milestone & submission of Original Invoice and Milestone completion and acceptance certificate duly certified by the Project coordinator and counter-signed/approved by PD/TD. <b>(Format enclosed)</b> No advance payment will be made.	
11.	Performance Security (Mandatory)	Successful bidder (Vendor) after placement of order shall be required to furnish a Performance Security in the form of Bank Guarantee, for a sum equal to 5% of the Contract value (including taxes and duties) within 14 days from the date of the Order valid till the completion of contract plus 60 days grace period as per ADA format enclosed. In case Vendor does not agree for Performance Security, the offer shall be summarily rejected. Also refer guidelines for submission of Bank Guarantee.	
12.	Registration with MSME/MSE/SSI/ NSIC/DRDO Labs/ Other departments of MOD with copy of		

	Registration		
13.	Unique Seller ID (Mandatory)	As per GeM	
14.	Contact Details 1) Name : 2) Contact No: 3) Email Id :		
	Other Conditions:		
a	Vendor shall execute the work as per the requirement in the Scope of Work (SOW) only by qualified and experienced Indian Nationals.		
b	The personnel deputed by the Vendor to ADA in connection with the work shall be regular employees of the Vendor and sub-contracting to other firms is not permitted. The age limit of the personnel deputed shall be as follows: i) The minimum age on deployment in ADA shall be 18 years ii) The maximum age up to which he/she can work in ADA shall be 60 years		
c	Vendor shall furnish the details of personnel being positioned / deputed by them such as their name, qualification, etc. along with their experience in related area before deputing them to ADA.		
d	Vendor shall submit the Police Verification reports with address verification valid till end of the Contract period from the Office of the District Police Head in the prescribed pro-forma in respect of the Personnel deputed by them before executing the work. Selected manpower resource shall obtain well in advance, necessary security clearance from Admin Department of ADA through the Project Coordinator and should also complete police verification process upfront. Cost of police verification etc. is to be borne by the Vendor.		
e	The Personnel positioned/deputed by Vendor will be issued with photo identity card by the Vendor. They shall maintain absolute integrity, devotion to duty, punctuality, discipline and proper office decorum, failing which Vendor shall be answerable and also liable to make proper replacements.		
f	The execution of work on performance-based milestone as per SOW shall be certified by the concerned Project Coordinator and approved by TD for having completed the milestone activities satisfactorily.		
g	It is also the sole responsibility of the Vendor for payment of whatever admissible benefits to the employees. ADA will not take any liability in any of these aspects.		
h	Vendor and their personnel should abide by all the Security instructions of ADA including IT Security. They should not move in the campus without cause and shall not be permitted to do any work other than that indicated in the Contract.		
i	If any Personnel engaged by Vendor are found responsible for any theft, damage, deface, break or destruction of any installation/fittings, etc., in the institution, Vendor shall make good the loss, at prevailing market rates.		
j	Vendor shall take all safety precautions required for execution of the work. ADA will not in any way be responsible for any injury/damage that may be caused to Vendor or their Personnel during the execution of work		

k	In case of any injury or death caused to any of the persons during the course of engagement, the responsibility shall solely rest with Vendor. ADA shall not be responsible for any loss of life of Vendor’s personnel caused at ADA site. Vendor shall alone be responsible for any compensation for which they shall take adequate insurance policy/policies at their cost and expenses from time to time and ensure all statutory requirements as per prevailing Government norms.	
l	All the Contract Personnel deployed by Vendor by virtue of this Contract shall remain the employee of Vendor only and they shall not acquire any claim whatsoever for employment in ADA or right for regularization as employee of ADA or continued engagement under ADA. Vendor or the Personnel engaged by Vendor shall not have any right to claim for employment based on the work done through this Work Package.	
m	Vendor shall submit a declaration, to the effect that none of the persons engaged by them has a criminal background, to the Sr. Administrative Officer, ADA before executing the work assigned to them. No overtime payment shall be made, for any extra work done by them.	
n	For security and administrative purposes, the personnel deputed shall be bound by Rules and Regulations of ADA.	
o	No removable/portable Media like CD/USB Device/Mobile phone, etc. would be allowed to be carried inside or out of ADA, even as part of the present work.	

**15. Permissible Time Frame for Submission of Bills:** To claim payment (part or full), the Vendor shall submit the bill(s) along with the relevant documents within 30 days from the completion of the activity/supply and acceptance.

**16. Mode of Payment:** It will be mandatory for the Bidders to indicate their bank account numbers and other relevant e-payment details to facilitate payments through ECS / NEFT. If payment to vendor is being made for the first time, vendor is advised to provide their ECS details in Original duly attested by their Bankers.

**17. Documents to be furnished for claiming Payment:**

The payment of bills will be made on submission of the following documents (wherever applicable) by the Vendor to the Buyer:

- a) Original Ink-signed / Digitally Signed / Electronically Signed / System Generated Invoice
- b) Performance Security Bank Guarantee
- c) Duly approved Milestone Completion and Acceptance Certificate as per *Annexure-B*
- d) Details for electronic payment as per ECS Mandate Form viz. Bank name, Branch name and address, Account Number, IFS Code, MICR Number, duly certified by your banker.
- e) Any other document / certificate that may be provided for in the Contract.

**18. Terms of Delivery of services:** Delivery of services shall be as described in the SOW. As the program has stringent time schedules, deadlines on the deliverables shall be adhered to during the tenure of the work package. The team should have sufficient strength (size and competency) to ensure completion of work, within working hours of ADA. The team shall be prepared to work even on holidays and weekends in order to meet the schedules in extreme cases.

**19. Force Majeure Clause:**

- i) Neither party shall bear responsibility for the complete or partial non-performance of any of its obligations, if the non-performance results from such Force Majeure circumstances as Flood, Fire, Earth Quake and other acts of God as well as War, Military operations, blockade, Acts or Actions of State Authorities or any other circumstances beyond the parties control that have arisen after the conclusion of the present contract.
- ii) In such circumstances the time stipulated for the performance of an obligation under the Contract is extended correspondingly for the period of time commensurate with actions or circumstances and their consequences.
- iii) The party for which it becomes impossible to meet obligations under the Contract due to Force Majeure conditions, is to notify in written form to the other party of the beginning and cessation of the above circumstances immediately, but in any case not later than 10 (Ten) days from their commencement.
- iv) Certificate of Chamber of Commerce (Commerce and Industry) or other competent authority or organization of the respective country shall be considered as sufficient proof of commencement and cessation of the above circumstances.
- v) If the impossibility of complete or partial performance of an obligation lasts for more than 6 (six) months, either party hereto reserves the right to terminate the Contract totally or partially upon giving prior written notice of 30 (thirty) days to the other party of the intention to terminate without any liability other than reimbursement on the terms provided in the agreement for the goods received.

- 20. Performance Security:** The Successful bidder may be required to submit a Performance Security in the form of Bank Guarantee (BG), from any of the Scheduled Commercial Banks, in favour of Aeronautical Development Agency, payable at Bangalore, for a sum equal to 5% of the Contract value (including taxes) within 14 days from the date of the Order valid upto 60 days beyond the completion date. The specimen of BG is attached at *Annexure-A*. Bank Guarantee is to be issued through SFMS by Applicant's Bank to ADA's Bank details as indicated below :

Name : ADA; A/c No. :10461037271; IFSC Code : SBIN0004815

Bank : State Bank of India, NAL Branch, Bangalore

**Note : While submitting the Bank Guarantee, Vendor should ensure that Bank Details such as Name of the Bank, Branch Name, Fax Number, Contact Person, E-mail ID, etc. shall be sent along with the Bank Guarantee.**

The Performance Security will be forfeited by the Buyer, in case the conditions regarding adherence to delivery schedule and/or other provisions of the contract are not fulfilled by the Seller.

**21. Guidelines for Submission of Bank Guarantees:**

- a) Bank Guarantees should be submitted by Bidders/Vendor in the specified format (as per *Annexure A*). Bidders should comply with prevailing formats and guidelines of ADA with respect to BGs at the time of issue of BGs.
- b) All Bank Guarantees should be submitted to ADA directly by the Issuing Bank under Registered Post (A.D.) / Speed Post / Courier.
- c) Bank Guarantee shall be free from all typographical error / deletions / inclusions, riders etc., and requires to be authenticated by Bank's signatory with official seal.
- d) The name, designation and code numbers of the Bank officer / officers signing the BGs should be incorporated under the signature(s) of the officials signing the BGs along with the complete postal address and email ID.

NOTE: Bank Guarantee should be issued from a Scheduled Commercial Bank in India. All charges connected with issue/extension of BG shall be borne by bidders/vendor.

**22. Evaluation and Acceptance Criteria of Bids:** The bid will be considered and selected based on instructions contained in Part I and Part II of the RFP for further evaluation of bids as per sequence given below:

i) **Techno-Commercial Bid Evaluation:** Bids will be evaluated based on vendor qualification criteria of RFP and SOW and bids of the qualified bidders will be considered for further evaluation.

The bidders hereby agrees to respond to the “techno-commercial queries” sent by TCEC (if any) via e-mail / Fax (as provided by Bidder) within the time limit, failing which the Bidder’s offer will be rejected summarily without any further communication.

ii) **Price Bid Evaluation:** The Price bid of those bidders whose Techno-Commercial bid has been accepted will be opened and comparative statement will be prepared. The best acceptable bid will be decided upon the lowest price quoted by the particular Bidder. The ultimate cost to ADA would be the deciding factor for ranking of Bids. ADA reserves the right to call the lowest acceptable bidder for techno-commercial negotiations, if the cost indicated is beyond the budgeted estimate. **The basis for evaluation of Price bid will be LOT WISE.**

**23. Confidentiality and Title to the information:** The Vendor shall note that any information received by them from ADA shall be treated with utmost confidence and the provisions of the Official Secrets Act shall be applicable. The Vendor needs to execute Confidentiality Agreement as per ADA’s format. The information, drawings, slips and draft papers as may be given by ADA should not be forwarded, discussed or parted to any other individual company without prior approval from ADA and the same should be returned to ADA after completion of the project. This requirement is neither to be published nor used for any promotional activities unless there is written permission for the same.

**24. Earnest Money Deposit:** Bidders are required to upload scanned copy of the Earnest Money Deposit (EMD), in favour of **Aeronautical Development Agency, Bangalore**, in the currency of their quote for amount equivalent to **Rs.9,60,000/- [Rupees Nine Lakhs Sixty Thousand only]** along with their bid. The EMD may be submitted by Indigenous bidder in the form of Insurance Surety Bonds/ Account Payee Demand Draft/ Fixed Deposit Receipt/ Banker's Cheque or Bank Guarantee (including e-Bank Guarantee) from any of the scheduled commercial banks or payment online (format enclosed at **Annexure-B**). EMD is to remain valid for a period of **45 days** beyond the final bid validity period. EMD of the unsuccessful bidders will be returned to them, without any interest whatsoever, at the earliest after expiry of the final bid validity and latest on or before the thirtieth day after the award of the Contract.

EMD of the successful bidder would be returned without any interest whatsoever after the receipt of Performance Security Bank Guarantee from them as called for in the Contract. EMD is not required to be submitted by those Bidders who are registered with the Departments of MoD, other DRDO labs, and as per the policy of Government of India in vogue. Such bidders shall be required to furnish the relevant documents in their Techno-Commercial bid in support of the claim. The EMD will be forfeited if the Bidder withdraws, amends, impairs or derogates from the tender in any respect within the validity period of their tender.

Following categories of Sellers shall however, be exempted from furnishing Bid Security:

i) Micro and Small Enterprises (MSEs) who are holding valid Udyam Registration and are manufacturer of the offered Product or Service (Primary Product / Service - in case of bunch bid with total value wise evaluation) and give specific confirmation to this effect at

the time of bid submission and claim EMD exemption and whose credentials are validated online through Udyam Registration website of Ministry of MSME and also through supporting document uploaded during bidding process and validated by the Buyer. State Government Buyers may, however, choose to exempt only MSEs from the State of Bid Inviting Authority by specifying the same in ATC of the Bid. In case no such ATC is included, eligible MSEs of all states are exempted.

- ii) Start-ups as recognized by Department for Promotion of Industry and Internal Trade (DPIIT), holding valid Startup Recognition Certificate which is to be uploaded while bidding and claiming EMD exemption and to be validated by the Buyer. Bidder to ensure that turnover for any of the financial years has not exceeded beyond limits prescribed in the certificate / Start Up scheme of DPIIT.
- iii) KVIC, ACASH, WDO, Coir Board, TRIFED and Kendriya Bhandar.
- iv) Sellers who have got their credentials verified through the process of Vendor Assessment by Vendor Assessment Agencies for the Primary Product / Primary Service for which Bid / RA has been invited and holding valid Vendor Assessment or Vendor Assessment Exemption Report / confirmation (Seller to upload VA report / VAE confirmation to be validated by the Buyer).
- v) Sellers / Service Provider having annual turnover of INR 500 Crore or more, at least in one of the past three completed financial year(s)
- vi) Sellers / Service Providers holding valid BIS License for the Primary Product Category whose credentials are validated through BIS database and through uploaded supporting documents to be validated by the buyer.
- vii) Central / State PSUs.
- viii) Seller / Service Provider registered with designated Agency / Authority as specified in the bid document by the Buyer – such bidder shall have to upload scanned copy of relevant valid registration document in place of Bid Security document while bidding.

**Note:**

1. Original **EMD instrument** should be sent by post in an envelope, addressed to **Director [Materials Management]**, Aeronautical Development Agency, P.B.No.1718, Vimanapura Post, Bangalore – 560017. The cover of envelope should clearly mention “EMD”, Gem number, Description and Bid due date.

In case **EMD instrument** (if applicable) is not received on or before “**techno-commercial bid opening date and time**”, bid of such vendors will summarily be rejected

25. **Intellectual Property Rights (IPR):** All work products/software developed exclusively for the execution of the project shall be the property of ADA. In case IPR clause is applicable, the IPR for all proprietary tools or framework developed for ADA will finally rest with ADA only. The Vendor shall assist and facilitate to obtain IPR registration in the name of ADA.

**General:**

Compliance for the Terms & Conditions is mandatory without which the offer will not be considered.

Bidders are requested to sign all pages of SOW and all the enclosure and annexures along with company stamp (at the bottom of pages) and submit the same along with their quotation (along with Techno-Commercial bid in case of Two Bid System)

Price details are to be furnished only in the price Bid. Technical Bids, if contain prices will summarily be rejected.

ADA reserves the right to accept or reject any or all offers in part or in full without assigning any reasons.

The bidder should be registered in India. GST Registration Number and its validity should be indicated. Documentary evidences should be supplied/attached to the Bid Proposal documents.

The Bidder must have PAN/TAN for Income Tax Department and the same may be quoted.

The bidder shall submit financial standing through copies of Annual Report (Balance Sheet and Profit & Loss Account) of last 03 years

The technical bid should contain supporting documents to prove all claims of the company. Company’s expertise needs to be highlighted and submitted to ADA to facilitate assessment of capabilities of company towards meeting the requirements by the Technical Evaluation Committee.

**26. PAYMENT TERMS**

The activities to be carried out for each build will be identified from the areas mentioned in section 5 of SOW/Technical Specification. In the beginning of every milestone, the activities to be taken up will be identified from the areas listed depending on the project need and priority. The schedule shall be discussed for the same between supplier and acquirer team and mutually agreed upon. 288 Man months effort is estimated to carry out the activities mentioned for 7 milestones. The project timeline with the milestones is given below:

T0- Deployment of all resources and Start of the Project, **T0 should not be more than 21 days from the Date of Purchase Order.**

Milestone Number	Description	Time Line	Cumulative Payment
1	Build 1	T0 + Build duration* : T1	15%
2	Build 2	T1 + Build duration* : T2	30%
3	Build 3	T2 + Build duration* : T3	45%
4	Build 4	T3 + Build duration* : T4	60%
5	Build 5	T4 + Build duration* : T5	75%
6	Build 6	T5 + Build duration* : T6	90%
7	Build 7 + Knowledge Transfer (KT)	T6 + Build duration* : T7 - 2027	100%

\* - Build duration varies between 3 months to 6 months

The documents with co-ordination from ADA shall be submitted as per the applicability. If any requirement changes are required to be implemented for aircraft safety related issues, an emergency software version is required to be developed in lieu of the software version planned for the milestone to the extent of additional work undertaken

**27. Acceptance criteria**

- a. Supplier shall meet the requirements as per section 5 of SOW/Technical Specification.
- b. Acceptance shall be milestone linked. One milestone per build is visualized.
- c. Milestone completion letter from team ADA after each milestone shall be required to acceptance.
- d. The approved mile stone report shall be submitted along with deliverables for payment.

**Part III - Vendor Qualification Criteria**

1. Supplier's project team experience in Airworthy Avionics LRUs Design, Development, testing and Certification for of Military Avionics LRU's would be considered desirable. Vendor shall provide the proof for the same during the submission of the bid.
2. The supplier having CEMILAC Certificate for Design house or Military Avionics LRUs would be considered desirable. Vendor shall provide the proof for the same during the submission of the bid.
3. Minimum SEI CMMI Level 3 or AS 9100 Rev C or ISO 9001:2015 certification is mandatory. Vendor shall provide the proof for the same during the submission of the bid.
4. Supplier shall not subcontract the project.
5. Acquirer shall explain the status, architecture, the development and testing mechanisms to the supplier.
6. Supplier's project team should have executed successfully minimum of 4 different projects in the domain areas specified in section 5 with each project span of minimum 6 months. Vendor shall provide documentary evidence for the execution of these projects with satisfactory feedback from the user during the submission of bids as per Annexure – 1 and Annexure – 2.
7. During technical bid evaluation, vendor shall demonstrate the technical knowhow and skills in the areas in section 3 for Proof Of Concept (POC).
8. The non-submission of these documents and non-completion of POC would lead to rejection of technical bids.
9. Supplier shall produce Software development plan in compliance with ADA software development process.
10. Based on the performance demonstrated by the supplier scope of the work shall be evaluated for the improvement. In case of the non-performance, acquirer has the right to terminate the contract at a suitable stage of the product.
11. Resource plan shall address attrition risk of the firm.
12. Environment required for executing the project shall be provided by ADA
13. Shall deploy team members including a dedicated Team Leader as single point of contact for the project based on Deployment requirement mutually agreed.
14. All items developed by supplier under this project are proprietary of ADA and shall not be disclosed and supplier does not have any rights on the software/artifacts developed.
15. Periodical project review shall be conducted with the supplier at least once in two weeks.
16. All artifacts developed during the project life cycle shall be submitted to ADA with source code and documentations at appropriate stages.
17. Supplier shall sign Non-DISCLOSURE Agreement with ADA.
18. Supplier shall maintain highest level security for the items developed and for the development environment for this project.

**2. Work Share between ADA team and the Supplier**

The Process to be followed is briefly described below:

- 2.1 ADA hereafter referred to as the acquirer of the project shall submit the set of Software Requirements and interface control requirement(s) which need to be developed and tested.
- 2.2 Supplier who is responsible for the supplying the developed and tested subsystem to ADA hereafter referred to as supplier and shall be responsible for software development, testing, co-ordination, documentation and certification.
- 2.3 Supplier shall study the software requirements and interface requirements before implementation.
- 2.4 During the course of the study the supplier is encouraged to ask all the related queries clearly understanding the requirement(s). Acquirer shall give the required inputs to the supplier's project team during the development phase of the project.
- 2.5 Supplier shall maintain the process and configuration management for the sub systems using the tools specified and provided by the acquirer.

- 2.6 Supplier shall submit artifacts as per defined process. This shall be discussed and agreed upon at the start of the project.

### 3. Terms & Conditions

- 3.1 This job is for a period of maximum Three Years and not exceeding December 2027.
- 3.2 This indent is only for software migration, design, development & CSU/ CSC testing of ECFM-EU.
- 3.3 The SOW shall be required to be executed at ADA premises.
- 3.4 IPR of the software developed is with ADA and all the items developed by supplier under this project are proprietary of ADA and supplier does not have any rights on the software/artifacts developed.
- 3.5 Vendor shall take care of logistics for travelling to ADA premises.
- 3.6 Security procedures of ADA shall be followed for all the deployed resources.
- 3.7 Resource deployment of engineers shall be done in concurrence with ADA.
- 3.8 Supplier shall take the responsibility to address the resignations with appropriate replacements ensuring the schedules are not getting affected. However the change in the personnel needs to be intimated and approved by the ADA project coordinator.
- 3.9 Supplier shall deliver the manpower services who are on the permanent roles of the company with sincerity and by maintaining confidentiality.
- 3.10 Police verification letter to be obtained for the deployed resources before executing the work
- 3.11 Confidential agreement (NDA) to be signed by the supplier.
- 3.12 The working schedule shall be as per ADA norms.
- 3.13 Supplier shall ensure scheduling of usage of resources and ensuring that absence and attrition does not affect the deliverables.
- 3.14 Two years technical support shall be provided by vendor after the completion of work package to support for any bugs/ problems found in the present work during flight testing.

4. Bidders are required to furnish clause by clause compliance of specifications bringing out clearly the deviations from specification, if any. Bidders are advised to submit compliance statement for the i) Technical and ii) Techno-commercial parameters separately in the following format along with the Techno-Commercial Bid:

Para of RFP specifications / SOW (item-wise)	Specifications / SOW of item offered	Compliance to RFP specifications / SOW – whether Yes / No	Remarks (In case of non-compliance, deviation from RFP to be specified in unambiguous terms. In case of compliance, catalogue/brochure reference, if available, to be indicated)

### 5. Consignee details:

- Tech. Co-ordinator : Ms. Usha. G
- Address : Aeronautical Development Agency,  
P.B.No.1718, Vimanapura Post,  
Bangalore – 560017
- Contact details : 080-2508 7827/ 9741003706
- Email : [usha-g.ada@gov.in](mailto:usha-g.ada@gov.in)

**MODEL OF PERFORMANCE SECURITY BANK GUARANTEE**

(To be issued by any Scheduled Commercial Bank on non-judicial stamp paper, as applicable)

Guarantee No.....

Date:.....

To

Aeronautical Development Agency  
Min. of Defence, Govt. of India  
P.B.No.1718, Vimanapura Post  
Bangalore - 560 017, INDIA

Dear Sirs,

Sub: Your Purchase Order No.....dt.....for.....

1. You have placed a \*Purchase Order/Contract vide Number as given above with M/s..... (hereinafter referred to as the Supplier) for the supply of ..... for LCA (hereinafter referred to as Products) for the price and on the terms and conditions contained in the said Purchase Order/Contract.
2. In accordance with the terms of said \*Purchase Order, the supplier is required to furnish an acceptable Bank Guarantee for .....% (in words) of the said Purchase Order/value, equal to USD/Rs..... (USD/Rs..... only) to be valid till the successful execution of the said purchase order/date of completion of warranty period of Products(s) in fulfillment of all the obligations under the said Purchase Order/Contract. For this purpose, you have agreed to accept our guarantee.
3. In consideration thereof, we hereby at the request of the Supplier, expressly, irrevocably and unconditionally undertake and guarantee to refund to you on demand and without demur and without reference to the Supplier the said payment of USD/Rs..... (Rs.....only) on receipt of your intimation that the Supplier has not fulfilled the conditions of the \*Purchase Order/Contract.
4. This guarantee shall not be revoked without your express consent and shall not be affected by your granting any indulgence to the Supplier, which shall include but not be limited to postponement from time to time of the exercise of any powers vested in you or any right which you may have against the Supplier and to exercise the same in any manner at any time and either to enforce or forbear to enforce any covenant contained or implied in the said \*Purchase Order/Contract or any other course or remedy or security available to you, and our Bank shall not be released from its obligations under this guarantee by your exercising any of your rights with reference to matters aforesaid or any of them or by reason of any other act or forbearance or other acts of omission or commission on your part or any other indulgence shown by you or by any other matter or thing whatsoever which under law would, but for this provision, have the effect of relieving our Bank from its obligation under this guarantee.
5. We also agree that you shall be entitled at your option to enforce this guarantee against our Bank as a principal debtor by a mere demand in writing from you which shall be conclusive evidence to us that such repayment is due and payable to you under the terms of the said \*Purchase Order/Contract and shall be binding on us notwithstanding any other security, or guarantee that you may have in relation to the Supplier's liabilities in respect of the premises.

This guarantee shall not be affected by any change in the constitution of our Bank or the Supplier or for any other reason whatsoever.

- 6. This bank guarantee shall be valid till the successful execution of the said purchase order/date of completion of warranty period of Products(s) and shall expire, unless extended on ..... The bank will, however, honor claims submitted by you up to 60 working days after the expiry date.
- 7. Notwithstanding any thing herein contained, our liability under this guarantee is restricted to USD/Rs..... (USD/Rs..... only). This guarantee in original shall be returned to us duly discharged upon final expiry of the validity.
- 8. Payment by us to you will be made immediately on receipt of your written request making reference to this guarantee and on demand.

Date  
Witness:

Authorised Signatory  
Seal of the Bank

*\*delete whichever is not applicable*

**MILESTONE COMPLETION AND ACCEPTANCE CERTIFICATE**

**Subject :** \_\_\_\_\_

**P.O. No.** \_\_\_\_\_ **dated** \_\_\_\_\_

**Milestone No.** \_\_\_\_\_

**Invoice No.** \_\_\_\_\_

This is to certify that M/s ..... have completed the task pertaining to Milestone No..... satisfactorily and have also submitted all relevant documents according to Scope of Work stipulated in subject PO and the result of Work submitted have been studied and accepted by Aeronautical Development Agency (ADA).

The Work was carried out completely and in accordance with the terms of the above-mentioned Contract, and fully conform to the Schedule / Technical Scope of Work (SOW) of the Contract.

For and on behalf of  
**Aeronautical Development Agency**

Project Co-ordinator

**Countersigned by**

**Project Director/Technology Director**

Non-Disclosure Agreement

This Agreement is made effective this ("Effective Date")

Between

- (i) ; and
- (i)

Both ----- and ----- are hereinafter referred to collectively as "the Parties" and individually referred to as a "Party".

1. Definitions

1.1 For the purposes of this Agreement:

- (a) "Confidential Information" shall mean this Agreement and all information of a commercial, technical or financial nature which is directly or indirectly disclosed by the Disclosing Party (or a member of its Group or another person on behalf of the Disclosing Party as applicable) (whether before, on or after the date of this Agreement) Confidential Information includes, without limitation, any information relating to, or materials of whatever nature embodying, the Disclosing Party's products, services, operations, plans or intentions, product information, protocols, intellectual property, data, know-how, secret formulae, processes, designs, photographs, drawings, specifications research and development, trade secrets, opportunities, business affairs, customer and clients, business plans, software code, listings, holdings, alliances, investments and transactions, regardless of form, format or media and whether communicated or obtained through meetings, documents, correspondence or inspection of a tangible item that is in each case either (i) by its very nature confidential; (ii) is marked as such; or (iii) it is reasonable to assume to be confidential from the context;
- (b) "Disclosing Party" means the Party disclosing Confidential information to the Receiving Party;
- (c) "Group" shall mean in relation to a Party, that Party, each and any subsidiary or holding company of that Party, and each and any subsidiary of such holding company;
- (d) "Purpose" means discussions and exchange of information related to [.....];
- (e) "Receiving Party" means the Party who receives Confidential Information from the Disclosing Party; and
- (f) "Representatives" shall mean employees, agents, contractors, directors and other professional advisers of the Receiving Party and the Receiving Party's Group.

2. Term and Termination

2.1 This Agreement shall continue in full force and effect for a period of one (1) year from the Effective Date unless earlier terminated by either Party upon the provision of thirty (30) days' notice in writing to the other. Each Party hereby undertakes to keep confidential all of the other Party's Confidential Information that it may acquire in any manner for a period of five (5) years after the termination or expiration of this Agreement.

2.2 At the expiration or in the event of early termination of this Agreement, or at any time on receipt of a written request from the Disclosing Party, the Receiving Party shall:

- (a) immediately discontinue all use of the Disclosing Party's Confidential Information disclosed under this Agreement;
  - (b) return forthwith all documents and/or other materials (whether in paper, electronic or other form) bearing or incorporating the said Confidential Information or any of it, or certify that same have been destroyed; and
  - (c) ensure that each of its Representatives who have been given access to the Confidential Information pursuant to the terms of this Agreement are aware that the continued use of same for the Purpose is no longer permitted.
- 2.3 The obligations in Clause 2.2(b) to return or destroy Confidential Information shall not apply to:
- (a) minutes or papers of any meeting of the Receiving Party's board of directors, or to those of a duly appointed committee of such a board; or
  - (b) the retention of Confidential Information by the Receiving Party and its Representatives to comply with applicable law, rule, regulation, professional record-keeping obligations, internal compliance procedure and internal document retention policies or any competent judicial, governmental, supervisory or regulatory body.
- 3. Undertakings and Acknowledgements**
- 3.1 In consideration of each Party disclosing its Confidential Information to the other, each Party hereby undertakes to:
- (a) keep the Confidential Information strictly confidential, including, without limitation, taking the measures set out in Clause 5;
  - (b) use the other Party's Confidential Information exclusively for the Purpose;
  - (c) not disclose the other Party's Confidential Information to any person, and prevent any such disclosure, except as expressly permitted by the terms of this Agreement; and
  - (d) keep the fact of the existence of this Agreement, the circumstances surrounding its creation, and the transaction contemplated by it confidential and not disclose same in any way whatever, whether by way of public announcement, individually to any third party, or otherwise, without the prior written approval of the other Party.
- 3.2 Parties acknowledge and agree that:
- (a) nothing in this Agreement shall be construed as a waiver by either Party of its proprietary rights in any of the Confidential Information it discloses hereunder;
  - (b) no warranty is given by either Party that the Confidential Information supplied by it will be complete and accurate and fit for any particular purpose, including the Purpose;
  - (c) nothing in this Agreement shall be construed as a grant by one Party to the other of any form of licence to use any of the Confidential Information it discloses hereunder other than for the Purpose, or to deal in any way with any of the intellectual property rights therein; and
- 3.3 The Disclosing Party warrants that it has the right to disclose the Confidential Information to the Receiving Party and to authorise the Receiving Party to use the Confidential Information for the Purpose.
- 4. Exceptions**
- 4.1 The restrictions on the Parties under Clause 3.1 shall not apply to Confidential Information that:
- (a) is or becomes generally available to the public through no act of default on the part of the Receiving Party or any of its Representatives; provided that, for the avoidance of doubt, disclosure to a governmental entity, domestic or foreign, shall not be considered to be "generally available to the public"; or
  - (b) the Receiving Party can prove by documentary evidence produced to the Disclosing Party that the Confidential information was already in the Receiving Party's

possession and at its free disposal before the disclosure made pursuant to this Agreement; or

- (c) is independently developed by the Receiving Party; its officers, employees, agents or contractors, without reference to the Disclosing Party's Confidential Information; and/or
- (d) is subsequently disclosed to the Receiving Party without any obligations of confidence by a third party who has not derived it directly or indirectly from either Party to this Agreement.

4.2 The Receiving Party may disclose Confidential Information that it is required to disclose by law, by any governmental or other regulatory authority or by a court or other authority of competent jurisdiction provided that, to the extent it is legally permitted to do so, it gives the Disclosing Party as much notice of this disclosure as possible.

## 5. Confidentiality Measures:

5.1 In order to secure the confidentiality attaching to the Confidential Information, each Party shall:

- (a) subject to Clause 5.2, ensure that access to the other Party's Confidential Information is allowed exclusively to those of its Representatives who are under a written agreement (which may be as part of their employment or contract for work) to preserve as confidential any information and knowledge which is entrusted to their employer or, in the case of a contractor, their client;
- (b) keep separate all of the other Party's Confidential Information and all information generated by it based thereon from all of its other documents and records;
- (c) not make or retain any copies of the other Party's Confidential Information or create any documents or other material of whatever nature containing or reflecting any of the other Party's Confidential Information except as necessary for the Purpose;
- (d) use the same security measures and degree of care to preserve and safeguard the other Party's Confidential Information as they use to preserve and safeguard their own Confidential Information and in any case no less than reasonable care; and
- (e) comply with all other reasonable requirements imposed by the Disclosing Party in relation to the protection of its Confidential Information.

5.2 For the avoidance of doubt, each Party further acknowledges and agrees that it shall be wholly responsible for breaches of this Agreement arising from the acts and/or omissions of its respective Representatives.

## 6. General:

6.1 The Parties acknowledge and agree that the Confidential Information is of significant commercial value to the relevant owners and that any breach by one Party of the terms of this Agreement could cause irreparable damage to the other Party's business. Accordingly, without prejudice to any other rights or remedies available to either Party, whether at law or in equity, each Party acknowledges and agrees that damages alone may not be an adequate remedy for a breach of this Agreement and that each Party shall be entitled to seek the remedy of injunction in the event of any actual, threatened or anticipated breach by the other of any of the terms of this Agreement.

6.2 This Agreement is personal to the Parties and shall not be assigned or otherwise transferred, in whole or in part, by either Party without the prior written consent of the other.

6.3 Neither Party shall describe itself or hold itself out as an agent of the other and nothing in this Agreement shall be construed as creating the relationship of partnership or principal and agent between the Parties.

6.4 This Agreement constitutes the entire understanding and agreement between the Parties relating to the protection and use of Confidential Information disclosed hereunder and

- supersedes any and all prior agreements (whether written or oral) or understandings relating thereto. No Party shall be bound by any additional or other representation, condition or promise unless expressly agreed in writing and signed by a duly authorized representative of that Party.
- 6.5 All non-legal notices, approvals, consents and other communications required or permitted under this Agreement will be in writing and delivered by email with confirmation of delivery, by courier or reputable international delivery service with written verification of receipt, or by registered mail, return receipt requested, postage prepaid, and in each instance will be deemed given upon receipt. All such notices, approvals, consents and other communications will be addressed to the address set forth in this Agreement or to such other address as may be specified by either Party to the other in accordance with this Clause.
  - 6.6 All legal notices under this Agreement will be in writing and delivered by courier or reputable international delivery service with written verification of receipt, or by registered mail, return receipt requested, postage prepaid, and in each instance will be deemed given upon receipt. All legal notices will be addressed to the address set forth in this Agreement or to such other address as may be specified in writing by either Party to the other from time to time
  - 6.7 If any provision of this Agreement is found to be unenforceable, the remainder shall be enforced as fully as possible and the unenforceable provision shall be deemed modified to the limited extent required to permit its enforcement in a manner most closely representing the intention of the Parties as expressed herein.
  - 6.8 This Agreement may be executed in counterparts, each of which will be deemed an original, but all of which together will constitute one and the same instrument. Transmission of the executed signature page of a counterpart to this Agreement by email or other electronic means shall take effect as delivery of an executed counterpart of this Agreement.
  - 6.9 The construction, validity and performance of this Agreement and all matters arising from or connected with it shall be governed in all respects by Laws of Republic of India.
  - 6.10 Save for any application for injunctive relief made by either Party pursuant to Clause 6 herein (which may be made in any court of competent jurisdiction), each Party irrevocably agrees that any dispute or claim of any kind whatever arising under, out of, or in connection with this Agreement shall be subject to the exclusive jurisdiction of the courts at Bangalore.
  - 6.11 Any claims, differences or disputes under or in relation to this Agreement shall be resolved amicably by mutual discussion failing which the same shall be referred to the Sole Arbitrator appointed by consent of both the parties. Any claims, differences or disputes under or in relation to this Agreement will be referred to Arbitration in accordance with Arbitration and Conciliation Act 1996 and the venue of arbitration will be Bangalore. The language of the arbitration shall be English. The decision/award of such an arbitrator shall be binding on the parties hereto and enforceable in any court of competent jurisdiction.

**Signed** by a duly authorised representative of the Parties

Signature:  
Name:  
Title:  
Date:

Signature:  
Name:  
Title:  
Date:

**EMD Bank Guarantee Format**  
[To be issued by Scheduled Commercial Bank

Guarantee No.....

Date.....

To  
M/s. Aeronautical Development Agency  
Min. of Defence, Govt. of India  
P.B. No.1718, Vimanapura Post  
Bangalore – 560 017, India

Dear Sirs,

1. Whereas ..... (hereinafter called the ‘Bidder’) has submitted their offer Ref.....dated..... for the supply of ..... (hereinafter called the ‘Bid’) against the Buyer’s Request for proposal No. ....
2. KNOW ALL MEN by these presents that WE ..... of ..... having our registered office at ..... are bound unto M/s. Aeronautical Development Agency, Min. of Defence, Govt. of India, P.B.No.1718, Vimanapura Post, Bangalore – 560 017 (hereinafter called the “Buyer”) in the sum of ..... for which payment will and truly to be made to the said Buyer, the Bank binds itself, its successors and assigns by these presents.
3. Sealed with the Common Seal of the said Bank this ..... day of ..... 20.....
4. The conditions of obligations are –
  - (1)If the Bidder withdraws or amends, impairs or derogates from the Bid in any respect within the period of validity of this tender.
  - (2)If the Bidder having been notified of the acceptance of his tender by the Buyer during the period of its validity.
    - a) If the Bidder fails to furnish the Performance Security for the due performance of the contract.
    - b) Fails or refuses to accept / execute the contract.

WE undertake to pay the Buyer up to the above amount upon receipt of its first written demand, without the Buyer having to substantiate its demand, provided that in its demand the Buyer will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition or conditions.
5. This guarantee will remain in force up to and including 45 days after the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date.

.....  
(Signature of the authorized officer of the Bank)  
Name and designation of the officer  
Seal, name & address of the Bank address of branch

TENDER ACCEPTANCE LETTER

(To be filled by Bidder and uploaded as part of Techno-Commercial Bid)

(To be given on Company Letter Head)

Date:

To,

\_\_\_\_\_  
\_\_\_\_\_**Sub: Acceptance of Terms & Conditions of Tender.**

RFP / Tender Reference No: \_\_\_\_\_

Name of Tender/Supply/Work: \_\_\_\_\_

Dear Sir,

1. I / We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the website(s) namely:  
\_\_\_\_\_  
as per your advertisement, given in the above-mentioned website(s).
2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. \_\_\_\_\_ to \_\_\_\_\_ (including all documents like annexure(s), schedule(s), etc.), which will form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
3. The corrigendum(s) issued from time to time by your department/ organizations related to this tender too have also been taken into consideration, while submitting this acceptance letter.
4. I / We hereby unconditionally accept the tender conditions of above-mentioned tender document(s) / corrigendum(s) in its totality / entirety.
5. I / We hereby undertake to respond to the "techno-commercial queries" (if any) which will be communicated by TCEC/ADA to our email id \_\_\_\_\_ or to our Fax No: \_\_\_\_\_ within the time limit set by TCEC without fail. I / We hereby agree that failure to respond for queries raised by TCEC within the set time limit will call for rejection of our bid/offer apart from I / We will be treated as "Default-Bidder".
6. I / We do hereby declare that our firm/company has not been blacklisted / debarred by any Govt. Department/Public Sector undertaking.
7. I / We hereby agree that the Terms & Conditions of SO/Contract will be followed without any deviation, in case SO / Contract is placed on us after due procurement process, failing which I / We will be treated as "Default-Bidder". I / We also aware that the detail of such Default-Bidder is being uploaded in the "Defaulter Vendor Data Base". Once the Bidder/Vendor becomes **three times** default, then such Bidder/Vendor will become **in-eligible** to receive any kind of tender enquiries for a period of **one** (1) year.
- 8) I / We certify that all information furnished by the our firm/company is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/organization shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy.

Yours faithfully,

(Signature of the Bidder, with Official Seal)



Annexure -A

**SOW for Migration, Design, development and CSU/CSC level testing of “Environmental Control and Fuel Monitor- Electronic Unit (ECFM-EU)” Software**

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# 1 Introduction

## 1.1 Project Overview

Environmental Control and Fuel Monitor- Electronic Unit (ECFM-EU) is one of the Mission critical units in LCA Air Force Mk2 aircraft, which plays a major role in Real time monitor & control of the Aircraft ECS, Fuel and oxygen systems. It sends Display & warning information of ECS, fuel and oxygen systems to mission computer on MIL-STD-1553B AVIONICS bus and Ethernet switch for cockpit display. It sends critical fuel parameters to Backup computer and Cockpit Interface Unit (BCCIU) through Ethernet switch.

ECFM-EU interacts with the On-Board Oxygen Generating System-Electronic Control Unit (OBOGS -ECU) through RS422 serial interface. ECFM-EU interacts with the Ground Refuel Panel (GRP) unit through RS422 serial interface.

The hardware is based on MPC5777C power PC (SPC5777CDK3MMO4) and additional I/Os are integrated to meet the ECFM-EU functional requirements. ECFM-EU software needs to be developed, tested and certified as per DO-178 guidelines Level A to meet the project requirements. It is planned to carry out the development in C/C++ code. Also certain proprietary modules developed in ADA 95 language based on Motorola 68332 microcontroller needs to be migrated to C/C++ language.

This SOW is for migration, design, development & CSU/CSC testing of ECFM-EU software.

## 1.2 Scope

The probable major areas of activities that need to be carried out by the vendor are listed below:

- a. Migration of the existing ADA code to C/C++ code in compatible with MPC 5777C power PC
- b. Wrapper library development for device drivers and integration for the following interfaces

- i. Hardware initialization
  - ii. Memory device read/write : FLASH, NVRAM, RAM etc
  - iii. Discrete inputs
  - iv. Analog inputs
  - v. Frequency inputs
  - vi. Discrete outputs
  - vii. 1553B
  - viii. Rs232
  - ix. RS422
  - x. Rs485
  - xi. Timers
  - xii. TSN Ethernet
- c. Design and development of the following modules as per DO-178 guidelines :
- 1. Inter- lane data Management module
  - 2. Exception and Interrupts handling module
  - 3. Timer handling modules
  - 4. SPOST test modules
  - 5. CBIT test modules
  - 6. Error handling modules
  - 7. Control & Monitoring modules for Aircraft ECS, Fuel & Oxygen systems
  - 8. TSN Data transmission module
  - 9. TSN Data receive module
  - 10. Data log and retrieval modules
  - 11. Insitu-flashing based on ARINC 615A/ARINC665-3
  - 12. Multi core management module
- d. CSU/CSC level testing of all the modules as per DO-178 guidelines
- e. Documentation as per DO-178 guidelines
- f. SQA and IV&V would also be carried out by independent Teams of Vendor as per DO-178 guidelines
- g. The Vendor would carry out support for higher level Requirements generation

Detailed description of Scope is mentioned in Section 5.

## **2 Supplier - Pre-requisite Qualification for Execution of Work Package**

1. Supplier's project team experience in Airworthy Avionics LRUs Design, Development, testing and Certification for of Military Avionics LRU's would be considered desirable. Vendor shall provide the proof for the same during the submission of the bid.
2. The supplier having CEMILAC Certificate for Design house or Military Avionics LRUs would be considered desirable. Vendor shall provide the proof for the same during the submission of the bid.
3. Minimum SEI CMMI Level 3 or AS 9100 Rev C or ISO 9001:2015 certification is mandatory. Vendor shall provide the proof for the same during the submission of the bid.
4. Supplier shall not subcontract the project.
5. Acquirer shall explain the status, architecture, the development and testing mechanisms to the supplier.
6. Supplier's project team should have executed successfully minimum of 4 different projects in the domain areas specified in section 5 with each project span of minimum 6 months. Vendor shall provide documentary evidence for the execution of these projects with satisfactory feedback from the user during the submission of bids as per Annexure – 1 and Annexure – 2.
7. During technical bid evaluation, vendor shall demonstrate the technical knowhow and skills in the areas in section 3 for Proof Of Concept (POC).
8. The non-submission of these documents and non-completion of POC would lead to rejection of technical bids.
9. Supplier shall produce Software development plan in compliance with ADA software development process.
10. Based on the performance demonstrated by the supplier scope of the work shall be evaluated for the improvement. In case of the non-performance, acquirer has the right to terminate the contract at a suitable stage of the product.
11. Resource plan shall address attrition risk of the firm.
12. Environment required for executing the project shall be provided by ADA
13. Shall deploy team members including a dedicated Team Leader as single point of contact for the project based on Deployment requirement mutually agreed.
14. All items developed by supplier under this project are proprietary of ADA and shall not be disclosed and supplier does not have any rights on the software/artifacts developed.
15. Periodical project review shall be conducted with the supplier at least once in two weeks.

16. All artifacts developed during the project life cycle shall be submitted to ADA with source code and documentations at appropriate stages.
17. Supplier shall sign Non-DISCLOSURE Agreement with ADA.
18. Supplier shall maintain highest level security for the items developed and for the development environment for this project.

### 3 Proof Of Concept (POC)

During technical bid evaluation, vendor shall demonstrate the technical knowhow and skills in the areas mentioned below. The problem statement covering the below area will be shared during TEC. Vendor needs to demonstrate the solution within three weeks' time at ADA.

Sl.No.	Areas to be demonstrated	Proof Of Concept (POC) Deliverables
1.	Generation of control flow diagram, data flow diagram, sequence diagram as per OOAD for the problem statement	Control flow diagram, data flow diagram, sequence diagram as per OOAD for the problem statement
2.	Generation of system and software architecture design artefacts for the problem statement	System and software architecture design artefacts for the problem statement
3.	ADA 95 language to C/ C++ code migration	C language project code to run in PC based environment for the problem statement
4.	1553B, RS422, RS232 data transfer for the problem statement	Interface design understanding using 1553B, RS422, RS232 data transfer for the problem statement

### 4 Work Share between ADA team and the Supplier

The Process to be followed is briefly described below:

1. ADA hereafter referred to as the acquirer of the project shall submit the set of Software Requirements and interface control requirement(s) which need to be developed and tested.
2. Supplier who is responsible for the supplying the developed and tested subsystem to ADA hereafter referred to as supplier and shall be responsible for software development, testing, co-ordination, documentation and certification.
3. Supplier shall study the software requirements and interface requirements before implementation.
4. During the course of the study the supplier is encouraged to ask all the related queries clearly understanding the requirement(s). Acquirer shall give

the required inputs to the supplier's project team during the development phase of the project.

5. Supplier shall maintain the process and configuration management for the sub systems using the tools specified and provided by the acquirer.
6. Supplier shall submit artifacts as per defined process. This shall be discussed and agreed upon at the start of the project.

## **5 Scope**

This section describes the areas of the activities involved in the development of the software. However during the beginning of every mile stone, requirements that are to be taken up in the listed area as part of each build will be defined during the project planning phase.

This SOW is intended to address in six builds covering one or more areas.

### **5.1 Migration of existing ADA language code to C/C++ language**

ADA will provide the existing code ADA code compiled in ADA MULTI GHS Ver.4.2.4 IDE for MC68332 microcontroller. The code needs to be redesigned using OOAD and migrated to the C/C++ language compatible in the new hardware platform. The required C/C++ compilers, the hardware units would be provided by ADA.

- The existing CSCI code written in ADA language consists of 188 files, Approx 100K SLOC and the EXE size is approx 1.5 MB.
- More details would be provided during project execution stage

### **5.2 Wrapper library development for Device Drivers and integration for bare board**

Post migration to C/C++ code, the following device drivers provided by OEM of the hardware needs to be integrated with the project.

- i. Hardware initialization
- ii. Memory device read/write : FLASH, NVRAM, RAM etc
- iii. Discrete inputs
- iv. Analog inputs
- v. Frequency inputs

- vi. Discrete outputs
- vii. 1553B
- viii. Rs232
- ix. RS422
- x. Rs485
- xi. Timers
- xii. TSN Ethernet

### **5.2.1 Hardware initialization and memory read/write modules**

- 1. Reading and writing of various memory devices.
- 2. Processor configuration
- 3. Inter Processor Communication
- 4. Debugging of problems
- 5. Integration of the module with other modules.

### **5.2.2 Discrete and Analog Input Module**

- 1. Reading of the data from the hardware
- 2. Processing / sampling of the data based on algorithms provided by ADA
- 3. Packing of the data in 1553B format
- 4. Debugging of problems
- 5. MATLAB based plot generation
- 6. Integration of the module with other modules

### **5.2.3 Discrete Output Module**

- 1. Unpacking of the data in 1553B format
- 2. Processing of the data based on algorithms provided by ADA
- 3. Writing of the data from the hardware
- 4. Debugging of problems
- 5. MATLAB based plot generation
- 6. Integration of the module with other modules

### **5.2.4 Frequency Input Module**

- 1. Unpacking / Packing of the data in 1553B format
- 2. Processing of the data based on algorithms provided by ADA
- 3. Writing/reading of the data from/to the hardware
- 4. Debugging of problems

5. MATLAB based plot generation
6. Integration of the module with other modules

### **5.2.5 Other Interface modules**

1. Configuration , Initialization and Handling of user defined of timers
2. Handling of user defined and hardware interrupts and their sub routines
3. Configuration, Initialization , protocol implementation and handling of various chips like 1553B , RS422, Rs485, RS232, etc

### **5.2.6 TSN interface updation**

ADA would provide TSN interfaces which needs to be integrated with the project.

### **5.3 Development and CSU/ CSC level testing:**

The following modules needs to be developed, tested at CSU/ CSC level and integrated

#### **5.3.1 Inter- lane data Management module**

ECFM-EU consist of two redundant lanes which can function identically and there is a high speed serial interface between both lanes. The logic is built such a way that failure of active lane shall trigger the stand by lane to take over as active lane. On failure of one lane, other healthy lane takes over the functionalities with switching time less than 100 ms. Lane changeover form Lane 1 to Lane 2 and vice versa is allowed any number of times in the event of failure of current ACTIVE Lane provided STBY Lane is healthy.

In all the above scenarios, the data transfer between both the lanes shall be carried out through inter-lane data management module.

### 5.3.2 Exception and Interrupts handling module

User defined, language specific and processor related exception handlers shall be implemented in this module. The module shall update the respective error variables when failure and system exception occurs.

### 5.3.3 Timer handling modules

Various timer handling modules shall be implemented in this modules.

### 5.3.4 SPOST test modules

On power up, the software needs to carry out short Power On Self tests to check the health of the hardware for each lane .The following checks shall be carried out during SPOST:

- CPU check: Some simple instructions shall be executed and checked to ensure CPU health.
- Memory checks: Read/Write check shall be performed on memory devices.
- Input/ Output check: Discrete inputs/outputs shall be checked by a discrete input and discrete output looped back.
- LCL check: LCL shall be checked by both the lanes
- WDT check: WDT shall be checked for its typical functionalities.
- AI\_ref check: AI reference signal uniquely identified shall be checked to test the AI circuitry.
- Lane1\_28V\_DC\_DC\_Converter\_Check: Lane1 28V DC to DC converter shall be checked
- Lane2\_28V\_DC\_DC\_Converter\_Check: Lane2 28V DC to DC converter shall be checked.
- Internal voltages: +5V, +15V, -15V / applicable internal voltages shall be checked.
- Any other checks if required would be defined during project execution phase.

During SPOST, the SPOST-in- progress bit shall be set. After completion of SPOST, the corresponding status bits shall be updated in MSWs depending on the results of the above mentioned tests.

### 5.3.5 CBIT test modules

Software shall perform CBIT (Continuous Built In Test) periodically to check

the health status of hardware resources which will be a sub set of the checks performed during SPOST. The module shall update MSWs based on test results. While testing, test programs shall not interfere with the normal operation of the unit.

### **5.3.6 Error handling modules**

This module shall check the error bits set in MSWs and shall update equipment failure present. Error bit shall get set if CBIT fails. Setting change in failure bit of MSW shall reflect change in status of bits in Mode and status (MSW) word. On setting of EU failure, software shall perform lane change over function.

### **5.3.7 Control and Monitoring modules for Aircraft ECS, Fuel & Oxygen systems**

ECFM-EU interacts with various sensor subsystems to acquire and process inputs, executes control algorithms to deliver the desired actuation whereby the requisite control & monitor of the environment, fuel & Oxygen systems is achieved.

### **5.3.8 TSN Data transmission module**

This module shall pack the data received from all CSCs and CSUs in TSN format and transmit to mission computer for cockpit display of Display & warning information of ECS, fuel and oxygen systems and to transmit critical fuel parameters to BCCIU through TSN interface.

### **5.3.9 TSN Data receive module**

This module shall unpack the data received through TSN interface from mission computer and BCCIU. The unpacked data shall be distributed to the concerned CSCs and CSUs.

### **5.3.10 Data log and retrieval modules**

The required data shall be logged and retrieved through this module. On occurrence of failures, the failure information along with event time and MSWs shall be logged.

### **5.3.11 Insitu-flashing based on ARINC615A/ARINC665-3**

Insitu flashing based on ARINC 615A/ ARINC 665-3 standard shall be implemented.

### **5.3.12 Multi core management module**

The multi cores of the processors and the resource management for these processors shall be managed through this module.

## ***5.4 Testing activities as per DO-178 guidelines***

The following testing activities shall be performed:

1. RAM debugging
2. Test case generation based on the above requirements
3. Code walk through after implementation
4. CSU/ CSC level testing
5. Coverage analysis
6. Regression testing for minor changes
7. Verification of code for coding standard
8. Functionality testing for each modules
9. MATLAB based plot generation
10. Problems reporting
11. Snag and data analysis

The test tools required for testing would be provided by ADA

## 5.5 Documentation as per DO-178 guidelines

Shall generate all the design and test documents based on ADA inputs listed below as per DO-178 guidelines LEVEL as per applicability for each software build mentioned in section 9.

Sl. no	Document description
1.	Software Planning Process <ol style="list-style-type: none"><li>1. Plan for software aspects of certification (PSAC)</li><li>2. Software development plan</li><li>3. Software verification plan</li><li>4. Software configuration management plan</li><li>5. Software Quality Assurance plan</li></ol>
2.	Software Development Standards <ol style="list-style-type: none"><li>1. Software Requirement Standards</li><li>2. Software Design Standards</li><li>3. Software Code Standards</li></ol>
3.	Software Requirements Data
4.	Software Design Description
5.	Source and Executable Code
6.	Software Verification cases and procedures
7.	Software Verification Results
8.	Software Life Cycle Environment Configuration Index
9.	Software Configuration Index
10.	Problem Reports
11.	Software Configuration Management Records
12.	Software Accomplishment Summary
13.	Any other documents if requested by certifying agencies as per DO-178 guidelines

## 5.6 Software life cycle artifact Review and analysis (as part of QA) and IV&V

- a) Vendor shall carry out Software life cycle artifact Review and analysis (as part of QA)
  - i. Review of Code against Software Requirements
  - ii. Reviews and Audit as per QA Plan
  - iii. Code analysis using tools for static and dynamic analysis for DO-178B

- iv. Prepare and submit duly completed Review Reports, filled Checklists as applicable
  - v. Absorption of all review feedbacks of Artifacts of milestone prior to start of work on next Milestone
- b) Vendor shall carry out IV&V
    - i. IV&V Activities as per the Plan based on Standards and Methods for DO-178B
    - ii. Prepare and monitor schedule
    - iii. Carry out Configuration Control of the artifacts received and developed
    - iv. Ensure reuse of the artifacts
    - v. Prepare and submit duly completed Review Reports, filled Checklists as applicable
    - vi. Ensure Absorption of all review feedbacks of Artifacts of milestone prior to start of work on next Milestone
    - vii. Carry out Effectiveness Analysis and Resolution for problems/review comments
- c) Team Members, from the Vendor, carrying out review & SQA Audits and IV&V for DO-178B, shall ensure
    - i. Autonomy of activities and shall not have any participation in coding or testing (Low level/ CSU CSC)
    - ii. Correctness of software with respect to requirements through reviews and process adherence.

## **5.7 Requirement Generation**

- i. ADA would generate Requirement Changes
- ii. The Vendor shall provide support for Requirements generation.
- iii. The Vendor shall provide feedback on inconsistencies, if any, prior to proceeding with any of the work on lifecycle artifacts.
- iv. The vendor shall prepare impact analysis report w.r to all SDLC documents and SDLC activities affected for the requirements generated using in house software tool.

## **5.8 Process Requirements**

- i. The vendor shall follow the process defined currently to design, implement, test, the software

- ii. The process includes requirement analysis, design, development, implementation and testing
- iii. The process includes all the required documentation, reviews and coordination with different agencies.
- iv. The process includes testing of Test Jig Software enhancements .The actual Test jig software updates is not in the scope of this SOW
- v. The support activities for aircraft and other rigs includes carrying out Pre-installation checks, snag verification, flight data analysis and aircraft level testing

### **5.9 Performance Review and Assessment**

- i. Program manager of the Acquirer shall review the progress made by the deployed team on the work assigned in the presence of project manager from supplier side.
- ii. Monthly / weekly meeting shall be held at ADA for the work assignment, schedule and realization plans.
- iii. The acceptance of the mile stones are done based on the following:

#### **Development:**

- Coding as per coding standards
- Number of requirements Vs implementation of the same
- Number of problems resolved
- Release of artifacts for each build and for each mile stone duly accepted.
- Process adherence

#### **Testing :**

- Number of CSU/CSCs tested
- Number of test cases generated and executed
- Number of problems reported
- Number of snags attended
- Release of artifacts for each build and for each mile stone duly accepted.
- Process adherence

- iv. For each defined mile stone the completion report shall be generated by the supplier duly approved by project coordinator of Acquirer.

## 6 Technical Team Experience

- The deputed team leader shall have ME/BE/MSc in Computer science/ Electronics/Instrumentation/ Avionics/ Aeronautics with minimum experience of 5 years or more in Embedded system Design, development Testing and Maintenance.
- The deputed team members shall have ME/BE/MSc in Computer science/ Electronics/Instrumentation/ Avionics/ Aeronautics with minimum experience of 3 years or more in Embedded system Design, development, Testing and Maintenance. Experience in Avionics domain is desirable.
- The deputed team shall have experience in handling similar projects
- The team leader shall have knowledge in minimum 3 areas in each sub category and the team members shall have knowledge in minimum 2 areas in each sub category

**IDE** :GHS ADA MULTI 95/ 2012 ,Visual studio , QT, Eclipse , GNAT, C Compiler, Understand ADA , DIAB

**PROTOCOLs** : MIL-STD-1553B, TCP/IP, UDP, TSN , RS422, RS232, RS485, ARINC 615A, ARINC665-3, Data Acquisition etc

**Languages** : C, C++, VC ++, Ada 95/ 2012 , Embedded C

**Operating System**: Windows 64 bit, Vxworks, Bare board, QNX

**Embedded systems knowledge** : microcontroller, microprocessor, memory handling, interrupt handlers, timers, flashing of software to target, debugging , IO processing

**Standards** : DO- 178, DOD- 2167A , IEEE 12207

**Tools**: MAT LAB, SIMULINK, RT-RT, HCL One Test, IBM clear case, IBM rational publishing engine, IBM Rhapsody, LDRA

## 7 Items provided by ADA

All the tools, environment and other infrastructure including licenses needed shall be made available by ADA. The details of the hardware and the existing software will be provided during the project execution.

## 8 Technical evaluation

- a) During technical evaluation, vendor shall demonstrate the technical knowhow and skills as per POC mentioned in section 3.
- b) The vendor shall submit the proof of experience as per Annexure - 1
- c) The vendor shall submit the resumes of their regular employees along with technical bid whom they are planning deploy for this project that has experience and knowledge mentioned in SOW along with resource compliance as per Annexure-3.
- d) TEC committee will be evaluating the capability of the vendor based on PC, the vendor's experience on executing similar projects and the resource's experience. In case, TEC found the resumes submitted is not as per SOW, the vendor needs to submit alternate resumes as per SOW within a weeks' time.
- e) Vendor shall provide the confirmation for their willingness to deploy at least half of the resources which are found suitable by the TEC committee during the evaluation if PO is placed. In case, it is found that the vendor is not complying the same, ADA is having rights to terminate the PO.

## 9 Schedule and Milestone Deliverables

### 9.1.1 Schedule and Milestones

The activities to be carried out for each build will be identified from the areas mentioned in section 5. In the beginning of every milestone, the activities to be taken up will be identified from the areas listed depending on the project need and priority. The schedule shall be discussed for the same between supplier and acquirer team and mutually agreed upon. 288 Man months effort is estimated to carry out the activities mentioned for 7 milestones. The project timeline with the milestones is given below:

*Deployment of all resources*  
 T0—Start of the Project

Milestone Number	Description	Time Line	Cumulative Payment
1	Build 1	T0 + Build duration* : T1	15%
2	Build 2	T1 + Build duration* : T2	30%
3	Build 3	T2 + Build duration* : T3	45%
4	Build 4	T3 + Build duration* : T4	60%
5	Build 5	T4 + Build duration* : T5	75%

Milestone Number	Description	Time Line	Cumulative Payment
6	Build 6	T5 + Build duration* : T6	90%
7	Build 7 + Knowledge Transfer (KT)	T6 + Build duration* : T7 - 2027	100%

\* - Build duration varies between 3 months to 6 months

The documents with co-ordination from ADA shall be submitted as per the applicability.

If any requirement changes are required to be implemented for aircraft safety related issues, an emergency software version is required to be developed in lieu of the software version planned for the milestone to the extent of additional work undertaken

### 9.1.2 Effort Estimate

A. Requirements are categorized as following types and the each requirement may contain multiple types:

- Interface
- Display / GUI
- Timing / scheduler
- Logic
- Database

B. The minimum number of changes which need to be implemented and tested along with technical documentation ranges from 30-40 respectively for each mile stone.

C. More details would be provided during project execution stage

D. The onboard software shall be considered to be of level A of DO-178B/C equivalent

## **10 Acceptance criteria and Payment terms**

- a. Supplier shall meet the requirements as per section 5.
- b. Acceptance shall be milestone linked. One milestone per build is visualized.
- c. Milestone completion letter from team ADA after each milestone shall be required to acceptance.
- d. The approved mile stone report shall be submitted along with deliverables for payment.
- e. Payment shall be made mile stone based as follows:

<b>Sl.no</b>	<b>Description</b>	<b>Cumulative payment</b>
1	Mile Stone 1	15%
2	Mile Stone 2	30%
3	Mile Stone 3	45%
4	Mile Stone 4	60%
5	Mile Stone 5	75%
6	Mile Stone 6	90%
7	Mile Stone 7	100%
	<b>Total</b>	<b>100%</b>

## 11 Terms & Conditions

- i. This job is for a period of maximum Three Years and not exceeding December 2027.
- ii. This indent is only for software migration, design, development & CSU/ CSC testing of ECFM-EU.
- iii. The SOW shall be required to be executed at ADA premises.
- iv. IPR of the software developed is with ADA and all the items developed by supplier under this project are proprietary of ADA and supplier does not have any rights on the software/artifacts developed.
- v. Vendor shall take care of logistics for travelling to ADA premises.
- vi. Security procedures of ADA shall be followed for all the deployed resources.
- vii. Resource deployment of engineers shall be done in concurrence with ADA.
- viii. Supplier shall take the responsibility to address the resignations with appropriate replacements ensuring the schedules are not getting affected. However the change in the personnel needs to be intimated and approved by the ADA project coordinator.
- ix. Supplier shall deliver the manpower services who are on the permanent roles of the company with sincerity and by maintaining confidentiality.
- x. Police verification letter to be obtained for the deployed resources before executing the work
- xi. Confidential agreement (NDA) to be signed by the supplier.
- xii. The working schedule shall be as per ADA norms.
- xiii. Supplier shall ensure scheduling of usage of resources and ensuring that absence and attrition does not affect the deliverables.
- xiv. Two years technical support shall be provided by vendor after the completion of work package to support for any bugs/ problems found in the present work during flight testing.

## 12 Glossary

AI	Analog Input
BCCIU	Backup computer and Cockpit Interface unit
CSC	Computer Software Component
CSU	Computer Software Unit
CSCI	Computer Software Configuration Item
DI	Discrete Input
DO	Discrete Output
ECFM-EU	Environmental Control and Fuel Monitor-Electronic unit
GRP	Ground Refuel Panel
LRU	Line Replaceable Unit
LOC	Lines of code
RAM	Random Access Memory
NVRAM	Non volatile RAM
DPRAM	Dual Port RAM
SOW	Statement of work
SLOC	Software Lines of code
TSN	Time Sensitive Network

**Annexure –1:Company Experience Details Template**

S. No	Requirements	Technical areas as per SOW	PO description with details of work carried out	Reference PO	PO relevance w.r.t ADA SOW section No	No of resources deployed for the PO

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**Annexure –2: Company Details Template**

<b>Sl.no</b>	<b>Parameter</b>	<b>Information</b>
1.	Year of Establishment of Company	
2	Total employee strength in India	
3	Years of experience in the relevant domains demanded by SOW and the tools used	
	Embedded software development	Years :      Tools:
	Test rig software development	
	Simulation software development	Years :      Tools:
	RTOS based Software development	Years :      Tools:
	Certification	Years :      Tools:
	Any Other Areas	Years :      Tools:
4.	Total employees currently working in the company with relevant experience demanded by SOW	
5.	Mitigation Plan for the milestone completion	

**Annexure -3 : Experience Compliance Matrix for the Resources planned to be deployed by the vendor**

Sl. no	Section no of SOW	Requirement	Details
1.		Name of the resource	
2.		No of Years / months of experience in vendor's firm	
3.		Qualification Compliance w.r.t SOW	
4.		Experience Compliance w.r.t SOW	Project name : Name of the project Works carried out : Description of the work carried out by the resource for the project No of years / months worked in the project:
5.		Skill set Compliance w.r.t SOW	
		IDE	Projects handled with this area:
		PROTOCOLS	Projects handled with this area:
		Languages	Projects handled with this area:
		Operating System	Projects handled with this area:
		Embedded systems knowledge	Projects handled with this area:
		Standards	Projects handled with this area:
		Tools	Projects handled with this area:
		Any Other Areas	

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