



TENDER

FOR

Unified Aviation ERP Solution Package

For

Maintenance, Engineering and allied functions

of MRO Management & Operation

Executive Director- Engineering

AI Engineering Service Limited.(AIESL)



Tender No. AIESL/IT/UNIFIED/2022

Date: 15/01/2022

Subject: Tenders inviting quotations from Aviation ERP Package Providers for Maintenance, Engineering and allied functions of MRO Management & Operation.

Dear Sir / Madam,

AI Engineering Service Limited of India Ltd. (AIESL) is a newly created entity and hived off from Air India after merger of Indian Airlines Ltd. (IAL) and Air India Ltd. (AI) along with their Low Cost Carrier and Cargo Carrier subsidiaries under the brand name of 'AIR INDIA'. Now it is owned by Govt. of India and is a Public Sector Undertaking. The proposed Unified ERP solution is expected to meet the Maintenance, Engineering and allied functions as MRO Management & Operation of AIESL at the facilities spread over major Engg Bases at Mumbai (BOM), Delhi (DEL), Kolkata (CCU), Thiruvananthapuram (TRV), Hyderabad (HYD) & Nagpur (NAG) including future joint ventures. AIESL is having capability to carry out the Base maintenance (heavy maintenance), line maintenance of Boeing A/C B747, B777, B787, B737 and Airbus family A/C A319, A320 and A321 at its various Engg bases in these locations. Also AIESL is having capability for servicing and overhaul facilities for Engine, APU, Landing Gears and various components of these A/C at various locations of Engineering Bases.

Sealed offers are invited by **AIESL** from reputed national / international vendors for the following: -

1. Providing an Aviation ERP Package for Maintenance, Engineering and allied functions of MRO Management & Operation in accordance with the specifications mentioned in the tender. The ERP package should be upgradeable from time to time in accordance with the evolving Aviation Industry trends including mergers, acquisitions, etc.
2. The tenderers must provide to AIESL a fully integrated aviation solution as per international industry standards prevailing at the time of award of the contract.
3. The tenderers must commit their intent to integrate with the solution to be provided to AIESL under the contract, recommended / mandatory standards as may be established by the Indian / International Civil Aviation regulatory bodies in the future.
4. Pre-Qualification bid (On Paper as well as CD ROM) together with Earnest Money Deposit (EMD), the proof of remittance of the EMD in case of wire transfer (applicable for foreign vendors), is to be submitted as given in Annexures in a sealed envelope super scribed with "Pre-Qualification Bid for Aviation Software Package for Maintenance, Engineering and allied functions of MRO Management & Operation against Tender No. AIESL/IT/UNIFIED/2022".
5. Technical bid (On Paper as well as on CD-ROM) is to be submitted in the format as given at various Annexures in a sealed envelope super scribed with "Technical Bid for Aviation Unified ERP Package for Maintenance, Engineering and allied functions of a MRO Management



& Operation against Tender No. AIESL/IT/UNIFIED/2022 dated 15/01/2022 and due on 31/03/2022

6. Commercial bid (On Paper only) is to be submitted in the format as given at Annexure relevant in a sealed envelope super scribed with Commercial Bid for Aviation Software Package for Maintenance, Engineering and allied functions of a MRO Management & Operation against Tender No. AIESL/IT/UNIFIED/2022 dated 15/01/2022

7. The above three sealed envelopes (First for Pre-Qualification Bid, second for Technical Bid and the third for Commercial Bid) should be submitted in another master envelope in sealed condition super scribed with "Aviation ERP Package for Maintenance, Engineering and allied functions of MRO Management & Operation against Tender No. AIESL/IT/UNIFIED/2022 dated 15/01/2022 due on 31/03/2022 duly addressed & deposited in the tender box of AIESL.

8. Queries, if any, may be addressed to the following Officials: -

FOR COMMERCIAL INFORMATION: -

Mr. Alok Kumar Agarwal
Dy. GM(E-PPC), AIESL,
AI Engineering Services Limited (AIESL)
Avionics Complex,
New Delhi-110037- INDIA
Tel: + 91 9968315081
E-mail: alok.agarwal@aiesl.in

FOR TECHNICAL INFORMATION: -

Mr. Achal Sharma
Dy.GM (Engg.), AIESL,
AI Engineering Services Limited (AIESL)
2nd Floor, CRA Building
Safdarjung Airport
New Delhi 110003-INDIA
Tel: + 91 9711114179
E-mail: achal.sharma@aiesl.in

Last date for submission of bids is 15/03/2022 upto 1500 hours (IST).

Pre-Qualification bid only will be opened on 17/03/2022 14.00 hours (IST).

The offers must be deposited in the tender box provided in the office of:



Mr.Alok Kumar Agarwal—Procurement,
Dy. GM(E-PPC), AIESL,
Avionics Complex,
New Delhi-110037- INDIA
Tel: + 91 9968315081

If so desired, a representative of the tenderer may be present at the time of opening of tenders. The representative must carry an authority letter from the tenderer's authorized signatory for participation in the tender opening. The name of the representative may also preferably be directly sent to AIESL in advance of the date of opening of the tenders by e-mail as under:

E-mail: alok.agarwal@aiesl.in

A pre bid conference, which will be held on 10/02/2022 at AIESL, 2ndFloor ,CRA Building Safdurjung Airport, New Delhi-110003 – INDIA. A maximum of three representatives of each prospective tenderer would be permitted to attend the pre-bid conference. The representative(s) must carry an authority letter from the company's authorized signatory for participation in the pre-bid conference. The name(s) of the representative(s) for the pre bid conference may also preferably be directly sent to AIESL in advance of the date of pre-bid conference by e-mail as under:

E-mail: alok.agarwal@aiesl.in

The Pre-Qualification bid, Technical bid and commercial Bid opening venue will be at the office of Mr.Alok Kumar Agarwal—Procurement,Dy.GM(E-PPC),AIESL, Avionics Complex, New Delhi-110037- INDIA

Yours faithfully,

For AI Engineering Service Limited .

Executive Director- Engg

**Annexure – I****Important Events/Dates**

(Change in dates, if any, will be intimated to Tenderers through **AIESL** website)

S/N	Event	Date
1	Hosting of tender	15/01/2022
2	Pre-bid conference with prospective tenderers	10/02/2022
3	Last date for receiving queries for clarification (if any) required by the tenderers	20/02/2022
4	Last date for posting clarifications to queries on the AIESL website.	07/03/2022
5	Last date for Submission of Tender	15/03/2022
6	Opening of Pre-Qualification Bid	17/03/2022
7	Opening of Technical Bid	21/03/2022 (tentative, and would be confirmed in advance to the tenderers who qualify in evaluation of the Pre- Qualification bids)
8	Presentations / Demonstrations by Tenderers	28/03/2022(tentative, and would be confirmed in advance to the tenderers)
9	Opening of commercial bids of technically qualified tenderers only.	Date will be advised to the successful tenderers after evaluation of the technical bids has been completed.



Annexure – II

General Terms & Conditions of the tender

Quotations are invited for providing an Aviation Unified ERP Package for the Maintenance, Engineering and allied functions of a MRO Management and Operations as per the specifications as indicated in this tender, and subject to the following terms and conditions. Tenderers must submit the Pre-Qualification bid and Technical bid in hard copy as well as in CD-ROM, The commercial bid is to be submitted in hard copy only.

Tenders received through fax and / or through e-mail will not be considered.

Tenders received late, delivered at an address other than as specified in the tender, or delayed in transit will not be accepted irrespective of whether the delay has arisen on account of the delivery system, i.e. postal, courier, etc.

Tenders that are incomplete are liable to be rejected.

Tenders should be duly signed and stamped on every page by an authorized signatory of the tenderer.

The rates quoted should be clearly typed / written in figures and words, repeat in figures and words read from over typing or over writing. The corrections, if any, must be authenticated by the full signature of the person who has signed the quotation.

All financial quotes should be preferably in US\$. Indian vendors would, however, be required to quote in INR. In case, any tenderer quotes in a currency other than in US\$, the currency selling rate as published on the date of opening of the commercial bids will be used for conversion from the quoted currency to INR for the purposes of evaluation.

Conditional discounts / credits, if any, shall not be given any consideration.

AIESL reserves the right to reject in whole or part any bid without assigning any reason whatsoever.



The offers should be valid for the acceptance by AIESL for one year from the date of closing of the tender.

All information related to the price to be quoted by the tenderer should be given only in the commercial bid.

The tenderer must submit along with the technical bid a photocopy of the commercial bid with the prices blanked / erased.

Technical bids of only those tenderers, who qualify on the basis of evaluation of their pre-qualification bids, would be opened, and accordingly such tenderers would be intimated in advance by E-mail and / or by telephone / fax, the date of opening of the technical bids.

Commercial bids of only those tenderers, who qualify on the basis of evaluation of their technical bids, would be opened, and accordingly such tenderers would be intimated in advance by E-mail and / or by telephone / fax the , date of opening of the commercial bids.

The tenderers, who qualify in the pre-qualification bid, would be invited to attend the opening of the technical bids. The tenderers would be permitted to nominate their representatives to attend the opening of the bids. Such representatives should carry a letter of authority from the tenderers, which is to be presented at the time of opening of bids. The tenderers are advised to intimate the names of their authorized representatives for attending the opening of the bids in advance to AIESLL through email. The venue of opening of the technical bids would be the same as the venue of opening of the pre-qualification bids. The tenderers, who qualify in the technical bid, would be invited to attend the opening of the commercial bids. The tenderers would be permitted to nominate their representatives to attend the opening of the bids. Such representatives should carry a letter of authority from the tenderers, which is to be presented at the time of opening of bids. The tenderers are advised to intimate the names of their authorized representatives for attending the opening of the bids in advance to AIESL through email. The venue of opening of the commercial bids would be the same as the venue of opening of the pre-qualification bids.



1. The prices quoted in the commercial bid, should remain firm / fixed for twelve months from the date of closing of the tender. The escalation / cap on escalation beyond this period along with its formula / basis should be clearly indicated in the commercial bid.
2. The tenderers should commit to assume the responsibility for implementation of the application unified ERP system as specified in the tender including the product installation and integration.
3. The tenderers are to satisfactorily complete customizations as required to fulfill the requirements of this tender in accordance with their technical bid before cutover of the application to production mode.
4. The tender is to be submitted after careful study and examination of the tender document, and after obtaining a full understanding of the requirements. Tenderers are, therefore, advised to study the tender document carefully before submitting their bids.
5. Tenderers should provide the recommended configuration of hardware, networking, details of operating systems, and third party products as required for the efficient performance of the complete solution.
6. The cost of providing on-site support during the project implementation phase till the end of the warranty period should be included in the commercial bid.
7. The Agreement would be signed between AIESL and the tenderer selected for award of the contract.

AIESL reserves the right of not awarding any contract and / or of awarding the contract to one or more tenderers.

The tenderers should bear all the costs associated with the preparation and submission of their bids, including the costs incurred in presentations, demonstrations etc. for the purposes of evaluation of the bids by AIESL. AIESL will in no case be responsible or liable for such costs, regardless of the conduct or outcome of the bidding process. AIESL would, however, be responsible for the cost on account of travel, accommodation etc of its Evaluation Team in the event that a decision is taken during the process of evaluation of the bids to make visits to client sites.

Determination of whether the bid complies with the tender requirements or not will be at the sole discretion of AIESL.



No advance / pre delivery payment term will normally be accepted. However, if any tenderer requires advance payment, the same shall be made subject to prior deposit of an irrevocable Bank Guarantee in the form and content acceptable to AIESL for the required advance payment. Such advance payment will be interest bearing @ 15% per annum. The cost incurred in providing the Bank Guarantee will have to be borne by the tenderer.

In case a Standby Letter of Credit is required, a loading of 0.5% per quarter would be applied for the period for which the Letter of Credit is required.

The tenderers must submit deviation statements, if applicable in respect of the pre-qualification, technical and commercial bids. If there are no deviations, "NIL DEVIATION" should be indicated. Whatever the final decision of acceptance of variation, if any, will be with AIESL only

The prices quoted in the commercial bid must be inclusive of all applicable taxes till the stage of delivery to AIESL. The tax and levy components are to be indicated separately as applicable in the country of origin of the tenderer and as applicable in India inclusive of their applicability for the period of AMC.

Costs, if any, to be borne by AIESL in respect of the Project should be clearly indicated in the Commercial Bid giving the break-up thereof element-wise.

The requirement of third party software licenses to be procured by AIESL in connection with the offered solution should be indicated in the Technical Bid. AIESL would ascertain the price of such products from the concerned OEMs before opening of the Commercial Bids, and load the same to the corresponding Commercial Bids as per AIESL policy.

The Commercial Bids have to be complete in all respects and no representation whatsoever would be entertained by AIESL for inclusion of any other cost head / cost after the opening of the Tender.



The tenderers should provide a complete point-by-point response to all sections of relevant Annexures and should also include any additional information as deemed necessary to support their proposal. Complete details should be provided to explain as to how the proposed system would address each requirement of the tender.

If the tenderer wishes to propose additional services (or enhanced levels of services) beyond the scope of this tender, a detailed description of such services should be provided as a separate attachment to the proposal.

The tender document can be downloaded from the website of AIESL.(www.aiesl.in)

EARNEST MONEY DEPOSIT (EMD)

An Earnest Money Deposit (EMD) of Rs. 2 Lakh only (applicable to Indian tenderers) or USD 3000 (US Dollars three thousand only) applicable to foreign tenderers must be submitted along with the Pre-Qualification bid either in the form of Bank Draft / Banker's cheque in favour of "**AI Engineering Services Limited,**" and payable at New Delhi, or by wire transfer remittance to the AIESL account.. No other mode of payment will be accepted.

EMD must be submitted along with the Pre-Qualification Bid. In the case of EMD remitted through wire transfer, proof of wire transfer should be submitted along with the Pre-qualification bid.

EMD will not carry any interest.

Those foreign tenderers who wish to remit the EMD through wire transfer may do so as per the bank details given below : -

NAME OF THE BANK & ADDRESS: HDFC Bank,Harbhujjan Ground Floor,Opposite CST road,Near Vidyanagari Post Office,Kalina,Santacruz East,Mumbai



ACCOUNT NO: 50200028464678

ACCOUNT NAME: AIESL

SWIFT CODE: HDFCINBBXXY

REFERENCE: TENDER NO AIESL/IT/UNIFIED/2022

Tenders received without the EMD, or proof of remittance (in the case of wire transfer), shall be rejected.

In case a Tenderer withdraws his bid during the process of evaluation of tender, or fails or refuses to accept the contract if awarded in his favour, the Earnest Money Deposit will be forfeited.

EMD of the Tenderers, who do not qualify in the 'Pre-Qualification Bid', will be refunded to them within two months of the award of contract.

EMD of the Tenderers, who do not qualify in the 'Technical Bid', will be refunded to them within two months of the award of contract.

EMD in respect of the successful Tenderer will be adjusted against Security Deposit / Performance Bank Guarantee.

EMD in respect of tenderers, who have been unsuccessful in the evaluation of the commercial bids, would be refunded within two months of award of the contract.

SECURITY DEPOSIT / PERFORMANCE BANK GUARANTEE:

A Security deposit (SD) @ 5 % of the contract value, or a Performance Bank Guarantee (PBG) for the same amount would be required to be submitted by the successful Tenderer within two weeks from the date of award of contract. The SD / PBG is for meeting the project commitments



till the end of the warranty period. The SD / PBG would be refunded / returned within two months of successful completion of warranty period subject to adjustment for penalties, if any, on account of deficiencies in performance as per the terms of the contract.

Subsequently a Performance Bank Guarantee or Security Deposit @ 5% of the AMC value for the first year would be required to be submitted by the successful tenderer to cover the performance requirements during the Annual Maintenance Contract period. This PBG / SD would be renewed annually @ 5 % of the AMC for the corresponding year till such time as the AMC is in force, and would be returned/ refunded within two months of successful completion of the AMC period after adjustment of penalties, if any, on account of deficiencies in performance as per the terms of the AMC.

It is to be noted that the costs involved in furnishing of the PBG / SD are to be borne by the tenderer who has been awarded the contract and the same is to be included in the commercial bid.

PRE-QUALIFICATION CRITERIA: -

All the tenderers must meet the Pre-Qualification criteria specified in Annexure IV. of the tender.

PRE-BID CONFERENCE: -

AIESL will host a Pre-Bid Conference on 10/02/2022

The venue and time of the pre bid conference would be as under: -

Address: AI Engineering Services Limited
CRA Building, Safdarjung Airport,
New Delhi-110003

Time: 11.00 AM

2. PRODUCT PRESENTATION: -

The tenderers shall be required to make a detailed presentation / demonstration of their product to AIESL. Such presentations would have to be made in India preferably in New Delhi, the venue, date and time for which would be decided mutually between the tenderers and AIESL. The purpose of such presentations would be to allow the bidders to demonstrate their proposed solutions to the AIESL Technical Evaluation Committee, and to provide additional information



and clarifications as may be required. It may be noted that it is mandatory for the tenderers to comply with this requirement.

The proposed presentations are tentatively scheduled after Technical Evaluation; however the specific dates would be advised to the tenderers in advance.

AIESL reserves the right to carry out visits at its own cost to the sites of clients of the tenderers for the purpose of eliciting feedback on performance of their application, as well as to observe the offered system in operation in a live environment. For this purpose the tenderers would be required to provide the requisite client references as well as to facilitate discussions / demonstrations with their clients.

3. ENQUIRIES FROM TENDERERS: -

All enquiries from the tenderers must be sent in writing addressed to the contact person(s) as notified in the tender. The preferred mode of communication for this purpose would be through e-mail. Telephonic enquiries would not be entertained.

The responses to the queries from tenderers would be hosted on the AIESL website www.aiesl.in periodical basis. It is to be noted that such responses would not be sent individually to the tenderers.

4. AMENDMENT OF TENDER DOCUMENT: -

At any time prior to the last date for submission of bids, AIESL may for any reason, whether at its own initiative or in response to a clarification requested by a prospective tenderer, modify this tender document by an amendment.

The amendments, if any, will be notified on AIESL's website www.aiesl.in and will be binding on the tenderers to comply with. The tenderers are, therefore, advised to visit the web site of AIESL regularly till the date of closing of the tender.

In order to afford reasonable time to the tenderers to take such amendments into account for preparation and submission of their bids, AIESL may, at its discretion, extend the last date for the submission of bids through an announcement on its web site.

10. WARRANTIES AND GUARANTEES FOR APPLICATION SOFTWARE: -

The tenderers must provide a minimum warranty of twelve months starting from the date of successful implementation & acceptance of the complete application software (cutover date).

The tenderers should provide all industry mandated software upgrades, patches/ fixes, software and documentation updates on FOC basis during the warranty period.

The tenderers should provide a remedy for and resolve all the problems arising out of non-achievement of guaranteed performance of the product during the warranty period.



Annexure – II
General Terms & Conditions of the tender

AIESL shall promptly notify in writing to the tenderer to whom the contract has been awarded, any deficiencies arising during the warranty period. Upon receipt of such notice, the tenderer shall, with reasonable speed, rectify the defect(s) without costs to AIESL and within the time specified and acceptable to AIESL. Failure to resolve such defects would be deemed as non-fulfillment of the warranty terms, and would render the tenderer liable to penalties.

If the tenderer to whom the contract has been awarded fails to remedy the defect(s) within the period specified in the contract, AIESL may proceed to take such reasonable remedial action as may be necessary, at the tenderer's risk and expense, and without prejudice to any other rights, which AIESL may have against the tenderer under the contract.

The tenderers should guarantee that:

- i. The application ERP system as quoted for, represents a complete solution in accordance with the specifications as indicated in the tender and its further amendments if any, and would be implemented in accordance with the terms and conditions to be specified in the contract.
- ii. Warranty services / support would be ensured by the tenderer in respect of third party products (if applicable) that may have been integrated with the implemented solution.
- iii. The criteria for acceptance of the solution during the implementation and warranty period (to be determined after award of the contract) would be complied with.

11. MAINTENANCE CLAUSE FOR APPLICATION SOFTWARE: -

The tenderer must commit to provide post warranty application support under AMC (Annual Maintenance Contract), for a minimum of 6 years from the completion of the warranty period.

The tenderer should designate a technical support contact for exchange of technical information to facilitate diagnosis / troubleshooting during implementation of the project and thereafter during the warranty and post warranty (AMC) periods.

During the AMC period, the tenderer would be required to provide on FOC basis all products and documentation updates, patches/ fixes, etc. as may be necessary to ensure the desired level of performance of the system.

1. TRAINING: -

The tenderers should provide product training on FOC basis to various categories of AIESL personnel as specified in the technical bid.

2. PROJECT MANAGEMENT: -



The tenderers should undertake the responsibility of project management with regard to the offered application software, including but not limited to the Business Process Study, Detailing of Work Scope, application development / customization, testing and implementation.

If a tenderer chooses to work with one or more partners to implement the project, the coordination with such partner (s) for project implementation and subsequent support would be the sole responsibility of the tenderer. The tenderers should submit, along with their technical bids, documentary proof of such partnerships as well as the related arrangements for project implementation / support.

AIESL shall allocate its own resources to co-ordinate with the tenderer's project team. The responsibility and scope of work of such resources would be mutually agreed upon between AIESL and the tenderer after award of the contract.

3. PAYMENT SCHEDULE / TERMS: -

The tenderers should clearly specify their payment schedule with reference to the project implementation milestones.

The standard payment terms of AIESL would be "60 days from the date of invoice subject to successful completion of each milestone". In case a tenderer does not accept this term, the commercial bid would be loaded by financing cost @ 15 % per annum for the difference between 60 days and the actual credit period offered by the vendor.

No advance / pre delivery payment term will normally be accepted. However, if any tenderer requires advance payment, the same shall be made subject to prior deposit of an irrevocable Bank Guarantee in the form and content acceptable to AIESL for the required amount of advance payment. Such advance payment will be interest bearing @ 15% per annum. Further all costs incurred in providing the Bank Guarantee would have to be borne by the tenderer.

In case a Letter of Credit is required, a loading of 0.5% per quarter would be applied for the period for which the Letter of Credit is required.

Payment terms of less than 30 days will not be acceptable.

The milestone-linked payments would be made after acceptance of the corresponding activity by AIESL.

All recurring payments will be made on monthly basis after receipt of the respective invoices and subject to certification of the same by the duly authorized official(s) of AIESL.

4. PENALTY: -

The successful tenderer will be liable to pay penalties in case of delays in:

- Deployment of the project team for implementation of the solution.
- Successful completion of the respective project milestones.



Penalties would also be imposed in the event of deviations from the performance levels as specified in the tender.

The quantification of the above penalties would be determined at the time of finalization of the contract.

5. ENFORCEABILITY: -

If for any reason, any one or more of the foregoing conditions are partially/wholly invalid or unenforceable; the other conditions shall still remain in full force and effect.

6. INTEGRITY PACT: - The Applicants/Bidders should execute an integrity pact with, as given in Annexure (to be sent separately). The signed Integrity pact document must be submitted with Technical Bid, otherwise the Bid will be rejected.

Kindly note that Independent External Monitor (IEM) is Dr. Meeran Chadha Borwankar. For any clarification related to Integrity Pact, she may be contacted by Post / Email on following address :-

Dr. Meeran Chadha Borwankar, IPS (Retd)

C-70/5, 2nd Floor,

Vasant Vihar,

New Delhi – 110057

meeranborwankar@gmail.com **Mob** 9637671746

1. TERMINATION CLAUSE: -

If there is a material breach or material non-observance by the tenderer of any one or more of its obligations under the Contractual Documents, and such material breach or material non-observance continues for a period of more than sixty (60) days after receipt of notice from AIESL to remedy such material breach or material non-observance, then AIESL shall, without prejudice to its other rights under any Contractual Document, have the right by written notice to the tenderer to terminate the Contract or any relevant part thereof.

In such case, the tenderer shall not be entitled to any compensation whatsoever for costs incurred or to be incurred on this account.

2. INFRINGEMENT: -



All products delivered by the tenderer must be free from any claim by way of infringement of copy right, trade mark, industrial design, etc. and the tenderer is to indemnify AIESL against any claims for such infringement.

3. LIQUIDATED DAMAGES: -

Delay in Delivery / Installation / Commissioning: The tenderer will be liable to pay liquidated damages to AIESL @ 0.5 % (half percent) of the contract value per week of delay or part thereof, subject to a maximum of 5% of the contract value for delay in successful commissioning of the Solution / Services for reasons solely attributable to the tenderer. The amount will be deducted / invoked from the Security Deposit / Performance Bank Guarantee / pending invoices (if any). If the delay exceeds 60 days from the scheduled date of delivery/ Installation/ Commissioning, AIESL reserves the right to cancel the entire contract.

4. ARBITRATION: -

Any dispute arising between the parties in respect of the construction, interpretation, application, meaning, scope, operation or effect of this document or the validity or breach thereof, shall first be settled by mutual consultation. If the dispute remains unresolved after a period of 90 days from the date when the mutual consultation has started, the matter shall be referred for settlement to "SCOPE FORUM OF CONCILIATION AND ARBITRATION", Government of India, (www.scopeonline.in) and the award made in pursuance thereof shall be binding on the parties.

5. JURISDICTION: -

Any dispute whatsoever shall be subject to the jurisdiction of New Delhi / Delhi Courts only.

For AI Engineering Services Limited.

Executive Director (Engg)

**Annexure – III****Work Scope Summary**

AI Engineering Services Ltd. (AIESL) requires an Aviation Unified ERP Package for Maintenance, Engineering and allied functions of a Commercial MRO Management & Operation, which should also be scalable to support the latest aviation industry standards as established from time to time, as well as scenarios of mergers, joint ventures, etc. **Wherever Authorization signature is required, digital facility for the same should be there.**

1. The application Unified ERP system should provide the following modules (major functionalities) and also as per the requirements contained in this tender document.

Core ERP : Finance and Accounting

SI. No.	Functional Requirement
1	Shall include all related financial reports needed for Schedules as per statutory requirements like Company Law, Income Tax, TDS, TDS on GST, standard GST, PF, ESIC, PT, Various schedules.
2	Must include customized MIS reports, transaction-specific, and necessary financial reports, such as earnings, balance sheets, and cash flow statements.
3	Manage 450 charts of accounts (approx.)
4	Handle multi-currency transactions
5	Manage taxation structure, namely GST, TDS, GST on TDS, RCM, Foreign VAT (for UAE)
6	The financial cycle is from Apr to Mar
7	Manage multiple bank accounts
8	Offer transaction reconciliations
9	Allow reports to be cross dimensions across different heads, departments, or cost

SI.No.	Finance & Accounts – General Requirement
1	Ability to integrate with following modules at on-line basis in order to monitor and analyze reporting, but should not limited to: - General Ledger, Accounts Receivable, Accounts Payabl, Asset Accounting, Material Management, Inventory Management, Budget Controlling, Payroll Accounting
2	Appropriate access rights at multiple levels for data entry, audit, administration and audit trial, etc.



3	All finance functions should have easy to use and user friendly nomenclature/code like Revenue accounting, printing of invoice..etc instead of complex codes
SI.No. Reporting Requirements	
1	Ability to upload,Download & print data for example, Excel spreadsheet, Access, pdf etc. into application system
2	Provide flexible Report Writer with the following minimum features:
	- Specify the format and layout of reports
	- Summarize and total the information to be reported
	- Select records to be included in the report
	- Select details from each record to be included
	- Perform arithmetic calculation on the information selected or totals
	- Ability to add narrative comments to reports
	- Ability to show financial data in thousands, lakhs, millions etc. without creating rounding problem
	- Store the report format for later use
	- Produce reports in graphical form for presentation purposes.
3	Ability to generate customized reports as per user Requirement like Business area wise , Profit Centre, Cost Centre, State wise, document date, posting date, in document currency and local currency etc.
4	Mutiple books of accounts for various purposes:
	- Indian financial reporting, Companies Act
	-Indian Accounting Standards
	- Indian tax laws
5	Fixed Asset Register (addition, augmentation, withdrawal, retirement, disposal)
6	Multiple Depreciation schedules (as per various statutory requirements, as depreciation as per companies act, 2013, depreciation as per regulatory requirements and depreciation as per income tax act)
7	Write Offs, Deferments, Amortizations to be charged as determined by the User
8	Facilitate preparation and control of budgets and Actuals
9	Maintain data required for statutory compliances (as Revised Sch. III, GST compliances, TDS, Income Tax, etc.)
10	Inter unit reconciliation, Bank reconciliation, Store Reconciliations
11	Manage Database for - Vendors, Customers, Employee, with details of Creation history, present status etc.
12	Ability to have proper system of checks and balances in the system, clearly defined Maker checker relationships



SI.No.	Finance & Accounts - COA
1	Structure the General Ledger code block as Company/Entity, Project Account, Cost Centre, Activity, etc.
2	Ability to provide facility to define and relate the logical grouping structure and numbering convention for generation of Account Code
3	Maintain the account numbering scheme. The scheme can use alpha characters, numeric characters, or both.
4	Maintain Cost Centers, Profit Centers, and Activities. Data maintained includes Name, Description, Valid account ranges for posting.
5	Maintain individual accounts. Data maintained includes Name / Description, Classification (Assets, Liabilities, Income, Expense, or Statistical), Status (Active or Inactive), Analysis code(s) (These codes are used to group accounts)
6	Control creation of new account/modifications made to COA with proper control & authorization and without extensive program or system change
7	Import/export facility for COA creation
8	Prohibition of account use based on the user profile
9	Option to have centralized maintenance of chart of account
10	Ability to have parent-child hierarchy in chart of account values.
11	Prohibit new transactions from posting to GL accounts that have been de-activated
12	Capture short as well as long description of accounts
13	Ability to immediately put across the electronic notification to relevant users after creation or change in Codes
14	System should provide the details of the workflow for posting, verification, approval in order to have maker cheker concept for all modules.
SI.No.	Accounting Basis
1	Accrual based accounting – Record the liability / receivable transaction, as also the payment / receipt transaction.
SI.No.	GL Relationships
1	Ability to provide the facility to have multiple, independent general ledgers/ schedules
2	Ability to allow information to be consolidated within and across general ledgers for reporting purposes
3	Ability for each General Ledger (GL) to be capable of supporting and be fully integrated with all modules
4	Ability of each sub-ledger to relate to a separate control account in the general ledger
5	Ability to open Memorandum Accounts



6	Ability of automatic posting (Postings to sub-ledgers should result in automatic postings to the control accounts)
7	Ability to provide access to operate the books of accounts of the previous year parallel with the current year until the previous year books are closed by the appropriate authority
SI.No. GL Master Data	
1	Ability to maintain the following master data records to store control information on how postings done into the general ledger account: -
	- Name of the Account, Description, Type of Account (e.g. revenue / asset), Tax Rates and classification (TDS, GST, etc.), Level of transaction details to be maintained within the GL Account, Alternative account number to store existing GL account (easier for user to search new account code)
2	Ability to - Copy accounts between entities, Automatically renumber account codes, Closed accounts – block/ mark for deletion, Add accounts, Delete accounts, Change description of accounts
3	Provide facility for mass creation of GL accounts that includes: (a) Copying entire chart using another chart of accounts as reference (b) Copying single account (c) Copying multiple accounts (d) Performing data transfer of GL account master data from existing system (e) Allowing deletion of inactive accounts or accounts with no outstanding balance.
4	Ability to retrieve an account master record via account alias
5	Ability to Assign an activity status to accounts (e.g. – active/inactive)
6	Ability to immediately put across the electronic notification to relevant users after creation or change of master data.
7	Ability to provide audit trail to log the creation, amendments and deletion of each GL account code.
SI.No. Calendar	
1	Maintain General Ledger calendar. For each fiscal year, define the start and end dates of each accounting period and the status of the accounting period.
2	Ability to control users to access past period for adjustments (e.g. to reopen a period that has been closed).
SI.No. Accounting Period and Closing	
1	Closure of financial books: (a) Periodic closing of books (through Memo JVs) without passing entries in main books (b) Automatic closing and opening entries on closing of books © Entries pertaining to a period to be passed in next period (for closing purposes only) I.e. allows back dated entries in Memo books



2	Provisional entries (Multiple memorandum books) for periodic closing of books: (a) Transfer of balances from one set of books to a parallel set of books as required by user (b) These entries should not impact the financial books if desired by user (c) Back-dated entries can be made in the memo book maintained for periodic closing (d) Pass Correction Entries (e) Auto-reconciliation between different books and MIS Reports (f) - Impact on cost centers and profit centers of entries in Memorandum books
3	Option to make entries without sub-ledger in the memo books
4	Ability to setup an adjustment period
5	Allow preliminary month-end, quarter closing and year-end closing, which support journal entries not allowed after preliminary closing, Journal entries not allowed after final closing
6	Track postings to the adjustment period separately
7	Ability to process the Prior year transactions for the previous accounting period posted in the current period
8	Ability to support the provisional entries (Performa JVs)
9	Ability to ensure that all necessary postings from various other modules are posted to the ledger before starting the closing run
10	Ability to automatically carry forward balances at the end of the year to the balance sheet and reset all profit and loss account
11	Ability to prepare schedules/sub-ledgers with details
12	Ability to provide for Accounting estimates as per accounting standards as applicable to the company and company policies
13	Ability to effect Audit Entries
SI.No.	Currencies
1	Maintain multiple currencies.
2	Several exchange rate types can be defined. For example spot, weighted average, IATA
3	Maintain exchange rates between each currency used in the system.
4	Exchange rates can be loaded electronically from validated source
5	Compute the unrealized gain/loss on foreign currency transactions at user-defined frequencies
6	Ability to convert balance sheet items (Other than INR) at year end exchange rate as per statutory requirement.
SI.No.	Journal Entry/ Postings
	Journal Structure
1	Each journal contains a journal type, indicating the source of the journal (e.g. from accounts payable, accounts receivable, general ledger, fixed assets, material management). User defined journal types for data imported from existing systems.



2	In addition to the journal type, an analysis code can be attached to the journal to further describe its purpose.
3	Ability to search account code, account name, account number and description or responsible area during posting of documents
4	Ability to assign unique number to journal entry
5	Ability to restrict access to certain accounts by user-defined groups.
6	Ability to control journal posting function by user-defined authorization
7	Ability to provide facility to:
	- Allow storing (park) incomplete documents without carrying out extensive entry checks.
	- Specify templates to capture details of recurring transactions (e.g.: - fixed prepayments and accruals)
	- Allow amendment or deletion to recurring transactions prior to posting
	- Perform the posting automatically according to user-defined specification
8	Ability to perform real time and batch processing In case of batch processes, following functionalities should be available:
	- Update by batch mode while other users are still active in the system
	- Provide exception report for batch update
	- Post through overnight batch
	- Provide information on batch status (e.g.:- posted, processing, error)
	- Automatically assign document or batch number after journals are posted
	- Provide a journal edit listing on screen and printed. The information should contain but should not be limited to the following:
	* Batch Number, Journal Posting date, Journal Creation date, journal type, source of journal, journal text, G/L account code, G/L account name and description, debit/credit amount, batch total and number of transactions.
Sl.No.	Journal Functions
1	Define Journal approval hierarchy w.r.t various levels, financials, approval authority etc.
2	Allow modification of the Journal approval work flow
3	Facility to add, delete, modify the journals under proper authorizations
4	Avoid duplication of entries
5	Validation of code block values is done at journal creation time. The journal cannot be submitted for posting unless a valid code block value is recorded.
6	Notes in the form of text, documents, pictures, web links etc can be attached to journals to fully describe the reason for raising the journal at journal and journal line level.
7	All journals are effective-dated, allowing posting to any open accounting period (Including Prior and Future periods)



SI.No.	Types of Journal
1	Maintain Reversing Journals; these journals automatically reverse in the following accounting period. E.g. provision entries.
2	Maintain Recurring Journals; recurring or standing journals are used to record business transactions that are repeated regularly. The code block values and the amounts do not change.
3	Maintain Template Journals; these journals have the account details and amounts need to be filled.
4	Accrual journals, which automatically reverse themselves in the following accounting period.
SI.No.	Manage Inter Unit Transactions
1	Ability to provide an electronic platform for units to record inter-unit transactions, with provision to view scanned documents
2	Automatic alerts/reminders in inter-unit accounting recipient unit that an entry pertaining to the unit has been made
3	Ability to provide for electronic acceptance or rejection of inter-unit accounting by the recipient unit with provision for comments
4	Ability to generate a report of pending, responded and un-responded Inter Unit Transfers (IUTs)
5	Ability to automatically create relevant accounting entries at both units on acceptance of the inter-unit accounting by the recipient unit
6	Ability to generate Consolidated Unit-wise Reconciliation statement
SI.No.	Store Reconciliation
1	Manage the Store accounting for receipt, returns, dispatch of goods etc.
2	Facilitate in preparation of Store Reconciliation of the stores Books with the Books of accounts and incorporate the adjustment entries
3	Ability to reflect the Store Balance Report category wise (moving/non- moving stock etc.)
4	Ability to generate Consolidated Store-wise Reconciliation statement
5	Ability to reflect the Goods in transit
SI.No.	Year End Reporting
1	Ability to produce the following financial reports across multiple levels (e.g. whole organization, reporting units such as departments, station etc.) and for a user-defined period (for the month, year to date), but should not limited to:
	- Profit and loss account
	- Analysis of Profit and Loss account
	- Analysis of operating expenses
	- Balance sheet
	- Analysis of Balance Sheet



	- Earning Per Share and Diluted Earnings per share
	- Trial Balance
	- Cash flow and Funds flow statement
	-Statement of Changes in Equity
	- Notes to the financial accounts (account breakdowns)
2	Ability to split schedules into multiple sub schedules
3	Ability to produce user defined TDS, CENVAT, GST, Income Tax, Statutory Reports, etc.
4	Ability to compare actual data to budgeted data and/ or budgeted data to actual data in:
	- Annually,
	- Semi-annually,
	- Quarterly, and
	- Monthly
5	Ability to automatically carry forward closing balances of a particular financial year to opening balance of the current year, with user defined control and authorization
6	Ability to create multiple versions of financial statement report and ability to customize reports as required by the user
7	Ability to generate comparative statements for various periods as defined by the user
8	Ability to support computation of various financial ratios as defined by users and ability to compare the same with the previous year and year to date
9	Ability to circulate the details required from various users across the organization from accounting system for the purpose of accounts closing/auditing and also ability to receive information in response to the said circular and automatically generate accounting entries and MIS
10	Ability to maintain Contingent Liability register
11	Transaction listing -By Account
	-By Date
	-By Voucher Number -By Voucher series -By User
12	Allow for generating financial statements for Company as a whole, statewise, stationwise, business areawie, cost center wise, profit center wise, as defined by the user
13	Should provide for generating financial statements as per Schedule III requirements, Ind AS requirements, CARO Requirements, etc.
14	Ability to comply with all tax related statutory requirements in force in India and applicable to the company and the system should be upgraded with the latest tax laws on a regular basis
15	Ability to generate all statutory reports applicable to the company as per prevailing laws
16	Ability to comply with all future statutory requirements like IND AS, GST, etc. as and when it is applicable to our Company
17	Ability to adhere to the changes in the Statute / Company Policies
18	Ability to generate exceptional reports like wrong A/c code, Suspense Account balances etc.



19	Ability to generate Age-wise Analysis of debtors, liabilities, Creditors, Advances, etc.
20	Ability to allow prior period adjustments, with proper control & authorization
SI.No.	Audit Requirements
1	Ability to track Government Audit Comments and replies thereto with facilities to maintain additional relevant details and string search facility
2	Ability to generate information & reports for CAG, Statutory, Supplementary, Tax, Cost & Internal audit purpose by the respective departments
3	Ability to compile all information and replies for the audit queries for submission to the auditors
4	Ability to retrieve required information as per the provisions of statute (eg: requirements of CARO, tax audit)
5	Ability to maintain the ageing analysis of the pending audit paras
6	Ability to generate alert messages for pending audit paras to the concerned departments/Offices
SI.No.	General
1	Accounting of expenses at various locations (e.g. station, reegions) in one stage
2	Continuous voucher numbers; even if a voucher prepared has not been ultimately authorized.
SI.No.	Standard Reports
1	Standard/Statutory Reports
2	Statement of Revenue
3	Statement of costs (including customized reports on Operational Costs)
4	Consolidated Cash Flow Statement
5	Trial balance of general ledger accounts
6	Transaction / journal and account listings
7	Cost Centre Reports
8	Activity Reports
9	Budget Variance Reports
10	Maintain inception-to-date project transactions history
11	Maintain Balances for Period to Date(PTD), Quarter to Date (QTD), Year to Date(YTD), Project to Date(PJTD)
12	Provide exception report for adjustment entries made in the current period for prior periods.
SI.No.	User Defined Reports
1	Balance Sheet, Consolidated Profit and Loss Statement
2	Schedule III summary for balance sheet
3	MIS, Ratios etc.



4	Provide multi-dimensional user reports, e.g. by business unit, cost center, and other user defined criteria.
5	Enquire on the master data.
6	On-line commitment/expenditure Position Enquiry.
7	Drill down from account balances to the journals.
8	Drill down from the general ledger to the source transaction (e.g. AP/AR / FA).
9	Drill down of management accounting report items (e.g., staff cost, overheads, etc.) to details.
10	Supports lakh/million/crore format
11	Notes to balance sheet can be created
12	Support data selection based on user requirements, e.g. Current period, Last Period, Same period last year, etc.
13	Ability to export the reports to office automation products.
14	Internal Reporting – Audit Trails, Transaction Listings. Changes to all master data are recorded by date, time, and user and can be reported by date range.
15	Listings of GL journals are available by various selection criteria such as account, type, date, and user.
SI.No.	Integration
1	Ability to integrate from AP, AR, Cash Module, MMD & PPC Department and taxation module alongwith Business area wise and station wise.

SI.No.	Manage Bank Reconciliations
1	Ability to integrate bank reconciliation system with the payment recording modules to eliminate any duplicate data entry.
2	Auto reconciliation of the bank statement transactions with the system transactions.
3	Ability to extract the BRS details as list of reconciled or non-reconciled items.
4	Ability to enter bank statement details:- <ul style="list-style-type: none"> - Manually - By electronic means to match bank transaction information with receipts and payments in the system to produce an electronic bank reconciliation.
5	Ability to record bank statement transactions including:- <ul style="list-style-type: none"> - Bank and other charges - Interest received or paid - Electronic fund transfers - Periodic payments - Dishonoured cheque (incoming/ outgoing)
6	Ability to automatically generate postings into the general ledger for outgoing cheque/transfer as follows:-



	- cleared cheque/ bank transfer data delivered by the bank to generate the clearing entries.
7	Ability to automatically generate postings into the general ledger for incoming cheque/ transfers as follows:-Bank transfers and cheque received/ banked in to generate the clearing entries.
8	Ability to print cheque deposit and bank transfer listing
9	Ability to post incoming cheque individually or in batch
10	Ability to provide function to overview cheque deposit processing status online
11	Ability to:- a)record stop payment of cheque b) enable the matching of multiple receipts in the system with a single receipt transaction on the bank statement
12	Ability to allow for short term planning from sources affecting the cash/bank position. This includes:- - Bank balances - Maturing deposits and loans - Notified incoming payments posted to the bank accounts - Incoming payments (e.g. cheque) with a value date - Outgoing cheque posted to the bank clearing account - Post-dated cheque
13	Ability to:- - Allow update of bank balance by bank accounts - Group bank accounts in a logical hierarchy by the type of account - Display bank accounts by group or in more details by bank accounts via drill down
14	Age wise analysis of BRS items

Sl.No.	Fixed Assets
1	Centralized definition of fixed asset categories, description, multiple depreciation rates, predefined residual values etc.
2	Centralized definition of content of the Fixed Asset Register to support CARO and other statutory requirements
3	Centralized/ decentralized definition of location data structure
4	Ability to maintain parent-child relationship across asset classes.
5	Ability to support WDV/ straight line method of depreciation.
6	Different treatment of assets for accounting and taxation purposes, for instance, different categories/ classification, depreciation etc.
7	Creation of separate reports for taxation and accounting purposes for assets.
Sl.No.	Fixed Asset Register
1	Maintain FA register locally at units with custodian-wise identification.
2	Automatically consolidate FA Register at units into FA Register for the company
3	Prevent units from entering/ updating data in any FA Register other than their own FA Register
4	Categorize assets based on multiple criteria like assets, moveable/ immovable etc.
5	Ability to differentiate between new asset and value adjustment/ up gradation like capacity expansion.
6	Record fixed assets with retrospective date placed in service in the past / future.
7	Merge one asset into multiple fixed assets and vice versa into one fixed asset



8	Provision to rectify errors in recording fixed assets in the same period or in previous periods
9	Record number of units against each fixed assets e.g. Tools – 10 units
10	Record fixed assets taken on lease, assets on other’s property, asset under possession but owned by other party
11	Generate Fixed Assets Schedule in accordance with the statutory requirement for instance, Schedule III
SI.No.	Retire Fixed Assets
1	Ability to handle impairment of asset as per Indian accounting standard
2	Retire entire or part of an existing fixed asset
3	Record salvage/ scrap value, sale proceeds, cost of removal etc.
4	Automatically calculate gain/loss on retirement
5	Record reason for retirement
6	Record mode of retirement e.g. sold, scrapped, donated etc.
7	Re-instate fixed assets incorrectly retired
8	Ability to identify assets awaiting disposal
SI.No.	Assignment
1	Option to assign each fixed asset to one or multiple custodians
SI.No.	Location
1	Record the physical location of each fixed asset
2	Generate reports on fixed assets at specific location
SI.No.	Transfer
1	Record transfer of fixed assets from department to another, one location to another or from one employee to another etc.
SI.No.	Insurance
1	Record insurance details against each fixed assets
2	Record multiple insurance policies details against individual fixed assets
3	System generated reports/ alerts/ reminders to designated users about insurance premium payable
SI.No.	Impairment of Assets
1	Ability to account for impairment of assets as per Indian accounting standards.



SI.No.	Revalue Fixed Assets
1	Revalue an existing fixed asset or a group of fixed assets or all fixed assets belonging to a category or all fixed assets in the fixed assets register
SI.No.	Reclassify Fixed Assets
1	Reclassification to automatically update depreciation rates
2	Reclassify individual fixed asset or a group of fixed assets
SI.No.	Physical Verification of Fixed Assets
1	Provision to record manufacturer's serial number
2	Provision to record bar code number
3	Provision to facilitate physical verification of fixed assets by printing fixed assets reports location-wise, employee-wise, category –wise etc.
4	Provision to enter/ electronically upload fixed assets physical verification data for the system to list out or alert missing fixed assets or not at recorded location or not with recorded employee
SI.No.	Accounting
1	Create accounting automatically for fixed assets addition, depreciation, re-categorization, evaluation, retirement, transfers etc.
2	Automatically interface accounting entries to the GL, AP,AR and Taxation module
3	Facilitate drilldown facility from the GL to individual fixed asset transaction in the fixed asset module
SI.No.	Depreciation
1	Multiple Depreciation schedules (as per various statutory requirements, as depreciation as per companies act, 2013, depreciation as per regulatory requirements and depreciation as per income tax act)
2	Support change of useful life and effective rate of depreciation
3	Run/ roll back depreciation multiple times
4	Suspend depreciation on specific or categories of fixed assets for specified period of time
5	Maintain depreciation data cost center wise
6	Forecast the depreciation and written down value for any user defined periods
7	Calculation of depreciation for defined period on existing asset as well as memorandum entries
SI.No.	Sales/Retired/Scrap Accounting
1	Sales include: - Sale/scrap of Assets along with auto interface with original assets, GL, AR and Taxation Module.



SI.No.	Accounts Payable
1	Centralized vendor master facilitating single vendor description and code across the organization (across units)
2	Multiple addresses against each vendor
3	Automatic vendor numbering
4	Alternate/short name of each vendor
5	Contact person for each vendor address
6	Bank account against each vendor (both e-payment and cheque payment)
7	Ability to incorporate vendor ratings (to be updated by the Procurement department) and to be able to extract the vendor list based on the vendor ratings
8	Vendor classification (multiple parameters required to meet reporting, preferential treatment like waiver of EMD etc. payment prioritization and other needs) such as SSI, PSU, Inter Unit etc.
9	Tax details, PAN Number, TAN Number, TIN Number etc. required for ensuring compliance with Indian Tax laws considering both direct & Indirect taxes.
10	Default currency for invoice/ payment.
11	Ability to control the creation and change of vendor master data, as per requirement
12	Ability to allow for specified fields in the master data to be made mandatory or optional entry.
13	Debarring parties with effective date, with facilities to re-activate.
14	Limit maintenance / access to vendor master to specific users (With approval for creation, edit, and deletion of vendor)
15	System control on similar vendor definition
16	Merge / correlate vendor details (Eg. One vendor taking over another vendor). Enabling tracking change of status from a date
SI.No.	Invoice Processing
1	Ability to support 2 way (matching with PO and Supplier Invoices), 3 way (matching with PO, Order quantity received and Supplier Invoices) and 4 way matching (matching with PO, Order quantity received, order quantity accepted and Supplier Invoices) in the system for bill processing
2	Ability to capture details from procurement to payment as Cross reference options to enable drilling down for information for any query, audit or review
3	Classify Invoices as:
	- Asset related invoices;
	-Employee related invoices;
	-Service Invoices;
	-Civil Work Invoices;
4	and create necessary interfaces with related modules



5	Ability of tracking invoice received but not processed/paid
6	Enter required vendor invoice details manually for matching at material receipt / payment level
7	Ability to generate invoices automatically based on predefined criteria (e.g. running bills, invoices based on receipt of material etc.)
8	Enter invoices individually or in a batch
9	Ability to allow Price Variation adjustments at the time of invoicing
10	View and match invoice to PO, Receipt in the system at line level and online acceptance of material by user eliminating need for physical PO / GRN and User Certificate
11	Automatic alert for non-compliance of PO terms (documents, price, delivery date other conditions of contract)
12	Automatically place hold on invoices not matched to PO for specific vendors
13	Automatic accounting for invoices based on Pos/ GRN by linking to A/c master
14	Default tax details from vendor master
15	Calculate / deduct TDS / statutory taxes etc. automatically
16	Calculate taxes and duties with respect to effective date both prospectively & retrospectively.
17	Generate TDS certificate and various statutory forms & returns.
18	Calculate monthly/ periodic TDS to be deposited to government, excluding adjustment entries.
19	Maintain exchange rates centrally, with payment in centralized / decentralized way.
20	Manage Year End / Accounting period end GL date to the respective accounting period only.
21	Calculate pay-by date from invoice date or material receipt date as specified by user / contract.
22	Automatically apply contract wise rates of tax / freight / handling charges across multiple invoice lines.
23	Place invoices on hold and prevent further action like payment etc. at different stages. Generate alert for such event.
24	Workflow enabled invoice approval hierarchy based on user approval limits, item etc. in line with defined approving authority limits.
25	Approve invoices individually or in a batch.
26	Automatic calculation of discount as per contractual payment terms
27	Recording project invoices with details of project code, activity, task etc.
28	Allocate single invoice expense line to multiple GL account
29	Calculate liquidated damages based on delivery period
30	Facility to store scanned / digitized soft copy of all related documents along with the Running Account Bills
31	System generated reports/ alerts in case an invoice has remained unapproved beyond specified time frame.
32	System generated reports/ alerts in case the time interval between receiving an invoice and making payment against it exceeds specified time frame.



33	System generated reports/ alerts where material has been received against a PO and payment is pending through Bank.
34	Indicate vendor balances on different accounts before making any payment. Ability to adjust against different balance before making any payment.
Sl.No.	Miscellaneous Bills (Travel, Medical etc.)
1	Approval of certain category of invoices like those for hotel bill, car hire, mobile bill, petrol, driver salary, medical bill etc. based on individual employee's entitlement and make recoveries and adjustments based on approval.
2	Ability to generate advance for specific purpose and adjust against the payment. Ability to show advance in personal account and adjust expenses against the same.
3	Ability to generate checklist of items to be checked before approval based on type of payment/expense
4	Purpose of Travel and the location of travel(in India or foreign) to be tracked and report based on purpose of travel can be taken (for Eg: like employees travelling for training)
5	Ability to generate alert if advance to employee and vendor remains unadjusted for more than stipulated time limit (defined in the system)
6	For medical Bills details of Medicine and the reason of illness (cardiac etc.) to be re-recorded, so that the management is aware of the Medical reasons for illness of the employee.
7	Ability to create master data and link it to payment process (entitlement, calculation) for particular type of expenditure. For example: Hospital master data, medicine master data for medical advance and adjustment; city list for travel expenditure.
Sl.No.	Debit/ Credit Memo
1	Enter Debit / Credit notes against specific invoice(s) to adjust vendor liability
Sl.No.	Making Payment
1	Pay each invoice individually or multiple invoices together for same vendor and manage outstanding balances accordingly by linking payment to invoices.
2	Link every payment to invoice(s) and manage outstanding balances accordingly.
3	Show alert for predefined vendors/Pos/Wos before payment.
4	Ability to have third party payment (Bank attachment cases, Power of attorney cases)
5	System based payment approval hierarchy based on amount, vendor category in line with Delegation of Power
6	Ability to appropriate/ adjust advance payments against multiple contracts/ invoices
7	Pay advance and link to specific PO to ensure only invoice matched to that PO can be settled with the advance
8	Schedule payments on different dates



9	To support payment for emergency/ petty purchases against approved Note sheet without following the formal ordering route.
10	Ability to handle e-payments to vendors.
SI.No. Viewing Vendor Account	
1	Age vendor outstanding balance i.e. balance due to / from vendors
2	Generate vendor account statement to be sent to the vendors
SI.No. Bank Guarantee Monitoring (Issued/ Received)	
1	Record bank guarantee details such as vendor name, project / department code, PO number, BG type, BG validity, BG receipt date, BG confirmation date etc. and link to payments.
2	Compare BG details with list of approved Banks.
3	Link PO / invoice approval to receipt / confirmation of bank guarantee and BG validity.
4	System based monitoring of expiry date of open bank guarantee with automatic alerts reminding of expiry date 30 days prior to expiry
5	System generated hold on vendor invoices in case bank guarantee has expired
6	Link bank guarantee to specific purchase orders, contracts or projects
SI.No. EMD (Deposits) Monitoring	
1	Handle EMD (Earnest Money Deposits) in form of BGs, DD, Cheque etc.
2	Record collection of Deposits from vendors / service providers / customers with linkages with Contract.
3	Refund / adjustment of deposits with age-wise analysis.
4	System generated reports/ alerts on deposits not returned / adjusted.
SI.No. Integration	
1	Integration with General Ledger, AP, AR & all module
2	Ability to drill down from an account balance to specific transaction, whether invoice, debit memo or payment and generate reports.
3	Integration/Interface with Pay roll, Direct & Indirect Tax modules, Stores Accounting etc.
SI.No. Payable Reporting	
1	Ability to produce the following payable reports, but should not be restricted to:
	- Invoices selected for payment by period, bank, payment method
	- List of approved invoices
	- List of cheque printed by cheque number and date
	- List of vendors with vendor master details



	- AP Liabilities Listing
	- Invoices under retention
	- List of inactive vendors
	- Outstanding Cheque which are overdue
	- List of cancelled and void cheque
	- Details of unpaid invoices (payment proposal exception listing)
	- List of realized and unrealized gains/ losses
	- Number of invoices and vendors processed within a payment run
	- Vendor aging report
	- Advance Paid Report, Age wise analysis of advance paid ledger
	- recurring invoice listing
	-Report of vendor account balance
	-Report of open invoices
	-Report of PR (Monthly/Annually)-Stationwise, business areawise in consolidation
	-Report for TDS on GST (Monthly/Annually)--Stationwise, business areawise in consolidation
2	Ability to provide access to projected cash requirement information based on selected items or any defined criteria
3	Ability to generate vendor payment history report
4	Ability to generate reports on any retentions/ deductions made from invoices.
Sl.No.	Loans and Advances
1	Receive duly approved request for advances for all offices.
	- temporary Advances,
	- advances to the vendor (Material, mobilization advances)
	-Employee advances (tour advance, salary advance, LTA)
	-revolving fund
	-rotating advance
2	ability to process the advance request:
	- check for approval received
	- compute the advances allowed as per the approval order, terms and conditions of the contract,
	- opening Advance Balance
3	Ability to define the advances in reference to PO (vendor advances), employee (for employee advances), office (temporary advances)
4	Maintain Advance Details like, Date of Advance, Balance, Adjustment etc.
5	Ability to reflect the advances paid while actual invoice processing of the respective parties and user defined controls to apply advances against actual invoices.
6	Ability to derive the advance ageing report



7	Ability to generate Employee wise loan wise information
8	Ability to apply Statutory dues at the time of advance payment, and adjustment of the same with original invoices

SI.No.	Cash Position
1	Ability of the system to reflect daily cash position
2	Ability of the system to create the multiple cash position templates with different buckets and generate the report accordingly as per user defined period
3	Ability to alert in case actual cash holding exceeds the user defined limit (any amount as defined by the user) to consider the funds for investments instead of keeping it idle
SI.No.	Cash / Bank Payments
1	Integrate bank reconciliation system with the payment and collection recording modules to eliminate any duplicate data entry.
2	Integrate bank reconciliation system with General Ledger to consider any bank related journal entries such as those for bank transfers etc.
3	Up-load bank statements into system in any format for any period.
4	Ability to support automatic reconcile bank statement with payments, collections, adjustments etc. recorded in the system based on the cheque number or such other reference no.
5	Bank Master Maintenance – maintain list of approved banks
6	Ability to print Cheque with preprinted Stationary
7	Support alerts if cash payment being prepared/ authorized exceeds particular limit.
8	Ability to maintain denomination wise control over cash balance
SI.No.	Costing Accounting & Reporting
1	Capture and report costs against each dimension in the chart of account structure such as unit, department, location, product, project etc.
2	Ability to allocate cost in various levels, for example: - Responsibility cost center (Department/ WORKshop/ Projects) - Activity Cost Centers
3	Ability to handle process costing, standard costing, activity based costing etc.
4	Ability to run iterative/non-iterative cost allocation processing in system
5	Facility to pool costs and then allocate/ reallocate costs to other cost centers/ across organization based on predefined basis.
6	Print various allocation schedules prior to the financial closing of the period.
7	Support allocation schedules using a percentage distribution to compute the required allocation of overhead expenses to the various cost centers.



8	Rerun cost allocations when the underlying data changes.
9	Combine the costs for several input sources and allocate in one allocation source through parameters.
10	Test an allocation procedure prior to scheduling it.
11	Allocate common costs across departments/ products/ units based on predefined base.
12	Generate periodic cost sheets for each product, process & services.
13	Facility to reconcile costing reports with financial reports.
14	Facility to compare actual costs with standard costs and analyze variances.
15	Ability to support comprehensive and flexible information system to analyze costs and expenses within organization, classification of expenses and must have provisions for grouping at various levels and various criteria
16	Should provide exception reports by amount/event/employee/nature of expense/variance
17	Support compliance with AS2 Cost Audit/ Cost Accounting related statutes, rules and standards (Cost Audit Report Rules, 2001)
18	Create Cost Accounting Report in compliance with AS2 Cost Audit/ Cost Accounting related statutes, rules and standards
19	To support variance analysis between budget and actual across various periods.
20	Ability to serve user to follow all costs to their origin, even down to the document level
21	Ability to monitor, analyze and evaluate reports on real time access
22	To generate product wise cost sheet for specific period with user defined allocation criteria. Ability to allow/disallow specific expense
SI.No.	Cash Reporting
1	Ability to print reports on inter unit transfers based on bank account/period/value etc.
2	Total collections into bank vs Total confirmations from bank
3	Total Transfers to HO account by bank account number and transaction
4	Cheque deposited Vs Cheque credited into bank
5	Dishonored checks by bank account number and identifying issuer of cheque
6	Total cheque issued Vs Bank debits by bank account number
7	Un-reconciled statement

SI.No.	Indirect Taxes
1	Support GST and TDS on GST reconciliation etc.
2	Auto Record input tax credit claims in the books.
3	Generate monthly/ annual tax returns and registers, payment of taxes to government treasury etc.
4	Auto Reconciliation of PR v 2A & 2B



5	Support Input tax credit for GST, etc.
6	Ability to support accounting of GST, generating GST returns
7	Ability to raise inter-unit GST invoices
8	Ability to Generate Report of TDS on GST as per Government format
9	Ability to Generate GST reports (Sales register) for GST return - state wise on monthly basis as well as well conolidated for all states as per govt format.
SI.No. Other Taxes and Statutory Compliances	
1	Manage GST & TDS on GST record, TDS, TCS, PF, ESIC & Professional Tax, Labour Cess on Civil Works, Income Tax computation, MAT Calculations, Deferred tax liability all other future additional tax.
2	Auto Computation of Taxes, Foreign Exchange Variation, Price Variation and effect of the same in accounts with proper approvals of the competent authority.
3	TCS collected & TDS from the party need to be deposited to the Government. Ability to manage the TDS & TCS details on deduction as per the statutory requirements (as Item, Tan number, Settlement Date, payment authority)
4	Ability to derive the tax detail report (with information in the format as required for return filling)
SI.No. TDS	
1	TDS accumulation
2	Multiple vendors in one invoice
3	Multiple tax line items in one invoice
4	TDS deducted by customers
5	Deduction, remittance and certificate issue for multiple TAN
6	Integrated challan update and account clearing
7	TDS Surcharge
8	Periodic returns for sections ,192B,194C, 194A, 194I, 194J,195 etc.
9	Auto interface for calculation of TDS at the time of accounting entries.

SI.No. Revenue Accounting & Billing	
1	Ability to account and generate invoice from the Work order/rental order / Sale order flowing from other related modules or direct billing.
2	Ability to generate performa invoice based on the quote generated by other modules or direct raising.
3	Ability to generate GST Tax invoice and E-invoice - stating Cutomer PO number, Work order, Rental order, sale order no. repair order no. period of activity performed, qty, Uom, rate, bank details, contact details etc



4	Ability to generate advance tax invoice and ability to knock the same in final tax invoice to avoid duplicay of GST / indirect taxees
5	Ability to raise credit or debit tax invoice by linking with original invoice
6	Ability to create one customer with different GSTIN for different states, in data base. So that user doing revenue accounting should be able to choose customer (preferable name and not code) and select placee of supply (state name) and selet station and customer GSTIN for billing or shipping address is auto linked with it, to avoid multiple customer creation for the same customer in front
7	Validity checks for place of supply and customer GSTIN, type of GST, SEZ units, Exports, Export with or without GST
8	Ability to upload attachments with the invoice
9	Ability to support various types of discount such for both on invoice and off-invoice and calculation there-of such as flat discounts, volume based discount, MOU based discount etc.
10	Ability to generate E-invoicing on real tim basis
11	Ability to auto dispatch of e-invoice / GST tax invoice to tehe customers' mail ID - electronically with supporting documents, attached in this module
12	Ability to record training revenue, recruitment fee etc with GST and genearte invoice
13	Ability to export Work order, Rental order, sale order no. repair order no. for which invoices to be prepared and ability to use the same file for importing and generation of invoices at mass level
14	Ability to mass - upload (Excel file) details for generation of invoice on system
15	Ability to generate multiple invoices by selecting multiple orders completed and ready for billing, in pipe line
16	Ability to generate part billing without clouser of work order - i.e. billing in phase manner
17	Ability to maintaion Revenue register in the system - Consoildate and statewide, business areeawise, stationwise, profit center-wise, with date range
18	Ability to record receipts and account for Scrap Sales
19	Ability to compute profit/loss on sale of Scrap and posting of the same in the General ledger
20	Ability to prevent creation of duplicate customer master records
21	Approve invoices individually or in a batch.
22	System generated reports/ alerts in case an invoice has remained unapproved beyond specified time frame.
SI.No.	Accounting Customer Collection
1	Ability to handle accounting of collection received from customers received in e-payment Mode. Ability to handle accounting TDS dedcuted.
2	Ability to adjust receipt with invoice, Credit notee, debit note and show net amount outstanding against particular receipt.



3	Ability to reconcile the TDS received with Form 26AS (Facility to upload Form 26AS and auto reconciliation)
4	Support accounting of advance received from customers, with ability to track against respective order , reference no, transaction etc.
5	Ability to record advances received from customers and security deposit received from customer, separately and ability to knock the same against outstanding of customer, if needed
6	Ability to raise alerts and seek approval while adjusting the outstanding with receipts and TDS, if it falls short
Sl.No.	Reporting
1	Support availability of customer balance on real time basis (i.e. any date not necessarily being month end date)
2	Ability to display break up of customer balance against each work order etc / invoice
3	Generation of customer outstanding statement on a consolidated basis across stations/ regions or only with respect to individual station / region
4	Support customer ledger on gross basis (showing all debit and credit entries) and net basis (only outstanding or unadjusted debit or credit entries)
5	Ability to generate report on customer profile/customer statement of account for a specific period.
6	Ability to prevent direct accounting entries being passed in Customer ledger control account (i.e. entries only to be routed thru sub-ledger)
7	Support generate ageing analysis (less than / more than six months etc.) required for balance sheet presentation and the late payment Interest mechanism should be properly built as per the terms of the PPA/regulator. Provide the sensitivity analysis on the Surcharge component and derive the scenarios
8	Ability to generate customer/group/revenue - stationwise, statewise, business areawise, profit center wise reports for a specific period, in document and local currency
9	Ability to Revenue - stationwise, statewise, business areawise, profit center wise reports for a specific period, in document and local currency alongwith GST tax code applied to it and offsetting account details
10	Ability to provide reporting for advances received from customers and security deposit received from customer.
11	Ability to flag when customer outstanding is more than security deposit or credit limit and alert the department including the department taking the work orders
12	Ability to generate the confirmation mail of the closing balances of the parties (Receivables/payables) at the year end.
13	Report of the Pending Balance Confirmations of the parties as on a particular date and auto generate the reminder mails.



14	Ability to support the requirements of Tax Audit/Statutory Audit and facilitate the preparation of various statements and annexure required therein
15	Customer register - with their complete details
16	Ability to generate alert if advance received from customer remains unadjusted for more than stipulated time limit (defined in the system)

Sl.No.	Payroll
1	Payroll Processing Program for different PAY AREA : Release, Correction & Exit
2	Generation of ECS file as per RBI guideline & format for sending instruction to bank
3	Mass Data upload / Workbench for the deductions, allowances & Empl data records
4	Payroll Posting of journal Entries in the Finance module
5	Payslip program to view & release payslip
6	Off-cycle payroll processing program
7	Payroll simulation function for payroll, gratuity & adhoc payment
8	Wage type Reporter for extracting salary report : Empl's & Business Area wise
9	Complete Log report for changes in employees and payroll data base
10	ESIC Report cum challan program
11	Provident fund report cum challan program
12	Tax on Salary (TDS) report cum challan program
13	TDS challan mapping program
14	Form 24 Q Report
15	Form 16 generation program
16	Batch program for the TAX method
17	Professional tax report cum challan program state wise
18	Full & Final Settlement report
19	Third party / utility deduction program
20	Maintain of employees records : Bank, PAN & UAN Updation.
21	Maintain & Display of HR Master Data
22	Creation of empl records in Vendor master
23	Empl Investment declaration program
24	Actuary Report : Employees wise PL & SL Leave Report
25	Batch Input & Job Selection monitoring report
26	Display individual Payroll result of employees
27	General table display for All allowance and Deduction
28	Table report for Pay scale group with increment scale
29	Program for extracting rates of DA & HRA
30	Payroll status update program



31	Report of salary component linked to GL & Vendor accounts
32	Infotype (Financial & non Financial components) overview of employees
33	Payslip view for off cycle payroll run
34	General table display for employees attendance , OT, Shift Allowance
35	Maintain table view for different shift & OT rate per hours
36	Employees wise report for Date of Joining and date of Separation
37	Display result : Salary Journal Posting
38	Adhoc query for the preparation of different Report
39	Gratuity Report
40	Leave encashment Report
41	Facilitate computation of the final settlement claim of the employees
42	Ability to automatically adjust calculations for mid-pay period salary, advanced salary, and employment actions
43	Ability to export the payroll to an excel sheet/pdf and data as per bank requirements
44	The system should be able to process payroll on the following frequencies; Daily, Weekly, Semi-monthly, Monthly, On-demand (i.e., terminations, vacation advance, court order, ratification)
45	There should be a field in the master to reflect the company code to the department to which an employee is associated
46	Provision to allocate cost of employee based on his/her associated department/unit
47	Leave/Absent record to be maintained in the system and auto effect of the same in the payroll run of the monthly salary.
48	Maintain information of the salary bank account
49	Ability to define various insurance schemes with premium and group insurance data generation.
50	Ability to allow restriction of administrative functions to a few select payroll users
51	Provision to calculate reduction in salary based on attendance policy
52	Ability to allow the following calculation of onetime payment of allowance and / or deduction: Incentive, arrear, ex-gratia etc. By Amount: enter amount to be deducted or payable, by Days: enter number of Days for system to compute the amount based on Basic Pay or gross Pay and/or any other component of Pay, By Percentage: enter percentage for system to compute the amount based on basic pay or gross pay and/or any other component of pay
53	System should facilitate the change in the PF Component as per the defined rules with approval of the competent authority, and impact the same in the accounts accordingly.
54	Allow for input of start and end date for recurring payment / deduction
55	Ability to allow Back dated calculations
56	Ability to allow a final settlement report for each separated employee
57	Ability to have the provision to run separate bonus/ incentive runs
58	Ability to conduct full and final settlement of employee during Exit



59	Ability to notify (flag) Competent authority of any outstanding balances when employee is terminated (Integrate with ESS in case of E-Exit process)
60	Ability to have Start and stop dates for deductions.
61	Ability to reverse deduction to be included in next pay check if incorrectly withheld / Option with user
62	Ability to run Payroll multiple times before finalization to ensure accurate pay computation
63	Provisions based on actuarial valuations should be done
64	Ability to provide information for actuarial valuation of the employees for determination of contributions to be made by the company
65	Reminders/ Notification to the employee for change or requirement of any additional data through mails/ SMS/ self-service etc.
66	Ability to provide an impact analysis tool for analysis of impact of revision of any / all components like pay, allowances, deductions etc. (Eg. Variation in salary component/employee wise for user defined period)
67	Exceptional reporting for month-on-month variation (financial non-financial)
68	Ability to support multiple banks or savings institutions per employee
69	Ability to forward the overtime schedule to the competent authority for approval if the amount of overtime is over a defined percentage of the basic salary (Integrate with Time Management Module)
70	Ability to process salary payment based on attendance. Statutory and voluntary deductions
71	Ability to upload documents related to calculation, payment and release of retirement benefits (Integrate with separation module)
72	Ability to determine deduction amounts by: Amount of earnings, Percent of earnings, Number of hours in cases of leave, unauthorized absence etc.
73	Ability to post the amount of salary paid for each element of pay for an employee, based on the relevant GL account code and employee cost center information to General Ledger. Financial postings include: Element, Amount, GL Account, Cost Centre
74	Provision to define tax rates (including available deductions, exemptions, taxation slab rates, standard deduction, surcharge etc.)
75	Ability to calculate HRA Rebate as per the prevailing Income Tax Law/Rules
76	Ability to handle tax exemptions as per the prevailing Income Tax Law/Rules
77	Ability to record details of loans, advances (all kinds - medical, TA etc.), recovery w.r.t all employees and also the particular "head" wise as per the rules of the company
78	Ability to provide investment declaration form in electronic format. The employee will be required to fill and submit the form electronically so as to automatically updating salary record and tax calculation by the system



79	Ability of the system to compute the amount to be transferred to the Trust as Pension, Gratuity, Commutation of Pension and Leave Encashment Contribution. (auto computation as per Actuarial report)
80	Maintain the records of the Employee Retirement Benefits as per AS-15
81	Ability to ensure support for major statutory reports / certificates of taxes in the user defined format

Sl.No.	Budget
1	Support bottom-up (input at detail level) and top-down budgeting (budget at high level and then distributed to lower level).
2	Ability to create the following budgets but not limited to:
	- Activity based budgeting
	- Revenue Expenditure budget
	- Operating Expenditure/Depreciation budget
	- Capital Expenditure budget
	- Forecast Balance Sheet for 3 years
	- Forecast Profit & Loss for 3 years
	- Forecast Cash Flow for 3 years
	- Forecast Financial Ratio
	- Forecast Retained Income
3	Ability to create new business area and cost centre
4	Can able to define controllable & uncontrollable GL's
5	Display Home currency & foreign currency Budgeted amt with rate of exchange
6	Define Stock budget GL's
7	Ability to Allocate and take Budget during as year
8	Transfer the budget from one GL / CC to Other GL/CC
9	Ability to support periodic (mid-year) budget revision.
10	Support multiple year rolling budget.
11	Support budget version control.
12	Control access to budgets for making modifications and inquiries.
13	Budget changes to be input by users to control updating to monitoring database after proper approval.
14	Ability to Freeze budgets.
15	Ability to provide a graphical representation of the budget hierarchy
16	Ability to calculate and compare budget vs. actual in:
17	Ability to provide Windows-based spreadsheets for budget preparation
18	Ability to calculate and compare budget vs. actual in:



	- Amount variance
	- Percentage variance
19	Ability to define tolerance limits either as a percentage or absolute value, depending on the amount exceed, automatically perform the following:
	- Trigger warning to user
	- Trigger warning to user and mail to budget owner
	- Disallow posting
20	Linking of the payments should be available with the budget, to ensure that the payment do not exceed the budget. Provide alerts when payment exceed budget.
21	Ability to generate variance analysis (Actual/ Budget) reports by user- defined parameters (e.g., time period, level of detail, activity, etc.). Ability to print the report and electronically route the reports to allow users to review reports.
22	Ability to provide exception reports for responsible areas (e.g. Area Office, zones) that exceeded budget with details such as:
	- Revenue/ expenditure (according to chart of accounts)
	- Actual to date
	- Budget
	- Variance (i.e. amount in excess of budget)
23	Ability to automatically check and highlight abnormal data i.e. actual exceed budget more than 10% or less than 10%
24	Ability to provide over/under budget reports
25	Ability to check fund availability real-time basis (for capital budget)
26	Ability to view source of fund for each project in capital expenditure budget report
27	Ability to generate budgeted financial statements for the accounting units

Core Maintenance and Engineering : System Administration

Sl.No.	Functional Requirement
1	User creation and archiving
2	Master data import by defined template
3	Application Programming Interface (API) management
4	Role creation



5	Permissions management by function
6	Permission management by sub-function (individual control on-screen)
7	Set permissions by read/write, read-only, or denied
8	Application for workflow should be graphical and user firendly
9	The company designed approval workflow limits and triggers
10	Ability to define if fields are mandatory over and above system fields
11	Ability to define additional fields of data (custom fields)
12	Ability to allocate pre-defined dashboards to users.
13	Ability to create checklists and assign these to specific processes
14	Customisable templates for e-mails, forms, certificates, etc.

Core Maintenance and Engineering : General

SI.No.	Functional Requirement
1	Role-based user management
2	User login by ID
3	User login tracking
4	Login via browser/Client Based/Web based
5	Self-service for when users forget their password - no requirement to involve system admin (Email/Mobile)
6	Users associated with employees for authorisation tracking
7	Support for Chrome, Safari, Edge browsers in User Interface
8	Dynamic user-defined dashboards
9	Business defined dashboards that cannot be user overridden
10	Database Business Intelligence access for reporting
11	Support for Strcutured Qquery Language reporting services
12	In system user to user messaging
13	Notification push to e-mail where appropriate
14	Export to XLS, CSV, XML, PDF etc
15	System-wide text search from the home screen with the ability to list all results
16	Screen filtering of results and ability to save the most used filters (same as Google features)
17	Ability to select often used functions in a favourite's menu for quick access
18	Ability to reorder columns and rows on screens with listed data
19	Unified system location for all master data(All master data to be at one location)



20	Ability to attach electronic documentation to system record easily in any format for easy retrieval
21	Ability to add notes to any piece of data in the system
22	Mobile applications must synchronise with a server-based system
23	Mobile applications to be capable of operating if a server connection is lost and then automatically update and synchronise once the connection link restores by either WIFI or cellular connection
24	All the processes must be validated against the regulations as defined in MoE and EPM

Core Maintenance and Engineering : Human Resource

Sl.No.	Functional Requirement
1	Ability to record employee details
2	Ability to record employee qualifications and skills
3	Ability to link qualifications to training courses
4	Ability to assign employees to approval stamps
5	Control qualification and stamp expiry and renewal
6	Assign employees to shift codes
7	Manage multiple shift code patterns
8	Manage allocation of vacation time by hours or days
9	Allow users to request vacation time
10	Manage and authorise or reject vacation time and notify employees automatically via e-mail
11	Manage time and attendance electronically via electronic identifiers such as barcode, RFID, fingerprint, etc
12	Automatically check employee clocking's against planned shift pattern
13	Automatically apply shift pattern overtime rules and pass to payroll after supervisor approval
14	Allow manual time entry
15	Allow time booking to company defined series of non-productive time codes
16	Graphical view of employee planning board showing employee, shift pattern, planned away time, and qualification expiry
17	Allocate personnel to scheduled courses for qualification renewal



18	Generate training courses and allocate resources
19	View training course plan
20	Create course content and question/answer banks
21	Publish courses online for remote learning

Core Maintenance and Engineering : Component Maintenance

Sl.No.	Functional Requirement
1	Generate a quote for the repair
2	Generate a quote for additional tasks required (over and above)
3	Track receipt of component for repair
4	Retain link with tracked part if received from managed aircraft so that maintenance status can be updated
5	Create and maintain the company capability list
6	Allow creation of a repair order in accordance with company capability
7	Allow blocking of internal repair order creation if not approved on the company capability list
8	Allow inclusion of pre-defined repair instructions to generate tasks in the repair order
9	Link publications to work order or task
10	Allow creation of multi-tasks or staged tasks to control strip inspection and build processes
11	Allow invoice generation for completed work at any stage without needing overall work order closure
12	Despatch component for repair with the ability to add additional costs (shipping, packing etc.)
13	Despatch component with Hazardous Goods Certification if required
14	Generate Form 1 or 8130
15	Ability to scrap part
16	Identify the owner of a component
17	Allow engineer to book a time to tasks (Clock-on/Clock-off)
18	Allow part requests against routine and non-routine work
19	Segregate component work orders from routine work orders to manage visibility across the organisation
20	Allow workshop supervisor (shop incharge) to assign a task to engineers



21	Provide engineer-specific screen for workshop staff. The screen shall follow the same design as base maintenance to maintain the look and feel and familiarity and features
22	Allow assigned task to be visible from tablet application in the same manner as base maintenance
23	Ability to show whether Repair Order/Component/Repair work is Under Warranty
24	Ability to show and generate Report of Repair work capturing details of all spares including expendables, consumables consumed, having source info. such as PO, Manhours consumed, list of all SBs complied etc. For Engine, it should include Part consumption at Module or submodule level including swap i.e, in total entity.
25	Ability to capture all scrapped Parts including expendables, consumables for every repair work (including Engine in totality)

Core Maintenance and Engineering : Base Maintenance

Sl.No.	Functional Requirement
1	Ability to manually generate engineer tasks
2	Generate tasks from OEM XML data import
3	Allocate resource requirements to tasks
4	Allocate parts, tools, external services, trade qualifiers to tasks
5	Create staged sign-offs with e-signing by pin ID or another electronic identifier
6	Add data capture (decision selection, dimension recording, etc.) to task for an engineer to complete electronically
7	Add limits for data capture (dimension recording must be within set limits etc.)
8	Allow import of 3rd party task list and match to existing task instruction where possible
9	Create work scopes to match or independently of OEM groupings
10	Allow levels of sign off, technician, supervisor, CRS, Quality, etc
11	Manage multiple CRS approvals
12	Generate planned pre-load of parts, tooling, and services prior to starting work
13	Generate customer quote list of work from pre-defined work scopes
14	Generate a quote estimate based on planned work, parts, and services
15	Approve or reject quotes
16	Generate quotes for 'over and above' additional work prior to working
17	Allow customer to approve quoted work remotely
18	Link quotes to customer contracts
19	Automatically apply contract terms to labour, parts, and services
20	Generate work order from approved quote



21	Option to apply task grouping Gantt planning to work order
22	Link non-routines tasks to scheduled tasks
23	Allow deferral of non-routines tasks under permission
24	Allow an individual or bulk task closure
25	Allow task closure with pre-defined text
26	Limit task closure to approved staff
27	Update aircraft records from closed work order tasks
28	Option to allow recording of component changes on managed aircraft by engineer
29	Allow supervisor (control room incharge) to allocate work to team members in advance and notify of availability and current tasking
30	Provide dedicated screen for engineering staff with simplified user interface (no requirement for navigation)
31	Engineers screen to allow time booking, part check, and request an application for vacation options and link to Gantt Chart
32	Engineers screen to display task instructions (if required for booked on task)
33	Engineers screen to do a real-time stock check and parts availability update
34	Engineers screen to allow additional part requisitions automatically linked to selected task and for required by dates to be automatically set based on assigned priority
35	Engineers screen to enable the creation of defects against task/aircraft
36	Provide the ability to print hard copy task cards
37	Provide the ability to apply user-defined task card templates
38	When raising non-routine tasks, allow the engineer to create staged sign-offs
39	Raise defect tasks with the option to prevent work until approved
40	Permit staff to book multiple tasks
41	When booked to multiple tasks, allocate time booked in proportion to task estimate (Clock-on/Clock-off)
42	For staged tasks, show stages already signed off when viewed in the Engineers screen
43	Manage shift handovers allowing notes in categories independent from tasks
44	Synchronise assigned work to a tablet device and provide task sign off from tablet device
45	Dedicated tablet application to enable the creation of part request
46	Dedicated tablet application to allow time booking to task
47	Dedicated tablet application to allow the creation of defect finding
48	Dedicated tablet application to review last shift handover notes
49	Dedicated tablet application for adding new shift handover notes
50	Tablet device must be able to work offline if the connection to the server is lost
51	Task booking to contribute to billing invoice total



52	Tasks booked must record against individuals for audit and experience recording
53	Track parts used to at work order and task level with traceability back to the goods release note
54	Tools requested must be automatically checked for valid calibration prior to the issue with notification to the user.
55	Track tools used against tasks issued to a person and, or the aircraft for traceability
56	Tools managed by part number, description, internal tool number and accompanied by image for ease of identification (nice to have)
57	Allocate tools to repair orders to allow for calibration testing
58	Generate a view of the capacity plan for a base, hangar, and bay
59	View to show work orders planned and unplanned for a base
60	Allow views of multiple base commitments
61	Show current timeline on maintenance planning screen
62	Show task completion summary on base maintenance plans
63	Show maintenance overruns on base capacity plan
64	Allow drill down on maintenance plan to individual work order
65	In drill-downs, including the ability to review task grouping Gantt plan for overruns or delays
66	In Gantt chart allow drill-down to see the detail of the task with hours booked and potential parts backorders
67	At the base level, show capacity taking into account shift availability
68	Capacity plan to take into account availability due to vacation
69	Capacity plan to show requirement by trade
70	Ability to show warranty details of the Job
71	Ability to show and generate Report of Repair work/ Work Package capturing details of all spares including expendables, consumables consumed, having source info. such as PO, Manhours consumed, list of all SBs complied etc. including consumption on Engine
72	Ability to capture all scrapped Parts including expendables,consumables for every repair work/work package.

Core ERP : Sales and Invoicing

SI. No.	Functional Requirement
1	Manage sales channels
	Preparing Master Agreement for all MRO Services,uploading of Agreements of all customers as per their Aircraft Data Base
2	Manage products and services - MRO, QC, CAMO, Training, Stores, Warranty and Support Programs



3	Manage Price lists and policies
	Managing a service catalog up to date in terms of labor pricing, capability list management, Materials Management including Consumables/Rotables/Expandables and their Price List, Inventory Management
4	Sale - Credit, discounts, loan, rental
5	Manage discount rules
6	Manage return product as per SLA
7	Payment modes
8	Manage commercial policy for the vendor, customer payment terms
9	Customized invoicing taking into account any service contracts relevant to the order.
10	Customer credit limits, definition and approval hierarchy
11	Allow generation of quote requests, receive responses, and issue PO based on quotes
12	Track invoicing, aging, and bank deposits
13	Analyse sales and generate reports on product, customer, and services
14	Leads management
15	Manage commercial marketing policy
16	Manage quotations: technical and commercial
	Manage Bidding and quoting using what-if scenarios
17	Prospecting through: E-mail, Telephone, WhatsApp
	Keep track of all exchanges with customers
18	Define/Apply customer credits
19	Sync credit limits from other modules
20	Allow generation of forecasts
21	Allow users to analyse data by creating custom real-time reports and dashboards
22	Allow drill-down for reports to analyse sales data
23	Allow setting of reminders, follow up and closure of tasks
24	Allow customer messaging from within CRM

Core Maintenance and Engineering : Finance and Accounting

Sl.No.	Functional Requirement
1	Ability to identify assets by part number and unique system asset ID
2	Ability to control a fixed asset register with journal entries for depreciation
3	Ability to hold a master list of all receivable and payable accounts
4	Ability to block/embargo a vendor due to country restrictions



5	Ability to raise purchase orders in response to and linked to requisitions
6	Ability to raise purchase orders linked to approved RFQ's
7	Ability to raise purchase orders for stock replenishment
8	Ability to manage multiple currencies and link to a dynamic currency exchange updating service
9	Ability to manage purchase approval limits based on workflow rules
10	Ability to raise loan orders
11	Ability to raise repair orders
12	Ability to raise exchange orders
13	Ability to map GL accounts from the accounting system to the associated system transactions
14	Automatically update new vendor information from the accounting system, including approval
15	Ability to approve or reject suppliers
16	Ability to generate a period stock valuation
17	Ability to match receipt against purchase
18	Ability to receive incomplete orders and await completion
19	Ability to create contract rules for third party work
20	Ability to generate an invoice at any point during work order progress
21	Ability to generate invoice backing information
22	Ability to apply contract markup or discount to invoice lines
23	Ability to analyse time booking prior to invoicing
24	Ability to add additional costs to an invoice independently of the work order performed work.
25	Ability to review actual spending against estimated budgets in real-time as the work order progresses.
26	The ability for finance to see work order progress and any potential delays
27	The ability for finance to be alerted to any work undertaken without approval
28	The ability for finance to see any work where booking exceed the estimate
29	Ability to define cost centers
30	Ability to define cost per trade
31	Ability to define cost per employee
32	Ability to define financial analysis codes
33	Ability to add/ update commercial policy
34	Ability to raise job billing advice of miscellaneous jobs
35	Ability to add invoice for non refundable deposit.(eg-non refundable deposit for aircraft recovery kit)
36	Ability to raise invoices for AOG customer without customer code in system.
37	Ability to raise job billing advice/ invoice release report by IE to enable finance to raise invoices



38	Ability to raise invoice report shopwise, periodwise & partywise etc.
39	During major grounding of Aircraft/ Engine, ability to see/ generate partial billing as per progress on work.
40	Ability to see open workorder in system.
41	Close loop system against invoices raise vs payment received for individual invoices.
42	Ability to raise report for outstanding invoices against which full payment not received.

Core Maintenance and Engineering : Inventory Management

Sl.No.	Functional Requirement
1	Allow creation of a part master
2	Part number control functions to allow creation, amendment, supersedence, and obsolescence.
3	Allow update of part master from OEM supplied price-lists
4	Manage parts by classification (Rotable, consumable, etc.) also capital / revenue
5	Allow identification by Part number
6	Allow identification by Non - Serial Number (Batch Number)
7	Assign Illustrated Parts Catalogue (IPC) identification to part number
8	Force IPC identification when part number created by engineers
9	Allow creation of units of measure in various parameters
10	Assign UOM at part number level
11	Option to assign UOM at the vendor level
12	Designate part as shelf-life controlled
13	Shelf-life to be controlled from various dates such as manufacture, receipt, cure date, etc
14	Allow planning of Min/ Max quantities
15	Allow Min Max quantities for the same part number to differ by base
16	Allow automated replenishment requisition as an option if the stock falls below min level
17	Dedicated backorder processing function to allow options such as purchase, exchange, or inter base transfer
18	Ability to satisfy backorder from stock if the alternate qualified part is available, system must record the swap and notify the recipient upon the issue
19	Dashboard home screen with the ability to add Inventory specific monitoring such as number of backorders, goods awaiting inspection, order past the due date, etc
20	Add multiple parts for the same vendor in a single purchase order
21	Automated allocation of in-stock parts if permitted by classification with FIFO and shelf-life checking
22	For Rotable parts, generate an exchange order and a core due line for booking in of the U/S item
23	Alternate part management with one and two-way compatibility managed at part number level



24	Ability to store sales prices.
25	Ability to allow multiple vendors per part and to allocate a preferred vendor
26	Allow multiple prices based on purchase condition (New, repaired, overhauled)
27	Allow parts to be purchased in one currency but billed in a different currency
28	Generate Goods Received Number (GRN) number for received parts
29	Ability to scan and store receipted paperwork against GRN
30	Ability to accept or reject parts received
31	Ability to define a two-step receipting and inspection process
32	Allow rejected parts to be separated into a quarantined location and make them unavailable unless approved
33	The system should not allow allocating serviceable stock into an unserviceable stock location, and vice versa
34	Dedicated requisition processing screens for review of orders, purchases, and receipts
35	Ability to add special instructions or internal notes to a requisition
36	Match receipted part conditions and quantities against requested details.
37	Automatically reserve accepted parts against original request and automatically update status against task for notification to engineering
38	Ability to manage exchanged parts if part received differs from part despatched for repair
39	Ability to despatch single or multiple parts against a despatch number
40	Ability to add airway bill for despatch
41	Ability to manage customer-owned stock
42	Ability to automatically allocate from customer-owned stock if available
43	Ability to reserve stock for planned activities
44	Ability to override reservation for operational needs and request replenishment
45	Ability to raise AOG or critical orders with pre-defined requirements (e.g., AOG required within 24 hours, Critical within three days, etc.)
46	For managed aircraft, allow robbery and inspection to update serviceability (Cannabalisation at A/C and Component)
47	Automatically generate barcoded labels for parts to be stocked
48	Automatically generate barcode labels for stock pick and allocation
49	Issue stock by scanning barcode or other means of electronic identification
50	Stock issues to be tracked to tasks, work orders, and persons issued
51	Ability to issue the material in units of quantity less than the purchased quantity
52	Receive stock into goods inwards using a mobile device
53	Ability to return unused stock and receive back into stores and mandate a reason for return
54	Ability to associate airway bills, Invoices, Bill of Entry with stock receipts
55	Ability to relocate stock using a mobile tablet device
56	Ability to issue stock to personnel using a mobile tablet device
57	Ability to undertake cycle count stock checks
58	Ability to use the mobile application to update cycle counts within a warehouse



59	Ability to request multiple quotes to purchase part in condition desired
60	Ability to enter the prices from vendors and approve an RFQ
61	Ability to create pre-defined and costed services for external services requested by planning or engineering
62	Ability to move materials between locations
63	Ability to upload all relevant documents on respective entry screens
64	Ability to create tenders
65	Ability to show the Warranty details of Part

Core Maintenance and Engineering : Fleet Management and CAMO

Sl. No.	Functional Requirement
1	Allow any combination of mixed fleet aircraft
2	Control master configuration by aircraft type
3	Define custom rules for Aircraft Serviceability status
4	Be able to apply master configuration to individual MSN and identify differences
5	Be able to identify both tracked and untracked Inspections and components aircraft by aircraft
6	Be able to specify reasons for not tracking or making a configuration item not applicable
7	Be able to upload OEM XML data for the generation of approved maintenance programs
8	Be able to upload OEM XML data for the generation of engineering task instructions
9	Be able to upload AD/SB instructions
10	Be able to upload AD's automatically from the regulator (EASA, FAA)
11	Link publications with engineering assessments
12	Link assessments to customer acceptance of rejection and, in turn, create engineering instruction
13	Manage and track received publications
14	Notify copyholders of publications of receipt and subsequent revisions
15	Allow manual entry of flight logs
16	Allow entry of flight logs for e-techlog (example) solution
17	Allow export of due maintenance and open PIREPs to e-techlog (example) solution
18	Record oil and fuel usage
19	Maintain a Dent and Buckle record for each aircraft with 3d graphical view and damage report
20	Create repair orders with staged sign-off
21	Attach OEM instructions to repairs
22	Generate maintenance forecasts based on utilisation



23	Generate maintenance forecasts based on look ahead
24	Generate maintenance forecasts based on forward flight schedule
25	Generate maintenance forecasts for main assemblies or specific components across the fleet
26	Generate maintenance forecasts and create new work-orders direct from the forecast
27	Generate maintenance forecasts and add to existing work-orders
28	Ability to see planned and unplanned work directly in the forecast
29	Ability to forecast items in list or calendar view
30	Compare AMP revisions to see the difference in a side-by-side view highlighting the difference
31	Capture PIREP, MAREP, and Component change information for reliability analysis
32	Allow deferral of PIREP and MAREP with authorised reason
33	Maintain an Acceptable deferred Defect audit trail per aircraft and manage MEL-defined time limits.
34	Synchronise ADD activity with e-techlog (example)
35	Manage multiple maintenance programs
36	Allow aircraft registration changes
37	Allow aircraft to move between maintenance programs individually
38	Retire a maintenance program, so it can no longer be applied
39	Allow draft programs to be worked on for development prior to approval.
40	Allow multiple tracking parameters at inspection level (hrs, cycles, N1, etc.)
41	Allow creation of new tracking parameters and apply to inspections and components
42	Allow inspections to trigger other inspections
43	Allow management of AMM revisions
44	Maintain C of A Records for Aircraft
45	Capability to generate customised crystal Reports for submission to regulatory Authority i.e Hard time due List, LLP due Report,Aircraft/Engine/Radio Logbook Report
46	Capability to download data in excel & word format
47	Generation of task card from Airbus AMM SGML
48	Creation of package with task cards as per current AMM
49	Generation of unique tracking number for deferred defect & Deferred defect tracking
50	Generation of task compliance report
51	Create component maintenance program for due scheduled overhaul/inspection monitoring.
52	provision to correct component replacement in case of data discrepancy
53	Provision to update component program as per last Component task compliance
54	Build A/C model configuration & specific Aircraft configuration
55	Build part configuration & specific component configuration
56	provision to restrict part replacement as per part interchangeability rules
57	Provision to conduct MCM
58	Generate EO & manage EO compliance across fleet & Generate EO compliance report
59	Provision to upload DFP against complied EO/package
60	Provision for error correction in journey log



61	Generation of Occurrence Report
62	Provision to maintain training record and tracking due training
63	Document management through Library
64	Provision to generate Aircraft maintenance forecast
65	Generation of A/C planning report
66	Generation of Reliability report for quarterly reliability meeting
67	Generation of repetitive defect report for monthly repetitive defect meeting
68	Generation of monthly Engg statistical Report
69	Generation of Report of signed off task of package with e-sign feature.
70	Provision to verify Aircraft compliance data by ARS for issuance of ARC
71	Allow interface with ACARS data for various consumption parameter tracking
72	MEL /discrepancy monitoring & reports and generation of MEL due report for given calender period,modelwise,open MEL report
73	Delay meeting agenda report which includes consolidated data of delays between fixed period with delay tracking
74	Incident report which includes consolidated data of incidents between fixed period with delay tracking
75	SB/AD compliance tracking and report for fleet /aircraftwise/work order/work ppackagewise
76	Aircraft movement report with complete tracking of maintenace check data,aircraft FH/FC,monitoring of line maintenace items
77	Modification tracking for components
78	LLP/Hard time/soft life component maintenance programs and tracking and related reports
79	Provision for bulk upload of manufacturer aircraft configuration data
80	Journey log reports for month/year for fleet
81	Provision for generation of customized report including reports related to AOG events, Delay and cancellation,Oil consumption,Aborted Take off,IFSD,EGT exceedance,Delta Fuel Flow at cruise,Aerodynamic stall
82	Fleet disposition report for P/N with all details of consumption paras tsn/csn tslv/cslv/tso/cso
83	Provision to Process Task Compliance Follow-up Requirements
84	Record Component Replacement Details
85	Amend Component Replacement Details
86	Edit Component Replacement Details
87	Reverse Component Replacement Details
88	Edit Engineering Service Request
89	Provision to edit/amend bulk component maintenance programs
90	Provision to track compliance of position based tasks
91	Component Reliability Monitoring based on PRR/FR/MTBUR/MTBF on the basis of shop findings. Identification of rouge units.
92	Engine Reliability Monitoring based on PRR, IFSD, Removals, Snag history and Shop findings



93	System should have procedure to define special requirements such as ETOPS / RVSM, capture relevant tasks, monitor compliance and generate approval request.
94	Storage of MEL document and linking of MEL item with deferrals, generation of operational and maintenance procedures associated
95	Monitoring of planned Aircraft movement, actual aircraft movement, planned checks and actual checks carried out during line maintenance and heavy / major maintenance.
96	Provision to record weight increase for SB compliance/mod compliance/repair compliance & generate weight growth report aircraft wise as per calendar period
97	Provision to generate weight and balance report aircraft wise
98	Automatic updation of aircraft/component programs based on execution of tasks in work package/work order
99	Fleet wise engine oil consumption report as per engine S/N ,Aircraft location, block hours, oil consumption rate
100	Provision of MEL aircraft mode wise
101	Aircraft/Engine wise monthly utilization reports
102	Allow phase out of aircraft and its attached components

Core Maintenance and Engineering : QC and Safety

Sl.No.	Functional Requirement
1	Generate an audit plan for both internal and external audits
2	Create a library of audit requirements and questions
3	Assign audits to an auditor
4	Record audit findings and raise non-conformances
5	Define if non-conformance needs notification, rectification, and or prevention - or all three
6	Assign corrective actions to the auditee
7	Allow delegation of an auditee
8	Track elapsed time from finding to correction
9	Approve or reject corrective and, or a preventative action
10	Raising of a safety occurrence against an aircraft, maintenance event, weather conditions, etc.
11	Mark a safety occurrence's probability and severity



12	Calculate the risk level of a safety occurrence
13	Ability to issue Authorization to certifying personnel
14	Ability to create, handling of training records

S/N	Functional Requirement	Sub Requirements
1	Audit Module	Generate an audit plan for both internal and external audits
		Create a library of audit requirements and questions
		Assign audits to an auditor
		Record audit findings and raise non-conformances
		Define if non-conformance needs notification, rectification, and or prevention - or all three
		Assign corrective actions to the auditee
		Allow delegation of an auditee
		Track elapsed time from finding to correction
		Approve or reject corrective and, or a preventative action
		QAPM Check list, EASA part 145 check list, JEOC customised checklist
		Type of audits: annual/spot/process/procedure/supplier
Ability to create audit report in FTM format		
2	Human Resource Module	Personal information record
		qualification record
		License/approval /COC record
		work experience record
		Record of training's conducted by AMO under CAR 145
		Training record
		maintain certifying staff list activity center wise
		Issuance of authorisation and validation of limiting dates
		Ability to issue technical bio data of certifying staff based on his/her qualification and experience
		Generate AME log book from system
3	Library and Data Management	maintain all documents as currently on air india cds server
		AME notice/Tech circular/GC/Staff notice
		Shop CMM data
		Acknowledgement documents(Read understood sign)
		Archive documents with control
		Provision to issue one-off certificate in exigency.
		Generate document revision status report



4	SMS Module	Raising of a safety occurrence against an aircraft, maintenance event, weather conditions, etc.
		Mark a safety occurrence's probability and severity
		Calculate the risk level of a safety occurrence
		Hazard Log
		SMS training Record
		SMS Gap Analysis
		occurrence reporting
		other sms functions like maintenance error data
5	Technical Services	AD/SB monitoring
		Ability of monitoring of eGCA records region wise
6	Calibration	List of tools/equipment to be calibrated work center wise
		standard to be maintained
		calibration record and certificate
		alternate tool approval
7	OJT and Assessment	records and monitoring

Maintenance Training Organisation	
	Learning Management System (LMS)
1	Training courses administration
2	Training documentation
3	Nomination of trainees
4	Tracking of training progress
5	Automation of training
7	Assessment of training
8	Delivery of training
9	certificates generation
10	Billing for outside parties
11	Course materials distribution
12	Instructor interaction
13	Refresher courses management
14	Examination management
15	The hardware and software to implement LMS



ENGINEERING FACILITY MANAGEMENT

Sl.No.	Functional Requirement
1	ALLOW CREATION OF MISC WORK ORDERS WITH INBUILT APPROVAL LIMITS
2	ALLOW CREATION OF MAINT WORK ORDERS WITH INBUILT APPROVAL LIMITS
3	ALLOW CREATION OF PROJECT WORK ORDERS WITH INBUILT APPROVAL LIMITS
4	ALLOW INVOICE CLEARANCES AS PER INBUILT FINANCIAL POWERS
5	ALLOW CREATION CALIBRATION ORDERS WITH INBUILT APPROVAL LIMITS
6	CAPITAL BUDGET PROCESSING AND APPROVALS (ARPPROPRIATION REQUESTS)
7	ALLOW CREATION OF PREVENTIVE MAINTENANCE CHECK LISTS FOR ALL EQUIPMENT , M/Cs, TOOLS. FEATURE TO EDIT, REPLACE OR ADD NEW ITEMS.
8	ALLOW EMERGENCY PROCUREMENT OF SPARES REQUIRED FOR AOG / PRODUCTION DELAY
9	ALLOW PROCURTEMENT OF ROUTINE SPARES & CONSUMABLES REQUIRED FOR MAINTENANCE
10	ALLOW USERS TO RAISE REQUEST AUTHORISED BY DIVISION INCHARGES FOR (i) calibration (EFD in house / through external party), periodic checks & certification (ii) service request like dock position, GPU, providing crane, water wash, portable compr, ac etc. (iii) maint. request like equipment break down, equipment check, temp power, comp air etc (iv) Emergency requirements like accident , fire damage, flood, aircraft recovery (V) General services like AC, Lifts, compressor etc.
11	ALLOW OTHER DIVISIONS TO RAISE NEW AUDIT REQUIREMENTS
12	ALLOW DIVSIONS TO REPORT AUDIT NCs. SYSTEM TO BE CLOSED BY USER AFTER



	NCs ARE SUCCESSFULLY COMPLETED.
13	ALLOW EFD TO CLOSE WORK ORDERS FOR EFD GENERATED BY OTHER DIVISIONS
14	ALLOW TO CREATE MATERIAL DISPATCH REQUEST TO SEND TO OUTSATION
15	ALLOW MATERIAL GATE PASS FOR OUTSIDE PARTIES AND ALLOW TO CLOSE AFTER RECEIVING THE ITEM BACK
16	ALLOW DISPOSAL OF SCRAP MACHINES/EQUIPMENT/RIGS WITH APPROVAL AUTHORITIES BUILT IN THE SYSTEM
17	PROCUREMENT OF OFFICE EQUIPMENT / STATIONARY / CONSUMABLES
18	REPLACEMENT PROCUREMENT FOR CRITICAL EQUIPMENT VIZ. RECOVERY EQUIPMENT AIRCRAFT JACKS ETC.

Core Maintenance and Engineering : Publications

SI.No.	Functional Requirement
1	Ability to record the receipt and control of publications in separate groupings
2	Ability to record the owner of a manual / document
3	Ability to notify the owner(s) of revisions to publications
4	The ability for owners of technical documents such as AD's and SB to carry out assessments for applicability and seek customer feedback
5	The ability for assessments to be processed by engineering into technical instructions and retain the link to the originating publication and revision
6	Ability to integrate FAA and EASA notification for review fortnightly
7	Ability to import OEM task Extensible Markup Language (XML) or Standard Generalized Markup Language (SGML) data against MPD and AMM revisions
8	Ability to use OEM data to generate authored task cards with electronic sign-off

**ENGINE OVERHAUL MUMBAI REQUIREMENT**

Sl. No.	Functional Requirements
1	ALL APPLICABLE MANUALS INCLUDING AMM (MAINTAINANCE DATA) CURRENT UPLOADED
2	VALIDATION OF PROCEDURE SHEET/TASK CARDS AS PER LATEST REV OF MANUALS LINK TASK TO MANUAL AND IPC FOR CROSS REFERENCE
3	NO FLOW OF UNAPPROVED TASKS/PROCEDURE SHEET
4	UPLOAD OF REVISION WITH TRACE OF THE REV STATUS
5	EASY METHOD FOR REVISION OF TASK CARDS WITH REFERENCE TO MANUALS WITHOUT MUCH MANUAL INTERVTION
6	TOOL VALIDATION/CALIBRATION/ AND POP OUTS FOR DUE FOR CALIBRATION
7	TRACE OF ISSUE OF TOOLS AND INSTRUMENTS
8	DGCA, FAA AND EASA FORM ISSUE AND TRACEABILITY OF DOCUMENT RELEATED AIRCRAFT PARTS
9	CONSUMABLES ISSUE AND MSDS AVAILABLE link
10	ALTERNATE CONSUMABLES REFERENCE AVAILABLE
11	POPS OUT FOR EXPIRY OF CONSUMABLE IN STOCK
12	LOW STOCK POP OUT FOR CONSUMBALES AND EXPENDABLE (MINIMUM STOCK TO BE MAINTAINED)
13	DATA TRANSFER WITH EASE AND ACCURACY
14	BULK ISSUE / BULK EXTERNAL PART ROUTING
15	GENRAL WORK ORDERS FOR ISSUE OF CONSUMABLE propotionate be billed.
16	SB STATUS/AD STATUS FOR ENGINE AND MODULES UPLOADED
17	MANGE INTERSHOP/EXTERNAL ROUTE
18	AUTO CONFIRM FOR SCRAP AND UNSERVICABLE PARTS
19	WORK PACKAGE EASY FLOW
20	DELINK OF REQLAR MAINTENACE TASKS ON WING WHEN ENG/COMPONENT IS REMOVED



	UNSERVICABLE
21	UPDATION OF LIFE/PART NO AND SERIAL NUMBER BE EASY
22	EASE IN DATA UPDATION
23	USER FRIENDLY APPLICABLE INFRASTRUCTURE AVAILABLE EASILY AND IN ADEQUATE QUANTITY
24	PROPER UPDATION OF APU HOURS AND CYCLES AS PER USAGE AND NOT AS PER AIRCRAFT FLYING HOURS AND CYCLES.
25	user id
26	preventive maintenance of Equipment and date updation
27	DATA DOWNLOADING SHOULD BE RESTRICTIVE. VIEWING CAN BE GIVEN TO ALL
28	CUTOMER PART INDUCTION AND TRACEABILITY
29	LIST OF PMA PARTS ISSUED FOR WORK PACKAGE WHILE CLOSING PACKAGE SHOULD BE PRINTED

PPC Functions

Module	Functionality
INVENTORY SETUP	PART MASTER
	Create, Edit, Amend, Superseded a Part
	Allow Obsolescence of Part and make inactive for use
	Maintain Maintenance (IPC, CMM,QPA, NHA, Software Standard, Aircraft Effectivity), Planning (Min/Max Levels, ABC Classification, Reorder Level, Reorder Qty, Price, Manufacturer, etc), Purchase (Purchase Price, Vendor Lead time, MOQ etc), Sale Information (Sale Price) of a Part
	Define Unit of Measurement (UOM)
	Maintain Part UOM and allow multiple UOM for a Part-Vendor combination
	Manage Part Classification – Rotable, Repairable, Expendable, Consumable
	Maintain Expense Type of a Part as Capital, Revenue
	Ability to capture Part Account Group as a combination of Aircraft Type, Engine, APU
	Maintain Shelf Life and Issuance Policy (LIFO/FIFO/Min Shelf Life), Expense Policy based on Part Classification
	Shelf-life to be controlled from various dates such as manufacture,



		receipt, cure date, etc
		Ability to Capture whether a Part is Serial Controlled or Lot Controlled
		Maintain Alternate Part Numbers (as Fully Interchangeable or One way or Conditional Interchangeable)
		Allow Update of Part Master from OEM Price List
		Ability to allow multiple vendors per part and to allocate Preferred Part
		Allow maintaining Kit composition with constituent Parts
		Create Service Information (such as AMCs, Online Services, Documentation Services etc)
		Maintain Service Planning and Purchase Information
		Maintain UOM conversion
		Ability to allow Part attribute change
		Designate Part as Core Returnable, Returnable
		Part Condition allowed (New, Repaired, Overhauled, New Surplus)
		Ability for New Part Creation request from Hangar Package, Task Creation, Work Order Process
		Ability to capture and show Part Warranty
		STORAGE ADMINISTRATION
		Create Warehouse Information (Warehouse type as Serviceable/Unserviceable/Receiving/Tools, Address, Capacity etc
		Ability to capture Part Types Allowed, Customer and Owned Parts Allowed
		Map Users to Warehouse
		Create Zone and Binning Location
		Ability to capture types of transactions allowed
		Create Warehouse Planning Parameters for a Part Eg: Allow auto replenishment from a defined matrix warehouse based on reorder point. Define Min/Max, Reorder Qty and Reorder Level for a part at Warehouse
		Allow warehouse access privileges through defined process parameters
		Allow Customer Specific Warehouse Zone and Bin Location
		PURCHASE REQUESTS
		Allow automated replenishment requisition as an option if the stock falls below the Min Level in a Warehouse
		Dedicate Requisition Processing screens for review of orders, purchases and receipts (Planner's Screen)
		Creation of Planner and Buyer Groups and map users to these groups
		Ability to add special instructions and Notes to a Requisition
		Automated replenishment requisition to appear on Planner's Screen for taking replenishment action by way of inter-warehouse stock transfer, expediting backorder, exchange, initiate procurement action. Screen should also display alternate part status
		Ability for planner to see NIS Material Requests on Planner's screen
		Create Purchase Request - Based on:
	PLANNING	



		<ul style="list-style-type: none"> 1) Direct Purchase Request for Part 2) NIS Material Request 3) Stock falls below Reorder Point or Min Level defined for a warehouse 4) NIS Part mapped to a Task called out in Hangar Work Package
	PLANNING	Purchase Requests to be authorized based on Work Flow
		Ability to satisfy backorder (NIS) from stock if the alternate qualified part is available, system must record the swap and notify the recipient upon the issue
		Dashboard home screen with the ability to add Inventory specific monitoring such as number of backorders, goods awaiting inspection, order past the due date, etc
		PURCHASE ORDER
		Create, Edit, Authorize, Close, Cancel a Purchase Order
		Add multiple parts for the same vendor in a single purchase order
		Create Purchase Request based Purchase Order
		Allow Parts to be purchased in one currency and billed in another currency
		Allow Purchase Order with staggered delivery schedule
		Create Requests for Quotes. Create Quote based PO
		Allow Drop Shipment of part/s at another location
		Maintain 'Payment Terms', 'INCO Terms', 'Insurance Terms', 'Shipping Cost Codes', 'Invoicing to', etc
		MAINTAIN SUPPLIER MASTER AND MAP PARTS TO SUPPLIER
		Maintain Supplier type as 'OEM', 'MRO', 'Distributor', 'Training Organization', 'PBH Provider'
		Maintain Supplier's Certificates, their Validity, Tax Certificates, Form 10F, etc
		Maintain Supplier Pay Terms
		Ability to manage Power By Hour based Rotable/Repairable Support
		Ability to create Purchase Orders for Services like AMC, Terrain and Nav Data Base, Online access to vendor's documentation, etc
		Ability for RFQ and Ordering through SPEC2000
		Ability to allow multiple vendors per part and allocate a preferred Supplier
		Allow multiple prices based on purchase condition as 'New', 'Surplus', 'Overhauled', etc
		For Rotable / Repairable Parts generate an Exchange Order and a Core Due / Returnable for U/S booking
		LOAN AND RENTAL ORDER
		Ability to Create Loan (In) and Rental (Out) Order
		Ability to capture Loan and Rental Terms based on calendar days, FH/FC based



STOCK MANAGEMENT	Ability to Convert Loan/Rental part to Exchange
	Ability to Create Loan/Rental Receipt and Return
	GOODS RECEIPT
	Generate Goods Receipt Number (GRAN) for parts received against, Purchase Order, Repair Order, Exchange Order
	Ability to Scan and Store Receipt Paper Work against GRAN
	Ability of Accept or Reject Parts Received
	Ability to Define two step Receipt and Inspection Process
	Allow rejected parts to be separated into a Quarantine location and make them unavailable until approved
	Allow return of Parts after rejection to vendor against Material Return Authorization
	Ability to match ordered quantity, condition and price with invoiced qty, condition & price and receipt qty, condition & price
	Automatically reserve accepted parts against original request and update status against task for notification to engineering
	Bin Parts into appropriate Stock Room/Warehouse permitting Serviceable Stocks
	Allow Goods Receipt of Customer Parts
	STOCK TRANSFER AND RECEIPT
	Create, Edit and Authorize Stock Transfer from One Warehouse to another (Inter Warehouse Stock Transfer)
	Allow Intra Warehouse Stock Transfer
	Create, Edit Authorize Stock Transfer Receipt
	Ability to record Loss of Material in Transit
	Create, Edit, Authorize Direct Stock Receipt
	Ability to Perform Physical Inventory & Cycle Count
	STOCK INQUIRY
	Inquire Stock availability across all warehouses, alternate parts, serviceable and unserviceable qty with serial and lot numbers
	Part Serial/Lot# Transaction History
	Allow Stock Correction, Standard Cost Revaluation
	Allow Part#/Serial# Change of Parts (Caused by Modification, Exchange, Software Upgrade etc)
	Single Screen facility to view Part Supply Chain information comprising of Procurement price history vendor wise, Open PO/RO, Alternate Parts stock status, Consumption Data, vendor lead times
	Allow Stock Conversion
Ability to Compute Replenishment Information based input parameters like Inventory Carrying Cost, Ordering Cost and Service Levels, Annual Consumption, Lead Times, etc	



		Ability to analyze Part Classification as A, B ,C
		Ability to identify parts as Fast Moving, Slow Moving and Non-Moving based on pre-defined parameters
		STOCK ISSUE
		Ability to record Issuance of Parts against Stock Transfer, Maintenance Material Request, Repair Order, Exchange, Loan/Rental Order, Sale
		Manage AWB Preparation
		Create Shipping Note and Shipping Invoice
		Integrate with Indian Customs SOFTLINK for online Export and Import Documentation
		KIT MANAGEMENT
		Ability to Build a Kit of Parts
		Inquire Stock Availability of Kit
		MATERIAL RETURN
		Allow Material Return of Serviceable and Unserviceable Parts to Serviceable and Unserviceable Warehouse/Stock after Maintenance
		COMPONENT WORK ORDER
		Ability to create Direct Component Work Order based on capability list
		Ability to automate Component Work order upon removal from Aircraft/NHA if failure confirmed
		Ability to create Component Work Order based on Customer Order
		Plan Component Work Order
		Generate Component Forecast for a period based on Scheduled Maintenance Tasks
		Track various stages of work completion on a component in Shop
		Ability to Scrap Part and generate Scrap Note for Final disposition of the parts. Inactivate the scrapped component from Inventory master
		Create and Maintain Company Capability List
		Allow creation of External MRO Repair Order for Component for which capability does not exist.
		Ability to define Maintenance Contracts with External Sub Contracted repair MROs (Suppliers) and map parts to the MRO
		Ability to create Child Work Orders of Main Assembly to track sub assembly movement and work compliance within shop
		Allow cannibalizing of sub- assemblies between components
		Ability sign-on and sign-off on a Task to capture manhours consumed
		Restrict work allocation on a component based on users authorization
		Link Publication to Work Order/Task
		Issue FAA/EASA/DGCA Tags
		Ability to designate a component as ROGUE UNIT

COMPONENT MAINTENANCE



		Retain link with tracked parts if received from managed aircraft so that maintenance status can be updated
		Allow creation of staged tasks to control strip inspection and build process
		Allow despatch and creation of Shipping Note for item designated for repair at External MRO against a Repair Order
		Repair Order
		Ability to automatically generate Repair Order if a Part or Sub assembly is flagged for repair at external Repair Agency, either based on a Repair Contract or Direct
		Repair Order must capture all the work scope to be performed at external repair agency and Warranty Status
		Complete tracking of Repair Order from Creation to Receipt should be available, along with Repair Quote, Quote Approval, Payment Details etc
		Ability to scrap a part at vendor facility based on cost of repair v/s new part price. Ability to recall a component in As Is condition
		Ability to approve BER Cost against Repair Order with provision to scrap at vendor facility and automatic generation of Scrap Note and inactivation of part from inventory
		Ability to show Warranty status of component
		Ability to show and generate Report of Repair work capturing details of all spares including expendables, consumables consumed, having source info. such as PO, Manhours consumed, list of all SBs complied etc. For Engine, it should include Part consumption at Module or submodule level including swap i.e, in total entity.
		Ability to capture all scrapped Parts including expendables, consumables for every repair work (including Engine in totality)
		Maintain Repair Cost History of a part from a Supplier (MRO)
	SALES AND CUSTOMER MANAGEMENT	Create Customer Master
		Ability to define Customer Contract capturing Work Scope, Contract Pricing, Part Sale Price, Discounts, Pay Terms, Scrap Policy, Additional Work Scope Pricing, Labour Rate etc
		Provide Repair Quotation to Customer
		Create Customer Order based on Customer Purchase/Repair Order
		Allow invoice generation for completed work at any stage without needing overall work closure
		Allow receipt of Advance Payment from vendor against a Customer Order
		Allow Finance to put hold on Customer Work in case of credit hold or bad payment history
		Invoice Generation to be based on Contracted terms
		Allow auto pegging of Customer inventory in Warehouse for issuance against Customer Work Order



		Ability to seek customer approval and record the same against any non-scheduled work scope
		Ability to Plan Hangar Work Package of Customer Aircraft
		Provide Quotation to Customer for Planned and Unplanned Hangar Work Package
		Ability to define Hangar Base Maintenance Contract for Customer Aircraft
		Record Work Execution, Part Consumption including expendables/consumables , Defects, Rectification, Parts scrapped, Sign-On and Sign-Off of tasks against Hangar Work Package
		Plan Material required for Customer Hangar Work Package
		Generate Interim Invoice to Customer for Tasks Completed against a Hangar Package
		Generate Component Work Order from Customer Aircraft for Parts routed to internal shops
		Route Customer part to Sub Contracted external Agency against Repair Order

Scope of Work for IT Infrastructure and Support

The Bidder shall provide, based on these specifications and contract drawings, and all equipment, material, labour and services required to construct and install the LAN, WAN, Server & Storage.

1.1. General

- 1) The bidder is expected to provide and manage network infrastructure, network security & EUDs AMC across all the office premises of AIESL. Refer Annexure XI and Annexure XII for AIESL office location and approximate number of End User Devices (EUDs), bandwidth requirement & average age of EUDs.
- 2) Under the managed services model, AIESL will not incur any capital expenditure for establishment of the network & security and any expense related to troubleshooting of EUDs (Refer Section AMC Support for EUDs). All the Customer Premises Equipment (CPEs) or network devices supplied and deployed for connecting, managing and monitoring the office premises of AIESL by the selected bidder will be provided as an OPEX. The bidder should ensure that all the office premises as listed in Annexure XI are covered under the proposed network infrastructure and security setup of AIESL including AMC. The bidder can avail third party services, but the responsibility of the ownership, SLA, confidentiality etc. rests with the bidder.
- 3) AIESL may add/remove additional/existing branches/office locations. The selected bidder will connect/disconnect branches/offices as and when required during the contract period. The selected bidder will be responsible for monitoring, management and maintenance of entire network including AMC of EUDs (+10%) in the existing network. The proposed network architecture should be scalable with 15% - 20% spare capacity keeping in mind any future expansion of AIESL. Proposed AMC solution will not cover any additional EUDs procured by AIESL.



- 4) At all locations, all equipment for providing the ILL or Broadband connectivity including router and switch will have to be supplied, installed, managed and maintained (throughout the period of contract) by the Vendor.
- 5) All the equipment including Modems / Mux /Router/Switch etc. that is required to provide the connectivity will have to be provided and managed by the respective service provider. All the above equipment shall be provided in an OPEX model. Minimum Technical Specifications for the network device and network switch to be delivered at AIESL's Offices are required in "IT Infrastructure & Support – Compliance II & III."
- 6) The selected bidder is required to deliver all the required equipment meant for one office location i.e., router, switch, rack, modem etc. in a single shipment. AIESL will not accept the partial delivery of the equipment. The partial delivery or installation will not be considered as installed. Payments for the site will commence after successful commissioning of solution after all the equipment are commissioned and installation report is signed off. Vendor needs to coordinate with designated AIESL Officials and deliver the equipment.
- 7) The selected bidder is required to provide AMC for EUDs, configure & manage the network equipment, setup NOC/SOC and provide portal for Management and monitoring/SLA reporting.
- 8) Selected bidder is responsible for reporting and logging of network incidents through the use of appropriate automated ticketing tools. Bidder should Track and monitor the closure of these incidents and escalation of these incidents to appropriate ISP/teams/ individuals in AIESL. AMC related complaints should also be appropriately ticketed.
- 9) The major AIESL's office premises as listed in Annexure XI should have full redundancy from 2 different service providers. For last mile/Remote sites as listed in Annexure XI one 200 Mbps broadband is enough. If at some location bidder provides last mile through other WAN service providers, the total responsibility of liasioning, commissioning, maintaining the link including all commercials involved should be taken care by the bidder.
- 10) If the last mile is on wireless, bidder has to ensure that no other Radio equipment causes interference to wireless signals used for AIESL's connectivity.
- 11) In the case of wireless 4G/LTE, the last mile should not have any data usage capping and it shall be only on unlimited plan similar to other wireline / RF links.
- 12) The bidder should manage and monitor the primary and secondary link/equipment to ensure compliance with SLA parameters under this Contract.
- 13) Successful Bidder should do all internal cabling where required till network rack for successful commissioning of the required link. Such additional cabling should be billed to AIESL on actuals and agreed upon pricing. Proper cabling at all locations including Office premises/DC/DR/Head Office should be done neat and clean with proper tagging and ducting by the bidder.
- 14) AIESL will only provide space within the office premises. All other required infrastructure like UPS Power supply, earthing etc. should be arranged by the bidder at no extra cost to AIESL. AIESL will not take any responsibility for installation of MUX /RF antenna/Modems etc.
- 15) The Successful bidder should configure automatic fail over using BGP or equivalent protocol like EGIRP for existing network links in coordination with AIESL and ISP Providers.



- 16) The successful Bidder should prepare, implement and ensure auto fall-back solution to switch over to DR site when DC is down. DC DR Drill has to be conducted two times in a calendar year without any additional cost to AIESL. Any additional drills as instructed by AIESL shall also be performed on need basis without any additional cost to AIESL.
- 17) All the hardware and software provided to AIESL by the bidder under this project should be licensed and legally obtained. All the hardware and other equipment supplied should be original, brand new and solution must be supplied with original and complete documentation, printed in English language.
- 18) The bidder will be responsible for upgrading of OS and other applications that comes under network infrastructure under this project. AIESL IT systems are audited by Internal and External auditors on yearly basis. Bidder will be responsible for complying with all the audit observations in all respect including but not limited to OS, application, database, etc. for systems provided by the bidder under this project.
- 19) Selected bidder should develop a Standard Operating Procedure (SOP) for day-to-day operation for management and monitoring of in-scope devices. SOP shall cover step by step illustrative guide with required screenshot for carrying out any operation.
- 20) In case of equipment provided to AIESL under this project is declared “Out of support” by OEM, bidder will deploy the similar or next available higher version of the equipment during the contract period without any additional cost to AIESL up to the remaining period of the contract. Payment & period of the contact and residual value for that equipment will be followed as a continuity of the earlier equipment which is replaced because of ‘Out of Support’.
- 21) The equipment proposed should not have been declared ‘Out of Sale’ at time of delivery. In case of equipment provided to AIESL under this project are declared “Out of sale” by OEM during the contract period, bidder will deploy the similar or next available higher version of the equipment during the contract period without any additional cost to the AIESL.
- 22) Bidder is responsible for preparing, maintaining and updating network documents/diagrams/inventory as per the AIESL's requirement. The documents/ diagrams should be updated with proper version controls. Tool/application with adequate license needs to be provided by bidder for creation and maintaining network diagram.
- 23) AIESL may, at the end of contract period, desire to retain all the installed equipment including its license at the branches/offices on its book value or Rs.1/- whichever is lower. Vendor should agree to this arrangement.
- 24) Whenever AIESL wishes to upgrade any link to higher bandwidth, bidder should upgrade link as per the agreed upon prices. Such bandwidth upgrades shall be commissioned within four weeks from the date of purchase orders / written confirmation from AIESL.
- 25) On behalf of AIESL, Bidder shall be responsible for testing new and/or emerging technology such as 5G/LTE etc. in the networking field. Based on the outcome of test result, bidder shall appraise AIESL on adoption of same. Modalities of any additional expenditure involved shall be discussed with AIESL officials.



- 26) AIESL's requirement is DMVPN (OR Equivalent) connectivity for all the branches/offices' locations mentioned in Annexure XI of this RFP.
- 27) Bidder should publish reports to prove SLA compliance of both primary and secondary links. The following reports should be submitted:
- a- Interface Availability - It shall show Availability report on daily, weekly, monthly or custom period basis to measure device level and network level availability and ensure that SLA specifications are being met.
 - b- Interface Traffic statistics - It shall show Graphs & reports of interface traffic and utilization statistics to analyse network usage and plan for additional capacity.
 - c- Interface Response time monitoring: It shall measure network latency and alert when thresholds are violated by identifying degradations early to ensure optimal VPN performance for end-users.
 - d- Interface errors - It shall monitor errors and discards on each interface to quickly identify faulty interface and take corrective action.
 - e- NMS- MIS reports on bandwidth and link utilization, response times of link, uptime, downtime reports, and configuration updates if any, should be submitted on monthly basis or whenever required by the AIESL without any errors.
 - f- Real time web-based reports and web-based monitoring should be accessible to AIESL through web-based portal.
- 28) Bidder should ensure the availability of the required hardware and software, to manage and monitor the agreed SLA terms.
- 29) All the equipment/devices installed must be IPv6 compliant and ready to handle IPv6 traffic in future.
- 30) The rates quoted by the bidder shall be uniform across the country for all locations irrespective of the location of AIESL Office premise.

1.2. Scope for Work

- 1) Bidder should deploy & manage below mentioned Network tools in AIESL's premises as part of managed network infrastructure to AIESL. Bidder shall perform the following tasks as part of deployment:

Phase		Activities	Deliverables
Phase I	Planning	<ul style="list-style-type: none">• Conduct Kick-off meeting• Identify project point(s) of contact• Identify AIESL resources required to assist in deployment, policy walkthrough, testing, and installation.• Identify business requirements• Identify technical requirements• Project Planning• Plan the schedule	Project Plan and Gap Analysis



Phase		Activities	Deliverables
Phase II	Design	<ul style="list-style-type: none"> Develop and/or review and validate solution design/architecture documents which will include: <ul style="list-style-type: none"> ✓ Solution overview and conceptual design ✓ Detailed design and connectivity parameters Create a User Acceptance Test Document 	<ul style="list-style-type: none"> Design & Architecture Document Prerequisite Document User Acceptance Test Plan
Phase III	Installation and Configuration	<ul style="list-style-type: none"> Deploy solutions Complete initial configuration Completed Integration with required ITSM tool Documentation of installation and configuration Bidder should certify the correct configuration of their equipment. 	<ul style="list-style-type: none"> Successful deployment solution Installation and Configuration Document Gap Assessment
Phase IV	Optimize	<ul style="list-style-type: none"> Fine-tuning of solution Monitor and resolve issues Provide an information knowledge-transfer workshop 	<ul style="list-style-type: none"> Tuning policies. Policies override SOP Transfer of Information session
Phase V	Deployment Validation	<ul style="list-style-type: none"> This phase will comprise of deployment validation to be conducted by bidder. 	<ul style="list-style-type: none"> Validation Report by bidder.
Phase VI	Monitoring, Management & Sustenance	<ul style="list-style-type: none"> Post- deployment (after sign-off) bidder will manage & monitor proposed solution Facilitation & operation for all change management, upgradation, updates etc. during contract period. Bidder should perform an annual audit of the system certify proper configuration and performance. 	<ul style="list-style-type: none"> Reports and Dashboards as per defined SLAs Go Live Operations

1.3. Network Functionalities

The bidder should provide all the ISP’s operations and services under the scope of this tender.

- 1) The service provider is expected to provide the Dynamic Multipoint Virtual Private Network (DMVPN) connectivity or equivalent in the locations as per Annexure XI and in future also during the contract period at the same commercials. Refer Annexure XIV for proposed network architecture.
- 2) The proposed architecture should include multipoint generic routing encapsulation (multipoint GRE) on hub and spoke configuration with Next Hop Resolution Protocol (NHRP).



- 3) The Solution should be scalable and stable and hence the preferable routing protocol may be either Enhanced Interior Gateway Routing Protocol (EIGRP) or Border Gateway Protocol (BGP) or equivalent.
- 4) The proposed connectivity will also be used for load balancing/sharing of AIESL's traffic depending upon the convenience of AIESL.
- 5) AIESL may run Data, Voice, and Video on the network simultaneously. Hence, the proposed solution should enable implementation QoS/CoS in the network from Day 1 without additional cost to AIESL.
- 6) Because of the business requirement, AIESL may shift branches/office premises to new locations. All the network equipment including the links needs to be shifted to the new premises. The bidder will uninstall the equipment, duly pack them and will transport the equipment to the new location and will reinstall the equipment at the new location. Equipment transportation cost through courier will be reimbursed. Similarly, the bidder will coordinate in shifting/surrendering the links both at old and new locations. AIESL will pay the agreed shifting charges to the bidder. Bidder has to carry out link shifting / equipment shifting within 4 weeks from the date of purchase order / work order.
- 7) Based on the requirements, AIESL may seek increase/decrease of bandwidth for certain locations. The bidder has to deploy suitable equipment for the same and coordinate with the telecom service provider for commissioning the required bandwidth. AIESL will pay the link commissioning charges if the local loop is required to be upgraded. In case of change of equipment to any other category, AIESL will pay the itemized cost for the newly deployed equipment from the date of deployment. Old equipment will be taken back by the bidder at his own cost.
- 8) The bidder, during the contract period, will apply, on behalf of the AIESL, for any additional Leased lines/RF/3G/4G/MPLS ports with Basic service Providers. It will be the responsibility of the bidder to co-ordinate with the Basic service Providers and other Government Organizations in obtaining the leased line/RF / 4G / MPLS port connections for all branches / offices across the country. Further, bidder will coordinate with the telecom service provider including submission of line applications, collecting demand notes and submitting the payment drafts to the service providers by obtaining the same from AIESL.
- 9) During the period of the Contract, AIESL reserves the right to add other networks to the AIESL network.
- 10) AIESL reserves the right to Increase /decrease the quantities/types/Bandwidth /designs as mentioned in this RFP.
- 11) The Bidder should Monitor and manage all links for strict compliance with SLA through NOC and SOC centre.
- 12) The Bidder will meet the defined SLAs for uptime of the network and bidder should ensure lower turnaround time in the event of equipment failure.
- 13) The bidder is required to implement End-to-End Gateway based encrypted VPN architecture for all existing and new / proposed office premises of AIESL so as to encrypt the data flow based on the requirement of the applications deployed.



- 14) The bidder has to integrate the VPN networks with the LAN segment of the AIESL's locations. The bidder has to ensure and enable end-to-end encryption to provide security in the communications.
- 15) The selected bidder shall update the software/OS/Patch of network devices as and when required without any additional cost to AIESL.
- 16) The bidder should coordinate with BSNL/MTNL and other Basic Service Provider for obtaining connectivity, for the locations depending on the Bandwidth requirement.
- 17) The bidder shall maintain the connectivity at each location on 24*7 basis. Bidder also has to monitor the sites pro-actively through NOC and SOC centre so as to prevent the link failure. Bidder should take the necessary action to restore the link in case of down time without waiting for down call from AIESL.
- 18) The bidder will also take the responsibility of liaising with the Government Departments for obtaining the necessary regulatory approvals, if any. However, AIESL will issue letters that are required and sign such applications as are necessary.
- 19) The bidder will provide escalation procedures and the names of the officials to whom the calls can be escalated for project implementation and network sustenance.
- 20) The bidder shall submit a detailed PERT (Project Evaluation and Review Technique) or Gantt chart, location-wise, within 15 days from the date of receiving the PO/LOI. The bidder shall submit weekly report on the progress of the project and also the status as on the scheduled date and actual date of each activity detailing any deviation from baseline PERT chart to AIESL.

1.4. IP Address Scheme

- 1) The bidder is responsible for maintaining and managing IP address and VLAN schema for AIESL across all locations.
- 2) The bidder should design the IP addressing scheme for the new branches/offices proposed to be connected in the RFP and implement the same at each location after obtaining approval from AIESL.
- 3) If it is felt necessary that the IP design needs to be changed at a later date, the bidder should design the new IP scheme based on AIESL's requirements and implement the same on the network. The bidder shall coordinate with the vendors of LAN, PCs, servers and other equipment and with the help of them migrate old IP addresses to the new scheme. The bidder shall submit a comprehensive document for the IP address scheme including implementation details for connecting all the branches/offices /other locations of the AIESL. The above IP address design, implementation, migration and documentation shall be offered without any extra cost to the AIESL.

1.5. Maintenance and Monitoring

- 1) The bidder shall do all such configuration as access list, firewall features that are required on the routers or other equipment under their maintenance.
- 2) The bidder shall maintain the network equipment inventory and configuration details.



- 3) The bidder will be responsible for ensuring the quality of service required by each of the applications running on the network. This activity includes application wise investigation of bandwidth usage, network latency, and identification of congestion points, troubleshooting and capacity planning.
- 4) In case, the network latency/jitter/packet loss is more than expected, it shall be the duty of the bidder to investigate the network to find out the cause and rectify the same for achieving the optimal network operation.
- 5) The bidder will be responsible for monitoring of AIESL's network infrastructure and regular checking of network health. Some of the major activities include but not limited to:
 - a- Daily Networks Health Checklist of all Network Equipment at AIESL office premises shall include Interface status/errors, equipment uptime, CPU / memory utilization, Logs, power status, Module status for Core Switch, diagnostic result.
 - b- Finding out status of all links from AIESL office premises. If any link is down, the bidder shall initiate steps to resolve the same.
 - c- Capacity/Bandwidth usage monitoring. Need to capture Min/Max/Avg. utilization on Daily/Weekly/Monthly basis of all links.
 - d- Monitor port status on network devices.
 - e- Network cabling status and verify connectivity in AIESL office premises. Co-ordination with respective teams /vendors.
- 6) The bidder shall be a single point of contact to all branches/offices for any problem related to connectivity, IP and EUDs issues. It would have to analyse the WAN and LAN issues and if related to network or networking equipment would have to initiate steps to resolve the same within the stipulated time. For any EUD related issue the vendor has to provide the service as per AMC terms and conditions listed in this RFP.
- 7) Bidder should ensure proactive Monitoring and management of installed network using network management software through a central location from Network Operations Centre (NOC)/Security operations centre (SOC). Remote Monitoring shall be enabled from the bidder's central NOC/SOC site with accessibility over toll free lines and email. Further bidder needs to provide web portal access to AIESL so that Monitoring can be done. The bidder should monitor and manage all links for strict compliance with SLA. AIESL should also be able to obtain standard reports on the links bandwidth usage, availability of links etc.
- 8) Bidder has to deploy a system where call logging of down link should be done automatically i.e., without manual intervention and alerts of such down calls should be reported to AIESL by way of email. Bidder should provide a portal and Dashboard to AIESL where real time monitoring can be observed and ticket logging and ticket status can be viewed and done.
- 9) If any call is logged for the link down issue, responsibility of the bidder shall be there until the link is up in the network switch in the branch.
- 10) Bidder should ensure setting up of centralised NOC/SOC within AIESL office premise. Further bidder needs to provide web portal access to AIESL so that Monitoring can be done.



- 11) The bidder should provide all security measures for the network, which should prevent against all kind of attacks like IP spoofing etc.
- 12) Bidder should provide below mentioned resources at AIESL’s office for proactive support to all requested locations during scheduled timing as mentioned below:
- a- The team shall be responsible for monitoring, management and L1, L2 & L3 support including incident and ticket management and resolution of network and EUDs issues.
 - b- The dedicated team proposed by AIESL for the period of five years is as follows:

City	Office	Desktop	Printer	Laptop	NOC/SOC Engineer	L1, L2, L3 Support Engineer
New Delhi	T2 – New Avionics Complex (NAC)	500	130		2 at Central Helpdesk for all India level L1 support and L2, L3 support at T2	2
	T1 - Engg. /Training School	30				Person to be called from NAC, T2
	T3 – Engg.	114	40			1 (2 personnel from NAC, T2 will give backup support)
	T3 - EMF		5			
	HQ - Safdarjung	30	30	7		Person to be called from NAC, T2
Kolkata	NTA	100	11	5		1
	Hangars	70				
Mumbai	NEC	42	10	2		1
	OAP	400	100	20		2
Nagpur	MRO NAG	104	35			1
Hyderabad	Shamshabad	80	13	2		1
	MTO	17				
Bengaluru	BLR	20	10			1
Chennai	MAA	19	6			1
Thiruvananthapuram	Hangars	60	11	3		1
	MTO					

Note: A total of 2 (NOC/SOC & L1, L2 & L3 Support) & 12 (L2 & L3 Support). Regular shift timings: 9 AM - 5 PM/6 Days a Week.



c- Support Level Definitions

Level-1 or Tier-1	Junior level technical support personnel. Level 1 support teams solve user problems by following standard operating procedures (SOP)
Level-2 or Tier-2	Level 2 technician reviews the work order from a Level 1 specialist. Level 2 technician communicates with the user with an in-depth analysis of the problem before providing a solution.
Level-3 or Tier-3	Level 3 support consists of experts, who may include specialists such as architects, engineers, and creators.

13) Bidder should have adequate field engineer for restoration of links with skilled knowledge and prior experience. The network links should not remain isolated due to the absence of field engineer at any point of time. There will be no engineer visit charges in any case.

1.6. Network Reports and MIS

Following are some of the reports that are to be submitted to AIESL. The vendor may be asked for other reports on network status/monitoring etc. in due course.

When	Report
Monthly	<ul style="list-style-type: none"> a - Link wise availability report b - Link-wise Bandwidth Utilization report with suggestions for bandwidth upgrade/downgrade based on the report. c - WAN Progress report to be provided for links Region wise, zone wise, link wise, new links added, links surrendered etc. d - Service Provider wise availability report e - Incident response and resolution SLA reporting
Quarterly	<ul style="list-style-type: none"> a - All monthly reports with trend analysis b - Quarterly SLA report c - WAN equipment/Network Asset’s inventory Report including Model, OS Version, DRAM, Flash RAM and Interface card details with other hardware available in the equipment. d - Link inventory including location, ISP. Bandwidth, Link Carried Medium, Peak utilization, Average utilization, etc.

1.7. Operations

1) Based on the requirement successful bidder has to integrate any new network to the AIESL existing network smoothly, which may be obtained from existing bandwidth provider or any new bandwidth provider as per the decision of the AIESL. Successful bidder may advice AIESL in the selection of media.



- 2) Successful bidder should install & configure network equipment for integration of new application, additional network etc., should support for smooth operation of its entire network, or any other location desired by the AIESL, conduct user training at the location specified by the AIESL and provide consultation, management and monitoring for other network related problems of any applications.
- 3) Successful bidder should conduct BIA (Business Impact Analysis) of the AIESL's network & security architecture and prepare Disaster Recovery plan (for network including links, equipment) including step-by-step procedure of the network recovery, time taken for each operation and dependencies.
- 4) The bidder shall be assisting AIESL with respect to the network design for new requirements/ revamping the existing architecture as per the best practices and implementing the same. The Network Specialist/Network Engineer to be available onsite during such deployments as and when required by AIESL.
- 5) The successful bidder is responsible to ensure that the NOC and SOC solutions comply with AIESL's information security policies and industry leading standards and applicable laws and regulations.
- 6) The successful bidder should do necessary configuration changes in the network devices to mitigate the vulnerabilities of the devices. The bidder shall provide support to AIESL/security team in doing the vulnerability assessment of the devices on a regular basis.
- 7) In addition, the bidder is responsible for impact assessment and modification of NOC and SOC operations at no extra cost, on account of any changes to applicable information security policies/ procedures / standards/ regulations.
- 8) As per industry practices, selected bidder should submit and regularly update following indicative list of documents for all in-scope solutions and operation activities:
 - a- High Level Design Document (HLD)
 - b- Low Level Design Document (LLD)
 - c- Standard Operating Procedure (SOP) for all operation activities
 - d- Network Diagram of AIESL office premises pan India.
 - e- Admin Guide for various in-scope solutions
 - f- Any other document as required by AIESL

1.8. Continuous Improvement

- 1) The selected bidder is required to make necessary modifications and improve the network monitoring, device configurations, traffic management, load balancing, bandwidth utilization, etc. in cost effective manner.
- 2) All activities related to modifications shall be planned well in advance and necessary permissions shall be taken from AIESL to perform such activities, through Change Management process.
- 3) This modification should be on a regular basis and the successful bidder will be held responsible if any issue occurs during any modification activities. It is expected from the successful bidder to co-



ordinate with AIESL team to improve processes related to network management. The selected bidder will have to improve this internal process if required to improve the network performance.

- 4) Bidder shall work towards improving the policies configured on an on-going basis to reduce the occurrence of false positives & false negatives.
- 5) Periodic audits should be carried out on-site, by the OEM every year to ensure the quality of implementation and operations. On need basis health check-up exercise shall also be conducted.
- 6) Bidder shall curtail the closure time for incidents and events, also ensure the periodic check-up reviews for the same.

1.9. Dashboards

- 1) As part of Deliverables, bidder must provide integrated dashboard covering all appliances for viewing real-time incidents / events, alerts, status of actions taken etc. The dashboard should be an easy-to-use Web User Interface with search function, create reports, as well as access cases and applications, with just a few clicks. The vendor should implement an integrated online dashboard for services provided to AIESL.
- 2) The dashboard should be web based online portal available over desktop, Mobile, Tablet and iPad. This should have the automated facility of sending e-mails and SMSs. This tool should be accessible on Laptop and Mobile devices through VPN.

1.10. SIT and UAT

- 1) There will be a User Acceptance Test by AIESL for the tools deployed and NOC and SOC operations wherever applicable.
- 2) The AIESL shall commence the User Acceptance Testing as and when each product and services are made ready by the Bidder and a formal confirmation that the system is ready for UAT is submitted to AIESL. The results thereafter will be jointly analysed by all concerned parties.
- 3) UAT will cover acceptance testing of all the product/services, integration with NOC and SOC tools and dashboard and integration of NOC and SOC with all targeted devices and systems.
- 4) Complete acceptance has to adhere to the stipulated time lines.
- 5) The solution will not be accepted as complete if any facility /service as required is not available or not up to the standards projected by the Bidder in their response and the requirement of AIESL.
- 6) AIESL will accept the solution on satisfactory completion of the above inspection. The contract tenure for the Solution will commence after acceptance of the solution by AIESL.
- 7) In case of discrepancy in facilities and services provided, AIESL reserves the right to cancel the entire contract.



1.11. Monitoring

It is expected that monitoring shall be carried out from Network Operation Centre (NOC) and Security Operation Centre (SOC) hosted on premises of AIESL. The bidder shall be responsible for providing adequate resource count for the operations of the NOC and SOC. Bidder shall also be providing dedicated SPOC (Single Point of Contact) and escalation matrix. The bidder is expected to monitor NOC and SOC related activities and events for AIESL's network infrastructure and suggest/ take appropriate action on an on-going basis.

1.12. Training

1) The selected bidder will be responsible for training AIESL's employees as and when required in the areas of implementation, operations, management, monitoring, error handling, system administration etc. The training will be given both pre-implementation and post-implementation for proposed solution.

a - Pre-Implementation: Training will be provided to AIESL personnel team on the product architecture, functionality and the design for each solution under the scope of this RFP.

b - Post Implementation: Training will be provided to AIESL personnel team on operations, monitoring, policy configuration for all in-scope solutions, routine operations, management, monitoring, etc.

2) The Bidder shall train the AIESL's personnel for basics of networking, operation, policy management, Troubleshooting and familiarization of features and functionalities, policy configuration, alert monitoring. The final agenda of training will be mutually agreed.

3) The bidder is required to provide all trainees with detailed training material for each solution as per the scope of work of AIESL. This training material should cover installation, operation, integration, maintenance, troubleshooting and other necessary areas for each solution.

4) All out of pocket expenses related to training shall be borne by the selected bidder. The bidder may utilize the OEM resources in case the bidder does not have adequately experienced resources for providing training. It is to be noted that all expenses related to trainer (logistic or other) shall be borne by the bidder. Rest all requirement such as training room, printout, etc. shall be taken care by AIESL.

1.13. IT Infrastructure and Network SLAs

A. Delivery SLA

S/N	SLA	Timeline
1	60% sites on wired / RF	Within 23 weeks from the date of Purchase Order
2	20% of sites	28 weeks from the date of Purchase Order
3	Balance 20% sites	32 weeks from the date of Purchase Order



4	Bandwidth Upgrades	4 weeks from the date of purchase orders / written confirmation from AIESL.
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Sign-off

Commissioning sign-off shall be arranged for every 10% completion of the total sites as per PO. From 10% until 80% the sign off shall be provided in batches. Beyond 80% the sign off shall be provided as and when the links are commissioned.

Penalty for delayed delivery

AIESL expects the successful bidder to deliver the required solution at minimum 60% of the sites within the above timeline. For sites, which are commissioned beyond the said delivery timelines, 10% of the total Annual Recurring Charges (ARC) against the respective location will be levied as penalty.

B. Maintenance SLA

The selected bidder shall guarantee a quarterly uptime as mentioned in table below for the DC/DR Infrastructure & Branch infrastructure from the date of commencement of the proposed solution. (Any planned shutdown will not be considered for calculating SLA).

$$\% \text{ Uptime (Qtr)} = \frac{\text{Total contracted minutes in a quarter} - \text{downtime during contracted minutes}}{\text{Total contracted minutes in a quarter}} \times 100$$

The table below specifies support/maintenance matrix along with uptime:

S/N	Services	MTTR1 (HH:MM)	MTTR2 (HH:MM)	Remarks
1.	Connectivity at DC/DR/HQ(P2P/Internet)	0:10	02:00	Should maintain 99.9% uptime
2.	Connectivity at Outstations	0:10	04:00	Should maintain 99.5% uptime

MTTR1 (Mean Time to Respond) - Defined as time taken by the help desk to respond to the concerned user over the service desk tool/ phone/Email or in person and acknowledge the problem.

MTTR2 (Mean Time to Resolve) - Defined as time taken to resolve a problem.

The problem shall be considered **to be solved** when the bidder has communicated to the user about the resolution of the incident and the resolution formally recorded.

The downtime calculated shall not include the following:

- Any planned shutdown
- Failure or malfunction of any equipment or services not provided by the bidder.



- Negligence or other conduct of AIESL or its agents, including a failure or malfunction resulting from applications or services provided by AIESL or its vendors

However, it is the responsibility of the selected bidder to prove that the outage is attributable to AIESL. The selected bidder shall obtain the proof authenticated by the AIESL's official that the outage is attributable to AIESL.

In case the bidder fails to meet the SLA as described above, the following penalty shall be imposed:

S/N	Services	Uptime	Penalty
1	Connectivity at DC/DR/HQ/Office premise(P2P/Internet)	>=99.9%	NIL
		<99.9% to >= 99.5%	10%
		<99.5 % to >= 99%	25%
2	Connectivity at Outstations	>=99.5%	NIL
		<99.5 % to >=99.0%	10%
		<99.0 % to >=98.5 %	25%

Absence of NOC, SOC Resources		Penalty
1	Absence of Technical Engineer	INR 2000/- per day
2	Absence of Technical Support	INR 1000/- per day

In case any branch/office is down for more than 24 hours due to failure of hardware (Router, Switch, Modem), Penalty of Rs.1,000/- per day per site shall be deducted in addition to SLA mentioned above.

The maximum penalty will be up to 25% of quarterly charges of respective services. In case maximum penalty is imposed for more than two times in a year for the same location, AIESL will impose an additional penalty of 5% of the quarterly charges and may consider termination of services.

1.14. Audit

To the extent that AIESL deems it necessary to carry out a program of inspection and audit to safeguard against threats and hazards to the confidentiality, integrity, and availability of data, the Bidder shall afford AIESL's representative access to the Bidder's facilities, installations, technical resources, operations, documentation, records, databases and personnel. The Bidder must provide AIESL access to various monitoring and performance measurement system (both manual and automated). AIESL has the right to get the monitoring and performance measurement systems (both manual and automated) audited without prior approval / notice to the bidder.

- 1) The Bidder shall at all times whenever required furnish all information, records, data stored in whatsoever form to internal, external, AIESL appointed and statutory inspecting auditors and extend full cooperation in carrying out of such inspection. The Bidder will also undertake to co-operate with the auditors to carry out its supervisory functions and objectives and will furnish all records and other information as auditors may call for to carry out inspection and/or other functions. The Bidder is required to facilitate the same at no additional cost and shall provide uninterrupted access to the



documents required by the auditors. Further the Bidder has to ensure rectification of all the irregularities thus pointed out by the auditor within a given time frame.

- 2) The bidder has to ensure compliance of Information Security according to policy of the AIESL and mitigate the risk, if any, within the stipulated time without any additional cost to AIESL.
- 3) In line of above, the selected bidder shall ensure that all regulatory, Statutory, Local Administration requirements are adhered to subsequently while undertaking deliverable and services over the period of contract without any additional cost to AIESL.
- 4) Compliance with security best practices may be monitored by periodic computer/information security audit performed by or on behalf of AIESL. The periodicity of these audits will be decided at the discretion of AIESL. These audit plan to include, but are not limited to, a review of: access and authorization procedures, physical security controls, input/output controls, DB controls, backup and recovery procedures, network security controls and program change controls.

1.15. AMC Support for EUDs

A. Hardware Support

Bidder will provide AMC support for EUDs which will include repair and maintenance of the EUDs for which details are provided in the Annexure XII.

- 1) Desktops: All the parts of the computer desktop including CPU, Monitor, keyboard and mouse etc., where same parts are not available equivalent compatible part should be provided. Replacement of such parts will be on actuals.
- 2) MFD/Printers/Scanner: All the parts of the printer including logic card, fuser assembly and all others cards and peripherals. Where same parts are not available equivalent compatible part should be provided. Printer cartridges are excluded and replacement of such parts will be on actuals.
- 3) Laptops: All the parts of the laptop excluding Battery and Charger/Adaptor. Replacement of such parts will be on actuals.

B. Hardware Support - Key Activities and Responsibilities

- 1) The comprehensive maintenance includes preventive maintenance on regular basis of the Desktops, Printers & Scanners and/or replacement of any items necessary for keeping the Desktops, Laptops, Printers and Scanners active and free from any defects/disturbance. Resolution of any unscheduled call for corrective and maintenance services, taking appropriate measures/steps on time to set right the malfunctioning of the Desktops, Printers and Scanners.
- 2) The replacement of defective spares with good quality and standard spares will be done by the bidder without any extra charge of any kind.
- 3) The Detail of machines (PC, Printer, Scanners, etc.) of which AMC is required is attached as Annexure XII in Excel workbook separately.



- 4) The comprehensive maintenance shall be carried out primarily at the premises of AIESL as specified in the work order, during office hours. In case, the Bidder feels that the equipment cannot be repaired at site, they will carry and deliver the equipment at their own cost and risk to get it repaired promptly.
- 5) The operating environment condition in which the equipment is presently installed is quite satisfactory and the Bidder will not raise any condition with regard to the working environments for the equipment for the equipment covered under AMC.
- 6) In case of reinstallation of software, the AMC vendor will not install a pirated copy in any circumstances. The AMC vendor will ensure that AIESL provides the original and licensed version of the software/OS. In case of any issue, the AMC vendor will report it to AIESL of such circumstances in writing.
- 7) As there are more than 2000 numbers of Equipment which are installed in AIESL and covered under AMC the successful bidder will ensure sufficient spare parts to avoid any downtime due to faulty EUDs at AIESL Office.
- 8) The successful bidder, as per the real need and requirement of the AIESL shall ensure the appropriate deployment of the manpower.
- 9) The successful bidder has to maintain all the relevant records, register and documents as required.

C. Software Support

- 1) Provide software support to all IT assets across AIESL branches, including Desktops, Laptops, Printers/MFDs and Scanners.
- 2) Software Support includes recommendation, specification, installation, testing, and troubleshooting of computer systems and peripherals within established AIESL standards/policies and industry best practices.
- 3) The Service Provider shall use remote control tools as preliminary mode of remote problem resolution, wherein NOC/SOC engineer shall take control of user systems for resolving incident remotely, first for maximum 30 minutes, subsequently call will be transferred to onsite FMS support personnel followed by engineer's visit if required.

D. Software Support - Key Activities and responsibilities

- 1) Software Support
 - a - PC, Laptops, Printers, Applications, AD, OS and any other peripherals / systems.
 - b - Escalation of calls to relevant person / vendor after first level problem Isolation.
- 2) Workplace/ Desktop Management
 - a - Install / support / maintain / trouble shoot various software and telephonic support to hardware.
 - b - Provide OS level support.



- c - Define and resolve problem alerts.
- d - Patch installation/updating and management in consultation with Corporate Office.
- e - Anti-Virus installation/updating and management, if any.
- f - Installing Microsoft Office, Antivirus, Microsoft System Centre and other software as required by the AIESL. License Key will be provided by AIESL.
- g - Installing/ reinstalling/repairing Operating system.
- h - Taking back up before installation of Operating system as required and restoration if required.
- i - Installing and Configuring MS-Outlook.
- j - Checking and Cleaning of logs of the system.
- k - Configuring Settings of Internet explorer for proper functioning of the in-house Applications.

3) Mail Management Client Level Support

Management of Mail Server will be the responsibility of AIESL.

- a - Management of Mail clients, Install, configure, troubleshoot & upgrade on E Mail Software. (E.g., MS Outlook etc.)
- b - Provide support for mail clients and establish email connectivity.
- c - E-Mail support on handy connected devices. E.g.- iPad, iPhone, TAB, Mobile, etc.
- d - Approx. no. of mailboxes with AIESL is 2000.

4) Antivirus Management

- a - Antivirus Management at end user.
- b - Machines to be updated as and when requirement comes from centralized team.

5) Any other IT related activities for which the person would be duly guided and / or trained by AIESL.

6) IT Infrastructure & Support – Compliance I

S/N	Requirement details	Compliance (Yes/No)
1	GENERAL	
2	SCOPE FOR WORK	
3	NETWORK FUNCTIONALITIES / MODALITIES	
4	IP ADDRESS SCHEME	
5	MAINTENANCE AND MONITORING OF NETWORK	
6	NETWORK REPORTS AND MIS	
7	OPERATIONS	



S/N	Requirement details	Compliance (Yes/No)
8	CONTINUOUS IMPROVEMENT	
9	DASHBOARDS	
10	SIT AND UAT	
11	MONITORING	
12	TRAINING	
13	IT INFRASTRUCTURE AND NETWORK SLAS	
14	AUDIT	
15	AMC SUPPORT FOR EUDS	

Authorized signatory of the bidder

Name:

Designation:

Company Name:

Seal and Signature:

1.16. IT Infrastructure & Support – Compliance II

Minimum Technical Specifications for Network Router / WAN Edge Device

S/N	Specifications	Compliance (Yes/No)	Remarks
1	Device should be modular with minimum two slots. The router will support 2 RJ-45 based ports, 1* SFP based ports, 2* NIM slots and have 100 Mbps aggregate throughput.		
2	It should be provided with minimum 2x10/10/1000 Base T and 1* SFP-based ports from day -1 and should have free slot to accommodate other interface for future expansion.		
3	Device should be able to support up to 100 Mbps of traffic with encryption and other services like QoS, NAT, IPSec etc.		
4	Device should support scalable IPSec VPN architecture, DMVPN or equivalent.		
5	Device should able to support up to 225 IPSec tunnels.		



S/N	Specifications	Compliance (Yes/No)	Remarks
6	Devices should be provided with minimum 4 Gb RAM or higher from day-1. Device should have minimum 4 GB flash memory to store multiple images.		
7	Device should support routing protocols like Static, RIP, OSPF, BGP, ISIS, MPLS, GRE, IPSec, ECMP, PIM, BFD, IPSLA. It should support policy-based routing, link performance-based routing. It should possible to send application traffic based on link performance.		
8	Device should able to support various traffic QoS methods i.e., priority queue, LLQ, Class based waited fair queue.		
9	Firewall device should able to do deep packet inspection and identify applications at layer-7 and we should able to define access control based on application. It should possible to identify at least 1000 common applications by Device.		
10	Device should support SSH, SNMP v3, Syslog, NetFlow for monitoring and device management should be possible from both CLI and GUI. It should support DHCP server, DNS.		
11	Device should support IPv6 features like BGP, DHCP, DNS		
12	Router should support link up down status report, Device up down status report.		
13	Solution should able to support Next Generation wide area network which allows to use WAN based on centralize controller architecture that can:		
a.	Perform Centralized path computation and policy provisioning based on templates		
b.	Support for building various IPSec/VPN topology like Hub & Spoke, full mesh, partial mesh with automation from the Central Controller.		
c.	Active-active Link Load Balancing for minimum 2 Links at Branch.		
d.	Bandwidth of 10 Mbps should be provisioned from Day 1 and should be upgradable to 50 Mbps in future.		
e.	The Branch equipment should support various Load Balancing technologies - Active-Passive, Unequal Load Balancing.		
f.	Completely separate Control Plane and Data Plane communication and path.		
g.	Control plane communication between Routers and Central Controller must be secured via TLS/DTLS or equivalent Secure technology.		
h.	End to end link quality detection based on loss, latency and jitter and traffic routing based on link quality		
i.	Support for end-to-end segmentation for different traffic and creating multiple virtual topologies based on traffic segment		
j.	The solution should have Firewall and URL Filtering from day 1.		
k.	Two-factor Device Authentication of Branch Router to participate in the WAN Network. One Factor defines the Edge Device is from the same OEM and Second Factor will define it is for UIIC.		
l.	The IPSec VPN should be at least AES 256 Standard and the		



S/N	Specifications	Compliance (Yes/No)	Remarks
	proposed device should periodically refresh IPsec keys of all the edge locations dynamically, at least every 24 hours.		
14	The device should not be declared EOS/EOL during first 3 years support period and for additional 2 years of extended support.		

Authorized signatory of the bidder

Name:

Designation:

Company Name:

Seal and Signature:



1.17. IT Infrastructure & Support – Compliance III

Minimum Technical Specifications for Network Switch

S/N	Specifications	Compliance (Yes/No)	Remarks
1	Minimum of 24 port 10/100/1000Mbps Gigabit Ethernet auto sensing ports with at least 2 Gigabit Ethernet port 1000Mbps SFP interface for uplink connectivity		
2	Switch should be supplied with Indian Power Cord and Rack connection clamp.		
3	Minimum of 512MB DRAM and 256MB Flash Memory		
4	Support for minimum 16000 MAC addresses		
5	Support for Address Resolution (ARP) to work in conjunction with Private VLAN Edge to minimize broadcasts and maximize available bandwidth		
6	The proposed Switch should be IPV6 compliant. The device should be IPV6 Tested device and IPV6 should support from the day one		
7	Multicast:		
a	Multicast must be supported in hardware so that performance is not affected by multiple multicast instances		
b	L2 Multicast support – IGMP Snooping		
c	Support both IPV4 and IPV6 addresses in a multicast group		
8	Support for external RADIUS for console access restriction and authentication		
9	The proposed Switch must support below IEEE 802.1X based security requirements and available from day one:		
a	IEEE 802.1X		
b	Radius change of Authorization (CoA) for Network Access Control		
c	802.1X with VLAN assignment		
d	802.1X with Guest VLAN		
e	802.1X with guest VLAN enhancements		
f	802.1X with Auth Fail VLAN		
g	802.1X with Auth fail Open		
h	802.1X with Mac Auth Bypass		
i	802.1X with Mac Auth bypass for Voice VLAN		
j	802.1X with ACL's		
k	802.1X with port security		
l	802.1X with accounting		
m	NAC-L2 IEEE 802.1X		
n	NAC-L2 IP		
o	NAC-L2 IP Auth Fail open		
p	Web authentication for non 802.1X clients		
q	Multi-Domain Authentication (802.1X for IP Phone + 1 Host Behind phone)		



S/N	Specifications	Compliance (Yes/No)	Remarks
r	Switch should support concurrent deployment of 802.1X and MAB Authentication.		
10	Port Based Access Control List (ACL) for Layer 2 interfaces to allow Security policies to be applied on individual Switch ports using Layer 2, Layer 3 and Layer 4 parameters.		
11	Support for dynamic VLAN assignment either through IEEE 802.1x for implementation of VLAN membership policy server client functions to provide flexibility in assigning ports to VLANs. Dynamic VLAN helps enable fast assignment of IP addresses.		
12	Should support Network Time Protocol (NTP) with authentication		
13	Security		
a	Support for Secured Ports which restrict a port to a user-defined group of authorized stations, when secure addresses are assigned to a secure port. The switch should not forward any packets with source addresses outside the defined group of addresses		
b	Prevent DHCP Snooping		
c	IP Root Guard		
d	Broadcast and Multicast storm control		
e	Dynamic ACL per port & Port Security		
f	BPDU guard to avoid topology loop		
g	Unicast MAC filtering		
h	Unknown unicast and multicast port blocking		
i	Support for MAC address notification		
j	Device should support 256 Access Control Entries (ACE)		
14	Support Bidirectional data support on the SPAN port allows Intrusion Prevention System (IPS)		
15	TACACS + server support		
16	The Switch should support IEEE 802.1Q VLANs, 802.1P, 802.1D, 802.3U, 802.1X, 802.3ab, 802.3ad, 802.1s.		
17	Should support RFC 768, 783, 791, 792, 826, 854, RFC 951.		
18	The device should not be declared EOS/EOL during the contract period.		

Authorized signatory of the bidder

Name:

Designation:

Company Name:

Seal and Signature:



1. Annexure XI – IT Infrastructure Controls

Major Office Locations

S/N	City	Office	Comms Room	Data Centre	Wall Racks
1	New Delhi	T2 - Avionics Complex (including JEOC)	1	1	Multiple
		T1 - Engg/Training School			
		T3 - Engg			
		T3 - EMF			
		HQ - Safdarjung			
2	Kolkata	NTA	1		
		Hangars			
3	Mumbai	NEC	1	1	
		OAP			
4	Nagpur	MRO NAG	1		
5	Hyderabad	Shamshabad	1		
		MTO			
6	Bengaluru	BLR	1 (To be newly established)		
7	Chennai	MAA	1		
8	Thiruvananthapuram	Hangars	1 (To be newly established)		
		MTO			

Note:

- a - Bidder has to Provide adequately sized UPS for Communication Rooms and Data Centre
- b - Bidder has to advice AIESL on Cooling requirements for the Data Centre and Communication rooms to Protect Network devices

Outstation/Remote Site Locations

S/N	City	Wall Mount Rack	Connectivity
1	Jaipur	1	Bidder has to Establish VPN Client connectivity to Corporate WAN for these 17 remote offices along with ISP-BB of 200Mbps
2	Raipur	1	
3	Kullu	1	
4	Jodhpur	1	
5	Chandigarh	1	
6	Amritsar	1	
7	Pant Nagar	1	
8	Udaipur	1	
9	Srinagar	1	
10	Khajuraho	1	
11	Jammu	1	
12	Varanasi	1	
13	Lucknow	1	
14	Kozhikode	1	
15	Kannur	1	
16	Cochin	1	
17	Mangalore	1	



2. Annexure XII – Office Locations and EUDs List

Major Office location details

A detailed EUDs list is provided in Excel for evaluation of AMC support.

City	Office	Address	Desktop	Printer	Laptop	Min. Primary Bandwidth (ILL Mbps)	Min. Secondary Bandwidth (BB Mbps)
New Delhi	T2 - Avionics Complex (including JEOC)	New Avionics Complex, Terminal 2, IGI Airport, Opp. New Custom House, New Delhi - 110037	500	130		30	200
	T1 - Engg/Training School	Air India MTO, Terminal 1, Group - A, Indira Gandhi International Airport, New Delhi - 110037	30			4	200
	T3 - Engg	Air India, IGI Airport, Terminal 3, International Pier, New Delhi - 110037	114	40		4	200
	T3 - EMF	Air India Engineering services, EMF building, IGI Airports, Terminal-II, New Delhi-110037	15	5		4	200
	HQ - Safdarjung	2nd Floor, CRA Building, Safdarjung Airport, New Delhi	30	30	7	4	200
Kolkata	NTA	New Technical Area, Dum Dum, Engineering Complex, NSCBI Airport, Kolkata-700052.	100	11	5	4	200
	Hangars	Air India, NEW HANGAR NSCB AIRPORT, KOLKATA, PINCODE - 700061	70			4	200
Mumbai	NEC	Air India Ltd, New Engineering Complex, Near Chakala Cigarette Factory, Bamanwada, Sahar Vile-parle (E), Mumbai Pin code 400099	42	10	2	4	200



City	Office	Address	Desktop	Printer	Laptop	Min. Primary Bandwidth (ILL Mbps)	Min. Secondary Bandwidth (BB Mbps)
	OAP	Santacruz, OAP-Air-India (Data centre Mumbai-OAP), Mumbai-400029	400	100	20	30	200
Nagpur	MRO NAG	Air India Ltd Service, Provider Room MRO Facility, AIESL Plot No 1 Sec No 9 Notified Area SEZ Mihan, NAGPUR.	104	35		4	200
Hyderabad	Shamshabad	General Manager, AI Engineering Services Ltd. & Station Head, Air India Ltd, Hyderabad. Engineering MRO Complex. RGIA Airport, Near Gate No. 3, Shamshabad. HYDERABAD - 500108.	80	13	2	4	200
	MTO	Training Manager, Maintenance Training Organisation, Engineering Training School, Central Training Establishment, Air India, Ferozguda, Hyderabad-500011	17			4	200
Bengaluru	BLR	First Location: Dy. GM-AIESL, 2nd floor Alpha #3 Building, KIAL, Bangalore	20	10			
		Second Location: a) SIC office, AIESL, 2nd floor RCC building, KIAL, Bangalore.				4	200
		b) Front Line Stores, AIESL, Ground Floor, RCC Building, KIAL, Bangalore.					



City	Office	Address	Desktop	Printer	Laptop	Min. Primary Bandwidth (ILL Mbps)	Min. Secondary Bandwidth (BB Mbps)
Chennai	MAA	DY. GENERAL MANAGER (ENGG.) AIESL, NEW ENGINEERING HANGAR INTEGRATED SERVICE COMPLEX MEENAMBAKKAM CHENNAI - 600 016	19	6		4	200
Thiruvananthapuram	Hangars	AI Engineering Services Ltd. Maintenance Facility (Hangar) Opp: KSEB, Near Trivandrum International Airport, Chackai, Trivandrum Kerala - 695007	60	11	3	4	200
	MTO	Maintenance Training Organisation, AI Engineering Services Limited, Next to Mascot Hotel, Palayam, Thiruvananthapuram 695 033 Kerala.					

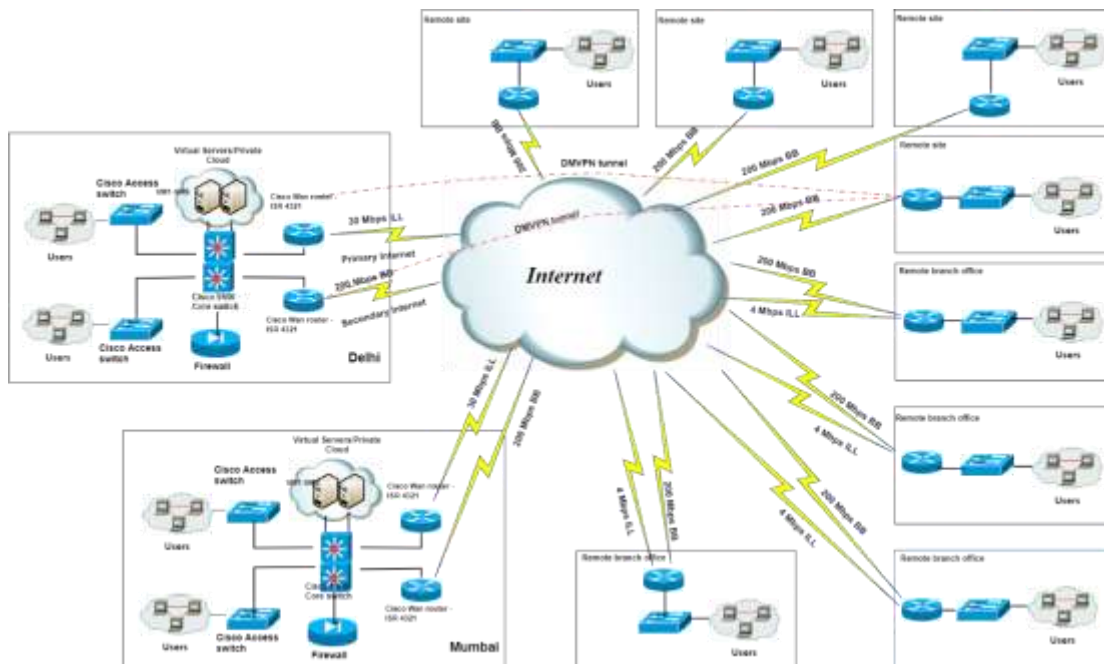
Summary of AIESL EUDs:

IT Peripherals Details						
Region	Area	Location Name	Desktop	Printers/Scanners	Laptops	Projector
HQ, Safdarjung	Delhi	Safadrjung	44	35	5	1
Northern	Delhi	Airbus - NAC, T1, T2, T3	487	167	2	2
		Boeing - EMF, T3, PIER B	54	18		
Eastern	Kolkata	NTA, Hangars	151	48	7	3
Western	Mumbai	NEC	127	28	2	4
		OAP	245	109	20	1
	Nagpur	MRO NAG	103	38		2
Southern	Hyderabad	MRO HYD	33	3	2	
	Bengaluru	BLR	22	11	6	



	Chennai	MAA	19	6		
	Thiruvananthapuram	TRV	42	5	4	
Line Stations	Line Stations	Line Stations	88	71	4	
Total EUDs			Desktop	Printers/Scanners	Laptops	Projector
			1415	539	52	13

3. Envisioned Network Architecture



Note:

- Internet Leased Line (ILL) + Broadband (ISP) at all sites: A 30Mbps ILL for DEL and MUM and 4Mbps for other sites with 200 Mbps BB redundancy and remote site with 200 Mbps Broadband only may be considered.
- The service provider is expected to provide the Dynamic Multipoint Virtual Private Network (DMVPN) connectivity.

ERP - HUMAN RESOURCE - INFOTYPES, WORK FLOWS, PROCESSES						



SN O	MAJOR CATEGORY	WORK AREA DESCRIPTION	DATA BASE INPUT	CONT ROL	USER	SPL USER	OUTPUT FOR OTHER SYSTEMS
	ERP BASIC DATA	ORG UNITS					
	Like SAP infotypes	PA / PSA, POSITION, WORK CENTERS					
		DEPTS/STATION/DIVISION/SECTION					
	EXPECTED FROM ERP	LOCATION					
		EMPLOYEE GROUPS / SUBGROUPS					
		WORK SCHEDULE / CALENDER					
		PAY SCALE GROUPS					
A	HR DEPARTMENTAL WORK	APPROVALS	FILE LIST	INITIATOR			
		ROUTINE	EMPLOYEE DATA	INITIATOR	HR HEAD	CEO / ED	DOCUMENT MANAGEMENT SYSTEM
		CUSTOMISED	AUTHORITY TABLE				EMPLOYEE DATA
	WORK FLOW BASED	SHIFT PLANNING					SAP /ERP
	E-DOCUMENT	TRAINING ALLOTMENT WORK FLOW	WORK FLOW	ADMIN			
	DIGITISED APPROVALS	PROBATION					
		TIME KEEPER		ADMIN			
		OT DATA					
		PAY ROLL INPUTS					



		ANNUAL INCREMENT					
		RESIGNATION					
		DEATH CLAIMS					
		BIOMETRIC DATA		ADMIN			
		ONLINE COURSES					
		MENTORING	ASSIGNMENT OF MENTOR	ADMIN			
		NOC					
B	POLICY POINTERS	FIXED	POLICY DATABASE	ADMIN	HR HEAD	CEO / ED	EMPLOYEE SERVICE SYSTEM
		VARIABLES	ENTITLEMENTS	ADMIN	HR HEAD	CEO / ED	DOCUMENT MANAGEMENT SYSTEM
	HARD CODED	RECRUITMENT ELIGIBILITY	PAY DATA SCALES	ADMIN	HR HEAD	CEO / ED	SAP
		PROMOTION ELIGIBILITY	ALLOWANCES	ADMIN	HR HEAD	CEO / ED	EMPLOYEE SELF SERVICE DATA
		PAY AND COMPENSATION	ELIGIBILITY	ADMIN	HR HEAD	CEO / ED	
		DISCIPLINE MANAGEMENT					
		ALLOWANCES					
		LEAVE / ABSENCE	QUESTION BANK	ADMIN	HR HEAD	CEO / ED	STRICTLY CONFIDENTIAL
C	DOCUMENT MANAGEMENT SYSTEM	PERSONAL FILES	SAP ID AS FILE NAME	ADMIN	HR EXECUTIVES		USER LOG FILE
		POLICY FILES		ADMIN	HR EXECUTIVES		STRONG SECURITY
	CLOUD STORAGE	RECRUITMENT FILES		ADMIN	HR EXECUTIVES		ALERTS TO ADMIN



	PLATFORM INDEPENDENT	AGREEMENTS		ADMIN	HR EXECUTIVES		RESTRICTED COPY
	ANY DEVICE LOGIN	FACTORY LICENSES	WORK FLOW	ADMIN	HR EXECUTIVES	ED/GMS	
		REGISTRATION AS PRINCIPLE EMPLOYER	WORK FLOW	ADMIN	HR EXECUTIVES	ED/GMS	
		RTI		ADMIN	HR EXECUTIVES	ED/CEO	
		COURT ORDERS		ADMIN	HR EXECUTIVES		
		CONCILIATION ORDERS		ADMIN	HR EXECUTIVES		
		CIRCULARS		ADMIN	HR EXECUTIVES		
		OFFICE ORDERS		ADMIN	HR EXECUTIVES		
		TRAINING RECORD	WORK FLOW	ADMIN	HR EXECUTIVES	ED/GM/DGM	
D	EMPLOYEE GREVIANCES	WORK FLOW	NODAL OFFICER	ADMIN	HR EXECUTIVE		SPECIFIC DATA FIELDS
	PART OF ESS	SC/ST REPRESENTATIONS					REGISTERS
E	EMPLOYEE SUGGESTIONS	WORK FLOW	NODAL OFFICER	ADMIN	HOD	HOD	SPECIFIC DATA FILES
	PART OF ESS	SCHEME DEVELOPMENT					AWARDS DATA
		EVALUTION METHOD					
F	EMPLOYEE	PERSONAL	e-Personal File	ADMIN	HR EXECUTIVE		EMPLOYEE MASTER DATA



		EXPERIENCE	Online Attestation Form	ADMIN	HR EXECUTIVE		QUALIFICATION DATA
	SAP ID AS KEY FIELD	LICENSES	C&A Verification	ADMIN	HR EXECUTIVE		LOCATION MANNING DATA
	PERMANENT EMPLOYEES	DESIGNATION	Caste Verification	ADMIN	HR EXECUTIVE		PAY CTC DATA
	FIXED TERM EMPLOYEES	LOCATION	Probation Completion	ADMIN	HR EXECUTIVE		SENIORITY LIST
		PAY LEVEL / GRADE	Marriage declaration	ADMIN	HR EXECUTIVE		SANCTION / POSITION DATA
		SENIORITY	Dependent addition	ADMIN	HR EXECUTIVE		Licenses data
		QUALIFICATION MAIN	Qualification add	ADMIN	HR EXECUTIVE		ATTESTATION FORM
		QUALIFICATION ADDTNL	Pay Fixation orders	ADMIN	HR EXECUTIVE		
		FTE CONTRACT / EXTENSION					
		FTE SEPARATION / RETIREMENT					
		EMPLOYEE PHOTO					
G	EMPLOYEE CATEGORY	SC	Verification Process	Nodal Officer			e-Roster data base
		ST	e-Roster				DOCUMENT MANAGEMENT SYSTEM
	A SEPARATE DATA TABLE	OBC	Backlog				
		PWD	Recruitment points				
		MINORITY					
		EX SM					
H	RESERVATIO	POST BASED	e-Roster	Nodal			e-Roster



	N ROSTER			Officer			data Base
	Based on Government Directives	STANDARD FORMAT of roster	Compliance				Verification Process Hard coded
I	EMPLOYEE DEPENDENT	NAME	Medical Insurance workflow	ADMIN	HR EXECUTIVE		Nomination data base
		RELATION	Renewal of mediclaim policy	ADMIN			
		AGE	Transfer input	ADMIN			
		EMPLOYMENT					
J	EMPLOYEE NOMINATIONS	GENERAL	Statutory Compliance s	ADMIN	HR EXECUTIVE		NOMINATION DATABASE
		PF	Super Annuation				DOCUMENT MANAGEMENT SYSTEM
	Statutory Formats	GRATUITY	Death				Final Dues Settlement
		OTHERS	Resignation				
		Spouse Details					
K	PROPERTY RETURNS	EXECUTIVES PROPERTY DATA	Yearly compliance	ADMIN	HR EXECUTIVE	VIGILANCE	e-Property returns
	as per Govt directioives						DOCUMENT MANAGEMENT SYSTEM
L	EMPLOYEE DISCIPLINE DATA	PENATIES HISTORY	Punishment Record	ADMIN	HR EXECUTIVE	PROMOTION	DPC DATA BASE
		DATE	Cumulative effect on	ADMIN			PAYROLL



			pay				
	effect on pay roll	EFFECT - CUMMU / NON CUMMU					
M	EMPLOYEE SUPERANNUATION	HARD CODED DATE OF SA	Manpower annual plan	ADMIN	HR EXECUTIVE	GM/ED	Superannuation Database
		FTE CONTRACT CLOSURE	FY / Calender year data	ADMIN	HR EXECUTIVE		Benefits database
N	EMPLOYEE CONTRACT	STANDARD	ONLINE FORMAT	ADMIN	HR EXECUTIVE	FINANCE	DOCUMENT MANAGEMENT SYSTEM
		CUSTOMISED	CUSTOMISATION	ADMIN	HR EXECUTIVE	VIGILANCE	
		REMUNERATION					
O	CADRE DATABASE	ENGG / IND ENGG / SS / HR / FIN	Fixed Data	ADMIN	HR EXECUTIVE	IND ENGG	DPC, SENIORITY DATA
		HARD CODED					
O-A	PERFORMANCE	MOU FOR GMs / EDs	Aligned with CEOs OU with MOCA	HRD / ADIN	ED	CEO	DPC input
	APPRAISALS	PLANNING	KRAs aligned with business goals				
			KPIs				
		Self appraisal					
		HOD level appraisal					
		ED Level appraisal					
		CEO appealate authority					
	Cycle	FY	Completion by 30th				Appraisal database



			April				
		Appeal	Open by May 15th				
			Closure by 30th May				
P	PROMOTION RULES	FREQUENCY - MONTH	INPUT FOR DPC	ADMIN	HR EXECUTIVE	CEO	PROMOTION DATA
	HARD CODED - ELEGIBILITY	TIME SCALE			COP		SENIORITY DATA
		VACANCY BASED					PAY DATA
	Based on full cycle work flow	STAGNATION					P FILES
		AUTOMATED					IND ENGG DATABASE
		SCALES					
		INCREMENT					
		ORDER TEMPLATES					DOCUMENT MANAGEMENT SYSTEM
Q	TRANSFER RULES	MUTUAL	DECISION INPUT	ADMIN	COP / ED / GM	CEO	POSITION DATA UPDATE
		DEPARTMENTAL					PAY DATA
		INTER REGIONAL					P FILES
		WILLINGNESS CAPTURE					DOCUMENT MANAGEMENT SYSTEM
		CHILDREN EDN					IND ENGG DATABASE
		SICKNESS IN FAMILY DATA					
		WIFE SERVICE DATA					
		TRANSFER BENEFIT APPLICABILITY					
R	EMPLOYEE	AIRCRAFT NB WB ATR	SPECIALISE	ADMIN	COP/	CEO	EMPLOYEE



	SPECIAL COMPETENCY	SPL	D GROUP	N	ED / CEO		DATABASE
		MAINT GEN	POSTING INPUT				EXPERIENCE DATABASE
		JET ENGINE	MANPOWER EVALUATION				
		VIP					
		MULTIPLE					
		OTHERS					
S	DIVERSITY	GENDER	DECISION	ADMIN	COP	ED / CEO	SPECIAL PROGRAMS
		DOMICILE	COMPLIANCE				COMPLIANCES
		LANGAUGE	SPL PROGRAMS				ANNUAL REPORT
		FOREIGN LANGAUGE					
T	EMPLOYEE STATUS	PERMANENT	EMPLOYEE MANAGEMENT	ADMIN	HR EXECUTIVE	ED / COP	REPORTS
		FTE	CONTRACT MANAGEMENT				MANNING DECISION
		OTHER	BENEFIT MANAGEMENT				EMPLOYEE DATABASE
U	MAPOWER REPORTS	FIXED MIS	STATUTORY	ADMIN	HR EXECUTIVE	ED / CEO	AUDITS
		CUSTOMISED	MONTHLY				COMPLIANCE REPORTS
V	EMPLOYMENT	ADVT DATA	STATUTORY	ADMIN	HR EXECUT	COP / ED / CEO	AUDITS



	(Recruitment)				IVE		
		COMPASSIONATE	RESERVATION				VIGILANCE
	TALENT ACQUISITION	GET	RTI				RTI
	FULL CYCLE WORK FLOW CAPTURE	CAMPUS					RESERVATION
		REDEPLOYMENT					
		Online					
W	ATTENDANCE ABSENCE DATA	LEAVE TRANSACTIONS	LEAVE DATA MANAGEMENT	ADMIN	EMPLOYEE	CONTROLLING	AUTOMATED WORKFLOW
	QUOTA HARD CODED	LEAVE WITHOUT PAY DATA	INCREMENT MANAGEMENT				
		SPL LEAVE DATA	INPUT FOR DPC				
		MATERNITY LEAVE DATA					
		SPL SICKNESS					
	OT	TIME CONTROL DATA	PAY DATA INPUT	ADMIN	EMPLOYEE	CONTROLLING	AUTOMATED WORKFLOW
		WORK GROUP - OT / NON OT					
		SUSPENSION DATA					
		POSH APPROVED ABSENCE	STATUTORY				ICC COMPLIANCE
		HOLIDAY LIST DATA					
X	ALLOWANCES	HRA	PAY DATA	ADMIN	HR EXECUTIVE	FIN EXECUTIVE	PAY ROLL INPUT
	HARD CODED	CONV MAINT	STANDARDISED DATA				



		DRIVER					
		UNIFORM					
		OTHERS					
Y	ID CARD	ID ISSUED	APPLICATION	ADMIN	HR EXECUTIVE	EMPLOYEE	SECURITY / CSO
		AEP ISSUED	PHOTO				
			PASSPORT COPY				
			POLICE VERIFICATION				
Z	HR ADMIN	LOGIN	AUTHORISATIONS	ADMIN	SYSTEM ADMIN	COP	RESTRICTED AUTHORIZATION
		PASSWORD					GENERAL AUTHORIZATION
		AUTHORISATION					EMPLOYEE SELF SERVICE
	Administration / Logistics	Travel and Accommodation	Employees	ADMIN	GM	ED/CEO	
							OTHER DEPARTMENT ACCESS
AA	INTEGRATION	WITH SAP	DATA EXCHANGE PROTOCOLS				
AB	DATA SHARE	WITH MAIN ERP USERS	DATA ACCESS RESTRICTIONS				
AC	BACKUP	ALL DATA BACKUP	MIRROR SERVER / CLOUD				



A D	EMPLOYEE SELF SERVICE	WORK FLOWS	ACCESS LICESES FOR KIOSKS	ADMI N	EMPLO YEEES	ALL DEVICES	ALL PLATFORM S
AE	EMPLOYEE COST	POINTERS	FIXED DATA INPUTS	ADMI N	FINANC E	CEO	
AF	MANPOWER DATA DASHBOAR D	WITH TABLES AND GRAPHS	FIXED / CUSTOMISE D	ADMI N	HR	ED / CEO	



JEOC/Shop Maintenance requirements	
Functionality	
1	Attachment of serialised parts to configuration tracked positions.Example, attachment of LPT module to Engine
2	Disassembly of Engine/Modules into Piece Parts.By removal of serialised parts from configuration tree as well as removal of non serialised repairables from NHA(Engine or module)
3	Individual Module and Piece Parts WO generation.Auto WO generation when removed from Parent
4	Scrapping of Parts,Scrap tag generation and Return to unserviceable warehouse.Including option for scrapped part to be returned to Customer
5	Removal of parts as serviceable and serviceable tag generation.
6	Option of returning removed unserviceable parts to warehouse without child WO generation.Required in case repair for part still under development
7	Generation of Modules/Piece Parts Unserviceable Tags
8	Workscoping for Modules/Piece Parts. Release of tasks by Quality for Engines and modules, by Authorised persons for piece parts.Populating the WO with tasks for internal processing, generation of Repair order for jobs beyond shop capability, adding of tasks to RO. Tasks applicable to the Part # automatically populate with respective workcenters where they are to be accomplished., the ones to be included can be selected and released. Workcenter definition and mapping to tasks required.
9	Generation of work packages for Engines/Modules/Piece Parts (Packages to be available in DMS as pdf, to be downloaded and printed for sign off by authorised person).Work packages to include tasks pdf as per workscope. Task cards have been parsed from OEM manuals and approved by SMM.
10	Ability of Area in charge to allocate tasks to authorised persons.Allocated tasks to be visible on allotted person's screen
11	Generation of Piece Part movement tags.To include workcenters where the part is to be routed as per tasks released in workscope



12	Tasks sign off by Authorised persons for Piece Part WO.Validation of skill by system, skill master data maintained by Quality.Option to manually enter manhrs through a pop up which appears while signing off
13	Raising of discrepancies(non routines) against standard tasks.Ability to generate discrepancy report for physical sign off
14	Scrapping of parts if they fail inspection during workorder in progress
15	Routing of Parts between Work centers. Tracking functionality for piece parts. Example ,piece part routed from Cleaning to NDT to View room, work center where the part is at present should be visible
16	Final task sign off and piece part work order completion. Serviceable tag/CRS to be issued (DGCA/FAA/EASA).Validation of skill by system, skill master data maintained by Quality. Further validation for regulatory framework under which CRS being issued to be picked from Customer order.
17	Return of Piece Parts to Warehouse to be optional. Parts may remain in final inspection area with WO closed. All such parts may be installed on original NHA or cannibalized for installation on another NHA of same Customer. During installation, WO of the part being installed to be captured for serialised as well as non serialized parts so that man hrs/part consumption on the child work order seamlessly flow to the NHA on which part is being installed. All such piece part work orders that have been installed on parent/NHA to be flagged by system as used
18	Piece Part manhrs booking and piece part WO closure. If option as given in 12 is not taken, manhrs to be booked after WO completion and prior to WO closure. If option as given in 12 is not taken, manhrs to be booked after WO completion and prior to WO closure.
19	Material Request from Warehouse for Assembly(Engine/Module).Material request for repairables/expendables/consumables.Material request for repairables/expendables/consumables
20	Return of unused parts to issuing warehouse/other warehouse.Other warehouse if parts received defective and have to be returned as unserviceable to unserviceable warehouse.Other warehouse if parts received defective and have to be returned as unserviceable to unserviceable warehouse



21	Attachment of parts which were removed during disassembly (Items either drawn from warehouse or picked from final inspection area as explained in point 17).In case original/cannibalized repairable part being installed taken from final inspection area, WO of installed part to be captured. In case repairable part taken from warehouse, last WO for internally serviced parts or RO for outside repaired parts to be captured. The consumption/manhrs/repair cost of these WO/RO should flow to the assembly WO on which parts being installed.In case new repairable is requisitioned from warehouse and used for assembly, the cost of new part should flow to the assembly work order.In case original/cannibalized repairable part being installed taken from final inspection area, WO of installed part to be captured. In case repairable part taken from warehouse, last WO for internally serviced parts or RO for outside repaired parts to be captured. The consumption/manhrs/repair cost of these WO/RO should flow to the assembly WO on which parts being installed.In case new repairable is requisitioned from warehouse and used for assembly, the cost of new part should flow to the assembly work order.
22	Issuance and return of tools from tool warehouse
23	Tasks sign off by Authorized persons for Module/Engine Work orders. Validation of skill by system, skill master data maintained by Quality. Option to manually enter manhrs through a pop up which appears while signing off
24	WO completion and issuance of serviceable tag/CA Form 1/8130-3.Validation of skill by system, skill master data maintained by Quality. Further validation for regulatory framework under which CRS being issued to be picked from Customer order. Customer order to have flagging for regulatory framework.
25	Recording of consumption for Module/Engine Work orders.For expendables/consumables drawn from warehouse.
26	Recording Manhrs for tasks.If option as given in 23 is not taken, manhrs to be booked after WO completion and prior to WO closure.
27	Return of Engine/Module to Warehouse
28	Engine/Module WO closure
29	Facilities creation in System
30	Creation of Facility Objects.P/N, S/N combination
31	Defining Maint. Info for facilities. Calibration/Maint. Intervals for facility. Multiple intervals where progressive maint. carried out on facility
32	Planning Facility Maint.Forecast of arisings
33	Generation of Facility WO



34	For Internal WO, addition of Calibration tasks in workorders. RO generation for facility objects to be routed externally.
35	Facility WO task sign off and completion and issue of calibration certificate
36	Return to warehouse/work center in case equipment installed at workcenter.
37	Ability to show Warranty status of Engine,Parts
38	Ability to show and generate report of consumption/installation of all spares with PO reference including expendables, consumables on Engine repair work including module swapped cases.
39	Ability to show and generate report of all scrapped parts including expendables from Engine repair work including module swapped cases.
	Documentation/publications
1	Ability to record the receipt and control of publications in separate groupings
2	Ability to record the owner of a manual / document
3	Ability to notify the owner(s) of revisions to publications
4	Register Documents and subsequent revisions
5	Record Document Distribution Information
6	Upload Documents
7	Acknowledge Document Distribution
8	Maintain Partner Correspondence
9	View Document Revision History
10	Generate Distribution Status Report
11	Generate Document Revision Status Report
12	Ability to upload scanned dirty fingerprint task cards work order wise
13	Ability to import OEM task Extensible Markup Language (XML) or Standard Generalized Markup Language (SGML) data against ESM revisions. Parsing required for each OEM Revision, system should allow editing of parsed task cards and approval by SMM which should reflect on task cards. OEM Rev#, Internal Rev # to be reflected on task card, record of task card revision and reason for revision should be retrievable for each task. Approved task cards should appear as pdf in the package post work scope release. Revised task cards to show changes relative to previous revision
14	Ability to use OEM data to generate authored task cards with electronic sign-off.A system of record processing in which records are entered, maintained, archived, and retrieved electronically. Use of one of several recognized methods of providing a secondary means for archiving records, separately from the original or primary.



15	<p>Electronic sign off related validations/functionalities.</p> <ol style="list-style-type: none"> 1) An individual using an electronic signature should take deliberate action to affix signature. 2) User must be prompted to review the record before signing 3) The system should notify the signatory that the signature has been affixed. 4) The electronic form of signature applied by the signer must be linked to the record being signed. 5) An electronic signature should provide positive traceability to the individual who signed a record, record entry, or any other document. 6) must prevent modifications without requiring a new signature. 7) prohibit the use of an individual’s electronic signature when the individual leaves or terminates employment. 8) means for user to correct records or documents that were electronically signed in error, as well as those documents where a signature is properly affixed but the information or data is in error.
Additional Requirements	
1	Induction of kits and constituents in warehouse. System should record P/N, S/N, Qty of items in kit. In case during use, any part of the kit is not used, system should be able to return the part back to warehouse.
2	Induction of Customer supplied parts in AIESL warehouse
3	Stock availability reports which can be customized to include parts, list of parts to be editable
4	Material shortage report for material requests which cannot be satisfied
5	Preservation tag reports that can be generated for engines post preservation
6	Provision to review work order count in shop with filters
7	Tracking of progress of engine disassembly through status check of child work orders
8	Screen for component movement history can be seen
9	Screen for component NHA/child configuration can be seen
10	Screen for checking part availability across warehouses
11	Screen for viewing material requests/issues against work order
12	Screen for viewing CRS history of components
13	Ability to enter FH/FC details as received from Customer against components/modules/engines/serialized repairable
14	Provision to change component P/N or correct S/N
15	Tally sheet/report showing tasks released against WO with task revisions
16	Shop visit report generation by Quality after engine WO completion
17	Reports for back to birth history of LLPs/modules/LRUs and engine.
18	Ability to feed test run parameters values and generate Test Cell trend monitoring chart
19	Report for generating work center wise SB/AD list
20	System should mandate reference document #/reference document upload during alternate definition in part master



Core ERP : Industrial Engineering

Sl. No.	Functional Requirement
1	Manpower module
2	Ability to allocate/change activity centres and stations of employees on time to time basis
3	Ability to define roles and responsibilities of employees of various division
4	Ability to validate the employee data base of all department
5	Ability to generate monthly manpower report as per the desired format
6	Ability to approve the addition /deletion of personal record from manpower data base
7	Allow to export time office report(absenteeism report) of all employees
8	Allow to create new work centres based on the requirement
9	Ability to see licence qualification of all aircraft maintenance personnel- AME and Technician
	MIS module
1	Ability to modify/create the format for job card for AME/technician.
2	Ability to validate/change the job postings done for AME/technicians
3	Ability to generate a summary of job allocation statement on daly/weekly/monthly basis
4	Ability to view/export work order status on daily/weekly/monthly basis.
5	Allow import of 3rd party task list and match to existing task instruction where possible
6	Option to apply task grouping Gantt planning to work order
7	Ability to monitor workflow across all the activity centres.
8	Ability to see planned and unplanned work directly in the forecast
9	Ability to forecast items in list or calendar view
10	Allow to export Work In Progress on monthly basis
11	Allow to generate cost forms for activity centres
12	Allow to enter Man hours norms for component
13	Allow to enter TAT & Mhrs norms for all maintenance checks
14	Ability to view summary of overtime statement of all employees
15	Allow to generate job completion statement on monthly basis
16	Allow to generate and validate job completion statement and component MHRS statement on monthly basis
17	Allow to generate workshop labour utilisation statement on monthly basis
18	Allow to validate time office report with daily labour utilisation statement.
	Billing Module



1	Ability to generate client wise summary report related to TR,NH,LOI,WI & 400FH chk done in line/base maintenance of various stations
2	Allow to view and import of non routine task list along with MHRS incurred in Base maintenance/Line maintenance, Component change information for monthly billing
3	Ability to view reports related to AOG, aerostrecher, cannibalization
4	Ability to generate view/export 3rd party technical handling/certification details on monthly basis
5	Ability to view invoice release report for 3rd party client component maintenance
6	Ability to view the P&L, Revenue & Expenses statements of all activity centres/stations
7	Ability to view money realisation on the previously raised invoices

The application software should be accessible from any domestic / international station of AIESL operational network both through the computer network.

2. The application software should be capable of handling data of 500 plus aircraft of type **A320/ A319/ A321// A330 / 737/ B747/ B777/ B787/ CRJ** or combinations of different models without compromising on the performance in its real time use.
3. The application software should be capable of handling **200** Users (approximately concurrent users) without compromising on the performance in its real time use.
4. The application software should be compatible with industry standards like Spec 2000 / ATA200 / FAA / EASA/ DGCA (India)/ any other Airworthiness Regulatory requirements.
5. **The tenderers should submit a detailed implementation plan listing various project milestones. The level of support to be provided by the tenderers and the level of support expected from AIESL for achieving these targets should be indicated by the tenderers.**



6. The tenderers should indicate the extent of post implementation support / on going upgrades / new version releases to be offered to **AIESL**
7. Adequate security and virus protection is to be ensured for the software and operating system on the network, and necessary recommendations with complete technical details thereof **should be submitted in this regard along with the technical bid.**
8. Functional training is to be imparted to the key users / implementation team of **AIESL**.
9. Application Software Administration training is to be imparted to the **AIESL** designated System Administrators.
10. **The tenderers would be required to migrate AIESL's existing data of Engineering, Stores, Finance departments on to the database of the offered application software to ensure smooth roll over to the new product.**
11. Change Management: The tenderers should submit a comprehensive plan for Change Management from manual / semi-automatic to fully computerized system along with the detailed implementation plan.
12. **A photocopy of the Price Bid (with the prices blanked) is to be submitted along with the technical bid.**
13. **A certificate is to be given by the tenderer along with their technical bid, indicating therein the specific tender clauses that have been included in the price as quoted in the price bid.**
14. Confidentiality: The tenderers should maintain confidentiality with regard to the content of this tender. Similarly **AIESL** would ensure confidentiality of all information as received from the tenderers in response to this tender.



To be printed on the Tenderer's
Company Letter Head

Annexure –IV

Pre-Qualification Bid Format

To
Executive Director(Engineering),
Ai Engineering Services Ltd,
Safdarjung Airport,
New Delhi-110003
INDIA

Ref. No:

Date:

Dear Sir,

Sub: Pre-Qualification Bid as per your Tender No. dated

With reference to your Tender No.... dated for Aviation Unified ERP Package for Maintenance, Engineering and allied functions of a Commercial MRO Management & Operation, we hereby submit our **Pre-Qualification Bid** as per the format at Annexures

We also agree to the General Terms & Conditions and Evaluation Criteria of your tender as detailed at Annexures



Thanking you,

Encl:

Signature of the tenderer: _____

Name of the tenderer: _____

Company Name & Seal: _____

Business Address: _____

Annexure – V

Pre-Qualification Criteria of the Tender

S/N	Requirement	Evaluation Criteria	Compliance (Yes/ No)
1	The Tenderer must be the owner of the Aviation Unified ERP Package for Maintenance, Engineering functions and allied functions of a Commercial MRO Management & Operation. (Attach documentary proof)	Mandatory	



2	The Tenderer must be presently in the business of Aviation Unified Package for Maintenance, Engineering and allied functions of a Commercial MRO Management & Operation. He must have also been in the aforementioned business for the last three years or more. (Attach documentary proof)	Mandatory	
3	The Aviation Unified ERP Package for Maintenance, Engineering and allied functions of a Commercial MRO Management & Operation of the tenderer must have the capability to support on line data back-up in a city different from the city of operation of the main system for the purposes of disaster recovery.	Mandatory	
4	The Aviation Software Package for Maintenance, Engineering and allied functions of a Commercial MRO Management & Operation of the Tenderer must be currently operational in a minimum of one MROs.(Attach documentary proof)	Mandatory	
5	The Tenderer must have a minimum annual turnover of Rupees Twenty crores (USD 5.0 million) in the last financial year. (Attach documentary proof)	Mandatory	
6	The Tenderer must have a product development policy with regard to Aviation software package to that covered in this tender, and to upgrade the software on an ongoing basis, based on the industry requirements / trends from time to time.	Mandatory	
7	The tenderer must have quoted in response to this tender for the modules of the aviation software covering major functionalities as listed below: -	Mandatory	
7.1	Core ERP : Finance and Accounting	Mandatory	
7.2	Core Maintenance and Engineering : System Administration	Mandatory	
7.3	Core Maintenance and Engineering : General	Mandatory	
7.4	Core Maintenance and Engineering : Human Resource	Mandatory	
7.5	Core Maintenance and Engineering : Component Maintenance	Mandatory	



7.6	Core Maintenance and Engineering : Base Maintenance	Mandatory	
7.7	Core ERP : Sales and Invoicing	Mandatory	
7.8	Core Maintenance and Engineering : Finance and Accounting	Mandatory	
7.9	Core Maintenance and Engineering : Inventory Management	Mandatory	
7.10	Core Maintenance and Engineering : Fleet Management and CAMO	Mandatory	
7.11	Core Maintenance and Engineering : QC and Safety	Mandatory	
7.12	Maintenance Training Organization	Mandatory	
7.13	ENGINEERING FACILITY MANAGEMENT	Mandatory	
7.14	Core Maintenance and Engineering : Publications	Mandatory	
7.15	ENGINE OVERHAUL MUMBAI REQUIREMENT	Mandatory	
7.16	Scope of Work for IT Infrastructure and Support	Mandatory	
7.17	ERP - HUMAN RESOURCE - INFOTYPES, WORK FLOWS, PROCESSES	Mandatory	
7.18	PPC Functions	Mandatory	
7.19	JEOC/Shop Maintenance requirements	Mandatory	
7.20	Core ERP : Industrial Engineering	Mandatory	

S/N	Requirement	Evaluation Criteria	Compliance Yes/ No
8	The application software solution offered by the tenderer must meet the following requirements: -		
8.1	The application software must be capable of supporting concurrent users at the time of cutover.	Mandatory	
8.2	The application software must be scalable to support a minimum of 200 concurrent users.	Mandatory	
8.3	The application software must be scalable to handle the data of 500 plus aircrafts.	Mandatory	



8.4	The application software must have inbuilt security features for authentication, authorization (at various hierarchical levels) and auditing of the transactions.	Mandatory	
9	The tenderer must commit to provide AMC support for a period not less than 5 years after the warranty period and should commit to migrate the application to a new hardware platform in case of technological upgrade or replacement of the recommended hardware or operating system due to any reasons during this period.	Mandatory	

S/N	Requirement	Evaluation Criteria	Compliance Yes/ No
10	The tenderer must give a detailed presentation/demonstration of their product to AIESL in India (either offline or through online connectivity to a production system), preferably in New Delhi.	Mandatory	
11	The tenderer must commit to undertake the responsibility of migrating AIESL's existing data of Engineering, Stores and Finance database/ system to the offered application for which AIESL will provide the existing data. Data extraction from AIESL's existing systems for this purpose would, however, be the responsibility of AIESL .	Mandatory	

Annexure – VI

Evaluation Criteria: Pre-qualification Bid

- The Tenderers must meet all the mandatory pre-qualification criteria as listed in Annexure III of this tender. Should a tenderer fail to comply with one or more of the mandatory criteria, his bid will not be evaluated any further.



2. Technical Bids of only those tenderers, who qualify in the Pre-Qualification Criteria, would be opened.
3. The tenderers must provide all the necessary and sufficient information as applicable in respect of Tenderer Company Information and Tenderer Product Information, so as to support their claims made to the mandatory requirements of Pre-Qualification Criteria (Annexure III).
4. Wherever applicable, documentary proof is to be attached in support of compliance with the bid parameters.

**To be printed on the Tenderer's
Company Letter Head**

Annexure – VII

Technical Bid

To

Executive Director (Engg)



AI Engineering Services Ltd.
Safdarjung Airport,
New Delhi-110003.INDIA

Ref. No:

Date: _____

Dear Sir,

Sub: Technical Bid as per your Tender No. AIESL/IT/UNIFIED/2022 dated 15/01/2022

With reference to your Tender No. AIESL/IT/UNIFIED/2022 dated 15 January 2022 for Aviation Unified ERP Package for Maintenance, Engineering and allied functions of a MRO Management & Operation, we hereby submit our Technical Bid .

We also agree to the General Terms & Conditions and Evaluation Criteria of your tender as detailed at Annexures of Tender.

Thanking you,

Encl:

Signature of the tenderer:_____



Name of the tenderer:_____

Company Name & Seal:_____

Business Address:_____

Annexure – VIII

Evaluation Criteria: Technical Bid

1. **AIESL** would evaluate the responses to all the requirements on the basis of the detailed information as provided in Annexure-V–Prequalification criteria. and the tenderer’s responses shall be assessed accordingly. The decision of **AIESL** in this regard shall be final.
2. Product presentations / demonstrations shall also form a part of the technical evaluation process, **AIESL** further reserves the right to visit the sites of clients for observation of performance of the software in a live environment, as well as to make an assessment of other salient aspects of the product.



To be printed on the Tenderer's
Company Letter Head

Annexure-IX
Commercial Bid

To:

Executive Director(Engg),
AI Engineering Services Ltd,
Safdarjung Airport,
New Delhi -110003,INDIA

Ref No:

Dated: _____

Dear Sir,

Sub: Commercial Bid as per your Tender Ref no AIESL/IT/UNIFIED/2022 dated 15 January 2022.

With reference to your Tender No. AIESL/IT/UNIFIED/2022 dated 15 January 2022 for Aviation unified ERP Package for Maintenance, Engineering and allied functions of a MRO Management & Operation. We hereby submit our Commercial Bid format.

We agree for the General Terms & Conditions and Evaluation Criteria of your tender as detailed in Annexure. Further, it is certified that there are no additional/ hidden costs to AIESL other than specified in the Commercial bid format.

Thanking you,

Encl:



Signature of the tenderer:_____

Name of the tenderer:_____

Company Name & Seal:_____

Business Address:_____

Annexure – X

Evaluation Criteria: Commercial Bid

1. The commercial bids of Tenderers, qualifying in the technical evaluation, will only be opened and evaluated. The evaluation of commercial bids will be on the basis of price and other terms offered in the Commercial bid .
2. The basic cost of the offered application Unified ERP package must be inclusive requirements as quoted in response to the tender.
3. Any other costs, if quoted separately by the tenderers for providing support for installation, implementation, migration, testing, user manuals, field service support, etc would be added to the total bid price for price comparison.
4. The AMC cost for application software per year will be loaded in the bid price using Net Present Value (NPV) method over the next five years from the warranty completion date. The AMC cost quoted should remain firm / fixed for five years from the warranty completion date. However, the escalation of AMC cost, if any, beyond the warranty completion date along with its formula should be clearly indicated in the commercial bid.
5. Any third party products and / or licenses, etc. that have been indicated in the technical bid by the



tenderers as a requirement for implementation of the offered solution that would need to be procured by **AIESL should be indicated in the technical bid**. The cost of such products and / or licenses would be added to the total bid price for price comparison. **AIESL** would ascertain the price of such products from the concerned OEMs before opening of the Commercial Bids, and load the same to the corresponding Commercial Bids. The decision of **AIESL** with respect to the price loading on this account would be final.

6. Any other costs not quoted in the commercial bid but which has to be borne by **AIESL** for implementation of the tenderer's solution, would be added to the total bid price for price comparison. The costs for this purpose will be taken from the prevailing market rate. The decision of **AIESL** in this respect would be final.
7. Unconditional discounts and credits, if any, would be adjusted in the total bid price for price comparison.
8. Conditional discounts and credits, if any offered in the commercial bid, will not be considered.
9. Representations, if any, for modifications to the price quoted in the commercial bids will not be entertained after opening of the Tender.
10. **Comparative evaluation of the price bids would be on the basis of the costs computed in INR.** For this purpose the prices quoted in currencies other than INR would be converted to INR on the basis of the currency-selling rate published on the date of opening of the commercial bids.
11. The standard payment terms of **AIESL** would be "60 days from the date of invoice subject to successful completion of each milestone". In case a tenderer does not accept this term, the commercial bid would be loaded by financing cost @ 15 % per annum for the difference between 60 days and the actual credit period offered by the vendor.
12. In case a Standby Letter of Credit is required, a loading of 0.5% per quarter would be applied for the period for which the Letter of Credit is required.

GLOSSARY



Abbreviation.....	Full Form
AD.....	Airworthiness Directive
ADF.....	Acceptable deferred Defect
AMC.....	Annual Maintenance Contract
AMM.....	Aircraft Maintenance Manual
AMP.....	Aircraft maintenance Program
AOG	Aircraft on ground
C of A.....	Certificate of Airworthiness
CAMO,,,,,,,,,,,,,	Continuous Airworthiness Management Organization
CMM.....	Component Maintenance Maintenance Manual
DFP.....	Dirty finger print
EO.....	Engineering Order
FH/FC.....	Flying Hours/Flying Cycles.
IFSD.....	Inflight shut down
IPC.....	Illustrated Parts Catalogue
JEOC.....	Jet Engine Overhaul Shop
LLP.....	Life Limited Parts
MCM.....	Modification committee Meeting
MEL.....	Minimum Equipment List
MIREP.....	Maintenance reported defect
MOQ.....	Minimum Ordering Quantity
NHA.....	Next Higher Assembly.
NIS.....	Nil In Stock
OEM	Original Equipment Manufacturer
PBH.....	Power By Hour
PIREP.....	Pilot reported defect
PRR.....	Premature Removal rate
SB.....	Service Bulletin
SLA.....	Service level Agreement.
UOM,,,,,,,,,,,,,	Unit of Measurement