

**Statement of Work
for
EEE Components Storage and
Management system software**

Table of Contents

Sl. No.	Title	Page No.
1	Introduction	3
2	Project Scope	3
3	Project Requirements & Specifications	3
4	Work Flow	4
5	Project Schedule	4
6	Project Approach	6
7	Process Flow & Software Requirements	6
8	Payment Terms	18
9	Vendor Responsibility	19
10	Training	19
11	Deliverables	19
12	Warranty and Support	19
13	Intellectual Rights	19
14	Acronyms	20

Statement of Work for EEE Components Storage and Management system software

1. INTRODUCTION

URSC is responsible for management of EEE components inventory system used for Spacecraft projects. Integrated Components Services Database System (ICSDBS) is a Java based application developed by URSC, which is currently being used for EEE components storage and management. ICSDBS developed on client-server architecture using oracle database version on RHEL server. In view of increase in new requirements and to facilitate more user-friendly operations, it is a planned to migrate existing software to an Opensource ERP based software architecture.

2. PROJECT SCOPE

This document defines the technical scope of work and activities leading to design, development, testing, installation and training of proposed software. It is required to support the activity of URSC by vendor for end to end development, migration and support integration testing with skilled team for completion of activity within stipulated time frame of 8 (eight) months.

3. REQUIREMENTS AND SPECIFICATIONS (Vendor shall provide compliance to below requirements)

Sl. No.	Requirement	Specification
1	ERP Software	Opensource ERP Next
2	Database	MariaDB or Postgres DB
3	Process Logic Implementation	Python scripts
4	Operating system	Developed Software shall run on Ubuntu/RHEL 64 bit
5	Environment	Developed Software shall run on URSC Virtual Machine with following configuration CPU Cores : 16 RAM : 32 GB Storage : 1TB OS : Ubuntu /RHEL 64 bit
6	License	All opensource without any financial licensing requirement from URSC
7	Experience	1. Vendor would have executed at least one Electronic Manufacturing industry line software implementation with ERP next. Purchase order Proof to be submitted.
8		2. Vendor would have executed at least two contracts for inventory management. Purchase order Proof to be submitted.
9	No of user IDs	Software shall support 5000 to 10000 users, concurrent users 300
10	Scope of work	As per SoW
11	Deliverables	As per SoW
12	Time frame	As per SoW

Statement of Work for EEE Components Storage and Management system software

13	Response Time (Hard Real time)	<=10 sec for regular report/action, <=5 minutes for all report type
14	Open Source Standards	frappe
15	Redundancy	Software shall support 2 servers with redundancy
16	Downtime	=< 1 hour
16	Support	Version support for platform updates (ERP, DBS, installable, etc.,) & platform compatibility support for 1 year

4. ARCHITECTURE

End to end operations required are shown below figure 4-1. Vendor shall suitably design the Architecture of software to meet all the requirements.

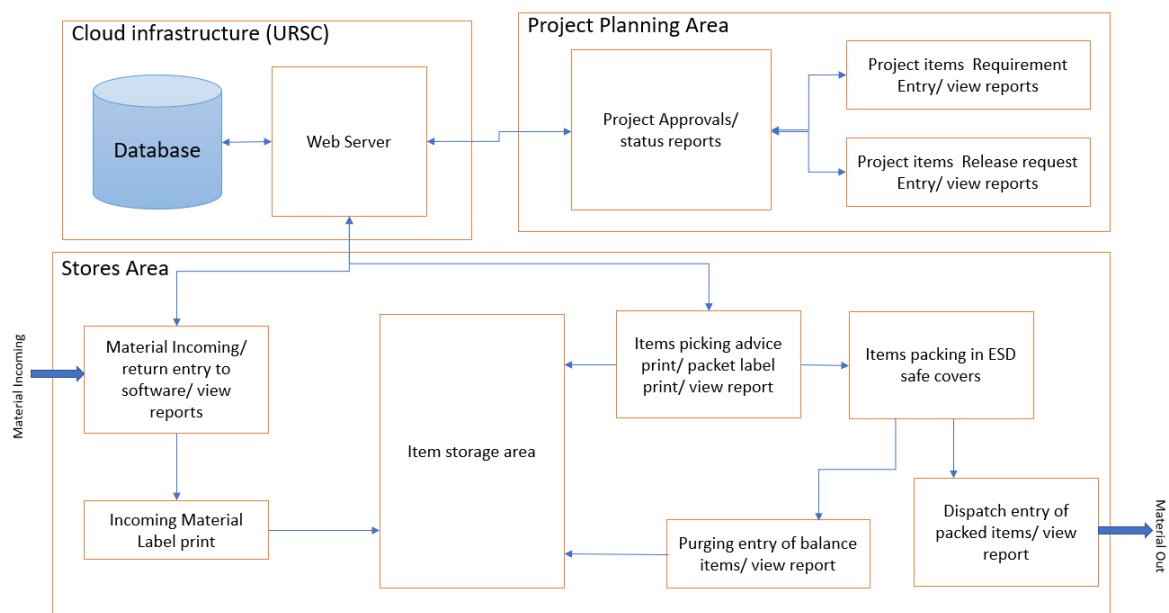


Fig 4-1: WORK FLOW

5. PROJECT SCHEDULE

The duration of the project is eight (8) months, starting from the Placement of Purchase order, i.e T0. The all activities include of upgradation of tables, development of web pages, reports, documentation and integration testing. The project closure will be treated as completed based on the acceptance of deliverables as defined in below table.

Statement of Work for EEE Components Storage and Management system software

Timeline	Activities	Milestone completion Criteria		Responsibility
T1=T0+2 months	Requirement Phase	Familiarisation of ICSDBS software	URSC & Vendor	
		Development, Migration Plan & Schedule	Vendor	
		Software Requirements Specification (SRS)	Vendor	
		SRS Review	URSC	
T2=T1+2 months	Design Phase	Data Design	Vendor	
		Data Design Review	URSC	
		Application Design	Vendor	
		S/w Design Documentation (SDD)	Vendor	
		SDD Review	URSC	
T3=T2+2 months	Development & Migration Phase	Migration of Server Data	Vendor	
		Source Code Generation	Vendor	
		Unit test report	Vendor	
		Traceability matrix	Vendor	
		Review of reports	URSC	
T4=T3+1 months	Testing and integration Phase	Functional Test execution reports	Vendor	
		Documentation and Reports	Vendor	
		Acceptance test	URSC	
T5=T4+1 months	Deployment & Support	Handing over of all source code, installable, etc.	Vendor	

Statement of Work for EEE Components Storage and Management system software

		Demonstration to users of URSC	Vendor
		Training to developers of URSC	Vendor
		Commencement of online activities	URSC, Vendor

6. PROJECT APPROACH

- URSC shall provide necessary inputs to successful bidder for development of software.
- Supplier shall carry out detailed design based on Technical and Functional requirements.
- URSC shall monitor and review all the design and development activity at each stages of development.
- After deployment of s/w, any changes i.e. bug fixing to be carried out by vendor at URSC.

Entry Criteria	Developed Source code, Functional Test Plan
Tasks	<ul style="list-style-type: none">Environment SetupMigration of Server DataSource Code GenerationFunctional Test Case ExecutionIntegration testingPerformance TestingTest Summary Report
Exit Criteria	<ul style="list-style-type: none">Functional Test execution reports delivered to URSC
Responsibilities	Supplier Project Manager and Technical Lead, Test engineers
Approval	URSC-Project Manager

7. PROCESS FLOW & SOFTWARE REQUIREMENTS

7.1 Process Flow:

EEE components are the basic building blocks for realizing space crafts. Procurement, usage & storage of these components are a continuous process in components supply chain management. Ensuring timely availability of components without affecting the project schedule needs advance planning of procurement and testing, considering the long lead time, obsolescence of technology and MOQ aspects.

Statement of Work for EEE Components Storage and Management system software

A simple to operate web-based software for “Components Management” is very much required and is in use, which needs to be upgraded and enhanced. In addition to the inventory management, the system should facilitate:

- Project cards component management, for varied requirements such as satellites, Qual model / engineering models / testing, ground applications etc.,
- online Request for Components to be issued,
- various type of requests, viz., wrt package / card, for screening / relifing, other centre requirements,
- constraints based on purpose, type of satellite, User etc.,
- FIFO advise for issual of components,
- dissemination of technical details like radiation data, alerts, etc.

Component management system maintains end-to-end transaction logs to facilitate traceability and provide real-time data to aid the various users in advance planning of project related activities.

This software provides various data as inputs to other software like the Card fabrication software (Fabrication Management system-FMS) and PCB fabrication Software (PCB Management System – PCBMS).

The Block diagram in figure 6-2, shows the various major blocks and their functions in a broad way.

Component Identification, key aspects and Major attributes

- **Component Type**

All EEE components are classified under 22 major categories as component type viz., Resistors, Capacitors, ICs, Diodes, Transistors, etc.

- **MDB partno, Basic partno, Link Partno**

Each component is identified under the component category and a standard component nomenclature, The Master DataBase(MDB) Partno is the key attribute. A standard nomenclature is followed for each category of component. The MDB Partno is a combination of Basic partno concatenated with a '-' and Quality code/Quality Level.

Eg: RM1206KB 1 KOHM 1% 1/8W-S

RM1206KB 1 KOHM 1% 1/8W-R

Both will be associated with a Link Partno as RM1206 1 KOHM 1% 100PPM 1/8W.

One or more Basic partnos which are equivalent, are associated with a Link partno (also called as Request partno). Link partno is a major key attribute for project card component module, FIFO stock module, Procurement planning etc.,

- **Package Style/ Foot print** plays an important role in the card component list and ECAD approval.
- **Datecode** is 4 digits, year and week of final inspection of component
- **Expiry date**, applicable for only Flight-G1 and Flight-G2, gives screening validity after which it is to be revalidated by relifing.

All these major attributes are stored in tables which we addressed as Master data tables or lookup tables. Whenever a new component is procured or received, if its specifications are new, the attributes are first added in the master data tables so that it is

Statement of Work for EEE Components Storage and Management system software

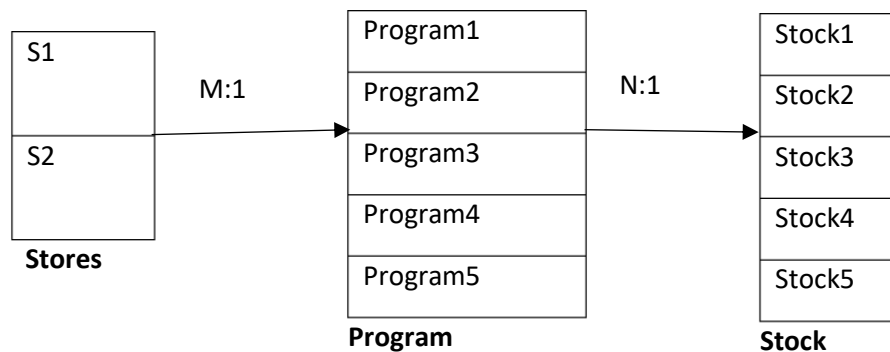
available for users as selectable. The purpose is to make most of the inputs as selectable to eliminate typo errors to the maximum extent possible.

Components Inventory Storage Pattern:

All components are stored under program names like INSAT, IRS, CENTER, Gaganyaan, etc. Each program has stocks as Flight-G1, Flight-G2, TO-SCR, Ground and Flight-COTS. Flight-G1 will contain all the Grade-1 components which are flightworthy. Flight-G2 components are components which are having marginal deviations and will be used for flight only in critical conditions where Flight-G1 is not available. TO-SCR stock contain the component which are to be screened and posted to Flight-G1. Ground components are to be used only for ground applications.

There are 2 stores viz., URSC stores and ISITE stores. FIFO issue of components are to be maintained across the stores and programs (INSAT & IRS).

For Example



Project – card configuration.

Every Satellite is a Project. Each satellite comprises of many subsystems and every subsystem will have one or more packages. Each Package will have 1 or more cards (PCB cards). For each project card, the BOM for all EEE components list is uploaded by adding / editing / copying. There may be one or more of same card in the package with same component list or with value change, in which case basic card name will be same and each card is suffixed with a letter and made unique wrt its stack position in the package.

The BOM is to be consolidated from the card component list, which gives the component link partno wrt each position on the PCB. With footprint of the component as a key attribute with restrictions for editing the component list. Components which are mounted on the package or on tray are entered in and On-Box card, which are named by package name prefixed with 'On-Box'. The components which are required for connecting the cards are listed separately as 'On-System' cards and the components are entered as consolidated list.

The BOM of each cards are submitted for one or more approvals and then any new card / new version is to be routed through ECAD approval. After ECAD approval, the design layout for the basic card configuration is frozen and only the value of component will be

Statement of Work for EEE Components Storage and Management system software

allowed to change. Once ECAD approval is done for the first card, the same card BOM can be updated by only copying from the approved, same basic card and this component list can be edited only to change the value with-in the same footprint.

When the card is taken up for fabrication, the Request for issual of component is initiated and the SIV Request is generated and routed to appropriate approving authorities, depending on purpose, stock for which the request is generated, if the request contains HMC, destination, etc. After approval it is available for stores to process it and issue the components.

The project-card configuration and card status, along with the BOM is input to various other modules software and also to other software such as PCBMS and FMS.

Database:

In general, all tables in the database are designed to meet the 3rd normal form. In order to increase speed and efficiency of software, some redundancy is maintained in few of the tables. The table structures may be further refined and old data archival may be planned as part of enhancement.

The brief software process flow of proposed software is shown in Figure 7-1.

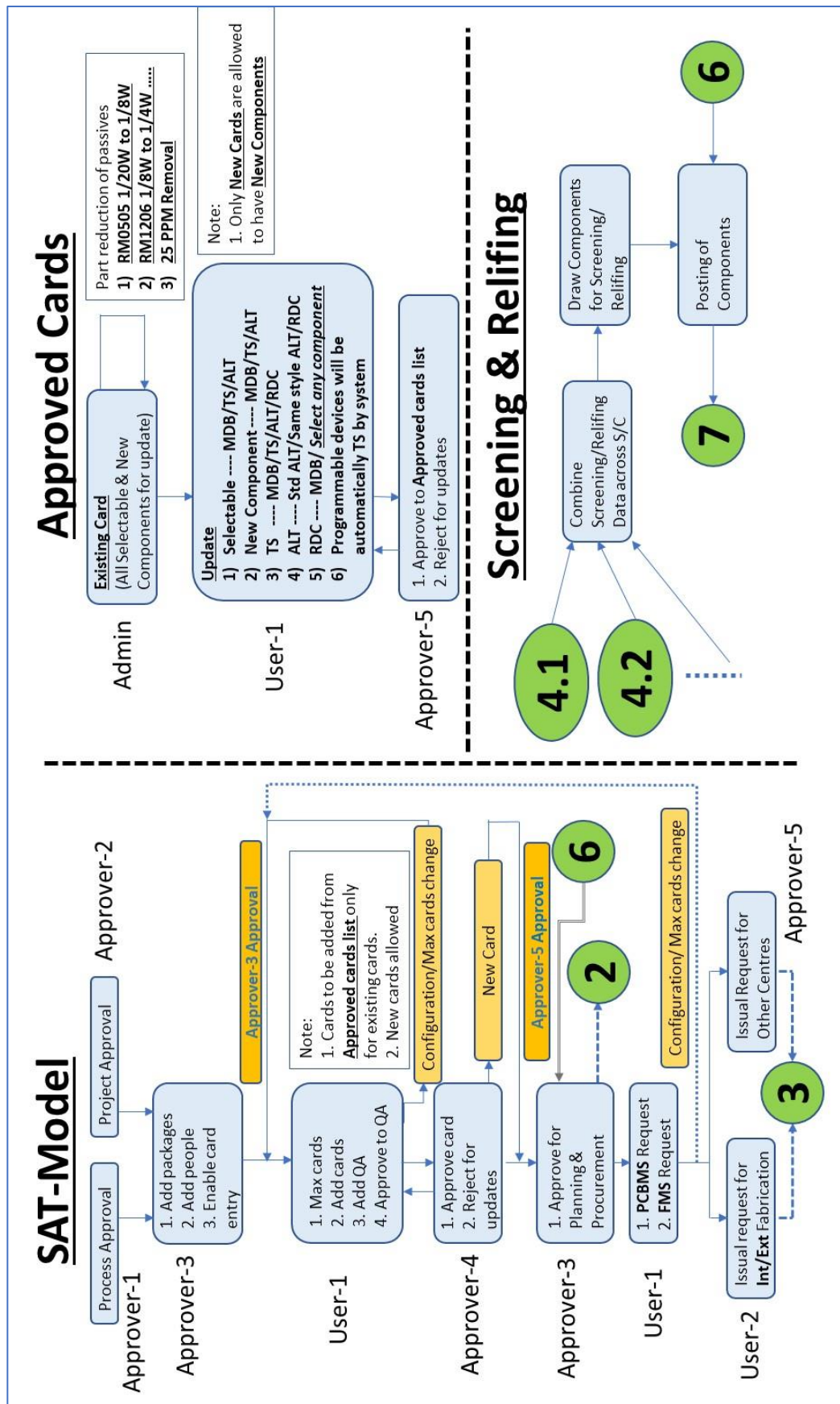


Fig 7-1A: Process Flow Diagrams

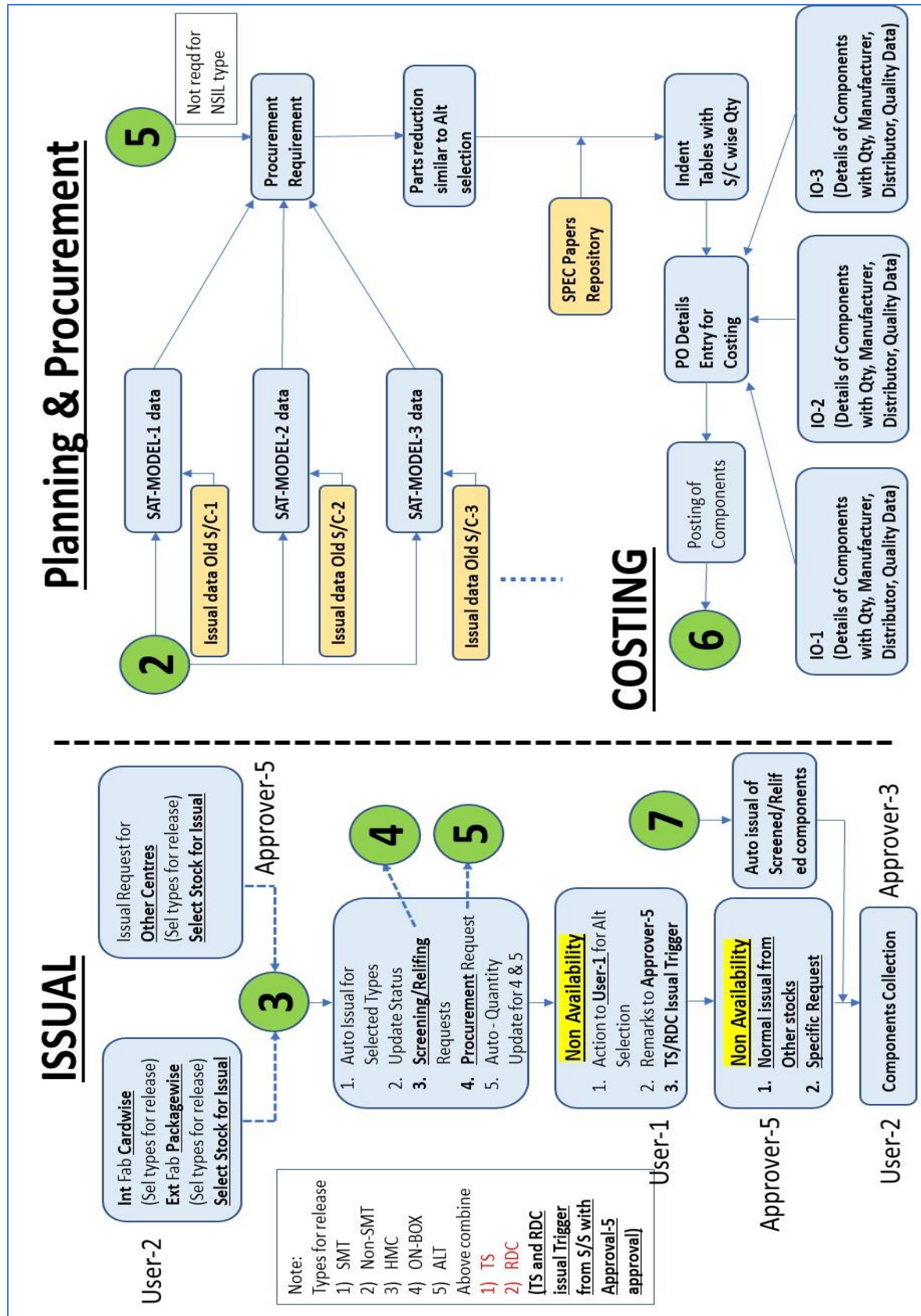
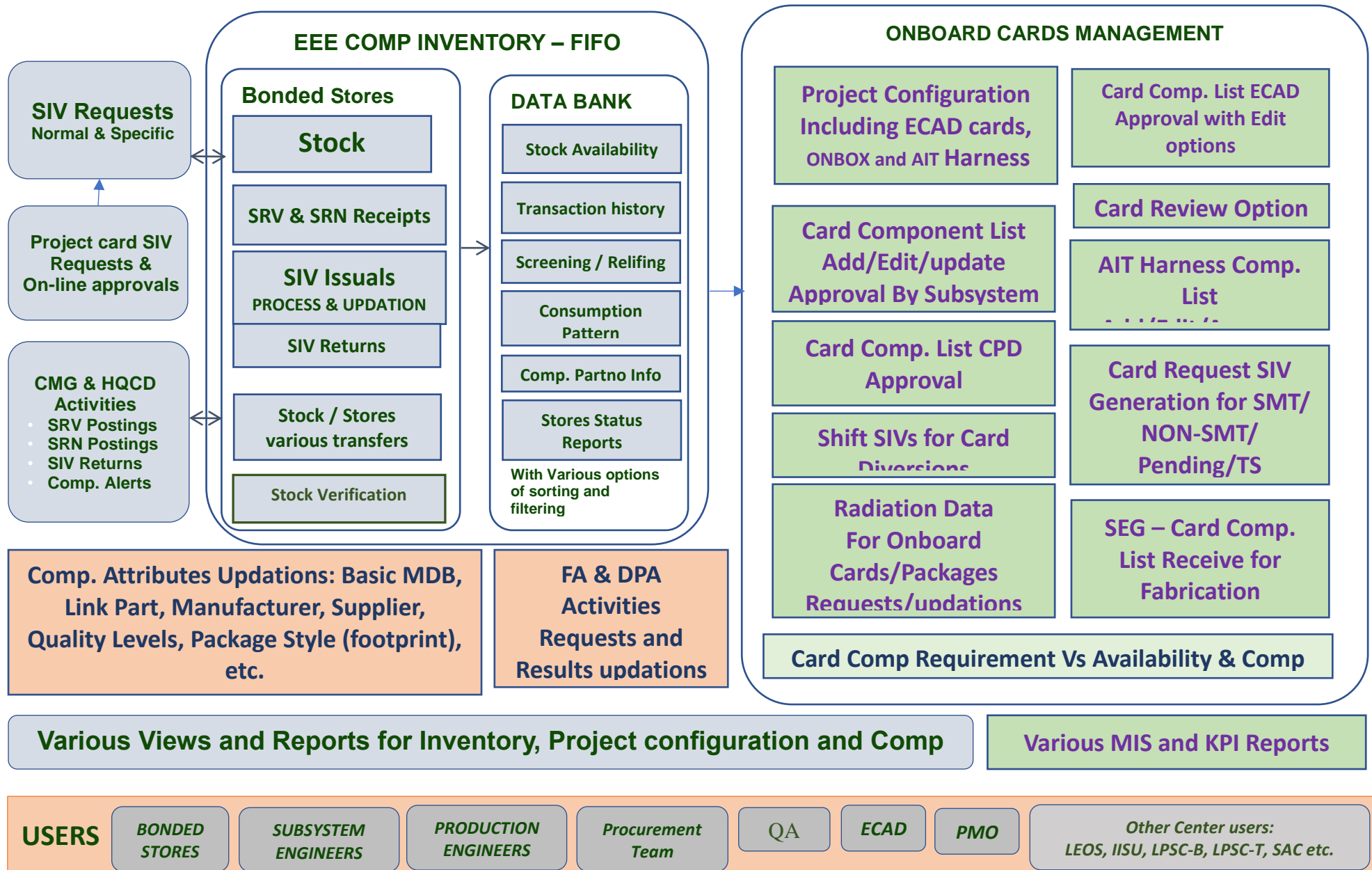


Fig 7-1B: Process Flow Diagrams

Fig 7-2: BLOCK DIAGRAM:



7.2 Software requirements:

The software requirements are provided below in a broadly classified manner, as modules and the various functions in each module. Also listed is the relationship of each module with the other modules.

7.2.1 Inventory Module

7.2.1.1 SRV Receipts

7.2.1.1.1 SRV Entry

Components are received at the Receipts stores against PO in one or more consignments and the received components are handed over to Components Management group for Incoming inspection / Screening with SRV/MIRV.

- Components received are entered into the system with data like PO details, Supplier/vendor, SRV No & date, Component type, Item description (manufacturer/ PO description), QTY ordered, Qty received, unit cost etc.
- Indent / PO details can be taken as input from Indent updation module.
- To link with the PO details of COWAA

7.2.1.1.2 SRV postings

After Incoming Inspection, the components are posted to appropriate stock with proper component Nomenclature as per convention followed for each component categories, with other major attributes as MDB Partno, datecode, Expiry date, Manufacturer, marking on components, program and stock to which it is posted.

Read and record data if source screened or partially screened components.

- Printing of SRV form and MDB slips for the components packet.
- If the component is received for the first time it needs to be updated in the Master Data tables such as Basic partno, Link Partno, its Package style/footprint etc. If not new, it should pick up the stores cardex no and location of storage, to be printed on SRV voucher and MDB slips.
- Partial postings must be facilitated i.e., One SRV, Multiple postings and may be posted to more than one Program and stock and to any Stores
- On line approvals

7.2.1.1.3 SRV Binning

After postings the components are handed over to Bonded Stores with SRV and components packet attached with MDB slips.

- Stores personnel must be able to see the postings and verify with the components received with SRV no and Date attributes.

- The components are binned into the stock (added to the existing stock) if it is a new component, New cardex no and location is to be assigned.

7.2.1.2 SRN

7.2.1.2.1 Posting

Component which are in TO-SCR stock are to be posted to Flight-G1 after screening against the SIV through which it was drawn from Bonded stores. With a system generated reference No. (SRN No.)

- Printing of SRN form and MDB slips for the components packet. Basic partno, Link Partno, its Package style/footprint etc. & it should pick up the stores cardex no and location of storage, to be printed on SRN voucher and MDB slips.
- Partial postings must be facilitated (One SIV, Multiple SRN and may be posted to more than one stock) and to any Stores.
- Special postings i.e., without SIV must be allowed to be posted
- On line approvals

7.2.1.2.2 Binning

Components which are handed over back to Stores, With the SRN Reference No., the components are verified and binned (Added) to the stock.

- If the component is new to the stock, New cardex is to be created and location to be assigned.
- Printing of MDB slips with relevant attributes to be provided.

7.2.1.3 SIV

SIV Requests are received for different stock for various destination and various purposes. There will be a normal request or a specific request. Normal Request will be wrt Link partno and specific request is for components with particular specifications/attributes only.

7.2.1.3.1 SIV Request Process

Normal SIV is processed to generate the earliest datecode and early expiring components to be issued according to FIFO logic and eliminating the component with 20year old datecode and other applicable constraints.

Printing of Advice in various formats to be facilitated to enable easy, efficient and error free picking up of components and disbursement of the same in a feasible manner.

Specific requests are to be checked for Availability at the time of issual.

7.2.1.3.2 SIV Updation

The components Ready for issual are then updated (reduced from the stock) and Issued against a SIV no. and Date., which together are unique to a program stock and SIV No is reset and starts from 1 every year, 1st of April.

7.2.1.4 STOCK TRANSFERS

7.2.1.4.1 Transfer between programme stocks

Stock transfers between programs stocks on the same level is to be facilitated. E.g., From INSAT to IRS, From Flight-G1 to Flight-G1 only.

7.2.1.4.2 Transfer between stores

Same program Same stock to be retained.

7.2.1.4.3 Transfer to Ground.

Transfer of components from any stock to ground stock in the same program stock
Usually the old datecode components will be transferred to ground.

- All transfers are through Transfer request /Auto transfer.
- Transfer update by Stores. (SIV for source stock and SRN to destination stock with identified SIV no wrt type of transfer)
- To print new MDB slips and updated forms.

7.2.1.5 Stock Verification

7.2.1.5.1 Entry of differences (Physical and Database Quantities)

7.2.1.5.2 Normalisation approval by blocking it. And later unblocking it when found.

7.2.1.5.3 Writing off the missing components [update as special SIV]

7.2.1.5.4 Entry of extra found components by special SRN and Printing of voucher and slips.

7.2.2 Project - card configuration

7.2.2.1 Project

7.2.2.1.1 To add a new project as ongoing

7.2.2.1.2 To update as Launched

7.2.2.1.3 To put a hold with a reason and to Release when required

Project type is one attribute which says if it is a normal project, special project, a production template, production packages project (where packages are not identified with any particular project), TDP & Qual, etc.

7.2.2.2 Subsystem

7.2.2.2.1 To add a subsystem to an ongoing project with details like Project and centre code.

7.2.2.2.2 Other centre cards are added under separate one or more subsystem for the convenience of issual of components to their appropriate destination and to eliminate it from various actions applicable for URSC cards.

7.2.2.3 Package

7.2.2.3.1 To add a package with no of cards the package can contain.

7.2.2.3.2 To put a hold with a reason and to Release when required

Packages which are fabricated by external vendors (production package) are to be identified separately and package name prefixed as 'PROD-'.

Eg: 'PROD-BDR-10'

7.2.2.4 Card

There are 3 different type of cards with slight variations in the attributes. viz., Normal card, On-box card, On-system card.

- 7.2.2.4.1 To add a card. No of cards in the package not exceeding the specified number at the time package was added, excluding the On-System or On-Box cards.
- 7.2.2.4.2 To put a hold with a reason and to Release when required.
- 7.2.2.4.3 To withdraw a card after checking for some constraints like if Job request for Card Fabrication / PCB fabrication is issued, components are issued or PCB is issued etc., Certain approvals will be necessary for withdrawal. Until all necessary approvals are obtained, the card is to be put on hold.
- 7.2.2.4.4 Submit for CPD approval.
- 7.2.2.4.5 Routing to ECAD approval if it is a NEW card.

Each card will be associated with its stack position in its package. The basic card name will be suffixed with the stack code or M/R to represent Main & Redundant or SP indicating Spare.

7.2.2.5 Package or card creation

7.2.2.5.1 Request for a package / card

7.2.2.5.1.1 Package name: New name or existing package copying with selection of cards from any existing packages

7.2.2.5.1.2 Production package: To allow copying of package / cards from Production Template only.

7.2.2.5.1.3 Replacement card: to allow addition only after any card is withdrawn from the package or no of cards added are less than the cards a package can hold

7.2.2.5.2 New cards that are to be routed through ECAD must be routed through System Administrator.

7.2.2.5.3 Request approval by PD / DPD

7.2.3 Master database tables updations

7.2.3.1 Link partno and Basic MDB partno

7.2.3.1.1 A new Link partno is added with attributes like, its package style and description and if it is a 'TS' (marked as 'TestSelect' for programmable devices)

7.2.3.1.2 A basic partno is added with a link partno. One Link partno can be associated with more than one basic partno. Basic partno attached with Quality code with '-' forms a MDB partno during posting of the components to stores.

7.2.3.1.3 To update a basic partno with an alert. There are different types of alert

7.2.3.1.4 To update when a component is becoming obsolete.

7.2.3.2 Quality level

7.2.3.2.1 To add a quality level and its short-form wrt to component category.

7.2.3.3 Package style

7.2.3.3.1 To add a Package style wrt to component category.

7.2.3.4 Vendor / Manufacturer

7.2.3.4.1 A new vendor is added with a unique name and attribute like Supplier or manufacturer, address, mail-id, phone number etc.

7.2.3.4.2 To update a vendor, added as supplier/ manufacturer as Both.

7.2.3.5 user or user role

7.2.3.5.1 To add a new user/ update role / reset password

7.2.3.5.2 To add a new user role

7.2.3.6 Menu / submenu and assign access rights

This is to add a new program or module without changes in the hard code of the menu program

7.2.3.6.1 To add/ update menu and submenus with program associated with it. ()

7.2.3.6.2 To assign access rights to one or more user type/role

7.2.4 Project - Card Component list (BOM)

7.2.4.1 To add/ edit /delete a component with various attributes such are component type, position/symbol, mounting position, selectable, package style/ footprint, link Partno, No-Connection/Short, etc.

7.2.4.2 Bulk edit option for editing multiple position to be updated with one value or editing attributes like function or Fabrication remarks.

7.2.4.3 Copying options

Copying of component list by Subsystem Designers to a single card or multiple cards. Copying for Production cards are allowed from only the production template only. If a programmable device is selected, that position is marked as 'TS' so that it can be mounted on subsystem intervention.

7.2.4.4 Review card – for retrieving the card back to Subsystem domain for further modifications until taken up for fabrication.

Restrictions: Add and delete is allowed only for a new card. Edit option allows selection of components which matches the footprint attribute.

7.2.5 Radiation Module:

7.2.5.1 Module to add card-wise/package-wise radiation details and approval of the same.

7.2.6 SIV Request Module

7.2.6.1 Normal request

7.2.6.1.1 For other than On-board or Qual Models

➤ Request from anyone other than Fabrication Agency. Eg Testing or ground purposes

7.2.6.1.2 For screening / Relifing

➤ Request from CQCD/ HQCD for Revalidating the expired components from Flight-g1 stock

➤ Request from CQCD/ HQCD for screening of components from TO-SCR stock.

7.2.6.2 Specific request

➤ Request is given for a specific component with specific attributes. Processing for this request will be only check the availability of stock.

7.2.6.3 On-board Project Card Request

➤ Requests are to be generated for BOM from the selected Project card/package, irrespective of project-stock and will be later processed for FIFO advice from across the project-stock and stores.

➤ First request is generated for all the components in the Project BOM, wrt Card / Package for which the request for component issual is raised and pre assigned program stock from which the components can be issued.

- To check the availability of valid FG-1 components and the user to decide whether partial issue is ok or to wait for the availability of all the components.
- Pending Requests are to be generated for partially issued cards /packages, while showing quantity already issued, the readiness of components, stock at screening lab, Requests in pipeline. Consolidation pattern varies between normal card, on-box card, On-system and harness card.

7.2.7 Failure Analysis Modules

7.2.7.1 Failure Analysis (FA) Activities

- Interface to generate, accept user FA request and update conclusions for failed component, issued from URSC bonded stores, for failure analysis.

7.2.8 Destructive Physical Analysis Modules

7.2.8.1 Destructive Physical Analysis (DPA) Activities:

- Interface to generate and accept requests & update conclusion for failed EEE components.

7.2.9 Views and reports for all the modules

- Each and every module is to be provided with views and reports generation which facilitates various filtering and sorting options.
- Facility for supervisors and system administrators to generate reports from the database as and when required by management.
- Log for all actions of user should be maintained

8. PAYMENT TERMS

Milestone payment along with applicable GST will be paid within 30 days against successful completion of each milestone and original invoice, milestone completion & acceptance certificate duly certified by the URSC Technical team. Payment terms as given below.

Sl.No.	Mile stone	End of Mile stone	Qualifying Payment
1	Development & Migration Phase	Completion of T3 mentioned in section 5	40% of PO Value
2	Final completion (Testing and integration Phase and Deployment)	Completion of T5 mentioned in section 5	60% of PO Value

9. VENDOR RESPONSIBILITY

- 1) Supplier shall be responsible for supply of software with source code, installables and its sub systems integration, testing, and satisfactory demonstration of operation.
- 2) Supplier is responsible for the modification of the code within form, fit and function, and interface, including test requirement interfaces

10. TRAINING

1. Vendor should provide a training session at URSC premises for a period of at least 3 (three) days on the operation test tool to the URSC staff (~ 50 users).
2. Vendor should provide a training session at URSC premises for a period of at least 15 (fifteen) days on the maintenance and new requirement development on tool to the URSC developers (Team of 10 developers).

11. DELIVERABLES

1. Software, tools, Functional Test execution reports to be delivered to URSC in accordance with the software requirements along with all source code and third party installable.
2. Documents: SRS, SDD, software installation & configuration, error handling, developer training material and user guides.

12. WARRANTY AND SUPPORT

Warranty Period:

A warranty period of one (1) year from the date of system acceptance shall be provided.

Warranty Coverage:

The warranty shall cover any defects or issues arising from the development and deployment of the software as outlined in the requirements. Software coding faults support will be provided for period of one year from the time of system acceptance. Support for handholding of generation of new view reports requirements. For any apparent software problems discovered during the warranty period, the vendor should rectify the fault at the earliest within two business days.

13. INTELLECTUAL RIGHTS

All project-related information, including source code, design documents and any other proprietary materials, shall be treated as confidential and not disclosed to any third party, NDA attached in tender to be provided after receiving Purchase order.

14. ACRONYMS

Sr No.	Acronyms	Description
1	ALT	Alternate
2	BOM	Bill of Material
3	CMG	Component Management Group
4	CPD	Component Procurement Division
5	CQCD	Component Quality Control Division
6	DPA	Destructive Physical Analysis
7	DPD	Deputy Project Director
8	ECAD	Electronic CAD Facility
9	EEE	Electrical, Electronic & Electromechanical
10	ERP	Enterprise Resource Planning
11	ESD	Electrostatic Discharge
12	FA	Failure Analysis
13	FIFO	First In First Out
14	FMS	Fabrication Management system
15	HMC	Hybrid Micro Circuits
16	HQCD	HMC Quality Control Division
17	ICSDBS	Integrated Components Services Database System
18	KOHM	Kilo Ohm
19	M/R	Main & Redundant
20	MDB	Master Database
21	MIRV	Material Inspection cum Receipt Voucher
22	MOQ	Minimum Order Quantity
23	Non-SMT	Non-Surface Mount
24	PCBMS	PCB Management System
25	PD	Project Director
26	PMO	Program Management Office
27	PO	Purchase Order

Statement of Work for EEE Components Storage and Management system software

28	PPM	Parts Per million
29	QA	Quality Assurance
30	RDC	Request for Design Change
31	RHEL OS	Red Hat Enterprise Linux Operating System
32	SAT	Satellite
33	SDD	S/w Design Documentation
34	SIV	Store Issue Voucher
35	SMEG	System External Manufacturing Group
36	SMT	Surface Mount
37	SP	Spare
38	SRN	Store Return Note
39	SRS	Software Requirements Specification
40	SRV	Store Receipt Voucher
41	TDP	Technology Development Project
42	TO-SCR	To Screen
43	TS	Test Select
44	URSC	U R Rao Satellite Centre