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Dedicated Freight Corridor Corporation of India Ltd
(A Government of India Enterprise)

Tender No. : HQ/IT/OEM/SAP_01/29052019

(Single Tender mode only)

TENDER DOCUMENT

Name of Work

**SAP-ERP System Upgrade, Stabilization,
Application Managed Services &
Cloud Delivery on HANA Enterprise Cloud**

Last Date & Time for receipt of Tender: 15:00 Hrs. on 29.05.2019

Date & Time for Opening of the Tender: 15:30 Hrs. on 29.05.2019

May'2019

Corporate Office

Dedicated Freight Corridor Corporation of India Limited,
5th Floor, Pragati Maidan Metro Station Building Complex,
New Delhi - 110 001
GST #: 07AACCD4768M1Z7

Phone: +91-11-23454700, Fax: +91-11-23454701

Date: 15.05.2019

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TENDER NOTICE

(Single Tender Mode)

Tender in Single bid system is invited for, **SAP-ERP System Upgrade, Stabilization, Application Managed Services & Cloud Delivery on HANA Enterprise Cloud**

Tender No.	**HQ/IT/OEM/SAP_01/29052019**
Estimated Cost of Work	Rs. 20,55,17,000/- excluding GST (Rs. Twenty crores fifty five lakhs and seventeen thousands only) excluding GST.
Completion period of Contract	a) Software – Immediate b) ATS – 12 months c) ECC Upgrade & HANA Migration – 2 months d) Stabilization & Application Manage Services – 12 months e) HEC & EMS - Five Years.
Type of Contract	Software Contract and Services Contract.
Earnest Money Deposit	Not applicable
Cost of Document	Not applicable
Date of publication	From 15.05.2019 at 10:00 Hrs. up to 29.05.2019 at 14:30 Hrs.
Last Date & Time of submission online Bid.	29.05.2019 up to 15:00 Hrs.
Last Date & Time of submission of statutory documents, if any.	29.05.2019 up to 15:00 Hrs.
Date & Time of Opening	29.05.2019 at 15:30 Hrs.
Mode of submission	Tender Document shall be submitted in sealed envelope and dropped in the Tender Box kept in **Corporate Office at Reception Area, 4th Floor, DFCCIL, Pragati Maidan Metro Station Building Complex, New Delhi - 110001.**

Dedicated Freight Corridor Corporation of India Limited (DFCCIL) reserves the right to reject any or all the tenders without assigning any reasons thereof.

DETAILS OF TENDER

1.1	Tender No.	HQ/IT/OEM/SAP_01/29052019
1.2	Name Of Work	SAP-ERP System Upgradation, Stabilization, Application Managed Services & Cloud Delivery on HANA Enterprise Cloud.
1.3	Type of Tender	Single Tender
1.4	Duration of Contract	• Software – Immediate • ATS – 12 months • ECC Upgrade & HANA Migration – 2 months • Stabilization & Application Manage Services – 12 months • HEC & EMS - Five Years.
1.5	Estimated Cost of Work	Rs. 20,55,17,000/- excluding GST.
1.6	Cost of Tender Document (Non- Refundable)	Not applicable.
1.7	Earnest Money Deposit (EMD) (Bid Security)	Not applicable.
1.8	Tender Validity	90 days from the Date of Opening of Tender.
1.9	Address for Communication	**Group General Manager/IT**, Dedicated Freight Corridor Corporation of India Limited (DFCCIL), 4th Floor, Pragati Maidan Metro Station Building Complex, New Delhi-110001. Contact : 011-23454837, Centralized Fax 011-23454701.

2.0 TERMS OF REFERENCE (TOR)

2.1 Background

Dedicated Freight Corridor Corporation of India (hereafter referred as DFCCIL) is a Special Purpose Vehicle set up under the administrative control of Ministry of Railways to undertake planning & development, mobilization of financial resources and construction, maintenance and operation of the Dedicated Freight Corridors. DFCCIL is currently constructing Eastern and Western corridors, which are likely to be fully operational by 2020.

DFCCIL has implemented SAP-ERP ECC 6.0 application running on DB2 Database on HP Servers to meet the Enterprise wide business needs and to automate the business processes, the hardware infrastructure required to run SAP application is on-premise.

DFCCIL intends to upgrade its SAP-ERP System, resolve the issues, and stabilize the System with OEM, SAP's Application Management Services and Migrate to HANA on *SAP HANA Enterprise Cloud* with certain professional services to manage OS / DB / Application etc. to run SAP Suite on HANA as per current and future requirement of DFCCIL.

2.2 Purpose of the RFP

DFCCIL invites RFP for Technical Upgradation, Migration, Functional Application Managed Services and HANA Enterprise Cloud Managed Services for their SAP ERP landscape.

The purpose of this RFP is to stabilize the current SAP system by fixing issues and gaps in current SAP implementation and upgrading to latest version of SAP and migrating to HANA environment on HANA Enterprise Cloud to run the application on SAP cloud managed infrastructure for the period of 5 years. The current SAP system as per defined scope and modules detailed below in the Annexure – 1 for Finance, HRMS, Payroll, Materials Management Modules and ESS Portal.

2.3 The main objectives of DFCCIL vide this RPF / Tender Document is for the following activities/ area of work:

Key Deliverable (KD)	Product / Services	Activities
KD - 1	**Supply of SAP Software Licenses** a) ESS and Payroll for 1500 Users to be supplied in 3 phases within 12 months. b) HANA Runtime Database Licenses.	• Supply of SAP software (ESS & Payroll) Licenses and HANA database Runtime Licenses. • Annual Technical Support (ATS).
KD - 2	Supply of SAP HANA Enterprise Cloud (HEC) Services for 5 (five) Years	• Cloud Infrastructure and Managed Service for SAP ECC. • Cloud Infrastructure and Managed Service for Employee Portal. • Cloud Infrastructure and Managed Service for Network & Security Services • Linux OS License and Support • HEC Standard Services and Enhanced Managed Services (EMS) Annexure-4 • Installation, maintenance and infrastructure support for 5 years.
KD – 3	SAP Upgrade & Migration Services	• Upgrade existing SAP ECC 6.0 EHP 6 to latest Version of SAP ECC 6.0 EHP 8. • Database Migration of current IBM DB2 database to SAP HANA on HANA Enterprise Cloud.
KD – 4	Application Managed Services (AMS) Scope for SAP Application Stabilization for 1 (One) Year	• SAP System stabilization and bug fixing on the key functional modules of Finance, HRMS, Payroll, Materials Management, ESS Portal and Training requirements as per the detailed Scope of Work in Annexure-1 and AMS support for one year and achieving UAT and OAT.

3.0 Detailed Scope of Work:

3.1 Key Deliverable–1: Supply of SAP Software License and ATS

Scope of Work – Supply of SAP HANA Runtime Database Licenses, SAP ESS User Licenses and Payroll for additional 1500 Users along with Annual Technical Support (ATS) for 12 months.

DFCCIL intends to procure HANA Runtime Database Software License and the bidder should supply HANA Runtime Database software License, SAP ESS User Licenses and Payroll for additional 1500 Users and Annual Technical Support (ATS) for 12 months.

    i.   SAP Software Licenses should be Perpetual.
    ii.   SAP should provide software support and customer login Portal to create tickets.

3.2 Key Deliverable – 2 – SAP HANA Enterprise Cloud and Managed Services

DFCCIL Intends to migrate its existing SAP-ERP Landscape to SAP HANA Enterprise Cloud (HEC) to run and manage for five years. Scope of work shall be as under:

1. Bidder/ OEM will be responsible for design and provisioning of required IT infrastructure for hosting DFCCIL's SAP Landscape (per below table-2), upgrade & migrate SAP applications on HANA Enterprise Cloud and provide cloud services for five years.
2. Bidder/ OEM will be responsible for provisioning of requisite network infrastructure (including switches, routers and firewalls) to ensure accessibility of the servers at cloud infrastructure.
3. Bidder/ OEM will provide provisions for network connection from its HEC cloud data center.
4. Bidder/ OEM should provide HEC solution including the following:
   a. Cloud Infrastructure and datacenter management (Power and network redundancy, heating, cooling, power cycling testing, physical security etc.)
   b. Operating System Management (Configure, troubleshoot, patch & upgrade)
   c. Firewall Management & Network Management
   d. Backup Management
   e. Storage Management
   f. HANA Database Management (incident management, patch management and upgrades)
   g. SAP Technical BASIS operation (monitoring, troubleshooting, incident management, patch management, housekeeping and backup and recovery)
5. HEC infrastructure provisioned must be flexible for scalability (increase / reduce infrastructure resources) via a Change Request Management by DFCCIL.
6. Compliance process to define international standards and security guidelines such as ISO 27001, ISO 22301, SOC-1 and SOC-2 for maintaining operations of cloud and ensuring privacy of DFCCIL data.
7. Bidder/ OEM shall confirm the Service Level Agreement (SLA) for High Availability to include the following:
   a. High Availability and redundancy of data centers, hardware, database and application uptime.
   b. 99.5% application availability on monthly basis for Production environment.

c. 95.0% application availability on monthly basis for non-production environment (Development & Quality).

8. Bidder/ OEM shall provide adequate backup and restore policies and confirm following procedures:
   a. Perform standard file system and database backups.
   b. Monitor backup processes and performance of scheduled backups, schedule regular testing of backups and ensure adherence to related retention policies.
   c. Real-time monitoring, log maintenance and reporting of backup status on a regular basis.

Backup frequency and retention policy adhered to as per below table (Table-1) and backup of the Production and Non-Production shall be replicated to an alternate datacenter in different location.

Table – 1

System	Environment	Backup Type	Retention Period
Database	Production	Daily full backup and log file backup per SAP product standard.	30 days
	Non-Production	Weekly full backup and log file backup per SAP product standard.	14 days
File Systems	Production	Monthly full backup and daily incremental.	2 months
	Non-Production	Monthly full backup and daily incremental.	2 months

System Landscape sizing details:

i. Sizing has to be done on current data size and 10% growth YoY for next five years.

ii. Project involves the setting up of the following systems:
   a. SAP Suite on HANA Production, Quality & Development Server.
   b. SAP ESS Portal Production, Quality & Development Server.
   c. SAP HEC Global Solution Manager to be considered for maintenance optimizer and Early Watch Alert (EWA) reports.
   d. SAP TREX Production, Quality & Development Server.
   e. SAP Web Dispatcher Production, Quality & Development Server.
   f. SAP Process Integration Production, Quality & Development Server.
   g. SAP Content Server Production & Development Server.

3.3 Key Deliverable-3 – SAP System Upgrade & Migration

DFCCIL intends to technically upgrade the existing SAP ECC 6.0 EHP 6 to latest version of SAP ECC 6.0 EHP 8, SAP would be responsible to upgrade the entire existing SAP landscape (per below table-2) to the latest version which is compatible for migration to SAP Suite on HANA and all satellite system to Sybase.

Below Table-2 shows the Current SAP-ERP Systems and its existing version:

Table -2

SAP Solution	SAP Version	Operating System	Database
ERP	SAP ECC 6.0 EHP 6	HP-UX 11.31 / IA64 64-BIT	DB2 for LUW 9.7 64-BIT
Employee Portal	Net-weaver 7.3	HP-UX 11.23 / IA64 64-BIT	DB2 for LUW 9.7 64-BIT
TREX	TREX	HP-UX	DB2 for LUW 9.7 64-BIT
Process Integration	SAP PI 7.3	HP-UX 11.23 / IA64 64-BIT	DB2 for LUW 9.7 64-BIT
Content Server	DMS Content Server	Windows Server	Max DB 7.6

Scope for SAP System upgrade and migrations shall be as below:

DFCCIL intends to technically upgrade its current On-Premise SAP Landscape to latest version of ECC and migrate to HANA Runtime Database on HANA Enterprise Cloud.

The below scope of SAP upgrade and migration would be:

1) Bidder/OEM should take the activities of Knowledge Transfer, Business Process understanding and Documentation preparation covering Project Plan, Time line, Upgrade / Migrate approach of existing SAP Landscape.
2) If there is any mandatory functional or process change in the upgraded version, Bidder/OEM should impart the proper training to key stakeholder (Core Team) as Train the Trainer mode.
3) Bidder/OEM shall correct/modify objects in entire landscape affected by Upgrade of ECC
4) Bidder/OEM shall ensure downtime optimization for upgrade and migration.
5) Bidder/OEM shall also modify or correct any Z-Programs for HANA Code Correction during the migration activities.
6) Bidder/OEM shall do system refreshes and backup restore, if required, during Migration Activity.

3.4 Key Deliverable - 4 - SAP System Stabilization & Application Managed Services (AMS)

Dedicated Freight Corridor Corporation of India Limited (DFCCIL) intends the services of SAP to stabilize the SAP application by fixing bugs and gaps as per below scope and detailed functional modules given in Annexure – 1

Scope for AMS (Application Management Services) shall cover the following:

1. **System Stabilization and Bug fixing**: SAP should fix the bugs and Process issues and cover scope of functional requirement detailed as per Annexure- 1.

2. **Functional and Operational Support** for following modules are required:
   1) Human Resource Management (HR) including Payroll
   2) Finance and Controlling (FI)
   3) Materials Management (MM)
   4) ESS Portal.
   5) SAP should migrate Content Server and Process Integration.

3. **Training:** SAP should conduct 2 weeks of training at DFCCIL, Corporate Office premises, to core team members (consisting of 4 to 6 Officials) under Train-the-trainer (TTT) mode under each Modules i.e. FI, HR, Payroll, MM, ESS Portal and BASIS on implemented functionality and also on the corrections performed.

4. SAP shall provide documentation and maintain the proper log of the issues raised and their solution and submit the same for review.

5. SAP shall appoint one person which will act for single point of contact (SPOC) responsible for all communication with DFCCIL.

3.5 Terms & Conditions

i. **Price Validity**

The quoted rates shall be valid for acceptance for the period of 90 days from the date of opening commercial bid.

ii. **Delivery Schedule**

Delivery of Software and Cloud Infrastructure including managed services shall be made within 4 to 6 weeks from the Letter of Acceptance or signing of agreement whichever is later.

iii. **Project Execution**

Supply, Installation, Configuration, Integration and Testing of system and final acceptance by DFCCIL should be completed within two weeks from the date of delivery.

SAP will provide "HEC Services" as specified in the RFP.

3.6 Payment Terms

i. **Taxes and Duties**

Unless otherwise specified in SCC, the Consultants, Members and Personnel shall pay such taxes and duties, fees and other impositions as may be levied under the Applicable Law. All payments will be subject to deduction of tax at source in accordance with the provisions of Indian Income Tax Act and any other Applicable Law.

ii. **Payments**

The cost of services and works under this contract shall be paid in Indian Rupees (INR) only. The payment will made as per schedule of payments agreed by the DFCCIL.

The bidder shall not be entitled to any extra payments towards reimbursements except mentioned in the contract for additional costs incurred by them during such period (warranty and AMC) for purposes of the services and in reactivating the Services.

Bidder shall be paid GST at the prevailing rate as per statutory requirement over and above this consultancy fee as indicted above.

3.7 Software ATS, HEC Services and SLA

a) Supplied Software & Services

- Supplied Software licenses
- ATS charges for 1 year.
- HANA Migration / Stabilization / AMS Services for 1 year
- HANA Enterprise Cloud Services for 5 year

b) HEC Service Level Agreement (SLA): Mandatory & Non-negotiable.

SAP will be responsible for providing L1, L2 & L3 HEC standard & EMS support services on the HANA Enterprise Cloud Services.

Support Level for SAP HEC Computing Environment at Primary Site		
Environment	Support Elements	Support
Production Systems	Monthly Availability of SAP Systems	99.5%
Non-Production Systems	Monthly Availability of SAP Systems	95.0%

c) Downtime defined

Downtime: Any unplanned down time of SAP System, irrespective of hardware or software supplied by vendor, during which the services are not available for transactions.

Cumulative downtime: Downtime for each instance of breakdown/service interruption, irrespective of hardware or software, would be accumulated over one month.

The planned downtime shall not go beyond 4 hours in a month

3.8 Penalty for Non-adherence of SLA

a) Violation of Monthly Availability of Production Systems

2% of Monthly Service Fees for each 0.1% below the System Availability Service Level, not to exceed 100% of Monthly Service Fees.

b) Violation of monthly Availability of Non-Production System (Development & Quality)

2% of Monthly Service Fees for each 1% below the System Availability Service Level, not to exceed 100% of Monthly Service Fees.

For logging calls, the process/ tool provided by OEM should be used for L1/L2/L3 calls.

3.9 Non-Compliance of SLAs for four (4) consecutive months

In the event of bidder fails to meet the SLA for Production computing environment as specified above for four (4) consecutive months, DFCCIL has right to terminate the contract/ order by providing bidder with 30 days' notice.

3.10 Submission of EMD / Security Deposit:

EMD / Security Deposit – Not applicable.

3.11 Payment terms

SN	Particulars	Milestone	Payment
1	Software and ATS	1 - Delivery of Software	100%
2	ECC upgrade and HANA migration	1 – ECC upgrade to EHP 8 2 – HANA Migration	1 – 50% 2 – 50%
3	Knowledge Transfer / System improvement – bug fixing & gaps / Stabilization and steady state of operations (AMS)	Stabilization of modules – 100%: 1. ESS Portal – 25% 2. FMS Module – 25% 3. HRMS Module (incl Payroll) – 25% 4. MM Module – 25%	100% (i.e. 25% of each Module) on completion of User Acceptance Test.
4	Process optimization / innovation / training / onsite and remote support	A. Steady State of Operations – 50%: Payable on submission of OAT. B. Payable on submission of quarterly operations reports on process optimization etc.	A – 50% (i.e. payable after achieving OAT). B - 50% after OAT in 2 quarters).
5	HANA Enterprise Cloud and EMS (50 hours Monthly Bucket)	Term of 5 years will start On-provisioning infrastructure. Total value would be payable in 5 equal installments	100% of annual instalment in the beginning of the year

The above quoted rate should be exclusive of all applicable taxes and duties.

3.12 Technical Requirement

a) Technical write-up on the proposed solution for DFCCIL (Provide full technical write-up on the solution offered to DFCCIL, including
   i) Technical Brochure of the product and services as applicable
   ii) Detailed Architecture of the proposed solution as applicable
   iii) Software licenses be supplied by the vendor as applicable

b) Detailed project execution plan with major milestones & deliverables at each milestone in case of ECC upgrade and HANA migration

c) Risk analysis in executing this project, if any, & proposed mitigation plan in case of ECC upgrade and HANA migration

d) Technical Specification of SAP Software and HEC Services sheet

e) The individual items need to be clearly mentioned as Software Licenses and Services.

f) SAP to confirm for all the line items mentioned in the bid and will be supplying the same.

g) SAP to confirm the delivery of "HEC Services" as per Scope of work detailed in Annexure – 3.

h) Bidder to submit the User Manuals, Installation Manuals, Technical Manuals and CBT Application Manuals.

i) Complete Process Documentation including Technical Specification to be provided.

GENERAL CONDITIONS OF CONTRACT

A. CONTRACT AND INTERPRETATION

1. Definitions

1.1 In this Contract, the following terms **shall be interpreted as** indicated below.

(a) Contract elements

(i) "Contract" means the contract Agreement entered into between the DFCCIL and the Supplier, together with the Contract Documents referred to therein. The Contract Agreement and the Contract Documents shall constitute the Contract, and the term "the Contract" shall in all such documents be construed accordingly.

(ii) "Contract Documents" means the documents of the Contract Agreement, including any Amendments to these Documents.

(iii) "Contract Agreement" means the agreement entered into between the DFCCIL and the any modifications agreed to by the DFCCIL and the Supplier. The date of the Contract Agreement shall be recorded in the signed form.

(iv) "GCC" means the General Conditions of Contract.

(v) "SCC" means the Special Conditions of Contract.

(vi) "Technical Requirements" means the Technical Requirements Section of the Tender Documents.

(vii) "Implementation Schedule" means the Implementation Schedule Sub-section of the Technical Requirements.

"Contract Price" means the price or prices defined in the Contract Agreement.

"Bidding Documents" refers to the collection of documents issued by the DFCCIL to instruct Supplier of the processes for bidding, selection of the winning bid, and Contract formation, as well as the contractual conditions governing the relationship between the DFCCIL and the Supplier. The General and Special Conditions of Contract, the Technical Requirements, and all other documents included in the Bidding Documents reflect the Procurement Guidelines that the DFCCIL is obligated to follow during procurement and administration of this Contract.

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(b) Entities

i) "DFCCIL" means the entity purchasing the Software, Cloud and Managed Services.

ii) "Project Manager" means the person **named as such in the SCC** or otherwise appointed by the DFCCIL in the manner provided in GCC Clause 21.1 (Project Manager) to perform the duties delegated by the DFCCIL.

iii) "Supplier" means the firm or Joint Venture whose bid to perform the Contract has been accepted by the DFCCIL and is named as such in the Contract Agreement.

iv) "Supplier's Representative" means any person nominated by the Supplier and named as such in the Contract Agreement or otherwise approved by the DFCCIL in the manner provided in GCC Clause (Supplier's Representative) to perform the duties delegated by the Supplier.

v) "Subcontractor" means any firm to whom any of the obligations of the Supplier, including preparation of any design or supply of any Information Technologies or other Goods or Services, is subcontracted directly or indirectly by the Supplier.

vi) "Adjudicator" means the person named in SCC of the Contract Agreement, appointed by agreement between the DFCCIL and the Supplier to make a decision on or to settle any dispute between the DFCCIL and the Supplier referred to him or her by the parties, pursuant to GCC Clause 6.1 (Adjudication).

c) Scope

"Scope/ scope Document" means the document that is provided with and becomes part of the Contract Agreement which further defines the scope of Services to be provided and other engagement specifics.

"Services" mean those service(s) as further defined by those specific Service Descriptions and Scope Document provided to Purchaser under Contract Agreement that references this Agreement.

"Software" means, any and all software products licensed to Purchaser under this Agreement as specified in Contract Agreements hereto, all as developed by Supplier and delivered to Purchaser hereunder; any new releases, updates or versions thereof made available through unrestricted

shipment pursuant to Supplier Support or warranty obligation and any complete or partial copies of any of the foregoing.

"SAP Materials" means any software, programs, tools, systems, data or other materials made available by Supplier to Purchaser prior to or during the performance under this Agreement including, but not limited to, the Software and Documentation, as well as any information, materials or feedback provided by Purchaser to Supplier relating to the Software and Documentation.

"SAP Support" means SAP's then-current SAP support offering made available to Purchaser, as stated in the applicable Contract Agreement and made a part hereof.

"Third Party Software" means (i) any and all software products and content licensed to DFCCIL under this Agreement as specified in Software Contract Agreements hereto, all as developed by companies other than SAP and/or any of their affiliated companies and delivered to Purchaser hereunder; (ii) any new releases, updates or versions thereof made available through SAP Support or warranty obligations and (iii) any complete or partial copies of any of the foregoing.

"Software Use" means to activate the processing capabilities of the Software, load, execute, access, employ the Software, or display information resulting from such capabilities.

"Cloud Service" means any distinct, subscription-based, hosted, supported and operated on demand solution provided by Supplier.

"Cloud Materials" mean any materials provided or developed by Supplier (independently or with Purchaser's cooperation) during performance under the Agreement, including in the delivery of any support or Consulting Services to Purchaser. Cloud Materials do not include the Purchaser Data, Purchaser Confidential Information or the Cloud Service.

"Computing Environment" means the Supplier provided data center facilities, servers, networking equipment, operating systems, and data storage mechanisms selected and used by Supplier to provide the Cloud Service for the Purchaser, and includes the Production Computing Environment (Production), and any other Computing Environment used for non-production purposes (Non-Production) as agreed in the Agreement.

"Confidential Information" means, with respect to Purchaser: Purchaser's marketing and business plans and/or financial information, and with respect to Supplier : (a) the Software and Documentation and other SAP Materials, including without limitation the following information regarding the Software: (i) computer software (object and source codes), programming techniques and programming concepts, methods of processing, system designs embodied in the Software; (ii) benchmark results, manuals, program listings, data structures, flow charts, logic diagrams, functional

specifications, file formats; and (iii) discoveries, inventions, concepts, designs, flow charts, documentation, product specifications, application program interface specifications, techniques and processes relating to the Software; (b) the research and development or investigations of SAP; and (c) product offerings, content partners, product pricing, product availability, technical drawings, algorithms, processes, ideas, techniques, formulas, data, schematics, trade secrets, know-how, improvements, marketing plans, forecasts and strategies.

"Operational Acceptance Tests" means the tests specified in the Technical Requirements and Agreed and Finalized Project Plan to be carried out to ascertain whether the Software is able to attain the functional and performance requirements specified in the Technical Requirements and Agreed and Finalized Project Plan.

"Operational Acceptance" means the acceptance by the Purchaser of the SAP/Software System where the Contract provides for acceptance of the SAP/ Software System.

"Effective Date" means Effective Date for Determining Time for Achieving Operational Acceptance as per the Contract Agreement, for the purpose of determining the Delivery, Installation, and Operational Acceptance dates for the System.

"Contract Period" is the time period during which this Contract governs the relations and obligations of the Purchaser and Supplier in relation to the System,

Service Level Agreement period or SLA period means the period of validity of the SLA given by the Supplier commencing at date of the Operational Acceptance Confirmation of the System during which the Supplier is responsible for SLA with respect to the Cloud Service

"Intellectual Property Rights" means patents of any type, design rights, utility models or other similar invention rights, copyrights, mask work rights, trade secret, know-how or confidentiality rights, trademarks, trade names and service marks and any other intangible property rights, including applications and registrations for any of the foregoing, in any country, arising under statutory or common law or by contract and whether or not perfected, now existing or hereafter filed, issued, or acquired.

"Modification" means (i) a change to the delivered source code or metadata; or (ii) any development, other than a change to the delivered source code or metadata, that customizes, enhances, or changes existing functionality of the Software including, but not limited to, the creation of any new application program interfaces, alternative user interfaces or the extension of SAP data structures; or (iii) any other change

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to the Software (other than an Add-on) utilizing or incorporating any SAP Materials (defined below).

"Territory" means the territory stated in the Software Contract Agreement."

"Purchaser Data" means any content, materials, data and information that Authorized Users enter into the production system of a Cloud Service or that Purchaser derives from its use of and stores in the Cloud Service (e.g. Purchaser's specific reports). Purchaser Data and its derivatives shall not include Supplier's Confidential Information.

"Deliverables" means those specific Work Products which are identified under the applicable Contract Agreement for delivery to Purchaser.

"Material Defect" means a defect causing serious interruptions in normal operations (important tasks cannot be performed due to a malfunction or an unavailable function in the respective Deliverables that is urgently required to deal with the current situation).

"Contract Agreement" means all written Contract Agreements or other ordering documentation entered into by Supplier and Purchaser containing the pricing and other specific terms and conditions applicable for each of the Services under an applicable Contract Agreement.

d) Place
    i) "Purchaser's Country" is the country named in the SCC.
    ii) "Project Office (s)" means the place(s) specified in the SCC for the supply and installation of the System.
    iii) "Contract Period" is the time period during which this contract governs the relations and obligations of the Purchaser and Supplier in relation to System, as specified in SCC.

2. Contract Documents

The following order of precedence shall be applied in the event of conflict or inconsistency between provisions of the components of the Agreement: (i) Contract Agreement; (ii) Letter of Acceptance; (iii) Corrigendum/Addendum; and (iv) SCC; (v) GCC; (vi) Bid Document; All documents forming part of the Contract Agreement (and all parts of these documents) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.

3. Interpretation

3.1 Governing Language

All Contract Documents and related correspondence exchanged between Purchaser and Supplier shall be written in the language specified in the SCC, and the Contract shall be construed and interpreted in accordance with that language.

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3.2 Entire Agreement

The Contract constitutes the entire agreement between the Purchaser and Supplier with respect to the subject matter of Contract and supersedes all communications, negotiations, and agreements (whether written or oral) of parties with respect to the subject matter of the Contract made prior to the date of Contract.

Agreement constitutes the complete and exclusive statement of the agreement between Purchaser and Supplier, and all previous representations, discussions, and writings are merged in, and superseded by the Agreement and the parties disclaim any reliance on any such representations, discussions and writings. Agreement may be modified only by a writing signed by both parties. Agreement shall prevail over any additional, conflicting, or inconsistent terms and conditions which may appear on any purchase order or other document furnished by either party.

3.3 Non-waiver

If either party should waive any breach of any provision of this Agreement, it shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision hereof.

4. Notices

All notices or reports which are required or may be given pursuant to this Agreement shall be in writing and shall be deemed duly given when delivered to the representative of Supplier and Purchaser at the addresses first set forth in the Contract Agreement. Where in this Section or elsewhere in this Agreement a written form is required, except for any notice of termination or notice of a material breach which shall occur by exchange of letter(s), that requirement can be met by facsimile transmission, exchange of letters or other written form, including email.

5. Governing Law

5.1 Any claims arising out of or relating to this Agreement and its subject matter shall be governed by and construed under the laws of the Republic of India, without reference to its conflicts of law principles. In the event of any conflicts between foreign law, rules, and regulations, and Indian law, rules, and regulations, Indian law, rules, and regulations shall prevail and govern. The Agreement and any claims relating to its subject matter shall be governed by and construed under the laws of India, without reference to its conflicts of law principles. All disputes shall be subject to the exclusive jurisdiction of the courts located in New Delhi for all claims, suits, or actions arising under this Agreement (including claims for payments due hereunder) or in connection with Purchaser's use or possession of the Software and SAP Proprietary Information. Purchaser shall initiate a cause of

action for any claim(s) arising out of or relating to this Agreement and its subject matter within one (1) year from the date when Purchaser knew, or should have known after reasonable investigation, of the facts giving rise to the claim(s).

5.2 Either party must initiate a cause of action for any claim(s) relating to the Agreement and its subject matter within one year from the date when the party knew, or should have known after reasonable investigation, of the facts giving rise to the claim(s). A person who is not a party to the Agreement has no rights to enforce any term of this Agreement.

6. Settlement of Disputes

6.1 Adjudication

6.1.1 If any dispute of any kind whatsoever shall arise between the Purchaser and the Supplier in connection with or arising out of the Contract, including without prejudice to the generality of the foregoing, any question regarding its existence, validity, or termination, or the operation of the System (whether during the progress of Project or after its achieving Operational Acceptance and whether before or after the termination, abandonment, or breach of the Contract), the parties shall seek to resolve any such dispute by mutual consultation. If the parties fail to resolve such a dispute by mutual consultation within fourteen (14) days after one party has notified the other in writing of the dispute, then, if the Contract Agreement in Appendix 2 includes and names an Adjudicator, the dispute shall, within another fourteen (14) days, be referred in writing by either party to the Adjudicator, with a copy to the other party. If there is no Adjudicator specified in the Contract Agreement, the mutual consultation period stated above shall last twenty-eight (28) days (instead of fourteen), upon expiry of which either party may move to the notification of arbitration pursuant to GCC Clause 6.2.1.

6.1.2 The Adjudicator shall give his or her decision in writing to both parties within twenty-eight (28) days of the dispute being referred to the Adjudicator. If the Adjudicator has done so, and no notice of intention to commence arbitration has been given by either the Purchaser or the Supplier within fifty-six (56) days of such reference, the decision shall become final and binding upon the Purchaser and the Supplier. Any decision that has become final and binding shall be implemented by the parties forthwith.

6.1.3 The Adjudicator shall be paid an hourly fee at the rate specified in the Contract Agreement plus reasonable expenditures incurred in the execution of duties as Adjudicator, and these costs shall be divided equally between the Purchaser and the Supplier.

6.1.4 Should the Adjudicator resign or die, or should the Purchaser and the Supplier agree that the Adjudicator is not

fulfilling his or her functions in accordance with the provisions of the Contract, a new Adjudicator shall be jointly appointed by the Purchaser and the Supplier. Failing agreement between the two within twenty-eight (28) days, the new Adjudicator shall be appointed at the request of either party by the Appointing Authority specified in the SCC, or, if no Appointing Authority is specified in SCC, the Contract shall, from this point onward and until the parties may otherwise agree on an Adjudicator or an Appointing Authority, be implemented as if there is no Adjudicator.

6.2   Arbitration:

6.2.1 If the Purchaser or the Supplier is dissatisfied with the Adjudicator's decision and acts before this decision has become final and binding pursuant to GCC Clause 6.1.2, or the Adjudicator fails to give a decision within the allotted time from referral of the dispute pursuant to GCC Clause 6.1.2, and the Purchaser or the Supplier acts within the following fourteen (14) days, or in the absence of an Adjudicator from the Contract Agreement, the mutual consultation pursuant to GCC Clause 6.1.1 expires without resolution of the dispute and the Purchaser or the Supplier acts within the following fourteen (14) days, then either the Purchaser or the Supplier may act to give notice to the other party, with a copy for information to the Adjudicator in case an Adjudicator had been involved, of its intention to commence arbitration, as provided below, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given.

6.2.2 Any dispute in respect of which a notice of intention to commence arbitration has been given, in accordance with GCC Clause 6.2.1, shall be finally settled by arbitration. Arbitration may be commenced prior to or after Installation of the Information System.

6.2.3 Arbitration   proceedings   shall   be   conducted in accordance with the rules of procedure specified in the SCC.

6.3   Notwithstanding any reference to the Adjudicator or arbitration in this clause, the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; the Purchaser shall pay the Supplier any monies due the Supplier.

B. SUBJECT MATTER OF CONTRACT

7. Scope of the System

7.1   Unless otherwise expressly limited in the SCC or Technical Requirements, the Supplier's obligations cover the provision of Cloud Services, Software, and Materials as well as the performance of all Services required for the design, development,   and configuration, implementation of the System, in accordance with the plans, procedures,

specifications, drawings, codes, and any other documents specified in the Contract and the Agreed and Finalized Project Plan.

8. Time for Commencement

8.1 The Supplier shall commence work on the System within the period specified in the SCC, and, the Supplier shall thereafter proceed with the System in accordance with the time schedule specified in the Implementation Schedule in the Technical Requirements Section and any refinements made in the Agreed and Finalized Project Plan.

9. Supplier's Responsibilities:

9.1 At any point during the Contract, should technological advances be introduced by the Supplier for Software originally offered by the Supplier in its bid and still to be delivered, the Supplier shall be obligated to provision for the latest versions of the available Software patches having equal or better performance with the prior consent from the purchaser

9.2 Supplier to grants Purchaser a non-exclusive, non-transferable and world-wide right to use the Cloud Service (including its implementation and configuration), Cloud Materials, and Documentation solely for Purchaser's internal business operations. Permitted uses and restrictions of the Cloud Service also apply to Cloud Materials and Documentation.

9.3 Supplier shall provide the Services in accordance with the work order. Supplier shall be responsible for the performance of the Services of such third-party contractors to the same extent as Supplier is liable for its own Consultants.

9.4 As part of the Cloud Service, Supplier shall (i) provide the initial installation of the Licensed Software in the Computing Environment (ii) setup and configure relevant hardware and software monitoring agents for the Computing Environment, and (iii) introduce Purchaser to Supplier's support and communications procedures.

9.5 The Cloud Service as contemplated under the Agreement shall include the provision of services for the Computing Environment described in the Documentation.

9.6 At Purchaser's request prior to termination or expiration of an Order Form, Supplier shall, within a reasonable time period provide to Purchaser in a reasonable backup media format being utilized by Supplier the Purchaser Data stored in the Computing Environment.

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10. Purchaser's Responsibilities

10.1 The Purchaser shall ensure all information and/or data to be supplied by the Purchaser to the Supplier, except when otherwise expressly stated in the Contract.

10.2 The Purchaser shall be responsible for timely provision of all resources, information, and decision making under its control that are necessary to reach an Agreed and Finalized Project Plan within the time schedule specified in the Implementation Schedule in the Technical Requirements Section. Failure to provide such resources, information, and decision making may constitute grounds for Termination.

10.3 If requested by the Supplier, the Purchaser shall use its best endeavors to assist the Supplier in obtaining in a timely and expeditious manner all permits, approvals, and/or licenses necessary for the execution of the Contract from all local, state, or national government authorities or public service undertakings that such authorities or undertakings require the Supplier or Subcontractors or the personnel of the Supplier or Subcontractors, as the case may be, to obtain.

10.4 In such cases where the responsibilities of specifying and acquiring or upgrading telecommunications and/or electric power services falls to the Supplier, as specified in the Technical Requirements, SCC, Agreed and Finalized Project Plan, or other parts of the Contract, the Purchaser shall use its best endeavors to assist the Supplier in obtaining such services in a timely and expeditious manner.

10.5 The Purchaser shall be responsible for timely provision of all resources, access, and information necessary for the Installation and Operational Acceptance of the System (including, but not limited to, any required telecommunications or electric power services), as identified in the Agreed and Finalized Project Plan, except where provision of such items is explicitly identified in the Contract as being the responsibility of the Supplier. Delay by the Purchaser may result in an appropriate extension of the Time for Operational Acceptance, at the Supplier's discretion.

10.6 Unless otherwise specified in the Contract or agreed upon by the Purchaser and the Supplier, the Purchaser shall provide sufficient, properly qualified operating and technical personnel, as required by the Supplier to properly carry out Delivery, Pre-commissioning, Installation, Commissioning, and Operational Acceptance, at or before the time specified in the Technical Requirements Section's Implementation Schedule and the Agreed and Finalized Project Plan.

10.7 The Purchaser shall designate appropriate staff for the training courses to be given by the Supplier and shall make all appropriate logistical arrangements for such training as specified in the Technical Requirements, SCC, the Agreed and Finalized Project Plan, or other parts of the Contract.

10.8 The Purchaser assumes primary responsibility for the Operational Acceptance Test(s) for the System and shall be responsible for the continued operation of the System after Operational Acceptance. However, this shall not limit in any way the Supplier's responsibilities after the date of Operational Acceptance otherwise specified in the Contract.

10.9 The Purchaser is responsible for performing and safely storing timely and regular backups of its data and Software in accordance with accepted data management principles, except where such responsibility is clearly assigned to the Supplier elsewhere in the Contract.

10.10 All costs and expenses involved in the performance of the obligations under this GCC Clause 10 shall be the responsibility of the Purchaser, save those to be incurred by the Supplier with respect to the performance of the Operational Acceptance Test.

10.11 The Purchaser shall be responsible for the connection to the Cloud Service, including the Internet connection to the Point of Demarcation.

10.12 Other Purchaser responsibilities, if any, are as stated in the SCC.

C. PAYMENT

11. Contract Price

11.1 The Contract Price shall be as specified in Contract Price and Terms of Payment of the Contract Agreement.

11.2 The Contract Price shall be a firm lump sum not subject to any alteration, except in case of execution of any change request

11.3 The Supplier's request for payment shall be made to the Payment Purchaser in writing, accompanied by an invoice describing the services provided / software supplied.

11.4 The Contract Price shall be paid as specified in the Contract Agreement.

11.5 Payments shall be made promptly by the Purchaser, but in no case later than forty-five (45) days after submission of a valid invoice by the Supplier.

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12. Terms of Payment

12.1 Purchaser shall pay to Supplier the software, services and support fees as specified in the Contract Agreement.

12.2 In the event that the Purchaser fails to make any payment by its respective due date or within the period set forth in the Contract, the Purchaser shall pay to the Supplier interest on the amount of such delayed payment at the rate(s) specified in the SCC for the period of delay until payment has been made in full, whether before or after judgment or arbitration award.

13. Securities

Issuance of Securities

13.1 The Supplier shall provide the securities specified below in favor of the Purchaser at the times and in the amount, manner, and form specified below.

13.2 The security shall be a bank guarantee in the form provided in the Sample Forms Section of the Bidding Documents, or it shall be in another form acceptable to the Purchaser.

13.3 The security shall automatically become null and void once all the obligations of the Supplier under the Contract have been fulfilled, including, but not limited to, any obligations during the Warranty Period and any extensions to the period. The security shall be returned to the Supplier no later than twenty-eight (28) days after its expiration.

13.4 Upon Operational Acceptance of the entire System, the security shall be reduced to the amount **specified in the SCC,** on the date of such Operational Acceptance, so that the reduced security would only cover the remaining warranty obligations of the Supplier.

14. Taxes and Duties

Fees and other charges described in this Agreement do not include taxes ("Tax(es)") now or hereafter levied, all of which shall be for Purchaser's account. Octroi shall be paid directly by Purchaser to the State/City Octroi authority at the time of shipment of Software, if applicable. Any applicable direct pay permits or valid tax-exempt certificates shall be provided to Supplier prior to the execution of this Agreement. If Supplier is required to pay Taxes, Purchaser shall reimburse Supplier for such amounts.

D. INTELLECTUAL PROPERTY

15. Copyright

15.1 Supplier own all intellectual property rights in and related to the Standard Software, Cloud Service, Cloud Materials, Documentation, Services, Deliverables, Work Products, design contributions, related knowledge or processes, and

any derivative works of them. All rights will not expressly be granted to Purchaser are reserved to SAP. The Purchaser agrees to execute and to ensure its third parties execute such documentation as reasonably necessary to secure SAP's title over such rights.

15.2 The SAP Materials, and all Intellectual Property Rights embodied therein, shall be the sole and exclusive property of SAP, subject to any rights expressly granted to Purchaser in the Agreement. Except for the rights set forth in the Agreement, Purchaser is not permitted to modify or otherwise make derivative works of the Software or other SAP Materials.

16. Software License Agreements

16.1 Except to the extent that the Intellectual Property Rights in the Software vest in the Purchaser, the Supplier hereby grants to the Purchaser license to access and use the Software, including all inventions, designs, and marks embodied in the Software.

16.2 The Standard Software may be subject to audit by the Supplier, in accordance with the terms **specified in the SCC,** to verify compliance with the above license agreements.

17. Modifications/ Add-ons

17.1 Purchaser shall comply with Supplier's registration procedure prior to making Modifications or Add-ons. All Modifications and all rights associated therewith shall be the exclusive property of Supplier. All Add-ons developed by Supplier (either independently or jointly with Purchaser) and all rights associated therewith shall be the exclusive property of Supplier. The Purchaser agrees to execute those documents reasonably necessary to secure Supplier's rights in the foregoing Modifications and Add-ons. All Add-ons developed by or on behalf of Purchaser without Supplier's participation ("Purchaser Add-on"), and all rights associated therewith, shall be the exclusive property of Purchaser subject to Supplier's rights in and to the Software and SAP Materials.

17.2 Purchaser will not commercialize, market, distribute, license, sublicense, transfer, assign or otherwise alienate any such Purchaser Add-ons. Supplier shall retain the right to independently develop its own Modifications or Add-ons to the Software, and Purchaser agrees not to take any action that would limit Supplier's sale, assignment, licensing or use of its own Software or Modifications or Add-ons thereto.

17.3 Any Modification developed by or on behalf of Purchaser without Supplier's participation or Purchaser Add-on must not (and subject to other limitations set forth herein): enable the bypassing or circumventing any of the restrictions set forth in this Agreement and/or provide Purchaser with access to the Software to which Purchaser is not directly licensed; nor

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unreasonably impair, degrade or reduce the performance or security of the Software; nor render or provide any information concerning SAP software license terms, Software, or any other information related to SAP Materials.

18. Protection of Rights

18.1 Purchaser will not copy, translate, disassemble, decompile, nor reverse engineer the Software or other SAP Materials. Purchaser will not create or attempt to create the source code from the object code of the Software or other SAP Materials.

18.2 Purchaser shall be permitted to back up data in accordance with good information technology practice and for this purpose to create the necessary backup copies of the Software. Backup copies on transportable discs or other data media must be marked as backup copies and bear the same copyright and authorship notice as the original discs or other data media, unless technically infeasible. Purchaser will not change or remove SAP's copyright and authorship notices

19. Confidential Information

19.1 Confidential Information of either Supplier or Purchaser (the party disclosing such information being the "Disclosing Party") includes information which the Disclosing Party protects against unrestricted disclosure to others that (i) the Disclosing Party or its representatives identifies as confidential at the time of disclosure; or (ii) should reasonably be understood to be confidential given the nature of the information and the circumstances surrounding its disclosure; including, without limitation, information from, about or concerning any third party that is disclosed under this Agreement.

19.2 The receiving party will protect all Confidential Information of the disclosing party as strictly confidential to the same extent it protects its own Confidential Information, and not less than a reasonable standard of care. Receiving party will not disclose any Confidential Information of the disclosing party to any person other than its personnel, representatives or Authorized Users whose access is necessary to enable it to exercise its rights or perform its obligations under the Agreement and who are under obligations of confidentiality substantially similar to those mentioned in Exceptions below.

19.3 Confidential Information shall not be reproduced in any form except as required to accomplish the intent of this Agreement. Any reproduction of any Confidential Information of the other shall remain the property of the disclosing party and shall contain any and all confidential or proprietary notices or legends which appear on the original. With respect to the Confidential Information of the other, each party : (a) shall take all Reasonable Steps (defined below) to keep all Confidential Information strictly confidential; and (b) shall not disclose any Confidential Information of the other to any

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person other than its bona fide individuals whose access is necessary to enable it to exercise its rights and/or perform its obligations hereunder, and who are under obligations of confidentiality substantially similar to those set forth herein.

19.4 As used herein "Reasonable Steps" means those steps the receiving party takes to protect its own similar proprietary and confidential information, which shall not be less than a reasonable standard of care.

19.5 Confidential Information of either party disclosed prior to execution of this Agreement shall be subject to the protections afforded hereunder.

19.6 In the event of legal proceedings relating to the Confidential Information, the receiving party will cooperate with the disclosing party and comply with applicable law (all at disclosing party's expense) with respect to handling of the Confidential Information.

19.7 Exceptions.
(a) is independently developed by the receiving party without reference to the disclosing party's Confidential Information, or is lawfully received free of restriction from a third party having the right to furnish such Confidential Information;
(b) is generally available to the public without breach of the Agreement by the receiving party,
(c) at the time of disclosure, was known to the receiving party free of confidentiality restrictions, or
(d) the disclosing party agrees in writing is free of confidentiality restrictions.

20. System Security and Data Safeguards

20.1 When Supplier is given access to Purchaser's systems and data, Supplier shall comply with Purchaser's reasonable administrative, technical, and physical safeguards to protect such data and guard against unauthorized access. In connection with such access, Purchaser shall be responsible for providing SAP Consultants with user authorizations and passwords to access its systems and revoking such authorizations and terminating such access, as Purchaser deems appropriate from time to time.

20.2 Purchaser shall not grant Supplier access to Purchaser systems or personal information (of Purchaser or any third party) unless such access is essential for the performance of Services under the Agreement. The parties agree that no breach of this provision shall be deemed to have occurred in the event of Supplier non-conformance with the aforementioned safeguard but where no personal information has been compromised.

E. SUPPLY, INSTALLATION, TESTING, COMMISSIONING, AND ACCEPTANCE OF THE SYSTEM

21. Representatives

Purchaser's Representative

21.1 Purchaser will name Project Manager who will be representative from Purchaser. If the Project Manager is not named in the Contract, then within fourteen (14) days of the Effective Date, the Purchaser shall appoint and notify the Supplier in writing of the name of the Project Manager. The Purchaser may from time to time may appoint some other person as the Project Manager in place of the person previously so appointed and shall give a notice of the name of such other person to the Supplier without delay. No such appointment shall be made at such a time or in such a manner as to impede the progress of work on the System. Such appointment shall take effect only upon receipt of such notice by the Supplier. Subject to the extensions and/or limitations specified in the SCC (if any), the Project Manager shall have the authority to represent the Purchaser on all day-to-day matters relating to the System or arising from the Contract and shall normally be the person giving or receiving notices on behalf of the Purchaser.

Supplier's Representative

21.2 If the Supplier's Representative is not named in the Contract, then within fourteen (14) days of the Effective Date, the Supplier shall appoint the Supplier's Representative and shall request the Purchaser in writing to approve the person so appointed. The request must be accompanied by a detailed curriculum vitae for the nominee, as well as a description of any other System or non-System responsibilities the nominee would retain while performing the duties of the Supplier's Representative. If the Purchaser does not object to the appointment within fourteen (14) days, the Supplier's Representative shall be deemed to have been approved. If the Purchaser objects to the appointment within fourteen (14) days giving the reason there for, then the Supplier shall appoint a replacement within fourteen (14) days of such objection.

21.3 Subject to the extensions and/or limitations specified in the SCC (if any), the Supplier's Representative shall have the authority to represent the Supplier on all day-to-day matters relating to the System or arising from the Contract, and shall normally be the person giving or receiving notices on behalf of the Supplier.

21.4 The Supplier shall not revoke the appointment of the Supplier's Representative without the Purchaser's prior written consent, which shall not be unreasonably withheld. If the Purchaser consents to such an action, the Supplier shall appoint another person of equal or superior qualifications as the Supplier's Representative.

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21.5 The Supplier's Representative and staff are obliged to work closely with the Purchaser's Project Manager and staff, act within their own authority, and abide by directives issued by the Purchaser that are consistent with the terms of the Contract. The Supplier's Representative is responsible for managing the activities of its personnel and any subcontracted parties.

21.6 The Supplier's Representative may, subject to the approval of the Purchaser (which shall not be unreasonably withheld), at any time delegate to any person any of the powers, functions, and authorities vested in him or her. Any such delegation may be revoked at any time. Any such delegation or revocation shall be subject to a prior notice signed by the Supplier's Representative and shall specify the powers, functions, and authorities thereby delegated or revoked. No such delegation or revocation shall take effect unless and until the notice of it has been delivered.

Satisfaction with Personnel

21.7 If at any time Purchaser or Supplier is dissatisfied with the material performance of an assigned Consultant or a Purchaser project team member, the dissatisfied party shall promptly report such dissatisfaction to the other party in writing and may request a replacement. The other party shall use its reasonable discretion in accomplishing any such change (which also, in the case of Supplier, shall be subject to staffing availability).

Product Upgrades

21.8 At any point during the Contract, should technological advances be introduced by the Supplier for Software originally offered by the Supplier in its bid and still to be delivered, the Supplier shall be obligated to provision for the latest versions of the available Software patches having equal or better performance with the prior consent from the purchaser

Grant of Rights

21.9 The Supplier shall grant the Purchaser a non-exclusive, non-transferable and world-wide right to use the Cloud Service (including its implementation and configuration), Cloud Materials, and Documentation solely for Purchaser's internal business operations. Permitted uses and restrictions of the Cloud Service also apply to Cloud Materials and Documentation.

Access to Purchaser's Data

21.10 During the Subscription Term, DFCCIL can access its Data at any time. DFCCIL may export and retrieve its Data in a standard format. Export and retrieval may be subject to technical limitations stated in the Documentation.

Before the Subscription Term expires, the Purchaser may use the Supplier's provided tools to perform a final export of Purchaser Data from the Cloud Service.

Following the end of the Agreement, the Supplier will delete or overwrite the Purchaser's data remaining on servers hosting the Cloud Service unless applicable law requires retention. Retained data is subject to the confidentiality provisions of the Agreement.

21.11 The Supplier will provide the Services in accordance with the work order. The Supplier shall be responsible for the performance of the Services of such third party contractors to the same extent as the Supplier is liable for its own Consultants.

Operational Acceptance

21.12 If there is an Agreement with Deliverables and the Agreement expressly states that such Deliverables are subject to acceptance procedures, the following language applies, unless otherwise agreed upon in an Agreement:

Deliverable Acceptance Period

21.13 Upon delivery by the Supplier of a completed Deliverable, the Purchaser shall have 14 calendar days to accept or reject ("Acceptance Period") the Deliverable, due to a defect using reasonable discretion, based on the acceptance criteria set forth in the Agreement for that Deliverable.

A "defect" means the Deliverable fails to substantially comply with the applicable and corresponding acceptance criteria for that Deliverable set forth in the Agreement.

21.14 If the relevant Deliverable passes the agreed acceptance criteria set forth in the Contract Agreement, Purchaser will accept the Deliverable. Acceptance will not be unreasonably withheld by Purchaser. If Purchaser notifies SAP that it has rejected the Deliverable due to a defect, Purchaser shall provide written notice, within such 14-day period, specifying the basis of the deficiency. SAP shall have a reasonable period to cure such deficiency and redeliver the Deliverable for an additional Acceptance Period.

21.15 If the Purchaser fails to reject any Deliverable within the Acceptance Period, in a written document specifying the deficiency, the Supplier shall be deemed to have accepted such Deliverable as of the 14th day of the Acceptance Period. Upon acceptance of a Deliverable, all Services associated with such Deliverable shall be deemed accepted and the Purchaser shall have no further obligation with respect to an accepted Deliverable. A Deliverable shall not be made available for the Purchaser's productive use, unless it has been accepted by the Supplier (either expressly or by passage of time). Where acceptance criteria is not specified in the for a Deliverable, such Deliverable will be deemed

complete and accepted by the Purchaser the day after the Purchaser performs it or delivers it.

Delivery of SAP Software

21.16 Supplier to provide license and may be made available by (i) physical delivery, which will be free-on-board SAP's shipping point (at Dehradun, India), to Purchaser at the location shared by the Purchaser AND/OR (ii) by electronic delivery, by providing to Purchaser the standard programs and documentation, effected by making them available for download through the SAP Service Marketplace (http://service.SAP.com/swdc). Purchaser confirms that it has access to SAP Service Marketplace as required to download the Software licensed under this Contract Agreement. Purchaser to be provided with the remote access information (including User Name and Initial Password) allowing download of the Software. Risk of loss passes at the time of such physical shipment.

Unless otherwise agreed, SAP will deliver the release of Software that is current at the time of the effective date of this Contract Agreement.

Term

21.17 Agreement and the licenses shall become effective as of the date first set forth in the applicable Contract Agreement and shall continue in effect thereafter unless terminated upon the earliest to occur of the following: (i) thirty days after Purchaser gives Supplier written notice of Supplier's direction to terminate this Agreement, for any reason, but only after payment of all License and SAP Support fees then due and owing; (ii) thirty days after Supplier gives Purchaser written notice of Purchaser's material breach of any provision of the Software Agreement.

21.18 The Purchaser shall introduce all new versions, releases or updates of the Software within eighteen (18) months of receipt of a production-ready copy of the new version, release, or update, provided that the new version, release, or update does not adversely affect System operation or performance or require extensive reworking of the System. In cases where the new version, release, or update adversely affects System operation or performance, or requires extensive reworking of the System, the Supplier shall continue to support and maintain the version or release previously in operation for as long as necessary to allow introduction of the new version, release, or update. In no case shall the Supplier stop supporting or maintaining a version or release of the Software less than twenty-four (24) months after the Purchaser receives a production-ready copy of a subsequent version, release, or update. The Purchaser shall use all reasonable endeavors to implement any new version, release, or update as soon as practicable, subject to the twenty-four-month-long stop date.

22. Implementation Installation, and Other Services

22.1 The Supplier shall provide all Services specified in the Contract and Agreed and Finalized Project Plan in accordance with the highest standards of professional competence and integrity.

22.2 Prices charged by the Supplier for Services, if not included in the Contract, shall be agreed upon in advance by the parties (including, but not restricted to, any prices submitted by the Supplier in the Recurrent Cost Schedules of its Bid) and shall not exceed the prevailing rates charged by the Supplier to other Purchasers in the Purchaser's Country for similar services.

23. Inspections and Tests

23.1 The Project Manager may require the Supplier to carry out any inspection and/or test not specified in the Contract, provided that the Supplier's reasonable costs and expenses incurred in the carrying out of such inspection and/or test shall be added to the Contract Price. Further, if such inspection and/or test impedes the progress of work on the System and/or the Supplier's performance of its other obligations under the Contract, due allowance will be made in respect of the Time for Achieving Operational Acceptance and the other obligations so affected.

23.2 If any dispute shall arise between the parties in connection with or caused by an inspection and/or with regard to any component to be incorporated in the System that cannot be settled amicably between the parties within a reasonable period of time, either party may invoke the process pursuant to GCC Clause 6 (Settlement of Disputes), starting with referral of the matter to the Adjudicator in case an Adjudicator is included and named in the Contract Agreement.

F. Warranties and Liabilities

24. Third Party Claims

24.1 Supplier will defend Purchaser against claims brought against Purchaser in the Territory by any third party alleging that Purchaser's Use of the Software, in accordance with the terms and conditions of Software Agreement, constitutes a direct infringement or misappropriation of such third party's patent claim(s), copyright or trade secret rights, and Supplier will pay damages finally awarded against Purchaser (or the amount of any settlement Supplier enters into) with respect to such claims. This obligation of Supplier shall not apply if the alleged infringement or misappropriation results from (i) Use of the Software in conjunction with any other software; (ii) Use of the Software with an apparatus other than a Designated Unit; (iii) failure to promptly use an update provided by

Supplier if such infringement or misappropriation could have been avoided by use of the update; or (iv) any Use not permitted by this Agreement. This obligation of Supplier also shall not apply if Purchaser fails to timely notify Supplier in writing of any such claim; however Purchaser's failure to provide or delay in providing such notice shall not relieve Supplier of its obligations under this Section except to the extent Supplier is prejudiced by Purchaser's failure to provide or delay in providing such notice. Supplier shall be permitted to control fully the defense and any settlement of any such claim as long as such settlement shall not include a financial obligation on or admission of liability by Purchaser. In the event Purchaser declines Supplier's offered defense, or otherwise fails to give full control of the defense to Supplier's designated counsel, then Purchaser waives Supplier's obligations. Purchaser will reasonably cooperate in the defense of such claim and may appear, at its own expense, through counsel reasonably acceptable to Supplier. Supplier expressly reserves the right to cease such defense of any claim(s) in the event the Software is no longer alleged to infringe or misappropriate, or is held not to infringe or misappropriate, the third party's rights. Supplier may settle or mitigate damages from any claim or potential claim by substituting alternative substantially equivalent non-infringing programs and supporting documentation for the Software. Purchaser will not undertake any action in response to any infringement or misappropriation, or alleged infringement or misappropriation of the Software that is prejudicial to Supplier's rights.

Claims Brought Against Purchaser

24.2 (a) Supplier shall defend Purchaser against claims brought against Purchaser and its Affiliates by any third party alleging that Purchaser's and its Affiliates' use of the Cloud Service infringes or misappropriates a patent claim, copyright, or trade secret right. Supplier will indemnify Purchaser against all damages finally awarded against Purchaser (or the amount of any settlement Supplier enters into) with respect to these claims.

(b) Supplier's obligations will not apply if the claim results from (i) Purchaser's breach of grant of rights, (ii) use of the Cloud Service in conjunction with any product or service not provided by Supplier, or (iii) use of the Cloud Service provided for no fee.

(c) In the event a claim is made or likely to be made, Supplier may (i) procure for Purchaser the right to continue using the Cloud Service under the terms of the Agreement, or (ii) replace or modify the Cloud Service to be non-infringing without a material decrease in functionality. If these options are not reasonably available, Supplier or Purchaser may terminate Purchaser's subscription to the affected Cloud Service upon written notice to the other.

Claims Brought Against Supplier

24.3 Purchaser will defend Supplier against claims brought against Supplier and their Affiliates and subcontractors by any third party related to Purchaser Data.

Purchaser will indemnify Supplier against all damages finally awarded against Supplier and their Affiliates and subcontractors (or the amount of any settlement Purchaser enters into) with respect to these claims.

Third Party Claim Procedure

24.4 Purchaser will defend Supplier against claims brought against Supplier and their Affiliates and subcontractors by any third party related to Purchaser Data.

Purchaser will indemnify Supplier against all damages finally awarded against Supplier and their Affiliates and subcontractors (or the amount of any settlement Purchaser enters into) with respect to these claims.

(a) The party against whom a third-party claim is brought will timely notify the other party in writing of any claim, reasonably cooperate in the defence and may appear (at its own expense) through counsel reasonably acceptable to the party providing the defence.

(b) The party that is obligated to defend a claim will have the right to fully control the defence.

(c) Any settlement of a claim will not include a financial or specific performance obligation on, or admission of liability by, the party against whom the claim is brought.

25. Limitation of Liability

Neither the Supplier nor the Purchaser will exclude or limit its liability for damages resulting from:

(a) unauthorized use or disclosure of Confidential Information,

(b) either party's breach of its data protection and security obligations that result in an unauthorized use or disclosure of personal data,

(c) death or bodily injury arising from either party's gross negligence or willful misconduct, or

(d) any failure by Purchaser to pay any fees due under the Agreement.

(d) Supplier's right to collect unpaid fees due hereunder, under no circumstances and regardless of the nature of the claim shall either party (or their respective affiliates or SAP's licensor's) be liable to each other to or any other person or entity under the Agreement for an amount of damages in excess of the fees paid for the applicable Services under the relevant Agreement or in the case of Cloud services, the fees paid in the twelve (12) month period preceding the date of the incident giving rise to the liability, or, any special, incidental, consequential, or indirect damages, loss of good will or business profits, work stoppage or for exemplary or punitive damages.

Exclusion of Damages; Limitation of Liability. Anything to the contrary herein notwithstanding, except for damages resulting from

i) unauthorized use of confidential information

ii) death or personal injury arising from either party's gross negligence or willful misconduct

iii) Supplier's right to collect unpaid fees; under no circumstances and regardless of the nature of any claim shall the Supplier, its licensors or the Purchaser shall be liable to each other or any other person or entity for an amount in excess of the paid license fees for the software directly causing the damage or be liable in any amount for special, incidental, consequential, or indirect damages, loss of good will or profits, work stoppage, data loss, computer failure or malfunction, attorney's fees, court cost, interest or exemplary or punitive damages.

The provisions of the Agreement allocate the risks between Supplier and Purchaser. The license fees reflect this allocation of risk and the limitations of liability herein.

Exclusions and Limitations for Third Party Software. The Purchaser shall not hold the Supplier accountable for any claims for an amount in excess of the paid license fee for any Third Party Software directly causing the damages.

26. Warranty

26.1 Supplier shall warrant that its Services shall be performed in a professional workman-like manner by Consultants with the skills reasonably required for the Services. Supplier warrants that for ninety (90) days following completion of the Service the Deliverables will materially conform with specifications in accordance with the respective Scope Document. However, Purchaser understands that Supplier does not warrant error-free or uninterrupted operation of any Service but Supplier shall correct all non-conformities. Purchaser shall notify Supplier in writing of any Material Defects within the warranty period and provide Supplier with a precise description of the problem and all relevant information reasonably necessary for Supplier in order to rectify such Material Defect.

26.2 Supplier and its licensors disclaim all warranties express or implied or statutory, including without limitation, any implied warranties of merchantability or fitness for a particular purpose except to the extent that any warranties implied by law cannot be validly waived.

Software & Services Warranty

26.3 Supplier shall warrant that the Software will substantially conform to the specifications contained in the Documentation for six months following delivery. The warranty shall not

apply: (i) if the Software is not used in accordance with the Documentation; or (ii) if the defect is caused by a Modification or Add-on (other than a Modification or Add-on made by Supplier and which is provided through Supplier Support or under warranty), Purchaser or third-party software; or (iii) to any Purchaser unlicensed activities. Supplier does not warrant that the Software will operate uninterrupted or that it will be free from minor defects or errors that do not materially affect such performance, or that the applications contained in the Software are designed to meet all of Purchaser's business requirements. Provided Purchaser notifies Supplier in writing with a specific description of the Software's nonconformance within the warranty period and Supplier shall validate the existence of such nonconformance, Supplier shall, at its option: a) repair or replace the nonconforming Software, or b) refund the license fees paid for the applicable nonconforming Software in exchange for a return of such nonconforming Software. This is Purchaser's sole and exclusive remedy under the warranty.

26.4 Subject to Purchaser's compliance with all the terms and conditions of the Agreement, Supplier grants to Purchaser a non-exclusive, non-transferable, perpetual (except for subscription based licenses) license to Use the Software, Documentation, and other SAP Materials at specified site(s) within the Territory to run Purchaser's and its Affiliates' internal business operations (including customer back-up) and to provide internal training and testing for such internal business operations, unless terminated in accordance with the terms of this Agreement. Purchaser will make Modifications and/or Add-ons to the Software in furtherance of its permitted Use under this Agreement, and will be permitted to use Modifications and Add-ons with the Software in accordance with this Section and Section below on Modifications/Add-ons. Purchaser will not: (i) use the SAP Materials to provide services to third parties (e.g., business process outsourcing, service bureau applications or third party training) other than to Affiliates (ii) lease, loan, resell, sublicense or otherwise distribute the SAP Materials, other than distribution to Affiliates (iii) distribute or publish key code(s); (iv) make any Use of or perform any acts with respect to the SAP Materials other than as expressly permitted in accordance with the terms of this Agreement; (v) use Software components other than those specifically identified in the Software Contract Agreement, even if it is also technically possible for Purchaser to access other Software components.

26.5 Supplier shall warrant that it will provide the Cloud Service:
(a) in substantial conformance with the Documentation; and
(b) with the degree of skill and care reasonably expected from a skilled and experienced global supplier of services substantially similar to the nature and complexity of the Cloud Service.

27. Force Majeure.

"Force Majeure" shall mean any event beyond the reasonable control of the Purchaser or of the Supplier, as the case may be, and which is unavoidable notwithstanding the reasonable care of the party affected and shall include, without limitation, the following:

war, hostilities, or warlike operations (whether a state of war be declared or not), invasion, act of foreign enemy, and civil war;

rebellion, revolution, insurrection, mutiny, usurpation of civil or military government, conspiracy, riot, civil commotion, and terrorist acts;

confiscation, nationalization, mobilization, commandeering or requisition by or under the order of any government or de jure or de facto authority or ruler, or any other act or failure to act of any local state or national government authority;

strike, sabotage, lockout, embargo, import restriction, port congestion, lack of usual means of public transportation and communication, industrial dispute, shipwreck, shortage or restriction of power supply, epidemics, quarantine, and plague;

earthquake, landslide, volcanic activity, fire, flood or inundation, tidal wave, typhoon or cyclone, hurricane, storm, lightning, or other inclement weather condition, nuclear and pressure waves, or other natural or physical disaster;

failure, by the Supplier, to obtain the necessary export permit(s) from the governments of the Country(s) of Origin of the Information Technologies or other Goods, or Supplier's Equipment provided that the Supplier has made all reasonable efforts to obtain the required export permit(s), including the exercise of due diligence in determining the eligibility of the System and all of its components for receipt of the necessary export permits.

28. Severability.

It is the intent of the parties that in case any one or more of the provisions contained in the Agreement shall be held to be invalid or unenforceable in any respect, such invalidity or unenforceability shall not affect the other provisions of the Agreement, and the Agreement shall be construed as if such invalid or unenforceable provision had never been contained herein.

H. CHANGE IN CONTRACT ELEMENTS

29. Changes to the System

29.1 Introducing a Change

29.1.1 Subject to GCC Clauses 29.2.5 and 29.2.7, the Purchaser shall have the right to propose, and subsequently

require, the Project Manager to order the Supplier from time to time during the Contract to make any change, modification, addition, or deletion to, in, or from the System (interchangeably called "Change"), provided that such Change falls within the agreed scope, does not constitute unrelated work, and is technically practicable, taking into account both the state of advancement of the System and the technical compatibility of the Change envisaged with the nature of the System as originally specified in the Contract.

29.1.2 The Supplier may from time to time during its performance of the Contract propose to the Purchaser (with a copy to the Project Manager) any Change that the Supplier considers necessary or desirable to improve the quality or efficiency of the System. The Purchaser may at its discretion approve or reject any Change proposed by the Supplier.

29.1.3 Notwithstanding GCC Clauses 29.1.1 and 29.1.2, no change made necessary because of any default of the Supplier in the performance of its obligations under the Contract shall be deemed to be a Change, and such change shall not result in any adjustment of the Contract Price or the Time for Achieving Operational Acceptance.

29.1.4 The procedure on how to proceed with and execute Changes is specified in GCC Clauses 29.2 and 29.3, and further details and sample forms are provided in the Sample Forms Section in the Bidding Documents.

29.1.5 Moreover, the Purchaser and Supplier will agree, during development of the Project Plan, to a date prior to the scheduled date for Operational Acceptance, after which the Technical Requirements for the System shall be "frozen." Any Change initiated after this time will be dealt with after Operational Acceptance.

29.2 Changes Originating from Purchaser

29.2.1 If the Purchaser proposes a Change pursuant to GCC Clauses 29.1.1, it shall send to the Supplier a "Request for Change Proposal," requiring the Supplier to prepare and furnish to the Project Manager as soon as reasonably practicable a "Change Proposal," which shall include the following:
brief description of the Change;
impact on the Time for Achieving Operational Acceptance;
detailed estimated cost of the Change;
effect on any other provisions of the Contract.

29.2.2 Prior to preparing and submitting the "Change Proposal," the Supplier shall submit to the Project Manager

an "Change Estimate Proposal," which shall be an estimate of the cost of preparing the Change Proposal, plus a first approximation of the suggested approach and cost for implementing the changes. Upon receipt of the Supplier's Change Estimate Proposal, the Purchaser shall do one of the following:

accept the Supplier's estimate with instructions to the Supplier to proceed with the preparation of the Change Proposal; advise the Supplier of any part of its Change Estimate Proposal that is unacceptable and request the Supplier to review its estimate; advise the Supplier that the Purchaser does not intend to proceed with the Change.

29.2.3 Upon receipt of the Purchaser's instruction to proceed a), the Supplier shall, with proper expedition, proceed with the preparation of the Change Proposal, in accordance with The Supplier, at its discretion, may specify a validity period for the Change Proposal, after which if the Purchaser and Supplier has not reached agreement.

29.2.4 The pricing of any Change shall, as far as practicable, be calculated in accordance with the rates and prices included in the Contract. If the nature of the Change is such that the Contract rates and prices are inequitable, the parties to the Contract shall agree on other specific rates to be used for valuing the Change.

29.2.5 If before or during the preparation of the Change Proposal it becomes apparent that the aggregate impact of compliance with the Request for Change Proposal and with all other Change Orders that have already become binding upon the Supplier under this GCC Clause 29 would be to increase or decrease the Contract Price as originally set forth in of the Contract Agreement by more than fifteen (15) percent, the Supplier may give a written notice of objection to this Request for Change Proposal prior to furnishing the Change Proposal. If the Purchaser accepts the Supplier's objection, the Purchaser shall withdraw the proposed Change and shall notify the Supplier in writing of its acceptance.

The Supplier's failure to so object to a Request for Change Proposal shall neither affect its right to object to any subsequent requested Changes or Change Orders, nor affect its right to take into account, when making such subsequent objection, the percentage increase or decrease in the Contract Price that any Change not objected to by the Supplier represents.

29.2.6 Upon receipt of the Change Proposal, the Purchaser and the Supplier shall mutually agree upon all matters contained in the Change Proposal. Within fourteen (14) days

after such agreement, the Purchaser shall, if it intends to proceed with the Change, issue the Supplier a Change Order. If the Purchaser is unable to reach a decision within fourteen (14) days, it shall notify the Supplier with details of when the Supplier can expect a decision. If the Purchaser decides not to proceed with the Change for whatever reason, it shall, within the said period of fourteen (14) days, notify the Supplier accordingly. Under such circumstances, the Supplier shall be entitled to reimbursement of all costs reasonably incurred by it in the preparation of the Change Proposal, provided that these do not exceed the amount given by the Supplier in its Change Estimate Proposal submitted in accordance with GCC Clause 29.2.2.

29.2.7 If the Purchaser and the Supplier cannot reach agreement on the price for the Change, an equitable adjustment to the Time for Achieving Operational Acceptance, or any other matters identified in the Change Proposal, the Change will not be implemented. However, this provision does not limit the rights of either party under GCC Clause 6 (Settlement of Disputes).

29.3 Changes Originating from Supplier

If the Supplier proposes a Change pursuant to GCC Clause 29.1.2, the Supplier shall submit to the Project Manager a written "Application for Change Proposal," giving reasons for the proposed Change and including the information specified in GCC Clause 29.2.1. Upon receipt of the Application for Change Proposal, the parties shall follow the procedures outlined in GCC Clauses 29.2.6 and 29.2.7. However, should the Purchaser choose not to proceed or the Purchaser and the Supplier cannot come to agreement on the change during any validity period that the Supplier may specify in its Application for Change Proposal, the Supplier shall not be entitled to recover the costs of preparing the Application for Change Proposal, unless subject to an agreement between the Purchaser and the Supplier to the contrary.

Change Request Procedure. During the Subscription Term, Purchaser can request Cloud Services and either party can request changes to the Cloud Services. Such changes shall be documented in a Change Request. When one party initiates a Change Request (the "Requesting Party"), the other party ("Responding Party") will use reasonable efforts to respond to such Change Request within ten (10) business days of receipt. Further, both parties will use reasonable efforts to either fully execute such Change Request, or mutually agree to abandon such Change Request, within fifteen business days of the Responding Party's receipt of the

Change Request. Supplier will not perform under a Change Request until agreed to and signed by the parties.

The Service Fee for Cloud Services (and other fees as may be agreed in a written Change Request) would be established based on information provided to Supplier by Purchaser. Supplier to rely on the accuracy of this information provided by Purchaser as a material factor in performing the initial sizing/scoping and calculating the Service Fee for Cloud Services.

30. Extension of time(s) for achieving Operational Acceptance

30.1 The time(s) for achieving Operational Acceptance specified in the Schedule of Implementation shall be extended if the SAP is delayed or impeded in the performance of any of

its obligations under the Contract by reason of any of the following:

(a)   any Change in the System as provided Scope
(b)   any occurrence of Force Majeure as provided in Clause Force Majeure;
(c)   default of the Purchaser; or
(d)   any other matter specifically mentioned in the Contract; by such period as shall be fair and reasonable in all the circumstances and as shall fairly reflect the delay or impediment sustained by the Supplier.

30.2 Except where otherwise specifically provided in the Contract, the Supplier shall submit to the Project Manager a notice of a claim for an extension of the time for achieving Operational Acceptance, together with particulars of the event or circumstance justifying such extension as soon as reasonably practicable after the commencement such event or circumstance. As soon as reasonably practicable after receipt of such notice and supporting particulars of the claim, the Purchaser and the Supplier shall agree upon the period of such extension. In the event that the Supplier does not accept the Purchaser's estimate of a fair and reasonable time extension, the Supplier shall be entitled to refer the matter to the provisions for the Settlement of Disputes pursuant to GCC Clause 6.

30.3 The Supplier shall at all times use its reasonable efforts to minimize any delay in the performance of its obligations under the Contract.

31. Termination

31.1 Termination for Purchaser's Convenience

31.1.1 The Purchaser may at any time terminate the Contract for any reason by giving the Supplier a notice of termination that refers to this GCC Clause 31.1.

31.1.2 Upon receipt of the notice of termination under GCC Clause 31.1.1, the Supplier shall either as soon as reasonably practical or upon the date specified in the notice of termination cease all further work, except for such work as the Purchaser may specify in the notice of termination for the sole purpose of protecting that part of the System already executed, or any work required to leave the site in a clean and safe condition;

terminate all subcontracts, except those to be assigned to the Purchaser pursuant to GCC Clause 31.1.2 (d) (ii) below;

remove all Supplier's Equipment from the site, repatriate the Supplier's and its Subcontractors' personnel from the site, remove from the site any wreckage, rubbish, and debris of any kind;

in addition, the Supplier, subject to the payment specified in GCC Clause 31.1.3, shall deliver to the Purchaser the parts of the System executed by the Supplier up to the date of termination; to the extent legally possible, assign to the Purchaser all right, title, and benefit of the Supplier to the System, or Subsystem, as at the date of termination, and, as may be required by the Purchaser, in any subcontracts concluded between the Supplier and its subcontractors; deliver to the Purchaser all non-proprietary drawings, specifications, and other documents prepared by the Supplier or its Subcontractors as of the date of termination in connection with the System.

31.1.3 In the event of termination of the Contract under GCC Clause 31.1.1, the Purchaser shall pay to the Supplier the following amounts:

the Contract Price, properly attributable to the parts of the System executed by the Supplier as of the date of termination; the costs reasonably incurred by the Supplier in the removal of the Supplier's Equipment from the site and in the repatriation of the Supplier's and its Subcontractors' personnel;

any amount to be paid by the Supplier to its Subcontractors in connection with the termination of any subcontracts, including any cancellation charges;

costs incurred by the Supplier in protecting the System and leaving the site in a clean and safe condition pursuant to GCC Clause 31.1.2 (a); and the cost of satisfying all other obligations, commitments, and claims that the Supplier may in good faith have undertaken with third parties in connection with the Contract and that are not covered by GCC Clauses 31.1.3 (a) through (d) above.

31.2 Termination for Supplier's Default

31.2.1 The Purchaser, without prejudice to any other rights or remedies it may possess, may terminate the Contract forthwith in the following circumstances by giving a notice of

termination and its reasons therefore to the Supplier, referring to this GCC Clause 31.2:

if the Supplier becomes bankrupt or insolvent, has a receiving order issued against it, compounds with its creditors, or, if the Supplier is a corporation, a resolution is passed or order is made for its winding up (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), a receiver is appointed over any part of its undertaking or assets, or if the Supplier takes or suffers any other analogous action in consequence of debt;

if the Supplier assigns or transfers the Contract or any right or interest therein in violation of the provision of GCC Clause 42 (Assignment); or if the Supplier, in the judgment of the Purchaser, has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, including but not limited to willful misrepresentation of facts concerning ownership of Intellectual Property Rights in, or proper authorization and/or licenses from the owner to offer, the hardware, software, or materials provided under this Contract.

For the purposes of this Clause:

"Corrupt practice"1 is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

"fraudulent practice"2 is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

"Collusive practice"1 is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

"Coercive practice"2 is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
"Obstructive practice" is

(aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

(bb) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under Sub-Clause 9.8.

31.2.2 If the Supplier:

has abandoned or repudiated the Contract;

has without valid reason failed to commence work on the System promptly;

persistently fails to execute the Contract in accordance with the Contract or persistently neglects to carry out its obligations under the Contract without just cause;

refuses or is unable to provide sufficient Materials, Services, or labor to execute and complete the System in the manner specified in the Agreed and Finalized Project Plan furnished under GCC Clause 19 at rates of progress that give reasonable assurance to the Purchaser that the Supplier can attain Operational Acceptance of the System by the Time for Achieving Operational Acceptance as extended;

then the Purchaser may, without prejudice to any other rights it may possess under the Contract, give a notice to the Supplier stating the nature of the default and requiring the Supplier to remedy the same. If the Supplier fails to remedy or to take steps to remedy the same within fourteen (14) days of its receipt of such notice, then the Purchaser may terminate the Contract forthwith by giving a notice of termination to the Supplier that refers to this GCC Clause 31.2.

31.2.3 Upon receipt of the notice of termination under GCC Clauses 31.2.1 or 31.2.2, the Supplier shall, either immediately or upon such date as is specified in the notice of termination:

cease all further work, except for such work as the Purchaser may specify in the notice of termination for the sole purpose of protecting that part of the System already executed or any work required to leave the site in a clean and safe condition;

terminate all subcontracts, except those to be assigned to the Purchaser pursuant to GCC Clause 31.2.3 (d) below;

deliver to the Purchaser the parts of the System executed by the Supplier up to the date of termination;

to the extent legally possible, assign to the Purchaser all right, title and benefit of the Supplier to the System or Subsystems as at the date of termination, and, as may be required by the Purchaser, in any subcontracts concluded between the Supplier and its Subcontractors;

deliver to the Purchaser all drawings, specifications, and other documents prepared by the Supplier or its Subcontractors as at the date of termination in connection with the System.

32. ASSIGNMENT

Neither party without prior written consent of other party, may assign, delegate, pledge, or otherwise transfer this Agreement, or any of its rights or obligations under the Agreement, or the SAP Materials or SAP Confidential Information, to any party, whether voluntarily or by operation of law, including by way of sale of assets, merger or consolidation. SAP may assign this Agreement to any of its affiliates

SPECIAL CONDITIONS OF CONTRACT (SCC)

The following Special Conditions of Contract (SCC) shall supplement or amend the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions of the SCC shall prevail over those in the General Conditions of Contract. For the purposes of clarity, any referenced GCC clause numbers are indicated in the left column of the SCC.

1. Definitions (GCC Clause 1)

GCC 1.1 (a)	There are no Special Conditions of Contract applicable to GCC Clause 1.1 (a).
GCC 1.1 (b) (i)	The DFCCIL is: Dedicated Freight Corridor Corporation of India Limited
GCC 1.1 (b) (ii)	The Project Manager is: General Manager - IT
GCC 1.1 (d) (i)	The DFCCIL's Country is: India
GCC 1.1 (d) (ii)	The Project office is / are: Dedicated Freight Corridor Corporation of India Limited, 5th Floor, Pragati Maidan Metro Station Building Complex, Pragati Maidan, New Delhi – 110001.
GCC 1.1 (d) (iii)	The Contract shall continue in force until the Software and all the Services have been provided as detailed out in 'Technical Requirements' unless the Contract is terminated earlier in accordance with the terms set out in the Contract.

2. Contract Documents (GCC Clause 2)

GCC 2	There are no Special Conditions of Contract applicable to GCC Clause 2.

3. Interpretation (GCC Clause 3)

GCC 3.1	The Contract's governing language is **English**.

4. Notices (GCC Clause 4)

GCC 4	Address of the Project Manager **General Manager IT** Dedicated Freight Corridor Corporation of India Limited 4th Floor, Pragati Maidan Metro Station Building Complex Pragati Maidan, New Delhi – 110001
	Office Landline No. - 011-23454981 Fax - 011-23454782 Mail Id- sapproject@dfcc.co.in

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5. Governing Law (GCC Clause 5)

GCC 5.1	The Contract shall be interpreted in accordance with the laws of: **India**

6. Settlement of Disputes (GCC Clause 6)

GCC 6.1	Not Applicable.
GCC 6.2.1	All disputes and differences of any kind whatsoever arising out of or in connection with the Contract Agreement, whether during the progress of the work, or after its completion and whether before or after determination of Contract shall be decided by / under the Arbitration and Conciliation Act-1996 (Ammendment-2015).

7. Scope of the System (GCC Clause 7)

GCC 7.1	As per the defined Scope defined in the Bid document and Technical Specification

8. Time for Commencement (GCC Clause 8)

GCC 8.1	The SAP shall commence work on the System within: Three (3) weeks from the receipt of LOA.

9. Supplier's Responsibilities (GCC Clause 9)

GCC 9	The Supplier shall have the following additional responsibilities: Bidder MUST ensure that there is no change of Key Team members (Team members included in the Bid and evaluated thereafter).
	DFCCIL will not consider substitution of Key Team members except on medical grounds or separation from the Company. Such substitution shall be permitted subject to equally or better qualified and experienced personnel being provided to the satisfaction of DFCCIL.

Price Bid Format

Please provide the following information as part of your RFP bid (all information required herein must be provided. If the information provided is found to be incomplete, incorrect or unsatisfactory, the bid is liable to be rejected):

SN	Particulars	Quantity	Unit Price (Rs.)	Total (Rs.)
1	HANA Runtime Database Software License	1 no.		
	SAP ESS Users Licenses – 500 users and 1 block of payroll	3 nos.		
	ATS on SAP Software License (at item 3 & 4) for 12 Months	1 no.		
2	Upgradation & Migration Service	1 no.		
3	Knowledge Transfer / System improvement – bug fixing & gaps / Stabilization and steady state of operations (AMS)	12 months		
4	Process optimization / innovation / training / onsite and remote support	1 no.		

a) Total Cost in words (Rs. _____) excluding GST.

SN	Particulars	Year 1 (Rs.)	Year 2 (Rs.)	Year 3 (Rs.)	Year 4 (Rs.)	Year 5 (Rs.)	Total (Rs.)
5	a) HANA Enterprise Cloud (HEC) and Managed Services b) Enhanced Managed Services (EMS) for HEC (50 hours Monthly Bucket)						

b) Total Cost in words (Rs. _____) excluding GST.

Grand total Cost in words (Rs. _____) excluding GST.

Detailed Functional Requirement Scope (FRS)

1. Finance Module:

Module	Sub-Module	Functional Requirement to cover below scope:	
		Module	**Functionality**
FI	Budgeting	Budgeting	Should allow to store the budgeted data for multiple years; also it should have the facility of making the budgets for multiple years
			Should be able to create different type of budgets in the same year
			Should allow the user to maintain budgets on-line
			Should have the capability of Consolidating the budgets by Project Activity at the corporate level
			Should be able to maintain original budget, revised budget and latest forecast for each account
			Should maintain budget at various levels (e.g. at project level/ WBS level, CPM Level, Corridor Level, sub account for some accounts, income/expense for other accounts etc.)
			Should automatically allocate an annual budget over multiple accounting periods based on an equal amount or a specific monthly allocation profile
			Should automatically generate a budget from previous years actual or budget with a percentage increase or decrease
			Should be able to create budget worksheets with prior period actuals
			Should facilitate multiple level approvals and multiple iteration
			Should have the facility of preparing the budget at the Department/ Project/ CPM level and then automatic Consolidation at corporate level
			Should have the flexibility of importing & exporting the budgets worksheets
			Should be able to maintain chart of accounts
	General Ledger		Should maintain project codes, contract codes, and job codes or assigned cost centers
			Should be able to maintain task codes or activity codes assigned within projects
			System shall allow user to define various budget heads and allow grouping of budget heads. Capital Budget and Revenue budget heads should be provided.
			Should be able to create and maintain accounts and account information on-line
		Module	**Functionality**
			Should be able to create memo accounts for collecting non-financial statistical information
			Should be able to segregate expense accounts by Cost/Profit center, department, Corridor and Contract & contractor
			Should be able to transfer or consolidate accounts and automatically combine all details
			Should be able to record settlements and adjustments through journal entries
			Should be able to carry out reversal of journal entries
			Should be able to post journal entries in batch
			Should be able to sort information from a header record in each transaction
			Should be able to repeat details from the previous journal (e.g. date, description) while at the same time preventing duplication of journal entry
			Should be able to enter description for each detail line of a journal
			Should not be able to post balances without an associated transaction
			Should be able to create multiple batches of journal entry at one time
			Should be able to automatically accept and post journal entries from Account Payable, Accounts Receivable, etc.
			Should have unique number for each journal entry
			Should be able to look-up by account number and description during entry
			Should be able to debit or credit a control account by the same journal voucher

		Module	Functionality
			Should be able to close a batch of journal entry transactions that is not balanced
			Should be able to create automatic recurring journal entries
			Should be able to create automatic recurring entries that allocate one account balance among several others based on ratios
			Should be able to terminate a recurring journal entry based on the automatic accumulation of all payments equaling total commitment
			Should be able to set starting and ending period/year for recurring entries
			Should be able to enter and maintain statistical information either along with or independently of journal entries
			Should be able to make journal entries for current and future period
			Should be able to make multiple accounting periods to be open at one time
			Should be able to post pre-payments like depreciation, internal charges for manpower, fixed assets depreciation, etc.
			When previous period is open and subsequent period posting is also going on then the available opening balances should be taken for reporting purpose
			Should be able to post adjustments to prior year
			Should prevent duplicate posting to the same account
		Module	**Functionality**
			Should be able to check before a period close that all the vouchers have been authorized and posted and Should give a warning if some unauthorized /un-posted voucher remains in the system
			Should ensure at year-end close that all entries are in balance and that all periods have been closed
			Should identify and process accruals with automatic reversal in the next accounting period
			Should be able to automatically post accrual/reversal entries after closing
			Should automatically roll-up detail accounts to summary accounts
			Should be able to calculate and maintain current, prior, and previous year comparative information
			Should be able to revise invalid journals
			Should be able to define a number of suspense codes
			Should be able to post errors to different suspense codes according to the source
			Should be able to correct transactions posted to suspense real time
			Should be able to save and transfer all supporting detail of the suspended item as originally entered when a correction is made
			Should be able to capture cash advances paid to the employees
			Should be able to book expenses on vacation settlements conducted by Payroll
			Should be able to generate Bank Payment vouchers based on these settlement expenses
			Should be able to generate Cash Payment vouchers based on these settlement expenses
			Should be able to maintain Bank required formats for Payroll payment advice
			Should be able to allow direct payments of Payroll in case of discrepancy
			Should have a GL report writer
			Should be able to generate unlimited number of financial reports for balance sheet, income statement, supporting schedule, cash flow and other specific account analysis
			Should be able to perform statistical calculations such as percent to total, or other statistical analysis of accounts
			Should be able to specify account for inclusion by :
			- natural account number
			- profit center / cost center
			- range of account numbers
			- range of account numbers with specified exceptions
			Should be able to specify the contents of each column with no restriction i.e. current month, current budget, year to date, budget to date, last year to date
	Accounts Payable	Accounts Payable	Should maintain a Payables register with the following entirely
			- Invoice Number
			- Date of receipt

Module	Functionality
	Amount
	- Date sent for approval
	- Person sent for approval
	- Approval receipt date (later)
	- Transmittal number (later)
	Should be able to register Invoices received and generate a scroll no
	Should be able to define template for invoices
	Should be able to perform centralized receipt and payment of invoices
	Should provide:
	- invoice register facilities
	- certification of invoice values
	Should update General Ledger:-
	- at the time of bill passing
	- at the time of approval of GRN
	-Service receipts in case of service type payment
	Should be able to make recurring payments at a frequency other than month
	Should be able to perform release - approval hierarchy for Invoice approval
	Should be able to provide the following fields in the transaction record:
	vendor code
	- vendor reference invoice number
	- unique transaction reference for internal use
	- invoice type
	- terms
	- invoice date
	- invoice receipt date
	- posting date
	- due date
	- period
	- gross amount
	- discount/deductions
	- penalty deducted for late delivery
	- other deductions
	- net amount
	- quantity
	- unit price
	- transaction currency
	- currency rates
	- payment method e.g. cheque, telex transfer
	- bank details
	- narrative
	- GL code
	- hold information

Module	Functionality
	- status code
	- flag prepaid for items
	- whereabouts of invoice for tracking
	Should enforce additional check for verification for period specified invoices
	Should alert at the time of invoice receipt and entry as to whether the invoice is duplicate
	Should be able to reference GRN under which the items were received
	In case of a service contract, should be able to provide a unique reference
	Should check for duplicate vendor invoice amounts
	Should check for duplicate vendor invoice numbers
	Should alert and stop transaction if the invoice has already been paid
	Should be able to enter general ledger code distributions on
	- purchase orders
	- vendor record
	- individual lines on an invoice
	- invoice total
	- automatically distributed based on user-defined percentages
	Should be able to copy details automatically from the purchase order to the invoice
	Should be able to edit copied details from the purchase order
	Should be able to prevent (access rights) users from changing details copied from the purchase order
	GL distribution codes should be validated
	- in the AP
	- interactively in a GL
	- only when interface files are input to a GL
	Validation should be on-line and/or in batch
	Invalid transactions should be rejected or posted to suspense
	Should check that the total recorded against the distribution lines equals the total invoice sum
	Should be able to capture data for printing cheque automatically from the system
	- Vendor
	- Amount
	- Other details
	Should print cheque with the
	- remittance advice above the cheque
	- cheque above the remittance advice
	- cheque beside remittance advice
	- separate cheque and remittance advice
	Should be able to customize cheque printing format
	During the cheque printing routine, should print asterisks or wild characters to fill up the numeric and description blocks not being used in the amount and word fields of the cheque

Module	Functionality
	Should be able to print cheque drawn on multiple bank accounts
	Should be able to recover in the event of a failure in the cheque printing process
	Should be able to prevent the same cheque from being printed in both the original and the recovery process run
	Should be able to accommodate payment of multiple advances to same vendors against various PO through one cheque.
	Should allow pro-rata adjustment of single advance/debit note against various invoices amount passed.
	Should allow cheque to be sorted by:
	- vendor number within bank account
	- PO
	- vendor-name
	Should be able to change the format / size of the cheque while printing
	Should be able to carry out cheque reconciliation
	Should reconcile voided, cancelled or returned cheque
	During reconciliation, should calculate uncleared payments by vendor
	Should be able to match purchase orders, receiving reports (delivery notes) and vendor invoices
	Should be able to use price and quantity and delivery date tolerances
	Should be able to enter discounts not mentioned in the purchase order but available through a discount structure
	Should generate exception reports of unmatched invoices
	Should be able to generate debit notes for vendors where delivery is incomplete
	Should be able to maintain master accounts payable data:
	- Vendor address and contact details
	- Vendor Bank details
	- Vendor Payment terms
	- Employee remarks
	Should be able to define data fields for maintaining master records
	Should be able to pay advances to vendors based on P.O./W.O. or Invoice
	Should verify these advances from the books of accounts
	Should be able to make a Bank Payment voucher on the basis of above
	Should allow for pro-rata adjustment of ADVANCE paid to vendor at the time of booking of invoice.
	Should check date & year of Invoice with vendor code before accepting fresh entry
	Should be able to authorize a group of invoices for combined payments
	Should automatically reverse GL posting if a posted invoice is cancelled

Module	Functionality
	Should be able to process credit notes
	Should be able to process invoices with both debit and credit lines
	Should be able to match a credit note with:
	- parts of one invoice
	- parts of several invoices
	Should be able to set up selection voucher or batch of vouchers for invoices which are received on a regular basis
	Amount transactions entered on-line posted:
	- immediately
	- during a batch program posting run
	Memo postings should be made immediately such that they would be available for inquiry purposes
	Posting should update:
	- accounts payable
	- general ledger
	- purchase order processing
	- if the bill passed amount is different than the PO amount, the effect will go to store ledgers
	Should be able to save supporting detail associated with the suspended item in the same format as it was originally entered, and transferred to the proper code when a correction is made
	Transaction types should be by default AP voucher for all transaction through AP.
	Should post generated transactions automatically to the general ledger
	Should be able to do posting real time.
	Should handle discounts:
	- as an amount
	- as a percentage of individual invoice line items
	- as a percentage of an invoice total
	- based on the volume of the product purchased from the vendor & Discounts received after actual delivery.
	Should post discounts automatically to the correct general ledger account for discounts
	Should be able to process more than one accounting period typically previous and future periods
	Should be able to handle accruals with automatic reversal in the next period
	Should be able to accept
	- balance forward
	- open item accounting
	Should be able to match invoices to goods and services received which have generated, on receipt, an accrued liability
	Should be able to search by:
	- supplier name
	- supplier short name
	- post code
	- invoice number

Module	Functionality
	- Invoice reference
	- purchase order number
	- cheque number
	- transaction date
	- transaction value
	other please specify
	Search should support wild card characters
	Should be able to handle employee expense reimbursement description, dates and time periods, and cross reference to related sales outcome by:
	-identification of employee expenses
	-identification of related advances
	-identification of itemized expenses
	Should distinguish between types of prepaid advances & adjustment of same while passing the bill
	Should be able to select bank accounts for disbursements, including reviewing multiple bank accounts to determine the proper account to issue checks from
	Should have on-line help and value prompting
	Should be able to process unmatched GRN at the end of any date/month
	Should be able to check with payment-terms of PO to get schedule of payment on respective date.
	Should be able to provide screen vision of receipts of imported materials/Equipment/ Engg-spares before passing bills of clearing-agents.
	Should generate liability statement for transporters invoices as against materials already received by DFCCIL
	Should be able to generate AP/RECEIPT voucher for mapping of respective invoices e.g. refund recd from suppliers
	Should be able to maintain open items in both local and foreign currency
	Should be able to maintain standard currency exchange rates for each foreign currency
	Should be able to handle multiple standard exchange rates for a given currency based upon effective dates
	Should be able to override standard currency exchange rate with each input transaction
	When the standard exchange rate is overridden, output report generated should show:
	- the standard exchange rate
	- the override exchange rate
	- the person entering the override transaction
	All postings and account balances should be maintained in both local currency and user-defined foreign currencies
	Should be able to calculate foreign exchange gains/losses
	Should be able to post foreign exchange gains and losses to a user defined general ledger code:

Module	Functionality
	at payment generation
	- after revaluation against the new exchange rate
	- after reconciliation of a payment
	Should be able to handle payments in currency other than that of the original invoice
	Should be able to process manual cheques
	Should be able to handle voucher preparation and cheque preparation as two stage activity
	manual cheques should close 'open payable' items
	Cheque no. should be entered for manual cheque
	Should be able to display manual cheques appear on the cheque register
	Should generate numbers to Vouchers automatically
	Should be able to define the formats for numbering:
	- at the time of installation
	- anytime after go live
	Should be able to do automatic processing of recurring payment transactions
	- should be able to specify an end date
	- Should be able to report automatic payments on a separate payment register
	- should be able to make recurring payments at a frequency other than monthly
	Should be able to pay vendor on one cheque for more than one invoice
	should be able to handle multiple bank accounts in the same processing run
	Should be able to stop payments to specific vendors temporarily
	Should be able to stop payment of a specific invoice temporarily
	Should be able to make payment during the same processing cycle that the invoice was entered
	Should be able to pay invoices as specified without regard to the payment scheduled date
	Should be able to make part payments
	Should be able to make a cheque on a different date than the payment voucher date and if both dates fall in different accounting periods than in which period the effect will be taken
	Should be able to issue post dated cheques
	Should list in advance all individual items to be paid on the next payment date of the cheque processing cycle
	Should be able identify all duplicate payments
	Should include outstanding credit notes in the payments calculation
	Should be able to specify individual general ledger codes for each Bank account
	Should be able to handle advance payments with and without invoice
	Should be able to make advance payments without a purchase order but based on a Letter of Intent

Module	Functionality
	Should be able to pass cheque reference numbers into the general ledger to assist with bank reconciliation's
	Should display balance is lying in the party account at the time of making payment and the detail of the balance can be drilled down from payment screen.
	Should be able to identify duplication of cheque no. used with reference to payment voucher No.
	In case of posted payment being voided, GL posting should be automatically reversed

	Accounts Receivables	
Accounts Receivables	Accounts Receivables	Should be able to maintain an Accounts Receivable master record with the following details.
		- Customer Code
		- Customer Name
		- Customer Address
		- Customer phone no.
		- Customer e-mail id
		- Customer Credit
		- Customer payment terms
		- Customer Bank Account details
		- Prior Payment History
		- Description
		- Invoice Number and Date

			Should generate alerts / reminders based on the Payment terms with the customer
			Should generate codes for new services
			Should generate codes in user defined formats
			Should be able to change the code for a service in future by adding suffixes
			Should be able to change the code for a service in future by adding prefixes
			Should maintain a list of Service / Service codes
			Should be able to perform all transactions related to a customer with reference to its customer code
			Should be able to generate Invoices for a customer/service based on automatic capture of data
			Should be able to use user defined formats for the invoices
			Should be able to generate reminders and alerts for invoiced and due from customers
			Should generate receipt for cash / check payments
			Should be able to automatically update the accounting records as soon as the receipt is generated
			Should be able to generate reminders to clients for payments before 180 days
			Should be able to send across the certificate to the vendor through electronic mail
			Should be able to record reasons against late payments made by customers

Module	Functionality
	Should generate reports on Ageing analysis for payments due
	Should maintain and generate reports on Outstandings from customer with reasons and action plan
	Should be able to separate the creation and approval of customer invoices and modifications
	Should be able to account for cash receipts
	Should be able to support accounts receivable reporting including:
	- Throughputs by revenue category, customer and period;
	- Customer performance;
	- Cash due in, by period; and
	- Discount received
	Should display the account balances for customer
	Should show account balances for the Previous years figure and the YTD figure
	Should be able to reverse Invoices
	Should be able to generate trend analysis based on the customer hierarchy
	Should be able to generate a list of inactive customers and then delete it after necessary approval
	Should be able to reprint invoices (upto 5 years)
	Should automatically link receipts to the Invoice
	Should be able to do accounting of Invoice & realizations in foreign currency
	Should be able to capture the Number of times cheque bounced
	Should be able to define penalty amount as a percentage of cheque value or flat whichever is higher.
	Should mark invoice as active once the cheques are dishonored for the calculation of ageing report
	Should raise a exceptional reporting for every cheque dishonored and stop the service to the customer.
	Should be able to calculate interest on overdue balances as it may be specified by the user
	Should have the provision of trail balance, aging reports and accounts receivables action reports
	Should be able to allocate cash receipts to invoices including the ability to hold unallocated reports
	Should be able to analyze customer payment performance
	Should be able to generate ad-hoc customer inquiry/reporting
	Should be able to generate ad-hoc receivable inquiry/reporting

	Consolidation & Reporting	Consolidation & Reporting	
	Consolidation & Reporting	Consolidation & Reporting	Should be able to consolidate general ledgers using different accounting periods
			Should be able to define period start and end dates in the consolidation module
			Should be able to make consolidation for the subsequent periods even if the consolidation of first period is still open

Module	Functionality
	All codes entered should be able to be validated on line, and the code description displayed for visual checking
	Should be able to reproduce the chart of accounts from any of the general ledgers in the consolidation module as a basis for consolidation
	Should display list of all valid codes and their descriptions at points when codes are required to be entered
	Should be able to generate the following reports as standard:
	- trial balance,
	- profit and loss account,
	- balance sheet,
	- net movement by account showing opening balance at start of the month, net transactions and closing balance,
	- net movement by account showing opening balance at start of the period which can be greater or smaller than a month, net transactions during the period and closing balance,
	- net movement by account showing opening balance at start of the range of continuous vouchers , net transactions during the range and closing balance at the end of the range
	- other ad hoc reports, particularly in relation to transactions
	It is likely that most reports will be produced by means of an end-user report writer. Such a report writer should be able to access all data items in the database to enable a wide range of custom reports to be written
	Should group codes depending on debit or credit balance in a account
	Should alert before consolidation if the inter department accounts are not Zero
	Should be able to use previous year data in consolidation reports
	Should be able to define different consolidation logic
	Should be able to do budgets consolidation different than the financial accounts consolidation
	Balance Sheet: Statement of assets and liabilities showing actual against budgets for current period, also listing actual for the same period last year.
	Profit & Loss statement: Listing period and year to date revenue and expense figures against budget and corresponding period in the last year.
	Project / Department Cost report: Listing period and year to date materials and overheads costs against budget and last year. Also indicate total revenue (unites) and calculated cost per employee
	Cash flow report: Listing period and year to date various cash flows against budget and last year, subtotaled at various levels (at least 3)
	Profit and Cash flow forecast. Listing forecasts of various profit / cash flow components for the rest of the year against YTD actual figures.
	Cost/ Profit Center Reports: User defined logic for budget v/s actual analysis
	Performance ratio report: Listing user defined performance measures for the period and year to date against budget and last year performance numbers, e.g.:
	- Profit / Capital employed
	- Avg. cost per unit of revenue earned
	- Operating income per unit of revenue earned
	- Net profit per unit of revenue earned
	- Avg. debtor days
	- Current ratio (current assets / current liabilities)
	- Overhead cost per unit
	System should be able to generate unclaimed cheque register
	System should be able to export the reports in common formats like MS – Word, MS – Excel and PDF

		Cash/Bank Management	Should be able to make following Cash / bank payments like:
	Cash & Bank Management		- Vacation/Leave Settlement
			- Cash Advances
			- Lump sum / Re-imbursement Payments
			- Other payments
			- Electricity Bill
			- Water Bill
			- Telephone Bill
			Should be able to capture petty cash transactions in different locations on a real time basis
			Should be able to maintain the following information on the Bank record:
			- Bank code
			- Branch name and address
			Type of Account
			- Account No
			- Fund based Limit
			- LC limit
			- Bank Guarantee Limit
			- Signatories authorize to operate the account
			- Relevant GL code
			- Name of the contact person
			- Telephone No
			- Balance as per Bank
			Should be able to add and maintain the cheque book No. issued by the bank
			Should be able to generate a projected cash flow statement, monthly (10th of every month)
			Should include Bill discounting and other Bank Loans for projecting cash flows
			Should generate a report before the payments run to list payments to each vendor
			Should be able generate payment forecast for the specified periods

Module	Functionality
	Should generate comprehensive cash requirements reports by period planned payment run date
	Should generate comprehensive cash requirements reports by bank
	Should generate comprehensive cash requirements reports by Vendor type
	Should generate comprehensive cash requirements reports by combination
	Should generate comprehensive cash requirements reports as defined by the user
	Should be able to generate cash requirements for an individual vendor and displayed on-line
	Should take cash requirements reports and inquiries into account:
	- registered, but unapproved invoices
	- projected payments in respect of goods received, but not invoiced
	- projected payments in respect of goods on order, but not received
	Should be able to process manual cheques
	Should be able to carry out voucher preparation and cheque perpetration as two stage activity
	Should be able to close 'open payable' items by manual cheques
	Should be able to make recurring payments after editing the data for the current month's modifications if any
	Should be able to make payment on more than one invoice for a vendor on one cheque
	Should be able to use multiple bank accounts in the same processing run
	Should be able to stop payments to specific vendors temporarily
	Should be able to stop payment of a specific invoice temporarily
	Should be able to make payment during the same processing cycle as that the invoice was entered
	Should be able to make payments on invoices as specified without regard to the payment scheduled date
	Should be able to make part payments
	Should be able to make a cheque on a different date than the payment voucher date and if both dates fall in different accounting periods than in which period the effect will be taken
	Should be able to issue post dated cheques
	Should display all individual items to be paid on the next payment date in advance of the cheque processing cycle
	Should identify duplicate payments
	Should include outstanding credit notes in the payments calculation
	Should be able to specify individual general ledger codes for each bank account
	Should be able to make advance payments with and without invoice
	Should be able to pay advance without a purchase order but on a letter of intent
	Should pass cheque number reference into the general ledger to assist with bank reconciliation's

Module	Functionality
	Should be able to make multiple payment runs per accounting period
	Should show the balance lying in the party account at the time of making payment and the detail of the balance should be able to be drilled down from payment screen
	Should identify duplication of cheque no used with reference to payment voucher No, AP/GL
	Should automatically reverse GL posting if a posted payment is voided
	Should perform automatic bank reconciliation every 15 days or as set by the user
	Should have in-built bank reconciliation facilities
	Should provide bank reconciliation capabilities
	Should identify and report gaps in cheque sequence
	Should be able to identify and generate a listing of outstanding cheques
	Should include voided, cancelled or returned cheques in reconciliations
	Should be able to calculate un-cleared payments by vendor during reconciliation
	Should be able to identify and flag the un reconciling items
	Should be able to specify the date of realization of cheques or collection
	Should be able to capture date of Bank Transfer
	Should be able to import the bank statements for the purpose of bank reconciliation

Investment / Treasury

Module	Functionality
Investment	System shall allow user to define the allowed investment instruments
	-Equity
	-Bonds
	-FD
	System should record the details such as:
	-Investment amount
	-Investment date
	-Rate of Return
	-Maturity date
	-Expected Maturity value
	-Purchase Market Value
	-Current Market Value
	System should be able to consolidate the investment portfolio
	System should be able to generate Portfolio valuation
	System shall have a facility to track primary dealers and their details. It should display the best primary dealer's quote alongside the live market rate for a given debt instrument. Primary dealer quotes should be stored in the system. The documents received should be time stamped

Module	Functionality
	System shall have facility to track all investments in equity (primary and secondary), fixed deposits, bonds, debt markets etc. Investments can be identified as 'Marked for trading / Mark to market' or 'Held to maturity'

Interfacing Requirements

Module	Functionality
Interfacing Requirements	Project Management System - Workflow for payment processing to be available through PMS.
	Project Management System - Pass payment status & details for monitoring of Financial progress of the projects compared to Contractual parameters.
	Enterprise Asset Management System - Pass Asset payment status & details
	HRMIS - Workflow for payment processing to be available through HRMIS.
	HRMIS - Pass details of payment against employee salary and other claims & reimbursements
	Portal - Single-sign-on sessions details
	Document Management System - Call appropriate workflow in the DMS for archiving Invoice, supporting documents etc.
	Document Management System - Call search facility in the DMS.

Reporting	Resolve issues related to standard or custom developed reports (Z-Reports)
GST	Resolve issues pertaining to GST Compliance and adherence as per GST requirements
Master Data	Management and control of FI Master Data centrally. Resolve issues related to Vendor Masters such as missing data/ setting up of validations, etc
Governance & Control	Setting up governance and control of FI module such as Master Data Management like creation, update / maintenance, critical transactions control ,etc through authorization and access control, preventing duplicate postings,etc.

2. HCM Module:

Module	Sub-Module	Functional Requirement to cover below scope:	
HCM	Employee Record Management	**Module**	**Functionality**
		Employee record management	System should allow users to define different grades of employment
			System should allow users to define departments in DFCCIL
			System should allow users to define types of departments within the organization
			System should be able to record information including but not limited to:
			Personal Details
			Name
			Nationality/ Caste/ Religion
			Domicile as established
			Father's Name
			Permanent Address
			Date of Birth
			Place of Birth
			Health Certificate
			Personal marks of identification
			Employee Photograph
			Family Details
			Professional Details
			Educational Qualifications
			Special Qualifications
			Date of joining PF
			PF Account Number
			Service Details
			Date of Appointment
			Place of first Appointment
			Capacity on Appointment
			Pay and Grade on Appointment
			Date of execution of service agreement
			Grade details
			Department allocated
			System should generate & record unique Identification number for the employee
			System should allow employees to view their own records
	Leave	Leaves	System should be able to define multiple sets of leave rules such as eligibility etc. for various grades of employees
			System should be able to define multiple leave types:
			Casual Leave
			Special Casual Leave, e.g.,
			Family Planning
			Miscellaneous
			Leave on average pay (LAP)
			Leave on Half average pay (LHAP)
			Maternity Leave
		Module	**Functionality**
			Study Leave (Non-Gazetted)
			Quarantine
			Paternity Leave
			Define comprehensive leave accrual / credit rules in the system
			Accrued at the start of the period
			Accrued prorated every month
			Accrued at the end of the year
			Accrual only after certain period of joining
			Accrued based on no of days worked
			Accrual only for confirmed employees
			Facility to credit leave manually
			System should allow users to define a comprehensive set of Leave Encashment rules for each type of leave scenario
			System should have integration with payroll module for leave encashment related transactions
			System should allow users to view leaves eligibility and leaves availed
			System should allow users to apply for leave under different applicable and eligible categories
			System should allow definition of hierarchical workflows for approval of leaves
			System should be able to record the approval/ rejection of applied leaves and update the employee leave account accordingly
			System should allow maintenance of record of unauthorized absence

	Loans & Advances	Loans & advances	System should have the facility to define multiple types of loans and Advances such as:
			Conveyance
			Bicycle
			Scooter
			Car
			House Building
			On deputation
			Computer
			From Provident Fund
			Natural Calamity
			Furnishing
			PC Loan
			CGHS
			System should allow users to define loan eligibility criteria
			System should allow integration with payroll module for the choice of mode of payment
			The system should be able to capture repayment conditions (no. of installments, rate of installment)
			System should allow definition of heirarchical workflows for approval of loans/advances
			System should have integration with employee service records for check of elegibility of loan and loan amount
		Module	**Functionality**
			System should be able to scrutinize loan applications based on the checks such as available allocation of funds, Basic Pay of individual, duration of service, number of times advance is availed
	Claims & Allowances/LTA	Claims & allowances/LTA	System should be able to define various types of allowances as mentioned:
			Break Down
			Compensatory
			Construction and Survey
			Conveyance
			Dearness
			Deputation
			Dual Charge
			Family Planning
			House Rent
			Officiating
			Out Station
			Out turn
			Remote Area
			Running
			Training Staff
			Transfer
			Transport
			Traveling
			System should allow users to define allowances eligibility as per the group & grade
			System should allow heirarchical approval to application for allowances
			System should have linkage with attendance records as per "Leave & Attendance" module for calculation of allowances
			System should have integration with "Payroll" for payment of allowances
			System shall capture the eligibility requirement for availing LTA
			System shall calculate employee wise eligibility for LTA
			System shall track utilization of LTA and medical claims by employees
	Disciplinary & Appeal Rules (DAR)	Disciplinary & Appeal Rules (DAR)	System should allow users to define the categories of misconducts
			System should allow users to define the eligible grades which can raise file chargesheet for every grade of employees
			System should allow authorized users to generate chargesheet against an employee
			System should generate unique ID for each case and should maintain case history for every DAR case. The details which are essentially required to be maintained are
			Employee ID
			Category of charge (Major/Minor)
			Charge sheet issued by
			Brief description about the charge
			Date and number of charge sheet

Module	Functionality
	Status
	Last decision
	The system should generate statement of pending cases on a monthly basis. The statement should describe the status of the cases
	DAR proceedings should automatically effect compensation/ progression as per decision of DAR
	System should allow user to file appeal against the decision of a case
	System should track the number of appeals made by the employee. Upto 3 number of appeals are allowed to be raised
	System should support searching of case by employee number, employee name, case number etc.

	Module	Functionality
Accommodation & Lease	Accommodation & Lease	System should allow user to maintain quarter type-wise details of existing quarters
		System should allow user to tag quarters with departments & units
		System should maintain priority list for allotment of quarters
		System should allow user to update quarter allocation details including date of allocation to employees
		Quarter allocation needs to be integrated with "Payroll"
		Quarter usage is linked with HRA payout
		Rent, Water charges, electricity charges etc. are deducted from the salary of the employees availing the facility of quarter
		System should allow user to record maintenance details of quarters
		Quarter allocation also needs to be integrated with "Employee Progression Management"
		Transferred/ Separated employees need to vacate quarters or pay penalty as per defined rules
		System should generate vacancy status for quarters occupied by employees transferred/ separated
Cadre Management & Manpower Planning	Cadre Management & Manpower Planning	The system should be able to define Posts detailing:
		Post Title
		Cadre Title
		Cadre Controlling Authority
		Sanctioned number of Posts
		Reference Number of Government Order
		Effective Date of Government Order
		Post Classification (e.g. Technical / Non-Technical, Planned / Non-Planned, Selection / Non-Selection, Gazetted / Non-Gazetted, Ministerial / Non-Ministerial)
		Post Hierarchy (Groups A, B, C & D)
		Nature of post (Temporary, Permanent)
		Validity Period (start date – end date)
		Probation Period
		Probation Criteria (prescribed tests etc)
		Salary Grade (this may have multiple pay scales attached)
		Pay Scale

Module	Functionality
	Department
	Section
	Office
	Sub Office
	Designation (department specific post titles where applicable)
	Tenure Limit for Post holder
	Age Limit
	Educational Pre-requisites (Essential & Desirable)
	Mandatory Training Pre-requisites
	Language Requirement
	System should allow user to define "Book of Sanction (BoS)", detailing department wise sanctioned staff
	System should be able to segregate "Selection Post" & "Non-selection Posts"
	System should be able to define the grades of payscale
	System should be able to define the reporting structure of the employees
	System should be able to define norms for promotion to higher posts
	System should contain Summary of roles and responsibilities
	System should allow user to define Key Result Areas (KRA) for each designation
	System should be able to maintain 'Post-based Roster' depending on the, percentage reservation norms, maintain reservation Details for other categories like physically handicapped, sportsmen, ex-servicemen
	System should be able to calculate "Money value of posts"
	System should have defined interfaces for data interchange with accounts department for validating the money value of posts
	System should allow user to maintain seniority list of employees
	System should be able to generate "PCDO (Periodic Confidential Demi-Offical" report, detailing the department wise sanctioned versus actual availability of employees
	System should be able to maintain details of surrendered posts
	System should be able to keep record of "Money value" of surrendered posts for the each department
	System should allow raising requisition for new posts/ increase in cadre
	System should check precondition (such as comparison of money value of new post and money value of surrendered posts by the department) for creation of new post/ increase in cadre
	System should allow user to sanction creation of new post or increase in the cadre strength
	System should generate recruitment requirement as per the comparison of sanctioned and actual staff. This should also take into account the tentative retirements, progressions etc.
	The system should be able to carry out periodic manpower forecasting and scenario building in terms of posts, numbers, qualifications, skills based on user-defined staffing norms

| Employee Progression & Management | Employee Progression Management | **Probation & Confirmation** |

Module	Functionality
	System should be able to track the probation period for each new incumbent and provide system alerts on probation completion due dates
	System should be able to record/ update the reporting location assigned to the employee
	System should be able to retrieve data from the training module about the trainings earmarked for the employee before confirmation
	System should be able to retrieve data about successful completion of confirmatory training
	System should allow authorized user to increase the duration of probation
	System should be able to record/ update the confirmation date and location of employee

		Promotions	
		System should be able to record details of Annual Confidential Report (ACR) for employees	
		System should track & generate status review of Performance Assessment of employees at multiple stages	
		In case of 'Adverse' remarks in the ACR, system should generate reminder & letter for communication to individuals	
		System should record employee representation to 'Adverse Comment'	
		System should provide time bound system reminders for disposal of	
		appraisals with 'Adverse' remarks	
		Amendment of 'Adverse Comment'	
		Expunction of 'Adverse Comment'	
		Maintenance of 'Adverse Comment'	
		System should generate timely triggers indicating the employees due for promotion	
		System should allow employee to complete Self - Appraisal as part of ACR process	
		System should have integration with "Cadre Management" for accessing seniority lists	
		System should be able to integrate seniority lists of employees from different departments eligible for same selection post	
		System should be able to allocate employees to the vacant posts in the "Non-Selection Post" category as per the seniority	
		System should be able to identify people to be called for selection procedure for "Selection Posts"	
		System should be able to apply "Reservation Roaster" to the selections made for "Selection Posts"	
		System should be integrated with "Employee Records Management" for updation of employee's grade & payscale details resulting due to promotion decisions	
		System should record details of promotion declined	
	Assured Career Progression	**Assured Career Progression (ACP)**	
		System should be able to identify employees eligible for "Assured Career Progression (ACP)" scheme	
		System should be able to retrieve employment details like ACR records, pending DAR cases if any, Mandatory training requirements, of the identified employee	

	Module	**Functionality**	
		System should be able to update the details of employees benefitted under ACP scheme	
		Transfers	
		System should be able to maintain wishlist for transfers as demanded by employees	
		System should be integrated with DAR for effecting the progression due to decisions of DAR cases	
		System should be able to publish transfer posting requirements	
		System should be able to match transfer requirement with the transfer location wishlist of the employees	
		System should be able to maintain the relieving & joining details (date of relieving & joining, passes issued at the current location of employment) of the transferred employee	
	Deputation	**Deputation**	
		System should be able to generate circulars for deputation vacancies	
		System should be able to receive nominations for deputation vacancies	
		System should be able to shortlist nominations for deputation based on:	
		Educational Qualifications	
		Current Roles & Responsibilities	
		Scale of Pay	
		Hierarchical Grouping of Post	
		System should be able to prepare post-wise seniority list of employees applying for deputation	
		System should allow recording of deputation details such as:	
		start date and end date of deputation period	
		Post Deputed to	
		Office Deputed to	
		Section Deputed to	
		Deputation Pay Scale	
		Deputation Allowance	
		System should be able to generate checklists for remittance of leave salary and pension contribution by borrowing department for the period of deputation including Foreign Service	
		System should allow users to set up system alert for reminder at tenure end when employee may revert to parent department or be absorbed by borrowing department including foreign service deputees	

		Module	Functionality
	Training & Development	Training & Development	System should be able to support the preparation of yearly (or user defined) training calendar
			System should be able to perform Activity Planning of training
			Training and development should be in coherence with Employee Record Maintenance (Service Book) as training in Railways is assigned as per the date of joining of the employees
			System should support tracking of training instructors, training facilities, standard equipment required for the training and equipment available at training facilities
			System should allow recording
			Attendance
		Module	**Functionality**
			performance of trainee
			feedback on trainers
			feedback on course
			System should be able to receive "Training Needs Analysis" details from various locations/departments for creating a training plan
			System should be able to maintain training history (both earmarked and attended) of all employees with effective dates
			System should record competencies that employees gain from completing a course and support automatic updating of employee competency inventory
	Recruitment	Recruitment	System should have integration with "Cadre Management & Manpower Planning" for retrieving manpower requirement actuals & projections details
			System should allow authorized user to collate department wise details of posts in need of recruitment
			System should allow user to define qualification/ requirements for post identified for recruitment
			System should allow users to register applicant and generate registration number
			System should be able to screen applications based on the requirement and the registered applicant details
			System should have interface for data exchange with Railway Recruitment Board (RRB) for informing the recruitment requirement, retrieving the applicant information
			System should be able to track applications for recruitment
			System should allow users to define recruitment schedule & define recruitment procedure for the posts
			System should be able to generate result and Letter of appointment for the selected candidates mentioning the location of joining, location of reporting, date of joining, salary & entitlements etc;
			System should be able to record following indicative details for the candidates joining at the prescribed locations:
			Employee Number of PF Number
			Employee Name
			Date of Assignment
			Employee assignment type (Regular, officer on special duty, officer on lien, temporary duty, officiating, deputation, leave reserve, ad-hoc, compassionate, part time - hourly / daily basis, contract / consolidated, contingent)
			Parent department (if applicable)
			Duration of assignment (relevant for certain employee assignment types)
			hours of work (for part-time employee assignment)
			Pay Fixation
			Benefits (Loans & Advances etc)
			Other Allowances
			Leave entitlement
			Mode of salary payment
			Compassionate Grounds
			System should be able to define the rules of dependents getting job on compassionate grounds
			System should maintain a register of all those who have applied for job on compassionate grounds
			System should allow user to define the mandatory requirements of the posts applied for
			System should be able to screen applications based on the requirement and the registered applicant details
			System should be able to generate intimation for test (s) if applicable for the post applied
			System should be able to record the test results if applicable for the post applied
			System should be able to generate result and Letter of appointment for selected candidates

Settlement & Pension	Settlement & Pension	System should allow users to define the Rules for separation –
		Retirement
		Resignation
		Removal / Dismissal
		System should be capable of generating reminders (12 months in advance) for employees due for superannuation
		System should allow users to define checklist of activities required for superannuation cases, such as:
		Verification of Service Book for period of Qualifying Service
		No - Dues verification from payroll data
		Railway assets (if any) assigned to employee
		PF data consolidation from accounts
		System should be capable enough to send reminders to the concern department where the employee is working, the Division where is located at and the Zone to which he belongs to(3-months in advance)
		System should be able to Determine applicable Pension details for cases based on:
		Length of Service
		Details of non-qualifying service (if any)
		Details of Medical Fitness
		Nature of Retirement
		System should have built in capability to incorporate and apply various user-defined formulae for calculation of pensions, depending upon (but not limited to) the following:
		Average Emoluments
		Net Qualifying Service (length of service less length of non-qualifying service)
		Total length of permissible service (33 years)

Module	Functionality
	System should have built in capability to incorporate and apply various user-defined formulae for calculation of gratuity, depending upon (but not limited to)the following:
	Basic Pay last drawn
	Current DA rate
	Net Qualifying Service (length of service less length of non-qualifying service)
	Emoluments
	Calculate Commutation of Pension (advance withdrawal of a specified percentage (40%) of "original pension" within a year of retirement based on (but not limited to) the following:
	Basic Pay last drawn
	Original Pension (i.e. pension amount before any adjustments like advance withdrawal)
	System should have built in capability to incorporate and apply various user-defined formulae for calculation of Family Pension, depending upon (but not limited to) the following:
	Basic Pay last drawn
	Pension
	System should be able to operate inter-state suspense accounts for clearance by concerned Authority / Bank disbursing the pension
	System should be able to use benefit information and changes in status for retired employees, surviving spouse and dependents as captured in Service Book
	System should be able to Record resignation request of permanent employee based on notice from employee or Appointing Authority
	System should be able to check Departmental Dues/outstanding loans' Government assets (if any) assigned to employee
	System should have provision to capture information of all the resignation cases
	System should be able to calculate the pension payout as per the category of separation

Employee Self Service (ESS)	Employee Self Service	System should Enable employee to complete Self-Appraisal as part of ACR process
		System should Enable employees to view Service Book (employee personal files) and trigger process for updates
		System should Enable employees to view training calendar
		System should Enable employees to view the details of the training undergone
		System should Enable employees to view the status of employee's training requests
		System should Enable employees to seek an approval of training request by the authorising authority
		System should Enable employees to make requests for all types of leave (Casual leave, Maternity leave, Half day leave, etc.)
		System should Enable sanction of leave applications by authoriser and automatic update of the employee leave balance

Module	Functionality
	System should Enable employees to view the status of their leave applications
	System should Enable employees to view summary information on leave availed and balances available
	System should Provide employees with easy access to payroll information
	System should Enable on-line printing of pay-slips by employees
	System should Provide employees the option of 'pre-paying' deductions (where applicable)
	System should Enable on-line application of loans, via self-service functionality
	System should Provide facilities for:
	Downloadable Forms
	Forms that can be Entered / Edited on-line
	On-line "Help" & "Responses to FAQs" for Forms & Procedures
	Loan Application' status tracking -Submitted, Approved or Under Process
	System should Enable employees to view their loan entitlements and balance, on-line
	System should Enable submission of claims by employees for themselves and their dependents as per their eligibility
	System should Enable employees to view claim balance eligibility and claim summary for all the categories of claims based on eligibility

Payroll Module

#	Functionalities
1	System shall allow user to define different elements for payroll generation
2	System shall allow user to define business logic for compensation for different grades of employees
3	System should be able to taxation rules as part of pay structure
4	System shall have integration with various modules to retrieve data about the elements like those listed below:
	• Pay-scale
	• Attendance
	• Leave
	• Allowances
	• Leased accommodation details
	• Loans
	• Advances
	• PF payout
	• Increments
	• Incentives
	• Gratuity
5	System shall allow user to update details of arrears/ adjustments
6	System shall calculate tax - payouts for the employees
7	System shall generate payroll as per the employee compensation eligibility and claims and business logic defined for payroll generation
8	System shall print payroll in a predefined format
9	System shall trigger auto-encashment of leaves to the payroll module on roll-over of the financial year
10	System shall generate Last Pay Certificate (LPC) needed during the transfer processing
11	System shall initiate electronic credit of salary or generate funds transfer note for bank as decided by DFCCIL
12	System should take care of Foreign Service Contribution (FSC) to Parent Organization for deputation staff
13	System should generate reports related to FSC

Interfacing Requirement

Interfacing Requirement	
	Project Management System - Employee Information to be available to PMS. Employees to be tagged to Corridors & CPMs.
	Financial Management System - Call appropriate payment processing workflow.
	Portal - Single-sign on sessions details
	Document Management System - Call appropriate workflow in the DMS for archiving employee related records.
	Document Management System - Call search facility in the DMS.

7th Pay Commission	Resolve the issues related to the changes as introduced under 7th Pay Commission into the solution in HCM.
Master Data	Management and Control of HCM Master Data centrally.
Governance & Control	Setting up governance and control of HCM Module such as Master Data Management like creation, update / maintenance, critical transactions control etc. through authorization and access control.

3. Materials Management (Admin):

Module	Sub-Module	Functional Requirement to cover below scope:
Material Management (Admin)	Contract Management	The system should provide the functionality to provide utility to define/capture terms and conditions of the contract as per agreement between DFCCIL and the contractor

		The system should provide the functionality to establish security measures to ensure that the users are allowed to review/edit contracts they are involved with.
		The system should provide the functionality to track changes, with reasons
		The system should provide the functionality to enable creation of more than one contract for the same Unique Project ID
		The system should provide the functionality to enable creation of a contract for the more than one Unique Project ID
		The system should provide the functionality to provide utility to redefine the contract as per need after revisions if any
		The system should provide the functionality to provide all required forms and formats made available online
		Ability for the creation of contractor master with details like name, address, phone Nos., fax nos., email id, contact persons, name of authorities, their email ids, bank information, category etc.
		Ability to define an invoicing/billing plan, according to what has been agreed with the vendor/subcontractor /suppliers, involving, for example, milestone-based billing or progress billing
		The system should provide the functionality to enable closure of contract when completed/abandoned/ terminated
		The system should provide the functionality to be able to re-open closed contracts
		The system should provide the functionality to notify all appropriate personnel, that a contract is closed
	Master Data	Management and control of Master Data centrally.
	Governance & Control	Setting up governance and control such as Master Data Management like creation, update / maintenance, critical transactions control etc. through authorization and access control.

4. Portal :

Module	Sub-Module	Functional Requirement to cover below scope:	
Portal	Accessibility & Authentication	**Module**	**Functionality**
		Accessibility & Authentication	System should Authenticate users accessing the portal
			System should offer single entry point for stakeholders and applications relevant to them
			The portal shall provide multi-channel access including mobile/wireless support besides 'traditional' access methods such as the Internet
			Portal should support secure (encrypted) access over the Internet/Intranet through a secure, remote, on-demand access and to applications without the need to add any client software on the desktops

			System should provide Single Sign-on facility to other application. Users should be mapped to the applications relevant to them. The portal will provide single sign on feature so that the end user need not individually logon to separate applications. Users can be categorized into following categories :
			     Employees
			 - Contractors/Consultants
			     General Consultants
			 - Independent Engineers
			     Government Agencies (MoR , MoF)

	Usability	Usability	The portal shall provide strong personalization features enabling the portal to customize the portal pages to fit the stored preferences profile of the user accessing the portal. Personalization should be focused on presenting information and application and services relevant to the user. Personalization should also encompass defined screen layout, preferred colours, preferred links etc.
			Portal should have a section for authorized users to upload content sharable: • Within the organization • among a team • Non sharable – exclusive usage of the user
			The portal shall provide comprehensive sitemap details in a easy to browse format
			The navigation, look and feel of the portal should be primarily consistent throughout to provide enriched user experience. The exact format and layout shall be defined during the analysis and design phase of the project.
			RSS field for downloading latest press releases, tender information, Magazines should be possible.

	Collaboration	Collaboration	Portal should include project-based collaboration.
			The portal shall provide collaboration services such as Message Boards, Bulletin boards that can be leveraged by the various participating departments
			Collaboration solution include searchable threaded discussions
			Project collaboration should include advanced search.
			System should have search facility, both metadata search as well as full text search
			Capability to use the enterprise-wide search to retrieve projects and project objects. The search results shall be secured so that only project members can view the appropriate search results.
		Dashboard	Portal should display the reports in the form of dashboard according to the user logged into the system. Users having a role that contains the dashboard(s) should automatically navigate to it upon login.
			Portal should have a dashboard based on applications to give a snapshot of various on-going projects (financial and physical status) with respect to schedule, geography, resources, milestones, cost and facility to drill down to transaction level. The Dashboard should be accessible in an easy to use graphical format.
			The dashboard should be customizable and access restricted for the intended group. The data elements/ reports accessible to an employee should be viewable to all the employees higher up on the hierarchy
			System should be able to aggregate data related to Project Financial status, Project Physical Progress, Funding status, Land Acquisition status, Compensation award status etc. at various levels like: 1. Corridor 2. Section 3. CPM 4. Contract,
		Interfacing Requirements	Portal shall be the primary Interface to users. As the Portal will have the facility of single Sign-on, the system should interface with all the applications developed/ integrated under the scope of this assignment.
	Master Data	Management and control of Master Data centrally.	
	Governance & Control	Setting up governance and control such as Master Data Management like creation, update / maintenance, critical transactions control etc. through authorization and access control.	

Technical Specification of HEC Cloud Services

SN	HEC Infrastructure and Managed Services
1	HEC Services includes periodic backup of systems and management of backup data.
2	HEC Services includes software licenses of OS (Operating Systems).
3	HEC Services will host systems within India Data Centers. NO Customer data or backup data is replicated to outside India.
4	HEC Services will ensure up-to-date and compatible hardware infrastructure for SAP software mentioned in RFP scope.
5	HEC Services will Install & Configure SAP systems (OS, DB & Application) and related components viz. Web Dispatcher, Load Balancer etc.
6	HEC services will carry out OS and DB management including parameter tuning.
7	HEC services will carry out Storage provisioning and management.
8	HEC services will ensure periodic update, upgrade of OS, DB and SAP applications.
9	HEC services will carry out periodic capacity management and performance review of hosted systems.
10	HEC services will configure transport management and will carry out transports.
11	HEC services will start / stop systems as required by system or customer.
12	HEC services will be responsible for incident processing and also provide incident management support 24x7x365.
13	HEC services will manage and implement security vulnerability and security audit recommendation.
14	HEC services will provide support for system copy as needed by customer.
15	Complete Restore & Recovery is responsibility of HEC services in the event of failure of computing environment.
16	HEC services will also generate EWA and take necessary action pertaining to OS, DB and SAP BASIS.
17	HEC services will monitor the system and its performance and provide report to customer.

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Required HANA Enterprise Cloud Infrastructure Services

HEC Infrastructure & Services	Duration in Years
ECC Development System: SAP SOH (DB) with followings: a) Linux OS b) 256 GB RAM c) 40 Core CPU d) Storage - Min. 3 times of RAM	5
ECC Development System: SAP SOH (APP) with followings: a) Linux OS b) 32 GB RAM c) 8 Core CPU d) Storage – 200 GB	5
ECC Quality System: SAP SOH (DB) with followings: a) Linux OS b) 512 GB RAM c) 60 Core CPU d) Storage - Min. 3 times of RAM	5
ECC Quality System SAP SOH (APP) with followings: a) Linux OS b) 32 GB RAM c) 8 Core CPU d) Storage - 200 GB	5
ECC Production System: SAP SOH (DB) with followings: a) Linux OS b) 512 GB RAM c) 60 Core CPU d) Storage - Min. 3 times of RAM	5
ECC Production System SAP SOH (APP) with followings: a) Linux OS b) 32 GB RAM c) 8 Core CPU d) Storage - 300 GB	5
EP Development System: SAP EP on SYBASE (DB+APP) with followings: a) Linux OS b) Min. 32 GB RAM c) 8 Core CPU d) Storage - 200 GB	5

EP Quality System: SAP EP on SYBASE (DB+APP) with followings: a) Linux OS b) Min. 32 GB RAM c) 8 Core CPU d) Storage - 200 GB	5
EP Production System: SAP EP on SYBASE (DB) with followings: a) Linux OS b) Min. 32 GB RAM c) 8 Core CPU d) Storage - 200 GB	5
EP Production System: SAP EP on SYBASE (APP) with followings: a) Linux OS b) Min. 32 GB RAM c) 8 Core CPU d) Storage - 200 GB	5
PO Development System: SAP PO on SYBASE (DB+APP) with followings: a) Linux OS b) Min. 32 GB RAM c) 8 Core CPU d) Storage - 200 GB	5
PO Quality System: SAP PO on SYBASE (DB+APP) with followings: a) Linux OS b) Min. 32 GB RAM c) 8 Core CPU d) Storage - 200 GB	5
PO Production System: SAP PO on SYBASE (DB) with followings: a) Linux OS b) Min. 32 GB RAM c) 8 Core CPU d) Storage - 200 GB	5
PO Production System: SAP PO on SYBASE (APP) with followings: a) Linux OS b) Min. 32 GB RAM c) 8 Core CPU d) Storage - 200 GB	5
SFTP Server - 3 No (Dev, Quality and Production) each with following a) Linux OS b) Min 8 GB RAM c) Min 2 CPU d) Storage - 200 GB	5

SAP Content Server Development: SAP Content Server Development on MAX DB (DB+APP) with Followings: a) Linux OS b) Min 32 GB RAM c) Min 8 CPU d) Storage - 1024 GB	5
SAP Content Server Production: SAP Content Server Production on MAX DB (DB+APP) with Followings: a) Linux OS b) Min 48 GB RAM c) Min 8 CPU d) Storage - 1024 GB	5
TREX Development System: SAP TREX with followings: a) Linux OS b) Min. 24 GB RAM c) 4 Core CPU d) Storage - 200 GB	5
TREX Quality System: SAP TREX with followings: a) Linux OS b) Min. 24 GB RAM c) 4 Core CPU d) Storage - 200 GB	5
TREX Production System: SAP TREX with followings: a) Linux OS b) Min. 32 GB RAM c) 8 Core CPU d) Storage - 300 GB	5
04 Nos. of SAP Web Dispatcher for DEV, QA, PRD on Linux OS with followings: a) 8 GB RAM b) 2 Core CPU c) Storage - 100 GB	5
SaaS Load Balancer – Min 4 Nos.	5
VPN Port Connection - Min 01 Nos.	5
MPLS Port Connection -Min 02 Nos.	5
Cloud Service Charges - System Administration (Proactive & Reactive for OS, Storage, Hypervisor, DB, SOH, Sol MAN & EP), Upgrade, Update, Backup, Replication, Troubleshooting and Maintenance of Infra, Network & Security	5

ENHANCED MANAGED SERVICES FOR SAP HANA ENTERPRISE CLOUD
SERVICE DESCRIPTION DOCUMENTATION

1. **SCOPE OF ENHANCED MANAGED SERVICES (EMS)**

   SAP will provide EMS based on the EMS tasks described in the applicable roles and responsibilities Documentation. Only Services marked as "*HEC Enhanced Managed Services ("EMS") that can be performed by customer,*" "*HEC Enhanced Managed Services (EMS) that can only be performed by SAP*" and "*Included in Hyper-Care service package*" are performed by SAP under EMS. The delivery of EMS is based on the complete availability of the HEC systems for which EMS is provided.

2. **PROACTIVE RECURRING SERVICES AND EMS REQUEST MANAGEMENT**

   Customer may request EMS by engaging SAP to deliver EMS via a proactive recurring service plan and/or via an EMS Request, as described herein.

   a. Proactive Recurring Service Plan. For SAP to provide EMS as a proactive recurring service, Customer and SAP will agree on a pre-defined service plan defining tasks, efforts and frequency of execution. SAP will execute the agreed customer specific service plan and provision EMS to Customer without further triggering an EMS Request or otherwise, by Customer. EMS hours consumed for proactive services will be reported as set forth in Section 4 below.

   Proactive Recurring Services may include but are not limited to repetitive monitoring activities not included in the HEC Standard Services (proactive Event Management: monitoring alerts, categorization of alerts according to criticality and creation of Incident Tickets for critical alerts, taking corrective actions by processing the Incident Tickets, proactive adjustment to relevant parameter to avoid further issues and, Ticket-based documentation and request involvement of Product Support when necessary).

   b. EMS Requests. All other requests for EMS must be made by Customer (or on the Customer's behalf by the SAP Service Team through an EMS Request. Customer will use the SAP Service Request Platform to submit EMS Requests to SAP for EMS. A Request can be classified as Incident, Request for Change or Service Request. All EMS Requests must be submitted (i) by a Key User, and (ii) with a priority level designation. Customer is responsible for setting up, operating and maintaining its ticketing infrastructure as described in "Customer's additional responsibilities including "Collaboration and Cooperative Duties" section below. SAP does not take any responsibility for ensuring that the Ticket replication from Customer ticketing infrastructure to SAP is functioning properly.

   b1. EMS Service Requests: For EMS Requests categorized as "Service Requests" and not included in HEC Standard Services, SAP will perform predefined Services as per HEC Roles and Responsibilities documentation ("HEC Enhanced Managed Services (EMS)"). All EMS Service Requests must be submitted with a Medium priority level designation only. SAP EMS will accept Tickets from Key Users according to defined service levels s set forth in Section 3 below, implement Service Requests, Requests for Continuous Operations and agreed Standard Changes and provide Ticket-based documentation.

   b2. EMS Incidents: For EMS Requests categorized as "Incident" and not included in HEC Standard Services set forth in the Documentation, SAP will provide

troubleshooting of technical/non-functional incidents. SAP EMS will accept Tickets from Key Users according to defined service levels set forth in Section 3 below and, provide analysis and resolution of Incidents according to such service levels. Any trouble-shooting of the technical layer requested by the Customer that is not included as part of the HEC Standard Services will be handled as an EMS service.

b3. EMS Requests for Change: For EMS Requests categorized as "Request for Change", SAP will provide changes of technical system configuration not included in the HEC Standard Services.

All EMS Requests for Change must be submitted with a Medium or Low priority level designation. SAP EMS will accept Tickets from Key Users according to defined service levels set forth in Section 3 below and provide analysis of Requests for Change according to such service levels. Scope validation is managed jointly in collaboration between SAP's Engagement Manager and Customer's Engagement Manager, including planning and deployment of Requests for Change after Customers approval either as part of the EMS service or under a Change Request to the Contract Agreement.

All EMS Services are provided remotely by SAP.

3.0 SERVICE LEVELS: EMS - Service Hours; Initial Reaction Time for EMS Requests

3.1 EMS – Service Hours

Service Desk	:	English: 24 x 7
		India : Mon-Fri, 9.00 a.m. – 6.00 p.m. IST
Service Delivery	:	Systems with PRD: English: 24 x 7
		Systems with NON PRD: English: 8:00 a.m. – 6.00 p.m. Local Time each Business Day

3.2. EMS Initial Reaction Time ("EMS IRT")

EMS Ticket Priority	Service Level – Initial Reaction Time (based on Service Delivery hours set forth in 3.1 above)
Priority Very High (Only applicable for PRD)	20 Min.
Priority High	2 Hours
Priority Medium	4 Hours
Priority Low	1 Business Day Local Time

EMS Ticket Priority Very High and High are reserved for EMS Incidents only.

EMS IRT for Service Requests is 4 hours during Service Hours for Service Delivery.

EMS IRT will only be measured for EMS Requests created through the SAP Service Request Platform or Tickets created by SAP in SAP's support landscape on behalf of Customer. IRTs do not apply for EMS Requests or Tickets created otherwise.

4. SERVICE REPORTING FOR EMS

SAP will create a monthly report providing Customer with information about the EMS activities provided in the previous month. A PDF document for prior last twelve (12) reporting periods will be provided upon request. The EMS service report will include the following information for the respective reporting period:

- Total number of EMS hours consumed, EMS Rollover Hours
- List of Tickets received including break down per service category and per priority

- Total hours for Tickets processed per month

In addition, a real time Ticket reporting dashboard is available online providing detailed information on tickets for EMS.

5. Customer's Responsibilities Including Collaborative and Cooperative Duties

In addition to the Customer responsibilities set forth in the HEC Supplement, the following Customer responsibilities apply for the provision of EMS:

a) Except for EMS provided under a proactive recurring service plan, EMS will be provided only after an EMS Request has been issued to SAP detailing the request in the SAP Service Request Platform.

b) Customer is responsible to ensure that non-SAP product support parties reasonably cooperate in their timely receipt and handling of queries and Tickets forwarded from SAP.

c) Customer is responsible for all data stored in the systems.

d) Customer provides SAP, free of charge, for the semi-annual audits a user with all necessary authorizations. This is required for all systems in which SAP has responsibility for transportation management (managing the technical deployment of changes from DEV systems to PRD systems). Customer also confirms that its transportation management can checked for audit purposes and that information is also made available to the respective auditors. This is only applicable if during the set up phase it is agreed that SAP will be responsible for transports to PRD.

e) If Customer fails or partially fails to comply with these collaborative and cooperative duties or if Customer fails to comply with these collaborative and cooperative duties in the right quality or if Customer fails to comply, SAP can request adjustments of the schedule and/ or charge additional fees to address increased SAP costs resulting from the Customer's non-compliance.

f) Customer is responsible for adaptations or extensions to the solution, for example, ones caused by Customer's changing requirements or structures (Organizational Change Management).

g) SAP's provision of the EMS is subject to Customer fulfilling its responsibilities described in the HEC R&R Documentation and Agreement. Customer agrees to execute prompt performance of such responsibilities and provide the employees and resources required for the project phases in sufficient measure.

6. DEFINITIONS

Business Day: any days from Monday to Friday with the exception of the public holidays observed at Customer's Primary Access Location.

Change Management Process: A process that defines the procedure through which a change of technical system configuration is authorized, planned and deployed into the supported systems. All changes in the supported systems which are not caused by an Incident or Problem or agreed as a Standard Change are considered a Request for Change. Change Management does not only include the implementation procedure, but the holistic process from the requirement to the deployment. Changes are classified by their potential impact to the productive system (Regular Change and Emergency Change). Depending on the potential impact a certain Customer approval level is required.

Continuous Operations: The Request category Continuous Operations is intended for all Tickets that contain some kind of continuous support for a longer time period. As a rule these will be periodical / recurring Tickets. They can be used to record Proactive Recurring Services (except monitoring) based on the Customer contract or separate

agreements, continued minor maintenance tasks on request of the Customer if the Customer does not want to create a separate Ticket for each task. Continuous Operations Requests are processed in compliance with the Request Fulfilment Process.

EMS Request: A request for Enhanced Managed Services as described in Section 2b above. All EMS requests are processed through the SAP Process Management control framework via the SAP Service Request Platform.

Incident: An unplanned interruption of a technical system function of the supported systems. Incident requests are processed in compliance with the Incident Management Process.

Incident Management Process: The procedure used to restore the business process. An Incident can be resolved by either providing a workaround or by finding and eliminating the root cause (Problem). Once the Incident is solved it may be required to find the root cause (Problem) of the Incident. If such is identified, an approach how to prevent the Problem from occurring again should be found and presented to the Customer.

Initial Reaction Time: The time between the receipt of an EMS Ticket (time stamp of Ticket status "open") and the first action taken by SAP personnel (time stamp of Ticket status "in process"), to respond to an EMS Request.

Key User: A Customer's designated contact person who has the responsibility for a special business process and knowledge of SAP products/services. A Key User is authorized to initiate EMS Requests and provide approvals according to SAP's Process Management control framework.

Local Time: The time zone in Customer's Primary Access Location.

Request: A question or a task that is submitted to EMS via a Ticket. A Request can be classified as Incident, Request for Change or Service Request.

Request for Change: A request for and description of a desired business process change within the supported systems. Requests for Change are processed in compliance with the Change Management process.

Request Fulfilment Process: Service Request process used if the Service Request does not match the prerequisites for any other of the predefined EMS processes (Event Management, Incident Management, or Change Management). These Service Requests will be further separated into one of the following categories: Standard Change, Request for Continuous Operations, or other Service Request.

SAP Service Request Platform: A portal provided by SAP where Customer can enter EMS Requests. This can be either the SAP Support Portal (https://support.SAP.com/home.html) or a dedicated Portal for EMS Requests.

Service Desk: A centralized function servicing the single point-of-entry for all EMS Requests and Tickets. The Service Desk handles Tickets in accordance with the Service Desk process described below:

- Ticket acceptance / rejection (contract, SLA, Key User check),
- Ticket monitoring (see SLA),
- Ticket dispatching to the EMS core team consultants.

The Service Desk process describes the workflow and tasks of the Service Desk function, including

- Request / Ticket reception,
- Ticket monitoring,
- Ticket dispatching and reporting.

Service Hours: Hours during which SAP provides Customer with the defined Enhanced Managed Services.

Service Request: A Service Request is any Request as described in section 2.b1 above which is not a Request for Change and not an Incident. Service Requests are processed in compliance with the Request Fulfilment Process.

Standard Change: Low-impact changes that are pre-defined and pre-authorized. Standard Changes are processed in compliance with the Request Fulfilment Process. See also Service Request, Continuous Operations

Ticket: The electronic documentation of any Request addressed by Customer to SAP. Each Ticket is given a number at the point of time it is created. The Ticket number will be the single reference to the Customer's request.

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