

CENTRAL WAREHOUSING CORPORATION

(A GOVT. OF INDIA UNDERTAKING)



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Implementation of Warehouse Management Solution
At
Central Warehousing Corporation

Annexure B- Volume III: Service Levels

Central Warehousing Corporation

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1. Service Levels

1.1. Purpose of this document

This section defines various Service Level Indicators which will be considered by CWC for monitoring the Service Levels of SI. The System Integrator has to comply with following Service Levels to ensure adherence to project timelines, quality and availability of services.

Commencement of activities for WMS and ongoing performance and service levels shall be as per timelines and parameters stipulated by CWC in this RFP, failing which CWC may, at its discretion, impose Penalties on the Bidder as per the Service Level Agreement mentioned in this RFP.

The purpose of this section is to clearly define the levels of service to be provided by SI to CWC for the duration of this project or until this SLA has been amended. The benefits of this SLA are to:

- a. Trigger a process that applies SI and CWC management attention to some aspect of performance only when that aspect drops below an agreed upon threshold, or target.
- b. Makes explicit the performance related expectations on performance required by CWC
- c. Assist CWC to control levels and performance of services provided by SI
- d. This SLA is between SI and CWC.

1.2. Description of Services Provided

SI shall provide service as defined in Volume I of this RFP.

1.3. Duration of SLA

- The service level monitoring would begin post phase –I go-live but the penalties would be imposed post Phase –I stabilization
- This SLA may be reviewed and revised according to the procedures detailed in the RFP.

1.4. SLA Specific Definitions

Prime Business Hours (PBH) -PBH refers to the prime business period, which shall be from10:00 hrs till 18:00 hrs on Monday to Saturday (excluding national public holidays, declared holidays and all second Saturday).

Extended SLA Hours (ESH) -ESH refers to the non-business period, which shall be:

- From 18:00 hrs till 10:00 hrs on Monday to Saturday,
- From 00:00 hrs to 23:59 hrs on Sunday, National public holidays & all second Saturdays.

Downtime / Outages are the instance where users experience no response from the Application.

- The recording of downtime shall commence at the time of:
 - Registering the call with SI
 for any downtime situation for the application / hardware.
- Downtime shall end when the problem is rectified and the application/ service is available to the user.

• Down time will not be considered for the following:

- Pre-scheduled preventive maintenance and health checks (Scheduled Downtime).
- Failover time in case of cluster environment, beyond which the service would be considered to be unavailable and appropriate penalty shall be imposed on the SI.

 Failover time in case of SAN shifting, beyond which the service would be considered to be unavailable and appropriate penalty shall be imposed on the SI.

Planned outage / Scheduled down time:

- a. The outage planned in advance for maintenance purpose.
- b. SI must notify CWC via email of the upcoming maintenance at least Three (3) business days prior to Scheduled Downtime.
- c. It shall not be scheduled during prime business hours.
- d. Any planned / scheduled downtime shall not be more than 12 hours else it shall be considered unplanned outage and penalized accordingly.
- e. The planned downtime would not be added to the SLA downtime unless it runs into prime business hours of the following day.
- f. Overall Planned downtime shall not be more than 48 hours in a Quarterly.
- g. The downtime for scheduled maintenance would need to be mutually agreed between CWC and the SI. To reduce this time, various maintenance activities can be clubbed together with proper planning.

Unplanned outage/ Downtimeis defined as an outage caused without prior notice where users experience no response from an Application for whatsoever is the reason (within the scope of services of the SI).

Contact for support /complaint will be by email or telephone. A Call will be logged by the SI/user in the System and an email/written response shall be provided to the system user about the resolution of the problem.

Denial of service: For a given quarterly, if the total penalty amount is more than the amount due for that quarterly, the same shall be considered as denial of service, and in such situation CWC has the right to terminate the contract besides any other action as per the provisions of the contract.

Uptime means, the aggregate number of hours in any specified time period during which application / hardware, is actually available for use.

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Uptime Calculation for the month: 
{[(Uptime Hours + Scheduled Downtime) / Total No. of Hours in the time period] x 100}
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Incident refers to any event / abnormalities in the functioning of the application / hardware that may lead to disruption in normal operations of the WMS.

Helpdesk Support shall mean the **Prime Business Hour**centre which shall handle Fault reporting, Trouble Ticketing and related enquiries during this Project.

Resolution Time shall mean the time taken (after the incident has been reported at the helpdesk), in resolving (diagnosing, troubleshooting and fixing) which may include escalations to the second level or to respective OEMs., The resolution time shall vary based on the severity of the incident reported at the help desk.

1.5. Service Level Agreement & Targets

This section is agreed to by CWC and SI as the key SI performance indicator for this engagement. It reflects the measurements to be used to track and report systems performance on a regular basis.

The targets shown in the following sub-sections are for the period of contact or its revision whichever is later.

1.5.1.Timely Delivery

Definition and Description	Timely delivery of all documents that are to be submitted as part of the WMS Project deliverables. The deliverables are already listed in the RFP.
Service Level Requirement	All the deliverables defined in the Work order issued by CWC have to be submitted on-time.
	 If any delay occurs, CWC will have the right to decide if the reason for delay was beyond the control of the SI and in such a case penalty will not be levied for that period.
	 If any deliverable is delayed because of its dependency on earlier deliverable (which was also delayed), then CWC will have the authority to decide the time for which the penalty should be relaxed / levied.
	 This RFP specifies the timelines for submission of FINAL version of the deliverables (i.e. after review by CWC). SI is expected to make adequate provision for review process and shall submit the draft version of the deliverable much before the timeline.
	 CWC will review and provide comments to SI on the deliverables normally within 10 working days of the submission of deliverables.
Measurement of Service Level Parameter	To be measured in Number of weeks of delay from the date of submission as defined in workplan submitted by the bidder (and this workplan has to be in line with the timelines of CWC).
Penalty for non- achievement of SLA Requirement	Delay would attract a penalty per week as per the following – 1. For Documents = 1 X Per week Penalty
	The Penalty per week is INR 25,000 (Rupees fifty thousand). The total penalty would be generated by the summation of the above.

1.5.2. Application Availability (applicable on Quarterly basis) – DC and DR (When services are running from DR site)

Definition and Description	Application availability refers to the total time when the Application is available to the users for performing all activities and tasks. The Application shall be made accessible 24x7x365 days for the usage by its stakeholders.					
Service Level Requirement	The average availability of the application (at DC level) during PBH shall be at least 99.5% in a Quarter. The same service levels will be applicable for a situation when operations are running from DR. The average availability of the application during ESH (at DC level) shall be at least 97% in a Quarter.					
Measurement of Service Level Parameter	Uptime = [(Total Availability of the Application in a quarter during PBH/ESH)/ (Total Time in a quarter in PBH/ESH)]*100 Any planned application downtime shall NOT be included in the calculation of application availability.					
Penalty for non- achievement of SLA Requirement	If the System Integrator is not able to meet the above defined service level requirement, then any deviation from the same would attract a penalty as per the following –					
	Application >= 98 % to < >= 95% to < >= 90% to < Availability during PBH (Quarterly average)					
	Penalty	1.0 % of	2 % of quarterly	4 % of quarterly		

	quarterly payment	payment	payment
Application Availability during ESH (Quarterly average)	>= 90 % to < 95%	>= 85% to < 90%	>= 80% to < 85%
Penalty	0.5 % of quarterly payment	1.0 % of quarterly payment	2 % of quarterly payment

If the application is consistently below 95% during PBH or below 85% during ESH continuously for two or more quarter duration, then CWC may consider withdrawing the Work Order with the System Integrator.

1.5.3. Database/Application/Web Server Performance – DC and DR (When services are running from DR site)

Definition and Description	Database/Application/Web Server Performance will be assessed in terms of CPU utilization and memory utilization.					
Service Level Requirement	exceed 60%.	•		te intervals, shall not ute intervals, shall not		
Measurement of Service Level Parameter	Average Server utilization % of shall be captured through aut in an 24 hr interval will be cou	comated tools every 5 inted once only for per	minutes. However mul nalty calculation purpos	Itiple non compliances se.		
Penalty for non-achievement of SLA	If the System Integrator is not able to meet the above defined service level requirement, then any deviation from the same would attract a penalty as per the following –					
Requirement	Average CPU Utilization	> 50 % to <60%	>= 60% to <65%	>= 65% to <70%		
	Penalty	0.5 % of quarterly payment	1.0 % of quarterly payment	2 % of quarterly payment		
	Average Memory Utilization	> 40 % to <45%	>= 45% to <60%	>= 65% to <70%		
	Penalty	0.5 % of quarterly payment	1.0 % of quarterly payment	2 % of quarterly payment		
	** For each additional increa payments of Operations & Ma					

^{**} For each additional drop of 5% in performance below 90%(PBH) and 80%(ESH), 5% of Quarterly payments of Operations & Maintenance cost will be levied as additional penalty

1.5.4. Security & Incident Management SLA

Definition Description

Security being one of the most important aspects of WMS would be governed by stringent standards. All security incidents leading to disruption in network availability would be penalized heavily. Security incidents could consist of any of the following:

Malware Attack -

This shall include Malicious code infection of any of the desktops/servers in use for CWC -WMS or Unchecked malware infected mails passing through the Messaging solution.

Denial of Service Attack

This shall include non-availability of service (Internet bandwidth, messaging service and other web services due attacks that consumes related resources). The SI shall be responsible for monitoring, detecting and resolving all Denial of Service (Dos).

Intrusion

Successful Unauthorized access to CWC information system, resulting in loss of confidentiality/Integrity/availability of data. The SI shall be responsible for monitoring, detecting and resolving all security related intrusions on the network using an Intrusion Prevention device.

Service Level Requirement

- Any Denial of service attack shall not lead to complete service non availability.
- Desired service level shall not allow even a single web defacement, data theft and Intrusion. Each occurrence of these three types of security violation shall lead to appropriate penalties as mentioned below.

Measurement of Service Level **Parameter**

The network shall be monitored for:

Malware Attack

Any malware infection and passing of malicious code through messaging solution shall be monitored at the gateway level or user complaints of malware infection shall be logged at the help desk system and collated every quarterly. Logs will be monitored every quarterly.

- a. The SI has to ensure that all computers/client devices (in scope) have antimalware installed with the latest pattern files (optional component - if purchased by CWC).
- b. Real-time scan has to be enabled on all systems and users shall not be given the option of being able to uninstall the anti-malware client or stop a scheduled
- c. All clients shall be configured to receive the latest pattern file from the central anti-malware server.
- d. The SI shall configure the AV system to perform scheduled scans every day/week at a time decided mutually with CWC.

Denial of Service Attack

Non availability of any services shall be analyzed and forensic evidence shall be examined to check whether it was due to external DoS attack.

Security

The SI will be responsible to install and maintain security components at DC and DRC and project locations as per the requirements of the RFP

Intrusion

Compromise of any kind of data hosted by CWC.

Note: Forensic evidence shall be analysed for all incidents

Penalty for nonachievement of SLA Requirement

If the System Integrator is not able to meet the above defined service level requirement, then any deviation from the same would attract a penalty as per the following –

Security Incident	
Security Incident (Malware Attack/	INR 2,00,000 (Rupees two lakhs)
Denial of Service Attack/ Data Theft/	per incident
Loss of data/ Intrusion or Defacement)	

Security Equipment					
Any unauthorised changes to any of	INR 1,00,000 (Rupees one lac) per				
the security equipment (Router,	incident				
Firewall, IPS etc)					

Uptime of Security Equipment (100% uptime for IDS/IPS, Antimalware - beyond planned downtime) (Quarterly average)	>= 98 % to < 99.5%	>= 95% to < 98%	>= 90% to < 95%
Penalty	1.0 % of quarterly payment	2 % of quarterly payment	4 % of quarterly payment

 $^{^{\}star\star}$ For each additional drop of 5% in performance below 90, 5% of Quarterly payments of Operations & Maintenance cost will be levied as additional penalty

1.5.5. Helpdesk Resolution Time

Definition Description	and	Time in which a complaint / query is resolved after it has been reported by CWC to the helpdesk team of the System Integrator.
Service Level Requirement		The helpdesk agents are required to be available physically only during PBH. Any query after being given a response shall be classified for resolution in following four categories.
		Resolution Level 1 (R1): Queries regarding issues which have the greatest business impact wherein the user is not able to perform his/her regular work. For example, unable to login to the system due to errors in software, critical module not working etc.
		Resolution Level 2 (R2): Queries regarding issues which have medium business impact wherein the user is partially able to perform his/her regular work. For example, user is able to login and perform most of his normal work, but can't approve a certain request through system.
		Resolution Level 3 (R3): Queries regarding issues which have the least/no business impact involving cosmetic changes. For example, text alignment issues, change of background colour etc.
		Resolution Level 4 (R4): Queries regarding enhancement requests. For example, addition of new functionality etc. (CWC will collate and review the enhancements requests and initiate Change control process accordingly)
		The System Integrator shall provide service as per the following standards –

Type of Query	Maximum resolution time allowed	Performance baseline			
R1	4 business hours	All calls resolved within defined timeline			
R2	8 business hours	Atleast 99.5% calls resolved within defined timeline			
R3	16 business hours	Atleast 98% calls resolved within defined timeline			
R4	To be calculated in discussion with CWC on case by case basis.				

Measurement of Service Level Parameter

The service level would be defined in the number of business hours calculated from the date of logging the call/raising the request with the System Integrator.

The System Integrator shall provide help desk software / tools / mechanisms to measure the same. The tool / mechanism shall be able to provide CWC information about Help Desk Resolution Time, and historical information of the same. After categorizing the Response Type, this shall be appropriately entered into the Helpdesk Log.

Penalty for nonachievement of SLA Requirement

Delay of every Business Hour would attract a penalty per hour as per the following -

- 1. For R1 = 5 X Per hour Penalty (The Penalty per hour is INR 1000)
- 2. For R2 = 3 X Per hour Penalty (The Penalty per hour is INR 1000)
- 3. For R3 = 1 X Per hour Penalty (The Penalty per hour is INR 1000)

Note: after the lapse of the resolution time, the query / issue should be escalated as per the escalation matrix submitted by the bidder.

Also, there will be penalty on the overall percentage of incident not closed within stipulated time frame

1. For R1

Percentage of incident closed within stipulated time frame	>= 99 99.5%	%	to <	>= 98	% to < 9	99%	< 98%
Penalty	0.25 quarter paymer	-	of	0.5 quart paym	•	of	1 % of quarterly payment

2. For R2

Percentage of incident closed within stipulated time frame	>= 98 % to < 99.5%	>= 96% to < 98%	< 96%
Penalty	0.25 % of quarterly payment	0.5 % of quarterly payment	1 % of quarterly payment

3. For R3

Percentage of	>= 96 % to < 98%	>= 94% to < 96%	>= 92% to < 94%
incident closed			
within stipulated			
time frame			

Per	nalty	0.25	% (of	0.5	%	of	1 % of quarterly
		quarterly	/		quarter	·ly		payment
		payment			paymei	nt		

^{**} For each additional drop of 2% in the ticket closure volume below the defined thresholds for R1, R2 and R3 incidents, 1.5% of Quarterly payments of Operations & Maintenance cost will be levied as additional penalty

1.5.6. WMS application response time (including portal) at DC

CWC-WMS	The application	Application response	Penalty :
Application	response time for users	time will be measured on	
Response	should not exceed	the basis of automated	1. Login time
Time	1. Login to solution – 3	reports.	exceeds 3 sec –
	sec	The data should be	0.1% per second
	2. Functionality screen	captured through	per request
	load – 5 Sec	automated tools at least	2. Functionality
		1 hour during the	screen load
		business hours. Any	exceeds 5 sec -
		scheduled downtime	0.1% per second
		should not be included in	per request
		the calculation of	
		application response	
		time.	

1.5.7.Backup and Archival Management

Definition and Description	The System Integrator shall take backup as per the backup and archival policy (to be finalised in discussion with CWC).				
Service Level Requirement	,				
Measurement of Service Level Parameter	SI shall adhere the backup and archival schedule/frequency to atleast 99%. The parameter will be calculated on quarterly basis.				
Penalty for non- achievement of SLA Requirement	Data and mail >= 98 % to <				
	Penalty 0.25 % of 0.5 % of 1 % of quarterly quarterly quarterly				

	payment	pavment	payment
	payment	payment	payment

** For each additional miss of 2% from the backup frequency below 94%, 1.5% of Quarterly payments of Operations & Maintenance cost will be levied as additional penalty

1.5.8. Others

1.5.8.1. SLA on additional services/items

Any additional equipment/service/items supplied by SI-as per the SI's commercial proposal (on CWC's request) shall also be governed by the terms and conditions set out in this agreement.

1.5.8.2. Breach of SLA

In case the SI does not meet the service levels mentioned in this RFP, for two (2) continuous timeperiods (quarterly) as specified in the relevant clause, CWC will treat it as a case of breach of Service Level Agreement and CWC may consider withdrawing the Work Order with the System Integrator.

1.5.8.3. Exclusions (for penalty calculation)

The SI will be exempted from any delays or slippages on SLA parameters arising out of following reasons:-

- a. The non-compliance to the SLA other than for reasons beyond the control of the SI. Any such delays will be notified in writing to CWC by SI, will not be treated as breach of SLA from the SI's point of view.
- b. There is a force majeure event effecting the SLA which is beyond the control of the System Integrator

1.5.8.4. SLA Monitoring and Auditing

CWC will review the performance of SI against the SLA parameters each quarterly, or at any periodicity defined in this RFP document.

The review / audit report will form basis of any action relating to imposing penalty or breach of terms and conditions of work order. Any such review /Audit can be scheduled or unscheduled. The results will be shared with the SI as soon as possible.

CWC reserves the right to appoint a third-party auditor to validate the SLA.

1.5.8.5. SLA Monitoring Tool

The System Integrator shall provide adequate tools for capturing data required for measuring SLAs at no extra cost to CWC.

The Tool shall be tested and certified for its accuracy, reliability and completeness by CWC before it is deployed by SI.

The tools shall have the capability such that the CWC representative can log in anytime, without the involvement of SI, to see the status.

At the same time the SI would provide online helpdesk for users to log the calls.

If the measurement tool and/or data equivalent to more than 5% of sample size is missing or unavailable for a particular SLA metric or if the tool is found to be unreliable then the maximum penalty applicable against that metric will be applicable.

1.5.8.6. Reporting Procedures

The SI's representative will prepare and distribute SLA performance reports in an agreed upon format by the 10th calendar day / next working day of subsequent quarter of the reporting period. Also, SI would be required to provide SLA performance report monthly for CWC records.

The reports will include "actual versus target" SLA performance, a variance analysis and discussion of appropriate issues or significant events. Performance reports will be distributed to CWC

1.5.8.7. Maximum Penalty to SI for the SLA

The maximum penalty at any point of time on an additive basis in any quarter shall not exceed 20% of Quarterly payments due as per the Commercial Bid submitted by the System Integrator. This is applicable only for the Operation and Maintenance phase. In case the penalty exceeds 20%, CWC reserves the right to cancel the bid.

1.5.8.8. Issue Management Procedures

General

This process provides an appropriate management structure for the orderly consideration and resolution of business and operational issues in the event that quick consensus is not reached between CWC and SI. It is expected that this pre-defined process will only be used on an exception basis if issues are not resolved at lower management levels.

i. Issue Management Process

- a. Either CWC or SI may raise an issue by documenting the business or technical problem, which presents a reasonably objective summary of both points of view and identifies specific points of disagreement with possible solutions.
- b. CWC and the SI's representative will determine which committee or executive level shall logically be involved in resolution.
- c. A meeting or conference call will be conducted to resolve the issue in a timely manner. The documented issues will be distributed to the participants at least 24 hours prior to the discussion if the issue is not an emergency requiring immediate attention.
- d. Management of CWC and SI will develop a temporary, if needed, and the permanent solution for the problem at hand. The SI will then communicate the resolution to all interested parties.
- e. In the event a significant business issue is still unresolved, the arbitration procedures described in the RFP document will be used.

ii. Risk and Cost Factor

In the event of withdrawal of work order on the basis of non-performance by the SI as per SLA, SI will be solely responsible for risk and cost factor thereon.