

**Terms of Reference For
Selection of Agency
For
Design, Development of Warehouse Details
Management System (WDMS)
Department of Food & Public Distribution,
Ministry of Consumer Affairs, Food & Public
Distribution,
Government of India**

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E-NOTICE: Terms of Reference For Selection of Agency For design, development Warehouse Details Management System (WDMS)

Tender No. _____ **Dated: DD.MM.YYYY**

Important Dates	
Published date	
Bid document download start date	
Bid submission start date	
Pre bid queries submission date	
Pre bid meeting(if required, virtual format)	
Clarification end date	
Bid submission end date	
Date of Technical bid opening	
Date of Technical Presentation	
Financial bid submission date	
Date of Financial bid opening	

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(XXXXXXXXXXXXX)
New Delhi
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E-mail ID:

1. About Department of Food & Public Distribution

The primary policy objective of the Department of Food & Public Distribution is to ensure food security for the country through timely and efficient procurement, storage and distribution of Food grains. This involves procurement of various Food grains, building up and maintenance of food stocks, their storage, movement and delivery to the distributing agencies and monitoring of production, stock and price levels of Food grains.

The focus is on incentivizing farmers through fair value of their produce by way of Minimum Support Price mechanism, distribution of Food grains to Below Poverty Line (BPL) families and covering poor households at the risk of hunger under Antyodaya Anna Yojana (AAY), establishing grain banks in food scarce areas and involvement of Panchayati Raj Institutions in Public Distribution System (PDS). The Department is also responsible for formulation of policies concerning the sugar sector such as fixing of Fair and Remunerative Price (FRP) of sugarcane payable by Sugar factories, development and regulation of sugar industry (including training in sugar technology), fixation of levy price of sugar and its supply for PDS and regulation of supply of free sale sugar. The Department also formulates policies on export and import of Food grains, sugar and edible oils.

Storage Division deals with policy aspects related to creation of adequate storage capacity for Central Pool food stocks in order to ensure availability of quality foodgrains to the citizens of this country. It aims to set up modern and scientific storage facilities for safe storage of foodgrains for distribution through Public Distribution System. It partners in providing warehousing infrastructure for procurement and storage of agricultural and notified commodities through Food Corporation of India (FCI), Central Warehousing Corporation (CWC) and Central Railside Warehouse Company Limited (CRWC). It is the Administrative Division for CWC and CRWC which are Mini Ratna Public Sector Undertakings primarily for providing warehousing infrastructure for agriculture sector. This Division also formulates policies to regulate the warehousing sector through Warehousing Development & Regulatory Authority (WDRA).

2. Background

For the purpose of national level real time data of availability of warehouses and stocks kept thereon and to have adequate input data for emergency situations etc, DFPD has envisaged a national portal for collection of warehouse details. The portal will be National Database of warehouses storage capacities as well as commodity wise stocks. It will have details of warehouses like Warehouse Name, owner details, Geo Coordinates, address, depositors etc. and

depositor wise commodity stock for National level consolidation of total no of warehouses, storage capacity and availability of total stock. It will be the first-ever national database for storage Division of DFPD

3. Scope of Work-Application Workflow

a. General Feature

- There will be administration module wherein different users or group users, having various rights and privileges as defined by administrator, can be created, deleted or amended. Only role based access to different users will be permitted
- The application will fit in accordance with the present hierarchy of the Department i.e. Ministry, State/District, Block & Gram Panchayat etc
- Different users, through web based access, will be able to generate and print various types of reports and MISs (region/location-wise and for management level) in different permutations & combinations. The application software will have ability to view data in various formats namely PDF & Excel and print graphs/charts.
- The software will have in-built provision to take data back-up on the regular basis.
- System will be able to generate auto Email Alerts with projects' key information for users.
- Collection of warehouses details of all kinds of warehouse owners viz. Government, Private, public, cooperative, etc.
- Warehouses details shall enable department to have national level storage capacities at any point of time.
- The database will also help the department to get availability of state wise, sector wise or district wise storage capacity and hence the database will help the department during decision making for augmentation of storage structures across country.
- Collection of commodity stocks in the warehouse will enable department to have real-time stock position of Agri and Non Agri commodities state wise, district wise, and sector wise.
- Real time Stock position may also help department in optimizing the stock movement routs from one state to other states or within states or within districts

b. Application Workflow

A Responsive scalable dashboard application will be developed which will cover following features/ requirements:

1. Stakeholders: Below are the stakeholders in the application-

- Department of Food & Public Distribution
- Food Corporation of India
- Central Warehouse Corporation
- State Warehouse Corporation
- Corporative Society
- NABARD
- Public Sector Warehouse

- Private Warehouse and Warehouse Service Providers
- Other Government Application like Prayas,DGQI etc.

2. WarehousesRegistration:

- Public sector warehouse will have to registered themselves in the application by filling basic details
- User will fill registration form by filling details like
 - Location
 - Capacity
 - Address
 - Owner Details
 - Geo Coordinates
 - Contact Information etc.
 - Upload Support document like identity proof
- After filling the registration form, registration will forward to Portal admin for approval
- After registration, system will send user id and password on registered mobile number and email id to update profile and details.

3. API/Web Service Development

- Development of web services/API modules of warehouse details, Stock details, live CCTV Camera feed for on boarding of stakeholders like FCI, CWC, State SWCs, cooperative, public sector warehouse owners.
- Web Services/API will be developed by Department of Food & Public Distribution and consume by other stakeholders to push data
- Web Services/ APIs will configurable so that department can add/edit parameter without any manual efforts and Same will also reflect in both code & database
- All data received from Various website/ APIs will be stored in centralized database
- Data will be updated in dashboard on real time basis

4. Live Camera Feed

- System will have provision to fetch live camera feed from warehouse
- User can click on feed option and it will start streaming

5. Data Validation

- Proposed system will have feature ofinbuilt data validation in web services/APIs so that centralized database will received sanitized data

6. User Manager

- Can generate the reports
- Activate/Deactivate Users
- Assign role as per user's level
- Check reports as per his role & rights

7. MIS/ Reports/Dashboards:

The system shall support extensive reports on overall, system, MIS.

- Create a variety of intuitive analytics by using the data uploaded on servers. The charts and graphics may be, but not limited to, the following type-
 - Pie Chart
 - Line Chart
 - Map View – State/District Boundaries (Bharat map will be integrated with geo-tagged and geo-fenced information)
- It is proposed that the dashboard is made customizable with the administrator having choice over the type of chart and the variables to be plotted.
- Reports based on data available in the system like-
 - Warehouse details
 - National, State wise, sector wise or district wise
 - Storage capacity
 - Total Capacity
 - `Occupied
 - Available
 - Collection of commodity stocks in the warehouse
 - Commodity Stock Available (Real Time)
 - Data of the Public warehouse can be made open. However, the Private Warehouse data shall have restricted access.

8. Alert & Notification

- SMS gateway and email will be integrated in the application to send notifications at various stage to all stakeholders

9. Security and Business Continuity Features

- The application developed shall have Security Audit through CERT-IN empaneled agency.
- The application shall be developed in English
- Application shall be Responsive (Desktop/ Mobile/ Tablet Compatible)
- Application shall be Cross Browser & Cross Platform compatible for end users.

10. Document Management System(DMS)

Proposed system will have a document management system to storage, retrieval, sharing, tracking, revision, and distribution of documents. All document related to process will store DMS. Basic feature of the document management system are as below-

- **Upload File:** To upload single and multiple files
- **Metadata:** Store relevant customized metadata information. A document's **metadata** in a Document Management System are all associated pieces of information, that are stored in the DMS' database. The metadata does not only give information, but also allows for specific search and the filtering of search results.

- **List Uploaded Files:** To retrieve the list of uploaded files. It is possible to retrieve any documents stored in the system at any time and in as many copies as needed
- **Download File :** To download uploaded files
- **Version Control:** Version control gives you the ability to manage document changes and revisions--including going back to a previous version of a document.
- **Search Functionality:** To search documents on the metadata information stored. DMS provides flexible search tools that enable defining criteria according to the actual needs. The documents can be searched by title, author, or keywords found in the name or the content of the document
 - Safe and Powerful search
 - Document content and meta data search
 - Advanced search on all document attributes
 - Scalable Document Search Engine
- **Web Services Integration:** Customized web services will be written for integration with project.

c. Support & Maintenance

The onsite maintenance support for Three [3] year will start after the successful launching of the website. The SLA will be signed accordingly. The same will be extendable for a year as per DFPD discretion. It will include following-

1. Application Maintenance and Support Services

- Support & Maintenance shall commence upon the successful launching of the website. Provide diagnosis and problem resolution for incidents caused specifically by breaks in existing functional configuration and/or existing development.
- Maintain issues and resolution log for immediate corrective action and future references.
- Production support
- Support and Maintenance services provided, should assure round the clock availability of the system and associated Hardware, Software, Operating System, Database, User Interface, front end, back end and other software applications. The bidder would provide services on 24x7x365 days and shall have arrangement for them so as to ensure 99.5% availability of the Portal.

2. Server Management

- Monitoring of Servers and troubleshooting. Resolving server operations problems, like system 'hang', hard disk crash etc. and keeping a log of the same.
- Administrating and managing recovery plans.
- OS Administration/ Configuration
 - Installation of packages, upgrades and patches of OS and other software as and when Required
 - Re-installation OS and other software, as & when required
 - Password Management
 - Monitoring of CPU utilization, main memory, disk space usage
 - Overall performance monitoring and generation of logs every month
 - Restoration of operation of server backup after any failure. Using back up data.

- Performing quarterly system performance tuning for optimum performance-changing the system configuration parameters and reorganizing the disk space etc
- Support for installation & smooth running of various applications running on these servers

3. Database Management

- Installation, Administration and Maintenance of database Instances
- Create Users, authorize/assign permissions based on the level of database access the user would need.
- Fine Tuning and Vacuuming/Trimming of Database as and when required
- Backup & Recovery Management Services
- Troubleshoot various problems that arise in a day-to-day work and fix the issues
- Installation of Service Packs/Patches as and when required.

4. Backup and Recovery

It will cover various servers/VMs with OS deployed under this project

- Perform backup operation for the servers, as per defined Backup Strategy/Schedule, as mutually agreed between DFPD Team & the bidder based on system requirement.
- Secure storage and handling of media to prevent data loss.
- Maintain log sheets of backups taken

d. Security Management

- Analyze the adequacy of security systems in place.
- Adequacy of the authentication schemes used by different application.
- Integration of authentication with associated database.
- Ensure SSL (Secure Socket Layer) communication over Internet.
- Ensure Virus/Malware control.
- Security Penetration Testing
- Comprehensive Portal documentation to be maintained as per guidelines incorporated in ISMS 27000 standards.

e. Application Services Management

- Ensure access to the Portal, hosted on servers under the scope of this contract, through Internet.
- Ensure minimum 99.5% System Availability
- Forcibly terminating all open but inactive connections.
- Session control based on the user activities.
- Performance tuning of Portal deployed for optimum results.
- Ensure hassle free integration of web services and applications with the associated database for contents management and storage.
- Ensuring that the Portal can handle multimedia files (Video/Audio).
- Managing user and admin accounts and maintaining log of activities.
- System shall also have a monitoring tool for the no. of tickets raised, acknowledged and resolved for solution. The access of same should also be with DFPD to monitor the nature of

complaint and their status for solution.

- Support DFPD in security audit, hosting, testing and rollout the portal.
- Regularly monitor and manage the activities pertaining to the on-boarded stakeholders in the portal.

f. Hosting:

The web application would be hosted at NIC Cloud environment. Hosting of the website will be done by the agency with the allocated credentials provided by NIC. Agency will need to work closely with NIC to deploy designed and developed website on NIC server/cloud

g. Deliverables

1. Website
2. System Requirement Specification (SRS) Document
3. User Manual
4. Technical Documents
5. Training Documents
6. Security Audit Certificate
7. Source Code
8. Test case and Test Reports

h. Proposed Technology

- The application front end and back end shall be developed using dot.net core 3.0/ open source technology and PostgreSQL/ MySQL/ MonogoDB etc database.

4. Penalty Clause:

- As per the NICS terms and condition.

5. Copyrights and Trade Marks

The source code, text, design, trademarks, photos and graphics in editable mode, or other art work furnished in designing of the portal shall be owned by DFPD upon completion of the successful implementation by bidder. Complete documentation, source code of the website has to be provided as it should be copyright to DFPD.

6. Non-Disclosure Agreement

- As per the NICS terms and condition.

7. Liabilities from the Contract

- As per the NICS terms and condition.

8. Arbitration

- As per the NICS terms and condition.

9. Laws Governing the Contract

- As per the NICSI terms and condition.

10. Force Majeure

- As per the NICSI terms and condition.

11. Payment Milestone

S. No.	Milestone/ Deliverable	Timelines	Amount Due
			(In % age)
1	SRS and Home Page Design Approval	T0+4 Week	20% of Development Cost
2	UAT on Agency Server	T0+14 Week	40% of Development Cost
3	After Security Audit	T0+16 Week	20% of Development Cost
4	Cost of Security Audit	T0+16 Week	Security Audit Charges
5	Go Live on NIC Server	T0+16 Week	20% of Development Cost

Note: - The payment of the AMC charges shall be done on quarterly basis as per the prevailing terms and conditions of the NICSI.

12. Project Time Line

Project Development duration will be 4 Months after award the work for development. After Go Live, Support and maintenance will be for 3 Year including, one year warranty and 2 year AMC.

13. Technical Evaluation (QCBS based) criteria for selection of proposal

The technical evaluation of the bidders shall be made on the following points:

S. No.	Evaluation Criteria	Marks
1.	About your Organization	Turnover, Certification , exposure to international clients, etc.
2.	Executed web design projects / web application development, support and maintenance, revamping, updation projects with each project of min value Rs. 50 Lakh during the last 5 FY(2016-17, 2017-18, 2018-19, 2019-20, 2020-21) – Maximum 10 Projects – Three marks for each centre/state government or PSU project , Two mark for each other project.	Max 30 marks – Supporting Document: Work order copy along with go live certificate from user and security audit clearance certificate.

3	National / International Awards won for agency's developed website/portal for any government ministries/departments. 2 marks for each certificate + WO 1 marks for each appreciation + WO	Work Order Copy + Certificate/Award Proof – Max – 10 Marks Max – 3 Certificate Max – 5 Appreciation
4.	Technical Presentation on the understanding of the scope of requirement, methodology for design & development	Requirement Understanding – 10 Marks Proposed Solution(design) – 20 Marks Proposed Technology/Platform – 10 marks Project Approach & Timeline - 10 Marks Innovative Ideas & Suggestions – 10 Marks Max 60 Marks

- Minimum 70 Marks are mandatory in technical evaluation & for financial opening.
- QCBS will be followed for further evaluation, with 70% technical weightage and 30% financial weightage.
- The separate rate shall be quoted for the AMC.

Method of Selection:

Quality and Cost Based Selection (QCBS)-Least Cost Selection (Lump Sum); wherein 70% weightage will be given to the Technical proposal and 30% to the financial proposal.

QCBS - 70:30(Quality (70%) cum Cost (30%) Based Selection)

The price Proposal of only those companies who qualify technically will be opened.

QCBS Evaluation:

The selection of agency will be evaluated as per the combined quality cum cost based system:

- The Technical proposals will be allotted weightage of 70%, while the financial proposals will be allotted weightages of 30%
- Financial proposal with the lowest cost will be given a financial score of 100 and other proposals will be given financial scores that are inversely proportional to their prices.
- The total score, both technical and financial, shall be obtained by weighing the quality and cost scores and adding them up.
- On the basis of the combined weighted score for quality and costs, the agency shall be ranked in terms of the total score obtained. The proposal obtaining the highest total score in evaluation of quality and costs will be ranked as H-1 followed by the proposals securing lesser marks as H-2, H-3 etc. The proposal securing the highest combined marks and ranked H-1 would be recommended for award of the contract.
- An example to explain the evaluation methodology to be adopted is given below for the information of the agency:
 - Suppose 3 proposals are received from agency A, B & C respectively, they would first be given marks for evaluation of their technical proposal/presentation as per the criteria given above. Suppose the agency A, B and C are allotted 75, 80 and 90 marks respectively, they would all become eligible for opening of their financial proposal.
 - Suppose the committee examined the financial proposals and evaluated the quoted prices as under:

Proposal Evaluated cost:-

- A Rs. 120
B Rs.100
C Rs.110
- vi. Using the Formula LEC/EC , where, LEC stands for Lowest Evaluated Cost and EC stands for Evaluated Cost. The financial proposal will be given the following points for financial proposals:
A: $(100/120) \times 100 = 83$ Points
B: $(100/100) \times 100 = 100$ Points
C: $(100/110) \times 100 = 91$ Points
- vii. Thereafter, for the purpose of obtaining the combined score proposals will be evaluated by using the Formula as shown below:-
A. Proposal A: $75 \times 0.70 + 83 \times 0.30 = 77.40$ Points
B. Proposal B: $80 \times 0.70 + 100 \times 0.30 = 86.00$ Points

14. General Terms & Conditions

- Bidder should read this condition carefully and comply strictly while submitting the proposal.
- DFPD has reserved the right to cancel the proposal without any information and reason
- The bidder should invariably fill up all the columns above and submit the necessary enclosures/documents or else the bid shall be liable for rejection.
- Non-acceptance/Non-confirmation for the above required aspects shall be liable for rejection of the bid.
- The qualified bidder has responsible to Development, maintenance and hosting of the website at NIC Cloud environment.
- Development, maintenance and hosting of the website should be in time line.
- For any further query you may write to DFPD through mail.
