



# The Bhagirathi Cooperative Milk Producers' Union Limited

(A Govt. of West Bengal Project)

BU:STORE:IMS:0213

Dated: 26.04.2024

## NOTICE INVITING QUOTATION

The Bhagirathi Cooperative Milk Producers' Union Limited invites Offline Quotations from individual developers, firms, companies for development, installation, testing commissioning and deployment of **Web-based Inventory Management System (IMS) for The Bhagirathi Co-operative Milk Producers' Union Limited** as per terms and conditions mentioned hereunder:

1. Bidders are required to study the SRS as per **Annexure A**, understand the requirement and then quote their rate.
2. Bidders are required to quote their lowest and best competitive rate/offer in sealed envelope addressing to the Managing Director of the Milk Union. The rate quoted must be inclusive of all taxes and levies. No extra incidental charges shall be provided.
3. The existing Inventory Management System may be studied for reference for quoting the rates.
4. The developed software must be as per the Standard Operating Procedures of the Milk Union.
5. As it a Govt. of West Bengal Project supplier must maintain absolute confidentiality regarding the data content of the software.
6. The selected bidder may have to enter into a Non-disclosure agreement of data with the Milk Union if the Milk Union decides so.
7. 50% Payment shall be made in NEFT/RTGS in the bank account of the bidder after successful delivery. Remaining 50% shall be paid after 30-60 days of successful deployment of the system.
8. Bug fixes is to be done during testing. If it comes to the notice of the Milk Union that there are major bugs in the system, Milk Union may withhold the payment.
9. Bidder must provide GST Registration Certificate along with the most competitive offer.
10. **The last date and time of bid submission shall be 06.05.2024 at 1600 hrs in The Bhagirathi Cooperative Milk Producers' Union Limited, Feeder Dairy Panchanantala, NH-34, Chaltia, Berhampore Murshidabad Pin-742165.**



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11. Free online support must be given for 2 year. Failure to provide support shall lead to forfeiture of payment.
12. Hosting of data in the Server should be done by the developing agency/company. In this case the Milk Union shall make actual payment to the developing agency/company. The company has to produce the actual bill/invoice from the principal company for release of payment.
13. The rate quoted must be valid for 6 months and not subject to any escalation.
14. The Milk Union may ask the lowest bidder to submit a security deposit of Rs.5000/- prior before release of Work Order if the Milk Union thinks so.
15. The intending bidder has to submit the following documents in the offer:
  1. **Details of the bidder like firm name, address etc.**
  2. **GST Registration Certificate.**
  3. **Commercial Offer as per Annexure B**
16. For any dispute between the service provider and the Milk Union the decision of the Milk Union shall be final and binding.
17. The Milk Union reserves the right to accept or reject any bids at any point of time or to cancel the entire tender without assigning any reason thereof.

Sd/-  
Managing Director  
The Bhagirathi Milk Union

Copy forwarded to:

1. Official Website ( [www.bhagirathimilk.com](http://www.bhagirathimilk.com))



# The Bhagirathi Cooperative Milk Producers' Union Limited

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## Annexure-A

### Software Requirements Specification (SRS) for Web-based Inventory Management System (IMS) for The Bhagirathi Co-operative Milk Producers' Union Limited

#### 1. Introduction

##### 1.1 Purpose

The purpose of this document is to outline the requirements for the development of a Web-based Inventory Management System (IMS) tailored for The Bhagirathi Co-operative Milk Producers' Union Limited. This system will manage inventory, track dairy products, consumables, handle perishable goods, and facilitate order processing.

##### 1.2 Scope

The Web-based Inventory Management System (IMS) will cater to the store department of Bhagirathi Milk Union, helping them manage inventory, sales and distribution effectively.

##### 1.3 Definitions, Acronyms, and Abbreviations

- IMS : Inventory Management System
- SKU : Stock Keeping Unit
- API : Application Programming Interface
- FIFO : First In, First Out
- FEFO : First Expiry, First Out
- GRN: Goods Receipt Note
- MRN: Material Return Note
- PO: Purchase Order
- DCS: Dairy Cooperative Society
- QA : Quality Assurance
- UI : User Interface
- UX : User Experience

##### 1.4 References

- Model around our existing software, reach out for more information.

##### 1.5 Overview

This SRS document provides detailed requirements, functionalities, and specifications for the Web-based IMS tailored for the Bhagirathi Milk Union's store department.



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## 2. Overall Description

### 2.1 Product Perspective

The Web-based IMS must seamlessly integrate with entire supply chain to provide real-time inventory tracking and management.

### 2.2 Product Functions

- Inventory management of spares, consumables, components, chemicals and reagents, medicines, stationeries, capital items used in the organization
- Stationary item inventory management used by various department of the Milk union and Societies (DCS).
- Dairy Product inventory management.
- Reporting and analytics.

### 2.3 User Classes and Characteristics

- Store Employees
- All Departments
- Administrators

### 2.4 Operating Environment

- Web-based application accessible via modern web browsers.
- Backend application should be agnostic to operating systems and platforms.
- S3 compatible file attachment store.
- Frontend technology (Angular 16 or higher).
- Backend technology (Nest.js, Node.js Framework).
- Backend database optimized for dairy industry data (PostgreSQL).
- Hosting on a secure and scalable cloud platform (Containerized, AWS/GCP).

### 2.5 Design and Implementation Constraints

- Compliance with dairy industry regulations.

### 2.6 Assumptions and Dependencies

- Availability of APIs for integration with existing systems.
- Reliable internet connection for users.

## 3. Specific Requirements

### 3.1 Functional Requirements



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## 3.1.1 Inventory Management

- Add and edit Genre and delete empty genre.
- Add and edit Goods (consumables, ingredients, chemicals and reagents stationeries, assets, machineries, components, spares etc.) under different genre and delete unused good.
- Monitor daily use goods (Reorder Level, Critical level, Danger level).
- Set and manage expiry dates for perishable goods.
- Inventory listing module should have smart lookup and shorting functionalities.
- All inventory should have standard stock management and flow control algorithm implemented (FIFO, FEFO).

## 3.1.2 Employee Master

- Add New Employee.
- Edit employee details.
- Employee listing module should have smart lookup and shorting functionalities.

## 3.1.3 Department Master

- Add New Department.
- Edit department details.
- Department listing module should have smart lookup and shorting functionalities.

## 3.1.4 Society (DCS) Master

- Add New Society (DCS).
- Edit Society details.
- Society listing module should have smart lookup and shorting functionalities.

## 3.1.5 Distributor Master

- Add New Distributor.
- Edit distributor details.
- Distributor listing module should have smart lookup and shorting functionalities.

## 3.1.6 Supplier Master

- Add New Supplier.
- Edit Supplier details.
- Supplier listing module should have smart lookup and shorting functionalities.

## 3.1.7 Production Unit Master



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- Add New Production unit.
- Edit Production unit details.
- Production unit listing module should have smart lookup and shorting functionalities.

## 3.1.8 Indent Management

- Add New Indent.
- Edit and delete indent until Purchase Order is issued.
- Indent listing module should have smart lookup and shorting functionalities.

## 3.1.9 Purchase Order Management

- Create New Purchase Order (PO) on existing indent.
- Edit and delete unprocessed PO.
- PO listing module should have smart lookup and shorting functionalities.

## 3.1.10 Process Management

- Start new process on existing PO.
- Edit and delete process if GRN not made.
- Process listing module should have smart lookup and shorting functionalities.

## 3.1.11 GRN Management

- Make new GRN on existing process.
- Create new batches for each GRN item.
- GRN listing module should have smart lookup and shorting functionalities.

## 3.1.12 MRN Management

- Make new Material Return Note (MRN)
- Create new batches for each MRN items.
- MRN listing module should have smart lookup and shorting functionalities.

## 3.1.13 Departmental Requisition Management

- Add new departmental requisition.
- Edit, Delete departmental requisition until Challan issued.
- Departmental requisition listing module should have smart lookup and shorting functionalities.

## 3.1.14 Departmental Challan Management



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- Departmental challan listing module should have smart lookup and shorting functionalities.

### 3.1.15 Society Requisition Management

- Add new society requisition.
- Edit, Delete society requisition until Invoice issued.
- Society listing module should have smart lookup and shorting functionalities.

### 3.1.16 Society Invoice Management

- Society invoice listing module should have smart lookup and shorting functionalities.

### 3.1.17 Distributor Invoice Management

- Add new distributor invoice.
- Edit, Delete distributor invoice until road challan issued.
- Distributor invoice listing module should have smart lookup and shorting functionalities.

### 3.1.18 Product Inventory Management

- Add, edit, and delete dairy products.
- Product listing module should have smart lookup and shorting functionalities.
- Set and manage expiry dates for perishable goods.
- Monitor shelf life and expiration dates.
- Generate alerts for expiring products.
- Dairy product inventory should have standard stock management and flow control algorithm implemented (FIFO, FEFO).

### 3.1.19 Distributor Challan Management

- Create new road challan for product disbursement.
- Distributor road challan listing module should have smart lookup and shorting functionalities.

### 3.1.20 Cash Purchase Management

- Add new requisition for cash purchase.
- Make GRN for cash purchase.
- Cash purchase requisition and GRN listing module should have smart lookup and shorting functionalities.

### 3.1.21 Reporting and Analytics



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- Generate various reports (e.g., consumption rate of materials, inventory holding cost, actual cost of material, sales, safety stock, reorder level, Pareto Analysis, ABC analysis).
- Visual analytics dashboard with customizable views.
- Export data for further analysis.

## 3.1.22 User Management

- User registration and authentication.
- Role-based access control tailored for dairy industry roles.
- User profile management.

## 3.2 Non-functional Requirements

### 3.2.1 Performance

- Response time should be less than 2 seconds.
- Support for 100+ concurrent user access.

### 3.2.2 Security

- Data encryption (at rest and in transit).
- Role-based access control with Keycloak or equivalent authentication system.

### 3.2.3 Usability

- Intuitive UI/UX design tailored for Bhagirathi Milk Union users.
- Mobile-responsive interface.

### 3.2.4 Reliability

- High availability with 99.99% uptime.
- Daily automated backups.

### 3.2.5 Scalability

- Horizontally and Vertically scalable architecture with distributed database to support growth in operations.
- Load balancing and caching mechanisms.

## 3.3 Interface Requirements

### 3.3.1 User Interfaces

- Dashboard for quick overview.





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- Interactive forms for data entry and editing.
- Reporting and analytics dashboard.

## 3.3.2 Software Interfaces

- APIs for integration with dairy production systems, distribution channels, and retail platforms.
- Database interfaces for data retrieval and storage.

## 3.3.3 Communication Interfaces

- Secure HTTPS communication.
- Email and SMS notifications for alerts and updates.

## 3.4 System Features

- All the listing modules should have smart lookup and shorting functionalities.
- Batch processing capabilities.
- All the printing modules should support generic laser printer.

**Sd/-**  
Managing Director  
The Bhagirathi Milk Union



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## Annexure-B Commercial Offer

The Managing Director  
The Bhagirathi Cooperative  
Milk Producers Union Limited  
Feeder Dairy Panchanantala  
Berhampore, Mursidabad  
Pin-742165

**Sub: Offer for development, installation, testing commissioning and deployment of Web-based Inventory Management System (IMS) for The Bhagirathi Co-operative Milk Producers' Union Limited**

Sir,

I have read the entire NIQ document understood the terms and conditions and thereby quote my best rate/offer as follows:

SL. No.	Particulars	Basic Price	GST @ 18%	Total
1.	Development, installation, testing commissioning and deployment of Web-based Inventory Management System (IMS) for The Bhagirathi Co-operative Milk Producers' Union Limited as per Software Requirements Specification in Annexure-A	To be quoted by the bidder	To be quoted by the bidder	To be quoted by the bidder

**Signature of Bidder with Date**