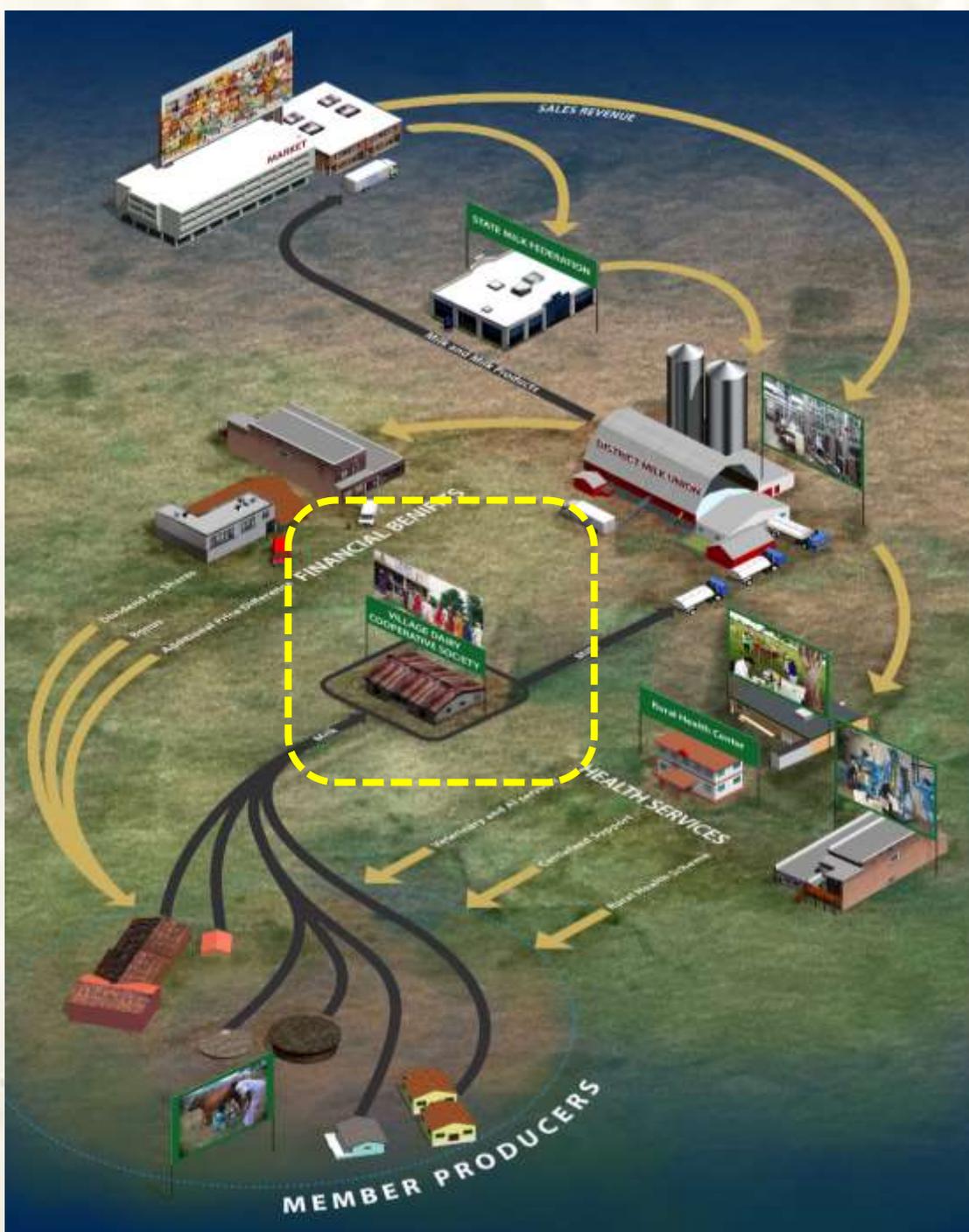


## Improving Process Efficiency at DCS Level

Niraj P Garg  
NDDB, Anand

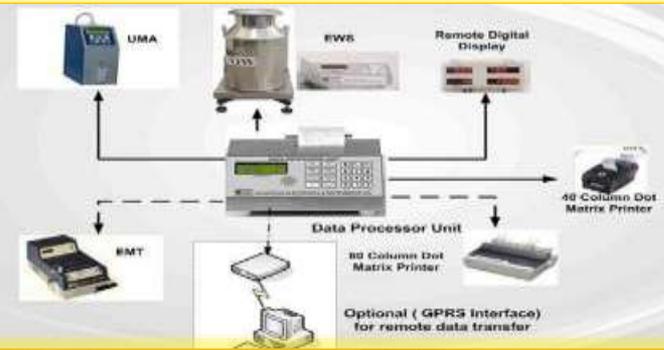


# A typical Dairy Value Chain

Focus on

- Operations at DCS Level
- DCS interactions with Dairy

# Approaches





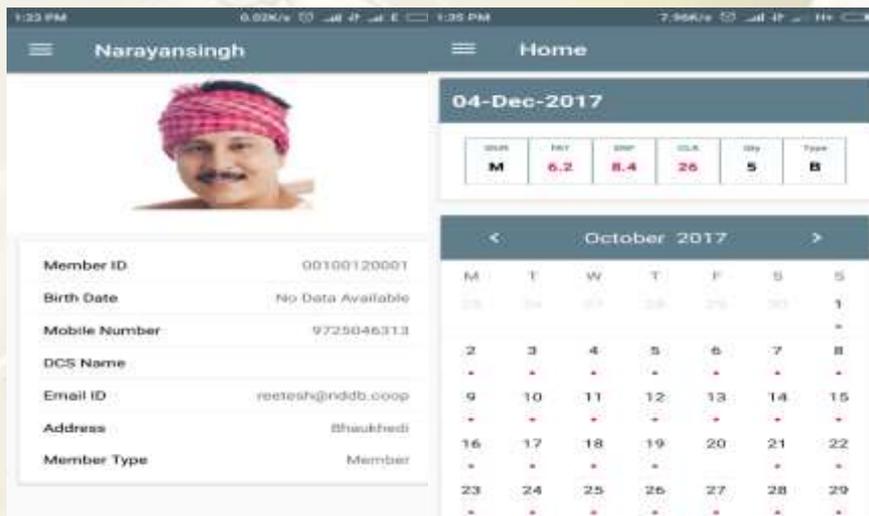
# AMCS Components



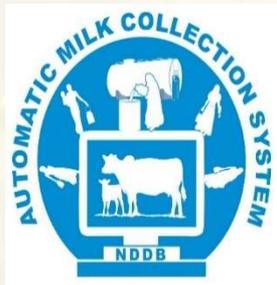
Desktop Application



Portal Applications

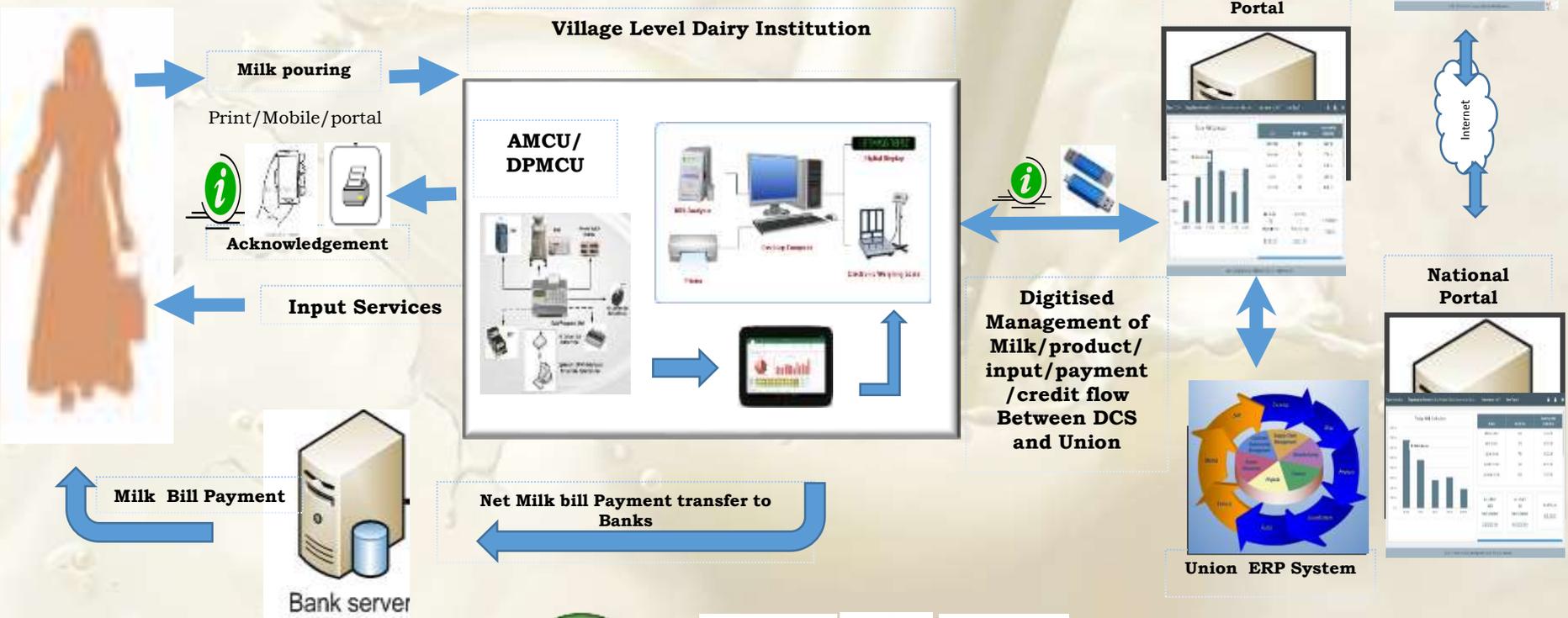


Mobile Applications



# Automated Milk Collection System

A robust, integrated, multi-platform multilingual software for complete Village level Dairy Institution's operations, integrated at Union/Federation/National levels to enable transparency and key Informatics based on Open Source Stack.





# Society Organization

**Society Organization**

**Member Registration**

**Staff Management**

**Share Management**

**Meeting Management**



**Society Registration**

**Pourer Registration**

**Staff Details**

**Allocation / Deductions**

**Election**

**Group DCS / Sub Center**

**Animal Details**

**Attendance**

**Certificates**

**Meetings**

**Additional Information**

**Payroll**

**Transfer / Refund**

**Minutes / ATR**



# Milk Collection

**Milk  
Collection**

**Bulk Cooling  
operation**

**Local Milk  
Sales**

**Milk Dispatch  
to Plant**

**Receipt at  
Plant**

Item	Unit	Rate	Quantity	Amount
Milk	Litres	1.00	1000	1000.00
Churn	Units	50.00	10	500.00
Butter	Units	100.00	5	500.00
Skimmed Milk	Litres	1.00	1000	1000.00
Whole Milk	Litres	1.00	1000	1000.00



Item	Unit	Rate	Quantity	Amount
Milk	Litres	1.00	1000	1000.00
Churn	Units	50.00	10	500.00
Butter	Units	100.00	5	500.00
Skimmed Milk	Litres	1.00	1000	1000.00
Whole Milk	Litres	1.00	1000	1000.00

Item	Unit	Rate	Quantity	Amount
Milk	Litres	1.00	1000	1000.00
Churn	Units	50.00	10	500.00
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Skimmed Milk	Litres	1.00	1000	1000.00
Whole Milk	Litres	1.00	1000	1000.00

**Purchase Rate**

**Running  
Hours &  
Consumption**

**Rate  
Management**

**Dispatch  
Challan**

**Dispatch  
Receipts**

**Equipment  
Integration**

**Parameter  
Recording**

**Dynamic  
Credit Control**

**Payment  
Cycle**

**Dispatch/Receipt  
Reconciliation**



# Product Management

**Requisition**

**Dispatch**

**Receipt @  
DCS**

**Sale**

Item Code	Description	Quantity	Status
00000001	Item 1	10	Open
00000002	Item 2	5	Open
00000003	Item 3	15	Open
00000004	Item 4	8	Open



Item Code	Quantity	Price
00000001	10	100
00000002	5	50
00000003	15	150
00000004	8	80



**Product  
Management**

**Consumer and  
Trade Schemes**

**Product Stock**

**Product Rate  
Management**

**Integration with  
Ordering System**

**Dynamic Credit  
Limit validation**

**Multiple UoM**

**Product Accounting**



# Financials

## Core Accounting

Common Ledgers

Bill & Vouchers

Financial Reports

## Bill Generation

Sl. No.	Member No.	Member Name	Grade	Quantity	Rate	Amount	Remarks
1	1001	Member A	Grade 1	10	100	1000	
2	1002	Member B	Grade 2	15	120	1800	
3	1003	Member C	Grade 3	20	150	3000	
4	1004	Member D	Grade 4	25	180	4500	
5	1005	Member E	Grade 5	30	200	6000	
6	1006	Member F	Grade 6	35	220	7700	
7	1007	Member G	Grade 7	40	250	10000	
8	1008	Member H	Grade 8	45	280	12600	
9	1009	Member I	Grade 9	50	300	15000	
10	1010	Member J	Grade 10	55	320	17600	

Milk Payments

Adjustments

Direct Bank Transfer

## Payment Disbursement

Member No.	Member Name	Grade	Quantity	Rate	Amount	Remarks
1001	Member A	Grade 1	10	100	1000	
1002	Member B	Grade 2	15	120	1800	
1003	Member C	Grade 3	20	150	3000	
1004	Member D	Grade 4	25	180	4500	
1005	Member E	Grade 5	30	200	6000	
1006	Member F	Grade 6	35	220	7700	
1007	Member G	Grade 7	40	250	10000	
1008	Member H	Grade 8	45	280	12600	
1009	Member I	Grade 9	50	300	15000	
1010	Member J	Grade 10	55	320	17600	

Installment Adjustment

Payment confirmation

## Bonus Distribution

Member No.	Member Name	Grade	Quantity	Rate	Amount	Remarks
1001	Member A	Grade 1	10	100	1000	
1002	Member B	Grade 2	15	120	1800	
1003	Member C	Grade 3	20	150	3000	
1004	Member D	Grade 4	25	180	4500	
1005	Member E	Grade 5	30	200	6000	
1006	Member F	Grade 6	35	220	7700	
1007	Member G	Grade 7	40	250	10000	
1008	Member H	Grade 8	45	280	12600	
1009	Member I	Grade 9	50	300	15000	
1010	Member J	Grade 10	55	320	17600	

Selection Criteria

Bonus Declaration

Automated Accounting



# Audit & Alert Management

**Audit Query**

**Audit Response**

**Acknowledgement**

**Closure**



**Intelligent Audit Query generation**

**Receipt of Audit Alerts**

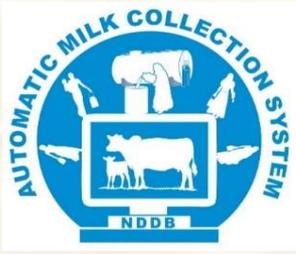
**Query response receipt**

**Automated Alert on the query**

**Response to Audit query**

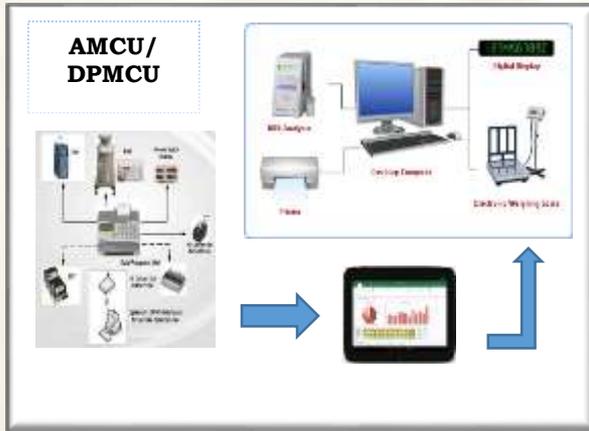
**Audit regeneration**

**Audit Closure**



# Common Multilingual Portals

## Village Level Dairy Institution



## Milk Union Portal



## Federation Portal



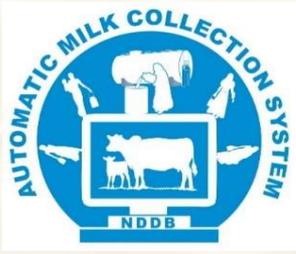
## National Portal



## Union ERP System



Real Time / Periodic , Intelligent, Configurable, Multi Way, Multi-Mode Closed Loop Feedback Enabled **Data Synchronization** apart from **Centralized Management and backup.**



# Secure Installation & Activation Process

Installation of AMCS Application



Activation at Union Portal & Key Generation



DCS Secretary receives Activation Code in his/her mobile



Validation & Data Synchronisation



Acknowledgement by Union Officials



AMCS Application Activation



# Multilingual Mobile Applications



## Farmer

- Access to Farmers' own data
- Last few Transactions
- Balance check
- Payments Alerts

## DCS Secretary

- Details of milk received at dairy
- Audit observations by Supervisor and response to the same
- Balance check at dairy & alerts on dispatches
- Ordering and Order Status query to dairy

## Dairy Supervisor

- Access to requisite DCS's data
- List of exceptional transactions
- Raising and following up on audit queries
- Details of milk received at dairy & milk supplier



# Technology

- Application supporting Windows , Linux and Android Platform



- Application supporting older machines to reduce Replacement Cost
- Application build using Open Source Components to reduce TCO



- Support **11 Regional Languages** Assamese, Bengali, Gujarati, Hindi, Kannada, Malayalam, Marathi, Odia, Punjabi, Tamil, Telugu.



# Key Benefits

- Single Application supporting multiple deployment scenarios
- Security along with Flexibility
- Process Standardization
- Transparent & Automated Accounting
- Centralized Audit and Alerts
- Centralized Management
- Native Integration with Union Systems
- One Click Backup and Restore
- Extremely Low TCO



**Thank You!**

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