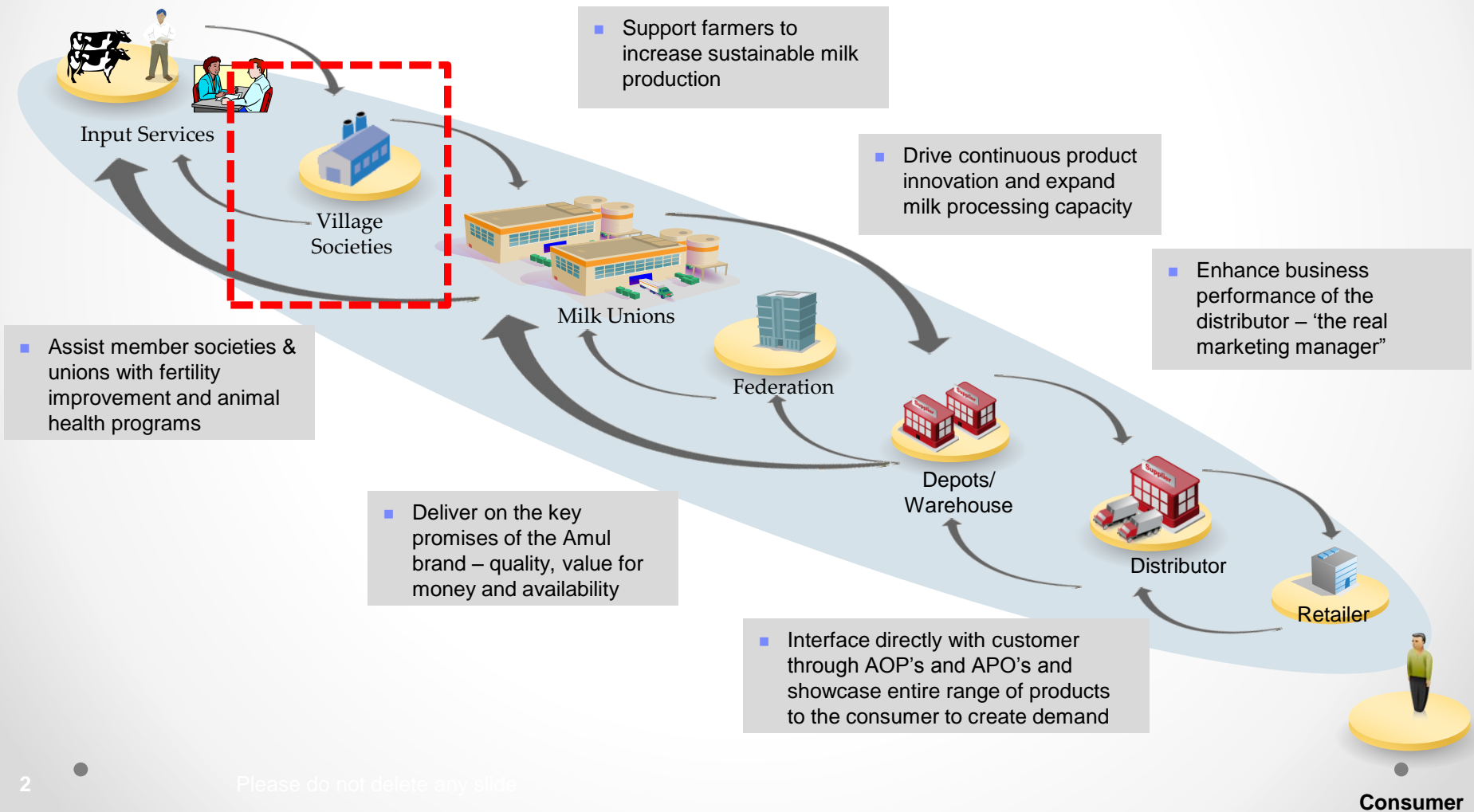


Technological Interventions in Strengthening Cooperative Network

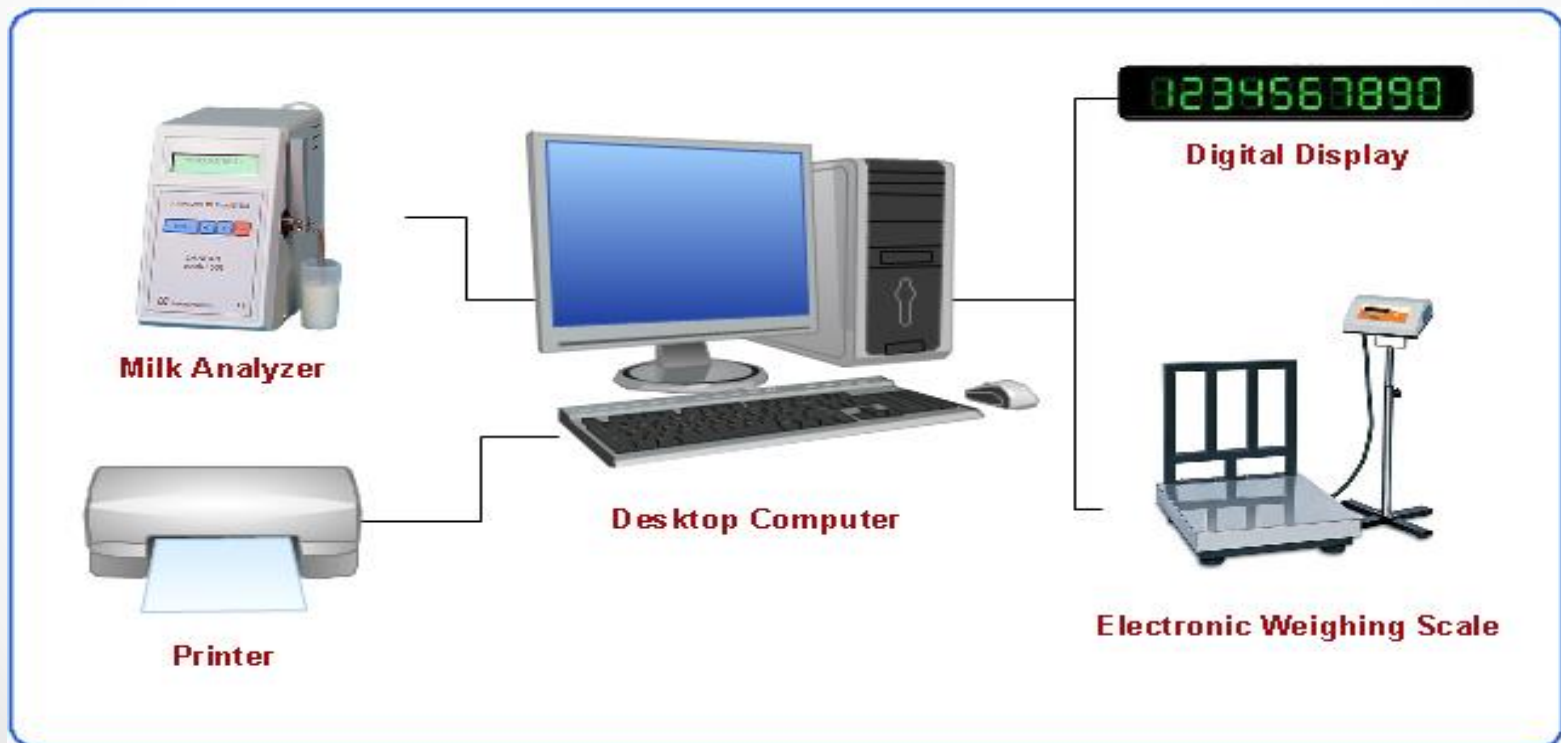
Niraj P Garg
Niraj@nddb.coop

Cooperatives' Mission: Give farmer '*the best price*' for his milk and consumer '*value for money*' for the product



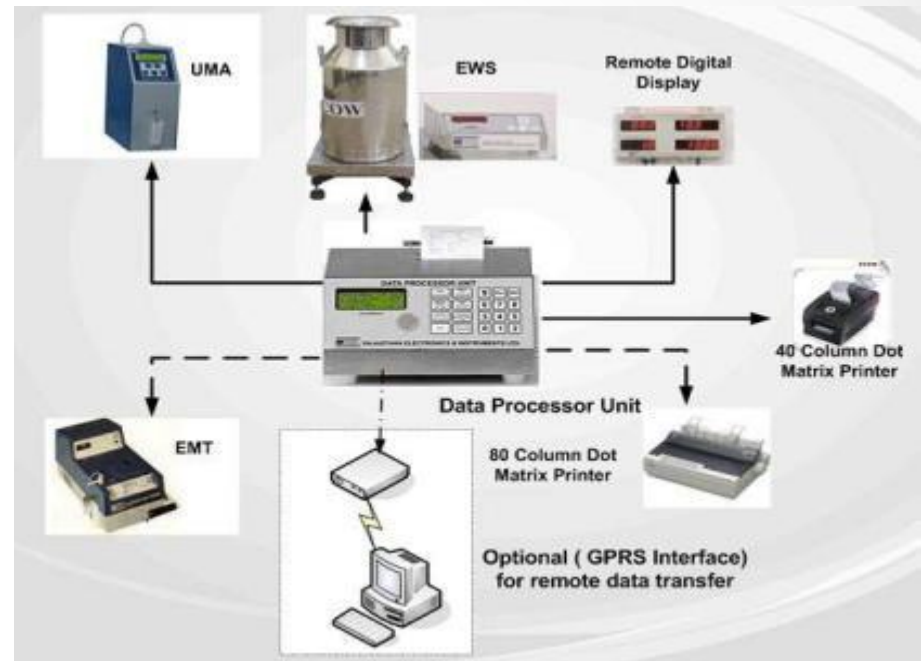
Automatic Milk Collection Stations

- A PC based Automatic Milk Collection Unit (PC based AMCU), which automates the milk collection process at Milk Collection Centers.
- It is a complete milk procurement setup in which the Weighing Scale & Milk Analyzer are integrated with PC with software.



Micro Processor based AMCU

- Capture FAT / SNF from EMT/ Milk-analyser
- Internal weight capturing.
- Option for entry of CLR in case of EMT interface
- Slip print out for member milk transactions.
- Shift end summary.
- Dispatch and Acknowledgement Slips.
- Data Security feature.
- User friendly operation.
- Rugged to work in rural conditions.
- Instant Data Processing & Transfer
- Secured Rate Chart Downloading
- Storage for 200 Members / 15 Days
- Optional Solar Power Module Integration



Handheld AMCU

Lypsää
Cute

- Handheld Small Footprint integrated device
- **Low Cost** State of Art product with capacity of high speed data processing and storage



- Solar Powered
- Touch Screen
- Thermal Printer Support
- PC Key-Board Interface
- Data Transfer Facility
- Embedded Linux

Mobile AMCU



Components

- Data Processor with In-built Printer & Splitter
- Milk Analyser
- Electronic Hanging Weighing Scale
- Digital Display

Use Cases

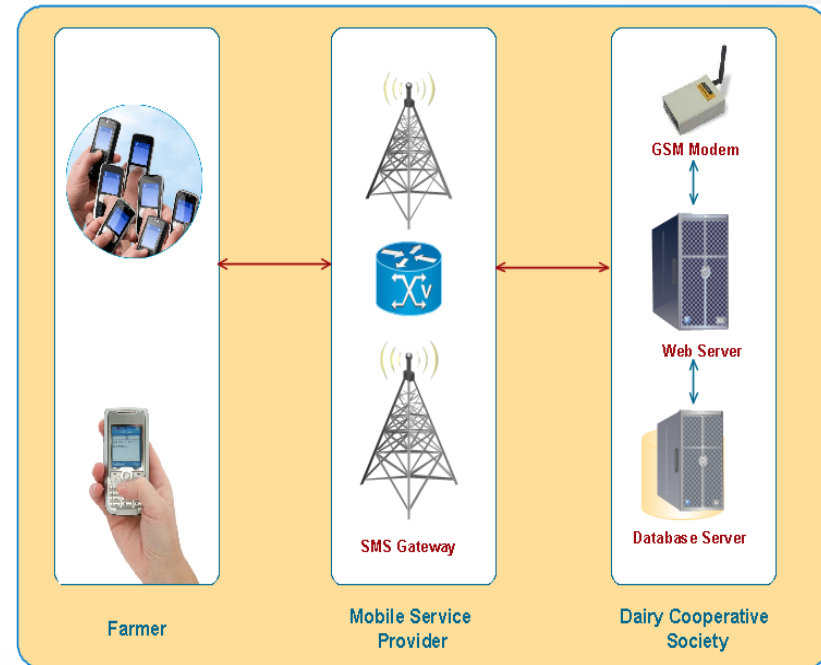
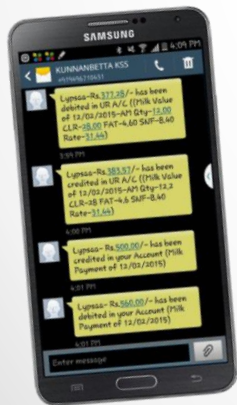
- Mobile Collection Unit
- Can be used to collect milk directly from the Farm.

Variations

- Android Tablet instead of Hand Held Terminal
- Sample Collection and later testing at Main DCS

SMS Response System

- It is designed for the farmers to provide an SMS based query response system.
- It **answers** against the Farmers common query like
 - Milk Quantity
 - Milk Quality
 - Balance Due
 - Today's Price



Information Kiosk

- Farmer-friendly touch screen Kiosk in **local language**
- It delivers farmer-centric information to public
 - Cow herding guidelines
 - News and Events
 - Promotional Messages
 - Resources related to agricultural and dairying
 - Extension and Advisory Services
 - Display of Information Brochures
 - Poster Display



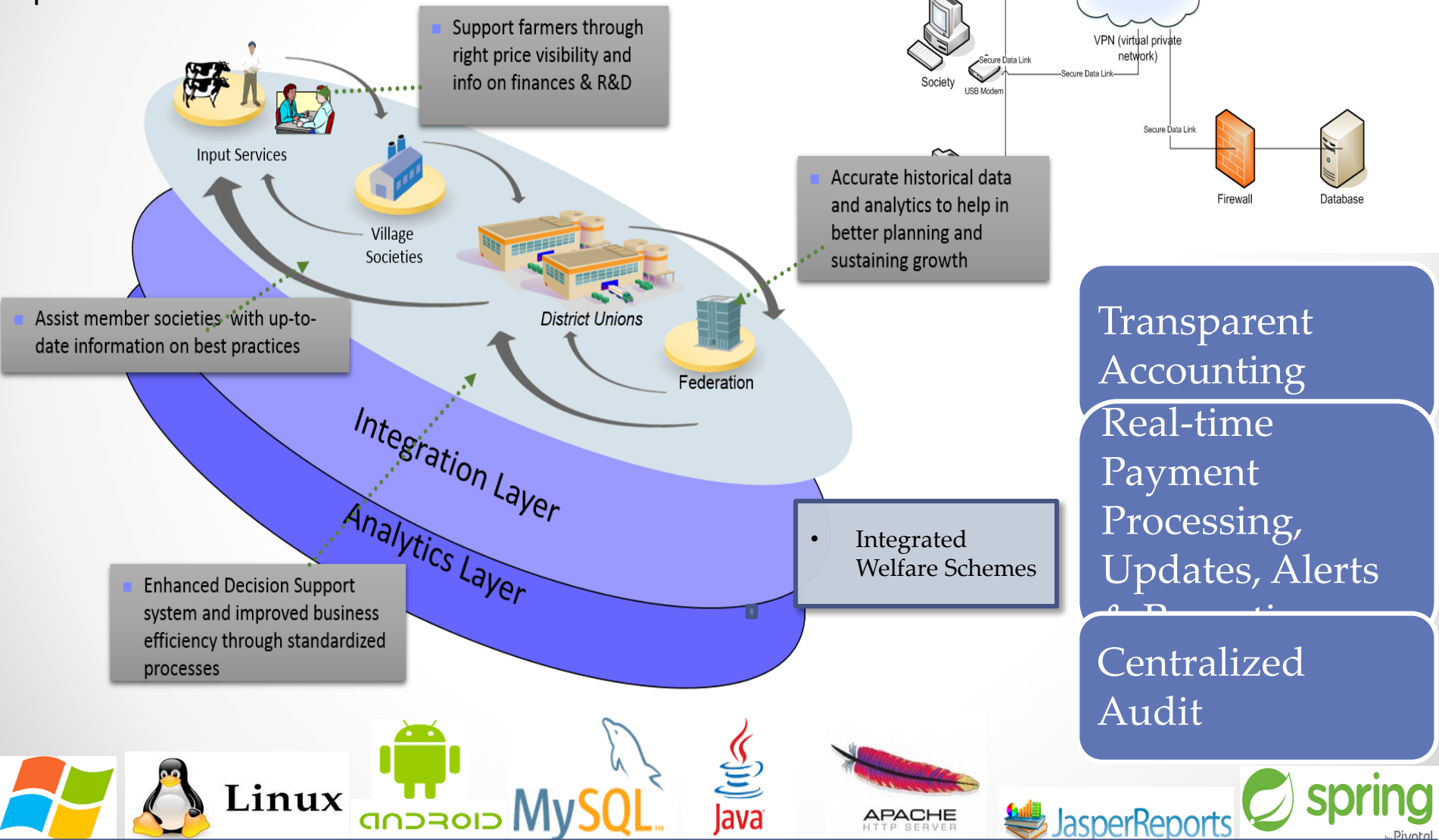
Digital Pass Book

- It is a virtual passbook solution resembling physical passbook.
- Farmers can access their transactions & Deliver DCS level statistics
 - Milk Qty Poured
 - Milk Quality
 - Milk Value
 - Cattle Feed
 - Cash Payment
 - Membership
 - Transaction History
 - Charts



Automated Milk Collection System

AMCS: A robust, integrated, multilingual software for complete DCS operations, integrated at Union/Federation/National levels to enable transparency and key Informatics based on Open Source Stack.



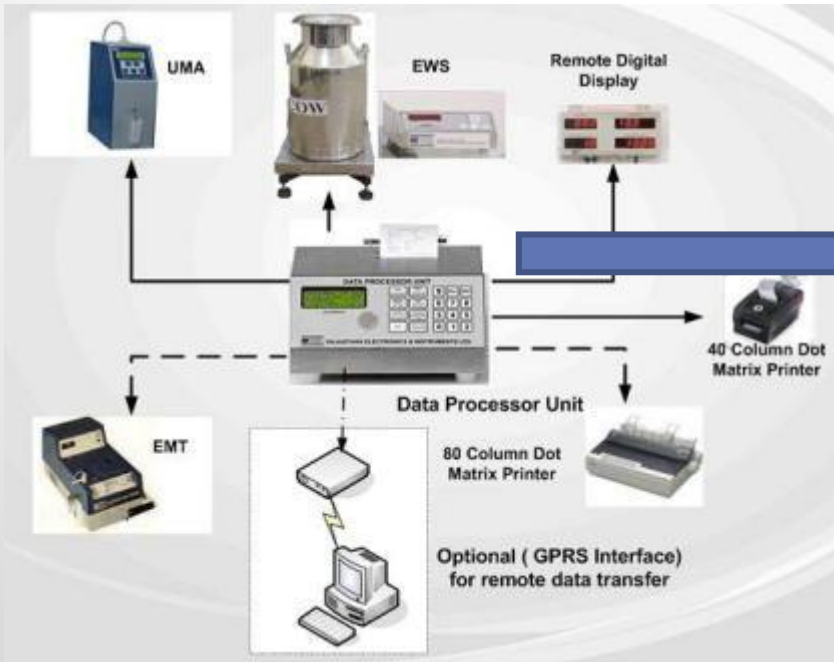
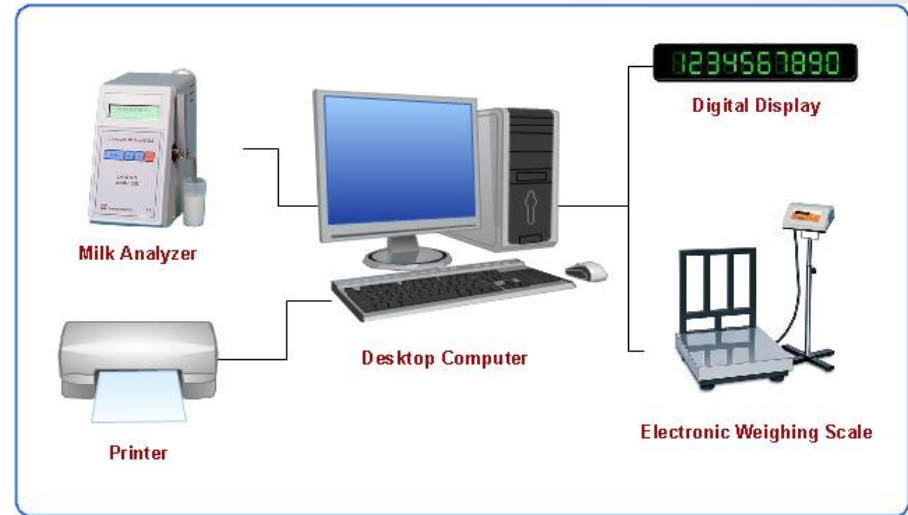
Common, Multilingual Automated Milk Collection System

- **Part A:** Common, Multilingual **AMCU Application** at DCS Level
Focus on all Operations including financial Accounting
- **Part B:** Common, Multilingual **Centralized AMCU Portal**
Focus on Multi-level Centralized Data Pooling
- **Part C:** Common, Multilingual **Mobile Application** for **Society Secretary, Dairy Supervisor and Farmer**
Focus on core information availability at multiple levels
- **Part D: Deployment Support** for Application and Portal
Focus on Deployment, Enhancement and Support Operations

Common, Multilingual AMCU Application

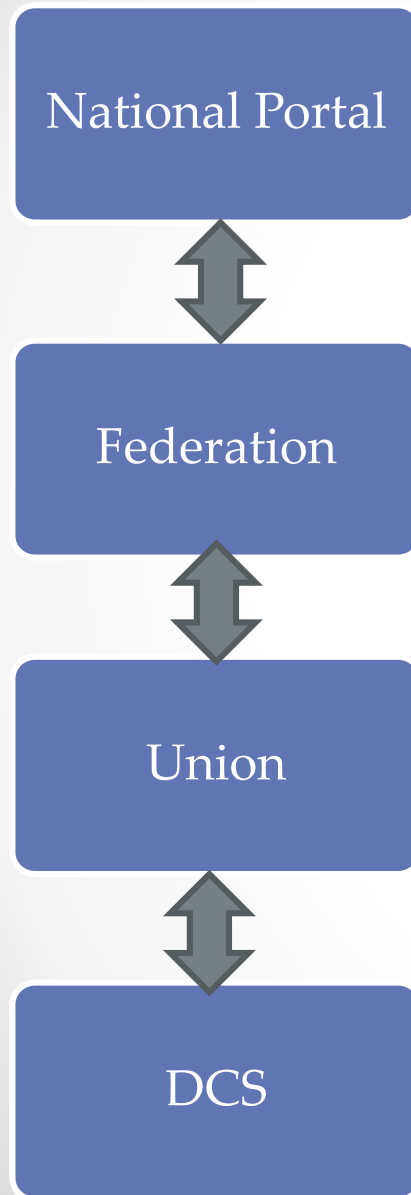
Equipment Integration

- Configurable integration to support multiple versions of
 - Milk Analyzer
 - Electronic Weigh Scale
 - Remote Display Unit



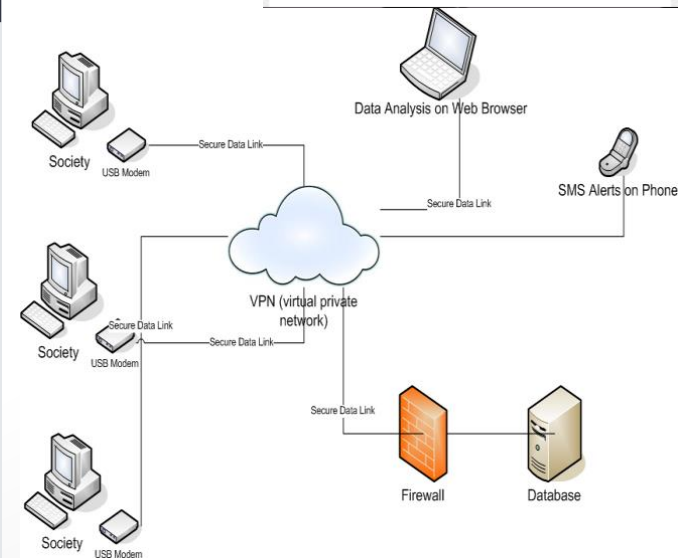
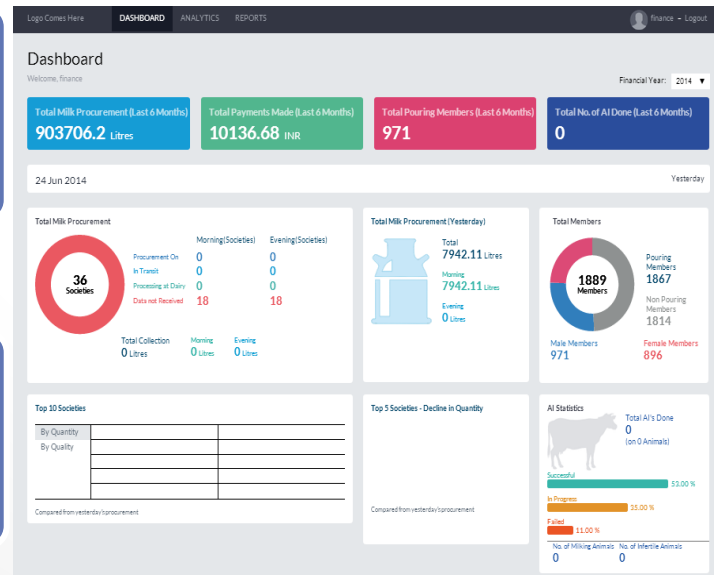
One-way data import from **DPMCU** into **Android Version of Application** on a **Tablet** can provide complete **AMCU functionality**.

Common, Multilingual Centralized Portal



- Multilevel (National, Federation, Union) Portal
- Real Time / Periodic , Intelligent, Configurable, Multi Way, Multi-Mode (Online, GPRS, Flash Drive etc.) Closed Loop Feedback Enabled Data Synchronization.
- Masters / Rate Management
- Support for rule-based, centralized audit
- Online Rate Chart, Circulars,
- Online Milk Reconciliation
- Online Order/ Dispatch Management
- Provision for Direct Benefit Transfer
- Integration with Union ERP System
- DCS Data Backup

Administration
Reports
Milk Purchase Register
Truck Sheet
Milk Edit
Local Sales
Item Purchase
Item Purchase Return
Item Sale
Item Sale Return
Stock Statement
Purchase Summary



Common, Multilingual Mobile Application

Application for Farmers

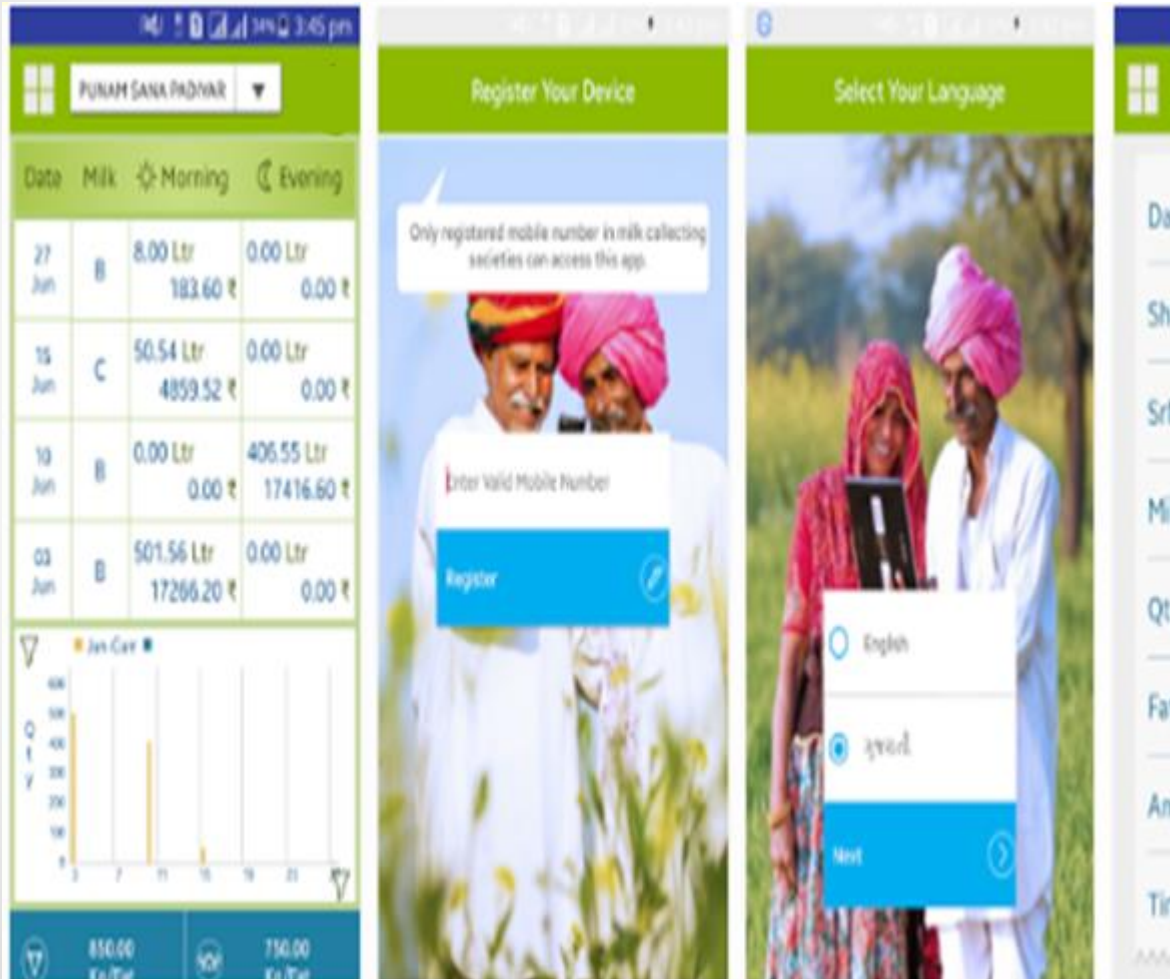
- Android based Application
- Validation by Mobile Number provided at Registration.
- Access to Farmers' own data
- Last few transactions
- Balance check
- Payment Alerts, etc



These facilities would be available on the Common Portal as well.

Common, Multilingual Mobile Application

Application for DCS Secretary



- Android based Application
- Validation by Mobile Number provided at `Registration.
- 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 dairy

These facilities would be available on the Common Portal as well.

Common, Multilingual Mobile Application

Application for Society

The screenshot displays a mobile application interface for audits. It features three checklist tables and an 'Audit Observation' form.

Checklist 1: STORE

#	Check item	Description	Score
			0 1 2 3 4
1	Materials or parts	Does the inventory or in-process inventory include and unrecorded materials or parts?	✓
2	Machines or equipment	Are there any unused machines or other equipment around?	✓
3	Jigs, tools, or dies	Are there any unused jigs, tools, dies or similar items around?	✓
4	Visual control	Is it obvious which items have been marked as unnecessary?	✓
5	Written standards	Has establishing the SDs left behind any useless standard?	✓
Sub Total			9

Checklist 2: Warehouse

#	Check item	Description	Score
			0 1 2 3 4
6	Location indicators	Are shelves and other storage areas marked with location indicators and addresses?	✓
7	Item indicators	Do the shelves have signboards showing which items go where?	✓
8	Quantity indicators	Are the maximum and minimum allowable quantities indicated?	
9	Demarcation of entryway and in-process inventory area	Are white lines or other markers used to clearly indicate walkways and storage areas?	✓
10	Jigs and tools	Are jigs and tools arranged more rationally to facilitate picking them up and returning them?	
Sub Total			1

Checklist 3: Warehouse

#	Check item	Description	Score
			0 1
11	Floors	Are floors kept shiny clean and free of waste, water and oil?	✓
12	Machines	Are the machine wiped clean often and kept free of sludge, chips and oil?	
13	Cleaning and checking	Is equipment inspection combined with equipment maintenance?	✓
14	Cleaning responsibilities	Is there a person responsible for overseeing cleaning operations?	
15	Habitual cleanliness	Do operators habitually wipe floors, and wipe equipment without being told?	✓
Sub Total			0

Audit Observation Form

Audit Observation

DCS: Sub Center:

Code: Date: Auditor Code: Auditor Name:

Object: Module:

Observations:

Attachment:

Audit Observation

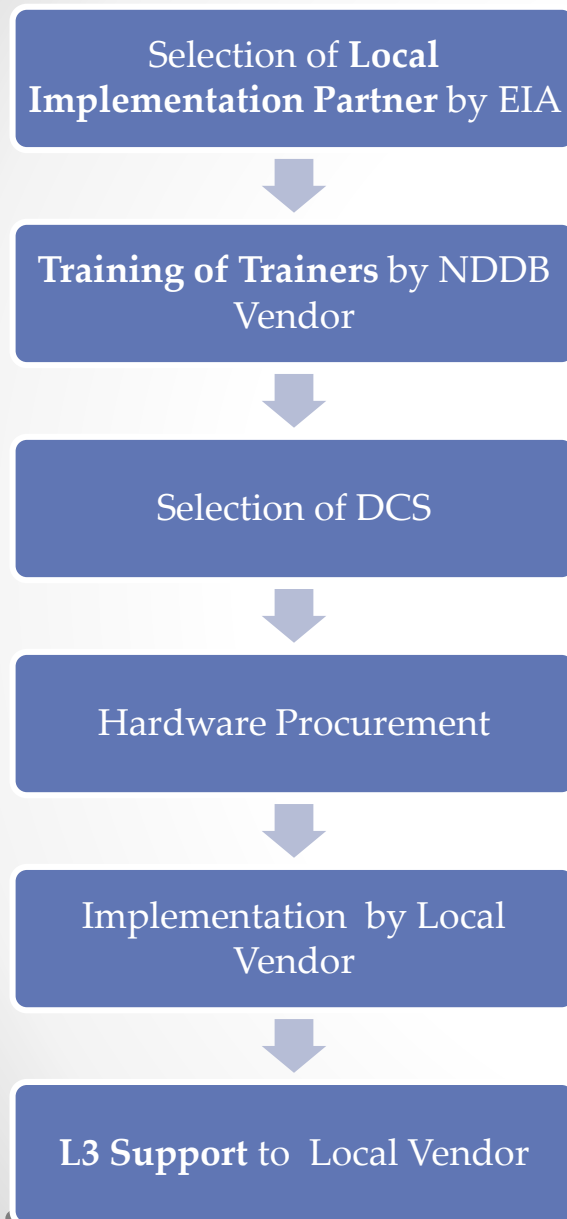
Object	Module	Observation

Legend: 0 Very Bad 1 Bad 2 Average 3 Good 4 Very Good

- Android based Application
- Validation by Mobile Number provided at Registration.
- 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

These facilities would be available on the Common Portal as well.

Deployment Support for Application and Portal



Comprehensive Training Plan

- Trainers Training
- End User (DCS) Training
- Supervisor / Auditor Training

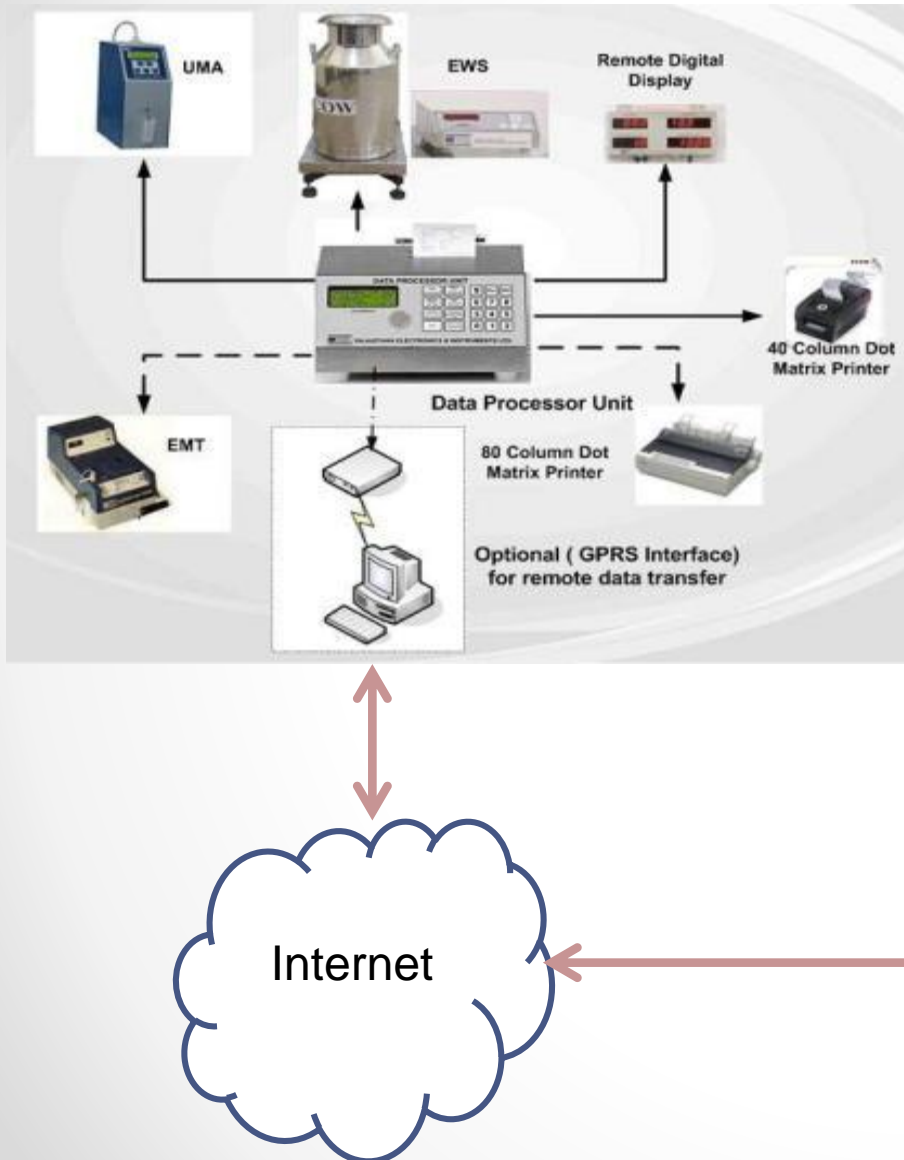
Detailed Multi-lingual Training Manual

- Trainers Training
- End User (DCS) Training
- Supervisor / Auditor Training

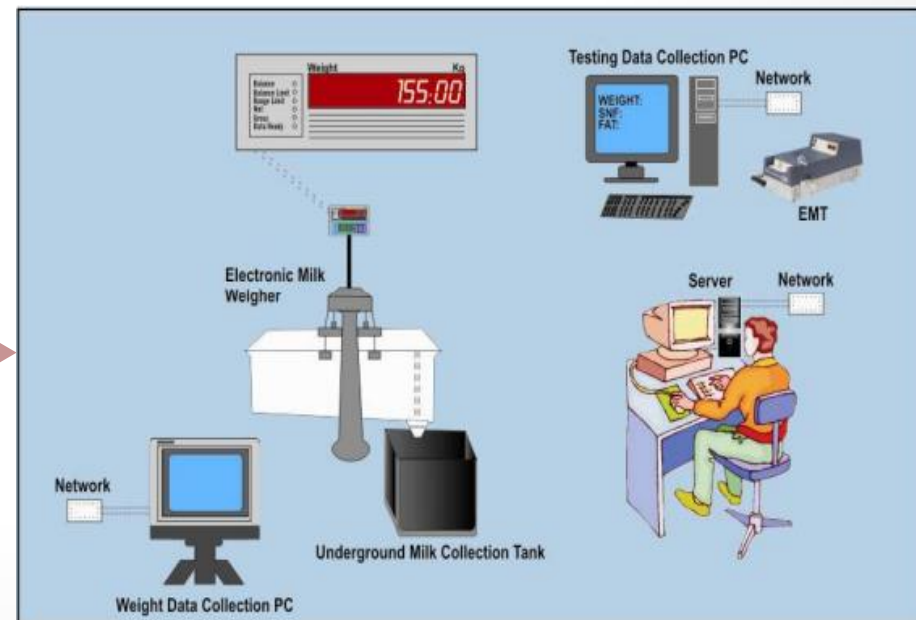
L3 Support to Local Vendor

- Comprehensive Support Portal
- Remote Desktop Support
- Feedback based Enhancement
- Refresher Training

AMCU/DPMCU - RMRD Linkages



- Linking Milk dispatch to dairy with Milk Reception at RMRD Dock before arrival of vehicle.
- Online Instant Alarms for low Reception



BMC Data Logger

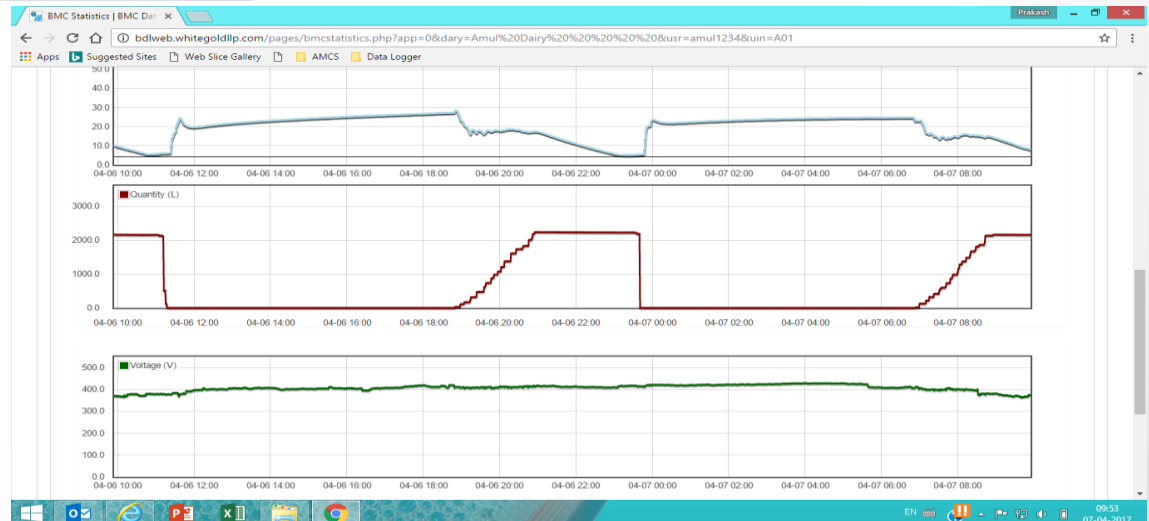
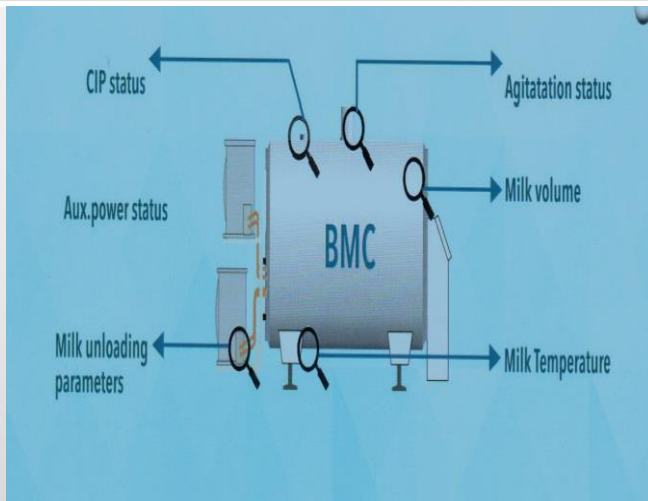
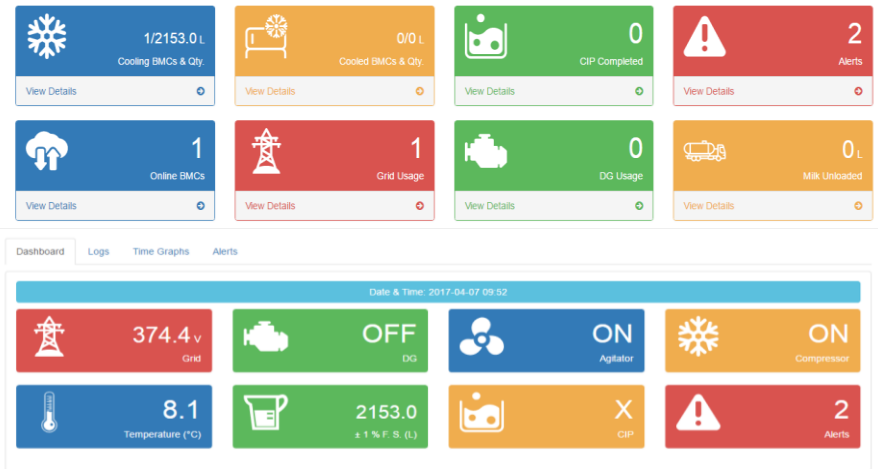
Web-based, real-time monitoring and reporting system for Bulk Milk Cooler.



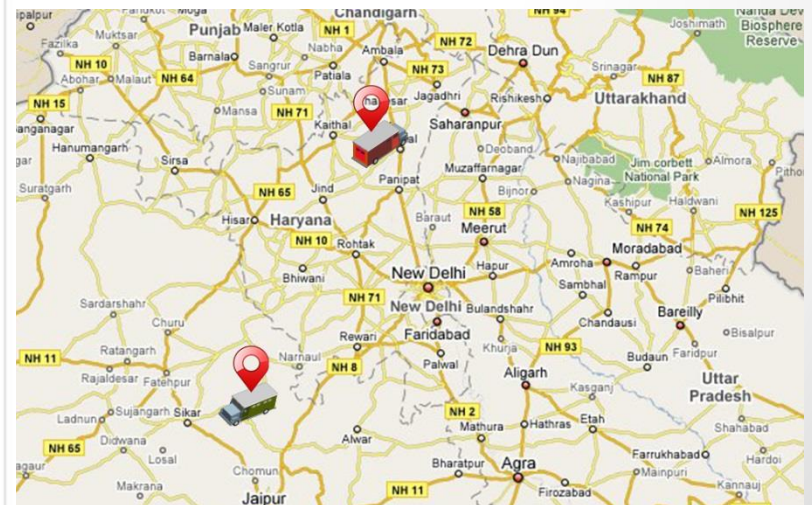
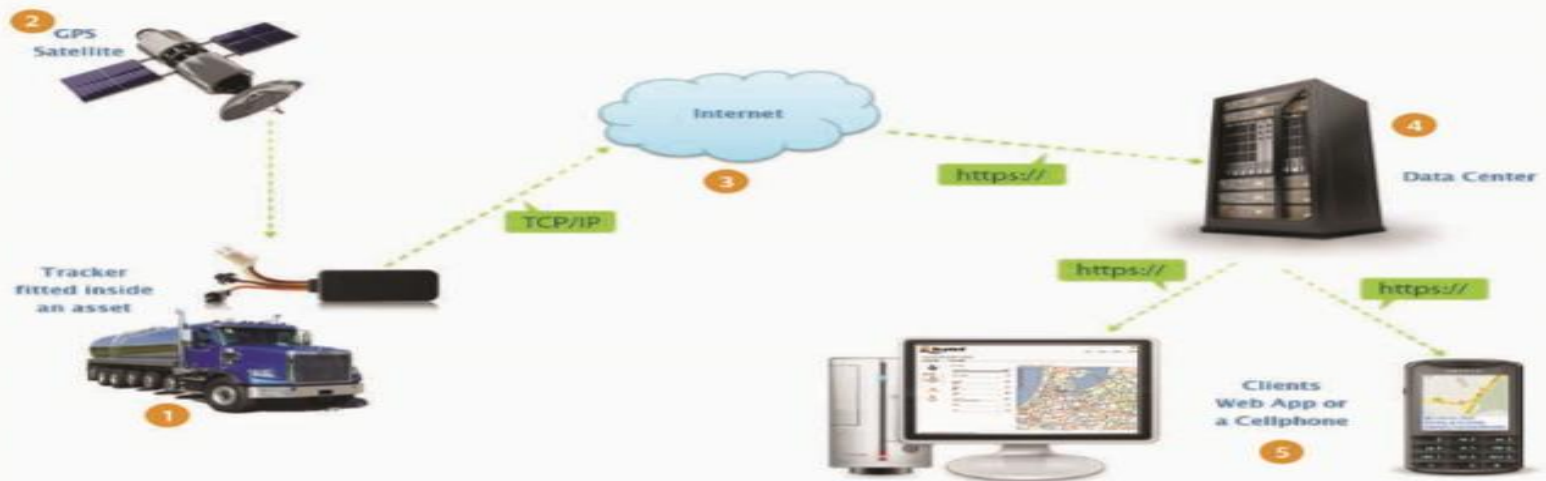
Monitoring

- Milk Volume & Temp.
- Compressor Running hours
- Power supply / DG set Operation
- Agitator
- CIP adherence/ Compliance

Dashboard



Vehicle Tracking System



Network at a glance

- Analytical reports
- BV Estimation

INAPH

NDDDB



Participating Organization



CEO

AI Delivery

Progeny Testing

Nutrition

Veterinary

Laboratories

Support Staff



Field Staff



AI Technicians

Milk Recorders

Local Resource Person

Veterinarians



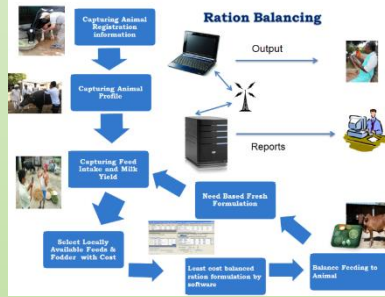
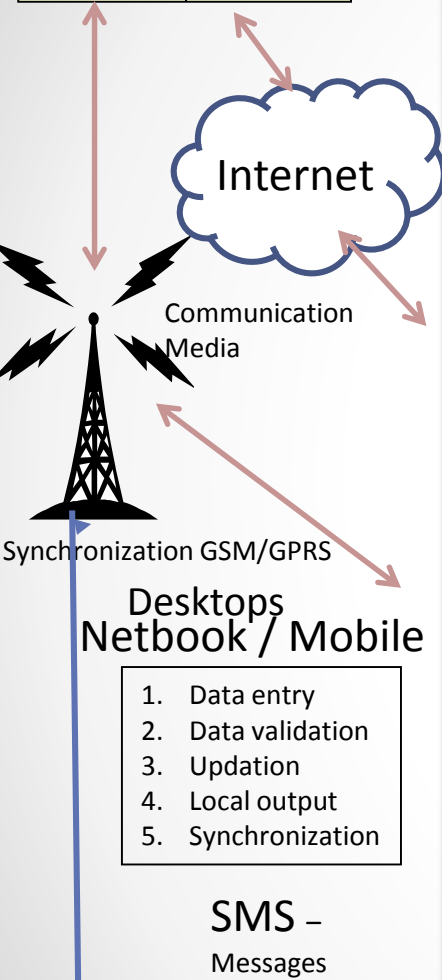
Milk Component Testing Lab



Nutrition Lab.



Disease Diag. Lab.



Farmer with animals in a village

Field IT Application that facilitates the capturing of **real time reliable data** on **Breeding, Nutrition and Health Service** delivered at Farmer's Doorstep

INAPH

On Demand Services

Requirement

- Trained Field Service Providers with access to INAPH and ear tagging facilities.
- Accurate Database of All Trained Service Provider mapped with villages
- Call Centers for Call Management .
- Responsive on field Tracking and Monitoring Support mechanism.

Request for Service by Farmer over Phone/Web (Service Type, Location)

Allocation of Service Request to designated Field Worker. (Sms to farmer / Worker)

Visit of Worker at Farmers' Doorstep after telephonic Confirmation

Farmer Registration. Animal Ear Tagging and Registration

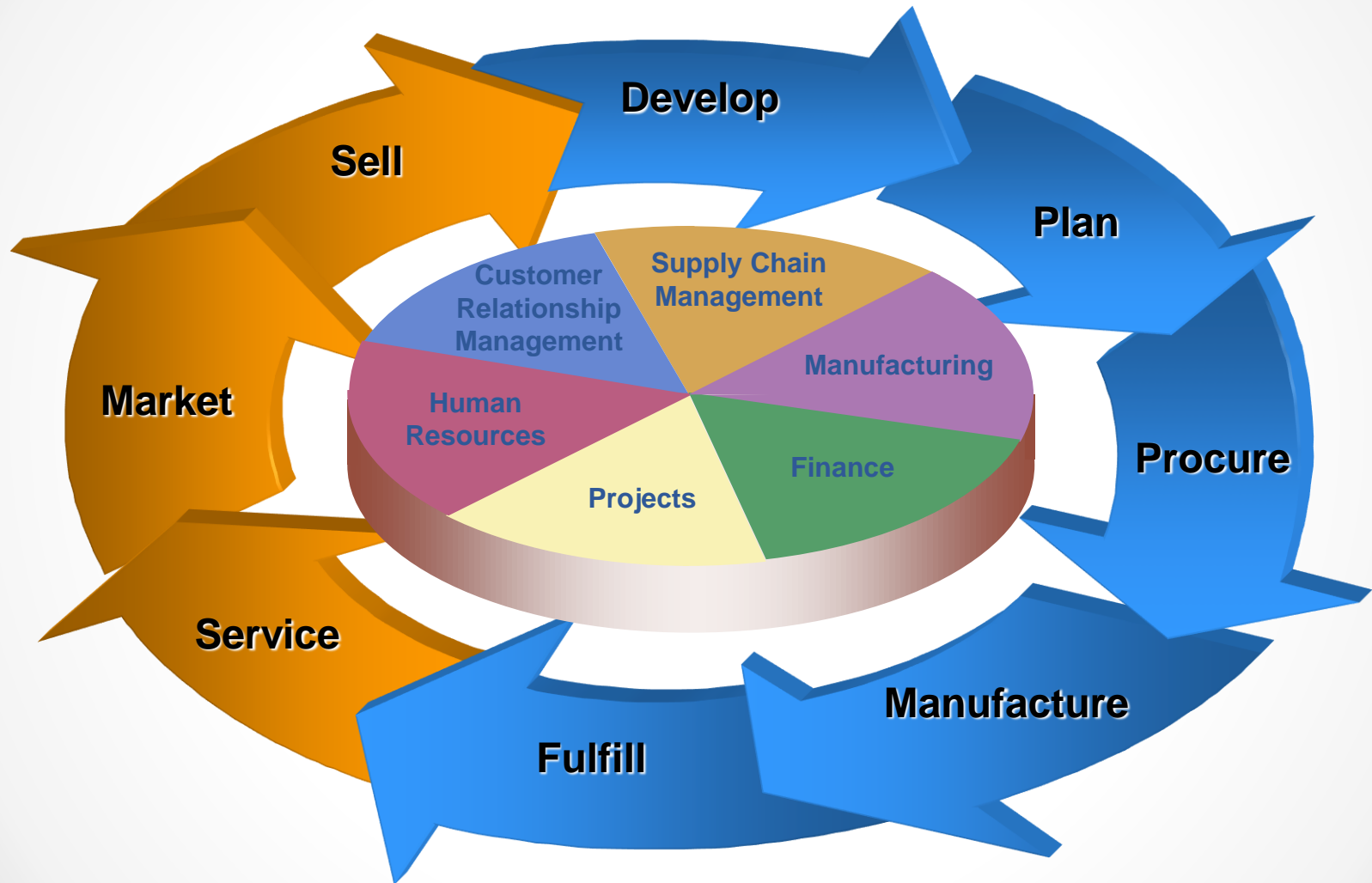
Service Delivery and Recording

Payment by Farmer to Worker

Request Closure and Feedback

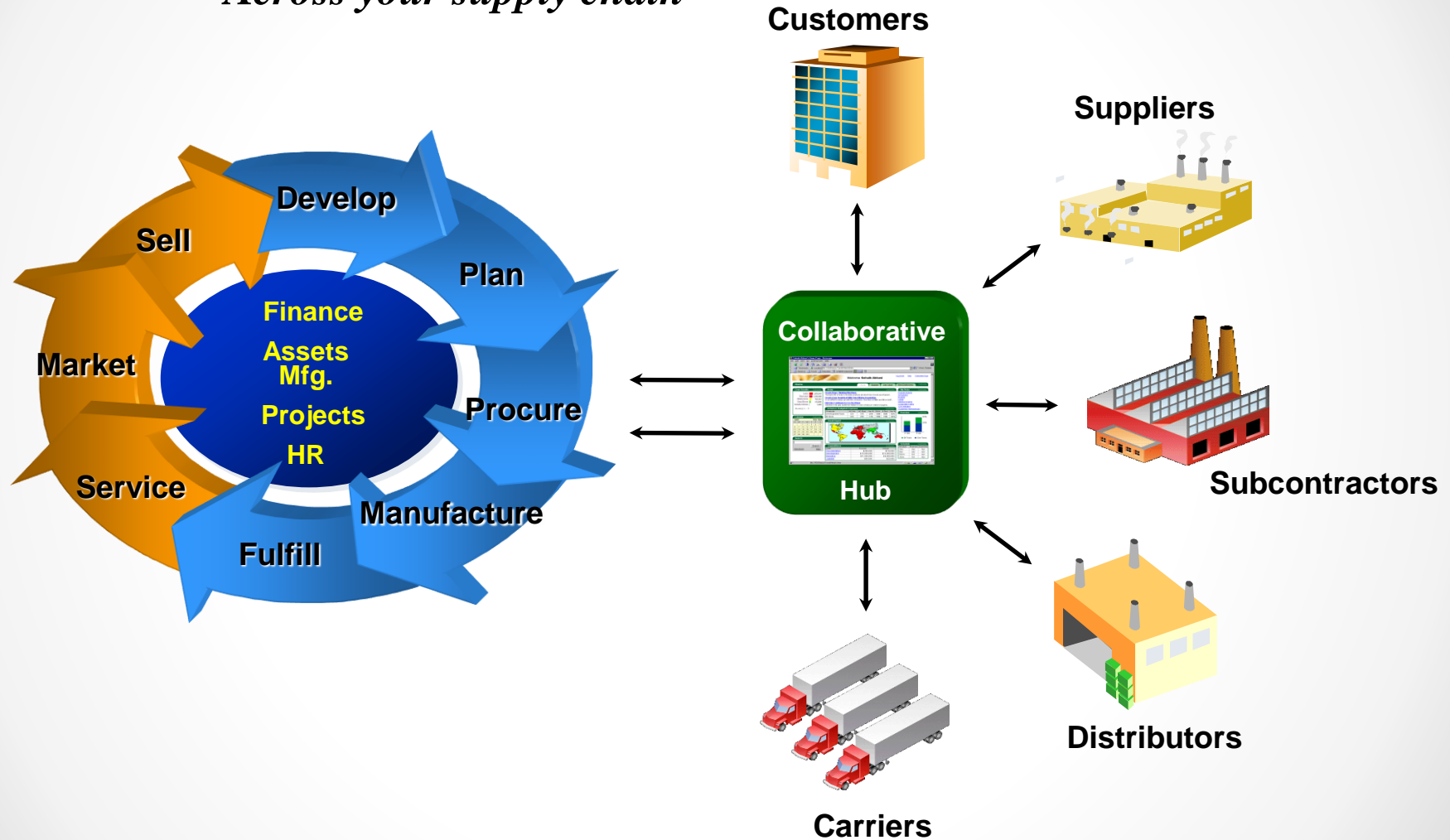


ERP Automates the Internal Functions



... And Extend The Automation

Across your supply chain



Functional Requirements

Cattle Feed
Plant

Chilling
Centers

Maintenance
& Utilities
Functions

Milk
Procurement
and Billing

Production
Operations

Projects

Semen Station
Management

Subcontracting
Operations

Transportation

Veterinary
Services

Budgetary
Control

Business
Intelligence
Reporting

Cooperative
Services

Finance and
Accounts

Human
Resource
Management

Insurance &
Treasury

Payroll

Production
Planning and
Control

Purchase

Quality
Assurance

Sales and Sales
Accounting

Asset
Management

Advertising &
Promotion



















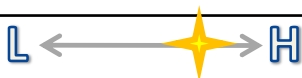


Dispatch
Planning

Distribution
and Network
Planning

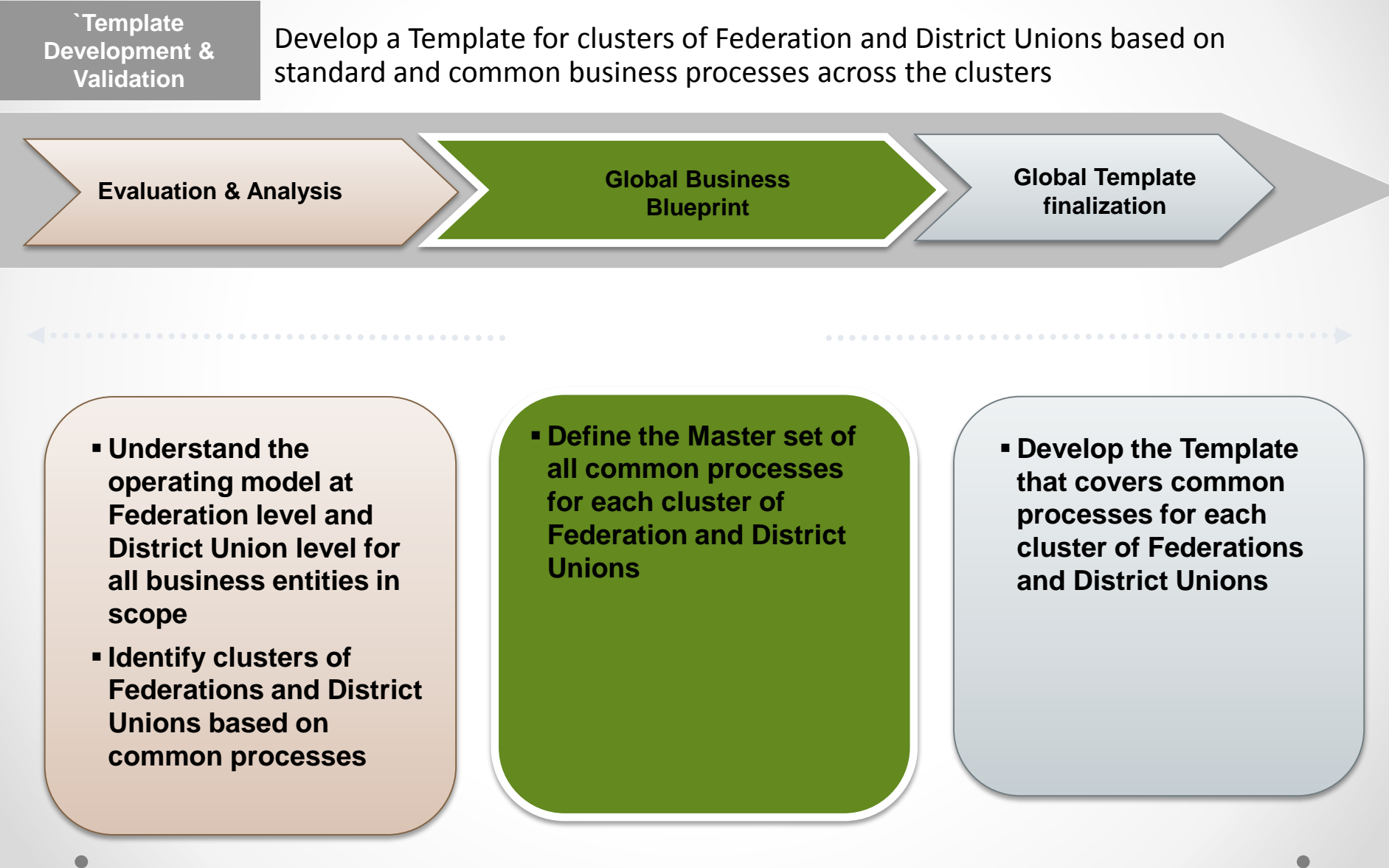
Market
Planning

Product
Complaint

Options

Criteria	Relative Comparison		
	Traditional ERP	Cloud Based SaaS	Open Source ERP
Solution Complexity			
Ability to Support Faster Deployments			
Overall Cost			
Implementation Timelines			
Support Complexity			
Ability to leverage leading practices from industry and each other			
Time to Full Benefit Realization			

“Design Once Implement Many” Approach enabled by Template based ERP Implementation will ensure Rapid Time to Value

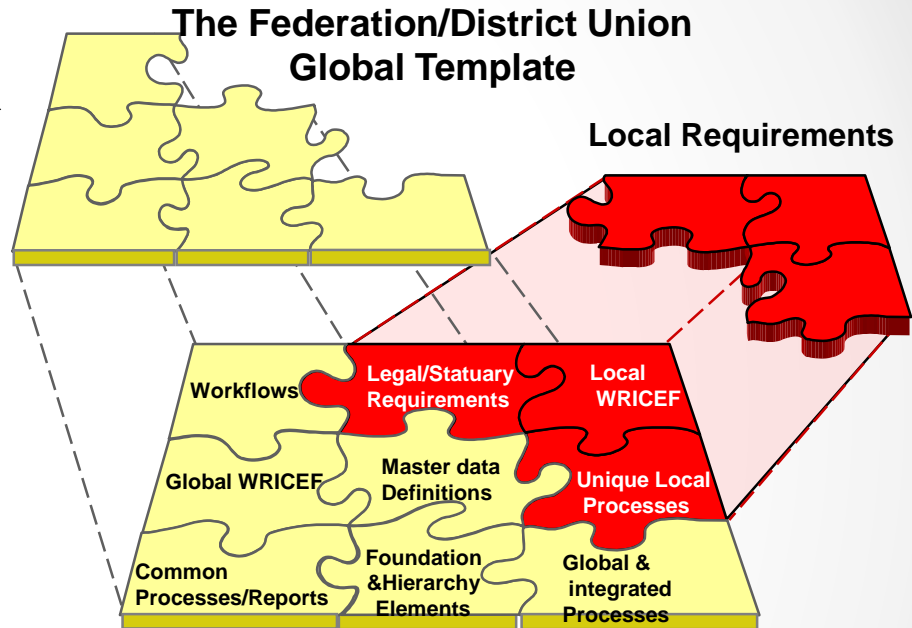


A Template defines the common processes, data structures and standards for a cluster of Federations and District Unions

The Template and Local Requirements combine to form the process blueprint for each business entity

Global Template Design and Development

- Define common processes
- Define data standards and data structures
- Define common interfaces and reports
- Define local variations for process, data, interfaces and reports
- Perform fit/gap analysis for template decision
- Design and develop template on the ERP of choice



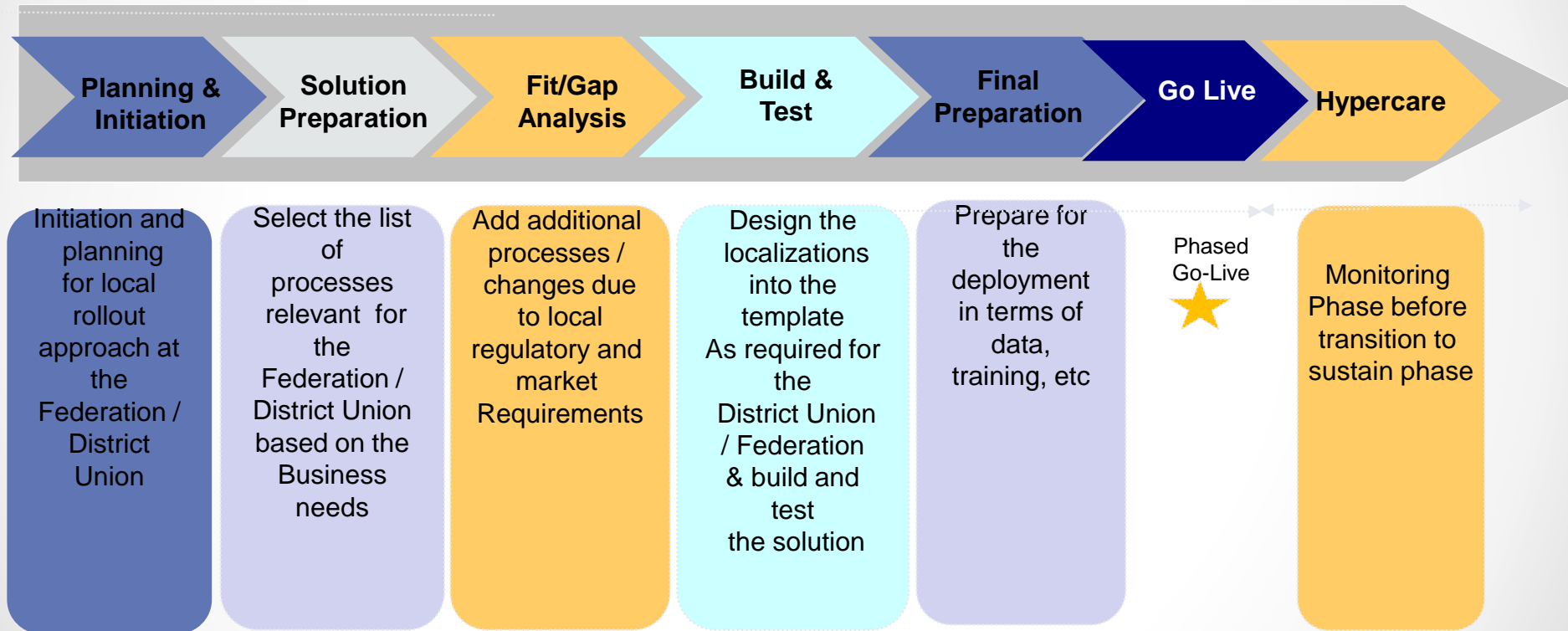
Local variations to be allowed for

- Legal requirements
- Tax & Statutory requirements
- Market specific customizations
- Local Interface requirements

Implementation of the Cluster template at Federation and District Unions

Template Localization and Rollout

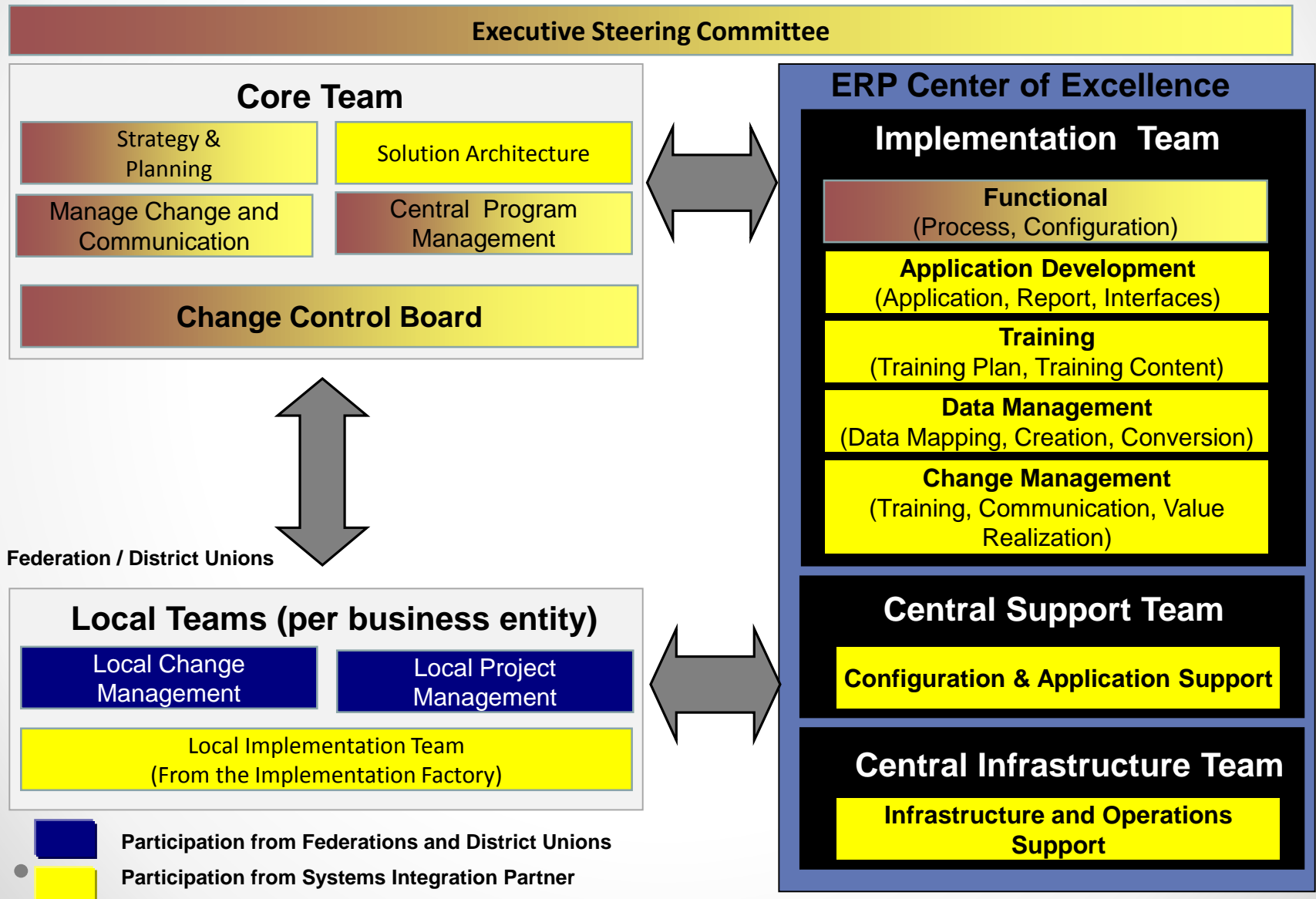
Localize the Template developed for the cluster of Federation / District Union as per the local requirements and rollout to the respective Federation or District Union in the cluster



Implementation timelines will vary based on the size and complexity of the Federation and the District Union

Template based approach helps speed up the overall implementation timelines

Efficient Execution



Thank You!!