Project Management Institute

CASE STUDY

TARGETED PUBLIC DISTRIBUTION SYSTEM CASE STUDY

TARGETED PUBLIC DISTRIBUTION SYSTEM CASE STUDY

By: Dr. Roopali Srivastava (PMP), Project Management Trainer and Consultant
Dhiren Gohel (PMP), Project Manager and Corporate Trainer

GIL
enabling e - Governance

सत्यमेव जयते
GOVERNMENT OF GUJARAT

Dst
Department of Science & Technology
(Government of Gujarat)

This case study is prepared for Gujarat Informatics Limited (GIL) as part of Project Management learning initiatives. It may not hold all historical facts related to the project.

Table of Contents

TARGETED PUBLIC DISTRIBUTION SYSTEM (TPDS)

Introduction

TPDS, Supply Logistics using Information and Communication Technology (ICT) is an e-governance initiative for effective and efficient supply chain management. It ensures the delivery of essential commodities to the rightful beneficiaries at the subsidized or economic rates.

TPDS scheme is operated under the joint responsibility of the Government of India (GoI) and the Government of Gujarat (GoG). The GoI is responsible for procurement, allocation and transportation of food grains upto the Food Corporation of India (FCI) godowns. The operational responsibility for lifting and distributing the allocated food grains within the State, identification of beneficiaries, issuance of ration cards and supervision over the distribution of food grains through the Fair Price Shops rests with the State Government. .

The Gujarat State Civil Supplies Corporation Limited (GSCSC) under Food, Civil Supplies and Consumer Affairs Department (FCS&CAD), Government of Gujarat functions as the nodal agency for the logistics and implementation of a range of schemes under Targeted Public Distribution System (TPDS).

The project is a huge success and has received various accolades / appreciations

- National Award for e-Governance, 2013-14 (Government of India) for "Excellence in Government Process Re-engineering"
- CSI-Nihilent E-Governance Award for the year 2012-13 "Awards of Excellence for the use of Information and Communication Technology (ICT) in Supply Logistics
- CSI Nihilent eGovernance Award 2011-12 in G2C - Project Category from Computer Society of India, Special Interest Group on eGovernance (CSI-SIGeGOV)
- Appreciation from the United Nation's World Food Program representatives, July 11
- Hon'ble Supreme Court of India has recommended Gujarat model of TPDS Reforms to other States, Sept 2011

This case study analyzes the aspects of project management and innovation that led to the success of the TPDS, Gujarat project. It maps the four project phases: Inception, Development, Implementation and Post Implementation with the five Project Management Process Groups and ten Project Management Knowledge Areas (Project Management Institute, 2013). Within each project phase, the performed activities are discussed, as appropriate. The case study is structured to allow an evaluation of the appropriate process of Project Management Knowledge Areas at the end.

In the inception phase, the discussion focuses around the background of the project, high level scope and its analysis. In the development phase, the discussion revolves around the overall and stage wise planning. In the implementation phase, the discussion addresses the design and execution aspects of the project. Finally, in the post implementation phase, the discussion is on project support function and current status.

Inception Phase

TPDS, Gujarat covers all 26 districts offices, about 225 Tehsil/Mamlatdar offices, about 210 godown centres and about 555 warehouses. It caters to approximately 1.07 Crore (almost 20% of the total state population) ration card holders and 17500 Fair Price Shopkeepers (FPSs). The State Government identifies families under three different categories Antyoday Anna Yojna (AAY), Below Poverty Line (BPL) and Above Poverty Line (APL) as per the preset criteria dictated by the Central/State Government. The respective beneficiaries collect their entitlements at their local ration shop with the ration cards issued to them. Commodities such as wheat, rice, sugar, edible oil, iodised salt and kerosene etc. are provided to eligible AAY, BPL and APL families at subsidized rates. AAY being poorer amongst BPL are given grains at much lesser price. Even though the number of BPL families is fixed by Central Government as per Planning Commission estimates, the State estimate of BPL families is more than the estimate given by the Central Govt.

Although the targeted public distribution system (TPDS) is operational since 1997, the entitled beneficiaries were not getting its benefits in totality. A survey published by ORG Marg in 2005, mentioned 24.4% and 16.2% diversion in PDS wheat and PDS rice respectively. The system as whole in the country was under severe criticism due to high leakage / diversions of PDS food grains, inefficiency, lack of transparency, accountability, monitoring and enforcement, weak grievance redressal. It was observed that lack of viability of Fair Price Shops had also made PDS corrupt at several levels. Recognizing these challenges, a committee headed by the retired Hon. Supreme Court Judge was constituted to look into the maladies which were affecting the proper functioning of the system and also to suggest remedial measures.

The due diligence process carried out by the Government of Gujarat highlighted the bottlenecks of the existing system. Ineffective identity management, structurally weak vigilance, unaccountability and lack of beneficiary empowerment were few of the main areas named for improvement. The entire system was driven by manual intervention. The system worked on mutual trust between administration, FPS and card holders. It was difficult to establish the accountability of the parties involved. The whole system needed strengthening and revamping to have a complete e-Governance solution of PDS to control the deviation.

In 2010, TPDS reform project kicked off with an objective to empower beneficiaries and, demonstrate the modern technology feasibility to deliver an effective, transparent and hassle free distribution system.

The high level plan for TPDS computerization was sketched as follows:

- Biometric ration cards to eligible beneficiaries / digitized beneficiaries database
- Empowerment of beneficiaries to have entitlement from FPS in timely manner
- Real time monitoring / alerts on Stock/ Supply chain Management (Procurement, transportation, storage and distribution of food grains from FCI to FPSs)
- Transparency and Grievance Redressal Mechanism

The existing paper based ration card was found to be a weak instrument for the card holders to claim their entitlement. There was no direct correspondence with the actual delivery of food grain

by FPS dealers to the card holders. Physical inspection(s) of the FPS and cross verification of its registers with the beneficiary cards was the only method to establish genuineness of the delivery transactions to the ration card holders. Such inspections were not only time consuming and tedious but also prone to corruption. Despite of stringent FPS licence conditions, inability to carry out comprehensive verification of transaction provided an easy route to FPS to avoid and evade consequences of misconduct. To conclude, previous TPDS system worked on mutual trust between administration, FPS and card holders, it was difficult to establish accountability of the parties involved.

With no central monitoring and vigilance system in place, delay delivery, missing trucks / diversion of stock, day to day problems in procurement, time consuming release order exercise and lack of proper and timely supervision instituted an inadequate system.

As the traditional governance approach had failed to solve this paradox, the Gujarat Government decided to leverage the immense opportunities offered by modern technology. The cost of the project was kept at the minimum by leveraging available e-Governance infrastructure, to the extent possible.

The business process re-engineering sub-project/task was carried out with the focus to (1) decimate the interference of District/Taluka Supply Administration official and (2) strengthen the accountability, transparency and rule based administration and must:

- help improve citizens satisfaction towards government management and provide transparency into government activities
- create a cost-effective system
- improve the dialogue between citizens and government
- deliver services that are relevant

The project objectives were keyed out and the beneficiary count (as of 2012-2013) were recorded so to have a systematic plan to monitor the stages:

- Digitized beneficiaries database
- Bar coded coupon for beneficiaries
- Effective stock movement & monitoring – Receipts & Issues
- Facilitation of e-Service to all stakeholders belonging to Civil Supplies Administration, like transport contractors, Fair Price Shopkeepers, Food Corporation of India (FCI), lifting inspectors and relevant authorities of FCS&CAD and GSCSC
- Real Time accounting of stock receipts from FCI and issues to FPSs
- Reduction in instances of diversion of stock meant for poor
- Increase in revenue by early account settlement with FCI and FPSs
- Transparency and accountability

And beneficiaries' data includes:

- Over 17,500 Fair Price Shopkeepers
- Over 26 large Transport Contractors
- Over 200 small Transport Contractors
- 4 Regional Offices and 46 Godown Offices of Food Corporation of India (FCI)
- 26 District Offices and 200 Godown Centres of GSCSC
- Head Office of GSCSC

In the new business process, the governance framework utilizes database(s), computational and local National Informatics Centre's technical resources that are readily available with the State Government. National Informatics Center (NIC), Gujarat Unit was empowered to develop TPDS software application with additional responsibility of managing hardware and networking aspects of the software.

The size and complexity of the project necessitated a standardized approach of doing the things right, the first time. Identifying key stakeholders, conveying project expectations and convincing them for the project was a major challenge and was handled very carefully. During last two years around two dozen Government resolutions are issued to provide guidelines to stakeholders.

Since, TPDS is an ongoing scheme; therefore, any reform intervention has to be such that there is continuity in the scheme implementation. Further, TPDS being a mass based scheme, its reform cannot succeed without necessary political will and administrative/ financial support of the Government.

The radical requirements of the project raised the level of expertise needed within the project team. In this project, all the team members of the respective departments were involved and committed to the delivery of the project.

The major benefits anticipated from TPDS reform were:

1. Beneficiaries getting full entitlement in a timely manner.

2. Substantial decrease in fake ration cards and leakage in the distribution system.

3. Real time monitoring of the lifting/procurement of stock from FCI godowns, transportation of the same to GSCSC godowns, receipt of stock at GSCSC godowns and issue of stock to FPSs from GSCSC godowns

The teams instituted strict controls for measuring, updating and solving problems through out the project. In addition, a formal methodology was defined to handle change requests in the project. The proactive measures were taken to mitigate strategic risks, helped in achieving the targets.

Development Phase

Project analysis and design occurred in the development stage of the project. Most of the procurement and contracting work typically occurred in the development stage of the project. Since leveraging information technology along with business process engineering was identified as a reform path for the effective citizen-centric public service delivery, it was ensured that teams explored all the aspects of inadequacies in the system.

The high level TPDS business process comprises of lifting/ procurement of stock from FCI godowns, transportation of the same to GSCSC godowns, receipt of stock at GSCSC godowns, issue of stock to FPSs from GSCSC godowns and distribution of goods by FPS to biometric bar coded ration card holders. Refer Annexure A for the tasks performed in these stages.

The project funding was made by the Government as part of the planned budget of the state. The initiative was supported by all superiors at all levels – starting from Managing Director to Hon.Chief Minister.

The substantial size and complexity of the project enforced GSCSC to adopt stringent strategies for smooth execution

and implementation of the project covering following aspects.

1. **Digitization of Data**

   - Digitization of beneficiary data (ration cardholders' data, FPSs data etc.) and making them online.
   - Issue of bar coded ration card to the beneficiaries and capturing their biometric detail
   - Digitization of Officers/Staff (District Officers, Godown Managers, Assistant Godown Managers, Mamlatdars of Taluka/Block and other important officials) detail for authentication with biometrics (finger prints).

2. **Application Software Development:**

   - Systems analysis, system design, programming and training by NIC, Gandhinagar.
   - Usage of Programmable HHT in Transport Pass printing while lifting stock from FCI Godowns.
   - HHT application development by vendor
   - Integration of HHT data with main PDS application by NIC
   - Online delivery challans to FPS while lifting stock from GSCSC Godowns
   - Issue of bar coded coupon to beneficiaries to be used while collecting their entitlement

3. **Change Management and Capacity Building**

   - Formal methodology to handle changes in the project
   - Training programs (e-learning and class room) for the use of HHT and overall system

To streamline the process and enhance the productivity, critical areas, respective challenges and proposed solution were brainstormed extensively.

The solution approach matrix was prepared for the critical issues:

Issue	Solution Approach
Identity	Elector's Photo Identity Card No. + Bio-metric data of at least one member of Beneficiary Family
Delivery	Through FOOD COUPON based upon ON LINE bio-metric verification of the Family member
Record keeping	Capturing of Transaction Data embedded in Food Coupon
Logistics efficiency	Commodity-wise aggregation of Supply and Demand Data at various stages i.e. FCI Depot, Godown, FPS, Kerosene Agent/ dealer etc.
Transparency	Dissemination of data on transparency portal, SMS alerts
Accountability	Bio-metric authentication by Decision makers
Stake holders' Participation	Appropriate Risk-reward System particularly for the FPS dealer and the card holder.

The business process design optimized the process for Supply Chain Management, Identity management and beneficiaries empowerment and grievance redressal (Annexure A). The TO BE business process design is based upon centralized architecture and is customizable. The solution framework is based on FPS-Card holder Transaction model of TPDS. In this model, beneficiaries are empowered with biometric verification; with real time access and monitoring of stock FPS became more viable; food grains savings and improved viability of the local Village Panchayat Kiosk.

With the automation of supply chain management and its integration with central server ascertained least possible human intervention in operations, covering the Food, Civil Supplies and Consumer Affairs Department and the head of departments (HODs) working under the department, including GSCSC. It was also proposed to introduce programmable Hand Held Terminals at the time of lifting of stock from FCI and, also implement on-line delivery challan module while issuing stock to FPSs.

The phase wise plan for implementation was sketched for issuing bio-metric based FPS cards and food coupons to the rightful beneficiaries, and effective supply chain logistics: including use of HHT while lifting stock from FCI, integration of same with the central server and generation of online delivery challan for issuance of goods to FPS. At this stage, change management methodology was drafted to cater the changes coming from all sources.

The team identified quality management and control as vital success of the project. The project leadership assigned responsibility and accountability of quality to each individual member of the teams. Considering the project size and interest/involvement of stakeholders, communication issues were addressed effectively and efficiently. The communication plan was executed carefully.

Availability of skilled manpower and the cost involved was always an issue. However, having a planned approach (outsourcing to third party vendor) in getting skilled local manpower helped to control this issue.

At this stage, the process became highly interactive and the lines between designs, build, test and implement became less distinct. Beyond inception, phases were indistinguishable. All the teams involved worked concurrently in repeating cycles of design – redesign, build- rebuild, and test - retest. Throughout development and implementation, there were plenty of challenges to overcome. Teams successfully managed all

Implementation Phase

Project objectives were clear at inception. However, end to end computerization of PDS in subsequent phases required extreme creativity. The stringent schedule constraint necessitated an innovative approach of doing the things. The salient feature of programmable HHT system and its integration with the central server made the system vigilant attentive. Wherever possible, existing infrastructure, technology, systems off the shelf features were configured or customized. The scope remains unchanged throughout the project though it required progressive elaboration. The schedule took the top priority and bottom up approach was finalized.

Bar Coded Ration Cards:

The state government issued new format digitized forms for all the existing card holders to capture their

identities such as EPIC no., Driving License no., GSEB no., LPG connection no., BPL no. etc. These details were verified against the existing databases maintained in the government system. Additionally physical verification was also done for conflicting data. This eliminated ration card duplicability and fraudulence. As a result 12.8% decline was recorded in the number of ration cards.

The process of issuing of bar-coded ration cards with biometrics/photograph of at least one adult member of the card holder's family took the priority. The individual biometrics was captured at respective FPS or Village Panchayat location. Subsequently, the bio-metric based ration card became the authentication key of the card holder's identity. Also, card holder's card details were cross-linked with the government databases to protect it against the misuse of the same in future. Even though there was no technology involved at FPS level, convincing people to adapt to the changing environment was the vast exercise.

Ascertaining card holder's identity by matching Electoral Roll Data (EPIC) and capturing of bio-metric data and finger print of the right person and distribution of Bar Coded Ration Cards across the state were very challenging and tedious job. During this phase, the team proactively mitigated the risks and focused on the quality of the project.

Bar Coded Coupon:

With biometric authentication process in place, the beneficiaries' card holders avail Food Coupons from the E-GRAM/ i-coupon outlets / (Common Service Center) and hand over these commodity-wise coupons to the FPS dealers. Beneficiaries were empowered with bar coded coupons which are getting generated from e-Gram/ Cybercafe for taking their entitlement from FPSs, once benificiaries present Bar Coded Ration Card and biometrics of one of the family member. This ensures delivery of the entitelement to the right beneficiary only. The system ensured right delivery to right persons.

Supply Chain Management:

The supply chain computerization helped in monitoring and tracking of food grains inventory and its allocation to FPS, subsequently to ration card holders. With the system fully integrated with the main server, all this information is now readily available through the Transparency Portal. Figure 1 depicts the architecture of the current system.

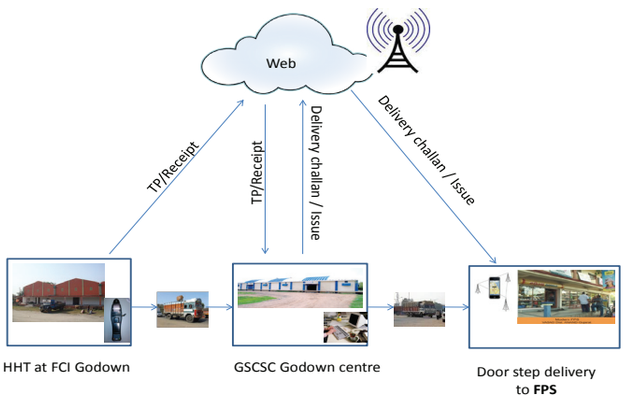


Figure 1: **SUPPLY CHAIN ARCITECTURE**

On Line Transport Pass (Use of HHT):

For the effective supply chain logistics, use of HHT while lifting stock from FCI and integration of the same with the central server was introduced.

The on-line Transport Pass (TP) generated through HHT content includes:

- Release order Number, Date, Time
- Commodity-Scheme
- Source FCI godown
- Destination GSCSC godown
- Truck weight (tare weight)
- Truck + food grain weight (Gross weight)
- Number of bags

The programmable Hand Held Terminal (HHT) decimated many of the administrative issues including missing of trucks, late receipt of truck, unnecessary deployment of resource, installation and connectivity issue with FCS&CAD server at remote locations (FCI godown) etc.. The programmable HHT integration with central server facilitated the real time functioning of the inventory system. As a result, all transactions and stock positions at different godowns and door step delivery up to FPS are centrally monitored. The travel time / route from source FCI to destination godown are fixed and if there is any delay, alerts are sent to all the levels. This assured in turn timely and full delivery of essential commodities as per beneficiary entitlement.

Prior to implementing programmable HHT feature, finger prints of all the concerned godown managers, assistant godown manager and other important officials were recorded. With a simple process of finger print authentication by manager/inspector would fetch all the details into HHT. The compulsory requirement of finger prints/ bio metric data while printing Transit Pass as well as Delivery Challan raised the level of authenticity, accountability and vigilance. The secured login credentials are provided to the users as per the role and responsibilities – for read/write/update access, in addition to login credential, biometrics (finger print) authentication is mandated.

E-Payment:

The project would not have been successful if the ration card holders / FPS had to go long distance to make the ration cards, collect food coupons / deposit funds to release stock, make permit etc. It was ensured that operationally viable E-Gram/ Cyber Café are within reasonable distance of a few habitation areas. FPS was provided with e-payment facility. The Fund Management System allows FPSs to deposit the amount from their own villages to GSCSC account via fund transfer/NEFT/ RTGS against the on-line permit received by them. This E-payment module is developed in partnership with (n) Code Solutions, Gandhinagar.

On Line Delivery Challan:

The implementation of generation of on-line delivery challan and gate pass for lifting of goods by FPSs in PDS ensured day to day monitoring of stock movement from GSCSC godowns to FPSs. Village Vigilance Committee members and beneficiaries who registered their mobile numbers into the system gets SMS alerts at the time of issue of goods to FPSs. In the earlier system, it was difficult for District/Head Office to monitor on day today basis the issues made to FPSs and complete the distribution in time by rigorous follow up with FPSs and GSCSC.

Enforcing on-line delivery challan helped team to perform gap analysis in releasing of stock to FPS and its distribution of beneficiaries. A major outcome was the reduction of instances related to diversion of stock from GSCSC godown.

Training:

The challenge of catering man power, motivation and competence at the Block level supply set up were mitigated training programs (e-learning and class room) for the use of HHT and overall understanding of the system for all relevant officers and staff. Training modules were prepared in local language. This exercise is ongoing and is done with the help of NIC and in house supporting staff. The project team ensured success and quality by holding tests for a period of at least one month. Around 200 godown managers were also given training on-line delivery challan

and gate pass printing module. Although it was difficult to convince lifting inspectors (having age more than 45) to undergo training on HHT usage, a mandate from senior management enforced it for all.

Given the nature of the project, there were inherent risks related to innovation & implementation of the solutions. The team did an outstanding work of putting up a robust system for monitoring and controlling the project objectives. With various real time reports are available online to the Senior Management officers, the time gap analysis (time taken by trucks/vehicles to travel between source godown of FCI and destination godown of GSCSC), missing trucks/ diversion of stock analysis helped in monitoring and timely distribution of stock meant for poor.

There were several challenges encountered during this phase resistance from user to adopt the new system, conducting training in different locations in limited time period, delays in getting the approvals, frequent transfers, re-shuffling of key stakeholders, user expectations not aligned with the system, key stakeholder emerging at the later phase of the project, and system integration with two different technologies (e-payment by nCode and supply chain integration by NIC). Teams successfully managed all.

Through appropriate risk and reward structure for the stake-holders coupled with political/administrative will and firmness, the State Government was able to overcome resistance to the implementation process and ensured stakeholders participation.

Implementation of such a gigantic State-wide Project was made possible through regular online monitoring of various tasks coupled with time bound targets and reviews. Regular review meetings were held at state & district level to monitor the progress. Evaluation of pilot phase of 225 FPS was carried out by State Government and evaluation for full implementation is planned at later stage.

Sound project management; adequate resources and stakeholders buy in; and parallel improvements in business procedures and practices supported by a suitable legal and regulatory framework were the integral part for the accomplish/success of the project.

Post Implementation Phase

TPDS implementation support process was drafted as follows:

- Use of programmable HHT (with SIM Card) with warranty of one year
- Fixed maintenance for another two years
- Use of simple PC (with 5 years warranty) at godowns with printer, UPS, finger print device, bar code reader etc. with OS (Windows) and Anti-virus Software.

Backup server are been installed for disaster recovery and service continuity In case of connectivity issues, terminal with static IP address are used and wherever BSNL landline is not available, connectivity is provided through VSAT.

TPDS implementation has shown credible reduction in leakages / diversion in cards and commodities while making the supply machinery more accountable. With the automation of supply chain logistics, effective stock movement and monitoring, time gap analysis reduced leakage/diversion of stock and ensured timely distribution

of entitlement to beneficiaries. Ensuring delivery to FPS via SMS, the confirmation of receipt of stock at FPS has encouraged the village vigilance committee.

With biometric authentication process in place, the beneficiaries' card holders avail Food Coupons from the E-GRAM/ i-coupon outlets / (Common Service Center) and hand over these commodity-wise coupons to the FPS dealers. In case of any misconduct, the card holder can register complaint using toll free Call Center number as printed in the Ration Card book let. Online grievance redressal system is also in place for beneficiary.

Lesson learned during the project:

1. Technology can help to bring 100 % effectiveness but not 100% efficient
2. Divide the sizable project into sub-projects / phase and plan accordingly
3. Active participation of all stake holders (Team work)
4. Convincing skill to minimize stakeholder resistance
5. Distribution of Bar Coded Ration Cards along with capturing of Bio□metric and Photographic details of at least one member of more than 1 Cr Card Holder families – an exhaustive exercise
6. Conduct training in small groups (5 to 10 employees) rather than making a big groups (20+ employees)
7. Integration with two different technologies takes more time and raises lots of technical as well as human hassles

Project Factsheet

S.No	Project Details	Dates
1	Project Start Date	2010 April
2	Food Coupon Start Date	2011 June
3	On-line Allocation and e-Permit for FPS	2011 November
4	PDS Transparency Portal Launch Date	2012 February
5	Project Go-Live date	2012 May
6	Supply Chain Computerization Completion	2012 September
7	SMS alerts to Vigilance Committee Members	2013 January
8	HHT based TP module Start Date	2013 January
9	Public Grievance Redressal System	2013 February
10	Mobile Registration (with SMS) for all	2013 February
11	Self-Supplementary Permit Started for FPS	2013 May

References

1. A Guide to Project Management Body of Knowledge (Fifth Edition)
2. http://www.gscscl.gujarat.gov.in/
3. eGov@Gujarat e-Governance Bulletin Vol.9, No.2, August-September, 2012
4. Implementation_GJ_TPDS.pdf
5. http://www.csinihilent-egovernanceawards.org/
6. CSI-Nihilent e-Governance Awards 2012-2013; Nomination form documentation for Project Category – Supply Logistics using Information and Communication Technology

Abbreviations

TPDS	Targeted Public Distribution System
GoI	Government of India
GoG	Government of Gujarat
GSCSC	Gujarat State Civil Supplies Corporation Limited
FPS	Fair Price Shops
APL	Above Poverty Line
BPL	Below Poverty Line
FCS&CAD	Food, Civil Supplies and Consumer Affairs Department
DFCS	Director of Food and Civil Supply
DSO	District Supply Officer
NIC	National Informatics Centre
EPIC	Elector's Photo identity Card
LPG	Liquified Petroleum Gas
NeGP	National e-Governance Plan
HHT	Hand Held Terminal
TP	Transit Pass
RO	Release Order

Annexure A

TPDS Business Process

The process of lifting/procurement of stock from FCI godowns, transportation of the same to GSCSC godowns, receipt of stock at GSCSC godowns, issue of stock to FPSs from GSCSC godowns and distribution of goods by FPS to biometric bar coded ration card holders is described in the following paragraphs.

1. **Lifting of food grains from FCI:**

   - Allocation of the Food Grains by Department of Food and Public Distribution (DFPD), Government of India to the State Govt. and in turn to GSCSC.
   - District-wise advance Payments by GSCSC to the respective Zonal offices of FCI.
   - Release Order (RO) by FCI for lifting of Food Grains from FCI Godowns
   - As per the RO, Lifting of the Stock (about 1.06 lakh MT of Wheat and 0.45 lakh MT of Rice) from Dis trict FCI godowns (about 46) and transportation to Block Levels by the district level implementa tion team inclusive of District Godown Inspector (DGI), Lifting Inspector and the empanelled trans port contractor headed by the Deputy District Manager of GSCSC.
   - A joint quality inspection of the stock to be lifted from FCI godown by the quality control officer of FCI and DGI of GSCSC prior to lifting of the stock.
   - Receipt and transfer of the goods from FCI Godowns by the authorized representative of the transport contractor to the GSCSC Godown cen ter as asked by the lifting inspector

- Issuance of the Delivery Challan and Transport Pass (TP) to the drivers of the carriers by the lifting Inspector

2. **Receipt of food grains at GSCSC godowns:**

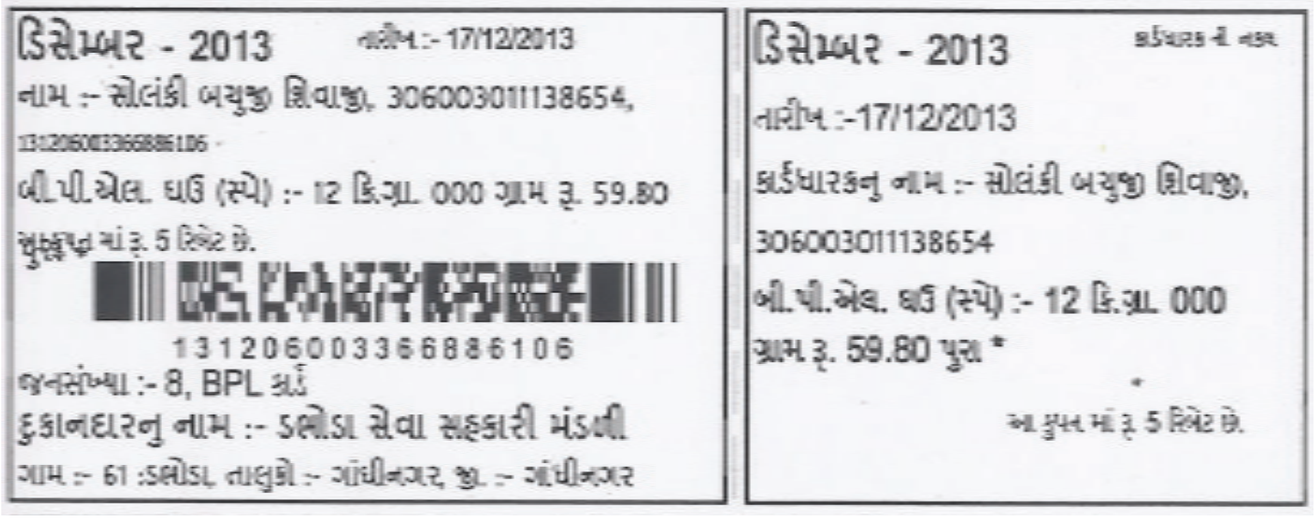
- After receipt of stock at GSCSC godown the data generated by HHT is captured by the Central Serv er and entry of receipt data is made into the Central Server

3. **Issue of food grains and other essential commodities to FPS:**

- As per the standard procedures, the fair price shopkeepers take permit from the mamlatdar and deposit an amount in into the designated bank account of GSCSC at Taluka level to lift stock.
- Based on the permit and amount deposited by FPS, Godown Manager of GSCSC issues food grains and other essential commodities, which reaches to FPS through door-step delivery i.e. transport contractor appointed by the Govt.

4. **Distribution of food grains to bar coded ration card holders**

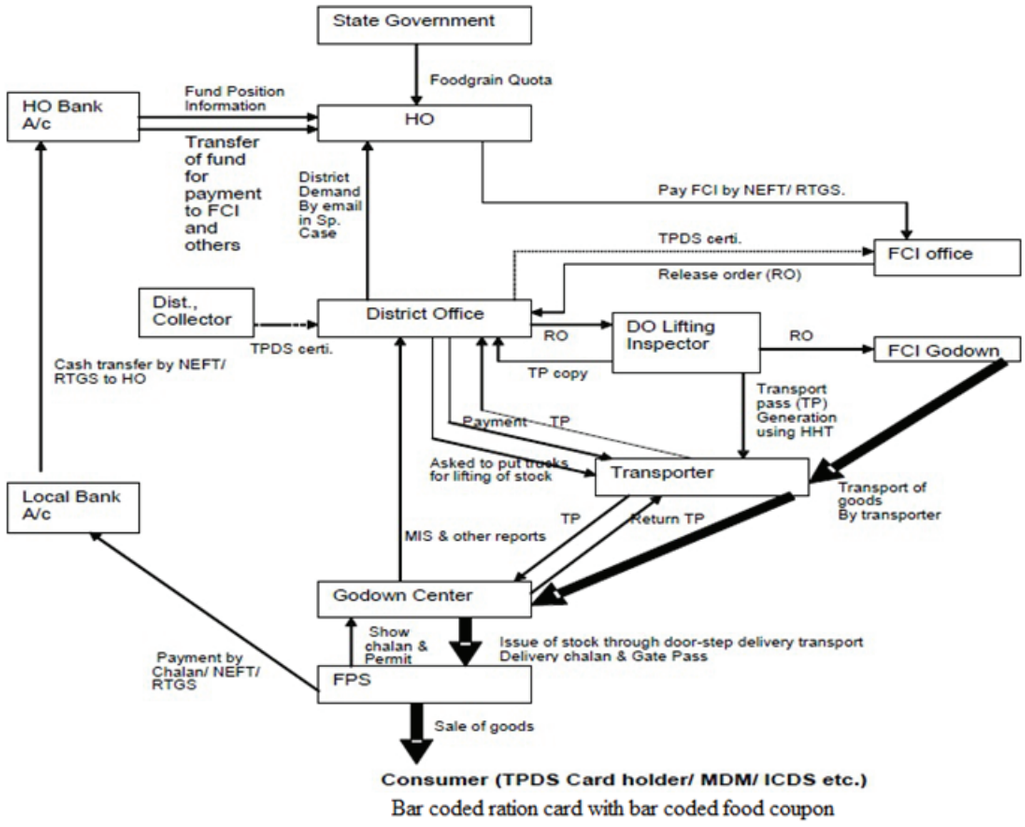
- Individual biometrics are captured and bar coded ration cards are issued
- Beneficiaries' card holders avail Food Coupons from the E-GRAM/ i-coupon outlets / (Common Service Center) and hand over these commodity-wise coupons to the FPS dealers.
- FPS to release food grains to ration card holder, collect the food coupons and submit it to E-GRAM centre
- Based on the number of food coupon submitted, next month commodities are allocated to FPS (refer point 3)
- Bar Coded Coupons for the month of June 2011 showing Card holders, FPS details as well as quantity and price details for each commodity as per entitlement. Middle portion of the coupon is the counter foil of the coupons (Card holder's copy).


ડિસેમ્બર - 2013 તારીખ :- 17/12/2013
નામ :- સોલંકી બચુજી ઝિવાજી, 3060030111138654,
1312060033668861O6
બી.પી.એલ. ઘઉં (રૂપે) :- 12 કિ.ગ્રા. 000 ગ્રામ રૂ. 59.80
ચુકવવા પાત્ર રૂ. 5 રિબેટ છે.
1312060033668861O6
જનસંખ્યા :- 8, BPL કાર્ડ
દુકાનદારનુ નામ :- ડભોડા સેવા સહકારી મંડળી
ગામ :- 61 :ડભોડા, તાલુકો :- ગાંધીનગર, જી. :- ગાંધીનગર

ડિસેમ્બર - 2013 કાર્ડધારક નો નંબર
તારીખ :-17/12/2013
કાર્ડધારકનુ નામ :- સોલંકી બચુજી ઝિવાજી,
3060030111138654
બી.પી.એલ. ઘઉં (રૂપે) :- 12 કિ.ગ્રા. 000
ગ્રામ રૂ. 59.80 પુરા *
આ કુપન માં રૂ. 5 રિબેટ છે.

Sample copy of food coupon

TPDS Flowchart



Business Process Engineering

FPS Transactions	- Paper Based Food Coupon System after online veri fication of finger print of beneficiary. - Beneficiary getting ration based on food coupons - Transactions recording at central server by reading coupons collected by FPS
Supply Chain Management	- Central Allocation instead of block level allocation - All transactions and stock positions at different godowns and door step delivery up to FPS centrally monitored - HHT Based Transit Pass System (FCI Godown to GSCSC Godown)
Issuance of Bar-coded biometrics Ration Cards	- Establishing the identity by mapping beneficiaries' EPIC number - Barcoded Paper Based new ration Card with biometrics data - Finger Print Authentication of competent authority at crucial decision point - Ration Card related all transactions (New, Division of cards, addition/deletion of members, amendments in cards, cancellation of cards etc.) monitored online
Transparency and grievances	- Online Public Grievance Redressal System - Dissemination of Data on transparency portal

Teaching Notes

Project Phases, Project Management Process Groups and Knowledge Areas

Project Phases

A project phase is a collection of logically related project activities that culminates in the completion of one or more deliverables. Different phases typically are completed sequentially, but can overlap in some project situations. Different phases generally have a different duration or effort. For project with more than one phase, these phases are generally sequential and defined by industry specific terminology. Collectively, these phases make an element of project life cycle. The project life cycle is a series of phases that a project passes through from its initiation to its closure. (A Guide to Project Management Book of Knowledge, Fifth Edition)

Inception

This phase may also be called initiation, conception or preparation. In this phase project charter is created and authorized. It considers alignment of the project within the organization's overall strategy, architecture and priorities. It addresses business justification, business benefits to performing and operating organization. Project boundaries are defined. The key purpose of this phase is to align the stakeholder expectations with the project purpose, give them viability with the scope and objectives, and show how their participation can help the project. It discusses finalizing the project charter and obtaining approval to proceed with the project.

Development

This phase may also be called planning, design, preparation or formulation. It determines whether the objectives stated in the project charter can be achieved as well as how the project will be accomplished. It considers development of project baseline and establishment of detailed project work and project management plan. It explores all aspects of scope, time, cost, quality, communications, Human resources, risks, procurements and stakeholder engagement. It addresses the problem that is needed to be accomplished and considers project concept, feasibility issues and possible alternative solutions.

Implementation

This phase may also be called execution, implementation or deployment. It addresses the completion of the work defined in the master plan as per the project specifications. It involves coordinating people, resources, managing stakeholder expectations, as well as integrating and performing activities of the project in accordance with the project management plan. It may also address planning updates and rebaselining. It addresses resource management, interpersonal skill, conflict resolution, leadership and communication. It also looks into monitoring and controlling of variances in scheduled parameters.

Post Implementation phase

This phase may also be called operation, application maintenance and support. It addresses the responsibility for operations, maintenance, and support to the appropriate organizational unit or service. It frames the development of recommendation to support success in future projects.

Project Management Process Groups

Project management is accomplished through processes, using project management knowledge, skills, tools and techniques to meet the project requirements. Each project management process is characterized by its inputs, the

tools and techniques that can be applied, and the resulting outputs. These processes are grouped into five categories known as Project Management Process Group (or Process Groups): Initiating Process Group, Planning Process Group, Executing Process Group, Monitoring and Controlling Process Group, and Closing Process Group. The Process Groups are seldom either discrete or one-time events; they are overlapping activities that occur throughout the project. The Process Groups are not project phases. When a large or complex project is divided into phases, the Process Groups are used, as appropriate, to effectively drive the project to completion in a controlled manner. The project manager and the project team are responsible for determining what processes from the Process Groups will be employed, by whom, and the degree of rigor that will be applied to the execution of the processes to achieve the desired project objectives. In this case study, the Project Management Process Group processes are imbedded within the phases.

Project Management Knowledge Areas

The Knowledge Areas are the specialized domains in which a Project Manager would function. These ten knowledge areas are used on most projects most of the time. These areas are: Project Integration Management, Project Scope Management, Project Time Management, Project Cost Management, Project Quality Management, Project Human Resource Management, Project Communications Management, Project Risk Management, Project Procurement Management, Project Stakeholder Management. In this case study, all the knowledge areas are utilized, as appropriate.

Project Scope Management –

Project scope management concept, processes and its associated tools and techniques to be explained in the project text.

Targeted Public Distribution System (PDS) was established with an objective of ensuring food security of the poor people in the country. This is achieved through the provision of subsidized food grain and other essential commodities, sold through Fair Price Shops (FPS). Under the TPDS, generally the Central Government procures grain from farmers and then allocates it to States that are responsible for identification of beneficiaries and delivery through the Fair Price Shops.

Beneficiary - Identification (to eliminate bogus/duplicate cards), Classification (minimizing exclusion/inclusion errors), Ensuring Delivery of food grain (minimizing diversion/leakages)

Fair Price Shop (FPS) - Transaction Capturing, Updated Record keeping

Logistics - Efficiency improvement (of food grain storage & movement)

Accountability - At all levels

Transparency - Across Supply & Delivery chain, - At all times.

Project Time management:

Project time management concept, processes and its associated tools and techniques to be explained. TPDS is an ongoing scheme. As against 1.25 Crs Ration cards in the beginning of 2010 there are only 1.09 Cr eligible Ration Cards as on 1st Dec 2013.

Project Cost Management:

Project cost management processes and its associated tools and techniques used while managing the project. Gujarat's TPDS reform model is fully funded by the state government.

Project Quality Management: Project quality management processes and its associated tools and techniques used while managing the project. Regular review meeting held at State & District Level to monitor and online report availability to check the progress.

Project Human Resources Management: Project human resource management processes and its associated tools and techniques used while managing the project.

1) Food, Civil Supplies and Consumer Affairs Department, Government of Gujarat - FCS&CAD subject to the directions of the Government of India, formulates policies and implementation guidelines in the State.

2) District / Taluka administration

Project Communication Management: Project communication management processes and its associated tools and techniques used while managing the project.

Project Risk Management: Project risk management processes and its associated tools and techniques used while managing the project.

1. Changing mindset of the stakeholder. (Passive attitude of Civil Supply staff as their discretion is minimized and accountability has gone up.)
2. Operationally viable E-Gram / Cyber Café within reasonable distance of the habitation.
3. Matching Electoral Roll Data (EPIC) of all adult members of the family
4. Controlling FPS viability as diversion/ leakage.
5. Incentives for FPS
6. Earlier the exercise was being carried out by Online. Looking to the constraint, various private agencies have been engaged to capture biometric data and distribution of cards. This has overcome by encouraging Shopkeepers themselves to procure a computer/ HHT & Biometric device along with internet connection (Landline/Broadband/Mobile Connectivity). It is also under consideration to permit the operation of this device offline & collect the electronic data of transactions on monthly basis.

Project Procurement Management: Project procurement management processes and its associated tools and techniques used while managing the project.

1) TPDS standalone software outsourced to NIC, Gujarat Unit.

Project Stakeholder Management:

Project stakeholder management processes and its associated tools and techniques used while managing the project.

- Food, Civil Supplies and Consumer Affairs Department
- Gujarat State Civil Supplies Corporation and its Godown
- District Collectorate
- Taluka Mamalatdar Offices/Zonal Offices
- CDPO
- MDM Office
- Fair Price Shops
- E-Gram
- Individual Internet Operator
- Ration Card holders
- SKO Dealers