Gujarat- TPDS

NIC & FCSCAD-Gujarat

18th April 2015
TPDS

Deficiencies in previous TPDS System

- Ineffective identity management
- Lack of beneficiary management
- Structurally weak vigilance
- Absence of accountability

Vision

- Empowerment (of beneficiary)
- Transparency (in TPDS)
- Innovation (in governance)
Ownership – Department owns the project. Developed State NIC
Beneficiary of the projects are AAY, BPL and APL Card holders
Non-disruptive Implementation
Concurrent Business Process Re-engineering (BPR)
Bottom up approach
Modular approach
Leveraging existing IT infrastructure
Central Architecture, no local data store
Central Software version controlling.
Centrally Scheme policy management.
Central Allocation through one command upto FPS Area level
Calculates entitlements up to beneficiary level.
SMS to FPS on Delivery Challan issue from State Godown
Gujarat, TPDS Major high lights

- Permit system is fully implemented including MDM, ICDS, permits to NGOs/Institutions and Fisheries Retailer Permit.
- Self supplementary permit to FPS owner in case of coupon quantity issued is more than the quantity allocated to him.
- Digitization of Ration Cards completed and issue of new biometrics based Barcoded ration card is in progress.
- Food Coupons implemented across the state through e-gram and private outlets.
- Delivery Challans and Gate Pass from State Civil Supplies Godowns.
- Transport Pass through HHT from FCI.
- Accept various Ration Card related applications at ATVT centre.
- FP Authentication at various key decision stage.
- We have FPS area concept. i.e. The smallest unit is FPS Area and not the FPS - State → District → Taluka → FPS → FPS Area.
Gujarat, TPDS Major highlights

- E-Grams and Pvt. Outlets to operate PDS food coupon system
- Data digitization in local language
- Stakeholder management (Area Master, FPS master, R/H master, Godown)
- Public Grievance Redressal System. Citizen can register their complaint through web or telephonically.

<table>
<thead>
<tr>
<th>Total</th>
<th>Disposed</th>
<th>Pending</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,738</td>
<td>10,627</td>
<td>111</td>
</tr>
</tbody>
</table>

(fig. are of as on date)

- SMS alerts at various stages
- Single Sign on
Gujarat, TPDS Stake Holders

- 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
Biometric Based Barcoded Coupon System

GSWAN/BB connectivity

CSC/E-GRAM/Cyber Cafe

FPC dealer submits bar-coded beneficiary coupons for entry. Using biometric, FPS dealer collects challan/suppl permits.

Fair Price Shop (FPS) Dealer

FPC dealer submits closing stocks & payment challan. Collects food grains, sugar, oil, kerosene etc.

GSCSC Godown/Kerosene dealer

Card Holder

Produce ration card. Using biometric, collects barcoded coupons.

Submits coupons, pays & collects ration. Usual entry made in Card.

Call Center

Licensing & Control

TPDS ADMINISTRATION

Controllers

TRANSPARENCY PORTAL

SMS alerts

Village Vigilance Committee & Registered Mobiles

Centralized TPDS Application

GSWAN/BB connectivity
# TPDS, Gujarat - Statistics

<table>
<thead>
<tr>
<th>Description</th>
<th>Fig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Districts</td>
<td>33+ 1 FC-Ahd</td>
</tr>
<tr>
<td>• Talukas</td>
<td>267 + 40 Zonals</td>
</tr>
<tr>
<td>• Civil Supplies Godown</td>
<td>211</td>
</tr>
<tr>
<td>• Total FPS Areas</td>
<td>17323</td>
</tr>
<tr>
<td>• Total Fair Price Shops</td>
<td>16500+</td>
</tr>
<tr>
<td>• Eligible cards for APR-2015</td>
<td>1,16,91,823</td>
</tr>
<tr>
<td>• Population of eligible cards</td>
<td>5,84,74,596</td>
</tr>
<tr>
<td>• FP captured of Members</td>
<td>1,69,89,990</td>
</tr>
</tbody>
</table>
## TPDS, Gujarat - Statistics

<table>
<thead>
<tr>
<th>Description</th>
<th>Fig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Food Coupons operational in FPS Areas (Mar-15)</td>
<td>14,795</td>
</tr>
<tr>
<td>• eFPS operational in FPS Areas (Mar-15)</td>
<td>7,301</td>
</tr>
<tr>
<td>• Food coupons operated at e-Grams (Mar-15)</td>
<td>5,773</td>
</tr>
<tr>
<td>• Food coupons operated through Pvt. Users (Mar-15)</td>
<td>10,322</td>
</tr>
<tr>
<td>• Mobile Registered with system to avail commodity delivery alerts</td>
<td>71,813</td>
</tr>
</tbody>
</table>
## TPDS, Gujarat - Transactions

<table>
<thead>
<tr>
<th>Transactions</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ration Card Application - 2013</td>
<td>16,00,095</td>
</tr>
<tr>
<td>Ration Card application - 2014</td>
<td>30,09,202</td>
</tr>
<tr>
<td>Ration Card application - 2015 (till date)</td>
<td>10,25,508</td>
</tr>
<tr>
<td>Food Coupons to beneficiaries - Mar 2015</td>
<td>75,59,463</td>
</tr>
<tr>
<td>Permits</td>
<td>76,000+ every month</td>
</tr>
<tr>
<td>DC &amp; Gate Pass</td>
<td>36,000+ every month</td>
</tr>
<tr>
<td>TPs</td>
<td>5,000+ every month</td>
</tr>
</tbody>
</table>
## Solution Matrix

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

- Ascertaining card holder’s identity by matching Electoral Roll Data (EPIC) and capturing of bio-metric data.
- Capturing Finger Print of right person
- Distribution of remaining Bar Coded Ration Cards across the state.
- Availability of operationally viable E-Gram/ Cyber Café within reasonable distance of a few habitation areas.
- To ensure FPS viability as diversion/leakage is under control
Problems

1. Ration Card holder has to go two places every month
2. In case of connectivity failure he has to wait for coupons
3. Coupon reading is not very regular
4. No e-Gram in city area hence so far not covered
Project Features

- **Issue of new BARCODED RATION CARDS** having 2D barcode on it. BARCODE contains some crucial information of Ration card.
- **The BIOMETRIC data** of at least 1 member/card is captured as per ISO standard (ISO 19794-4 and 19794-2 (minutiae))
- **Establishing the identity of a person** through convergence of Ration Card data with EPIC
- **Food coupons to the beneficiaries** to avail the commodity covered in Public Distribution System. The food coupons can be printed from e-gram/Pvt. users on biometric verification of beneficiaries.
Future Roadmaps-proposed solution

- FPS Automation through eFPS migration.
- AADHAAR seeding in Ration card data.
- Self Permit, FPS owner can avail permit without going at Block level office
- PoS transaction-SMS alert to the Ration Card holder
Enter Ration Card number and HHT display the basic details of the cards. Beneficiaries ask required quantity of entitled commodity.

Validate the Finger Print of Beneficiaries with Central Server

IF Finger Print Verification of Beneficiary with Central Server data is OK then

Stores the transaction and generates a bill

Saves the Transaction Data on Central Server and server acknowledges the HHT Device to print the Bill

Commodities along with Bill
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Govt. of Gujarat  
Email: secfcs@gujarat.gov.in
Business Process Re-engineering

- FPS Transactions
  - Paper Based Food Coupon System after online verification 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)
Business Process Re-engineering

- 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
- Details of Your Ration Cards with members
- Details of Ration card Holders - Card Category & District wise
- List of Fair Price Shops and retailer & Hawkers
- FPS wise/Retailer-Hawker wise Card holders
- Details of Allocated, lifted and sale Quantity(s) to & by Fair Price Shop/ Retailers/Hawkers
- FPS-wise Details of Village/ Town Vigilance Committee members
- Monthly Allocation Details of Essential Commodity(s) - District, Scheme and Item-wise
Sample copy of food coupon sheet
Sample copy of food coupon

[Image of food coupon]
Technical Features

- Developed in ASP.Net technology with SQL Server 2012.
- Client modules based on Smart Client Technology
- HHT Based FCI Transit Pass
- SQL Server Reporting Service for Reporting tool
- Inclusion of 2D PDF 417 barcode in various documents like New Ration Card, e-Permit, Food Coupons etc.
- Finger-print captured as per ISO Standard (ISO 19794-4 and 19794-2 (minutiae))
- Single Sign On facility
Major Modules

- Ration Card Management
- Scanning of Forms
- Masters Management
- Scheme Policy Management
- FPS and Area Management
- Central Allocation
- E-Permit (including MDM, ICDS, Fisheries Retailers & NGOs)
- Godown Module.
  - Issue part is fully implemented.
  - Receipt Part is under progress
  - Challan module is in progress
  - Fund flow Management is in progress
- HHT Based Transit Pass system is operational
- PDS food Coupons
Major Modules

✓ PGRS
✓ Mobile registration
✓ SKO Module- lifting by FPS/Hawkers from SKO agent against the kerosene permit.
✓ eFPS (released in July-2014)
Project History

- Start date: 23rd April 2010
- Food Coupons Started on 1st April 2011 at Moria village of Palanpur District
- On-line allocation and e-permit started NOV-2011
- Godown Module (DC) started OCT-2012
- PDS Transparency Portal launched during February 2012. Toll Free no. also operationalized.
- Since August 2012, all ATVTs accept Ration Card related applications.
- Supply Chain Computerization completed during September 2012. Introduction of SMS alerts to the members of Vigilance Committee.
Project History

- HHT based TP module started implementing in JAN-2013 for trial and started in FEB 2013
- Public Grievance Redressal System in FEB-2013
- SMS to VVC in JAN- 2013
- Mobile Registration Module FEB-2013 (with SMS)
- Self-Supplementary Permit Started May-2013
- Released eFPS module in July-2014
Reviews & Visits

- During July 2011, the Representatives of United Nation’s World Food Program visited the Pilot Project and have appreciated the initiative.

- Central Vigilance Committee (CVC), headed by Hon'ble Supreme Court Justice Wadhwa (Retd.) has visited a few Pilot project FPS areas in August 2011 and observed the working of the Pilot Project.

- Later, CVC also submitted its report to Hon'ble Supreme Court in the matter of 196/2001 (PUCL vs. Union of India & others). In its order dated 14.09.2011, Hon'ble Supreme Court of India has recommended Gujarat model of TPDS Reforms for consideration of other States.
STEP-1: Door to door visit by enumerators to help existing Ration card holders fill up prescribed FORM-1 for availing Bar Coded Ration card.
Biometric Based Bar-coded Coupon System (Pictorial Demo)

STEP-2: Digitization of Form -1 and matching of card holders’ family details with EPIC from Electoral Roll.
**Biometric Based Bar-coded Coupon System (Pictorial Demo)**

**STEP-3:** Capturing of Photo and bio-metric details followed by Printing of Bar Coded Ration Card.
BIOMETRIC BASED BAR-CODED COUPON SYSTEM (PICTORIAL DEMO)

**STEP-4:** Distribution of Bar Coded Ration Card to the Cardholder (in lieu of old ration card).

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BIOMETRIC BASED BAR-CODED COUPON SYSTEM (PICTORIAL DEMO)

STEP-5: BPL Card Holder with Bar-coded Ration Card
<table>
<thead>
<tr>
<th>Ration Item</th>
<th>Quantity</th>
<th>ID Code</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>40</td>
<td>GI/15/102/231030</td>
<td></td>
</tr>
<tr>
<td>Rice</td>
<td>38</td>
<td>GI/15/102/231007</td>
<td></td>
</tr>
<tr>
<td>Sugar</td>
<td>18</td>
<td>UAK0502468</td>
<td></td>
</tr>
<tr>
<td>Salt</td>
<td>15</td>
<td>UAK0862003</td>
<td></td>
</tr>
<tr>
<td>pulses</td>
<td>11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
BIOMETRIC BASED BAR-CODED COUPON SYSTEM (PICTORIAL DEMO)

STEP-6: E-GRAM operator with Computer, Printer, Bar-Code Reader and Biometric Device

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BIOMETRIC BASED BAR-CODED COUPON SYSTEM (PICTORIAL DEMO)

STEP-7: Card holder visits E-GRAM and E-GRAM Operator reads the card details with Bar Code reader device

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STEP-8: E-GRAM/ CYBER CAFE Operator carries out ON LINE verification of Card Holder’s FINGER PRINT using Biometric Device
BIOMETRIC BASED BAR-CODED COUPON SYSTEM (PICTORIAL DEMO)

STEP-9: E-GRAM Operator verifies the Bar-Coded Coupon with the Ration Card and takes the Print out of the Bar Coded Coupons
BIOMETRIC BASED BAR-CODED COUPON SYSTEM (PICTORIAL DEMO)

STEP -10 A: E-GRAM Operator handing over Ration Card and the print out of Bar Coded Coupons for all commodities as per entitlement to the Card Holder
STEP-10 B: Bar Coded Coupons for the month of June 2011 showing Card holder’s, 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).
BIOMETRIC BASED BAR-CODED COUPON SYSTEM (PICTORIAL DEMO)

**STEP- 11:** Card Holder goes to the Fair Price Shop along with Ration Card and Bar Coded Coupon.
STEP-12: Card Holder submits bar-coded coupon and makes payment to the Fair Price Shop Dealer as per Coupon details.
BIOMETRIC BASED BAR-CODED COUPON SYSTEM (PICTORIAL DEMO)

STEP-13: FPS Dealer hands over wheat as per coupon details to the Card Holder
STEP-14: Card Holder returning from FPS along with Wheat and Ration Card with due entry by FPS dealer.
STEP-15: FPS dealer goes back to the E-GRAM and gets commodity coupons (as per the date of actual sale) read into his sale register maintained in the central system.
STEP-16: using bio-metric the FPS dealer can obtain Supplementary Permits from E-GRAM.
STEP-17: Lifting of food grain from State Civil Supply Godown by FPS dealer triggers SMS alert to the registered mobile users in that FPS area.