

**Smart PDS**  
**- A COMPLETE e-Governance**  
**SOLUTION**  
**FOR**  
**GUJARAT STATE**  
**PUBLIC DISTRIBUTION SYSTEM**

**Presentation By**  
**Food, Civil Supplies and Consumer Affairs Department,**  
**Government of Gujarat,**  
**Gandhinagar**

# **PRESENTATION PLAN**

- **INTRODUCTION TO FOOD, CIVIL SUPPLIES & CONSUMER AFFAIRS DEPT.**
- **RATION CARD – A VITAL LINK BETWEEN PUBLIC & PDS**
- **DRAWBACKS WITH PRESENT SYSTEM**
- **PROPOSED SOLUTION**
- **COST ESTIMATE**
- **SAVINGS AFTER INVESTMENT – GUJARATI APPROACH**
- **BENEFITS FROM THE PROPOSED SOLUTION**

**Food, Civil Supplies and  
Consumer Affairs Department,  
(FCS & CAD)  
- an introduction**

## Objectives of FCS & CAD :

- Implementing & strengthening PDS by ensuring availability of essential commodities in adequate quantities at fair price to the vulnerable section of the society.

# Major Activities of FCS & CAD

- **Implementation of various Central & State Government schemes under PDS.**
  - Distribution of food grains, coarse grains, edible oil, levy sugar, kerosene etc. under pds
- **Distribution of commodities under various Central & State Government schemes of other departments i.e. schemes like SGRY, MDM-C, MDM-S, ICDS, WFP etc.**
- **Ensuring quantity and quality of petroleum products sold in the state**
- **Weights & Measurement**
- **Consumer affairs – commission, forums etc.**

# Major Schemes

## Major Schemes under PDS:

- Antyoday Anna Yojana (AAY)
- Below Poverty Line (BPL)
- Above Poverty Line (APL)

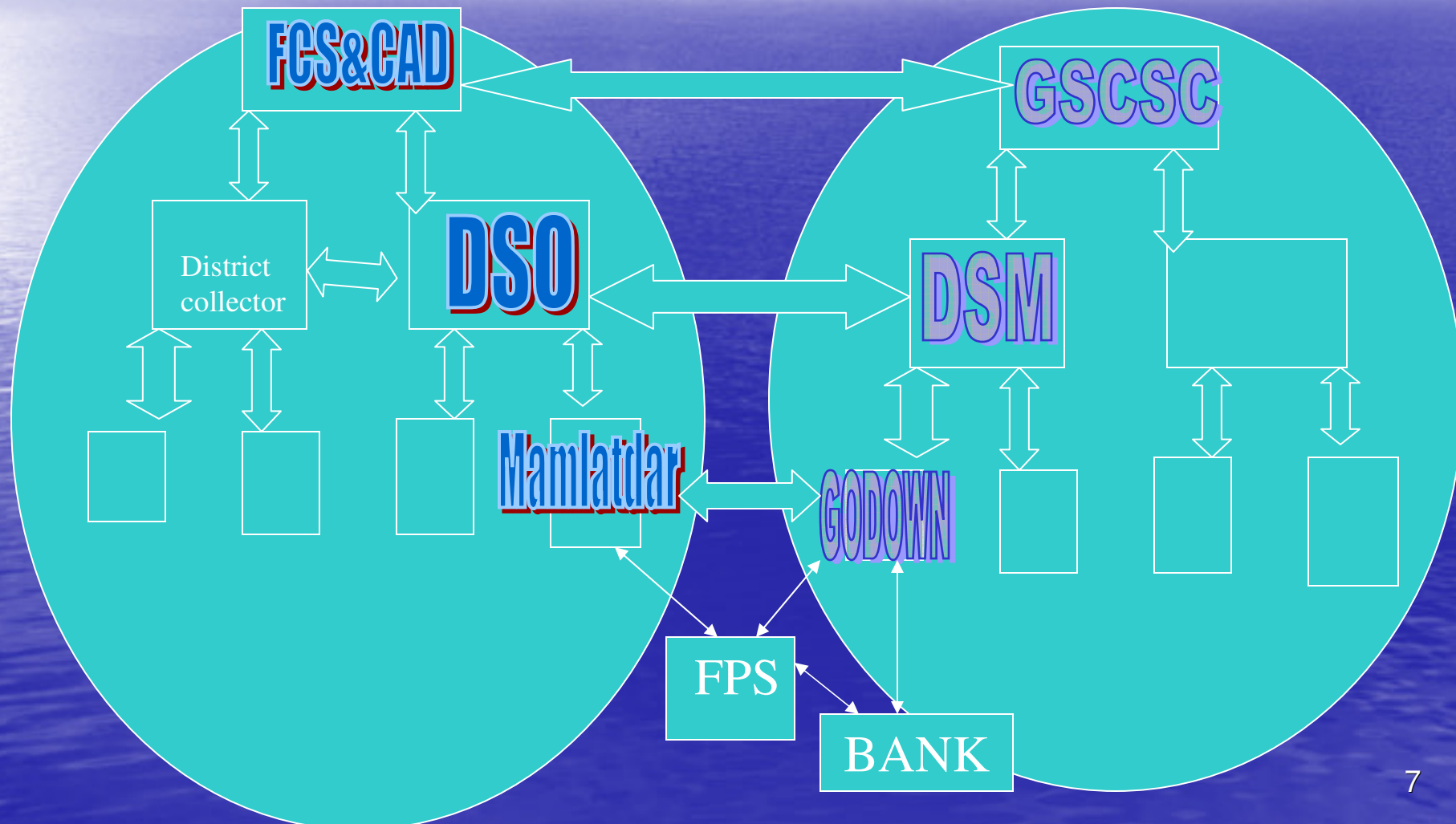
## Major Schemes under other Govt. Depts.:

- SGRY
- MDM
- CMDM
- ICDS
- WFP
- Adijati etc.

# PDS Network

FCS & CAD

GSCSC



# Infrastructure at FCS & CAD to implement PDS

- **AT Gandhinagar**

- FCS & CAD
  - Secretariat and Directorate
  - Departments
- GSCSC
  - Head Office

- **AT A'bad CITY and OTHER DISTRICT HQ:**

- FCS & CAD
  - Food Controller's office at Ahmedabad
  - District Supply Officers at all District HQ
- GSCSC
  - Ahmedabad City Office
  - District Manager (Grade-II) Office at all District HQ



# Infrastructure at FCS & CAD to implement PDS

- **AT ZONAL AREA of A'BAD CITY and OTHER TALUKA PLACES:**
  - FCS & CAD
    - Zonal offices in Ahmedabad City (e.g. 16 Offices), Baroda City, Surat City, Rajkot City, Jamnagar City, Bhavnagar City
    - Taluka Mamlatdar's office at Taluka level (225 Offices)
  - GSCSC
    - Godown Centres of Corporation (192 Centres)
- **AT almost each ward of A'BAD City and Other VILLAGES:**
  - FCS & CAD
    - At present Pandit Din Dayal Grahak Bhandars (Registered Fair Price Shops) – about 16336 in numbers - all over Gujarat. Later on it may turn out to approx. 20000 FPS connected to 250 Zonal/Taluka Offices and 192 Godown Centres of GSCSC and 260 Designated Bank Branches.
    - Out of 16336 FPS, about 7991 FPS are Modern FPS as on Sep-08.

## Other related Offices/Corp.

- Food & Civil Supplies Department, Government of India, New Delhi.
- Food Corporation of India (FCI)
- State Trading Corporation (STC)
- Co-operative bodies
- Petroleum Corporations etc.
- Private Suppliers
- Banks

# **Ration Card**


- A Vital link Between Public  
&  
Public Distribution System**

# Role of Ration Card (RC)

- In PUBLIC DISTRIBUTION SYSTEM (PDS), essential commodities are made available to the citizens and targeted groups through RC
- RC is an essential instrument playing vital role in ensuring effective and efficient PDS in the state.
- It has been observed that the manual process involved in issuing, editing and transferring RC may lead to the generation of Ghost Cards, which takes away PDS subsidies and ultimately defeats the purpose of PDS.

# Generation of Ghost Cards

- Manual Process involved
- Tatkal Ration Card System
- Lack of identity of persons in RC
- No accountability
- Registers kept at Government office (G-register) and FP Shop
- As per the year 2004 information, it is estimated that out of the total no. of ration cards about 5.14% ghost card exists.



# **DRAWBACKS OF PRESENT SYSTEM**

# DRAWBACK / OBSERVATIONS

- No assurance whether essential commodities under PDS are distributed in right quantity at right rate to the right (eligible) people at right time.
- In spite of availability of goods, whether all FPSs has lifted their quota in time as per requisite quantity and distributed the same to the eligible card holders is not known immediately, so objective of PDS is not fulfilled.
- Issue of duplicate/fake permit and black marketing of PDS quantity.
- Misappropriation cases do not come to notice immediately.
- No control over black marketing of the PDS Quota in the open Market.
- Issuance of Duplicate/Ghost cards without proper verification due to non-availability of proper control system.

# DRAWBACK / OBSERVATIONS

- No accountability for issuance of such cards and no verification.
- Loss of investment, other related costs as well as subsidy.
- No stringent checks and balances.
- Up to date records of RCs are not maintained.
- No. of RCs with Zonal / Mamlatdar Office may not tally with no. of RCs with FPS.
- Communication gap between Zonal offices/ Mamlatdar office, FPS and Godown.
- Missing JIT concept and hence unnecessary overstocking.



# DRAWBACK / OBSERVATIONS

- No direct control over Wastage/Handling losses.
- Time consuming system as calculation is being done manually
- Quantity Reconciliation and Financial Reconciliation takes lot of time as it is done manually. This delay leads to delay in claim preparation and ultimately late payment of claims.
- Lack of integration.
- Difficulties in getting latest information.
- Planning becomes difficult.

# DRAWBACK / OBSERVATIONS

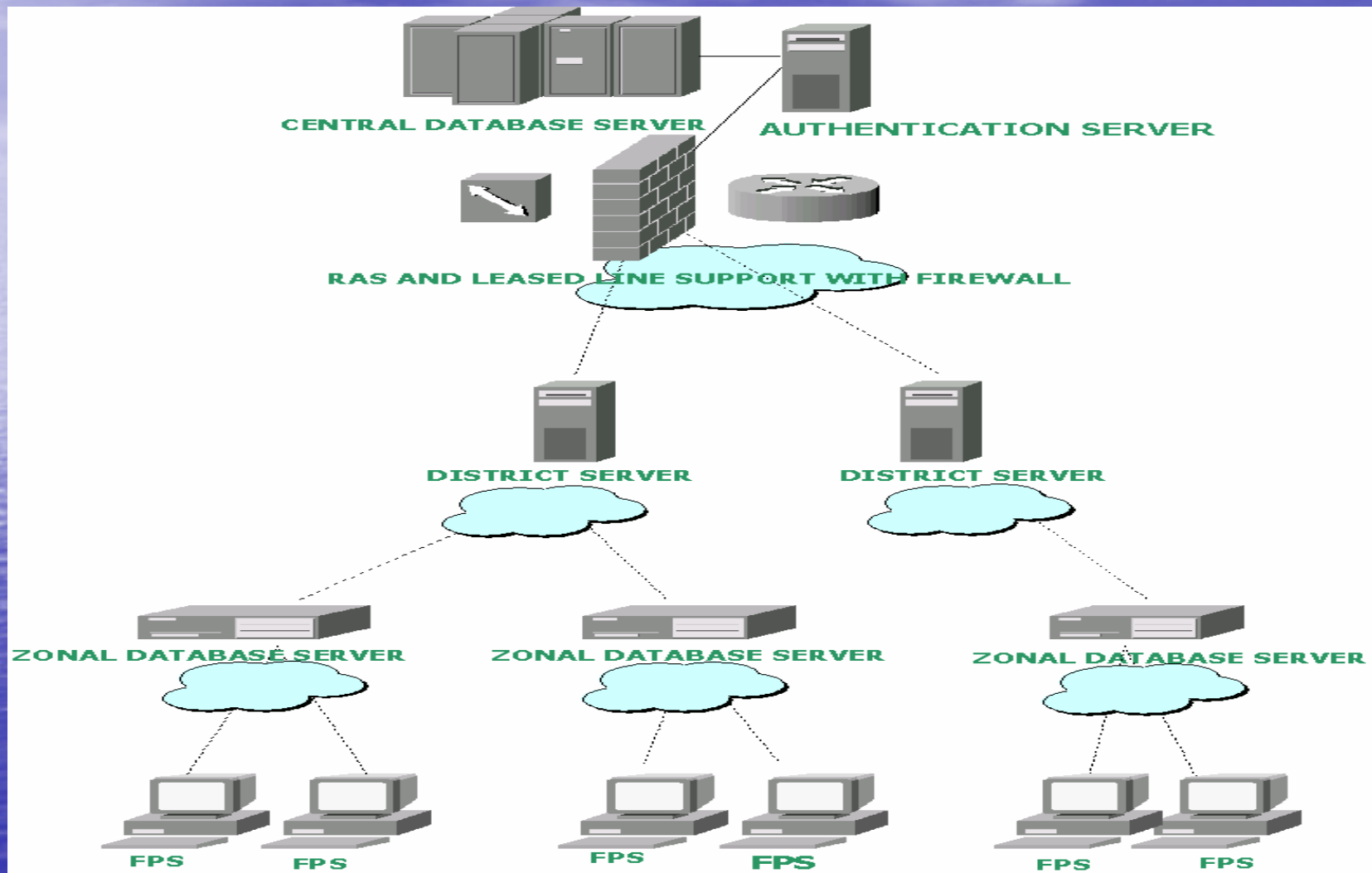
- Fund Flow management needs fresh look with latest technology.
- Interest loss to the Corporation, due to some amount of money in pipe line
- Lack of method to keep people informed about the schemes and stock status.
- Low level of consumer satisfaction.
- Lack of separate information and monitoring system for relief operations.
- Lack of proper method to check efficiency and effectiveness of PDS.

***“Smart PDS”***  
***– a complete e-Governance Solution for  
Gujarat State Public Distribution System***

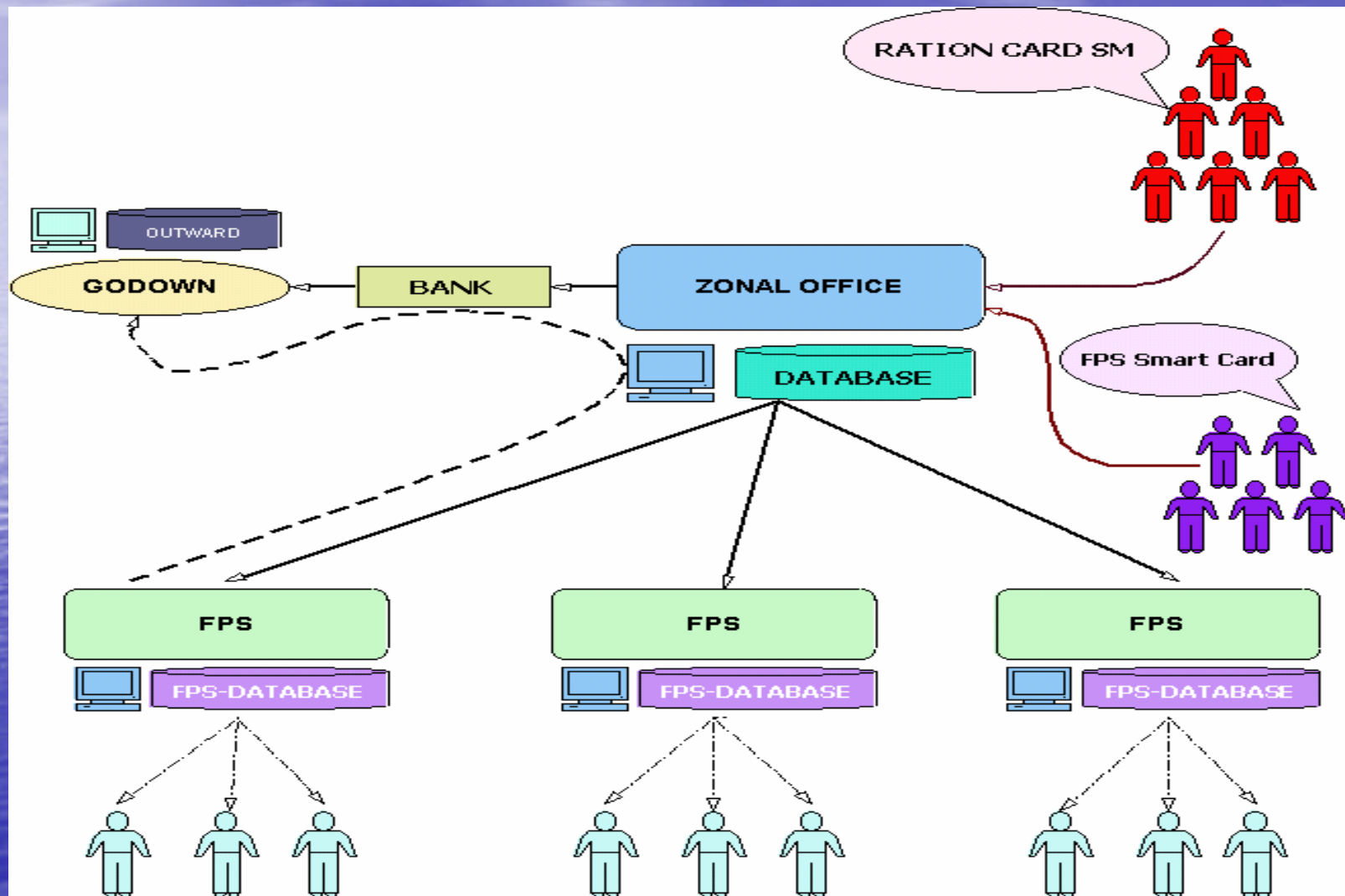
# ***“Smart PDS” – a complete e-Governance Solution for Gujarat State PDS***

- Use of modern state of the art technology
- To minimize the existence of Ghost Cards, to have more accurate information on RC, to increase efficiency and effectiveness of PDS in the State, Government can think of using Information Technology (IT).
- Why IT ? - because of
  - Inherent Characteristics of Computers & IT
  - $IT + IT = IT$
  - Indian Talent + Information Technology = India Tomorrow
- also mainly because of -
  - Central Database.
  - Networking Technologies
  - Smart-Card Technologies

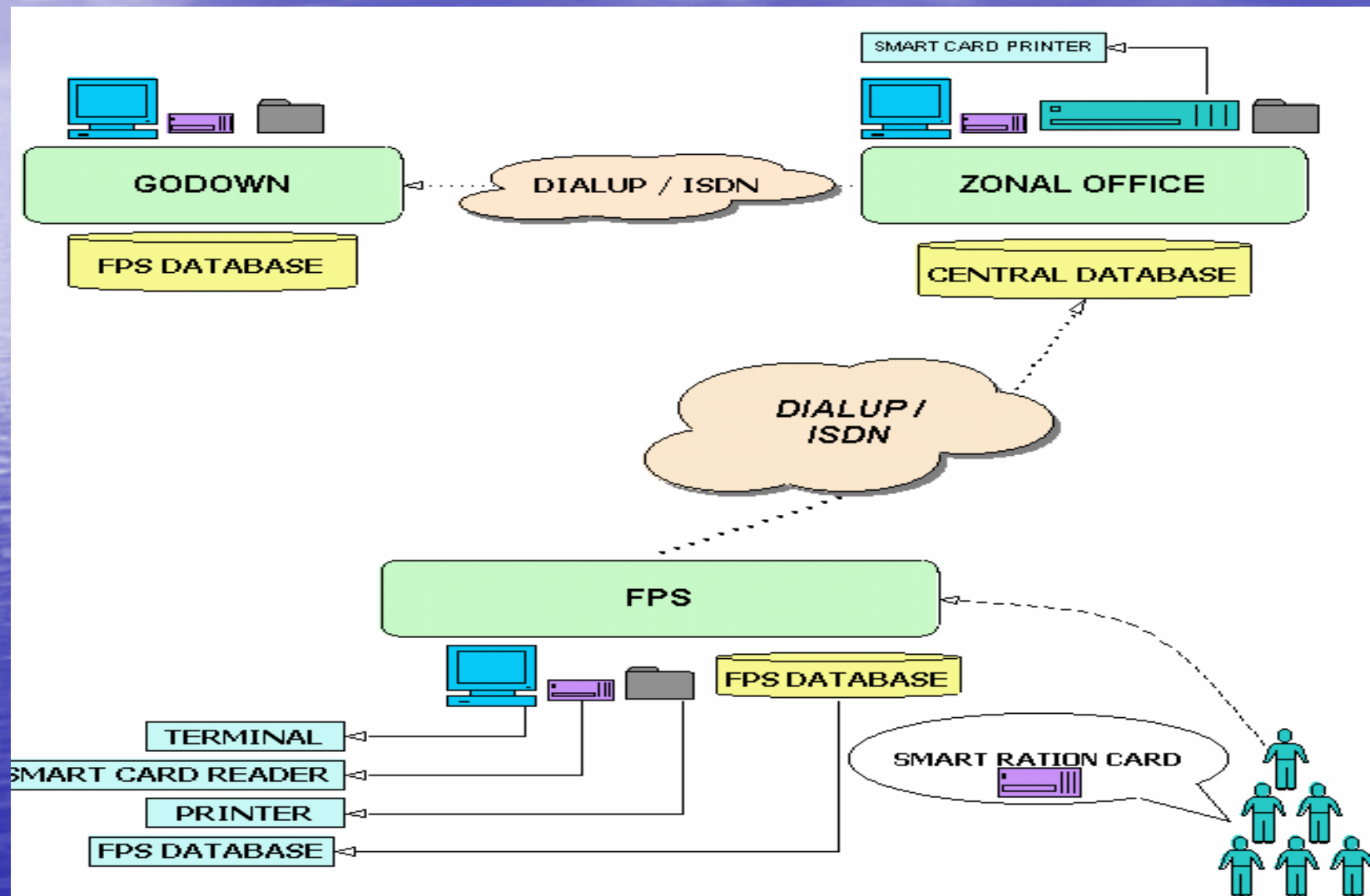
# Network Diagram



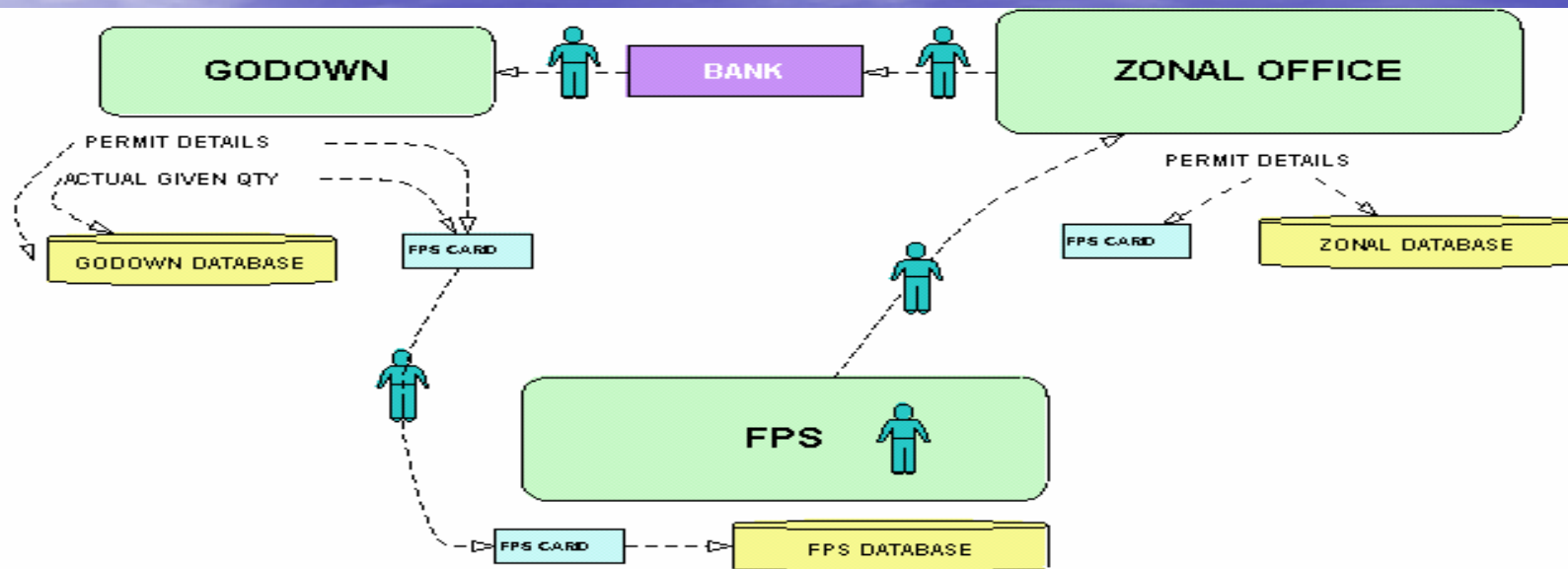
# System Concept Diagram



# LINK BETWEEN FPS -- ZONAL/TALUKA -- GODOWN



# FPS SMART LICENCE – CREATING LINK BETWEEN FPS --- ZONAL/TALUKA --- GODOWN





# Proposed IT Solution : Smart 7 Modules

- **Module – I (Zonal Module)**
- Computerisation at Zonal / Mamlatdar (CS) office, which mainly includes
  - Issue of Smart Ration Card to the public (initially only AAY+BPL+Kerosene)
  - (Use of election data with EC permission and thereafter adding only persons below 18 years)
  - Issue of Smart Roaming Ration Card to the needy people
  - Issue of Smart License to the Fair Price Shopkeepers (FPS)
  - Issue of Permit to FPS on Smart License
  - Monitoring of Permit with respect to standard allocation under various schemes
  - All related application areas of Ration Card, Roaming Ration Card, FPS License – like updations, maintenance of G-Register etc.
  - Permit parameters, Stock Allocation and Monitoring
  - Supervision of FPS with observations on efficiency and effectiveness

# Proposed IT Solution : Smart 7 Modules

- **Module – II (FPS Module)**
- Computerisation at Fair Price Shop, which mainly includes
  - Automatic updation of receipts in Stock data/Register through Smart License.
  - Eligibility Display for the public
  - Issue of essential commodities to Smart Ration Card as well as Roaming Ration Card holders with bill.
  - Maintenance of Purchase Register, Sale Register (for RC & RRC), Stock Register, Card Register etc.
  - Generation of reports
  - Assurance of food security
  - Later on establishing as Government Authorized Information Centre for general public
  - Gradually expanded as Internet Phone booth with upgradation of technical resources.

## Proposed IT Solution : Smart 7 Modules

- **Module – III (Godown Module)**
- Computerisation at Godown Centres, which mainly includes following transactions:
  - Receipt (TP), Standardization, Permit, Issue, Loss, Bank Chalan, Credit Note Issued/ Received, Bank Scroll
- and hence following applications:
  - Inventory Management System
  - Financial Accounting System (including raising invoices for MDM, ICDS etc.)
  - Bank Reconciliation System
  - Transport, Labour and Wastage Cost control system
  - Efficient Godown Capacity utilisation

## Proposed IT Solution : Smart 7 Modules

- Module – III (Contd.)
- Computerisation at Godown Centres will also facilitate :-
  - Automatic updating of Issue of commodities to FPS in the Smart License.
  - FPS wise Issue detail Display for the public and automatic letter generation for Sarpanch / Committee
  - Permit vs Issue Monitoring
  - Relief Operation detail and monitoring.
  - Stock Analysis - Age wise, Grade wise, Scheme wise etc.
  - Immediate submission of issue information to the authorised news channel and mamlatdar office

# Proposed IT Solution : Smart 7 Modules

- **Module – IV (DSM Module)**
- Computerisation at Dy.Mgr (Gr-II) Office, which mainly includes
  - Consolidation of Godown Centre Information System covering
    - Inventory Management System
    - Financial Accounting System
    - Bank Reconciliation System
    - Major Reporting System
    - Upward and downward connectivity with HO and Godown Centres of GSCSC
    - Parallel connectivity with DSO Module for Allocation and Inventory information
    - Integration

# Proposed IT Solution : Smart 7 Modules

- **Module – V (DSO Module)**
- Computerisation at DSO Office, which mainly includes
  - Consolidation of Zonal / Mamlatdar Office Information System covering
    - Smart Ration Card Information System
    - Smart FPS License Information System
    - Inventory Management System
    - Major Reporting System
    - Upward and downward connectivity with HO – Secretariat / Directorate and Taluka Mamlatdar
    - Parallel connectivity with Dy.Mgr (Gr-II) Office Module for Allocation and Inventory information
    - Integration

## Proposed IT Solution : Smart 7 Modules

- **Module – VI (HO – Govt. Module)**
- Computerisation at Head Office – Secretariat / Directorate, which mainly includes
  - Consolidation of DSO Information System covering
    - Smart Ration Card Information System
    - Smart FPS License Information System
    - Inventory Management System
    - Major Reporting System
    - Parallel connectivity with HO – GSCSC Module for Allocation and Inventory information
    - Integration

# Proposed IT Solution : Smart 7 Modules

- **Module – VII (HO-GSCSC Module)**
- Computerisation at Head Office – GSCSC, which mainly includes
  - Consolidation of Dy.Mgr (Gr-II) Information System and HO **purchase and payment** system covering
    - Inventory Management System
    - Financial Accounting System
    - Bank Reconciliation System
    - Cost Control System
    - Major Reporting System
    - Parallel connectivity with HO – Secretariat / Directorate Module for Allocation and Inventory information
    - Integration



# Proposed Technology

- Smart Ration Card is given to all ration card holders (initially only AAY, BPL and APL getting Kerosene) instead of booklet.
- Use of election data with EC permission and thereafter adding only persons below 18 years
- Smart Roaming Ration Card is given to the needy people.
- Smart License is given to all FPS.
- Smart Identity Card is given to all Civil Supplies Employees.
- Smart License becomes the data carrier for FPS and Monitoring instrument for black marketiers
- Fully automation of current distribution system.
- Government can immediately start with Module – I, II and III. Thereafter other modules can be implemented.

# Cost Estimate

# Cost Estimate

			COMPUTERS	POS Terminals
			(Rs.)	(Rs.)
TOTAL INVESTMENT AT ALL ZONAL / TALUKA OFFICES	229	OFFICES	1013787580	1013787580
TOTAL INVESTMENT AT ALL FPS	16500	FPS	1823250000	1509750000
TOTAL INVESTMENT AT ALL GODOWN CENTRES	192	OFFICES	99328896	88128000
TOTAL INVESTMENT AT ALL DSM OFFICES	26	OFFICES	20603700	20603700
TOTAL INVESTMENT AT ALL DSO OFFICES	26	OFFICES	13713700	13713700
TOTAL INVESTMENT AT ONE FCS & CAD, GOG OFFICE	1	OFFICE	2145654	2145654
TOTAL INVESTMENT AT GSCSC HEAD OFFICE	1	OFFICE	2677784	2677784
TOTAL INVESTMENT OF THE PROJECT	0	0	2975507314	2650806418

# Savings after Investment – a Gujarati approach

Food, Civil Supplies and Consumer Affairs Department, Government of Gujarat.

Estimated Savings on various costs and subsidy due to PDS Computerisation

Sr.	Item	Scheme	Unit of Qty.	Qty. sold during 2007-08	20%* of Qty. sold	<---GOI Rates(-Rs/Kg or Ltr.)----->				<-GOI Amount in Crores for 20% Qty.->			
						Purch. Price/ MSP	Landing Cost\$	Issue Price to the State	Subsidy by GOI	Purch. Amount	Landing Amount	Issue Amount	Subsidy Amount
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Wheat	AAY	MT	150865	30173	10.00	16.00	2.00	14.00	30.17	48.28	6.03	42.24
		BPL	MT	231064	46213	10.00	16.00	4.15	11.85	46.21	73.94	19.18	54.76
		APL	MT	38229	7646	10.00	16.00	6.10	9.90	7.65	12.23	4.66	7.57
2	Rice	AAY	MT	139958	27992	11.70	18.73	3.00	15.73	32.76	52.42	8.40	44.02
		BPL	MT	250694	50139	11.70	18.73	5.65	13.08	58.68	93.89	28.33	65.56
		APL	MT	50073	10015	11.70	18.73	8.30	10.43	11.72	18.75	8.31	10.44
3	Maize	AAY	MT	2323	465	8.40	13.44	1.50	11.94	0.39	0.62	0.07	0.55
		BPL	MT	2233	447	8.40	13.44	3.00	10.44	0.38	0.60	0.13	0.47
4	Bajara	AAY	MT	1415	283	8.40	13.44	1.50	11.94	0.24	0.38	0.04	0.34
		BPL	MT	1427	285	8.40	13.44	3.00	10.44	0.24	0.38	0.09	0.30
5	Palmolien Oil	AAY/ BPL	MT	12000	2400	60.00	68.50	53.50	15.00	14.40	16.44	12.84	3.60
6	Lewy Sugar	AAY/ BPL	MT	66444	13289	13.02	13.75	13.50	0.25	17.30	18.27	17.94	0.33
7	Iodised salt	TPDS	MT	5625	1125					0.00	0.00	0.00	0.00
8	Kerosene	TPDS	KL	955728	191146	25.70	41.12	8.95	32.17	491.24	785.99	171.08	614.92
		<b>Total</b>								<b>711.39</b>	<b>1122.21</b>	<b>277.10</b>	<b>845.10</b>

\*Note: It has been mentioned in ORG-MARG Survey 2005, that diversion of PDS quota in Gujarat is about 27%.

\$Note: It has been observed that Landing Cost of the foodgrains at State Warehouses of FCI turns out to be

about 60% more than the pur.price.

# Savings after Investment – a Gujarati approach

Food, Civil Supplies and Consumer Affairs Department, Government of Gujarat.

Estimated Savings on various costs and subsidy due to PDS Computerisation

						<---GOG Rates(-Rs/Kg or Ltr.)----->				<-GOG Amount in Crores for 20% Qty			
Sr.	Item	Scheme	Unit of Qty.	Qty. sold during 2007-08	20%* of Qty. Sold	Purch. Price from GOI/ Supl.	Landing Cost	Issue Price to the Cust.	Subsidy by GOG	Purch. Amount	Landing Amount	Issue Amount	Subsidy Amount
1	2	3	4	5	6	15	16	17	18	19	20	21	22
1	Wheat	AAY	MT	150865	30173	2.00	2.88	2.00	0.88	6.03	8.69	6.03	2.66
		BPL	MT	231064	46213	4.15	5.04	2.00	3.04	19.18	23.29	9.24	14.05
		APL	MT	38229	7646	6.10	7.00	7.00	0.00	4.66	5.35	5.35	0.00
2	Rice	AAY	MT	139958	27992	3.00	4.01	3.00	1.01	8.40	11.22	8.40	2.83
		BPL	MT	250694	50139	5.65	6.64	3.00	3.64	28.33	33.29	15.04	18.25
		APL	MT	50073	10015	8.30	10.00	10.00	0.00	8.31	10.01	10.01	0.00
3	Maize	AAY	MT	2323	465	1.50	2.36	2.00	0.36	0.07	0.11	0.09	0.02
		BPL	MT	2233	447	3.00	3.91	2.00	1.91	0.13	0.17	0.09	0.09
4	Bajara	AAY	MT	1415	283	1.50	2.36	2.00	0.36	0.04	0.07	0.06	0.01
		BPL	MT	1427	285	3.00	3.91	2.00	1.91	0.09	0.11	0.06	0.05
5	Palmolien Oil	AAY/ BPL	MT	12000	2400	67.48	77.47	48.35	29.12	16.20	18.59	11.60	6.99
6	Levy Sugar	AAY/ BPL	MT	66444	13289					0.00	0.00	0.00	0.00
7	Iodised salt	TPDS	MT	5625	1125	1.78	2.13	1.00	1.13	0.20	0.24	0.11	0.13
8	Kerosene	TPDS	KL	955728	191146	8.95	9.50	9.50	0.00	171.08	181.59	181.59	0.00
		<b>Total</b>								<b>262.72</b>	<b>292.75</b>	<b>247.68</b>	<b>45.06</b>

\*Note: It has been mentioned in ORG-MARG Survey 2005, that diversion of PDS quota in Gujarat is about 27%.

\$Note: It has been observed that Landing Cost of the foodgrains at State Warehouses of FCI turns out to be about 60% more than the pur.price.

# Savings after Investment – a Gujarati approach

Food, Civil Supplies and Consumer Affairs Department, Government of Gujarat.

Estimated Savings on various costs and subsidy due to PDS Computerisation

Sr.	Item	Scheme	Unit	<-Est.Savings-two forms->	
			of	Landing Cost	Total
			Qty.	of GOI plus	Subsidy
				Hand.Chrg	GOI+GOG
				of GOG	on 20%
1	2	3	4	23	24
1	Wheat	AAY	MT	50.93	44.90
		BPL	MT	78.05	68.81
		APL	MT	12.92	7.57
2	Rice	AAY	MT	55.25	46.85
		BPL	MT	98.86	83.81
		APL	MT	20.46	10.44
3	Maize	AAY	MT	0.66	0.57
		BPL	MT	0.64	0.55
4	Bajara	AAY	MT	0.40	0.35
		BPL	MT	0.41	0.35
5	Palmolien Oil	AAY/ BPL	MT	18.84	10.59
6	Levy Sugar	AAY/ BPL	MT	18.27	0.33
7	Iodised salt	TPDS	MT	0.04	0.13
8	Kerosene	TPDS	KL	796.50	614.92
		<b>Total</b>		<b>1152.24</b>	<b>890.17</b>

\*Note: It has been mentioned in ORG-MARG Survey 2005, that diversion of PDS quota in Gujarat is about 27%.

\$Note: It has been observed that Landing Cost of the foodgrains at State Warehouses of FCI turns out to be about 60% more than the pur.price.

# Benefits from "Smart PDS"

# BENEFITS TO THE GOVERNMENT

- Most accurate, temper proof and digitaly signed issue of Smart Ration Card, Roaming Ration Card and FPS permit to the FPS and thus avoiding any kind of manipulation.
- Manipulation, if any, can be easily traced out.
- Misuse of Ration card can be stoped.
- Plan can be given to the inspectors to perform checking of information in time and issuing correct cards in time. Thus accountability can be achieved.
- Security features of the computer network can assure security, integrity and accountability.
- Elimination of Ghost Cards



# BENEFITS TO THE GOVERNMENT

- Savings on investment, related expenses and subsidy because of decrease / removal of Ghost Cards.
- Same card can be used number of times
- Most accurate temper proof and digitally signed allotment to the FPS and thus avoiding chances for malpractices and manipulation.
- Right Ration to Right Person on Right Time - that is ultimate objective of food security can be achieved.
- Black marketing and malpractices can be curbed
- Proper weight-age to the various people under various categories in various locations.
- Management of various schemes becomes easy.

# BENEFITS TO THE GOVERNMENT

- Administration of the Government become more transparent.
- Easy access of latest data and reports by respective authority.
- Different types of MIS reports can be generated instantly.
- Removes communication gap between different PDS agencies and improves administration.
- Activity time gap analysis can easily trace out malpractices and gray areas. This improves governance.

# BENEFITS TO THE GOVERNMENT

- Due to on line availability of stock information JIT concept can be adopted and can stop overstocking.
- Wastage/Losses can be easily analyzed and controlled.
- Godown capacity utilisation increases.
- Speed, accuracy, security, accountability and transparency becomes the characteristics of the process due to digital world.
- Quantity as well as Financial reconciliation becomes easy and faster. This gives additional advantage over unnecessary interest loss.
- Peoples participation increases as information related to stock with FPS is shared instantly.

# BENEFITS TO THE GOVERNMENT

- Card holders gets their eligible quota, as they are well informed about the eligibility criteria.
- Management of Relief operations becomes easy and scientific.
- Alternate employment and business possibilities can be provided to the educated unemployed youth.
- FPS System can be used as Village Information Centre
- Consumer satisfaction is achieved.
- Data Mining (Single Statewide Unified Data)

# BENEFITS TO THE GOVERNMENT

- In later stage, Govt. can think of even connecting cards with Birth & Death Dept. and Marriage Registration section so that information can be updated at one point and card holder need not to bother for inclusion or removal of name from the card.
- After inclusion of the detail like PAN no., election areas, personal detail and health related detail, if these cards are expanded as Citizen Card then there could be lot of improvement in overall administration.
- As ration card is a popular procedure it is easy to introduce Citizen Card through Ration Card.

# BENEFITS TO THE GOVERNMENT

- History has proved that any card whose importance is not established, such cards are merely failure.
- Government can use single card with multiple purposes.
- Govt. can easily cross verify the card data with censuses data.
- Govt. can save huge amount of related investment, costs and subsidies.



**.....NOW LET US START OUR JOURNEY  
TO e-GOVERNANCE WITHOUT  
THINKING MUCH ABOUT “WHETHER  
TECHNOLOGY WILL HELP ?”**

**THOSE WHO CHANGE THEMSELVES  
THEY ONLY SURVIVE IN LONG  
RUN.....**





**THANKS**