Case Studies on e-Governance in India

CORE PDS: Empowering with Portability

Prof. Omkarprasad S. Vaidya
Mr. A.K. Somasekhar, NIC, Chhattisgarh
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Prof. Omkarprasad S. Vaidya

Mr. A.K. Somasekhar, NIC, Chhattisgarh
About the Initiative

This publication is a part of the Capacity Building initiative under the National e-Governance Plan (NeGP) by NeGD with an aim to draw out learnings from various projects implemented in various States/UTs and sharing this knowledge, in the form of case studies, with the decision makers and implementers to benefit them, by way of knowledge creation and skill building, from these experiences during planning and implementation of various projects under NeGP.

Conceptualised and overseen by the National e-Governance Division (NeGD) of Media lab Asia/DeitY these case studies are submitted by e-Governance Practitioners from Government and Industry/Research Institutions. The cases submitted by the authors are vetted by experts from outside and within the Government for learning and reference value, relevance to future project implementers, planners and to those involved in e-governance capacity Building programs before they are recommended for publication. National Institute for Smart Government (NISG), working on behalf of this NeGD provided program management support and interacted with the authors and subject matter experts in bringing out these published case studies. It is hoped that these case studies drawn from successful and failed e-Governance projects would help practitioners to understand the real-time issues involved, typical dilemmas faced by e-Governance project implementers, and possible solutions to resolve them.

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# TABLE OF CONTENT

Abstract ........................................................................................................................................ 1  
Background .................................................................................................................................. 1  
The concern ................................................................................................................................... 3  
The Theme of the Project: Portability Rights to the Beneficiary .................................................. 6  
Development of the System ......................................................................................................... 8  
Implementation Details of COREPDS ......................................................................................... 10  
Practical Impediments in Implementation of the Project ............................................................... 11  
The Business Continuity Plan ...................................................................................................... 16  
Performance Indicators for COREPDS ....................................................................................... 17  
The Road ahead ............................................................................................................................ 19  
Methodology adopted for Case Writing ....................................................................................... 21  
References ..................................................................................................................................... 21
Abstract

A supposedly seeming simple task of distributing food grains to the poor and needy has many challenges. In the present study, we discuss the rationale of implementing a system in the developing state of Chhattisgarh. This case study is known to be a successful re-engineering process (implemented by the state government) in Public Distribution System (PDS). The project was initiated, planned and executed under the title ‘CORE PDS’.

Traditionally, a beneficiary (family holding a valid ration card) is assigned to only one Fair Price Shop (FPS) to get their ‘food grain/s and kerosene’ entitlements at subsidized prices. The prices are usually decided by the state and/or central government. This creates a forced monopoly of the seller or the dukandar (the fair price shopkeeper). At times, it is seen that this monopoly deteriorates the service level and the beneficiaries are deprived of their rights.

In CORE PDS, a beneficiary is linked with all the Fair Price Shops and is given an option to procure the goods from any FPS according to his/her convenience. With this facility provided to the beneficiary, the back office process becomes complex. A sustainable information technology to take care of authentication of the beneficiary and manage various record/s is therefore needed. It is noted that, this ‘portability’ has empowered beneficiary with greater negotiating power with the FPS. The competition among FPSs for a bigger business share has improved the service quality. This case study discusses various risks (such as vested interests of FPS owners to dis-credit the system, connectivity problems etc.), issues and challenges associated with FPS automation. The processes developed under the project CORE PDS has ensured a sustainable system with suitable mitigation strategies.

Here, in this case study, we discuss rationale in developing the FPS automation system and key learnings while implementing the system.

Key words: Public Distribution System, Chhattisgarh, COREPDS, FPS Automation, Portability

Note to Practitioners

In this case, an attempt is made to share various problems while implementing the CORE PDS project. A properly developed theme of the project “empowering the beneficiary with portability benefits” provided solutions to solve most of the problems. The technology base of the project enabled proper controlling and monitoring of the processes. The following practical tips may be of use to the practicing managers.

- While designing eGovernance applications, practicing managers need to keep a fine balance between beneficiaries’ convenience and controlling the diversion or leakages.
• The guru mantra to the success of such systems is taking along all the stakeholders together by carefully understanding their needs and demands.

• It was noted during the implementation of the various other eGovernance projects that most of the stakeholders are not interested in the success of the system. For instance in the present case under discussion, some beneficiaries, some FPS owners, some government officers, some political representatives had their vested interests in the existing system and were reluctant to change. Eventually, after proper discussion with all the stakeholders, with their help and support, this project is successful. At times, sustainability of any new eGovernance application is at stake. Designers need to undertake a vigorous risk analysis and study the sustainability of the project.

Background

The public distribution system (PDS) was at a nascent stage at the time of formation of an independent state, ‘Chhattisgarh’ in November 1st, 2000. The State Government launched Mukhyamantri Khadya Sahayata Yojana in 2007. PDS then, was manual and the task was to serve more than 5 million beneficiaries. The government had the basic system, the fair price shops (nearly eleven thousand) in place. Department of Food, Chhattisgarh State, decided to computerize this public distribution system in 2007-08. The computerization has been made operational since January 2008 enabling the government an efficient monitoring system. This initiative was awarded the “Prime Minister’s Award for Excellence in Public Administration” in the year 2010. The model has been applauded by the Honourable Chief Justice of Supreme Court, when they recommended replication of the “Chhattisgarh model of Computerization of PDS Supply Chain” to the other States.

Presently, about 5 million beneficiaries are being served under PDS scheme, through nearly 10900 Fair Price Shops (FPSs) in Chhattisgarh State. Out of 5 million beneficiaries, 1.8 million are Below Poverty Line (BPL) as per planning commission guidelines. Government of India provides subsidised food grains to these beneficiaries at the rate of Rs 5.65 per kg. Chhattisgarh government took a step forward by considering another 1.6 million beneficiaries who are slightly at a higher income bracket than planning commission standards. The subsidy was also increased and the government decided to distribute the food grains to the beneficiary at a rate of Rs 2 per kg or Rs 1 per kg, depending on the income slab. About 0.75 million beneficiaries (out of 1.8 million BPL beneficiaries) are considered for the ‘Antyodaya’ (poorest of the poor) scheme and offered food grain at Rs 1 per kg. Remaining 1.6 million beneficiaries are considered to be Above Poverty Line (APL) and are entitled for food grains at a higher rate of approximately Rs 9.30 per kg.

Chhattisgarh State has a strong network of about 10900 FPSs to serve these 5 million beneficiaries. These FPSs were managed by private bodies till 2004. They are made public
since then. Currently more than four thousand three hundred FPS are managed by cooperative societies, more than four thousand by Gaon Panachayat, nearly two thousand four hundred by woman self-help groups, about one hundred and fifty by forest protection committees and the remaining by urban local bodies. The aim of the CORE PDS project is to enable smooth functioning by automating the services. The state government has decided to roll out this scheme of automation in phased manner.

A ‘simple to follow’ process was adopted by the government. Initially they decided to identify the problems and issues (also termed as concerns). Later, the deliverables (also called as the objectives) were developed. And finally, an information technology driven system to address and mitigate the issues are developed. In this case study the developed process/es are discussed in a structured manner.

The concern

As a step towards excellence through automation, the PDS supply chain (from the procurement of commodities to delivery at the FPS), was computerized in 2008. A few tasks involved in the computerization were, creating and updating the unified ration card database, online real-time inventory management system at the warehouses, and establishment of call center and citizen interface web site. The computerization had enabled improved transparency, accountability and efficiency.

Even though ‘computerization’ in the food department had improved the public distribution process and the beneficiaries were in general getting their entitlements, there were, broadly following areas of concern:

The concern of beneficiaries

- The FPS is usually not open during the scheduled timings especially in the last two weeks of the month necessitating the beneficiaries multiple visits to the shop. This is a troublesome situation especially for those who could not avail the facilities in the first two weeks.

- Because of the prevalent monopoly, the FPS *dukan dar* declares “no stock”; at times, even when the FPS has sufficient stocks; forcing the beneficiary multiple visits.

- The sales person does not accord due respect to the beneficiary or sometimes misbehaves. This is mainly because, in most of the FPSs, the customer is a women and sales person is generally a man. The literacy level is low.

- The sales person charges more than actual amount.

- Deliberate under weighing of the commodities by sales person.

- Adulteration of commodities by the *dukan dar* before being issued to beneficiaries.
• It is also seen that, many a times, the beneficiaries may need to spend more than 4 to 5 hours in a queue to avail the benefits.

An informal survey with a few women beneficiaries revealed various reasons to opt for another FPS. Exhibit 1 provides the summary.
Exhibit 1: Some obvious reasons to change over to another FPS

The concern of Government bodies

- The basic nature of beneficiaries is such that, they would seldom complain, hence there is need to facilitate a genuine complaint process.

- The authorities need to track the inventories in the FPS, ensuring the least possibility of a beneficiary being deprived.

- There were many evidences of proxy issue of commodities i.e. recording an issue in the record books, without actually issuing a commodity.

- Leakages and diversion of the commodities are the most common problems in the PDS throughout the country.
The motivation in implementation of CORE PDS is to provide a solution to the problems mentioned. Given that these problems exist at the shop level and mainly depend on behaviour and integrity of the sales person, designing a proper process was the need of the hour. ‘Portability rights to the beneficiary’ backed up by information technology driven monitoring system would seem to be the solution for these problems.

**Objectives of the Project**

With the issues and problems at hand, a committee was set up comprising of members from Department of Food, NIC, CG State Supplies Corporation and District Central Cooperative bank.

After a heavy brainstorming session, following implementable objectives were proposed and finalized.

- **To Improve Service Quality**: Primary purpose of the initiative is to improve service quality at FPS in terms of quality and quantity of commodities issued to the beneficiaries and also the behaviour of FPS sales person with beneficiaries.

- **To Empower Beneficiary**: The objective of COREPDS is to empower the beneficiary. This in turn will help reduce the monopoly of dukandar and introduce fair competition among FPSs.

- **To Reduce Leakage and Diversion of commodities**: The leakages and diversions of PDS commodities can be reduced by imposing vigorous checks on proxy issues.

- When FPS is able to record some proxy issues as a genuine issue, he can divert the (so called) issued quantity of commodities to the black market. Hence, diversion in PDS supply chain at any stage (while procuring, storage, movement from warehouse to FPS or at FPS) is possible only when proxy issues can be recorded by FPS as a genuine issue.

- **To Weed out Malpractices at FPS**: All the good intentions and measures of the government to weed out malpractices were proven ineffective in the past. This was because of the practice of ‘fixing’ of supervisors/inspectors. A system is essential, where bad performers shall be automatically weeded out as a result of competition/ill treatment to the beneficiaries’.

After hours of discussion on how to implement the system, the committee zeroed down on a one point agenda: the basic theme of the entire process called “Portability rights to the beneficiary”.

**The Theme of the Project: Portability Rights to the Beneficiary**

In 2008, PDS supply chain was computerized in the State. By 2009, the computerization started showing positive changes in the system. There were clear evidences that the system
was becoming more transparent and thus improving. By 2010, the project is well recognized with eight National Awards including ‘the Prime Minister Award for excellence in Public Administration’.

The thought process then went on to automate the last stage of this supply chain, i.e. distribution of commodities to the beneficiaries. Officers from Chhattisgarh were not impressed to introduce mechanical authentication like bio-metric authentication, at FPS, without offering any additional advantage to the beneficiary. A feeling was that this would result in an inconvenience to many genuine beneficiaries and check only a few mishandling of commodities. At this time, Chhattisgarh was aiming to improve service delivery in terms of opening the FPS in scheduled timings, good behaviour by the FPS, less queues and less number of trips. The officers were convinced that improvement of service is possible only by empowering the beneficiary with the right to choose his/her FPS and thus creating competition among the FPSs for larger business share. Hence, the concept of portability became predominant idea behind the functioning of the project.

The root cause of the problems faced by beneficiaries was as a result of assigning a beneficiary to a specific Fair Price Shop. This created a forced monopoly for the FPS. The motivation for implementing this ‘portability’ scheme is the quote by famous Indian Nobel Laureate Dr. Amratya Sen.

“A person produces the same commodities in the same way and ends up with same income and buys the same goods, she may still have very good reason to prefer the scenario of free choice over that of submission to order”

The rationale of this theme is simple: if the customer (here beneficiary) is not treated properly, she/he can avail the facilities from any of the other FPS. One can easily realise the benefits derived because of such an initiative. This system, by itself, creates competition between FPS owners and thus impel improve service delivery. The system will enable good performing FPSs attract more customers and hence improve their profitability. Whereas the bad performers will lose the customers and will have a strong chance of being weeded out of the system.

This thinking has proved right. Today, one can note that only about 20% beneficiaries have preferred to purchase the commodities from another (non-assigned) FPS. Whereas, about 80% beneficiaries have preferred to buy commodities from the assigned FPS. The complaints have also decreased considerably, which was a major concern. Here, one can also note that, today the beneficiaries’ are purchasing their commodities, from the assigned FPS, by choice not by compulsion.
Development of the System

The system needs to be developed by considering the role of various stake holders in the system. These stake holders mainly comprised of

a) the *dukandar* or the fair price shop keeper
b) the beneficiary and
c) The government authorities.

The processes at each of these stakeholders are discussed as follows:

*The fair price shop:*

FPSs are equipped with a Point of Sale (POS) device with General Packet Radio Service (GPRS) connectivity (also termed as internet connectivity). Each beneficiary is provided with a Smart Ration Card (SRC). The beneficiary can claim their entitlements at any of the FPS, by producing the ration card ‘SRC’. After proper swiping of the SRC with the POS device, the beneficiary is authenticated and is eligible for the entitlements. The sales person then punches in the required quantity of commodities, to be updated with the central server. After a success report from the central server, a printed receipt is handed over to the beneficiary; money in cash is collected by the sales person. The beneficiary then collects the commodities at the counter.

The beneficiary can at any point of time verify and cross check their eligibilities, entitlements and balance available by properly swiping their SRC at the POS device. Any POS device available in FPS can be used for this purpose.

The Honorable Chief Minister of Chhattisgarh Dr. Raman Singh has suitably named this POS device used in COREPDS as “Annapoorna ATM”, as it works like an Automatic Teller Machine for food grains. Exhibit 2 shows the POS device.

A special feature of this process, especially the POS device is, that it permits biometric (figure print) authentication of the beneficiary. This authentication can be carried out by
using either the Aadhaar card or Rashtriya Swasthya Beema Yojana (RSBY) biometrics. The process in CORE PDS is acquiescent with the smart card/s issued by the Food department as well as with the RSBY smart card issued by the Health department. This not only leads to savings in precious time and money for the Government but also relieves the beneficiary of the burden of carrying multiple cards.

The beneficiary:

Each beneficiary is given a Smart Ration Card (SRC). Please refer to Exhibit 3. The various details on the smart card include the name of the family head, the exact location or place of the assigned FPS, residential location of the beneficiary, a unique 14 digit number, the scheme applicable to the beneficiary, and an embedded memory chip.

Exhibit 3: Smart Ration Card

The beneficiary needs to visit any FPS with this smart card. Upon authentication, he/she is eligible for entitlements.

The Government Authorities:

Probably, the most important role and the tedious task is that of the government authorities. They need to monitor and inspect the entire process at regular intervals and ensure smooth functioning.

a) Validate a beneficiary: A beneficiary should be validated before issuing PDS commodities. Beneficiary can be validated in COREPDS, by any one of three methods, explained as follows:

i. SRC of the beneficiary swiped and FPS card and SRC are mutually authenticated.

ii. RSBY card of the beneficiary is swiped and FPS card and RSBY card are mutually authenticated.

iii. Beneficiary shares the One Time Pin (OTP) sent to registered mobile number and the same matches with the OTP stored at the Server.

b. Update the food balance records: After the commodities or the food is issued, following records are updated by the system
i. Updating in the records of the beneficiary.

ii. Updating in the inventory records of the FPS. This enables have a check on the possible malpractices.

c. **Intimating suppliers:** After the quantity of food commodities drops below a specified level, a signal is sent to the transport manager at Chhattisgarh State Civil Supplies Corporation (CGSCSC) indicating a need at a particular FPS. The transport manager at CGSCSC then authenticates the information, gets an invoice and delivers the food commodities to the concerned FPS.

On a broader sense, the mechanism of operation, jointly operated by the state and the central government is as follows: Departmental Secretary, with the help of one Joint Director and one Food Inspector monitors and get the updates from the projects. The technology part is handled by NIC, Chhattisgarh. At NIC, the operations are managed by a formal Project Management Unit (PMU) with one senior programmer and one assistant programmer. In addition to State level PMU, one assistant programmer is posted to each of the cities where COREPDS is implemented.

**Implementation Details of COREPDS**

COREPDS is predominantly online system, by design. Servers are maintained in the NIC data centre, Raipur. Unified beneficiary database is already available with department as computerized system for supply chain management has been operational since 2008. Necessary web services are hosted in NIC servers. Each Fair Price Shop (FPS) has been given a Point of Sale (POS) device consisting of 2 smart card readers, finger print scanner, thermal printer and GPRS module. COREPDS application on POS devices consumes the web services hosted at server using GPRS connectivity. The ration card number either read from smart card or as entered by the FPS shall be sent to the server to get the food account balances. Once the quantities to be issued are entered the details are again sent to the server. The transaction is updated on the server and success report is sent to the POS device. A receipt is generated at the POS device. The flow is shown in the Exhibit 4

For the maintenance of the COREPDS application, one assistant programmer is recruited for every 100 FPSs. 15% of the devices have been put under the reserve for immediate replacement in case of malfunctioning of any device. Our experience shows that the maintenance of POS devices is a real challenge because of the dusty environment and improper use by un-skilled FPSs.

FPSs have been trained in two rounds by assistant programmers. Food Inspectors and Food Officers have been trained by conducting couple of workshops. The field staff has been involved from very beginning of the COREPDS design to ensure their feedback is well taken
into the design. Workshops have been conducted in each city by the secretary himself to create awareness in the public representatives of urban local bodies.

Exhibit 4: The Entire Process on Real Time Basis

In the next section of this case discussion we look at some of the practical issues and challenges and some suggested ways to embark upon them.

**Practical Impediments in Implementation of the Project**

This project appears to be lucrative on paper, however, it posed few difficulties and challenges while implementation. We quickly look at those difficulties and challenges and the strategy adopted in mitigating them.

Difficulties and Challenges while issuing the commodities to the beneficiary: The various challenges are discussed herewith.

**Challenge 1: Issue Food Commodities with SRC**
This is the most general method of issuing commodities to the beneficiaries. SRC is swiped with the POS device. POS authenticates the details of beneficiary and the FPS with the central server. The balance of the commodities to be issued is then rectified. Server updates the transaction and if validated, a success signal is sent. Receipt is printed and given to the beneficiary along with food commodities.

This simple process had posed challenges in the initial days of implementation, mainly because the literacy level of the store keepers. With suitable training, this is no more a problem and the process is almost set on autopilot mode.

Assistant programmers and one food inspector in each area work as master trainers they are provided necessary training at state capital. These master trainers train the *dukandars* with the help of video training material provided by NIC, Chhattisgarh

**Challenge 2: Issue Food Commodities without SRC**

As the literacy level of the beneficiaries is quite low, there stands a chance of genuine beneficiary unable to produce the Smart Ration Card (SRC) while availing the facilities. This may be because of many reasons. Some of them being: i) the beneficiary do not have SRCs because he/she could not take part in the SRC distribution camps. ii) The beneficiary has lost Smart Ration Card and have not received duplicate, etc.

Under the CORE PDS scheme, provision has been made to serve these genuine beneficiaries and curtail the malpractices of proxy issues. Here, according to the provision, the beneficiary shall be deprived of the ‘portability’, but can avail the facilities from the assigned FPS (parent FPS). At the parent FPS, the shopkeeper, manually submits the Ration Card details (the details of which are available in the hard copy of the ration card) and the required quantity with the help of POS system. Upon authentication from the central server, the commodities are issued and records updated.

Briefly, according to this provision, for want of the Smart Ration Card, the beneficiary is deprived of ‘portability right’, however, he/she can avail the commodities from the parent FPS.

**Challenge 3: Issue Food Commodities with One Time Password (OTP) authentication.**

For a specific class of beneficiaries called as Above Poverty Line (APL) beneficiaries, Smart Ration Cards (SRCs) are not issued, but they are registered with their mobile numbers. These beneficiaries can visit any FPS with the registered mobile and avail the entitlements. At FPS, the shopkeeper, enters the unique ration card number and submits to the server. The server then responds to the registered mobile number with the account details and a One Time Password (OTP). The food balances in the account are sent as a short mailing service (sms) to the POS device. Beneficiary is expected to share the OTP with FPS, to be validated with the central server via POS device. Upon server authentication, a success signal is sent, enabling the beneficiary his/her entitlements.
**Challenge 4: Issue food Commodities with SRC, in off line mode**

This facility is available at any FPS, in case of an emergency. At times, in some locations the above mentioned processes cannot be properly executed for want of internet connectivity. In these situations, as a default, the process is authenticated by mutual authentication with FPS card and the beneficiary can avail their entitlements. The updating this transaction on server takes place when proper internet connection between the central server and the POS device is established.

In order to avoid misuse of this facility provided, only a fixed and limited number of transactions are allowed at a FPS.

**Challenge 5: Issue food Commodities with Rashtriya Swasthya Beema Yojana (RSBY) Smart Card**

Government of Chhattisgarh has decided to universalize RSBY throughout Chhattisgarh. That means every family in the state shall get one RSBY smart card. The department thought of issuing the commodities by using RSBY cards, instead of SRC. If successfully implemented, this will be the first experiment in the country that provides synergy between two government departments to provide services to common beneficiaries. RSBY cards can also be used for offline biometric authentication before issuing food commodities.

**Challenge 6: Maintenance of POS devices, in order to ensure disturbance free process.**

The government authorities purchased sufficient higher (buffer) quantities of POS devices. In case of an emergency, the POS device is immediately replaced.

**Challenge 7: To create awareness among all stakeholders.**

The authorities decided to develop and distribute training material in video and hard copy format. This training material, apart from the instructions to operate the system consists of messages from the chief minister and food minister. This acted as a motivating force among the stakeholders. Wide publicity was also endorsed in print media (newspapers and magazines) and also on radio and television.

A schematic sketch depicting few of these challenges is shown in Exhibit 5.
Strategically speaking, the entire process has a few challenges and risk, we now present some of the possible strategic risks/challenges and our remedial solution.

**Strategic Risks and Challenges**

Exhibit 5: Detailed flow of COREPDS operations
**Risk 1: Vested interest of Agencies:**

Implementation of CORE PDS proved to be an obstacle for a few dukandars, for their own vested interests. In fact, during the initial days, some FPSs dukandars tried their best to make sure this technology driven process fails and genuine beneficiaries do not get the commodities.

*Mitigation Strategy Adopted:* No much efforts were needed here. The portability rights assigned to the beneficiaries took care of this risk factor. Whenever a dukandar refused the commodities or posed some problems, the beneficiary went to another FPS.

**Risk 2: Informal dukandar consortium**

During the initial days, at a few locations, it was seen that group of dukandars formed an informal consortium against the practices. As a result of this the beneficiaries were deprived of the benefits.

*Mitigation Strategy Adopted:* The government decided to operate mobile FPSs. Vehicles were arranged to carry food commodities and POS devices. These vehicles were kept on high alert. Upon the receipt of a complaint, the vehicles with food commodities and POS devices were sent immediately to the desired location. They served the beneficiaries in the areas. As a penalty to the dukandars, their contract was cancelled immediately and a new dukandar was appointed.

**Risk 3: Deliberately deteriorate the service quality**

Competition does not help if everyone is bad. The informal consortium of dukandars decided deliberately not to improve their service. This would mislead everybody and send a wrong notion of ineffective CORE PDS.

*Mitigation Strategy Adopted:* Guaranteed good performers are being introduced with the help of Non Government Organizations (NGOs), etc. This shall result in establishing a service level bench mark and thus ensured that the service quality.

**Risk 4: Smart card distribution issues**

There were (in fact, there are) various reasons, with a genuine beneficiary, for not possessing a Smart Ration Card. Few of them being: a) distribution of smart cards is not on schedule. b) A few beneficiaries have lost their smart cards and it takes a few days to re-issue a duplicate card, etc.

*Mitigation Strategy Adopted:* A genuine beneficiary can avail the facilities without the smart card. However, “portability” may not be permitted.

In order to make the process plan sustainable in daily activities, business continuity plan needs to be developed. This plan will provide guidelines to the stakeholders mainly the
beneficiaries and the shopkeepers, in case of emergency or if the system is temporarily not functioning.

**Business Continuity Plan**

Considering the fact that the beneficiary is from an economically backward background, the system needs to be planned so that the beneficiary is seldom deprived of his/ her benefits. Following guidelines were issued to the beneficiaries and the shopkeepers to enable smooth functioning. The government officers while framing these guidelines were aware that there exists a small chance of issuing the commodities to proxy users. It was decided to deal with such situation at a later date. Some of the guidelines are presented here with.

**Scenario 1:** Smart Ration Cards distribution is not complete. Some genuine beneficiaries do not possess SRCs with them.

**Guideline:** The beneficiary can avail their commodity at the assigned FPS only. They however do not get portability benefit.

**Scenario 2:** Some genuine beneficiaries have lost their SRCs and have not yet received the duplicate.

**Guideline:** The beneficiary can avail their commodity at the assigned FPS only. They however do not get portability benefit.

**Scenario 3:** POS device is not functioning or the *dukandar* not behaving properly.

**Guideline:** Beneficiaries can visit any convenient FPS and avail the commodities.

**Scenario 4:** POS devices in a locality are not operating at a given time.

**Guideline:** Upon receipt of a complaint from either the shopkeeper or any beneficiary, arrangements for mobile FPS are made.

**Scenario 5:** Central server connectivity is temporarily not available.

**Guideline:** Beneficiary can avail the commodities as per the offline mode, discussed earlier.

**Scenario 6:** Central server crash.

**Guideline:** Transaction continues with the help of mirror server.

**Scenario 7:** Total failure of technology in an area for a few days.

**Guideline:** Director (Food) is authorized to permit manual operations on the recommendation of district collector and the manual transactions are captured in the system through Food Inspector's module. A separate task force for such a situation may be employed if required.
Performance Indicators for COREPDS

The credibility of a process is gauged by its performance. Following performance indicators were used for the accessing the functioning of CORE PDS project.

**Indicator 1: Reduction in Fake Issues**

Here, we measure the impact of CORE PDS scheme. The sales of the commodities in a month (after implementing CORE PDS) are compared with the average sales over a period of six months (just before implementing CORE PDS). A value (percentage change in the sales) is computed to indicate the reduction in fake issues. This value also indicates the actual savings, as a result of implementation of CORE PDS.

**Indicator 2: Measurement of Portability**

The theme of this project is ‘portability empowerment’. It is therefore essential to have a track of portability movements of the beneficiaries. The following indicators are calculated to understand the portability.

- **Churning Effect or Churning Index**
  
The Churning Index for a given FPS is calculated as a percentage of non-assigned beneficiaries served to the total beneficiaries served. This value will lie in the range of 0 to 1. Higher value indicates the FPS is serving a good proportion of beneficiaries not assigned to the FPS under consideration.

- **Number of Under Performing FPS**
  
  An FPS is said to be under performing if it has lost at least 25% of the beneficiaries. That means 25% of the beneficiaries have opted to switch over to some other FPS because of some reasons. If a FPS dukandar is not performing this number is likely to increase, and provides sufficient evidence to take action against them. The performance indicator for the CORE PDS system can be the number of FPS unable to retain this specified number of beneficiaries.

**Indicator 3: Measurement of improvement in service delivery**

Following indicators are used as a measure of service delivery.

- **Average number of trips by a beneficiary to get all commodities**
  
  It is seen and noted that a beneficiary needs to visit an FPS a number of times to avail the different commodities. This is not desired. Ideally a beneficiary should be able to get all the commodities in a single visit. In this indicator, we compute the average number of visits a beneficiary makes to avail all commodities. This is not an exact performance indicator, as at times, the beneficiary by default may not like to get all the commodities in a single visit because of various reasons. Few of them
being: i) the beneficiary may not like to purchase ‘kerosene’ with other food items.
ii) The beneficiary may not have the required money to purchase all the commodities at a time.

- **Annual Customer Satisfaction Survey**

An annual survey based on a random sample (of beneficiaries and FPS shop keepers) is conducted. A customer satisfaction index is computed using this survey.

According to the need of the project, a continuous evaluation is carried out at regular intervals. The results of this project are encouraging.

A study conducted to review the impact of the project is presented in the following Exhibit 6.

**Exhibit 6: Studying the impact of CORE PDS**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Prior to COREPDS</th>
<th>After COREPDS</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Sale of PDS commodities to BPL beneficiaries</td>
<td>99-100%</td>
<td>95.50%</td>
<td>Prior to COREPDS, FPSs used to record proxy issues and declare 99 to 100% sale. After introduction of Smart card / OTP authentication the sale figure have reduced. Savings of 4.5% in case of BPL food grains, 40% in case of sale of Kerosene and 30% in case of APL food grains is seen.</td>
</tr>
<tr>
<td>2 Sale of Kerosene</td>
<td>100%</td>
<td>60%</td>
<td></td>
</tr>
<tr>
<td>3 Sale of PDS commodities to APL beneficiaries</td>
<td>80%</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>4 Churning Effect:</td>
<td>0%</td>
<td>20%</td>
<td>The beneficiaries were forced to buy commodities from their pre-designated FPS prior to COREPDS. A few non-satisfied customers moved to other FPS. This is a direct indicator of improved service delivery.</td>
</tr>
<tr>
<td>5 Average number of trips to FPS to take different commodities</td>
<td>4 – 5</td>
<td>1.8</td>
<td>This number is based on a survey conducted. Presently there is no mechanism to record the value for the entire population.</td>
</tr>
<tr>
<td>6 Number of FPS (in percentage) losing more than 25% of their business as a result of drop in service level</td>
<td>0%</td>
<td>20%</td>
<td>This is an indicator to prove COREPDS can automatically weed out bad performers.</td>
</tr>
</tbody>
</table>
The Road ahead

The project COREPDS is presently working successfully in the cities of Raipur, Durg, Rajnandgaon and Mahasamund and the rural block of Mahasamund. Initially, COREPDS was implemented in selected five FPSs in Raipur city. After this pilot study was successful, the project was formally inaugurated by Honorable Chief minister on 20th March 2012. The system was then implemented in all 151 FPSs by 1st July 2012. In Durg city (69 FPSs), the project was inaugurated on 1st Nov 2012, while it was rolled out in December 2012, at Rajnandgaon city (49 FPSs). In January 2013, the 60 FPSs of Mahasamund city and rural blocks adopted this system.

COREPDS is ready to be implemented in all the remaining 8 corporations (Bilaspur, Bilai, Ambikapur, Chirmiri, Jagadalpur, Raigarh, Janggir and Champa and Korba) of the State.

It is expected COREPDS will be implemented in 90% of 10,900 FPSs by 31st Mar 2015.

A few facts and figures are as shown in Exhibit 7.

### Exhibit 7: Some facts about COREPDS

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sector:</td>
<td>Social Sector: Public Distribution System</td>
</tr>
<tr>
<td>2</td>
<td>Stake Holders:</td>
<td>Department of Food, Chhattisgarh State Civil Supplies Corporation, Fair Price Shop, Beneficiary</td>
</tr>
<tr>
<td>3</td>
<td>Information and Communication Tools Partner:</td>
<td>National Informatics Centre, Chhattisgarh.</td>
</tr>
<tr>
<td>4</td>
<td>Project Start Date:</td>
<td>20th March 2012</td>
</tr>
<tr>
<td>5</td>
<td>Areas Covered:</td>
<td>Cities of Raipur, Durg, Rajnandgaon, Mahasamund and the rural block of Mahasamund</td>
</tr>
<tr>
<td>6</td>
<td>Number of Fair Price Shops:</td>
<td>302</td>
</tr>
<tr>
<td>7</td>
<td>Number of Beneficiaries:</td>
<td>300 000</td>
</tr>
<tr>
<td>8</td>
<td>Total transactions since the inception of the project:</td>
<td>2.78 Million till 26th May 2013</td>
</tr>
<tr>
<td>9</td>
<td>Dash Board URL</td>
<td>cg.nic.in/pdsonline/corepds</td>
</tr>
</tbody>
</table>

While there is an attempt to make the system full proof, the COREPDS is still working on the following aspects.

- The problem of keeping smart cards with the FPS (i.e. not returning back the smart card to the beneficiary) and using them for recording proxy issues.

- Mortgage of Smart Cards and stealing of Smart Cards

COREPDS has made a provision to issue commodities without a smart card to eliminate denial of a genuine beneficiary from his/her entitlements. This feature, at times can be misused for recording a proxy issue. The department is handling this by physical inspection of the FPSs who recorded large number of such issues.
Such issues by and large are very less in quantum, and efforts are being made to eliminate them.

Briefly, COREPDS with its theme ‘portability’ created a paradigm shift in the entire process. Presently the cost of entire project is about rupees two crore for more than three hundred FPSs. It is estimated, that this cost will come down to Rs forty five thousand for each FPS for further implementation.

This project is all set to be rolled out to the entire state within the next two years. Following are proposed plans:

A. Government of Chhattisgarh is considering an introduction of a scheme called ‘Guaranteed good performers’ to run FPSs by inviting open ‘Expression of interest’. The selected agency needs to deposit necessary security deposit and open a FPS in the allotted area with its own funds. No beneficiary will be linked with any FPS in this situation. A beneficiary is allowed to visit any FPS. The responsibility of marketing and delivering service quality will lie with the FPS dukandars. With this intervention it is expected that all FPS will improve their service level to woo the beneficiaries or at least try maintain good relations with the customers (here beneficiaries).

B. The aim of the project CORE PDS in coming years is to serve the beneficiaries at their door steps. Specifically in Chhattisgarh, we find many small villages with a population of around 250 to 500. That means it will not be viable to have a dedicated FPS for a village. A FPS would be able to serve about 5-8 villages. However, this option will not be good from the beneficiary point of view, as they then would be required to travel a longer distance to avail their commodities.

Project CORE PDS plans to run a mobile FPS (on weekly basis) to these small villages. Presently a pilot work is being studied. Exhibit 7 shows a photograph of Mobile FPS.
**Methodology adopted for Case Writing**

This case study is prepared by the authors on the basis of information available in the public domain, discussions with the Secretary (Food), Govt. of Chhattisgarh and field visits.

**References**

2. COREPDS – Meri Marjee, Booklet published by Department of Food, Govt. of Chhattisgarh, 2012

**Project Owner**

Department of Food, Civil Supplies and Consumer Protection, Government of Chhattisgarh

**Case Study Authors**

Omkarprasad S. Vaidya, Asst. Professor, Indian Institute of Management, Lucknow, E-mail: vomkarin@yahoo.co.in

A.K.Somasekhar, Technical Director, NIC, Chhattisgarh State Centre, Raipur E-mail: som@nic.in