

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF e-GOVERNANCE INITIATIVES

NAME OF CATEGORY- 'INNOVATIVE USE OF MOBILE TECHNOLOGY IN e-GOVERNANCE'

1. Coverage – Geographical and Demographic :-

(i) Comprehensiveness of reach of delivery centres,

Service is reachable to all 28 Lakh consumers of the Company

(ii) Number of delivery centres

Service delivery is through Mobile phone SMS service therefore delivery centre are not required

(iii) Geographical

(a) National level – Number of State covered

(b) State/UT level- Number of District covered

16

(c) District level- Number of Blocks covered

Please give specific details:-

The MPMKVVCL is one of the three power distribution Company of the Madhya Pradesh. The jurisdiction of the Company in the 16 districts of the State only. The proposed project has been implemented in the entire jurisdiction of the Company.

(iv) Demographic spread (percentage of population covered)

All the electrified villages and town.

2. Situation Before the Initiative (Bottlenecks, Challenges, constraints etc with specific details as to what triggered the Organization to conceptualize this project) :

Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Ltd Bhopal, is a power distribution Company, catering to the needs of consumers in 16 Districts of Madhya Pradesh. Supply of electricity is ensured by stepping down the high tension voltage to 440 volts through distribution transformers (DTRs).

Traditionally, the information regarding failure of DTRs reaches the concerning authority very late, especially in rural areas as a result timely action was not possible. The replacement of DTR was also delayed due to

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prolonged procedure that involved following steps-

- i. Receiving the complaint.
- ii. Spot inspection.
- iii. Preparation and sanction of estimates.
- iv. Requisition of good DTR for replacement from the store.
- v. Release order from competent authority.
- vi. Withdrawal of DTR from Area Stores.
- vii. Actual replacement.

Only after completion of above steps, the replacement of DTR was possible. The traditional procedure largely accounted for public unrest. In order to improve the response time for replacement of failed DTR's, the system of SMS based failed distribution transformer information and management system has been developed.

The project has been conceived to reduce the time span between failure of Distribution Transformer and its replacement by the use of modern means of communication, process reengineering, comprehensive monitoring using SCADA interface, and minimal manual intervention. During the entire procedure, consumer is informed about the action taken.

The project has benefitted the Company, in terms of:

- i. Greater revenue realization through reduced breakdown period.
- ii. Improved efficiency.
- iii. Streamlining the process work flow.
- iv. Improved quality of services.
- v. Greater satisfaction to the consumer.

3. **Scope of Services** (Relevance of application for e-governance, Extent to which service is delivered through mobile #)

The idea behind selection of technology was two fold –

1. Availability of technology with common citizen irrespective of their social and economic status, now a days mobile is within the reach of

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citizen even in rural areas.

2. Design of system which is simple and requires minimal input.

PROJECT DISCRPTION :

A 10 digit unique code has been assigned to each distribution transformer for distinct identification. The standardized codification technique has been applied to ascertain the location ID allocated to a particular Distribution Transformer. The 10 digit location ID contains segments for Circle, Division and Distribution Centre which determines the hierarchy of the concerned offices. The location ID is prominently painted at the support structure of the transformer.

As the entire system is based on Short Message Service (SMS) of mobile phones therefore, to facilitate citizens designated SIM number 9039110022 is also painted on the support structure. For various updates on complaint status, Company officials use different predefined key words depending upon the type of update desired. Some of the keywords are listed as below-

| Key word template | Description of Complaint status update |
|-------------------|---|
| <ComplaintID>/WC | The complaint reported is false. (W rong C omplaint) |
| <ComplaintID>/CR | The transformer has been checked and supply has been restored after minor repair. (C omplaint R esolved) |
| <ComplaintID>/XB | The transformer reported is failed and is B eyond guaranty period. |
| <ComplaintID>/XW | The transformer reported is failed and is W ithin guaranty period. |
| <ComplaintID>/XE | The transformer reported is E ligible for replacement. |
| <ComplaintID>/XR | The transformer reported has been R eplaced. |

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In turn system confirms execution of complaint status update through predefined message templates containing variables to accommodate context specific complaint details.

In case of transformer failure, any citizen can lodge complaint mentioning 10 digit transformer code painted at support structure of the corresponding transformer by sending SMS to 9039110022. For a particular distribution transformer with a certain location ID only one complaint can exist in the system at a time. If more citizens register complaint for the same DTR only first valid complaint will be registered and given unique complaint ID and rest of the complainants will be informed 'the complaint already exists for this DTR' along with complaint ID.

Upon receiving the SMS, server validates the location ID and registers the complaint against valid location ID only. In case of invalid ID suitable message in predefined template is passed to the complainant. After complaint registration in the system, a unique complaint ID is generated and communicated in the form of SMS along with Location ID, name of Village and Capacity of transformer to concerned officers ranging from Assistant Manager to DGM for initiating action. The complainant is also informed complaint ID and complaint date via SMS. In case of multiple complainants for a single transformer, each of the complainants will be given complaint status updates SMS till complaint is resolved and closed.

The officer concerned investigates the DTR and takes action to resolve the complaint. To update the complaint status, Company officers use different predefined key words depending upon the type of update desired. The keywords are sent through SMS to mobile number of Control Centre (9039110022).

In response to the above complaint status update request, the system updates the status of complaint and revert SMS in predefined template to the Complainant(s) and Company officers concerned confirming the current status of the complaint in the system till complaint is resolved and closed.

In this system complaint status can only be updated through SMS. SMS sent

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from the mobile numbers of concerned Company officers are only entertained by the system. Therefore mapping of officers contact details is always updated in the system. The entire system is monitored through web based user interface. All types of Reports and summary MIS are available at the web based application for failed distribution transformer information and management.

This application is available as '**Online DTR Status**' hyperlink at <http://www.mpcz.co.in> under Quick Links group OR www.madhyavitaran.com.

4. Strategy Adopted

(i) The details of base line study done,

The details of all distribution transformers installed under the Company (1.52 Lakh) were collected and mapped with Distribution Centre, Division, Circle and Regional office.

A 10 digit unique code has been assigned to each distribution transformer for distinct identification. The standardized codification technique has been applied to ascertain the location ID allocated to a particular Distribution Transformer. The 10 digit location ID contains segments for Circle, Division and Distribution Centre which determines the hierarchy of the concerned offices. The location ID is prominently painted at the support structure of the transformer

The details of all concerned officers like Astd. Manager, Manager and DGM were collected and mapped with each of the transformer.

A dedicated SIM has been earmarked (9039110022) for receiving SMS from citizens and to communicate complaint status updates to all stakeholders.

(ii) Problems identified,

Traditionally, the information regarding failure of DTRs reaches the concerning authority very late, especially in rural areas as a result timely action was not possible. The replacement of DTR was also delayed due to prolonged procedure. Therefore, the following processes have been identified as a candidate for re-engineering –

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- Receiving information through SMS regarding transformer failure.
- Immediate reporting after inspection through SMS.
- Preparation of Estimate through ERP.
- Sanction of estimate through ERP.
- The process of Release of Transformer by CGM discontinued.
- Instantaneous issuance of good transformer from area store.
- Timely replacement.

(iii) Roll out/implementation model,

A 10 digit unique code has been assigned to each distribution transformer for distinct identification. The standardized codification technique has been applied to ascertain the location ID allocated to a particular Distribution Transformer. The 10 digit location ID contains segments for Circle, Division and Distribution Centre which determines the hierarchy of the concerned offices. The location ID is prominently painted at the support structure of the transformer.

As the entire system is based on Short Message Service (SMS) of mobile phones therefore, to facilitate citizens designated SIM number 9039110022 is also painted on the support structure.

(iv) Communication and dissemination strategy and approach used.:

Through newspaper, leaflets and announcements in public meetings etc. More than 50 training sessions for employees.

5. **Technology Platform used-**

(i) Description,

At user end (the citizens and officers of the Company) Mobile phone based SMS service has been used for communicating complaints and updates.

Whereas for the purpose of monitoring and addition/deletion of transformer and officer's details, web based application has been provided.

(ii) Interoperability

Digital Inclusion –

Since the entire Failed Transformer Management and Information

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System gets activated through a single valid SMS received from the Complainant at any time without having to identify him/her self or provide any justification for doing so thereby preventing Language, demographic and cultural differences amongst stakeholders. Also the transformer replacements are done based on the chronological order of system generated replacement priority list.

Green e-Governance –

In the transformer complaint redress system all MIS and reports are on-screen. All stakeholders have been given training to avoid prints of the information available in the system. Whenever required they may take prints of summary MIS for the purpose of management. Thus, consumption of paper has been discouraged to make the system environment friendly.

(iii) Security concerns

Security and Confidentiality standards -

Complaint Status Updates can only be initiated through registered mobile numbers. Any officer whose mobile number is registered in the system can update the complaint status of failed transformers of his jurisdiction only. Complaints can only be updated through SMS and for each update transaction records are created with Complaint ID, updating authority, update made and timestamp. Its web based interface for MIS and reports is secured through login credentials given to each operating officer and also this application has role based matrix.

Strategy for Disaster Recovery and service continuity -

Frequent backups are taken to deal with any disaster and to keep the service in continuum

(iv) Any issue with the technology used

Technology related challenges faced –

As this project is driven by Short Message Service (SMS) of mobile, the

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complainant finds it difficult to log complaints from places where mobile network is not available.

Lessons learnt from Technology choices and implementation strategy adopted –

Use of very common SMS service technology has made the system acceptable by the citizens. The SMS based transformer complaint system became very popular in a very short span after implementation and since inception 17700 transformers have been replaced through this system.

- (v) Service level Agreements(SLAs) (Give details about presence of SLA, whether documented, whether referred etc. #)

For the application service level of 99.9% uptime has been given. After one year of warranty period there is a 2 years annual maintenance contract.

6. Citizen Centricity (Give specific details on the following#)

- (i) Impact on effort, time and cost incurred by user,

The entire transformer complaint redress system gets activated through a single valid SMS received from the Complainant at any time. Rest of the process takes place at accelerated pace in a time bound fashion till replacement of eligible transformer is done. The defective transformers are replaced immediately. Hence supply to the consumers are made available for their use which reflect in growth in Current Demand of the Company.

- (ii) Feedback/grievance redressal mechanism,

Daily monitoring of the complaint status is done by higher officers and daily report is placed to competent officers.

- (iii) Audit Trails,

From the point of logging of complaint to point of its resolution each transaction made is recorded in the system and monitored for timely closure of complaint. It is enhancing the efficiency and effectiveness of administration by creating pressure and an enabling environment

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for the Company's service delivery systems.

By being open, clear and verifiable with regard to the standards and procedures, the Company is ensuring transparency.

(iv) Interactive platform for service delivery,

After registration of complaint for failed transformer the status of complaint in system is updated and simultaneously communicated to all stakeholders at every stage till complaint is resolved.

After investigation the complaint status updates are communicated by the officers to the system using pre defined keywords which are interpreted by the system and meaningful messages are sent to all stakeholders to update them.

(v) Stakeholder consultation

Field officers are being contacted regularly to suggest any modification in the system. All field officers have welcomed this system as this tool is helpful to them for timely redress of the complaints and to resolve public unrest.

7. **Demonstrate Innovation in use of Mobile Technology for e-governance**

(Give details about the mobile technology used (platforms, SMS, Pull & Push, Apps, Mobile Payment, innovation applied in use of mobile technology to deliver information or Services to target audience #)

The mobile phone facility is available to almost all public and officers and this system is developed to send SMS only for 10 digit of transformer ID. Similarly predefined keywords are used by designated officers to send through SMS only. The system is successful in its operation.

8. **Adaptability and Scalability** (Give details about Local language support, ability to leverage shared Government infrastructure, Standardization of technology used (hardware, software, application etc. #)

SMS are in English using pre-defined templates.

9. **Adaptability Analysis**

(i) Measures to ensure adaptability and scalability

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SMS based technology is being used is adaptable among citizens.

(ii) Measures to ensure replicability

Simplicity of technology and processes which can be easily replicated.

(iii) Restrictions, if any, in replication and or scalability

No Restriction

(iv) Risk Analysis

N.A.

10. **New Models of Service Delivery** (Give details about type of partnership model used, Links to/Supported by Public/Private Organization, Links provided to relevant websites etc. #)

N.A.

11. **Efficiency Enhancement** (Give specific details about the following #)

(i) Volume of transactions processed,

| Year | Transaction # |
|--|--|
| FY 2013-14 [April to March] | Transaction of more than 3, 66,000 SMS through the system. |
| FY 2012-13 [August* to March] | Transaction of more than 2, 50,000 SMS through the system. |
| *This application launched on 11.08.2012 | |

(ii) Coping with transaction volume growth

Depending upon the number of complaints priority volume of repaired transformers are adjusted to meet the requirement of distribution transformer replacement.

(iii) Time taken to process transactions,

At the most five days to complete the cycle for transformer replacement.

(iv) Accuracy of output,

System responds on various pre-defined keywords only supplemented by transformer-officer mapping. Use of incorrect keyword, skipping of sequence

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of complaint status update OR attempt to update transformer beyond the jurisdiction of officer concerned will not work and is rejected by the system. It is therefore working with 100% accuracy.

(v) Number of delays in service delivery

The distribution transformer is replaced only if there are no arrears. Hence any delay in service is attributed to arrears due on consumers.

12. **User convenience** (Give specific details about the followings #)

(i) Service delivery channels (Web, email, SMS etc.)

Short Message Service (SMS)

(ii) Completeness of information provided to the users,

Since the date of lodging complaint, the complainant is updated with every action on his complaint till its redress.

(iii) Accessibility (Time Window),

24x7

(iv) Distance required to travel to Access Points

The system can be accessed through Mobile phone of the stakeholder.

(v) Facility for online/offline download and online submission of forms,

Not required. One SMS is enough to trigger the action.

(vi) status tracking

After registration of complaint for failed transformer the status of complaint in system is updated and simultaneously communicated to all stakeholders at every stage till complaint is resolved.

They get the current status of their complaint on their mobile phones also they can get the status of their complaint from the home page of the web site

13. **Sustainability** (Give details about sustainability w.r.t. technology (technology used, user privacy, security of information shared – Digital Encryption etc. #), Organization (hiring trained staff, training etc. #), financial (Scope for revenue generation etc. #)

The system is sustainable because of use of SMS based technology which is identifiable with consumer's mobile number, the security ensured to restricting

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the updation only by registered users/staff. The system has also resulted in improved revenue by replacing the transformer within five days.

14. **Result Achieved/ Value Delivered** to the beneficiary of the project-(share the results, matrices, key learning's, feedback and stakeholders statements that show a positive difference is being made etc):

(i) To organization

- Improved quality of service.
- Improved response time
- Improved trust of citizens
- Better management of transformer inventory.
- Realization of more revenue through early restoration of power supply.
- Transparent System
- Rigorous Monitoring

(ii) To citizen

- 24 X 7 services
- Empowerment of citizen to initiate the complaint process for replacement of failed transformers.
- Improved response time for replacement reducing 'Blackout' period.
- Transparent system. Transformer replacement priority list is published at web site in chronological order of eligibility of transformer for replacement.
- Regular updates regarding status of complaint.

(iii) Other stakeholders

N.A.

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15. Extent to which the Objective of the Project is fulfilled-(benefit to the target audience i.e.G2G, G2C, G2B, G2E or any other, size and category of population/stakeholder benefited etc):

Around 28 Lakh consumers of 16 District of the Company are benefitted with this system.

16. Comparative Analysis of earlier Vs new system with respect to the BPR, Change Management, Outcome/benefit, change in legal system, rules and regulations

- Since, the entire process is transparent and SMS based without any manual interventions the process delay has considerably reduced from one month to five working days approx.
- The improved response time has reduced 'Blackout' period for the affected area which in turn is generating more revenue for the Company.
- The public unrest has been almost brought down to zero level.

17. Other distinctive features/ accomplishments of the project:

1. Integration of this e-Governance initiative with other internal and/or external ICT systems -

This e-Governance initiative has been externally integrated with ERP System of the Company. After the complaint status turned to 'Eligible for replacement' the transformer can be released from Stores of the Company. Before releasing transformer from the Stores the complaint ID is validated from the system for its current status and if the status is 'Eligible for replacement' then only transformer is issued from Stores through ERP System

This is just an indicative list of indicators. Applicant can add on more information based on suitability of the project nominated.