

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF e-GOVERNANCE INITIATIVES

OF CATEGORY- 'INNOVATIVE USE OF ICT BY CENTRAL GOVERNMENT PSUs'

1. Coverage – Geographical and Demographic :-

(i) Comprehensiveness of reach of delivery centres,

The Initiative is being used by all the employees of BHEL Bhopal (8000+). The users can access the system from anywhere within BHEL internal network i.e. LAN. Some of the features of the Initiative are also provided in Mobile App., which can be used from anywhere via INTERNET connection.

(ii) Number of delivery centres

This Initiative caters to 100+ departments of BHEL organization situated at Bhopal.

(iii) Geographical

(a) National level – Number of State covered

ALL

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

ALL

(c) District level- Number of Blocks covered

ALL

Please give specific details:-

The Initiative has been deployed on the Organization's INTRANET, wherein the employees access the PORTAL either through local LAN or via VPN (Virtual Private Network).

(iv) Demographic spread (percentage of population covered)

This Initiative covers 100% population as it caters to all the employees of the organization. They can access the system anytime from anywhere within LAN. It covers all the 8000+ employees of BHEL. The Initiative covers all the 100+ department of the organization.

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

Earlier, all the official documents (including engineering drawings) were either in hardcopy OR available with the individuals. There was no track of meetings / committees & their progress. There was lot of person dependency & chances of damage / loss of official information were high. Moreover the time to get the

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required information / document was huge which used to result in loss of man-hours. In addition, Presentations, Minutes of meetings, Drawings and other documents were not available online, which would lead to their getting lost and also lot of time was spent on managing documents and projects.

With development of CAD software and computer advancement manual sketching of drawings also ended. But now there were no common repository (system wise) of drawings . Drawing made by individual was owned under his responsibility. There was no record of drawing creator or its approver. This sometimes led to duplicity of same work.

Managing the revisions and distribution of documents was another major difficulty that employees faced as there was no centralized document management portal.

The project main aim was to digitize the entire official documents i.e. approvals, minutes of meeting, communications, drawings etc. and store the same at a central secured location which will be accessible anytime from anywhere.

The main challenge was to digitize the existing documents, which were huge in numbers, and to provide a state of art facility to maintain the space / backup and other IT requirements.

Also Space constraints, inadequate physical security, and manual handling of records were affecting the security and confidentiality of documents.

Finally due to lack of any centralized document and file management portal, the Organization's, intellectual and propriety data such as Drawings , Designs and Programs were getting leaked and benefitting the Competitors.

3. **Scope of Services/ Activities Covered** (Relevance of choice of application for clients/ PSU, extent of e-enablement in terms of number of processes/services, extent to which step in each service/process have been ICT- enabled #)

The main objective of this Initiative is to provide an Online reliable solution to the employees for managing the official documents & drawings in digital form.

This Initiative incorporates various innovative features like:

- **Document Management system:** This module facilitates e-file sharing

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amongst Group members, within department to all employees and to employees without creating groups.

- **Collaboration Management system:** This module facilitates employees to collaborate with each other by forming Committees, Groups and by scheduling and conducting Meetings and uploading and sharing MOMs, Presentations and other documents online.
- **Document Storage on server:** To facilitate storing of Documents/files/Drawings in central server, which can be easily accessed by authorized persons only.
- **Auto search Feature:** To facilitate addition of members/invitees to committee/meeting this feature searches the name of employees from employee records in database as soon as the user starts to key in the name of an employee.
- **E-Workflows:** Well defined Workflows are in place and role based access is provided to employees. For ex. Digitized drawings can only be approved by employees who are in the executive cadre. Committees and Groups formed can only be deleted by the Creator or Chair person.
- **Comprehensive Dashboard:** To provide all the details on a single screen, where all the relevant Actions can be performed on a single click.
- **Email / SMS updates:** Regular email / SMS notifications to respective members in case of any action taken
- **Linking of Documents:** This Initiative links all Documents to their respective Committees / Meeting / Group etc., which facilitates easy Management and sequential Tracking.
- **Digitization:** The Initiative, e-SUVIDHA, covers the digitization of all types of official documents like
 - Approvals
 - Minutes of meeting
 - Communication
 - spreadsheets, and presentations

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- Scanned Images and paper documents
- E-mails, fax
- Multimedia files (audio, video and images)
- Electronic forms and CAD drawings
- Financial reports and software
- **E-Sharing:** The Initiative offers you to electronically share documents using various options as below :
 - Committees
 - Meetings
 - Groups
 - Departments
 - For Self (using e-USB)

4. Strategy Adopted

(i) The details of base line study done,

Firstly the requirement gathering was done and the requirements received from various departments / users were consolidated to finalize the common areas of improvements where Digitization and e-Sharing was required.

Types of documents were identified considering the importance of each type of document.

The workflows were decided based on the feedback received.

Technology identification to fulfill the requirement & space provisioning to store the documents was done.

(ii) Problems identified,

Following Major Problems were identified

- No Knowledge base was readily available
- There were Non-Standard / person dependent practices to maintain the official documents
- Lack of Involvement of Higher management
- Integration of many departments and processes was required

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- Factory wide Implementation catering to all levels of Employees
- Change Management, Communication and Trainings
- Employee resistance was also a major problem identified
- The whole task of Digitization was labour intensive
- Structural inertia (built-in mechanisms) is a big hindrance

Drastic change in mindsets and convincing of employees was required, as employees were not that computer savvy and till date had never used online services to store / access the documents and drawings.

(iii) Roll out/implementation model,

Phase wise roll-out / implementation was done, firstly covering digitization of all the drawings considering 1 department at a time and then other types of documents were covered.

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

For rollout of the Initiative, we have given wide spread publicity through various meetings / forums. During the Initiative inauguration, which was done by BHEL's Director (HR), a demonstration was also organized to the higher management. The developed Initiative was highly appreciated by all. Also wide publicity was given to all On-roll employees through company email and via the Intranet/LAN. Apart from this Training sessions were arranged in groups. User manuals were circulated & provided on the first page of the Initiative. The Initiative was deployed under the New links of our Organization's Intranet, so as to create curiosity amongst employees. Tickers were also placed in Employee dashboard to inform them about this Initiative.

5. Technology Platform used-

(i) Description,

The entire Initiative has been developed using JSP (JAVA SERVER PAGES), HTML, JAVASCRIPT, Oracle Developer 11g Forms and Reports as frontend and for User Interfaces, for uploading and downloading of documents, for Project and

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Assembly management, server directory management and roles management.

Programming has been done in PL/SQL for capturing Employee data from various sources & ORACLE as database.

Also automatic **SMS & e-mail Notifications** has been inbuilt at various levels of the e-workflows

Front End

- JSP (JAVA SERVER PAGES)
- JQuery
- EJBs
- Servlets
- HTML
- JAVASCRIPT
- Oracle Forms and Reports

Database

- Oracle 11g (Latest version of Oracle database)

Hardware

- High-End IBM P780 Servers
- File system --- NAS storage

(ii) Interoperability

At present, the Portal has been deployed in IBM (model P780) server, which has Linux 6.1 operating system installed in it.

As the whole Initiative is developed using portable Java components, which are loosely coupled in such a way that the whole application can easily be deployed in Application servers using other Operation systems like Windows and Unix. The entire project is independent of underlying Operating System & application server. In case of any version upgrade of OS/Application server/DB server, the system will work without any issues.

Interoperability in terms of data exchange with other system has been

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done seamlessly. The master data used in the project is directly linked with the master tables of FINANCE/HR. No duplicity of data is allowed. Initiative is also integrated with many other systems related to planning and Engineering. Similarly every revision and version update is provided to all concerned persons via mail.

(iii) Security concerns

Care has been taken to ensure that there are no security breaches in the Initiative. The whole Initiative is password protected based on the SINGLE SIGN ON concept. Wherein the employee accesses the Initiative by logging only once into the initiative using his/her Staff number and a password. Password can be changed by employee as and when required.

The whole initiative has been tested using PAROS tool, which is based on Open Web Application Security Project (OWASP) guidelines.

World class latest servers of IBM (model P780), with data redundancy and real time data mirroring have been used to deploy the Initiative. All data generated related to various services is also backed up and replicated in real time basis onto the servers located in the Organization's Disaster Recovery (DR) site. This procedure ensures there is no data loss in case of any mishap in the main server location. This is a World class practice in all World class organizations. This also ensures 24x7 availability of the Initiative.

The Initiative has been secured using single sign-on and user session management to restrict the unauthorized access. The data is being stored in clustered environment using Disaster recovery mechanisms like data mirroring, which ensures high-availability of data. The data is being backed up on daily, Monthly and yearly basis which eliminates the chances of data loss.

Penetration & vulnerability Testing has been done for the Initiative independently by an External Agency. This has given confidence that

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the Portal is completely secure from external Threats and attacks.

To avoid leaking of digitized drawing information and unauthorized access user management system is used to define roles of each user. Also log is maintained for every search and download of digitized drawings. For general users we have blocked the save and print option while viewing the drawings.

(iv) Any issue with the technology used

NONE

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

There are 2 types of Service level Agreements

First is with various vendors, from whom the organization has procured the Application and Database servers.

In case of any major issue, which is rated as Category 1, the downtime that can be taken by the vendor is 1 hour. In case of any medium sized issue, which is rated as Category 2, the downtime that can be taken by the vendor is 1/ 2 day and In case of any minor issues, which are rated as Category 3, the downtime that can be taken by the vendor is 1 day.

Moreover Second is with our management. As we are a ISO 9001 certified department, we have our own Key Performance Indicators as listed below :-

- | | | | |
|----|-----------------------|---|-----------------------------|
| a. | First Time OK | - | 95 % |
| b. | On Time Delivery | - | 90 % |
| c. | Resolution Time | - | 80 % (Less than Half Day) |
| d. | Customer Satisfaction | - | 90 % (Most Satisfied) |

The uptime / availability to be maintained as per SLA : 99%

6. **Enhancement of Productivity** (Give details about impact on volume of transactions handled per employee, Productivity of machines/ resources#)

The Initiative has entirely changed the way employees manage Documents, Files and Drawings, which has resulted in man hours savings & increase in

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productivity of employees. The Initiative aims at creating a positive environment by doing away with the cumbersome load of paper documents, drawings and files.

On a daily basis more than 100 documents are being shared amongst all the employees using this Initiative. It saves a lot of paper & manual movement of document, resulting into saving of man-hours.

More than 400,000 lakh drawings have digitized and uploaded in NAS server. Daily more than 500 drawings are downloaded. More than 2000 drawings are viewed daily. Around 200 digitized drawings are daily uploaded with new revisions. Around 100 drawings are sent daily for print via the Initiative.

It also reduces the chances of loss of information and leakage of propriety and intellectual property of the organization.

Other benefits:

- a. Authorization based access
- b. Bringing in transparency and Accountability
- c. Reduction in the cost
- d. Improving efficiency
- e. Reduction in Workloads
- f. Offering Controls, Checks, Alerts and Validations
- g. Paperless office
- h. Bringing in a culture of Smart Office
- i. Reduction in processing delays

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

(i) Volume of transactions processed

There are more than 100 documents are being shared amongst employees using various options. These documents are being used by 8000+ users who are authorized to view the documents.

More than 400,000 lakh drawings have digitized and uploaded in NAS

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server. Daily more than 500 drawings are downloaded. More than 2000 drawings are viewed daily. Around 200 digitized drawings are daily uploaded with new revisions. Around 100 drawings are sent daily for print via the Initiative.

With the development of this Initiative many processes have become easy and less time consuming. Earlier it was very difficult to manage and search required drawings. Printing was also time consuming as employee had to search the drawing from vault rack and after getting its Xerox again it had to be placed at proper place. Change management was less accurate and slow process. It posed various risks on the product manufacturing and planning which directly or indirectly depended on drawings. All these have been corrected and made more efficient with the introduction of the Initiative.

Third party purchase of systems involved huge cost to the company.

Around 1000 design engineers and 1500 employees in the various manufacturing departments , now have very easy and convenient online access to all digitized drawings, which has reduced the overall design and manufacturing cycle of the Products.

(ii) Coping with transaction volume growth

As per organization policy we move the old transactions / data from live database server into archive / tapes. We follow the retention of data/log policy to reduce the size of live server & maintain the server performance

(iii) Time taken to process transactions,

We are using high-end IBM P-780 machine, which are amongst the best Application and database servers in the world, so it hardly takes a second to share a document.

(iv) Accuracy of output,

Accuracy has been maintained to 100%

(v) Number of delays in service delivery

With the development of this Initiative, **there is NO DELAY** in the service

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delivery

8. **Service Delivery – Business/ Client Centricity** (Give details about improvement in interaction with clients and outcome for clients, relevance of access points, Length and Breadth of services provided online etc. #)

As this Initiative is developed for internal use within BHEL, the client in this system is BHEL Bhopal Management & it has all the employees as its end-users. All services are available Online 24X7. This has helped all employees, even those who are in Second shift (factory timings: 4 pm to 1 am) and Third Shift (factory timings: 1 am to 7 am) to use the Initiative.

The Initiative, e-SUVIDHA, covers the digitization of all types of official documents like

- Approvals
- Minutes of meeting
- Communication
- spreadsheets, and presentations
- Scanned Images and paper documents
- E-mails, fax
- Multimedia files (audio, video and images)
- Electronic forms and CAD drawings
- Financial reports and software

With the development of this Initiative, the satisfaction and motivation levels of employees has increased manifolds, as all the documents are readily available online & there is no dependency on other persons.

9. **Citizen/ Client Centricity** (Give specific details on the following#)

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

This initiative has resulted in more transparent and hassle free process, elimination of manual and redundant processes, and reduction in the effort and time spent to fetch the necessary information. The manual system has

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been discontinued.

Before this Initiative, the employees had to keep a hardcopy with them of each and every important document. Employees now get to know about important pending tasks such as Meetings to be attended, Files to be shared amongst Group members, important drawings to be downloaded etc.

Availability of back-up files in the server, eliminates the need for re-construction of lost/ misplaced files. This reduces a lot of effort on the part of the employees.

- The Initiative has provided an efficient and consistent system of e-Office , wherein all types of documents are digitized and available online
- It has reduced the turnaround time in searching for official documents has all types of Files/documents/drawings are available online.
- It has provided for an effective resource management to improve the quality of administration
- The Initiative has established transparency and accountability
- It has provided for an cost effective e-storage facility
- Environment friendly, eco-friendly

(ii) Feedback/grievance redressal mechanism,

The initiative has an online platform, wherein employees can raise their concerns / queries & get response within short span of time, regarding issues related to any service request.

This online feedback/grievance redressal mechanism also has an admin area for HR & FINANCE department to view & reply to queries raised by employees.

(iii) Audit Trails,

At every stage of the e-Workflows in the Portal, as and when an employee logs into the Initiative, the PC's IP address, PC's User name, the staff number of the user and the date and time are recorded along with the transaction, in

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the database. This maintains Audit trails for future references and for security audit purposes.

Every transaction / action is being stored with Date, Time and User Name. This creates Audit Trails and enables the concerned departments to keep a track of user database.

(iv) Interactive platform for service delivery,

The Initiative has a lot of checks, validations and alerts at each and every step, which ensure that the employees get the accurate & authorized data. A user friendly manual has been provided in the Portal, which aids the employees in using the system. Regular email / SMS notifications are sent by the Initiative, to respective members in case of any action taken. For ex. If a Group is created for sharing file, all members of the group are intimated about the group formation via SMS/Email notifications. Similarly if a Committee is created online in this initiative, committee members are notified.

(v) Stakeholder consultation

Regular surveys and opinion polls are conducted in the organization, in which questionnaire related to the Initiative are published and opinions of employees are sought. Based on the feedback of the employees, who the stakeholders, improvements and modifications in the Initiative are done.

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

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

The Initiative is deployed on the Organization's INTRANET, wherein the employees access the PORTAL either through local LAN or via VPN (Virtual Private Network). All services are available Online 24X7. This has helped all employees, even those who are in Second shift (factory timings : 4 pm to 1 am) and Third Shift (factory timings : 1 am to 7 am) to file service requests.

Automatic SMS and Email Notifications is also one of the best features of the Portal, which has been integrated with the entire system so that end-users / admins gets SMS/mail at each and every status change.

(ii) Completeness of information provided to the users,

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The Initiative has a lot of checks, validations and alerts at each and every step, which ensure that the employee is able to correctly enter his/her service requests. This ensures the exactness and completeness of information fed by the employees and no erroneous data is generated.

Role based Authentications in the Initiative ensure that the employees get customized dashboards according to their roles and privileges. This ensures that users get only that information which is meant for them. For ex. Group members cannot delete Meetings and Groups. Only the Creator and Chairperson can delete them.

This has drastically reduced work load of the various departments, and has ensured 100% Transparency in delivery of services.

The total turnaround time of users' requests has reduced drastically and Total Transparency is ensured, due to which the employees are satisfied and motivated.

(iii) Accessibility (Time Window),

As the Initiative is Web based, It is accessible 24x7, Anytime. All services are available Online 24X7. This has helped all employees, even those who are in Second shift (factory timings: 4 pm to 1 am) and Third Shift (factory timings: 1 am to 7 am) to file service requests.

(iv) Distance required to travel to Access Points

Accessible only with BHEL Network and using individuals PCs

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

All action can only be taken in the online system. As previously mentioned, the Initiative provides facility for uploading and downloading of documents/files/digitized drawings.

(vi) status tracking

Comprehensive Dashboard has been provided , wherein employees can view the pending actions needed to be taken by them. The Dashboard provides an

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interface wherein employees can view all the information at one glance. For ex. If the employee wishes who has created the group, who are the members of a committee, when was the committee created, who is the chairperson etc, he/she can just view the dashboard to get the information. Email and SMS intimations are provided to employees to intimate them of any request/status change in the Initiative. Email and SMS intimations give complete information about the request such as who has created the request, action to be taken and when the request was created.

11. **Innovation** (Give details on how the usage of technology is exemplary, any use of new and emerging technology, impact on number of steps required, identification and removal of bottlenecks/ Irrelevant steps etc. #)

We have used the finest Technology, world class servers to host the initiative, best Programming languages and Database available in the IT world. The entire system has been developed using JSP (JAVA SERVER PAGES), HTML, JAVASCRIPT, Oracle Developer 11g Forms and Reports as frontend and for User Interfaces, Programming has been done in PL/SQL for capturing Employee data from various sources & ORACLE 11g (latest version of ORACLE) as database.

Mobile Application of the Initiative has been developed for ANDROID. Employees can view forthcoming meetings, documents pending for approval etc.

The whole Initiative is based on **the SINGLE SIGN ON concept**. Wherein the employee accesses a bouquet of services related to e-Office, by logging only once into the initiative using his/her Staff number and a password

JQUERY, AJAX based java tool, a new and innovative technology has been used in a number module in the Initiative. It calls another JSP/PROGRAM on the fly and is used to retrieve information in the same page.

The Initiative has been hosted in High End servers of IBM (model P780)

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with Open source Operating system - Redhat Linux 6.1 installed in it.

World class latest servers of IBM (model P780), with data redundancy and real time data mirroring have been used to deploy the Initiative. All data generated related to various services is also backed up and replicated in real time basis onto the servers located in the Organization's Disaster Recovery (DR) site. This procedure ensures there is no data loss in case of any mishap in the main server location. This is a World class practice in all World class organizations. This also ensures 24x7 availability of the Initiative. The data is also being backed up on daily, monthly and yearly basis which eliminates the chances of any data loss.

All the Modules of the Initiative have inbuilt **automated e-WORKFLOWS**, which ensure, that the service request is automatically directed to the concerned person for his/her approval and in this way the service request finally reaches the concerned department. Service request statuses are available at each and every module of the initiative. The e-WORKFLOWS inbuilt in every service offered have reduced redundant steps, which were there during the manual process and hence enabled Business process re-engineering.

Integration with E-mail & SMS is another innovative aspect of the Initiative, through which status changes are informed to the employees.

Authorization based access is used to define roles of each user, so that roles do not overlap and that no user infringes into the domain of other users.

12. **Defined and Achieved outcomes** (Give details about extent of improvement in terms of organizational objectives, output targeted in the beginning of the project and output achieved, extent to which the project is able to reach/ fulfill the requirements of planned beneficiaries etc. #)

- Workflow automation
- Knowledge management, including creation of institutional

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reminiscences

- Efficient communications management
- Management of records in effective manner
- Quality assurance
- Productivity Management (file tracking, dashboard view and performance management)
- Cost-effectiveness and ease in accessibility
- Accountability, including audit trails and transparency
- Horizontal and vertical integration of various departments
- User-friendliness
- Paperless office
- Security and Confidentiality of documents is ensured
- Easier to secure than traditional filing cabinets, and can track individual accesses to each document
- Remote access of Files/Documents/Drawings
- Simplification and standardization of processes

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

The best and latest Technologies have been used as listed below, that ensure the long term sustainability of the Initiative

Hardware: Latest IBM 780 server

Database : Latest Oracle 11g

Front-end Tool: Widely used JSP & Oracle Forms

Data is being replicated at Near DR at SAN level

Deployed in Clustered Environment

Complete confidentiality is maintained and the system is totally secure as, Employees need to create their separate login and passwords after giving their

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staff number and date of birth, which is then checked from database and validated, and then only the employee gets access to all the information.

No trained staff is required for operation of the Portal as the Initiative is self-driven and has been developed 100% error free with the best available technologies. All services are available Online 24X7 in the Portal without any Manual intervention. This has helped all employees, even those who are in Second shift (factory timings : 4 pm to 1 am) and Third Shift (factory timings : 1 am to 7 am) to file service requests.

Only trained staff is required for Maintenance of the Initiative, for doing the Improvements and Modifications as per the requirements of the users.

The Initiative has a full-fledged Online Tutorial, which aids the new users in understanding the facilities available and how to fill the various service requests.

14. **Adaptability Analysis**

The developed Portal is totally adaptable to future requirements of the organization. Scalability and adaptability has been ensured, as majority of Modules of the Portal are developed using portable JAVA Components, which are loosely coupled and can easily be reused to develop any number of additional service request applications. This simplifies the testing, maintenance and troubleshooting procedures.

Also there is no constraint on the number of concurrent users who can logon to the Portal and submit service requests, which makes the Initiative highly scalable.

(i) Measures to ensure replicability

The Initiative has replicated with minor modifications and rolled to other sister units of BHEL, such as BHEL Jhansi, BHEL Jagdishpur, and

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BHEL EMRP-Mumbai

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

NONE

(iii) Risk Analysis

The whole initiative has been tested for risk from outside threats, using PAROS tool, which is based on OWASP (Open Web Application Security Project) standards.

The Vulnerability Assessment & penetration testing have been performed by an independent External agency that eliminates the chances of attacks from outside threats.

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

Earlier the documents were in paper form OR available with individuals in soft copy. The main objective of this project was to digitize all the official documents like engineering drawings, approvals, minutes of meetings, reports, presentations etc and store them at a centralized secure location.

Now all the documents/files/drawings are available online which can be accessed by authorized persons only.

The chances of loss / damage of documents have been completely eliminated.

16. 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**

- The project has enhanced the satisfaction & productivity of employees.
- Ensured online availability of data anytime from anywhere.
- Data digitization
- Data security
- Data consolidation

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- Eliminates person dependency
- Save paper & promote GREEN-IT
- Eliminates chances of loss / damage to important documents
- Paperless Office`
- Consistent and uniform processes
- Low process time due to automation of processes
- Ease of access to information/central repository
- Transparency in process
- Instant recovery of data in case of disasters
- Maintains team spirit, and reposes greater trust and mutual sharing
- Drastic reduction in physical infrastructure required to maintain Files/Documents/Drawings
- All transactions are captured with audit trails and cannot be tampered for ever
- Build a Strong Online Knowledge database of important Documents/Files/Drawings in the organization

(ii) To citizen

For the Citizens, this whole effort of the Initiative means a Paperless and more Greener world

As per study, on an average, a document is photocopied 19 times. Paper files get doubled every 3.5 years and paper usage in an average office grows 22 percent a year and doubles every 3.3 years which keeps adding to the new filing cabinets and resources to manage these. A letter has to pass through 41 steps and entered in dozens of the registers before it is answered. The average time to retrieve and file a paper document is 10 minutes. Due to the large number of physical files, average search time for any document is 18 -20 min minutes and sometimes these files are never found. Misplacement of files is a very common issue and at any given time about 3-5% of organization's files

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are lost or misplaced. In organizations where there is lot of paper based work, half of the office's time is spent in handling paper or data entry. In spite of this effort, 92 percent of information is in manila folders.

If we just glance at the environmental repercussions of the usage of the paper, it would be pertinent to note that only 12500 sheets of paper can be made from a fully grown tree. Now take the case of BHEL Organization, it would be noteworthy that on an average 210 billion sheets of paper are sent by fax/photocopy/print every year. Imagining the number of trees that are sacrificed for meeting these requirements. What is more disturbing is that about 95% of this paper will eventually be thrown away.

(iii) Other stakeholders

To the employees, who are a major stakeholder of the Initiative, the following have been the positive outcomes

- A better work culture
- Improve in productivity and efficiency
- Easier planning and management as all documents are available online
- Simplification and standardization of processes and procedures, elimination of unproductive/ non-value-adding work, and reduction in paperwork has been other positive outcome
- Remote usage and access of files/documents/drawings is possible as the Initiative is deployed in the Organization's Intranet
- Knowledge Repository: As we know Knowledge is wealth and now using this Initiative, the knowledge can be preserved in an organized fashion, which is centralized, easily accessible knowledge base for all the employees
- The Initiative creates an e-environment for all the employees
- Seamless integration of various other applications
- Instant file exchange: The files can be sent with in fraction of seconds, within a Group, Department or to an Individual

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF e-GOVERNANCE INITIATIVES

17. 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):

This project is G2E i.e. the end-users of this Initiative are the employees of BHEL. It is currently being used by 7500+ employees for their day-to-day official activities. The Initiative can be accessed anytime from anywhere with BHEL network and also via Mobile application over the INTERNET.

18. Other distinctive features/ accomplishments of the project:

1. Real-Time integration with SMS & Mail
2. **Mobile Application for Android based mobiles**
3. Rewarded under BHEL IMPRESS Scheme (**IMPROVEMENT PROJECTS REWARDS SCHEME SYSTEM**)
4. **Copyright Filed**
5. Accessible anytime from Anywhere within BHEL Network
6. Saves paper, promotes GREEN IT
7. **100% In-house developed. No external agency involved**
8. Covering all categories of Employees (Including Workers)

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