

HYDERABAD METROPOLITAN DEVELOPMENT AUTHORITY

A BRIEF NOTE ON AUTOMATION IN PLANNING DEPARTMENT

The Hyderabad Metropolitan Development Authority (HMDA) as part of its vision of providing good governance to citizens and to facilitate quicker and transparent procedure for the sanction of Building Permissions, decided to harness the potential of Information and Communication Technology (ICT) to provide integrated services to the citizens by deploying appropriate tools of ICT.

In this regard, HMDA identified specific activities that could be brought under ICT in a phased manner to have substantial impact on the service delivery mechanism.

The major areas include;

❖ **Building Permission**

- Residential Buildings
- Industrial
- Commercial
- Institutional
- Multiplex, Special Projects

❖ **Layout Permissions**

- Layout with open plots
- Layout with houses
- Gated Community Developments
- Group Housing Developments

❖ **NOCs**

- Quarry
- Petrol Pump
- Cinema Hall etc.

The HMDA engaged the services of (ASCI) Administrative Staff College of India, Hyderabad (ASCI) as the Technical Advisory. ASCI submitted the proposal to provide its services to establish ICTSystem to encompass all aspects to technical assistance to HMDA. ASCI has undertaken detailed **Business Process Re-Engineering (BPR)** for all the processes and submitted recommendation to HMDA with change in processes. Further, the HMDA awarded

the contract to M/s. Soft TechEngineers Pvt Ltd for Development & Implementation of **"Development Permission Management System" (DPMS).**

Objective of HMDA's ICT Enablement:

The main objective of this project is to help HMDA in strengthening and managing goodgovernance by leveraging ICT to improve its internal processes to serve the citizens in aneffective and efficient manner.

- To provide Business Process Re-engineering(BPR) for the existing system and processes and to streamline the redundant steps of workflows to ease the processes
- To create easy access to services of HMDA for all the stakeholders
- To make existing processes more efficient by reducing the time consumed in file Movement
- Easy access to information for citizens
- Efficient and better MIS systems for improving the internal efficiency of Operations
- To monitor the ICT enabled systems for improving the transparency and accountability within the System and Services.

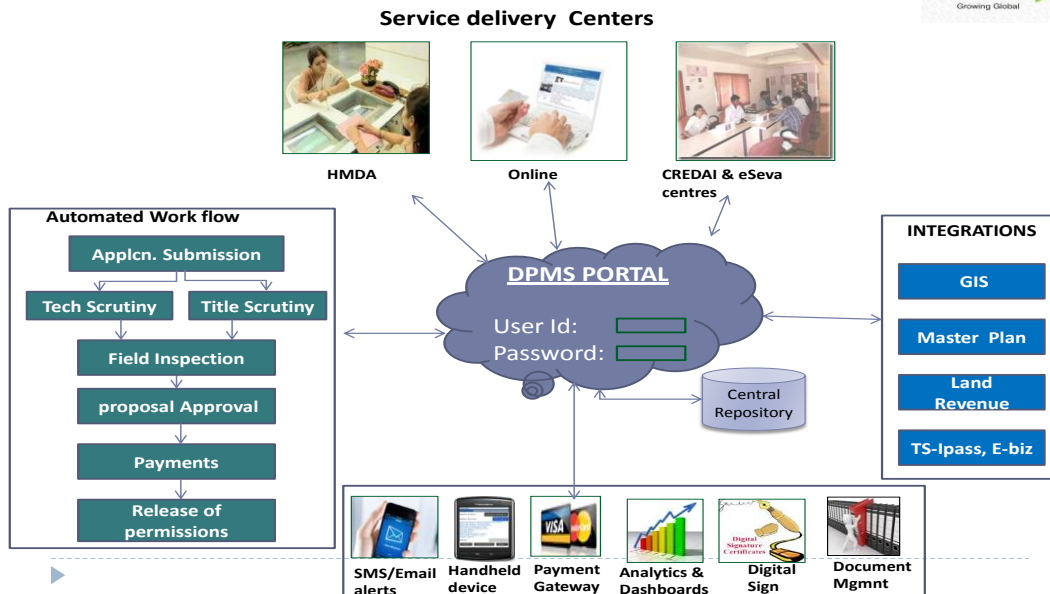
Challenges in Building Plan Approval

- Rapid urbanization and spurt in industrial, commercial and residential projects.
- Complex Bye Laws
- Slow and error prone manual approval process
- Discretion in processing

Resulting in

- Chances of human errors while reading drawings manually
- Subjectivity and lack of uniformity in interpretation of byelaws
- Inadequate visibility of process flow and progress
- Delays in approval resulting in reduced collection of fees which contribute to loss of revenue.

DPMS Architecture



The strategic objectives achieved in the due process are placed at Annexure I.

Work flow automations including BPR

- Every applicant (Architect/Developers/Owners) who intends to submit the proposals online at HMDA can do so by one time registering himself/herself at the HMDA. The registration and the verification process are totally online and can be accessed from HMDA website. On successful registration applicant can login to the Development Permission Management System (DPMS) using his/ her login credentials.
- In process of automation, the HMDA proposed to dispose the online applications with in time span of 20 working days. The present system of disposal of and proposed system is placed below as an example for one scenario.
- DPMS application enables automatic scrutiny of building proposal by reading CAD (Computer Aided Design) drawings submitted by Applicant bringing quickness and uniformity in the scrutiny and eradicate human errors.
- The Development Charges are automatically calculated from the CAD drawing as per the prevailing rates again bringing in quickness and eradicating human errors.
- The progress of the application made by applicant can be monitored by applicant by login into the system and can communicate.
- The inspection carried out during the process of scrutiny of the application for development permission is automated through mobile app. The check list is provided online through this mobile app and the inspection can be carried out online and photographs taken are directly updated through the app to central database. The Photographs are geo tagged.

- The Part B file - Clearance of ownership aspects of the application made for development Permission contains the verification of ownership / title aspects by the designated revenue authority.

Receiving & Disposal of Building Applications in Planning Dept is exemplified below

Service Name	Sub Process Name	Present System	Proposed System for Implementation	
Building Permission	Application receipt & File development	5 - 8 days	-	
	Title Scrutiny	5 - 6 days	10 days	
	Technical Scrutiny by JPO / APO	7 -13 days		
	Technical Approval by PO, CPO & Director Planning	8 -15 days	7 days	
	MC approval & Payment of Development Charges	7 -12 days	1 days	
	Issue of Sanction / Approval (Proceedings)	21- 30 days	2 days	
	Total		51- 84 days	20 days

The major benefits envisaged to achieve with this ICT initiative:

- Integrate the entire organization workflow with the effective use of ICT for better service delivery to the citizens
- Refine and define the process to make the service delivery simple and convenient to the citizen and all stakeholders in the system
- Build capacity within the organizational for smooth adoption of ICT enables service delivery to Citizens
- Fast and better revenue realization
- Management Information System(MIS), trends and Business Intelligent

Features covered in the application:

Auto Scrutiny:

- Automatic Scrutiny of building plans and generation of scrutiny reports .
- Automatically reads and identifies building plan and objects from the drawing
- Maps the objects in the drawing to development control rules
- Verifies DC rules to find variance

Tables in drawing:

- Automatically inserts tables in the drawings
- Area statement tables
- Door window schedules

Auto zooming facility:

- Clear view and easy analysis of the failed objects in the list stating the reason of failure.

Dynamic reports:

- Reports will be customized and produced
- Plot area report, MIS report, failed item reports
- Detailed scrutiny report along with associated rules

Integrated help:

- Self-explanatory help is provided at all stages in a very lucid manner
- Extensively indexed search capabilities

Automated workflow and alerts

- Approval process can be mapped dynamically using rule based template
- Scrutiny of documents classified as ownership, NOC and affidavits
- Email or SMS bases alerts and notifications
- Hand held devices integrated to capture information at site

Flexibility of customization

- Customization as per specifications of authority.

Integration:

- **Payment Gateway:** The DPMS application is also integrated with paymentgateway (Indian Overseas Bank (IOB) integration is completed for VISA card and integration with multiple cards with IOB is in progress) for receiving the paymentonline for Development Permission related payments. HMDA is in process ofintegrating the payment gateway with multiple banks and the discussion and negotiations are in progress.

- **MDP-2031:** The Metropolitan Development Plan-2031 is presently in GIS format. There is proposal of integration of Master plan in DPMS.

- **Details of Prohibitory / Govt. Lands:** The integration of land details of Governmentlands, Surplus lands, Assigned lands as issued by the concerned Mandal Revenueofficer/Tahsildar and District collector are yet to be incorporated in the software.

Collection of Local body Charges: The collection of bank account and fee details of Gram Panchayat, Nagar Panchayat & Municipalities which are falling under the jurisdiction of HMDA (under process).

Digital Signature: All the HMDA planning staff shall be given Digital Signatures which shall be integrated into the DPMS application for authenticating the transactions done and issuing requisite certificates.

Mobile Application: The inspection carried out during the process of scrutiny of the application for development permission is automated through mobile app. The check list is provided online through this mobile app and the inspection can be carried out online and photographs taken are directly updated through the app to central database. The Photographs are geo tagged.

Outcomes

- Provide **24X7 online services** to the citizens through standardization and automation of workflows across the organization
- **Transparency** into the end-to-end assessment process
- **Uniformity** and adherence to DCR guidelines, rules and regulations levied by the authority
- **Systematic monitoring and tracking of file progress** at every stage and auto escalation to higher officers to act on any delays -Reduced corruption
- Enhanced communication systems via SMS/Email etc
- Maintain comprehensive **data information system**

Access to Real time information on dashboards to make better and faster decisions (application visibility, performance monitoring etc.)

Conclusion

The project is ready for launch. The approved and rejected applications for development permission shall be pushed to HMDA website. The DPMS application data shall be pushed to State Data Center and archived for data security and redundancy.

ANNEXURE-I

S.No:	Strategic Objectives	How they are addressed
1	Ensure stakeholder (citizen,Architects and officials)satisfaction by enabling atransparent and predictableprocess for approval offresh /revision Developmentplans	<p>1. DPMS brings in contextual information like visual workflows (you know exactly where the process is at any point of time).</p> <p>2. It is highly predictable in that it follows an uniform pre-determined process and uniformly interprets the building bye-laws. Citizens and architects can view the status of proposals.</p>
2	Enhance the revenue earningpotential of the authoritythrough scrutiny and feecollections complimented byfaster clearance of proposalsreceived	By accelerating the process of building planapprovals, the potential for revenue generation(scrutiny, completion certificate and otherNOC fees) to go up significantly.
3	Ensure high levels of compliance through an objective review of proposals vis-à-vis the building bye lawsin force	<p>1. Manual system of approving proposals is usually error prone. The process of scrutinizing drawings is entirely automated through effective mapping of drawing entities to building bye laws. This ensures highest levels of objectivity and compliance.</p> <p>2. Ensuring immediate retrieval, search and viewing for audit and compliance.</p>
4	Automate the entire process from receipt to approval of proposals received	The entire drawing scrutiny process isautomated as explained earlier. The citizensare therefore assured of a transparent anduniform process. It frees up time forconcerned officials, who can focus onqualitative work.

5	<p>Identify potential bottlenecks Through a visualization of the Process as it happens</p>	<p>The workflow within DPMS is visual and Officials can easily identify bottlenecks if any. Preventive measures can also be taken by Tracking workload on officials.</p>
6	<p>Manage the content lifecycle (drawings, certificates, note sheets etc.) related to each proposal so as to maintain complete traceability</p>	<p>1. Content related to each proposal is maintained Throughout the life cycle providing end-to-end traceability 2. Advanced search facilities also greatly assist in retrieval of documents through tags and other data.</p>
7	<p>Gain insights and intelligence related to the process performance through visual reports and dashboards</p>	<p>1. Advanced Reporting Engine offers a variety of analytics in the form of dashboards scorecards, what-if-analysis and drill-downs which can be mapped to predetermined Key Performance Indicators (KPIs) of HMDA. This not only provides intelligence but also Helps the planning function of the department. 2. The visual representation of growth on Building Plan approval can also be used by</p>