Automated Building Plan Approval

Prior to the implementation of 74th CAA in most of the urban local bodies, town planning section was responsible for issuing the permissions for building plan approval. The building plan approval is envisaged to facilitate quick processing and disposal of building plan permissions, standardization of building fee & other charges, automation of the technical scrutiny, effective monitoring of file processing. But in the post 74th CAA implementation scenario these functions are transferred to ULBs and ULBs will have to equip them to take care of this function in an efficient and effective manner.

Process Overview

The building plan approval process relates to the issue of permission for the construction of buildings based on specific set of rules and regulations. As per the relevant provisions of the State Municipality Acts, any person desirous of undertaking a construction activity (fresh construction as well as modifications to existing structures), is required to obtain prior sanction from the relevant local body before embarking on the same. The building plan approval is envisaged to facilitate quick processing and disposal of building plan permissions, standardization of building fee & other charges, automation of the technical scrutiny, effective monitoring of file processing.

The Building Plan approval process can be divided into following sub-processes:

- Approval of building proposals of various types and nature of buildings
- Approval of layout proposals
- Processing and disposal of plans
- Calculation and collection of fees

Existing Situation:

Today most of the building plan applications & drawing plans are submitted manually in paper format. Processes related to scrutiny, approval and rejection are carried out manually. This involves longer processing time, errors & variance in evaluation, more cost & more resources. Moreover, status tracking by the citizens & department officials becomes difficult & cumbersome with manual process in place. Apart from above, following are also the hurdles in the building plan approval process.

- Lack of mapping of city master plan and MIS on GIS platform with required accuracy
- Lack of information to the citizens for self checks etc.
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- Limited availability of delivery channels and availability of facilities or services for limited periods.
- Citizens physically visit the municipalities several times to obtain, submit and check status for the application.
- No facilities for Online Fee calculation / Payment
- No readily available historical data/ MIS given the accurate and updated information
- Non integration with accounts department delays the process of reconciliation and generation of the financial statements process

All the above-mentioned limitations for Building Plan Approval will be taken care with implementing the essentials for e-Governance.

Essentials for implementing e-Governance

Essentials pertaining to Building Plan Approval process using ICT are as follows:

**a. Input**
- Single window for Architects/ Engineer etc. for online scrutiny & mapping all control rules of the Authority
- Facility for online submission of the necessary documents along with building plan with ability for automated capturing of relevant data from maps etc. For example Auto DCR
- Software distribution may be done to registered architects or pre-approved software identified for the purpose
- Pre-approved plan to be fed into the software application system
- Centralized database for storage of repositories for easy reference & instant retrieval

**b. Process**
- 100% of the plan with details to be mapped on GIS/ MIS map
- Auto generation of Unique ID for each approved building plan
- Linking Property Tax and Utility data with Building plan ID
- Availability of Automated Checking Mechanism to map the Pre-approved plan with the building plan applied for
- Generation of Automatic Online Provisional Building approval on self certification as per Pre-approved plan
- Facilities for Online Fee calculation / Payment
- Automated workflow
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c. Output
- Automatic Generation of Acknowledgement Receipt
- Tracking of applications

d. Others
- Facility for Status tracking
- Online payment facilities

Benefits:
The following are the benefits that can be envisaged from the Automated Building Plan Approval
- Saving of traveling time, cost & efforts for citizens
- Make the processes more transparent
- Simplify and automate the complex, manual, inefficient, non-transparent, time consuming and non-stakeholder friendly process in place
- Eliminate potential delays and thus reduce the delivery time for approval/rejection/processing
- Avoid inconsistencies and minimize errors in interpretation
- Efficient, secured & controlled system for scrutiny and approval
- Decrease turn-around time, increase the quality and efficiency and effectiveness of government services for citizens and businesses
- Significant cost & manpower saving for municipal bodies
- Secure & seamless integration with related departments for better accessibility and extraction of data
- Make accurate and updated information available in public domain
- Make MIS reports available instantaneously

Many Municipal Bodies across India have done commendable work in automation of building plan approval. To name few are:
- Chennai
- Ahmedabad
- Surat
- Pune
- Nagpur
- Aurangabad
- A Greater Mumbai
- Jaipur Development Authority
- Thane
- Nanded
Case: Chennai Municipal Corporation

A case of Chennai Municipal Corporation has been considered to understand the commendable work done in this sphere.

**Brief:**

Chennai Municipal Corporation receives about 10,000 building plans for approval every year. The problems faced were as follows:

- Huge number of applications to be dealt in regular manual processes
- Tedium of manual system for assessment and approval of building plans
- Lack of mapping of city master plan and MIS on GIS platform with required accuracy
- Citizens physically visit the municipalities several times to obtain, submit and check status for the application.
- Non integration with accounts department delays the process of reconciliation and generation of the financial statements process

**Aim of the initiative:**

‘Speed up the Building Plan Approval Process and make the process more efficient and citizen friendly.’

**Implementation Strategy:**

To overcome the problems in the manual processes and adopt the process of automated building plan approval, Chennai Municipal Corporation undertook the initiative in a phased manner.

- Studied the Building Plan approval process and broadly divided into following sub-processes:
  - Approval of building proposals of various types and nature of buildings
  - Approval of layout proposals
  - Processing and disposal of plans
  - Calculation and collection of fees
Studied other available best practices and undertook secondary research
Consulted experts from the implementing agency with past experience and project implementation methodology
Presenting project case to all stake holders giving the clear project case and benefits of automation
Obtained buy in of stakeholders
Re-engineered & optimized the existing process as per specific requirements
Stage wise implementation planned by integrating with other applications.
Development of the base application, customization as per needs
Testing the software developed using number of old and live test cases for accuracy and completeness of all rules and regulations.
At first instance automated workflow for building plan approval through AutoDCR was integrated with CoC website and then it is planned to be integrated with future initiatives.
Key performance indicators were used to measure impact and overall result. The indicators are mainly number and area of proposals sanctioned, revenue generated, time required for approval of proposals and number of resubmissions, thorough checking of development control regulations, accuracy of area calculations and elimination of human errors.
Training to internal team
Awareness workshop for other stakeholders like Architects/ engineers etc.

Brief on “Automated Building Plan Approval”
The re-engineered & automated building plan approval process in Chennai Municipal Corporation now has been reduced to the following steps:

**Step 1:** Log on to “www.chennaicorporation.gov.in” and click on ‘Building Plan Submission’. One would be directed to a page with links to “New Plan”. Digital copy of the building plan can be uploaded. The applicant would be provided an online receipt number.

**Step 2:** Clicking on the link “View Plan Report”- the submitted plan would be scrutinized (with a maximum time of 24 Hours) by the software and a report will be generated regarding compliance. After scrutiny, approvals are given and a copy of the approved plan is sent to the local office in the PDF format.

**Step 3:** If there are any corrections to be made, applicants are intimated to submit a fresh plan using the “Resubmit Plan” option. This can be done numerous times as per
requirement. Even though the Corporation does not have powers to approve multi-
storey buildings the Auto DCR software has the capability to process plans for such
buildings.

- **Step 4:** Payment of online processing fee through a payment gateway.

### Key Contributors:

- Leadership of Chennai Municipal Corporation
- Departments and the employees
- Implementing Agency

### Achievements

Salient features of the initiatives as an outcome are:

- Online Submission & storage of drawings
- Increased efficiency in approval process
- Status tracking for citizens
- Enhanced service levels by reduction in approval time and associated human resource
- Readily available data in a user friendly format helps in decision making and comprehensive planning at local, regional and national level
- The urban planning could be drastically improved, as the urban growth is known well in advance based on approvals being granted. Using this data the city planners and strategic decision makers could plan infrastructure requirement for city in an advanced manner.

### Lessons Learnt

Building plan automation has been landmark project in Chennai Municipal Corporation e-
governance road map and has generated immense confidence to all stake-holders in taking up similar initiatives in future. Following lessons were learnt during implementation of the initiative:

- Citizen accessing information may not necessarily be a well educated person;
- System allows information to be gathered, stored, and shared more readily than ever before, it also raises important issues of protecting information from unauthorized changes and safeguarding personal privacy;
- Government projects have very tightly defined user specifications;
- Unlike other (regular) business applications, they have no room for negotiation because a change in them may invoke legal implications for the government department concerned.