



CASE STUDY



City of Dallas, Texas

Client:

Department of Development Services,
City of Dallas, Texas

Business Challenge:

Creation of an integrated Land
Management System for the Department's
Building Inspection Division

Solution:

POSSE, POSSE Internet

Industry:

Public Sector – Municipal Government

The Land Management System has reduced the processing time for over-the-counter plan reviews from more than 2 hours to 30 minutes on average.

*"Now that we provide plan review comments on the Internet, contractors can quickly see what needs to be revised or whether their plans are ready to be picked up. This is a tremendous service we're providing our customers."
– Manager, Dallas Building Inspection Plans Examiners*

Summary

The City of Dallas (pop. 1.2 million) is the ninth largest municipality in the United States. Prior to implementing POSSE in 2005, the City's Department of Development Services Building Inspection Division was using a mainframe system with limited capabilities and fewer IT people able to support it.

Building Inspection staff realized that substantial efficiencies could be gained using an integrated workflow management system. Repeat customers would not have to have their contact information re-entered each time an application was filed, while plan reviewers and trade clerks would not have to leave customers sitting at their desks while they checked maps for zoning information or property dimensions.

POSSE was selected as the solution to best meet the Department's business needs. POSSE is tightly integrated with Development Services' geographic information system (GIS) resulting in the Land Management System (LMS). The LMS allows the Building Inspection Division to accurately and efficiently process permit applications and plan reviews, and conduct inspections of construction activity.

Field inspectors complete their work using POSSE Internet and wireless technology on ruggedized laptop computers. This provides inspectors with real-time access to the POSSE LMS database. POSSE Internet is also used to provide contractor and public access to land development data.

Contractors and other applicants can apply and pay for certain permits online and are able to find the status of an application without having to come to the Division's Permit Center, reducing the approval process time and improving service. The public can also search the website to find available development information.

Project Goals

The Land Management System was intended to improve private development processes, including permitting, plan reviews and building inspections, and to enhance customer service and increase efficiency and accuracy.

Methodology

The Project Plan provided for multiple phases in system development, each phase moving toward a more complete version of the final product:

1. Documenting Business Requirements – gathered from Subject Matter Experts (SMEs) in focus group meetings.
2. First Iteration Review – basic system configuration designed and demonstrated to SMEs to show how system would meet each business requirement.
3. Second Iteration Review – more details added to system configuration by designers, and another demonstration conducted with SMEs. The second iteration review included demonstration of automated procedures and intrinsic reports (those produced from POSSE workflow, such as Building Permit documents).
4. Third Iteration Review – final demonstration to SMEs of system at 95 per cent design completion demonstrating all features of the system including preliminary data conversion of historic records.
5. End User Testing – system delivered in a test environment for SMEs to test against business requirements. Thorough vendor testing on system design and automated procedures had been completed prior to the City's test environment. End user testing was also performed on 25 different performance metric management reports produced from system data.
6. System Acceptance – confirmation from the SMEs that the system met business requirements and was ready to move into the production environment.
7. Go Live Event – carefully planned and fully supported on-site implementation.

During the project modifications were made to the original system design. The City increased the scope of the vendor's contract to include work that had previously been identified as City scope. Some design modifications were made to the LMS following each of the three iterative review processes. This was done at the request of SMEs who, as they became more familiar with POSSE's capabilities, identified LMS modifications they determined would improve the overall final design.

The Land Management System is integrated with the Department's GIS, which further relies on data imported from the Dallas Central Appraisal District (DCAD).

Success Factors

Technology Benefits

One of the primary differentiating features of using POSSE® for the Land Management System (LMS) is that it can be configured or reconfigured by trained staff without ongoing support from the vendor. Subject Matter Experts (SMEs) from the business units who understand the technology can quickly modify the system to reflect changes in business processes or ordinance revisions. Custom procedures may be required to automate some workflow.

The LMS automatically generates building permits and contractor registrations with all the pertinent information, eliminating the need for clerical intervention to produce the documents. Once plans are approved and construction underway, inspection results are immediately populated into the database from inspectors in the field. Utility companies are notified immediately by email, and utilities can be released within hours rather than a day or two later.

Dallas Development Services uses POSSE Internet to provide real-time access to field inspectors using ruggedized laptop computers with a wireless EVDO connection. Using POSSE Internet also provides contractors and the public with access to the LMS via the Department's building website (<http://developdallas.dallascityhall.com>).

Contractors sign in and have access to their development activities, such as the status of their applications, plan review comments and inspection results. They can also apply and pay for certain permits online. The LMS will e-mail the permit document to them for printing and posting at the construction site. The public can search the website for development information by permit number, address and date.

"The new site for building inspections / permits and contractor information is great! This will make a big difference in my daily schedule. Thanks for all the hard work!" – Contractor



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Stakeholder Benefits

Development Community:

The LMS has been a good public relations tool for the Department. The development community is complimentary of the enhancements in customer service, reduction in staff errors and decrease in processing times. They are particularly pleased with the real-time access to inspection results and utility releases occurring much more quickly.

The LMS provides a single database of parcel information including zoning, property ownership and lot dimensions; customers and contact information; and a full record of active and historical construction-related activity. The integrated database decreases processing time and increases staff accuracy.

Further, the development community is no longer constrained by the location or operating hours of the Permit Center because of the availability of e-commerce and other online services. The advent of the LMS saves the development community valuable time and money.

The LMS has reduced the processing time for over-the-counter plan reviews from more than two hours to 30 minutes on average. It has enabled extended service hours by offering e-commerce services. Contractors have the ability to apply and pay for certain permits online, renew contractor registrations, review plan review comments and check permit status, and request inspections and view real-time inspection results online. It has resulted in enhanced customer service, positive comments from the development community, and improved morale within the department.

Inspectors:

An unexpected benefit was improved morale among the field inspectors. There was concern that the new technology may be imposing to those who were used to making hand-written notes in the field, and then coming back to the office at the end of the day for data entry. However, the inspectors readily adapted to entering inspection results through drop-down lists using POSSE Internet functionality and appreciate having management invest in technology to improve their jobs.

Department Staff:

All sections of the Building Inspection Division use the Land Management System. Staff enter applications, route plan reviews, enter plan review comments, update application statuses, collect fee payments and issue permits, renew contractor registrations and conduct field inspections.

The LMS places a wealth of information at the end users' fingertips. An employee is automatically notified on their To Do list when there is a step within the plan review process for them to complete—greatly decreasing overall review time as it progresses through various plan review steps.

Plan review comments are immediately available in the system database for viewing by all involved in the process: other employees, supervisors, and customers. It's immediately known where plans are in the process, who's reviewed them and what comments have been made. Users can view parcel location and information through the GIS interface.

Staff no longer have to re-enter repeat customers' names and contact information when a new application is submitted. The information already exists in the system and is available to all staff using POSSE. Property addresses are also in the system and can be retrieved automatically, reducing typing and data entry errors. Also, staff do not need to leave a customer sitting at their desk while researching parcel or application information, the information is available in POSSE at the end user's desk.

By having more information available on the Building Inspection website, fewer telephone calls are made to Customer Service staff with requests for project status and general information. There is also less foot traffic in the Permit Center and the four inspector field offices due to the availability of more online services.

Project Success

The POSSE Land Management System has greatly enhanced the efficiency of the Building Inspection Division. Plan review times that were once done over the counter in more than two hours now take an average of 30 minutes. A contractor or other applicant can readily determine the status of an application by checking online and can conduct a substantial amount of business without having to come to the Permit Center. Time and money are valuable commodities in the construction industry. The Land Management System saves developers and contractors both.

The website was implemented in May 2006, and the number of telephone inquiries to the Building Inspection Office for permit status has steadily decreased as people become accustomed to accessing the website. The number of in-person applications at the Permit Center is also decreasing, which further decreases waiting times and improves customer service.

Source: Winning Submission for 2006 URISA Exemplary Systems In Government (ESIG) Award.