



Council of Governors



How Automation of the Building Permit System has enhanced staff efficiency and reduced the turnaround time of permit issuance in Kiambu County

County:	Kiambu		
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Target Audience:	County Departments of Physical Planning, CECMs Finance, Academia, other County resource persons		
Author(s) and contacts:	<ol style="list-style-type: none"> 1. Anthony Kibe K. — Kiambu County anthony.kibe@kiambu.go.ke 2. Charles Mbugua — Kiambu County mcharlesmbugua@gmail.com 3. Phelix Omom — Kisumu County phelix.omom@yahoo.com 4. Justus Emukule — Bungoma County emukulej2014@gmail.com 5. Symon Mwakisha — Kilifi County smwakisha@kilifi.go.ke 6. Prisca Kinyua — Kirinyaga prisca.kinyua56@gmail.com 7. Nkatet Siololo — Narok County nkatetsiololo@gmail.com 		
Institution(s):	County Governments, Maarifa Centre		
Resource person(s) and contacts:	Mr. Anthony Kibe Kamau, System Administrator for EDAMS; Mr. Charles Mbugua Muniu, System Administrator for EDAMS		

CONTEXT AND CHALLENGE

Kiambu County is located in Kenya's central region and covers a total area of 2,543.5 km². According to the 2009 Kenya Population and Housing Census, the population of Kiambu County stood at 1,623,282, and was projected to reach 2,090,592 by the end of 2022¹

Land in Kiambu is put under diverse uses, among them, industrial, agricultural, commercial, wetland forest, and public land for public utilities and amenities. The official land records indicate that 85 per cent of land owners in Kiambu County have title deeds to their land, with no recorded incidences of landlessness. This registered land has however been subdivided without registering the titles. The remaining 15 per cent of land owners have not received their title deeds for various reasons.

Through the Department of Land, Housing and Physical Planning and Urban Development, Kiambu County issues Building Permits to members of the community. However despite staffing each sub-county with Physical Planners and Surveyors, the Building Permits System has long been *inefficient* and tedious due to the bulky nature of the documents used e.g. blue prints, and their volume, there was the dreaded issue of loss of documents. This has been replaced with soft copy versions of the same documents which is easier to work with and much safer as there exists backups of all the documents.

A Building Permit System is a set of laws and procedures that all building practitioners, such

¹ County Government of Kiambu. County Government Integrated Development Plan 2018–2022

as builders, architects, planners, specialized design consultants, and contractors, have to abide by when engaging in the construction of a new building or in the modification of an existing building that has structural implications. The main objective of regulating building permits is to ensure the health and safety of the community. Sound regulation of construction helps protect the public from faulty building practices.

The enforcement of building permits is so complex that it continues to foment informality. In most developing countries, this rate of unregulated structures hovers between 60 and 80 per cent. The end result is *poor oversight on safety*, and *higher costs for the community*. While the cost in human lives is most evident, local authorities lose the opportunity to generate more revenues. Carefully managing the “gate-keeper” role is an important factor in the success of building permit reforms.

RESPONSE AND ACTIONS

In March 2016, the County Government of Kiambu signed a Cooperation Agreement with the Kenya Investment Climate Programme 2 (KICP 2), a three-year program of the World Bank Group, financed by UK Aid and the Dutch government, to reform the County’s business environment in order to facilitate the creation and licensing of businesses, reduce the cost of doing business, and ultimately attract more private investment in the County. Automating (design, develop, test and deploy the online system) the construction permit system was one of the key objectives of this partnership.

Electronic permitting is a set of computer-based tools and services that automate and streamline the building permit process. An electronic permitting system typically replaces traditional paper and file-card systems. As a result, the intent of electronic permitting is to reduce permitting time, improve customer service and staff efficiency, enhance quality, and make operating funds more productive.

The software is built to support the following functions specific to the administration of construction permits:

- *Registration of architects, physical planners and engineers into the system:* architects, physical planners and engineers can do self-registration, and vetting is done by the appropriate institution in order to permit them to access the system’s functionality.
- *Submission of building proposals for review and approval:* architects can upload their building proposals online without having to present themselves physically at the County offices.
- *Submission of payment evidences:* architects upload evidence of payments made for processing of building proposals.
- *Monitoring of submitted building proposals:* architects can log into the system and view the status of their submitted building proposals. The system also notifies the applicants via SMS and email once the proposals complete key milestones in the system. Notifications are also received when actions are pending for the applicant, e.g. requests to make payment.
- *Review and approval of building proposals:* Development Control Officers in the County can log into the system, view submitted building proposals, provide comments on them and approve or return them (electronically) to the applicants for amendments.
- *Issuance of construction permits:* after approval, the system generates the permit and allows the applicant to download it immediately and commence construction works.
- *Reporting on all activities related to the permitting process:* the system has a comprehensive and extensive reporting facility called a Business Intelligence Tool that allows users to generate reports of key aspects of the construction permit approval. Examples of currently supported reports include reports of all submissions received within a specified period, reports of all approvals within a specified period and an

overdue report (a report indicating proposals that have exceeded the pre-specified time threshold in circulation).

- *Profiling of ongoing constructions for the inspection process:* the system allows building inspectors to review ongoing constructions and decide on those that make the most monitoring sense to inspect.
- *Capturing of inspection data using tablets:* the system allows building inspectors to go to site and capture inspection data via tablets. Photos of key aspects of the construction can also be uploaded during such inspections. One important feature of this system is that, in areas where there is no connectivity, the inspector is still able to fill out the relevant data and later send the information to the relevant departments when connectivity resumes.
- *Support for the enforcement process:* the system allows enforcement officers to record key information on the enforcement process, e.g. ongoing court proceedings and their outcomes.
- *Archiving of data:* the system archives all data submitted to or created using it. This provides a valuable resource to people seeking information on construction-related issues in the city.

RESULTS AND OUTCOMES

Electronic permitting can provide a broad range of benefits, including

1. *Better communication* - enhanced communication between customers and County staff at various stages of the building permit application, review and approval processes will in the long run produce higher quality plan submissions and reviews, permit applications, and exceptional customer service.
2. *Improved speeds of permit issuance* – the automated system is expected to reduce the amount of time needed to review and approve a building proposal with a multiplier effect in the economy.
3. *Increased transparency* – applicants of building proposals will be able to monitor the status of their proposals by accessing the online system. In addition to this, the system will notify applicants via SMS and email whenever their proposals complete key milestones during approval.
4. *Profiling of architects, physical planners & engineers* – property developers and other interested parties will be able to request for information on the number of successfully completed projects that an architect, physical planner and engineer has undertaken. This way they will be able to identify a large array of professionals in the industry who see development projects to successful completion.
5. *Access to information* – the e-DAMS administration system has a number of features that allow the dissemination of information relevant to construction permits. For example zoning guidelines and bylaws that affect specific areas in the city. With such information available online, it is expected that the number of calls or visits that architects have to make to the County in the course of their work shall reduce.

The Electronic Development Application Management System (e-DAMS) has changed the way communities across the County of Kiambu do business, speeding the construction permit process for builders, inspectors, and plan reviewers within Kiambu County, and providing better and timelier information to decision makers, managers, and staff of the County Government of Kiambu.

Key reforms include:

- I. streamlining internal review processes for building permit applications;
- II. reducing the time for process building permit applications to 7 working days for single dwellings and 1 month for a multi-dwelling. Previously it would take months for each;

- III. adopting new building regulations, improving building quality control processes;
- IV. introducing a one-stop shop for lodging and tracking your application, and obtaining your permit; and
- V. fees reduction.

Key Benefits to the County of Kiambu

1. *Improved report generation:* e-DAMS provides for flexible reporting capabilities that document the volume of work completed and the revenue generated by the department of Land, Housing, Physical Planning and Urban Development.
2. *Increased efficiencies* through the simultaneous review of building proposals by different reviewers, e.g. Sub-County Planners, Development Control officers, Public Health officers, Surveyors, Fire officers etc. In the old manual system, physical plans moved from section to section in the county for review and comments. The electronic system has enabled all sections to review building proposals simultaneously, consequently reducing the approval time.
3. *Fostering good practices in the industry:* the system targets registered architects. It is expected that architects shall endeavor to build good profiles in the system by seeing their projects to successful and lawful completion. The effect of this is expected to be an industry that is incentivized to adhere only to good and lawful practices.
4. *Improved inspection processes:* the system through an inspection application will allow inspection officers at the County to generate reports on ongoing constructions and profile them according to risk. This way, inspections can be directed to where the need is greatest, consequently resulting in higher compliance with laws governing construction.
5. *Management oversight:* section heads shall be able to monitor the volumes processed by their staff and any bottlenecks arising should be quickly identified and dealt with. This leads to more efficient use of staff time and less duplication of effort and better internal management tools for gauging department efficiency and spotting problems.
6. *Researchers & the academic fraternity:* the system will archive all building proposals submitted to it and their eventual outcome. Using such data it will be possible for researchers and other stakeholders to obtain various statistics on the construction industry in the city and consequently in the country.
7. *Enhanced Public Safety* – due to increased compliance in the industry through the adherence to good and lawful practices supported by the system, the public safety influenced by buildings is expected to be enhanced. For example, buildings complying with the outlined fire protection by-laws are less likely to result in loss of life during a fire outbreak.

LESSONS LEARNED

1. The E-dam system runs on an online platform dependent on internet connectivity; this makes our operations dependent on the network provider which can affect service levels.
2. The system requires interaction with multiple users, and this requires technical input to train various stakeholders on how to successfully operate.

RECOMMENDATIONS FOR OTHER COUNTIES

Counties that would like to introduce efficiencies into their Building permit system can learn from the Kiambu County e-DAMS model:

1. Engage multiple network service providers to mitigate against system outage.
2. Ensure you have adequate resources to enable capacity building of multiple users such as architects, System administrators, physical planners