

Increasing Cadastral Survey Productivity to Tackle Undocumented Land Rights Worldwide: a Case Study

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SUMMARY

This paper will introduce a vision for transforming cadastral workflows by leveraging a broad spectrum of geospatial technologies in a way that will provide surveyors with greater productivity in both the field and the office. A holistic system approach will be analyzed, with key factors identified to address customer challenges in the context of a real-world case study. Finally, the customer benefits identified in the case study will be extrapolated to identify potential applicability to developing countries in order to enhance productivity to tackle undocumented land rights worldwide.

Cadastral surveying has evolved significantly over the past 25 years, with the introduction of faster, lighter, and more accurate hardware technology to serve more traditional operations. Field and office software has also evolved to handle large volumes of data in smaller packages and in formats readily accessible worldwide. However, with all of these advancements, there still remain challenges in the transition phases of cadastral projects and, even with all the available technology at a project's disposal, the volume of undocumented land parcels worldwide is estimated in the billions. In Uganda alone there are currently an estimated 15 million unregistered land parcels that current cadastral government authorities estimate will take Ugandan surveyors 1,000 years to legally register. Improvements to cadastral workflows, when considered at such scale, can decrease the time it will take to do this work and thus grant land tenure to rights-owners more expediently. Therefore, it is important to not only assess the introduction of technology, but to understand the workflows and processes that can introduce delays and challenges in the establishment of land rights.

Leveraging the power of data is essential to making informed decisions in the field and, though challenging, the results of doing so yield significant productivity gains. Business process analysis

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and requirements gathering is not just about implementing new technology and software workflows, but about understanding what the true intent and purpose of a project is. By assessing the system and workflows holistically, and constantly iterating with feedback from both field and office components, cadastral workflows can truly be transformed to a new level of productivity to tackle undocumented land rights worldwide.

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