DIGITAL PLANNING & OPERATIONS:
Reduced overtime expenditure at Rustenburg Local Municipality

THE BUSINESS CHALLENGE.

All municipalities are faced with juggling limited financial and human resources that must be directed at maintaining and renewing infrastructure, addressing backlogs in service delivery, and comprehensively dealing with changes in demand.

From service delivery protests to negative audit reports, if municipalities are unable to meet their statutory and democratic responsibilities towards their citizens, the consequences can be dire and far reaching.

Digital Information Management is an essential component of building smart, resilient cities that can intelligently approach the challenges faced by rapid urbanisation and environmental change. The right information in the right hands at the right time informs decisions, improves awareness and ensures the effective use of resources. In developing countries data is, however, rarely converted into an electronic format. Existing data is difficult to find, is captured using old technology, or distributed across disparate offices and departments. Therefore, silos form between departments such as Engineering and Finance, information is rarely accessible to all relevant stakeholders, and the communication of information is made more difficult.

In the case of Rustenburg, a digital infrastructure asset management system needed to be built from the bottom up. There was a complete lack of electronic data, and all relevant information was either archived across departments or non-existent. The inability to consolidate data made it near impossible to make timely and informed decisions. Furthermore, maintenance was purely reactive. There was no knowledge of the age and existing life of water and sanitation infrastructure, and no modelled output of the water and sanitation network. Operational teams were left guessing as to which materials to collect from the stores before they went out on-site. A high expenditure on overtime was one result of ill-informed planning.

THE CLIENT

Rustenburg Municipality is a Category B municipality within the Bojanala Platinum District Municipality, in the North West Province, South Africa. Rustenburg is a large town situated 112km northwest of Johannesburg and Pretoria, at the foot of the Magaliesberg Mountain Range. It is an economic centre for Platinum Mining and trade. The municipality is the most populous in the North West Province and the fastest growing municipality in South Africa. In 2011 its population was estimated at 549 575, with a per annum growth rate of 3.50% (2001-2011).

INDUSTRY

- Local Government

IMQS SOLUTION

- GRAP-compliant Asset Register, desktop version for all movable and immovable assets
- Work In Progress (WIP) Register that acts as an inventory for all capital projects in progress
- IMQS Mobile Asset Verification tool is used to verify movable assets across all departments
- Water, Sanitation and Water Demand modules run on the IMQS Web platform

BUSINESS IMPACT

- Increased accountability
- Improved decision-making
- Effective resource utilisation
- Proactive maintenance
- Enhanced resilience to crises
- Overtime reduced

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THE SOLUTION.

Rustenburg needed a solution to overcome operations and planning challenges and an easy-to-use system that could bridge communication gaps, support operations through accessible information and in so doing effectively manage revenue.

IMQS's integrated Infrastructure Asset Management (IAM) software aims to consolidate data emanating from different sources into one, easy-to-use, accessible and geographically enabled IAM platform. All stakeholders across the municipal infrastructure spectrum are empowered by access to real-time and historical information.

A GRAP-compliant desktop version of the IMQS Asset Register forms the basis of the holistic solution offered to Rustenburg that facilitates more informed decision-making, oversight and accountability.

All movable assets are captured and verified via the IMQS Mobile Asset Verification tool by work teams in the field. Data is directly captured in the predetermined asset hierarchy, even when there is no internet connection. Due to the intuitive design of the application (which works on an Android tablet), coupled with successful skills transfer, operational staff do not rely on outside help to complete their daily operations. Easy audit tracking is built into all IMQS products to ensure fast and efficient oversight and accountability.

A Work in Progress (WIP) register acts as an inventory for all capital projects in progress. The WIP is in the process of being built. The aim is to effectively improve all capital project management and asset capitalisation, as well as facilitate the easy transfer of asset and asset component information into the growing, spatially enabled Asset Register.

The North West of South Africa is prone to variable rainfall and therefore highly vulnerable to drought. A rapid rise in population amidst huge mining operations places pressure on water resources and infrastructure. Water, sanitation and water demand are therefore critical areas of management for Rustenburg Municipality.

IMQS's Water, Sanitation and Water Demand modules run on the GIS-centric IMQS Web platform. These integrated solutions support the municipality by helping it to overcome prior lack of knowledge on the age, existing life and capacity of water infrastructure assets in its domain and allowing for more informed maintenance and risk management.

THE ACHIEVED BENEFITS.

"Our overtime has been reduced drastically, and the responding time is quicker" (Ole Mosoane, Section Manager: Management Information Services, RLM)

IMQS's software solutions aim to help increase accountability across the entire stakeholder spectrum by making information accessible and processes visible. The goal is to facilitate informed decision-making that enables focused customer service from which the community will benefit greatly. The implementation of an asset management information system has set the foundation for these processes.

At Rustenburg, IMQS has become the central point of contact where operational staff meet before going out into the field. Operations are supported from a back office with modern technology, where IMQS offers all stakeholders a geographic view of their entire infrastructure landscape. Data from various points have been consolidated through IMQS and have been made accessible to all stakeholders.

A great achievement at Rustenburg thus far has been the continuous reduction of overtime from R1,5 million in 2015 to R328,000 in 2016.

This was made possible by tracking work done and improving on the reporting of maintenance projects. When an incident is logged an operational staff member's name will be added to the incident, and a time stamp is automatically created. The control room will know exactly if the staff member deliberately delays the call out to claim extra overtime. Should this occur regularly disciplinary steps can be followed against the staff. In this manner accountability is increased. Managers can gain a better oversight and save on the overtime.

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