Reference Story
Local Government | Municipality
CoCT Waste Water

Client Background

The municipality supplies up to 880 000 m³ of water to customers daily.

This is a large department and has a staff complement of 4 000, an operating budget of R6.6 billion and a capital budget of R1.5 billion.

Engineering is the maintenance division of the Water Department, tasked to ensure that the facilities and equipment used in water purification, distribution and treatment are in working condition.

Engineering is responsible for servicing the water infrastructure in the municipality, valued at R58 billion.

The infrastructure includes over 600 pump stations, 12 potable water and 22 wastewater treatment works.

Key Challenges

- SAP® PM is the ERP system for the Water Department of a large municipality in Southern Africa. Since its inception in the early 2000s, the demand for water has increased due to property development and the associated population growth. A nationwide water shortage adds to the pressure on the Water Department to be more efficient with its resources.
- The current Asset Care Plans (ACPs) were developed with the inception of the ERP system and were not kept up to date with newly installed equipment. A recent study highlighted the reactive maintenance on some plants and stations. The Process Control Systems (PCS) section has the most plants and stations that do not have any form of tactical maintenance in place.

Value Add

- Plants and stations with no PCS tactical maintenance plans have been identified.
- ACPs are being identified and implemented in accordance with the asset management strategy.
- Outdated maintenance plans will be identified and improved to align with the asset management strategy.

> *The municipality now has a clear understanding and holistic view of the maintenance plans associated with their assets. Updates to current asset care plans and new ones can be developed and implemented to systematically improve uptime and asset performance.*

Pragma Intervention

- There are more than 650 plants and stations situated in and around the municipality that help with the purification, distribution and treatment of water.
- There are four PCS teams, each specialising in their own area. The four teams conducted Asset Identification and Verification (AIV) projects on the plants to determine which plants make use of which equipment. The information gathered with the AIV project was verified against the ERP system to identify the gaps in tactical maintenance.
- The gaps were further investigated before it was established that three of the four specialisation areas required additional maintenance plans at Telemetry, 160 plants or stations; PLC, 7 plants or stations; and SCADA, 15 plants or stations.
- Future plans include the consolidation of all the process control maintenance plans into one. This will allow one person to perform all relevant maintenance in one visit. Apart from the decrease in travel time and cost, this will also allow one person to check if all systems are working together as a unit as they should be, instead of each area acting in isolation.

Tools and Technology

- SAP and SAP BI
- Asset Management Improvement Planning
- Asset Management Foundations
- Focused Improvement
- Asset Identification and Verification
- Asset Register Administration
- Work Planning and Control Business Process
- Asset Care Plan development
- AC Pack 3.1
- MS Excel

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