

IMQS: PROJECT CONTROL SYSTEM

Management Solution for Capital and Operational Projects



PROJECT CONTROL SYSTEM MODULE

The IMQS Project Control System (PCS) is a web-based software application that enables the easy and efficient tracking and management of capital and operational projects in line with Infrastructure Asset Management (IAM) requirements.

PCS enables users to centralise all project related data on one easy-to-use and spatially enabled platform. The end result means decreased capital and operational costs, while at the same time enabling higher operational performance over the long-term.

TECHNOLOGY

IMQS is a web-based enterprise application software that enables effective infrastructure lifecycle asset management. The software consists of collection of web-services and components that are supported by specialised tools and frameworks. The core platform provides an extensive set of generic functionalities that together make the implementation infrastructure management products possible. Due to its high level of configurability and ability to combine componentised sets of functionality, IMQS offers a highly flexible framework able to produce tailored made solutions. Users primarily interact with the IMQS service through a browser-based front-end, which is additionally supported by tablet-based apps.

Interfaces for the enterprise software follow REST principles, both internally and externally. All constituent services have a published API as their primary interface. These interfaces are the foundation on which the browser-based front-end is built. Standard protocols, like HTTP with JSON payloads, however, make it effortless for third parties to consume them for integration purposes. Authentication and authorization services enable security on the interface level.

IMQS's Version 8 stack runs on enterprise operating systems, including Linux (with Docker containerisation) and Microsoft

WHO WE ARE

IMQS builds specialised, GIS-centric software for the Infrastructure Asset Management market. This means that we are committed to conceptualising and constructing solutions for real-world problems that impact the lives of people, at all levels and from all communities, on a daily basis. It is our business to think of innovative ways to enhance the value of your organisation's physical assets, while you focus on the work that matters – delivering key services to your valued customers. IMQS's software is currently enabling effective decision-making, service delivery and customer satisfaction in over 100 government and private organisations in South Africa and internationally.

TECH BENEFITS

- Cloud-based
- Seamless deployment
- Fast and Secure
- Customizable
- User-friendly
- Mobile

IMQS IN NUMBERS

- **143 534 km** combined length of water pipes
- **3 892 086** lines of code used to program our software and counting

Windows Server. Database technologies include Microsoft SQL Server and PostgreSQL, which are both tried and tested in high-demand environments.

A dedicated DevOps team manages the challenging and unique environment of on-site deployments from a central point. IMQS DevOps makes use of in-house developed, fit-for-purpose tools to manage client-specific data and configuration. The IMQS operations team attends to monitoring server health and service performance by using state-of-the-art monitoring software. This enables fast detection and pro-active response to developing issues in the production environment.

KEY FEATURES

PLAN



PCS allows users to create a project from scratch via dynamic input forms that are configurable by a user's specific requirements. It enables centralised portfolio and project management planning according to milestones, phases, activities, physical and financial progress, as well as timelines. Users can register a programme, link it to relevant projects and assign multiple strategic objectives. Key project information such as vendor lists, organisational structures and annual/approved adjustment budgets can easily be imported and centralized.

MONITOR



PCS enables the coordinated monitoring of time and money invested in a project and across the spectrum of multiple linked projects. Monitoring projects on an on-going basis through a centralised platform enables users to compare physical and financial progress. The consolidation of information over time allows the project manager to more effectively detect and react to challenges before they become critical.

VIEW



PCS is a spatially enabled platform that displays project management information on an intuitive user interface that easily integrates with popular Enterprise Software Applications, e.g SAP. All relevant projects are mapped out according to their GPS coordinates, allowing stakeholders to gain a birds eye view of planned and active projects, as well as generating spatially relevant reports.

REPORT



PCS allows users to generate and access project reports that facilitate planning, tracking and transparency. Reports are web-based and configurable. Levels of reporting stretch from funding source, affected wards/areas, project programme, department and overall metro. The user has the ability to access general reporting dashboards or customise views according to target audience. This facilitates effective and transparent internal and external communication and allows for better interdepartmental cooperation, customer communication and stakeholder presentation.

TRANSPARENCY



Changes to project information are easy to make, either manually or via an import process. Audit tracking ensures transparent project control in order to monitor the evolution of the project and stamp out any challenges or signs of corruption

BUDGET MANAGEMENT



Approved user can create, edit, or delete budgets or budget line items. And compare on-going projects in order to better plan budget allocation and prioritization. The PCS enables the optimization of funds, allows for future budgeting and ensures the efficient utilization of human resources.

KEY FEATURES (continued)

CAPITALISATION



In the broader IAM process, PCS enables the capitalisation of assets in order for an organisation to build a comprehensive asset register.

PROJECT	PROJECT MANAGER	DEPARTMENT	START DATE	END DATE	PHYSICAL %	FINANCIAL %
Test DV <i>REQUESTED ACTIVATION</i>		Inspectional Services Inspectional Services Section			No Planning	No Plan
20902016-03-16_01-05-40 IMQIS <i>CAPITALISATION</i>	Monique October	Building & Housing Public Records Public Records Section	2016-03-16	2017-07-13	No Planning	No Plan
PR-1 Bellville Treated Effluent <i>ACTIVE</i>	Shaun Struwig	Water & Sanitation Water & Sanitation Division Infrastructure Provision Section	2013-06-01	2015-12-31	79% 68% 78% 65%	
PR-2 Housing subsidies and support services <i>ACTIVE</i>	Shaun Struwig	Building & Housing Public Records Public Records Section	2011-05-01	2014-09-25	33% 33%	No Meas. Planning
golden.maduana@gmail.co Gold en Maduana <i>PLANNING</i>	Philippus Rudolph Botha	Building & Housing Public Records Public Records Section	2017-10-01	2017-10-13	No Planning	No Plan
0712885801 Bongani mabasco <i>PLANNING</i>	Philippus Rudolph Botha	Building & Housing Public Records Public Records Section	2017-10-01	2017-10-11	No Planning	No Plan
0732296460 Moeketsi lebesa <i>PLANNING</i>	Steven Arumugam	Water & Sanitation Water & Sanitation Division Infrastructure Provision Section	2017-10-05	2017-10-13	No Planning	No Plan
0824674959 Rachelle sons <i>PLANNING</i>	Philippus Rudolph Botha	Water & Sanitation Water & Sanitation Division Infrastructure Provision Section	2017-10-06	2017-10-13	No Planning	No Plan
123/123/123 PCS training testers <i>PLANNING</i>	Ina Geldenhuis	Roads Management Systems and Planning Management Systems and Planning Section	2016-07-01	2017-06-30	No Planning	No Plan
123456	Ina Geldenhuis	Water & Sanitation	2018-05-01	2021-05-01		

General

Project Number: PR-1
Project Name: Bellville Treated Effluent
Start Date: 2013-06-01
End Date: 2015-12-31
Department: Water & Sanitation
Division: Water & Sanitation Division
Section: Infrastructure Provision Section

Budget

FY Budget: R 0.00
Total Budget: R 6 002 000.00

Resources

Contractors: Magasana Construction cc, Worleyparsons RSA Pty Ltd, EVN Africa (PTY) LTD
Consultants: Airgro (Pty) Ltd, Electron Technologies (pty)td
Project Manager: Shaun Struwig

S-curve

KPI Progress

Image 1: Project Overview Screen

CONCLUSION

The IMQS Project Control System has been developed in the context of infrastructure asset management (IAM) to facilitate user compliance with IAM related legislation and standards (mSCOA, GRAP-17, ISO 5000). The module provides its user with complete control over project budgets and costs, while increasing the real-time visibility of key performance indicators and decreasing risk. The module offers a valuable geographic display of active and planned projects that informs decision-making, automates business processes and enforces disciplined best practices. PCS provides best-of-breed 'construction project' functionality with asset capitalization directly built into the project management process. The module functions as a stand-alone product, but can also be incorporated in IMQS's suite of IAM solutions for a more comprehensive holistic service.

CONTACT

Erick Underhill
HEAD OF MARKETING
E: erick.underhill@imqs.co.za

Masheke Mukwamataba
CHIEF INNOVATION OFFICER
E: masheke@imqs.co.za