

The logo for IMQS, consisting of the letters 'i', 'M', 'Q', and 'S' in a stylized, outlined font. The 'i' is lowercase and has a vertical bar to its left. The 'M', 'Q', and 'S' are uppercase and have a similar vertical bar to their left. The letters are white and set against a dark background.

# IMQS

IMQS SOLUTIONS

**ROAD MANAGEMENT**



## **OVERVIEW**

Due to the sheer amount of data that needs to be captured and maintained, managing pavements and maintain roads can be a very complex task.

IMQS provides a solution that supports effective road maintenance and pavement management through a web based spatially enabled application which integrates with our Asset Management and Asset Registering suite of products.

## **PROBLEM(S) / PAIN POINTS**

An integral aspect of the various problems relating to road maintenance and pavement management is the critical need for ensuring that data is captured, kept current, and is accessible in relevant ways. Specific problems around road maintenance and pavement management include:

- Inability to capture and analyse spatial / dimensional data
- Inadequate information about the status of road and pavement related projects
- Analytical and reporting capabilities do not allow for proper planning and responsible decisions to be made
- Projects cannot be prioritised in the right way due to inaccuracy of data
- Budgets are not being allocated appropriately to projects.
- Compliance and safety data is not readily available which poses a risk to citizens.
- Projects / jobs take too long or are not completed as they should be
- Quality of work is not properly checked

## **SOLUTION(S)**

Consistent effectiveness and efficiency of projects and processes around road & pavement management is impossible if the right information is not delivered to the right people at the right time. IMQS's Road Maintenance and Pavement Management solutions provide a clearly defined set of procedures for collecting and analysing relevant data so that maintenance and management needs for entire road networks can be identified, prioritised and budgeted for.

The system allows a number of dynamic capabilities including but not limited to:

- Actively monitors the condition of road networks.
- Define entire road networks geospatially
- Display road networks through spatial map viewers.
- Pro-active maintenance prioritization
- Prepare of budgets and work programmes
- Allow decision makers to provide the optimum solutions for the funds available.
- Analysis and modelling of the condition of road segments
- Report the conclusions in a variety of formats for different levels of management. These formats include the presentation of results by way of reports, graphs and maps. T
- Create a foundation for roads infrastructure asset inventory in infrastructure asset registers.
- Allocate available funds to the right projects at the right time
- Restrict future reconstruction of roads to a minimum.
- Change management processes from a usually subjective method to a formalised scientific method
- Contribute to ensuring that road networks are maintained at an acceptable standard in an optimised manner.

## **PRIMARY BENEFITS**

The system allows a number of dynamic capabilities including but not limited to:

- Contributes to monitoring the condition of road networks.
- Enables entire road networks to be defined geospatially

- Display road networks through spatial map viewers.
- Pro-active maintenance prioritization
- Prepare of budgets and work programmes
- Allow decision makers to provide the optimum solutions for the funds available.
- Analysis and modelling of the condition of road segments
- Report the conclusions in a variety of formats for different levels of management. These formats include the presentation of results by way of reports, graphs and maps. T
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## **TECHNICAL / FUNCTIONAL / FEATURE INFORMATION**

The high level technical & functional features include:

- Reporting on the road network inventory condition
- Roadsides can be classified according to different themes e.g. roadside, surface, kerbing, storm water inlet, route etc.
- Display data on roadside surface types. Some of the main surface types of roadsides include: cement or clay stones, concrete, blocks, lawn, garden, etc.
- Surface Type graphs show the percentage of walkway for each surface type.
- Display data on kerbing types. The Kerbing Types graph indicates the percentage of roadside belonging to the different types of kerbing e.g. vertical concrete/stone, entrances, mountable, etc.
- Roadsides can be classified according to the type of storm water inlet.
- Display data on a geographical background.
- Roadside inventory data can be displayed when selecting an asset data on maps (viewed through the application GUI)
- View walkway requirement list with the required lengths indicated

- View maps with specific themes addressing walkway condition rating, kerbing condition rating, unpaved walkway condition rating, storm water inlet condition rating and aesthetic condition rating.
- Poor condition graphs can be created by suburb.
- The detailed properties form provides the data as collected during the assessment.
- View data about roadside, kerbing, storm water inlet, weeding, pruning and aesthetics by priority.
- The roadside priority report gives a summary of the walkways, unpaved areas, cycle lanes and parking areas, and barriers that need attention.
- Other reports are available that provide prioritisation for each problem area.

## **CLIENT REFERENCES**

- City of Tshwane
- City of Cape Town
- Ekurhuleni Metropolitan Municipality
- Bitou Municipality