

Integrated information tools for strategic asset management

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Abstract

Sustainable management of water infrastructures relies on a deep knowledge of the assets. Water utilities are focusing their attention in information systems and systems integration. However, even in sophisticated utilities, the essential information is not always available or may fall short in quality or quantity.

The development of an asset management strategy has been vital at AGS improving information acquisition and analysis as well as developing a new approach to our data. We developed a business-support tool that delivers immediate access to relevant information of any information system, providing a clear approach to data, access to detailed and accurate information, and valuable key performance indicators. This highly dynamic information layer does not require data duplication or a new data structure, capturing data in any format available, being easily adapted to new systems or utilities needs.

This paper introduces AGS approach: business adapted and supported on meaningful data, promoting a better service and building resourceful utilities. This way, working on standard methodologies and providing a sustainable and clear approach to progressive asset management policies, we were able to develop a smart-tool that can be applied in any utility providing the answers with the right information.

Keywords: Information management, data integration, data analysis, business intelligence, infrastructure asset management, standardisation.

INTRODUCTION

AGS is a leading Portuguese water services private operator founded in 1988, with a share capital of 29 million euros. Its activity is developed in Portugal, Brazil and Angola and has a business portfolio of 2'000 million euros. AGS manages 14 water utilities in Portugal (divided in municipal concessions and public-private partnerships), providing water and wastewater services to about 1 million people. Besides utilities management, AGS also acts as a services provider in the management, operation and maintenance segments of water and wastewater infrastructures.

Infrastructure Asset Management (IAM) always played an important role at AGS, due to contract requirements, regulation and the need to optimise service quality, network performance and infrastructure life-time. Even so, methodologies, decision support tools and also strategy were not always clear or provided accurate answers to the organisation needs.

Nowadays, with a more comprehensive and well-devised strategic approach being developed in recent years (Alegre, 2009), the development of an IAM policy in AGS took a giant step with the definition of a strategic plan and the implementation of decision-support tools, improving management and utility performance, recognising an important role to data and information. Integrating these tools and being able to assess the performance of the utilities, based on benchmarking activities, allowed a clear view of the process.

There are two essential drivers promoting a better approach to IAM: i) the AWARE-P project, in an end-user perspective – Advanced Water Assets Rehabilitation in Portugal (www.aware-p.org), coordinated by the National Laboratory of Civil Engineering (LNEC) in Portugal, assisting AGS to establish a clear approach to IAM, from strategic to operational levels – promoting gradual steps to