

Business Case for City of Ames Public Works Department Work Management System

In keeping with this year's focus on municipalities and utilities, we worked with the City of Ames Public Works Department to create a business case for a proposed work management/asset management system to be linked to their GIS.

City of Ames has a mature ESRI-based GIS. In fall 2010 city staff began to develop a work order management system attached to the GIS. This effort led to recognition of the need for a commercial work management product, City Works or a similar product. The goal of this software deployment is to increase benefits and close gaps between departments by combining four databases into one. These include water testing, capacity analysis, and trouble call databases from the Water Department and the permits database from the Inspections Division.

The new system is envisioned as an enterprise system for work order management. Currently information must be manually integrated by patching together multiple databases. The new system will close this gap by handling work orders from the initial phone call to the field to track work orders. Anticipated benefits include: efficiencies in preventive maintenance; increased reliability and customer care through better ability to respond; improved analysis and decision making; and elimination of redundant data collection and maintenance.

The new work management software will be deployed on iPads for field use as well as on office computers. This follows a successful pilot of providing city facilities data from the GIS on an iPad for use by operations staff.

City staff collaborating in collection of cost and benefits metrics include: Ben McConville, GIS Coordinator; Corey Mellies, Public Works Operations Manager; Dale Weber, Operations Supervisor; and Tom Weese, Public Works.

Ten-year forward looking analysis of a project to acquire work management/asset management software for deployment on office computers and additional iPads for field use shows \$196,000 Net Present Value, 4.63% annualized Return on Investment, and a four year payback period. Costs include \$114,000 in startup hardware and software costs plus \$44K in staff labor devoted to startup. Total costs over ten years are \$423,000.

Benefits over ten years are projected at \$618,000. Major benefits categories include: avoided costs of emergency wages for water main breaks and sanitary sewer backups; avoided equipment and materials costs for water main breaks; saved time by eliminating redundant record keeping and reporting; and saved time in redundant data gathering.

We are confident this is a conservative depiction of the business case, as costs are quite well developed but benefits are minimally sketched in at this stage of the project. Additional anticipated benefits include: improved pavement performance through joint trenching coordination within city departments; better resolution of punch lists from contracted work; improved communication with Iowa One Call; reduced liability to the city regarding maintenance issues; and better coordination and use of inspection data.