

# Trouble justifying automation investments? Talk to operations

By Graham Nasby, P.E., PMP



I currently have the privilege of working in an industry that is vital to the operation of every modern city, town, and village: the municipal water and wastewater sector. It is a sector that is increasingly becoming dependent on advanced instrumentation, automation, supervisory control and data acquisition (SCADA), and distributed control systems (DCSs) to operate its many plants, distribution, and collection networks. It can, however, be a challenging environment to work in.

Simply put, most municipal water and wastewater plants, and their associated distribution/collection infrastructure, are not traditional profit-motivated operations. Instead they are usually operated on a "cost-recovery model," where it is ratepayers (direct users) who fund the construction, operation, and maintenance of the facilities. Revenue typically comes from directly billing customers using a combination of usage-based and connection charges. As a result, for most capital upgrades, utilities must often wait until they accumulate enough savings to make the investments, or if they are lucky, rely on government grants or bonds when they become available. The result is that money is tight. Justifying investments, especially automation investments, can be challenging.

What is an automation professional to do? A lot of what we do is hard to "see." Civil works have always been an easy sell: New buildings, piping, pumps, and tanks can be easily grasped and understood by the ratepayer. However, spending half-a-million dollars or more on a plant's computerized control system is a bit harder for the average person to visualize. In this environment, ratepayers will tend to downplay what they do not understand. Consequently, local utilities and politicians, ever mindful of their images, will often see automation as a cost to minimize rather than a technology to invest in.

However, automation is one area where the municipal water and wastewater sector desperately needs to invest. The sector is facing growing pressures to "do more with less," as evidenced by recent reports released by the Water Environment Federation and the American Water Works Association. This need includes achieving better process visibility, enabling data analytics by collecting process data, making better use of staff resources, better targeting maintenance activities, optimizing asset usage, and reducing electricity usage. These are all areas where automation investments can empower significant gains.

So how can we convince utilities that they need to invest in automation? Talk to the folks in the operations and maintenance departments in the plants. They get most of the benefits of automation, so they are the ones best equipped to champion investments in automation. It is not capital projects people—they build plants, they do not operate them.

Keep in mind plant operations people will often know more about the processes they manage than you do. Respect this knowledge, and you will be surprised with how open they are to new ideas. One of the most common things I hear when I talk with operations is, "I didn't know that automation could do that—having feature X would save me a lot of time and enable me to do Y." You can also discover win-win opportunities when they say things like, "I wish the DCS/SCADA system could do this, as it would make my job easier," and you know what they are asking for is doable.

So how do you reach out to the operations and maintenance groups of your clients? Provide friendly technical information, attend conferences, and talk with them about the things that matter to them. Forge relationships based on trust, and do not forget to regularly check in with them, and not just when you are doing a paid project with them.

Once this trust is established, there is an important role for the automation professional when it comes to helping operations identify opportunities and then giving them the tools to make those opportunities a reality. That is what the effective application of automation technology is all about.

## ABOUT THE AUTHOR

**Graham Nasby, P.E., PMP**, ([graham.nasby@eramosa.com](mailto:graham.nasby@eramosa.com)) is the general symposium chair of the 2013 ISA Water/Wastewater and Automatic Controls Symposium. Nasby is a senior member of ISA and a voting member of the ISA18 alarm management standards committee. He works as a senior instrumentation and control engineer with Eramosa Engineering Inc.

## RESOURCES

"The Water Resources Utility of the Future: A Blueprint for Action," NACWA, WERF and WEF, 2013.

Maxwell, S. "The New Normal: Trends to Watch," *Trends in Water & Wastewater*, Journal of the AWWA, September 2011, 102–103.