

## Don't Forget the Fundamentals

I recently read an article from a well-regarded industry veteran who was excited about all the new technologies available to our industry. Everything from big data, IoT to AI and Machine Learning. I can't disagree with his enthusiasm as it has been a long-time coming for the utilities industry. And the potential is huge for, at the least, operational gains across all organizations.

But, as much as we should get excited about the advent of these technologies, it struck me that we shouldn't lose sight of the need to focus on – and improve – areas that we're already struggling with. Don't get me wrong, digitizing our industry is critical and IoT and others can help us get there but before we jump on that bandwagon how about we focus on something a little more fundamental? And that is, dragging our CIP planning and execution process into the 21<sup>st</sup> Century.

In conjunction with a robust, flexible and defensible CIP plan these new technologies can feed us the valuable information we need to make better and more timely decisions. It rapidly becomes a virtuous circle of information.

The key though is to have all these technologies work together and that means they have to be on an equal footing. Specifically, working with the latest IoT solutions and AI applications is hindered – or rendered completely useless – if you're managing your capital planning process on static or untimely data via spreadsheets. Although the abacus (circa. 4700 BCE) is still in use, generally technology developed in the 1980s doesn't mesh well with that of the 2000s.

Moving beyond spreadsheets, and certainly paper, enables companies, for example, to quickly combine project data from disconnected enterprise systems. So no longer does finance have to guess at the impact of a decision on a specific project or program. An apt analogy is the Rubik's cube. Working on 1 side of the cube to make all the colors red, isn't too hard. But, what about the random state of the other 5 sides? Imagine if red meant finance, blue was project management, green was supply chain, etc. How would those other colors, or departments, possibly manage things? Of course, they can always work on their respective sides of the cube, but the results would be the same.

So when all our "colors" are aligned we're able to reduce portfolio costs, minimize investment risks and speed project execution. And that alignment is achieved through applications that enable a collaborative CIP process underpinned by accurate planning, forecasting, reporting, and what-if analysis.

Broadly speaking, I see three areas where this enhanced CIP process has the most impact. We can look at these 3 through the lenses of "Why you need it", "What it helps you do" and "How it gets done".

	<b>Adjust</b>	<b>Optimize</b>	<b>Empower</b>
Why	Lack visibility into unplanned and unforeseen project risks and changes	Inefficient and sub-optimal allocation of capital and resources	Slow, inaccurate and doubtful decision-making
What	Rapidly address the impact of variances and changing constraints	Objectively develop and optimize enhanced execution strategies	Clearly communicate defensible and bold plans to key stakeholders
How	Easily combine data from existing, often siloed, enterprise systems and disjointed, manually managed, spreadsheets	Confidently leverage accurate data using our proprietary modeling capabilities for what-if analysis, variance modeling and scenario planning	Rapidly create agile, forward-looking reports, dynamic dashboards and credible project & portfolio plans

As an example, one of our client’s was facing a similar situation and committed to improving their capital planning process.

Responsible for delivering clean, safe, reliable and affordable water and wastewater services to 2.7 million people around the clock, this investor-owned utility (IOU) invests approximately \$350M in their capital assets portfolio with nearly 600 projects annually.

Their annual process for 5-year business planning required two dedicated, experienced analysts and more than a dozen operations/project managers and took 5 months. Using a highly manual process that required extensive institutional knowledge, the analysts extracted large quantities of relevant data from their corporate systems and merged them into a complex spreadsheet as a starting point for their new 5-year plan.

This was not a sustainable process. We helped the IOU rapidly automate and accurately manage their planning process. The annual capital planning process was reduced by 2 months – a 40% decrease in planning time. And there was a significant increase in data confidence and collaboration between the key stakeholders.

We’re at an exciting time in the industry and need to embrace the newest technologies available. However, pausing and reflecting upon areas of improvement for our existing processes will only make the adoption of that new technology more valuable and useful as we plan, execute and manage capital projects.