Advanced Metering Infrastructure (AMI) for Water

At Jacobs, we take pride in supporting our clients throughout their smart metering journey. We work with utilities of all sizes, from 5,000 customer regional-utilities to national providers with well over 1 million accounts.

We partner with cities and water companies to help them avoid and mitigate unnecessary risk, and serve at their side as an owner's agent to provide technical guidance throughout the process.

Because of our global experience, we are able to advise our clients on how AMI systems are evolving and maturing across global regions. Given the long life-cycle of AMI technology, our keen insight is critical to helping our clients make well informed and sustainable decisions.

As an engineering consulting firm, we are also able to advise our clients on the use-case(s) for this technology and ensure that target benefits are realized after implementation is complete. We want to be a long-term partner.

Keys to Success

STAKEHOLDER ENGAGEMENT. Our phased approach to AMR/AMI projects provides our clients with the opportunity to engage key stakeholders so they can participate and learn throughout the process. One of the keys to successful implementation is ensuring that both internal and external stakeholders have the necessary awareness of – and see the benefit from – this technology. These are once-in-a-career projects, and it is critical that leaders and customers alike have their questions and concerns addressed.

PROVEN METHODOLOGY. Our approach to each phase of the project is rooted in decision analysis techniques to help provide confidence in the decision making process. This is accomplished by providing expert technical advice, proven and defensible methodologies and tools, and sensitivity analysis to demonstrate the range of potential outcomes.

OUTCOME BASED TOOLS. Our business case model is probabilistic and provides a confidence range of results rather than just one expected value. Our procurement document has been refined over dozens of projects and is tailored to illicit true technical differences between technologies. And our evaluation methodology is structured to ensure differentiation in scores to minimize potential for unclear results or protests. We begin with the end in mind to clearly define target benefits and achieve success.

WATER SPECIFIC EXPERIENCE.

<table>
<thead>
<tr>
<th>Start</th>
<th>Client</th>
<th>Meters</th>
<th>Delivery Role</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>South East Water (UK)</td>
<td>900,000</td>
<td>Strategy</td>
<td>Ongoing</td>
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<td>2008</td>
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<td>Feasibility/Procurement/Implement</td>
<td>2016</td>
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<td>2018</td>
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<td>Toowoomba (AU)</td>
<td>60,000</td>
<td>Feasibility</td>
<td>Ongoing</td>
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</table>

Smart Metering Roadmap

- Existing inventory
- Business objectives
- IT systems
- Communications strategy
- Budgetary cost estimate
- Target benefits
- Release strategy
- Performance requirements
- Levels of service
- Excessive failures
- Evaluation criteria
- Schedule
- Full-life cost
- Interview
- Demonstration
- Validation
- Selection
- Negotiation
- Award
- Schedule
- Communication
- Workflow
- Interfaces
- Rollout
- Validation
- Acceptance
- Data analytics
- Diurnal curves
- Hydraulic modeling
- Leakage and DMAs
- Customer monitoring
- Meter optimization
- Capital planning