



# Operational Technology

Business and Technology Consulting for SCADA, ADMS, OMS, Gas Control, DERMS, EMS, Distribution Automation

The operational needs of the distribution utility are changing. Customer and regulatory demands for improved system robustness and resiliency along with the increasing penetration of Distributed Energy Resources (DERs) and Electric Vehicles (EVs) are a few of the key drivers of these changes.

At the same time, automation, monitoring and control of the distribution infrastructure of electric and gas utilities has become a transformational initiative. Black & Veatch assists our clients with the transformation

of their Operational Technologies (OT) with a value-driven approach, providing the expertise, resources, and rigor for successful outcomes for their OT, IT, and business stakeholders.

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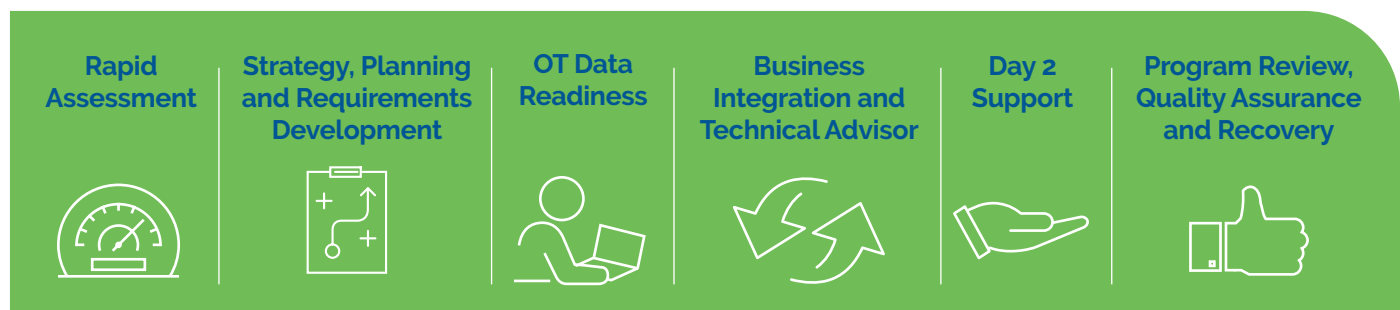
# The Black & Veatch Value

Black & Veatch has the vision, experience, and resources to assist utilities in defining and executing their operational technology initiatives and projects. Our deep industry knowledge and technical capabilities combined with our experience in managing transformational projects enable our clients to realize the optimum value from investments in new technologies.

The modern OT landscape is more than just SCADA. Today, there is a broad set of data intensive applications generating, collecting, manipulating, and presenting information to the utility organization. When properly implemented and integrated, these applications improve operational situational awareness, decisions, and safety. The typical OT applications and systems that fall into this mix include Advanced Distribution Management System (ADMS), Distributed Energy Resources Management System (DERMS), Distribution Automation (FLISR, VVC/VVO), and Gas Control and Pipeline Management Applications.

Each of these have unique needs, challenges, and risks. However, OT transformations have a common set of characteristics to be considered and addressed throughout the solution lifecycle. We provide value to clients at any or all points in the lifecycle of OT programs.

## Our Capabilities



## Services

**Rapid Assessment** - Fast, focused insight into your present OT situation

When business operating assumptions need confirmation or exclusion, our Rapid Assessment provides focused insight into your present OT situation:

- A short-term engagement to assess the current capabilities of your OT landscape across one to two focus areas: processes, applications, capabilities, IT/OT/IoT infrastructure, data and Systems integration.
- Identifies capability gaps and maturity levels using the Black & Veatch Utility Reference Framework or other industry-accepted frameworks.

### Strategy, Roadmap and Requirements Development

- Provide a clear line of sight to achieve your OT objectives

- Aligning OT objectives with overall corporate strategy and goals identifies the required capabilities and enabling technology. Both are required at different maturities at different points in time. Achieving these strategic objectives requires planning across multiple initiatives to enhance existing, and to build new, capabilities.

**OT Data Readiness** - Prepare your data and organization to enable your enterprise OT investments

- Data is now a strategic asset and requires the appropriate attention and governance. To prepare your data and organization to enable your OT investments, we assist in data readiness.

**Business Integration and Technical Advisor** – Drive transparency and accountability in OT transformations plus provide technical alignment and advocacy

- OT transformation programs have multiple roles with differing responsibilities. In addition to the client, those roles include, vendors, Systems Integrators (SI) and Business Integrators (BI).
- A separation of duties between vendor, systems integrator, and business integrator can drive greater transparency and accountability in OT transformations. To assist our clients with this, we provide Business Integration and Technical Advisory solutions.

**Day-2 Support** – Improve effectiveness at start-up and accelerate benefit realization

- Post go-live OT operations are often chaotic and suffer degraded performance and usability as users transition to new procedures and systems. New applications often require “tuning” to enable the intended functionality and these efforts can be accelerated with dedicated personnel. Benefits realization requires thoughtful monitoring and measurement to identify areas needing refinement to achieve success. Our Day 2 Support can provide supplemental personnel with the experience needed to bridge performance gaps from a few weeks to longer-term.

**Program Review, Quality Assurance and Recovery** - Avoid or correct program issues and risks for in-process or completed OT transformations

- The complexities of OT transformations sometimes turn risks into issues. Sometimes, an objective and experienced third party can recognize the root cause of issues. And sometimes these issues need an objective yet experienced third party to provide a resolution. This experience, across multiple transformations, vendors, technologies, and participants, enables us to correct and keep OT transformations on-track through our quality assurance and recovery services.

**We fit the technology with real business needs, not the other way around.**

## Client Case Study

### Major Public Utility



This Utility was facing several OT challenges including:

- End-of-life of their IT infrastructure (operating system, databases) serving the OT/SCADA applications
- Alignment with corporate IT strategy (consolidation of applications, reduction of O&M)
- Emerging OT needs such as enhanced situational awareness

Black & Veatch performed a Rapid Assessment of their technology landscape and capabilities and developed a Strategy to mitigate their operational needs. The future state capabilities and solution architecture to support those capabilities were developed and used as key components of the requirement development phase.

To reduce the end-of-life impact on the operational systems and meet client time constraints, we leveraged an accelerated engagement approach and provided a dedicated team tailored to our client's needs, providing an intense focus on our client's goals and resulting in a highly efficient and productive engagement.

# Building a World of Difference.®

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