



# Smart Utility<sup>®</sup> Planning

Design and deploy an integrated network platform through a customized technical, financial, and strategic approach.

## A Plan to Overcome Challenges

Electric utilities face numerous operational challenges like aging infrastructure, future bandwidth and growth considerations, operating multiple networks and platforms, and understanding IT/OT interactions and convergence. Black & Veatch works alongside our clients to strategically and holistically design a modern grid that uses integrated two-way communications to become dynamic, interactive and effective. Equally important, our process creates synergy between existing networks, current financial and marketplace conditions, business requirements, and regulatory issues.

## Distinct Advantages

Utilities vary in geography, topography, and organizationally, which is why we customize our Smart Utility<sup>®</sup> Planning process to provide each utility with specific insight. Black & Veatch follows a structured process built on industry best practices. We work directly with the utility to systematically plan, assess, architect, design, install and optimize networks. Our planning process offers several distinct advantages:

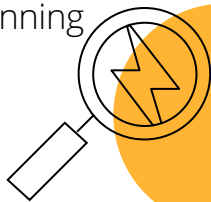
- Maximum network performance with minimal impacts to related areas
- Controlled, budgeted and planned expenses
- Customized implementation blueprint
- Specific, accurate equipment and technology recommendations

# A Proven Smart Utility® Planning & Execution Process

The Black & Veatch Smart Utility® Planning process helps utilities make informed decisions for enhanced efficiency and effectiveness. Each phase uses industry best practices to provide sound technology options, financial justifications, implementation timelines, cost-reduction recommendations and alignment of business and network objectives.

## Phase 1

Roadmap  
Planning



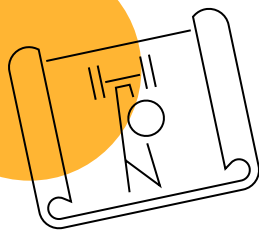
- 1. Current state:** A clear and detailed review of existing IT/OT networks across the enterprise.
- 2. Future state:** Alignment of business and technical drivers with industry best practices to define the plan's requirements.
- 3. Solutions analysis:** High-level architectural and conceptual solutions to resolve identified gaps.
- 4. Roadmap:** Strategic implementation options

### Deliverables:

- Technology solutions
- Financial justifications
- Technical justifications
- Implementation guidelines
- Conceptual designs
- Rough order of magnitude (ROM) cost estimates

## Phase 2

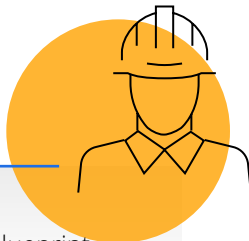
Detailed  
Blueprint Plan



- 1. Technology assessment:** Detailed review of the technology in the market.
- 2. Architectural design:** A high-level architectural design of the telecom network and technology recommendations.
- 3. RFI and RFP processes:** Development and management of the RFI and RFP vendor evaluations and short lists.
- 4. Proof of concept testing:** Product testing and final selection.

### Deliverables:

- Specific technology solutions
- Custom long-term strategic plans
- Product selections
- Detailed network designs
- Budgetary cost estimates



## Phase 3

Implementation  
Engineering Plan

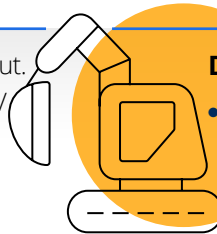
- 1.** Provision of detailed cost projections for each technology area covered under the plan, such as microwave, tower expansion, backhaul access, downline access, LMR and backbone core. Annual costs are defined for engineering, expenses, and installation/construction labor.

### Deliverables:

- Site-specific blueprint implementation plan
- Staffing and organizational plans
- Final cost estimate

## Phase 4

Construction  
and Buildout



- 1.** Implementation/construction buildout.
- 2.** Detailed timeline and coordination/PMO for each site-specific.
- 3.** Buildout with timelines and actions.

### Deliverables:

- Detailed, site-specific blueprint with timelines and actions for buildout, supporting a final operational network