

3Q Flow and Measurement Technical Services

Full-life-cycle consulting that improves measurement management, capital efficiency, and production potential

APPLICATIONS

- Equipment-, asset-, or enterprise-level measurement audits
- Engineering, feasibility and risk mitigation studies
- Functional design specifications
- Selection, configuration, and integration of technologies
- Measurement data validation and gas/liquid analysis verification
- Uncertainty modeling
- Measurement management
- Data management and processing
- Metering documentation
- Regulatory compliance
- Supervision of installation and commissioning
- Investigation of mismeasurement and troubleshooting
- Operations and maintenance support
- Training

BENEFITS

- Capital efficiency through unbiased recommendations and cost analyses
- Operational flexibility with ability to be deployed in house or outsourced to independent experts
- Enhanced measurement data reliability, reduced uncertainty, and increased confidence in measurement equipment
- Compact system designs that deliver higher performance
- Improved HSE footprint with leak detection compliance

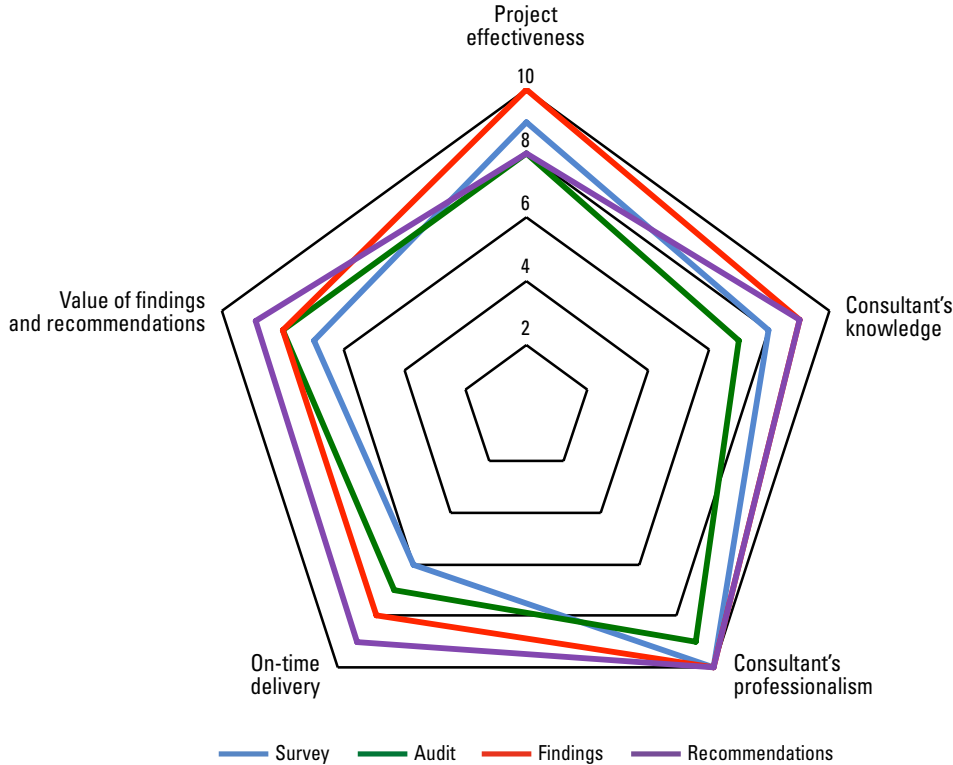
Reliable and accurate hydrocarbon measurement data is vital for oil and gas companies, their partners, regulators, service companies, and contractors impacted by fiscal, custody transfer, and contractual or referential metering.

3Q* flow and measurement technical services offer full-stream consultancy and technical solutions that provide the bandwidth, skills, and independent authority to cost-effectively solve a variety of measurement challenges. With this insight, customers reduce risk and uncertainty while maximizing the value of produced, processed, and transported hydrocarbons.

End-to-end project scope and management

Before work begins, a complimentary scope-of-work discussion takes place to establish that the objectives of the study, audit, assessment, and analysis are clearly defined and understood. Project sponsors are asked to describe success in terms of transactional measurement reliability, behavioral changes and knowledge levels for relevant stakeholders.

All phases of work include a five-factor performance scorecard that enables project sponsors and end users to specify the KPIs that define success from the development to project completion.



Projects are scored with five factors to enable sponsors and end users to establish and agree on KPIs prior to beginning work and to rate 3Q service performance after project or task delivery.

3Q Flow and Measurement Technical Services

FEATURES

- Survey and audit, front-end engineering design (FEED) studies, and recommendations
- Minimized lost and unaccounted-for (LAUF) quantities
- Significant reduction in the total cost of operation
- Subject matter experts (SMEs) with in-depth knowledge of measurement operations, instrumentation, equipment design, installation, supervision, commissioning, maintenance, and calibration
- Unbiased recommendations compliant with industry standards and regulations
- Ability to evolve manual systems to fully automated, real-time monitoring, alarms and optimization
- Visualization and performance dashboards

Independent, transparent answers

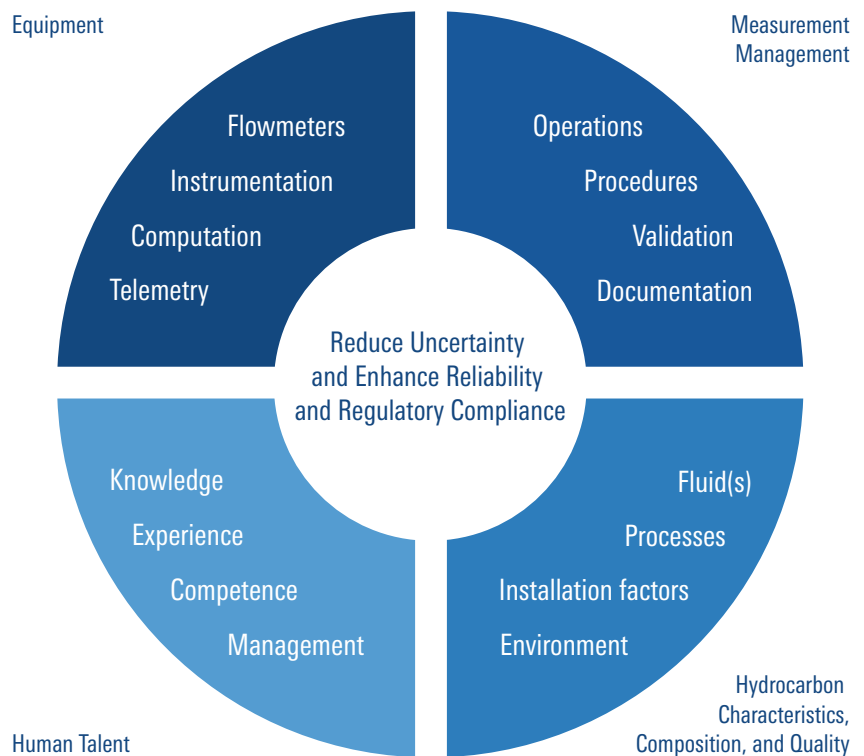
3Q services provide impartial, vendor-neutral specifications and recommendations. The advice, studies, designs, and onsite support delivered by 3Q services are based on cost-benefit models that are transparent and easy to validate.

Team members have a global track record of serving major, independent, and national oil producers, midstream companies, refineries, petrochemical plants, and government agencies.

Field-proven and industry-trusted advisors

Our job is to identify and overcome measurement challenges presented by the instrumentation, environment, and human factors involved in assessing the composition and characteristics of hydrocarbon fluid flow and storage. Our technical experts complement your team with an unmatched depth and breadth of knowledge, expertise, and experience in equipment, measurement management, hydrocarbon characteristics, and personnel.

From determining whether a temperature sensor is out of calibration or an orifice plate is installed backward to surveying a complete facility for data calibration and validation issues, or setting enterprise or national standards for measurement quality, 3Q services enable you to operate effectively and efficiency with minimized measurement uncertainty.



Equipment; measurement management; hydrocarbon characteristics, composition, and quality; and human talent are the four pillars of 3Q flow and measurement technical services expertise that can make a significant difference in maximizing hydrocarbon value.

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