



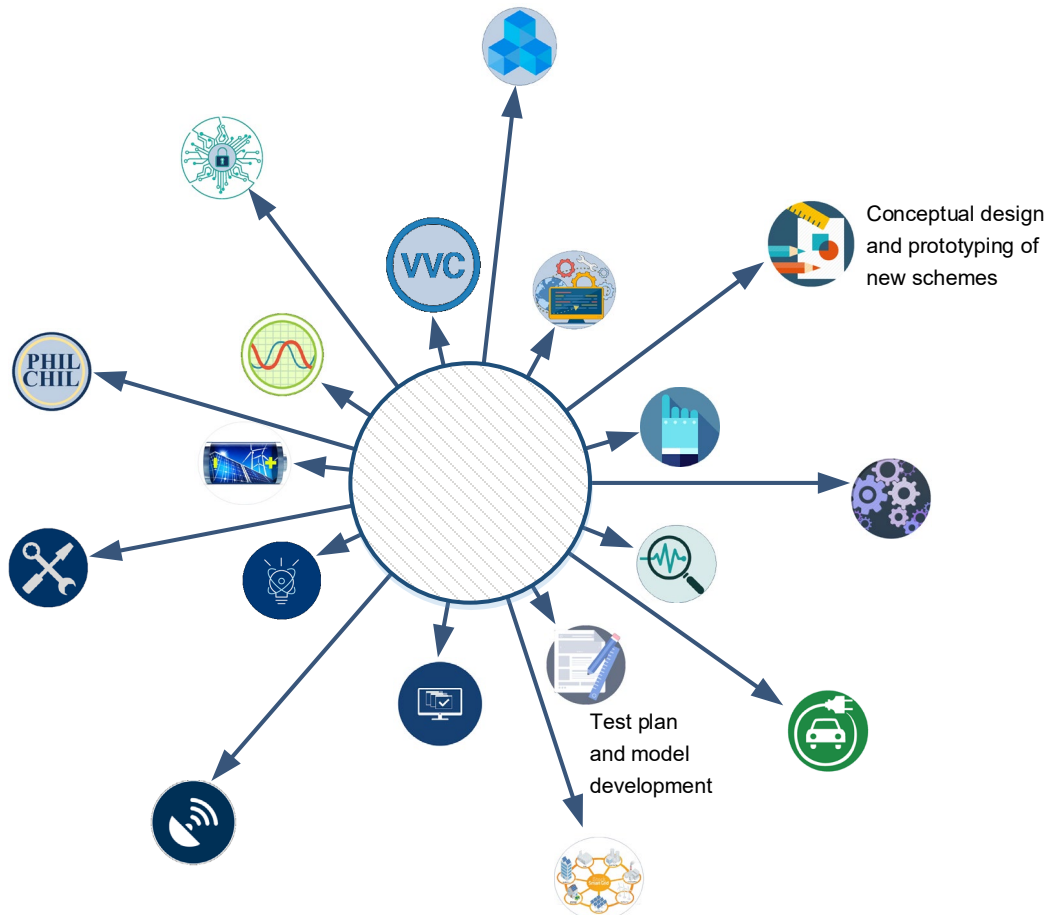
## QT-STIL®

### Quanta Technology's Sustainable Technology Integration Laboratory

Quanta Technology's Sustainable Technology Integration Laboratory (QT-STIL®) services provide innovative testing capabilities, practical evaluation approaches, and comprehensive root-cause analysis solutions to support utilities and electric industry projects in the areas of sustainable energy integration and emerging technology evaluation and deployment. Our practical experience and deep understanding of various power-system applications comes from involvement in all stages of design, technology selection, field deployment, and operational analysis for several state-of-the-art, utility- and government-funded projects.

#### QT-STIL® Laboratory Services

- Microgrid control, protection testing, and evaluation
- Smart inverter controls and communications interoperability
- Power and Control HIL testing (PHIL and CHIL)
- Energy storage system testing
- Evaluation of remote controls, dispatching, and communications infrastructure
- Performance evaluation and operational analysis of EV charging stations and charge controls
- Power quality testing and evaluation





QT-STIL® laboratory services facilitate the finalization of design, development, prototyping, and testing of DER integration in the distribution automation systems, controls, communications, and operations. The aim is to get from the proof-of-concept design stage to proof-of-value performance evaluation in a controlled lab environment.

## Testing Service Areas

### Real-Time Digital Simulation (RTDS) Testing

- Protective relay closed-loop testing
- Controller hardware-in-the-loop (HIL) testing for grid modernization and microgrid applications, such as microgrid master controllers and distributed energy resource management systems (DERMS)
- End-to-end testing of advanced distribution automation applications such as integrated volt-var management systems, fault location, isolation, and service restoration (FLISR), load transfer schemes, and fast load shedding
- Testing of DER-related IEC-61850 solutions for substation and feeder protection and automation
- Synchrophasor, distribution phasor measurement units (D-PMU), and phasor data concentrator (PDC) application analysis for DER and distribution systems
- Power quality (PQ) meter compliance testing

### Energy Storage and Power Electronics Testing

- Our lab is equipped with a 350 kVA grid simulator and load bank for power level testing and performance evaluation
- Power HIL for solar, energy storage, and wind advanced inverter testing, including IEEE 1547 and Rule 21 interconnection standard compliance
- Testing of smart inverter functions and interoperability
- PV power simulation for solar inverter testing

### Electric Vehicle (EV) Charger Testing

- AC level II EV charger and DC fast charger sub-metering tests
- AC level II and DC EV load simulation platforms
- EV demand response and load management proof-of-concept

## Why Quanta Technology?

Quanta Technology experts have helped utilities and developers perform technical studies and real-time testing for proof-of-concept projects and implementation of functional specifications and control requirements in several innovative microgrid and advanced automation applications.

### About Quanta Technology

Quanta Technology is an independent technology, consulting, and testing company providing business and technical expertise, along with advanced methodologies and processes, to utilities and others in the power and energy industries. Our mission is to provide unparalleled value to our clients in every engagement across the value chain by using advanced software and hardware, laboratories, and custom tools for a holistic approach to practical service and the most insightful thought leadership in the industry.

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## Smart Solutions Practical Results

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