



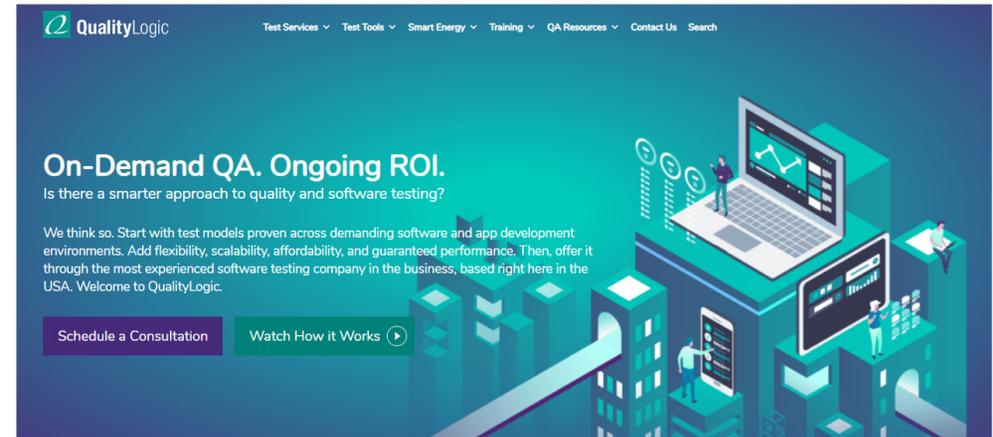
**DR and DER
Interoperability:
Test Tools, Training,
Support and
GridEdge Intelligence**



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For Those Who Don't Know QualityLogic...

- **30-year-old provider of test products and services**
 - Software QA, test planning and testing
 - Software test tools for standardized communications protocols – conformance, interoperability, performance
 - Data quality assurance
 - 100+ staff headquartered in Boise, ID



The image shows a screenshot of the QualityLogic website. At the top, there is a navigation bar with the QualityLogic logo and links for Test Services, Test Tools, Smart Energy, Training, QA Resources, Contact Us, and Search. Below the navigation bar is a large hero section with a dark blue background and an illustration of a city skyline with a laptop and various data icons. The main heading is "On-Demand QA. Ongoing ROI." followed by the sub-heading "Is there a smarter approach to quality and software testing?". The text below describes the company's approach to software testing, emphasizing flexibility, scalability, and performance. At the bottom of the hero section, there are two buttons: "Schedule a Consultation" and "Watch How it Works".



The image shows a screenshot of the QualityLogic website's "Smart Energy" section. The heading is "Smart Energy" with the sub-heading "The Interoperability Advantage: Aligning with Smart Grid Standards". The text below discusses the challenges of grid transformation and the importance of interoperability in modern electrical systems. It mentions that QualityLogic is a leader in creating interoperable eco-systems and provides training, advice, and test tools for implementing these systems. The background features an illustration of a smart home with a wind turbine, a house with a dollar sign, and a hand holding a tablet displaying a temperature of 21°C.

QualityLogic's Role in the Smart Energy Industry



- **DR and DER Interoperability**
 - Standards development, especially test standards
 - Test tools for development and certification
 - Training and technical support for standard implementation
 - Consulting on standards and implementations
- **QualityLogic Works with**
 - OpenADR
 - IEEE 2030.5
 - IEEE 1547/UL 1741
 - IEC 61850
 - And others

Current OpenADR Solutions



- **OpenADR Advanced Training**
 - For engineers and implementers
 - Virtual 2-day [workshop](#)
 - [Online workshop](#)
- **Official OpenADR Test Harness**
 - For both VTNs and VENs
- **Implementation Consulting**
 - Applying the [OpenADR Demand Response Program Guide](#) to specific use cases
 - Development of custom implementation guides
 - Development of sample XML payloads

Introducing GridEdge Intelligence

 OVERVIEW

 PROTOCOLS ▾

 INTEROP ESSENTIALS

 EVENT CALENDAR

 NEWS

 PARTICIPATE



Hello there!

Welcome to GridEdge Intelligence! We're excited to have you join our community and look forward to your involvement.

Our goal is to help you accelerate selection, adoption and implementation of standard communications protocols for grid edge resource integration into grid operations.

Here's What's Inside



DER Protocols

GEI is the source for everything you need to know.



Interop Essentials

How to select the right protocol. Catalog of Standards and Smart Grid Interoperability.



Participate in GEI

Read our blog, provide feedback, become a contributor.



What's Happening

DER protocol events, workgroups, conferences and more.



GEI News

Stay up to date on the latest GEI news.

OpenADR Just Added

A Service



The Protocols That Will Be Covered

- **Note: Rolf Bienert is one of our 12 Advisors**

The screenshot shows a website interface with a navigation menu at the top and a grid of protocol cards below. The navigation menu includes: OVERVIEW, PROTOCOLS (with a dropdown arrow), INTEROP ESSENTIALS, EVENT CALENDAR, NEWS, and PARTICIPATE. The grid contains seven cards:

- IEEE 2030.5 Snapshot**: Includes a blue icon of three stacked layers.
- OpenADR 2.0**: Includes a blue icon of three stacked layers.
- DNP3 - IEEE Std 1815TM**: Includes a blue icon of three stacked layers. Below the title, it says "Coming Q2 2021".
- IEEE 1547/UL 1741**: Includes a blue icon of three stacked layers. Below the title, it says "Coming Q2 2021".
- IEC 61850**: Includes a blue icon of three stacked layers. Below the title, it says "Coming Q2 2021".
- SunSpec Modbus**: Includes a blue icon of three stacked layers. Below the title, it says "Coming Q2 2021".
- Why These Protocols Today?**: Includes a blue icon of three stacked layers. Below the title, it says "Selected based on:" followed by a bulleted list:
 - Survey feedback of 68 respondents
 - Importance to the emerging DER management applications
 - Being actively used and with organized ecosystems and certification programs

An Invitation to Participate!!

- Become a Founding [Subscriber](#)
- Take a [survey](#)
- Become a Contributor
 - We are looking for Protocol Eco-System experts for each covered protocol
 - Potential compensation
 - Contact contributions@gridedgeintelligence.com
- Something to add? Product or training listing? Use case? Protocol article? Other? Send to contributions@gridedgeintelligence.com
- Questions? Contact info@gridedgeintelligence.com

Founding Subscriber

\$150/yr

\$275/year regular price

- Influence on protocol priorities and future features
- Protocol Specific Database - 6 initial protocols
- Additional Protocols based on interest
- Periodic Newsletter (Monthly/Quarterly Digest of News)
- New Flashes
- Expert insights on Protocols
- Resources for Training and Development
- Ask the Expert Service
- Open Source Code Information
- Free webinars for subscribers

[Become a Founding Subscriber](#)

Organizational Subscriber

\$1,250/yr

\$2,500/year regular price

- All the benefits of Founding Subscribers, plus:
- Access for up to 10 individuals within your organization
- Sponsorship opportunities

[Become Organizational Member](#)

OpenADR Virtual Summit: Implementation Workshop

- **Speaker OpenADR Observations/Conclusions – Matt**

- OpenADR is very capable and flexible – at the expense of interoperability
- Continuing implementations with proprietary communications to devices – risks of stranded assets
- Cloud implementations and aggregation not well defined using OpenADR – e.g., targeting, groupings not really standardized
- Reporting flexibility a major interoperability issue
- Certified VENs can have differing optional capabilities
- Implementing specific use cases results in unique/custom solutions

- **Speaker OpenADR Observations/Conclusions – Denver**

- Utilities regard OpenADR certification as a minor requirement compared to others
- Because of OpenADR flexibility, SMUD needed to create own implementation profiles for OpenADR
- Current OpenADR certification does not cover many use cases

What is Next for OpenADR?



- **If we want to improve interoperability of OpenADR, how do we do it?**
 - Develop more specific application profiles and test specifications?
 - Incorporate popular use case validation tests in the certification program?
 - Create a portfolio of certification programs that are use case specific?
 - Develop interoperability testing, events or other process to insure interoperability between vendors and products?
- **Open Standards Compete!!**
 - The risk to OpenADR is that other standards like IEEE 2030.5 keep refining and improving interoperability
 - OpenADR is in a clear leadership position – let's keep it that way!!
- **Comments? Discussion?**