



Data Quality & Data Governance for Utilities

Data is a valuable resource to utilities. It has been compared to crude oil, as it needs to be extracted, cleaned-up, and processed. Very few utilities are taking action to make effective use of the data they have at their disposal and according to our experience, data quality is often problematic with myriad spatial and temporal issues present. **Correct and accurate information based on high integrity data is necessary for proper decision making.**

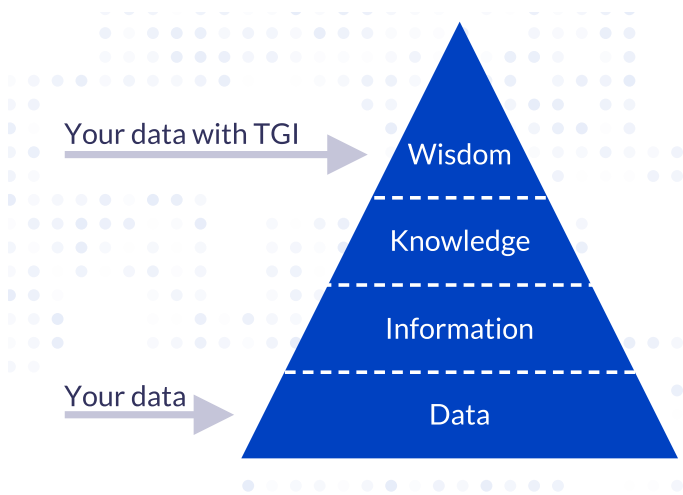
Many modern utilities around the world understand the importance of big data and are implementing strategies to plan for a digital future. Data is being used to create “digital twins”, digital representations of the physical infrastructure that allow for better analysis and modelling.

To faultlessly harness the power of data, utilities need to consider:

- **Data diversity**
- **Data access**
- **Data quality**
- **Data governance**

¹ Utility Analytics - 2019 - 01

² Forbes - Bain Insights - 2017-02-28



Data Diversity and How It Unlocks Data Value

In each utility a wide variety of data sources exist. For a typical power distribution company those data sources may include billing systems, customer information systems, asset management systems and geographic information systems (GIS).

To extract full value out of one’s data, a powerful and versatile application is essential. That application should use a combined data set, pulled together from all available data sources in the network. Diversity and intact contextual relationships are the key. The sooner utilities realise the added value which comes from interconnected data systems, the sooner they can prepare for renewable penetration and the energy grid of the future. For this to happen, additional processing and conversion may be required to build a high integrity relational database that has consistent temporal and spatial datasets. Implementing this approach to data will help unlock further efficiency from the grid and the utility’s operations. A bridge must be built to connect an ancient system to modern complex technologies.

Awesense understands the potential of combined data source synergy. **The True Grid Intelligence (TGI)** platform takes advantage of this fact. TGI processes and aggregates multiple datasets from various sources to achieve better data extraction facilitating actionable decision making.

Cross-Functional Data Access

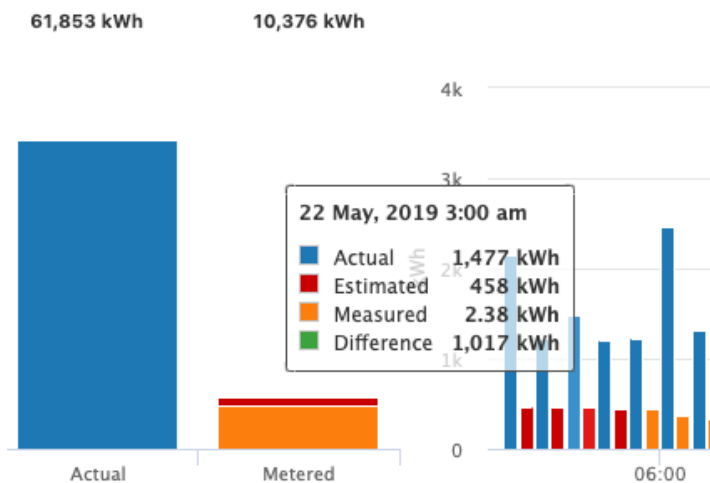
To conduct powerful data analysis, accurate access to data is critical. Some of the biggest obstacles utilities face today is that different datasets are maintained by different departments and cannot be properly assessed across teams. For this reason, an application and/or appropriate data storage layer is necessary. An effective solution is key to ease data access issues and maintain all necessary information in one place.

Data access goes two ways; the first is to ensure that there is a proper, scalable API bus that can be used for integration internally and externally; second is access control to ensure that only approved applications and approved users of those applications can read and/or write the data.

Awesense’s True Grid Intelligence (TGI) platform includes a versatile data model that can ingest a wide variety of utility datasets (SCADA, AMR/AMI, billing, etc.). TGI’s data storage layer provides a single point of access. Data is then available for TGI applications as well as for conducting the user’s own analysis.

“Strong data governance ensures that the right information, of the right quality, is available to the right person, for the right purpose, at the right time.”

- Evan Rawstron, Partner, Global Lead, KPMG



Real-time energy balance with data VEE in TGI.

Data Quality for Better Results

Reaching the best possible data quality for each of the data sources should be the primary goal for the digital utilities of the future. Competent data quality allows the utility to maximize the data's value and to optimise it in further processing.

When we discuss data quality in the utility context we often diagnose the following symptoms:

- Data quality is not consistent across the various data sources: some data sources have sufficient data quality and others do not;
- Despite knowledge about poor data quality there are no processes or plans to systematically tackle the issue of poor data quality;
- Data quality for various data sources are not measurable and thus cannot be measured as a KPI for improvement;
- It is difficult to learn and apply various validations and data correction methods for different, unsynchronized types of data.



For solving these issues, an extensive data validation, estimation and editing (VEE) solution is required. VEE provides not just a tool for correcting data but also ameliorates data quality awareness. Previously impossible data governance processes will be unlocked and could be implemented.

Data Governance for Achieving World Class Data Quality

Effective data governance should be hardcoded into the DNA of a digitally-focused utility. While on the journey to digitization, one thing is certain: **new technologies cannot be applied on old processes.** Precise data governance processes are the foundation of world class data quality. These key processes are:

- Implementation of proper data handling and that its quality will be not degraded over time;
- Establishment of data ownership and data accountability
- Adaptation of regular data quality check-ups
- Creation of KPIs which are aimed to improve data quality

Furthermore, data governance processes should be embraced by the utility's overall strategy which should include digital initiatives. The strategy should also allow for the creation of a step-by-step and agile implementation of digital architecture.

Awesense TGI is the industry leader in utility data governance and can offer knowledge and the platform to achieve data governance excellence.

Book a demo at [awesense.com](https://www.awesense.com) to learn more.

True Grid Intelligence

- *Automated Data Processing & Analysis*
- *Geospatial VEE*
- *Time Series VEE*
- *Data Validation Reporting*
- *Energy Balancing*
- *Outage Detection*
- *Feeder Analysis*



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