

# Building the smart utility of the future with Teradata Vantage™ Utilities Analytic Schemas

As the grid shifts from macro to micro, utility companies are searching for new and better ways to make their facilities—and their entire operations—more efficient. However, in the quest to encourage customers to develop better consumption habits, utilities are often hampered by inaccurate and inconsistent data.

Many organizations are finding themselves with disparate silos of data: multiple data sources that make it difficult, if not impossible, to make informed business decisions across the enterprise. For example, when meter inventory and meter reading data don't match billing system data, the utility runs the risk of not billing usage—and losing that revenue.

Teradata Vantage™ Utilities Analytic Schemas (UAS) enables utility companies to:

- Gain consistency in results by reducing data redundancy.
- Establish and maintain situational awareness in an increasingly distributed grid by integrating and managing analytics.
- Increase network reliability with detailed insight on assets before they fail.
- Support initiatives that help customers conserve and save money with data-driven insight.

## What is Utilities Analytic Schemas?

Utilities Analytic Schemas (UAS) is a predefined data model for utilities companies that allows them to jumpstart development of the access layer in their analytic environment. It includes dimensional data models and analytic data sets in a single integrated data model.

These structures can be used effectively by business and technical analysts for slice-and-dice analytics as well as failure analytics.

### Drive Business-focused Benefits with UAS

UAS rapidly drives analytics for:

- Smart meter analytics
- Condition-based maintenance analytics
- Tee connector failure predictions
- Utility pole health capacity assessment
- Equipment availability analytics

Teradata is continually adding new business capabilities to enhance UAS.

UAS is aligned with, but distinct from, the Teradata Vantage™ Utilities Data Model (UDM), which models the integrated data layer of the analytic environment. UAS and UDM use the same data modeling standards and can be mapped for traceability. UAS and UDM can be licensed as two separate products or as a bundle.

## Addressing Business Challenges with Utilities Analytic Schemas

The Vantage Utilities Analytic Schemas provides the flexibility to address organizations' most important business challenges. It organizes data to make it accessible, enables reuse of data, and provides the flexibility to build dashboard and analytic reports with users' business intelligence (BI) tools of choice.

UAS provides much needed insight into business areas, including:

- What trends are occurring with Advanced Metering Infrastructure (AMI) network devices that are impacting the reliability of the AMI RF Mesh Network?
- How many AMI meters and modules are installed and not communicating?

- Which meter data and Alarms/Events help to identify potential energy theft, tamper, or intrusion?
- By analyzing load factor, can situations be uncovered where the relationship between demand and usage isn't aligned?
- Do subsequent failures tend to occur upstream or downstream relative to the previous failure of a tee connector?
- Which utility poles in this location have a reduced capacity?

The UAS schemas are:

- Well suited for agile development
- Agnostic to data warehouse maturity architecture and BI tools
- Accelerators used to rapidly address drill-throughs, ad-hoc, and advanced analytic business requirements

## Benefits of Utilities Analytic Schemas and the Utilities Data Model Working Together

UAS and UDM are complementary and address two key areas in the data architecture: data integration and data analytics. They can be used as separate products—fulfilling a specific need in the data architecture—or used together as a broader portfolio.

These products are built on a consistent set of standards and comprehensively organized by subject areas. The easily extendable template models are continuously updated to meet the evolving needs of today's dynamic business environments.

A natural alignment exists between UDM generalizations and UAS specificity that benefits mapping during client implementation, such as:

- Party (UDM) to customer or clients (UAS)
- Equipment (UDM) to meter and distribution network elements (UAS)

Overview of Utilities Analytic Schemas (UAS)	Overview of Utilities Data Model (UDM)
Data analytics	Data integration
Business question focused	Enterprise coverage
Business insight driven	Business rule driven
Slice-and-dice	Business information models
Access layer	Core layer

UAS provides business outcome insights that encompass a subset of the UDM business scope. Coverage increases with each new UAS release.

## About Teradata

Teradata is the connected multi-cloud data platform company. Our enterprise analytics solve business challenges from start to scale. Only Teradata gives you the flexibility to handle the massive and mixed data workloads of the future, today. The Teradata Vantage architecture is cloud native, delivered as-a-service, and built on an open ecosystem. These design features make Vantage the ideal platform to optimize price performance in a multi-cloud environment. Learn more at [Teradata.com](https://www.teradata.com).