

CYIENT

INTELLIGENT DATA MANAGEMENT SOLUTION (IDMS)

Optimizing the performance of your
advanced distribution management system
and operational analytics

As the Internet of Things (IoT) proliferates across the utility network, the increased number of smart devices, Distributed Energy Resources (DER), and Information and Communication Technology (ICT) infrastructure are creating operational complexities, new business paradigms and benefit scenarios. An increase in DER across the distribution network mandates real-time generation and supply modeling, bringing fresh challenges to the utilities in managing and interpreting large volumes of information.

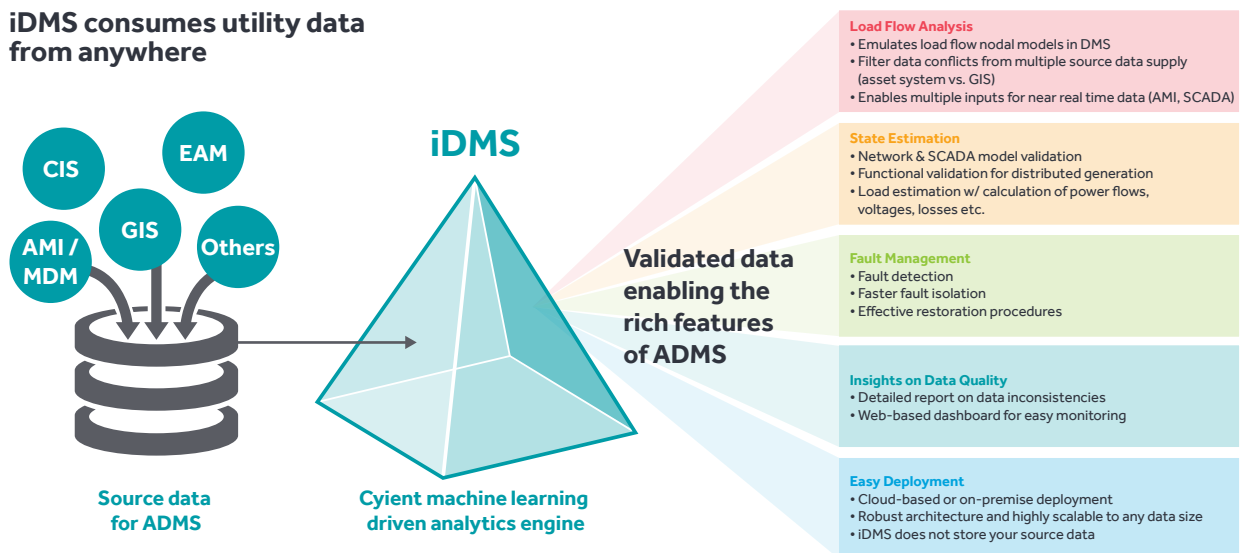
To streamline this transformation, utilities throughout the world are turning to Advanced Distribution Management Systems (ADMS) and related operational analytics requirements such as Volt/Var and fault

detection. Data, however, remains a significant stumbling block to realizing these benefits. For instance, ADMS and operational analytics can enable power flow modeling to help dispatch smaller energy resources only when the system accurately understands actual load characteristics based on real-time phase and system load.

While GIS is an essential data source for ADMS and operational analytics, the data in a typical GIS system is insufficient to deliver operational requirements. Operationally viable data must be complete, accurate, consistent and current. Utilities are looking for a holistic solution that can consolidate, validate, and improve data effectively to enable the grid transformation.

ADMS Filtering: iDMS' Value Proposition

iDMS consumes utility data from anywhere



Cyient Solution for Enhanced Data Quality

By leveraging our rich knowledge of electrical network data models, connectivity rules, data needs of the DMS and smart meter data, Cyient has conceptualized and developed the Framework for Intelligent Operations (FiOPs). The wide-ranging solutions under FiOPs tackle different challenges faced by utilities worldwide.

One of these solutions, the best-in-class intelligent Data Management Solution (iDMS) is configurable and cloud-based, which purifies, validates, establishes, and governs data quality for ADMS. The solution consumes data from different source systems, applies validation rules to assess and assure data quality, including smart meter data (and other real-time data), to incorporate transformer-meter association and network phasing. iDMS validation unlocks the power of ADMS and establishes the ability to expand into additional operational analytics. As a technology agnostic solution, iDMS supports all commercial-off-the-shelf products and platforms through published APIs.

Working in tandem with GIS, asset management, customer, meter, and other data intensive systems, iDMS allows utilities to continuously monitor, flag and correct input data quality using configurable machine learning validation routines, allowing the ADMS to function optimally. This in turn, results in accurate power flow studies, improved fault identification and more realistic outage predictions and reliability reporting.

BUSINESS BENEFITS OF iDMS

Enhanced safety and security:

iDMS supports in building as-operated network models to provide a holistic view of the grid, delivering measurable impact on the safety of workforce and assets.

Improved service reliability:

iDMS enables the creation of a stable and robust data governance model to support the long-term success of ADMS. This helps utilities improve service reliability and reduce losses to the tune of millions of dollars every year.

Increased operational efficiency:

iDMS makes comprehensive, responsive and high-quality data available to the ADMS, saving up to 60% of the effort spent on visual inspection of input data and makes the process 2x faster.

Increased productivity:

By leveraging metering data to automate network data validation, iDMS improves data accuracy and turns underutilized capital investments into productive resources.

More CapEx-driven:

iDMS as a SaaS-based solution enables utilities to transition data purification costs from operational expense to the capital budget.

About Cyient

Cyient (Estd: 1991, NSE: CYIENT) provides engineering, manufacturing, geospatial, network and operations management services to global industry leaders. We leverage the power of digital technology and advanced analytics capabilities, along with domain knowledge and technical expertise, to solve complex business problems. As a Design, Build and Maintain partner, we take solution ownership across the value chain to help our clients focus on their core, innovate, and stay ahead of the curve.

Relationships lie at the heart of how we work. With nearly 14,000 employees in 21 countries, we partner with clients to operate as part of their extended team, in ways that best suit their organization's culture and requirements. Our industry focus spans aerospace and defense, medical, telecommunications, rail transportation, semiconductor, utilities, industrial, energy and natural resources.

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