

# Delivering Successful Business Outcomes and Innovation for Utility Companies

**NTT DATA**  
Services

NTT DATA Business Analytics and Internet of Things Snapshot



Changes in customer demand, regulatory uncertainty and increased competition force utility companies to constantly seek operational efficiencies and ways to improve and provide new services to their customers. Advances in technology and data availability offer an opportunity to address these challenges and capitalize on innovation and smarter use of data.

NTT DATA is ranked #1 in the Hadoop community contribution index among all system integrators, demonstrating our deep commitment to open source and continued investments in research and development (R&D) for data and analytics. In August 2017, NTT DATA was named a High Performer in the HfS Research Blueprint Report for Energy Operations and HfS Ranked #2 for Automation and Robotics.

At NTT DATA, we've built strong capabilities and developed strategic alliances and partnerships to deliver the right solutions — every time.

Leveraging over \$2 billion annually, NTT Group employs more than 6,000 researchers in innovation centers around the globe to develop new technologies and use cases for digital transformation in industries such as utilities, energy, health, retail and insurance.

Our business analytics solutions for utility companies cover the complete value chain including production, distribution and end-user consumption:



## Energy generation and portfolio management

- Optimize energy management models and adapt them to the new energy mix using non-structured information and the Internet of Things (IoT)



## Distribution — grid management

- Reduce grid operation and asset maintenance costs by utilizing grid sensors data
- Streamline field service activity using real-time location data



## Energy retail

- New customer services, powered by data generated through home automation, smart metering and digital channels
- Fraud detection

Outcome-driven solutions

**Intelligence and advanced analytics**

Data-oriented business processes, services and organizations

- Trends analysis
- Analytical methodology
- Advanced analytics
- Cognitive analytics

**Big data technology**

Analytical solutions based on a mature development cycle and a technology reference model

- Trends analysis/advisory
- Reference architecture
- Data government
- Managed infrastructures

**Cognitive apps development center**

Center for development of analytical solutions based on a mature process and a technology reference model

- Cognitive computing
- Algorithm as a service
- Semantic, ontologies
- Advanced analytics

**Big data accelerators**

Analytical solutions based on a mature development cycle and a technology reference model

- Cognitive computing
- Algorithm as a service
- Semantic, ontologies
- Advanced analytics

**Capabilities:**

- Unified data intelligence
- Predictive and advanced analytics frameworks
- Meter data management (MDM)
- Fraud management algorithms
- Energy forecasting algorithms
- TACIT cybersecurity attack simulations

**Alliances and partnerships:**

- Allegro — energy trading risk management systems vendor
- Nimbeo — smart metering solutions and analytics
- CISE — power and gas asset management
- EnergieWerks — autonomic analytics system for trading and demand forecasting





With NTT DATA's end-to-end IoT solutions, utility and energy companies can improve customer experience, reduce costs and provide new services. Our capabilities include:



### Research and Development

- Development and implementation of smart metering solutions: MDM, meter data capture and meter data analytics
- Hardware prototyping, software design and IoT proof-of-concept (POC) development with technology and client partners
- Ongoing collaboration with technology partners
- Evaluation and testing of open source stacks, frameworks, libraries, communication technologies and sensor equipment
- R&D innovations, such as Hitoe wearables for health and safety, and IoT-based maintenance of energy infrastructure
- Establishment of IoT center of excellence in large organizations



### Advisory and consulting services

- IoT advisory services, business process analysis and strategic planning for the energy and utilities sector
- A global team formed by senior subject matter experts with vast experience in different IoT technologies and business process domain (such as smart grid, smart metering, smart city and renewables) permit us to cover the complete utilities sector value chain



### IoT solution development and support

- Large ecosystem of technology partners and strategic alliances
- IoT solutions deployment planning and control
- Strategic approach based on POC development and analysis prior to large-scale deployment

Client success stories



### Smart metering management for a leading electric utility company

**Business challenge**

The company needed to cut costs and provide new services to remain competitive in the market. Meter reading was performed manually, leading to high costs for billing and meter management.

**Solution**

- Collected power consumption data from smart meters and linked with billing system for automated billing process
- Integrated multiple systems including smart meter asset management, MDM and network monitoring
- Enabled a map function to locate malfunctions in meters and networks

**Results**

- Automated meter reading and billing
- Remote monitoring of power outage and recovery
- Ability to automatically detect and register newly connected meters



### IoT solution for a liquefied petroleum gas (LPG) distribution company

**Business challenge**

A major Spanish company operating in the downstream LPG distribution business needed a technology upgrade. The update required integration of truck, driver and billing data and real-time totalizer data for quantity, temp and density.

**Solution**

- IoT solution integrating truck/fleet management with real-time connection to volume totalizers and onboard printers.

**Results**

- Ability to monitor and control all aspects of delivery operations
- Optimized LPG delivery operations
- Real-time route modifications and enhanced invoice collection



### Enhanced MDM for Spanish water treatment supplier

**Business challenge**

Meter data readings were being obtained manually, requiring human intervention and resulting in slow, error-prone procedures and estimated readings increasing the number of claims. Fraud and leakage were also difficult to detect.

**Solution**

- A comprehensive network that interconnects individual smart meters with a central MDM system.

**Results**

- Increased accuracy of customer billing
- Enhanced leakage and fraud detection
- Ability to determine and forecast customer consumption behavior
- Improved customer satisfaction

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NTT DATA Services partners with clients to navigate and simplify the modern complexities of business and technology, delivering the insights, solutions and outcomes that matter most. As a division of NTT DATA Corporation, a top 10 global IT services and consulting provider, we wrap deep industry expertise around a comprehensive portfolio of infrastructure, applications and business process services.