



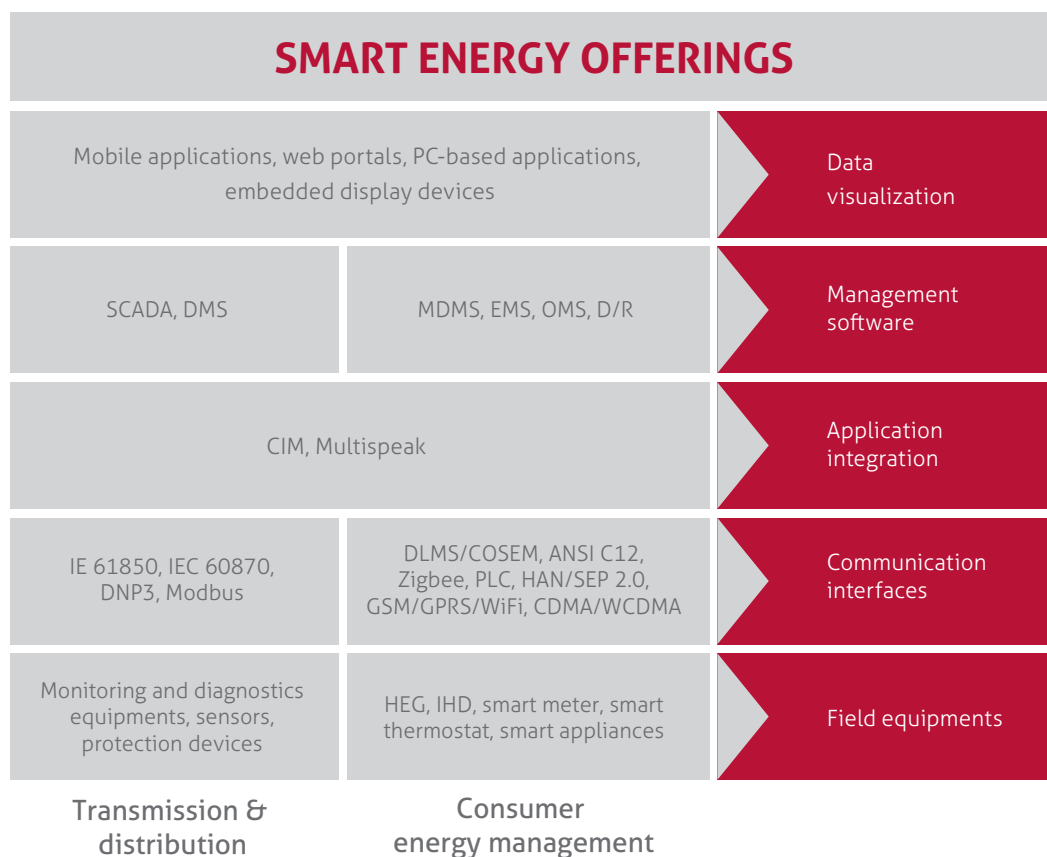
Energy and utilities

Delivering successful products and solutions for the Smart Grid.



Welcome to possible

Mindtree has deep domain understanding and rich experience across the entire value chain of energy and utilities enterprises in the areas of semiconductors, M2M integration, system and application software, Business Intelligence (BI) and data analytics to cloud enablement. Mindtree has helped leading technology and CIO organizations to build successful products and solutions for the smart grid. Our expertise traverses the breadth of the smart energy domain as shown below:



Solutions and frameworks

We have created a set of solution accelerators and frameworks, targeted for the energy and utilities sector.

Some of these are listed below:

- Customizable KPI dashboard for utilities to track performance across various KRAs
- Mobile workforce enablement solutions for sales and service personnel in the utility industry
- MAPLE – Enterprise Mobile Application Platform for Utilities and Energy ISVs
- MWatch – Integrated remote monitoring platform for AMS and smart meter monitoring

SOFTWARE SERVICES

- Energy usage reporting
- Web portal development
- Mobile application
- Trend analysis and predictions

Customer engagement

"Business as usual" - BAU

- Sustainance engineering
- Infrastructure management & technical support

- Smart grid application
 - Application development
 - Application customization
 - Integration services
 - Testing services
- Business technology consulting
- Enterprise solutions (SCM, CRM and ERP)

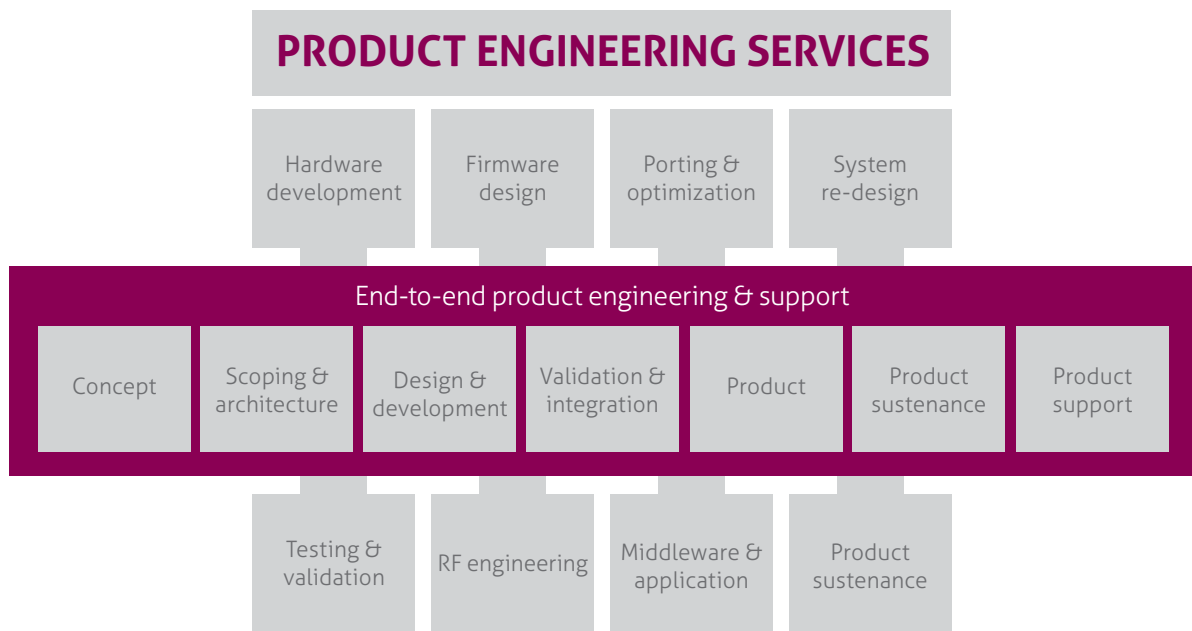
Business sustainability

Business information management

- Information management
- Master data management enterprise data warehouse etc.
- Business intelligence
 - Dashboards for KPIs, packaged BI implementation, reports, etc.
- Data analytics
 - Predictive analytics, trend analysis, scenario prototyping
- Big data management

Success stories

- Design and development of AMI head end system with ANSI C12 based meter data acquisition and integration of Demand Response (DR) commands – part of a pilot project exercise for a large American utility company
- Development of a remote infrastructure monitoring solution for utilities to manage energy readings from remote equipment such as DG sets, transformers, etc. This includes built in support for alarm management, configuration, performance data collection and authentication
- Development of a decision support system for managing large volumes of real-time data generated from meter data management applications
- SaaS enablement, cloud migration and integration of back-end applications for service providers and utilities in the energy space
- Due diligence and system integration for the business process transformation initiative for one of the world's largest utility companies located in the US
- Professional services of a pioneering energy trading platform installation for a top North American wholesale energy trading company. Installation, configuration and support for the platform that was deployed on two top large US-based energy utility companies
- Backend application migration for an Australian power company, which helped in multiple ways including cost reduction via virtualization
- Infrastructure management, including automation of several work flow processes, for an Indian major in oil and gas industry
- Offshore engineering team for a tier-1 ISV in the energy space, involved in the testing and development on MDMS and customer service management applications
- Development, maintenance and enhancement of a home energy usage monitoring portal based on the Azure platform; also conducted integration of the application with social networks such as Facebook
- Web-based energy curtailment software solution for Demand Response (DR) management and monitoring and communicating consumer energy data usage analysis
- Home energy monitoring application for Android devices, used to track and monitor energy consumption, carbon footprint, etc. for home / buildings
- Integration of Building Management Software (BMS) with energy usage control devices such as HVAC / lighting controls, for a European customer



Success stories

- Enterprise green dashboard development, which interfaces with the internal SAP system to collate information related to energy, air, travel, water and waste
- End-to-end product engineering (from specifications to qualification testing) for SCADA used in energy distribution systems – for a Japanese OEM in the energy space; additional features created include data migration tools, HMI graphics conversion tools, IEC 60870-5 and DNP3 protocol communication systems, etc.
- Substation protection and control manager to connect IEDs and identify event / failure and also to control the flow of power in different areas
- Common Information Model (CIM)-based integration of power SCADA for a Japanese energy customer
- Design of an advanced energy meter for a leading EMS vendor, for one of their marquee customers in the energy space
- Test suite development to verify the request-response sequence for the PSEM protocol, used to transport table data over an optical connection to / from the smart meter
- Application development to automate the calibration procedure for smart meters
- Battery charge controller for modulating the power from a solar panel, used in lighting for small / medium scale buildings
- Hardware design review and reliability analysis for energy meters to be launched in Indian and Australian markets
- Zigbee-based solution for home energy control – complete development done by Mindtree, including home networking and lighting profile
- Android-based display system development for a European solar equipment vendor, to monitor power consumption, current output, etc.
- Monitoring and diagnostics control for transmission class transformers, to detect dissolved gases and moisture in the oil used; provisions for integrating to smart grid using IEC 61850, DNP3 and Modbus
- Re-engineering of transformer monitoring device to take care of component obsolescence for a US-based energy equipment manufacturer

About Mindtree

Mindtree is a global information technology solutions company with revenues of over USD 400 million. Our team of 11,000 experts engineer meaningful technology solutions to help businesses and societies flourish. We enable our customers achieve competitive advantage through flexible and global delivery models, agile methodologies and expert frameworks.