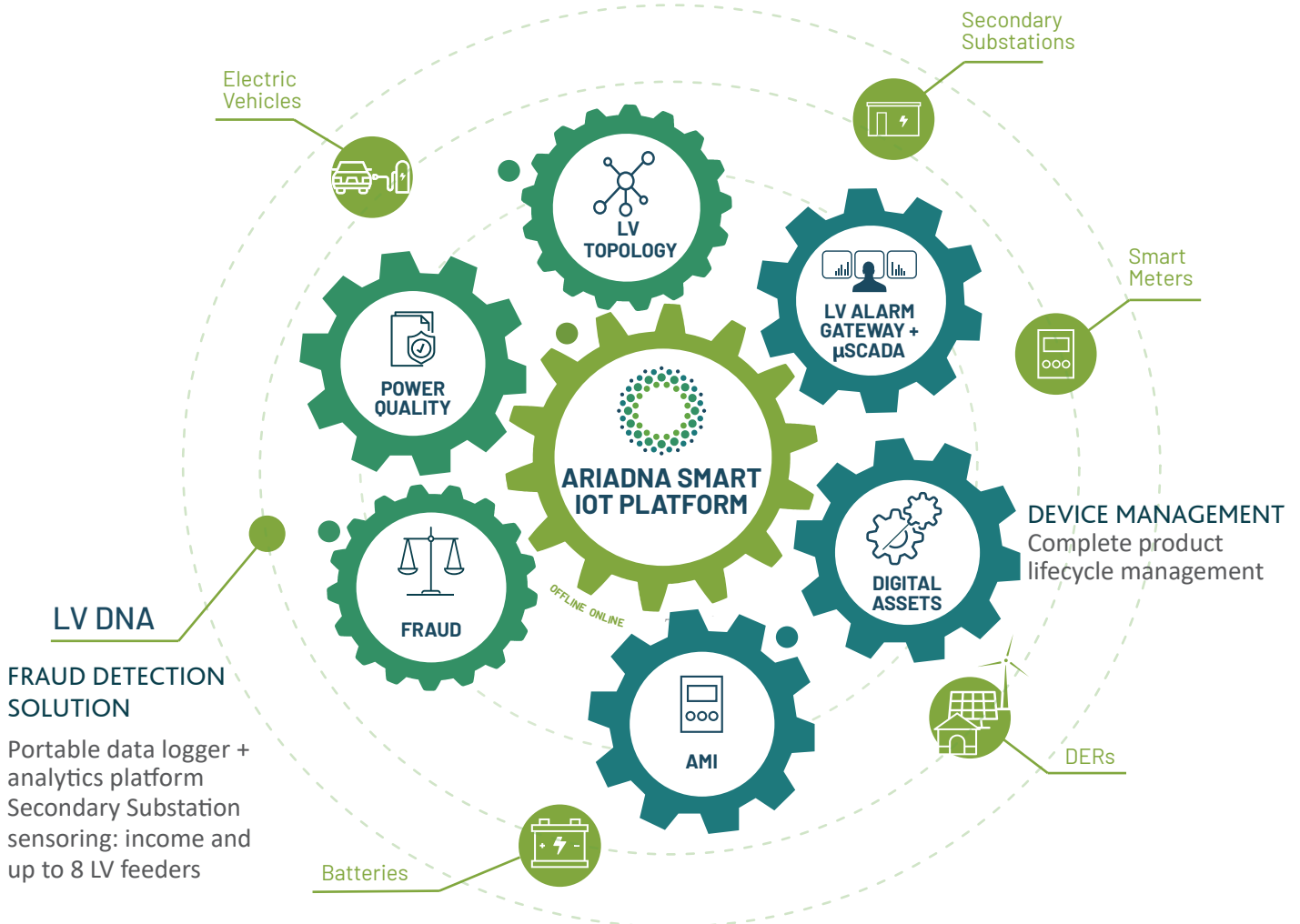


ariadna Smart IoT Platform

The most comprehensive solution for Low Voltage (LV) network management in Distribution System Operators (DSOs). With a 360-degree view, it incorporates all the necessary elements to monitor LV grids in a single platform, supporting network management, supervision, maintenance, and planning operations. Robust and secure, developed with the vision to support all existing and future digital elements in the LV Network.

An advanced solution for the global management of Low Voltage networks



Drawing the future of the electric network

Use cases

LV ALARM GATEWAY + μ SCADA

To effectively ingest the avalanche of events and measurements that comes with the integration of LV network sensors into control centers, our Alarm Gateway integrates several functionalities into one tool. Included protocol translation, communication thread management for +10k IEDs, device filtering policies, and routing of alarms to the relevant departments.



LV DIGITAL TWIN

Using network mapping and the energy profiles of smart meters, the Power Flow Simulator (PFS) tool simulates the current that circulates through each cable segment of the LV network, including phase and neutral conductors.

- Mean values of current and active/reactive power
- Voltage drops along the lines
- Overvoltages caused by distributed generation
- Conductor saturation / hot spot detection
- Technical losses in kWh and generated CO₂



LOSS DETECTION

Fraud solution. Loss detection and energy balance. Automatically detect tampered meters, before field inspections are made.

DEVICE MANAGEMENT

Commissioning, monitoring and supervision of all devices installed on the network from a single interface.

- Device commissioning
- Auto-Discover: new devices automatic detection
- Communications parameters
- Alarm configurations
- FW update
- Device status
- Bulk operation Logs
- Troubleshooting



LV GRID TOPOLOGY

Accurate LV mapping is key for an efficient network management. The ARIADNA CONNECTIVITY algorithm ensures that the association between customers and their feeder connection point is automatically detected, keeping the topology database always updated.



Aligned with our customers' needs



Scalable



Modular



Full-Integration



Hardware Agnostic



Open data



Cloud/On-premise

Services

A comprehensive support to our clients, in order to maximize the value of the implemented solutions.



CONSULTING

- Network topology
- Energy Losses
- Supply quality
- Digital twin, scenario simulation
- Smart Grid management



DATA SCIENCE

- Specialized consulting for electric grid monitoring
- Incident and problem audits
- Specific studies using artificial intelligence tools: machine learning, neural networks, etc



FACTORY

- Software factory
- System integration
- Custom development
- Platform customization



IT MANAGED

- Monitoring and supervision of:
 - IT infrastructure
 - Devices
 - Platform communication systems
- Incident, request, and change management across the entire IT/OT infrastructure.



LABS

Equipment certification process

GridGIS D-twin

A Low Voltage electrical network digitisation app



App compatible with QGIS, ArcGIS, GE Smallworld and Google Earth.

Developed to work with Merytronic's portable devices, it offers a complete and efficient solution that allows automatic storage and transfer of field-collected data, including:

- Network topology data, showing electrical customer connections.
- Mapping of electrical lines.
- Network inventory (transformers, feeders).
- Bar-code data for meters.
- Geolocation data and images of devices within the network.



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