Iskratel Intelligent Applications Platform for Energy (IAPE)

Digital transformation of Energy Utilities

Benefits

- **No** vendor **interlocking**

- **Value driven integration**

- Data normalisation

- Full stack cyber security

- **CIM** - Standardised exhange language

Why Iskratel?

- **Own R&D** and EU-based **manufacturing**

- **First** integration **pilot** on a national level in EU

- **70 years** of Iskratel experience

The energy segment is going through disruptive changes. As utility companies face fierce competition, they are being forced to reduce operational costs through high-quality improvements and asset utilization, while remaining focused on their assets and customers. Utilities usually develop and manage information technology (IT) and operational technology (OT) as two separate domains. In order to successfully differentiate themselves from their competitors, they need to effectively integrate their IT and OT systems and convert real-time data into actionable intelligence.

IT is associated with back-office information systems relating to costs, workforce, customer records and other transactions connected to data and computing resources deployed in corporate data centres.

Meanwhile, OT typically refers to field-based connected devices which communicate among themselves with relatively little or no human interaction.

INTEGRATION AS THE FIRST STEP

As utilities incorporate an increasing number of smart devices, they also need to handle a massive amount of generated data.

OT systems require field maintenance, device configuration and communications management, which indicates a slight resemblance to IT systems.

By integrating IT and OT we impose shared standards and platforms in order to allow utilities to reduce costs. This represents a significant driver in helping utilities cut operational expenses by improving their asset management capabilities.

ISKRATEL'S APPROACH

Iskratel Intelligent Applications Platform for Energy (IAPE) stands for:

Integration of IT/OT system data

- Integration backbone (ESB)
- Interoperable data exchange model (CIM)
- Big data architecture for real-time data processing

CIM repository

- Digital representation of the network
- Innovation and state-of-the -art design on network model exchange
- Undoubtedly defines the network topology objects

Advanced analytics

- Artificial intelligence data modelling for advanced network operation
- Using historic and inaccurate smart metering data for real-time operation

ISKRATEL
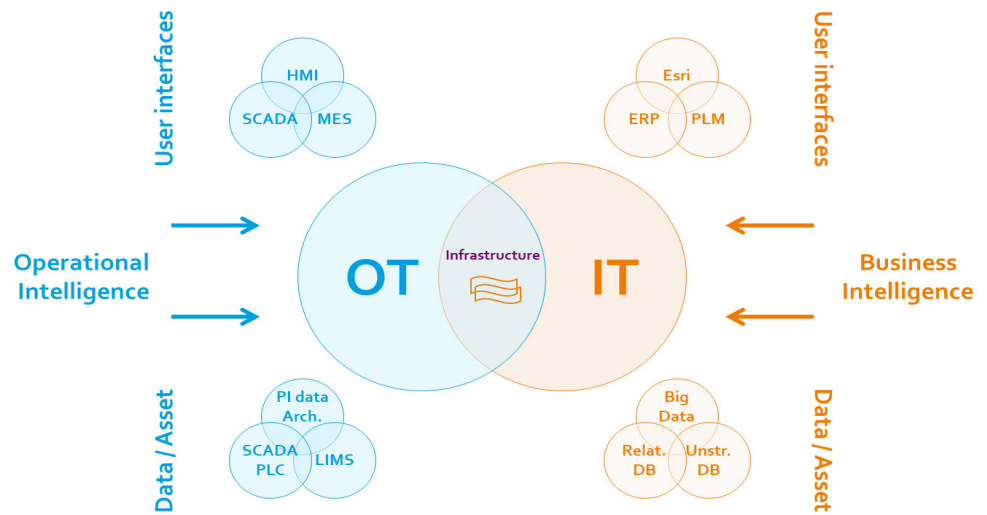
INTEROPERABILITY

The open architecture allows interaction with other systems and technologies. To achieve smart grid capabilities, technology deployments connect large numbers of smart devices and systems involving hardware and software solutions.

CIM - COMMON INFORMATION MODEL

The CIM defines a common language and basic ontology for aspects of the electric power industry data exchange. Applying CIM profiles and interfaces in a basic integration platform (Enterprise Service Bus - ESB) is one of the key advantages of the solution.

SECURITY

A smart grid is a complex network composed of millions of interconnected devices and entities, raising many security concerns and vulnerabilities. While considered as a critical infrastructure, all vulnerabilities need to be identified and resolved to reduce the risks to an acceptable security level. Iskratel enables full stack approach towards every single stage of the system.

WE DELIVER

Intelligent Applications Platform for Energy, which integrates IT / OT systems, and provides ecosystem for development and deployment of custom-made applications. The holistic approach provides:

- Enterprise **integration platform**
- **Big data** management
- **Aggregation, orchestration** and **transformation** of data
- Interoperable **data exchange**
- **Standardized** service interfaces
- **Sustained value** from engineering oriented solutions

Iskratel's IAPE represents a future-proof platform for building next generation applications with utilizing Machine Learning and Artificial Intelligence capabilities. It is the platform for connecting a wide range of different data sources allowing enterprises to ingest all data on a cloud-based system.