

## Solutions for new services and efficiency increase in the energy market

**empuron AG** is a German company which provides technical solutions in high quality for Monitoring and Reporting of your Plants and Energy Efficiency increase.

**empuron** provides using modern programming techniques customer- and market-oriented state-of-the-art software, which is appreciated by a lot of customers.

We adapt our approach of integration to any existing system. **empuron supervise** as a universal application including e.g. a reporting module, modules for integration of technical interfaces, Web capability, a user group concept and charting function. Besides time series capabilities also spontaneous values recording is provided.

This combination of the functions is uniquely developed for the energy market. **empuron** solutions are part of modern concepts for smart grid and smart metering, as well as conceived for energy efficiency solutions.

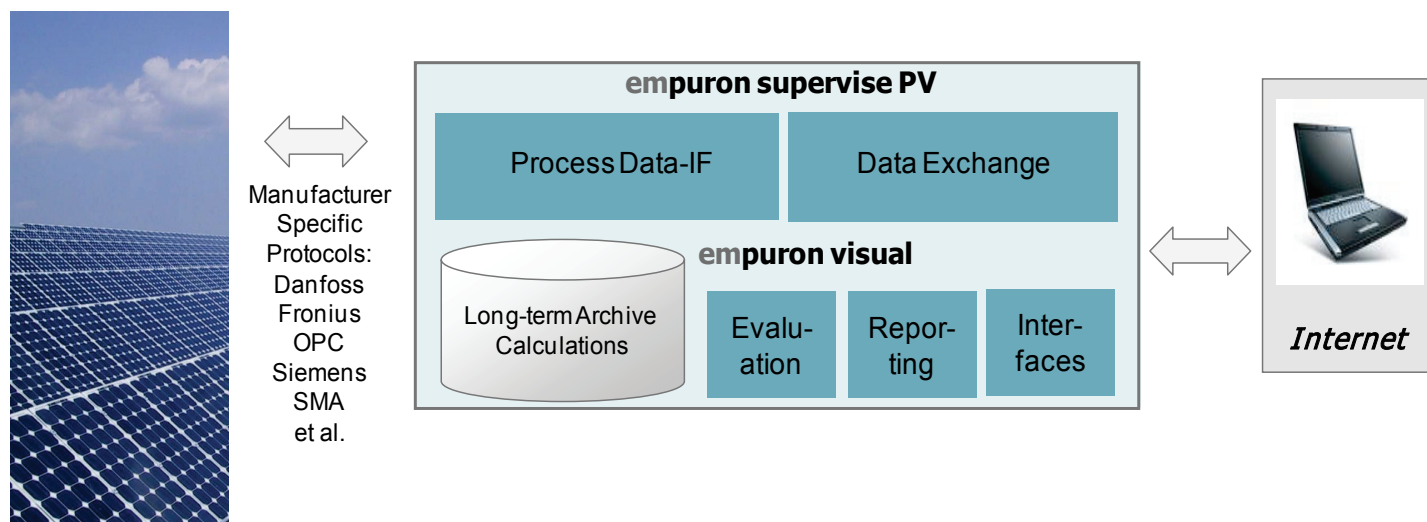
### That are our skills:

- Data analysis for Photo Voltaic Plants, Wind Plants and other decentralized energy systems
- Structured data collection for plant overall data operation
- Long-term data storage and Reporting
- Provision of big Historical Information Systems "HIS" based on relational databases
- Monitoring and disturbance detection for plants
- Flexible integration frameworks for plant access
- Energy Efficiency Monitoring
- Provision of Business Intelligence functions for control systems

## Application categories of the empuron portfolio:

Solar, Wind, CHP, Green Buildings, Geothermal, Clean Transport, Fuel Cells

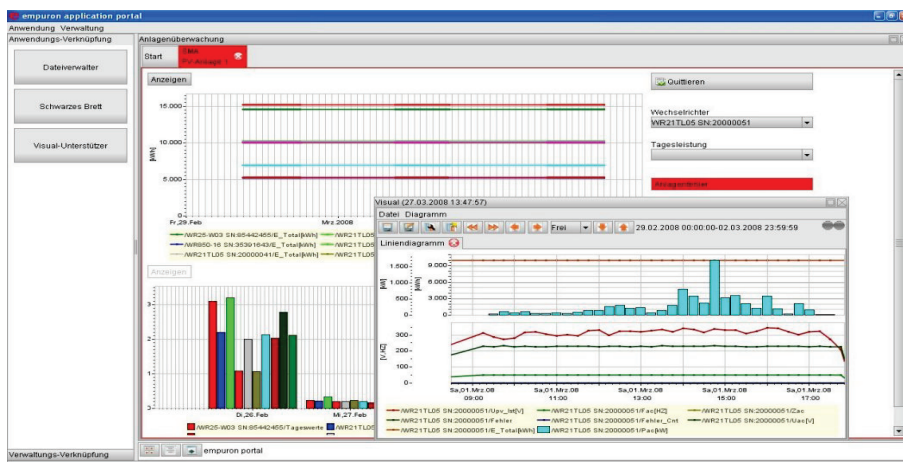
### Example: empuron supervise PV for Solar plants



Accessing on information of local Solar plants at different locations from each workstation – with **empuron visual** an independent visualization and analysis of messages is possible.

# Providing Smart Integration Solutions

**empuron visual** is a tool for a system-independent visualization and evaluation of messages, values and states of legacy systems, in distributed infrastructures (control systems, automation systems, ...) and in data-bases (archive, Data-Warehouses, ...). Standard workplace is e. g. a PC, connected to the Internet or Intranet.

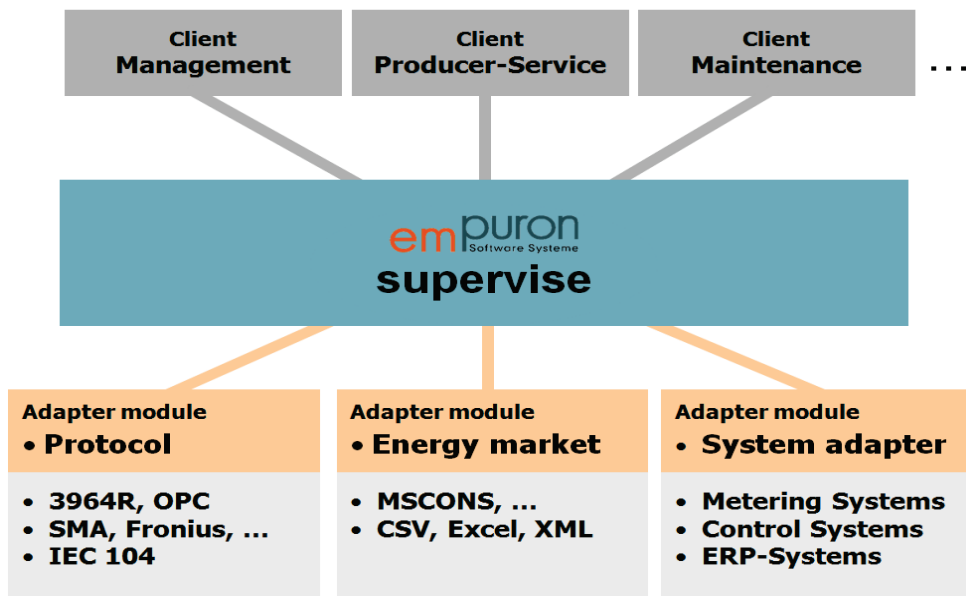


## empuron HIS - Historical Information-System

With the Database-Solution **empuron HIS** (Historical Information System) **empuron** provides a scalable database in the terabyte dimension. Time-series of large enterprises can be hold in access over several years online.

**empuron supervise** is a Monitoring-Solution, which automatically and manufacturer independent collects plant data and so the service and the working process supports.

**empuron supervise** saves your operating data and notifies the user respectively the service provider e.g. per E-Mail, SMS or voice as soon as deviations from the optimal plant parameters exist.



## JBoss components

The **JBoss SOA** Platform provides open and standards-based Integration for energy data and applications. Together with the **empuron visual**, **empuron supervise** and **empuron Reporting**, the **empuron** Middleware Solution provides flexible, secure and customizable communication and data access.



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