

### **Subtask 5- FI technology database**

#### **FI Tech Case #1: Enermet**

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Enermet is one of the world's leading suppliers of energy metering and load management solutions. They serve the energy industry with solutions that make it easy to collect, manage and distribute metering data, as well as to control energy demand.

#### **Mission**

Enermet assists energy companies to achieve improved efficiency and customer service. They provide industry leading solutions and services for reliable energy information and optimised energy network utilisation.

#### **Vision**

Enermet is the preferred supplier and trusted advisor for energy companies in smart metering and dynamic load management.

#### **Pioneer in electronic energy metering and load management**

There are almost 200 AMR (Automatic Meter Reading) systems in use, and approximately 1 000,000 AMR metering points sold in the Nordic countries. With respect to Load Management Enermet belongs to the top suppliers world-wide with an installed base in 30 countries.

[Metering](#) and [load management](#) form the core of Enermet's approach to improving energy companies' operating efficiency, customer service and financial performance - all at the same time.

Enermet's products have a successful track record in the energy industry that goes back more than 50 years. They have a long tradition encouraging their customers to explore and develop new ways of conducting business.

In-depth understanding of the energy business, sound international experience, professional and motivated staff, and innovative product development are the key competencies that customers will have at their disposal when choosing Enermet as partner.

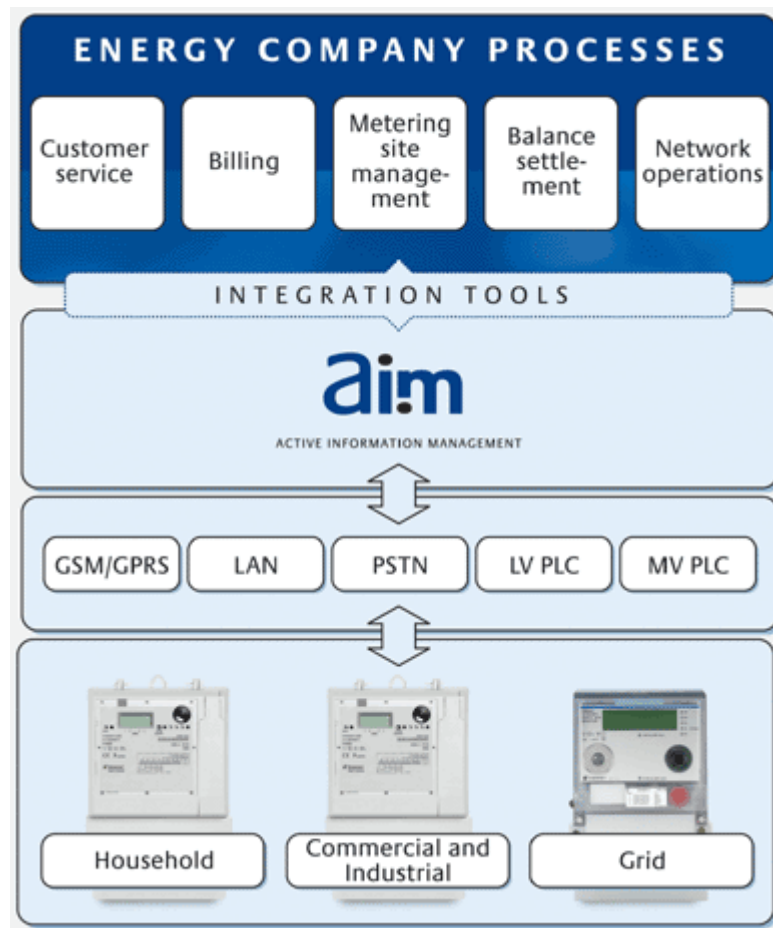
### **Enermet AIM Advanced AMR Solution**

Enermet AIM is Enermet's Advanced AMR (automatic meter reading) solution. Enermet AIM measures the energy consumption, collects and manages metering data as well as transfers it in right format to other systems. Enermet Advanced AIM includes also world-class devices to complete and fully support metering value chain.

AIM is described as a fourth generation AMR with best possible usability, reliability and functionality. Complete set of applications to support all main energy company processes. Unlimited scalability allows capacity expansion when needed.

Integration tools – Unique two-way integration platform (AIMIA) for error-free, timely and seamless data flow between other systems and AIM. Enermet cooperates actively with global system suppliers in order to find the optimal integration solution for every customer.

The following figure illustrates the structure and some of the functions available in Enermet AIM.



Enermet AIM not only does automatic meter reading but also refines the data for multiple purposes (e.g. billing). High quality AMR solution enables error-free and seamless data flow from meters to various IT systems (e.g. CIS).

Data must be available when needed in the right format whether it is consumption data or power quality data. Tools must be available to diagnose system errors and faults in order to solve problems as fast as possible. Enermet develops tools in close cooperation with customers, helping them run AMR smoothly in all circumstances. One system for all consumer segments (household, industrial and grid) makes AMR use, maintenance and support easier.

### **Customer service and billing**

Access to accurate and relevant real-time information is needed for world-class customer service. Billing must be based on actual consumption data which AIM can refine for multiple purposes.

The availability of metering data at the customer service can make all the difference. When a customer moves, changes suppliers or simply makes an inquiry, the customer service personnel is able to handle the situation during a single phone call.

Accurate and clear invoices are an important part of world-class customer service. Enermet's AIM solution allows remarkable improvements to service. Task flow is one of the many issues that increases user-friendliness and speeds up processes. Enermet has created a task flow concept that offers an automated way for executing tasks in the desired order. The task flow can be followed on a monitor, which enables quick problem solving.

## **Load Management**

Load Management Systems based on robust and well proven technology will improve the utility's performance in regulated and de-regulated markets. Enermet has a continuous 50 year track record in establishing Load Management Systems in more than 30 countries world-wide.

We invite you to explore Enermet's Load Management Systems and its multifunctional applications as well as to learn about the products and services that facilitate an effective load management system.

Applications for Load Management have changed from simple switching functions according to a fixed time schedule towards complex optimization and control programs to match pre-defined network operation schemes in deregulated electricity markets.

Over decades we have continuously developed our portfolio and are able to respond to customer's challenges and requests in a very short time. Our technology is following straight forward modular platform thinking which ensures highest quality and efficiency.

## **Load Management Applications**

There are various applications for Load Management. However, the only things that count in the end are a technical need in combination with the return on investment (ROI).

In the following we have listed a couple of applications where an effective Load Management System can provide a real benefit to your company's operations. We at Enermet have a unique track record of supplying Load Management Systems for single or a combination of above mentioned applications to customers in 30 countries worldwide.

With this fundamental experience within our own operational units, we are able to consult to you, irrespective of our own products and systems over the various alternatives as well as the ROI of a Load Management System. Especially for this purpose we have developed a [Cost - Benefit Analysis](#) tool that facilitates a detailed discussion between your operational experts and ourselves.

The CBA will support you in deciding whether to implement a new, or expand your existing, Load Management System or continue your operations without it. Usually the ROI is achieved in three years or less.

Load Management Applications:

- [Air Conditioning](#)
- [Boiler / Heating Control](#)
- [Demand Side Management](#)
- [Influencing Investment](#)
- [Load Shaping](#)
- [Operational Flexibility](#)
- [Peak Cutting](#)
- [Risk Mitigation](#)
- [Streetlight Control](#)
- [Tariff Switching](#)

## Load Management Products

Enermet's Load Management Products and Systems are based on a modular platform technology ensuring highest availability and efficiency.

To operate a Load Management System using Ripple Control Technology there are four different modules that need to be installed in the Power T&D network.

The Controllers collect measurement values from the grid together with external commands given by an operator. Depending on the controlled variable and its target value the controller will – according to a built in algorithm – automatically decide on the commands needed.

Via various communication means the controller sends its command signals to the Transmitter, which applies via the Coupling Equipment the Ripple Control Signals to the Power T&D grid.

Via its own grid the utility distributes the control signals to each and every corner of the network and the Receivers installed at private households as well as industries filter out the command signal and convert it into the related switching signal.

All Enermet's Load Management Products are produced and assembled in Central Europe or Australia / New Zealand.