

## Largest Retailer relies on EIServer®



### Introduction

138 million customers a week worldwide, 285.2 billion in sales, 1.6 million associates worldwide, approximately 4,000 stores in the United States of America and Great Britain, over a 1,000 more in the rest of the world: These mind-boggling figures describe a large player in the retail market.

Being a large retailer has some consequences for the energy consumption. One of them is the fact that the energy invoice rises over 1 billion US dollar each year. Electricity and gas together represent over 90% of the invoice of this world player. As for electricity, the consumption equals about one third of what a country like Belgium consumes in one year. If one takes in mind that the prices for these energies are so volatile that the prices can differ over a 100% on world level, it is clear that it is of the utmost importance that our retailer knows their consumption in detail so that reaction is possible where necessary.

### Requirements

The needs were in the first place the processing of huge loads of data and comparing these data with the invoicing data. As a result, the system had to allow the tracking and correcting of inefficient energy consumption. Next to the correct handling of the data, the rate at which the data comes in was also very important. Before EnergyICT® came in, the data was delivered 60 days after the actual consumption and on top of that, the data was very brief. Not to mention that this delay does not allow efficient energy management. The retailer takes the management of energy serious and therefore ordered the system to allow forecasting based on weather data and historic consumption.

EnergyICT® competed with the largest ICT companies and industrial concerns in the world, but the knowledge, high-tech and reliable products, flexibility and customer mindedness convinced our retailer that EnergyICT® could meet the requirements. As a result EnergyICT® delivered a performing solution for the processing and forecasting of huge loads of energy consumption data that is used for energy management purposes.

## EnergyICT® Solution

To meet the requirements, EnergyICT® set up a mix of their in-house developed software and hardware solutions.

- **Hardware:** EnergyICT®'s Remote Transfer Units (RTU) capture and store the data coming from the actual meters. These devices are connected to the Internet via a built-in Ethernet card.
- **Communication:** every 15 minutes the RTU's push the collected data to the software package over the Internet. This no-cost communication uses EnergyICT®'s EIWeb®-protocol ensuring safe and impeccable communication.
- **Software:** EIServer®, the energy management software developed by EnergyICT® receives, treats and stores the data in an Oracle database on a JAVA-platform.
- **System:** EIServer® uses an Oracle database to store the data. Furthermore the system is JAVA-based which ensures platform independence.
- **Reporting:** EIServer® excels in its reporting capabilities. It allows the creation of reports based on stored data (EM reports, geographic reports, graphs, tables, etc....), it possesses an extensive library of standard reports (tables/graphs), but it allows the configuration of your reports as well. A JAVA scripting tool allows creating even more comprehensive and extensive reports.
- **Forecasting:** Next to the collection of the consumption data, weather data is also imported into the system. The historic consumption data and the imported weather data are used as input for the neural network based forecast. The result is the day-ahead consumption.

## Conclusion

After installing EnergyICT®'s hard- and software solutions and redesigning the communication, it became immediately apparent that delivery delay of the consumption data was reduced. It used to be 60 days, now it is 15 minutes. This allows active energy management as inefficient energy consumption is shown immediately.

By using their state-of the-art energy management system, our large retailer visualizes savings on their energy invoice between 2 and 4%. With an annual bill of over 1 billion US dollar this represents an amount of 20 to 40 million US dollar. In the distribution sector with highly competitive margins, these savings represent a huge advantage to the competition.



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