



Salzburg AG: automatic processing of energy transactions

Schedule management in the Austrian energy market

inubit AG – Member of Bosch Group



Requirements

The growing volume of the schedule and information exchange called for a powerful solution to manage the processing of energy transactions using schedules promptly and correctly in multiple markets:

- ▶ Flexible adaptation of interfaces to make it possible to respond to changing market conditions quickly and without external help
- ▶ Automatic processing of energy transactions
- ▶ Integration of different regional rules for the exchange of schedules

- ▶ Performance test of inubit Suite via pilot project and subsequent roll-out

Results

The inubit Suite offers the required flexibility for the Salzburg AG to meet the changing requirements of the energy market:

- ▶ Handles the sending of all schedules including data formatting of the leading external systems
- ▶ Replaced complex interface structure with uniform, clear star architecture and interface monitoring
- ▶ Minimized schedule errors, reducing the expenditure for expensive unscheduled power flows, cost reduction

Approach

With the inubit Suite, inubit meets all the project realization and technical criteria:

- ▶ Knowledge transfer through XML training and BPM crash course provided by inubit
- ▶ Successful project implementation and extensive specifications as well as professional support for project coordination and troubleshooting

“Without the inubit Suite, Salzburg AG would not be able to offer the flexibility dictated by the market. It helps us meet requirements in a new, ground-breaking way. The option to adapt the software without having to involve inubit support is one of the great advantages of this solution.”

Martin Olsen, Project manager at Salzburg AG

Automating processes, integrating the existing system landscape while being able to respond flexibly to market changes. These were the requirements with which Salzburg AG started looking for central middleware for interfaces and process flows. The inubit Suite beat the competition thanks to its high level of preconfiguration for European market communication as well as its flexibility to keep up with constantly changing market conditions.

With the opening of the Austrian energy market for all customers, a balance group system for energy exchange settlement in line with the Electricity Industry and Organization Act (EIWOG) was introduced in the year 2000. The exchange of energy between the balance groups is handled in the form of schedules that specify in what quantities energy is fed into or taken from certain points in the grid. As the entity responsible for Austria, Germany and Switzerland, Salzburg AG is responsible towards the transfer network operator for ensuring that the power balance in its balance group is constantly balanced and that schedules are handled correctly.

Until recently, a standard software for energy data management was used for schedule management (FPM) in European energy trading. Since the volume of the schedule and information exchange is increasing rapidly, the handling of energy transactions should be automated. The automation affects the following processes:

- ▶ Partner administration
- ▶ Schedule administration
- ▶ Schedule management
- ▶ Sending schedules
- ▶ Receiving schedules
- ▶ Automatic error correction

In addition to the market communication in the context of European schedule management, Salzburg AG uses the inubit Suite as the central Enterprise Service Bus (ESB). This controls the data exchange with the PSImarket trade system and integrates the technical IT solutions into the system landscape.

The legacy system does not meet the requirements

A high level of flexibility is necessary to be able to quickly and easily implement changes in the market and the laws, which occur frequently in the energy market. For example, the complex rules of the European Transmission System Operators (ETSO) must be fulfilled for the exchange of schedules. Since Salzburg AG does not just service the Austrian market but the entire German-speaking region, different regional rules must also be integrated into the

solution. It must be possible to process the entire sending of schedules including the data formatting of the leading external systems within five minutes.

To solve these tasks, Salzburg AG first decided to develop its own software that would reflect the specific requirements of the company. After a short time, however, the processes in schedule management proved to be too dynamic, and constant adjustment of the in-house development to changing conditions too costly. Based on this realization, the company decided to use a standard solution for a Business Process Management (BPM) solution that would be able to meet the company's requirements and be able to respond quickly and easily to changes.

In general, the existing platform provided the functions required and was supposed to be used for future process automation. However, in everyday use, this turned out to be too complicated. In parts, there were difficulties implementing interfaces because there were only very basic options for debugging, which made it extremely difficult to track down errors. Overall, Salzburg AG did not feel capable of promptly and correctly handling the dynamic exchange of energy transactions via schedules in multiple markets, which takes place several times a day.

Flexible process automation

With its sights on finding central middleware for interfaces and process flows that also allows flexible adaptation to market conditions, Salzburg AG decided on a pilot project with the inubit Suite. A test run was used to check whether it was able to meet the complex interface integration and process automation requirements.

Since many processes were supposed to be processed at the same time, and resumption without any loss of data after a potential server crash or other errors had to be ensured, Salzburg AG decided to use the high-availability Enterprise Edition of the inubit Suite.

Since using the inubit Suite requires solid knowledge of XML and XSLT transformation, a three day XML course and a three day BPM crash course were held to facilitate the decision to buy. Following that, a team of Salzburg AG and inubit AG employees implemented an interface that was already running on the legacy system within two days as part of a pilot project during a workshop. The Salzburg AG employees appreciated this approach from a technical as well as a personal perspective.

To gain sufficient knowledge on both sides, both parties got together to document comprehensive specifications



Martin Olsen,

Project manager at Salzburg AG, states:

“The inubit Suite has contributed significantly to simplifying the system architecture. The interface structure that was characterized by uncontrolled growth and disadvantages such as missing data and lack of clarity when changes were made to the system was replaced with a uniform, clear star infrastructure and interface monitoring.”

with business and technical descriptions. Together with the project plan, which regulates the distribution of tasks, this provided the basis for great collaboration. Developing the individual process steps together, including Salzburg AG at an early stage and providing project coordination and troubleshooting support made it possible to quickly and easily port the interface to the inubit Suite.

In addition to the technical skills and professional support provided by the inubit employees, the inubit Suite meets all the requirements for the integration of the existing system landscape. Salzburg AG uses various standard tools for energy trading. In particular for energy data management, the standard software GENERIS by VISOS is used while the PSImarket product is used as the trading system. During the connection of these systems, it became apparent that the inubit Suite is particularly strong in the interface area and, unlike the legacy system, can implement these without any problems.

Roll-out

After the pilot project, the inubit Suite was to be deployed comprehensively. It is the only solution that offers the flexibility that enables Salzburg AG to handle the changing legal conditions of the energy market.

Thanks to its strong performance, it can handle the entire sending of schedules including the data formatting for leading external systems within five minutes. The system

currently has about 510 active time series with a volume of approx. 50,000 individual values. Until the final schedule is complete, several versions of a schedule need to be sent and received. This produces a daily data volume of approx. 300,000 values.

The semi-automatic documentation using workflow diagrams also facilitates work. With regard to schedule management, Martin Olsen emphasizes: “Using the inubit Suite in this area improves efficiency, enabling us to save real costs. By minimizing errors in schedules, we have managed to reduce costs for expensive unscheduled power flows.”

Outlook

Over the coming months, the inubit Suite will be used to implement additional processes and integrations step by step. Furthermore, extensive process flow support will be implemented. In the medium term, once the existing systems and processes have been integrated and schedule management has been automated, ordering is to be connected, web services introduced and data exchange management controlled.

About Salzburg AG

Salzburg AG for energy, traffic and telecommunications is an energy and infrastructure provider with headquarters in Salzburg and currently supplies about 260,000 customers in the entire state of Salzburg and neighboring Upper Austria. It has more than 40 energy trade partners and is represented on the Leipzig and Graz stock exchanges and has operative access to all relevant market areas in Austria, Germany and Switzerland.

The energy trade guarantees that Salzburg AG will have a sustainable, independent energy market position. In addition to trading about 10 TWh of electricity and about 5 TWh of gas per year, the use of its own power plants is continuously optimized and controlled.



inubit AG

Schöneberger Ufer 89-91
10785 Berlin
Germany
Tel. +49 30 72 61 12-0
Fax +49 30 72 61 12-100
contact@inubit.com
www.inubit.com

inubit AG is a leading provider of holistic process management solutions. From the inubit Suite as the technological backbone, to BPM methodology and a wide range of services, inubit supports companies in all phases of business process management. To achieve sustainable results, inubit merges the requirements from IT and business departments and implements them in continuously applicable products and solutions with a good price-performance ratio.

inubit is present in over 10 countries with its regional companies and local partnerships and has more than 450 customers worldwide. Since October 2011, inubit AG has been a company of the Bosch Group.

More information at **www.inubit.com**