



HanseMerkur automates its service billing processes using the inubit Suite

# Automatically Mastering Record Growth

inubit AG – Member of Bosch Group



## Requirements

Between 2003 and 2009, the number of people insured by HanseMerkur increased from 366,000 to a total of 1.2 million. The challenge was to maintain the current level of service with an almost unchanged workforce despite this increase:

- ▶ Reduction of the time-consuming manual processes in checking the insurance coverage with an automatic reconciliation of the information extracted from the bills
- ▶ Selective dialog interaction with agents in exceptional cases

## Approach

Competing against process engines from Pegasystems and Cordys as well as open source solutions like jBPM, the inubit Suite managed to score thanks to its power, flexibility and the excellent value-for-money it offers:

- ▶ Implementation of a reference process with interfaces, dialogs and process rules that is documented in the BPMN modeling standard
- ▶ To the extent necessary, integration of staff using a

workflow that is based on the inubit Suite and uses interfaces developed in Eclipse

- ▶ Establishment of new processes on a service-oriented architecture in order to be strategically prepared for future change requirements in the industry

## Results

The inubit Suite integrates systems of the IT landscape (mainframe, inventory management system, databases) and integrates medical verification systems for service checks or a rule engine for mapping complex decision rules:

- ▶ Increase in the number of service bills per employee and reduction of the stock claims ratio through automatic checks
- ▶ Process-driven migration of other inventory and service systems into the SOA context, orchestration of processes
- ▶ Future increase of the share of automated processing from the current 20% to at least 30%

**HanseMerkur Krankenversicherung AG automates its service billing processes using the inubit Suite from Berlin-based inubit AG and is thus able to keep up its level of service while maintaining an almost unchanged workforce even though the number of customers has tripled. In future, the share of automated processing is to be increased from the current 20% to at least 30%.**

HanseMerkur Krankenversicherung offers both comprehensive health insurance and supplementary health cover. Between 2003 and 2009, it enjoyed record growth from 366,000 insurance customers to 1.2 million. With a delay of almost two years, this growth has now become notable also in the service processing area. Until well into 2005, service billing was a purely manual process of data entry and service check, which required many individual checks performed by well-trained agents. Due to the large amount of manual work required, data entry and verification were first reduced as much as possible. This was not compatible with the interests of service management and the objective to keep contributions stable. To handle the increasing volume without having to make service cuts, intelligent systems for data extraction have been purchased since 2006 and expert systems for service checks have been integrated into the processes. This increased the amount of data used and checks performed, which led to more complex processes for agent specialization, which were difficult to map in the old system architecture.

### **Ready to flexibly face challenges with SOA**

To handle the growth at HanseMerkur without a massive expansion of the service workforce on the one hand, and without reducing customer service on the other hand, the processes had to be optimized by using some partially and fully-automated process flows. The information extracted from the bills, such as the customer name, service provided and billing amount is, as part of a preliminary check, automatically compared to the information in the databases to reduce the manual activities required for checking the insurance coverage. Dialog interaction with the agent should only be necessary at specific points in exceptional situations. The aim was to establish the new processes of a service-oriented architecture (SOA) and to integrate a process engine to map these processes with a high level of flexibility in order to be strategically prepared for the constantly increasing number of changes required in the private health insurance industry.

The first market overview was created on the basis of internet research. As appropriate for the existing infrastructure at HanseMerkur and supported by the respective demo versions, small scale tests were then conducted with some

providers. The five candidates that made it into the closer selection were analyzed as part of a proof of concept (PoC) and in separate workshops.

In addition to the usual assessment catalog, a reference process documented in the BPMN modeling standard was described with the specified service interfaces, dialogs and process rules. This process had to be implemented in executable form under the watchful eyes of the HanseMerkur team. In addition to the inubit Suite, process engines from Pegasystems, Cordys and others as well as open source solutions such as jBPM were evaluated. These were all checked against extensive requirements catalogs from the business departments as well as IT and then field-tested. Even though none of the providers managed to meet all of HanseMerkur's high requirements, there were significant differences in the quality of the solutions.

In the end, the inubit Suite scored best in the PoC because it met most of the requirements and convinced with its flexibility. Lastly, the economically fantastic value-for-money and the personal impressions also weighed in: inubit's product and people were the best match for HanseMerkur.

*"The inubit Suite made it possible to successfully implement the vision of flexible end-to-end process design of the Organizational Development Department at HanseMerkur and thus create an important module for achieving the strategic goals. The process design creates more transparency and lets departments and IT come together."*

**Frank Mielke**, IT architect and project manager

### **Selective dialog interaction**

Since the production capability of the BPM stack within HanseMerkur had to be proven with a first business process, the infrastructure had to be set up quickly once the decision regarding the tool was made. A three-day course for the developers of the BPMN models and Technical Workflows as well as a one-day admin course combined with a one day workshop for the administrators were thus booked.

At the start, HanseMerkur staff also received support from inubit consultants to integrate the Technical Workflows into the staging process, among other things. When the inubit Suite was integrated, special attention was paid to the dialog integration issues and the performance required here. A workflow based on the inubit Suite uses interfaces developed in Eclipse to ensure that the right persons are actively



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*“It was wonderful to see such good cooperation within an interdisciplinary team consisting of billing specialists, business architects, software architects, and others working toward a common goal. Both on the management side as well as technologically speaking we chose entirely new ways.”*



**Dr. Horst Karaschewski,**

Head of application development at HanseMerkur

integrated at the right time via web services. The option to “put processes to sleep” and to “wake them up again” means a concept has been developed for asynchronous dialog connection with the active process on the client side, with the effect that the client offers the dialog tasks assigned to the agent profile for prioritized processing. Since this cycle has to be processed several times within one round of processing, the challenge was to achieve optimal cycle times. Within a short period of time, inubit staff managed to improve the runtime to meet the HanseMerkur requirements.

#### **Growth without an expanding workforce**

Over each of the last few months, approximately 68,000 customer letters resulted in 59,000 service bills, of which about 20 percent were generated automatically via the new processes. The inubit Suite integrates the systems in the existing IT landscape, such as mainframe, inventory management system and existing databases, and integrates various tools such as medical verification systems for service checks or a rule engine for mapping complex decision rules. In parallel, automatic preliminary checks have increased the number of service bills per employee and the extensive automatic checks by the new processes have reduced the inventory loss ratio.

In future, the inubit Suite is to be used as the leading system for orchestrating all service billing processes. To do so, all verification sub-processes will be integrated into the health insurance service process step-by-step. The inubit Suite will also be used to integrate the components for the calculation of agreed reimbursement amounts, which are

currently still mapped in a downstream system.

Once the service processes have been implemented completely in the inubit Suite, additional inventory and service systems will be migrated into the SOA context in a process-driven manner and orchestrated with the corresponding processes of the inubit Suite.

Customer correspondence with several documents for different verification processes such as receipts from dentists combined with receipts for medication and spectacles will then also be processed using the inubit Suite. For Sönke Volquartz this is another step towards growth: “Our aim is to further extend the end-to-end process design and increase the share of automated processing to at least 30%. With a continuously growing customer base, the only way we can maintain and increase the current level of customer service is to use new flexible processes and the selected automati-

*“For HanseMerkur staff, the work focus has shifted from data entry and manual invoice verification with insurance cover reconciliation to special verifications of complex matters. In addition, the time saved during data reconciliation makes it possible to focus on the core business: sustainable service for existing customers and winning new ones.”*

**Sönke Volquartz,** Head of Organizational Development Group at HanseMerkur

## About HanseMerkur Group

HanseMerkur Group has developed into a modern, nationally operating insurance group with more than 1,740 employees and independent agency owners, with € 962.2 million of contributions received and investments of € 3,628.8 million. Growth is being driven mainly by the main business area, health insurance, with premiums of € 699.5 million collected. With 22,348 new customers in comprehensive health insurance, 2009 saw record growth in the

company's history. HanseMerkur Krankenversicherung AG also provides supplementary cover to 55,647 persons with statutory health insurance, bringing the total number of privately insured HanseMerkur customers to 1.2 million at the end of 2009.



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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**