

# AT DB NETZ AG, BPM SETS ALL THE SIGNALS TO GREEN FOR SOFTWARE DEVELOPMENT



## Customer

Deutsche Bahn (DB) Netz AG is responsible for maintaining the infrastructure for rail operations as a 100 percent subsidiary of Deutsche Bahn AG. It creates the conditions to ensure that passenger and freight traffic on Europe's largest railway network can be punctual and reliable. In 2010, the company with more than 35,000 employees posted revenues of €4.478 million.

## Industry

Transport/Logistics

## Opportunity

- Seamless standardization of the entire software development process
- Basis for introducing the Model-to-Execute methodology
- Elimination of format conversions in requirement and development documentation
- Direct re-use and implementation of the process model by the IT service provider

## Solution Set

- ARIS
- webMethods
- CentraSite

## Key Benefits

- Seamless, standardized and structured methods from the description of technical requirements to their realization
- Project execution up to 40 percent faster
- Savings of up to 25 percent on development costs



PROJECT DURATION  
UP TO **40%** SHORTER

**25%** SAVINGS IN  
DEVELOPMENT COSTS



## A quick reach into the IT toolbox

The railway network that DB Netz AG is responsible for stretches across 61,260 km. Around 70,000 switches and crossings need to be set correctly for its 380 customers from Germany and all over Europe. Additionally, DB Netz AG needs to develop schedules and carry out construction projects. Without a high-performance IT infrastructure, the company's more than 35,000 employees could not perform their complex tasks.

However, in the past, many applications were developed independently from one another, the same data was managed in different databases, and functionalities for realizing requirements were developed redundantly.

Holger Ewald, CIO of DB Netz AG, decided to strike a new path: Working with his team, he developed an innovative IT toolbox system as part of a service-oriented architecture that would structure and harmonize the development process for all IT applications within the company.

To further optimize existing processes and put new ones on the right track quickly, DB Netz AG decided on a Business Process Management (BPM) platform that the company would implement together with Software AG. With the help of the Software AG Model-to-Execute methodology, DB Netz AG was able to shorten the duration of its projects by 40 percent and reduce development costs by 25 percent.

*“Not only do we save time and money with ARIS, webMethods and the Model-to-Execute methodology—we can efficiently develop pioneering agile software solutions.”*

— **Holger Ewald** | CIO, Deutsche Bahn Netz AG

## Software development without conversion

New requirements bombard DB Netz AG on a daily basis. Existing processes need to be further optimized and new ones implemented. The IT department's responsibility lies in developing innovative, yet reliable solution concepts from these requirements in the shortest possible time. The company's IT team used a process model developed in-house—ADITE—to perform feasibility studies, requirement analyses and realization concepts. However, format conversions were necessary in many places because the transfer formats were not fully standardized. Higher costs ensued particularly in the realization, evaluation and documentation of projects. At the same time, projects ran significantly longer. The solution for the IT toolbox: standardized BPM with the goal of automating processes from technical requirements through realization and documentation.

### Setting the course

The IT team defined the following requirements for selecting the suitable technological platform:

- Extensive modeling possibilities
- Smooth transfer of the model to IT service providers
- Harmonious interaction between process modeling and implementation
- High degree of automation achievable

Software AG clearly prevailed with its comprehensive concept in an EU-wide call for proposals: a BPM platform based on ARIS and webMethods to implement the Model-to-Execute methodology.

With this methodology, ARIS models can be directly converted in webMethods at the execution level.

CentraSite was integrated as a central service repository to re-use the created components and enable faster mapping of new business processes.

In addition to the comprehensive concept, the DB parent company's positive experiences with ARIS also convinced decision-makers at DB Netz AG.

### Realization by the road map

On the road to a seamless integration of the Model-to-Execute methodology, the first stop was the technical installation of ARIS Business Server and webMethods. Then the project team synchronized the process model developed in-house by DB Netz AG, ADITE, with the corresponding concept from Software AG. The advantages are obvious: The company's extensive process experience will be re-used, adjustments to subsequent projects will be minimized and employees will be productive faster with the new methodology. The next step also contributed significantly to boosting efficiency: The project team developed a new group structure in ARIS that offers the opportunity for every project to be modeled in its own closed space and, at the same time, have company-wide access to objects in a library.

Next, the modeling level and execution level needed to be linked. To do this, the project team comprised of employees from Software AG, IDS Scheer Consulting and DB Netz AG created a semantic and syntactic framework that determined how to apply the Model-to-Execute methodology in a way that is easy to understand for all users. This was a real challenge considering the different user profiles: Users from a purely technical perspective as well as developers of the technical/logical IT concept and the IT service providers implementing it all needed to find their bearings here.

Despite the complex specifications and tasks, the implementation of the first project using the Model-to-Execute methodology only took four person months to complete.

DB Netz AG is now working with Software AG to develop the supplementary integration routines beyond the standard functionalities of webMethods Integration. These enable information from objects and data models stored in ARIS as well as screen designs to be transferred to webMethods. Now the information no longer needs to be re-created for IT service providers. At the same time, the documentation of projects will be standardized by expanding the reporting functionality in ARIS, extending process monitoring in MashZone and introducing the maturity model prepared for the software development cycle.

### Success at every level

The success of the new methodology is already clear after the first few projects:

- Significantly less effort for describing processes
- Results of the individual project phases are more clearly structured and easier to understand overall
- Format conversions are eliminated
- Significantly higher quality of delivered software solutions
- Schedule analyses yielded time savings of 40 percent in project duration
- Development costs can be reduced by up to 25 percent using the BPM platform

The numbers speak for themselves: Ewald's positive experience is generating great interest within the DB Group as well. Testing should show the extent to which a solution can be used in other areas of the company.

#### ABOUT SOFTWARE AG

Software AG offers the world's first Digital Business Platform. Recognized as a leader by the industry's top analyst firms, Software AG helps you combine existing systems on premises and in the cloud into a single platform to optimize your business and delight your customers. With Software AG, you can rapidly build and deploy digital business applications to exploit real-time market opportunities. Get maximum value from big data, make better decisions with streaming analytics, achieve more with the Internet of Things, and respond faster to shifting regulations and threats with intelligent governance, risk and compliance. The world's top brands trust Software AG to help them rapidly innovate, differentiate and win in the digital world. Learn more at [www.SoftwareAG.com](http://www.SoftwareAG.com).

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