

DIRECTGROUP GERMANY

BERTELSMANN

DirectGroup Germany bundles all the German media sales and direct marketing businesses of DirectGroup Bertelsmann: under the trusted brand "Der Club Bertelsmann", we bring traditional media to people – wherever customers want it.

The media club provides great entertainment in the 275 stores throughout Germany, in the catalog, and in the online shop. Around three million members in Germany alone are satisfied by the club's selection and service. Furthermore, we use our direct marketing expertise to develop innovative products and business models, which we test and establish in the retail market. The products offered extend to travel, insurance or cellular telephone networks to wellness and chocolate. DirectGroup Germany is part of DirectGroup Bertelsmann, which is wholly owned by Bertelsmann AG.

Opening up new customer segments

Following the expansion of its sales channels, the German-speaking portion of DirectGroup Bertelsmann decided to refactor its processes. The greatest challenge it faced was the integration of Short Head and Long Tail business. The volume of transactions to be processed required highly flexible and modern system architecture. With the objective of providing product data centrally to all sales channels from one common system, it commissioned Nionex with the design of the new system architecture.

The multichannel retailer wishes to offer its customers as many items as possible above all via interactive sales channels, such as Internet and phone, as well as via the ordering service in its stores. As these items are not kept in stock, they are not blocking any resources during the tendering process. In the Long Tail scenario, a solution is required that allows the automated creation of items in SAP only at the exact moment they are ordered for the first time. This is necessary because it is too expensive and ineffective if the average time it takes to create a product manually per item is 15 minutes. Nionex, the IT service provider for DirectGroup

Bertelsmann, which has also been running SAP order logistics for four years, developed a solution concept with two core elements:

- a central product pool containing all product information for all sales channels (online, print, cash);
- the outsourcing of business rules to a central Business Logic Service, from where the relevant rules are delivered to the sales channel systems and executed there as required.

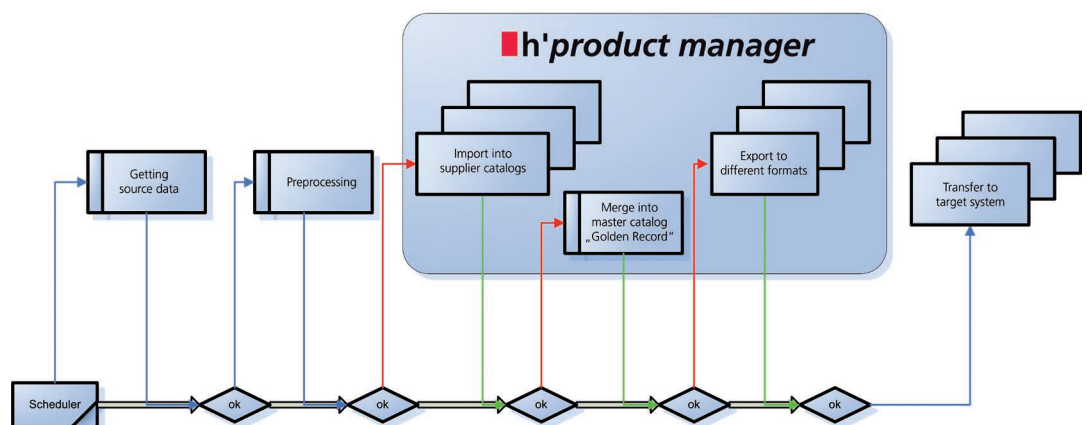
Several options were under consideration in the selection of a suitable system to map the central product pool. Candidates with

fundamental product database characteristics featured among the existing systems in the Bertelsmann DirectGroup. In the meantime, the software of product information management system providers (PIM systems) had greatly matured.

Following a preliminary analysis, a number of systems were considered more intensively and assessed according to the following criteria:

Performance

It is vitally important that several million items of data can be processed during the initial upload of data to the master catalog.



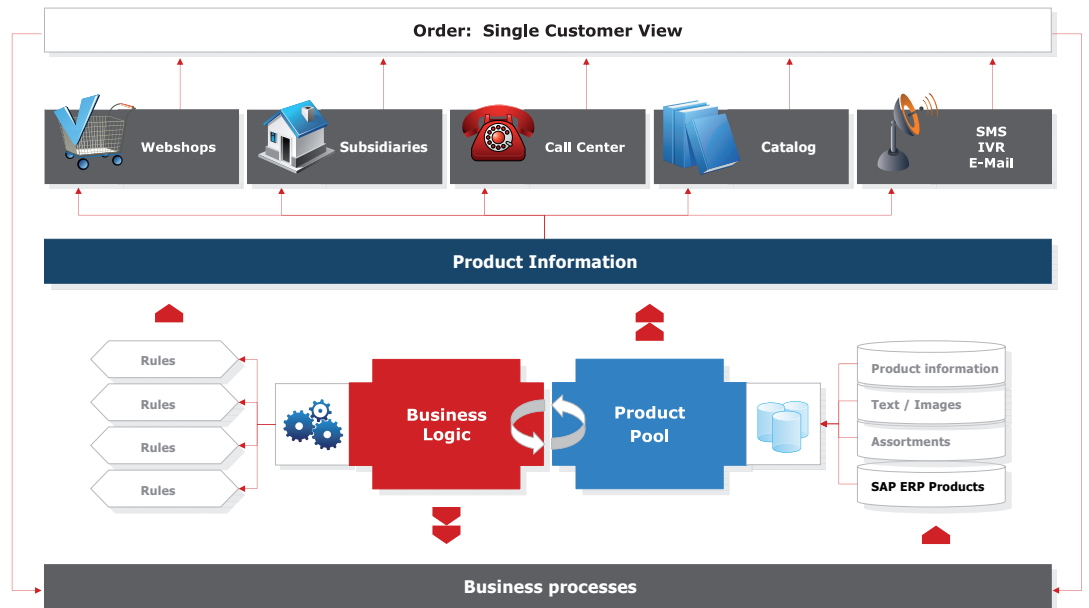
Automation

The most efficient and intelligent mechanisms possible must then ensure that information from different suppliers for the same item is consolidated largely automatically in a "Golden Record" according to certain criteria.

Assortment development

Finally, the system must allow efficient assortment development, which ensures the smooth supply of item information to the output channels, and permits manual additions. Consideration of the various system alternatives from modern PIM systems and existing IT components reached the conclusion that Heiler Enterprise PIM solution covered the requirements best of all. Data maintenance is one of the distinguishing features of the PIM system from Heiler Software, particularly where large data volumes are concerned. Whereas it is evident that PIM systems from other providers often originated in a particular output channel – mostly print or e-commerce – Heiler Product Manager covers the information supply chain as a whole.

Once the selection was made, Nionex provided the proof of concept with the first implementation of Heiler Product Manager for the online shop medienshop.de. First of all, Nionex successfully integrated the SAP system, Heiler Product Manager and the Apache Open For Business (OFBiz) e commerce platform. A Ruby on Rails-based community site was also connected to this. The result is a highly efficient solution with which supplier data is automatically uploaded to Heiler Product



Manager, consolidated with the master catalog using rules, and prepared for the online shop.

The implementation design included the setting up of the new central product pool as well as integration in the process control network of DirectGroup Bertelsmann. With the UC4: Global data automation environment, time-driven and event-driven processes can be started, and reactions to emergency situations largely automated. DirectGroup Bertelsmann attached great importance to the merge process, in other words, the consolidation of imported product data with the available master catalog within Heiler Product Manager.

The suppliers provided between 500,000 and 2,500,000 items of product data. The procedure was extremely performance-sensitive due to the large volumes of data to be processed. The fact that product information for an item is obtained from different suppliers also posed a challenge.

This can lead to situations where supplier A has the best descriptions, supplier B the best images, and supplier C provides additional information separately. In addition, the rules for consolidating item information are dependent on the assortments and thus different rules apply for books and music CDs, for example.

Nionex has adapted Heiler Product Manager for the merge process in such a way that the best product information from each supplier is consolidated in a "Golden Record" for an item in the master catalog by means of merge profiles and individual decision rules.

The easy-to-use functions of Heiler Enterprise PIM solution for compiling assortments for each output channel ensure that up to date product information is always used for the provision of suitable product data to the output channel. The data is finally transferred to the target systems of the sales channels via the

scheduler process of the Nionex solution, as illustrated in the following figure.

The Nionex retail PIM solution integrates Heiler Product Manager in a highly-automated and, at the same time, efficient environment that is to be implemented for all product information for the provision of all sales and service channels in multichannel retail trade.

In productive operation, product data updates from suppliers are integrated automatically in the online shop medienshop.de each day without the need for any manual intervention. The central product pool with the Heiler PIM environment, which can be flexibly adjusted to suit individual requirements, now makes it easier to connect additional output channels. Work is currently underway to connect the Intershops Enfinity shop platform to more than six online shops. That will be followed by the connection of printed catalog preparation.