



### Acando – Your Partner

Acando is a consultancy company that in partnership with its clients identifies and implements sustainable business improvements through information enabled by technology. Acando provides a balance of high business value, short project times and low total cost. Acando's annual turnover is about EUR 160 million and the Group employs approximately 1,100 professionals in six European countries. Acando is listed at NASDAQ OMX Nordic. Acando's corporate culture is based on three core values: Team spirit, Passion and Results.

## Service Bulletins

### Service Layer and Kit Management Tool

#### Challenges & Benefits

All local lines of Airbus produce Service Bulletins (SB) which describes how to embody after sales modifications into the aircraft. Along with a textual description of the modification Airbus delivers a kit of parts to the customer airline. Until spring 2005 all local lines used individual IT systems for the text authoring as well as for the kit management.

In April 2005 Airbus introduced a common authoring system for Service Bulletins that uses the XML/SGML editor EPIC as user interface. Each local line was provided with an individual instance of the new authoring system. Each instance is connected to the central workflow system. For the kit management however each local line still applies on its own business processes supported by local IT systems. In Germany the kit management is accomplished on mainframe systems that had to be connected to the German instance of the new authoring tool as well as to the central workflow system. This challenge was met by a batch driven service layer developed and implemented by Acando.

An updated version of the common authoring tool introduced in 2007

provided an integration with the central configuration management allowing the definition of several solutions for a given modification task depending on the different pre-states of those aircrafts affected by the SB.

Service Bulletins for the new A380 double deck jet require kits containing parts of different design office IT systems across all local lines of Airbus. Therefore Airbus had to introduce a central common kit management for service bulletins. Acando developed and implemented this new tool which does not only unify the business processes across all local lines but also provides the integration with the central configuration management. Therefore in addition to the textual description there can be assigned the related kits of parts to a certain solution of a given modification task.

#### Solution

The service layer is an adapter between the German mainframe systems on the one side and the German instance of the new authoring tool as well as the central workflow system on the other side. It does not contain any complex business logic but simply has to re-format

## Portrait of Airbus

Airbus is a European aircraft maker with headquarters in Toulouse-Blagnac. A subsidiary of the European Aeronautic, Defence and Space Company (EADS), it employs around 56,000 people at 16 sites in four European countries (France, Germany, the UK and Spain). As well as this, it has operations in the United States, China, Japan and the United Arab Emirates.

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and forward files from one system to the other. Acando implemented the service layer by a set of PERL scripts that run on a UNIX host and are started via the UNIX cron daemon. Each PERL script covers one use case that is either related to kit -, order - or document data processing. The service layer also provides logging and email notification functionality. Furthermore Acando implemented a web based UI for the service layer that allows to view all kit -, order - and document data processed for a given SB based on the information stored in the log files. This information tool is implemented in JAVA with JSP and servlet as web-tier. It is used by the maintenance team as well as by business key users.

The common kit management tool has been developed as a new SAP R/3 component for the SB domain on the central SAP platform of Airbus. The new kit management introduces extensions and customizations of the SAP material management and bill of

material management and provides an in-process connection to the central configuration management. The common kit management is on top of the SAP material master that is regularly fed with BoM data currently released in various Design Office source systems of Airbus.

Based on these design office bill of material data, the new kit management tool supports a two-step kit creation process: In a first step the items of one or more bill of materials can be copied to an internal Engineering-Kit.

Then the items of one or more Engineering-Kits can be copied to a SB-Kit obeying logistic and manufacturing constraints. On release, the SB-Kit is exported to the authoring system and to the central workflow system to trigger the part manufacturing process. For both kit types Acando implemented a revision management as well as a sophisticated state management according to business rules and interface requirements.

