ARIS Platform Products

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IDS Scheer
Altenkesseler Straße 17, D-66115 Saarbrücken, Germany
Tel: +49(0)6 81-2 10-0  Fax: +49(0)6 81-2 10-10 00
Web: http://www.ids-scheer.com/bptrends  Email: info@ids-scheer.de

1. Product Overview

The software and consulting company IDS Scheer is a leading provider of business process management related products and consulting services designed to support every phase of the business process management lifecycle, ranging from design, modeling, and analysis to implementation, monitoring, and optimization.

IDS Scheer develops Business Process Management solutions for corporations and public authorities. With its ARIS Platform for Process Excellence, the company offers an integrated and complete software tool portfolio for strategy, design, implementation and controlling of business processes and enterprise architecture management approaches. Thanks to the integrated approach of ARIS Value Engineering (AVE), IDS Scheer consultants build bridges between corporate strategy, business processes, IT solutions and the controlling of running processes in their customers’ organizations. IDS Scheer was founded in 1984 by Prof. August-Wilhelm Scheer and now serves about 6,000 customers in over 70 countries through a network of its own branch offices and partners. In 2006, the company earned revenues of about 354 million Euro. About 2800 people are working for IDS Scheer worldwide. The company is listed in the TecDAX on the Frankfurt Stock Exchange (Germany).

The ARIS Platform for Process Excellence consists in more than 20 product components supporting different usage scenarios and addressing different user roles in a company. All ARIS Platform products are highly integrated, using an integrated methodology, supporting open standards and can access all data from one central ARIS repository.

For business process modeling and analysis, IDS Scheer markets ARIS Business Designer and ARIS Business Architect. The former is an entry level tool intended primarily for users just getting started in business process modeling and analysis as well as for general (i.e., non-technical) business users that just want to model their process model parts of a company-wide business process and enterprise architecture. The latter is a high-end product that provides all the facilities and features required to support enterprise architecture management and that enable the enterprise-wide, global definition and design of business processes as well as their analysis and optimization. ARIS Business Architect integrates all features for analyzing and optimizing an organization business processes based on a common repository. For a detailed quantitative analysis of process correlations, resource allocations, weak-points analyses and processing times IDS Scheer offers ARIS Business Simulator as a simulation engine for realistic simulation and dynamic analysis of business process organization and operational structure.

Especially for IT managers and IT architects IDS Scheer markets the new product ARIS IT Architect which combines business process modeling with special methodologies and analyses for the management of enterprise architectures, standardization and harmonization of IT systems, IT landscape and IT architecture and portfolio management.

ARIS for SAP NetWeaver, an add-on component to ARIS Business Architect, is also the business process design and analysis tool used by SAP and by most SAP consultants and SAP developers. The
product includes a number of features that support SAP blueprinting, configuration, implementation, development and testing. It's the only tool chosen by SAP as business process modeling software integrated with SAP NetWeaver and SAP Solution Manager.

Oracle's BPM product portfolio now includes IDS Scheer's ARIS Platform and will support a customer's entire business process lifecycle, ranging from modeling and simulation to deployment and optimization across heterogeneous IT systems. There are also plans for Oracle to offer the Oracle® Business Process Analysis Suite, which is powered by IDS Scheer's ARIS Platform.

IDS Scheer has also been selected by Microsoft to be a preferred BPM modelling and monitoring partner as part of Microsoft's commitment to building a network with the formation of the Business Process Alliance. The Business Process Alliance is comprised of companies whose offerings enhance the Microsoft business process management (BPM) technology platform by providing integrated solutions in areas such as business process modeling, simulation, and business rules design.

Table 1 provides an overview of the ARIS Platform Products.

| ARIS Business Architect | ARIS Business Architect is Web-based and supports professional, enterprise-wide business process management (BPM). It offers maximum flexibility for modeling, analyzing, and optimizing business processes and benefits from an intuitive user interface. ARIS Business Architect contains extensive functionality for administering databases, users, scripts, etc. Alongside proven methods like Event-driven process chain (EPC), ARIS also supports BPMN, BPEL, UML, and other architecture concepts, such as, DoDAF, IT City Planning, and Zachman. |
| ARIS Business Designer | ARIS Business Designer is the Web-based tool for getting started with end-to-end business process management. With its client-server architecture and enhanced user interface, ARIS Business Designer allows even non-technical users to design professional business processes. |
| ARIS IT Architect/ARIS IT Designer | ARIS IT Architect provides all the elements needed to build and manage enterprise-wide IT environments and synchronize them with business processes. This software product supports all the necessary planning processes, from documenting and analyzing the existing architecture to establishing a new architecture that is aligned with business processes. |
| ARIS Business Publisher | ARIS Business Publisher guarantees permanent, low-cost availability of process and enterprise architecture information via Web-based portals. Thanks to rights-based and role-based access to process models, content is only displayed to the relevant target group. This prevents users from being overwhelmed and protects critical process knowledge. All portal content is dynamically generated when the user signs in, minimizing export times and guaranteeing up-to-the-minute information for decision-making. |
| ARIS for SAP NetWeaver | ARIS for SAP NetWeaver enables enterprises to define SAP related business management requirements from a process perspective. Requirements are mapped using business process models and can be enriched with all the necessary additional information and subjected to analysis. The bidirectional interface to SAP Solution Manager enables the models to be constructed on the basis of SAP reference content for a process-based SAP blueprint, implementation and configuration. They can be seamlessly implemented in the SAP Solution Manager. These process models therefore represent an important aid to making business decisions, while also ensuring that the required processes can be implemented in the SAP system. A special BPEL interface to SAP Exchange Infrastructure (SAP XI) supports end-to-end integration of existing IT systems. |
| ARIS Defense Solution | ARIS Defense Solution supports the development of DoDAF-based organizational architectures built on the C4ISR framework. With its central repository, object-based approach, and multiple interfaces, ARIS Defense Solution provides defense organizations with a truly professional tool. |
| **ARIS SOA Architect/ARIS SOA Designer** | ARIS SOA Architect enables users to design an SOA based on the business processes deployed in the various departments. The Service Browser in ARIS SOA Architect makes it easy to identify services for automating business activities. Because services are linked to business activities in the ARIS process model, executable BPEL processes can be generated automatically. After the BPEL processes have been exported, they can be executed on platforms, such as, Oracle Fusion Middleware, MS BizTalk, IBM WebSphere, BEA WebLogic, Fujitsu Interstage and SAP XI. |
| **ARIS ITIL** | ARIS ITIL offers companies:  
- a comprehensive reference model, which uses graphical models to represent all ITIL processes and structures relating to “Service Support” and “Service Delivery” including their hierarchies and dependencies.  
- navigation options through all levels of the ITIL processes, including references to the corresponding points in the publications “Service Support”, “Service Delivery” and “Security Management”.  
- clear and comprehensible representation of the interrelationships and dependencies between the individual processes thanks to graphical formatting in ARIS Business Architect.  
- flexible opportunities for adaptation of processes to individual company requirements.  
- problem-free supplementing of the models, e.g. with resources involved, documents or IT systems.  
- extensive options for evaluation of processes before implementation, e.g. determination of resource bottlenecks, system or media breaks or comparison of process alternatives.  
- the possibility of realizing software updates with no loss of data.  
- professional change management for flexible adaptation of processes to new or changed requirements overcomes discrepancies between documentation and actual processes. |
| **ARIS Easy SCOR** | Based on the Supply Chain Operations Reference-model (SCOR), IDS Scheer has developed ARIS EasySCOR. The ARIS repository based tool enables users to easily navigate the SCOR Model and customize the pre-defined reference processes according to their needs. |
| **ARIS Audit Manager** | ARIS Audit Manager is an intuitive software product that helps users to conduct tests by providing a corresponding workflow and all the relevant information. It enables organizations to carry out the necessary compliance activity with maximum efficiency and can easily be extended to accommodate new legislation or standards. |
| **ARIS Process Performance Manager** | ARIS Process Performance Manager (ARIS PPM) is a patented client/server software product that leverages key performance indicators to visualize, document, and assess “real-world” corporate processes in IT systems. Using actual processes, ARIS PPM generates intuitive management dashboards that display the current corporate objectives and communication relationships. An integrated early warning system (EarlyAlert) automatically monitors each step and issues an alarm in the event of deviation from planned values. ARIS PPM thus makes a key contribution to achieving sustained improvement in business processes. |
| **ARIS Toolset** | ARIS Toolset is a proven Windows-based tool for designing business processes and creating IT enterprise architectures. Offering extensive functionality for distributed business process management, this end-to-end solution supports users from definition through analysis to the optimization and implementation of business processes. In addition to the proven ARIS methodology of Event-driven process chain (EPC), many other architecture concepts and modeling notations are available, such as, Zachman, BPMN, UML, and BPEL. Many different import and export options ensure interoperability with other software products. |
| **ARIS Easy Design** | ARIS Easy Design is an intuitive tool for documenting business processes in graphical format. Its simple visual modeling methods are made available to users via target group-specific filters, ensuring that processes are easy to document and structure. ARIS Easy Design is extremely flexible and does not require any specialist knowledge. The aim of ARIS Easy Design is to allow non-technical staff to document their process knowledge without specialist assistance. |
To optimize processes, businesses need meaningful data that provides insights into different aspects of a workflow. This data normally consists of key performance indicators (KPIs), which are derived from the operational process. By combining process structures with KPIs, it is possible to reach precise conclusions about issues, such as, process costs and personnel requirements planning. ARIS Business Optimizer is a Web-based tool for process optimization using KPIs. It delivers process transparency by modeling operational structure and process organization, while also providing insights based on KPIs for IT and cost management activities. ARIS Business Optimizer helps users to define best-practice procedures and make informed decisions.

A number of templates, reference models and frameworks are also available with ARIS Platform, including for SCOR, ITIL, eTOM, ISO9000:2000, TOGAF, Zachman, DoDCAF, TEAF/FEAF, ArchiMate, SAP industry reference content, Oracle and industry specific process models from IDS Scheer. Finally, ARIS supports paperless certification according to many well-known standards.

2. Product Architecture

2.1. Architecture Overview

Figure 1 provides a generic overview of ARIS Platform architecture. ARIS has a flexible architecture that can scale from a single user to hundreds of users geographical dispersed. The Web-based clients based on Java can be launched in the Web browser via a central link. Alternatively, they can be installed as a desk top application via setup or software distribution. In both cases, any required client update can be set up and controlled centrally to avoid follow-up costs for a further rollout and for associated quality assurance measures.
A central database server (e.g., Oracle, Sybase, MS SQL) is used for data management. All ARIS clients access the database server via ARIS Business Server and thus work on the basis of the same data.

To guarantee optimum load balancing and increase reliability (“ARIS Site”), more than one application server (ARIS Business Server) can be used.

With the central database server and a clustering of several application servers, ARIS Platform offers a high level of system scalability and availability.

The scalability is also reflected at the level of the products in use. For instance, a large number of modelers who use ARIS Business Designer can be managed by relatively few users with ARIS Business Architect (access privileges, available reports, conventions / filters, etc.). With ARIS Business Architect administration can also be performed locally.

In a single-user scenario ARIS Business Architect can also be installed locally.

The traditional Windows-based ARIS Platform products, such as ARIS Toolset and ARIS Easy Design, can operate in parallel on the central ARIS Business Server via Local Area Network (LAN). As these products require a higher bandwidth, a terminal server, such as Windows Terminal Server with Citrix MetaFrame, is recommended when the products are used in the Wide Area Network (WAN).

2.2. Usability and User Interface

ARIS Platform modeling products support both general business users and technical analysts and IT personnel. ARIS Business Designer is intended for more general business users, while ARIS Business Architect, ARIS Business Simulator and ARIS IT Architect is targeted at more technical users like IT architects, project managers, and systems designers. However, all models created in various ARIS products and components are connectable and shareable because they utilize the same repository.

The user interface of the web-based ARIS products (i.e., ARIS Business Designer and ARIS Business Architect) has been developed by usability experts (psychologists, graphic designers, information scientists and software engineers) with the direct participation of IDS Scheer customers and interests.

In detail, since the beginning of the development of ARIS Platform products version 7.0 in 2004, the results of continuously performed usability studies were used for optimizing the usability of ARIS Platform products. The results of these studies confirmed the general navigation and design concept, e.g. the introduction of modules and panes or the new look-and-feel of the wizards, dialogs and controls. The participants of the studies were highly satisfied with the ARIS interface and 90% gave top ratings in structural clearness and visual design.

Figure 2 shows the basic GUI for ARIS Business Architect. This screen is displaying an overview of a company’s business model. By clicking on the various icons (e.g., “Strategy”, “United Motors Group”, “Enterprise Map”, “Data”, “IT Systems”, “Products+Services”, etc.) the user can drill-down to specific models and their associated information.
Figure 2. ARIS Business Architect GUI

The ARIS Business Architect GUI provides comprehensive design and navigation capabilities. Users can prepare models graphically or in text format. Full-screen mode and navigation options enable users to present data in a comfortable way, allowing design and modeling issues to be divided into clearly understandable sections, and large models to be viewed in their entirety. In MS Windows environments users can also embed and link (OLE-capable) multimedia objects in their graphical models as additional information, allowing the integration of text, presentations, videos, or internet links into their process documentation.

The ARIS interface is also configurable, allowing users to define their own symbols, own model-types and the appearance of objects, and to specify font and language capabilities used by the tool.

The ARIS design environment provides a number of features to assist users with creating process, organization charts, and other diagrams. These include automatic layout generation – including the multiple placements of objects, modeling objects in objects and creating implicit relations between them as well as placement of attribute occurrences on several objects at the same time through multiple selections.

ARIS Business Architect also has several features that provide behind-the-scenes “intelligence” for assessing and evaluating the quality of processes modeled in the tool. A semantic-checking facility ensures that as the user creates a model it will comply with established modeling conventions. In addition, an analysis module provides KPIs on the process-orientation of the organizational structure, on the integration of data and information, and on the degree to which the processes are integrated in the system. Figure 3 shows a Value-added Chain Diagram modeled in ARIS Business Architect.
2.3. Repository Options/Team Development

ARIS provides multiple capabilities for supporting team design and development. ARIS is repository driven, with all models and knowledge of business processes stored in the ARIS database repository, thus, ensuring maximum reusability of the data and models. The IDS Scheer folks refer to ARIS as having an “active repository” whereby all work or modeling takes place inside the repository. In other words, developers do not actually check out a model and then check it back in the traditional sense. Rather, when you open a model inside the repository, it is, in effect, “checked out.”

ARIS’s model-generation capabilities enable users to generate new views of existing models and other repository content. Users can combine existing models or objects according to specific rules to generate new models that provide additional information. For example, users might generate a function tree diagram from functions contained in multiple event-driven process chains (EPCs). Or, users could create an EPC from UML Activity diagrams. Importantly, source models and objects are not affected by this process.

Further team development support is provided by ARIS Business Designer, which allows users to design models in a standard browser, and ARIS Business Publisher provides role-based web access of models to employees via the internet.

Finally, every ARIS Platform product (i.e., ARIS Business Architect, ARIS Business Designer, etc.) features multilingual functionality for supporting international project teams.
2.4. Integration with Other Products

ARIS Business Architect offers various APIs and import/export formats for integrating and exchanging data with other products. In addition to XML export and import capabilities, ARIS can import process models from common standard interfaces and additional interfaces and formats such as XML, XMI, WSDL, XSD, XPDL, CADM (DoDAF), BPEL, BPML, Export, Visio, txt and Excel, as well as from popular case tools like IBM Rational Rose and ERwin. ARIS also provides an Active-X-API for exporting and importing information from ARIS Business Architect.

Finally, IDS Scheer offers consulting services for custom interface development. Some third-party vendors like Reischmann Informatik (www.reischmann.com) or Enel Software (www.enel.hr) offers several interface solutions for ARIS as well (CASE-Tools, MS Project).

3. Analysis and Process Modeling

3.1. Enterprise and Organization Models

Enterprise Architecture Models
ARIS Business Architect is one of the few tools on the market that supports all of the major frameworks, including Zachman, TOGAF, TEAF, FEAF, DoDAF (C4ISR), NAF, ArchiMate. In addition, ARIS features its own proprietary framework known as “ARIS House.” The ARIS Platform itself is based on the ARIS House concept developed by Prof. Dr. August-Wilhelm Scheer and offers a basic framework for process-oriented architecture of integrated information systems.

ARIS Business Architect also features a configuration component that allows users to customize frameworks and methodologies to meet the specific framework and methodology needs of their organization by creating filters or templates (See Section 3.2).

Organization Models
Organizational units, data objects, application systems and information carriers can be modeled within processes in ARIS, along with events and functions.

Resource and Cost Modeling
ARIS allows users to model a range of resource categories – including equipment, human, consumable, and services. Users can also define cost, schedules, and usage patterns as well. The aim of Business Process Management is also to create and implement efficient, cost-effective, high-quality processes.

ARIS Business Simulator is a product of ARIS Platform for dynamic analysis of process organization and operational structures. The simulation highlights weaknesses in business processes and supports the implementation of cost-effective processes. Key performance indicators obtained using ARIS Business Simulator allow a range of alternatives to be evaluated and the “best” process to be identified before costly process changes are made. With ARIS Business Optimizer IDS Scheer offers an additional product for the flexible analysis and calculation of process costs or underlying resources requirements based on the common data in the ARIS repository.

Mapping Organization Strategies to Performance Measures
ARIS Platform offers several options for representing performance strategies and goals, including Balanced Scorecard. End-user organizations can also add other representations to suit their needs.

ARIS Balanced Scorecard (BSC) option supports the documentation and analysis as well as the integration of strategic objectives, critical factors, and key data and measures necessary for implementing a balanced scorecard solution. A variety of options are offered. These range from the basic planning and documentation of a Balanced Scorecard to prototype development and the transfer of the information via Excel interfaces. Also supported are the analysis of cause-and-effect relationships and the calculation of actual values and a comparison with target values as well as immediate detection of deviations.
Managing Process Portfolios

Process portfolios are managed in the ARIS Repository, which can handle up to hundreds of thousands of processes. A complete description of the enterprise processes is captured in the ARIS repository, including metrics, people, systems, and data.

3.2. Defining Processes

ARIS offers several ways to model processes, with each method applying semantics that enforce process integrity. The user can model the process flow, process rules, actor, systems, inputs and outputs, and other resources needed in the process.

Define Processes

Processes are defined using ARIS Business Architect or ARIS Business Designer – graphical design tools for modeling and documenting business processes, organizational views, and data. Users can also describe process models in text format.

Process Information Storage and Integrity

All models are stored in the ARIS repository. In addition, ARIS’s semantic model control capability ensures that models are checked to verify they comply with specific modeling rules. This helps to ensure that the processes are mapped in ARIS logically and meaningfully. Only if models meet certain requirements are they processed further by other ARIS components, such as ARIS Business Simulator or ARIS Business Optimizer. (For more on ARIS Repository features and system administration/security, see Section 2.3.)

Graphical Notations

ARIS supports over 150 notations for modeling processes, data, systems, organizations, products, and services.

Users can also create own-defined, tailored notations and frameworks. This is accomplished using the ARIS Configuration component, which provides facilities for configuring ARIS Business Architect and ARIS Business Designer to meet organizational and end-user needs. For example, by using a special configuration functionality and by creating the appropriate filters, end-user organizations can adapt the ARIS Methodology to special requirements (e.g., rename model types, object types, symbols, attribute type groups, etc.). Users can also define templates that influence the appearance of objects and connections. Templates can be assigned to specific models in the ARIS repository.

Figure 4 shows a BPMN-Model, which is available in ARIS as an additional modeling notation. This notation method can be used in conjunction with the other ARIS methods available.
Figure 5. BPMN Model in ARIS Business Architect.

A UML Design component that supports all UML methods, including UML 2.0 Activity Diagrams, is available with ARIS SOA Architect. (For more on ARIS’ UML capabilities see Section 7.1). ARIS SOA Architect also allows to model BPEL specific notations that can be exported via a BPEL interface.

3.3. Subprocesses and Activities

Handling Subprocesses and Activities

ARIS provides a drill-down capability for representing and managing subprocesses.

Defining Activities

ARIS offers multiple drill down levels all the way down to the activity level. Using the function object, a user can depict activities. Alternatively, one can use the Activity diagram to show actors and activities.

Documenting Decision Rules

In ARIS, decisions are defined using the logical operators and events.

Rules Entry

Business rules can be depicted in the form of events and operators to show process rules; business rules can also be shown as separate rule objects in the model. IDS Scheer offers in cooperation with Corticon an integrated business rules support with ARIS Business Rules Designer. ARIS Business Rules Designer allows non-technical staff to describe rules and integrate them into business processes. Patented technologies provide support when searching for critical problems, such as, completeness issues or conflicting rules. Optimized rules can be converted into Web services for automated execution. By integrating the modeling and management of business rules, ARIS allows companies to boost the effectiveness of their business process design and its implementation in IT.
Activity Costs, Resources, and Time Data
ARIS methodology allows the storage of cost, resource, and time data with activities.

3.4. Simulation

Simulation Capabilities
ARIS Business Simulator is a web-based application for dynamic analysis of business processes and organizational structures. The simulation highlights weaknesses in business processes and supports the implementation of cost-effective processes. ARIS Business Simulator provides graphical animation of objects and attributes as well as provision of results in statistics tables. It features a discrete event simulation engine produced by Lanner Group.

Analytic Capabilities
For individual processes, the following data can be determined by dynamic simulation:

- Executability of the process, process weak points, resource bottlenecks, and so on
- Process duration that considers available resources for this process and other resources
- Execution frequency of a process within a given period
- Use of employees, organizational units, and other resources by certain processes
- Capacity development of used and consumed materials as well as finished products
- Wait times of the processes, resulting from employee and other bottlenecks
- Localization of the process weak points
- With the simulation of target processes, you can forecast the actual effect of planned restructuring

Real-time Data Utilization
ARIS Business Simulator does not interact with operational systems; however, IDS Scheer's Solutions Groups can build such an interface or the data provided by ARIS Process Performance Manager (ARIS PPM) can be used as input. ARIS PPM generates the process-data out of running IT systems.

Model Distribution and Simulation on Enterprise Networks
ARIS offers a full process discrete event simulation. The simulation can be run on high-level models that represent enterprise process flows. The simulation can also be run on the server.

Statistical Fit/Data Analysis
ARIS provides some analysis capability to analyze the process, using ARIS Business Simulator and ARIS Business Optimizer. The simulation engine produces various statistics from each simulation run that easily can be taken into statistical analysis tools like MINITAB.

Capture and Reporting of Simulated Metrics
ARIS’s animation features allow users to (visually) determine first results and tendencies during the simulation itself. Visual changes to individual objects during the simulation may immediately indicate whether or not process branches are ever run through. While attribute animation provides more detailed information about the state of individual objects, indicating, for example, the number of times a function is carried out at a certain point in time.
ARIS also generates cumulative and detailed statistics of simulations and process efficiencies, and the statistics can be displayed online (in real-time) in the form of charts, tables, and other diagram formats. Users can also export simulation results and statistics to Excel for further analysis, formatting, and publishing.

4. Business Process Methodologies

4.1. Business Process Methodologies

“ARIS Value Engineering” is the principal IDS Scheer methodology for business process management. The ARIS methodology includes over 150 model types and hundreds of objects. Users can also modify the appearance of objects.

In addition, ARIS Concept provides a guideline for developing, optimizing, and implementing integrated application systems. At the same time, it shows business administration specialists how to view, analyze, document, and implement information systems. This ARIS Concept approach is broader than just systems development. It supports enterprise architectures, business process improvement, and governance, risk & compliance approaches. It also includes some standard approaches, as well as proprietary approaches.

4.2. Six Sigma Support

IDS Scheer does not offer a specific Six Sigma add-on package for use with ARIS Business Architect. However, the company does offer a training program designed to support a Six Sigma model-driven solution. This includes a 5-day-workshop covering the Six Sigma concept as well as IDS Scheer’s Six Sigma product portfolio.
5. Report Generation and Document Management Capabilities

ARIS Business Architect includes a GUI for users to evaluate and run reports and analyses at the group, model, or object level of the ARIS metamodel. ARIS Business Architect includes more than 100 predefined standard reports, which users can modify. Users can also use a Report Wizard designed to assist in creating a report by accessing report scripts included with the ARIS Business Architect package, or that have been created (i.e., user-defined) with the integrated ARIS Script Editor (IDE) and JavaScript.

The JavaScript-based ARIS Report component as well as the macro functionality allows you to evaluate selected database contents in text form. Evaluations can be created as files of various formats (e.g. MS WORD/EXCEL, Adobe PDF, HTML etc.), which users can edit further, using standard applications. Users can also export model graphics in such formats as WMF, GIF, JPG, and BMP. Some reports can also write data to ARIS databases. In addition, database contents can be output automatically for translation, and translated texts can be entered back into the database.

With ARIS Business Designer or ARIS Business Architect, users can also create knowledge management models by using a knowledge object to indicate knowledge. In these knowledge objects, the user can link to external sources (e.g., documents, URLs, or knowledge management systems, etc.) so that external documents can be triggered from the model.

6. Development Environment

6.1. Language of Tool

The web-based ARIS Platform products are written in Java, whereas the windows-based products are written in C++.

6.2. Product Support, Maintenance, and New Versions

Users on maintenance are provided with support via email or phone. They can also access a FAQs knowledgebase on the IDS Scheer website.

Users with updated maintenance receive all product upgrades at no charge. Updates and patches are provided as needed and can be downloaded from the IDS Scheer FTP server.

7. Software Modeling and Code Generation

Optional components that are available – ARIS SOA Designer and ARIS UML Designer are designed to support business-driven software engineering efforts by linking process models (in ARIS Business Architect) with technical (UML) models. Typical users include software development engineers and managers.

ARIS SOA Architect and ARIS UML Designer are integrated in the ARIS repository and can access the data directly of ARIS Business Architect directly. Thus, multiple users at different locations can process the same data with ARIS SOA Designer, ARIS UML Designer and ARIS Business Designer. ARIS UML Designer fully supports all UML modeling methods as well as the Object Management Group’s (OMG) Model Driven Architecture (MDA) framework.

ARIS SOA Designer and ARIS UML Modeler also provide quality assurance capabilities through online consistency monitoring. This active modeling capability monitors and detects syntactical and structural modeling errors. Users can then transfer tested models from ARIS to third-part software design/development environments via XMI, where they can be used to generate program code.
7.1. UML Model Generation

The UML Designer component fully supports all UML diagrams.

7.2. BPEL Generation

ARIS SOA Architect is able to model, generate and export BPEL.

8. Templates and Frameworks

IDS Scheer offers a number of reference models and industry templates and solutions for the ARIS Business Architect, including

- SCOR reference model
- ITIL reference model
- eTOM reference model
- ISO9000:2000 reference model
- SAP reference model
- Oracle reference model
- Microsoft Axapta reference model
- Specific industry reference models (i.e., Financial service industry)

ARIS Audit Manager

ARIS Audit Manager is also available for ensuring Sarbanes-Oxley (SOX) compliance. It includes the following:

- Structured method and integrated procedures
- Maintenance of master data only in ARIS (i.e., no redundant data maintenance)
- Fast implementation and maintenance of the management system due to synchronization with ARIS
- Operational support for necessary tests within processes. In addition to documenting the risks and controls in the process, one can also document the test activities that need to be performed to validate the controls.
- Hassle-free production of documentation for auditors

ARIS Defense Solution

ARIS Defense Solution supports the development of DoDAF-based enterprise architectures built on the C4ISR framework. With its central repository, object-based approach, and multiple interfaces, ARIS Defense Solution provides defense organizations with a truly professional tool.

ARIS Healthcare Solution

ARIS Healthcare Solution is a process management tool custom-tailored for the healthcare industry. It enables the concise graphical representation of complex medical treatment processes as well as interactions across hospitals. It supports creating an optimal view of treatment paths and costs to support Case Management and Disease Management. ARIS Healthcare Solution also makes allowances for quality assurance; it can serve to minimize organizational risks considerably.

ARIS for SAP NetWeaver

ARIS for SAP NetWeaver enables enterprises to define SAP related business management requirements from a process perspective. ARIS for SAP NetWeaver, formerly known as “ARIS for mySAP” works based on the ARIS repository to enable process-oriented implementation of SAP applications. Requirements are mapped using business process models and can be enriched with all the necessary additional information and subjected to analysis. The bidirectional interface to SAP Solution Manager enables the models to be constructed on the basis of
SAP reference content for a process-based SAP blueprint, implementation and configuration. They can be seamlessly implemented in the SAP Solution Manager. Benefits include linking of business processes with SAP transactions, integration of enterprise requirements and customization, integration of SAP implementation tools, process-oriented user training sessions, and creation of user profiles. These process models therefore represent an important aid to making business decisions, while also ensuring that the required processes can be implemented in the SAP system. A special BPEL interface to SAP Exchange Infrastructure (SAP XI) supports end-to-end integration of existing IT systems.

9. Systems Administration and Security

ARIS Business Architect provides a number of administration and security features. These range from the modeling and semantic-checking features associated with the design and development tools (discussed previously) to a controlled review environment and data storage, documentation, and release lifecycle management capabilities.

Management. Core management capabilities for ARIS Business Architect are provided by the integrated ARIS Explorer component. ARIS Explorer component provides navigation options and enables users to administer servers, databases, user groups, access privileges, fonts, methodology filters, models, and objects.

Models and objects can be displayed in the Explorer so that the user can control the degree of complexity of the display. In addition, assignments to models can be shown in a concise and convenient manner.

The authentication of users via LDAP (Lightweight Directory Access Protocol) enables efficient administration of access privileges, particularly for large application scenarios.

Shared Modeling. To avoid conflicts and inconsistencies among versions of equivalent objects (maintained in different departmental databases), the ARIS Consolidation facility is used for merging objects and for creating an object definition that is valid throughout the organization.

A merge facility is also available that allows consistent merging of the contents of multiple databases into a single master database. This feature is important because, in multi-user mode, operational departments can enter their business processes in different databases. The ARIS Merge facility allows users (i.e., typically a coordinating office or group) to merge the content of varying databases – including those residing on different servers – to form one master ARIS database. ARIS Merge recognizes identical items when conducting a merge, allowing the user to decide which item(s) to transfer.

Change Management. The ARIS Change Management evaluation component helps ensure that models are current and that business processes are mapped correctly. Basically, this component functions by incorporating process models in improvement cycles so that documentation and analysis of continuous improvement are assured. Proposals for change and improvement can be made for all objects and models in the ARIS database/repository.

Basically, model users enter their proposals for improvement directly into the ARIS database/repository, with or without consulting a process manager. An improvement manager receives an overview of all improvement proposals via corresponding database items in the ARIS Explorer component. Model users see the proposals for change and improvement in attribute editing. The improvement manager receives information on all improvement proposals and their status. Based on this information, he or she can assign tasks to responsible parties. Modelers automatically receive notification of the tasks assigned to them, and the process manager is responsible for the implementation of the modified process. Thus modeled processes are evaluated and change measures initiated for them where they are actually being executed. In this way, process analyses with ARIS Business Architect provide a constant stream of current results that are pertinent for decision making. Reports are used to make the improvement information available outside the program as well.

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Release Lifecycle Management. ARIS Business Architect features a release lifecycle management capability that allows the tracking of complex process release cycles. The release cycle commences with a formal review of the model status by a coordinator in the development environment. The process manager who receives the results of this review checks the contents and then passes the model and project information released to a protected release environment and also back to the development environment.

10. Scalability

The ARIS Platform products can scale from a single user to hundreds of users that are geographical dispersed. It has a central repository that can be accessed by multiple users and can be deployed in a development and production environment.

The ARIS Business Simulator can simulate large complex models and can also simulate linked and inter-related models.

11. Supported Platforms

ARIS Platform Products can run on several platforms.

Supported Client Platforms
Supported client application platforms include Microsoft Windows 2000 and XP Professional.

Supported Client Browsers
Supported client browsers include Internet Explorer (up to version 6.0 SP1)

Supported Relational Database Platforms

12. Pricing

Pricing for ARIS Business Architect starts at US $6,500, with the pricing varying, depending on which components the customers wish to access.

Software licenses are on a named user basis. For large user scenarios, individual site license agreements are typical.

13. Company Product Positioning and Support

13.1. Company Background Information

IDS Scheer is the market leader in Business Process Management software and services for corporations and public organizations worldwide. With its unrivaled ARIS Platform for Process Excellence, the company offers an integrated, comprehensive solution portfolio for the strategy, design, implementation and controlling of business processes. Utilizing the ARIS Value Engineering (AVE) approach, IDS Scheer consultants bridge the gap between corporate strategy, business processes, IT solutions and process controlling. Approximately 2,800 employees, in over 70 countries, serve the company’s 6,000 customers. In 2006, IDS Scheer’s revenues reached 354 million Euro / $465 million USD. Established in 1984 by Prof. August-Wilhelm Scheer, IDS Scheer is listed in the TecDAX on the Frankfurt Stock Exchange (Germany).

IDS Scheer is a leading provider of business process management and IT products and services. The company has spent the past 20 years dedicating its R&D efforts and services to business process
management, In 1992, it introduced the ARIS Toolset. Today, IDS Scheer’s products and services cover the full lifecycle of enterprise architecture and business process management.

In addition to strongly focusing on offering products and services to help companies with SAP implementation, IDS Scheer offers a range of products and consulting services targeting various industry verticals – including consumer packaged goods, pharmaceuticals, automotive, chemicals, retail, and software development.

13.2. Positioning

IDS Scheer has positioned the ARIS Platform to support the entire range of EA modeling and BPM activities, including

- Enterprise BPM
- Enterprise Architecture Management
- Process-Driven SAP Management
- Business-Driven SOA Management
- Process Intelligence & Performance Management
- Governance, Risk & Compliance Management

IDS Scheer has been a leader in business process management for almost 20 years – both in product offerings as well as consulting services. As a result, the company has amassed extensive experience and expertise in all areas of business process management. This shows in the ARIS Business Architect, which provides a wide-range of features and functionality necessary to support the full breadth of enterprise architecture and business process management requirements. This experience also shows in the constant addition of new capabilities to ARIS Platform products, enabling IDS Scheer and its offerings to remain at the forefront of the market. (As an example, with its ARIS Business Designer component, which has been available for almost 5 years, IDS Scheer was one of the first companies to market a web-based business process analysis and modeling environment.) Today, IDS Scheer is heavily focused on packaging its considerable expertise in the form of process content for use with ARIS in order to offer customers pre-configured solutions for specific industries and applications.

When combined with its various optional components, the ARIS Business Architect offers one of the most comprehensive platforms available. In short, ARIS covers the full spectrum of business process modeling, simulation and analysis, optimization and enterprise architecture, and IT architecture design, making it suitable for modeling the entire organization. In addition, the large number of supported frameworks and methodologies (over 140+) make ARIS well suited for almost any modeling effort, including human performance improvement initiatives and development of Balanced Scorecards and other management and measurement systems. Likewise, when used in conjunction with UML modeling components, ARIS provides the ability to support IT and software development efforts, too. Finally, the availability of various reference models and industry templates provides a quick way for organizations to “jump start” various process and IT initiatives like SCOR, ITIL, financial services, healthcare, homebuilding, SAP, Oracle, and Microsoft Axapta efforts.

13.3. Product Training

IDS Scheer offers numerous training sessions and workshops oriented toward ARIS Platform Products and business process management, in general. These include a management workshop on “Strategic Business Process Management” and various ARIS training courses:

- Creating and analyzing models with ARIS Business Designer
- Project management with ARIS Business Architect
13.4. Business Process Consulting

IDS Scheer offers extensive consulting solutions for SAP, Enterprise Application Integration (EAI), Business Intelligence, and Business Process Reengineering.

The company’s industry-specific expertise covers: automotive industry, capital goods industry, chemical and pharmaceutical, consumer goods industry and retail, financial services, media, metals industry, paper industry, public sector, telecommunications, textile industry, transportation and travel, and the utilities sector.

Thanks to the experience in all mainstream sectors of industry and a consistent methodology, IDS Scheer is able to transfer successful processes from one industry sector to another.

14. Case Study

AUDI AG is a subsidiary of the Volkswagen Group and is one of the leading automotive manufacturers on the world stage. In 2006, the Ingolstadt-based company posted revenue of EUR 31.1 billion, employed some 52,000 members of staff at seven locations and produced 905,188 vehicles. The brand behind the four rings is known for its sporty vehicles featuring innovative, high quality technology.

Audi, the sporty brand within the Volkswagen Group, is putting the pedal to the metal to hold pole position in the fast-moving automotive market. This is the background to the introduction at Audi of a tool-supported IT architecture management system based on the ARIS Platform. The harmonized IT landscape will keep Audi in the fast lane: reference architectures and modules are reused and can thus significantly reduce the duration of projects — meaning that the company runs more productively and cost effectively. The process-oriented IT architecture solution is being rolled out across the board at the Volkswagen Group in a gradual process.

The automotive manufacturer has been using ARIS to model its business processes for over ten years now and also uses solutions from IDS Scheer in the company-wide PFITA method for analyzing and optimizing business processes. PFITA is a consultancy aid for gaining an overall picture of processes, functions, information and applications. To ensure optimum usage of the synergies with the existing ARIS process management solutions, the IT architecture management system was also installed in a process-oriented manner based on the ARIS Platform.

Over 3000 IT systems are being categorized in order to harmonize and standardize the fragmented IT landscape. This task is being performed by ARIS IT Architect, a solution developed in close cooperation with VW/Audi. The software supports all the necessary strategic planning processes for establishing and maintaining an Enterprise Architecture. The first task at Audi was to use ARIS IT Architect and ARIS IT Designer to document and analyze the existing landscape. ARIS IT Architect was also used to design the target architecture, which is aligned with the business processes and IT. ARIS Business Publisher ensures communication of IT content throughout the entire VW Group and serves as a data input environment for system specifications for a total of 4000 application managers.

Analyzing the existing architecture enabled the project team to identify redundancies within the technical IT architecture and business support. Audi is gradually removing unnecessary application systems. This
increases productivity as it completely cuts out redundant data and its maintenance. The end result is a consolidated and modular IT landscape. Furthermore, the IT standards set reduce the time required for employee training and familiarization.

The automotive manufacturer with the four rings as its emblem will also benefit from the integrated Enterprise Architecture when planning its IT in the future. The links between processes and IT are improved, and the architecture modules and methods available can be reused.

Based on the ARIS Platform IT architecture solution, standardized IT architecture management gives Audi a head start on a very competitive course.

15. Company Offices

Headquarters of IDS Scheer Global are in Saarbruecken, Germany, the North American Headquarters are in Philadelphia (Berwyn), PA. Subsidiaries of IDS Scheer are in Germany (Saarbruecken, Berlin, Dusseldorf, Frankfurt, Hamburg, Munich, and Nuremberg) as well as in 24 further countries, including Great Britain and France, USA, Canada and Brazil, Japan, China, Singapore and within Central and Eastern Europe. Please contact the IDS Scheer website for a complete list of subsidiaries.

Headquarters (Global)
Altenkesseler Straße 17
D-66115 Saarbrücken, Germany
Phone +49(0)6 81-2 10-0
Fax +49(0)6 81-2 10-10 00
Email info@ids-scheer.de
Internet http://www.ids-scheer.com/bptrends

Headquarters (North America)
1055 Westlakes Dr Suite 100
Berwyn, PA 19312
Phone: +1-610-854-6800
Fax: +1-610-854-7382
Internet: www.ids-scheer.com/us