

Two wireframe hands, one pointing towards the text and the other open, are rendered in a white grid pattern against a blue background. The text is centered and reads: 

**THE  
FUTURE OF  
BPM  
STARTS  
NOW!**

**Professor Scheer on technology trends  
that will shape the future of BPM**

## The Future of BPM starts now!

### Professor Scheer on technology trends that will shape the future of BPM.

**Business Process Management (BPM) is an established management discipline. Since today's organizations expect every employee to think and act like an entrepreneur, i.e., like a manager, BPM is also increasingly becoming part of everyday operations. But merely adopting a process-based approach across the enterprise is not enough to enable BPM at every level. What is needed is a combination of organizational forms and technologies that support distributed BPM initiatives while simultaneously consolidating them company-wide. Every employee must be empowered to model and optimize their own processes. At the same time, the entire BPM community needs a platform that brings together all the individual initiatives. This is the only way to leverage the full potential of process-oriented management. In the following article, the authors describe the trends in BPM development that are turning users into process managers and supporting the creation of a BPM community.**

#### Find out:

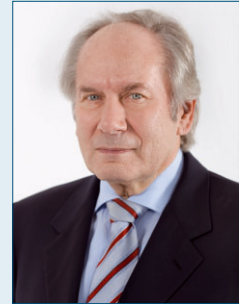
- ▶ Which technology trends will shape the future of BPM

### BPM Guerrilla vs. BPM Governance

BPM initiatives often start with a guerrilla approach – individual departments launch improvement initiatives to remedy inefficient workflows, with the choice of software tools being based on departmental preferences. To avoid time-consuming procurement and approval processes, the choice falls on low-cost tools bought online. Team members gradually evolve their own methodology for describing processes, which is then developed in ad hoc fashion. When there are more than two or three process modelers involved, the manual effort needed to maintain model consistency rises sharply. The lack of standards means that content is frequently interpreted differently, leading to decisions being made on incorrect data. If the BPM project grows virally across departmental boundaries, further problems arise: other teams have already recorded their processes using different technology, enterprise-wide process chains cannot be created, and teams find it difficult to share their insights. Accordingly, the guerrilla BPM initiative fails before it can deliver real value.

Many organizations recognize that BPM initiatives tend to come into being virally, as described above, rather than due to strategic management decisions from the center. Such projects should be encouraged rather than prevented, since process orientation is beneficial to businesses. Having said that, there needs to be sufficient upfront intervention to ensure that the results of individual BPM teams can be combined. At the same time, it is important to maintain momentum: after all, no one has the time or inclination to wait months for the internal procurement department to finally come up with BPM software. The guerrilla approach thus calls for products that can be bought over the Internet and are easy to install.

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#### Joerg Klueckmann

studied Industrial Sociology, Business Administration, and Intercultural Communication at Friedrich Schiller University, Jena, Germany, and Louisiana State University, Baton Rouge, LA, USA. He graduated with distinction. From December 2000 to June 2005, Joerg Klueckmann was employed at Intershop Communications AG, where, as marketing manager, he was responsible for product marketing for Infinity, a leading software solution for professional e-commerce. In June 2005, Joerg Klueckmann joined IDS Scheer AG in Saarbrücken. He is responsible for international product marketing for ARIS Platform, as well as for all ARIS solutions.

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ARIS Express is just such a tool. It can be downloaded online free of charge and installed on every workstation. The integrated event-driven process chain (EPC) method ensures a consistent basis for interpreting and evaluating process models. Models can be combined to form cross-departmental process chains, despite the ARIS Express users being scattered across the organization (Fig. 1).

ARIS Express also supports other types of models in addition to EPCs, such as organizational charts, value chains, BPMN, and IT environments. Unlike the majority of modeling tools, the software is thus not limited to a process view. This flexibility is a key requirement for a holistic approach to Business Process Management that takes full account of business reality.

If more specialized functionality is needed, such as model versioning, complex evaluations across multiple process chains, or process simulation, all content can be transferred from ARIS Express into IDS Scheer's professional ARIS tools. The unstructured BPM guerrilla approach can therefore be transitioned into structured, sustained, holistic Business Process Management<sup>[1]</sup>.

BPM governance plays an important role in facilitating the transition from unstructured to structured BPM. Organizations with a large number of BPM users and high workflow flexibility requirements need to establish structures and policies that take the process management process itself to a professional level. When this degree of BPM maturity has been

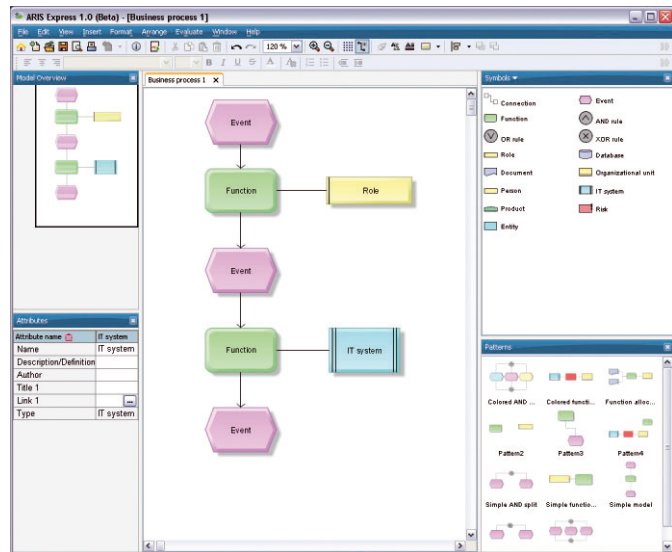


Fig. 1: ARIS Express

achieved, technologies, such as ARIS Governance Engine, must be deployed to define and implement BPM structures and policies. Thanks to the model-driven approach behind ARIS Governance Engine, individual departments can create and implement their own governance processes by way of the ARIS method. A dialog designer provides a simple drag-and-drop interface to enable creation of input templates for subsequent automation. Thanks to predefined form fields, users can quickly create the screens in a structured manner. The data flow needed for process control can be created via a graphical data flow designer (Fig. 2). This greatly simplifies linking of dialog box elements with the underlying data for non-expert users.

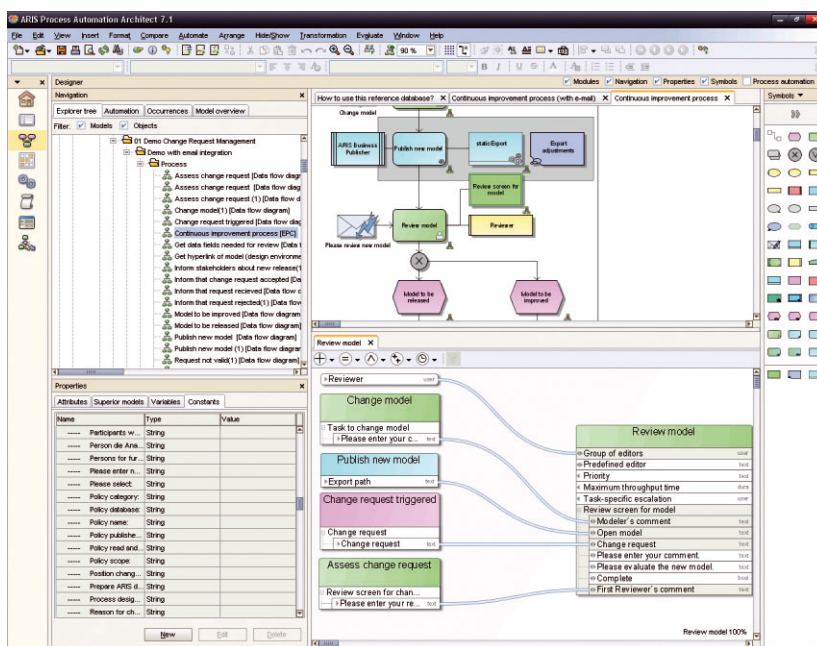


Fig. 2: Data flow modeler

The process desktop provides a custom, role-based task view with a list of all open, ongoing, delegated, and completed tasks, thus delivering a quick overview of the user's area of responsibility within the process. Users are guided step-by-step through each task from this desktop via the dialog screens created earlier. Replacement cover and escalation mechanisms deliver extra flexibility and help ensure that day-to-day workflows run smoothly.

With ARIS Governance Engine, business process modelers equipped with the necessary rights can become BPM governors; no IT support is needed. In change management projects, BPM managers gain the ability to optimize and accelerate their change processes and make them more transparent, while the role of IT architecture managers is to implement professional approval processes and optimize IT architecture and portfolio management activities. Governance managers can tailor their policies to meet compliance needs and roll them out across the organization. The overall result is more efficient and effective BPM organization.

Companies wanting to establish their level of BPM maturity can access Professor Scheer's Advanced BPM Assessment (<http://www.professor-scheer-bpm.com/>). A BPM application wheel and BPM technology wheel display the various phases and technologies on the path to a holistic BPM approach.

## The Power of the Community

In recent years, there has been an explosion of online communities covering a wide range of subjects, with Facebook and LinkedIn being particularly prominent examples. This process has been driven by a desire to communicate with like-minded people and learn from them. The success of business communities, such as LinkedIn, shows that business users and BPM teams also want to interact with other users – both within the organization and beyond. This is not exactly a new trend because user groups have existed for a number of years, usually relating to a specific technology or product family, such as SAP, ARIS, or UNIX. Such groups also tend to be locally based. Today's online communities, however, are global and characterized by a virtualization of relationships. Regular face-to-face meetings are less important, with their place being taken by thriving online forums. Participation of employees in a BPM community yields a number of benefits. These include acquiring a process mindset in an informal peer group setting, thus helping to establish a process culture within the enterprise. External advice and comparisons with other companies become available without the need to invest in costly consulting projects. And by actively participating in a BPM community, employees acquire the knowledge they need to create a successful process culture.

The new ARIS Community (Fig. 3) allows BPM evangelists and project teams to acquire process knowledge and stay updated on the latest developments. Personal connections can be established with BPM experts on the provider side and in other organizations. Web 2.0 technologies make it possible for BPM teams to join forces, exchange process knowledge, and engage in collaborative development work, regardless of location. Since collective results and decisions are better than individual ones, communities improve the effectiveness and efficiency of BPM initiatives<sup>[2]</sup>. The ARIS Community also offers a growing number of BPM courses and training materials that enable new BPM users to get up to speed quickly on the subject.

The ARIS Community ([www.ariscommunity.com](http://www.ariscommunity.com)) also has plenty to offer ARIS users, who can submit questions to IDS Scheer experts about specific ARIS products in a special forum. Frequently asked questions are documented and accessible via a user-friendly search function. In addition, ARIS Express can be downloaded from the ARIS Community site. This software features the standards required by the community to ensure that results are compatible and can be interpreted in a consistent fashion. ARIS Community members based in different locations worldwide can work together on best practices. The established ARIS blog ([www.arisblog.com](http://www.arisblog.com)) is integrated into the Community, as is ARIS TV ([www.youtube.com/aristv](http://www.youtube.com/aristv)), the first BPM channel on YouTube. A Twitter feed (<http://twitter.com/ariscommunity>) updates members on new contributions and keeps them informed about the ongoing development of Community functions.

ARIS Campus ([www.ariscampus.com](http://www.ariscampus.com)) is a special community with a BPM focus established by IDS Scheer for universities. Students and lecturers benefit from online campus access to BPM knowledge, software, best practice examples, and the latest research results. The PROWIT research project (Process-Oriented Web 2.0-based Integrated Telecommunications service) uses ARIS Campus to examine the potential impact of Web 2.0 on BPM<sup>[3]</sup>. The ADiWa project is conducting research into the potential components of semantic BPM (see Sneak Preview: Semantic BPM). This project also uses ARIS Campus to bring together the various teams online and encourage interaction.



Fig. 3: ARIS Community

## Crowdsourcing – Making Products and Processes Democratic

Consumers are increasingly demanding more say in how products are designed. In the auto industry, mass customization has long been established practice, with customers able to modify the specification of their chosen car right up to shortly before production commences. Other industries have picked up on this trend: Customers of Lego Factory (<http://factory.lego.com/>), for example, can create new models from standard Lego bricks using a form of CAD software, publish them in a community, and order the relevant bricks. Other members are then able to add to the models. The creativity of the community is greater than that of any design department, and it helps Lego to produce many new models based on standard elements. Tasks previously performed by company employees are now outsourced to a large, undefined group of people organized in the form of a community. This approach is referred to as “crowdsourcing”<sup>[4]</sup>.

The software industry has also experienced increased demand for customer input into products. Customers know best what range of functionality a software product should have and what the underlying processes they need to support look like. The obvious answer is to provide customers with standardized components from which they can create their own applications. The IDS Scheer response to such demands includes ARIS MashZone, which enables departmental users to create mashups (composite applications) for visualizing and evaluating a range of data. Every user department holds huge amounts of data that can only be accessed and visualized with a great deal of effort. This data is often derived from different sources, and users have a huge need to create connections and establish patterns. Because such data is often very volatile, static reports are no longer sufficient. In fact, most reports are obsolete by the time they reach the recipient – a situation that many companies cannot tolerate in times of crisis.

Like in the Lego Factory scenario, ARIS MashZone users can perform their own situation-based evaluations without needing any programming knowledge. This in turn reduces the workload of IT staff. With every consumer of information now a mashup producer, the long wait for analysis results becomes a thing of the past. Employees gain better insights faster and have more freedom when it comes to preparing/presenting key performance indicators relevant to the decision-making process. A mashup combines internal data (ARIS Process Performance Manager, ARIS Process Event Monitor, ARIS Business Optimizer, Excel, ERP systems, CRM systems, data warehouse systems, etc.) with Web data (Google Maps, statistical databases, financial tickers, etc.). To do this, it taps data sources and turns them into feeds (Fig. 4). Consistency is ensured at all times because data remains in its original source location. The feeds are then assembled into mashups in a visual composer. ARIS MashZone offers a host of visualization components for this purpose (bar graphs, pie charts, pyramid charts, funnel charts, maps, etc.). Interactive display enables intuitive analysis and filtering of data in the mashup.

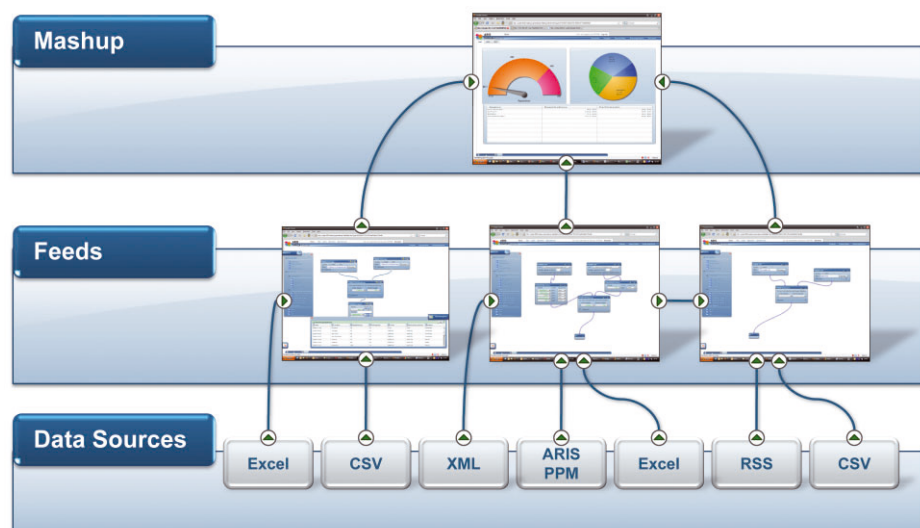


Fig. 4: ARIS MashZone

Typical ARIS MashZone scenarios include evaluation of marketing campaigns, competitor analysis, customer satisfaction analysis, and financial analysis. Fig. 5 shows a mashup of United Motors Group (UMG), IDS Scheer AG's demo company. The mashup visualizes the results of a roadshow marketing campaign to launch a new vehicle. A CRM system (sales for last 12 months) is linked to e-mail marketing software (invitations), plus two Excel lists (registrations, participants), bringing together all the data.



Fig. 5: Mashup of United Motors Group

Users can display considerable amounts of detail, such as showing the sales figures for an area 200 km around the roadshow location in an integrated Google Maps view. Integrating sales process indicators from ARIS Process Performance Manager (ARIS PPM) makes it possible to use the mashup to check whether objectives are being achieved. If sales are below target, the user can go directly to ARIS PPM to analyze the live processes.

The Web 2.0 approach behind ARIS MashZone means that employees can share their mashups with colleagues and/or redeploy them (user-generated content). Thus process information from ARIS products can also be distributed to employees who do not use ARIS. The attractive way in which process KPIs (e.g., from

ARIS PPM) are presented in mashups increases user acceptance, making Business Process Management fun and exciting. Thanks to a multidimensional combination of data, new information can be acquired, generating new knowledge in the process. As a result, the intellectual and creative potential of every member of the organization is realized.

### The Search Function – A Gateway to Everything

Few technologies have attracted as much attention in recent years as search functionality. Much of this can be attributed to Google, which was founded by students at Stanford University. The Google search engine revolutionized not only the way Web information is accessed, but also user behavior. Instead of trawling through sitemaps or complex menu structures in software products, more and more users are using search functionality to access the information or functions they need. The major benefit of this kind of search is finding things you never knew existed. Conversely, if information or functions are “invisible,” they are worthless.

The same is true of BPM projects: best practices, policies, and process standards are worthless if employees cannot find them. New ARIS Rocket Search therefore gives all company staff – regardless of their process and methodology knowledge – easy access to all forms of process content, ranging from workflow descriptions to templates for documents associated with the workflow and decision-making aids. Rather than navigating through a series of hierarchies to identify a process, all users have to do is enter the description of the process in the search box. Every letter entered reduces the number of hits returned. Fig. 6 shows a search for a sales process in the UMG process repository. Entering “SAP” as an additional search term would return all sales processes supported by an SAP system. Users can go directly from the search screen to the relevant process or object.

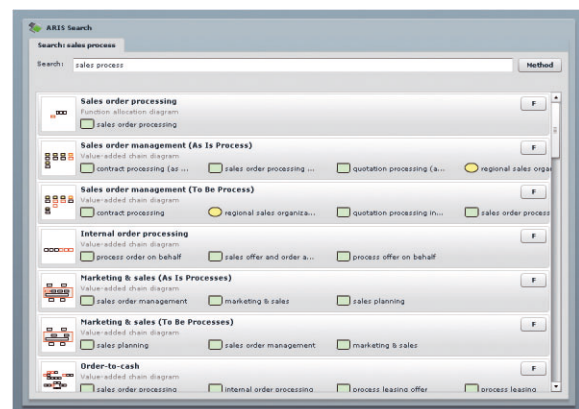


Fig. 6: Searching for a sales process

ARIS Rocket Search also makes work easier for modelers working on process models, giving them the ability to select objects in the process chain and search for them in the ARIS repository. A filter is available to restrict the search to an exact combination of objects or to each individual object (Fig. 7).

To make working in ARIS easier, it is also possible to search menu structures, interfaces, and the help system. For example, to find out how to run a report, users can simply enter “Run report,” and the function is executed immediately. Since BPM content is often stored in different databases, ARIS Rocket Search can search any number of process, architecture, or service repositories and associated document management systems. Hit accuracy improves with every search because ARIS Rocket Search tracks the results most frequently used. Key information is identified, categorized, and prioritized during the next search, aided by the use of semantic information from the process repository. Searches for a job description also return processes, manuals, IT systems, and employees (social network) associated with the job. Benefits include the ability to create training programs quickly and easily. The search results can be displayed in list form as well as graphically, offering statistics and intuitive visualization in greater detail. ARIS Rocket Search also benefits from sophisticated input recognition functionality, enabling number ranges and time spans to be recognized and searched for. Whether the approach is BPM guerrilla or BPM governance, intuitive search functions that deliver fast, accurate hit rates are set to become the standard access mechanism for BPM information.

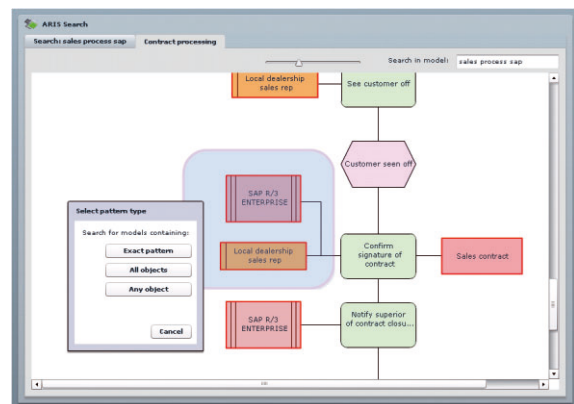


Fig. 7: Searching within a process

## BPM and the Cloud

One of the hottest topics in the BPM community is currently BPM in the cloud. Using the software-as-a-service (SaaS) model, this involves offering and consuming BPM services via the Internet (cloud). Users can access these services and execute the application on the Web via a thin client. Because processing takes place online, an almost complete BPM environment is available. But before an organization decides to take to the cloud with its BPM initiative, it needs to distinguish between core processes and context processes and identify the relevant risks and opportunities.

Core processes are a company’s essential value-adding processes. As such, they are the operational expression of corporate strategy. If the strategy is one of price leadership, core processes will be geared toward cost minimization. If high service quality is the strategy, the focus will be on smooth operation and ongoing optimization of all processes with customer touchpoints. In a word: core processes carry an organization’s DNA and are crucial to business success. Clearly, such processes should not be placed in the cloud without careful consideration – competitors could access them and gain an advantage. Core processes are also not candidates for public exchange of information on freely accessible platforms, so there is no real case for making them available across corporate boundaries.

The situation is different when it comes to context processes, which tend to play a supporting role (HR processes, support processes, etc.). Best practices are frequently exchanged publicly and documented as part of various standardization initiatives across a broad range of industries. For example, the business processes of telecommunications companies are documented in eTOM<sup>[9]</sup>.

IDS Scheer supports both scenarios, enabling organizations to use Java-based ARIS versions to launch BPM initiatives in a “private cloud” for users in different locations around the world. All data is stored and consolidated in the central ARIS repository. ARIS Governance Engine enables transparent design and efficient implementation of change processes. IDS Scheer also offers modeling as a service, which enables customers to use an installation operated within IDS Scheer’s data center, instead of having to buy hardware or install software. Rights- and role-based access to the system is provided via the Web (Fig. 8). Context processes, on the other hand, can be published and discussed on ARIS Community, where the collective intelligence of members enables continuous process improvement. Of course, not-for-profit organizations can also have their core processes analyzed and improved by the community, in the same way that open source software, such as Linux, is developed collectively.

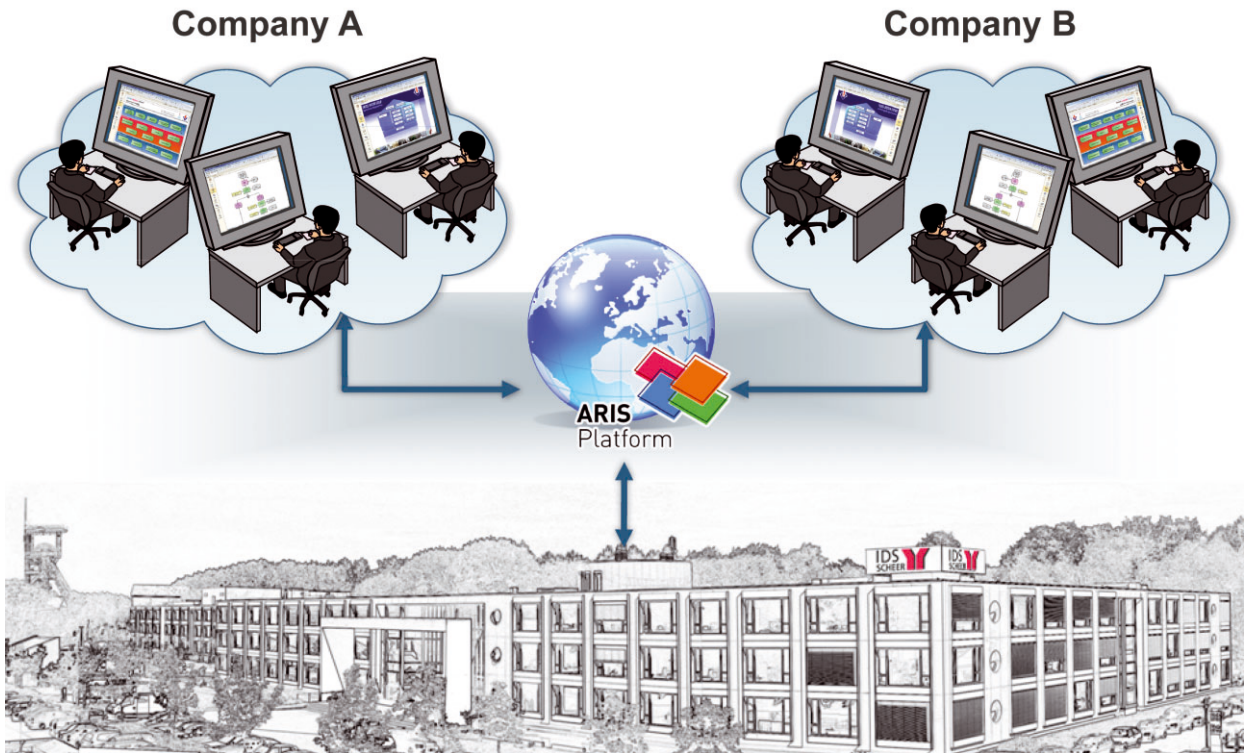


Fig. 8: Modeling as a service

But many enterprises have a much more basic problem: they have no real knowledge of their core and context processes. This can lead to huge problems in times of economic turmoil. If core processes are compromised by cost cutting and restructuring activities, customers will quickly switch to competitors. At the same time, care must be taken that any outsourcing decision only applies to context processes, while continued investment in core processes is essential to retain existing customers and acquire new ones.



## Sneak Preview: Semantic BPM

To implement Business Process Management at the IT level, business processes need to be transformed into technical processes. For some years now, the technology of choice here has been service-oriented architectures (SOAs). All too often, however, SOA projects fail to deliver the desired results, often because of a lack of adequate cooperation between user department (SOA customer) and IT department (SOA provider). The barrier between business and IT is due in large part to the different language used by the two groups. The SUPER research project (Semantics Utilized for Process Management within and between Enterprises) seeks to bridge this gap through a combination of semantic Web services and BPM<sup>[6]</sup>. The result is a methodology for semantic BPM covering the entire BPM lifecycle. Process models are semantically annotated, which increases reuse of process fragments. The models are then translated into the BPEL4SMS standard and executed. Users can use semantic queries at runtime to search for and execute new software services<sup>[7]</sup>.

As an example of a semantic BPM scenario, take a food manufacturer, who has to comply with new EU regulations stipulating that certain foods must now be sold within a shorter sell-by date than before. If the organization already has a BPM initiative, it needs to identify the processes relating to shipping of the relevant products – a task that can only be performed by a human being. With semantic BPM, the business processes and EU regulations would be defined in a way that allows automatic execution of the required process changes. Technologies used here include reasoners, ontologies, and mediators, which have all been developed to make the semantic Web a reality. In the semantic Web, machines can understand and categorize Web content<sup>[8]</sup>.

Although semantic BPM currently only exists in the research labs of universities and a limited number of BPM technology providers, such as IDS Scheer, this technology is key to the future of BPM. For it to succeed, organizations must have a high level of BPM maturity, but given the rapid progress made recently by BPM at the technology and organizational levels, it can only be a matter of a few years before semantic BPM becomes reality.

## Summary

The BPM guerrilla approach and BPM governance are not conflicting choices. Rather, they are two different organizational forms that represent a natural progression as an organization's BPM maturity increases. Both depend on technology to deliver the benefits of a process-driven organization. It needs to be possible to combine the output of independent BPM teams and interpret it consistently. Teams also need the ability to form communities and share insights. This is the only way to propagate the process mindset across the enterprise. Whether search functionality or mashup technology are used, access to process information must be quick and easy. Increased viral distribution of process information enables generation of greater knowledge. Although prospects for the emergence of a self-learning BPM system are encouraging, it should be remembered that processes will always be modeled, optimized, implemented, and monitored by humans. Technology is simply a means to an end – it is always people who drive growth.

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