



Communities of Innovation at SAP
Enterprise Services Community

A PRESCRIPTION FOR COLLABORATION

BUILDING ENTERPRISE SERVICES FOR THE HEALTHCARE INDUSTRY

In healthcare, accurate patient and clinical information is critical, and integrating it with back-end software can be a challenge. To address this, SAP convened groups of customers and SAP partners to advise on needed solutions. Their valuable feedback helped SAP develop enterprise services for the industry.

Healthcare is inherently complex. Whether treating an accident victim or giving a routine inoculation, providing quality care requires a team of skilled professionals, highly sophisticated equipment, and a daunting array of drugs and supplies. To compound the situation, all of these must be supported by meticulous record keeping, intricate workflows, and deft administrative processes. Given this complexity, it's no surprise that many hospitals, clinics, and health networks struggle with disparate IT systems.

This is particularly true when it comes to administrative and clinical processes. Most healthcare organizations rely on highly specialized software – developed internally or purchased from independent software providers – to manage activities such as shift planning, device maintenance, diagnostic entry, medication management, and medical documentation. Tying these applications together, and linking them to traditional enterprise resource planning solutions, can be quite a challenge. In the past many IT departments have attempted to integrate patient management and clinical applications via hard-coded interfaces or cumbersome manual processes like data reentry. The result: high costs, low productivity, and an inflexible IT landscape.

The Power of Peer Review

The challenge of integrating clinical and patient management applications can also affect the many hospitals and clinics that use the SAP® Patient Management application. An integral part of the SAP for Healthcare solution portfolio, this application helps organizations efficiently manage patient-centered processes like admitting, tracking, billing, and discharging. To address this challenge, the solution management team for SAP for Healthcare created a group of enterprise services to help healthcare customers connect the SAP Patient Management application to disparate clinical systems.

Instead of developing the services independently, SAP invited representatives from 12 leading German and Austrian healthcare organizations to serve as a focus group for the service-definition process. Groups like this are not uncommon in the ecosystem surrounding SAP. Known as community definition groups (CDGs), they are part of the Enterprise Services Community program – a technical forum in which SAP customers and solution providers collaborate with SAP to define enterprise services and business processes. In addition to gaining a unique opportunity to work directly with SAP solution architects and business

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analysts during the service-definition process, members of a CDG also welcome a chance to share insights and ideas with their peers. “It’s not good to sit behind a wall and think solely about your own solutions to a problem,” says Dr. Martin Glück, head of clinical information systems at University Hospital of Mainz. “Often, there are good ideas that are completely different from our own. In the CDG, we can find out how other people have solved a particular challenge.”

A Collaborative Approach

After an initial two-day session held in May 2006, during which Glück and his peers in the healthcare industry discussed a wide range of IT issues, the CDG narrowed its focus to a handful of issues with existing SAP software. In addition to discussing the need for better integration of clinical and administrative applications, the CDG participants also identified some areas for improvement in the SAP Patient Management application. For example, staff members at many of the hospitals were having trouble completing certain patient-oriented processes because all fields on a given page had to be filled in before a transaction could be accepted by the software. “Sometimes it was difficult to get blood levels done because a patient couldn’t speak to a nurse or administrator,” says Dr. Eibo Kraemer, CIO and CFO at University Hospital of Mannheim. “And with no name or address or insurance information in the correct field, the application wouldn’t let you complete the administrative process that generates a patient identifier.”

The ad hoc solution – for University Hospital of Mannheim, as well as the other organizations – was manual work-arounds. For example, a nurse who didn’t know the answer to a question about insurance coverage might simply enter a random notation so that treatment could commence, then go back later and enter the correct data. This cumbersome practice reduced staff efficiency and contributed to the potential for inaccurate record keeping.

During the course of the CDG sessions, the solution management team presented a methodology based on enterprise service-oriented architecture (enterprise SOA) that will allow healthcare organizations to separate SAP applications into smaller, more modular components. As a result, users – including nurses, physicians, clerical workers, and administrators – will no longer have to enter data that is not directly linked to their roles and functions.

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Putting Enterprise Services to Work

Based on feedback from the CDG, the solution management team finalized the patient administration services and packaged them as an enterprise services bundle. This collection of enterprise services is built using commonly accepted process components and business objects that support a specific business process or business scenario. It includes a number of real-world use cases that contain step-by-step descriptions of how end users will accomplish certain tasks using the services. Use cases specify the sequences and circumstances that determine the way in which an application will consume or provide the enterprise services contained in the bundle.

SAP also supports the services through an enterprise services Wiki, a dedicated Wiki¹ that encompasses the collective know-how surrounding them. Enterprise services Wikis typically include service descriptions, suggestions for using the services to solve key business problems, and guidance on relevant best practices. Flexible, accessible, and comprehensive, Wikis are an ideal tool for transferring knowledge and sharing experiences among SAP customers, partners, and employees.

Delivering Healthier Applications to Healthcare Customers

Approximately 12 months after their initial fact-finding meeting, members of the healthcare CDG reassembled to review the enterprise services being developed on their behalf. Not surprisingly – given their active role in the

1. The patient administration Wiki can be found on sdn.sap.com by performing a search for “enterprise services Wiki patient administration.”

Patient Administration for the Healthcare Industry

The bundle includes enterprise services that address patient identification and encounter-management processes, and supports roles for nurses, administrative clerks, and schedulers. It includes approximately 40 enterprise services and enables functions such as:

- Create patient
- Merge patient
- Create billing patient encounter group
- Create patient encounter

definition process and their ability to preview developed services via online collaboration rooms – the group was highly enthusiastic. “Business objects and services made sense right from the beginning,” says Krahmer. “The only question was determining how those services would fit into our specific processes and workflows. This can be difficult because you have to split the services at different steps in a given workflow, and we talked quite a lot about how we might do this.”

The patient administration bundle contains more than 40 services and, like the enterprise services SAP offers for other industries, it will be made available to customers via enhancement packages to the SAP ERP application. Actual deployment of the services lies somewhat down the road for most participants in the healthcare CDG, but Krahmer is looking forward to improved productivity and efficiency for users of the SAP Patient Management

application. “With enterprise services, you’ll no longer have as many required entries in the patient management application,” he says. “We’ll be able to streamline our manual processes and spend much less time handling exceptions.” Glück anticipates similar benefits for University Hospital of Mainz. “Nurses won’t have to do patient administration,” he says, “and the system won’t contain empty fields that they don’t know how to fill out. With service-enabled applications we’ll be able to modulate our activities based on job functions. That means more time for patients and less time for administration.”

A Team Approach to Building Services

The University Hospitals of Mainz and Mannheim have a similar approach to IT. Both organizations operate lean IT departments, preferring to use applications with a minimum of customization, and both are somewhat cautious of an evolution toward SOA. At the same time, these healthcare providers view service-enabled applications from SAP as an important step toward an SOA-powered future. Perhaps more important, both institutions are delighted that SAP is showing a willingness to make them part of the service-enablement process through participation in community development groups. “In past years, we used to wonder if SAP developers were aware of our ideas and needs and philosophy,” says Glück. “Now we can sit down in the CDG with influential people from SAP and they ask us, ‘What do you think about this – is it a good idea?’”



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Krahmer concurs. “We have a chance to get software that fits our needs better than in the past,” he says. “As a member of the CDG, you get the feeling that you are part of the development process and not just watching it. And that can be quite good for future decisions.”

For More Information

To join or learn more about Enterprise Services Community, please visit esc.sap.com.

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