

**SAP Solution Brief**  
**SAP NetWeaver**



## **END-TO-END PROCESS INTEGRATION WITH SAP NetWeaver™**

**Elevating Business Automation Through Integrated Processes**

With the SAP NetWeaver™ platform, organizations can implement crucial IT activities in a flexible step-by-step approach at lower cost. For instance, organizations can make disparate applications and business partners' systems exchange information and execute transactions smoothly, operating as if they were a single system. This end-to-end process integration is enabled by SAP NetWeaver components such as SAP® Exchange Infrastructure and SAP Auto-ID Infrastructure.

By integrating a variety of processes, businesses can have timely access to accurate data. A number of advantages result, such as accelerating time to market of products and services, maximizing partner business results through synchronized product catalogs, and improving the ability to respond and adapt to changing conditions.

Organizations have been investing in solutions to integrate business processes across the enterprise and into the value chain for some time now, with mixed results. Often, large expenditures on point solutions for enterprise application integration, business partner integration, or business process management have failed to provide a satisfactory return on investment. While they may solve a single problem well, these solutions do not address requirements for a technology foundation that meets today's needs, much less those of tomorrow.

That's why savvy organizations are seeking an advanced approach to end-to-end process integration. These organizations are moving away from point solutions toward broader platforms that solve integration issues, while also serving as the architectural foundation for future application services.

### **The Solution: End-to-End Process Integration with SAP NetWeaver™**

Two factors are critical to the successful implementation of integrated processes. One is the underlying technology platform, well integrated with all necessary technologies and applications. The other increasingly important factor is the packaged availability of integration content – best-practice process templates, standards-based document templates, and widely used partner collaboration patterns.

SAP and its partners deliver business packages, with touch points into SAP® business applications, to support the shift from “build” to “buy” for integrated business processes. By using the SAP NetWeaver™ platform to improve your end-to-end process integration activities, you can easily leverage all the best practices and information assets of SAP business applications.

SAP NetWeaver – the foundation for the most widely used business applications in the world – supplies all the connectivity, tools, and engines required for the high-value, nonstandard, and nonpackaged processes that you must integrate on your own. These capabilities allow you to efficiently build, run, and manage processes that integrate software applications and business partners, while also incorporating the latest technologies such as radio frequency identification (RFID) tagging.

Through end-to-end process integration using SAP NetWeaver, you can enable application-to-application processes, business-to-business processes, and business process management and insert real-world awareness into your business processes. These activities help you address specific requirements today and provide a pragmatic path to the Enterprise Services Architecture blueprint.

### **Enabling Application-to-Application Processes**

Integration between separate business applications has been a necessity from the beginning. Employee records need to move from HR to accounting, for example; insurance policy information travels from contracts management to claims processing; and loan data is transferred from a bank’s credit application into risk management and collateral realization systems.

Traditionally, this issue has been solved by batch processing. But batch processing can prove expensive, as separate extraction and loading programs need to be built and maintained for each data exchange instance. Furthermore, batch loading is not suitable for situations such as financial applications that require real-time data exchange.

Another approach is to unify all enterprise data and store it in a single database accessible to all applications. Unfortunately, this method gravely limits the organization’s agility. Because people become reliant on access to this data, and accustomed to the way it is represented, changing the underlying data models poses a problem.

Today’s state-of-the-art approach to application-to-application integration combines the best of both worlds with the hub-and-spoke model. Through the spokes, the central message-processing hub is connected to all relevant applications, dramatically reducing the number of system connections required. The hub system then hosts all necessary information – such as document formats, transportation rules, and security requirements – to handle integration activities. This method provides a single point of management for all of the organization’s application-to-application integration requirements.

SAP NetWeaver incorporates a hub-and-spoke integration broker within its SAP Exchange Infrastructure (SAP XI) component. SAP XI contains predefined integration content for a growing number of SAP solutions, such as mySAP™ Supplier Relationship Management and mySAP Supply Chain Management, helping you integrate these solutions with existing business systems. Because SAP XI provides an open, standards-based infrastructure and a wide selection of adapters for the most common business systems – such as IBM CICS Transaction Server, Oracle E-Business Suite, PeopleSoft Enterprise, J.D. Edwards OneWorld and World, Siebel Systems, and others – you can also use it to integrate non-SAP systems into your environment. (The adapters are licensed separately from the SAP NetWeaver delivery.)

## Enabling Business-to-Business Processes

Incorporating partners into business processes is becoming an increasingly important requirement for leading organizations. Large manufacturers already rely on electronic means to convey orders, manage shipments and inventory, receive invoices, and report quality of parts to their suppliers. Because these transactions involve the transfer of legally binding documents representing a high monetary value, organizations must address more stringent requirements for partner communication processes than for purely internal communications.

To transfer information to business partners, companies have traditionally relied on a batch process similar to that used for application-to-application integration. The initiating application produces the documents to be conveyed to a partner, while a specialized partner communication system – for example, an electronic data interchange (EDI) subsystem – receives the documents, transforms them into the required partner format, and deposits them in the partner's mailbox on a value-added network (VAN). This process is both expensive and error-prone, as multiple systems are involved. In addition, VAN connectivity costs are prohibitive for all but the largest buyers and suppliers.

To overcome this problem, SAP NetWeaver uses the same hub-and-spoke infrastructure as for application integration. Specialized spoke adapters for partner communication support a variety of processes and connectivity requirements, including data and process security, reliability, and validity. By using these adapters, you can migrate your traditional EDI system to the latest industry-standard partner exchange mechanisms – such as EDI over Internet (EDIINT), RNIF (RosettaNet, CIDX, and PIDX), UCCnet, SWIFT, Transora, and many others – or you can leverage secure HTTP for direct interaction over the Internet.

## Enabling Business Process Management

Although tools for business process management and products to support workflow have both been around for some time, a gap has existed between the business experts who are planning the business processes and the IT experts who are implementing

them. By incorporating the SAP Business Workflow tool into its business applications, SAP has been helping its customers create sophisticated workflows inside these applications for years. Now, SAP NetWeaver elevates business process management to a new level, giving business and IT personnel a common language when discussing processes.

Through a strategic partnership with IDS Scheer AG, the world leader in business process analysis and modeling, SAP NetWeaver enables the following three levels of process design:

- **Business-level** process modeling describes the process landscape and architecture of a company from high-level value chain diagrams down to event-driven process chains, with various views on end-to-end processes from a business angle.
- **Configuration-level** process modeling enables process-driven configuration and implementation of both application-embedded and centrally integrated processes.
- **Execution-level** process modeling drives message orchestration and, in turn, services-based process execution.

By using market-leading SAP business applications that make use of these capabilities, you can reduce the time needed to implement business processes and the effort to maintain them going forward.

## Inserting Real-World Awareness into Business Processes

Organizations are increasingly leveraging RFID technology to improve visibility into their inventory data and increase accuracy across supply chain networks. Many companies, in their rush to implement RFID, have resorted to custom or proprietary systems that have proved difficult and expensive to integrate into existing operations. In a competitive, fast-moving business environment, that approach can be too costly, too cumbersome, and too complicated.

The SAP Auto-ID Infrastructure component of SAP NetWeaver provides the capabilities you need to integrate business applications into sensing devices – including RFID readers, printers, and bar code devices. By efficiently managing and validating large volumes of streaming RFID data, you can close the loop between acquiring real-time RFID data, converting it to actionable business information, and automating all associated transactions and processes.

#### **Business Benefits**

SAP NetWeaver provides a comprehensive, process-based platform for the integration of applications, business partners, and employees. At the same time, it helps you evolve your IT landscape into an agile, service-oriented business software environment so you can realize the following key benefits:

- Diminished time for new or reworked business processes to be put into production, which in turn enables additional and quicker changes at no extra cost
- Reduced interface creation and maintenance costs, as the hub-and-spoke model decreases the number of physical interfaces per connected system or partner
- Lower overall platform ownership cost, due to consolidation of process management, application, and business partner integration capabilities into a service-oriented environment
- Reduced time and project costs to integrate business partners into your business processes or vice versa through prepackaged, industry-standard business packages

As your organization seeks to transform itself through differentiated business processes, you need a comprehensive architecture that supports today's business applications and tomorrow's vision. By performing end-to-end process integration with SAP NetWeaver, you can stay ahead of the competition.

#### **Gain from End-to-End Process Integration Now**

With SAP NetWeaver you can make end-to-end process integration work and do the following:

- Reduce the number and types of technologies and applications needed to effectively run your business
- Standardize on a single platform that supports all your requirements
- Leverage business packages to quickly integrate with business partners' systems
- Deploy cross-organizational business processes

#### **Find Out More**

Contact SAP to learn more about enabling specific end-to-end process integration activities with SAP NetWeaver. For additional information, please visit [www.sap.com/netweaver](http://www.sap.com/netweaver).