



mySAP™ ERP STATEMENT OF DIRECTION 2005 TO 2007 OUTLOOK

VERSION 1.0

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PREFACE

This statement of direction describes SAP's vision, strategy, development, and commitment for mySAP™ ERP and its future role and position within SAP's overall solution portfolio by laying out a three-year road map. This document shows SAP's past and current development decisions and investments in this area.

The vision and road map described in this document are those that SAP currently plans to realize within the next three years. This implies the possibility that, due to any number of reasons, SAP may have to postpone or cancel some of the planned capabilities.

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SUMMARY

More than two decades ago, enterprise resource planning (ERP) software started to play a significant role in helping IT executives cut costs and increase efficiency. The scope of ERP software solutions encompassed basic financial and human capital management capabilities as well as operational capabilities, such as order entry and materials management. Early off-the-shelf ERP applications enabled IT organizations to reduce application backlogs and implement standard business processes.

Today, however, organizations are facing a very different world. Organizations must contend with shrinking business cycles and growing time pressures. Innovation occurs with stunning speed, and yet the window of opportunity for capitalizing on innovations continues to narrow. For organizations to operate cost-effectively and profitably, they must find ways to reduce time to market and time to value.

Increased competition and globalization, coupled with new legislation in many countries, are forcing organizations to make detailed evaluations as to how their businesses are performing and how they can improve productivity and profitability through the introduction of new business processes or modification of existing processes, while utilizing the investment from existing ERP solutions.

To meet these expectations, SAP has launched the next-generation ERP solution: mySAP™ ERP powered by the SAP NetWeaver® platform. mySAP ERP is an evolution from the traditional ERP solution. It not only allows organizations to leverage increased efficiencies throughout the extended enterprise, but enables them to react more quickly to business changes with the Enterprise Services Architecture (ESA) blueprint.

ESA is SAP's rendition of a service-oriented architecture (SOA) that expands the concept of Web services into an architecture that supports an enterprise-wide service-enabled business architecture. The **differences between SOA and ESA** come from service-enabling the most common business processes, such as procure to pay, order to cash, and hire to retire. While SOA can be seen as a more technical concept, ESA can be thought of as the blueprint that enables flexibility, openness, and speed – elements that are critical for business success. Simply put: ESA is SAP's blueprint for a business-oriented approach to SOA.

Benefits Associated with mySAP ERP

A service-oriented architecture provides greater flexibility, seamless business integration, and an increased capacity for innovation across the enterprise – all of which represent significant competitive advantages. In addition, tighter integration capabilities make possible more streamlined business processes, as well as better integration with third parties for more effective information exchange and greater transparency between organizations. And the extendibility increases overall efficiency by making information available to anyone, anywhere, and anytime. In general, the following benefits can be realized with mySAP ERP:

Productivity and efficiency with increased user productivity through specific roles, automation and standardization of routine business processes, delivery of shared services to consolidate common business functions, and support for out-tasking as the next step for offloading nonstrategic activities

Differentiation through new features, functions, and support for innovative new business processes and models through composite applications, delivered on the same platform as established business transactions

Strategic business insight through embedded analytical tools and content that enable organizations to assess performance, identify business areas where organizations can differentiate themselves from the competition, and to monitor areas that could become candidates for efficiency and process improvements

Flexibility to act today with Enterprise Services Architecture (ESA)–enabled solutions that deliver the flexible infrastructure organizations require to support the rapid change of operational business models, processes, applications, and organizational structures

The enablement of ESA and the realization of benefits are achieved with the extended capabilities of mySAP ERP powered by the SAP NetWeaver platform. By combining and extending the traditional functionality of the SAP® ERP solution with the benefits of SAP NetWeaver, SAP enables users to become more efficient and organizations more agile and better equipped to take advantage of new business opportunities. These strategic developments are geared to help enterprises increase business value to realize a faster return on investment.

Additionally, there will be a strong focus on composite applications, which make use of enterprise services. Composite applications bring together functionality and information from different functions or applications and provide a common, straightforward end-user experience.

To further reduce systems management costs for mySAP ERP, plans are underway to simplify the system landscape, reduce the number of dedicated servers required to support a single instance, offer standard tools such as Adobe for printing, compile concise descriptions of the transition, and provide guided procedures for user management.

The mySAP ERP release for 2005 will provide additional, value-added capabilities for specific industries that will, for example, allow customers to use a switch framework for easy activation of capabilities previously reserved for special industry add-ons.

SAP software is the safest and most cost-effective choice in today's increasingly complex global environment. SAP is uniquely qualified to help organizations succeed, based on its market leadership for over 30 years, industry-specific developments, R & D investment, and customer partnerships.

Guiding Development Principles for mySAP ERP for 2005 to 2007

Guiding Principle	Business Benefit Objective	SAP Development Focus	Examples of New Capabilities
Efficiency Enhancement	Bring all relevant applications, information, and services to users' chosen devices to enable them to complete their daily tasks faster. Ensure rapid user adoption by even casual users. Promote increased collaboration. This can apply to an employee or business partner, such as a supplier or customer.	<ul style="list-style-type: none"> ■ The portal as entry to system ■ Support for multiple devices: PCs, PDAs, and mobile phones ■ Standardization of user interfaces across all solutions ■ Creation of roles and content ■ Integration of standards 	<ul style="list-style-type: none"> ■ Preconfigured user business roles (generic and specific) with focused business process content ■ Guided procedures to assist occasional users through complex tasks ■ Latest and unified user interface technology ■ Use of Adobe forms for information gathering
Value-Adding Capabilities	Ensure that standard ERP system can fulfill current and future business requirements, which are not limited to standard human capital management (HCM), financials, and operational capabilities, but also support corporate services such as real estate and travel management	<ul style="list-style-type: none"> ■ Continuous focus on key areas of HCM, financials, operations, and corporate services while exploring new composite solutions ■ Inclusion of industry standards as well as legal and regulatory requirements ■ Extension of business processes outside traditional organizational limits ■ Support for business process outsourcing and shared-service center (SSC) functionality 	<ul style="list-style-type: none"> ■ New financial general ledger and financial supply chain management ■ Radio frequency identification (RFID) technologies ■ E-learning and e-recruiting ■ Easier business consolidation and express planning ■ Occupational health improvements ■ Interaction center functionality for SSCs
Analytics for Transparency and Compliance	Provide organizations, employees, customers, and partners with relevant information and an understanding of activities across the entire business network, enabling them to make informed decisions. Help organizations comply with an ever-growing number of regulations and laws.	<ul style="list-style-type: none"> ■ Development of central reporting tool ■ Adoption of business process monitoring ■ Creation of predefined content with roles ■ Analytics in all business processes ■ Creation of integrated planning framework 	<ul style="list-style-type: none"> ■ Strategic enterprise management ■ Predefined analytical dashboards ■ Business content for roles ■ Tools to support regulatory compliance
Software Solution Flexibility	Ensure that IT organizations have the agility and flexibility to enable, modify, and deploy processes that support fast-changing business requirements in a timely manner. Give organizations the ability to easily integrate heterogeneous system landscapes using Web standards.	<ul style="list-style-type: none"> ■ Development of a services platform that facilitates service-enabling of functionality ■ Development of open framework for composite solutions ■ Simplified system integration, both technically and using master data management 	<ul style="list-style-type: none"> ■ Service-enabling of functionality, such as invoicing and billing for financials; and enterprise learning and talent management for HCM ■ Composite applications for dispute and collections management
Total Cost of Ownership (TCO) Improvements	Reduce the total cost of ownership over the life cycle of the solution from implementation through operation and continuous improvements. Ensure that existing investments in IT infrastructure are leveraged.	<ul style="list-style-type: none"> ■ Compatibility from one version to next ■ Simplified system implementation, operations, and upgrade ■ Flexible deployment options for outsourcing and shared services ■ Consolidated applications 	<ul style="list-style-type: none"> ■ Simplification of system landscape by reducing number of instances needed for solution ■ Consolidation of industry solutions ■ Preconfigured solutions ■ Best practices for mySAP ERP

mySAP ERP – EMBRACING THE BUSINESS PROCESS PLATFORM

Over the next years, mySAP ERP will build on SAP NetWeaver and embrace the business process platform. This section describes the evolution of SAP R/3® to mySAP ERP.

As shown in Figure 1, SAP R/3 (up to version SAP R/3 4.6c) was a stand-alone system in which people, rather than technology, acted as integrators in business processes. SAP R/3 was a clearly defined application, with strong ties to other SAP applications.

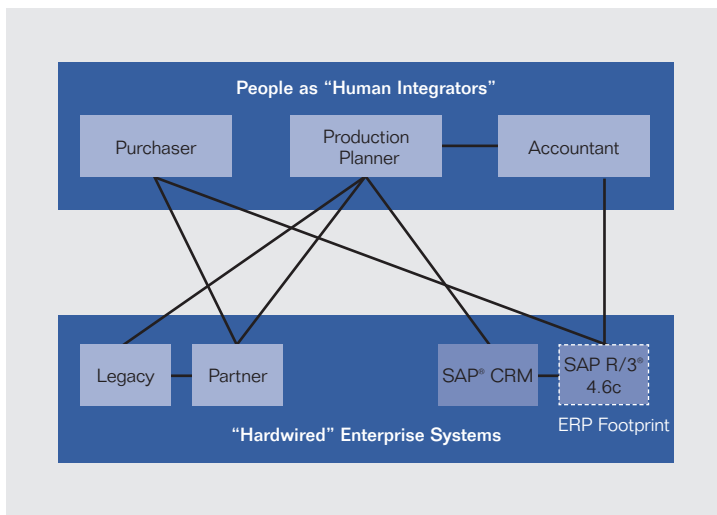


Figure 1: Traditional Footprint of SAP® R/3®

With the introduction of SAP R/3 Enterprise, the technology layer of SAP R/3 made use of SAP Web Application Server (SAP Web AS) for the first time.

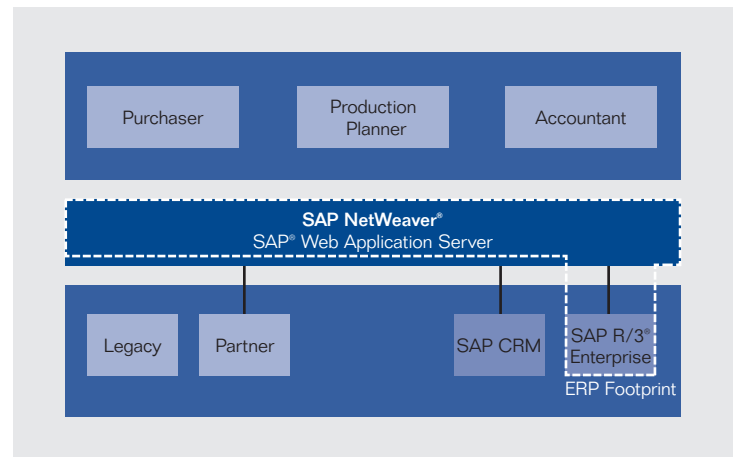


Figure 2: Introduction of SAP® Web Application Server

SAP Web AS, now called SAP NetWeaver Application Server (SAP NetWeaver AS), formed the new technology basis for all SAP applications, and future versions of SAP applications did not just use the SAP Web AS, but were actually built on it. This is true for mySAP ERP 2004, which additionally makes extensive use of other SAP NetWeaver components, such as SAP Enterprise Portal, now called SAP NetWeaver Portal, or SAP Business Intelligence, now called SAP NetWeaver Business Intelligence, to offer role-based access and integrated analytics.

In future versions of mySAP ERP, additional integration of SAP NetWeaver is a given. Analytics will play an increased role to ensure all information on an organization, individual, and process level is available to those who need it. Information from multiple distributed systems can be consolidated more easily within SAP NetWeaver. Tighter integration with the portal will offer a much-improved user experience with role-based information actively pushed to users.

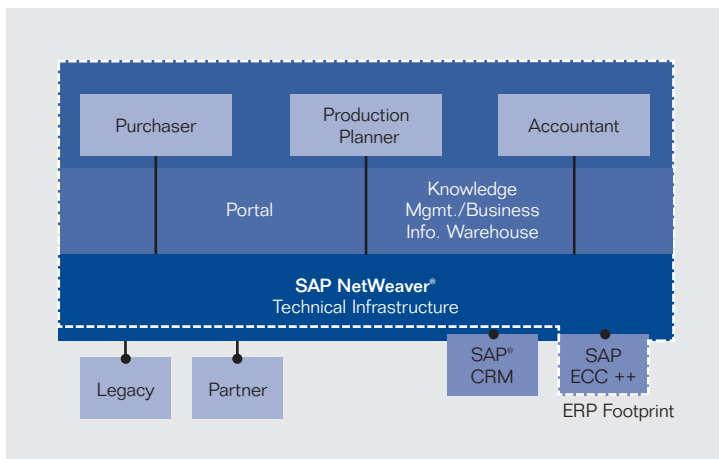


Figure 3: Addition of SAP NetWeaver® Components

mySAP ERP 2004 was one of the first SAP solutions to make use of composite applications. The idea is that flexible applications can be built quickly and maintained easily on top of the existing infrastructure. Composite applications will be a major development focus of future mySAP ERP releases. Processes already in mySAP ERP, such as creating or changing a product and hiring new employees, act as composite applications. In mySAP ERP 2005, more composites will be introduced, such as guided procedures in self-service applications. All composites use SAP NetWeaver as the underlying technology.

Additionally, partners can use the infrastructure to create and develop their own composite applications, and organizations can leverage both SAP and partner composites to create their own applications.

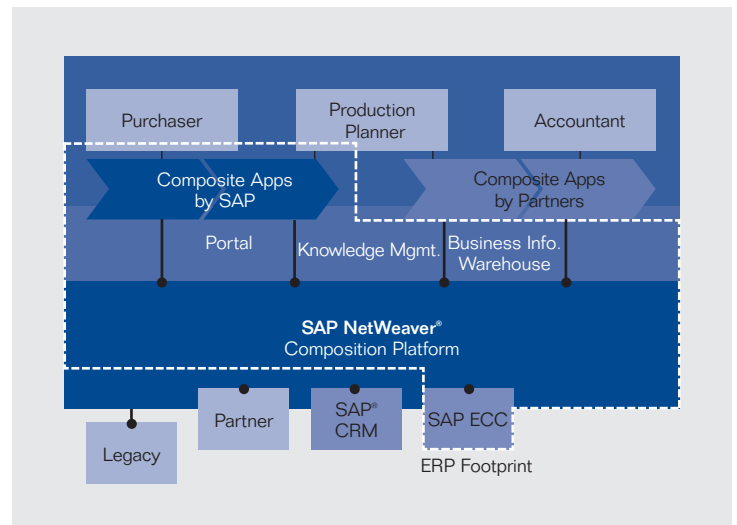


Figure 4: Addition of Composite Applications

Future development of mySAP ERP will start to embrace Web services as a foundation of Enterprise Services Architecture (ESA). By leveraging the 2005 enterprise services inventory, and directing customer and partner feedback via the SAP Developer Network ESA preview system, more and more Web services will be developed. Plans have been announced in 2005 to introduce a first package of several hundred services. Services will include basic functionality, such as currency conversion; user-interface services, such as sales order status; and complex services, such as purchase order creation or listing absent employees.

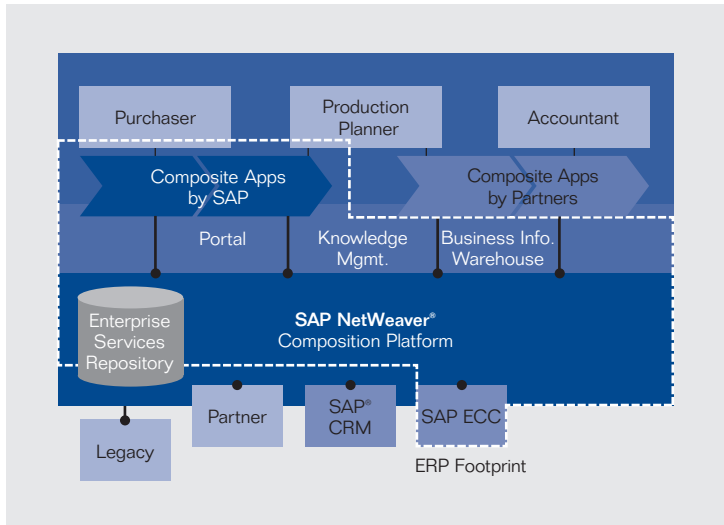


Figure 5: Addition of Enterprise Services Repository

Finally, with the repository complete, SAP NetWeaver will become a platform for orchestrating business processes. Functionality will be moved from some applications and centralized within the platform, making it available for use by a variety of different applications. For example, when functionality for a call center is moved to the platform, it can be used by ERP applications for an employee call center and by a CRM application for a customer interaction center.

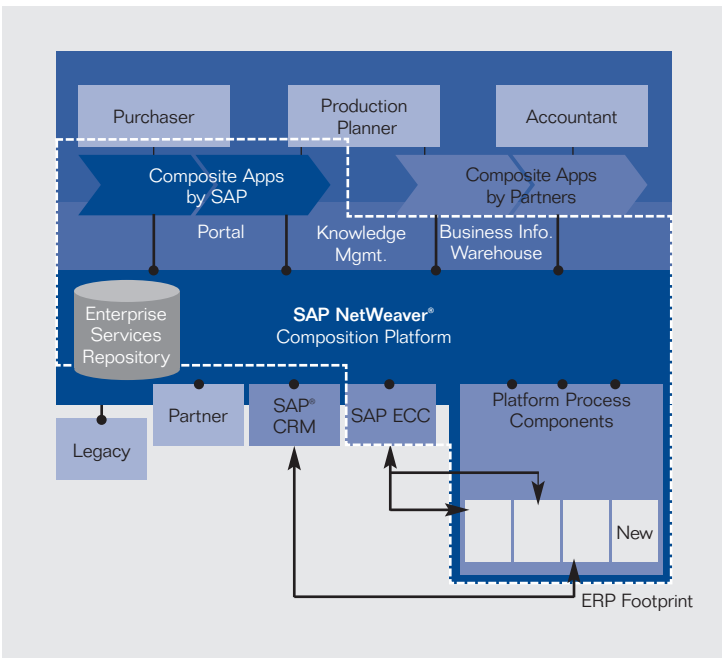


Figure 6: Centralized Platform Components

With this approach, mySAP ERP, as well as other applications, will use common elements within the platform. This means reduced landscape complexity and increased system flexibility, as new composite applications can be built around the services offered by the platform, either from SAP or from partners.

In the long term, this means greater flexibility for organizations and the ability to react quickly to market and customer needs while maintaining costs.

ENTERPRISE SERVICES ARCHITECTURE ADOPTED WITHIN mySAP ERP

Introduction of Services

mySAP ERP is one of the major contributors to fulfill on the promise of the Enterprise Services Architecture (ESA) blueprint. Recently published by SAP, this road map will enable organizations to benefit from a service-oriented architecture, one that allows for high flexibility while ensuring that related costs of change can be contained.

In brief, Enterprise Services Architecture is SAP's open architecture for adaptive business solutions. The fundamental premise of ESA is the abstraction of business activities or events, modeled as **enterprise services**, from the actual functionality of enterprise applications. Aggregating Web services into business-level enterprise services provides more meaningful building blocks for the task of automating enterprise-scale business scenarios.

Business applications that are based on ESA principles can reduce costs by lowering TCO for the operation of existing IT solutions and freeing up capacity to invest in new solutions to stay ahead of the competition. This is achieved through a common set of standards, which allows integrating other open standards or platforms.

In mySAP ERP 2005, SAP invested heavily into the seamless integration of various SAP NetWeaver components with SAP business solutions within the mySAP Business Suite family of business solutions. The SAP NetWeaver components and capabilities that are fundamental to support our service-oriented approach include:

- Transparent service definition through the **SAP NetWeaver Exchange Infrastructure** component
- Flexible process definition through **guided procedures** and integrated Adobe forms
- Fast and user-friendly master data search with SAP's **search engine**
- Enhanced flexibility through **Web Dynpro**-based user interfaces
- Increased efficiency by leveraging the **SAP NetWeaver Portal** features
- Better insight with embedded **analytics** and integrated analytical applications

From a business point of view following the ESA road map, mySAP ERP 2005 enables:

- Improved efficiency, greater automation, increased productivity, and better IT asset utilization that can save time and money while reducing the number of process steps
- Greater flexibility with better optimization and easier integration that enables growth of end-to-end business processes and reuse of existing assets
- Faster innovation with new processes that benefit from collaboration inside and outside the organization

The first package of services for mySAP ERP will be made available at the beginning of 2006, when several hundred services will be published. These services will be available for mySAP ERP 2004 and shortly thereafter for mySAP ERP 2005.

Composite Applications

Future development of mySAP ERP will emphasize the creation and use of **composite applications**. Composite applications use the functional application building blocks made available through Enterprise Services Architecture to create more flexible business processes and task-oriented applications that can be created and modified more quickly. These enhanced capabilities through the exploitation of composite applications will not only improve collaboration within enterprises and organizations' ecosystems, but will also offer new opportunities for higher efficiency. This higher efficiency can be achieved through the use of new capabilities in the composite applications SAP will deliver to enhance future mySAP ERP versions. Organizations can more easily adapt the supplied business and workflow processes and optimize the supplied user interface to the applications with the SAP process modeling capabilities and the visual tool set that is part of the SAP Composite Application Framework tool. For streamlined processes, SAP will offer the concept of guided procedures, which is especially helpful for uncomplicated processes.

SAP is already working on a variety of composite applications that will be showcased at the beginning of 2006 when the first batch of enterprise services are made available for mySAP ERP 2004 and later on for mySAP ERP 2005.

Analytical Applications

For organizations that require even more flexibility, SAP will provide new analytical functionality as well as visual tools that enable authorized individuals within organizations to produce new analytical applications, such as dashboards, or enhance and adapt existing ones by integrating additional information through the use of these new services. These dynamic analytical processes, with the typical pattern of "event–analysis–resolution," require more flexibility and fast project delivery by an IT organization. Ideally, power users will be able to adjust this new type of application to their team needs, which is possible only with an increasing number of enterprise services that will be delivered with the next mySAP ERP versions.

Integration of analytical information will be much more flexible with the service-oriented approach. Today, integrating interactive reports into user roles already delivers the necessary information in one view. SAP will deliver more services that push important events to users, regardless of the form used or the environment they are in. New dashboards will not only provide the relevant information at a glance, but will also offer the option to react to these events immediately. Integrating office documents and other unstructured data as well as being able to search and retrieve relevant information across object and media boundaries will allow for a new level of quality in decision-making processes. This added value, together with faster reaction capabilities and the opportunity to be more proactive in areas such as planning and forecasting, will be key benefits for SAP customers.

Common Repository for More Flexibility

A common repository offers many benefits. A common shared enterprise services repository can integrate mySAP ERP enterprise services with other services in an enterprise's individual landscape. This is where business knowledge on processes and enterprise services resides, which offers clear advantages. The tools provided in SAP NetWeaver and tighter tool integration in the near future provide flexibility for both IT and power users.

mySAP ERP will also offer services and tools that enable enterprises to define and build individual processes using a model-driven approach, with their own in-house staff or with the help of specialized partners. The key is that SAP provides interoperability because our customers typically run a mix of SAP and non-SAP software.

Flexibility for processes is not enough. Enterprises need the ability to consolidate and scale where appropriate. With well-defined deployment units, SAP enables enterprises to be more effective in areas where shared-service centers and business process outsourcing are common. With the flexibility of a service-oriented architecture, it is much easier to change models and integrate additional tasks while maintaining control. Expect additional services to be provided in subsequent mySAP ERP releases, for example, in the areas of payroll, financial processes, manufacturing, and warehousing.

Supporting Open Standards

Building on the open architecture of SAP NetWeaver, mySAP ERP automatically benefits from the improvements of open standards for business applications. SAP actively participates in the definition of international standards, including Business Process Management Initiative (BPMI); Organization for the Advancement of Structured Information Standards (OASIS); Universal Description, Discovery and Integration (UDDI); World Wide Web Consortium (W3C); and United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT). This ensures the interoperability and reach of ERP solutions beyond the boundaries of enterprises in a cost-effective way. SAP invests in the most important industry standards, which means our customers can expect additional out-of-the-box integration in that area.

Open standards allow our partners to smoothly transfer their existing solutions or build new ones based on these standards. Decoupling of previously integrated monolithic or individual approaches through common Web service-based standards enables the flexible upgrade of components in IT landscapes. As the typical backbone of such a landscape, mySAP ERP will contribute to and benefit from this new service orientation. The service paradigm not only helps customers to be more flexible but also enables them to grow their processes as needed.

Within the 2005–2007 time frame, mySAP ERP will see more integration scenarios and composite applications. Enhancing processes and increasing flexibility in a step-by-step approach will lead to faster innovation while keeping projects under control and achieving faster return on investment for SAP customers.

PEOPLE PRODUCTIVITY

mySAP ERP enables all users to be more productive. It enhances users' productivity by providing role-based usability and services that deliver business processes to the desktops of all authorized employees based on their needs, expectations, and goals. In mySAP ERP, usability is not just about a better looking and more intuitive user interface. It is about adapting business processes and workflows to changing business demands and replacing reactive work by proactive work. People productivity is taken seriously in mySAP ERP, and it will be a major influence in future mySAP ERP releases. mySAP ERP is developed with a dedicated user-centric approach that is all about engineering users' needs, expectations, and goals into the solution. Furthermore, mySAP ERP makes use of Enterprise Services Architecture (ESA) and the SAP NetWeaver platform to enable all people to work more efficiently and effectively.

Support for People Productivity by Enterprise Services Architecture

People productivity is one of the pillars of Enterprise Services Architecture. It supports two main ESA promises: to increase our customers' productivity and to help our customers to differentiate themselves from competitors. It drives productivity as it connects people to business processes and to business information, allowing each employee to change from transactional work to task- and goal-oriented work. It helps to differentiate with support for timely decision making with the objectives to reduce costs and maximize revenues and profits while improving collaboration within the organization and in the extended value chain.

In traditional enterprise resource planning systems, people need to act as integrators within business processes to connect "hardwired" applications. The question is: how can we better connect people to business processes and to their tasks within business processes? The answer provided by mySAP ERP is twofold:

- **Composite applications** solve the integration aspect within business processes, allowing SAP customers to adapt business processes supported by SAP solutions to their organization-specific needs at a lower cost of change.
- **Work centers** connect people to their tasks within all business processes by providing a people-centric view on the business. They push work triggers to individuals and provide them with business insight into their area of responsibility. And they close the loop between being informed about a business situation and the execution of a business decision, enabling people to get their jobs done more quickly.

Composite Applications for Reengineered Business Processes

Business process reengineering from a people-centric perspective with mySAP ERP enables organizations to receive business value through an emphasis on a consistent, usable, people-centric interface. Within mySAP ERP, business process reengineering is enhanced with three strategies: automating business processes, automating services, and changing the way experts work with the solution.

Through increased **business process automation** in mySAP ERP, users are better supported by the system, for example, by monitoring key performance indicators. Users are proactively alerted by the system when exceptions occur, while routine work is being done by automated processes without the need for active involvement of users. This significantly reduces the need for human interaction with the system.

The increase of **service automation** and self-services allows more businesspeople to participate directly in the execution of business tasks in the system. Decentralization is supported by breaking the bottleneck of synchronous one-to-one communication between centralized experts and decentralized businesspeople. System-supported communication allows experts to work on their tasks more efficiently and allows businesspeople to access the system directly and at any point in time.

mySAP ERP **changes the way experts work** with the system. Automation lets the experts execute their tasks in a more efficient and effective way. Rather than interacting with the system simply on a transactional level, experts can adapt the system to automate additional activities and services. Users are supported by automated monitors and work lists that help them find and execute their tasks more quickly. They can discover and use interaction patterns that best support their work style.

As we see, the goal of people productivity is to increase the efficiency and effectiveness of people working in the organization and being supported by mySAP ERP. It makes supported business processes intuitive and easier to use – for every user within the organization and beyond. New business processes, implemented as composite applications, can be adapted further to serve the needs of individuals, the organization, and the business.

Work Centers That Bring Business Process Tasks to Users

Through work centers, mySAP ERP makes sure that users are aware of the tasks within the business processes to which they are assigned. Work centers represent an individual employee's view on an area of activity. Work centers provide a quick overview and push work triggers and the personal work load to the user. By answering questions like “What critical processes do I have to take care of?”, work centers allow people to organize their daily work load. By guiding users from their work triggers to the underlying work load and on to processing a single item, mySAP ERP supports the entire work process: from work trigger to task completion. This lets users change the way they work from object-centered transactional work to user-, task-, and goal-oriented work. Work centers will be a major focus in the area of people productivity in future mySAP ERP versions.

Each work center is dedicated to serve a certain area of activity usually referred to as a business role or function. All work centers of a user form a control center, which is the starting place for each user to begin or resume working in the system. The starting place of the control center is the single access point to all work-related content and tasks delivered to the user.

mySAP ERP supports similar work styles with adaptable building blocks that make up the work centers. Because the same interaction patterns are used consistently for identical work styles, users become familiar with them very quickly. They can then use work centers in a completely different business context with minimal effort for relearning. When necessary, enterprises can reconfigure and enrich the preconfigured work centers in mySAP ERP and create additional roles to meet the needs of the organization.

People Productivity Powered by SAP NetWeaver

mySAP ERP is powered by the SAP NetWeaver platform and makes full use of its capabilities. SAP NetWeaver facilitates the integration and alignment of people, information, and business processes across organizational and technological boundaries. Flexibility and adaptability have become key success factors for any enterprise. SAP NetWeaver supports these requirements at the operational and tactical levels.

To increase people productivity, mySAP ERP makes use of the following capabilities:

- **Enterprise portal** to assemble all work centers and to provide access and single sign-on to all applications and information
- **Web Dynpro** as the user-interface technology that allows for higher adaptability of user interfaces at a lower cost of change
- **Adobe print forms** as well as **Adobe interactive forms** for better adaptability at a lower cost of change
- **Collaboration rooms** and **real-time collaboration** to communicate and share information with peers
- **Business information warehouse** with embedded analytics that people can use for decision making and **information broadcasting** for handing over the full context of their analysis to colleagues for follow-up actions
- **Guided procedures** that support users in nonroutine tasks

Microsoft & SAP: Revolutionizing Information Workers' Access to Enterprise Business Applications

Another exciting development that shows the direction SAP is taking with user productivity is code-named "Mendocino." SAP and Microsoft Corporation are jointly designing and developing a new product that will help organizations by empowering information workers in the way they access, analyze, incorporate, and use enterprise data to improve business decisions and significantly enhance productivity. Mendocino links SAP process functionality directly to Microsoft Office applications so that users can access SAP business solutions and decision support tools directly through, for example, Microsoft Outlook.

Examples of functionality used include:

- **Time management** with Microsoft Outlook calendar as the front end for SAP time reporting
- **Budget monitoring** to receive reports in the Microsoft Outlook inbox and to work offline
- **Leave management** to add leave requests as calendar items that are integrated with approval guidelines in SAP software
- **Team management** to integrate up-to-date information about employees in Microsoft Outlook contacts

The preview version of Mendocino is planned for the fourth quarter of 2005, with general availability planned for mid-2006.¹

¹ Preview release is a limited-availability release, available only to nominated customers.

The future direction of Mendocino development will be focused on extending current applications, adding self-service functions, enabling newer capabilities such as smart-tag integration to additional Microsoft Office products, and bringing additional business process support closer to information workers in their familiar desktop environment. There are plans to make a tool set available so that customers and third-party providers can build their own integration scenarios.

The Way Forward: mySAP ERP Continues to Focus on Users

The future direction of people productivity within mySAP ERP will be to continue support for bottom-line improvements by increasing user efficiency and effectiveness as well as to increase support for top-line growth by providing adaptable composite applications. As with mySAP ERP 2005, future versions will provide easy-to-use and intuitive access for every authorized employee to all information, applications, and services they need for their work. Intuitive interfaces and online access to broader, more accurate information support employees – even occasional users – to make decisions more quickly and complete their jobs more effectively than before.

SAP will continue its user-centric engineering approach when developing future versions of the mySAP ERP solution, focusing on productivity of people. Improved productivity means greater efficiency and quicker responsiveness. Extending the reach of real-time business processes lets enterprises engage and connect with more users both within and beyond the enterprise, including customers, suppliers, and partners. The solution's easy-to-use and intuitive role-based portal environment ensures easier systemwide access to a consolidated and consistent process view that increases user adoption and collaboration.

With improved efficiency, enterprises can empower everyone in the organization with the information they need to react and respond proactively to market changes more quickly than their competitors. In previous versions of SAP software, the focus was on data and process consistency. This is still true in mySAP ERP. But to proven track records in functionality, performance, and reliability, SAP adds convenience for the user, flexibility, and speed. While the solution still supports users in “doing things right” through work centers, SAP supports them even more in “doing the right things.”

SAP ANALYTICS FOR mySAP ERP

To make informed decisions, organizations, employees, customers, and partners need to get relevant information and understand the activities across the entire business network. Additionally, organizations need to be compliant with an ever-growing number of regulatory requirements.

With the mySAP ERP solution, SAP has defined a new value proposition for organizations that want to enhance their analytical insight, share data across all layers of the business, and improve decision making within every work stream of the enterprise. With a single platform, enterprises can deploy a unified set of analytic applications and decision support tools for all aspects of their organization. Finance, human resources, supply chain, and other corporate functions can take advantage of analytics and business process support through mySAP ERP.

Strategic Enterprise Management

To successfully handle the entire corporate performance management life cycle, organizations can use mySAP ERP to set strategic key performance indicators (KPIs) and ensure organizational alignment with corporate objectives. Performance objectives can be cascaded throughout the organization to bring a greater level of accountability and alignment to the enterprise. The SAP Strategic Enterprise Management application provides a set of analytical capabilities that enable effective budgeting and planning, preparation of corporate performance scorecards, generation of consolidated financial statements, and strategic risk management.

Business Transformation Through Analytics

Organizations that use mySAP ERP can increase visibility for every employee and role, utilize predictive analysis to guide business decisions, and leverage real-time actual data of the business to set strategy. Analysts can spend more time evaluating performance measures rather than constructing models. Enterprises can gain first-mover advantages in their market by targeting the right customers, investing more intelligently, and optimizing the price of their services or products.

Embedded Analytics in Business Processes

mySAP ERP is all about improving the ability of an organization to capture relevant information, read market and business trends, and respond quickly to change. The historical concept of enterprise resource planning as a means to improve business transaction flow still remains; however, it is enhanced through SAP's innovative approach to enterprise analytics. mySAP ERP 2005 takes advantage of Enterprise Services Architecture by desegregating analytics and embedding analytical tools and dashboards within actual business process. With this approach, organizations can eliminate any delay between insight and action. When analytical information is presented to authorized individuals within the context of a business process, a worker can react immediately to the information and take the necessary steps to correct or optimize a work stream. As one result of this approach, all roles and work centers discussed above in the section on people productivity contain actionable analytics.

Enabling Businesspeople with Analytical Applications

The notion of analytics as a tool for only the most advanced users of an enterprise is changing through the ability to present key performance indicators, scorecards, and graphical reports and to personalize portals and Web interfaces that are oriented around individuals and their job responsibilities. mySAP ERP 2005 delivers more than 100 predefined analytical applications (such as blocked-order lists or manufacturing order lists) that use a rich and highly interactive user interface to deliver information required by businesspeople throughout the organization. Future mySAP ERP versions will include additional predefined analytical applications.

Easy-to-use design environments provided with mySAP ERP through SAP NetWeaver empower employees to create, modify, and deploy analytic applications for their respective line of business. The SAP Analytics application is easy to deploy and intuitive to use, thereby helping to bridge the gap between IT and business and to make analytics relevant for the average business user within any industry. Analytical applications built with the SAP NetWeaver Visual Composer tool deliver the power of the SAP NetWeaver Business Intelligence component together with the possibility to embed enterprise services from mySAP ERP.

Specific business problems will be addressed in future versions of mySAP ERP. For example, mySAP ERP 2005 will incorporate the following capabilities:

- Express planning provides methodologies to guide managers through their recurring tasks in planning and budgeting for cost centers. The “express” approach is the result of in-depth user studies with the clear objective to take the planning and budgeting process, including all communication, out of numerous e-mail conversations and versions of spreadsheets and incorporating these into mySAP ERP.
- Enhancements have been developed in the area of business consolidation where the focus is on support of new IAS/IFRS regulations, master data integration with operational systems, and several new functional topics, such as interunit profit elimination in fixed assets and inventory supply chains.

SAP NetWeaver provides the foundation for analytics in mySAP ERP, delivering several new key capabilities that will further increase the value that can be obtained by using analytics. Major strides have been made in the area of high-performance analytics. Utilizing innovative search engines with indexing technology, query performance has been significantly enhanced. New insights can be converted directly into revised plans in the same user interface through business intelligence integrated planning. New analytical applications can be built and deployed quickly using SAP NetWeaver Visual Composer, the new model-driven design environment. The benefit is clear: businesspeople can quickly create analytical applications that serve exactly the needs of their line of business – without programming.

The future direction of development efforts for SAP Analytics will be centered on two main areas: first, enabling businesspeople in their day-to-day work by embedding decision support in the process; second, service-enabling the analytics architecture to provide additional flexibility and adaptability.

Enterprise Services Architecture will be the future foundation for SAP Analytics, allowing the seamless connection of real-time and replicated data, operative and strategic data, and third-party and SAP application data with presentation in a unified pattern-based user interface environment.

Analytics are and will continue to be an integral part of the mySAP ERP solution and its functional building blocks. The development focus will be on providing support for entire processes across all underlying functionality with coherent analytics to overcome the silo orientation in the industry. This will include measuring the performance of processes by using business activity monitoring, for example, to support business process outsourcing. To leverage all analytics capabilities throughout an organization, planning, simulation, and forecasting will be made available to all businesspeople, in addition to the expert user, by providing first-class user interfaces as well as process support.

mySAP ERP OPERATIONS

mySAP ERP Operations capabilities are enhanced by Enterprise Services Architecture and the business process platform.

Procurement and Logistics Execution

Purchasing has experienced a quiet revolution in recent years, driven by an increased awareness that effective supply management is a key contributor to profitability. To cope with this change, SAP will continue to provide procurement and logistics execution solutions that deliver on the following promises:

- Improve user productivity and efficiency in operations through applications that are easy to use and easy to navigate
- Automate routine tasks of managing documents, allow fully automated processes wherever possible, and monitor and focus on exceptions
- Create transparency throughout solutions, embed analytical support into day-to-day activities, and answer strategic questions with solution analytics

Based on the powerful SAP NetWeaver platform, mySAP ERP 2005 supports extensible new procurement processes that consolidate selected e-procurement functions from mySAP Supplier Relationship Management with traditional ERP functionality in the same environment. Organizations benefit from the reduced need for custom integration by aligning people, information, and processes across technologies and supply chains. This purchasing platform enables organizations to increase the productivity of internal and external users, allows for more flexibility in setting up the software, and gives more transparency through enhanced analytical capabilities.

Future developments in mySAP ERP Operations for procurement and logistics execution include the following capabilities.

Procurement of Temporary Labor

Organizations in all industries are relying on resources from third parties for their day-to-day activities and projects. This capability will support line managers or project managers in their job to fill positions with temporary staff. Previously, processes like this had to go through the central procurement department with various iteration loops, even though procurement was, in most cases, not involved in line or project activities. By providing professional sourcing functionality together with workflow enablement to line or project managers, this capability can deliver significant efficiency gains and streamline processes while empowering those employees who have the knowledge of what to order or where to source it.

Supplier Order Collaboration

The supplier order collaboration capability, like the one above, is a powerful example how decentralization of business processes streamlines operations and increases employee motivation as they are empowered through self-service functions. In supplier order collaboration, a supplier responds to a purchase order created by a buyer in mySAP ERP, and they agree on delivery quantities, dates, terms, and conditions. Supplier collaboration functionality includes bill creation and enterprise services to check the payment status. For the large number of small suppliers that typically do not have the capability to exchange documents electronically, this order collaboration platform will provide the right medium to dramatically reduce costs for supplier onboarding.

SAP will provide more support not only for business processes that are automated or consolidated with regard to the underlying application architecture, as seen in the examples above, but also for processes that are based on current technologies that are redesigned.

Invoice Monitoring

Previously, invoice management and invoice verification were transactional processes. The new invoice preprocessing functionality supports various invoice exception scenarios, speeding invoice verification by automatically matching invoices with purchase orders based on predefined variables and tolerances. In case of exceptions, workflows will be sent to the appropriate person, including supplier notifications. Additional business benefits include reduction in manual processing through intelligent, best-in-breed matching of invoices and payments; comfortable and intuitive user interfaces that increase user productivity; and streamlined processing that reduces processing time.

Production Planning and Manufacturing Execution

To succeed in today's competitive marketplace, manufacturers must deliver innovative products to demanding customers faster and at lower cost. At the same time, they must move quickly to keep their production and supply chain processes in step with unforeseen changes in both demand and supply. SAP solutions help organizations meet those challenges by integrating manufacturing with the supply chain and other enterprise business processes, which give managers and production personnel real-time visibility into supply, demand, and manufacturing processes. Manufacturers can drive decision making to the shop floor and empower people to take quick, appropriate action. By closing the information loop between the factory and the enterprise, and putting manufacturing processes in the larger business context, the solutions enable manufacturers to sense and respond to changing conditions rapidly, accurately, and cost-effectively.

To succeed in this demanding environment, SAP solutions help manufacturers build new capabilities and meet operational challenges. Manufacturers can also find ways to do the following:

- **Increase visibility.** Decision makers often lack immediate information about equipment, material, labor issues, customer orders, product costs, and budget variances. They often do not have the ability to continually monitor and report on manufacturing quality and compliance with health and safety regulations.
- **Increase responsiveness.** Decision makers, especially shop floor personnel, often do not have the information they need to respond quickly to change or align manufacturing priorities with business goals. This makes it difficult to capitalize on fast-moving opportunities or deal with problems as they arise, and, ultimately, to deliver products to customers correctly and on time.
- **Improve performance.** Manufacturers are often burdened with the cost of excessive inventory, material shortfalls, downtime, rework, overtime, and expediting. They often struggle to monitor performance and increase efficiency, improve processes, and fine-tune priorities in manufacturing.

mySAP ERP lays the foundation of the SAP Manufacturing solution, a comprehensive, integrated solution that enables discrete and process manufacturers to plan, schedule, sequence, execute, and monitor production and maintenance while supporting compliance with health and safety standards. The solution gives managers and production personnel real-time visibility into manufacturing operations and empowers them to take quick, appropriate action.

SAP Manufacturing, through the SAP NetWeaver platform, integrates ERP capabilities, such as resource planning, with manufacturing execution systems, supervisory control, and data acquisition systems. This integration enables manufacturers to detect exceptions regarding material, capacity, order, machine, and labor, and resolve these exceptions before they become customer issues. The platform also enables manufacturers to monitor and control their key performance indicators, thereby delivering superior business performance.

Current developments include support for manufacturing-specific roles, including dashboards for plant manager, production supervisor, maintenance technician, and quality inspector; embedded analytics; support for mobile devices and RFID technology; and integration of ISA S95 (a standard for plant-to-enterprise business process interoperability). Dashboards showcase the new interaction paradigm that combines transactional activities with embedded analytics to make users more productive as well as supports decision making based on real-time information. These developments and the integration of partners with the Powered by SAP NetWeaver program prove SAP is serious about the manufacturing market.

Manufacturing Vision and Capabilities to Be Delivered over the Next Three Years

As organizations respond to cost and competitive pressures, supply chains continue to grow leaner every day. Inevitably, though, the leaner the inventory, the more exposed the supply chain is to production issues or unexpected changes in customer demand. To lessen these risks, the burden of replenishing customer orders without a drop in service levels continues to shift to the factory, and real-time visibility into the shop floor is becoming critical. Mobile and RFID-enabled business processes are meant to close this real-time gap.

The primary goal driving SAP mobile capabilities in a manufacturing environment is to unchain production personnel from their desktops and empower them with the essential visibility they need to monitor and detect manufacturing exceptions as and when they happen. This would enable them to respond proactively and resolve these exceptions before they are exacerbated or become customer issues. Mobile asset management significantly increases the productivity of maintenance personnel as well as the quality and flexibility achieved in maintenance, thereby increasing asset uptime and utilization.

The adoption and use of RFID in retail and distribution environments is anticipated to drive adoption and usage into the factory floor. In fact, stringent regulations driving the need for cradle-to-grave audit trails and compliance in industries like pharmaceuticals and life sciences will result in increased use of RFID on the shop floor for tracking customer orders, inventory management across the production life cycle, and quality compliance. Signals captured from RFID tags can be used to render exceptions and KPI deviations in real time, further automating closed-loop manufacturing exception and performance management processes.

With a robust solution for RFID and its acknowledged thought leadership in technology, SAP is well positioned to integrate RFID into its manufacturing capabilities for tracking and tracing receipt to dispatch and for supporting standards compliance, thereby driving real-world awareness into the factory floor.

Product Development and Life-Cycle Data Management

As organizations have mastered basic operational practices, for many of them the scope of competitive differentiation has narrowed to product excellence. Today, competitive success rests heavily on an organization's ability to identify customer requirements, design for purpose, and successfully manage product launches and ongoing support.

In response to this growing trend, SAP offers the mySAP Product Lifecycle Management (mySAP PLM) solution. All capabilities of mySAP PLM, except for those covered in SAP xApps™ packaged composite applications, are delivered through mySAP ERP. mySAP PLM is a strategic business tool that can empower enterprises to become more innovative, successful, and profitable. It brings together technology, processes, best practices,

and key functional elements supporting a full range of innovation-related processes, including product specification, product engineering, production ramp-up, sales and aftermarket services, quality requirements, legal compliance, and environmental factors. This holistic approach can help streamline processes for greater efficiency and responsiveness. It helps organizations reduce development time by enabling key processes to run in parallel rather than sequentially.

Key elements of mySAP Product Lifecycle Management include the following.

Life-Cycle Data Management

The solution delivers the wide range of product information needed during the life cycle, such as CAD models and specifications in the design phase; recipes, bills of materials (BOMs), and routings in the planning and production phases; and as-sold or as-maintained structures for the service and maintenance phase. There are new document management features through, for example, the SAP Easy Document Management application, such as document structure support, an enhanced authorization concept, and support for thumbnails. Product structure management has new BOM variant configuration capabilities, as well as new features based on an integrated product and process engineering (iPPE) model. The SAP Recipe Management application is enhanced in the areas of engineering change management usability and process parameter management.

Life-Cycle Process Support

Product development is a key area, especially for discrete manufacturing industries. SAP software provides a virtual collaboration environment in which everyone can share, review, and change information using enhanced document management and collaboration capabilities. Integration to service and maintenance management helps enterprises monitor and maintain assets; perform equipment repairs, modifications, upgrades, and refurbishment; and track costs for individual assets, production lines, and entire facilities.

New features on the CAD desktop include the integration and preview of digital mock-up (DMU) viewing, export to the collaboration platform provided with the Collaboration Folders (cFolders) application and integration to SAP Easy Document Management.

Development collaboration provides new features for file management and cFolders, including BOM comparison, extraction of BOM information for external users, support for manufacturer part numbers, and reference designators, especially for the high-tech industry. Integration with iPPE and the CAD desktop offers new features like work-set design collaboration for mySAP ERP 2005 and the extension of the repository manager for the knowledge management subcomponent in SAP NetWeaver.

Long-term development will be driven by our PLM strategy, leading to enhancements in all three solution layers:

- The foundation: service-enabled life-cycle data management
- The core: life-cycle process support
- The cockpit: project and product portfolio management

Life-cycle data management: SAP will focus on Enterprise Services Architecture enablement of underlying product-related data, especially product structures. This will take advantage of the advanced product structure of the PLM solution, which is known as iPPE. The result will be greater openness through easier integration with partner and third-party applications.

Life-cycle process support: SAP will focus on creating an even deeper integration of mySAP PLM, with enhanced integration into CAD solutions, engineering change management, and manufacturing and design partner collaboration. Other emerging areas include the management of software in products and configuration management for software and hardware.

Sales Order Management in Sales and Service

A number of market trends in the area of sales management strongly influence the business models and the way organizations are engaging with their customers and prospects. These are reflected in the mySAP ERP solution strategy and road map.

Convenience of doing business: Customers are looking for the most convenient way of buying, and organizations need to find ways to improve the user experience for their existing and potential customers. Another aspect of this trend is that customers expect the use of new sales channels like online marketplaces, such as eBay.

Demand for personalized product offerings: Because customers' market power continues to strengthen, it becomes a necessity for organizations to differentiate to serve not only industries as a whole but to provide specific offerings to subsegments down to individualized products to markets of one. This requires products that can be configured easily and a configuration engine that allows organizations to define their product offerings in a flexible form.

These external factors require changes in internal organizational and process setup as well as significant productivity gains to streamline service delivery. This issue is addressed by personalized roles that allow back-office users responsible for sales order management to organize their work according to personal work styles and to focus on exceptions.

Current solution capabilities that support the above requirements include the SAP E-Commerce application, which provides an e-commerce platform that enables users to rapidly turn the Internet into a profitable sales and interaction channel. SAP E-Commerce offers everything organizations need to sell products over the Internet: catalog browsing, product search, shopping basket with functions such as saving and retrieving, checkout, order status, and order history. Web shop owners conducting a business-to-consumer scenario are provided with a function that allows them to register products in a catalog at Web crawlers such as Google or AltaVista. Potential customers searching for products on the Web are directed to the Web shop page to conduct their purchase.

Focus on User Productivity

Organizations can achieve significant productivity gains by deploying state-of-the-art sales channels with the SAP Mobile Sales application. SAP Mobile Sales supports a broad range of business activities that can be processed offline on a mobile device, for example, review customer information, take sales order with bar-code scanning, create and modify sales orders, search for sales orders, and view a list of all materials.

For contact centers focused on outbound or inbound lead-qualification activities, **inbound telesales** provides functions that are delivered through the SAP Telesales packaged solution, which provides agents with the resources they need to track opportunities and meet revenue targets. The interaction center can also leverage outbound dialing hardware to optimize agent efficiency.

Occasional users can benefit greatly from a **highly flexible** interface. When combined with a high-performing application, an easy-to-use interface can speed up sales processes and enhance data accuracy, even if a high sales order volume is handled. The new user interface for sales order management is customizable and can be adapted to the organization's business needs. It supports personal work styles and pushes critical business processes like "incomplete sales orders" or "expiring quotations" directly to the **desktop of the internal sales representative**. In this environment, internal sales representatives can monitor their daily workload more efficiently and, supported with analytical insight, they can drive higher order-fulfillment rates and improved customer service.

Future developments in the area of sales and service will focus on the adoption of business objects and core capabilities provided by the business process platform in an ERP environment, for example, telephony integration, managing opportunities and activities, as well as broader integration of the Internet pricing and configurator beyond Internet sales.

mySAP ERP FINANCIALS

Chief financial officers (CFOs) are facing growing pressure to increase the efficiency and strategic direction of financial accounting in their organizations. At the same time, CFOs have to be independent enough to present an objective and unfailingly transparent portrayal of the organization to all relevant parties, such as executives, shareholders, banks, external auditors, analysts, and tax auditors. CFOs must act as independent business partners of their organizations because they have to question and analyze its business decisions. Ultimately, financial accounting provides the key figures on which executives throughout the organization base their daily business decisions. Lastly, CFOs are expanding their scope of responsibilities within the organization and require 100% transparency on the operations and performance of the entire organization.

The mySAP ERP solution provides CFOs with the optimal support for fulfilling these requirements. The focus of the mySAP ERP Financials solution is to change the ratio of strategic and transactional tasks in finance, improve visibility of all business operations, and provide analytical capabilities to all functions in order to accelerate decision making and improve the response to leading performance indicators.

A service-oriented architecture gives organizations an opportunity to transform financial management processes for greater effectiveness and efficiency. Web services enable finance organizations to aggregate performance indicators more quickly, present this information in a more intuitive manner, and decrease reaction times to financial conditions of the business. In addition, Web services allow organizations to automate finance functions that formerly required manual or batch-job interfaces. The ability to communicate and transfer information externally can be executed at a lower cost and with greater security and control.

Future development of mySAP ERP Financials will concentrate on the following areas.

Financial Supply Chain Management

Financial supply chain management refers to the monetary part of the logistics chain that runs in parallel to the logistics supply chain within or between enterprises. The financial supply chain automates and optimizes all financial processes among organizations by connecting customers, suppliers, banks, and other service providers. The challenge is to seamlessly integrate financial processes, thereby realizing the following specific goals:

- Optimize working capital
- Significantly reduce the cost of financial processes
- Greatly improve cash-flow planning

The ability to optimize the financial supply chain is linked closely to technological and organizational requirements. The acceleration and automation of the financial supply chain must be backed by integrated analytic applications to assist business users' decision making. Users access all information that is relevant to them through a completely redesigned intuitive user interface. These applications enable business users to make the right decisions without going through the time-consuming process of asking specialist departments for the necessary information.

With mySAP ERP 2005, SAP provides solutions that have already proven their strength for electronic invoicing, automatic invoice verification, and structured complaints processing. This range of functions has been extended with solutions for protecting against risks related to customer defaults, currencies, and interest rates. These integrated functions of mySAP ERP Financials enable more precise and up-to-date planning of an organization's cash flow.

Any delays in payment transactions cost great amounts of time and incur avoidable fees. With future versions of mySAP ERP, SAP will deliver solutions for securely and electronically handling all payment transactions based on Web services, thus eliminating the need for manual intervention. Straight-through processing is the “magic” concept here. For example, after payment orders are submitted to a bank, their status can be monitored online and the order can be cancelled as long as the bank has not yet completed it. Organizations gain faster access to information that is more detailed than the information the banks provide on the bank statements.

Organizations can finally realize the promise of a fully integrated treasury and cash management function with mySAP ERP. Deals, risk, credit, and commodity transactions no longer have to exist as an isolated branch of the enterprise. Today, mySAP ERP helps organizations realize greater control over treasury and reduce the risk of fraud that could occur in treasury or cash management departments. mySAP ERP not only provides proven treasury, in-house cash, and cash management capabilities; it also delivers the added benefit of knowing that these functions are conducted in a controlled and compliant fashion. The future of treasury and cash management will focus on the expansion of the number of transaction types and the improvement of data communication between treasury departments and their external banking partners.

From an organizational perspective, the goals mentioned above can be achieved by implementing a shared-services center or outsourcing to external service providers. These organizational structures require maximum flexibility to achieve the best results with regard to business processes. The Web services provided by SAP solutions are based on a service-oriented architecture and provide this flexibility as well as the necessary interfaces to meet these challenges.

Financial and Management Accounting

With mySAP ERP Financials, organizations of all sizes and from any industry can effectively and cost-efficiently meet national and international accounting requirements such as complying with U.S. GAAP and International Accounting Standards (IAS) and supporting multiple currencies and languages, which is a traditional strength of SAP solutions. Not only is accounting-related data recorded for financial reporting, but cost and revenue information is gathered for management reporting and valuation purposes. The tight integration of financial and management accounting with logistical applications means that all employees have access to the same consistent information, thus accelerating internal communication processes and the period closing.

With mySAP ERP 2004, SAP delivered a completely revised version of the general ledger that is superior to the classic general ledger in the following ways:

- Standardized general ledger to fulfill all business requirements
- Closely linked financial and management accounting
- Mapping of parallel accounting principles and valuations
- Delivery of industry-specific, extendable general ledger templates
- Split functions for balanced books by any general ledger dimension for management and segment reporting
- Increased transparency and, consequently, improved auditing capabilities for corporate governance
- Faster period-end closing

With mySAP ERP 2005, SAP continues offering its current customers transition tools that were first put to the test with mySAP ERP 2004 and are available now to all customers. The new general ledger fulfills all legal, national, and international accounting principles. For example, stricter legal requirements regarding revenue recognition gave rise to extensions and improvements in this area, and these new features will be delivered with future versions of mySAP ERP.

Once again, the service-oriented architecture forms the basis for the extensive increases in deployment flexibility. This answers the calls from many customers with complex system architectures who want to connect a centralized financial accounting installation to several decentralized logistics installations without the redundancy of saving the financial accounting data or configuring the financial accounting functions in the decentralized logistics systems.

In line with SAP strategy, user interfaces and support for critical operational business processes in financials and management accounting, such as activities related to period-end closing, were reworked. In this case, period-end closing times have been shortened drastically. By mySAP ERP 2007, current and future user groups will be provided with new user interfaces and integrated, role-specific analytic applications.

Corporate Governance

As a result of financial scandals in recent years, corporate governance has experienced a major increase in importance. Financial and stock market authorities pushed through a series of new national and international laws to regain the trust of investors. mySAP ERP Financials enables organizations to comply with national and international legal requirements as well as with the specific laws that affect them, such as Basel II and the Sarbanes-Oxley Act. In addition to examining financial accounting systems, external auditors also look at all business processes that ultimately affect balance statements, profit and loss statements, and cash flow statements. During the audit of financial statements, auditors specifically look to see whether key steps in the processes contain serious errors or if they could allow fraudulent activities. The financial statements' audit is supported by extensive functions for efficient and cost-effective internal controlling and for risk management, by identifying the consequences of potential risks to organizational goals.

Starting in 2005, many organizations are subject to the Sarbanes-Oxley Act (SOA) in addition to the regulations mentioned above. mySAP ERP 2004 brings multiple capabilities to support section 301 (whistle-blowing), section 302 (sign-off), section 404 (internal control documentation and testing), and section 409 (material changes in business). In addition, SAP software uses inherent and configurable business controls to regulate fraud prevention at the transactional level.

For many companies, section 404 is particularly challenging. mySAP ERP provides a module for the management of internal controls to support SOA 404 projects.² This not only enables organizations to document their internal verification systems, but also lets them evaluate the design and effectiveness of internal checks, making them transparent for executives and auditors. With the whistle-blower function, employees can anonymously report irregularities that they discover to the auditing committee.

mySAP ERP provides an audit information system application for internal and external auditors to evaluate mass transactions.

The effects that risks have on an organization's important key figures can be identified with the SAP Strategic Enterprise Management (SAP SEM®) application. The operational risk management tool is the result of customer projects and has been provided to individual enterprises as a pilot project as of last year.

The SAP SEM application of mySAP ERP Financials supports organizations that, as a consequence of Basel II, can reduce their cost of capital only if their financial information and planning figures are made more transparent.

The service-oriented architecture of mySAP ERP 2005 has facilitated the use of enterprise services to seamlessly integrate the SAP Compliance Calibrator by Virsa Systems software, a partner product available as of this year. The software helps organizations carry out the "four-eyes" principle³ and works with the authorization concept to identify security lapses. With SAP Compliance Calibrator by Virsa Systems, organizations can use simulation functions when assigning new authorizations.

² SOA 404 requires public companies to include a report by management (in annual company filings) describing and assessing their internal controls over financial reporting and disclosing any material weaknesses in those systems. SOA 404 also requires the external auditor to attest to management's assessment of the company's internal controls.

³ Meaning two people commonly verify a transaction or a process.

mySAP ERP HUMAN CAPITAL MANAGEMENT

More than ever, an organization's human capital is the key differentiator for its ability to attain competitive advantage and achieve sustained business success. Key human capital management (HCM) strategies that contribute to this business edge include improving workforce efficiency and productivity, delivering best-in-class HR services at the lowest possible cost, planning workforce needs, measuring strategies, finding the right talent for today and building talent for tomorrow, educating the workforce, and aligning and motivating people to achieve organizational goals and objectives. Together, these strategies help maximize the organization's human capital investment to drive business success.

SAP's goal is to enable execution of these strategic workforce processes through technology, providing the foundation for organizations to maximize the contributions of their workforce. Combining a wide range of human capital processes with self-service, analytics, and flexible technology, customers can consolidate their human capital processes onto one global platform, distribute them to everyone in the organization, and provide the analytical data to plan for future workforce needs.

Talent Management and Workforce Process Management

The human capital processes supported by mySAP ERP comprise two general groupings: talent management and workforce process management. Talent management encompasses processes spanning the entire "hire-to-retire" spectrum of the employee life cycle, including sourcing, applicant tracking, career and succession management, training, performance management, and compensation management. Traditionally, these processes have been viewed as stand-alone activities that have little interaction across their boundaries. However, mySAP ERP integrates and connects these activities with support for creating end-to-end business processes that transform the way organizations acquire, influence, and retain their employees. For example, connecting succession planning with development plans and performance management enables an organization to identify high-potential employees, plan their development, and monitor progress.

Workforce process management supports foundational employee processes like organizational management, time management, and payroll and benefits. mySAP ERP continues with the strategy of “globalization with localization” by providing a basis for an organization to standardize global human resource processes while providing legal compliance and best practices at the country level.

End User Service Delivery

The ability of an organization to make full use of its strategic human capital processes depends on its ability to make those processes available as services to everyone in the organization. Because HR data and processes can touch every employee in the organization, HCM solutions have a very high threshold for usability. Moreover, given that not all employees have Internet access, multiple means of access must be supported, such as kiosks, telephony, and mobile devices. It is crucial that organizations enable employees to use methods like mail and a help desk to initiate service requests. mySAP ERP combines all these channels and strategies as part of end-user service delivery, enabling organizations to implement and manage a comprehensive shared-services strategy.

New in mySAP ERP 2005 is the SAP Interaction Center application for employees, which can transform HR departments into a strategic, service-oriented response center. Organizations using this application can increase employee satisfaction by providing every employee with prompt, personalized, and courteous service and accurate information. They can decrease costs and improve credibility by giving their HR staff the ability to verify corporate policy, employment status, entitlements, and service commitments based on real-time information.

The introduction of a flexible set of HR forms and processes supplements existing self-service for managers and employees. Adobe forms adaptable to the business process can be integrated throughout the entire communications process. Once completed, forms can be saved directly to the employee's file.

A new easy-to-use portal role for maintaining personnel master data will be available with mySAP ERP 2005. Using the respective work center, HR administrators receive work items classified according to specific tasks, priorities, approvals, pending items, or even automatic responses. Embedded analytics will enable organizations to make effective use of business intelligence functionality and to gain credible, clear, and comprehensive business insight on the organization's employee administration activities to balance work loads and to address critical operations quickly.

Workforce Analytics

With the implementation and delivery of strategic human capital processes, tools to create strategies and measure them are crucial. In the past, workforce analytics has been centered on process measurement, such as the cost to create a paycheck. Today, workforce analytics, integrated with ERP data, provides the data consolidation necessary to drive multiple dimensions of insight, including the relationship between human capital investment and business outcomes, workforce trends and demographics, and workforce planning. This provides a better basis to implement strategies that can be measured and monitored over time. mySAP ERP enables this transformation by combining workforce data with ERP data to provide comprehensive insight on how workforce factors can contribute to business planning and, ultimately, to business success.

Technology plays a key role in enabling strategic HCM processes. Integration of content and services from third parties, as well as process outsourcing, play key roles in the ability to deliver a comprehensive HCM solution. Enterprise Services Architecture is a key enabler of these strategies, providing industry-standard methodologies to integrate processes across business boundaries and to enable outsourcing of selected tasks. By providing the platform to construct composite applications and processes on top of those delivered by SAP and its partners, SAP enables organizations to respond quickly to new demands on their human capital and associated processes.

Taken together, mySAP ERP capabilities have the sophistication and breadth to enable organizations to better manage their human capital investments and answer questions like: “Have we identified and are we developing our next wave of leaders?” and “Do we know which human capital investments have the greatest impact on business performance?” Organizations can transform the way they manage their human capital and fully leverage this asset to attain maximum business success. mySAP ERP helps organizations in this transformation through comprehensive, consolidated support for talent management processes and global foundational workforce processes, delivered through end-user services based on need, context, and expectations, and supported by analytics and advanced technology.

mySAP ERP CORPORATE SERVICES

The mySAP ERP Corporate Services solution helps organizations support and streamline administrative processes in the areas of project portfolio management; quality management; audit management; environment, health, and safety; travel management; and real estate management. Although these processes are ubiquitous to every enterprise, they do not necessarily allow for differentiation. Therefore, it is essential to conduct these processes with the utmost efficiency. Corporate services enhance transparency and control, and reduce financial and environmental risks.

Project Portfolio Management

SAP solutions empower organizations to establish comprehensive project-portfolio management processes with the Collaboration Projects (cProjects) suite, the SAP xApp™ Resource and Portfolio Management (SAP xRPM) packaged composite application, and project management functions. mySAP ERP provides advanced capabilities to manage, plan, and execute projects and programs and stay focused on results. Portfolio management allows organizations to prioritize and align projects with strategic decisions. cProjects, which is an integral part of mySAP ERP, is a powerful and easy-to-use application that enables operational project management with a phase-based approach focusing on resources, project roles, documents, and collaboration. SAP xRPM delivers the foundation for strategic portfolio management by combining financial, strategic, and operational aspects of the entire portfolio (projects, products, assets, services, and so on). Customers benefit from a complete solution that promotes project visibility at all stages by including all aspects of integration into mySAP ERP (logistics, human resources, and financials) and collaboration with internal and external partners. Scalability and an open, extendable framework are further solution differentiators.

In mySAP ERP 2005 and future versions, SAP's goal is the transformation to a service-enabled architecture that allows greater flexibility regarding user interfaces, deployment options, and total cost of ownership. On a strategic level, support for the portfolio life cycle as well as scoring, simulation, and review tools assist customers in their decision making. In addition, enhanced analytical features are available for all areas of project and portfolio management.

To enable organizations to accelerate project execution, SAP will include a project dashboard, work list, and improved collaboration features by integrating collaboration rooms, which are delivered through SAP NetWeaver Portal. In addition, a user-oriented self-service feature will support project leads and project team members by providing guidance for various project execution activities. To significantly increase people productivity, project work lists with project-relevant key performance indicators, such as staffing or degree of work completed, will be provided as entry points to the application. Furthermore, a project dashboard dealing with costs and resources will be provided. Time and resource management enhancements allow users to share responsibilities and to reconcile resource demands between the strategic layer and operational staffing. The integration of external service procurement and time recording complements our product and project portfolio management solution.

The development plans beyond 2005 include the ongoing integration between the strategic and operational layer of project and portfolio management as well as continuous improvements of resource management functionality and financial integration, especially for the service industry. In addition, project portfolio management is seen as the basis to drive a successful new-product development and introduction process within all organizations. SAP plans developments to manage the product innovation process more efficiently and to establish transparency throughout the entire development cycle. With an emphasis on integration, organizations will be in a better position to leverage their existing investments to support these additional processes. SAP plans to extend the scope of project management to support the planning, execution, and reporting of Six Sigma projects.

Quality Management

There is more to quality management than assuring quality by means of quality inspections. The focus is on prevention of deficiencies, continuous process improvement through collaboration, and sustained quality control. Quality management capabilities within mySAP ERP allow organizations to control unplanned events, ensure quality throughout the entire supply chain and the life cycle of products and assets, and comply with legal requirements and industry standards. Organizations can use the available project management capabilities to run Six Sigma projects: define the project goal and key figures, measure all influencing factors, analyze the results, improve the process, and control the effectiveness of measures to enhance quality and save costs within the organization. The steps for measuring and analyzing critical situations and parameters will be supported by quality management capabilities and through the availability of KPIs derived from data from logistical processes like manufacturing.

Quality management within mySAP ERP provides a comprehensive approach to total quality management throughout the entire product life cycle by supporting enterprise-wide quality engineering, quality assurance and control, and continuous improvement. It helps organizations comply with industry standards and legal requirements, increase customer satisfaction, and improve competitiveness. Task-specific roles can improve the efficiency of people involved in quality-related processes, such as quality inspectors.

mySAP ERP addresses industry-specific quality management needs even for regulated industries. The solution offers a comprehensive range of functions that reach far beyond the borders of a traditional laboratory information management system. Examples are the handling of stability studies for testing and evaluating products during various stages of the product life cycle and the management of multiple specifications, which allows the determination of the suitability of a batch for a specific customer or country. Both functions are integrated seamlessly into other logistical business processes, which increase the information transparency throughout the organization.

Audit Management

Audit management is a powerful capability that shows how mySAP ERP benefits from the SAP NetWeaver platform. An audit is a systematic examination used to determine to what extent an object meets previously specified criteria. Audits are usually performed using questions that represent the criteria. Audit management enables organizations to plan and process audits, grade audit objects, monitor corrective and preventive actions that were based on the findings, and analyze audit data from different points of view.

From a business perspective, audit management provides a framework that can be applied to various application areas, such as quality management, environmental management, safety and security management, financial revision, and risk management. In the quality management area, it can be used for different purposes, such as system audits, process audits, and product audits. Audit management is completely self-contained and does not require any other solution component.

Environment, Health, and Safety

As products and processes continuously change, so do the laws and rules that regulate them. Global businesses must contend with frequent changes in the number and complexity of environment, health, and safety (EH&S) regulations that impact nearly every area of an enterprise, including purchasing, new-product development, manufacturing, sales, distribution, service, and maintenance. Regulatory changes may require modifications to work areas, which can impact industrial hygiene and safety of employees.

mySAP ERP provides capabilities for monitoring complex regulations, managing data and documents, tracking dangerous materials and products, carrying out waste disposal, enhancing employee and public safety, and supporting preventive healthcare. The integrated architecture of mySAP ERP ensures the consistency and accuracy of all data exchanged with other solution areas. The master data management capability in the SAP Environment, Health & Safety (SAP EH&S) application eliminates the need for redundant data maintenance, and up-to-date data and documents are always available when needed. It can be implemented by every organization that handles chemical or nonchemical substances in any form – be it in manufacturing, processing, storage, transportation, or end applications.

Product safety and hazardous substance management

will be enabled to meet the technical and business aspects of the new European Registration, Evaluation and Authorization of Chemicals (REACH) legislation, for example, with the provision of appropriate data on the respective substances to a central database and the calculation and tracking of substances (material) volumes in a heterogeneous and global business environment.

Dangerous goods management will feature major enhancements in dangerous-goods packaging and dangerous-goods checks during sales, shipping, and transportation, enabling organizations to comply with legal regulations. The dangerous goods management capability in SAP EH&S supports all processes connected with the manufacturing and distribution of dangerous goods and compliance with national and international legislation.

Waste management will feature enhanced generic reporting functions for waste life-cycle analysis supporting organizations in handling waste disposal processes; complying with national and international regulations and laws that are relevant for generation, transport, and disposal; and distributing costs proportionally among departments that generated the waste. Customers benefit from easier handling of data collection for waste life-cycle analysis and more flexible creation of legally mandated reports.

Industrial hygiene and safety (IHS) supports IHS professionals and occasional users, enabling them to obtain and store information on work areas; any substance or material used or stored in the organization; exposure situations; status of safety measures, incidents, and accidents; health and safety briefings planned and held; and technical equipment (functional location, equipment). IHS will be enhanced through the integration of the classification system into IHS measurement management.

Occupational health supports general employee occupational healthcare in an enterprise, as well as the planning and execution of special health surveillance protocols and the treatment of injuries. It sets the stage for implementing a full-scale healthcare management process in the enterprise. Customers benefit from the ability to run a preventive medical management system with less administrative work and more transparency. Additionally, SAP software supports flexible processes to ensure legal compliance and a customer-specific healthcare engagement. Due to enhancements in SAP EH&S for occupational health processes, customers can reduce their administrative work and benefit from process and cost transparency, for example, with the new planning cockpit, the easier recording of medical data, and document assignment in the medical service.

Within the next three years, developments in SAP EH&S will enable the use of SAP NetWeaver as the new technical platform, enhance existing functionality to support adaptation to future legal requirements, and offer new processes to help customers ensure compliance in a worldwide business environment. With the provision of SAP EH&S dangerous goods master data and substance data on the Enterprise Services Architecture blueprint, SAP software will enable customers to create and operate new business processes with the essential EH&S information to ensure legal compliance.

In general, the adaptation to future legal requirements affects all areas of the SAP EH&S application, especially for organizations with a worldwide reach. In this context, one of the major steps is the enablement of the technical and business aspects of the new European REACH.

Travel Management

The SAP Travel Management application provides all customers with end-to-end process support for travel management. With SAP Travel Management, customers can implement a pretrip approval travel request, use a powerful online booking tool to book air, car, hotel, and rail online, and it provides a globally used expense management system.

The SAP Travel Management application has seen a dramatic change in user-interface design and will be enhanced in future versions by additional interface elements, such as universal work list support (enhancements) and new functions for entering expenses.

The **trip request** process is supported by the SAP Business Workflow tool. The complete process of pretrip approval, including requesting an advance, is based on new user-interface technology, which will be enhanced further to support Adobe interactive forms and Internet service requests. In addition, the connection to the online booking system will be developed further, and the requirements of the public sector will be delivered in the form of funds management. Additional enhancements are planned in the delivery of workflow templates for the trip request, which will deliver out-of-the-box standard workflow that meets many organization's requirements.

Travel planning will be further enhanced by developing additional generic, standard interfaces to connect car and rail providers to complete the open interface strategy of SAP Travel Management based on the SAP NetWeaver Exchange Infrastructure (SAP NetWeaver XI) component. Additional improvements between travel planning functions and travel agencies are planned, which include enhancements in workflow and lost-savings statistics. Following the market trend, there will be enhancements in the area of airline pricing. The existing global distribution system interfaces (Sabre, Amadeus, and Galileo) will be changed to SAP NetWeaver XI interfaces, giving customers a choice of more than 20 content providers for their online booking needs.

The travel expenses function delivers more than 20 country versions and will be enhanced by several new country versions, including Russia, China, Hungary, Brazil, and Australia. The credit card interface will be enhanced to run through a SAP NetWeaver XI interface. In addition, there will be full support for credit card company data files, which include hotel, air, and rental car portfolio data.

Travel expense management includes a new version of the SAP Mobile Time and Travel application, the user interface of which has been redesigned in full compliance with the user interface of the online employee self-service process for travel and expenses. Additional offline processes will also include manager approvals for travel requests, travel plans, and expense reports. Furthermore, notifications on open trips and trip status as well as on changes regarding travel arrangements (hotel, car rental, or air reservations) during the trip will be made available.

Analytics for SAP Travel Management will be enhanced to include reports and online graphics, such as most-used hotels, lost savings, worldwide travel expense, and many more. To deliver these reports, data interfaces from and to partners, such as credit card providers and booking systems, will be standardized through SAP NetWeaver XI. SAP will deliver templates based on the SAP NetWeaver Visual Composer tool so that organizations can build their own dashboards.

Real Estate Management

The SAP Real Estate Management application supports customers by increasing transparency in their real estate portfolios, streamlining day-to-day business processes, and increasing transparency to help them make the right decisions.

Using SAP Real Estate Management to map and manage real estate property portfolios enables customers to optimize their real estate portfolio mix, maximize utilization of their resources, improve business partner relationships, and better manage occupancy rates and site usage. This, in turn, provides for better cost management in that reduction in the frequency and duration of vacancies is optimized through more effective property management. Additionally, it is also possible to outsource certain parts of the real estate business, and deployment options for this functionality will be enhanced in future mySAP ERP versions through Enterprise Services Architecture.

It is crucial that real estate managers make timely and accurate decisions in all areas of their real estate business. Controlling and reporting functions enhance information transparency and provide a complete view of all facility expenses and revenues. Real estate customers are able to improve their decision making and investment strategies through accurate cost and revenue performance data. They are able to effectively manage real estate costs, identify operational efficiencies, and streamline their forecasting and planning processes. This functionality will be developed continually to provide more features to manage company-used space, such as assignment of employees, graphical removal planning, and settlement of usage costs.

As part of mySAP ERP, SAP Real Estate Management provides an integrated end-to-end solution, in contrast to point solutions for management of real estate transactions. Many country versions are available, and future versions will support additional country-specific legal features for countries such as Japan, Russia, Portugal, and Spain.

SAP Real Estate Management will continue to support customers by integrating real estate information with financial and other enterprise applications. This means that there is less consolidation and data validation between systems, and no additional system maintenance costs.

ABBREVIATED TERMS

PDA	personal digital assistant
RFID	radio frequency identification
HCM	human capital management
ESA	Enterprise Services Architecture
SOA	service-oriented architecture
SSC	shared service center
BPP	business process platform
BPMI	Business Process Management Initiative
OASIS	Organization for the Advancement of Structured Information Standards
UDDI	Universal Description, Discovery and Integration
W3C	World Wide Web Consortium
UN/CEFACT	United Nations Centre for Trade Facilitation and Electronic Business
KPIs	key performance indicators
ISA S95	standard for plant-to-enterprise business process interoperability
CAD	computer-aided design
BOM	bill of materials
STP	straight-through processing
iPPE	product and process engineering
DMU	digital mock-up
cFolders	Collaboration Folders
CFOs	chief financial officers
IAS	International Accounting Standards
US GAAP	US Generally Accepted Accounting Principles
SOA	Sarbanes-Oxley Act
HR	human resources
cProjects	Collaboration Projects
LIMS	laboratory information management system
NPDI	new product development and introduction
IHS	industrial hygiene and safety
EH&S	environment, health, and safety
REACH	Registration, Evaluation and Authorization of Chemicals

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