

Research and Development

Resources for R&D

Fourteen Percent of Revenue Plowed into R&D

We must continuously improve our portfolio of products if we wish to maintain and build on our current leading position as a vendor of business software. Our R&D activities in 2007 centered on our new SAP Business ByDesign solution. This new solution strategically extends our existing portfolio for small businesses and midsize companies, which also includes the SAP Business One application and the SAP Business All-in-One solutions.

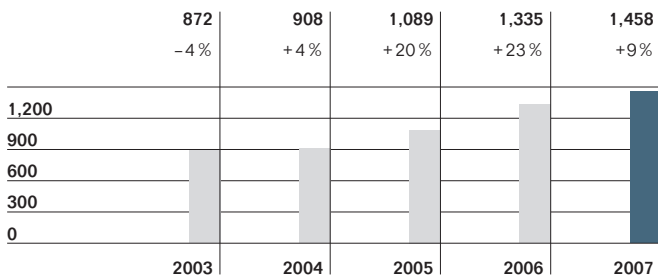
In 2007, our R&D expense rose 9% to €1,458 million (2006: €1,335 million; 2005: €1,089 million). We spent 14% of total revenue on R&D in 2007 (2006: 14%; 2005: 13%).

The importance of R&D was also reflected in the breakdown of employee profiles. In 2007, our total FTE count in development work was 12,951 (2006: 11,801; 2005: 10,215). This is 30% of all Group employees and represents a 10% rise in the number of R&D employees since the previous year. Of the employees working in R&D, 48% (2006: 52%; 2005: 57%) are employed in Germany, 25% (2006: 22%; 2005: 18%) are in our high-growth development centers in China and India, and about 27% (2006: 26%; 2005: 25%) are in our other development locations.

The expenses for R&D include employee salaries and the cost of externally procured development services.

Research and Development Expenses

€ millions | change since previous year



Development News

In 2007, our product development work focused on optimizing our solution portfolio. Working with our customers and partners, we developed numerous innovations and greatly extended the functional range of our software products. These efforts created rich new solutions in all four core areas of our product portfolio: enterprise applications and industry solutions; platform; software for small businesses and midsize companies; and offerings for business users. We also acquired companies and business to augment our portfolio of products.

Enterprise Application and Industry Solution Offerings Expanded

We adapted the enterprise applications in SAP Business Suite and all of our industry solutions for enterprise SOA and developed the following enhancements:

- **SAP ERP:** In July, we announced the availability of the second enhancement package for the SAP ERP application. Next to functional enhancements, the package included specific innovations for the media, utilities, telecommunications, and retail industries. We announced the third enhancement package in December. It delivers reporting, financial, human resource management, and quality management capabilities. These enhancement packages enable customers to quickly and cost effectively take advantage of key innovations without moving to a new SAP ERP release.
- **SAP CRM:** In December, we introduced a new version of SAP CRM. SAP CRM 2007 offers new enhancements and capabilities, such as real-time offer management, trade promotions management, business communications management (bringing e-mail, fax, and telephony together into one all-Internet Protocol environment), and pipeline performance management. Its dynamic new user interface with Web 2.0 functions gives business users more flexibility to manage customer relationships the way they prefer.

By acquiring Wicom Communications, a leading provider of all-Internet Protocol software solutions, and integrating the Wicom capabilities with related SAP applications, we can now offer more efficient and powerful contact center and enterprise communications functions in the SAP Business Communications Management software.

- **SAP Product Lifecycle Management (SAP PLM):** We enhanced our product life-cycle management software, building the foundation for a new generation of the SAP PLM application. With SAP PLM, manufacturers can better address two dominant business trends – the accelerated speed of change and the need to achieve competitive differentiation by collaboratively innovating within their business network. Companies use SAP PLM to introduce new products more rapidly, for example, and to effectively collaborate with their business networks.
- **SAP Supply Chain Management (SAP SCM):** SAP SCM 2007 considerably extended our supply chain management offering, with its new applications for supply network collaboration, extended warehouse management, transportation management, and sales and operations planning. It can greatly help customers streamline, for instance, the way their marketing, production planning, sales planning, and financial budgeting work together. It can also help them optimize their trade processes, improve process transparency, drive down costs, and manage international shipping.
- **SAP Supplier Relationship Management (SAP SRM):** In 2007, we introduced an on-demand electronic purchasing solution. Companies can use the SAP E-Sourcing on-demand solution for their sourcing and procurement processes, such as online auctions and responding to requests for proposals. We also launched an application for contract life-cycle management and a spend analytics application that enables companies to more effectively manage procurement costs and compliance. Customers can use SAP SRM to run their complete procurement process from source to pay.
- **SAP Auto-ID Infrastructure:** We kicked off a new round of radio frequency identification (RFID) tagging development in 2007 with our SAP Auto-ID Infrastructure offering for product tracking and authentication. Customers can use it to collect and process product data from RFID tags and they can store and manage the data in the SAP object event repository designed for that purpose. This enables them to pinpoint the exact location of any object at any time.

- **SAP Manufacturing:** As a result of acquiring Factory Logic in late 2006, we added the SAP Lean Planning and Operations application to our offering for manufacturing industry. It helps manufacturers adapt more effectively and more flexibly to the changing demands of their customers. In addition, as a result of our acquisition of Lighthammer, in the new version of the SAP Manufacturing Integration and Intelligence application plant employees have better, personalized access to the information they need for decision making.

Platform Simplifies the Way People Use IT

SAP NetWeaver is the open integration and application platform that integrates people, information, and processes into one hub, across technologies and organizations, to reduce TCO. Customers wishing to create an enterprise SOA can deploy further elements of SAP NetWeaver, such as SAP NetWeaver Business Intelligence Accelerator and SAP NetWeaver Master Data Management, to optimize and enhance their core processes. We added new functions to the SAP NetWeaver technology platform in 2007. It now gives IT staff an even more powerful strategic technology platform to standardize, consolidate, and optimize their IT landscape and to develop and integrate innovative business process solutions. In developing the new functions for SAP NetWeaver, we concentrated on helping simplify the way workers use IT, accelerating design and integration of applications for business processes, and managing and accessing relevant data right across the enterprise. It is now even easier for customers to create a powerful business process platform based on enterprise SOA.

- **SAP NetWeaver Composition Environment:** We released the SAP NetWeaver Composition Environment, offering, a lean, integrated, standards-based development, modeling, and runtime environment. Software developers and technical consultants can use it to extend application logic and, depending on users' needs, compose new views and applications based on SAP software. It has been available to our customers and partners since May 2007.

- **SAP NetWeaver Process Integration:** In December 2007, we shipped the final major building block for creating an enterprise SOA. Companies use new functions in the SAP NetWeaver Process Integration offering, which we developed from the SAP NetWeaver Exchange Infrastructure component, to make their business processes more flexible and to manage enterprise services. At its heart is the Enterprise Services Repository, which is used to define all enterprise services and manage them through their life cycle. The new version also supports standards better, and improves the handling of data-intensive scenarios.
- **SAP NetWeaver Business Rules Management:** We acquired Yasu, a leading vendor of business rules management systems, and embedded its solutions in our SAP NetWeaver technology platform, helping our customers apply their business rules consistently to all of their business processes in heterogeneous IT landscapes, and update them as necessary. The control capabilities can also help companies better and more reliably maintain legal compliance.
- **SAP NetWeaver Identity Management:** We acquired MaXware in May 2007. We integrated its identity management solution in the SAP NetWeaver technology platform and enhanced it to help companies save time and money by optimizing the administration of user accounts and passwords.
- **SAP NetWeaver Enterprise Search:** In August 2007, we released the SAP NetWeaver Enterprise Search application. It provides secure, seamless access to information and processes in SAP and non-SAP systems to help information workers navigate to key business data. They can use it in familiar environments: in portals, as a desktop widget, on handheld devices, and in e-mail. SAP NetWeaver Enterprise Search delivers highly relevant results and suggested actions that reflect the user's role in the enterprise, and recognizes the business context of the search query.

- **SAP NetWeaver Mobile:** The first customers started using our new SAP NetWeaver Mobile offering in May 2007. This is the successor to the SAP Mobile Infrastructure component. It provides new, scalable middleware to simplify the management of mobile devices, and improved security functions. New development tools help build mobile applications with very little programming work. SAP NetWeaver Mobile also provides a runtime infrastructure for mobile solutions with which mobile workers can access the information they need from SAP and non-SAP applications, online and offline, wherever they are.

Midmarket Initiative Gains Pace

We developed the following new solutions and releases for small businesses and midsize companies in 2007:

- **SAP Business All-in-One:** We completed the development, ready for release early in 2007, of a new generation of the SAP Business All-in-One solutions. Based on SAP ERP and SAP CRM, the solutions leverage the power of an enterprise SOA to offer midsize customers new levels of flexibility and simplicity in their use. SAP's development partners also introduced many SAP Business All-in-One complementary solutions, which now number more than 80. Deepening support for midsize companies in specific industries, we added 60 SAP Best Practices offerings midyear, designed to boost the operational power of SAP Business All-in-One solutions.
- **SAP Business ByDesign:** In September, we launched SAP Business ByDesign. We developed this solution for midsize companies, complementing our existing portfolio of midmarket solutions. SAP Business ByDesign delivers simplicity, adaptability, and a wide range of functions at low running cost. SAP Business ByDesign is a complete on-demand software solution for businesses with 100 to 500 employees – fast growing companies that typically have not experienced integrated business solutions before.

- **SAP Business One:** In 2007, we added many core business processes to SAP Business One. The SAP Business One 2007 release offers many new financial capabilities from reconciliation to reporting that are designed to enable small businesses to leverage local best practices and meet local customary requirements. The solution comes with many new and redesigned screens and interfaces to make it easier to use, faster to access information, and more scalable. It also adds new Web-based capabilities such as Web CRM and e-commerce to provide a single integrated system for small businesses to manage their business online and offline.

Significant Expansion of Business User Portfolio

We expanded our portfolio of products with innovative offerings, notably:

- **SAP solutions for GRC:** We delivered a new version of the SAP GRC Global Trade Services application to help customers better integrate processes related to import and export. The SAP Customs Processing for Automated Export Systems application, which our developers also completed in 2007, helps customers comply with new EU procedures by facilitating electronic communication with EU customs systems. The new version of the SAP GRC Process Control application has new functions to make it simpler to handle the internal controls required for management certification. We released the new SAP GRC Risk Management application, which provides automated functions for risk planning, identification, and analysis across companies' lines of business. An enhanced version of the SAP GRC Access Control application simplifies the compliant assignment and management of user authorizations for IT systems and access to data.
- **Analytic blueprints from SAP:** By acquiring Pilot Software we added a critical piece of new technology that is now integrated into our portfolio of analytic applications. We can now offer customers tools to foster the alignment of their business strategy across all of their organizations. This has the potential to make our core products, such as our applications for ERP, CRM, and SCM, even more attractive for our customers.
- **SAP Strategy Management:** We acquired Pilot Software to enhance our portfolio of strategy management software. Customers use the SAP Strategy Management application to continuously manage and assess the three cornerstones of business performance – metrics, decisions, and goals.
- **SAP Business Planning and Consolidation:** Our acquisition of OutlookSoft, a specialist company providing financial and strategy performance measurement solutions, extended our portfolio of solutions to help chief financial officers (CFOs). With its integrated planning, budgeting, forecasting, and consolidation capabilities, it is a solution that provides an effective control and planning toolbox. It also enables companies to conduct their business analysis more thoroughly and in more detail.
- **Mobile business:** Responding to growing interest in mobile business processes, we developed new mobile solutions and enhancements to existing mobile applications. Employees with mobile devices can be given full access to all core business processes from anywhere with our current offering.
- **Duet:** Duet, which has been available since 2006, enables information workers to use SAP-based business data and business process software in the familiar Microsoft Office environment. In March 2007, we delivered a value pack with new scenarios for sales management, travel management, and demand planning. It comes with new configuration tools for the system administrator, and with more languages.