Readying information systems for the euro, though technically no big deal, is a massive undertaking a company should begin sooner rather than later

Crossing the euro Rubicon

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A MORE IMMEDIATE PROBLEM than the Year 2000, and one of equal or greater magnitude, is surfacing on company agendas worldwide. The issue for company managers is how to prepare their businesses for Europe's conversion to a single currency.

On 1 January 1999, the euro will become the official currency of the European Monetary Union, though notes or coins will be issued at a later time. On that date, the exchange rates of participating countries will be irrevocably fixed, and companies, financial institutions, and governments will start moving to the new currency over a three-and-a-half-year dual-currency phase.

During this period, both the euro and participating countries' national currencies may be used for transactions. On 1 January 2002, euro notes and coins will come into circulation, and no later than 1 July 2002, the euro will oust those national currencies to become the official European currency in circulation. Banks and stock markets will begin conducting business using the euro at the start of 1999 [see the timeline, p. 31]. But other businesses can make the switch on their own schedules any time during the 42-month transition period.

Altogether, 11 nations are participating members of the European Monetary Union and will begin converting their national currencies to the euro next January 1: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain. The belief is that once the conversion is accomplished, a single European currency will lead to brisker trade and a stronger European economy.

But while the benefits are substantial, so, too, are growing pains. The ramifications for companies are expected to be far broader than with the much-publicized Year 2000 problem, which requires millions of computer systems to be reprogrammed so that their two-digit internal clocks recognize "2000" rather than "1900." Unlike the Year 2000 problem, which is largely a technical problem that affects companies' information systems, the conversion to the euro presents a strategic problem that requires changes to entire business processes. As a result, the cost of preparing European corporate computer systems for the euro conversion will be between US $150 billion and $400 billion, which is more than the projected cost of fixing the Year 2000 problem, according to the Gartner Group, a business analysis firm in Stamford, Conn.

The euro will directly affect 370 million inhabitants that produce 27 percent of the world's gross national product. Its impact will be greatest on banks and financial institutions, but the change will affect virtually every European business as well as any U.S. businesses that have subsidiaries in, trade with, or invest in Europe. Companies affected will need to reevaluate every aspect of their business that involves money, including accounting procedures, legal and taxation issues, procurement, sales, and payroll.

Euro requirements

The euro-conversion problem has at least two recent precedents: the decimalization of the British currency in the early 1970s, and, somewhat later, Britain's switch from imperial to metric measures for products like groceries. Difficulties were predicted in both cases, but as Colin Maunder, marketing communications manager of

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British Telecommunications Laboratories, in Ipswich, UK, observes, "neither change created major problems in these areas."

But for all its seeming straightforwardness, the changeover to the euro has several requirements and intricacies that will force companies to make significant adjustments to their information systems. The Maastricht Treaty of 1992 mandates that the euro be used as the intermediate currency during all currency conversions starting next year. Thus, a direct mark-to-lire translation is no longer possible, thanks to this treaty-specified conversion method, called triangulation. Rather, deutsche marks will first have to be converted into euros and rounded, and then converted into lire and rounded again. This rounding can lead to discrepancies, depending on how the number is rounded.

The Maastricht Treaty also requires that conversions be made at a level of six significant figures, a higher level of precision than most accounting programs can handle at present. In fact, most systems use five decimal places and will become obsolete.

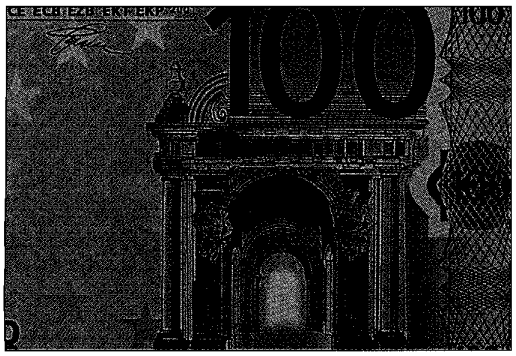
Complicating the matter further, companies will be able to decide when to begin using the euro according to their own timetables during the dual-currency transition period. This provision, known as "no compulsion, no prohibition," was meant to give a measure of flexibility. In reality it will force businesses to manage two currencies throughout the transition period. For example, large multinational companies that want to be at the front of the curve may opt to pay vendors and employees in euros beginning in 1999, but local governments may still require that taxes and fees be reported in local denominations. In short, companies will probably need to keep two sets of books to remain competitive—an obstacle because few software packages currently can handle more than one currency at a time. Moreover, enterprises will need to add the euro symbol, €, to font sets, printer drivers, and keyboards. And for historical comparisons and record-keeping purposes, many businesses may have to recalculate years of historical financial data into the euro.

Daunting as these problems may seem, they only scratch the surface of what is involved. Beyond the adjustments to companies' information systems, the procedures for payroll, inventory, and invoices need to be altered and long-term contracts need to be reevaluated to take the new currency into account. Cash registers, vending machines, and automated teller machines will need to be updated to recognize the euro symbol and handle two currencies.

Decisions about processing supplier bills need to be made, and business strategies such as pricing and packaging need to be reconsidered. For example, a household item priced at 2.99 in deutsche marks might become the psychologically less attractive marketing price of €1.20, if converted to euros at roughly the current rate. Instead of being just *under* 3 marks, the price is now considerably *more* than 1 euro. To maintain an attractive price that is just below the next full euro, should the retailer change the packaging, adjust the product's volume, or raise or lower the price?

And how is the company to price the product while dual currency holds sway? These are the kinds of questions involved in becoming euro-compliant.

Another issue is price transparency. Companies that price their products differently from country to country may encounter increasing intolerance from European customers, as these price differentials become more obvious with a single currency. Consequently, companies may need to reconsider pricing strategies and introduce more sophisticated methods of price differentiation [see table, p. 32]. While sample exchange rates



PHOTOGRAPHS: LIAISON AGENCY

1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002

October 1992

Treaty of Maastricht sets single currency objective

December 1995

Regulatory, organizational, and logistical framework is specified for European Central Bank (ECB)

April 1998

Eleven countries selected to participate in ECB and euro launch; production of bank notes and coins begins

1 January 1999

Rates for converting national currencies to euro are fixed, and ECB starts operations

1 January 2002

Euro notes and coins start to circulate

1 July 2002

Euro becomes exclusive payment medium

1. Finding the right price in Euroland

	Price of widget		Annual volume, units	Total sales, euro	Percent change in total widget sales (same volume) if:*			
	Local currency	Euro			all-Europe unit price = € 18.99	all-Europe unit price = € 19.49	all-Europe unit price = € 19.99	all-Europe unit price = € 20.49
Germany	39.99 DM	20.35	15 000	305 250	–6.7%	–4.3%	–1.8%	+0.7%
Netherlands	44.99 NLG	20.26	3 500	70 910	–6.3%	–3.8%	–1.3%	+1.1%
Belgium	799 BNFr	19.69	3 000	59 070	–3.6%	–1.0%	+1.5 %	+4.1%
France	129 FFr	19.54	10 000	195 400	–2.8%	–0.3%	+2.3%	+4.9%
TOTAL			31 500	630 630	-5.1%	–2.6%	+1.1%	+2.3%

* The change is calculated as the all-Europe unit price times (a nation's) unit sales volume as a percentage of (a nation's) total sales in euro, on the admittedly unrealistic assumption that sales volumes do not change with price changes.

Source: Onno Ponfoort, Netherlands Foreign Investment Agency

At present, prices vary among European countries for this imaginary product, the widget. Setting a single European price in euros, at the near-integral levels supposedly preferred by consumers, will be a tricky and risky business. If, for example, the price is set high, close to Germany's, revenues will rise everywhere—unless fewer people buy. At intermediate price levels, the widget will still cost more in some markets, threatening to turn customers off. But makers may not be able to afford to set the price at €18.99, a price that would look good to everybody else.

already exist, companies will not know exact conversion rates until January 1999, when the European Central Bank sets fixed conversion rates between national currencies and the euro.

Many ostriches

While the problem will have a huge impact on European businesses, the implications for U.S. enterprises also are significant. A recent report by the U.S. Department of Commerce found that sales by European subsidiaries of U.S.-based companies topped $1 trillion in 1995. A united Europe will become the United States' largest trading partner behind Canada, with sales likely to grow even more rapidly.

As a general rule, any business with 20 percent or more of its core business in Europe will need a euro-compliant information system, according to the Hurwitz Consulting Group, in Framingham, Mass. And virtually every U.S. company that trades, invests, or communicates with Europe will need to rethink at least some aspects of its business.

Businesses worldwide generally have been slow to respond to the euro challenge. The problem has captured the attention of European businesses, but the debate has focused mostly on political issues at the expense of economic realities. An October 1997 study by KPMG Management Consulting, in London, found that planning for the euro by European companies is "woefully inadequate" and that few have grasped the full strategic implications of the European Monetary Union or put comprehensive practical plans into place.

The study found that 60 percent of companies had developed a strategy, but that two-thirds of those surveyed had not estimated the total costs faced in adapting to the European Monetary Union. The study also found that 49 percent of companies were planning to implement an action plan, but of these, 46 percent had not started. In the United States, with the exception of the banking industry, businesses are even less prepared. Few businesses have begun working on the problem or taken the time to understand the implications of the euro. Some have adopted a wait-and-see approach given the possibility that the European initiative might fall apart as the 11 participating countries hash out budgets, leadership roles, and other details.

Others are feeling so strapped by the Year 2000 problem that in their view they lack the resources to focus on both issues at the same time. Tackling both problems at once definitely presents a costly situation for businesses. A number of experts and business leaders are so upset about the financial implications for their companies that they have asked the European Monetary Union to postpone the introduction of the euro until the Year 2000 problem is solved. The union has resisted these requests, noting that companies can combine preparation for both issues to avoid modifying the same information systems twice.

Despite opposition to the timing, however, chances are that the euro initiative will neither fail nor be postponed. Moreover, many multinational companies such as Siemens AG and Philips Electronics have announced plans to begin using the euro as soon as the transition period begins on 1 January 1999, with several suppliers and smaller companies expected to follow suit. This will leave companies that delay preparations in a noncompetitive position compared with businesses that are quick to respond. With a single currency, the European market will become more unified, and a market that U.S. companies cannot afford to ignore.

Many of the large banks and some of the larger multinationals believe they have enough internal software-development capabilities to cope with the euro-conversion problem on their own. But they still have to specify requirements and priorities in light of the expected monetary changes, and if they use standard software packages, they need to find out whether planned modifications and upgrades will meet their needs.

Many companies can use help and are turning for assistance to software firms, mainly the principal suppliers of enterprise-resource planning (ERP) systems, a type of comprehensive management tool pioneered by this author's company, SAP AG, in Walldorf, Germany. The leading ERP suppliers are Oracle Corp. and SAP, but there are many to choose from, including the

Netherlands' Baan, headquartered in Putten, J.D. Edwards, Denver, Colo., and PeopleSoft, Pleasanton, Calif.

PeopleSoft, which has just opened an Amsterdam office to handle its European operations, has undergone the meteoric growth typical of many firms in this burgeoning field. Since 1987 when it was founded, its global staff has grown to about 4500 and its revenues to nearly $1 billion. SAP currently earns well over $2 billion a year from sales of software licenses alone.

Preparing for the Euro

So what should businesses do to prepare for the euro? To begin with, they should develop a comprehensive business management plan that outlines the anticipated impact of the euro on their information systems and their overall business strategy. This plan should consider the strategic impact of converting to the euro according to different timelines and the impact of these options on information technology (IT) and other departmental budgets. Businesses need to consider the effect of the euro on long-term contracts, existing contracts, and business partners. Billing procedures will need to be revised and price lists revisited to take into account the changes that will occur with a single European currency. Current interest rate transactions for accounting processes will need to be reviewed, as will loan and interest agreements.

To make their information systems euro-compliant, companies can upgrade their existing systems or use the situation as an opportunity to implement a new packaged application. Before deciding on an approach, however, companies should evaluate the strategy behind each software vendor to ensure that the vendor's solution and implementation and delivery timetables match the company's requirements and the European Union's regulations and timing.

Hercules Inc., a global manufacturer of chemical specialty products with headquarters in Wilmington, Del., is working to address the euro. The company, which does about 40 percent of its business in Europe, has decided to take an incremental approach to becoming euro-compliant in order to leave enough resources to simultaneously address the Year 2000 problem. Hercules formed a European-based team to evaluate IT implications in late 1997 and has since broadened its research to determine how the euro will affect business processes throughout the company.

The company began replacing its legacy systems that managed its business processes with SAP R/3 software several years ago because of the integrated functionality SAP offers; Hercules installed SAP euro functionality as an add-on to the R/3 system this past summer to perform euro-compliant price conversions and number-rounding. SAP offers a solution called SAP Euro, a comprehensive package that includes software conversion tools, add-on functions that allow specialized customers to perform tasks specific to their industry during the dual-currency phase, and training and consulting services.

Building on the existing multicurrency capabilities of SAP systems, (a prerequisite for SAP's Euro package), the new euro software further aids customers in converting data to the euro and automatically documents and reconciles differences caused by rounding-off figures following conversions. The SAP training and consulting services are designed to help businesses develop customized, strategic plans for converting to the euro.

Tom Ciconte, vice president of information management for Hercules, said the company will be prepared to receive and make payments in the euro by 1 January 1999, but will not make a full-scale conversion to the new currency until it fixes its Year 2000 problem. Ciconte recognizes the euro as a major issue and is doing what he can now to prepare for the transition period. He realizes the changeover comes with a significant price tag, but he is also aware of the opportunities for his company. In fact, he believes a single European currency will ultimately stimulate markets Hercules previously found cost-prohibitive, and may make it possible to work with new suppliers once viewed as unattractive because it involved setting up the company's business processes to accommodate several currencies.

Euro benefits

Like Hercules, other U.S. and European businesses that prepare for the euro can look forward to significant benefits. A single currency is expected to lead to a stronger economy and stiffer competition throughout Europe. Fluctuations in exchange rates will be eliminated and replaced by a more consistent and predictable environment for international trade. Businesses will reduce their costs as packaging, contracts, invoices, and other administrative and transactional functions are geared for a unified Europe rather than 11 distinct currencies. Prices quoted in the same currency will make it easier for businesses to compare prices and identify where goods are overpriced.

The costs of euro-compliance are high. But it is essential that companies prepare for the changeover now so they can begin to reap the rewards. Otherwise, they will find themselves at a competitive disadvantage against other businesses that have been nimbler in adapting to the single currency. ◆

About the author

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To probe further

A perspective on how the euro-conversion problem compares to other major software challenges facing large organizations may be found in "Bad days for software," by Capers Jones, *IEEE Spectrum*, September 1998, pp. 47–52. Detailed information can be found at the European Commission's World Wide Web site for euro-related matters, europa.eu.int/euro, and at the European Community Information Society Project Organization, www.ispo.cec.be/y2keuro. In particular, its report, "Preparing Financial Information Systems for the Euro," accessible at the Web site www.ispo.cec/be/y2keuro/src/eupapers.htm, is recommended.

Www.euroinformation.com also is a good source for comprehensive information on the euro and its business implications. Launched earlier this year, the Web site provides news articles on the euro from around the globe, as well as a reference section with information about regulatory bodies and information technology issues.

Presentations about the euro-conversion problem will be made at the Second International Software Quality Week Europe convention, held 9–13 November in Brussels. For more information, see www.soft.com/QualWeek/QWE98/qwe98.program.html.

More information about the SAP euro solution can be found on the SAP Web site at www.sap.com/euro. For alternative solutions offered by Baan, the Dutch company headquartered in Putten, see www.baan.com.

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