

IT'S AN OLD WORLD IN MORE WAYS THAN ONE

European companies have always valued quality, but their methods frequently are antiquated



Bernardo De Sousa still remembers the day in 1982 when he first heard the term "total quality management." The Swiss chemical giant Ciba-

Geigy Ltd., where he is corporate quality officer, had received a warning from Milliken & Co., a top U.S. customer for Ciba's textile dyes: If it wanted to keep Milliken's business, it should adopt TQM practices—or else. Back in Basel, management was incredulous. With a 200-year tradition of precision engineering, Ciba made some of the purest dyes in the industry. "We had good Swiss quality," De Sousa recalls. "We didn't know what they were talking about."

With a little investigation, however, Ciba discovered that its process for achieving that quality was woefully inefficient. Bad dye batches, rebates for mistakes in product shipments, lost business resulting from inventory shortages, and other business-as-usual errors were costing it a whopping 20% of sales. Registration approval of new products from government authorities took an average of two years to get, twice as long as necessary. Worse, because Ciba had never bothered to ask its customers to define their product and service needs, upstarts from India and Taiwan were stealing sales from it with dyes of lower but acceptable purity at much lower prices. Milliken had a point: "We needed new tools to increase productivity, improve our processes, and change our attitudes," says De Sousa.

What Ciba learned, and what most of European business is just waking up to, is that managing for quality means far more than fine-tuning production controls. The time was in Europe when Old World craftsmanship in everything from hand-cobbled Italian shoes to custom-made German automobiles meant quality. Customers, equating top quality with top price, paid up. But in recent

years, the luster of "Made in Europe" has dulled as foreign competitors have turned out products of sufficient or better quality at far lower costs.

Suddenly, alarms are sounding from Stockholm to Madrid that Europe has fallen years behind the U.S. in harnessing efficient quality-management techniques as a strategic weapon. As for its position in respect to Japan, the deficit can be measured in

decades. Moreover, the prospect of brutal competition after trade barriers fall in 1992 has Europe scrambling to catch up. Its competitiveness hangs in the balance. "We're facing a new era in industrial history that is as fundamentally different from mass production as mass production was from craftsmanship," says Daniel T. Jones, a professor at Britain's Cardiff Business School. "And most Europeans have a



tremendous leap to achieve the new world-best standards."

His point was driven home painfully in a 1989 study by Jones and Massachusetts Institute of Technology that compared world auto manufacturers. Its conclusion: European producers haven't learned the secret of raising quality and at the same time lowering costs. The average European large-volume car plant took 36.2 hours to build a car—twice what Japan took—and produced 97 defects per 100 vehicles, or 62% more than Japan. American factories scored roughly midway between the two on both measures.

"You can extrapolate those results to most other industrial areas of Europe," says Kees J. van Ham, secretary general of the European Foundation for Quality Management. "The MIT study really indicates where we are today." A recent study of 358 European companies by Erasmus University in Rotterdam and Britain's University of Manchester further reveals that the Old

World generally has yet to employ advanced quality-assurance techniques common in Japan and the U.S. For instance, far fewer European companies use the Taguchi method for designing reliable manufacturing processes or employ such methods as concurrent engineering to get products to market faster with fewer defects. Service industries—banks, phone companies, hospitals—which face the least threat so far from foreign competition, are furthest behind. For many of these, laments van Ham, "the notion of a customer is hardly known."

Europe has fallen behind, ironically, because it traditionally put a lot of stock in quality—and thus was less vulnerable to attacks from Japan than the U.S. was back in the 1970s. The problem now is that Europe's timeworn methods of assuring quality have become inordinately expensive and outdated. Typically, manufacturers hire troops of inspectors to find and fix defective products as they come off the line. Japan's preventive TQM approach, by contrast, showed how to overhaul procedures in every function, from research and development to marketing and service, to circumvent errors—and in the process cut costs anywhere from 10% to 50%. "Europeans always worried about the quality delivered to the customer, but not the efficiency to create it," says A. Blanton Godfrey, chairman of the Juran Institute Inc., a leading U.S. quality consultancy.

Until recently, trade barriers in autos, banking and insurance, telecommunications, transportation, and other sectors often sheltered Europe from facing up to the challenge. An analysis by Philip Crosby Associates Inc., another U.S. quality consultant, shows that British banks waste more than 50% of their operating costs because of error-prone procedures that result in problems such as lost documents. An amount equal to 30% of sales is wasted on average in manufacturing and service operations in France, and 40% in Italy, Crosby says.

In Germany, Switzerland, and parts of Scandinavia, an apprenticeship educational system produces a different phenomenon. Skilled journeymen tend to over-engineer products as a means of guaranteeing quality. But such methods often produce machine tools, for instance, that would last for 50 years—if most customers didn't scrap them halfway through their life

cycles. In overreaching for perfection, many companies inflate costs by as much as 10% without perceptibly adding quality, estimates Hans Dieter Seghezzi, a professor at Switzerland's St. Gallen Graduate School of Business. As markets open, exposing such practices to competition, "European engineering traditions are being shattered," says Harold Macomber, a divisional quality manager at ABB Asea Brown Boveri Ltd., the Swedish-Swiss industrial engineering giant.

The first Europeans to jump on the TQM bandwagon in the early 1980s were, unsurprisingly, those who first ran up against Japanese competitors: Rank Xerox in office equipment, Philips in consumer electronics, Olivetti in computers. But as many early American converts to TQM found, implementing quality circles, work teams, and other faddish techniques that merely copied the Japanese style—while missing its substance—fell short of the mark. And the early rhetoric from top executives about the importance of quality rarely translated into ongoing quality programs—or results.

When it did, there was usually pressure from Japan behind it. Take Philips Electronics Ltd.'s auto headlamps. Philips had always been top-rated by Western carmakers, but when it started supplying Toyota in the early 1980s, Philips found it wasn't as good as it thought. Toyota forced Philips to change its method for measuring quality to defects per million instead of a less-exacting standard that measured percentages of manufactured lots of goods. The resulting fall in its measured quality level "was devastating," says Matthijs Vermaas, corporate quality director. "Our old wisdom was not valid anymore." The shock, however, led to improvements in packaging, manufacturing, and transportation procedures, and vast savings in wasted material. Defect levels dropped by a factor of 100, and Philips' exports to Japan doubled in 10 years and had captured 60% of that market by 1990.

Unfortunately, such examples are rare, both within Philips and around the Continent. As most European companies did, Philips generated great internal debates about quality among top management, who then, fatally, delegated implementation to lower levels without monitoring the results. "There was lots of lip service but little action," says Vermaas. As evidence, he concedes that Philips has no systematic way of measuring customer satisfaction—"the guts of any quality program"—let alone many ways of trying to improve it. The upshot: Since



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QUALITY: OVERVIEW

Philips' quality push began in 1983, the auto headlamp division has been one of the few to improve.

Crisis, competition, and high costs, however, are sparking an avalanche of concern. In 1988, the presidents of 14 top companies formed the European Foundation for Quality Management to promote TQM techniques. Now, instead of relegating quality training to engineering classes, some 50 universities, up from zero five years ago, also incorporate it into their general-management curriculum. EFQM also will hand out its first European Quality Award next year. The hope is that the Europe-only prize will spur awareness the same way the Baldrige and Deming prizes have in the U.S. and Japan.

Most important, a critical mass of top executives is reinvoking corporate-wide quality as a top priority. Ciba, after the successful foray of its dye division, is rolling out a TQM program to all units worldwide. Philips President Jan D. Timmer, pushed by a financial crisis last year, is installing worldwide complaint-handling procedures and customer-satisfaction surveys, and he's including quality measures in executive compensation plans. "While we debated the merits of total quality concepts, our competition applied them and capitalized on our inertia," he says. "This is our last chance."

At Fiat, Managing Director Cesare Romiti is rejuvenating a total quality campaign that started half-heartedly with quality circles in 1982. He's now retraining workers, cooperating with suppliers and dealers to boost performance, and revamping the company's processes to cut the time it takes Fiat to design, engineer, and tool up for a new model from five years to three. This effort is critical to reverse erosion in Fiat's Italian market share, which has fallen to 45% from 60% just three years ago—and which could fall further when import quotas on Japanese cars are lifted starting in 1993.

Even companies with a track record in TQM are finding it necessary to redouble their efforts. Swedish appliance leader Electrolux enjoyed a startling 40% reduction in field-service repairs in the early 1980s as a result of changes in design methods and other work processes. For instance, field engineers now electronically feed data on defects back to engineers, helping weed out bad designs and parts. But further improvements have come slowly. So, new President Leif Johansson has set a goal of reducing field re-

initiatives in recent years, focusing mainly on bringing companies up to minimum standards set by the Geneva-based International Standards Organization, known as ISO 9000.

Many experts, however, fear that ISO 9000 may do as much harm as good. The series of universal standards took on a special role when the European Committee for Standardization, Europe's standard-setting body, adopted it in 1987 as the means of harmonizing 12 member states' varying technical norms. ISO 9000 specifies design, man-

ufacturing, logistics, and other controls associated with producing quality products and services.

But critics argue that it has no bearing on the efficiency of those processes, or on nonproduct issues such as customer satisfaction. Now, as ISO 9000 certification becomes *de rigueur* for any company selling into Europe in 1993, everyone is scrambling to qualify. But this may divert many companies from making the cultural and management changes

necessary to ensure organization-wide quality, warns Tito Conti, a consultant and former quality chief for Olivetti. "ISO 9000 is only a warm-up for the real game," he warns.

Europe can't afford to get caught in such traps. For as much progress as it is now making, Japan

and other competitors are continuing to raise the quality crossbar. "Now, it's not just a matter of meeting the customer's needs—you have to delight him," says Ciba-Geigy's De Sousa. For Ciba's textile chemicals business, for instance, that has meant moving beyond issues of purity and cost to raising the level of biodegradability of its products as environmentalism surges in Europe. Only by building quality consciousness into every organizational process, De Sousa adds, can Ciba hope to keep up. If even the fastidious Swiss believe this, the rest of Europe had best not dawdle.

By Jonathan B. Levine in Paris



**AFTER FIXING ITS
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pairs by another 40% within three years. To set the tone, top executives have been personally combing through Electrolux' product catalog and eliminating problematic models of vacuum cleaners and refrigerators. "People don't listen to what you say but what you do," says Knut Stangenberg, corporate quality director. "This is a matter of management determination."

He and fellow quality bugs have plenty of reason to be motivated. The CEOs of 230 top European companies surveyed by McKinsey & Co. in 1989 believed that their companies' gross margins could be boosted by an average of 17%, and variable costs reduced by 35%, if TQM practices were widely employed.

Governments have also recognized this potential. Britain, Denmark, France, the Netherlands and others have all launched quality-awareness in-