

MANAGEMENT SIEMENS

Engineering a recovery

Transforming an 'old-economy' manufacturer requires not only cost-cutting, but also growth and innovation, says **Peter Marsh**



Siemens was once a symbol of all that was wrong with Europe's high-technology industry. Now the German electrical and electronic-goods maker has become a case study in what good management and hard decisions can put right.

As recently as 1998, the company was derided as "old-economy". It had management methods rooted in the 19th century and financial returns to match. Much of its manufacturing was based on rigid production processes that could not easily be adapted to new products.

There is still much to do, but Heinrich von Pierer, Siemens' long-serving chief executive, has increased productivity and innovation in many of its businesses and the group has begun to return some decent financial results. Last year saw a 37 per cent surge in after-tax profits to DM3.6bn (£1.1bn) on sales of DM134bn. Investors cheered and the share price has tripled - to €162.7 - since the start of 1999.

The pace of change has been as great in the past few years as at any time in the company's 153-year history. Some of its progress can be put down to industrial and financial restructuring. Siemens has shed poor businesses with sales of DM17bn a year, introduced share option schemes and ensured that its accounting is more transparent. It has also started to list valuable subsidiaries, the latest being Unisphere, an internet infrastructure company.

But at the heart of Siemens's new start lies a management strategy that it calls time-optimised processes, or Top. Nobody in Siemens is more closely identified with the nuts and bolts of Top than Edward Krubasik, a former nuclear physicist who became a consultant at McKinsey.

Indeed, Mr Krubasik's arrival on Siemens' 10-strong management board in early 1997 was a sign that change

was on the way. A decade earlier, Siemens' top directors gained their jobs only after decades on the lower rungs.

Ostensibly, Mr Krubasik's role is to look after Siemens' industrial and transport activities, manufacturing machine-tool controls, drives, rail equipment and vehicle parts. It is one of six divisions in the company - the others cover power station equipment, mobile telephones, semiconductors, lighting and medical systems - and accounts for a third of sales and 40 per cent of profits.

But Mr Krubasik also has his familiarity with Top to offer. At McKinsey during the early to mid 1990s, he spent much of his time advising Siemens on how it should implement the process. Top is not just about cutting costs, he says, hauling out from his briefcase a drawing of what he calls the "Top temple". This has a roof supported by three columns: cost-reduction, growth, and innovation. "You have to have all three if you are going to be successful," he declares.

'You must understand what world class is and then go and achieve it'

That said, the starting point in many divisions was in fact to cut costs. "We were 20 to 30 per cent more expensive than our competitors," he says. "This translated to a requirement - on the assumption that our competitors were not likely to stand still - to work to cut our costs over a period by 40 to 50 per cent."

Siemens also insisted - and continues to insist - on growth. "Managers did not set themselves a static target, but one that was

dynamic, and took into account changes that competitors were likely to make". Although the managers of the company's divisions grumbled, they had to benchmark themselves against their competitors every two years.

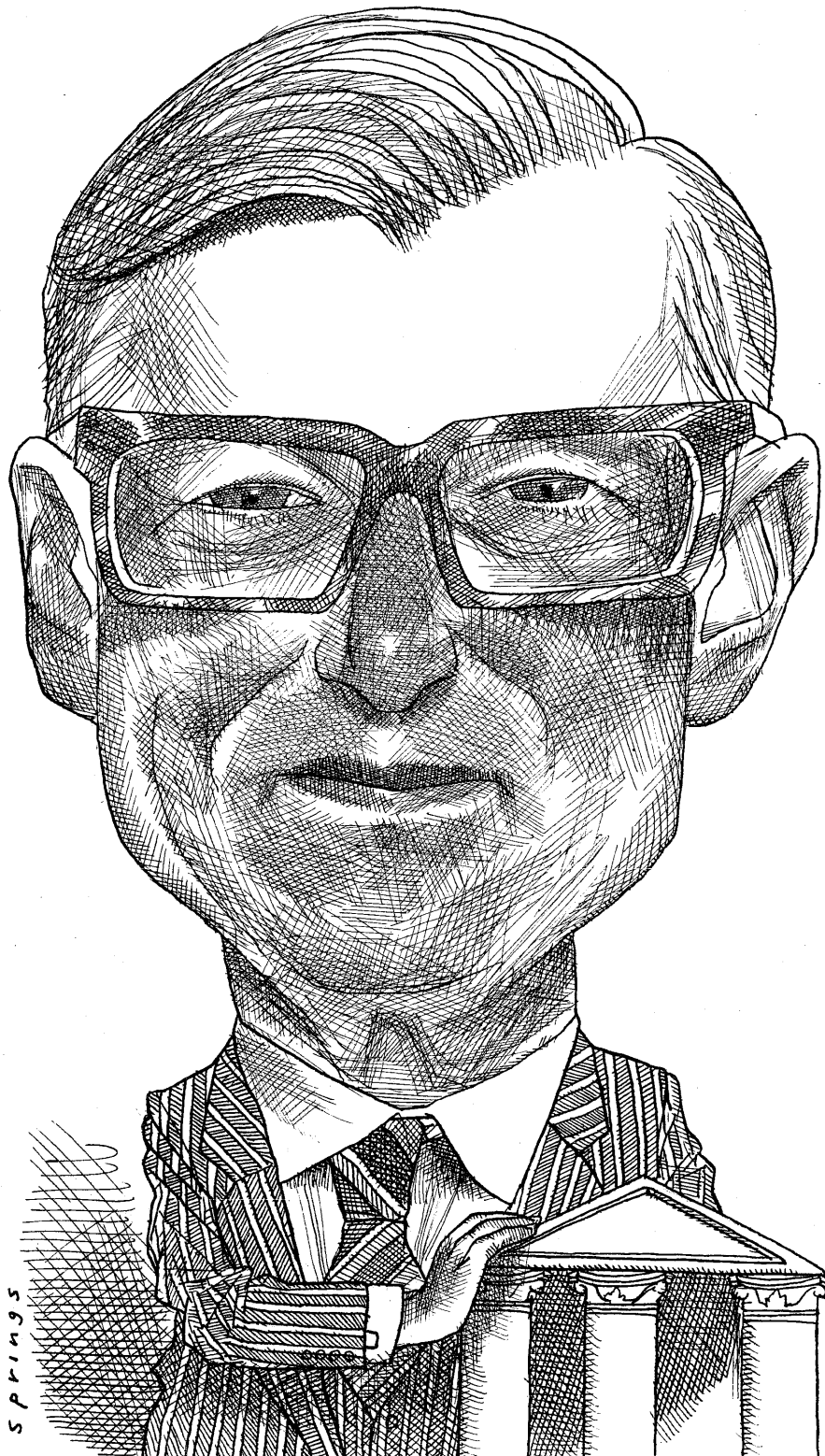
All this entails Top's third pillar - innovation. To cut the cost of a product by half requires a redesign - and increased calls for constant improvements, because "you must understand what world class is and then go and achieve it".

Top's results have sometimes been extremely impressive. At Bruchsal near Karlsruhe, Siemens owns a plant that makes surface-mounting machines, used to produce printed circuit boards. Siemens accounts for about a fifth of the world market for these machines, worth about DM5bn a year. In 1994 this part of the company made a loss and was in roughly fifth position in the world market. Now it is profitable and the company is number two in the world, after Fuji of Japan. "A key to this change was not just cutting costs," Mr Krubasik says, "but [the] introduction of new products that would compete better on world markets".

The part of the company that supplies the machine-tool industry with computer numerical controls was also in the red in 1994. The company had outdated products and manufacturing methods, Mr Krubasik says. However after a redesign and new production techniques, concentrated in a plant at Erlangen near Nuremberg, the division cut costs per item by about half. Because the division could lower the price of its products, it tripled its unit volumes, leading to a doubling of annual sales to about DM1.5bn.

The growth in productivity tended to cut the need for labour, but this was more than offset by increased sales. The effect was to increase the division's staffing slightly, from 2,300 to





2,500. "This is a fairly typical pattern that shows what the Top process is capable of," says Mr Krubasik.

Siemens found that a useful source of innovation was to use new ideas in software to improve existing products. Mr Krubasik estimates that 60 per cent of the company's sales are related to software. "We have 27,000 software engineers [out of 420,000 employees], which is more than Microsoft," he boasts.

"If you look at power sta-

tions, then their performance is as much to do with the control aspects of the equipment as the efficiency of the gas turbines. Medical equipment is basically big pieces of metal surrounded by software," he says.

And what next? The internet is, inevitably, part of the answer. According to Mr Krubasik, the company will use the web to deliver services to customers on the other side of the world and integrate supply chains, rather as General Electric of

the US has attempted to do.

The company also plans to build cross-divisional teams around particular customers. The Siemens team that sells to Volkswagen, the German carmaker, has 50 members - drawn from places as far apart as China, Brazil, Germany, the US, and Spain.

The job at Siemens is far from complete. Analysts say they want a clearer sense of Mr von Pierer's vision for the company. Nevertheless, Top has at least revealed the potential buried within it.