An interview with Murray Duffin
Interview by Sarah Powell

Until recently Murray Duffin was Vice President for Total Quality and Environmental Management at ST Microelectronics (formerly SGS-Thomson). Working closely with the chief executive officer, he acted as co-strategy manager for the company’s service strategy, and he was the primary architect for its TQM development. Murray also led the company’s drive to sustainable development.

ST Microelectronics was the 1997 winner of the European Quality Award and the 1999 winner of the Singapore Quality Award for TQM, and is the first large multinational corporation to see all its sites world-wide qualify for EMAS and ISO-14001.

Murray Duffin has spent his career in high-technology electronics in the USA, Europe and Asia and he has direct line management experience in all corporate functions, except human relations and direct sales.

What did your recent role with ST Microelectronics involve?

Murray Duffin:

My job and that of the small team of people reporting to me was to convert the culture of the company from a traditional command and control type of company to a TQM-oriented company. I had started promoting the concept of TQM to the management team in the middle of 1988 but it took some three years to get this initiative off the ground.

I should explain that ST Microelectronics was the product of the merger in July 1987 of SGS Microelettronica, Italy with Thompson Semiconducteurs, France, both of which were losing substantial sums of money. At the time of the merger, combined losses totalled some $20 million per month. Following the merger, in just over 12 months the company broke even, but this rapid turnaround in the company’s performance bred complacency; management saw no urgency in implementing total quality management. What really prompted change was an industry downturn at the end of 1989. In 1990 ST went back into the red and, at that point, the CEO became convinced of the need for change and agreed to the implementation of TQM.

During the early part of 1991, we did a lot of preparatory work. In late 1991, using an outside consultant as facilitator, we held the first TQM introductory workshop with the CEO and his top management. Following top management’s agreement that this was the way they wanted to go forward, I was appointed Vice President for TQM.

We then repeated the TQM workshop for the top 250 managers in the company to bring them on board, running another 12 workshops over the next six months, and I wrote a “TQM manual” for the company so that we had common guidelines to work with. By the middle of 1992, having set up the necessary framework, i.e. steering committees and so on, we were well on our way.

There has been considerable debate about TQM and its validity. In a previous Spotlight column, Jim Harrington of Ernst & Young advocated total improvement management rather than total quality management on the grounds that, while TQM focuses on adding value for the customer, TIM focuses on adding value for all stakeholders. What is your view?

Murray Duffin:

I see this as little more than a question of semantics. Since about 1992 in the USA reams have been written about the failure of TQM. This criticism has been levied by consultants who are clearly trying to generate more business for themselves, and by academics who, to my mind, have never really understood what TQM means. This has led to a certain degree of souring in the USA that I don’t perceive to the same degree in Europe, although the European Foundation for Quality Management also now talks about business excellence rather than TQM.

However, whether we talk of TIM or business excellence, we are still referring to TQM. I am
quite happy to use anybody's terminology, as long as we understand what we are talking about.

When TQM started in the USA in the early 1980s, in response to the Japanese business threat, it was, in effect, total quality control or TQC; the Japanese never called it anything except TQC. TQC focused on the production process and the product that came out of the production process, i.e. it was quality assurance but a far more in-depth quality assurance than had been practiced until then. The result was the tremendously high quality of Japanese products such as cars.

During the 1980s this concept and ideas such as quality circles were developed. However these were not as successful as had been hoped. By the late 1980s, and the introduction of the Malcolm Baldrige Award, the approach had become much more holistic than just TQC. TQM was starting to change its meaning and take on a much broader role in terms of management involvement. With the beginning of the 1990s, the European Quality Award expanded the definition even further, encompassing all the things that Jim Harrington is talking about, i.e. taking all your stakeholders into account, involving yourself with the business processes and so on.

So, my way of looking at it is that in the early 1980s TQM meant the total management of quality. By the end of the 1990s TQM meant the total quality of management, which is a very different 'animal'. So, whether you call it the total quality of management or total improvement management, business excellence or management excellence, the point is that it has to be holistic. It must involve all aspects of the way you run your business and all these other tools that have come along, like benchmarking, process improvement, business process engineering and so on... these are all just tools within the toolbox of the TQM manager, to be used in the appropriate place at the appropriate time.

What has happened in the USA is that people constantly confuse one or two of the tools, or one or two of the sub-elements of TQM, with TQM. The critics of TQM have failed to recognize the evolution that has taken place.

**Might this be a problem that emerges from excessive theorizing in what are, perhaps, intrinsically practical subject areas?**

Murray Duffin:

The answer is “yes”. There is far too much emphasis on attaching a mystique to the concept of TQM; it isn’t necessary. Years ago, a British consultant said that TQM is basically very simple, but just because it is simple doesn’t mean it’s easy – he was absolutely right. It is not a tremendously complicated subject, but it is not easy either. Fundamentally TQM is applied common sense but, as somebody else once said, the trouble with common sense is that it is not very common.

**Do you accept estimates that 60 per cent of TQM processes fail and, if so, to what would you attribute this?**

Murray Duffin:

There are no statistics even to suggest such a rate of failure. That said, there have been a fair number of companies which have been unsuccessful in their attempts to introduce TQM. But it is not TQM itself which fails; it is managers who fail to practice TQM – that’s the difference. TQM, by definition, has to succeed. If you are not succeeding you are not practising TQM – it’s that simple. Managers who have not grasped what TQM is about, or who are not prepared to make the commitment, or to change their own management styles, will not succeed; or they may succeed partially, which I think is much more commonplace.

One of the problems is that some managers have an inflated idea of the potential returns. They then get discouraged if things don’t turn out as expected. It has to be kept in mind that TQM is a long-term project, although, if you embark on this route seriously, you can expect to see an initial pay-off within some six months. But for TQM to become an integral part of managing the company, for it to produce the full benefits, you are talking of a minimum of four to five years.

**Is this longer-term programme not complicated by the tendency for managers to move on to new jobs more rapidly than in the past, i.e. committed staff might leave during the process?**

Murray Duffin:

A substantial amount of work is involved in promoting the appropriate mindset for TQM. If new people are promoted from within the organization, they will also have undergone some degree of ‘mindset conversion’. I have heard it said that you cannot change people’s mindsets but I think you can. In fact, one of the major aspects of TQM is to change mindsets, to change the culture of the company. That is why it takes so long. It is not just something that happens overnight. And it doesn’t happen at all unless the CEO is demonstrating his leadership and his ability to change.
Does the spread of quality as a concept, i.e. an idea developed in the USA but taken up by Japan before it eventually caught on in the West, indicate that some nationalities are more adaptable to such change than others?

Murray Duffin:

Yes, I think this is true. Almost all quality concepts were initiated in the USA during the Second World War, in response to the urgent need to ‘ramp up’ and mobilize a major production engine. A tremendous number of techniques were developed and there was a remarkable flowering of ideas that took place almost overnight. However, at the end of the war, companies in the USA found themselves to be practically the only viable industries in the world, with infinite demand sitting in front of them; doing business was easy and industry became complacent.

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The Japanese, on the other hand, had to rebuild completely an economy that had been totally destroyed. So, they brought in some of the talent from the USA very early on and refined and spread quality practices over decades. It was at the end of the 1970s that the ideas started to flow back to the USA. It is astonishing to think how many of these brilliant ideas originally emerged in the 1940s even though they are only now being documented.

Now, you asked about national response to quality. My experience is that all TQM practices, once accepted, are practiced equally well in every culture that we at ST deal with. These include the North African Muslim culture in Morocco, and the Malaysian Muslim culture in Malaysia; these are quite different from one another. Then we have the Chinese culture in Singapore which is different to that in China. In addition there are the American, Italian and French cultures.

I find that these diverse cultures are all equally capable of practicing TQM initiatives. The only differences I see are in the length of time before a new idea is accepted and introduced, and the levels of resistance to acceptance. In general terms, the Europeans are definitely the slowest to accept the new ideas, presenting the highest level of resistance. But, once they do accept them, they execute change just as effectively as everybody else.

Your new contract with ST involves a focus on sustainability. What will this involve and what are the business-related issues?

Murray Duffin:

My primary role will be to act as outside spokesperson for the company on issues of sustainability, i.e. to ‘spread the word’. At the same time, I shall also still be working inside the company to help with training programmes and with moulding mindsets to encourage people to think in terms of conserving energy, being resource-efficient, preventing pollution, i.e. all the areas where the company can reduce its impact on the environment.

We launched this sustainability initiative back in 1993 and spent the first two to two and a half years just trying to determine which directions to move into. Then in 1995 we published our “Decalogue”, a list of ten rules of environmental management. This takes the form of a set of quantified goals dealing with different aspects of environmentalism such as: pollution, safety (the handling of hazardous materials), contribution to global warming, reduce-reuse-recycle, etc.

Having defined the decalogue, it took us another two and a half years to get the measurement system going. We had to collect data that we had never collected before, and we had to find ways of measuring it, of establishing base lines to determine our starting point. There was a tremendous amount of work to do but in doing this, we were effectively sensitizing people to environmental issues and, by the time we had a data collection system up and running, significant improvements were already being achieved.

This summer we issued the first revision of the decalogue and some of the original goals have been made much tougher. We’re getting more
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Ambitious as we discover what we have been able to achieve already, and what more we can do.

There is a growing trend for large companies like ST to publish an annual corporate environmental report. Is it now accepted that having an eye to green issues can have a very appreciable impact on the bottom line?

Murray Duffin:

I think that argument will be won although there is still resistance based on suspicions that environmental programmes will cost money. There is enough corporate evidence clearly showing a favourable bottom-line impact to make even the investment community start to take an interest. Dow Jones, for example, has recently produced a list of top sustainable companies and something it calls the “sustainability index”. What is interesting is that the companies in the sustainability index are significantly out-performing companies that are not included in it.

Has your own company started realizing benefits from this programme as far as you can see?

Murray Duffin:

Absolutely – and from day one! Introduction of the environmental programme involved a fair amount of investment, but almost all of this showed a financial payback in under two years, which is a very rapid return. Where there is no payback it is because we have had to resort to ‘end of pipe’ solutions, e.g. abatement. To provide a positive return in dealing with pollutants, we prefer to ‘go upstream’ to prevent production of the pollutants in the first place, which is a more productive alternative.

What do you see as the major challenge in encouraging all businesses to adopt an environmental approach?

Murray Duffin:

The main problem is selling the benefits. There has been tremendous hostility from an entrenched energy lobby which has felt threatened. Initially, this included the oil and coal companies, and the electricity utilities – although the oil companies are now moving away from that position.

An alternative Nobel Prize was recently awarded to a man by the name of Scheer for his work in promoting solar energy. He stated that “We need a stronger commitment of the ecological community to overcome the massive obstruction of the established economy and of the directly connected political institutions and politicians.” He is right – there is massive obstruction. He was talking about Europe and this negative lobbying is worse in the USA than it is in Europe by an order of magnitude. But, the way I see it, given the slowly changing tide of opinion, these people are a bit like King Canute, standing there and defying the waves.

The other problems we face are economic models. Economists presume that if there are ways to save energy economically, these have already been implemented and therefore the only way you can reduce energy in the economy is by reducing the economy. This whole stream of logic is completely false. There are an incredible number of reasons why energy-saving measures may not be implemented – primarily perhaps because energy saving has never really been an issue. We have never cared before about how energy efficient we were! In fact, I am currently writing an article on the psychology that is involved.

The second big reason is just sheer ignorance. People don’t know what they can do and they tend not to believe just how much is possible. Some people may also feel threatened by the potential savings of energy efficiency; this inevitably conveys the suggestion of current inefficiency i.e. the argument for change can be construed as criticism. Hence we need to be very artful in the way we present such suggestions. □

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