Technology management in Japan: A new way forward?

By Hugh Whittaker

From challenger to U.S. dominance in the 1980s, Japan had turned into a stumbling giant in a number of high tech industries by the turn of the century. In 2002 a new acronym began to spread throughout Japanese industry and the business media: “MOT” (management of technology) was seen as a means of reviving Japanese industry, although it was dismissed by some skeptics as an imported fad. What went wrong with Japan’s technology champions, and has MOT given them a new way forward, or are the skeptics right?

The “Japanese model” faced two key challenges from the late 1980s. One was the emulation of Japanese quality, product development, supplier management etc. practices by East Asian, U.S. and to an extent European, competitors in the 1990s. In some cases, this emulation not only improved performance, but resulted in new competitive practices which Japanese companies themselves found hard to emulate. The other was the transformation of global competition, from being among large, vertically integrated firms in the ICT (information and communication technology) industries, to competition among networks of specialist firms, spreading across borders through global value chains. At the very time the competitive environment was changing, Japanese firms in these industries were finding it difficult to change, victims of their own past success.

Technology management concepts emerged in the U.S. in the 1980s, partly in response to Japanese competition. They were imported into Japan as “MOT”, and used by the Ministry of Economy, Trade and Industry to frame a re-examination of Japan’s competitive strengths, and to bring universities and industry closer together. In a campaign to train “10,000 MOT specialists,” a MOT Consortium was created in 2002. Bids were invited from universities – engineering faculties, and some of the business schools which were just being started – to develop and deliver MOT courses for companies wrestling with changed competition, increasing rigidities, and poor returns on R&D investment, or seeking fresh stimulation for technologists.

More broadly, MOT was supplemented by other initiatives aimed at overhauling Japan’s innovation system, while shoring up its manufacturing base. These include the strengthening of university-based research combined with technology spinouts, startup promotion to reverse declining startup rates, and cluster creation. In effect, these are trying to create a parallel or dual innovation system, featuring small firms (and universities) linked in networks. Issues remain about how these will link with the large firms and their groups.

Japan has largely dropped off the radar screen of New Zealand businesses. Even if only partially successful, however, we can still learn from its attempts to reinvent its productive economy without passively accepting the one-way migration of manufacturing off shore.

Road map for sustainable exports

By Brian F. Nattrass

In the past 24 months there has been a sea change in business and consumer attitudes throughout the western world toward environmental and social sustainability – much of this stemming from a growing public awareness of the issues around climate change and its attendant global warming. Nowhere is this trend more evident than in the United States, where many, if not most, of the major buyers of New...
Zealand exports have recently adopted policies and practices designed to prefer environmentally and socially sustainable products. This poses both opportunities and challenges for NZ business as its traditional customers move strongly toward more sustainable products.

Examples of the recent shift to green or sustainable purchasing include many of the largest names in the U.S. and international retail business. With America’s Wal-Mart, the largest retailer in the world, and its new emphasis on sustainable product; Home Depot, the largest home improvement retailer in the world with its new “Eco-Options” programme; and Britain’s Tesco and Marks & Spencer, there is a very real move strongly toward more sustainable products.

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In a recent unexpected move, a consortium of the largest corporations in the U.S. with combined revenues of USD $1.7 trillion, including Alcan, Caterpillar, Dow Chemical, Dupont, Ford, General Electric, General Motors, Johnson & Johnson, Pepsico, Xerox and many other familiar names, banded together under the name U.S. Climate Action Partnership (USCap) and in January 2007 called upon the White House to quickly enact strong national legislation to significantly reduce greenhouse gas (GHG) emissions and establish a regime to create a market for trading in emissions credits. In August, 2007, an important U.S. industry study entitled “State of the Outsourcing Industry,” by the Brown-Wilson Group, concluded that more and more corporations are dropping environmentally-unfriendly outsourcers in “a trend expected to continue.”

One of the emerging challenges for NZ food exporters is the growing “food miles” movement in both Europe and North America, whereby the GHG footprint of the food as delivered to the customer is calculated and published. As more and more consumers understand the connection between climate change and the buildup of GHGs in the atmosphere, it is expected the trend for consumers to request more locally or domestically produced product will continue. Obviously, the amount of GHG emissions to deliver a kilogram of lamb to a table in the UK, Canada or the U.S. from NZ far exceeds that of locally produced lamb. This new consideration will need to be compensated by the quality, price, and non-GHG sustainability attributes of the NZ product.

How can NZ exporters help take the lead in providing more sustainable, or green, solutions in the export market? Here are five suggestions: understand the environmental and social underpinning of sustainability issues generally including climate change; understand the emerging sustainability standards in both the industries and the particular markets they are targeting; learn the rapidly emerging green procurement standards that individual corporate and governmental customers are implementing; implement corporate sustainability policies and practices internally that ensures the NZ product meets the emerging standards internationally; and lastly, integrate sustainability practices into all aspects of their business – which will enable them to both realize the cost and process advantages that can come from more sustainable production, and also stay ahead of the new green standards as they continue to emerge in markets around the world.

Building group commitment to change: Why is it so hard?

Research suggests that only 30 percent of strategic change initiatives are fully or mostly successful. Often that’s because people fail to change or fail to agree on the changes to be made. Building buy-in and commitment to change is hard. It’s hard because to see a need to change, people need to see a problem in a new light – as more urgent, as solvable in a different way, as more important than before.

Individual changes in beliefs are difficult to achieve, and changes in the collective beliefs of groups (“shared mental models”) are even harder. “Group think” is embedded in beliefs about “how we do things around here” and “what’s important, and what’s not”. It drives actions and decisions across the organisation and it makes us efficient at doing what we’ve done before – so it’s hard to overcome.

What’s the secret? Facilitation can help people to build commitment to change within organisations and teams, but only if used correctly. Over the last few years, my colleague Professor Bettina Buechel of IMD and I have conducted empirical research with senior management teams from all over the world to discover what makes facilitation work, and what can increase your chances of success in building group commitment to change.

We discovered that you need to ensure four important things happen:
1. Choose the right tools and frameworks for your issues. Good analytical tools help groups explore problems and make rational decisions. A simple example is the Boston Consulting Group matrix (problem child, rising star, cash-cow and dog) that helps companies categorise their product portfolios and then decide product investment and promotion strategies. But it’s important to use relevant tools: it’s unlikely that manufacturing process redesign frameworks can really help a group of nurses to improve hospital occupancy rates.

2. Good facilitators encourage conflict and bring it out into the open. With complex issues, great interpersonal skills and other soft skills that deflect conflict can lead to compromises and sub-optimal decisions. Conflict typically re-emerges later, often with more destructive results. Good facilitators depersonalise conflict and make it productive. They use good interpersonal skills plus relevant frameworks that uncover why people have different points of view and help them discuss the rationale for their thinking, instead of judging their views and conclusions.

3. Separate the processes of inquiry (exploring new ideas) and advocacy (selecting alternatives and making decisions). For example, when groups brainstorm badly they judge each new idea as soon as it hits the table. In doing so, each new idea is overwhelmed by group think — and groups come to predictable conclusions and mostly decide on incremental change. When brainstorming is done well, all ideas, weird or wonderful, are captured. Then they are all evaluated in one hit. The result — more inventive solutions, ideas and change.

4. Get real — accept change doesn’t happen in a day. Real change occurs when groups work together over weeks and months, giving them time to reflect on and accept their new shared ideas. It requires detailed plans for selling change to wider stakeholders across the organisation, disciplined implementation planning and rewards and penalties for those tasked with implementing changes.

Focus on managing these four issues, and you’ll increase the probability of success of your change initiatives, perhaps to a lot higher than 30 percent.