Unilever's manufacturing plant has restructured and re-tooled to cope with changing consumer markets. JUDE BARLOW talks to Unilever Australasia's Manufacturing Director, Murray Papps, and finds out how engineering innovation and working smarter maximise productivity and market responsiveness.

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UNILEVER'S PETONE FACTORY is a major employer in the Wellington region, with 330 staff. It is a subsidiary of Anglo-Dutch Unilever plc, one of the world's largest manufacturers of fast-moving consumer goods (food products and home and personal care products). Over the past 10 years employment has grown at the Petone site, along with exports to Australia. Nevertheless, like many New Zealand manufacturers, Unilever is under pressure to rationalise production, management structures and staffing in response to the pressures of changing local and global markets.

The Petone factory is now the sole Unilever plant in New Zealand. New Zealand and Australian operations were organised into a single business unit about a year ago. Bar-soap production will be transferred to factories in Australia and Indonesia in June, as consumer preferences have shifted to liquid soaps and shower gels. Toothpaste production is to move to an Indian Unilever factory, reflecting a loss of market share in New Zealand and Australia.

Now the Petone factory is determined to work through the pressures of changing markets. "In the fast-moving consumer goods market innovation is absolutely vital," says Mr Papps. "We are looking to re-invent existing brands with improved formulations and packaging." He identifies three planks to success: regular product innovation; continual plant updating; and making the most of the skills and abilities of your workforce.

While the soap and toothpaste production lines are closing down, Petone's laundry powder production for Australasia is picking up, increasing three-fold in 1993/4 after Unilever closed a Sydney plant. Mr Papps says the laundry side of the plant, which is totally computer controlled, is very modern. "We have invested heavily in the past 10 years to upgrade the equipment, and we keep up capital expenditure."

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ei ned laundry powder ble-mi int mixers compared with i ever Jnet iatel ump nr A: iour, vene was developed e, c ring c mpi te ogrammes and perso out 8: % c ta elp. offer of further traini nt adopted TPM (Total oduc e Mair.te involves the entire production am, r the plant maintenance. TPM g v ne c ...ty turning the IST Ds Ji nom Je anese Luce <u>you.</u> Fina ou of your pardware real st. es wrong by getting visual inspec WW.VISISCO Visiscope[®]



A total quality management programme, it is targeted at the factory floor. It involves staff of different capabilities working together to achieve optimum results. As well as technical skills team members need to develop soft or managerial skills to enable them to hire and lay off staff, hold team meetings, solve problems, assess and respond to training needs. Display boards throughout the Petone factory show how teams have worked together to identify and solve manufacturing problems. Banners exhort staff to work to the best of their ability, proclaiming slogans such as "Remember work smarter not harder".

Mr Papps says the philosophy, which a JIPM consultant helped establish and updates every three months, has worked "staggeringly well" at the plant, with a "dramatic improvement" in the work environment and in productivity. "I wouldn't have believed 10 years ago we could do it. To see people doing jobs that were previously in supervisors' or managers' spheres, as well as their normal work, and using new skills, is extremely satisfying."

"The key thing is that people feel empowered to undertake initiatives." Teams can co-opt people from other departments, such as human resources or finance, to help



solve problems without management approval. Over 10 years the number of managers has dropped 15%. Supervisory positions have also decreased and been replaced by team support officers, who help the teams solve problems rather than directing people.

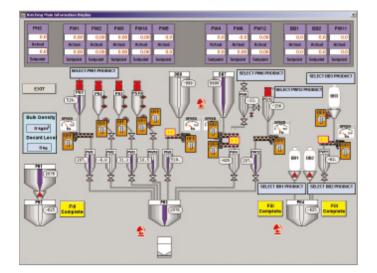
An example of this approach was the development of the deodorant filling machine. The deodorant bottle is difficult to handle because it is small, irregularly shaped, and unstable, and requires a ball and spherical cap. The team applied TPM problem solving techniques and the engineering members, with their production colleagues, designed, manufactured and assembled all the equipment. The plant now has a high-efficiency line instead of a collection of unreliable equipment. An Italian-supplied shampoobottle feeder was also re-thought and re-engineered to cope with a change in bottle dimensions.

Safety

Safety has always had a high priority on the Petone site. Factory Manager Bob Armour was quick to see TPM's loss-prevention approach as beneficial to safety management. TPM has helped improve overall safety – the factory has gone two and a half years without a single lost-time accident or a restricted work case. The plant has the highest tertiary level of ACC self-insurance, and holds ISO certification for its environmental management, quality management and occupational health and safety management systems. In 1997 it received a Wellington Regional Council commendation for its environmental practices and came fourth in last November's *Unlimited* (magazine) Massey University Corporate Environment awards.

Mr Papps says the factory has no difficulty hiring engineers, sourcing graduates from New Zealand and Australian universities. However, it does have difficulty hiring and retaining IT and process computing staff, because of a worldwide shortage. It deals with a lack of tradespeople through its long-running apprenticeship programme, which sees an average of nine apprentices training at any one time.

A further "tremendous advantage" for the Petone plant is its production flexibility. The plant can do long or short product runs, and the product type can be changed quickly. This makes it possible



to take inventory out of the supply chain and free up working capital. The plant's flexible workforce means it can also change shifts and work patterns easily.

Despite this versatility further rationalisation is inescapable. To improve its profit growth the parent company is drastically cutting the number of brands it markets from 1600 to 400. Mr Papps says the Australasian business will attempt to sell some brands and delete others, focussing on priority brands.

Control screen for post-dosing: a conveyor positions bins under hoppers to recieve doses of laundry powder components.

Mr Papps says so far the factory has handled increasing automation through redundancy and natural attrition. "We wouldn't want to slow down future automation. We would not be competitive if we did that." However, he does not believe the entire operation will be moved out of New Zealand to a country with cheaper labour costs. Labour represents only 5–15% of product costs. New Zealand wages are lower than, for example, Australia's, and this country's labour regulations and skills base allow greater flexibility. While most raw materials are imported, New Zealand's energy and packaging materials are also comparatively cheap.

Over the next 10 years Mr Papps expects a continued focus on the laundry powder plant. "We'll maintain that as a world class facility in terms of equipment, the processing we use, and the structure of the workforce." For example a \$2.7million proposal for improving concentrate laundry powder production was approved recently. The factory will continue to produce a limited range of other products.

Jude Barlow is a Wellington based freelance journalist.



October/November 2001 additions to and changes in the classes of membership

The membership changes published in the Jan/ Feb issue were incorrect. We apologise for the error, and publish the correct information below.

Elected to Graduate membership

Brent Huia Cooper, Bernard John Fournier, Christopher Emlyn Harris, Brendon Paul Hickey, Tracey Marie Leslie, Lillian Jane Wilkinson Linton, Kate Machen, Christopher Edward McPhee, Stephen John Morgan, Zaid Mansoor Muhsin, Shaukat Zia Quershi, Kerry Andrew Wilkinson, Alice Jennifer Marie Grace, Benjamin Karl Scott, Dion Barry Bowen, Gregory Andrew Clark, Sylvester Thushantha De Almeida, Lindamalage Hemala Sumithra De Silva, Clive William Edgar Eddy, Daniel Mark Hovell, Zhong Xiong Lai, Steven Rodney Maiden, Tracy Ellen McGuigan, Bridget Mary O'Brien, Malinda Lee Spillane, Joanna Lynley White, Salam Samir Jirjis, George Joseph Kaithakkottil, Philip Owen Walker, Stephen Andrew Scard, Arthur Robert Amputch, Jonathan Kirk Burden, Kevin Robert Mark Coleman, Dean Richard Coutts, Jon Garth

Cunningham, James Edward Gardener, Nicholas John Christopher Gluyas, James Maitland Greenwood, Bryce Laurence Hall, Christopher John Hargreaves, Leanne Henderson, Peter Frederick Kinley, Greig David Larcombe, Vincenzo Marotta, Ian Richard Matthew, John Forbes Miller, James Roy Quentin Natusch, Guy Carlson Stewart Rodger, Cameron John Smythe, Fawaz Hdaid, Hemant Dinkar Kukde, Opata Kankanange Mahinda Padmasiri, Timothy James Conder, Nicholas Ellis Jolly, Michael Maylon Robinson, James Hong Kwan Ning, Heather Marie Meyer, Duane Kuru Southon

Elected to Member

Craig Douglas Thelin, Mark Gerard Mahoney, Stephen James Page, Johann Jurgens Mouton, Peter Douglas Brown, Robert Francis de Roo, Alistair John Fussell, Andrew Ross Harvey, Roger James Kight, Neil Alexander McCann, Kevin Andrew Morris, Noel Robert Nancekivell, Kevin Douglas Patrick, Vladmir Shayne Sajnovic, Paul Gwylim Allan Thomas, Izak Andries Delport van Blerk, Gordon John Wright, Roger Frederick Argyll Beardsley, Bettina Anne Lavers, Alan Benjamin Mitchley

Elected to Affiliate Member

Shivam Rajan Naidu, lan Stanton Maddox, Mardi Joan Lewis, Robert John Snoep <u>Elected to Engineering Technologist</u> John David Skidmore

Elected through the IEAust Members Reciprocal Agreement Wai Sum Lawrence Lee

Promoted from Technologist to Member Richard John Porter, Hussam Abdul-Satar Abdul-Rassol, Ara Setrak Ovansseoff

Promoted from Engineering Associate to Engineering Technologist Allen William Geerkens, Stephen Griffin

Promoted from Engineering Associate to Member Stephen Wayne Young

Promoted from Graduate to Member

Christopher Dunlop, William James Noell, Graeme Keith Doherty, Nathan Earl Barrett, Philip Richard Boys, Nigel Croft, Mark Douglas Gerrand, David Arthur Heiler, Joanna Jane Irving, Stephen Parameina Kamo, Katrina Elsa Kidson, Brent William Manning, Timothy Douglas McLeod, Rebecca Jane Nicholson, Philip James Quinn, Mark Rodger Treadgold, Hendrik Jan Visser, Steven Ward, Ross William Wilkinson, Stuart Michael Winterbourne