

## Sample of CTPM Manufacturing Client Achievements as reported at public Forums and Conferences

*Levels achieved relate to CTPM's 5 Level Milestone CI Excellence Award established in 2002 to assist sites to achieve Operational Excellence*

The following information has been reported in the public domain (eg CTPM CI Forums) and hence can be shared. Our clients have also achieved many more substantial gains which for confidentiality reasons cannot be reported.

Company and Source	Timeframes	Publicly Reported Outcomes
<b>Current Clients</b>		
<b>ArcelorMittal Tailored Blanks</b> Edinburgh SA 40 personnel	Commenced June 2008 <ul style="list-style-type: none"> <li>• Level 1 – March 2009</li> <li>• Level 2 – February 2010</li> </ul> Progressing ...	<ul style="list-style-type: none"> <li>• 60% increase in OEE</li> </ul>
<b>B&amp;D Doors &amp; Openers</b> Kilsyth VIC 100 personnel  <i>CTPM E-News Publication</i> January 2012	Commenced October 2010  Progressing ...	<i>Results from an improvement team in 2011:</i> <ul style="list-style-type: none"> <li>• \$63,000 p.a. saving from increasing Productivity by 20% on roller door line</li> <li>• \$27,000 p.a. savings from reduced Scrap losses</li> <li>• Continuous improvement and problem solving now a part of the way we work</li> </ul>
<b>B&amp;D Doors &amp; Openers</b> Revesby NSW 100 personnel  <i>Nat Operations Mgr</i> Forum 2010  <i>CTPM E-News Publication</i> November 2010 and October 2012  <i>Operations Mgr</i> Forum 2011	Commenced February 2009 <ul style="list-style-type: none"> <li>• Level 1 – July 2011</li> </ul> Progressing ...	<i>At time of Level 1 Verification Assessment in July 2011:</i> <ul style="list-style-type: none"> <li>• In excess of \$400,000 in savings identified after 4 cycles</li> <li>• Improved cross-department interaction and communication</li> <li>• Higher skilled workforce with reduced frustrations</li> <li>• More visual factory</li> <li>• Significant cost reductions in the site waste / recycling initiatives</li> <li>• Reduction of downtime across all lines by implementing OEM</li> <li>• New Area Management Team expanded usable floor space</li> <li>• Production &amp; Maintenance now working as one</li> <li>• 2 Operators and 2 Teams have been nominated for the National B&amp;D OHS Awards</li> <li>• 17 Students have completed Cert III in Competitive Manufacturing</li> <li>• 5 Students have completed Cert IV in Competitive Manufacturing</li> </ul> <i>At the 2012 Forum, a Cross-functional Team focused on Energy Reduction reported:</i> <ul style="list-style-type: none"> <li>• 19% reduction in High Bay Light energy cost</li> <li>• 17% reduction in site electricity usage</li> </ul>

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<p><b>Buildex</b> Moorabbin VIC 130 personnel</p> <p><i>CTPM E-News Publication</i> June 2011 and August 2012</p>	<p>Commenced February 2011</p> <p><b>Progressing...</b></p>	<p><i>Results from “Alloy Plating Wizards” improvement team in 2011 focused on Alloy Plating:</i></p> <ul style="list-style-type: none"> <li>• 5% increase in OEE resulting in <b>\$184,000</b> of extra product processed each month.</li> </ul> <p><i>Results from “Plan(T) 2” improvement team in 2011 focused on downtime on Line 3:</i></p> <ul style="list-style-type: none"> <li>• OEE for Plant 2 increased from 66% to 84% in the space of four months</li> <li>• Line 3 had the most significant change increasing OEE from 55% to 79%</li> <li>• The area processes an additional <b>\$158,000</b> of extra product / month</li> </ul> <p><i>Results from improvement team in 2012 focused on Heading Plating Line (HPL):</i></p> <ul style="list-style-type: none"> <li>• 83% reduction in line jams saving 2.2 hrs per week in lost time</li> <li>• 50% reduction in cleaning time / week of the conveyor plates (saving 4hrs / week)</li> <li>• 8% increase in OEE</li> <li>• 29% reduction in powder usage saving \$160 per day (<b>\$39,680 p.a.</b>)</li> <li>• 21% increase in OEE for the HPL Area by implementing key countermeasures from HPL 4 line to HPL lines 1, 2 and 3</li> </ul>
<p><b>Cedenco Foods New Zealand</b> Gisborne NZ 300 personnel</p> <p><i>CTPM Forum</i> September 2012</p>	<p>Commenced: January 2008</p> <ul style="list-style-type: none"> <li>• Level 1 – May 2012</li> </ul> <p>Completed 14 cycles with weekly then fortnightly CTPM support then progressed with internal accredited personnel</p> <p><b>Progressing ....</b></p>	<ul style="list-style-type: none"> <li>• <b>Over \$1m</b> impact on bottom-line after first season</li> <li>• Reduction of downtime across all lines by implementing Op Equip Mgmt</li> <li>• Maintenance Work Area Mgmt Teams very successful and sustaining</li> <li>• Production &amp; Maintenance now working as one</li> <li>• Employees are now engaged in a common goal</li> </ul>

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<p><b>Coopers Brewery</b> Regency Park SA 180 personnel</p> <p><i>Operations Mgr</i> Forum 2004</p> <p><i>CI Co-ordinator</i> Forum 2005 and 2009</p> <p><i>Operations Mgr</i> Forum 2008 and 2012</p> <p><i>CTPM E-News Publication</i> March 2012</p>	<p>Commenced September 2003</p> <p><b>Progressing...</b></p>	<p><b>Reported at 2012 Forum:</b></p> <ul style="list-style-type: none"> <li>• 23% increase in OEE in main bottling line.</li> <li>• Identified 6 water saving projects totalling 68 Million Litres of water per annum</li> <li>• 13% increase in Bottling Line Ale / Stouts OEE resulting in <b>\$243,000 p.a.</b> savings</li> <li>• 13% increased in Cartons per hour rate</li> <li>• Over 30 One Point Lessons delivered during first cycle of OEM-4 activities</li> <li>• 78% reduction in Reject Kegs while increasing Keg Line rate by 5%</li> <li>• 79% reduction in start-up times at Labeller Section</li> <li>• 30% reduction in change-over time on Filler / Packer / Hop Oil Dosing</li> <li>• Successfully conducted 88 improvement projects</li> <li>• “We have involved Operations, Sales &amp; Marketing, Supply Chain”</li> <li>• “We have made CI the way we do business, we are relentless in our pursuit for Operations Excellence where failure is not an option”</li> <li>• “Our Culture has changed from being Knowledge based (expert / scientists) to being a Learning based culture – with an emphasis on analysis not gut feel”</li> <li>• “Our Focus on the development of our People has resulted in a work force who now works <b>on</b> the business, not just <b>in</b> the business, and have greater enthusiasm”</li> </ul> <p><b>Results from “State Limit 110” Homebrew Line improvement team in 2011 focused:</b></p> <ul style="list-style-type: none"> <li>• 20% increase in OEE</li> <li>• 30% increase in line speed for most products</li> </ul>
<p><b>CSR Ethanol / Sucrogen BioEthanol</b> Yarraville VIC 20 personnel</p> <p><i>Operations Manager</i> Forum 2008</p>	<p>Commenced January 2008</p> <p><b>Progressing...</b></p>	<ul style="list-style-type: none"> <li>• Saved <b>\$187,000</b> in 3 months by reducing the variance of machinery</li> <li>• Reduced set-up time on filler machine by 75%</li> <li>• 40% reduction in waste resulting in a <b>saving of \$120,000 p.a.</b></li> </ul>

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<p><b>CSR Ethanol / Sucrogen BioEthanol</b> Sarina QLD 45 personnel</p> <p><i>CTPM E-News Publication</i> July 2009</p>	<p>Commenced October 2008</p> <p><b>Progressing...</b></p>	<p><i>Results from "The Brew Crew" improvement team in 2009:</i></p> <ul style="list-style-type: none"> <li>• 12% improvement in OEE</li> <li>• Achievement of a higher ethanol production rate per hour</li> </ul>
<p><b>Mars Petcare</b> Wanganui NZ 200 personnel</p> <p><i>CTPM E-News Publication</i> October 2008</p>	<p>Commenced August 2006</p> <p>Initially with weekly then fortnightly then monthly support from CTPM along with internal accredited support</p> <p><b>Progressing ....</b></p>	<p><i>In 2008 it was reported they had achieved:</i></p> <ul style="list-style-type: none"> <li>• Significant improvement in plant performance,</li> <li>• 14% decrease in site energy costs from 2006 to 2007</li> <li>• Confidence to instigate significant upgrade to plant</li> </ul>
<p><b>Nestle - Mulgrave Peters Ice cream Factory</b> Mulgrave VIC 150 personnel</p> <p><i>Oceania Market AM Pillar Leader</i> Forum 2011</p>	<p>Commenced June 2010</p> <p><b>Progressing ...</b></p>	<p><i>After 1 year of Prevention at Source activities using CTPM Training Material:</i></p> <ul style="list-style-type: none"> <li>• 36% Reduction in Minor Stops</li> <li>• 75% improvement in Mean time Between Failures</li> <li>• 6% Improvement in rate</li> <li>• 8% Waste Reduction</li> <li>• 80% Skill Growth amongst teams</li> </ul>

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<p><b>New Zealand Sugar Chelsea</b>                      Birkenhead NZ                      200 personnel</p> <p><i>Operations Mgr</i>                      Forum 2009  <i>Maintenance Mgr</i>                      Forum 2010  <i>Packing &amp; Warehouse Mgr</i>                      Forum 2011  <i>Team Presentations</i>                      Forum 2009, 2010, 2011 and 2012</p>	<p>Commenced Feb 2008</p> <ul style="list-style-type: none"> <li>• Level 1 – March 2009</li> <li>• Level 2 – July 2009</li> <li>• Level 3 – November 2012</li> </ul> <p>Competed 15 cycle initially with weekly then fortnightly then monthly support from CTPM along with internal accredited support</p> <p><b>Progressing ...</b></p>	<p><i>At time of Level 3 Verification Assessment in November 2012:</i></p> <ul style="list-style-type: none"> <li>• Lost Time Injury Frequency rated reduced from 9.8 to Zero</li> <li>• Energy consumption reduced - gas &amp; electricity</li> <li>• Improved engagement &amp; ownership</li> <li>• Identified and rectified many safety risks</li> <li>• Significantly improved Housekeeping standards</li> </ul> <p><b>Significant improvement in Maintenance Performance including:</b></p> <ul style="list-style-type: none"> <li>• Significant reduction in PM and W/O backlogs, and stock levels</li> <li>• Now working in harmony with Production</li> <li>• Maintenance Innocence to Excellence Rating increased from 34% to 84%</li> </ul> <p><b>Significant Improvement in Refinery Performance including:</b></p> <ul style="list-style-type: none"> <li>• Teams saved over <b>\$150,000 p.a.</b></li> </ul> <p><b>Significant Improvement in Packing Area Performance including:</b></p> <ul style="list-style-type: none"> <li>• 50% improvement in Packing OEE</li> </ul>
<p><b>Norske Skog</b>                      Albury NSW                      200 personnel</p> <p><i>CTPM E-News Publication</i>                      November 2011</p>	<p>Commenced May 2011</p> <p><b>Progressing ...</b></p>	<p><i>Results from “The SWIFTS” improvement team in 2011 focused on addressing issues with sheet widening:</i></p> <ul style="list-style-type: none"> <li>• Success rate for attempts at sheet widening improved from 74% (June 2011) to 92% (August 2011), this equates to more than <b>\$150,000</b> additional contribution margin</li> <li>• Analysis conducted increased the teams understanding of the machine</li> <li>• Structured approach helped to break down large problems into smaller chunks, and allow tasks to be shared more evenly</li> </ul>

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<p><b>OneSteel – Australian Tube Mills</b> Somerton VIC 85 personnel</p> <p><i>Operations Mgr</i> Forum 2012</p> <p><i>CTPM E-News Publication</i> November 2012</p>	<p>Commenced March 2012</p> <p><b>Progressing ...</b></p>	<ul style="list-style-type: none"> <li>• Individually training projects have yielded over \$200k in annualised savings</li> <li>• Similar returns from the daily reactive problem solving</li> <li>• Greater engagement from the frontline regarding the problem solving process</li> <li>• Improved relationships between leaders and frontline</li> <li>• An aligned process for the whole site becoming embedded culturally</li> <li>• Increased accountability and ownership</li> <li>• 2.8% Improvement in Yield for Mill 7 = \$380k per annum</li> <li>• 7.1% Improvement in Availability for Mill 7 = \$105k per annum</li> <li>• 3.7% Improvement in Availability for Mill 8 = \$111k per annum</li> </ul> <p><i>Problem Solving Examples:</i></p> <p><b>Mill 7 Raft Encoder Reliability</b></p> <ul style="list-style-type: none"> <li>• 20% improvement in change over times</li> <li>• Has contributed to Mill 7 Availability improvement</li> <li>• Availability savings of \$20,000 per annum</li> <li>• A more cohesive Electrical Team</li> </ul> <p><b>Reduce Wet Bore Rejects on No.8 Mill</b></p> <ul style="list-style-type: none"> <li>• Reduction in wet bore losses have improved underlying yield performance</li> <li>• Estimated annual benefit of over \$50,000</li> </ul>

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<p><b>Sugar Australia</b>                      Glebe Island NSW                      25 personnel</p> <p><i>Site Manager</i>                      Forum 2006  <i>CTPM E-News Publication</i>                      May 2007 and August 2011  <i>Site Manager</i>                      Forum 2009  <i>Cont Imp &amp; Prod Support Team Leader</i>                      Forum 2010  <i>Site Manager</i>                      Forum 2011  <i>Reliability Team Planner</i>                      Forum 2012</p>	<p>Commenced October 2005</p> <ul style="list-style-type: none"> <li>• Level 1 – September 2008</li> <li>• Level 2 – December 2008</li> <li>• Level 3 – July 2011</li> </ul> <p><b>Progressing...</b></p>	<p><b><i>At time of Level 3 Verification Assessment in July 2011:</i></b></p> <ul style="list-style-type: none"> <li>• 100% engagement of employees in improvement teams</li> <li>• 50% improvement in OEE across site</li> <li>• 90% increase in output</li> <li>• 50% reduction in customer complaints</li> <li>• Zero lost time injuries since commencing CI</li> <li>• <b>\$1.2million</b> savings over 5 years</li> </ul> <p><b><i>Other improvements reported at Forums</i></b></p> <ul style="list-style-type: none"> <li>• Improved industrial packaging line OEE by 180%</li> <li>• Improved retail packaging line OEE by 96%</li> <li>• Reduced labour costs by 25%</li> <li>• Improved OEE across the site by 50%</li> <li>• Increased output by 90%</li> <li>• Reduced customer complaints by 50%</li> <li>• Changeover improvement time by over 50%</li> <li>• Through OEM Activities; equipment operates more effectively – increased OEE; operators understand a clean machine makes their job easier; and learn to look and identify defects – normal vs abnormal</li> <li>• Teams communicate and challenge themselves in a positive manner, striving to achieve higher performance measures</li> <li>• Relationships between Operators and Maintenance the key to success assisting with defects and improvements</li> <li>• Results achieved through the CI process boost team morale, create a safer work environment and operator ownership of the packing lines</li> <li>• 250 SOP's and 95 One Point Lessons written</li> <li>• 100% of Glebe staff involved in CI</li> </ul>
<p><b>Sugar Australia</b>                      Mackay Port QLD                      30 personnel</p> <p><i>CI Excellence Award</i>                      Forum 2010</p>	<p>Commenced June 2006</p> <ul style="list-style-type: none"> <li>• Level 1 – March 2010</li> </ul> <p><b>Progressing....</b></p>	<p><b><i>At time of Level 1 Verification Assessment in March 2010:</i></b></p> <ul style="list-style-type: none"> <li>• 20% increase in OEE across the site</li> <li>• Reduction in the need for casuals</li> <li>• More ships packed</li> <li>• Significant reduction in cost / kg</li> </ul>

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<p><b>Sugar Australia</b> Yarraville VIC 150 personnel</p> <p><i>CTPM E-News Publication</i> June 2007, October 2011, May 2012 and October 2012</p> <p><i>GM Operations</i> Forum 2007 and 2008</p>	<p>Commenced September 2006</p> <ul style="list-style-type: none"> <li>• Level 1 – April 2010</li> <li>• Level 2 – December 2011</li> </ul> <p><b>Progressing...</b></p>	<p><i>At the time of Level 2 Verification Assessment in Dec 2011</i></p> <ul style="list-style-type: none"> <li>• <b>\$1.2 million</b> saving from improvements</li> </ul> <p><b>In Packing Area:</b></p> <ul style="list-style-type: none"> <li>• 80% reduction in waste generation</li> <li>• 80% reduction in manual lifting</li> <li>• Significant increase in morale</li> <li>• 50% reduction in packing variability</li> <li>• 50% increase in packing capacity</li> <li>• Higher level of PM attainment resulting in better availability</li> </ul> <p><b>In Refinery:</b></p> <ul style="list-style-type: none"> <li>• 73% reduction in sweet waste pumped to trade waste</li> <li>• <b>\$270,000 p.a.</b> savings</li> </ul> <p><b>Other improvements reported at Forums</b></p> <ul style="list-style-type: none"> <li>• Improved in OEE of 50% in two years of implementing CI i.e. 50% more capacity over the 2 years with virtually zero investment.</li> </ul> <p><b>Results from cycle 2 improvement team in 2007:</b></p> <ul style="list-style-type: none"> <li>• 75% reduction in filler set-up time achieved by The “Set it Right” team</li> <li>• 23% improvement in OEE on the Industrial Packing Line (IPL) achieved by the “HIPPI” team</li> </ul> <p><b>Results from the “Return of the Moose’s” improvement team in 2012 focused on the Industrial Packaging Line (IPL):</b></p> <ul style="list-style-type: none"> <li>• 10% improvement in % OEE, and also a reduction in the variation of % OEE due to the equipment being less contaminated</li> <li>• <b>\$43,000 p.a.</b> savings from the improvements</li> </ul> <p><b>Results from the “Change Up” improvement team in 2012 focused on the Retail Syrup Line:</b></p> <ul style="list-style-type: none"> <li>• 67% reduction in all changeovers</li> <li>• Learning by the team was to not only to focus on reducing changeover time, but how to eliminate the need for minor adjustments. The team mantra was “No Tools, Set Once”.</li> </ul>



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<b>Past Clients</b>		
<p><b>ACI Plastics Packaging</b> Auckland NZ 65 personnel</p> <p><i>CI Co-ordinator</i> NZ Forum 2004</p>	<p>Commenced July 2002</p> <p>Completed 6 cycles with weekly then fortnightly CTPM support then progressed with internal accredited personnel</p> <p>Concluded Oct 2004 due to change of ownership</p>	<ul style="list-style-type: none"> <li>• Workers found pride in their workplace</li> <li>• Gained ownership of their equipment and ideas</li> <li>• Increased communication between shifts and departments</li> <li>• Significant impact on bottom-line results</li> </ul>
<p><b>ACI Plastics Packaging / Visy Industrial Packaging</b> Drouin VIC 35 personnel</p> <p><i>CTPM E-News Publication</i> February 2005 and December 2005</p>	<p>Commenced February 2002</p> <p>Concluded ...</p>	<p><b><i>Through 6 cycles of CI:</i></b></p> <ul style="list-style-type: none"> <li>• Plant OEE has improved by 30%</li> <li>• DIFOTQ (Delivery in Full On Time with the correct Quality) has hit 96%</li> <li>• Output from the plant has increased by 30%</li> <li>• Injuries have been reduced by 60%</li> <li>• Maintenance cost reduced by 42% in 12 months (between 2003 and 2004)</li> <li>• Increased involvement of all team members</li> <li>• People who would have never dreamed of touching a machine are now competent operators and understand how they work</li> <li>• New and challenging tasks has provided people with encouragement and support to step outside their own comfort zones</li> <li>• Opportunity to move forward through the organisation</li> <li>• Committed leadership team, passionate about fostering the appropriate environment</li> </ul>

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<p><b>ACI Plastics Packaging / Visy Industrial Packaging</b> Kirrawee NSW 100 personnel</p> <p><i>Plant Manager</i> Forum 2002 and 2003</p> <p><i>CI Co-ordinator</i> Forum 2003</p> <p><i>Team Presentation</i> Forum 2003 and 2004</p>	<p>Commenced November 2001</p> <ul style="list-style-type: none"> <li>• Level 1 – October 2002</li> <li>• Level 2 – October 2002</li> </ul> <p>Site moved to Minto 2004 under new ownership</p>	<ul style="list-style-type: none"> <li>• Increased OEE by 30% across site.</li> <li>• Received highest rating from customer audits resulting in doubling of customer orders.</li> <li>• Significant increase in employee morale.</li> <li>• Achieved 95% engagement of workforce in improvement activities</li> <li>• Improved communication among shifts.</li> <li>• Reduced material losses resulting in annual savings of <b>\$178,788</b>.</li> <li>• Reduced Tool Change Times by 53%</li> </ul>
<p><b>ai Automotive</b> Adelaide SA 300 personnel</p> <p><i>CTPM E-News Publication</i> August 2005 and November 2005</p> <p><i>Chief Operations Officer</i> Forum 2005</p>	<p>Commenced October 2004</p> <p>Concluded June 2005 due to change of Snr Management</p>	<ul style="list-style-type: none"> <li>• Delivered annualised savings of over <b>\$400,000</b> after 1 cycle of activity</li> <li>• Improved OEE from 47% to 63%</li> <li>• Improved first-class quality from 93% to 99%</li> </ul> <p><i>Results from “Boxheads” improvement team in 2005 focused on Style Box Cell, which produces the rear box section of the Holden Crewman Ute. 9 months on:</i></p> <ul style="list-style-type: none"> <li>• Increased OEE from the baseline of 47% to the current levels of 75%-80%, which resulted in an improvement of productivity of 32 units per shift to an impressive 40 units per shift (25% increase)</li> <li>• Increased Availability from 58% to 68%</li> <li>• Increased Rate from 61% to 73%</li> <li>• Increased Quality from 98% to 99%</li> <li>• Increased Productivity from 4.96 man hrs per part to 4.05 man hrs per part</li> <li>• Improvements made delivered in excess of <b>\$250,000 p.a.</b> back to the business.</li> <li>• Better communication, cooperation and understanding between Production, Maintenance, Management and the shop floor</li> <li>• Increase in morale due to less frustration as equipment was more reliable</li> </ul>

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<p><b>Alphapharm</b>  Carole Park QLD  420 personnel</p>	<p>Commenced June 2001</p> <p>CTPM support concluded July 2003 as they had developed sufficient in-house capability to progress</p>	<p><i>Pre-cycle Strategy Review towards end of Cycle 3 in March 2002</i></p> <p><b>Production</b></p> <ul style="list-style-type: none"> <li>• Increased coating throughput by \$600,000 within 2 months</li> <li>• Reduced inventory by 2/3rds</li> <li>• Freed up floor space (115m<sup>3</sup>)</li> <li>• HV Granulation team identified improvement initiatives equivalent to another 23.5hrs production per week</li> </ul> <p><b>Packaging</b></p> <ul style="list-style-type: none"> <li>• Increased throughput in Blister Pack #2</li> <li>• Bottling Line #3 identified improvement initiatives equivalent to another 27.5hrs production per week.</li> <li>• Standardised set-up card systems</li> <li>• Introduced colour coding into bottling line areas for equipment, tools and documentation</li> <li>• Introduced a compactor system for label storage</li> <li>• Identified tool requirements, purchased tooling trolleys and cabinets</li> </ul> <p><b>Maintenance</b></p> <ul style="list-style-type: none"> <li>• Improved workflows in machine shop</li> <li>• Reduced frustrations, increasing morale and productivity</li> <li>• Identified major issues for maintenance improvement initiatives</li> </ul> <p><b>Support Areas</b></p> <ul style="list-style-type: none"> <li>• Increased efficiencies in the QA Laboratory, and HR office areas, through WAM activities</li> <li>• Removed redundant equipment, significantly increasing storage space</li> <li>• Revised stock control systems for chemicals, glassware and columns</li> </ul>

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<p><b>Bonlac Foods / Fonterra</b> Cobden &amp; Cororooke VIC 200 personnel</p> <p><i>CTPM E-News Publication</i> June 2006</p> <p><i>CTPM E-News Publication</i> July 2006</p> <p><i>HR Manager</i> Forum 2006</p> <p><i>Maintenance Mgr</i> Forum 2006</p>	<p>Commenced February 2005</p> <p>Concluded after 5 cycles in May 2007 (Cobden) and after 4 cycles in July 2007 (Cororooke) following the take-over of the company by Fonterra and instigating their own Manufacturing Excellence program from NZ.</p>	<ul style="list-style-type: none"> <li>• Safer working environment</li> <li>• Established pride amongst the trades</li> <li>• Better control of hand tools, manuals, and drawings through Work Area Management</li> <li>• Reduced maintenance lost time looking for things</li> </ul> <p><b>Results from "Pitstop" improvement team in 2006 focused on Retail Shred Line at Cororooke:</b></p> <ul style="list-style-type: none"> <li>• Average savings of 63% in changeover times</li> <li>• Revised and standardised procedures</li> <li>• Improved communication</li> </ul> <p><b>Results from Cycle 2 improvement teams in 2006 at Cororooke:</b></p> <ul style="list-style-type: none"> <li>• The "Scrubbers" team reduced wash up time by 36%, equating to an extra 4.8 weeks of production time per year</li> <li>• The "Dust Off" team reported an 18% improvement in OEE of their powder packing line</li> <li>• The "Rev it Up" team realised improved packing line speeds on their VFFS equipment</li> </ul>
<p><b>Bonlac Foods / Fonterra</b> Spreyton TAS 100 personnel</p> <p><i>CTPM E-News Publication</i> October 2006</p>	<p>Commenced April 2005</p> <p>Concluded after 6 cycles in May 2007 following the take-over of the company by Fonterra and instigating their own Manufacturing Excellence program from NZ.</p>	<p><b>Results from "Fat Loss" improvement team in 2006:</b></p> <ul style="list-style-type: none"> <li>• Achieved a saving of more than \$100,000 p.a. with even more savings identified</li> </ul>
<p><b>Boral Bricks</b> Prospect and Bringelly NSW 150 personnel</p> <p><i>General Manager</i> Forum 2008</p>	<p>Commenced September 2007</p> <p>Concluded 2009 due to change of Snr Management</p>	<ul style="list-style-type: none"> <li>• 20% improvement in OEE on the Bringelly Plant Dehacker</li> <li>• 25% reduction in Credit Issues raised in NSW</li> <li>• 20% reduction in Truck Loading Time at Badgerys Creek</li> <li>• 20% increase in OEE on Bringelly Plant Setter</li> <li>• Improved the accuracy of credit invoices from 13% accuracy to 91% as a result of teams taking ownership and responsibility for their actions.</li> <li>• Refine and Improve Customers Account application processes (17% new accounts opened correctly the first time)</li> </ul>

## Sample of CTPM Manufacturing Client Achievements as reported at public Forums and Conferences

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Company and Source	Timeframes	Publicly Reported Outcomes
<p><b>Cryovac Sealed Air</b> Porirua, Wellington NZ 275 personnel</p> <p><i>CTPM E-News Publication</i> February 2004 <i>Area Co-ordinator</i> NZ Forum 2004 <i>Team Presentation</i> NZ Forum 2004 and 2006</p>	<p>Commenced July 2002</p> <p>Completed 4 cycles of improvement with weekly then fortnightly CTPM support before progressing with internal accredited personnel</p> <p>Concluded November 2006 due to change of Senior Management</p>	<ul style="list-style-type: none"> <li>• One team reduced set-up time by 76% saving <b>\$680,000 p.a.</b></li> <li>• One team reduced the time to conduct a production process by 40% saving <b>\$27,200 p.a.</b></li> </ul>
<p><b>CSL Bioplasma</b> Broadmeadows VIC 500 personnel</p> <p><i>Senior Maintenance Engineer</i> Forum 2004 <i>CTPM E-News Publication</i> March 2006</p>	<p>Commenced August 2003</p>	<ul style="list-style-type: none"> <li>• Defect elimination improved uptime by more than any other system on its own</li> <li>• Visual Controls &amp; a One Point Lesson help reduce Breakdowns by 50%</li> <li>• Improved the effectiveness of the Preventative Maintenance (PM) activities</li> </ul>
<p><b>Detmold Packaging</b> Adelaide SA 150 personnel</p> <p><i>CI Co-ordinator</i> Forum 2003</p>	<p>Commenced February 2002</p> <p>Concluded August 2003 due to significant downturn in industry</p>	<p><i>After 3 cycles:</i></p> <ul style="list-style-type: none"> <li>• OEE on printing line increased by 37% saving <b>\$247,000 p.a.</b></li> <li>• OEE on waxer line increased by 19% saving <b>\$70,000 p.a.</b></li> <li>• Waxing team reduced wax variance saving <b>\$27,000 p.a.</b></li> <li>• Significantly improved service levels, housekeeping, attitudes and morale</li> </ul>
<p><b>Edgecumbe Milk Products / Anchor Products / NZMP / Fonterra</b> Edgecumbe NZ 360 personnel</p> <p><i>Team Presentation</i> NZ Forum 2004</p>	<p>Commenced July 1999</p> <p>Concluded April 2004 due to change of ownership</p>	<ul style="list-style-type: none"> <li>• Shaved 1 hour 9 min off turn-around time for the CIP process resulting in <b>\$1.5 million p.a.</b> increase in revenue</li> </ul>

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Company and Source	Timeframes	Publicly Reported Outcomes
<p><b>Holden HFV6 Engine Plant</b> Port Melbourne VIC 200 personnel</p> <p><i>CTPM E-News Publication</i> December 2007</p>	<p>Commenced October 2006</p> <p>Concluded .....</p>	<p><i>Results from "Block Busters" improvement team in 2006 focused on Operation 60 a crank bearing assembly unit:</i></p> <ul style="list-style-type: none"> <li>• Improvement in OEE from 55% to 98%</li> <li>• Increased production worth approx <b>\$500,000 per month</b></li> <li>• New rework process for operation 60 has improved right first time quality delivery to the assembly line (Zero rejects)</li> <li>• Decreased production costs</li> <li>• Operator frustration eliminated</li> <li>• Safety improvements for operators</li> </ul>
<p><b>Hynds Pipe Systems</b> East Tamaki NZ 150 personnel</p> <p><i>CI Co-ordinator</i> Forum 2002</p> <p><i>Operations Manager</i> Forum 2004</p> <p><i>CTPM E-News Publication</i> August 2004</p>	<p>Commenced August 2001</p> <ul style="list-style-type: none"> <li>• Level 1 – March 2006</li> </ul> <p>Completed 19 Cycles initially with weekly then fortnightly then monthly support from CTPM along with internal accredited support</p> <p>Concluded 2008 due to change of Snr Management</p>	<p><i>Site</i></p> <ul style="list-style-type: none"> <li>• 12% reduction in operating costs over first 12 months</li> <li>• 20% increase in output over first 12 months</li> </ul> <p><i>Despatch Area</i></p> <ul style="list-style-type: none"> <li>• 30% increase in despatch storage space within 3 months</li> <li>• 23% increase in productivity over 6 months</li> <li>• 20% increase in loading out with the same amount of resources</li> </ul> <p><i>Maintenance</i></p> <ul style="list-style-type: none"> <li>• 30% increase in planned work being completed with no increase in labour resources</li> <li>• 66% reduction in reactive work</li> </ul>
<p><b>Norske Skog Tasman</b> Kawerau NZ 400 personnel</p> <p><i>CTPM E-News Publication</i> August 2008</p>	<p>Commenced November 2007</p> <p>Completed 3 cycles</p> <p>Concluded August 2008 due to new direction from corporate</p>	<ul style="list-style-type: none"> <li>• <b>\$720,000 p.a</b> savings by halving #3 Paper Machine downtime per month</li> </ul>
<p><b>OPAC</b> Gisborne NZ 560 personnel</p> <p><i>CTPM E-News Publication</i> November 2009</p>	<p>Commenced November 2008</p> <p>Completed 6 Cycles initially with weekly then fortnightly then monthly support from CTPM along with internal accredited support</p> <p>Concluded July 2010 due to downturn in industry</p>	<p><i>After first 12 months, compared to previous season:</i></p> <ul style="list-style-type: none"> <li>• 50% reduction in Plant Downtime</li> <li>• Staff product knowledge increased resulting in better handling of the product</li> <li>• Cost of packaging significantly reduced as performance increase</li> <li>• Big increase in Staff Moral</li> </ul>

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Company and Source	Timeframes	Publicly Reported Outcomes
<p><b>Pacmetal Services</b> Glendenning, Sydney NSW 50 personnel</p> <p><i>Improvement Mgr</i> Forum 2006 <i>CTPM E-News Publication</i> September 2006</p>	<p>Commenced March 2005</p> <p>Concluded .....</p>	<ul style="list-style-type: none"> <li>• Reduced manufacturing interval of Sheeting by 67%</li> <li>• Reduced manufacturing interval of Coating by 50%</li> <li>• Doubled Output of Print operations</li> <li>• Reduced Inventory value by 62%</li> <li>• Reduced Print Lead Time by 60%</li> </ul>
<p><b>Sanitarium Health Foods</b> Berkeley Vale NSW 230 personnel</p> <p><i>CTPM E-News Publication</i> September 2006</p>	<p>Commenced May 2005</p>	<p><i>Results from "The Packaging Triangle" improvement team in the Spreads Department:</i></p> <ul style="list-style-type: none"> <li>• Jar losses reduced by 75%</li> <li>• Reduction in material wastage due to cost of lost jars in the manufacturing process</li> </ul>
<p><b>SCA Hygiene – Te Rapa (ex Carter Holt Harvey)</b> Hamilton NZ 130 personnel</p> <p><i>Team Presentation</i> Forum 2003 <i>Operations Manager</i> NZ Forum 2004 <i>Shift Charge Hand</i> NZ Forum 2006</p>	<p>Commenced September 1999</p> <p>Initially with weekly then fortnightly then monthly support from CTPM along with internal accredited support</p> <p>Concluded August 2008 due to change of ownership</p>	<ul style="list-style-type: none"> <li>• <b>\$340,000 p.a.</b> saving by improving uptime and productivity</li> <li>• <b>\$156,000 p.a.</b> saving from reducing manning from 3 to 2 per shift on one line</li> <li>• <b>\$10,000 p.a.</b> saving from reducing Kraft waste by 35%.</li> <li>• <b>\$635,000 p.a.</b> saving an improvement that only cost \$32 in materials.</li> </ul> <p><i>In 2004 reported over past 2 years achieved:</i></p> <ul style="list-style-type: none"> <li>• 600,000 hrs LTI free for the first time in history of site</li> <li>• 40% reduction in downtime</li> </ul>
<p><b>Simplot Australia – Bathurst</b> Bathurst NSW 170 personnel</p> <p><i>Plant Accountant</i> Forum 2006</p>	<p>Commenced December 2004</p> <ul style="list-style-type: none"> <li>• Level 1 – August 2008</li> </ul> <p>Concluded Feb 2013 due to change of management &amp; direction</p>	<ul style="list-style-type: none"> <li>• Reduced change-over times from 8 hours to 4 hours on the Can Line</li> <li>• Reduced start up after change-over from 8 hours to 1 hour on Can Line</li> <li>• Saved \$19,165 due to early commissioning of the new line, later achieving an annualised saving of \$156,578</li> <li>• Improved safety conditions</li> <li>• Improved communications and morale</li> </ul>

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Company and Source	Timeframes	Publicly Reported Outcomes
<p><b>Simplot Australia – Devonport</b> Devonport TAS 200 personnel</p> <p><i>Regional Business Development Mgr</i> Forum 2007 <i>Engineering Mgr</i> Forum 2008</p>	<p>Commenced January 2005</p> <ul style="list-style-type: none"> <li>• Level 1 – August 2006</li> <li>• Level 2 – August 2007</li> </ul> <p>Concluded Feb 2013 due to change of management &amp; direction</p>	<ul style="list-style-type: none"> <li>• Improved the gap on baseline to 5 year vision for OEE by 54%</li> <li>• Improved the gap on baseline to 5 year vision for cost per kg by 58%</li> <li>• Reduced the cost of manufacturing by 29%</li> </ul>
<p><b>Simplot Australia – Echuca</b> Echuca VIC 120 personnel</p> <p><i>CTPM E-News Publication</i> December 2005 <i>Factory Mgr</i> Forum 2007 <i>Production Mgr</i> Forum 2008</p>	<p>Commenced September 2003</p> <ul style="list-style-type: none"> <li>• Level 1 – February 2007</li> <li>• Level 2 – August 2007</li> </ul> <p>Concluded Feb 2013 due to change of management &amp; direction</p>	<ul style="list-style-type: none"> <li>• Improved the gap on baseline to 5 year vision for OEE by 40%</li> <li>• Improved the gap on baseline to 5 year vision for yield by 85%</li> <li>• Improved efficiency and productivity of all workers</li> <li>• Improved delivery performance by 10%</li> <li>• Reduced customer complaints by 30%</li> </ul> <p><i>Results from “Shining Light” improvement team in 2005 focused on Can Line:</i></p> <ul style="list-style-type: none"> <li>• OEE improved by 9% from 69% to 75%</li> <li>• Delivery improved by 9% from 85% to 92%</li> <li>• Safety and Quality to Customer measures improved</li> <li>• A key benefit to the team was that undesired overtime, which had been a feature of the line’s operation, no longer had to be worked because the set production could be achieved within the allotted shift</li> </ul>



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Company and Source	Timeframes	Publicly Reported Outcomes
<p><b>Simplot Australia – Kelso</b> Kelso NSW 260 personnel</p> <p><i>Team Presentation</i> Forum 2004 and 2005</p> <p><i>CTPM E-News Publication</i> December 2004, March 2005 and October 2005</p> <p><i>Plant Manager</i> Forum 2005</p>	<p>Commenced September 2003</p> <ul style="list-style-type: none"> <li>Level 1 – September 2005</li> </ul> <p>Concluded 2007 due to change of Snr Management</p>	<p><i>Results from “Finding Nemo” improvement team in 2004 focused on Slicer Press Line:</i></p> <ul style="list-style-type: none"> <li>49% reduction in lost time concerning line stoppages to change cutting plastic</li> <li>High Level OEE was averaging 85%, up from the baseline 76%.</li> <li>Waste was also reduced from a level of 3% to 2.4%</li> <li>Master Production Schedule (MPS) was tracking at 93% (vs 77% at week 6)</li> <li>Improved understanding between departments, making for better working relationships</li> </ul> <p><i>Results from “F-Troop” improvement team in 2003 focused on Fish Finger Line:</i></p> <ul style="list-style-type: none"> <li>Customer complaints reduced by a massive 50%</li> <li>Improved OEE from 79% to 86% with substantial savings to the company</li> </ul> <p><i>Other site Improvements:</i></p> <ul style="list-style-type: none"> <li>Improved OEE on Fish Finger Line by 12%</li> <li>Improved total OEE from 3 lines by 30% over twelve months</li> <li>Overall plant reliability, as measured by OEE jumped from 64% in September 2004 to consistently over 80% for the six months to August 2005</li> <li>Increased number of staff involved in CI across all shifts</li> <li>Doubled Retail Line OEE from 43% to 81% in twelve months</li> <li>Reduced product spillage by 87% on one product line which was an increase in OEE by 4.5% resulting in annual savings of <b>\$182,000</b></li> <li>Yield increasing with <b>\$63,000</b> in savings achieved in August 2005 alone</li> <li>Delivery performance up, and Consumer quality complaints down</li> </ul>

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Company and Source	Timeframes	Publicly Reported Outcomes
<p><b>Simplot Australia – Ulverstone</b> Ulverstone TAS 240 personnel</p> <p><i>CI Coordinator</i> Forum 2004 <i>Production Mgr</i> Forum 2005 <i>Regional Business Development Mgr</i> Forum 2007</p>	<p>Commenced – October 2003</p> <ul style="list-style-type: none"> <li>• Level 1 – August 2007</li> <li>• Level 2 – August 2008</li> </ul> <p>Concluded Feb 2013 due to change of management &amp; direction</p>	<ul style="list-style-type: none"> <li>• Improved the crinkle-cut chip carton per day production by 21%.</li> <li>• Improved crinkle-cut yield by 6%</li> </ul>
<p><b>Tenon</b> <b>(ex Fletcher Challenge Forests)</b> Kawerau NZ 270 personnel</p> <p><i>Site Manager</i> Forum 2003 <i>Team Presentation</i> NZ Forum 2004</p>	<p>Commenced October 2002</p> <p>Initially with weekly then fortnightly then monthly support from CTPM along with internal accredited support</p> <p>Concluded in 2006 due to change in ownership</p>	<p><i>In August 2003, the site manager reported that over the past 12 months:</i></p> <ul style="list-style-type: none"> <li>• 29% increase in Capacity</li> <li>• 70% reduction in rework volumes that are being sustained</li> </ul> <p><i>In 2004 one team reported that within 6 weeks achieved:</i></p> <ul style="list-style-type: none"> <li>• 80% reduction in unplanned saw changes</li> <li>• 2.25% increase in sawmill capacity</li> <li>• 50% reduction in timber going to the Re-saw</li> <li>• <b>\$41,526 p.a.</b> by reducing the replacement and machining of parts</li> </ul>

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Company and Source	Timeframes	Publicly Reported Outcomes
<p><b>Tenon</b> (ex Fletcher Challenge Forests) Rainbow Mt NZ 100 personnel</p> <p><i>Site Manager</i> Forum 2003 <i>Team Presentation</i> Forum 2003 <i>Quality Manager</i> NZ Forum 2004 <i>Team Presentation</i> NZ Forum 2004</p>	<p>Commenced October 2002</p> <p>Completed 10 cycles initially with weekly then fortnightly then monthly support from CTPM along with internal accredited support</p> <p>Concluded 2006 due to change in ownership</p>	<p><i>In 2003 the Planer Set-up Reduction team within 12 weeks achieved:</i></p> <ul style="list-style-type: none"> <li>• <b>\$134,000 p.a.</b> saving from reducing set-up times by over 60% costing only \$7,000</li> </ul> <p><i>In 2004 the Logistics &amp; Support team within 12 weeks achieved:</i></p> <ul style="list-style-type: none"> <li>• 12% reduction in onsite transport costs savings <b>\$100,000 p.a.</b></li> <li>• Reduction by 2, the number of forklifts required on site.</li> <li>• 15% reduction in Work In Progress Inventory</li> <li>• 27% reduction in the average Manufacturing Lead Time.</li> </ul> <p><i>By 2004 had achieved:</i></p> <ul style="list-style-type: none"> <li>• 70% reduction in LTIFR over 2 years</li> <li>• 35% reduction in MTIFR over 2 years</li> <li>• 66% increase in OEE for Planer Area over 1 year</li> <li>• 69% increase in Planer Productivity over past 3 years</li> <li>• 40% reduction in Planer rejects over 2 years</li> <li>• 10% increase in Sawmill OEE over 1 year</li> <li>• Over 340 improvements completed</li> </ul>
<p><b>Uncle Toby's Company</b> Smithfield NSW 210 personnel</p> <p><i>Manufacturing Mgr</i> Forum 2003</p>	<p>Commenced April 1999</p> <ul style="list-style-type: none"> <li>• Level 1 – October 2002</li> <li>• Level 2 – October 2002</li> <li>• Level 3 – October 2002</li> </ul> <p>Plant closed and relocated to Wahgunyah VIC</p>	<ul style="list-style-type: none"> <li>• Reduced Lost Time Injury Frequency rate from 14 to 1 per Million Man Hours</li> <li>• OEE increased by 23% on Packing Lines resulting in cost reductions of \$62,000 p.a.</li> <li>• OEE increased by 31% on Pasta Line resulting in cost reduction of \$54,000 p.a.</li> <li>• OEE increased by 30% on special Pack Line without any money being spent</li> </ul>