



Started by Two Brothers in 1946





1

Company Big Threats

- Competition
- Rising costs IE: Energy
- Resources boom in Western Australia

Strength

Keeping and attracting employees for a secure future
in a safe environment.



2

Operations Paradigm Shift

- 10 years ago we had dig clay out of equipment with a shovel.
- 30 years ago our site was predominantly manual labour stacking bricks.
- Today we need people to be more technically oriented with knowledge and skills.
- A learning culture, where the operator needs to be proactively learning.
- We need to provide the learning tools to provoke questions from the trainee.



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How We Engaged Our People



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Site Leadership Team



Maintenance Leadership Team



Sponsored by:
Regional General Manager
&
Cross Functional Leaders







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Site Mission Statement

To be the preferred supplier of quality clay and
concrete bricks and landscape products to the
domestic and export markets.

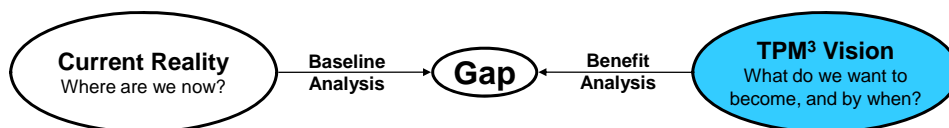






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What is the Vision?



What do we want to become?

Number 1 supplier in our market

Preferred supplier of choice

A site that is World Class in all Key Success Factors

A site with all employees embracing Innovation and Learning through Formal Continuous Improvement (eg 10% involvement in Formal Continuous Improvement)

We will achieve Level 5 of the TPM³ Excellence Award by Dec 2011



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Intro Workshops 2008



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What Lean or TPM is Not !

- Not about operators taking over maintainers jobs
- Not about maintainers taking over operators jobs
- Not about making everyone work harder
- Not about short term gains to reduce lead time



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What Lean or TPM Is!

Lean and TPM is about using our collective skills to reduce frustrations, improve our workplace, and having some fun along the way!



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Maintenance Excellence Workshops



Maintenance Innocence to Excellence Matrix

		Leadership & Capability					Processes				
		Main Mgmt Vision & Strategy	Performance Measures	Organisation Structure	Human Resources	Knowledge Base	Maintenance Tactics	Materials Management	Planning & Scheduling	Contractor Management	Reliability Engineering
		6.7	4.8	#DIV/0!	#DIV/0!	5.0	#DIV/0!	#DIV/0!	5.7	#DIV/0!	#DIV/0!
100%	Excellence	Personal action plans and appraisals are clearly tied to the Maint Mgmt Strategy.	On-going benchmarking of metrics and processes.	Maint structure supports training of operators in equip functions, minor servicing, and root cause failure analysis.	Empowered, flexible, workers with mastery skills. Self-managed team focus.	Expert monitoring systems used where appropriate which are fully integrated into Maint System.	The Preventive Maint Plan is continuously being optimised with support of operators. The "right" tactic is applied based on analysis.	Stores system integrated to Maint System and Business system. Bar-coding of stores items where appropriate.	All maint jobs (other than defect repairs) are planned and scheduled at least the week before. Linked short, medium and long term planning.	Small number of Contractors used on long term risk sharing partnership agreements with high innovativeness.	Risk and unplanned failure reduced to best in industry.
90%											
80%											
70%	March 2010	Maintenance improvement action plan are linked to the Maint Mgmt Strategy.	Statistical Process Control applied to Maint Process Measures. Equip specific maint costs available.	Establish teams for key objectives in the Maint Strategy.	Multi-skilled trades with process capability in the business.	Easy access to Knowledge Base available to all employees at all times.	Preventive Maint Plan exists for all maintainable items. Emphasis on investment and Predictive.	Single source supplier partnerships established. Areas of investment in tooling.	Long term asset planning established. Critical path analysis used for all rebuilds, shutdowns.	Contracts are established based on the "Right Thing" sharing.	Effective Root Cause Analysis successfully implemented and captured in the system.
60%	August 2009	A clear Maint Mgmt Vision & Strategy is documented and communicated to all employees.	Input, Process, Output measures reviewed and checked. Downtime by equipment and maintenance reviewed.	Decentralised with central support. Clearly written mandates / roles for Frontline, Technical and Strategic maint groups.	Trades have problem identification & solving, team dynamics and training skills.	Document control system established. Maint System installed and used to Manage Knowledge Base.	Preventive Maint Plan exists for key equipment. Compliance is more than 95% as scheduled.	Classified with separate strategies. Spares linked to Equipment Drgs. Standardisation policies exist.	All but major defect repairs are planned and scheduled through the system. All planned jobs provide accurate details.	All contracts requiring notables are capable of Original Equip Manufacturer's testing.	Good Equip Conditions established. Good failure database. All major failures investigated. PMs modified.
50%											
40%											
30%	March 2009	Our main role is to "stop it from breaking" however no documented Role of Maint exists.	Some downtime records. Maintenance regularly available but not segregated into area / line.	Maint has aligned to production. Team approach to technical problem solving.	Trades have maint support (inspection, reporting and Condition Based Monitoring) skills.	Plant registers identified and used for data collection. All drawings and equipment information identified.	System sets to identify all critical maintainable items. Emphasis on inspection and overhauls.	Stores catalogue established. Inventory accuracy >95%. All spares labelled and protected.	Work Order system established. Major shutdowns fully planned and programmed.	Contractors used for peak loads and core maint work.	Collect the data. Equipment history occasionally reviewed for failure analysis.
20%											
10%											
Innocence		Our main role is to "fix it when it breaks".	Inaccurate or no maint downtime records. Maint costs not readily available.	Maint has no alignment to production. "Command and Control" approach.	Trades have their basic trade's skills, however little or no technical or support skills.	Ad-hoc records. No plant register or control of drawings.	Ad-hoc records. No plant register or control of drawings.	Ad-hoc stores. No costing or control of spares.	No planning. Little scheduling. Short term focus.	All maint work carried out by in-house resources.	No failure records.



Scope and Support for Teams

Work Area Management Team Information Sheet (Area Based Team)			
Cycle No.3	Defined Production Area: Despatch	Improvement Area: Old Rumbler	TPM Activity: WAM
Starting DPA OEE:		Target DPA OEE for this Cycle	
Mandate:	<ul style="list-style-type: none">• Clear-up and clean-up your Improvement Area and create 'a place for everything and have everything in its place' by working through the 10 parts of Work Area Management (WAM);• Create standards and checklists for your work area and work processes to ensure that improvements are sustained;• Ensure appropriate visual controls are established to communicate work area standards and to make any deviation from standard easy for all to see;• Achieve a WAM Self-Assessment Rating of at least 80%;• Contribute along with all other Area Based and Cross-functional Teams in your Defined Production Area to help improve the OEE and the Goal Aligned Performance Measures for your Defined Production Area• Complete within 6 weeks		
	Physical:	Within the team's improvement area	
	Technological:	No change to existing technology unless approved	
	Team Resources:	Time for meetings per week: approx 0.5 hrs Time for improvement activities per week: approx 1.5 hrs Total Time for formal activities (excludes discretionary time): 2.0 hrs	
	Boundaries:	Changes: Before changes can be implemented, they must be agreed to by all other teams in your DPA and signed off by the Team Leaders of all other shifts that work in your Improvement Area on the appropriate Improvement Sheet	
Support Resources:	Allocated Mech Maint support: as required up to 2.0 hrs per week Allocated Elect Maint support: as required up to 1.0 hr per week		
Financial:	A budget of \$1,000 per team subject to application from the team and approval from L/T at the mid-way presentation. Further money may be available if justified and then approved by the Leadership Team (your TPM Co-ordinator can help you with this)		
Team Members:	Team Leader	Marius Radu	Designated Support
	Operator	Cade Scott	Maintenance Mechanical
	Operator	Jake Rhodes	Maintenance Electrical
	Operator	Cody Rhodes	Quality / Technical
Kick-off day:	Operator		
Tuesday 3/11/09	Operator		LT Member (Mentor)
Meeting Time:	Operator		TPM Co-ordinator
8am Every Tuesday	Operator		CTPM Navigator
Recommendations from Mid-way Presentation			
Results from Final Presentation:			
Key Learning: from Final Presentation:			
To be handed to Team in Step 1 / Part 1 of kick-off workshop; To be completed at end of cycle for archives			



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Cycle 1 Pilot Teams 2008

- Site Leadership Team
- Macro FE&PI Kiln 7/8 Production
- Macro FE&PI Kiln 11 Production
- Macro FPI Yard / Despatch Value Stream
- Micro FPI Site Performance Measurement



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Recognition



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Implement Across Full Site

- Structured approach with std format
- Use the Lean tools and follow the P.D.C.A. method
- Grow internal leadership



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Cycle 2 “THE BIG BANG” February 2008

4 Maintenance excellence workshops
102 maintenance personnel

10 Lean Awareness workshops,
one with a walk out and a first aid treatment
156 personnel



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Cycle 2 “THE BIG BANG” February 2008

31 Teams were selected for formal continuous
improvement

- 6 Half day kick off workshops
- 22 custom kick off workshops



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Two Team Kick Off's



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Consensus





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Team Member Work Styles

Leader: 

Doer: 

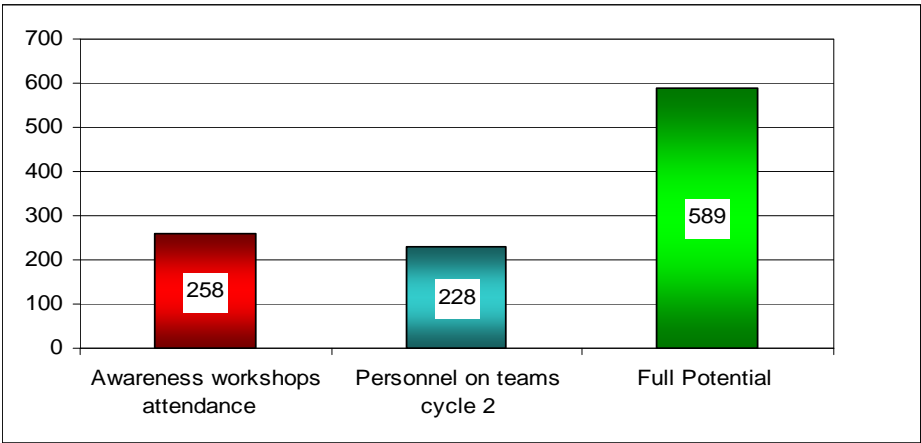
Thinker: 

Carer: 

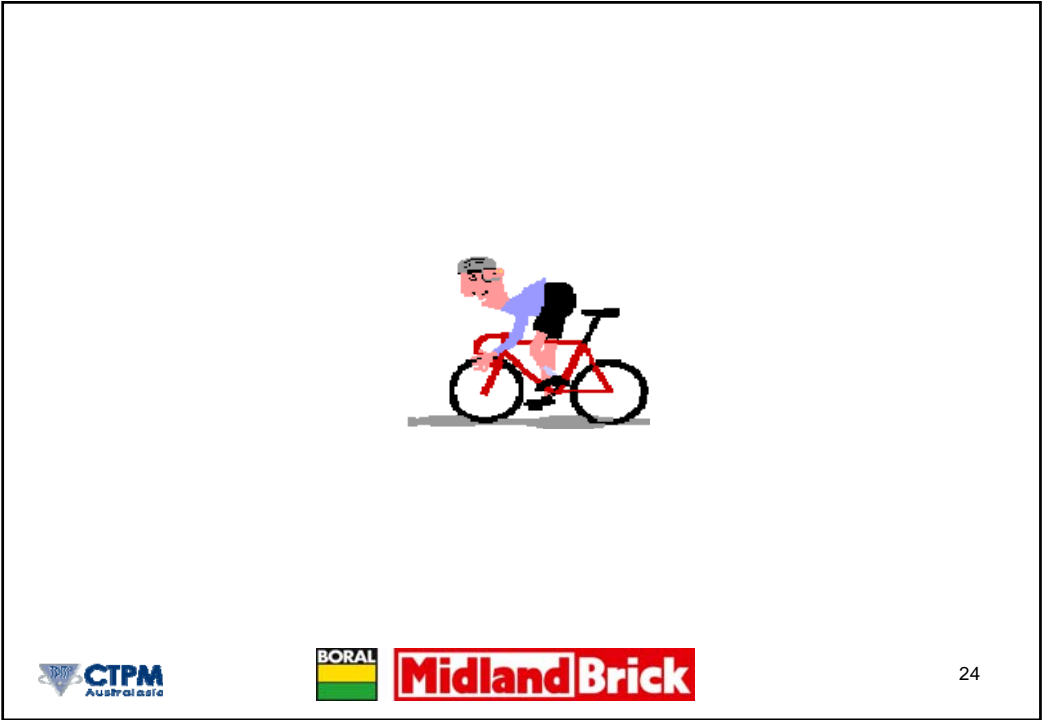
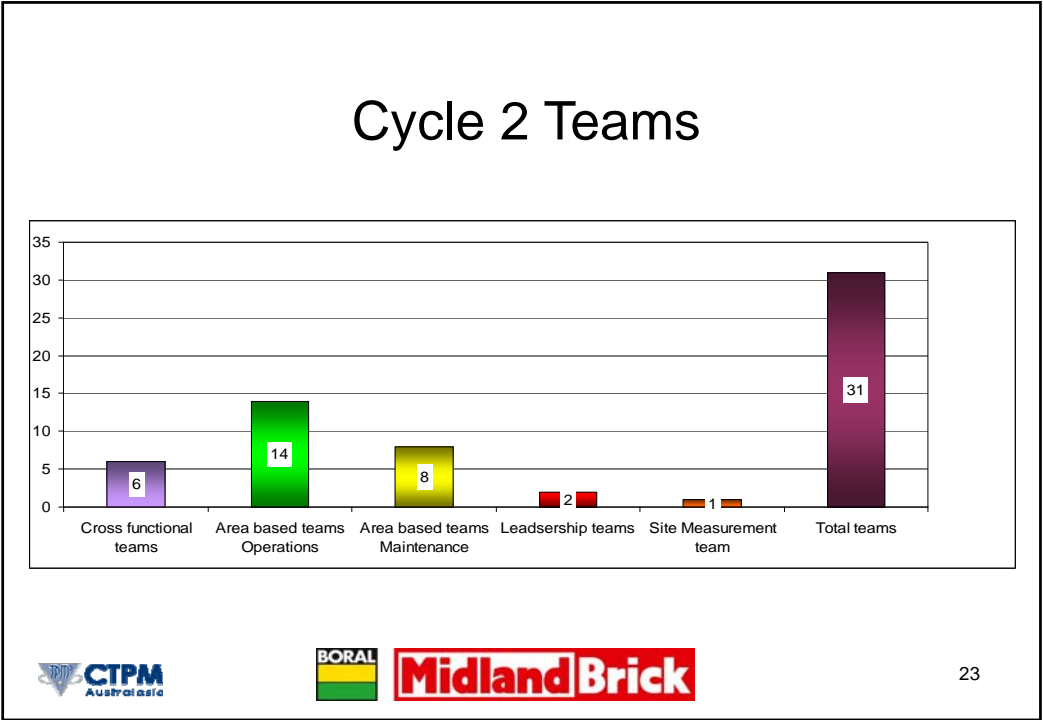


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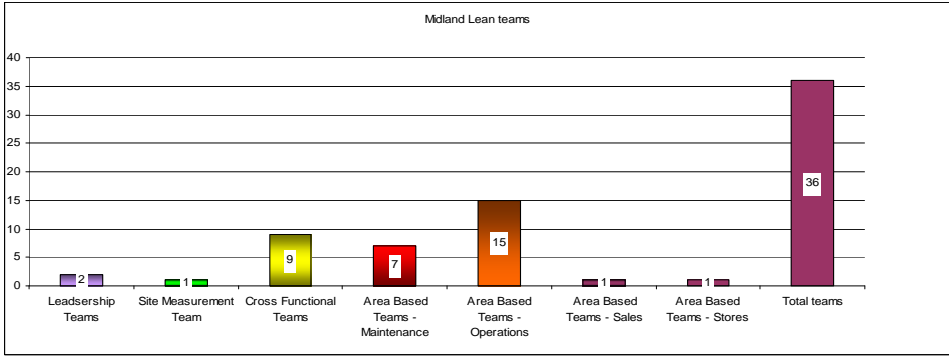
Cycle 2



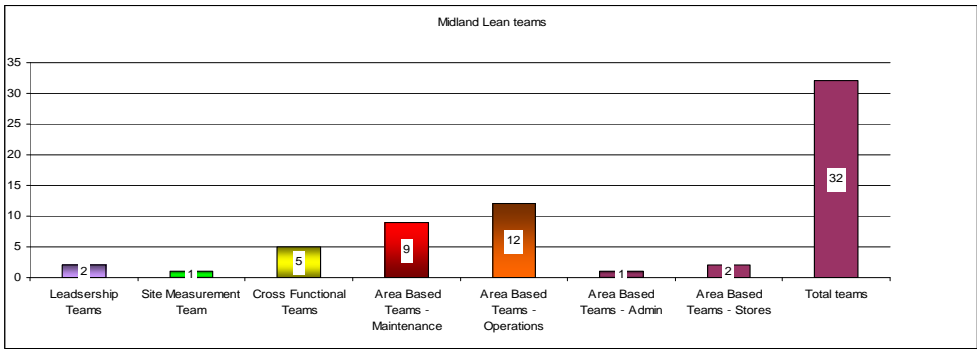
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Cycle 3 Teams



Cycle 4 Teams



Advanced Lean Workshops



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Midland Lean Plan, Do, Check, Act

- Establish baseline
- Plan & display a vision
- Obtain approval to proceed
- Do a Pilot or implement
- Check: did it measure up
- Communicate & Share



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Achieve the Vision



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Hold the Gains



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Recognition Systems

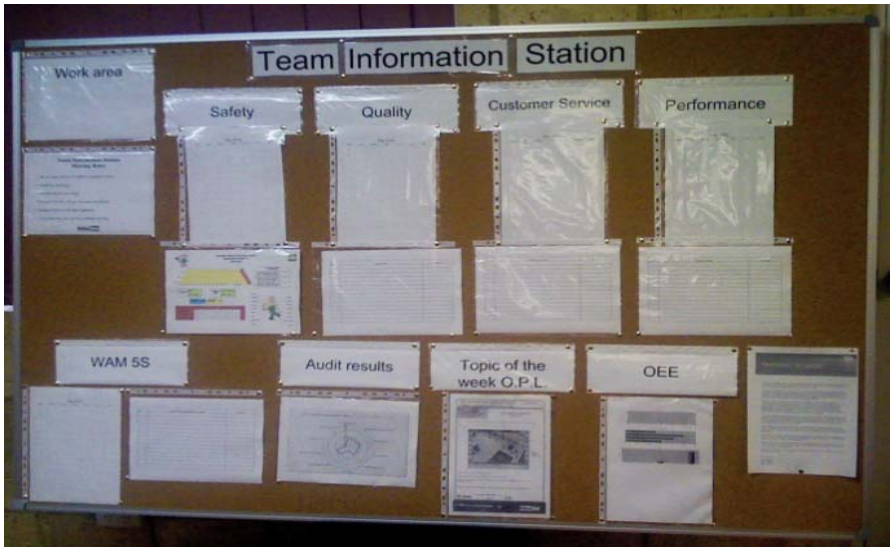
Improvement of the month
\$100 gift voucher

Annual Lean Initiative Award. A
trip to Broome!



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Information Station



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