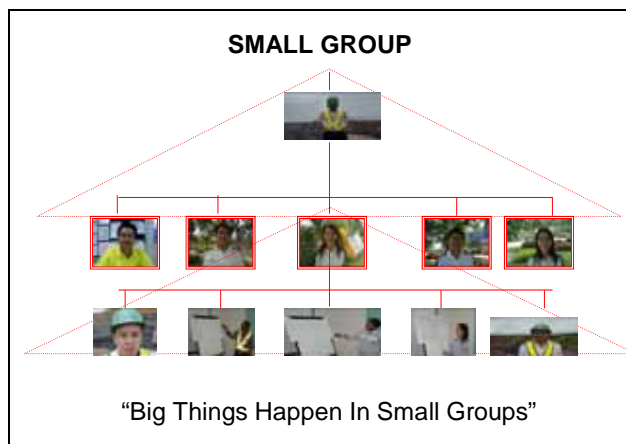






Living Banpu Spirit in managing the operation to Excellence:

TPM & TPM³ “the ways of doing things” Banpu Spirit in practice

To implement 10 Pillars of Total Productive Maintenance TPM (or TPM³ for CTPM), the small groups are the key drivers to implementing all TPM pillars.



Each group will drive TPM by applying tools & activities such as 5S, KYT, One Point Lesson, Know my Machine, Suggestion, ISO 9000, ISO 14000, OHSAS 18001, QC 7 tools, VFP, Training system, Tag system, Owner of machine working area, pillar activities and so on. As a matter of fact, as you can see in the chart below, the practice of TPM tools and activities are linked to the application of the core values of “Banpu Spirit” in our daily activities.

TPM “Ways of Doing Things” (Banpu Spirit in practice)	
Banpu “Spirit”	TPM “Way of Doing Things” (Banpu Spirit in practice)-Examples
	Small Groups, Suggestions, One Point Lessons, Problem Solving, Continuous Improvement, Training
	Facts & Statistics, Scoreboards, Notice boards and template Attendance, Meeting Minutes, Audits, Visual Controls, Punctuality, TPM records, OEE
	Small Groups (working as a team), Leadership Teams, Training, One Point Lessons, Owner of machine working area, Know your Machine 5s, Training, Tagging system
	One Point Lessons, Small Group activities, Process Improvement, Cross-functional Teams, Small Group meeting structures.

TPM³ 10 Pillar Activities

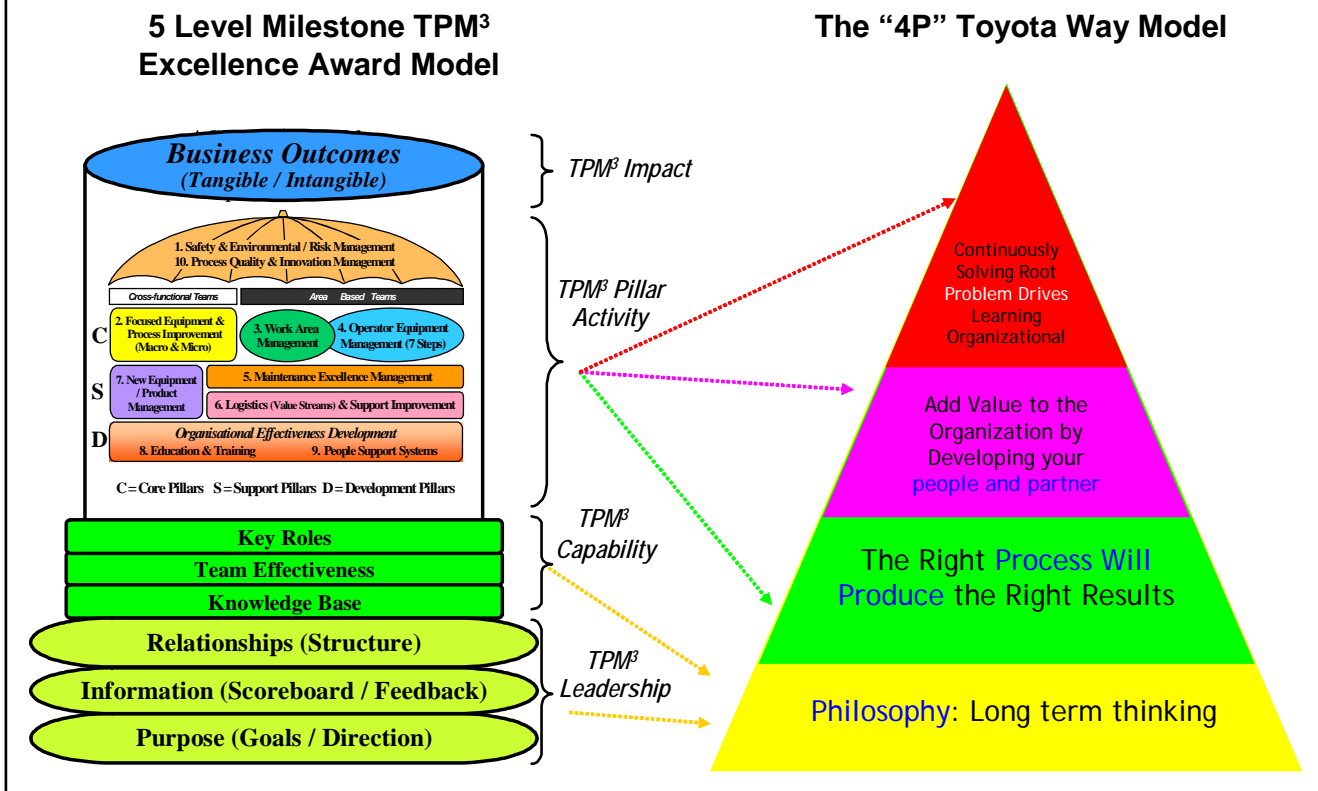
Safety & Environment / Risk management
Focused Equipment & Process Improvement
Work Area Management
Operator Equipment Management (7 Steps)
Maintenance Excellence Management
New Equipment / Product Management
Logistics & Support Improvement
Education & Training
People Support Systems
Process Quality & Innovation Management

TPM or TPM³ is an obvious quality tool to deploy in a mining / manufacturing organisation. It is primarily concerned with creating an environment in which individuals and teams are most likely to pursue their productive resources in the most effective way. Through TPM³, all personnel are involved in continuous improvement activities and provided with the opportunity to set and reinforce a common set of values and behaviours. For example, on the shop floor TPM³ is driven by basic, hands-on goals such as zero breakdowns and practical enabling tools to deliver it and much more. TPM³ works by helping management to systematically identify and then reduce hidden losses. The required level of attention to detail is only possible by involving those who carry out the work.

The Toyota Way explains the management principle and business philosophy behind Toyota’s success.



Comparison of TPM³ Excellence Award Model and “4P” Toyota Way Model



It narrates Toyota’s approach to Lean Production (known as the Toyota Production System) and the 14 principles that drive Toyota towards quality and excellence. Toyota is widely recognized for manufacturing excellence responding to the market. The cornerstones of the Toyota Production System are continuous improvement and employee involvement and empowerment.

TPM³ is a comprehensive program implemented to maximize equipment availability, in which production operators are trained to perform maintenance basic tasks on a regular basis, whilst maintenance technicians carry out more specialized tasks. TPM³ was extremely successful in driving improvements in uptime and throughout all areas of the mining plant. The above comparison between the TPM³ Excellence Award Model and the “4P” Toyota Way model, found that they are similar. The key objective of both the TPM³ and the Toyota Way model is to build a Lean Manufacturing organisation leading to business excellence. The measurement of success in implementing TPM is carried out by assessing operational processes and performance outcomes against the TPM³ Excellence Award

Model Criteria which focuses on Leadership, Capability, TPM³ 10 Pillars and Impact. In other words, practicing TPM is the application of the Banpu Spirit in day-to-day operations which will lead Banpu to Business Excellence

Text Reference:

- Banpu spirit manual-by Banpu Public Company Limited
- **The Toyota Way** by Jeffrey K. Liker.
- Delivering Benchmark levels of Business Excellence through TPM by Peter Willmott WCS International Ltd.
- TPM³ for Mining & Processing, The Centre for TPM (Australasia) by Ross Kennedy
- Application of Lean Manufacturing in a Ductile Iron Casting Facility by Andy Franks ,APC



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