

Operations Excellence through TPM & Lean (TPM³)

8 April 2014

Work Area Management The start of Production Area Based Team Improvement Activity



Presentation by:
Ross Kennedy
President CTPM Australasia

Outline of Presentation

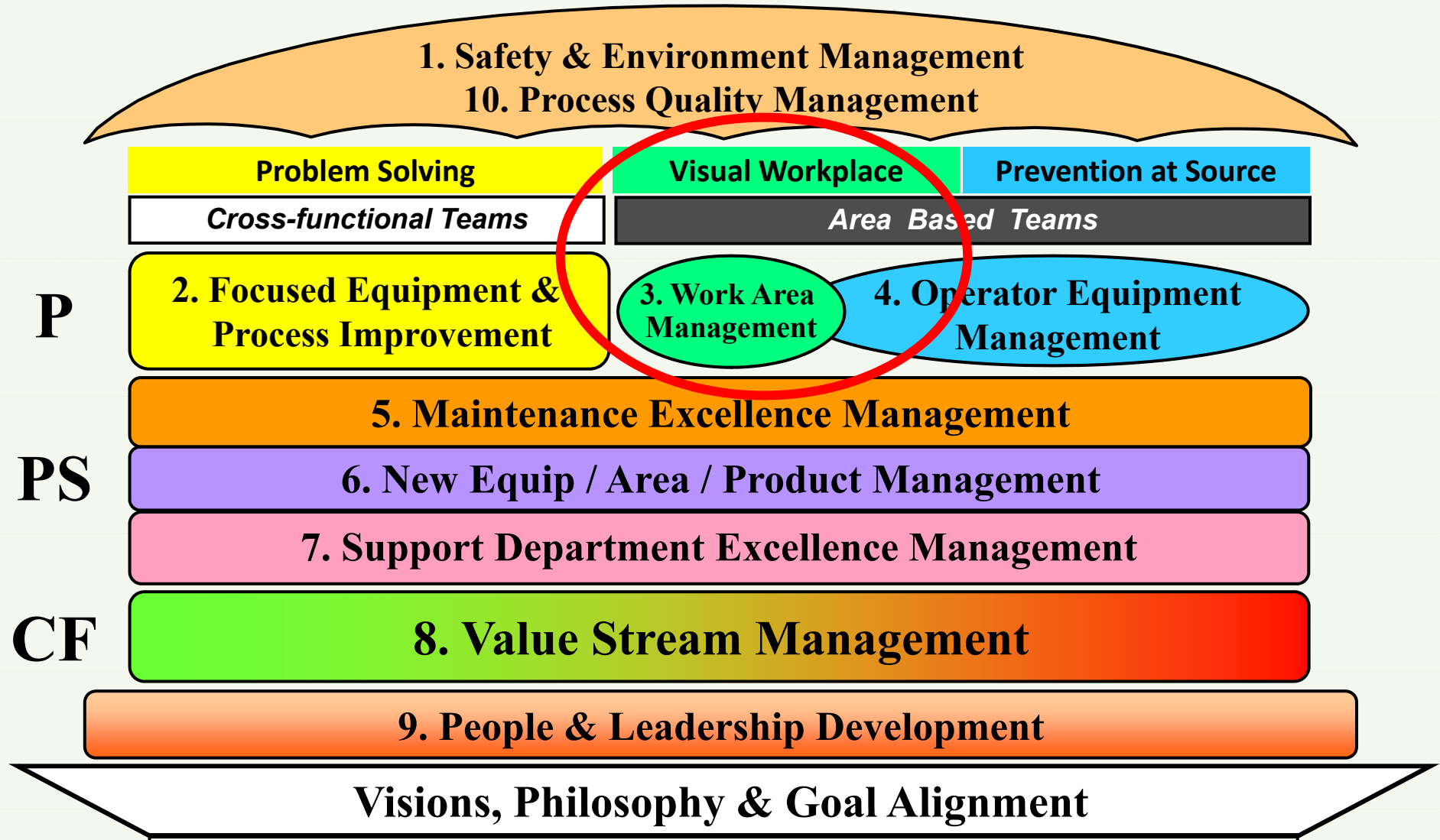
Work Area Management

1. Role of WAM in the Operations Excellence journey
2. Importance of Horizontal Development of your People
3. Using Focus Points to develop both Team Members and Team Leaders
4. Using Check–Act–Plan–Do rather than Plan–Do–Check–Act approach to ensure sustainability
5. Making it Happen
6. Key Learning



TPM³ Framework for TPM & Lean

incorporating 10 Improvement Activities supported by the Leadership Base



P = Production PS = Production Support CF = Customer Focus Activities

5S

5S is the name of a workplace organization method that uses a list of five Japanese words:

From Wikipedia, the free encyclopedia

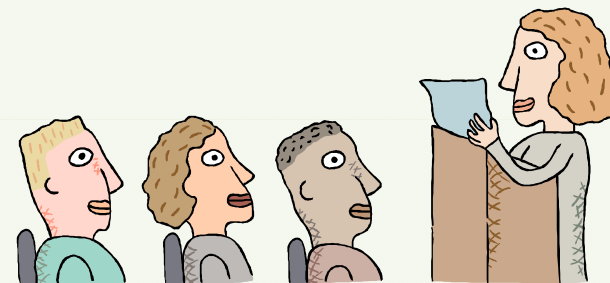
‘a systematic method of industrial housekeeping and organisation for the workplace’

Japanese Words *		Meaning	Activity	Alternate English Words
S1	Seiri	Organisation	Clearing Up	Sort
S2	Seiton	Orderliness	Organising	Set in Order / Straighten
S3	Seiso	Cleanliness	Cleaning	Shine
S4	Seiketsu	Standardising	Standardising	Standardise
S5	Shitsuke	Self Discipline	Training & Discipline	Sustain

** Each word refers to a specific principle or set of established rules of organisation and housekeeping*



Ask the Audience



1. Role of WAM in the Operations Excellence journey

The Role of Work Area Management

To address the question: Do you ever get frustrated trying to find something when you are about to do a task?

by

- Developing Area Based Teams with clear responsibilities and boundaries for agreed defined Improvement Areas for each shift / team
- Standardising work practices across all shifts
- Introducing the practice of Area Based Team self-assessments

so as to

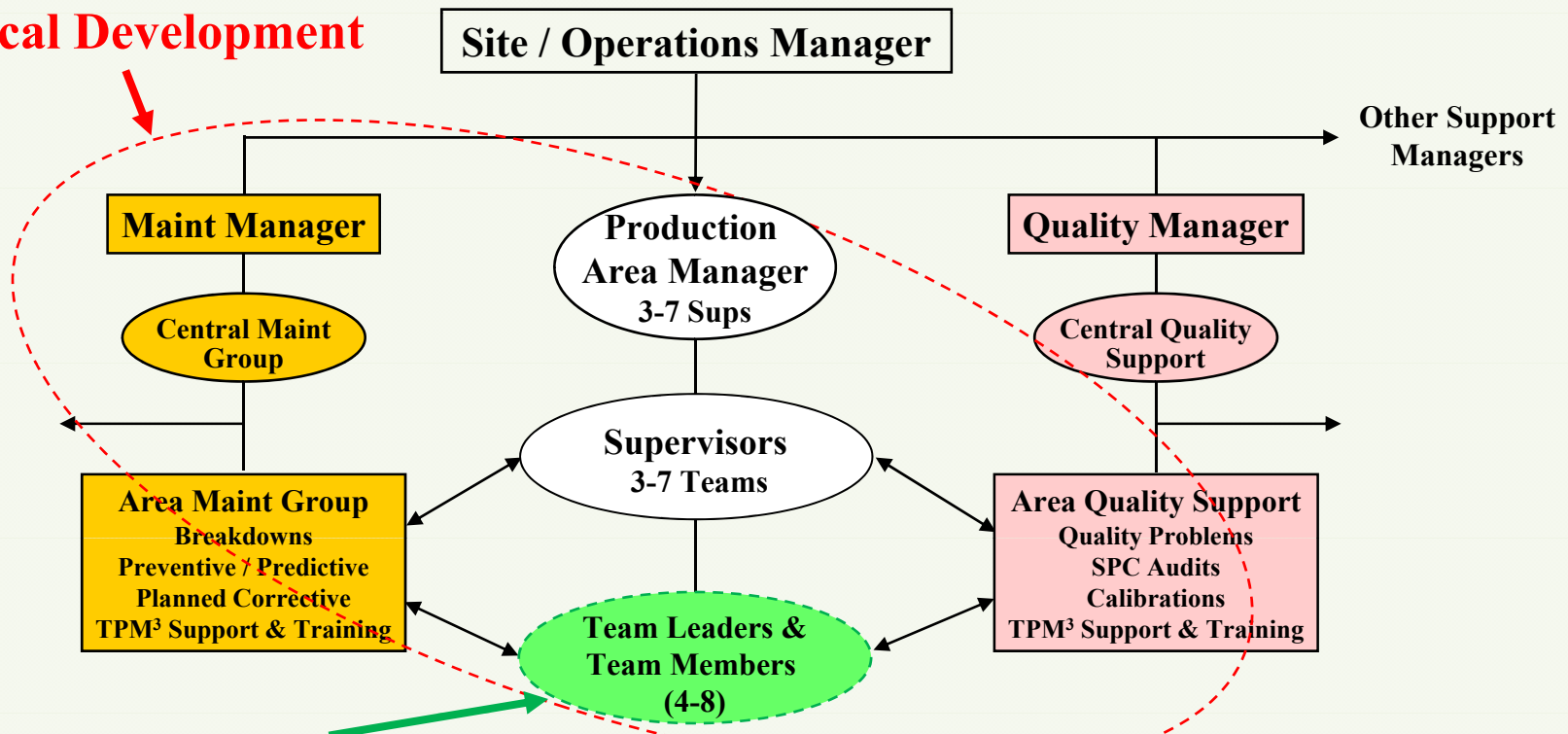
- Reduce frustrations and improve safety, productivity and morale by establishing “a place for everything and everything in it’s place”
- Engage both the team members and the teams in working together to improve their Work Area (and prepare for the introduction of Operator Equipment Management)

2. Importance of Horizontal Development of your People

We believe every business has the potential to significantly increase productivity and reduce costs by engaging all their personnel in the quest for excellence.

Vertical vs Horizontal Development of your People

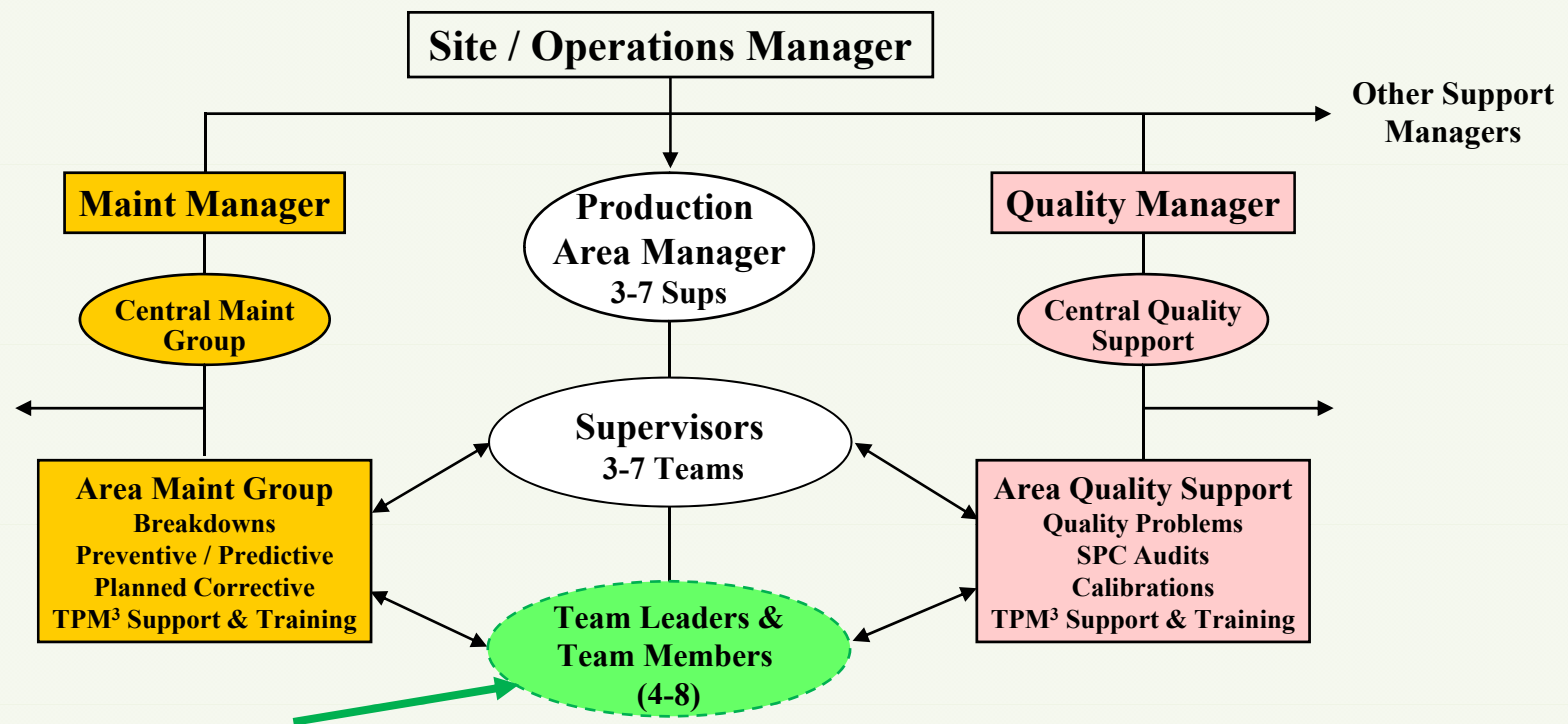
Vertical Development



Horizontal Development

Horizontal Development of your People

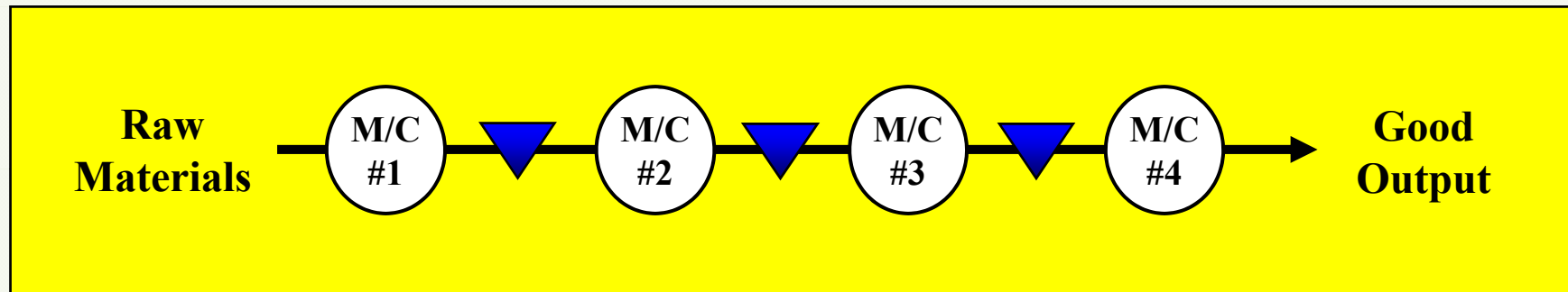
Opportunity to work with people at the same level in their organisation, led by their current Team Leader to develop Visual Workplace and Prevention at Source skills (so as to identify and stop problems at the earliest possible time)



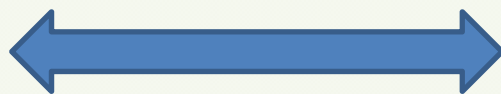
Horizontal Development

Area Based Teams

Defined Production Area (DPA)



HORIZONTAL
Development of your
people



Area Based Team:

A team of 4-8 people including a designated Team Leader who work together to achieve the Production Plan and improve their workplace (Work Area + Equipment) by mastering Problem Solving, Visual Workplace and Prevention at Source skills

3. Using Focus Points to develop both Team Members and Team Leaders

The Need for Focus Points

Too often Team Leaders struggle to effectively delegate responsibilities to their Area Based Team members.

Focus Points are a means to assist Team Leaders to effectively delegate responsibilities evenly across their Area Based Team and hence reduce their workload during on-going WAM improvement activities.

Focus Points are not allocated to Team Leaders as their role is to assist each Team Member with their Focus Point.

Focus Points are used to improve the Work Area recognising that everyone must sustain the agreed improvements.

Sample Focus Points for a Production Area Based Team of 5 Operators

Based on items found in the Work Area

1. General Amenities

Safety equipment, cleaning equipment etc

2. Information

Quality Standards, Work Instructions etc

3. Inventory

Raw materials, Stores etc

4. Maintenance Tools, Parts and Equipment

Hand tools, lifting tackle, spare parts etc

5. Production Tools & Changeover Parts

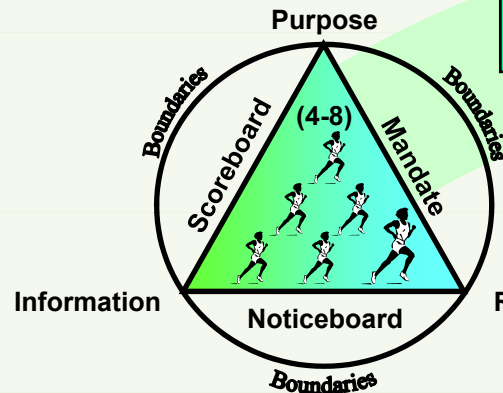
Adjusting tools etc

4. Using Check–Act–Plan–Do rather than Plan–Do–Check–Act approach to ensure sustainability

Cross-functional Team Deductive / Vertical Dev		Area Based Team Inductive / Horizontal Dev	
Plan:	Define and baseline problem and develop an action plan to solve	Check:	Thoroughly examine and expose all issues
Do:	Implement the action plan including any trials	Act:	Take actions to rectify all issues and identify requirements to prevent recurrence
Check:	Verify the results to original baseline	Plan / Standardise:	Implement approved improvements and standardise to prevent recurrence
Act:	Refine, standardise and identify future opportunities to apply learning	Do:	Monitor and assess to ensure the procedures are followed. Communicate results and share learning

Work Area Management (WAM) Process

1. Confirm Mandate & Boundaries



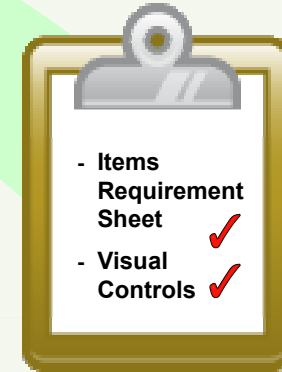
2. Form Team & Scope Activities

Allocate
Focus Points

3. Expose all Issues
(Initial then Regular
Clear-up of Area)



4. Take Actions to Rectify
(Identify a Place for Everything)



10. Communicate Results & Share Learning
(Final Presentation)



Check – expose not in right place
Act – create correct storage
Plan / Standardise –checklists etc
Do – regular monitoring to sustain

5. Identify Requirements to Prevent Recurrence



9. Monitor & Assess



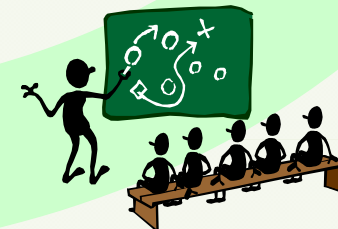
8. Standardise to Prevent Recurrence



7. Implement Approved Improvements

TPM Improvement Sheet													
Name: []	Location: []	Problem: []	Completed Date: []										
<table border="1"> <thead> <tr> <th>Item</th> <th>Current State</th> <th>Proposed Change/Improvement</th> <th>Batch / Photo</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>[Image]</td> <td>[Image]</td> <td>[Image]</td> </tr> </tbody> </table>				Item	Current State	Proposed Change/Improvement	Batch / Photo	1	[Image]	[Image]	[Image]		
Item	Current State	Proposed Change/Improvement	Batch / Photo										
1	[Image]	[Image]	[Image]										
<table border="1"> <thead> <tr> <th>Item</th> <th>Actual Cost</th> <th>Expected Cost</th> <th>Expected Completion Date</th> <th>Expected Start Date</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>[]</td> <td>[]</td> <td>[]</td> <td>[]</td> </tr> </tbody> </table>				Item	Actual Cost	Expected Cost	Expected Completion Date	Expected Start Date	1	[]	[]	[]	[]
Item	Actual Cost	Expected Cost	Expected Completion Date	Expected Start Date									
1	[]	[]	[]	[]									
<table border="1"> <thead> <tr> <th>Item</th> <th>Actual Savings</th> <th>Expected Savings</th> <th>Expected Completion Date</th> <th>Expected Start Date</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>[]</td> <td>[]</td> <td>[]</td> <td>[]</td> </tr> </tbody> </table>				Item	Actual Savings	Expected Savings	Expected Completion Date	Expected Start Date	1	[]	[]	[]	[]
Item	Actual Savings	Expected Savings	Expected Completion Date	Expected Start Date									
1	[]	[]	[]	[]									
<p>TPM Improvement Sheet</p> <p>Changes will not be made without approval of Plant/Process Owner</p> <p><input checked="" type="checkbox"/> Risk Assessment Completed <input type="checkbox"/> Proposed Change Approved <input type="checkbox"/> Improvement Being Worked On</p>													

6. Obtain Approval to Proceed
(Mid-way Presentation)

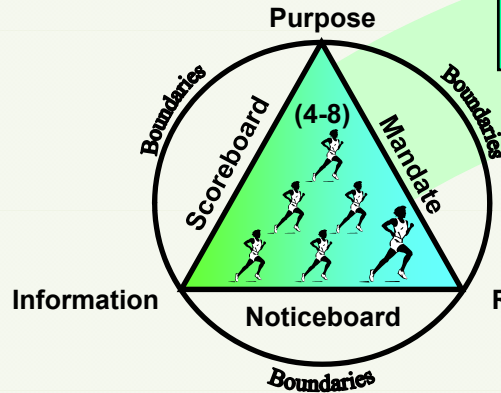


"A place for Everything & Everything in its place"

Gaining agreement from all shifts

Work Area Management (WAM) Process

1. Confirm Mandate & Boundaries



2. Form Team & Scope Activities

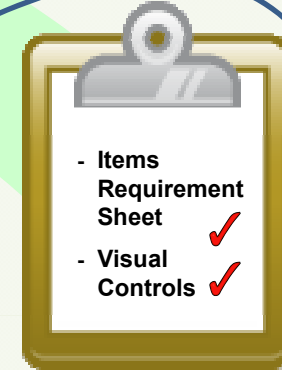
Allocate Focus Points

3. Expose all Issues
(Initial then Regular Clear-up of Area)

S1



4. Take Actions to Rectify
(Identify a Place for Everything)



10. Communicate Results & Share Learning
(Final Presentation)



9. Monitor & Assess

S5



8. Standardise to Prevent Recurrence

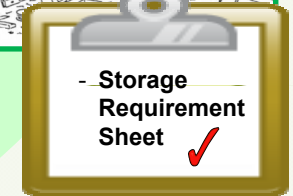
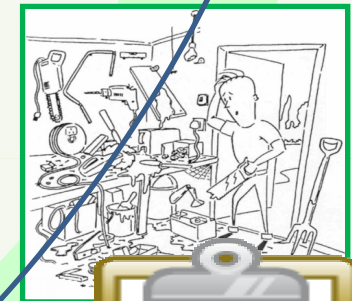
S4



Check – expose not in right place
Act – create correct storage
Plan / Standardise – checklists etc
Do – regular monitoring to sustain

5. Identify Requirements to Prevent Recurrence

S2



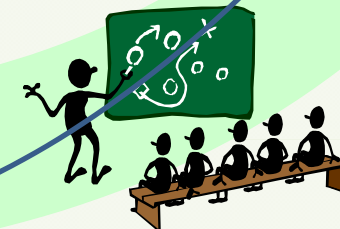
“A place for Everything & Everything in its place”

6. Obtain Approval to Proceed
(Mid-way Presentation)

S3

7. Implement Approved Improvements

TPM Improvement Sheet			
Name	Location	Problem	Completed Date
John Doe	Workbench	Cluttered workbench	10/10/10
<p>Improvement: Clear the clutter off the workbench</p> <p>Expected Outcome/Address Improvement: Better Flow</p> <p>Expected Date/Completion Date: 10/10/10</p> <p>Actual Date/Completion Date: 10/10/10</p> <p>Assessed by: John Doe</p> <p>Assessed Date: 10/10/10</p> <p>Approved by: John Doe</p> <p>Approved Date: 10/10/10</p> <p>Discrepancy with team: None</p> <p>Approval of Proposed Change: [X]</p> <p>Risk Assessment Completed: [X]</p> <p>Proposed Change Approved: [X]</p> <p>Improvement Being Worked On: [X]</p>			



Gaining agreement from all shifts

Why name it Work Area Management?

Work Area + Equipment = Workplace

**Work Area
Management**

+

**Operator
Equipment
Management**

=

**Perfect
Workplace**

Zero Breakdowns
Zero Quality Problems
Zero Accidents or Incidents

Supported by Cross-functional Teams

Why split up the Work Area from the Equipment?

Learning:

If we make a mistake with the Work Area it normally doesn't stop Production

If we make a mistake with the Equipment it will often lead to a Production loss

*Hence Work Area is a good starting point to develop the **discipline** required to tackle the equipment*

What are the benefits of starting with the Work Area first?

Fixing up the Work Area can often be done by the people working in the area

Helps develop a greater understanding of some of the 7 wastes such as unnecessary motion & movement or excessive transporting

Fixing up the Equipment often requires a lot of Maintenance support

Why does Work Area Management focus on People Development?

Apart from creating a Work Area where everything is orderly, neat and tidy

There is also the need to:

- Establish the discipline to follow agreed standards within the workplace so that everything remains orderly, neat and tidy?
- Standardise Work within each crew and most importantly across shifts to identify problems at the earliest possible time?
- Improve communication across shifts to rapidly share learning?

How do we sustain the gains from Work Area Management?

It is about on-going improvement with further challenges

Link WAM to further improvement activities eg Operator Equipment Management which spans 2-3 years

Use 12-14 week cycles to re-invigorate improvement activities

Ensure a robust team self evaluation process supported by a regular management compliance assessment

5. Making it Happen

Preparation for Work Area Management:

- Ensure there is regular time (suggest 1-2 hours per week or 2.5% – 5% per shift) available for improvement activity
- Establish flexible Area Based Teams (4-8) with designated Team Leaders with allocated Improvement Areas to ensure strong ownership
- Where appropriate, allocate designated support staff (Maintenance, Quality, Facilitation, Mentoring) to each Area Based Team
- Provide a prescriptive structured process for the teams to follow
- Allocate dedicated weekly time for the improvement activity eg 30 min meeting and 1.5 hr doing

TPM³ Improvement Sheet

Team Name:	Night Owls	Location:	Refiner	Initiated Date:	13 / 11 / 00
Team Type:	WAM	Item:	Work Bench	Completed Date:	
Initiator:	J Smith				

1. Problem (Plan)

Cluttered and Messy Work Bench

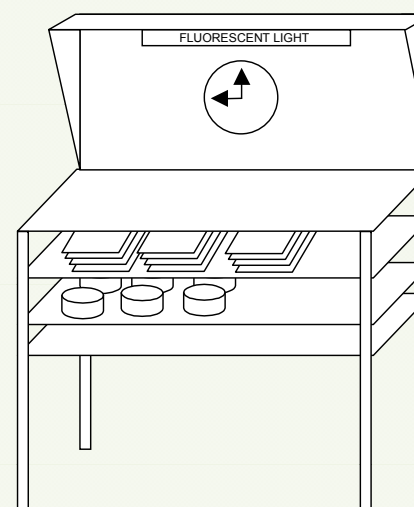
2. Current Situation (Plan)

Photo:



3. Proposed Change / Approved Improvement (Do)

Sketch / Photo:



Improvement Target: Area to be cleaned up and a work bench restored.
Everything required having a place

Expected Cost: \$200
Expected Saving: \$2,500 per year
(15 minutes per day x 2 people)

4. Results: (Check)

Actual Cost:	
Actual Savings:	

5. Future Actions: (Act)

CTPM Australasia	Approved by:	TL - Shift A	TL - Shift B	TL - Shift C	TL - Shift D	LT Member
	Discuss with team then sign off acceptance of Proposed Change	BA	DE	FZ	JS	PG

Example of WAM Standard

Subject: Cleaning Equipment Location Standard

Area of Use / Location: Line 1 Up-ender West Side

Purpose: To ensure cleaning equipment is stored correctly for easy access



Cleaning Equipment not
returned to correct location



Cleaning Equipment Stored
Correctly



Date Created:		Created by:		Version:		Reference Number:	
Last Version Date:		Amended by:				Approved by:	

Training Record: Completed Training in this Procedure

Team Member Name	Team Member Signature	Trainer: T/L Signature	Team Member Name	Team Member Signature	Trainer: T/L Signature

Note: *If multi-shift situation then provision may be required to allow all Team Leaders from all shifts to sign-off agreement to the standard on behalf of their crews*

6. Key Learning (1)



1. If necessary create regular weekly time for WAM first through Cross-functional Team improvement activity
2. Establish ownership in the workplace with properly structured Area Based Teams
3. Use a structured stepped process spanning no longer than 12-14 weeks per cycle
4. If area being addressed requires a longer timeframe it is better to break the area up into milestones of 12-14 weeks and acknowledge and celebrate each milestone

6. Key Learning (2)



5. Use a mid-way presentation to gain agreement and a final presentation to capture learning and acknowledge success
6. It is the responsibility of Site Management (Leadership Team) to ensure all teams are successful – they achieve their mandate

Conclusion

We believe every business has the potential to significantly increase productivity and reduce costs by engaging all their personnel in the quest for excellence.

Work Area Management should be the start of your Area Based Team Horizontal Development of your People

The most successful sites are those that have fun making things happen



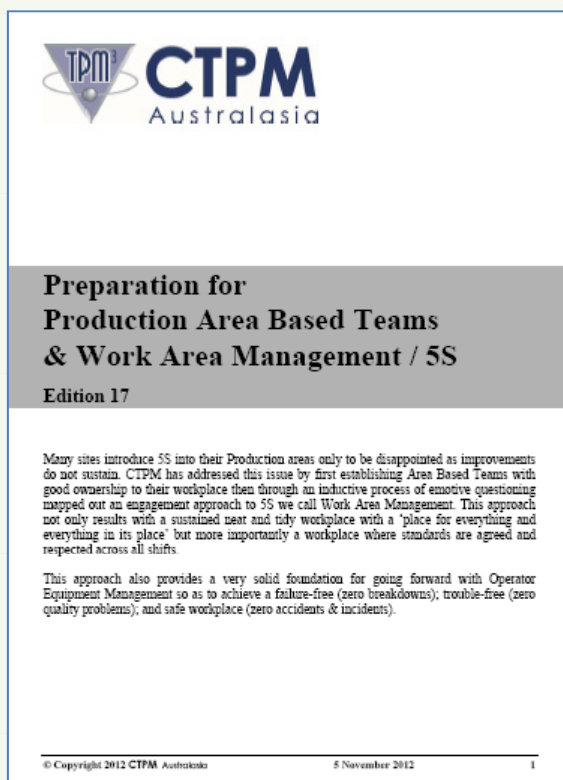
Final Message

Unless the focus of your organisation's improvement journey is the on-going development of all your people through both Cross-functional Teams and Area Based Teams, your quest to achieve and sustain Operations Excellence will become a dream rather than reality.

How can we help?

www.ctpm.org.au

Preparation for Area Based Teams & Work Area Management





Question Time



Presentation by:

Ross Kennedy

President CTPM Australasia

Email: ross.kennedy@ctpm.org.au

Phone: 02 4226 6184

Web: www.ctpm.org.au