



15th INTERNATIONAL OPERATIONS & MAINTENANCE CONFERENCE IN THE ARAB COUNTRIES
UNDER THE THEME: “**SMART MAINTENANCE**” CONICIDE WITH THE 15TH ARAB MAINTENANCE EXHIBITION

COMPARISON BETWEEN EUROPEAN AND ASIAN COMPANIES ON TOTAL PRODUCTIVE MAINTENANCE IMPLEMENTATION

SITI NABILAH MISTI



OVERVIEW

1. Introduction
2. TPM Pillars
3. Six Big Losses
4. Case Studies
5. Comparison of TPM issues
6. Results and Discussions
7. Future Improvements
8. Conclusion





5 Point Definition of TPM

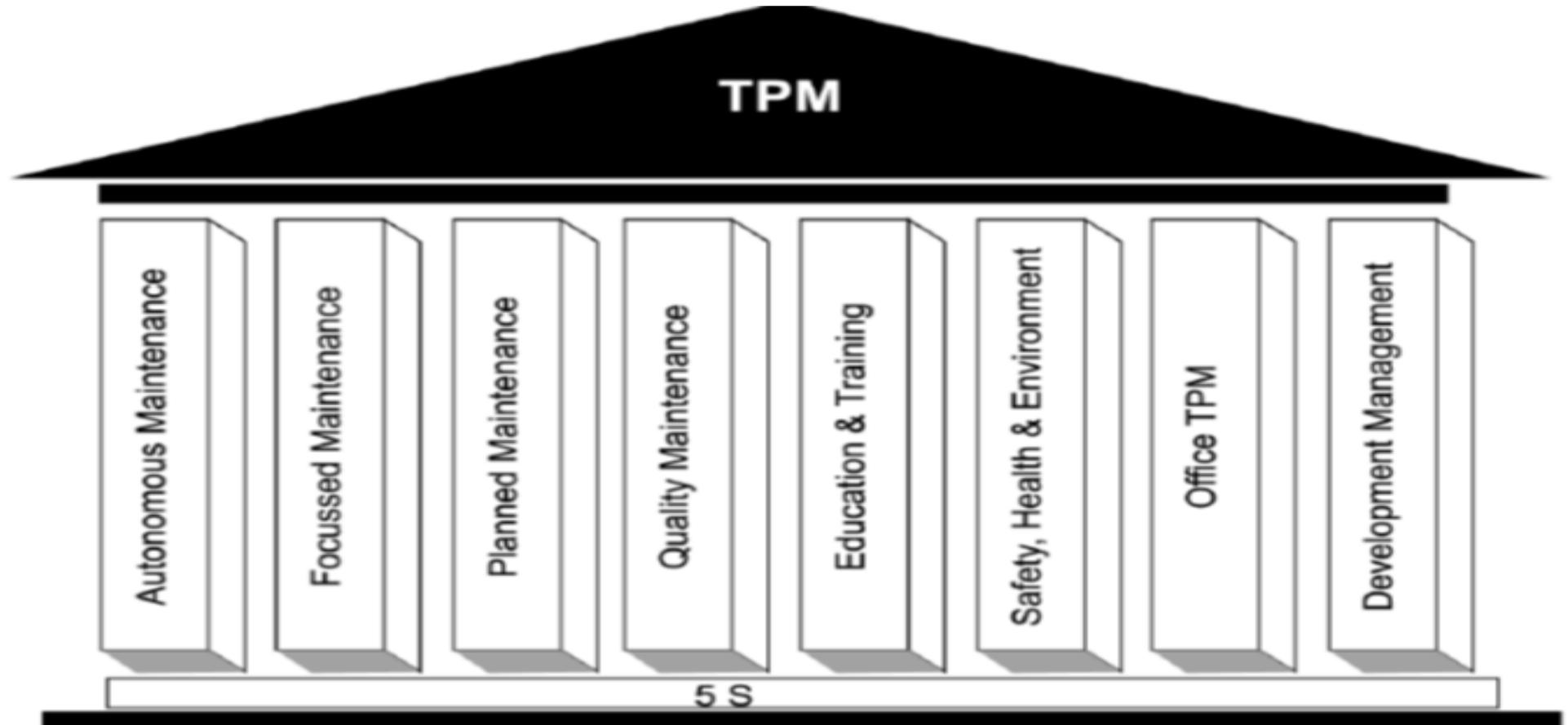
- Aims at getting the most effective use of equipment.
- Builds an Advance Maintenance Process
- Brings together people from all departments concerned with equipment
- Requires the support and partnership of everyone from shop floor personnel to top managers
- Promotes and implements autonomous small group activities



TPM is not a quick fix

If you are looking for a quick fix TPM is not it. It will take three to five dedicated years to fully implement TPM and bring your operation up to world class levels. “Quick Fixes” are usually just Band-Aids to get you through they do not add value in the long term. They usually create more problems than they fix.

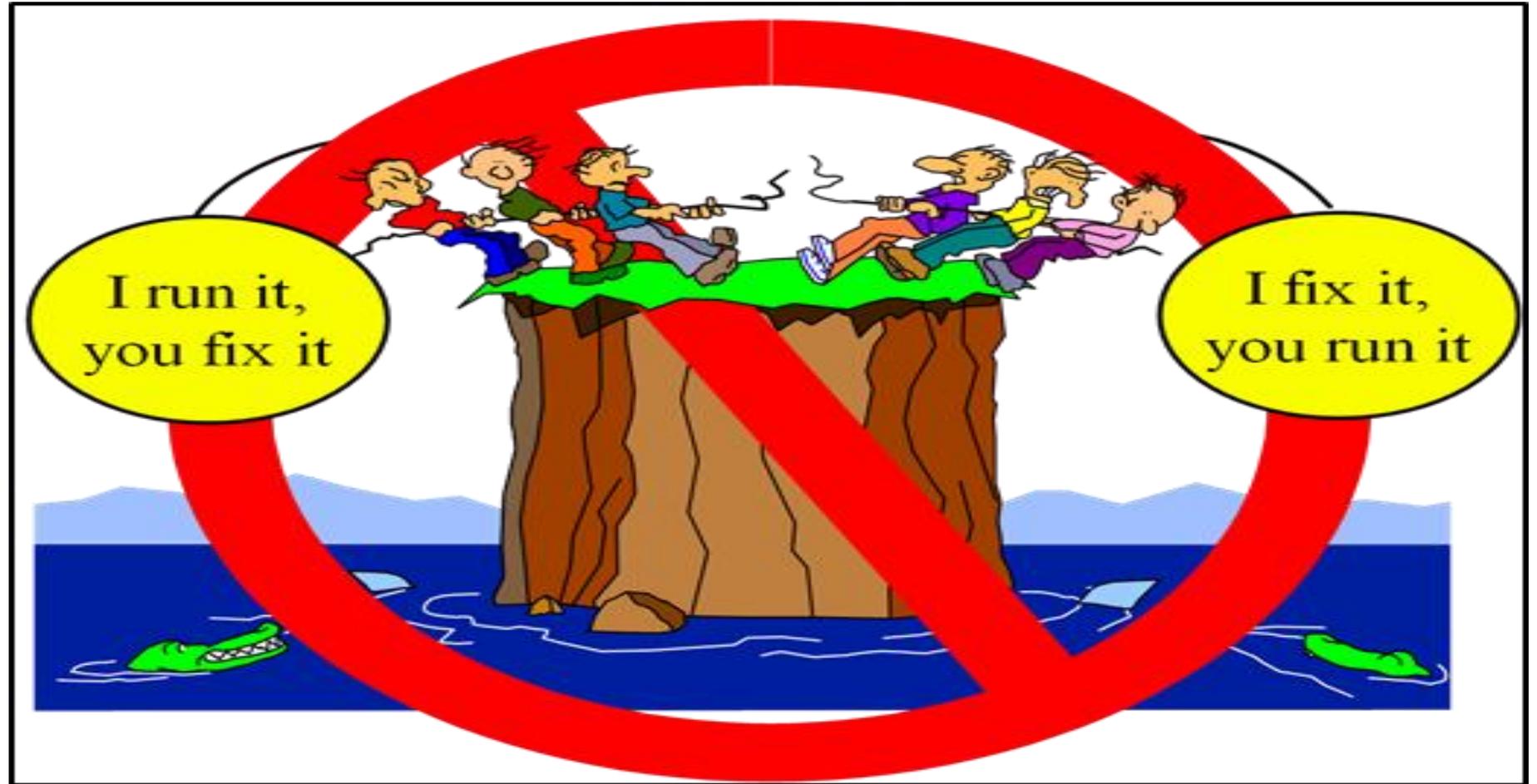
TPM Pillars



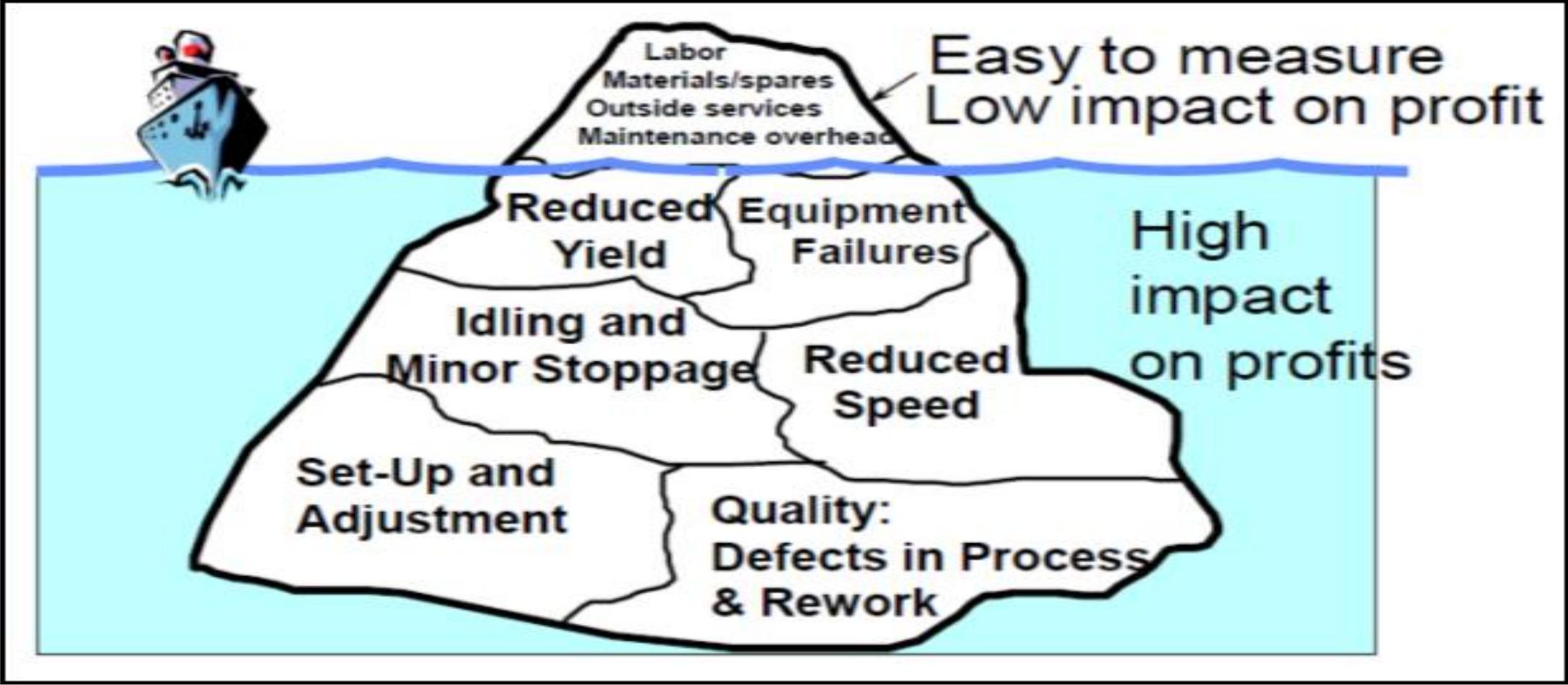
Reference:

- Asian Composites Manufacturing Sdn. Bhd., (2011). "TPM pitch for certification class," ed. Kedah, Malaysia ACM Sdn Bhd, 2011.

Autonomous Maintenance



Six Big Losses



Case Study

- WHERE?

Continental Sime Tyre, Alor Setar, Malaysia
Corrugated Fibreboard Manufacturing, UK

- WHY?

Failed to achieve maximum potential of TPM

- HOW?

Interviews and questionnaires



Comparison of TPM issues with Davis theory

SIMILARITIES OF TPM FAILURE	Asian Company		European Company	
	YES	NO	YES	NO
Not serious in changing program	✓		✓	
Inexperienced facilitators or trainers		✓		✓
Program conducted is too high level (run by managers for managers)	✓			✓
Lack of relationship and structure	✓		✓	
Shop floor was left out of the program and/or not managed	✓		✓	
Lack of education and training	✓			✓
Program is run by engineering section and production section see this as though it does not concern them	✓		✓	
Use the Japanese way on applying TPM (through Japanese publication)		✓		✓
TPM teams lack the necessary mix of skills and experience		✓		✓
Poor structure and organisation in supporting TPM and its activities	✓		✓	



Identified Shortcomings

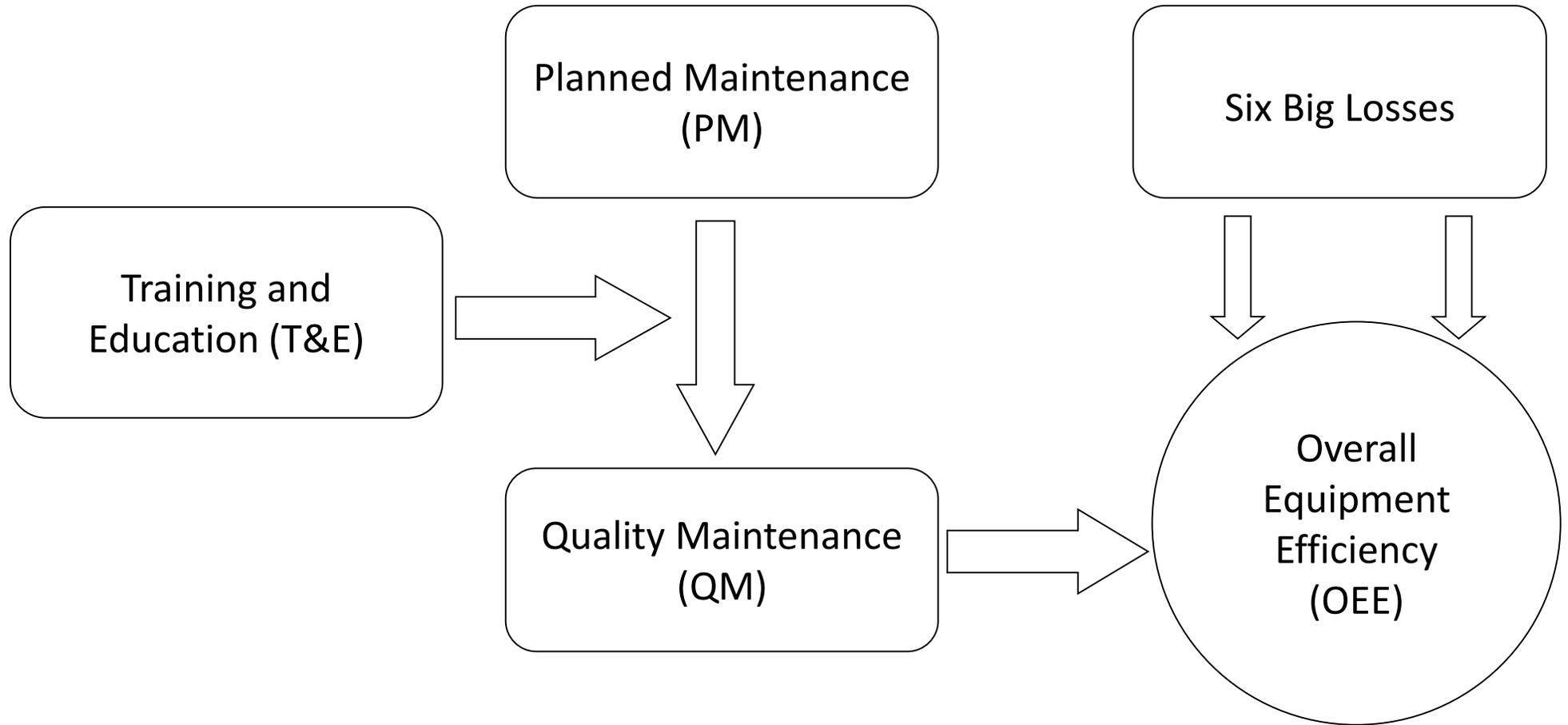
- Equipment breakdown
- High volume of production
- Lack of communication between production and maintenance
- Lack of training for operator
- Insufficient manpower
- Accident occurrence



Future Improvements

- TPM pillars should be implemented depending on each company's demands, operation and situation
- Scheme of training given to the staff according to their field of work
- Apply Root Cause Analysis and concentrate on the equipment that is causing the most problems
- Proactive maintenance activity to check equipment condition from time to time
- Carefully schedule the machine run time to avoid wear and fatigue
- Responsibility transfer between maintenance team and production floor

TPM's 3 Predominant Pillars



THANK YOU

