

SINGLE MINUTE MAINTENANCE PROCESS



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The Bluefield “Single Minute Maintenance Process” is adapted from the Single Minute Exchange Die (SMED) process specifically for the mining and resources industry. The process enables asset management groups to significantly reduce their equipment downtime by applying a process from developing task procedures that minimise equipment downtime while maximising work quality and repeatability.

<https://bluefield.com.au/2018/03/14/improving-maintenance-labour-productivity/>

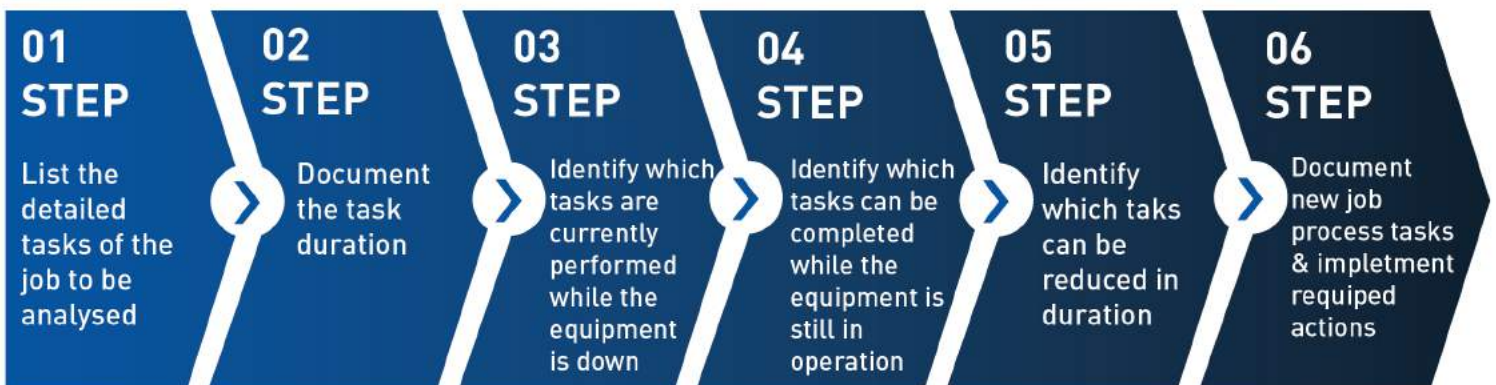
SMM MAINTENANCE MANAGEMENT PROCESS



DETAILED PLANNING

The process is called Single Minute Maintenance because the process involves breaking a task down to detailed steps which can be measured in minutes. Each step is then analysed, where non value added time is identified, reduced or eliminated. SMM is suitable for both existing and conceptual.

PROCESS STEPS





“
THE DEVIL IS IN
THE DETAILS
”

SMM IMPLEMENTATION

The Bluefield Asset Management Specialists can facilitate the process with the site teams and educate them so that they can continue to prepare plans and procedures that:

1. Minimise the equipment downtime while improving work quality and repeatability

OR

2. Provide the knowledge in order to implement yourselves.

As long as our industry benefits, we are pleased to have assisted.



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STEP 1,2 & 3 CURRENT TASK DETAILS

Document the job in detail listing all of the tasks. Add the estimated duration (in minutes) of each task and whether it is performed while the machine is down or operating. For example some parts of a job may be completed while the machine is still operating such as preparing the spare with the correct fitting or coupling required to fit into position without modification.

Machine Type:		Job Description:	SMM Review Date:	
Current Process			Current Duration (mins)	Machine Down (Y/N)
Task #	Task Description			

STEP 4 - WHAT CAN BE COMPLETED WHILE MACHINE IS STILL IN OPERATION

For each task ask whether it can be completed while the machine is in operation. These improvement opportunities are usually centred around better set up of the spares. For example in the case of an engine replacement having the spare engine complete with the alternators, harnesses, water pumps etc. will eliminate the need to transfer these items across. This in turn will reduce the task duration by the time it takes to transfer these parts.

Machine Type:		Job Description:	SMM Review Date:	
Current Process			Current Duration (mins)	Machine Down (Y/N)
Task #	Task Description			

STEP 5 - REDUCING TASK DURATION

For each task that must be completed while the machine is down it is now time to identify opportunities to reduce the task duration. This step is usually centred around improved tooling, access or procedures. For example for many tasks that require lifting it is often much simpler and quicker to use a lifting device that eliminates the need to rig a component with chains and slings. This change also often improves the task quality and repeatability.

Machine Type:		Job Description:			SMM Review Date:
Current Process		Current Duration	Machine Down (Y/N)	Description of how task can be completed while the machine is operating	Description of how the tasks duration can potentially be reduced
Task #	Task Description				



STEP 6 - DOCUMENT NEW PROCESS

It is essential to document the proposed new process and capture the potential reduction in downtime duration.

Machine Type:		Job Description:			SMM Review Date:
Current Process		Current Duration	Machine Down (Y/N)	Description of how task can be completed while the machine is operating	Description of how the tasks duration can potentially be reduced
Task #	Task Description				

STEP 7 - IMPROVEMENT ACTIONS

The improvements will not be realised until the necessary improvement actions have been implemented. Capture the actions required to realise the improvements in the process. Examples maybe, update specifications of spares, develop and certify a new lifting tool or access system.

Machine Type:		Job Description:	SMM Review Date:	
Action #	Action Description	Responsibility	Due Date	

DISCUSSION:

Where to apply the SMM approach?

Where should we focus our efforts? What tasks would be the priority to utilise the SMM approach?

- Fit component replacements into scheduled outage windows?
- Reduce shutdown downtime?
- Frequent tasks to improve the quality and reduce the time?