

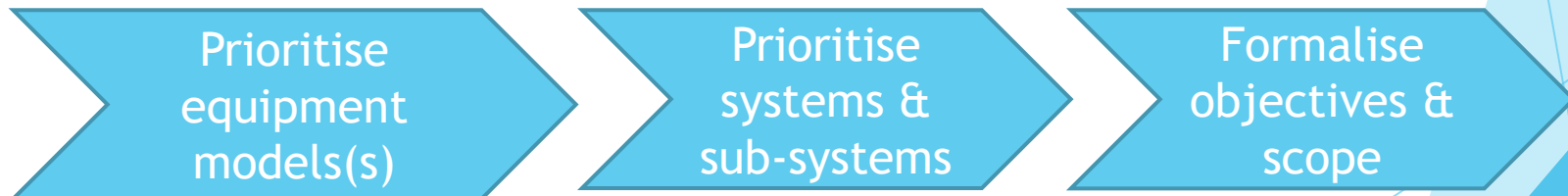
Equipment Strategy Development

Our process comes in three (3) stage. To identify, develop and deployed a set of maintenance strategies that will enable a piece of physical asset to reliably operate within its operating context over its whole of life



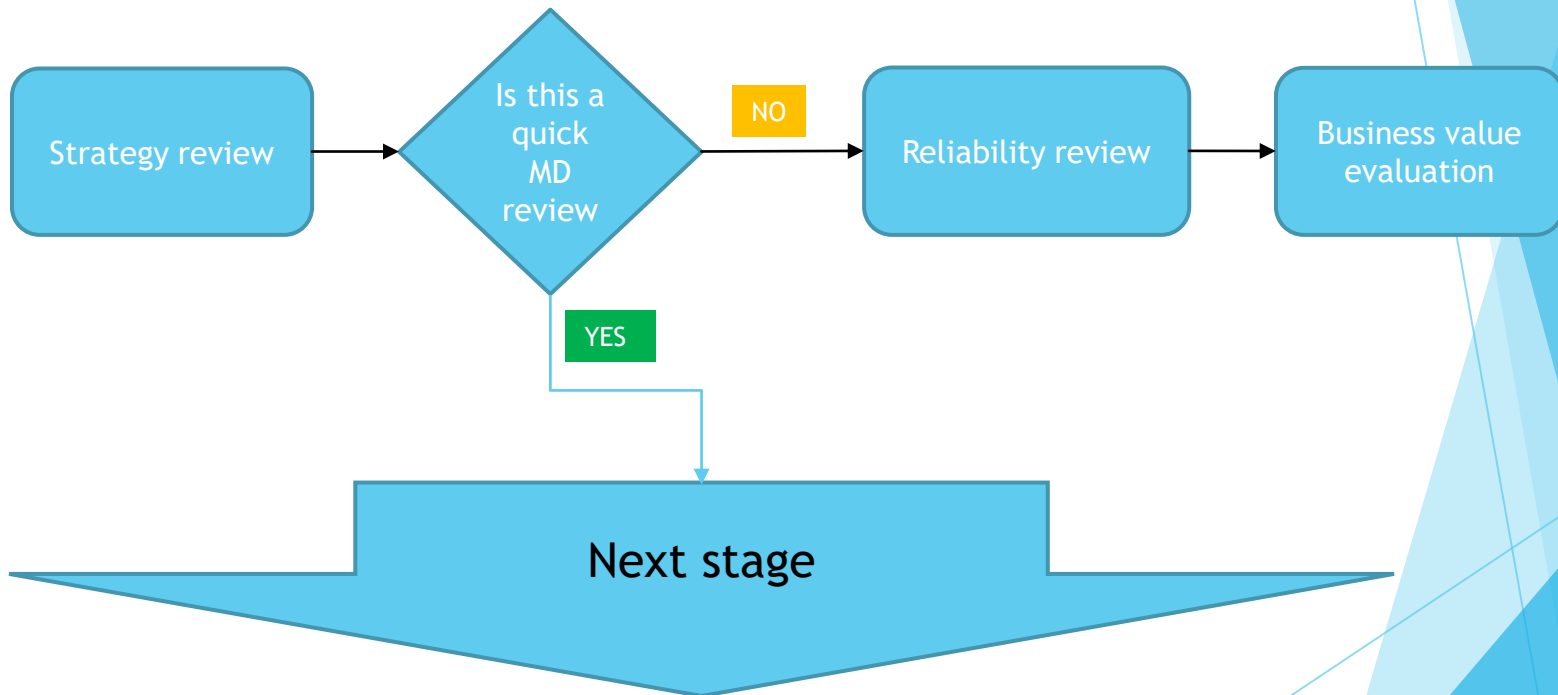
The process further described below:

Value Proposition – Identifying and prioritising the value whether it be Safety, Volume or Cost



Equipment Strategy Development

Design & Evaluation – The analysis involved in demonstrating the defined value proposition. This is demonstrated by using Reliability modelling scenarios and value driver tree evaluation



Equipment Strategy Development

Deployment - A complete pack of maintenance strategies (PM Insp & Component Life Strategies) designed and created from the assessment of design & evaluation. Set of maintenance tactics and practices that is operational ready to be planned, scheduled and ready for execution once uploaded to the desired CMMS

SYSTEMS	Maintenance Tasks	Proposed Strategy Interval
Braking & Steering	15000H Repl Brke Cng Hoses	15000H
	15000H Repl Brke Sck Adj R	15000H
	15000H Repl Brke Sck Adj L	15000H
	15000H Repl Ster Ctrl Vlve	15000H
	15000H Repl Ster HMU Pump	15000H
	15000H Repl Tie-Rod	15000H
	24000H Repl Brke Cng Motr	24000H
	24000H Repl Brke Cng Pump	24000H
	24000H Repl Brke Colr	24000H
	24000H Repl Brke Ctrl Vlve	24000H
	24000H Repl Brke Hois Pump	24000H
	24000H Repl Ster Pump	24000H
	24000H Repl Ster Slnd & Relf Vlve	24000H
30000H Repl Ster Linkages	30000H	
SYSTEMS	Maintenance Tasks	Proposed Strategy Interval
Differential Shafts & Axles	12000H Repl PTO Shft	12000H
	12000H Repl RAX Colr Hose	12000H
	18000H Repl Driv Shft	18000H
	24000H Repl Axle Colr	24000H
	24000H Repl Axle Pump R & Motr	24000H
	24000H Repl Diff	24000H
	24000H Repl Pump Driv Box	24000H
	42000H Repl Axle Shft LH	42000H
	42000H Repl Axle Shft RH	42000H
	6000H Repl Driv Shft Uvsl	6000H

Equipment Strategy Development

SYSTEMS	Maintenance Tasks	Proposed Strategy Interval
Final Drives & Wheel Ends	30000H Repl Finl Driv LHR	30000H
	30000H Repl Finl Driv RHR	30000H
	30000H Repl Whel End LHF	30000H
	30000H Repl Whel End RHF	30000H
	48W Insp Brke Pack Hght	48W
SYSTEMS	Maintenance Tasks	Proposed Strategy Interval
Suspension	30000H Repl Susp Cyli LHF	30000H
	30000H Repl Susp Cyli LHR	30000H
	30000H Repl Susp Cyli RHF	30000H
	30000H Repl Susp Cyli RHR	30000H
	6000H Calb Ride Strut	6000H
SYSTEMS	Maintenance Tasks	Proposed Strategy Interval
Transmission	18000H Repl Colr Trans & Ster	18000H
	18000H Repl Trans	18000H
	6000H Repl PTO Shft Uvsl	6000H
	24000H Repl Torque Cvtr	24000H
	4500H Calb Trans	4500H
SYSTEMS	Maintenance Tasks	Proposed Strategy Interval
Engine	24000H Repl Engi	24000H
	250H Adju Valve Set	250H
	12000H Repl HP Fuel Pump	12000H
	6000H Repl Elec Strt Motr	6000H
	24000H Repl Rdtr	24000H
SYSTEMS	Maintenance Tasks	Proposed Strategy Interval
Safety Inspections	5Y Sfty Repl Fire Sprn Bottle	5Y
	12M Sfty Insp Fire Sprn Syst	12M
	6M Sfty Insp Fire Sprn Syst	6M
	2Y Sfty Insp Extn Acum	2Y
	10Y Sfty Repl Acum	10Y
SYSTEMS	Maintenance Tasks	Proposed Strategy Interval
Cylinders	15000H Repl Ster Cyli LH	15000H
	15000H Repl Ster Cyli RH	15000H

Proposal Methodology Template

Background/Context/Problem Statement - What is the value proposition: Defining the underlying problem statement.

Example: To enable a safe achievement of the increased target of 33.5Mt saleable ore product by working more efficiently and effectively.

What we did - The review and analysis process

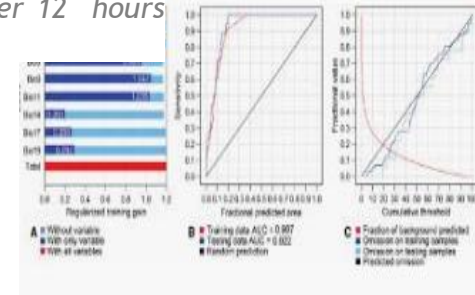
- FMECA sessions with the maintainers/operators/subject matter experts/OEMs
- Set a target time to complete top and bottom screen deck change-out of 7 hours a reduction of 5 hours and 4 hours for prep. Work.
- Mechanical maintainers, metallurgists and supervisors used the scheduled screen change-outs to observe, brainstorm and trial improvements; resulting in an reduction of scheduled down time from over 12 hours down to 7 hours with a reduction of maintainer's walking from 8 to 1 kilometer.

Key insights - The findings from the review and analysis

- Found that there were 2 different Standardised Work (SW) procedures where of the 13 pages only one was being used. The current improved process has been documented as SW where the number of job steps has been reduced from 27 to 21.
- BOM Kits were developed and delivered to the screen house
- False floor was also designed to improve safety and reduce number of lifts.

Value delivered - How do we deliver value

- This has resulted in an extra 120 hours of plant operations per year, operating cost of the plant being \$2000 per minute this was an extra 60,000 tonnes of production which would have been lost.



Statistical charts of MaxEnt analysis ...