Maintenance Optimisation Case Study – 40% Reduction in Annual Costs

Company: Large Aluminium Producer, Australia
Project: Provide an Optimised Maintenance Plan and Spares Holding Level
Equipment: 20 Tonne Overhead Crane

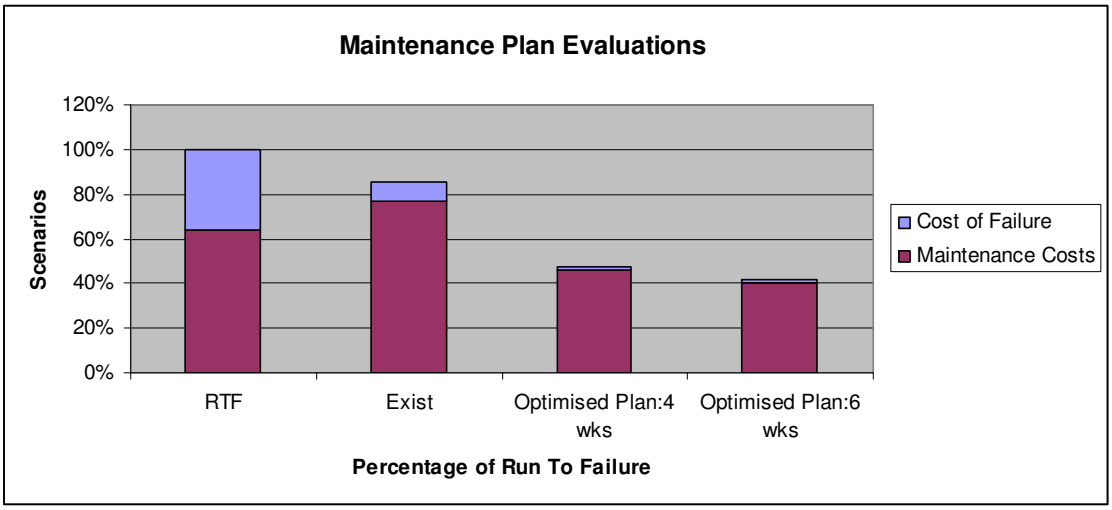
Project Brief:

The overhead cranes had been identified in a business review to be high maintenance - high cost piece of equipment, so an RCM study was initiated in order to improve crane availability and reduce unscheduled outages.

Isograph's RCMCost software was chosen to build a model to reflect the existing practices and performance. This model was then used to challenge existing maintenance tasks and frequencies and an optimized plan was developed whereby ineffective tasks were deleted or frequencies changed, new tasks were identified and the tasks grouped to optimum routines.

RCMCost provides a capability to simulate the maintenance plans over a chosen lifetime. Four scenarios were evaluated over a ten year timeframe and the annualized costs compared as shown in the graph below. Whilst the existing maintenance reduced cost impact of failure of the Run To failure scenario, the optimized plans at 4 week and 6 week shutdown intervals revealed annual savings of 60% compared to Run to Failure (RTF) and 40% annual savings over the existing strategy.

RESULTS: 60% Reduction In Annual Costs!



The optimized maintenance plan shows an expected 40% reduction in maintenance costs and a 97% reduction in the cost of failure.

Cost of Study: $28,000
Annual Savings: $210,000 x 14 cranes= $2.9 million
Return on Investment: 100 fold!
Crane Availability: Availability study showed new plans supported over 90% availability.