Client Reference
Automotive

Client Background

Our client is an icon worldwide in the motor industry and a leading manufacturer in South Africa. The manufacturing plant in East London, South Africa, currently produces the latest model of their luxury passenger vehicle. The management of our client embarked on a journey to implement a range of management systems based on the Pragma Asset Management road map. The aim is to mature all asset management key performance areas to a world class standard.

Key Challenges

A criticality analysis project was launched before the start of the new W205 C-Class. A very well workshopped model was used, but all inputs was based on assumptions and gut feel as nobody in the project had any experience and failure history of the new equipment. This criticality analysis exercise unfortunately did not yield results that could accurately identify the most critical assets.

Value Add

The criticality analysis enables MBSA to identify problematic and high risk equipment, which improves and assists maintenance efforts and planning

"Our client now has better insight into the criticality of their equipment and technologies, to assist in focusing maintenance efforts to reduce equipment downtime."

Tools and Technology

- SAP® PM
- Microsoft Excel
- Bukela Production Software
- Work Planning and Control
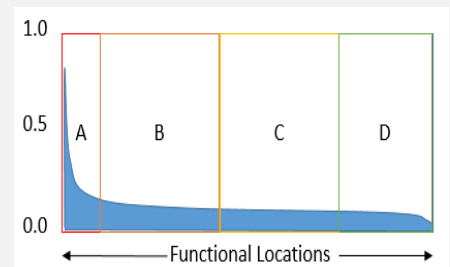- Asset Register Administration
- Asset Care Plan Development

Pragma Intervention

A work planning and control business process was implemented to ensure quality data, which resulted in good information to be used in a criticality model. Pragma then developed a dynamic criticality model that takes failure history per asset type, equipment position and buffer sizes into account. The model works on weighted ratios to ensure flexibility and to ensure that the model is not biased to a specific input. The two main categories are asset type criticality and positional criticality. The asset type criticality uses failure data regarding the asset type and the failures on specific locations. The positional criticality looks at the possible effect the downtime of the asset will have on production. The model take into account both the history and risk from failure data of the different technologies and positions to identify and rank these technologies based on their functional locations.
Here is a depiction of what the model looks like:

Asset Type Criticality

Average downtime per technology type

Total downtime per functional location

+

Positional Criticality

Positional criticality per cell

Time to repair per location

Bodyshop Criticality per location