

# Client Reference

## Focused Improvement project on light curtains



### Client Background

Our client is an icon worldwide in the motor industry and 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 South Africa 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

- The Trim Line was identified as one of the most unstable functional Areas in the Assembly Shop and a large contributor to downtime. However, there was no clear understanding of which breakdown categories and technologies were the major contributors to these breakdowns.
- A cross-functional problem solving team needed to be created in order to align production and maintenance regarding the root causes of these breakdowns.
- Bukela, which is the Software used by Production to record stoppages on the line, was used to identify repetitive faults.

***“Analysing data on production stoppages with the assistance of a highly motivated cross functional team, consisting of Facility planners, Pragma Engineers, Maintenance and Production personnel, leading to the brainstorming of all ideas, documenting these ideas and formulating action plans for various tasks and the continuous monitoring and re-evaluation, undoubtedly has far reaching implications to the successful reduction in unnecessary production losses.”***

*Keith Baling, Assembly Shift Engineer*

### Pragma Intervention

- The first step was to gather Maintenance breakdown data from SAP® on the Trim Line. Through this, the team was guided towards specific areas and faults to investigate further.
- Next, Cell Tech Production Data from Bukela was incorporated in order to verify the major breakdown categories, sub-categories and technologies.
- After the major breakdown categories, sub-categories and technologies were identified, brainstorming was done in order to identify possible root causes for these breakdowns.
- Light curtain and laser scanner interruptions was seen to be the major repetitive breakdown technologies in Assembly line 2 and 3.
- The light curtains and laser scanners were segregated in the data to determine which get interrupted by production, maintenance, cleaning crew and other traffic respectively.



### Value Add

- Installed safety gates on either sides of Assembly Lines 2 and 3. Fixed gates or swing type gates were installed, based on the safety requirement.
- Did awareness campaigns for operators at exit of Assembly line 2 and entrance of Assembly line 3.
- Moved up sweeper, brush and light curtain at Assembly 2 to give operator more space.
- Made light curtains less sensitive at entrance of Assembly line 3 and exit of Assembly line 2.
- Changed the value for reduced resolution (Object size that do not result in shut down).

Our client now has better control over light curtain interruptions. The number of light curtains being broken per week were reduced from as much as 150 to 35 per light curtain (75% reduction). The remaining numbers are thought to result from harnesses hanging loose from the vehicle and can be addressed by further reducing the object sizes activating the light curtains.

### Tools and Technology

- SAP® ERP “zpm\_shift\_report”
- Microsoft Excel
- Bukela Production Software
- Microsoft PowerPoint.
  
- DMAIC Cycle
- Fish Bone/Ishikawa Diagram.