Client Reference

Manufacturing | Automotive

Improving work planning and scheduling, and maintenance plan development

"On Key allows us to plan, schedule and allocate tasks to our artisans based on available man hours and we can already see an improvement in our Weekly Schedule Attainment. This is great for us as we measure our efficiency based on work planned versus work executed."

— Everett Clayton, Body Shop Team Manager

48% ↑ schedule attainment

66% ↓ production risk

Key challenges

- Manual work scheduling using spreadsheets led to inefficiencies and low schedule attainment.
- Inconsistent maintenance work management (MWM) practices across different production areas.
- Resistance to change and limited maintenance scheduling capability at the supervisor level.
- Poor data accuracy and limited visibility of work orders and resource allocation.
- Integration complexities between On Key and SAP® PM systems.
- There is no clear process or tools to manage maintenance tactics or ensure related best practices are being utilised.
- Lack of quick recovery strategies and downtime impact on production volumes
- Initial asset criticality models were based on assumptions and lacked historical failure data, resulting in poor decision-making.

Our approach

Maintenance work management:

- Introduced a structured MWM process and implemented On Key as the front-end system for scheduling and daily work allocation.
- Developed an SAP-On Key interface to retain SAP's core asset and cost records while enabling user-friendly planning in On Key.
- User training in best practices and On Key functionality empowered supervisors and planners to take ownership of work allocation and scheduling.
- Piloted a proof-of-concept rollout in one area and, upon success, extended across other production areas.

Asset criticality analysis

- The MWM process was implemented to ensure high-quality failure data.
- Pragma developed a dynamic asset criticality model, combining asset type and positional criticality using historical failure data, equipment positioning, and buffer capacities.
- The model used weighted ratios to provide an unbiased, data-driven view of asset criticality.

Approach continues on next page.

Value add

Work Planning and Scheduling

- 93% average schedule attainment during production (up from 48%).
- 86% average schedule attainment during non-production (up from 50%).
- Labour utilisation improved to 78% during non-production (up by 24%) and to 23% during production (up by 5%).
- Significant reduction in overtime and a completely paperless work allocation process.

Maintenance Tactics Development

- Mean Time to Repair (MTTR) improved from 62 minutes to 21 minutes.
- 66% reduction in production risk across critical assets.
- 68 additional units produced weekly post-breakdown recovery.
- R2.27 million saved from February to August, with projected annual savings exceeding R20 million.

Operational Benefits

- Empowered supervisors with better control and visibility of work orders.
- Improved data accuracy and standardisation of asset management processes.
- Increased data velocity and real-time performance tracking
- Smarter Asset Prioritisation
- Reliable identification of high-risk, problematic equipment.
- More effective allocation of maintenance resources.
- Foundation laid for targeted maintenance strategies and capital investment planning.

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Our approach continues …

Maintenance Tactics Development Methodology:

- Pragma applied a DMAIC approach to review and optimise maintenance tactics in the Body Shop.
- Maturity levels were measured using a completeness satisfactory level CSL audit, revealing data gaps and process weaknesses.
- Pragma managed a structured FMEA development project from which maintenance tactics were selected to mitigate failure risk, considering asset criticality and operating context. Implementing tactics through awareness, system configuration, and other controls was a part of the overall project. Quick recovery strategies supporting run-to-failure tactics (as opposed to breakdowns) were implemented to reduce production risk further.

Change Management and Support:

- Ongoing technical support from the Pragma team ensured smooth change management, alignment of processes, and continuous system improvements.

Client background

Our Client, a leading automotive manufacturer in South Africa, embarked on a strategic journey to implement a world-class Asset Management System based on the Pragma Way. The focus was on driving excellence in maintenance work management (MWM) and developing maintenance tactics to achieve optimum asset management maturity and improve asset performance. Initially reliant on manual maintenance work scheduling via spreadsheets and facing challenges with fragmented processes across departments, the Client required a tailored approach.

Pragma introduced and supported the adoption of its On Key Enterprise Asset Management System (EAMS) to improve scheduling capabilities, enhance labour utilisation, and enable standardised asset care practices across the plant. Additionally, maintenance tactics were based on a variety of inputs, none of which considered the assets' inherent reliability or criticality. Equipment specialists lacked a sound methodology to define ideal tactics and relied on initiative and OEMs. Pragma's OMM methodology was adapted to the Client's context and provided the basis for developing the Client's internal approach to developing maintenance tactics.

These solutions were rolled out across multiple plants, including Final Assembly and the Body Shop. They resulted in greater control over the execution of maintenance work and improved the quality and effectiveness of the work being executed.

Client quotes

"It's a cost saver, because it allowed us to become completely paperless and is a great time saver, because it allows us to schedule and allocate work in bulk. It's a good tool to manage staff utilisation and as a result reduce overtime."
— Wayne Hillier, TSS Assembly Team Manager

"The process was successfully implemented and achieved a maturity level of >71% by SOP. Since implementation, the overall savings from February to August were R2,271,929, with a potential for projected savings of R20,466,560 for the 2022-2023 year."