

Workflow: Maintenance and Asset Care

Toolkit 8.1

Maintenance KPIs

target audience

Operations, maintenance, technical managers, and contractors.

what it is

Effective and safe operations depend on the availability and effectiveness of equipment when required. This can only be achieved if the asset is used for its intended purpose by a skilled operator, while being properly cared for.

Packhouse are essentially industrial production operations that are highly dependent on the machinery and systems they employ. Therefore, even more than for a citrus production (farming) operation, packhouses should measure the performance of the maintenance strategy and execution.

why it is important

Maintenance is mostly seen as a means to an end, namely uninterrupted process and productivity, as well as optimal efficiency.

However, it is worth measuring the performance and effectiveness of maintenance per se, as a major component of the business. This is done by refining the KPIs for maintenance itself.

success factors

The success factors for reliability approach to asset care are:

- **Implement a maintenance and asset care strategy** – As discussed in [Toolkit 8.2 – A Reliability Approach to Asset Care](#), ensure that you have a clearly defined plan against which you can measure your performance.
- **Develop KPIs** – Develop suitable KPIs and differentiate between strategic KPIs (is your maintenance delivering the bigger business goals) and tactical measurement (maintenance performance metrics. KPIs could include:
 - **Work efficiency** – Maintenance Backlog, Maintenance Overtime, Machine Set-Up Time, Percentage Emergency Work, Overtime Hours, MTTR, number of Rework Requests

- **Costs and spending** – Maintenance Cost as Percent of Replacement Asset Value (RAV), Maintenance Cost Per Unit, Life Cycle, Utility Consumption (per utility)
 - **Asset maintenance** – Planned Maintenance Percentage (PMP), Schedule Compliance, Mean Time Between Failure
 - **Safety and compliance** – Number of Reported Accidents and Incidents, Lost Time Injury Frequency Rate (LTIFR)
 - **Asset performance** – Overall Equipment Effectiveness, Asset Uptime
 - **Downtime** – Production Uptime Percentage, Equipment downtime
 - **Work order management** – Average Time to Complete Work Orders, Percentage of Work Covered by Work Order
 - **Spare parts inventory management** – Stock-Out, Inventory Accuracy, Turnover Ratio
- **Develop KPIs for behaviour, routines, habits, and practices** – These could include:
- **Compliance to maintenance schedules** – Both internal (own maintenance teams) and external (service providers and agents).
 - **Technical meeting schedules** – Are your 24-hour technical meetings in place and reporting to the daily performance review meetings?
 - **Maintenance skills** – A KPI of your organisational capability, both as a business and per shift.
 - **Data management, administrative and financial management** – Measuring the quality and availability of maintenance data and information.

execution steps

Included in the key success factors.

assessment questions

Please Note: There is no minimum / maximum number of questions you can add.

1.	Do you have a maintenance and asset care strategy with clear objectives against which you can measure your performance?
2.	Are basic maintenance routines in place for cleaning, inspecting, and lubricating?
3.	Have you generated clear KPIs for both performance and maintenance routines and behaviour
4.	Do you capture and process all the necessary maintenance data to produce useful KPIs?
5.	Do you use the KPIs to report on improvement, solve problems, and plan for improved performance?

resources

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| 1. | <i>Seven steps to maintenance strategy</i> by Paul Adams (9 August 2019) |
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