

Group #I1.02 - Preventive Maintenance KPI Dashboard

Kylie Todd, Christopher Alvarez, Zion Eyimogbo
Haiver Montenegro

Problem Statement

Preventive maintenance (PM) activities are currently performed without a centralized, detailed, or consistently structured documentation process, resulting in misaligned maintenance frequencies, incomplete equipment records, and reduced operational visibility that can increase downtime risk and efficiencies.

The problems that we are addressing are:

- Improve operational reliability
- Reduce downtime risk
- Increase maintenance accountability
- Enable data-driven decision-making
- Reduce maintenance costs

Project Objectives

Standardization and Documentation

- Create a complete centralization equipment registry
- Preventive Maintenance Control and Compliance
- Achieve greater than or equal to 90% PM compliance

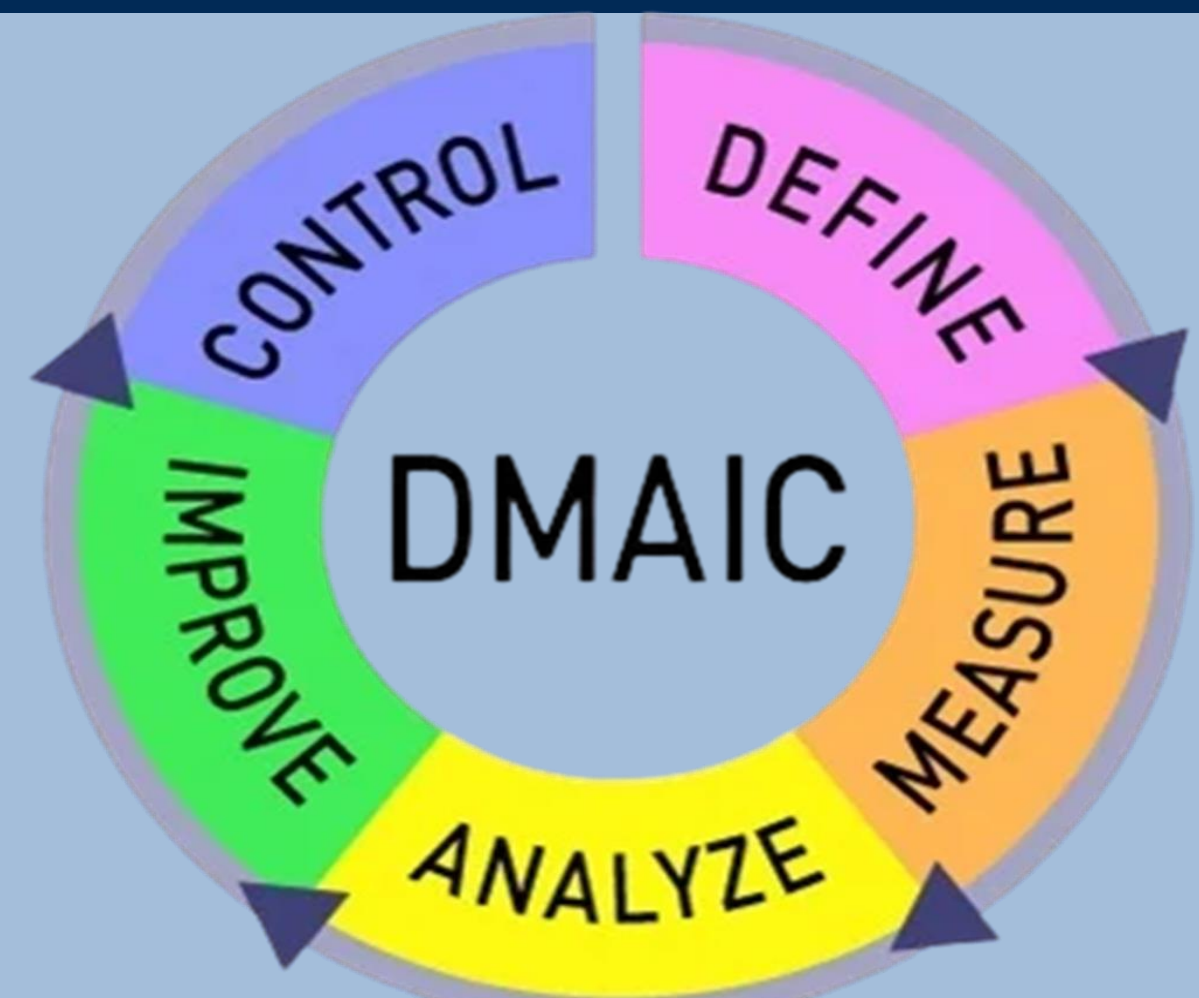
Visibility and Performance Monitoring

- Develop KPI Dashboard displaying compliance and performance

Sustainability and Usability

- Generate automated weekly/monthly reports
- Implement automated alert system of overdue/upcoming PMs

DMAIC



Machine List

Machine	Property Tag	Equipment Type	Department	PM Date	By Who	Interval	Next Due	Notes
A	00779	Compressor	SW	3/14/2025	Clayton Crosby	3	6/14/2025	
Stretch Wrapper	00629	Stretch Wrapper	SW - Shipping	10/28/2024	Clayton Crosby	12	10/28/2025	PM Required
SWEXT2	00478	SW - Ext	SW - EXT	12/11/2024	Clayton Crosby	12	12/11/2025	PM Required
MILL	00258	Milling Machine	SW - EXT	7/11/2025	Clayton Crosby	6	1/11/2026	
SWEXT4	00480	SW - Ext	SW - EXT	1/15/2025	Clayton Crosby	12	1/15/2026	PM Required
LS3	00524	L - Sealer	49	1/30/2025	Clayton Crosby	12	1/30/2026	Serial Number 95670-on Clamco
Winder2	00782	Winder	SW - EXT	1/30/2025	Aloysius Boeck	12	1/30/2026	PM Required
Winder3	00781	Winder	SW - EXT	1/30/2025	Aloysius Boeck	12	1/30/2026	PM Required
PS1	00423	SW - Bag Machine	SW - Bag	9/5/2025	Clayton Crosby	6	3/5/2026	12/2/2024 Changed from PS7 to PS1 Previously SH Bag 40
PS2	00540	SW - Bag Machine	SW - Bag	9/5/2025	Clayton Crosby	6	3/5/2026	12/2/2024 Changed from PS6 to PS2 Previously SH Bag 28
PS3	00157	SW - Bag Machine	SW - Bag	9/5/2025	Clayton Crosby	6	3/5/2026	12/2/2024 Changed from PS5 to PS3 Previously SH Bag 9R
PS4	00279	SW - Bag Machine	SW - Bag	9/5/2025	Clayton Crosby	6	3/5/2026	Previously SH Bag 63
PS5	00466	SW - Bag Machine	SW - Bag	9/5/2025	Clayton Crosby	6	3/5/2026	Previously SH Bag 71
PS6	00719	SW - Bag Machine	49	9/5/2025	Clayton Crosby	6	3/5/2026	12/2/2024 Changed from PS2 to PS6 Previously SH Bag 72
PS7	00722	SW - Bag Machine	49	9/5/2025	Clayton Crosby	6	3/5/2026	12/2/2024 Changed from PS1 to PS7 Previously SH Bag 62
PS8	00465	SW - Bag Machine	SW - Bag	9/5/2025	Aloysius Boeck	6	3/5/2026	12/2/2024 Changed from PS3 to PS8
PS9	00469	SW - Bag Machine	49	9/5/2025	JB	6	3/5/2026	Previously SH Bag 65
SWEXT3	00479	SW - Ext	SW - EXT	3/18/2025	Clayton Crosby	12	3/18/2026	PM Required
SWCHLR6	00780	SW - Chiller - 6	SW - Ext	3/20/2025	Clayton Crosby	12	3/20/2026	
SWCHLR1	00519	SW - Chiller - 3HP	SW - Ext	3/28/2025	Clayton Crosby	12	3/28/2026	PM Required

PM Instructions Template

Step #	Task Description	Tools Needed	Expected Result	Pass/Fail
1	Verify machine power-up sequence operates correctly	None	Machine starts without faults	
2	Confirm emergency stop engages and resets properly	None	E-stop stops machine immediately	
3	Inspect all guards and covers for secure mounting	Screwdriver	All guards tight and undamaged	
4	Check for unusual noises during startup	None	No abnormal vibration or noise	
5	Inspect machine frame for cracks or loose hardware	Wrench set	Frame intact and secure	
6	Inspect wiring for heat damage or exposed conductors	Flashlight	Wiring clean with no damage	
7	Verify control panel indicators function correctly	None	All lights and indicators operate	
8	Check terminal blocks for tightness	Screwdriver	All terminals tight	
9	Inspect sensors for proper alignment	None	Sensors aligned and unobstructed	
10	Test limit switches for correct actuation	None	Switches trigger reliably	
11	Confirm motor amperage is within specification	Clamp meter	Amperage within rated range	
12	Inspect VFD or motor starter for abnormal heat	Infrared	No hotspots detected	
13	Inspect belts for tension and wear	Belt tension gauge	Belts tight with no cracks	
14	Check pulleys for alignment	Straightedge	Pulleys aligned properly	
15	Inspect bearings for noise or excessive play	None	Bearings rotate smoothly	
16	Verify shafts rotate smoothly	None	No binding or wobble	
17	Inspect fasteners for looseness	Wrench set	All fasteners tight	
18	Check couplings for wear or misalignment	None	Couplings intact and aligned	
19	Verify oil level is within operating range	Dipstick	Oil at correct level	

Scope

- 24 Machines need a PM Checklist
- Each checklist tailored to equipment type

Impact

- Ensures consistent PM execution
- Reduces human error
- Enables accurate tracking in dashboard system

Alert System

PM ALERTS & ACTION ITEMS

3 OVERDUE
Oldest overdue: 7 days

5 UPCOMING
3 High-critical machines

14% OVERDUE
Target: ≤ 10%

Last Updated: Apr 16, 2026 · 02:48

Status	Machine	Criticality	Assigned Tech	Days Overdue
Overdue	SWCHLR1	Medium	Clayton	5
Upcoming	PS7	Medium	Aloysius	3
Overdue	Winder3	Medium	JB	2

Last Updated: Apr 16, 2026 02:48

Dashboard Survey

Dashboard survey

Hi, Zion. When you submit this form, the owner will see your name and email address.

- The dashboard is easy to access and navigate []
☆☆☆☆
- The data on the dashboard is accurate and reliable []
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- The dashboard is updated frequently enough to support decisions []
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Dashboard Mock-Up

Software Platform

- Microsoft Power BI

Data Sources

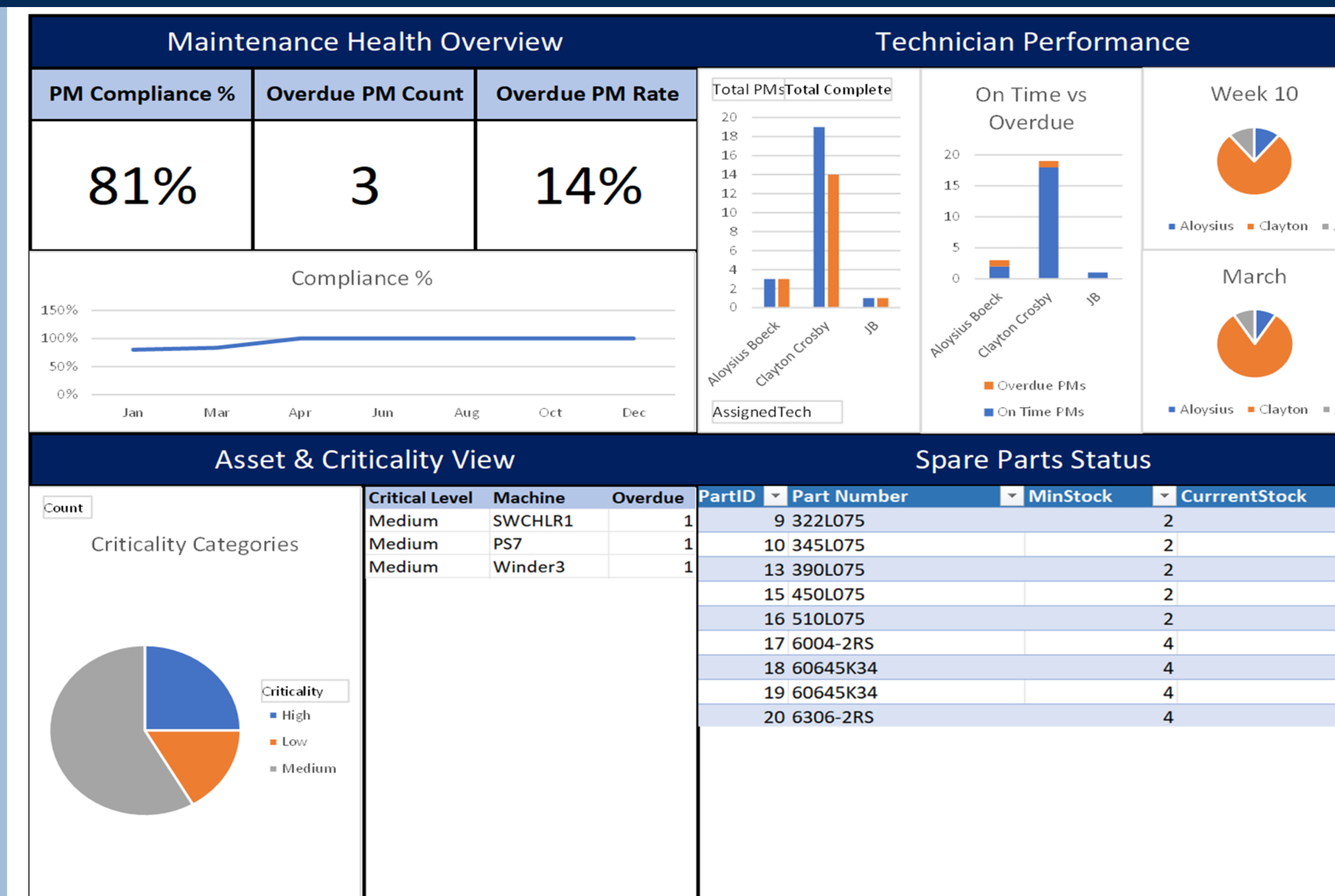
- PM logs
- Asset registry
- Spare parts inventory

Users

- Maintenance Technicians
- Supervisors
- Management

Access

- Desktop & mobile-friendly interface
- Date range filter

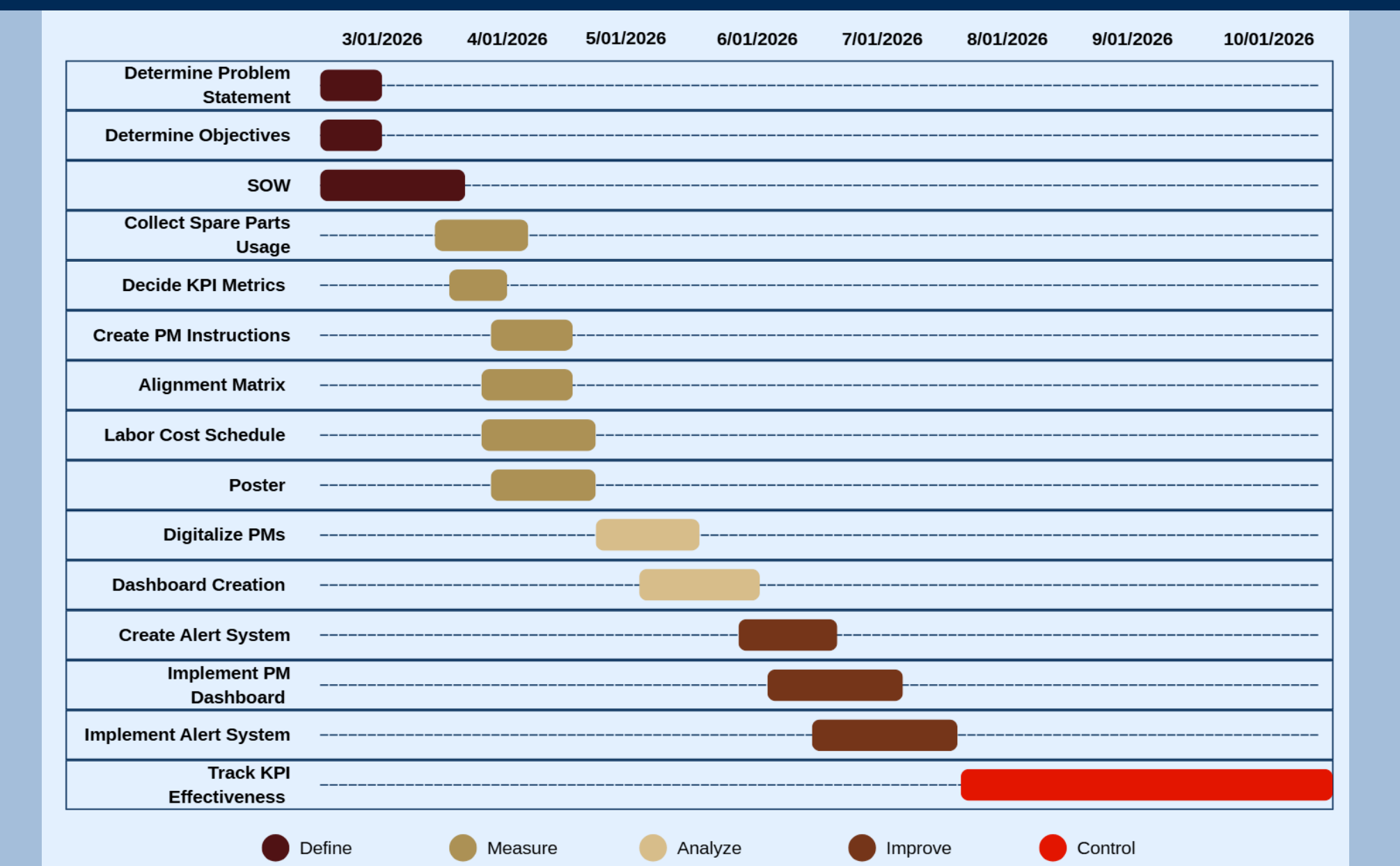


Spare Parts

Part Being Replenished	Quantity Added	Part Number	Quantity	Requested Amount	Desired Inv. LVL
35 OL	2	62463427	2	0	2
		#35-1Rx10ft Chain for Bag Lines	3	0	2
		1r450	5	0	6
		2000 S Power Unit	2	0	2
		210L075	2	0	2
		240H100	1	0	2
		270L075	3	0	2
		2M174	1	0	1
		1r450	2		
		BC115388S	20		
		BC115884S	20		
		R12 ZZ	9		
		85C1/30A	6		
		R10 ZZ	6		

- Centralized inventory of maintenance components
- Supports PM scheduling and reduces downtime
- Tracks quantity on hand and required stock levels
- Improves maintenance efficiency and planning

Gantt Chart



Team Members

