



**Df-OS**  
Digital Factory Operating System



# PM (Preventive Maintenance)

Powered by Df-OS  
(Digital Factory Operating System)





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# Project Background



Preventive Maintenance (PM) is a proactive approach designed to maintain equipment and machinery through scheduled tasks aimed at preventing breakdowns and extending asset life.

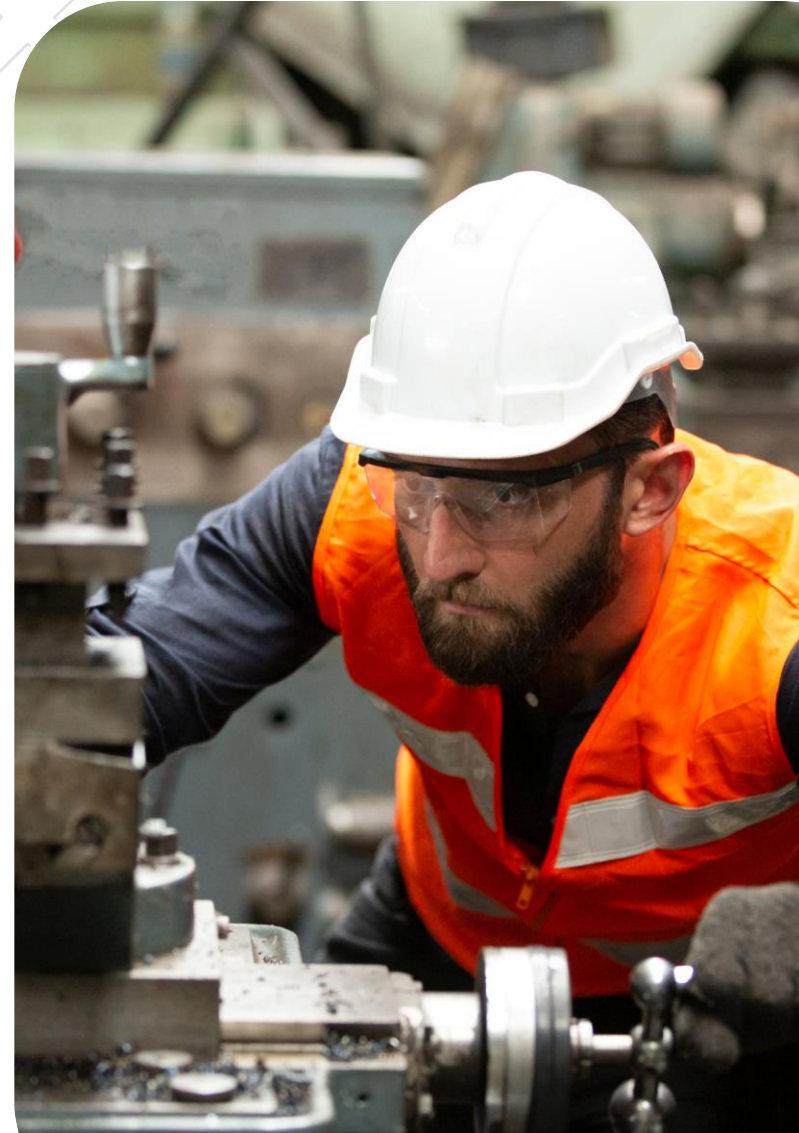
The PM process has been successfully digitized using Df-OS (Digital Factory Operating System), replacing the traditional paper-based methods. This transition has eliminated inefficiencies such as missed maintenance schedules, inaccurate records, and challenges in monitoring equipment health. By automating scheduling, task tracking, and reporting within Df-OS, the organization has significantly improved equipment uptime, maintenance efficiency, and data accuracy.



# Problem Statement

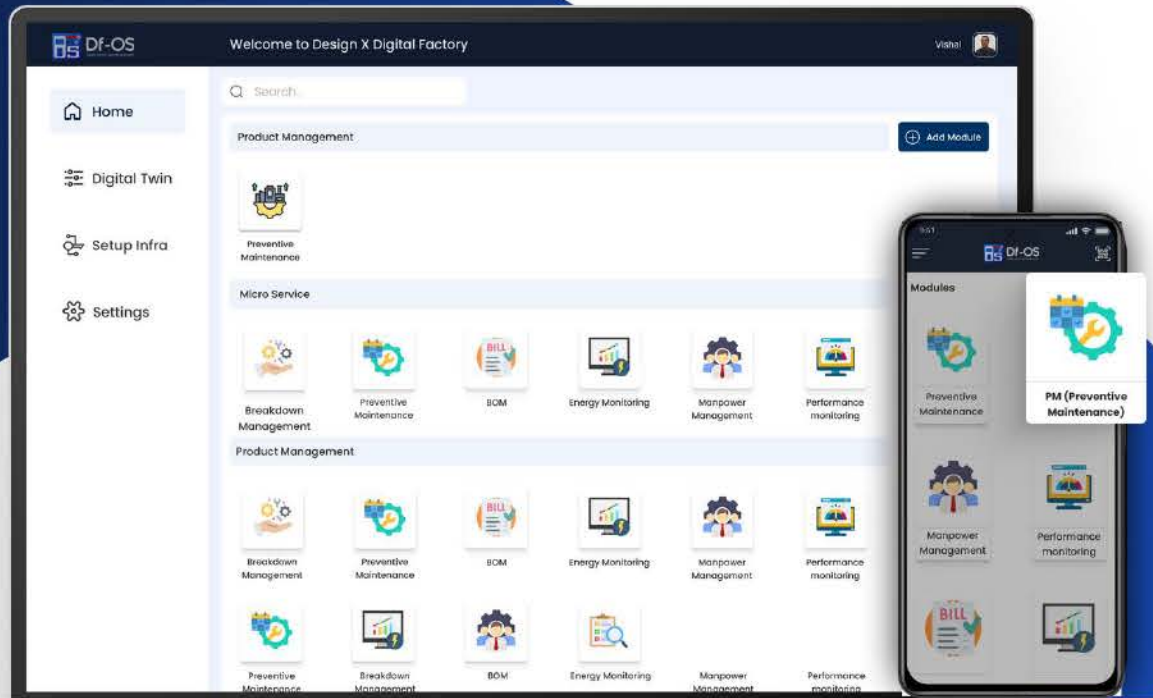
Before the implementation of Df-OS, the paper-based Preventive Maintenance system suffered from **multiple inefficiencies**, including **delayed task execution**, **missed maintenance schedules**, and **challenges in tracking equipment history**.

These issues led to **increased downtime**, higher equipment failure rates, and elevated operational costs. The absence of a centralized monitoring system hindered timely interventions and data-driven decisions regarding equipment health. With Df-OS, these challenges have been addressed, providing real-time visibility into maintenance activities.



# Proposed Solution

- **Digital Workflows:** Replace paper-based forms with digital checklists and procedures.
- **Automated Scheduling:** Set up predefined schedules for PM tasks based on their monitoring frequencies.
- **Real-Time Monitoring:** Integrate machine sensors for real-time health monitoring, automatically flagging potential issues.
- **Centralized Data Management:** Store maintenance history, logs, and reports centrally for quick access and analysis.
- **Automated Alerts & Notifications:** Notify teams of upcoming maintenance tasks or when specific thresholds are exceeded.
- **KPI Tracking & Reporting:** Track key metrics like Mean Time Between Failures (MTBF) and generate reports for performance analysis.



# Process Flow







# User Interface

15:56 PM-BU5

< October 2024 >

Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

**BU5PMF18 Rev1 CENTER LATHE C-410- (JBMI)**  
Plant : JBM BU-5 Tooling Business.  
Area : JBMI-TRD  
Machine : CENTER LATHE C-410 (JBMI-TRD)

**BU5PMF22 Rev1 HORIZONTAL BORING, DIA- 125 MM - (JBMI)**  
Plant : JBM BU-5 Tooling Business.  
Area : JBMI-TRD  
Machine : HORIZONTAL BORING, DIA- 125 MM (JBMI-TRD)

Activity Insight + Task To Me Schedule


< DF-OS

BU5PMF18 Rev1 CENTRE LATH...

**Machine Condition**

Machine Condition ⓘ

Running ▾

 **Catcher Image**  
File format : jpeg, png Recommended size : 600x600 (B)

**Electrical Panel**

Panel Door(Check For - Fully closed) - ⓘ

Activity - Inspection, Tightening  
- Check For - Fully Closed  
- Tool -Hand/Eye


OK

NOT OK


Preview Save Draft Submit

Add File

< DF-OS

**Nc Detail**  View Details


Site Neel Metal Products Ltd  
Plant JBM BU-5 TOOLING BUSINESS  
Area JBMI-TRD  
Resource CNC-103 , JYOTI VMC-1580 (JBMI-TRD)  
Machine CNC-103 , JYOTI VMC-1580 (JBMI-TRD)

**BU5PMF70A Rev3 CNC-103 , JYOTI VMC-1580 - (JBMI)**  
Submitted By :Rajesh Kumar  View Form  
Question Temperature Controller (Check For ~25~32 C)

**Remark** Not Working  
**Task Remark** ac unit new install and alter ok running  
**Task Status** Complete  
**Task Responsibility** Prakash Chandra  
**Task Assigned By** Drigpal  
**Task Completion Date** 2024-04-29  
**NC Approval Status** Approved  
**NC Approval By** Dipty Singh

< DF-OS

**Audit Approval Detail**

**BU5PMF70A Rev3 CNC-103 , JYOTI VMC-1580 - (JBMI)**  
PM Done By : Piyush Sharma  View Form  
PM Done Date 04 October, 2024 | 11:20 Am

**BU5PMF70A Rev0 SHEARING MACHINE - (JBMI)**  
**Audited By** Piyush Sharma  
**Audit Date** 04 October, 2024 | 11:20 Am  
**Approval By** Approved  
**Approval Date** 2024-10-04  
**Approval Remark**

# Key Results



**Reduction in equipment downtime:** Improved tracking and timely interventions through Df-OS have led to fewer equipment breakdowns.



**Improvement in maintenance task completion:** Automated scheduling and reminders via Df-OS have significantly increased the percentage of on-time task completions.



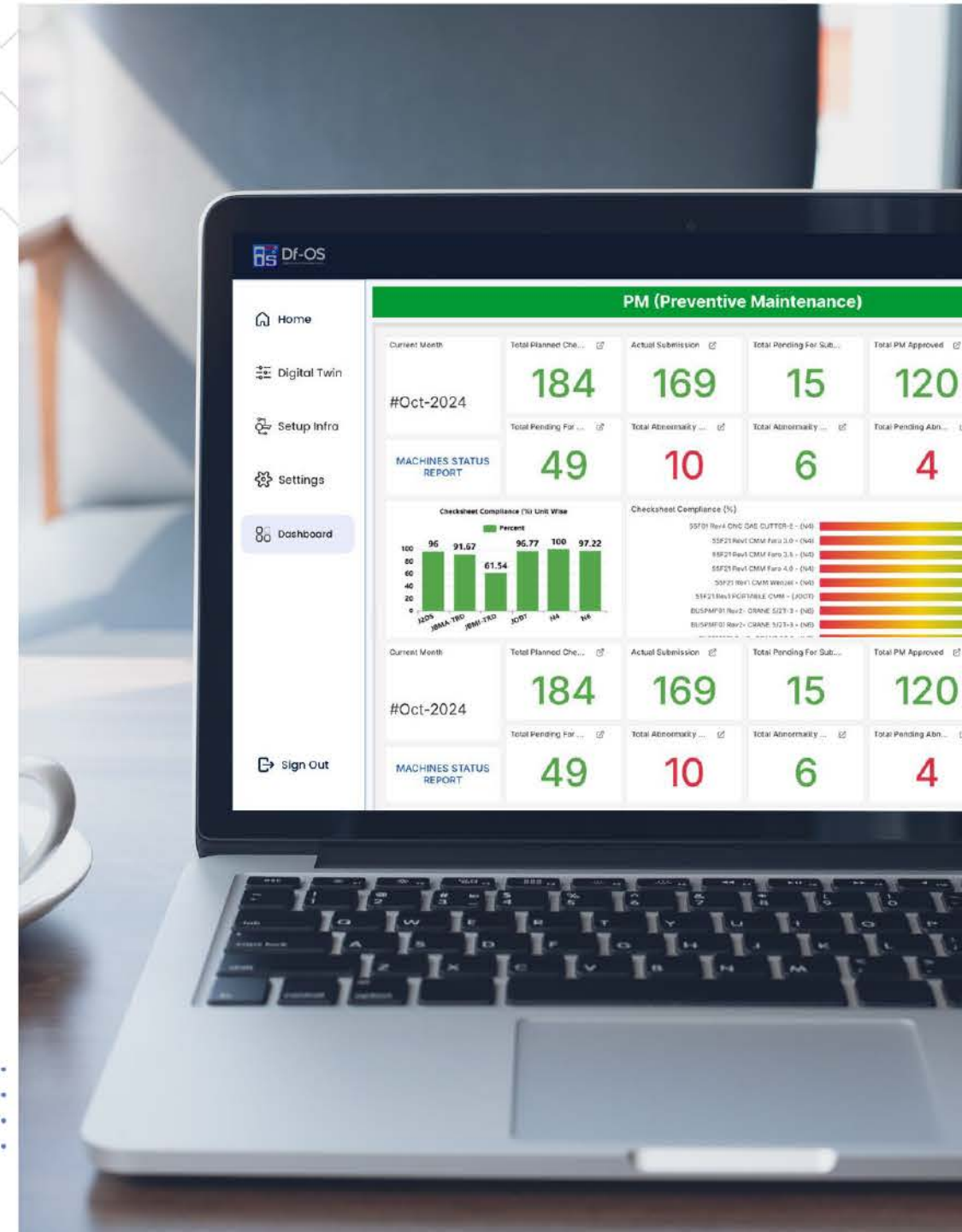
**Real-time visibility:** Maintenance managers now gain real-time insights into ongoing activities, enhancing accountability and reducing delays.



**Enhanced equipment lifespan:** Regular and timely maintenance facilitated by Df-OS has extended equipment life, reducing the need for costly replacements.



**Data accuracy improved:** Digital logging of maintenance activities within Df-OS has eliminated manual entry errors, ensuring accurate historical records.





# Benefits



**Improved operational efficiency**



**Reduced unplanned downtime**



**Real-time data monitoring**



**Better decision-making**



**Increased equipment reliability**



**Seamless remote platform accessibility**

# Contact Us

Unlock the transformative potential of Df-OS for your factories and operations. Connect with us today via phone, email, or LinkedIn to learn more!



<https://dfos.ai>



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<https://www.linkedin.com/company/dfos/>

