



## Digital Factory Operating System (DF-OS)

Despite factories generating millions of data points, the accessibility of only 1% of this data available for decision making puts a significant challenges on the path to digital transformation, ultimately hindering their evolution into lighthouse factories.



Digital Factory Operating System (Df-OS)

## About DesignX

DesignX is revolutionizing the manufacturing industry by digitizing processes to enhance productivity, safety, and quality. Our SaaS solution empowers the deskless workforce, addressing the critical need for digitalization in shop floor operations. With a focus on the manufacturing sector, where 80% of the workforce operates in the field, DesignX bridges the gap between deskless and deskbound employees, who leverage advanced technologies and enterprise software to optimize their tasks.



<https://designx.in/>



info@designx.in



+91 8595770364



<https://www.linkedin.com/company/nrv-designx/>

**Established:** October 2015

**Offices:** India (Noida, Dehradun, Ahmedabad)

**Team Strength:** 100+

**Technology**



{ JavaScript }

**Support :**



**Establishment Type :** Pvt. Ltd.

**Countries Covered:** 14

**Projects Done:** 1000+

**Domain:** Operation Digitization powered with AI, ML & IOT

**Industry Segment:** B2B



Digital Factory Operating System (Df-OS)

# What is a Lighthouse Factory?



Lighthouse factories represent the forefront of manufacturing, celebrated for their innovative application of Fourth Industrial Revolution (4IR) technologies.

These factories seamlessly adopt digitization, IIoT, Big Data, and other technologies to boost their operational efficiency and speed, while at the same time connecting their frontline workers with the mainstream and upgrading their skills. These lighthouse factories will enhance the transparency in the data and provide better financial insights related to the data.

## World Economic Forum on Lighthouse factories



**Transformative Role in 4IR:** Lighthouse factories use AI and IoT to enhance financial transparency by providing clear insights into operational costs, resource utilization, and financial performance.

**Innovation and Productivity:** As part of the Global Lighthouse Network, these factories drive significant improvements in efficiency and sustainability.

**Models for Upskilling and Sustainability:** They lead the way in workforce development and environmental responsibility.



**Inspiration for Global Adoption:** Lighthouse factories serve as benchmarks, encouraging industries worldwide to embrace smart technologies for future success.



Digital Factory Operating System (Df-OS)



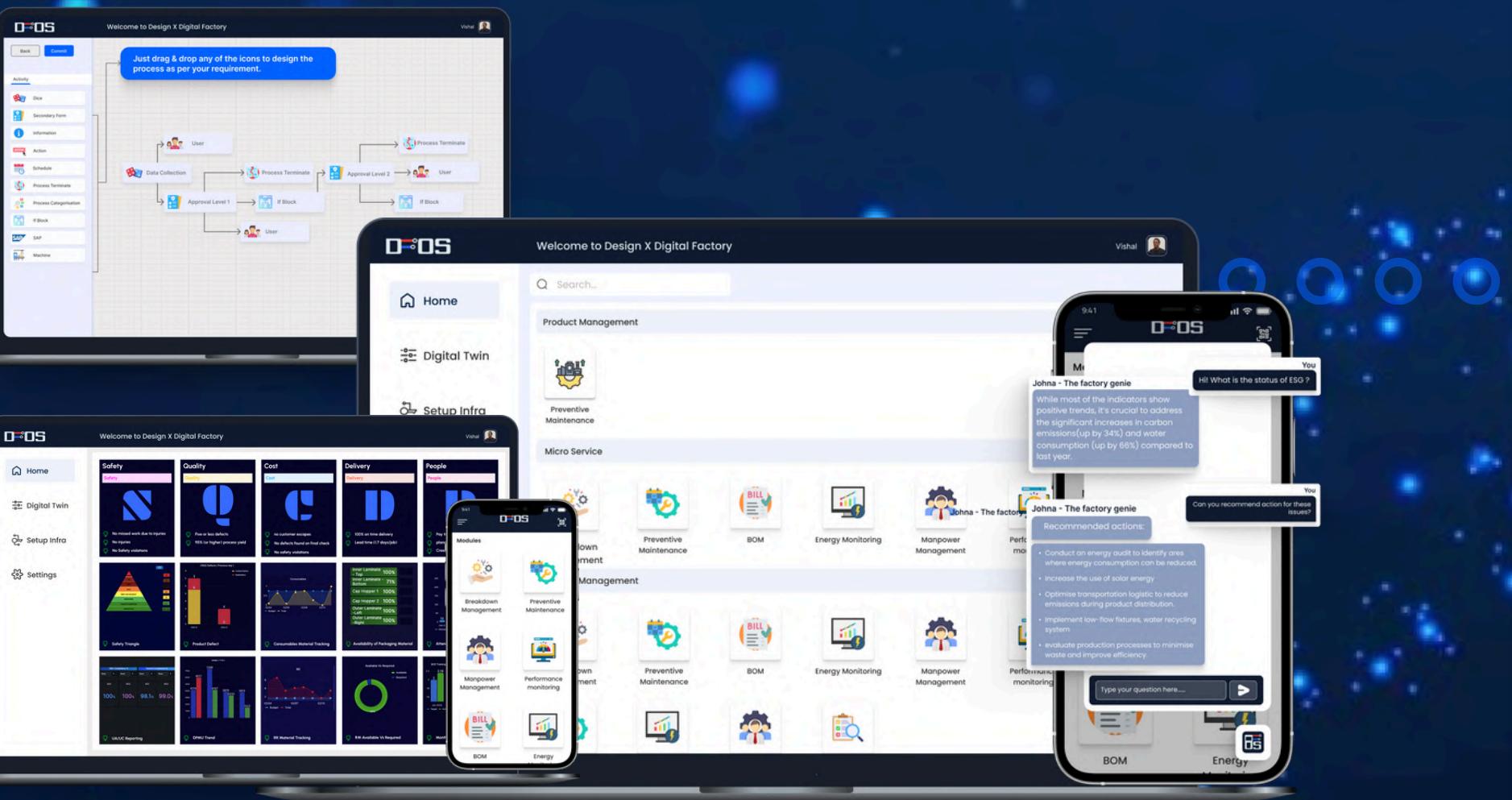
The \$2.1 trillion invested annually in automation may not fully address some of the core challenges that are inherently originated from human centric processes.

70-80% of process optimization comes from improving processes at granular level.

Upskilling employees on process driven approach could unlock up to \$2.5 trillion in additional economic output.

Frontline workers empowered to manage the process at optimal level and without surprises.

# Df-OS your Factory co-pilot



**Unified data:** Get all your data in a single environment to be accessed from a vantage point aka **Lighthouse factory**.



**SQDCP:** Focuses on overall health of factory. Drives continuous improvement in **Safety Quality Delivery Cost & People**



**Lightspeed:** Cut down time to floor for a new initiative by **1/12**.

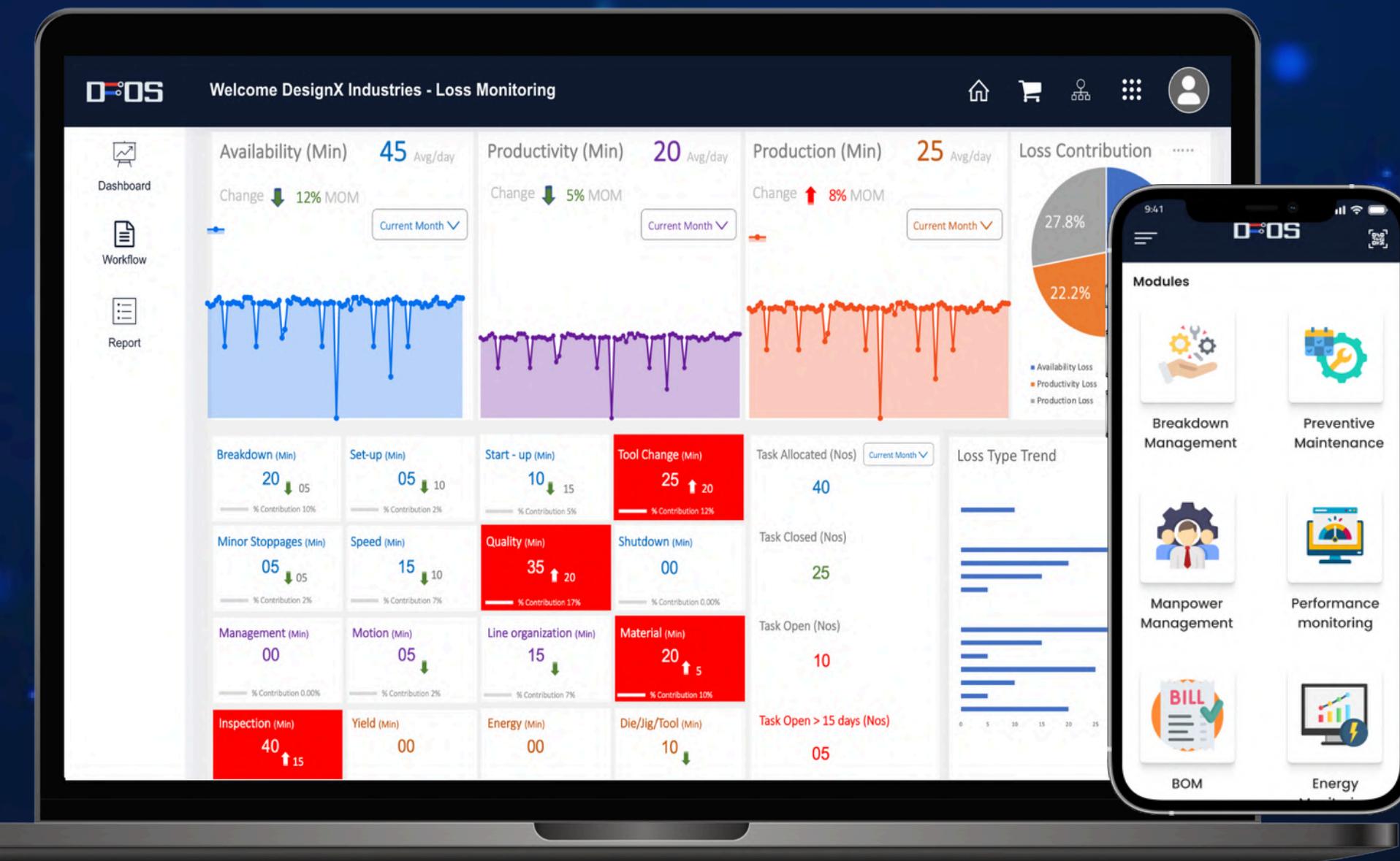


**Economy of scale:** Being a single platform for 600+ factory use cases. It allows you to do transformation at scale benefiting you with economy of scale.



Digital Factory Operating System (Df-OS)

# Df-OS Salient Features



- **DIY Platform:** Design your processes by yourself.
- **Real-Time Analytics:** Access real-time analytics through dashboards and reports
- **Unlimited User Accounts:** No capping on user creation in the Df-OS platform.
- **Scalability:** Easily scalable for other processes.



Digital Factory Operating System (Df-OS)



Oracle ERP



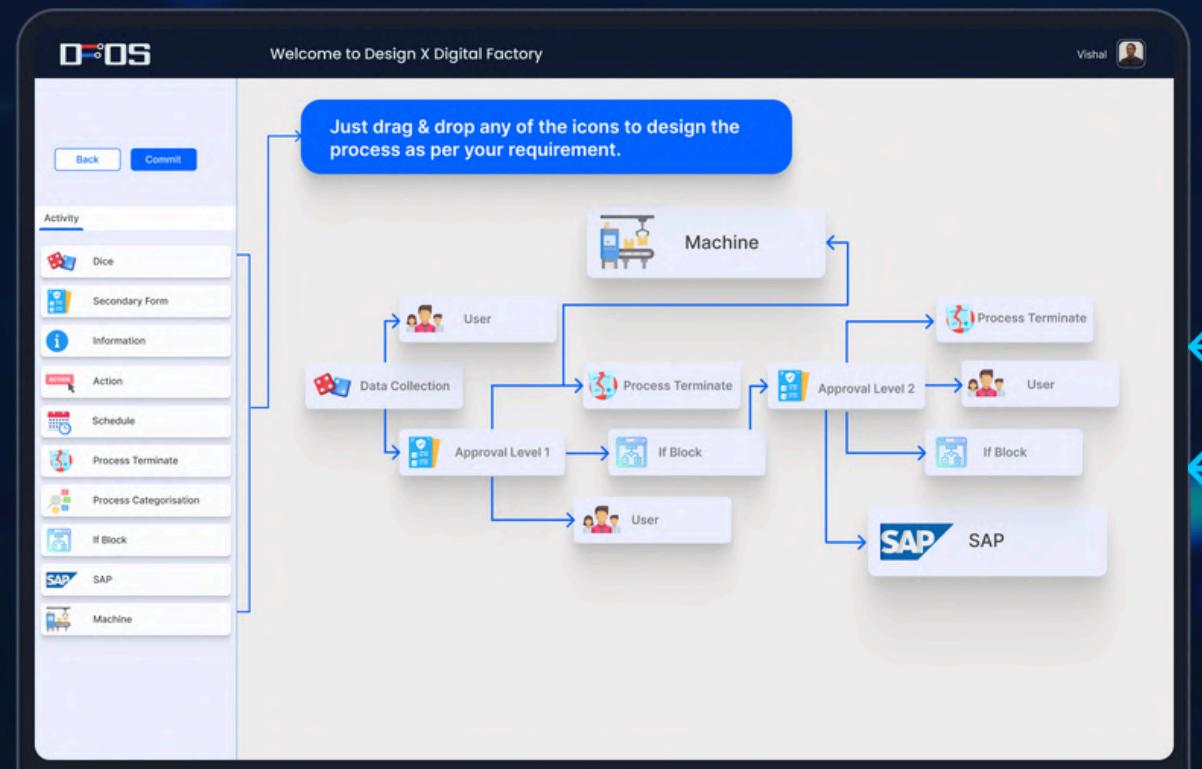
odoo odoo erp



Microsoft Dynamics 365



SAP SAP Business One



No disruption in your existing setup. Df-OS can connect with almost every software and hardware.



Digital Factory Operating System (Df-OS)



# Future of Work

As soon as the workflow is designed and configured, you are ready to use the **Df-OS** App, and your digital transformation journey begins.

- Real-time data access for immediate insights into machine performance
- Mobile integration allows production monitoring from anywhere
- Wearables enhance safety, training, and productivity
- Empowering frontline workers boosts decision-making and productivity



Digital Factory Operating System (Df-OS)

# Data Analytics



Ask the health of your process from our Factory Genie - Johna, the intelligent chatbot which can provide you the data you ask for in less than a minute.

Df-OS provides you with a built-in dashboard and reports to monitor the output of the process in real time and assign actionables among the CFT.

Home

Digital Twin

Setup Infra

Settings

Welcome to Design X Digital Factory

Search...

Product Management

Preventive Maintenance

Breakdown Management

BOM

Energy Monitoring

Johna - The factory genie

Hi there! How can I help?

Hi! What is the status of ESG?

While most of the indicators show positive trends, it's crucial to address the significant increases in carbon emissions (up by 34%) and water consumption (up by 66%) compared to last year.

Johna - The factory genie - Just now

Can you recommend action for these issues?

Recommended actions:

Type a reply...



Digital Factory Operating System (Df-OS)

# DFOS Factory Pro Suite

Production	Quality	Safety	Maintenance	Utility	HR
<ul style="list-style-type: none"> <li>• 1. Production Logbook</li> <li>• 2. Production Planning</li> <li>• 3. Performance Monitoring</li> <li>• 4. Trial Record</li> <li>• 5. Shift Scheduling</li> <li>• 6. Material Requisition</li> <li>• 7. Batch Tracking</li> <li>• 8. Waste Management</li> <li>• 9. Downtime Analysis</li> <li>• 10. Order Fulfillment Tracking</li> </ul>	<ul style="list-style-type: none"> <li>• 11. Pre-Delivery Inspection (PDI)</li> <li>• 12. GAMBA Audits</li> <li>• 13. Daily Machine Check</li> <li>• 14. 5S Audits</li> <li>• 15. In-Process Inspection</li> <li>• 16. Poka Yoke Check</li> <li>• 17. Batch Recipe Creation</li> <li>• 18. Supplier Audits</li> <li>• 19. First Piece Inspection</li> <li>• 20. SPC Analysis</li> </ul>	<ul style="list-style-type: none"> <li>• 21. Hazard Reporting</li> <li>• 22. Visitor Management</li> <li>• 23. Incident Reporting</li> <li>• 24. HIRA (Hazard Identification and Risk Assessment)</li> <li>• 25. Work Permit Management</li> <li>• 26. OHSAS Compliance</li> <li>• 27. Unsafe Act/Unsafe Condition (UA/UC) Reporting</li> <li>• 28. Fire Safety Drill Tracking</li> <li>• 29. PPE Monitoring</li> <li>• 30. Emergency Response Plan</li> </ul>	<ul style="list-style-type: none"> <li>• 31. Breakdown Management</li> <li>• 32. Preventive Maintenance</li> <li>• 33. JH Tags (Job Hazard Tags)</li> <li>• 34. Machine Spare Part Monitoring</li> <li>• 35. Asset Tracking</li> <li>• 36. Work Order Management</li> <li>• 37. Calibration Tracking</li> <li>• 38. Lubrication Management</li> <li>• 39. Energy Consumption Monitoring</li> <li>• 40. Service Level Agreement (SLA) Monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• 41. ETP (Effluent Treatment Plant) Logbook</li> <li>• 42. Water Usage Monitoring</li> <li>• 43. Electricity Logbook</li> <li>• 44. Scrap Logbook</li> <li>• 45. Scrap Movement Monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• 46. Employee Suggestion Program</li> <li>• 47. Security Guard Audit</li> <li>• 48. Attendance &amp; Shift Management</li> <li>• 49. Training &amp; Certification Tracking</li> <li>• 50. Accident/Incident Reporting</li> </ul>

## Logistics & Supply Chain

- 51. Supplier Performance Monitoring
- 52. Warehouse Inventory Auditing
- 53. Cold Chain Monitoring
- 54. Transportation Logbook
- 55. Supply Chain Risk Assessment
- 56. Vendor Qualification
- 57. Goods Received Inspection (GRN)
- 58. Order Accuracy Checks
- 59. Outbound Logistics Monitoring
- 60. Delivery Performance Tracking
- 61. Distribution Route Optimization

ESG

# Approach toward Digital Transformation

## Traditional & Unefficient Way

### High Risk

- All-or-Nothing
- Delayed Value



## Low Risk

- Gradual Growth
- Immediate Value

### Move from Paper to Digital

1. Digitise your existing logbooks, excels & other manual formats.
2. Acquire all the data digitally and store at one place.
3. Connect all the front line workers in digital workspace.
4. Start the Digital Culture in your factory.
5. Monitor your with Factory Control Tower

15 Days

### Df-OS Recommended Approach

### IIoT Systems

6. Connect your machines with Df-OS.
7. Data directly retrieved from the machine.
8. Implement process level interlocks.
9. Move into predictive analysis.

90 Days

### Factory Metaverse

10. End to end traceability of produced goods.
11. Digital Twin

180 Days

Entire Digital Transformation of the Factory will be done in just 285 Days.



Digital Factory Operating System (Df-OS)

# Df-OS Clientele

FMCG



Automotive



200+

Others



1000+ Processes Digitized



500+ Factory Presence



1400+ Machines Connected



405+ Customers Catered



Digital Factory Operating System (Df-OS)

# The Vision & Guidance

## Leadership Team

**Rajat Srivastav**

CEO & Founder



**Nishant Srivastav**

CTO & Founder



**Parveen Sethi**

VP - Sales & Marketing



**Tarun Sharma**

Chief Operating Officer



**Sachin Pandey**

Manager DevOps



**Shubham Kumar**

Product Manager



## Strategic Advisors

**Jasbir Singh**

Director at Amber Enterprises



**Nilay Shah**

CEO | Varmora Tiles Bathware



**Sanjeev Kathpalia**

Co-Founder @ VitalProbe.Inc



**Prakash Iyer**

CIO Haldiram



Digital Factory Operating System (Df-OS)

# Lighthouse - FMCG Industry

## Challenges

Heavy operational activities generate substantial transactional data across various pillars, including production, safety, quality, and others. It becomes challenging to consolidate this data in one place to address bottlenecks, extract actionable insights, and ensure government compliance, such as:

1. Balancing Production Monitoring and tracking of EGA.
2. Ensuring consistent Quality Standards amid Rapid Production Cycles.
3. Upholding compliance with PPE Protocols for Blue-Collar workers' safety.
4. Navigating Supply Chain disruptions.

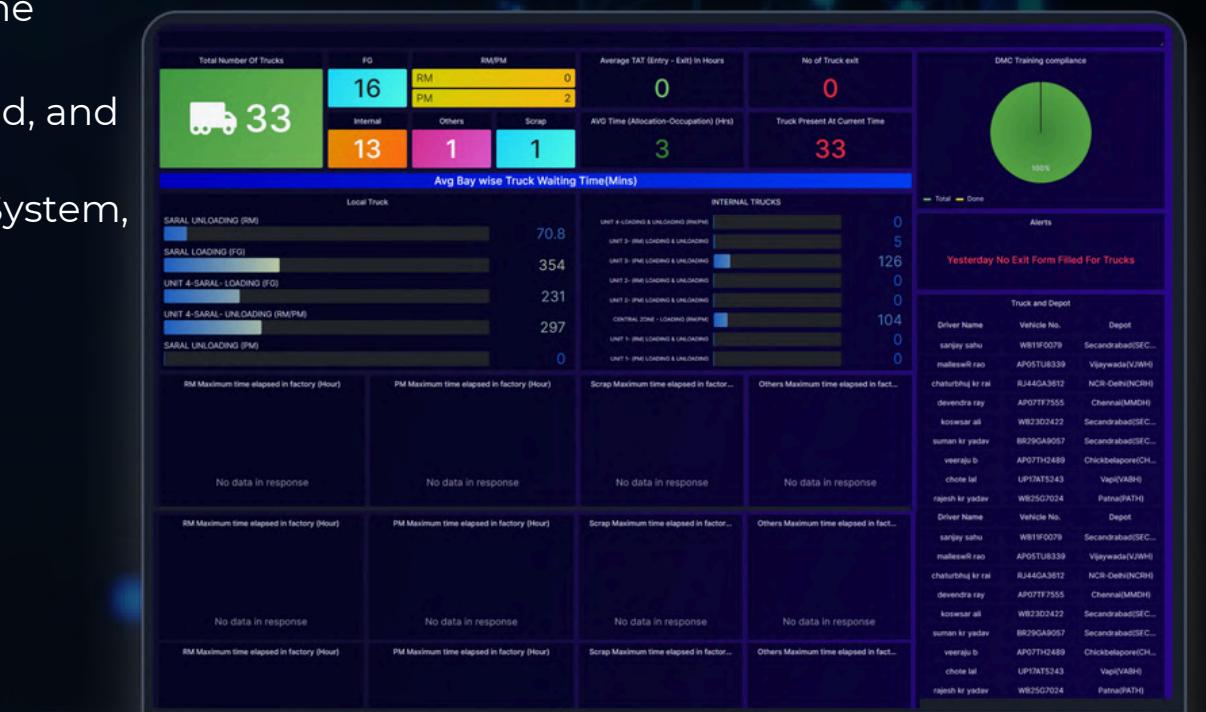


\*Disclaimer- This is not a stock image

## Solution

**Df-OS Solution:** It streamlined data captured by digitizing logbooks, spreadsheets, and other formats, along with direct data collection from machines. It ensures comprehensive insights at every level.

- **Production:** Df-OS provided real-time data analytics that uncovers inefficiencies.
- **Quality:** It detected defects through digital logs, conducts RCA, and identifies pattern trends.
- **Safety:** Df-OS automated safety documentation, used IoT sensors for real-time monitoring, and provided the alerts for safety breaches.
- **Supply Chain:** Tracking real-time data and predictive analytics, Df-OS checked inventory, forecasts demand, and integrates Risk Management.
- **Focused Area:** Inspection at Shop Floors, Quality Process Audits, Safety KPIs Tracking, Truck Management System, RM-PM Pull



## Benefits

- Real-time tracking of EGA, and provides interlock in overshooting the limit.
- Seamless integration along all six departments.
- Roll out done for all 4 plants at one site.
- Improved overall operational efficiency.
- Reduction in machine downtime by 15%.
- Overall improvement in TAT of open tasks.



Digital Factory Operating System (Df-OS)

# Lighthouse - Consumer Electronics

## Challenges

A leading consumer electronics manufacturer faced significant hurdles due to scattered data, which negatively impacted production line efficiency, workplace safety, and product quality. The disjointed information posed significant challenges in decision-making and operational effectiveness. Such challenges include:

- Tracking of production plan vs. actual, especially in peak seasons of demand.
- End-to-end product traceability.
- Quality control of brought-out parts.
- Machine breakdown and downtime tracking.
- Tracking of Sustainability Data.



**Df-OS Solution:** It streamlines data captured by digitizing logbooks, spreadsheets, and other formats, along with direct data collection from machines.

## Solution

- **Production:** Df-OS provides monitoring of plan vs actual compliances & OEE of the production lines in real-time.
- **Quality:** All the Brought Out Parts goes under SPC analysis through Df-OS created SPC module.
- **Sustainability:** Recording of the ESG data on monthly basis and tracking the important indicators in real time.
- **Supply Chain:** Monitoring of all the consumables spares in on click and at the same time maintaining FIFO while issuance of the spares from store.

Spare Part Status									
Spare Parts (No's)			Surplus Spare Parts (No's)			Spare Parts Below Minimum (No's)			
252			13			5			
Search ALL									
Product Name	Specification	Model Number	Minimum Quantity	Maximum Quantity	Rack_Location	Available_Quantity	Status	Status Days	
TIMER SELEC	TIMER	SELEC	2	5	RACK A1	3	OK	52	
TIMER FUZI	TIMER	FUZI	2	10	RACK A2	5	OK	35	
TIMER PARAGON 24	TIMER	PARAGON 24	1	3	RACK A3	1	OK	33	
TIMER PARAGON 23	TIMER	PARAGON 23	1	3	RACK A4	1	OK	32	
INDICTOR 24 DC	INDICTOR	24 DC	10	20	RACK A5	20	OK	32	
INDICTOR 48 VDC	INDICTOR	48 VDC	4	10	RACK A6	9	OK	32	
BULB HOLDER	BULB	HOLDER	2	10	RACK A7	3	OK	32	
3 pin Top	Anchor 16 Amp		5	10	RACK A8	7	OK	32	
TIG WELDING TORCH	TIG WELDING	TORCH	1	1	RACK A9	1	OK	32	
PRESSURE GUAGE	PRESSURE	GUAGE	4	12	RACK A10	11	OK	32	
DPM METER	DPM	METER	2	5	RACK A11	5	OK	32	
TIMER PARAGON 24	TIMER	PARAGON 24	1	3	RACK A3	1	OK	32	
TIMER PARAGON 23	TIMER	PARAGON 23	1	3	RACK A4	1	OK	32	
INDICTOR 24 DC	INDICTOR	24 DC	10	20	RACK A5	20	OK	32	
INDICTOR 48 VDC	INDICTOR	48 VDC	4	10	RACK A6	9	OK	32	
BULB HOLDER	BULB	HOLDER	2	10	RACK A7	3	OK	32	
3 pin Top	Anchor 16 Amp		5	10	RACK A8	7	OK	32	
TIG WELDING TORCH	TIG WELDING	TORCH	1	1	RACK A9	1	OK	32	
PRESSURE GUAGE	PRESSURE	GUAGE	4	12	RACK A10	11	OK	32	
DPM METER	DPM	METER	2	5	RACK A11	5	OK	32	

## Value Deliverables

- Getting real time production compliances helps to plan the production plan in advance to achieve the target.
- Analysis over quality aspects of Brought Out Parts assist in ensuring the quality standards of the products as well as submitting reports to supplier to improving the quality.
- Accelerated Turnaround Times (TAT) for Faster Response to Production Demands
- Seamless integration across six departments.
- Quick roll out across four factories.



Digital Factory Operating System (Df-OS)