



# Use Case

## Production Monitoring System (OEE)

*With*

Digital Factory Operating System  
(DFOS™)



**1****Data is delayed by 24 Hrs.**

MIS reports and minor exceptions are made for n-1 day using conventional non IoT based system.

**2****Remote monitoring of critical parameters not available.**

For monitoring and analysis of critical parameters Gemba is always done which also results in delayed action on process optimization.

**3****Many modalities used for communication of exceptions.**

Connectivity of communication within shop floor & support functions is done using various modalities like WhatsApp, Email, Paper based tickets etc.

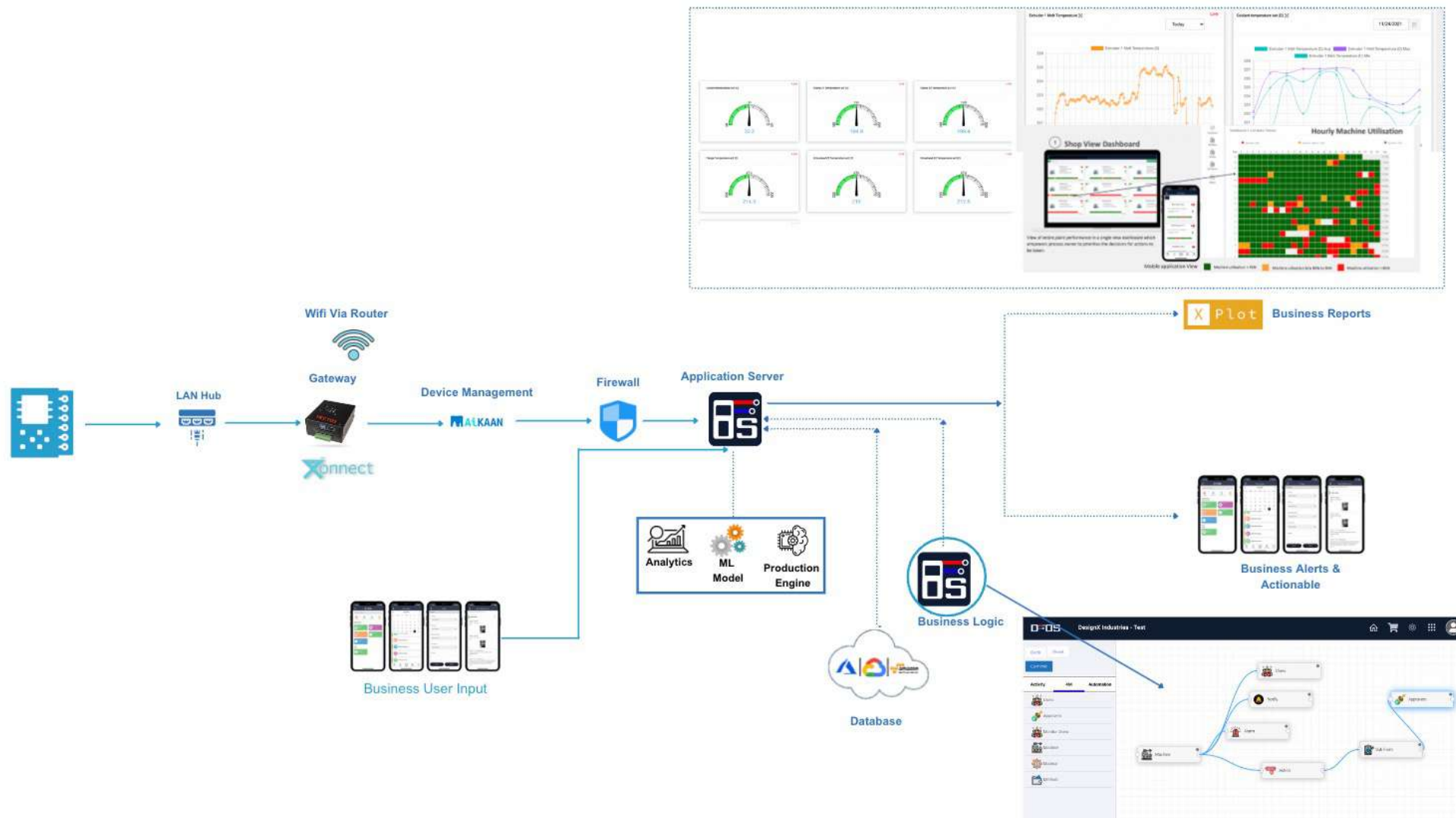
**4****Performance Data Traceability & Impact of actions taken not visible.**

Limited BI functionalities to track and trace performance data on real time basis and visible impact of actions taken is not evident.



Challenge

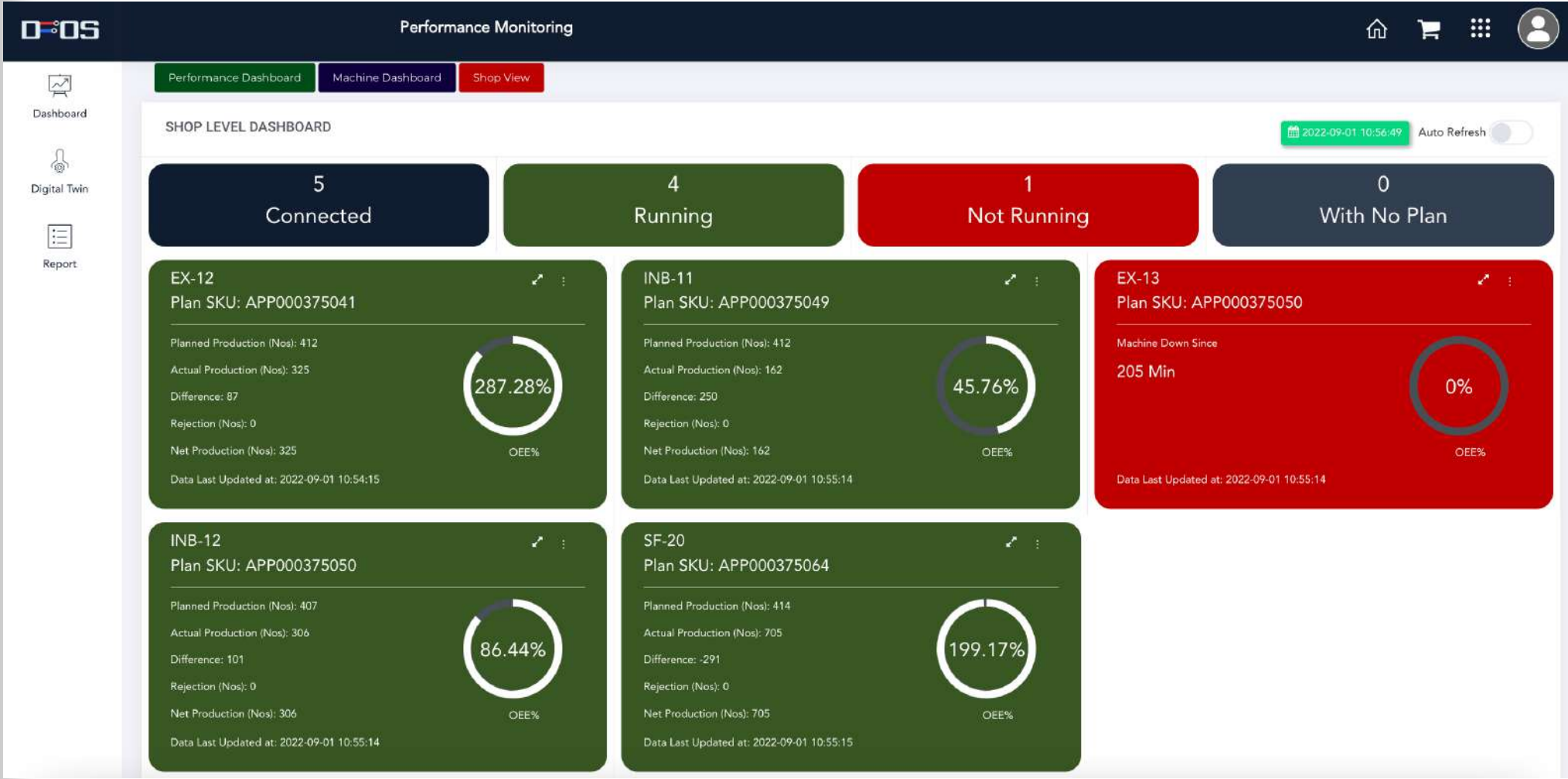
## Solution Architecture



Solution

Challenge

# Shop level Dashboard View

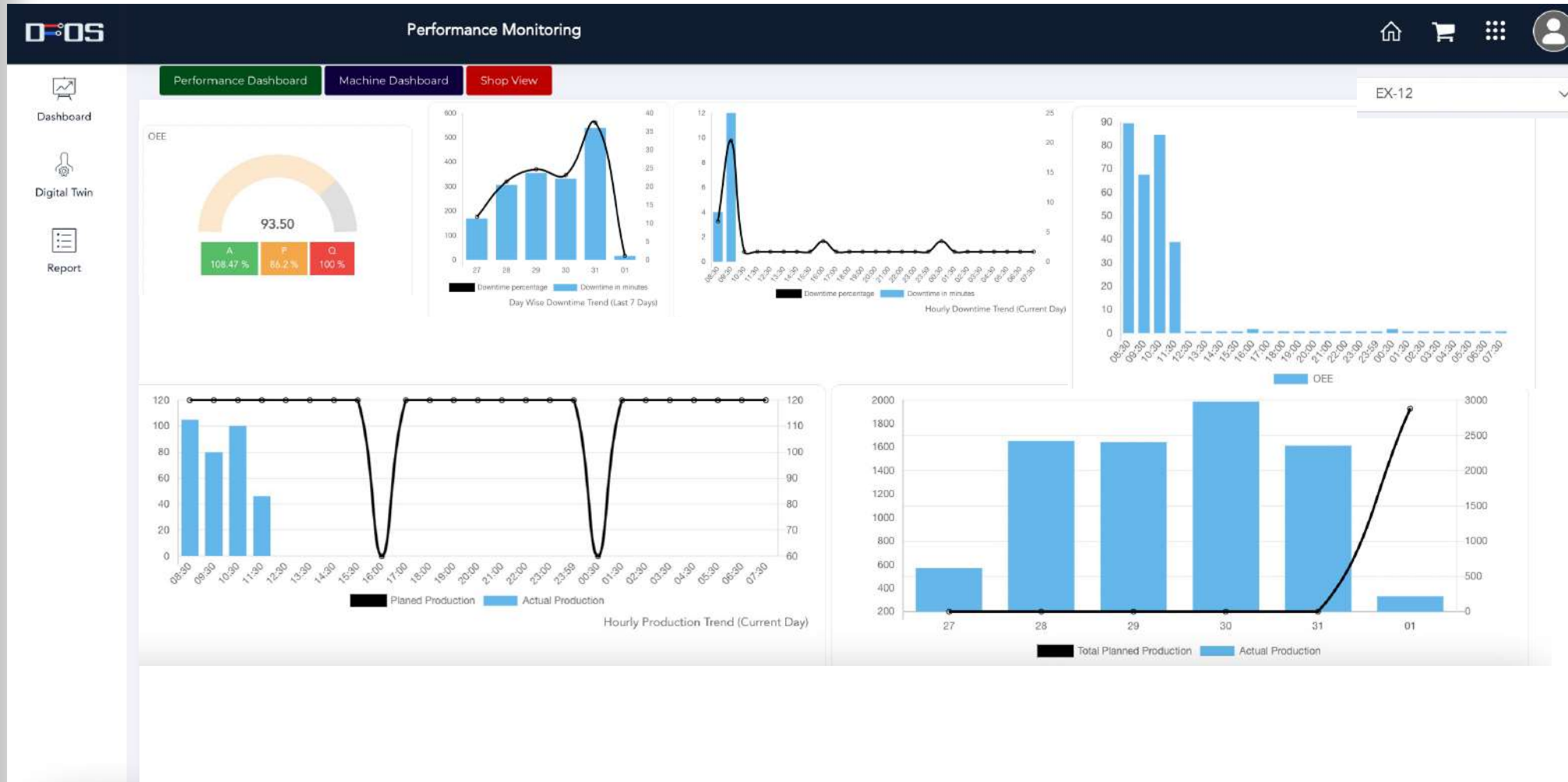


Wireframes

Solution

Challenge

# Live Dashboard – Machine Level



Wireframes

Solution

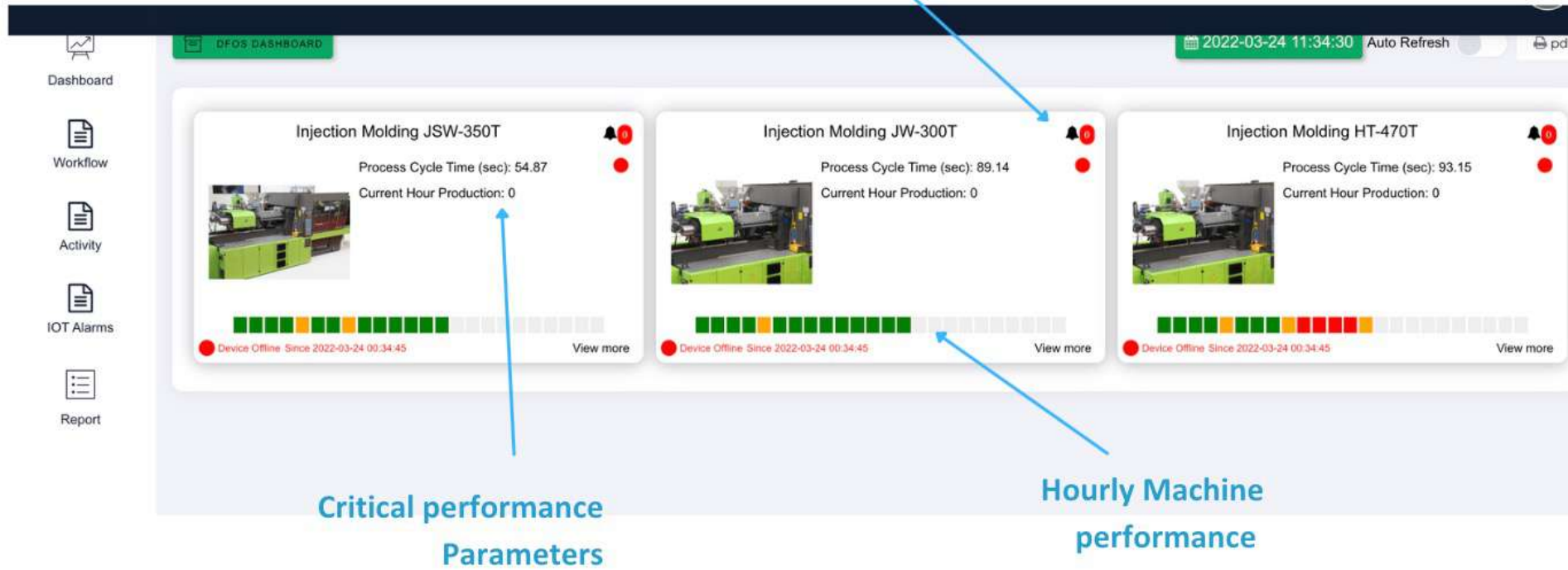
Challenge

<https://www.designx.in>

Results

# IIoT Live Dashboard for Process Parameters

Number of Business actionable assigned

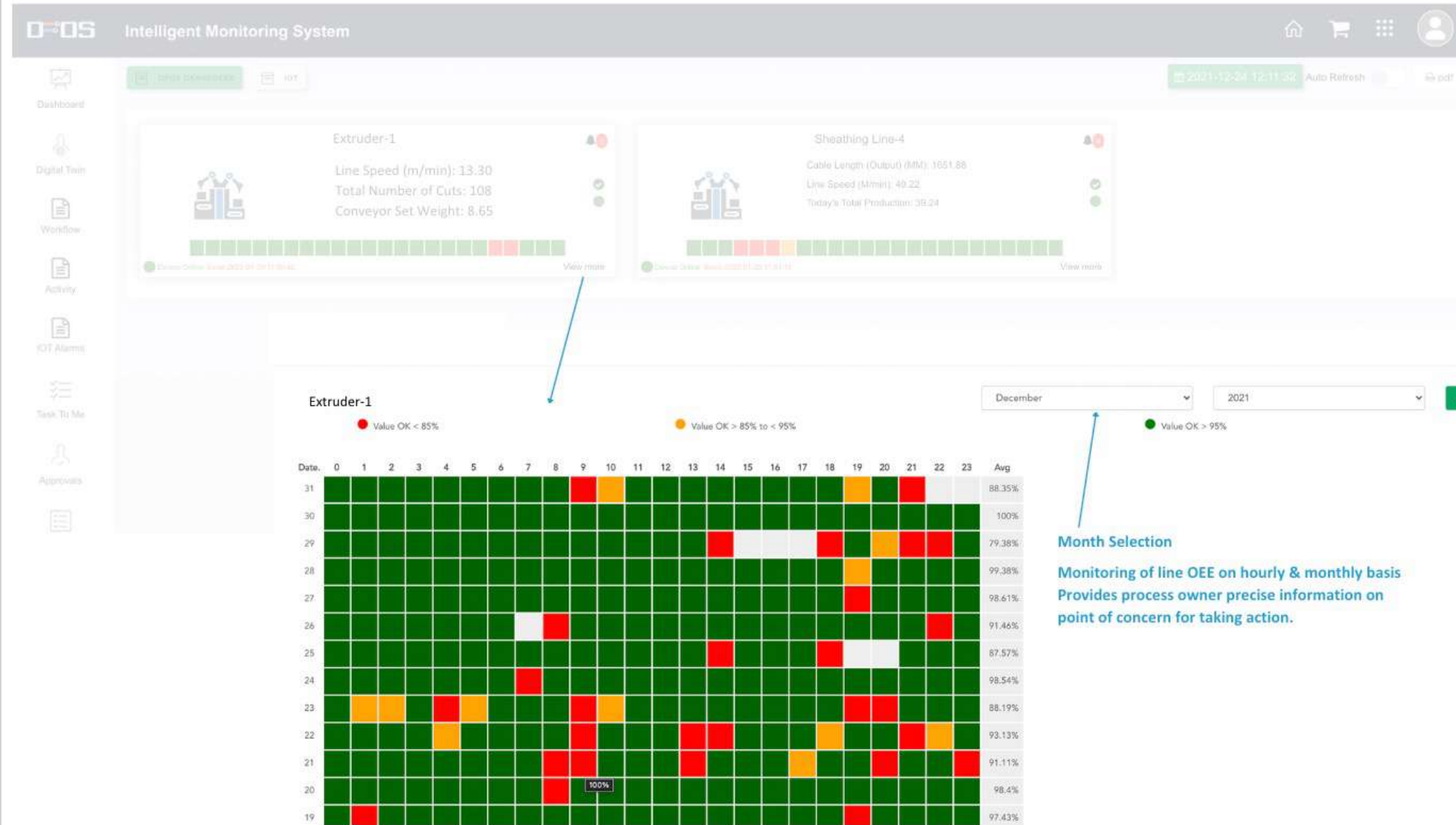


Wireframes

Solution

Challenge

# IIoT Live Dashboard for Process Parameters



Wireframes

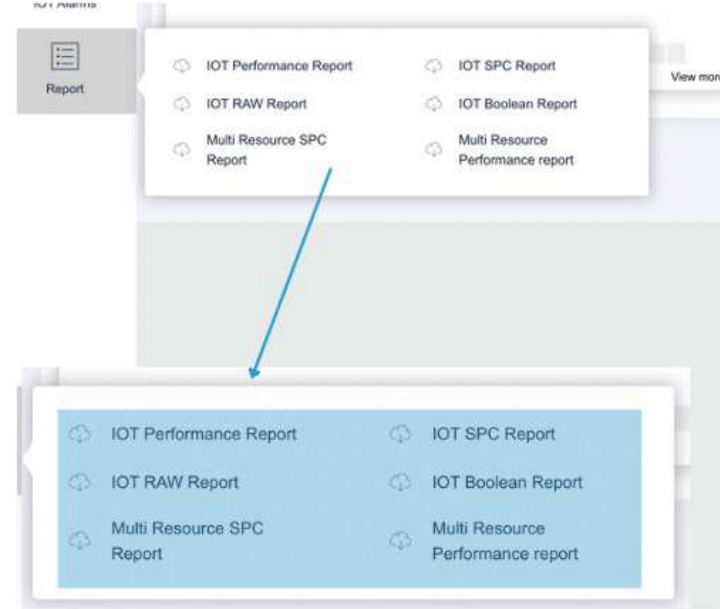
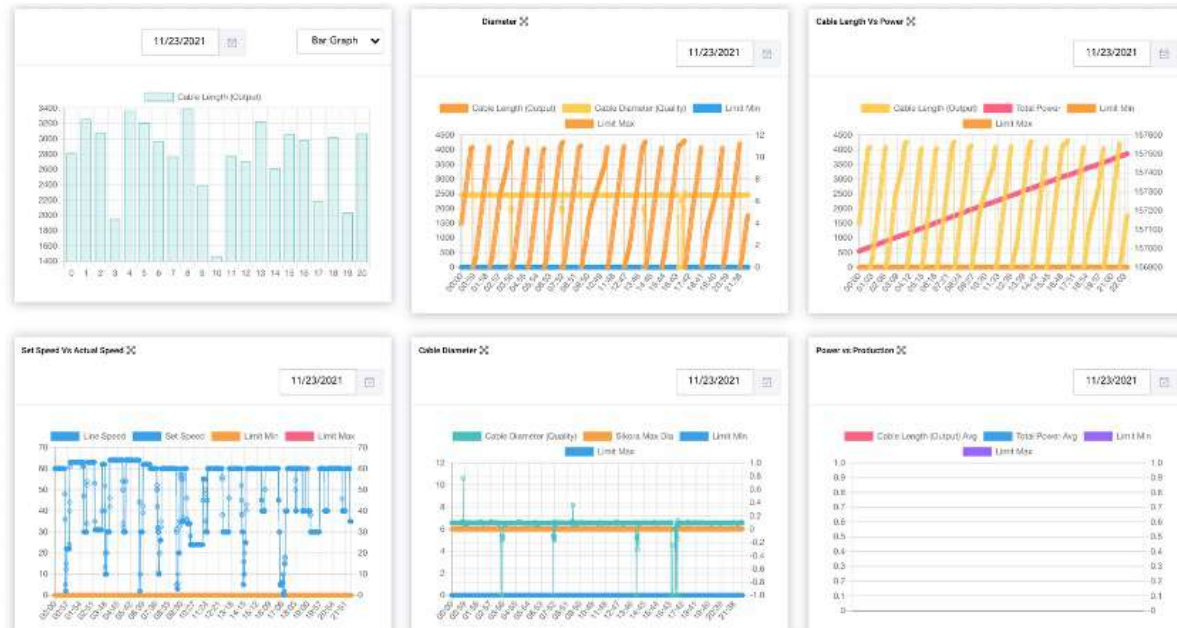
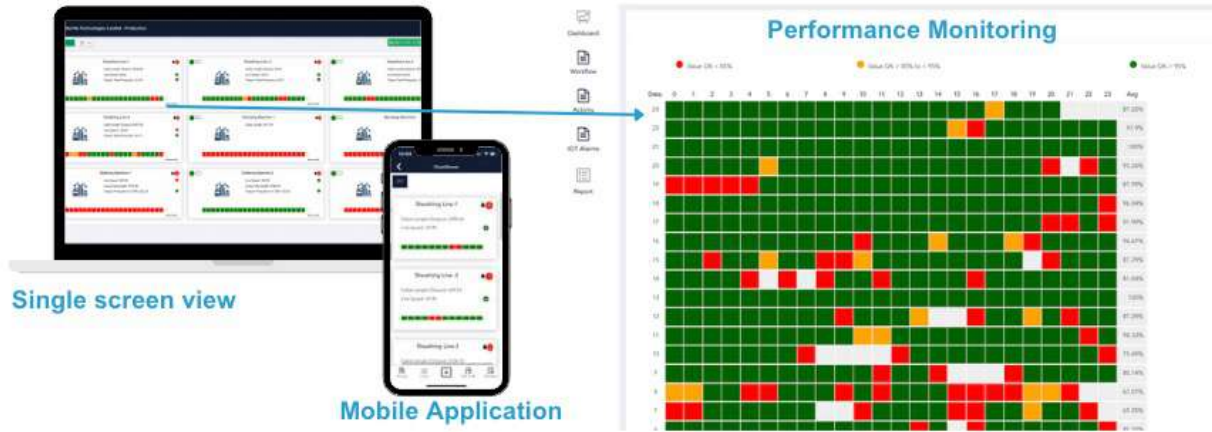
Solution

Challenge

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# IIoT Live Dashboard for Process Parameters

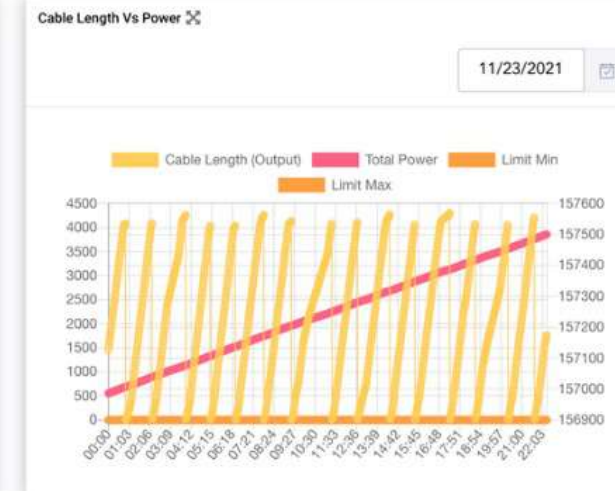


Wireframes

Solution

Challenge





Power consumption

3 Process discovery via drag & drop functionality for process elements for assigning actionable and mapping of dynamic alerts/notifications which ensures alerting process owner when machine utilisation is dropping.



Sheathing-4 Stop >> Line Speed

4 Configuring the alert/notification condition

Alarm Type \* Aggregate Trigger Condition \* = Trigger Value \* 0 Dynamic Tag --Select Tag--

Lower Limit \* Upper Limit \* Notification Duration(In Min.) \* 30 Notification Title \* Sheathing Line Stop

Submit Cancel

Wireframes

Solution

Challenge



Dashboard



Workflow



Activity



IOT Alarms



Report



Workflow



Activity



IOT Alarms



Report

## Activity / Sheathing Line-4 / IOT Performance

Add manual Hour

Date

November 23, 2021 - November 23, 2021

Apply

Export to Excel

Search:

No. ⬇	Shift ⬇	Shift Date ⬇	Shift Hour ⬇	Target ⬇	Cable Length (Output) ⬇	Total Power
1		2021-11-23	20		5095.69	33.83
2		2021-11-23	19		3719.54	32.66
3		2021-11-23	18		4935.14	35.06
4		2021-11-23	17		5095.21	31.24
5		2021-11-23	16		2316.05	21.89
6		2021-11-23	15		3536.05	24.52
7		2021-11-23	14		3122.71	23.16
8		2021-11-23	13		4152.39	15.84
9		2021-11-23	12		2242.84	16.44
10		2021-11-23	11		2349.72	16.58

## Activity / Sheathing Line-4 / IOT SPC

## Critical Parameter Average &amp; Range

Add manual Hour

Date

November 23, 2021 - November 23, 2021

Apply

Export to Excel

Search:

No. ⬇	Shift ⬇	Shift Date ⬇	Shift Hour ⬇	Extruder A Temperature (Zone-1) (min) ⬇	Extruder A Temperature (Zone-1) (max) ⬇	Extruder A Temperature (Zone-1) (avg) ⬇	Extruder A Temperature (Zone-2) (min) ⬇	Extruder A Temperature (Zone-2) (max) ⬇
1		2021-11-23	20	34.00	34.00	34.00	34.00	34.00
2		2021-11-23	19	34.00	34.00	34.00	34.00	34.00
3		2021-11-23	18	34.00	34.00	34.00	34.00	34.00
4		2021-11-23	17	34.00	34.00	34.00	34.00	34.00
5		2021-11-23	16	34.00	34.00	34.00	34.00	34.00
6		2021-11-23	15	33.00	34.00	33.92	33.00	34.00



Wireframes

Solution

Challenge

# Shift Creation and Yearly Holiday calendar planning to evaluate availability.

MAN

MACHINE

MATERIAL

AREA

SAP

BOT

SHIFT

Shift Add

Yearly Holidays Calendar

Shift Name \*

Start Time \*

End Time \*

Total Hours \*

Days \*

Shift Name\*

0:00:00

0:00:00

1

Select Working Days

☐ All working Days

Submit

Cancel

Export to Excel

Search:

Showing 1 to 3 of 3 entries

<

1

>

Wireframes

Solution

Challenge

# SKU based Production planning

Time Based, Quantity Based and Shift Based Planning Methodology available

Model Planning

Quantity Based Production Planning

Back

SF-20 / Model Planning Add

Back

Model/Product/SKU

Multiplier

Active Multiplier

Ideal Cycle Time (in ml Sec.)

Model Name

1

1

1

Add New Value

Submit

Cancel

Excel

Search:

Sr.No	Resource	Model/Product/SKU	Multiplier	Active Multiplier	Ideal Cycle Time (in ml Sec.)	Action
1	SF-20	XYZ	1	1	30000	<div><div></div><div></div></div>
2	SF-20	Dinesh125	1	1	30000	<div><div></div><div></div></div>
3	SF-20	app000380000	1	1	3000	<div><div></div><div></div></div>
4	SF-20	APP000375064	1	1	3000	<div><div></div><div></div></div>
5	SF-20	APP000375064	1	1	25	<div><div></div><div></div></div>
6	SF-20	APP000380064	1	1	3000	<div><div></div><div></div></div>

Showing 1 to 6 of 6 entries

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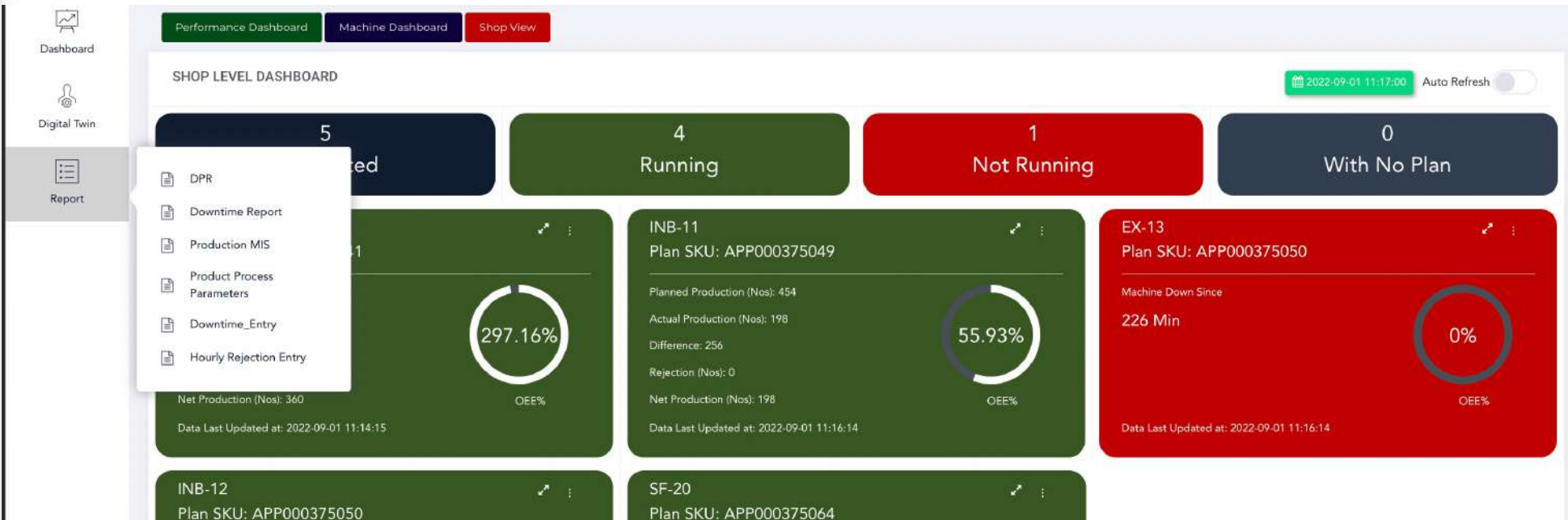
# Various reports for in depth insights

Daily Production Report (DPR)

MIS

Process Parameters (On-Change) Report

Downtime and Rejection Reports



Wireframes

Solution

Challenge

<https://www.designx.in>

# Results

## Tangible

15%

Increase in Machine  
availability

6.75%

Improvement in overall  
OEE

## In-tangible

Realtime MIS and DPR  
generation

10X

Faster communication and  
business actions due to real  
time alerts and notifications.

## ROI

Within 6 months  
post  
implementation



Results

Wireframes

Solution

Challenge