



Predict.AI

Customer Name

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1. Project- Introduction

Predict.AI is essential to predict or monitor the health status of each asset (parts of single machine) , Performance of machines in Wind, Turbines, Solar Plants. By using the Predict.AI products we can reduce the major damages and time for shutting down the plants for longer time in replacing the damaged machines and can estimate the lifetime of machines.

Many projects come under the Predict.AI Product.

Customer is an industrial powerhouse with a dominant presence in steel, power, mining and infrastructure sectors. Customer is a leading Indian conglomerate that aims to strengthen the future of the nation and works towards building a better world. The company's enviable success story has been scripted essentially by its resolve to innovate, set new standards, enhance capabilities, enrich lives and to ensure that it stays true to its cherished value system.

Customer having a product under Predict.AI which is basically monitoring the maintenance, health status of the machines and to reduce the downtime in the plant.

2. Challenges

As one of the leading economies of the world, India is expected to grow at a significant pace in the coming years, the steel and power sector will play a pivotal role in India's growth story.

At Customer site, they are poised to create superior value for the stakeholders by meeting their customers' needs, maximising free cash flows from their world-class assets, and allocating capital with discipline. We are working towards building the furnace of India's growth. Considering 65% of their portfolio, that consists of margin-strong long products, we hold a unique position among their Indian peers and substantiate the growth agenda of the world's fastest growing large economy.

Customer faces challenges in maintaining the Standards in Quality and Defects in the machines as being a big plant and lack of proper safety and maintenance in the plant for the machines. They are facing more downtime in the plant due to which plant will go to shut down for longer time. With the rise in production, the industries would also face severe environmental and societal constraints. They have recognised climate change as one of the most pressing problems that is being felt across the globe. They are striving hard to avoid and manage climate-related risks and reduce our carbon emissions. Maintaining the machines is also difficult as it is made manually.

3. Solution

BLP proposed a solution with the help of Web Application. The Solution will be used to monitor the machine's performance, maintenance of the machines as well as employees and reducing the downtime.

We have proposed the model with different modules like Monitoring, Safety, Checklist, Alerts, Maintenance modules for different assets and individual parts in the plant.

BLP application is capable of handling data for different timestamps, check the defects in the machines, try to monitor the health status of machines by generating alerts in the assets through the application. By using the JSPL application we can check the safety measures machines in the plant and give the maintenance details of the same. Before the maintenance of machines is done manually, now it has been made dynamical through the application such that the time and risk factor have been reduced. The downtime is also slightly reduced after using the BLP-JSPL application.

4. Benefits

With our application, the customer was able to:

- Monitor the health status of the machines and replace the machines if there are any problems in the machines in time without wastage of time for keeping the plant shut down for more time.
- Increased the Productivity of the plant.
- Able to find the safety of the machines and take necessary actions within the time.

- Alerts are generated based on the active status and functionality of machines such that the customer can act upon it.
- Can control the breakdown of machines.
- Downtime can be reduced.
- Maintenance made dynamic by which time and energy for doing the maintenance of machines is reduced.
- There will be less chances of getting the asset or plant shut down for longer time.

5. Customer PHASE 1 ,KPIs

- **Running Hours** = 60 - delay

(delay = bloom discharging time from RHF(if it takes more than 5 minutes) – 5)

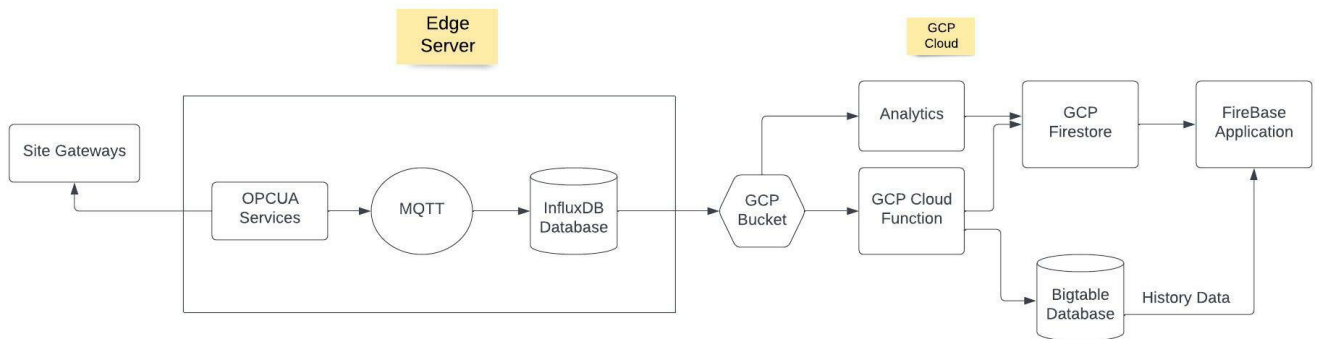
- **Average Rate of Production** = Total Blooms / Running Hours
- **Running status** = Which shift is running at that time(A/B/C)
- **Hourly Charge & Discharge** = (Total_Shift_Charging/Total_Shift_Discharging) at that hour - (Total_Shift_Charging/Total_Shift_Discharging) previous hour
- **Shift wise Charge & Discharge** = Max(Total_Shift_Charging/Total_Shift_Discharging) – Min(Total_Shift_Charging/Total_Shift_Discharging)

- **Fuel Consumption**

HFO consumption = Max(Total_Hfo_Consumption)-Min(Total_Hfo_Consumption)

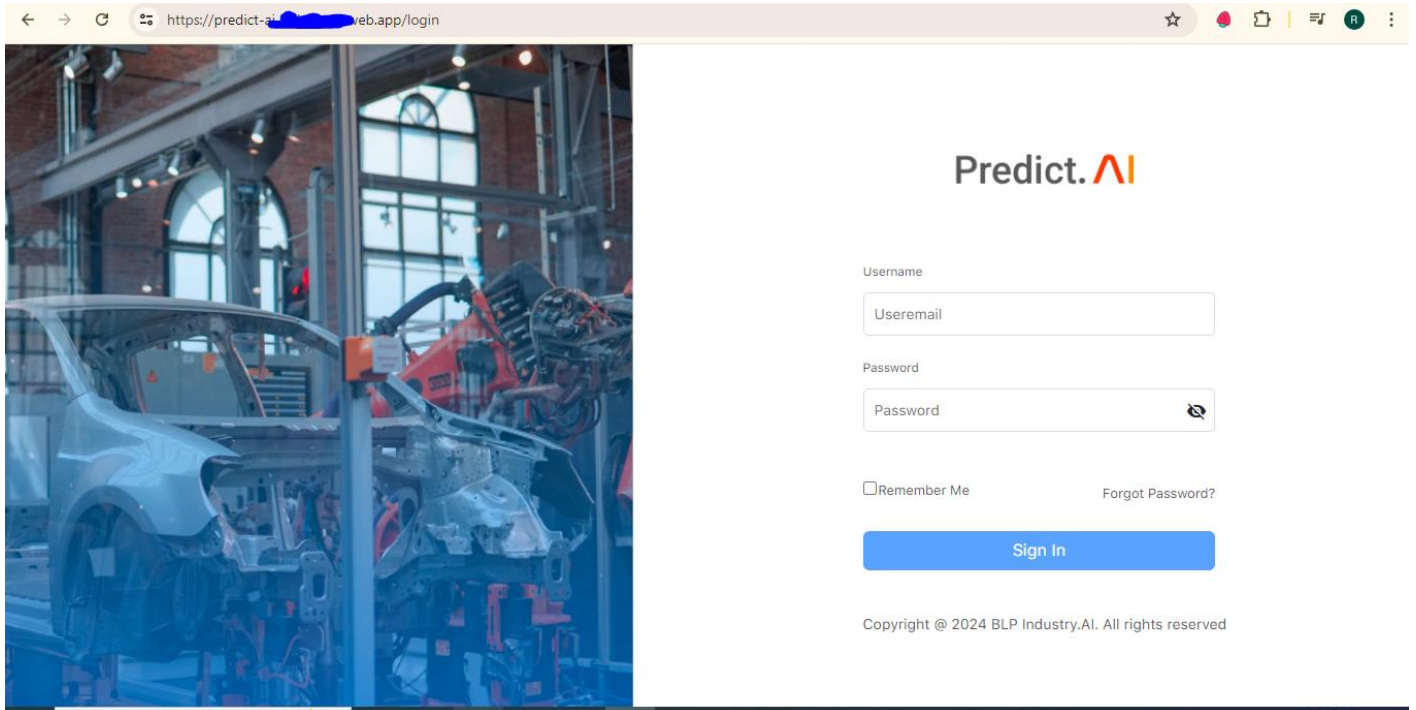
BFG Consumption = Max(Total_BFG_Consumption)-Min(Total_BFG_Consumption)

6.Architecture:



7. Functionality of Application

7.1 Login Screen:



Step 1: Enter URL in the web browser.

Step 2: Enter the Username and password in both fields.

Step 3: Click on Remember me check box (If the "remember me" checkbox is checked while logging in, the browser should remember user credentials. The website homepage should load directly next time. And if the "remember me" checkbox is unchecked while logging in, the browser should not remember user credentials. The website should go to a login page for next time.)

Step 4: Forgot password functionality. Click on Forgot password if user forgot the password, enter username and User will be able to set new password.

Step 5: Click on the Sign In button and it will redirect to the dashboard page.

Credentials

URL: URL will be provided here for each customer

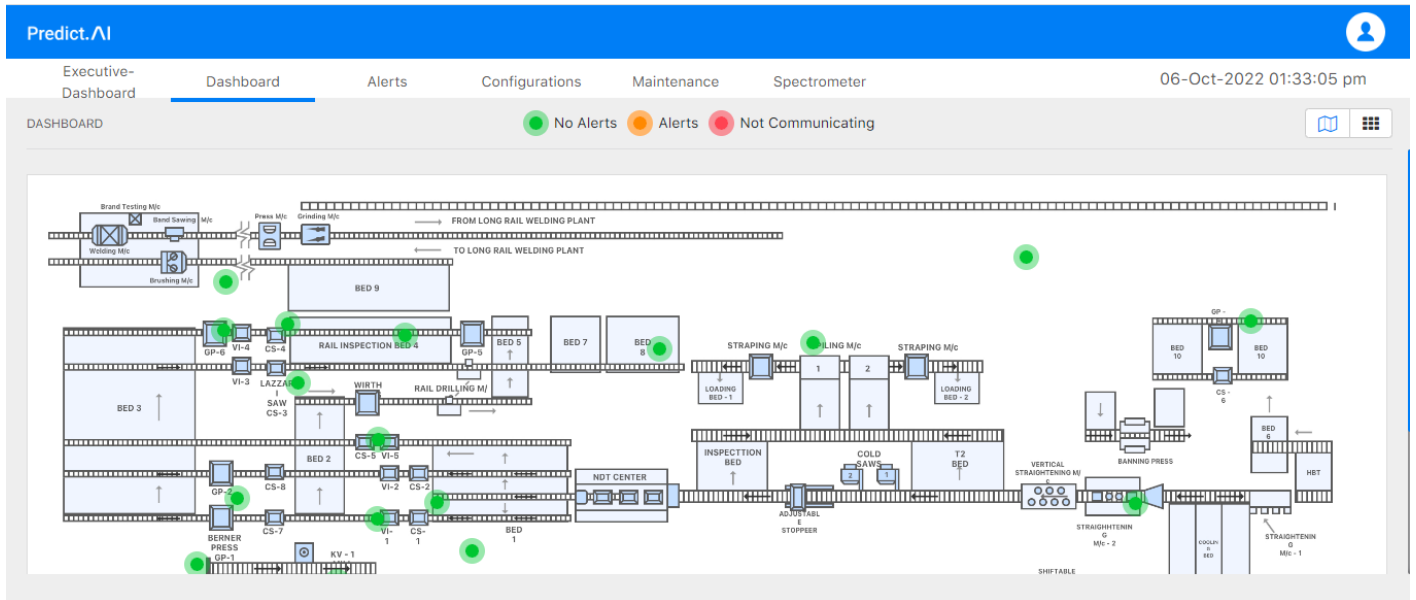
User Name: user detail

Password: password

7.2 Profile:

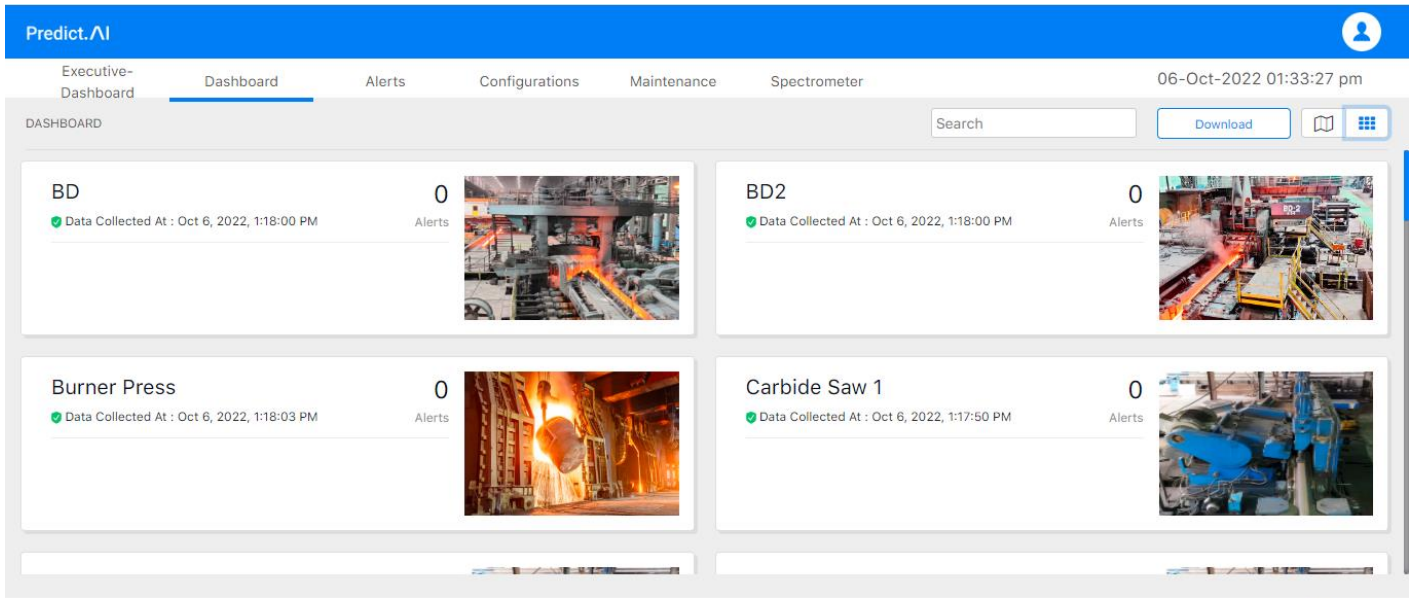
- If a user wants to logout, they need to click on their profile and click logout. It will redirect to the login page
- For user management, only super admins have access.

7.3 Dashboard:



- User can view all the assets in Map View configured on the plant design.
- In the Grid View, User can see the details of each asset.

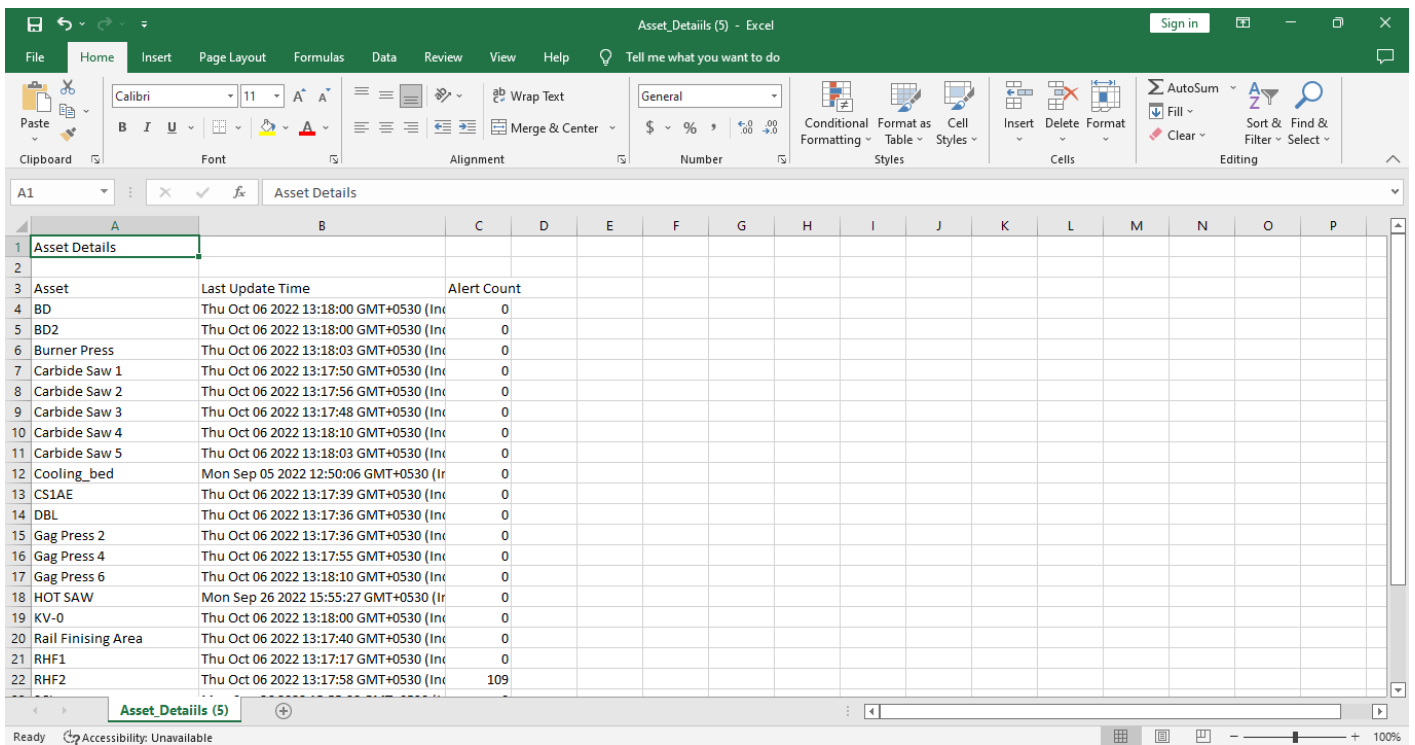
On click of any of the asset in the plant design, user will be taken to asset details page



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- In Grid View, the User can see all the assets with their respective images and the timestamp of the last data collected.
- Customer can search the asset.
- By clicking on the download functionality, user can see all the asset details as shown in the below image.
- By Clicking on any asset, user will be navigated to asset detail screen.



Predict.AI

Executive-Dashboard | Dashboard | Alerts | Configurations | Maintenance | Spectrometer

06-Oct-2022 01:35:29 pm

DASHBOARD / BD


BD

Live Tags | Monitor | Add Widget

Overview

- Trends Monitor
- KPI Monitor

BD



Last Updated : 12:59 pm 06-Oct (10pm - 10pm)

Total Blooms

185 Nos

Rate of Production

14.84 blooms/hour

Previous Shift: C

Total Blooms

104 Nos

Alerts (0)

No Alerts Found

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Predict.AI

Executive-Dashboard | Dashboard | Alerts | Configurations | Maintenance | Spectrometer

06-Oct-2022 01:37:18 pm

DASHBOARD / ASSET DETAIL / LIVE DATA

Search

BD

Download

S.No	Tag	Tag Description	Value	Timestamp
1	MD_GEN_DR_STATUS	General_Drive_Status	8	Oct 6, 2022, 1:33:06 PM
2	10K2_A3_2	Primary_Descaler_Booster_Pump_1_Running	0	Oct 6, 2022, 1:33:05 PM
3	11K2_A3_3	Primary_Descaler_Booster_Pump_2_Running	1	Oct 6, 2022, 1:33:05 PM
4	21K5_A2_4	Primary_Descaler_Hp_Pump_A_Running	0	Oct 6, 2022, 1:33:05 PM
5	21K6_A2_5	Primary_Descaler_Hp_Pump_B_Running	1	Oct 6, 2022, 1:33:05 PM
6	3101_TEMP1_ALARM	Bd_Aux_Gr_Tr_73101_Temp_1_Alarm	0	Oct 6, 2022, 1:33:05 PM
7	7204_73ATS_1	Bd_Tilter_Tilting_Angle_Sel_0_Deg_Ts	0	Oct 6, 2022, 1:33:05 PM

1 2 3 4 5 ... 14

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No	Tag	Description	Value	Timestamp
1	MD_GEN_DR	General_Drive_Status	8	Invalid Date
2	10K2_A3_2	Primary_Descaler_Boost	0	Invalid Date
3	11K2_A3_3	Primary_Descaler_Boost	1	Invalid Date
4	21K5_A2_4	Primary_Descaler_Hp_Pu	0	Invalid Date
5	21K6_A2_5	Primary_Descaler_Hp_Pu	1	Invalid Date
6	3101_TEMP1	Bd_Aux_Gr_Tr_73101_Te	0	Invalid Date
7	7204_73ATS_1	Bd_Tilter_Tilting_Angle	0	Invalid Date
8	7204_73ATS_2	Bd_Tilter_Tilting_Angle	1	Invalid Date
9	7204_73ATS_3	Bd_Tilter_Tilting_Angle	0	Invalid Date
10	7205_1LM	Bd_Load_Cell_North_Me	32768	Invalid Date
11	7205_1SM	Bd_Main_Moter_Speed	32768	Invalid Date
12	7205_2LM	Temp_Pyro_After_Bd_M	32768	Invalid Date
13	BD2_DELTA_CI	Bd2_Delta_Current	2888	Invalid Date
14	BD2_RECIRCUI	Bd_2_Recirculation_Wat	1	Invalid Date
15	BD2_STAR_CU	Bd2_Star_Current	2866	Invalid Date
16	BD2_total_CU	Bd2_Total_Current	5795	Invalid Date
17	BD_CREEP_SW	Bd_Main_Motor_Creep	0	Invalid Date
18	BD_EAST_TILT	Bd_East_Tilter_Current	0	Invalid Date
19	BD_Entry_TEM	Bd_Entry_Temperature	1600	Invalid Date

Widget Manager

WIDGET CREATED (6) TRENDS MONITOR

- CHART** BD1 Motor Field Current
BD_MOTOR1_FIELD_CURRENT, BD_MOTOR2_FIELD_CURRENT
- CHART** BD1 CURRENT
DELTA_CURRENT
- CHART** BD1 Entry Temperature
BD_Entry_TEMP
- CHART** BD1 Total Current
total_CURRENT

Widget Title:

Widget Width: 16%

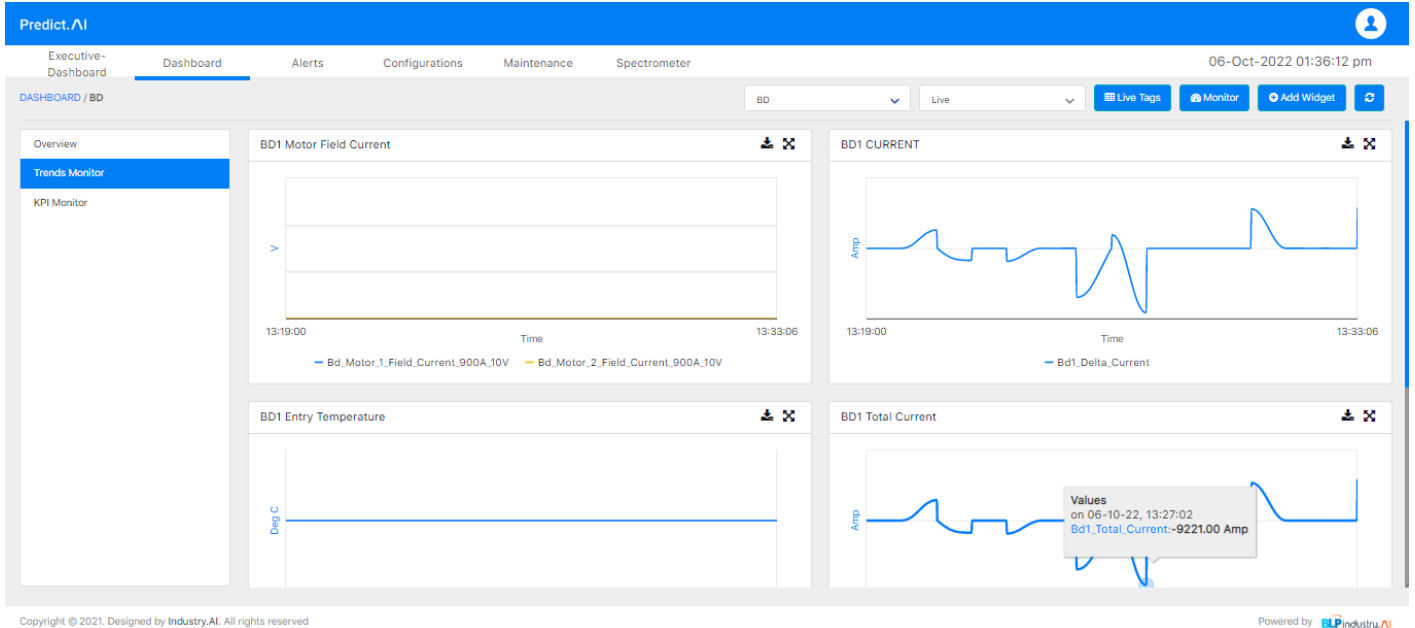
Widget Category: Chart

Select Tag:

Add KPI formula

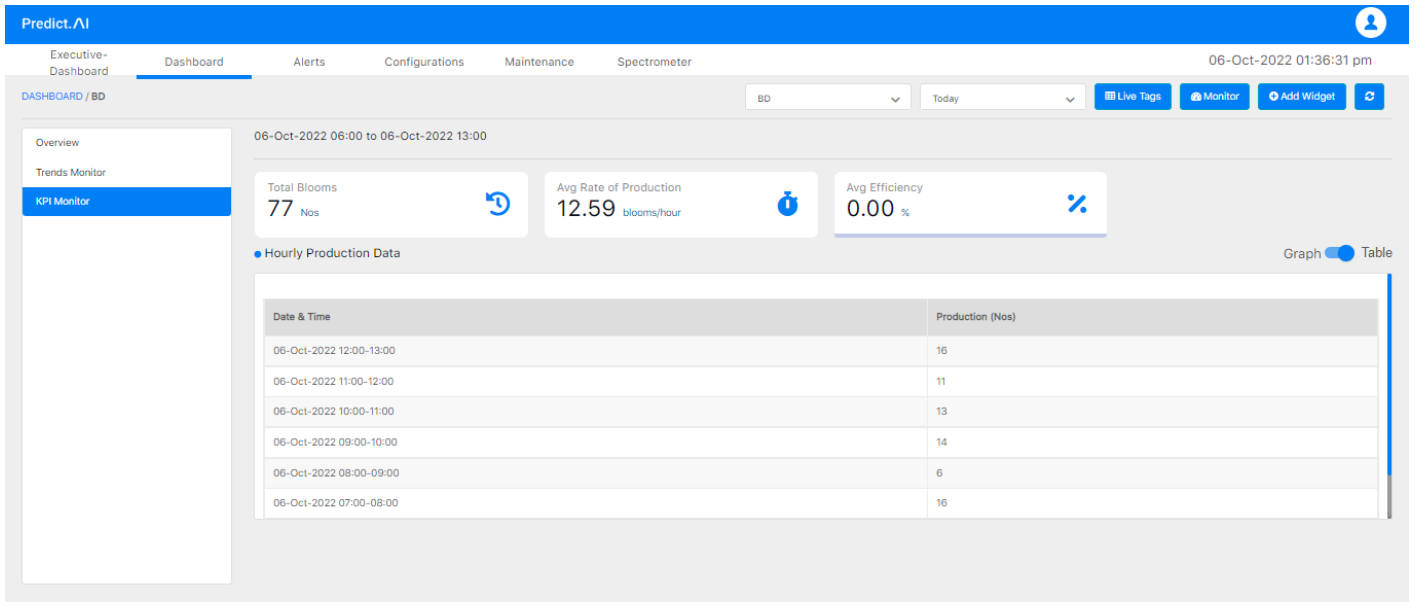
- Asset details screen consists of Overview, Trends Monitor and KPI Monitor.
- User can filter the asset.
- By clicking on Live Tags icon user will be able to see all the live data with respective tag name and tag descriptions.
- By clicking on Add Widget user will be able to create Add and Edit widget details in Widget manager pop up screen.
- By clicking on More alerts user will be navigated to alerts screen.

- Total Blooms, Rate of Production and Total Blooms of Previous Shift data is displayed on Dashboard details screen. It is calculated only for BD, BD2, RHF2, HOTSAW, TANDEM assets.



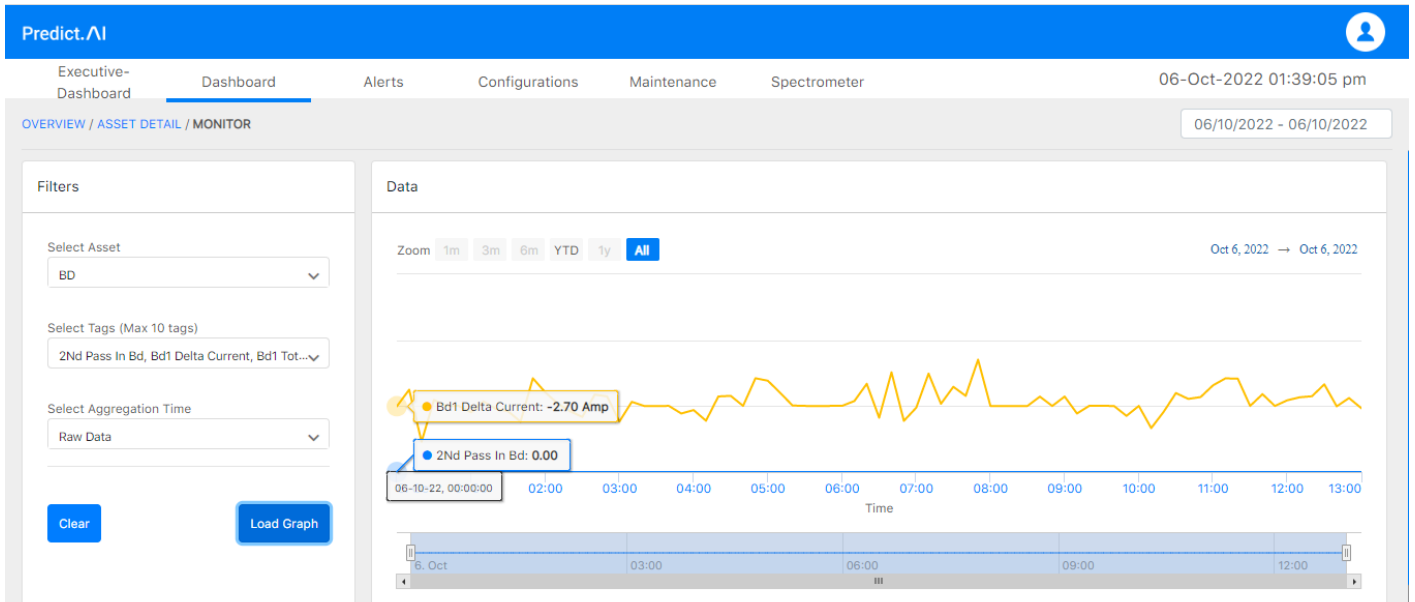
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- In the filters department, user can see the options Date range selection, Select Asset, Select tags, Select Aggregation time graph type option.
- In the date range selection, the user can get the date picker for date selection. Based on date selection trends load.
- On this page, users can see both raw data and KPI data. By default, raw is selected.
- On the KPI page, users can see the tag in the centre graph navigation bar.
- In the select asset dropdown, user can select which asset they want to see the trend for. Based on the selection, trends will be displayed. And the aggregation dropdown has two options 10 min. & 60 min.
- Select graph type. User can use this option to change the graph trend.
- In raw data, In the asset, user can select what tag they want to load in the Select tag fields. And click on load graph to load tags in the trends (Max 10 Tags)
- And user can select the aggregation time of 10 min or 60 min in the Select aggregation time dropdown.
- When a user hovers their mouse over a trend, they will see a data with the tag name, tag values, and unit.
- And then click on Asset Detail at the top, it will be redirecting to Asset details page.

7.4 Alerts:

Predict.AI

Executive-Dashboard Dashboard Alerts Configurations Maintenance Spectrometer 06-Oct-2022 01:42:20 pm

Sep 06, 12:00 am to Oct 05, 11:59 pm

Timestamp	Asset Name	Alert Type	Description	Acknowledge	Relevance
Sep 6, 2022, 12:41:37 PM	BD	Low	Bd_East_Tilter_Current has gone below its Lower Threshold of -10 Amp By -67 Amp	No	☆
Sep 7, 2022, 2:07:36 PM	BD	Low	Kv1_Field_Current has gone above its Upper Threshold of 386 Amp By 387 Amp	No	☆
Sep 7, 2022, 2:47:28 PM	BD	Low	Bd_Manupulator_E_S_Current has gone above its Upper Threshold of 450 Amp By 65516 Amp	No	☆
Sep 7, 2022, 3:47:09 PM	BD	Low	Primary_Descaler_Booster_Pump_2_Running is Active	No	☆
Sep 7, 2022, 3:47:09 PM	BD	Low	Primary_Descaler_Hp_Pump_B_Running is Active	No	☆
Sep 7, 2022, 3:47:09 PM	BD	Low	Primary_Descaler_Hp_Pump_A_Running has gone below its Lower Threshold of 1 By 0	No	☆

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- Threshold can be set for different parameters. On crossing, those values alerts will be generated.

Predict.AI

Executive-Dashboard Dashboard Alerts Configurations Maintenance Spectrometer 06-Oct-2022 01:42:41 pm

Sep 06, 12:00 am to Oct 05, 11:59 pm

Filter ✕

Alert Type: Select

Acknowledge: Select

Relevance: Select

Search

Timestamp	Asset Name	Alert Type	Description	Acknowledge	Relevance
Sep 6, 2022, 12:41:37 PM	BD	Low	Bd_East_Tilter_Current has gone below its Lower Threshold of -10 Amp By -67 Amp	No	☆
Sep 7, 2022, 2:07:36 PM	BD	Low	Kv1_Field_Current has gone above its Upper Threshold of 386 Amp By 387 Amp	No	☆
Sep 7, 2022, 2:47:28 PM	BD	Low	Bd_Manupulator_E_S_Current has gone above its Upper Threshold of 450 Amp By 65516 Amp	No	☆
Sep 7, 2022, 3:47:09 PM	BD	Low	Primary_Descaler_Booster_Pump_2_Running is Active	No	☆
Sep 7, 2022, 3:47:09 PM	BD	Low	Primary_Descaler_Hp_Pump_B_Running is Active	No	☆
Sep 7, 2022, 3:47:09 PM	BD	Low	Primary_Descaler_Hp_Pump_A_Running has gone below its Lower Threshold of 1 By 0	No	☆

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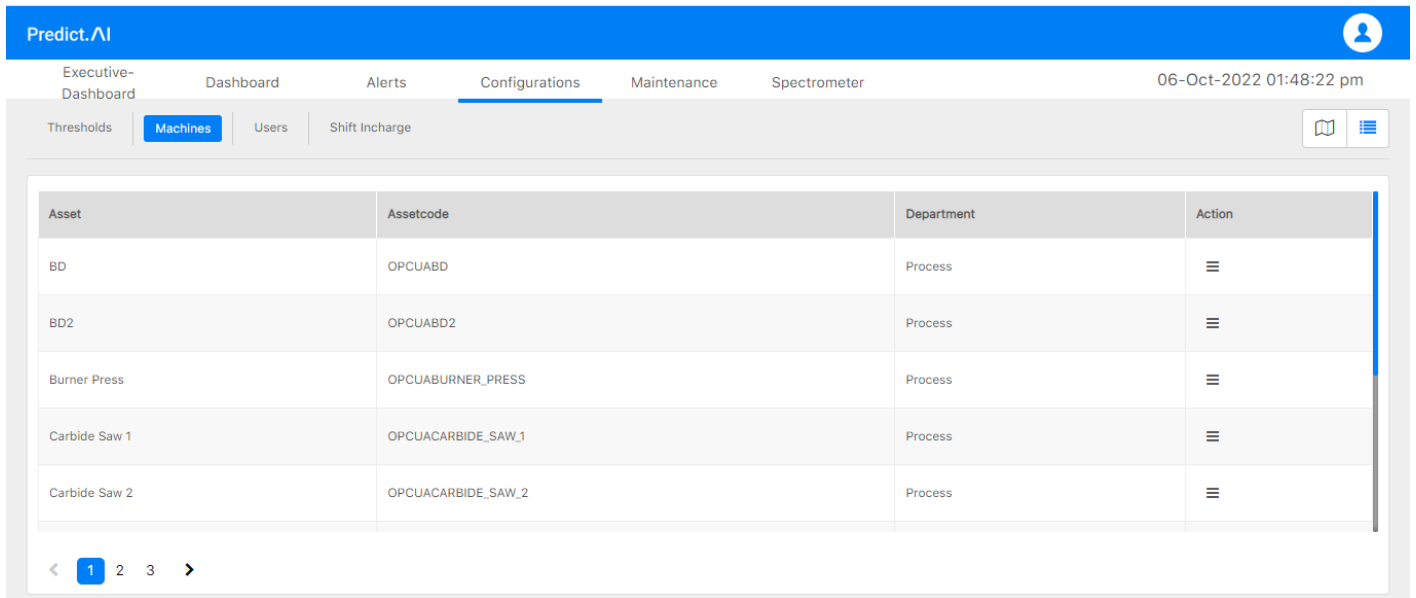
- By clicking on filter icon User can select alert type, Acknowledge and Relevance.

7.5 Configurations:

S No	Tag	Datatype	Unit	Lower Threshold	Upper Threshold	Criticality	Deactivate/Activate	Date Modified
1	2Nd_Pass_In_Bd	<input type="text"/>		0 <input type="button" value="edit"/>	999999999 <input type="button" value="edit"/>	Low <input type="text"/>	<input checked="" type="checkbox"/>	Sep 8, 2022, 12:19:52 PM
2	Bd1_Delta_Current	<input type="text"/>	Amp	0 <input type="button" value="edit"/>	999999999 <input type="button" value="edit"/>	Low <input type="text"/>	<input checked="" type="checkbox"/>	Sep 8, 2022, 12:19:52 PM
3	Bd1_Total_Current	<input type="text"/>	Amp	0 <input type="button" value="edit"/>	999999999 <input type="button" value="edit"/>	Low <input type="text"/>	<input checked="" type="checkbox"/>	Sep 8, 2022, 12:19:52 PM
4	Bd2_Delta_Current	<input type="text"/>	Amp	0 <input type="button" value="edit"/>	999999999 <input type="button" value="edit"/>	Low <input type="text"/>	<input checked="" type="checkbox"/>	Sep 8, 2022, 12:19:52 PM
5	Bd2_Star_Current	<input type="text"/>	Amp	0 <input type="button" value="edit"/>	999999999 <input type="button" value="edit"/>	Low <input type="text"/>	<input checked="" type="checkbox"/>	Sep 8, 2022, 12:19:52 PM
6	Bd2_Total_Current	<input type="text"/>	Amp	0 <input type="button" value="edit"/>	999999999 <input type="button" value="edit"/>	Low <input type="text"/>	<input checked="" type="checkbox"/>	Sep 8, 2022, 12:19:52 PM

- Threshold can be set for different parameters. On crossing, those values alerts will be generated.
- User can set upper and lower threshold value and criticality (Low, Medium, Moderate and High).
- Datatype can be selected either as analog or digital.
- User can download threshold value document for any asset by clicking on the download icon.

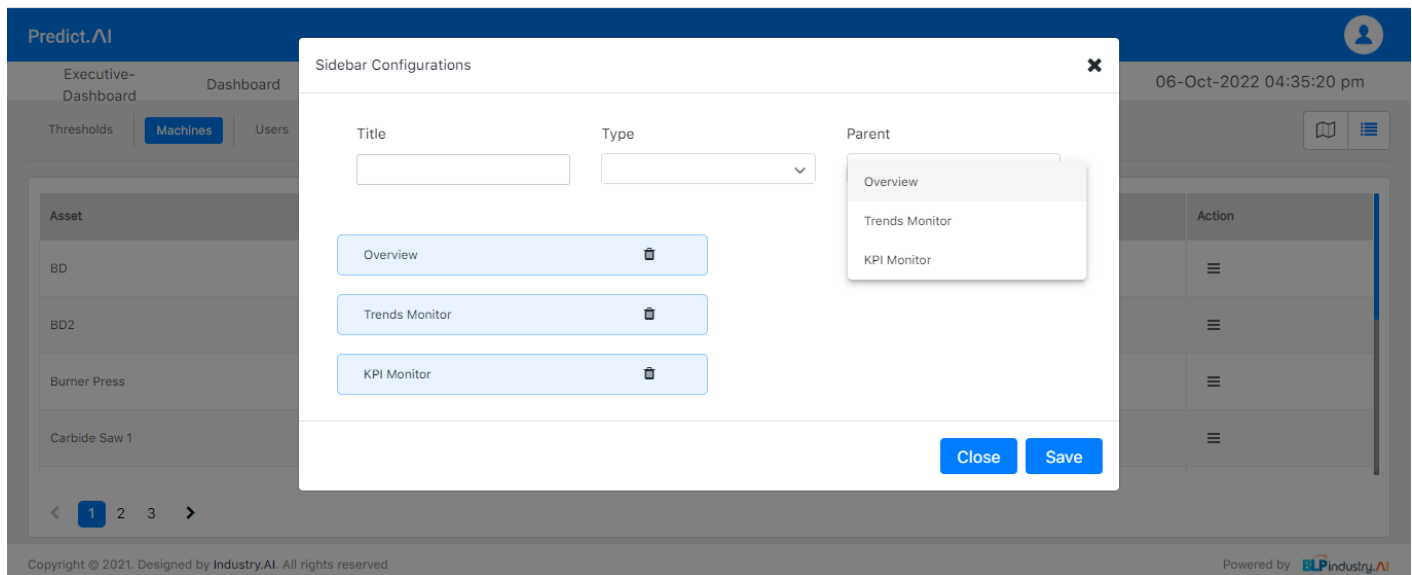
Asset	Tag	Description	Min Thres	Max Threshold
BD	DB_H1_SEND_BD_UR1	2Nd_Pass_In_Bd	0	1E+10
BD	DELTA_CURRENT	Bd1_Delta_Current	0	1E+10
BD	total_CURRENT	Bd1_Total_Current	0	1E+10
BD	BD2_DELTA_CURRENT	Bd2_Delta_Current	0	1E+10
BD	BD2_STAR_CURRENT	Bd2_Star_Current	0	1E+10
BD	BD2_total_CURRENT	Bd2_Total_Current	0	1E+10
BD	RECIRCULATION_WATER_FLOW	Bd_1_Recirculation_Water_Flow	0	1E+10
BD	BD2_RECIRCULATION_WATER_FLOW	Bd_2_Recirculation_Water_Flow	0	1E+10
BD	3101_TEMP1_ALARM	Bd_Aux_Gr_Tr_73101_Temp_1_Ala	0	1E+10
BD	MD_BD_BOTTOM_SCDN_STAT	Bd_Bottom_Scdn_Dr_Status	0	1E+10
BD	MD_BD_BOT_SCDN_HLM	Bd_Bottom_Scdn_Pid_High_Limit	0	1E+10
BD	MD_BD_BOT_SCDN_LLM	Bd_Bottom_Scdn_Pid_Low_Limit	0	1E+10
BD	MD_BD_BOT_SCDN_LMN_FAC	Bd_Bottom_Scdn_Pid_Output_Fac	0	1E+10
BD	BD_EAST_TILTER_CURRENT	Bd_East_Tilter_Current	0	1E+10
BD	BD_Entry_TEMP	Bd_Entry_Temperature	0	1E+10
BD	BD_Entry_TEMP_TIMER	Bd_Entry_Temp_Timer	0	1E+10
BD	MD_BD_ET_W_G1_STAT	Bd_Et_W_G1_Dr_Status	0	1E+10
BD	M_3104_COILING	Bd_Ewt_E_G1_Coiling_Operation	0	1E+10
BD	M_3104_HEALTHY	Bd_Ewt_E_G1_Healthy	0	1E+10



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- In Machines, All the asset with asset code is displayed here.



- By clicking on Action icon, user can add or edit the sidebar title, type and parent type.

Predict.AI 06-Oct-2022 01:49:11 pm

Executive-Dashboard | Dashboard | Alerts | **Configurations** | Maintenance | Spectrometer

Thresholds | Machines | **Users** | Shift Incharge Search + Add User

Sl No	Name	Email	Role	Action
1	Tarique Ahmed Khan	tarique.khan@jindalsteel.com	superadmin	
2	Shiva	shiva@jindalsteel.com	incharge	
3	TulsiHydr	tulsi.patel@jindalsteel.com	plantitadmin	
4	BFQC	bfqcdemo@jindalsteel.com	incharge	
5	PRAKASH KUMAR NISHAD	prakash.nishad@jindalsteel.com	incharge	

< 1 2 3 4 5 ... 8 >

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- User can add or create user and edit the user information by clicking on the edit icon.
- By clicking on Settings icon, user will be navigated to access permissions and will be able to checkmark any of the assets and screen.
- By clicking on delete icon, we can delete the user.

Predict.AI 06-Oct-2022 04:37:31 pm

Executive-Dashboard | Dashboard | Alerts | **Configurations** | Maintenance | Spectrometer

Thresholds | Machines | **Users** | Shift Incharge Search

Access Permissions

Assets

Select / Deselect All

<input checked="" type="checkbox"/> BD	<input checked="" type="checkbox"/> BD2	<input checked="" type="checkbox"/> Burner Press	<input checked="" type="checkbox"/> Carbide Saw 1
<input checked="" type="checkbox"/> Carbide Saw 2	<input checked="" type="checkbox"/> Carbide Saw 3	<input checked="" type="checkbox"/> Carbide Saw 4	<input checked="" type="checkbox"/> Carbide Saw 5
<input checked="" type="checkbox"/> Cooling_bed	<input checked="" type="checkbox"/> CSIAE	<input checked="" type="checkbox"/> DBL	<input checked="" type="checkbox"/> Gag Press 2
<input checked="" type="checkbox"/> Gag Press 4	<input checked="" type="checkbox"/> Gag Press 6	<input checked="" type="checkbox"/> HOT SAW	<input checked="" type="checkbox"/> KV-0
<input checked="" type="checkbox"/> Mill Area	<input checked="" type="checkbox"/> Rail Finishing Area	<input checked="" type="checkbox"/> RHF1	<input checked="" type="checkbox"/> RHF2
<input checked="" type="checkbox"/> SCL	<input checked="" type="checkbox"/> Straightening Machine	<input checked="" type="checkbox"/> Structural Finishing Area	<input checked="" type="checkbox"/> Tandem

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Predict.AI 06-Oct-2022 01:49:33 pm

Executive-Dashboard | Dashboard | Alerts | **Configurations** | Maintenance | Spectrometer

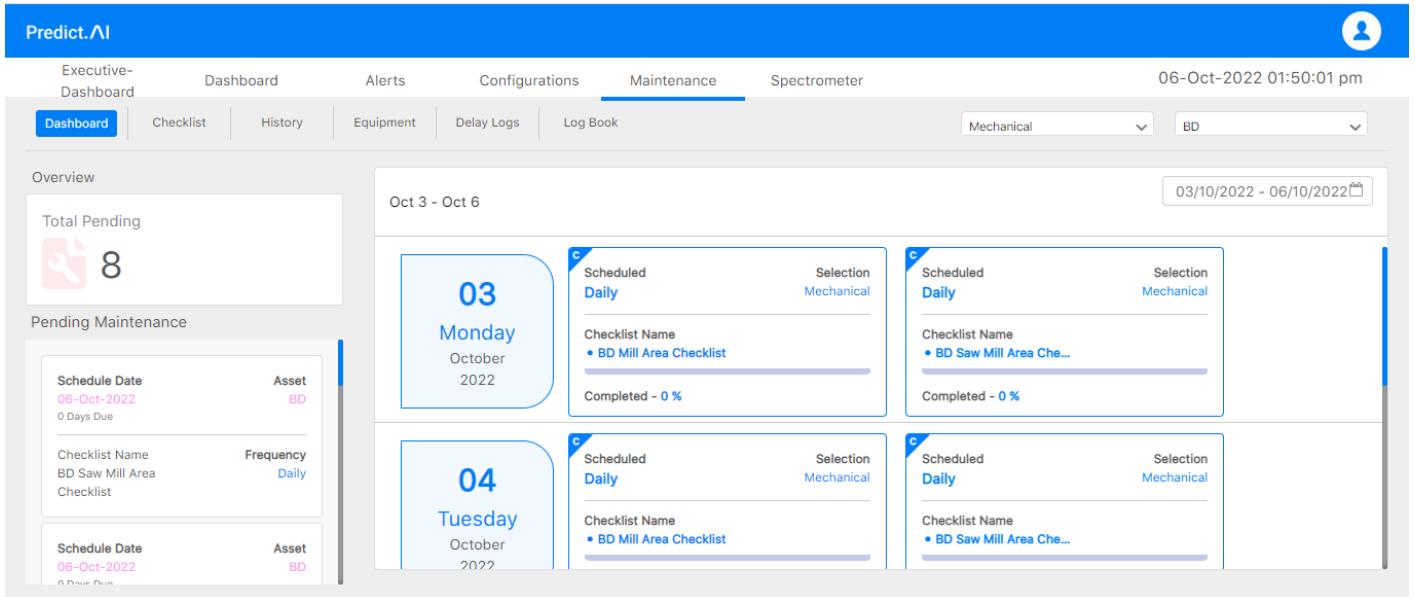
Thresholds | Machines | Users | **Shift Incharge** | | [+ Add Incharge](#)

SI No	Incharge Name	Area	Action
1	G Dewpal	Mill Area	
2	Shyamsaran	Mill Area	
3	K B sahu	Mill Area	
4	B Siby	Mill Area	
5	Rakesh Sonwani	Mill Area	

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- Shift In charge name and their area name information is displayed here.
- User can Edit and delete details by using edit and delete icon.
- User can click on Add In charge icon and add shift incharge details.

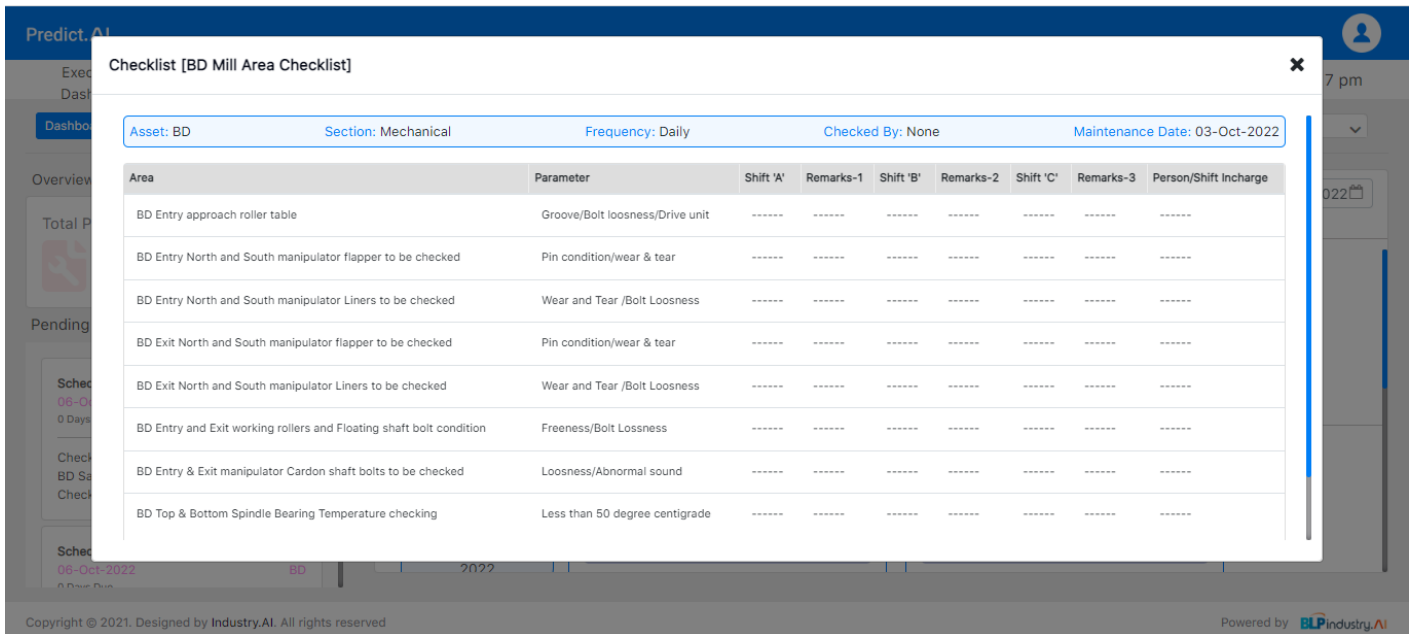
7.6 Maintenance:



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- Maintenance dashboard consists of mechanical, electrical, hydraulic, operations and miscellaneous asset type.
- User can see the details of checklist, Total pending and Pending maintenance of the selected asset in filter dropdown.
- User can select the date range in date picker.



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- By clicking on view, user can see the checklist details.

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- On checklist tab, user can see all checklist details that have been created by the customer.

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- User can select the asset type in the dropdown.
- By clicking on Add icon, customer can enter all the checklist details and save it.
- The added details will be displayed under selected asset and selected asset type.

Predict.AI

Executive-Dashboard | Dashboard | Alerts | Configurations | Maintenance | Spectrometer | 06-Oct-2022 01:56:12 pm

Dashboard | Checklist | History | **Equipment** | Delay Logs | Log Book | Mechanical | BD | Add

Equipment Name	Section	Equipment Serial No	Description	Last Breakdown Maintenance	Next Preventive Maintenance	Document	Action
BD Screwdown system	Mechanical	1	NA	26-Jul-2022 View	10-07-2022 History		
BD Test	Mechanical	null	null	No Maintenance Found	No Maintenance Found	NA	
travel gear complete,type 2	Mechanical	630-039.012.2-II	560.10075	No Maintenance Found	No Maintenance Found	NA	
Top Screw Down North & South	Mechanical	1	NA	No Maintenance Found	No Maintenance Found	NA	
Bottom Screw down North & South	Mechanical	2	NA	No Maintenance Found	No Maintenance Found	NA	

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- Each asset will be having different parts, that defect will be added in equipment page.
- By clicking on add equipment, user can add all the details of equipment.

Add Equipment

Assets	BD (Mechanical)	BD Screwdown system	BD Test
<input type="text" value="Search"/> <ul style="list-style-type: none"> BD BD2 Burner Press Carbide Saw 1 Carbide Saw 2 Carbide Saw 3 Carbide Saw 4 Carbide Saw 5 	<input type="text" value="Search"/> <ul style="list-style-type: none"> BD Screwdown system BD Manipulator BD roll changing rig Pinion Stand 	<input type="text" value="Search"/> <ul style="list-style-type: none"> Bottom Screw down North & South Top Screw Down North & South travel gear complete,type 2 BD Test 	
	<p>Equipment Name : BD Screwdown system</p> <p>Equipment Serial No : 1</p> <p>Section : Mechanical</p> <p>Installation Date : Invalid date</p> <p>Vendor : JSPL</p> <p>Description :</p>	<p>Equipment Name : BD Test</p> <p>Equipment Serial No : null</p> <p>Section : Mechanical</p> <p>Installation Date : Invalid date</p> <p>Vendor : null</p> <p>Description : null</p> <p>Life Expectancy : null</p>	

Add Maintenance

Breakdown Maintenance Preventive Maintenance

Maintenance Date * 10/6/2022

Life Expectancy 10/6/2022

Equipment Serial No

Manpower *

Criticality *

Time Taken(Hrs) *

Action Taken *

Maintenance Done By *

Observations

Save

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- **Breakdown Maintenance:** If there is any sudden damage. Damage is fixable for short period of time. All the details can be added in breakdown maintenance.

Add Maintenance

Breakdown Maintenance **Preventive Maintenance**

ISO Doc No: F- 02 (6.3.0-05)/ ISSUE 01 **Add Activity**

Activity	Frequency	Last Maintenance	Manpower	Time Taken(Hrs)	Done By	Remarks	Maintenance Date	Action
Blowring & cleaning of motor	Quaterly		4	1			10/7/	🔒 ✎
checking of brush spring tension if required	Quaterly	03-Sep-2021			Arun Karmokai		10/7/	🔒 ✎
Check/tighten motor terminal connections for field and armature circuits	Quaterly	03-Sep-2021			Arun Karmokai		10/7/	🔒 ✎
IR Value of Field	Quaterly						10/7/	🔒 ✎
Check carbon brushes/Holder and replace if required	Quaterly	03-Sep-2021			Arun Karmokai		10/7/	🔒 ✎
Greasing of motor Bearing	Quaterly	03-Sep-2021			Arun Karmokai		10/7/	🔒 ✎
Blowring & cleaning of motor	Quaterly	03-Sep-2021			Arun Karmokai		10/7/	🔒 ✎

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- **Preventive Maintenance:** Complete action for repair or change of the component. All the details can be added in preventive maintenance.

Predict.AI | 06-Oct-2022 01:57:57 pm

Executive-Dashboard | Dashboard | Alerts | Configurations | **Maintenance** | Spectrometer

Dashboard | Checklist | History | Equipment | **Delay Logs** | Log Book

ISO Doc No: F - 09(7.5.1-21)

Section Incharge : G Dewpal

Select Time * 10/6/2022 | Shift * Shift A | From Hour * 07 | To Hour * | Delay Type * No Delay | Rolled * | Misrolled * | Recharge * | Rolled Section *

Add Log

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- **Delay Logs:** The Logging Delay Detail report gives information about the delays the job step experiences because of the details logging environment. All timings are based on elapsed time (in milliseconds). Logging Delay Detail report.
- User can add all log by clicking on Add log.

Predict.AI | 06-Oct-2022 01:58:25 pm

Executive-Dashboard | Dashboard | Alerts | Configurations | **Maintenance** | Spectrometer

Dashboard | Checklist | History | Equipment | Delay Logs | **Log Book**

ISO Doc No: F-01 (7.1.5-01)/ISSUE 01

Date * 10/6/2022 | Shift * Shift A | Section * Mechanical | Area * RHF | Shift Technician * | Shift Engineer * | Total Delay

Start * 06:00 AM | Complete * 06:00 AM | Total | Work Informed By * | Equipment Name * | Observation * | Action Taken * | Spare Consumed | Delay

Add Log

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- A log book is a book in which user or customer records details and events relating to maintenance and equipment.
- User can add all log details by clicking on Add log.

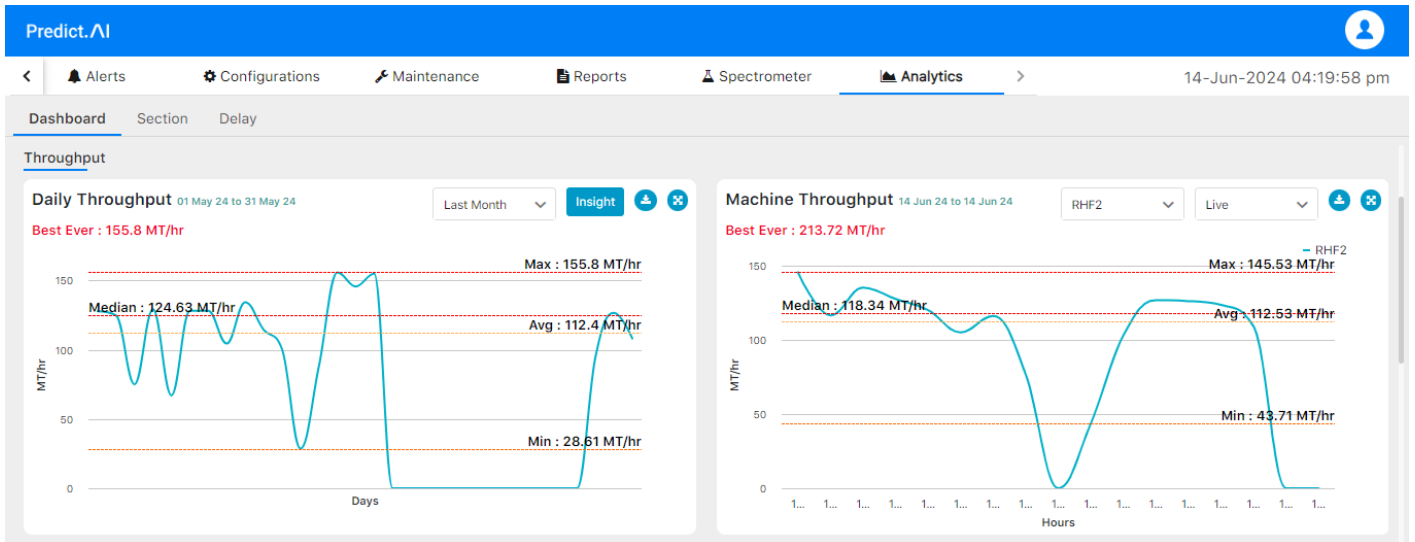
7.8 Analytics

Here we are showing 3 different page called Dashboard, Section and delay page. All 3 pages contain many use KPI's

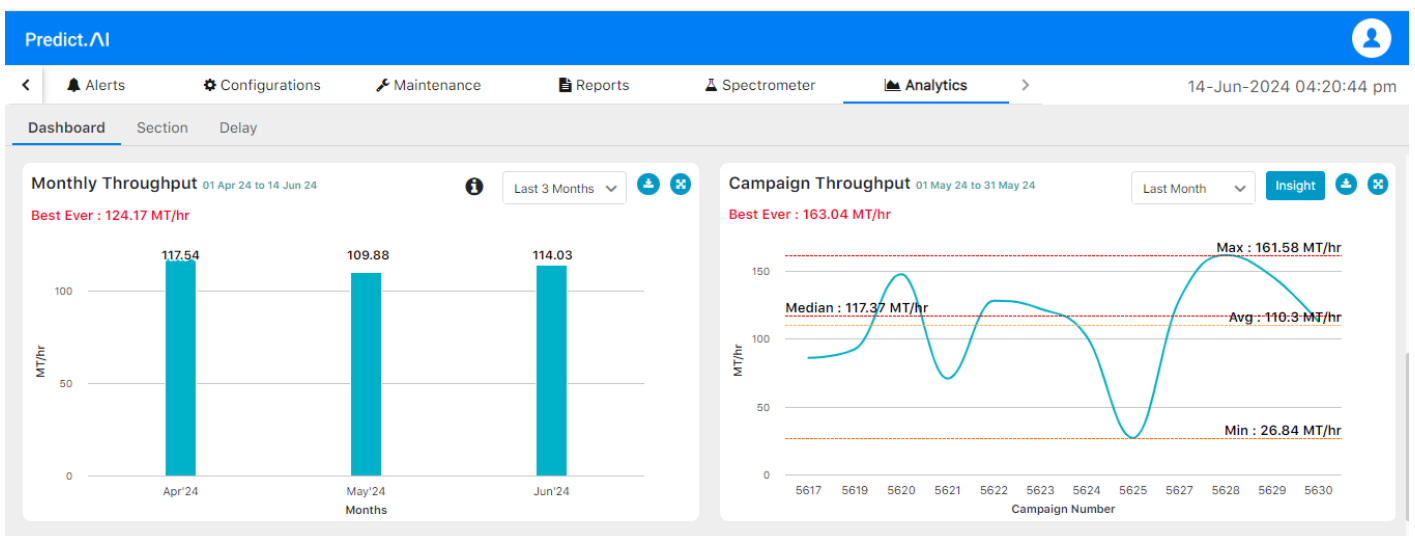
Like Total Production, Total Runtime, Total Delay and Throughput.

In Dashboard We are showing Daily Throughput, Machine throughput, Campaign Throughput, Monthly Throughput and Specific Energy consumption

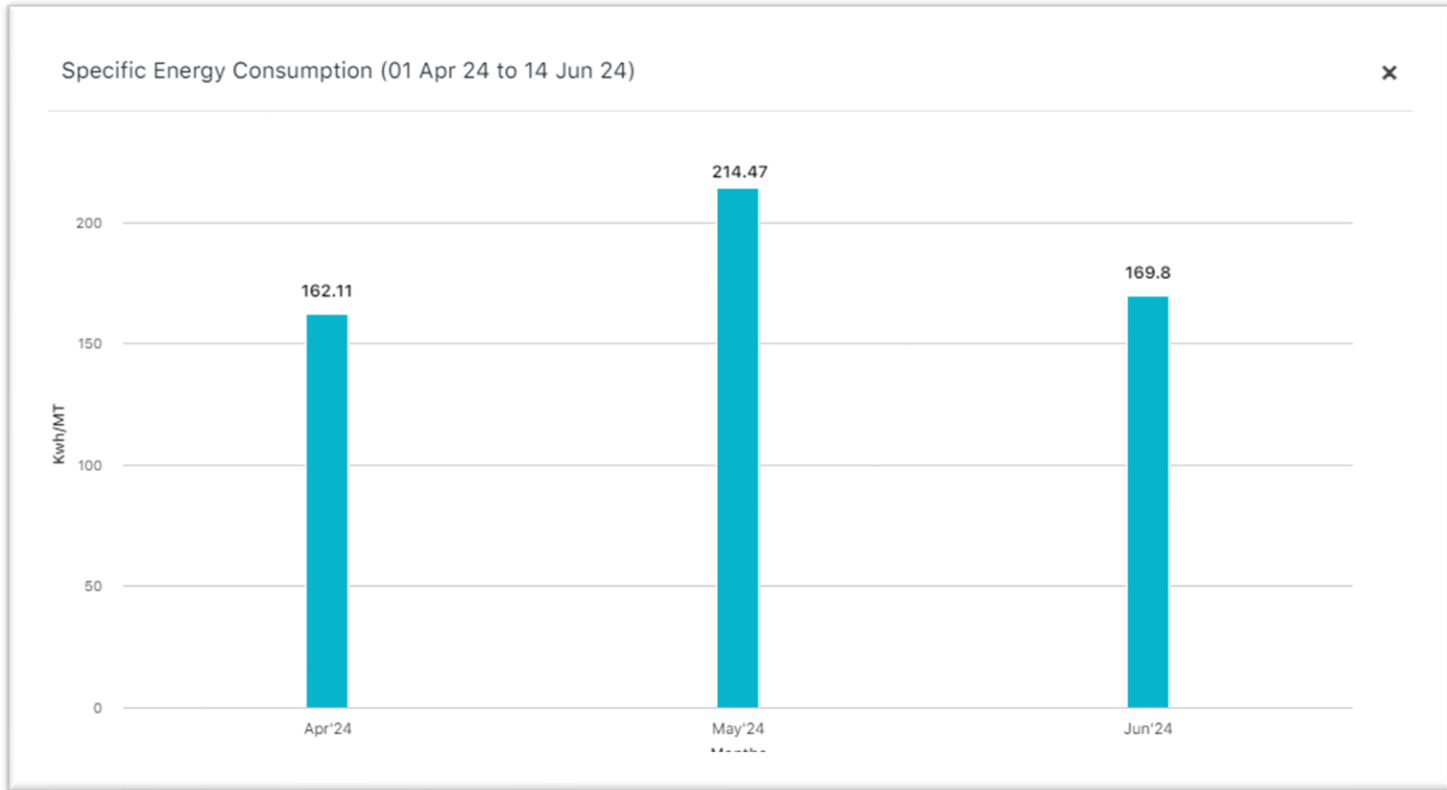
Screenshot for the graph is below:



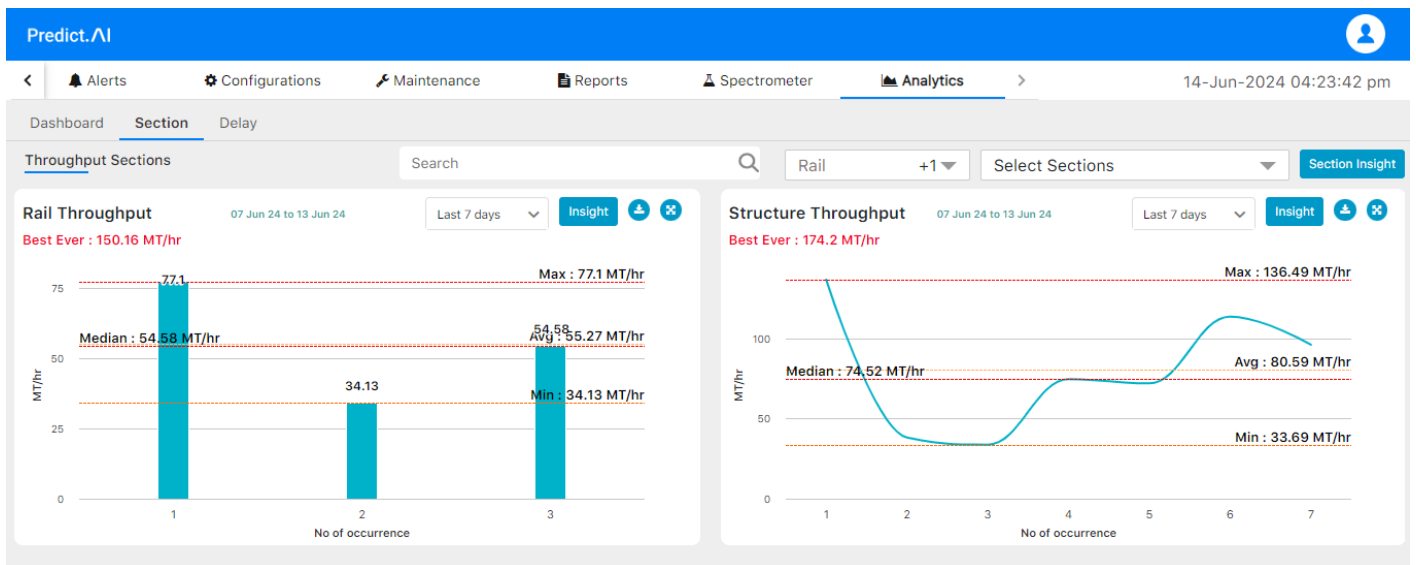
Monthly and Campaign Throughput:



Specific Energy Consumption:

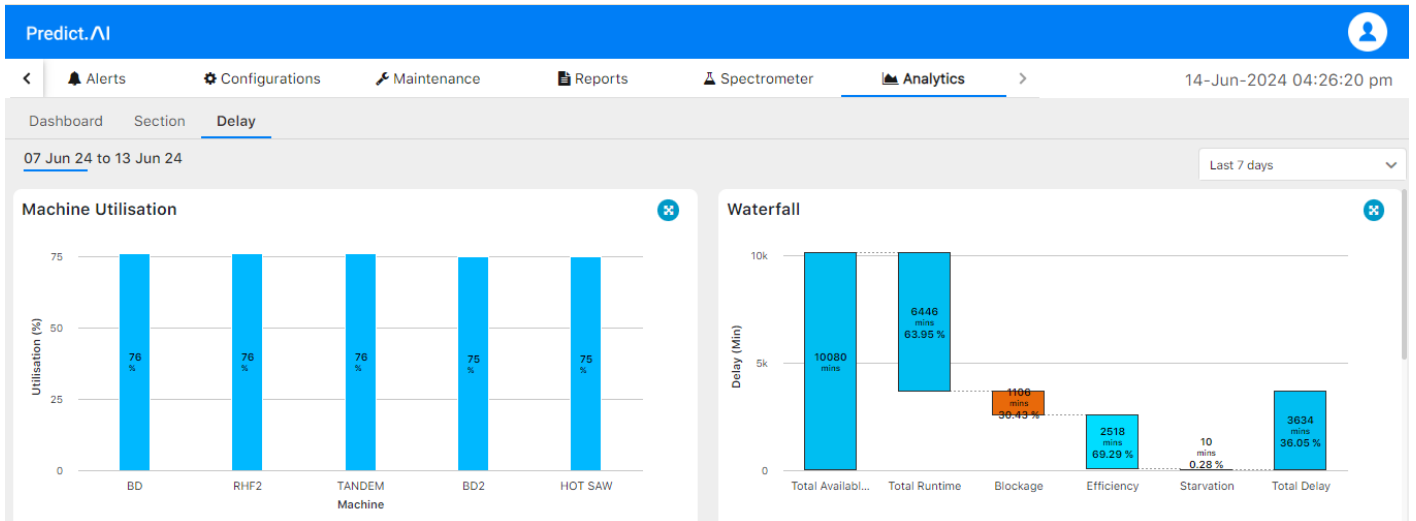


Section: Here we are showing two types of throughput

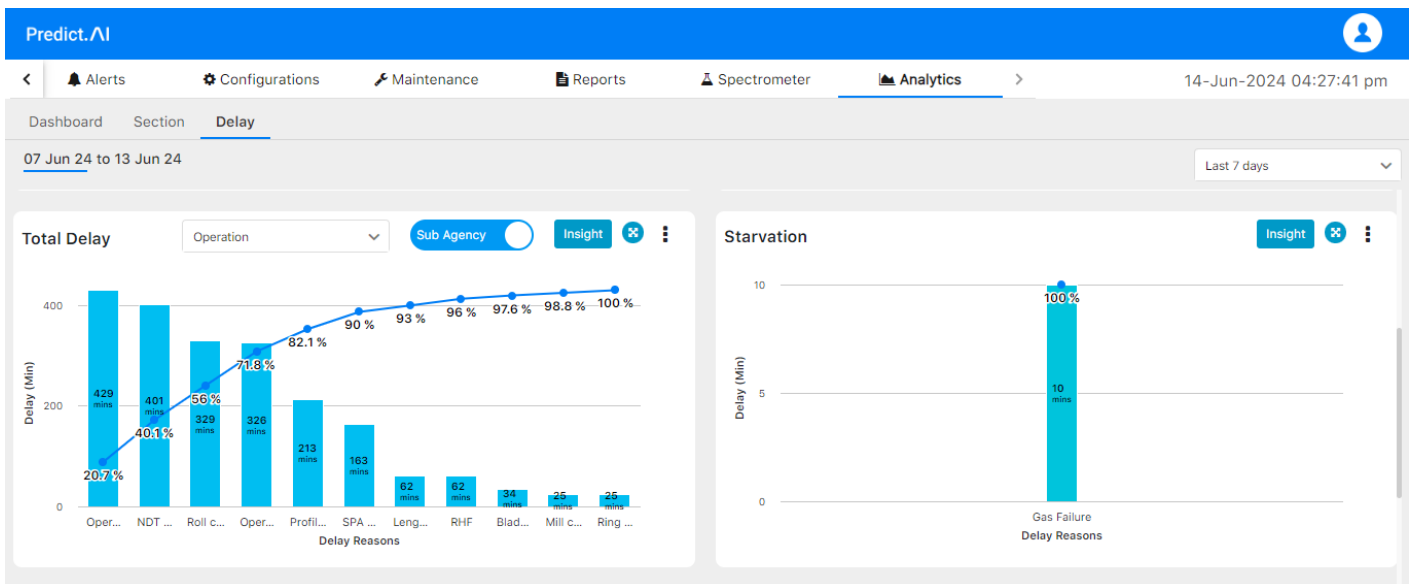


Delay: In this page we are showing 6 types of information in graphical format:

Machine Utilization and Waterfall chart:



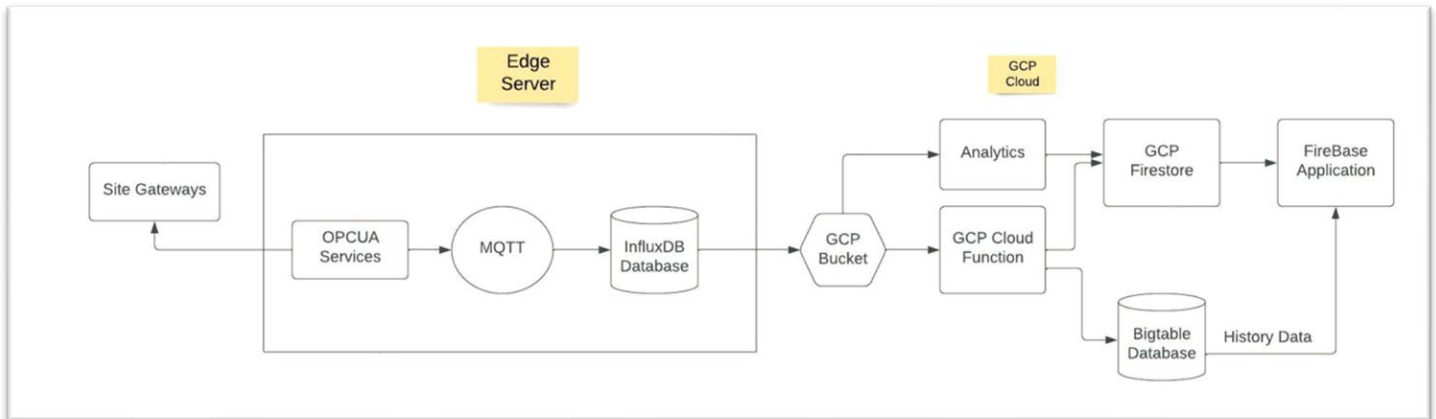
Total Delay and Starvation:



Blockage and Efficiency:



7.9 Architecture of Predict.AI



.....**Thank You**.....

