

UNIFIED PLANT DASHBOARD

Automating Plant Dashboards for
Enhanced Visibility and Efficiency.

WWW.MYENOVATION.COM

Phase 1 Scope

- Phase 1 focuses on reducing manual entries and automating KPI data for operational efficiency.
- Automate the calculation of Key Performance Indicators (KPIs) - OEE, Job per Hour (JPH), and Downtime.
- Streamline the data entry process to minimize manual efforts from line leaders and showcase key matrix to management team.



Objective

Automate and streamline shopfloor data integration for enhanced visibility and efficiency across multiple plant locations.

Key Features

- **Centralized View** : Single comprehensive dashboard consolidating data from various plant locations.
- **Automated Data Input** : Reduction of manual data entry through automated processes, minimizing errors.
- **Dynamic Filtering** : Customizable filters for location, product type, customer, shift,



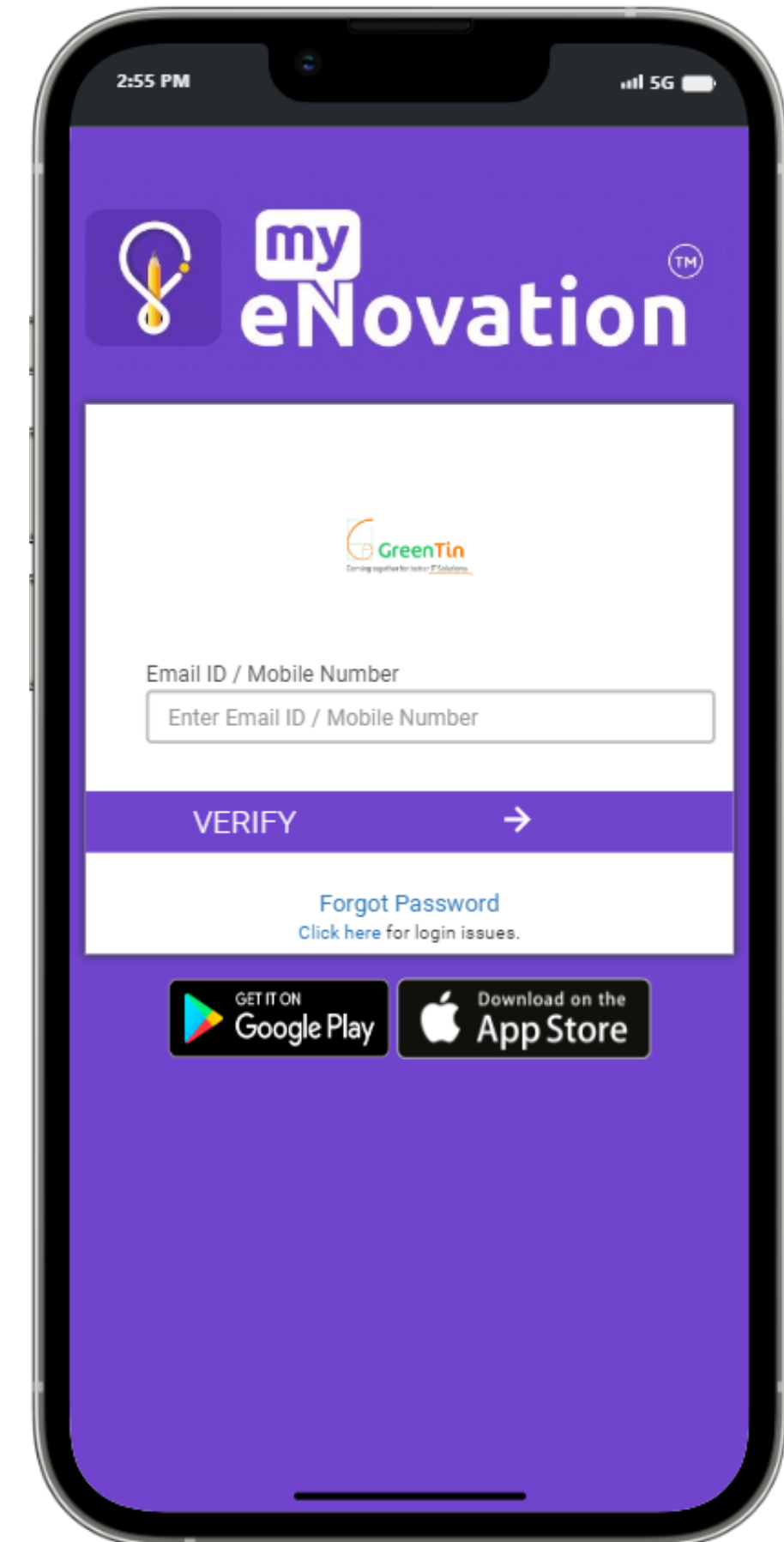


Seamless Data Input with myeNovation App

- **Process Overview:** Line leaders & Admin can effortlessly input data using the existing **myeNovation** app.

Key Steps

- Open **myeNovation** App
- Login with Existing Credentials
- Access "Plant Data" Section



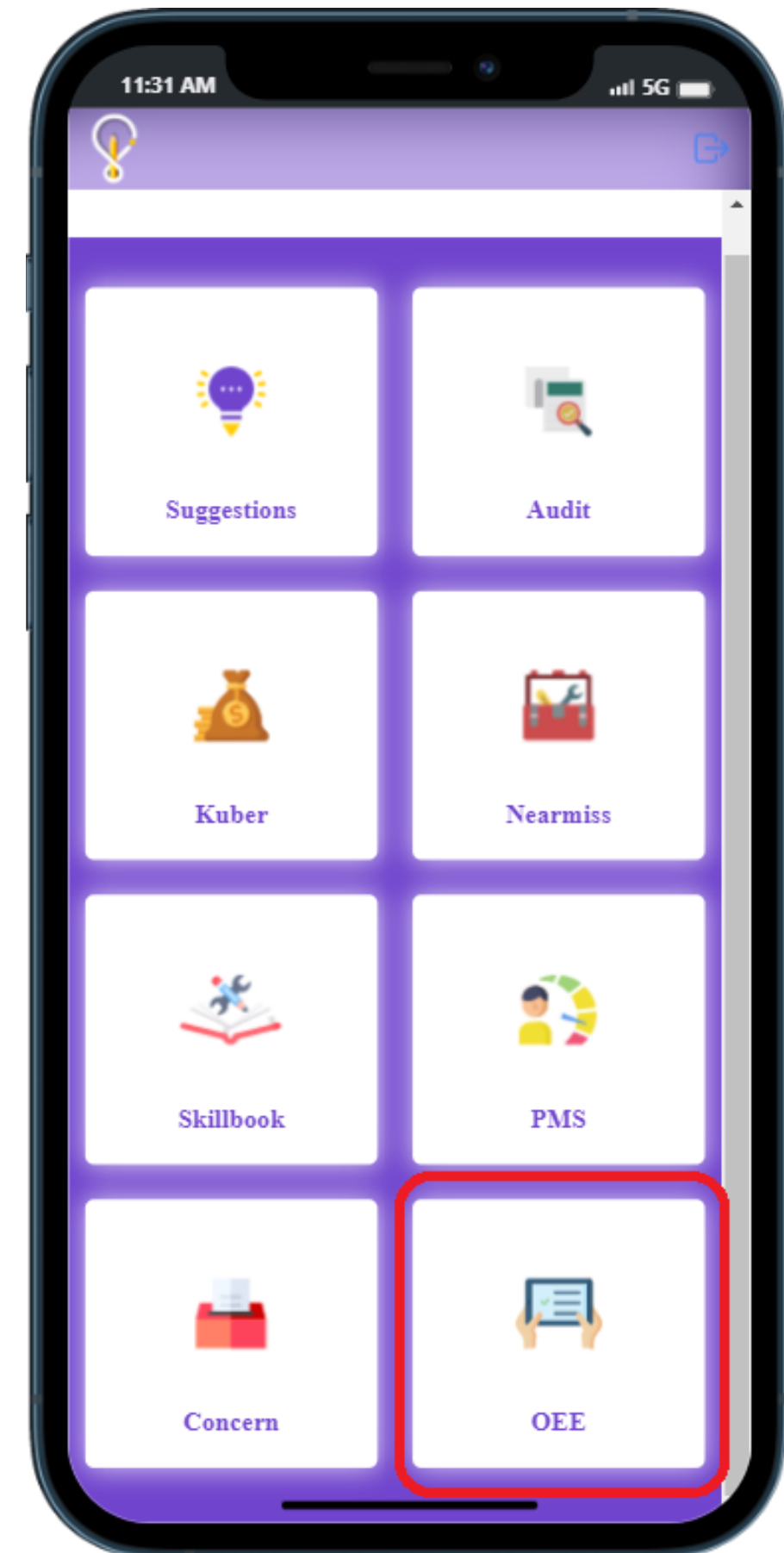


Seamless Data Input with myeNovation App

- **Process Overview:** Line leaders & Admin can effortlessly input data using the existing **myeNovation** app.

Key Steps

- Open **myeNovation** App
- Login with Existing Credentials
- Access "Plant Data" Section

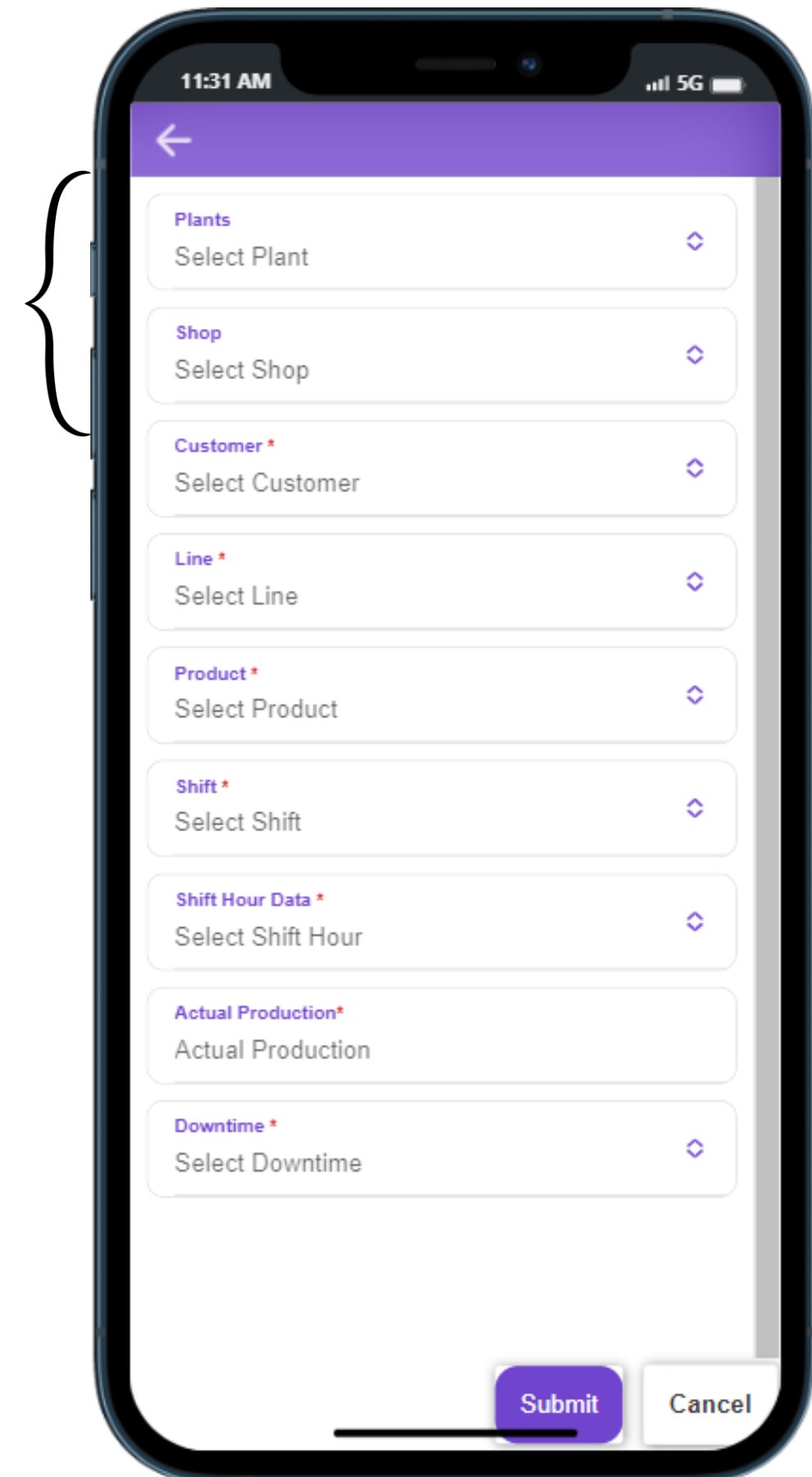


Intuitive Data Input in myeNovation App

- Plant and shop data dynamically loaded based on user location for personalized experience.

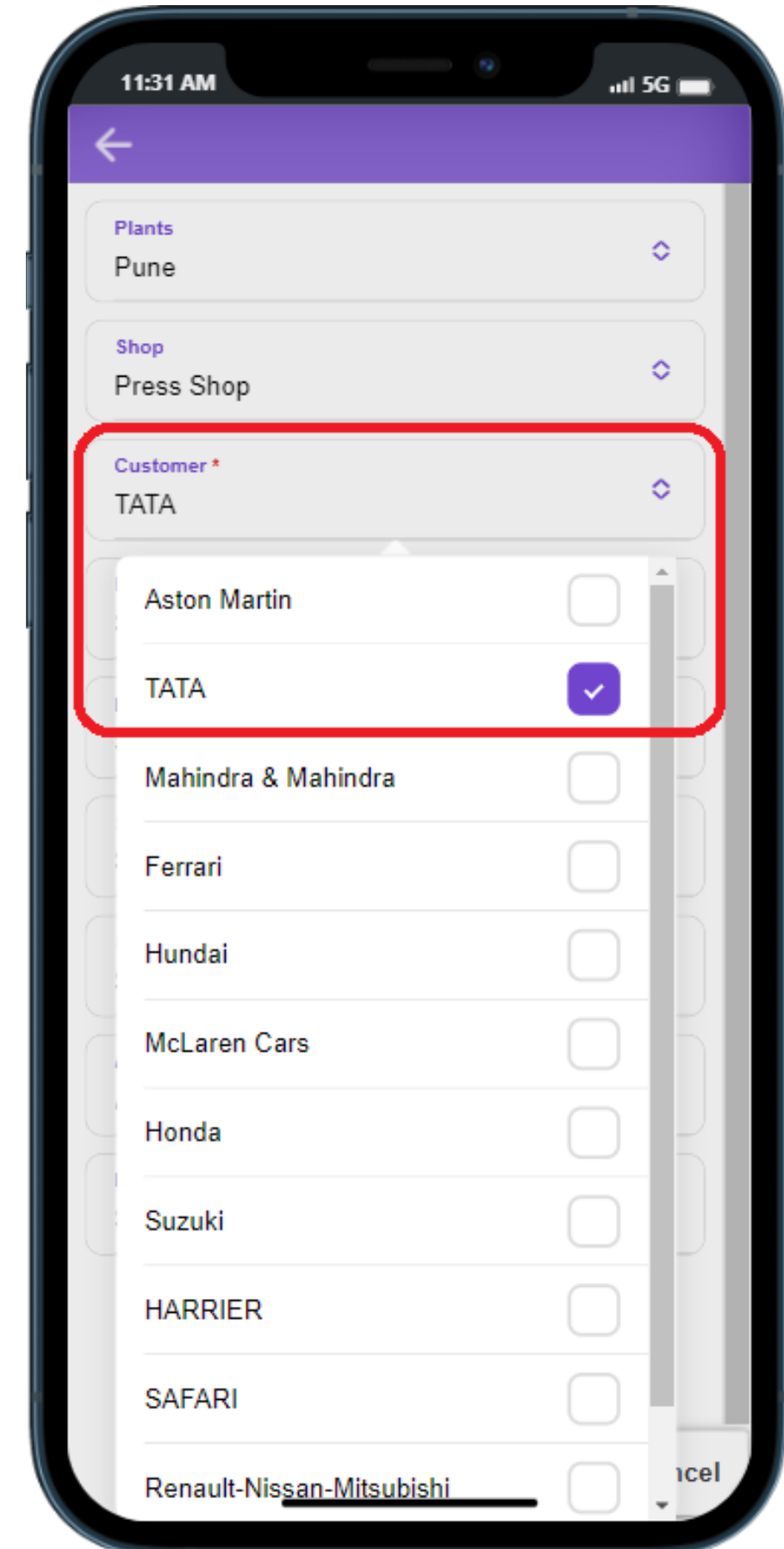
Highlights

- **Precision** : Dropdowns ensure accurate data input with standardized selections.
- **User-Friendly** : Intuitive interface for line leaders and admins.
- **Efficiency** : Streamlined process for quick and accurate data entry.
- **Human Error** : Minimizing the Human Errors.



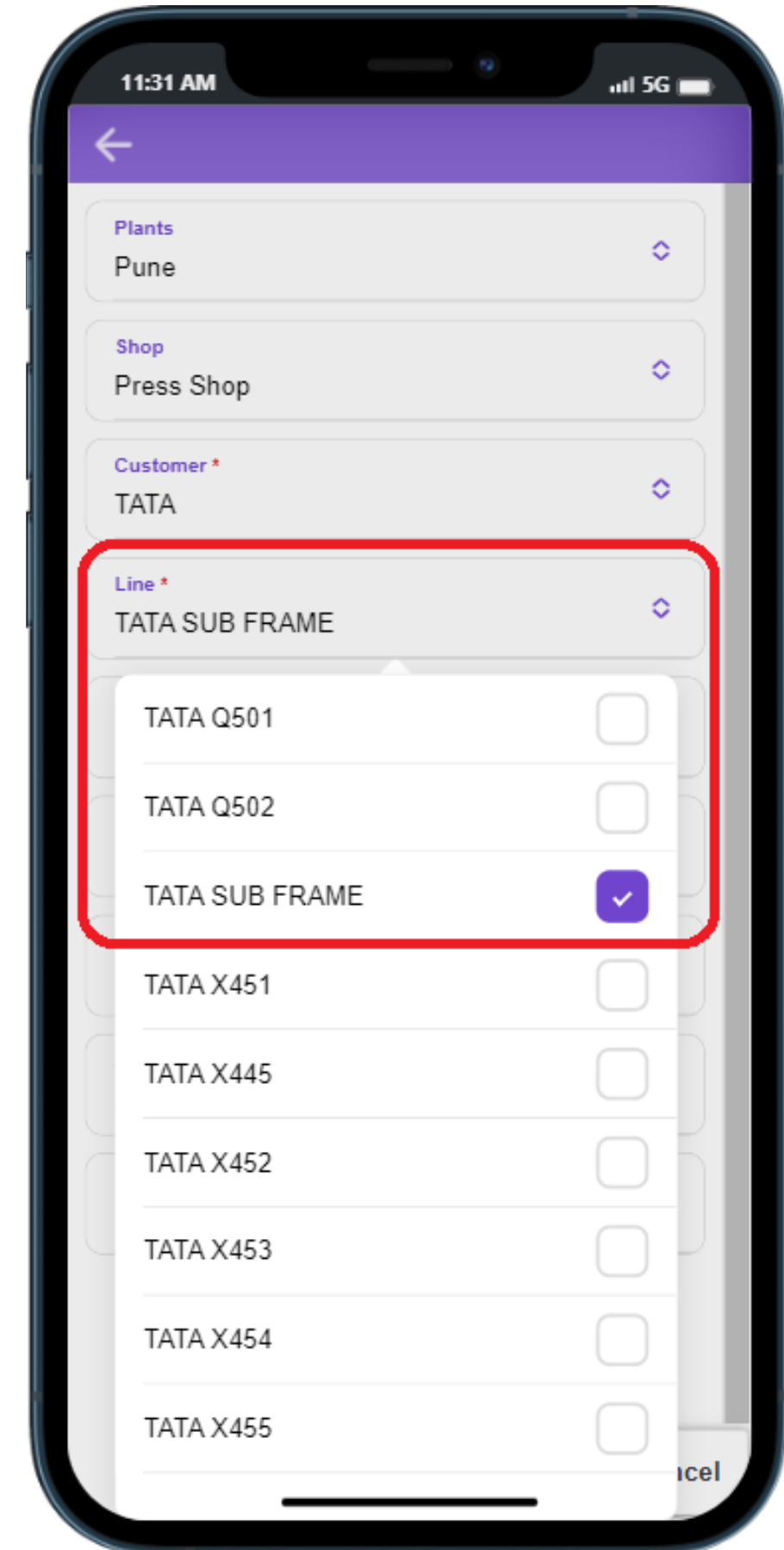
Intuitive Data Input in myeNovation App

- **Customer**
 - Choose the customer associated with the production data.
 - Accurate assignment of production data to specific customers.



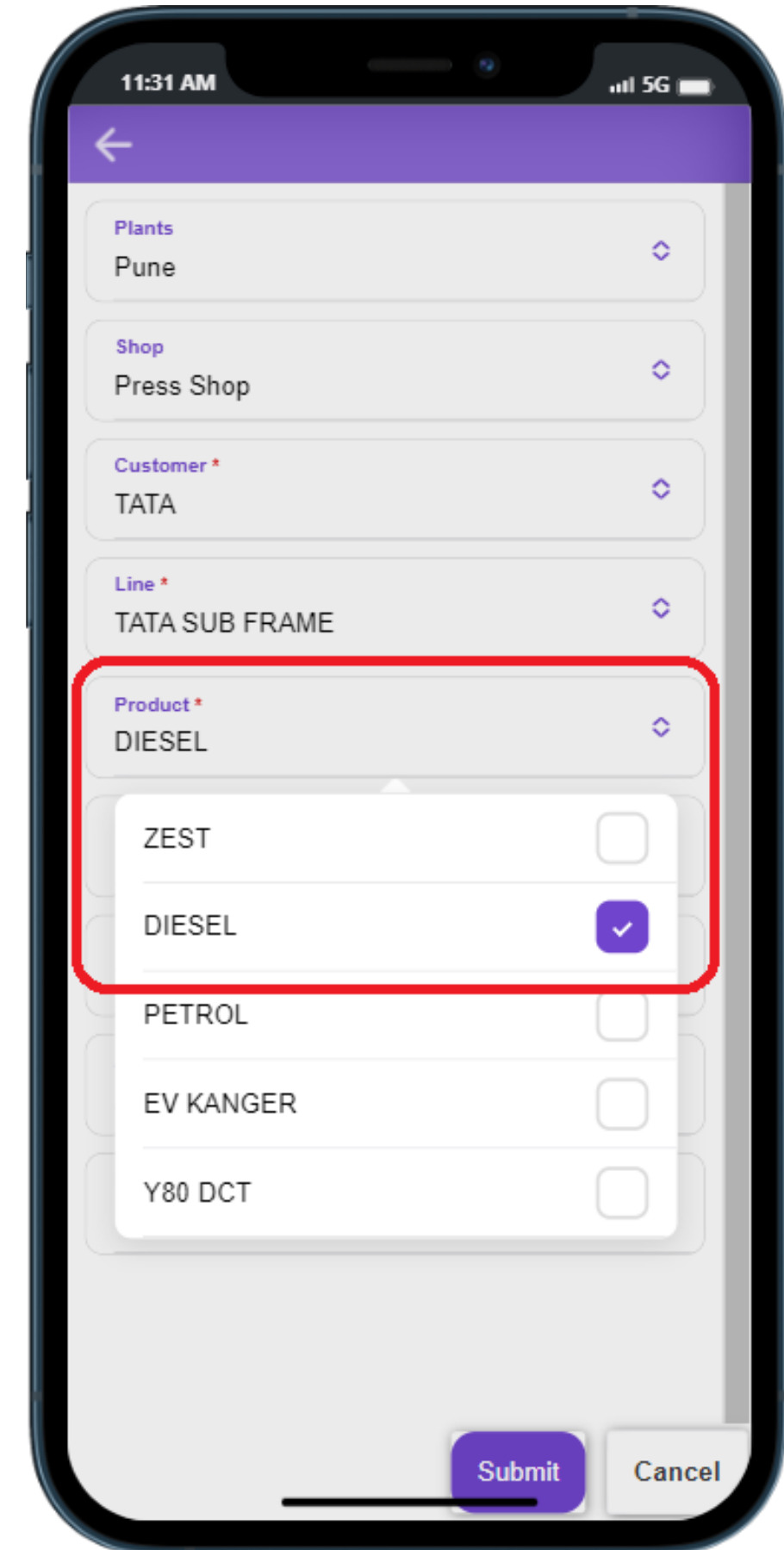
Intuitive Data Input in myeNovation App

- **Line**
 - Select the production line where the manufacturing activities occur.
 - Targeted data input for specific production lines, aiding in focused analysis.



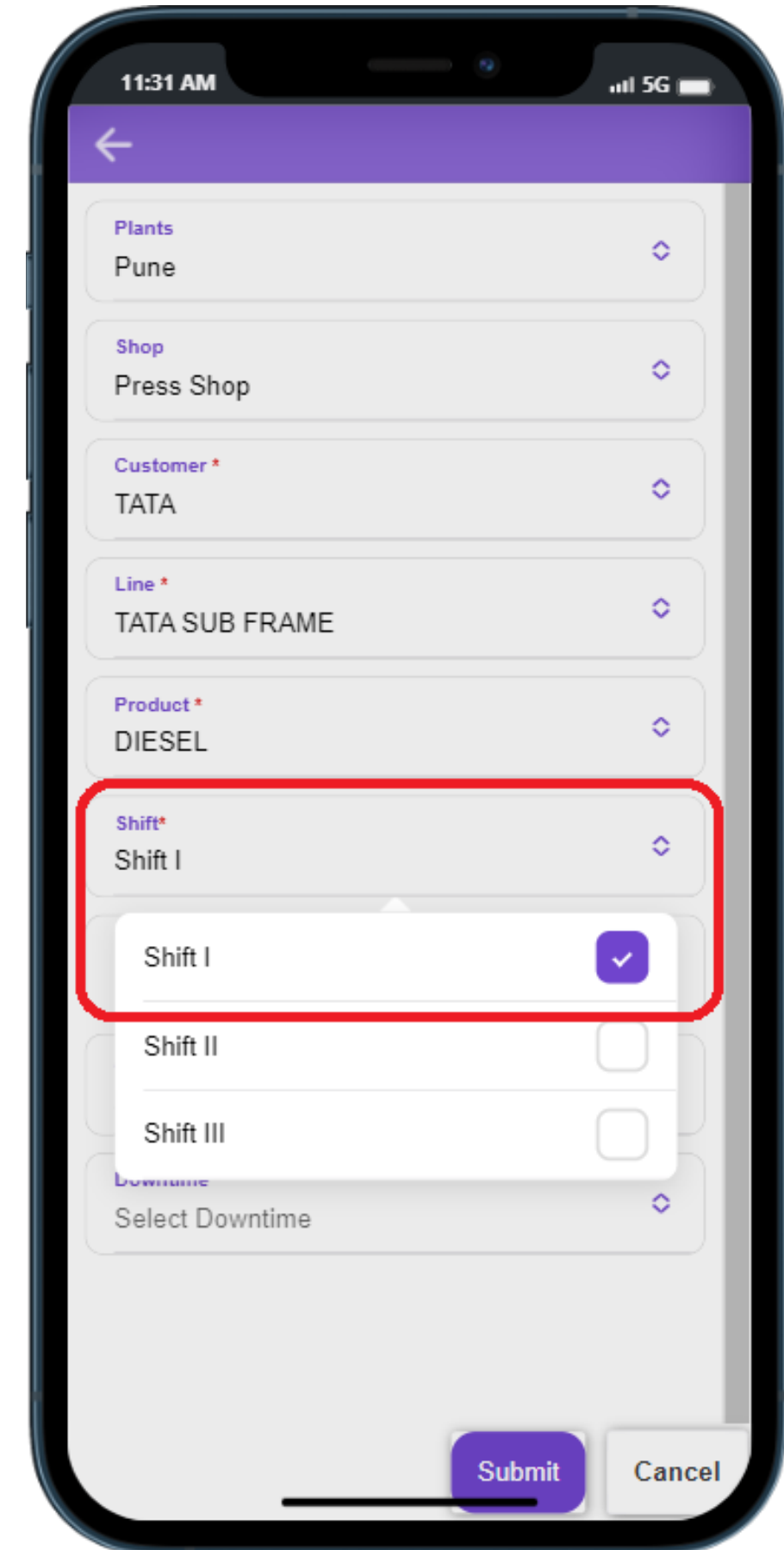
Intuitive Data Input in myeNovation App

- **Product**
 - Utilize a dropdown menu to precisely identify the product being manufactured.
 - Ensures accurate categorization of production data for each distinct product.



Intuitive Data Input in myeNovation App

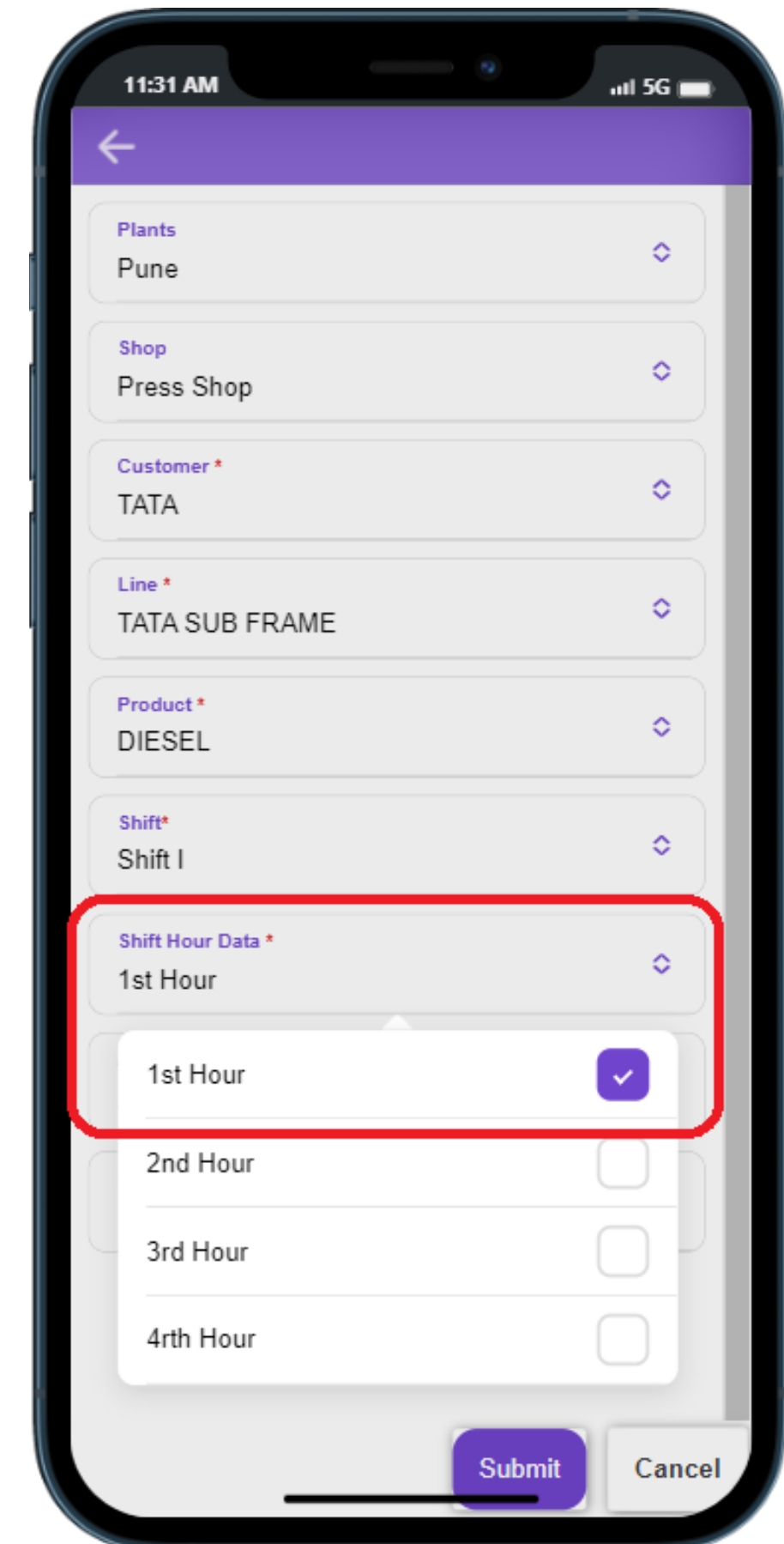
- **Shift**
 - Easily specify the relevant shift during which the production activities occurred.
 - Accurate record-keeping based on different shifts for comprehensive analysis.



Intuitive Data Input in myeNovation App

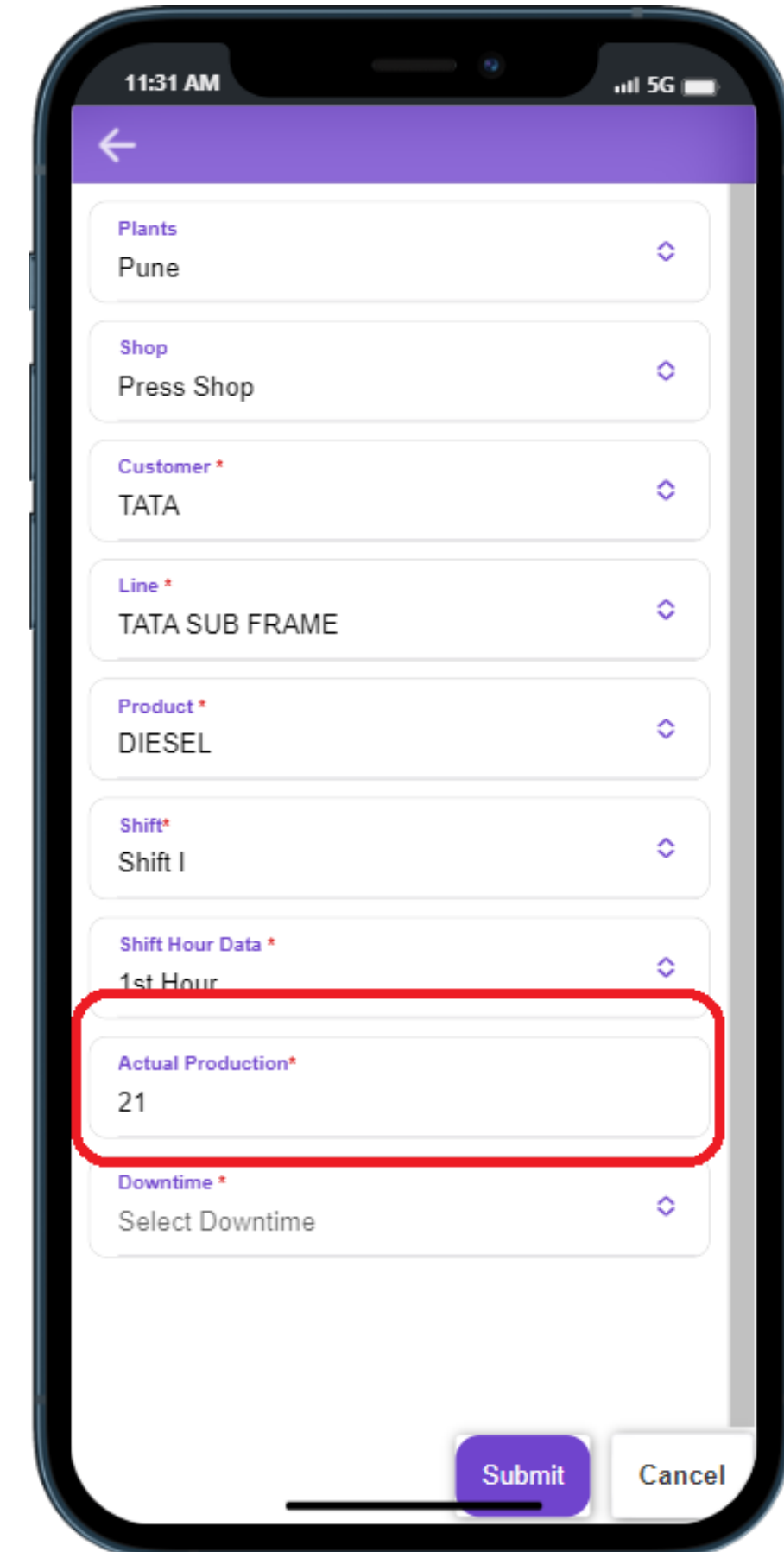
- **Shift Hour Data**

- Input production details with a user-friendly dropdown for specific shift hours.
- Granular data input for precise analysis of production trends during specific hours.



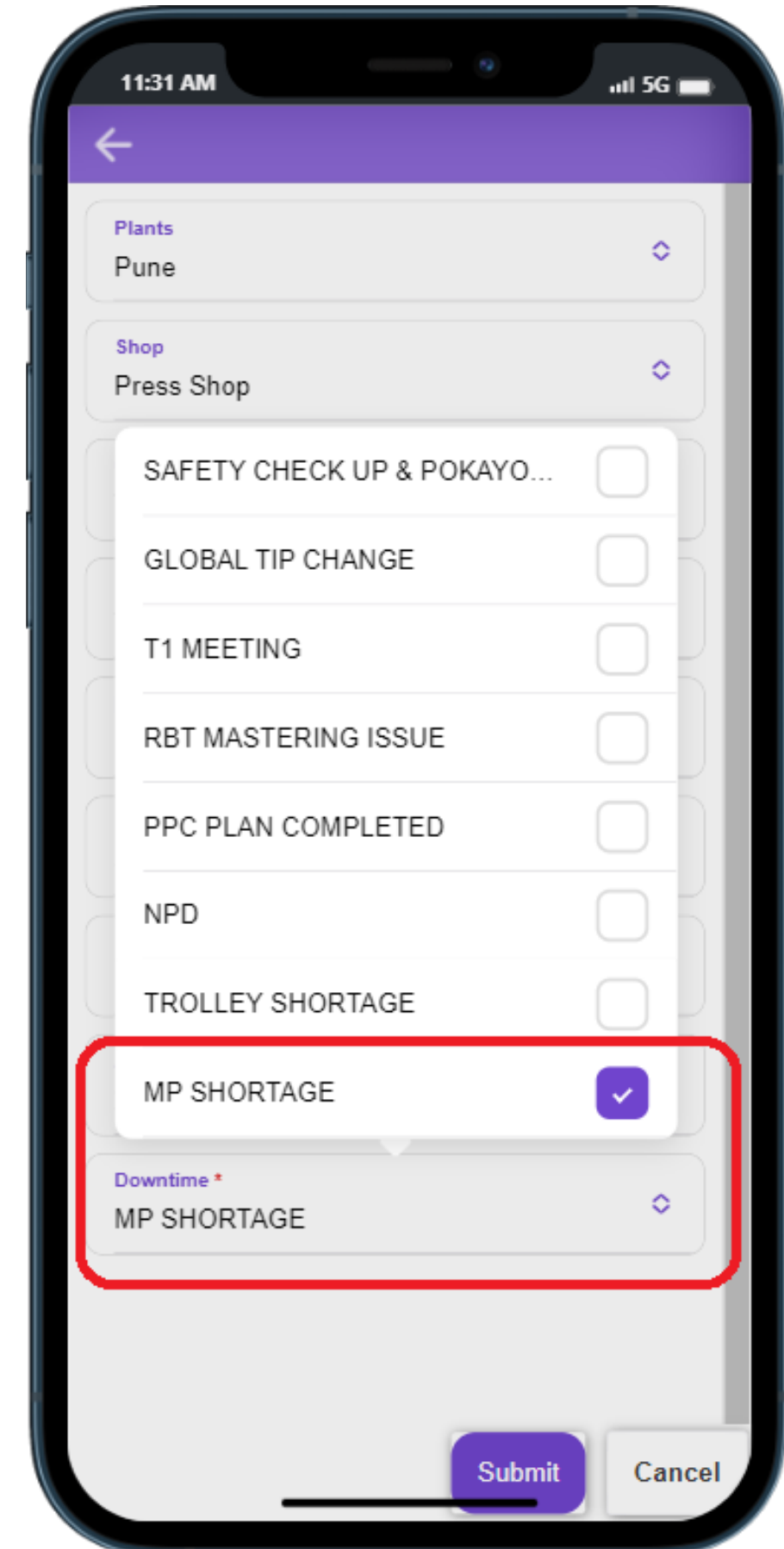
Intuitive Data Input in myeNovation App

- **Actual Production**
 - Enter the actual production figures achieved during the specified parameters.
 - Real-time tracking of production figures for immediate insights into performance.

A screenshot of a mobile application interface. At the top, the status bar shows the time as 11:31 AM and 5G connectivity. Below the status bar is a purple header with a white back arrow. The main content area consists of several white input fields with rounded corners, each with a label and a dropdown arrow on the right. The fields are: "Plants" with the value "Pune"; "Shop" with the value "Press Shop"; "Customer*" with the value "TATA"; "Line*" with the value "TATA SUB FRAME"; "Product*" with the value "DIESEL"; "Shift*" with the value "Shift I"; "Shift Hour Data*" with the value "1st Hour"; "Actual Production*" with the value "21"; and "Downtime*" with the value "Select Downtime". The "Actual Production*" field is highlighted with a red rectangular border. At the bottom right, there are two buttons: a purple "Submit" button and a white "Cancel" button with a grey border.

Intuitive Data Input in myeNovation App

- **Reason for Downtime**
 - Clearly categorize and select reasons for downtime from a dropdown menu.
 - Facilitates in-depth analysis by providing categorized insights into the causes of downtime.

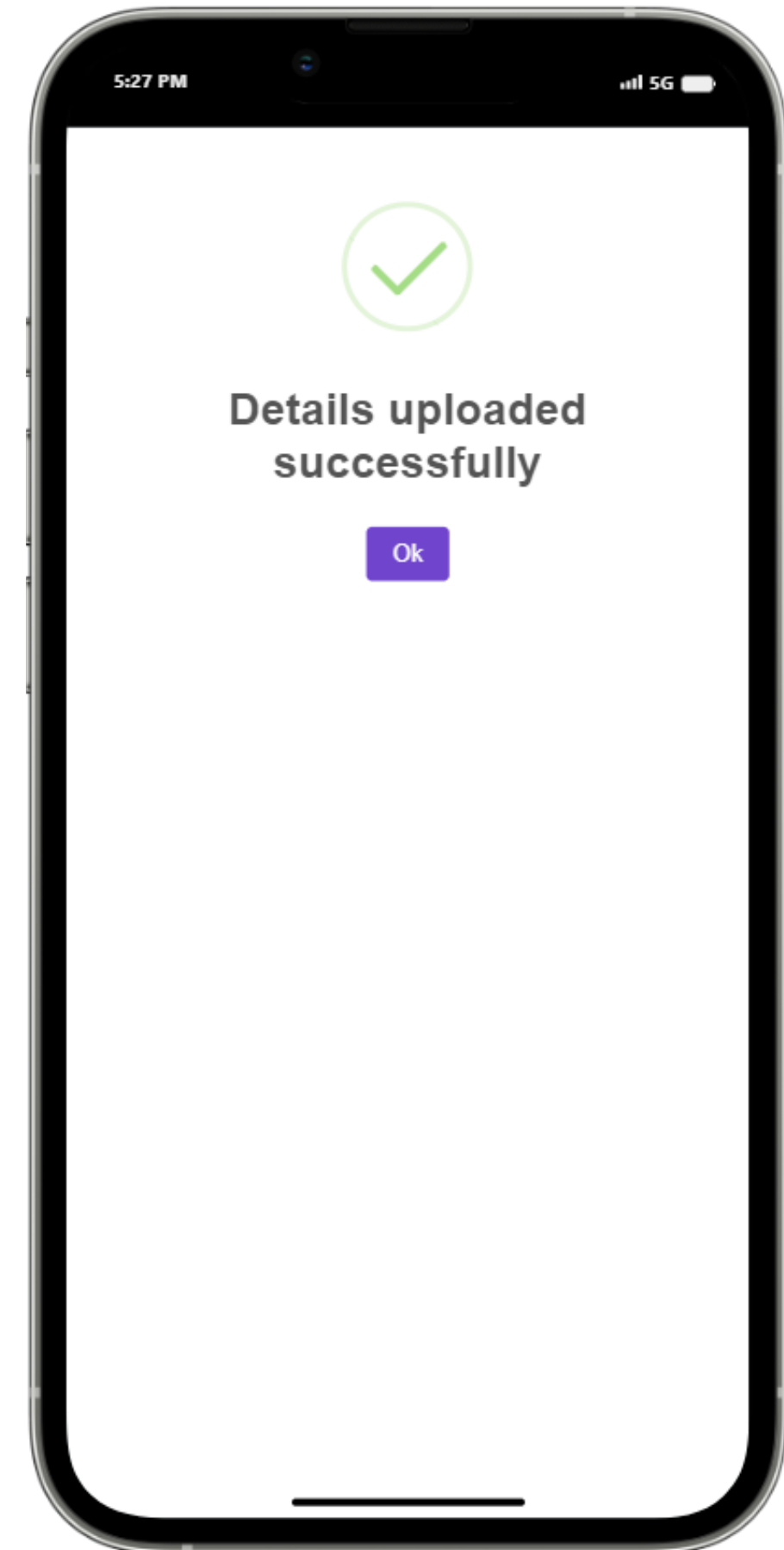


Finalizing Data Entry - Submitting Records

- **Confirmation Step** : After entering all relevant input fields, users click on the "Submit" button.

Highlights

- **Data Validation** : Briefly highlight the importance of reviewing entered data for accuracy before submission.
- **Historical Record Keeping** : Submitted data is automatically recorded in the system's database.
- **Audit Trail** : Ensure transparency and accountability with an audit trail for all submitted records.



KPI Calculation and Excel Spreadsheet Integration

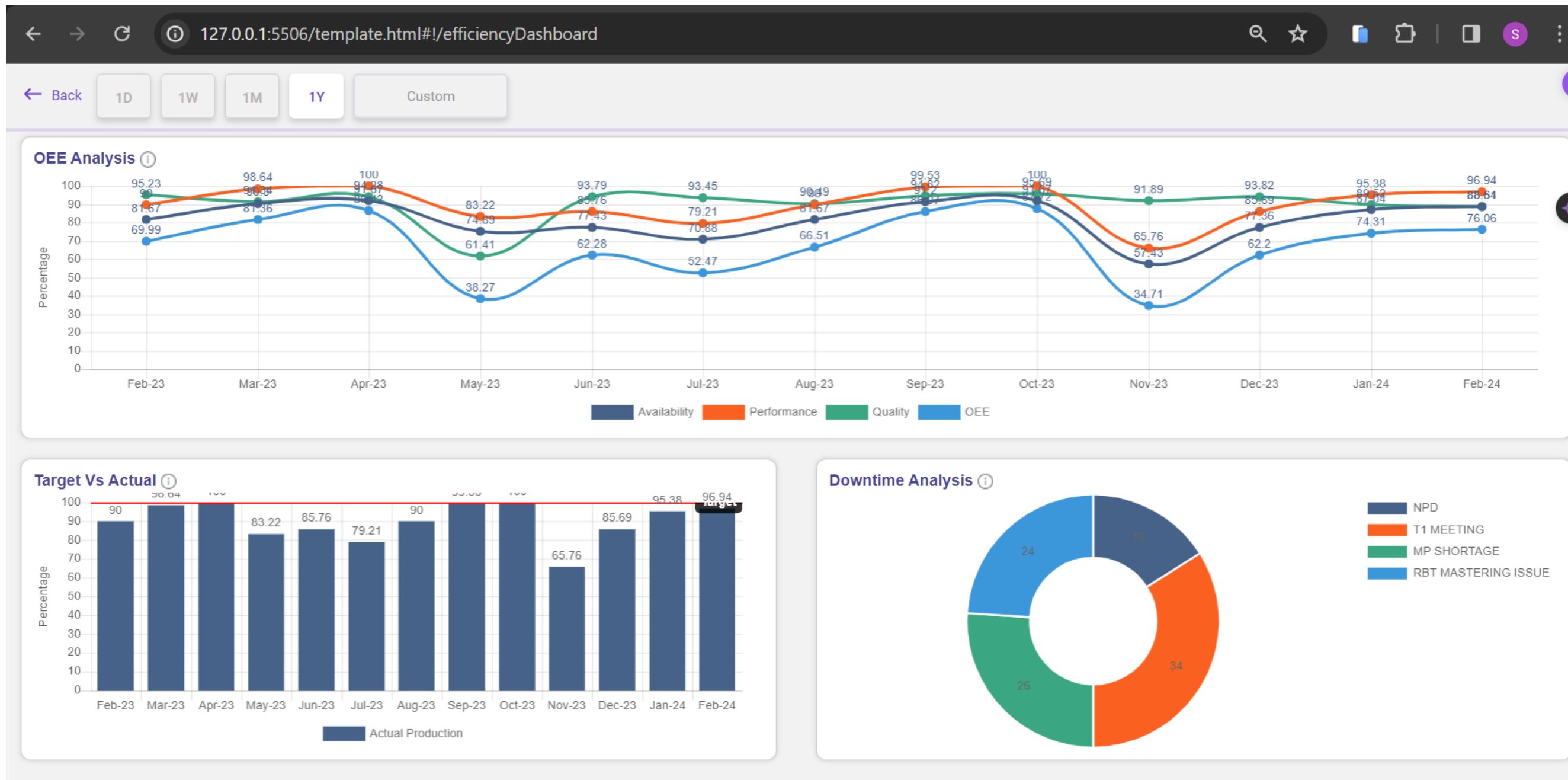
- **Data Utilization** : Data captured through **myeNovation** app serves as the foundation for Key Performance Indicator (KPI) calculations of OEE, Production, MIS reports can be exported in the excel format.

Highlights

- **Key Metrics** : Highlight the specific KPIs being calculated, such as OEE, Job per Hour, and Downtime metrics.
- **Automated Calculations** : Utilize formulas and algorithms to automate KPI calculations based on the entered data.
- **Integration with Excel** : Calculated KPIs seamlessly integrated into an Excel spreadsheet.
- **Data Storage** : Excel spreadsheet serves as a centralized repository for historical and real-time KPI data.
- **Analytical Power** : Excel facilitates in-depth data analysis and reporting.

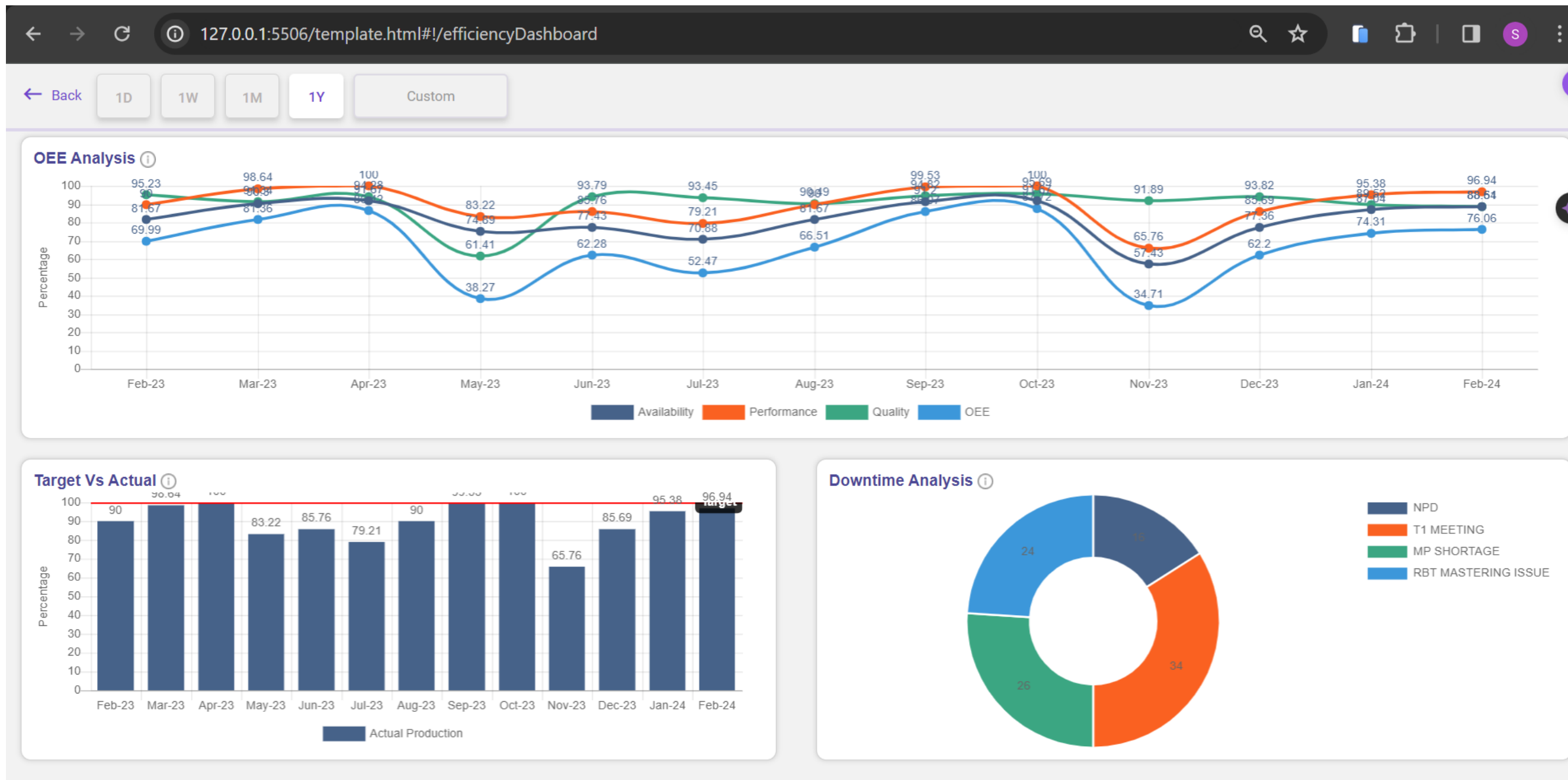
	Day 1	Day 2	Day 3	Day 4
# of Units Produced	700	900	1,000	600
Time (Hours)	24	24	24	24
Throughput	29.2	37.5	41.7	25.0
Cost of Goods Sold	\$10,500	\$13,500	\$15,000	\$9,000
Average Inventory	600	600	600	600
Inventory Turns	17.5	22.5	25.0	15.0
Raw Materials Per Unit	14	14	14	14
Units Produced	700	900	1000	600
Projected Customer Demand	9,800	12,600	14,000	8,400
Scrapped Units	50	50	50	50
Units Produced	700	900	1000	600
Scrap Rate	6.7%	5.3%	4.8%	7.7%
Production Target	700	700	700	700
Units Produced	700	900	1000	600
Production Attainment	✓	✓	✓	✗

Visualizing KPI Data on Dashboard



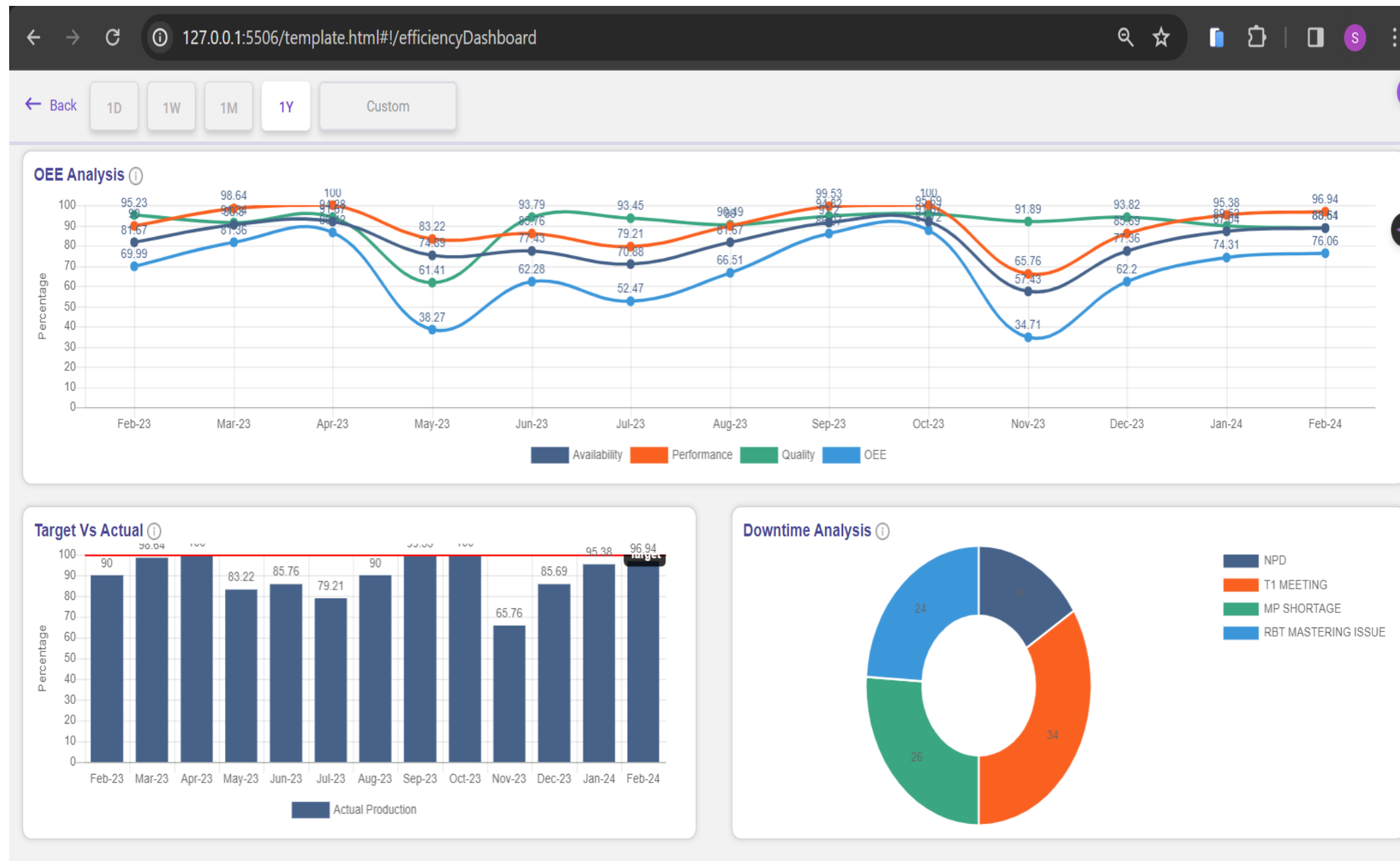
- **Dashboard Overview :** KPI data stored in the Excel spreadsheet will be dynamically showcased on an interactive.
- **Dashboard Graphical Representation :** Illustrative visualizations for key parameters: OEE, Job per Hour (JPH), Top Downtime, etc.

Visualizing KPI Data on Dashboard



- **Real-time Updates :** Dashboard reflects real-time changes based on the updated KPI data.
- **Customization Options :** Users can customize the dashboard view based on specific preferences or focus areas.

OEE (Overall Equipment Efficiency)



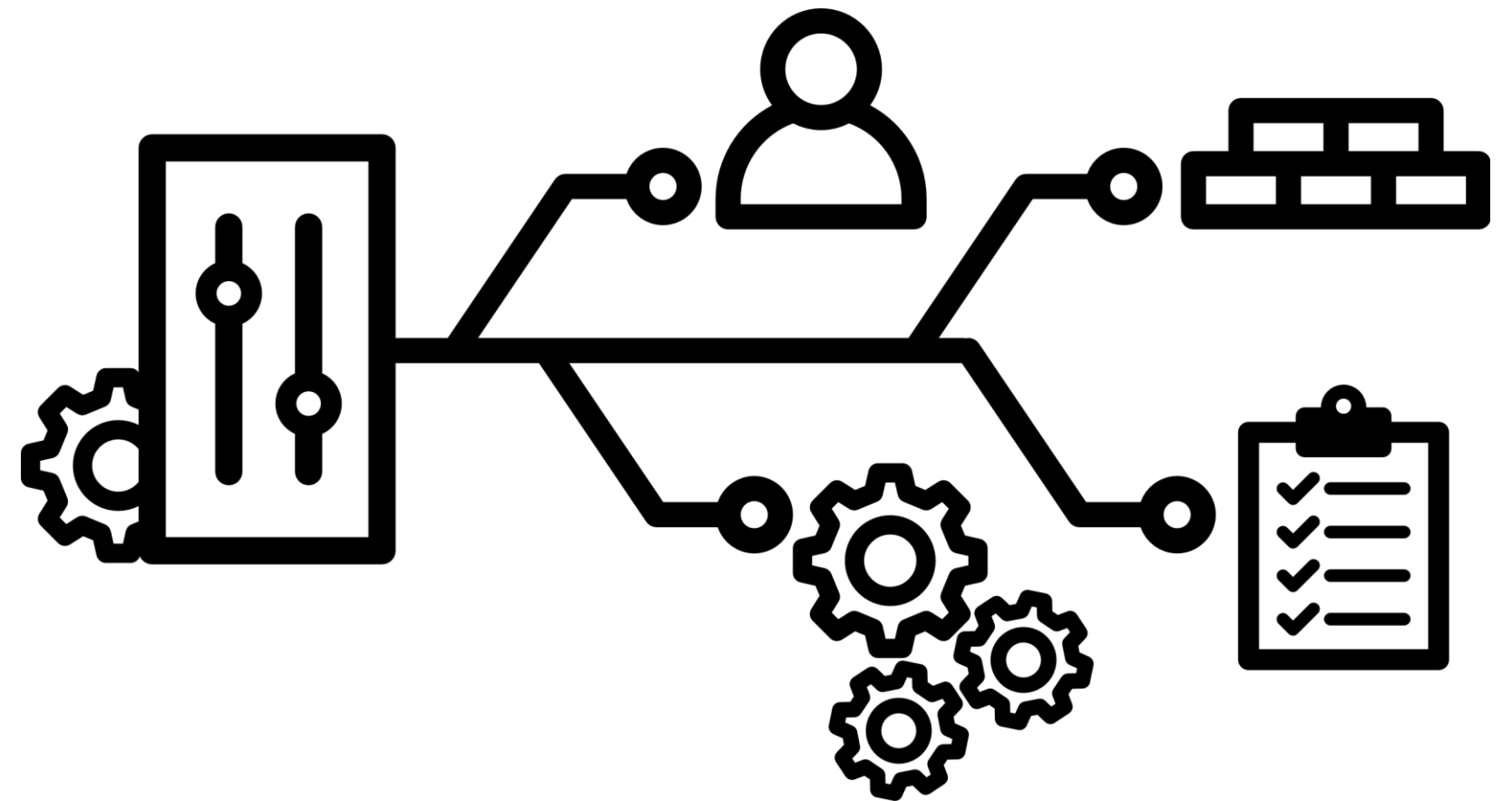
- OEE (Overall Equipment Efficiency) is calculated as the product of Availability (A), Performance (P), and Quality (Q).
- **Formula:** $OEE = A * P * Q$
- **Components:**
 - Availability (A): Measures the percentage of time the equipment is available for production.
 - Performance (P): Measures the speed and efficiency of the equipment during its available time.
 - Quality (Q): Measures the percentage of defect-free products produced.

Loss Analysis - 4M

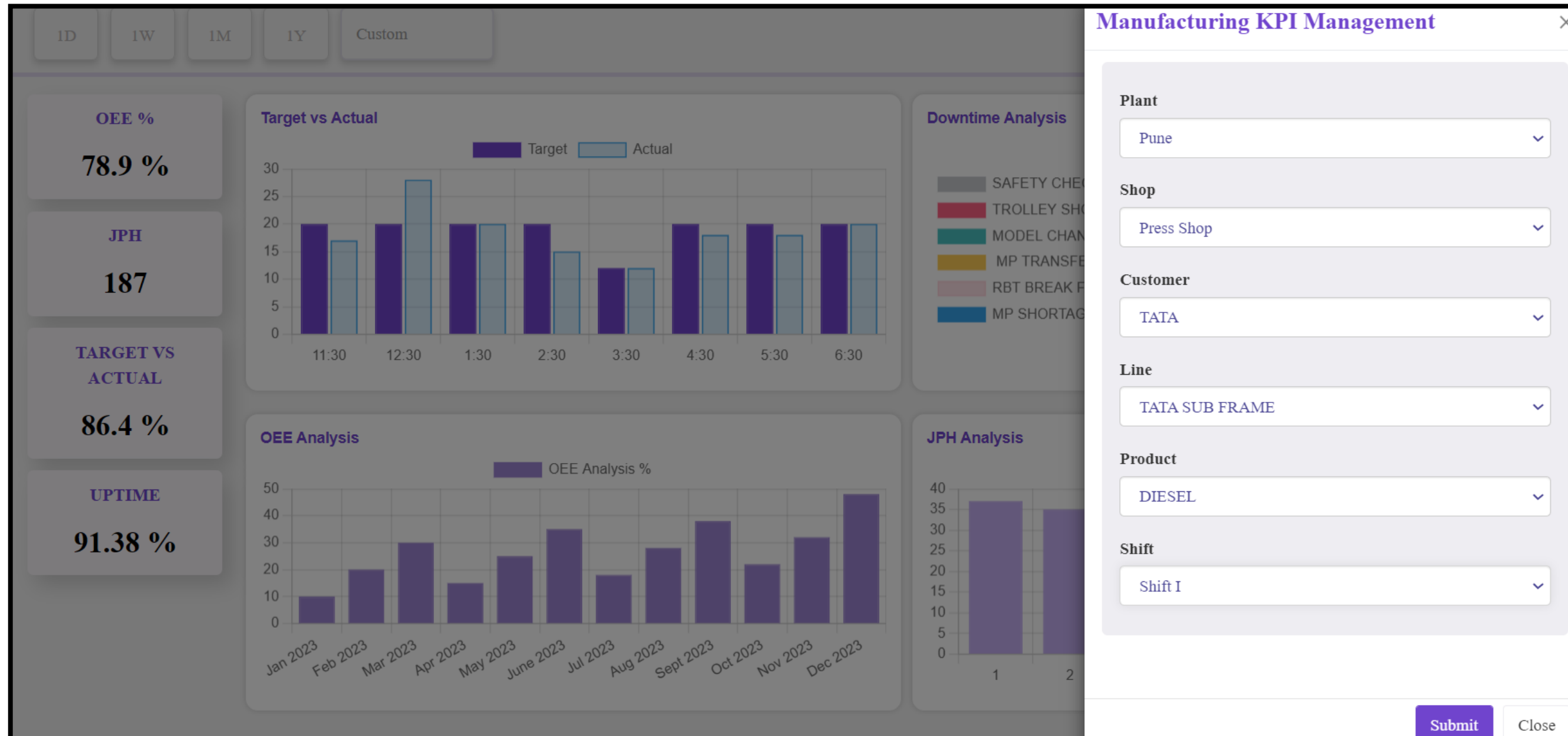
- Loss Analysis feature to be included that focuses on identifying and addressing losses in the production process. It encompasses the 4M factors: Man, Machine, Material, and Method.

Components

- **Man:** Analyze losses related to human factors, such as skill levels, training, and staffing.
- **Machine:** Assess losses associated with equipment, machinery, and technology.
- **Material:** Examine losses related to raw materials, quality issues, and wastage.
- **Method:** Evaluate losses resulting from the production process, procedures, and overall methodology.

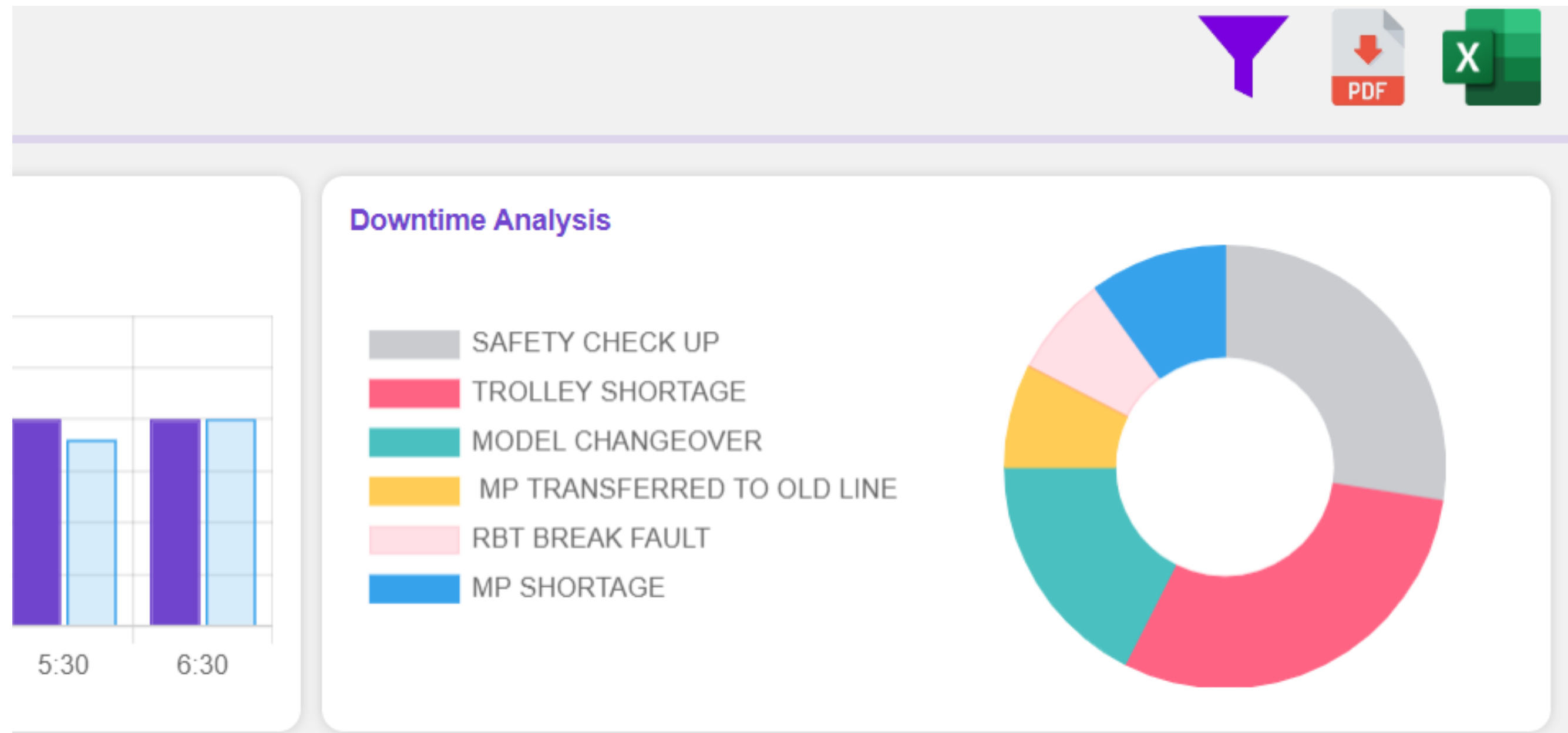


Admin Manager's Customization Power



- **Dashboard Customization :** Admin Manager has the ability to customize KPIs based on diverse parameters.
- **Targeted Monitoring :** Tailor the dashboard to focus on specific plants, customer segments, production lines, or shifts.

Streamlined Reporting with One-Click Downloads

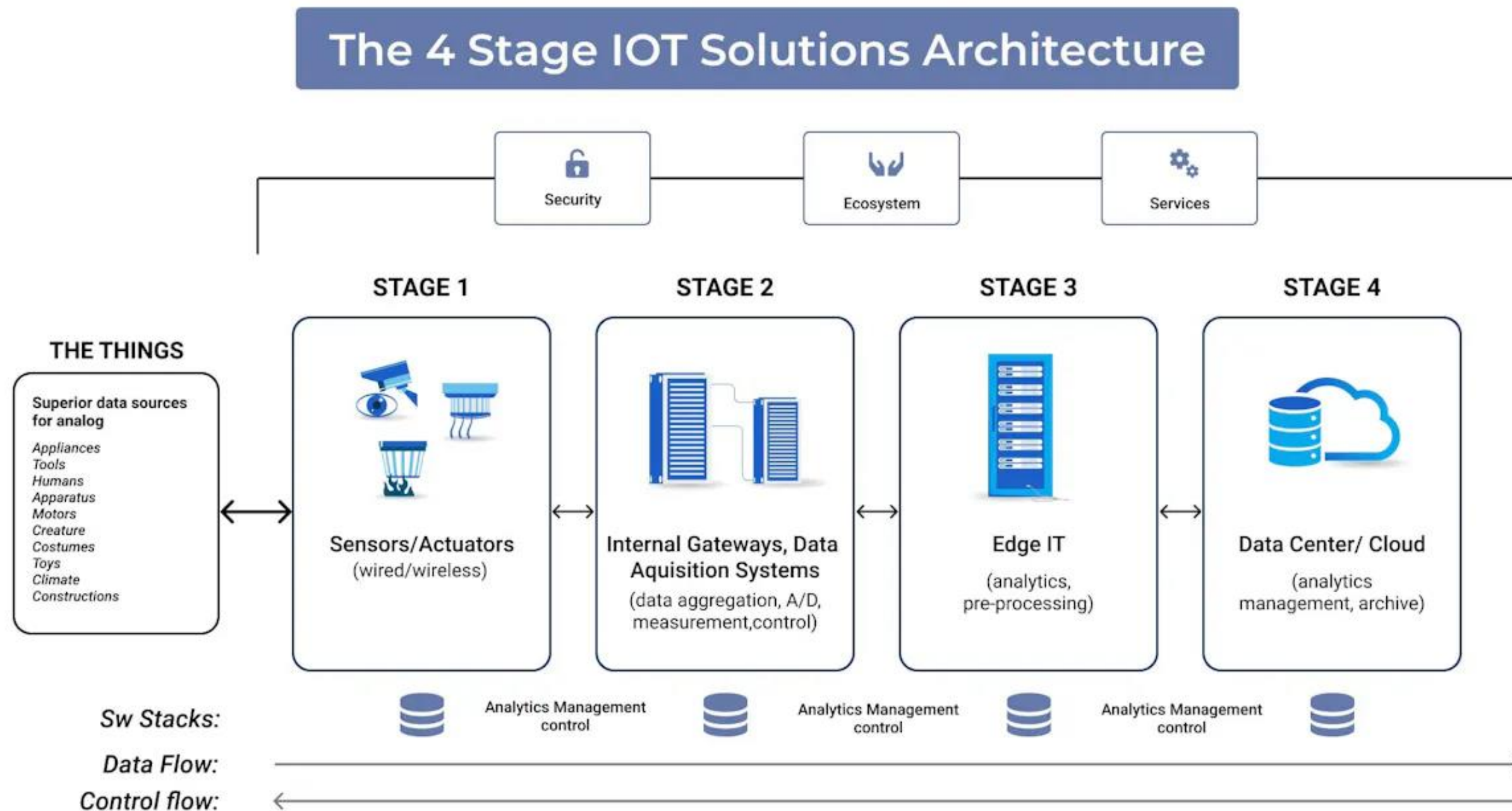


- **Data Accessibility** : Enhance accessibility by providing instant access to comprehensive reports.
- **Automated Export** : Reports are generated automatically based on the current dashboard view.

Phase 2: Intelligent Production Systems in Industry 4.0



IoT Solution Architecture



THANK YOU