

S&OP PROCESS ANALYSIS FOR ORIGINAL EQUIPMENT MANUFACTURER (OEM)

ABOUT THE CLIENT

Client is an **Original Equipment Manufacturer (OEM)** for **Electric Vehicles** serving customers in over 50 countries, with four manufacturing plants across the globe



SITUATION

- Client lacked visibility into real time performance of **Sales and Operations planning processes** due manual processes and this was leading to supply chain inefficiencies and **increased order fulfillment lead times**.
- Merilytics partnered with the client to streamline the processes by solving data bottlenecks and built **S&OP dashboards** that can be leveraged to **track strategic and operational KPIs** and have real time visibility into the supply chain processes



VALUE ADDITION

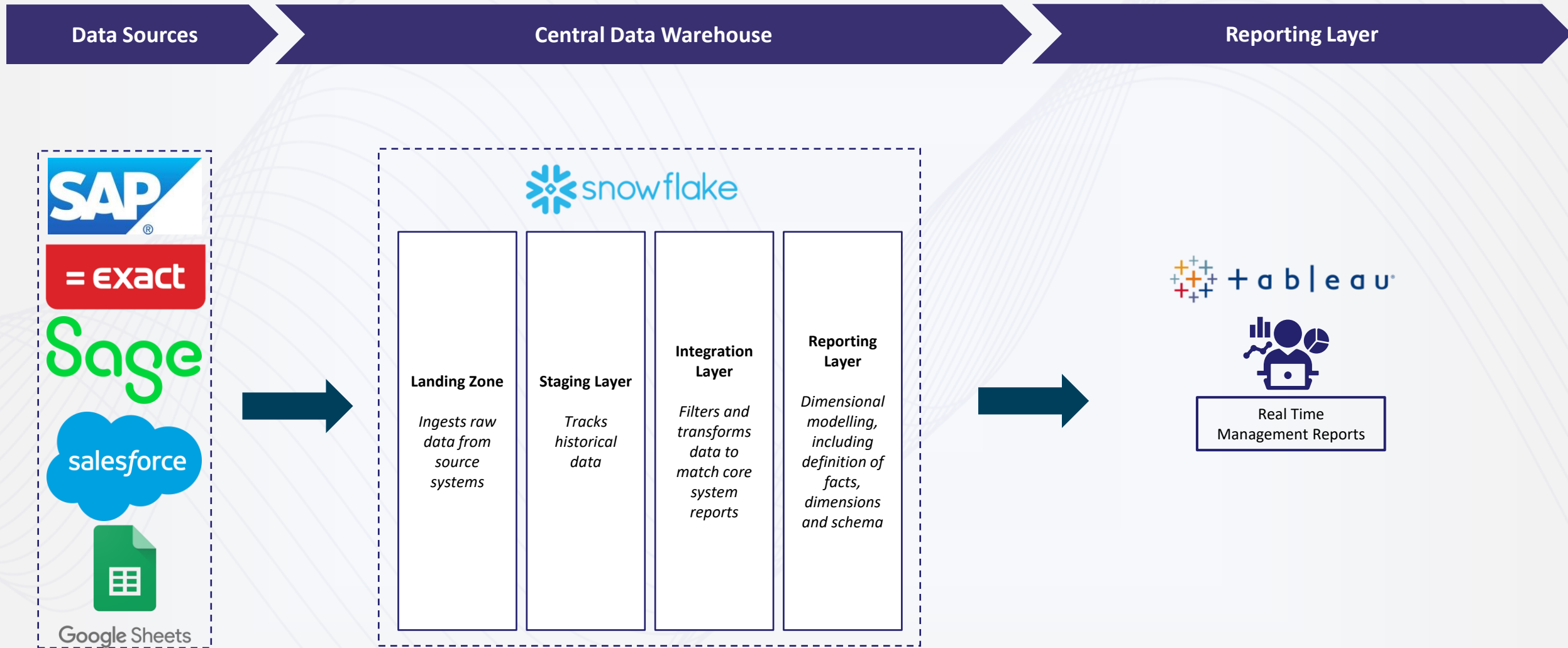
- Collaborated with the sales and supply chain team to understand the order to cash process and defined **85 Management and Operational KPIs** that track various metrics across **Order Intake, Fulfillment, Procurement, and Inventory**.
- Built pipelines to **ingest data from source systems** (SAP, Salesforce, Sage and offline Excel files) to create a **single central repository** of the data on Snowflake.
- Automated the creation of sales forecast template, production forecasting by leveraging VBA and built eight automated self-serve dashboards on Tableau – **Sales Orders & Fulfillment, Commercial KPI tracking, Procurement, Shipment, Inventory, Product availability, Backlog** and **S&OP-360 view** with daily refresh for the S&OP team to support the **reporting/analytics requirements**



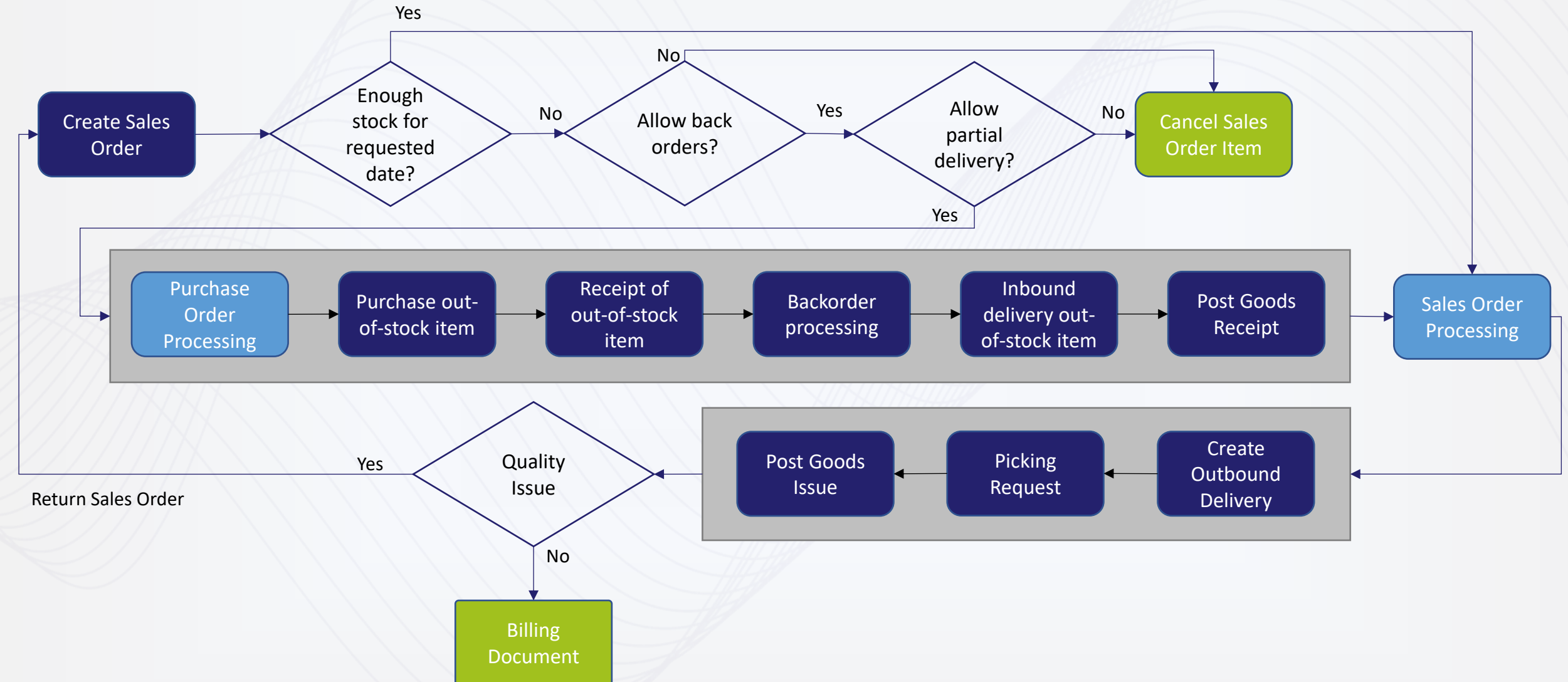
IMPACT

- Automation of the sales and production forecasting** has helped the team **save around 40 person-hours per month**
- The Sales Orders & Fulfillment and Inventory dashboards helped the Sales and Operations team **save around 80 person-hours per month**
- Real time tracking of KPIs provided 360-degree view into S&OP process enabling the client in **streamlining various supply chain processes** resulting in a **reduction of lead time by ~30%**

REPORTING ARCHITECTURE



METHODOLOGY/ APPROACH : OVERVIEW



METHODOLOGY/ APPROACH : DEMAND PLANNING

Factors affecting the product availability such as inventory and scheduled orders are automatically consolidated in the forecast template eliminating manual efforts.

Inventory

Order Intake

Forecast Input Template

Regional Forecast

Data Consolidation and Calibration

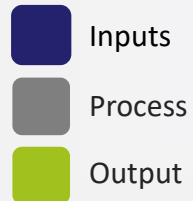
S&OP Forecast

Regional forecast is dynamically consolidated to create a single data source for the monthly S&OP forecast round.

Compared the regional sales of certain product groups and their subgroups against the available inventory levels to provide visibility into regions that are either exceeding or underperforming in terms of the allocated sales.

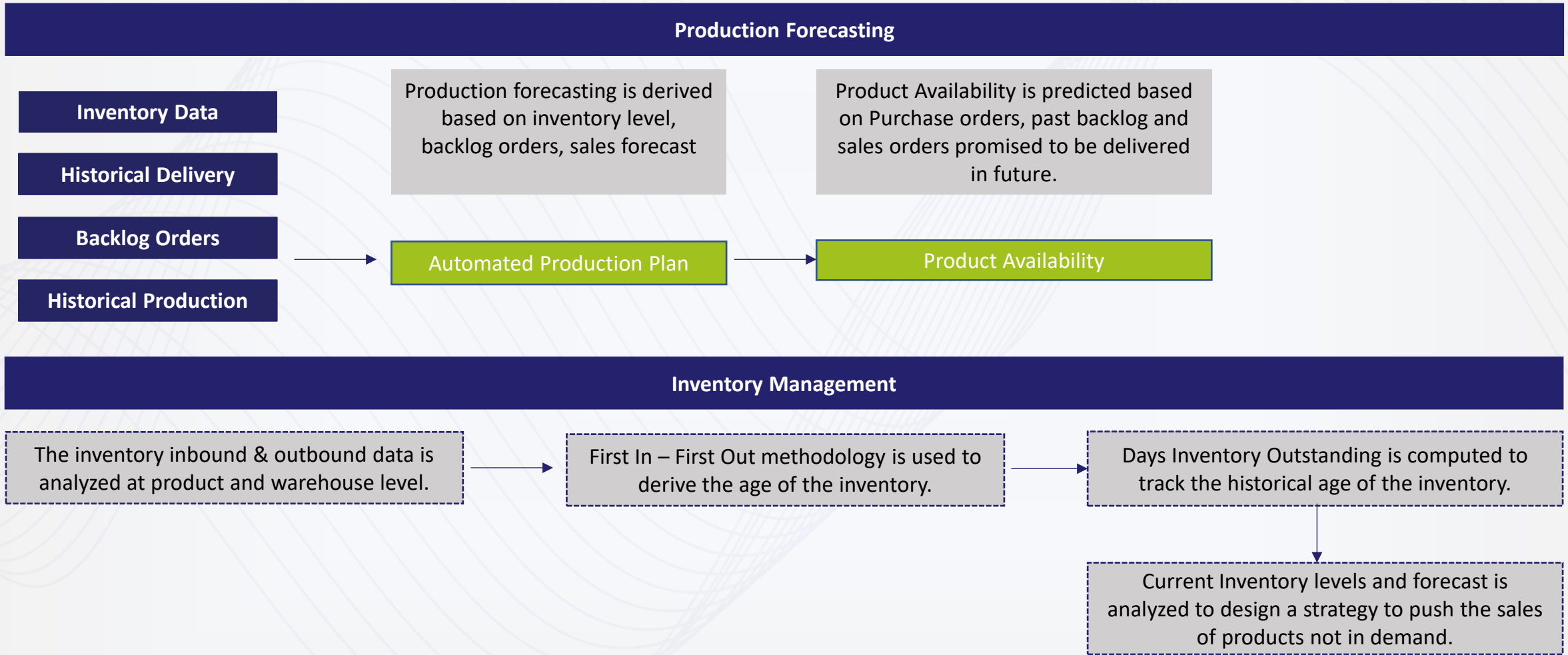
Collaborated with the sales team to understand the order intake and forecasting process to design the automated Excel based input template for different sales regions by leveraging VBA

Automated the end-to-end processes in the S&OP forecast input file, which is circulated with the executive stakeholders to collect the forecast figures from different regions



METHODOLOGY/ APPROACH : SUPPLY & INVENTORY PLANNING

- Partnered with the supply & operation planning team to analyze the inventory, production and outbound data and created an automated production plan.



S&OP EFFICIENCY TRACKING

- Provided real time visibility into S&OP processes by tracking the following metrics

Order Intake vs Sales Budget

- Variance between order Intake and Sales Budget
- Productivity of the sales team

Sales Forecast vs Actual Orders

- Sales Forecast Accuracy is computed by analyzing the order intake data and timestamped forecast data from previous months

Production Plan vs Actual Production

- Production Plan Forecast Accuracy is computed by analyzing the actual production and the historical production forecast

Commercial Sales KPI Tracking

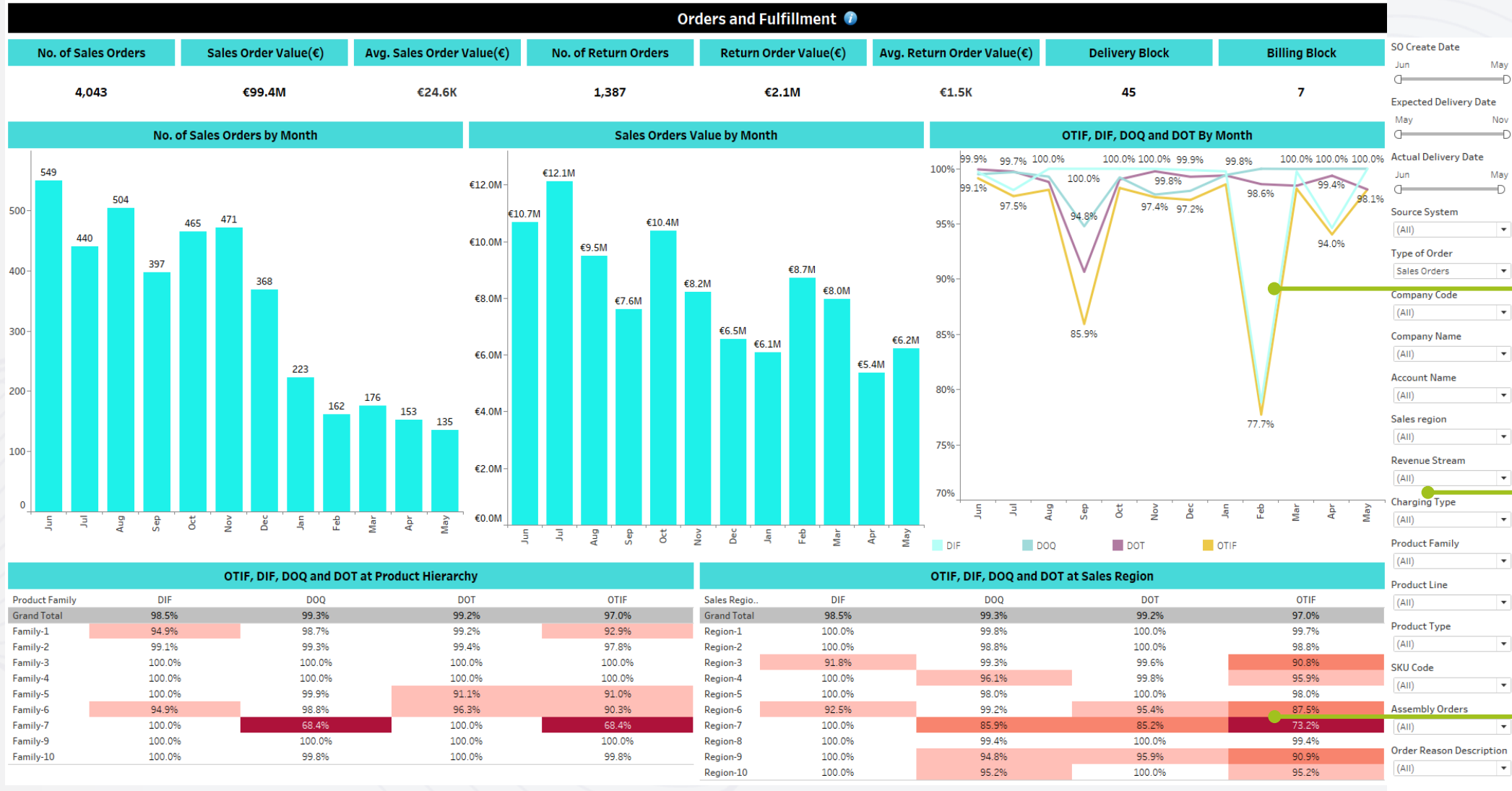
- Revenue, Backlog order, Sales Forecast and Budget are analyzed to compute the gap between the revenue budget and the actual revenue

S&OP 360-degree view

- Demand & Supply KPIs such as Order Intake, Outbound Delivery, Inventory and Backlog orders are consolidated at a single location to analyze the bottlenecks in the process

EXHIBIT 1 : SALES ORDERS AND FULFILLMENT TRACKING

ILLUSTRATIVE



Filter Pane

SO Create Date: Jun to May

Expected Delivery Date: May to Nov

Actual Delivery Date: Jun to May

Source System: (All)

Type of Order: Sales Orders

Company Code: (All)

Company Name: (All)

Account Name: (All)

Sales region: (All)

Revenue Stream: (All)

Charging Type: (All)

Product Family: (All)

Product Line: (All)

Product Type: (All)

SKU Code: (All)

Assembly Orders: (All)

Order Reason Description: (All)

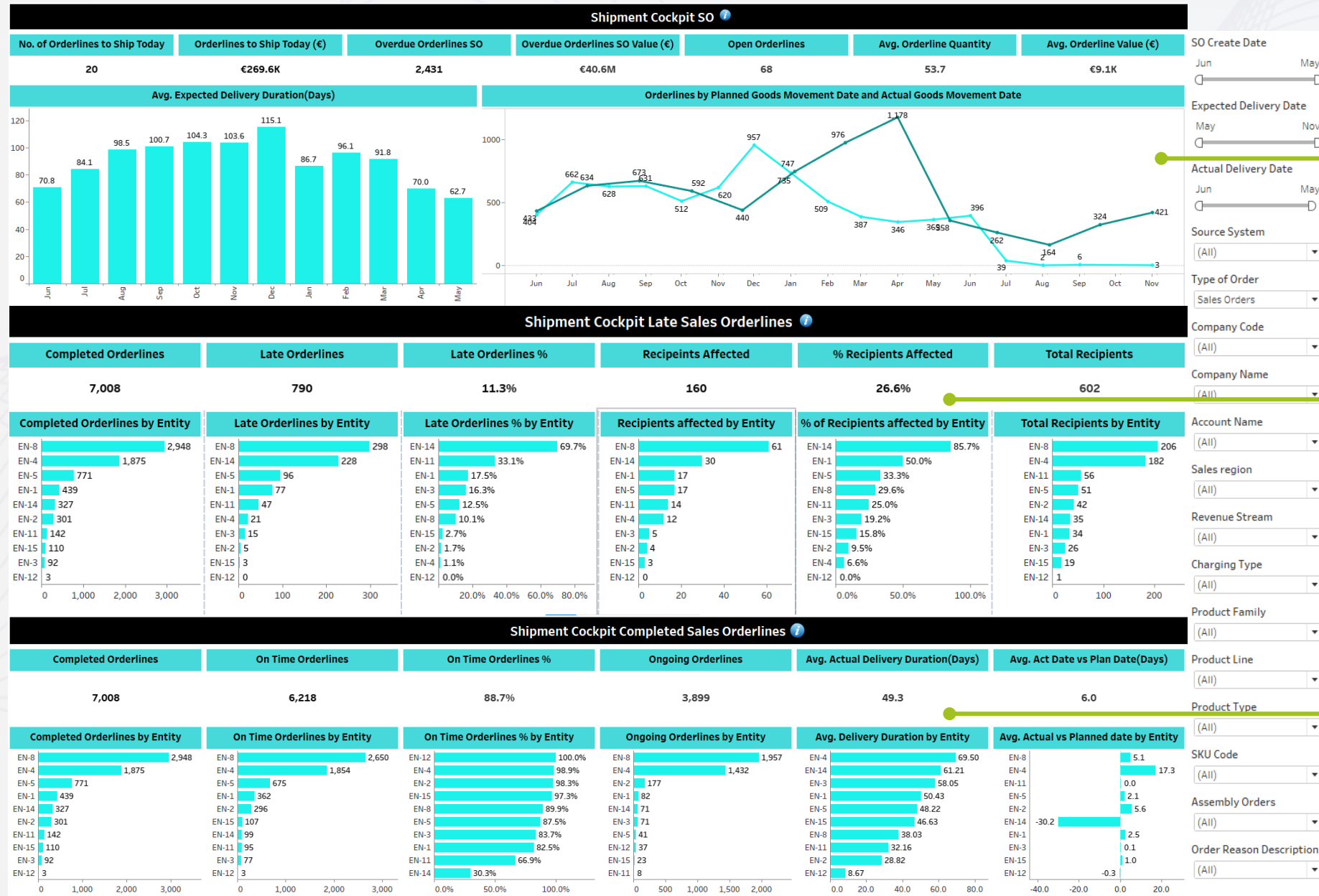
Monthly trends of Sales Orders and Fulfillment KPIs

Filter Pane to provide flexibility to change time frame, and drill down by various other dimensions

Break down of fulfillment KPIs performance by Regions and Products

EXHIBIT 2 : SHIPMENT COCKPIT AND LEAD TIMES ANALYSIS

ILLUSTRATIVE

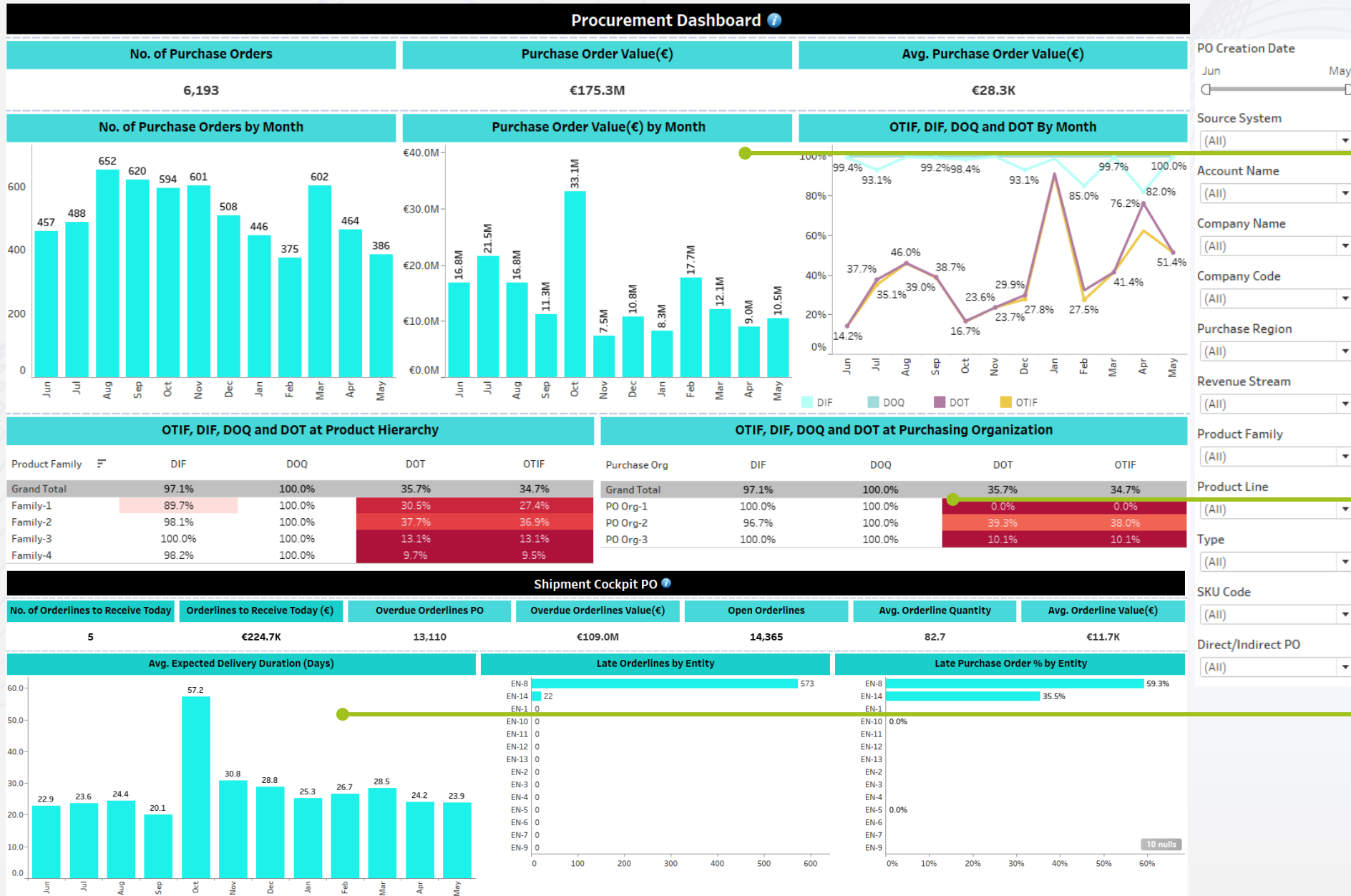


Trend chart comparing the # order delivered - planned vs. actual

KPIs tracking the performance of fulfilled order lines and late deliveries, and their respective lead times

EXHIBIT 3 : PROCUREMENT - PURCHASE ORDERS AND LEAD TIMES ANALYSIS

ILLUSTRATIVE



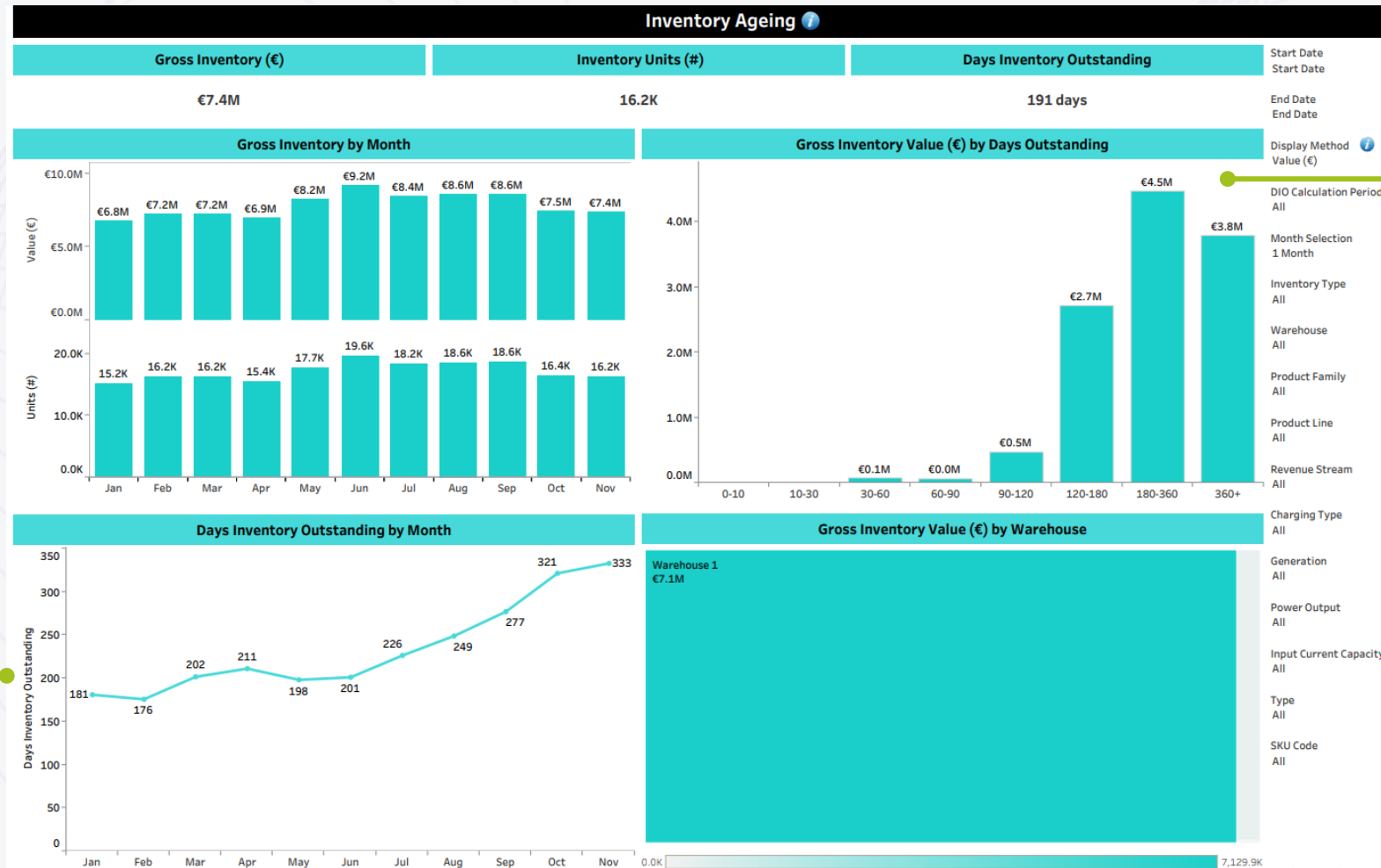
Monthly trends of Purchase orders and Procurement KPIs

Tracking on time delivery KPIs of various suppliers

KPIs tracking the performance of purchase orders with respect to Vendor promised delivery times

EXHIBIT 4 : INVENTORY MANAGEMENT METRICS

ILLUSTRATIVE

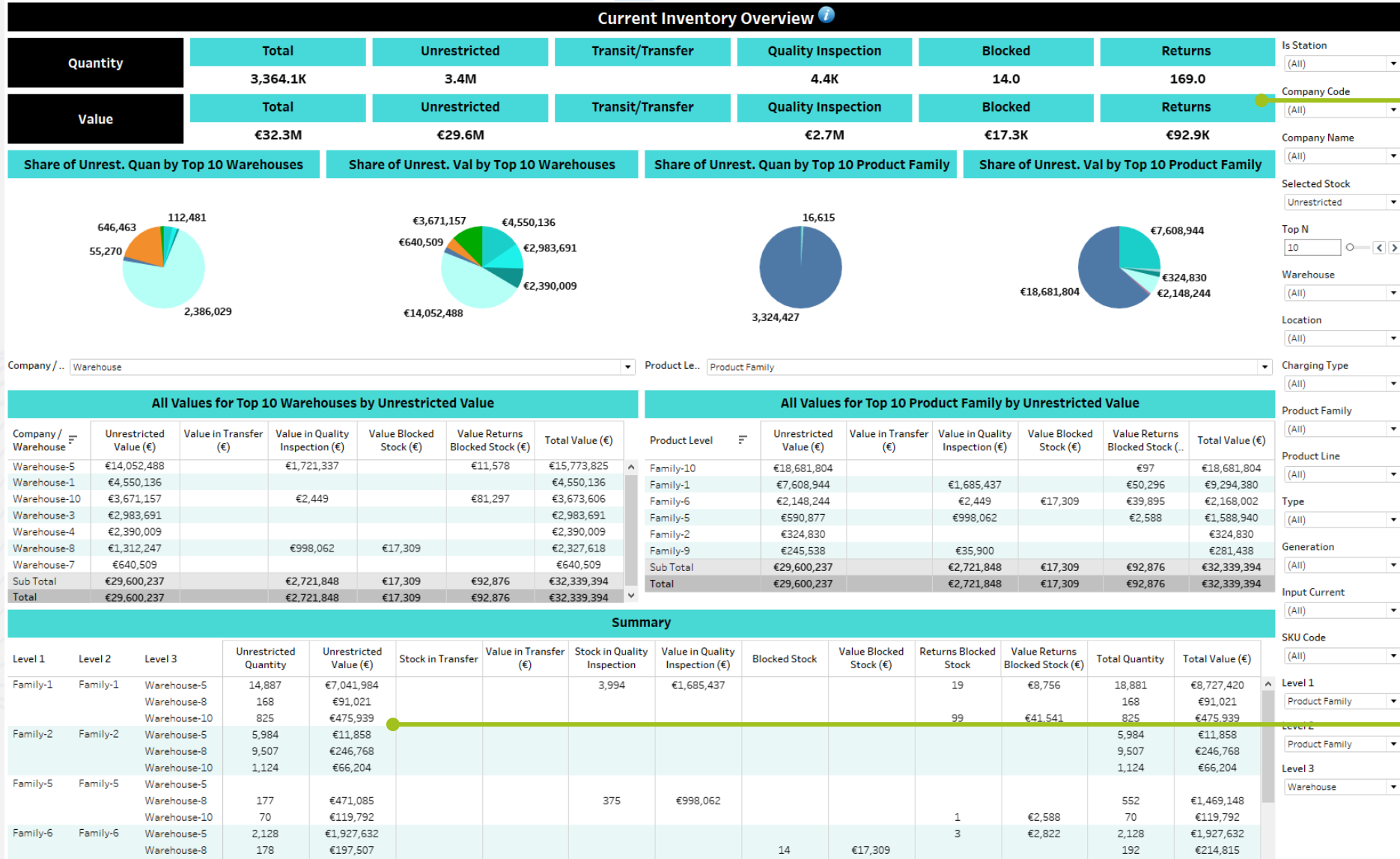


Insights into **age of inventory** for current and historical periods.

Days inventory outstanding calculated based on weighted average method to enable visualization by various dimensions such as warehouse, SKU etc.

EXHIBIT 5 : CURRENT INVENTORY AND SKU AVAILABILITY

ILLUSTRATIVE



Current Inventory Stock overview to provide visibility into availability of products

Drill down of inventory levels by user selected levels

EXHIBIT 6: S&OP - 360 DEGREE VIEW

ILLUSTRATIVE

Comprehensive visibility into **supply drivers** such as actual production and inventory levels

Demand drivers such as order intake and backlog orders



Outbound inventory movement

Revenue realization from the complete S&OP process