

STAGE 1: EMPATHIZE – 5W1H

Who will use this dashboard?	What problem does this dashboard solve?	When and where will stakeholders view the dashboard?	Why do stakeholders need this dashboard?	How have stakeholders tried to achieve this goal?
<ul style="list-style-type: none"> Purchasing Manager Purchasing Executive Board of Directors (BOD) 	<ul style="list-style-type: none"> Are material costs optimized? Is inventory sufficient for production? Are any suppliers causing delays? 	<p>When:</p> <ul style="list-style-type: none"> Executives: daily order follow-ups Managers: weekly performance reviews BOD: monthly summaries for decision-making <p>Where:</p> <ul style="list-style-type: none"> Internal dashboard used in meetings or individual review Accessible on laptops or as PDF printouts 	<ul style="list-style-type: none"> Continuously monitor procurement activities Prevent stock-outs Optimize ordering processes Reduce delivery delays and order risks Track factors that impact procurement (supplier quality, pricing, etc.) 	<ul style="list-style-type: none"> Optimize the procurement workflow for accuracy and efficiency Monitor supplier performance: delivery, pricing, consistency Use dashboard insights to adjust purchasing plans quickly
If only one key stakeholder is selected	Summarize the problem in one sentence			
Purchasing team	The Senior Manager needs to continuously monitor procurement performance to ensure materials are always available, purchased at the right time, in the right quantity, and at an optimal cost.			



STAGE 1: EMPATHIZE – 5W1H



What does the stakeholder think and feel?	What does the stakeholder see?	What does the stakeholder say and do?
<p>Think:</p> <ul style="list-style-type: none"> They believe their role directly impacts business performance and the company's P&L. They need to constantly monitor and adjust procurement activities to enhance efficiency and minimize costs. <p>Feel:</p> <ul style="list-style-type: none"> Worried that delayed material deliveries will disrupt production. Concerned about finding ways to procure materials at the most optimal cost. Stressed from managing multiple vendors simultaneously. 	<ul style="list-style-type: none"> Pressure from other stakeholders when goods are delayed. Uncontrolled or rising procurement costs negatively affect company P&L. Delays in receiving updates on procurement information. 	<ul style="list-style-type: none"> I need to know how much stock is available today. Why is this vendor always late? Frequently checks reports and regularly meets with the supply chain team. Tries to balance quality - lead time - cost. Sometimes loses trust in current reporting systems due to lack of transparency.
What are the biggest problems and challenges?	What are the opportunities and benefits?	
<ul style="list-style-type: none"> No centralized data to make quick decisions. Lack of early warnings for low stock or underperforming vendors. Poor visibility between actual vs. planned procurement. High KPI pressure without effective supporting tools. 	<ul style="list-style-type: none"> Always ensuring sufficient stock for production => improve overall productivity. Optimizing operational costs => contribute to better company P&L Higher customer satisfaction => on-time production ensures product availability and avoids OOS (out-of-stock) situations. 	

STAGE 1: STAKEHOLDERS JOURNEY

STEP 1

Stakeholders wanted to improve their ordering process because they had to open many files to get info. The data wasn't real-time, and they lacked clear insights to make decisions. There was no clear report to track main KPIs.

STEP 2

They approached the Data Analytics (DA) team and asked for a dashboard showing key metrics, trends over time, and details of what impacts operations.

STEP 3

After having the dashboard:

- Executive: Checks daily to see if KPIs are met.
- Manager: Uses it in weekly/monthly meetings to find root causes.

STEP 4

Based on the dashboard, the team brainstorms ideas and actions to improve performance and reduce costs. The team keeps reviewing and adjusting as needed.

STAGE 2: DEFINE POV & NSM



	NORTHSTAR 1	NORTHSTAR 2 (Optional)
WHAT VALUE you want to measure?	Measure the back order rate, which reflects how many orders are not fulfilled on time.	Measure the cost efficiency in the purchasing process.
WHEN THE value DELIVERY SUCCESS?	The value is delivered successfully when the back order rate decreases, indicating that orders are being fulfilled more effectively, which reduces stock shortages and helps control costs.	The value is delivered successfully when purchasing costs are optimized, ensuring goods are available in the right quantity and quality at a reasonable cost.
Northstar Metric Name	Back Order Rate	Average Purchase Order Cost
WHY do you choose this metric?	A lower back order rate means fewer delays, ensuring the production process runs smoothly and minimizing extra costs caused by last-minute orders or stockouts.	This metric helps assess whether the purchasing process is cost-effective by evaluating the average cost per item ordered. It identifies unusually expensive or cheap orders and highlights areas for potential cost savings or process improvements.

STAGE 2: DEFINE POV & NSM



Dimension Data Groups	Group 1	Group 2	Group 3
	Stock Readiness	Cost Efficiency	Operation Efficiency

View	Description	Why
View 1	Product / Product Type	Focuses on tracking purchasing cost and back order rate across different product categories.
View 2	Vendor	Evaluates supplier performance based on cost, delivery reliability, and back order rate.

Northstar Metric Formulas	Back Order Rate	Revenue
View 1	Back Order Rate (%) = (Total backordered quantity / Total ordered quantity) x 100%	Average PO Cost = Total PO value / Total number of POs
View 2	Back Order Rate by Product Type (%) = (Total backordered quantity for product type / Total ordered quantity for product type) x 100%	Avg PO Cost by Product Type = Total PO value for product type / Number of POs for product type
View 3	Back Order Rate by Vendor (%) = Total backordered quantity from vendor / Total ordered quantity from vendor) x 100%	Avg PO Cost by Vendor = Total PO value from vendor / Number of POs issued to that vendor

STAGE 3: IDEATE - BRAINSTORMING



OVERVIEW LAYER	Metric 1	Metric 2	Metric 3	Metric 4
	Total Purchase Spend	On time Fulfillment Rate	Delivery Lead Time	OOS Rate
	Metric 5	Metric 6	Metric 7	Metric 8
	AVG Vendor Credit Rating	Inventory Turnover	Unit Purchase Price	Purchase Order Cycle Time

Idea Name	Layer 0: Core Metrics	Layer 1: Single Dimension Breakdown	Layer 2: Two-Dimension Breakdown	Is there anything important we missed? (Suggestions)
View 1: Overview	<ul style="list-style-type: none"> Total PO Value Avg PO Cost Back Order Rate On-time Delivery Rate. 	<ul style="list-style-type: none"> By Month By Warehouse/Location By Category. 	<ul style="list-style-type: none"> By Month + Category By Month + Vendor 	Add: Cumulative PO Cost (YTD) to track purchasing cash flow over time.
View 2: Product Analysis	<ul style="list-style-type: none"> Avg PO Cost Back Order Rate Total Spend by Product. 	<ul style="list-style-type: none"> By Product Category By SKU 	<ul style="list-style-type: none"> Category + Vendor SKU + Month. 	Add: SKU below Reorder Point, Inventory Turnover by Product.
View 3: Vendor Performance	<ul style="list-style-type: none"> Avg PO Cost Back Order Rate PO Cost Variance Total Spend 	<ul style="list-style-type: none"> By Vendor. 	<ul style="list-style-type: none"> Vendor + Category Vendor + Lead Time. 	Add: Vendor Rating, Fulfillment Risk Score, Pareto Analysis (80/20 Rule).

STAGE 3: IDEATE - STRUCTURE IDEA



	Metric 1	Metric 2	Metric 3	Metric 4	Metric 5	Metric 6
Scorecard	Total Purchase Spend	On time Fulfillment Rate	Purchase Order Cycle Time	Delivery Lead Time	Unit Purchase Price	AVG Vendor Credit Rating

Idea Name	Very Important Information	Important Information	Detailed Information
View 1: Overview	<ul style="list-style-type: none"> Back Order Rate (%) Average PO Cost Total PO Spend 	<ul style="list-style-type: none"> No. of POs On-time Delivery Rate. 	<ul style="list-style-type: none"> Trend of PO Spend over time Back Order Rate trend PO Fulfillment by month
View 2: Market Analysis	<ul style="list-style-type: none"> Back Order Rate by Category Avg PO Cost by Category 	<ul style="list-style-type: none"> Total Spend by Product Top Categories 	<ul style="list-style-type: none"> Back Order by SKU Avg PO Cost by SKU Monthly PO Trend per Category
View 3: Product Analysis	<ul style="list-style-type: none"> Vendor Back Order Rat Avg PO Cost by Vendor 	<ul style="list-style-type: none"> Avg PO Cost by Vendor Total Spend by Vendor On-time Delivery per Vendor 	<ul style="list-style-type: none"> PO Cost Variance Delivery Lead Time by Vendor BO Rate by Category & Vendor