

You are a supply chain manager at an electrical parts distributor located in the US but with sales in the US and internationally. The new VP of Supply Chain comes from an organization that was very data-driven. He wants your help to ensure this operation is more data driven. Here is what we know from meeting with the new VP and from looking at some available data. 1) The new VP wants to have a 15 minute conversation on a monthly basis to review key metrics. But he also wants a visual ‘dashboard’ that can be on monitors in the breakroom so the organization is reminded that the data and metrics drive decisions. 2) There are 3 electrical components sold (A,B and C). You have received summary turnover and out-of-stock data on each for the last four quarters. 3) Yesterday, the new VP received an escalation phone call from an account manager of a good customer indicating that their shipments were overdue. The new VP wants more visibility on this type of information. 4) There is a lot of data in the function but in your meeting with the VP, he indicated focusing on a small, balanced set of KPIs. You’ll want to organize various operational metrics into some logical groupings. 5) The VP also mentioned that because he is new, don’t show data all by itself, try and use trends, goals, or benchmarks where feasible to help him understand the data better. 6) You phone up a colleague you met at a conference last year. You receive some benchmarks from them for a similar operation they run on some key metrics. 7) Each year your procurement team rates your key suppliers in a survey. It is a 1-5 scale where 1 is the lowest and 5 is the best. They are asked questions about supplier cost, quality and time. You retrieve a summary of those prior year ratings from the Chief Procurement Officer. The VP of Supply Chain would like you to design a survey you can use at the end of this year for the supplier satisfaction survey.

8) The account management team does an annual customer satisfaction survey. It has an NPS question and score (How likely would you be to recommend our organization to others? 0=not likely, 10 very likely). The NPS scores were made available to you with some breakdowns in the data. 9) Please see the data on the following page related to the aforementioned information.

Inventory Turnover

Q1

Q2

Q3

Q4

Target

Electrical Part A

9

6

11

14

10

Electrical Part B

20

18

22

23

20

Electrical Part C

10

4

2

8

8

% Out of Stock Items

Q1

Q2

Q3

Q4

Target

Electrical Part A

1%

3%

1%

1%

2%

Electrical Part B

0%

5%

2%

0%

2%

Electrical Part C

1%

7%

5%

0%

2%

Daily Shipping Status

Today

7 Day Avg

30 Day Avg

On-time Shipments

105

95

110

Overdue Shipments

23

20

9

Sample KPIs

Last Qtr

Last Year

Benchmarks

Shipping Cost as a % of Average Product Cost

5%

3%

2%

Product Cost as a % of Revenue

50%

60%

50%

Warehouse Safety Incidents per Month Avg.

1

4

1

Order Picking Errors as a % of Lines Picked

7%

5%

3%

On-time Shipments

77%

92%

95%

Time to fill backorder (days)

3

3

1

Vendor Survey Ratings (Prior Year)

Overall

Cost

Quality

Time

Vendor X

3.80

4.80

2.70

3.90

Vendor Y

2.70

2.80

3.10

2.10

Vendor Z
3.50
3.50
2.80
4.00
Customers
Q1
Q2
Q3
Q4
Target
Returned Shipments
5%
7%
11%
9%
5%
Net Promoter Score (NPS) (Current Year)
Score
1=Worst, 5=Best
Largest Customers US
40%
Outside US
20%
Order Part A
70%
Order Part B
30%
Order Part C
-15%
Order more than 5 times in year

50%

Order less than 5 times in year

20%

Instructions: Based on the above please prepare a summary presentation and more formal, detailed write up that has the following: 1) What are some data tags that you would want to use to cross tab or pivot this data if you had access to the raw data? If you don't see these tags, cite what you would request. 2) Draft a brief survey to gather feedback from your procurement team about the suppliers. List the questions you would gather and any demographics as well. 3) What does the operational data tell you? Is there any other data that you'd request? 4) What does the survey data tell you? Is there any other data you'd request? 5) Prepare a draft dashboard for the VP to display on the breakroom monitor. 6) You are to have a 15 minute monthly meeting with the VP. Describe this or mock up an example. 7) What best practices would you use when communicating the data to the VP? 8) What practices can you suggest to the VP so the organization can create a data-driven culture? 9) What elements of AI could be used here to make the decision-making process better and why?