

NORTHWIND

DATABASE ANALYSIS FOR A
FOOD PRODUCT SALES COMPANY

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STATISTICS DRIVE DECISIONS

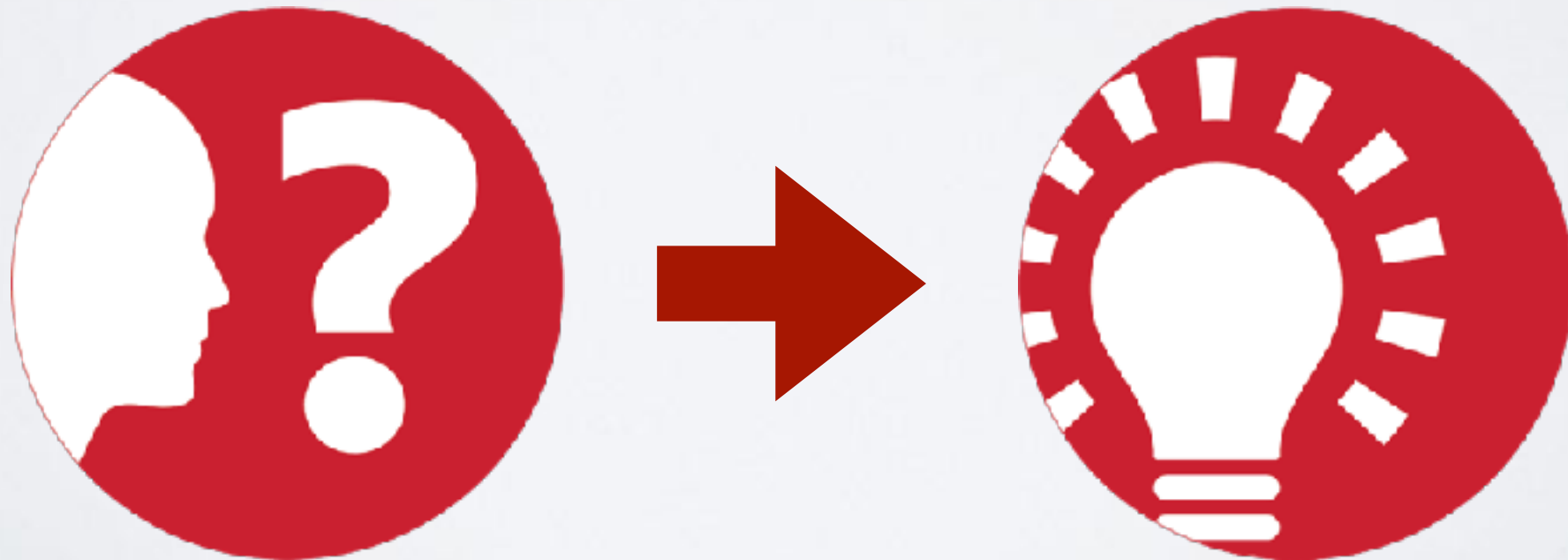
Understanding our data is paramount.



***Statistical Testing* gives us confidence in our findings.**

PROCESS

1. **Exploration**
2. **Formulate a Hypothesis to test**
3. **Divide data into groups based on Hypothesis**
4. **Perform Statistical Tests**
5. **Report Findings**



DISCOUNTS

Discounts drive higher order quantities! “Hey, I’m getting a deal”



5-7 more units purchased with 5%, 15%, 20%, or 25% discount.

Recommendation:

- Avoid 10% discounts as they do not impact order quantity.
- Depending on inventory, product expiration: increasing quantity of product per order is beneficial —> 15% and 25% discount levels have the greatest effect.

DO DISCOUNTS EAT INTO REVENUE?

No, in fact, order price went up by \$228 on average for 5% discounts.

“Sweet!”



Recommendation: Consider that offering a 5% discount results in a net positive to the company.

PRODUCT UNIT PRICE



Higher Unit Price —> Higher Order Revenue.

Highest Priced products brought in \$965 more per order than lower priced products.

Higher Unit Price —> No change in Quantity Ordered.

Order quantities remain consistent across price levels ~20 units per order.



Recommendation: Adjust product quantity/volume per unit —> increase sales.

BRING HOME THE BACON

Meat and Poultry represent the highest revenue orders.



Recommendation:

- Increase the meat and poultry product offering.
- Seek new customers who are interested in buying meat and poultry products.

HOW ABOUT PEOPLE?

Does sales representative impact order price?

No significant difference in average order price between sales reps.



SUMMARY - RECOMMENDATIONS/FUTURE

Discount is correlated with increased order quantity for most, but not all, discount levels.

- Avoid giving 10% discounts as they do not impact order quantity.
- There are instances where increasing quantity of product per order is beneficial. Consider that 15% and 25% discount levels would have the greatest effect.

Discount is not correlated with lower order revenues.

- Discounts do not negatively impact order revenue.
- Northwind should consider that offering a 5% discount results in greater revenue.

Higher product prices have higher order revenues. Order quantity remains unchanged with higher product price.

- Adjust product quantity/volume per unit in order to increase sales.

Meat/Poultry bring in higher average order revenues.

- Increase the meat and poultry product offering.
- Seek new customers who are interested in buying meat and poultry products.

FUTURE:

Investigate differences in order metrics by shipping company, import/export status, or customer location.

THANK YOU

And Remember:

“Data reveals impact, and with data, you can bring more science to your decisions.”

— Stuart McDonald, CMO at Freshbooks, (Source)