

# Operations Support Analyst

Take home test  
(Sam Taylor)

# Case Study Presentation

(Dataset)

## Case Study Presentation

You're an Analyst for a new company called Marañón (similar to Amazon), and you've been asked to prepare a presentation for both Sales & Operations that summarizes sales and operations thus far. The summary should include (at the very least) an overview of the company's current state, current customer satisfaction, and a proposal for 2-3 areas where the company can improve.

### Here are some additional Facts:

- Pretend it is currently Sep-18, so you can ignore all data after this date.
- The company was founded in Jan-17, so you can ignore all data prior to this.
- The company is based in the USA, but it was founded in Brazil.
- You can presume that all orders have been delivered - so ignore the order state field.
- [All available data can be download from this hyperlink](#)

**Your presentation should include no more than 10 slides of material, should last no longer than 20 minutes as well as contain a 5-10 Minute for Question & Answers slot.**

**Tip:** Create a structure for answering the questions. If you're not sure what questions to ask, make some up for yourself. It dramatically simplifies the task of digging for data.

# Key areas



1



2

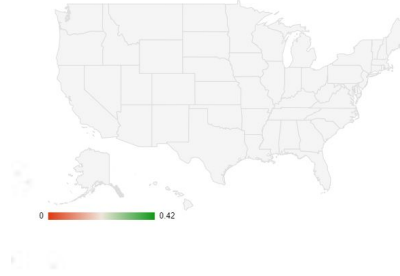


3



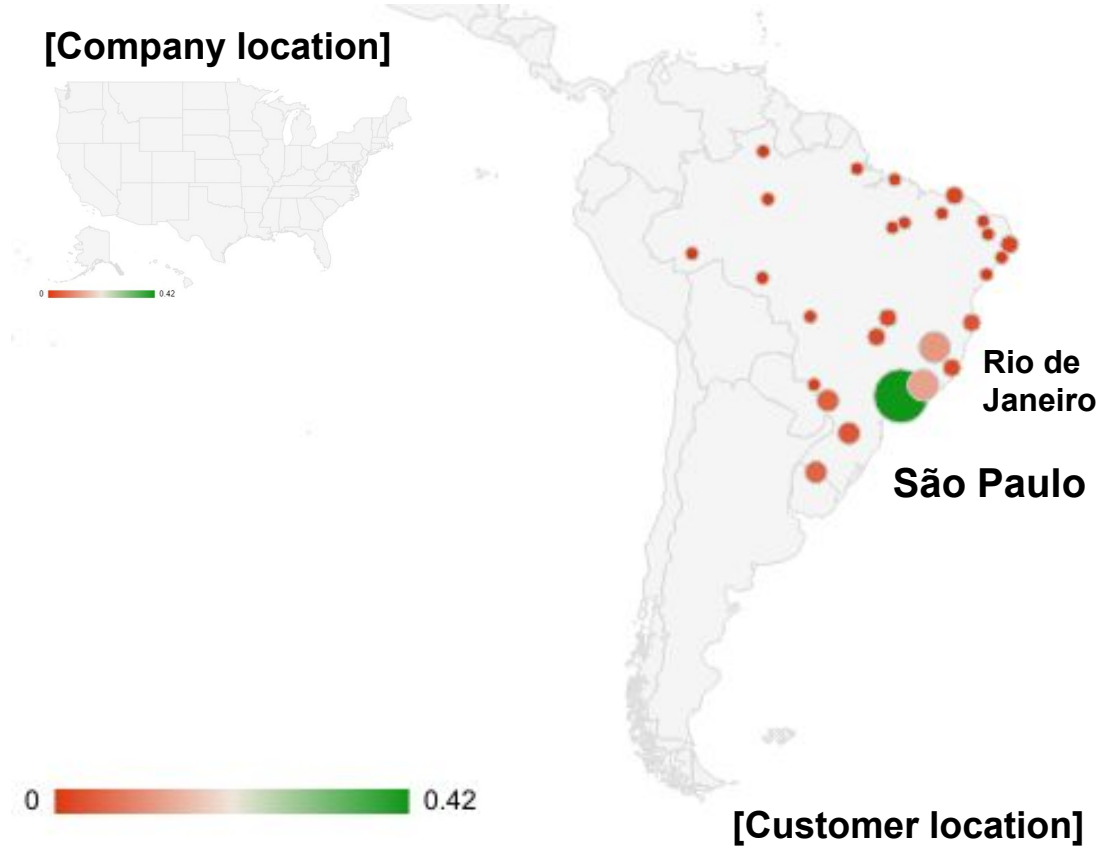


[Company location]



**Question:** Where are the company's customers located?

[Customer location]



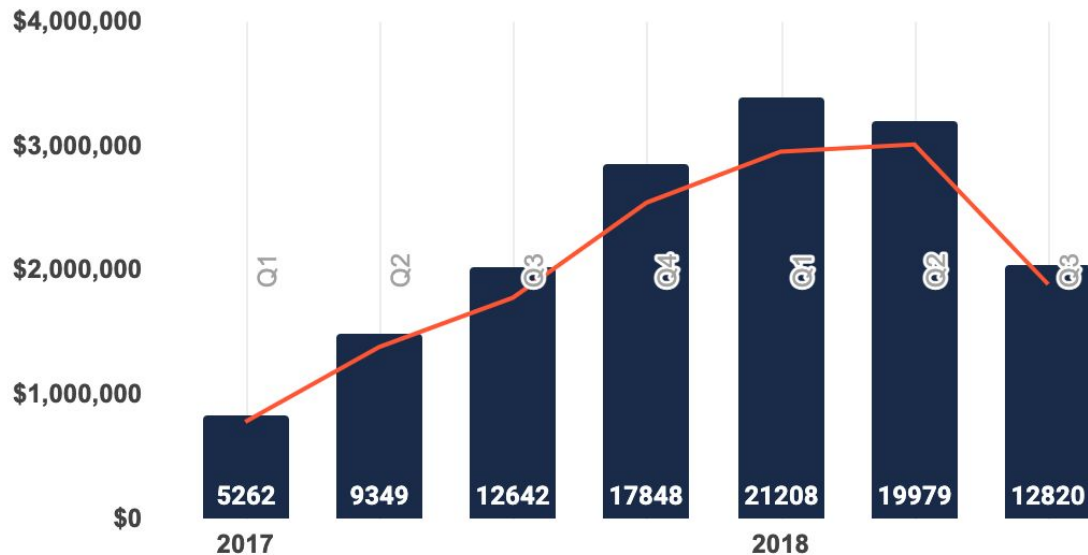


**Question:** How are the company's sales?

## Total sales vs. net revenue

(2017-2018)

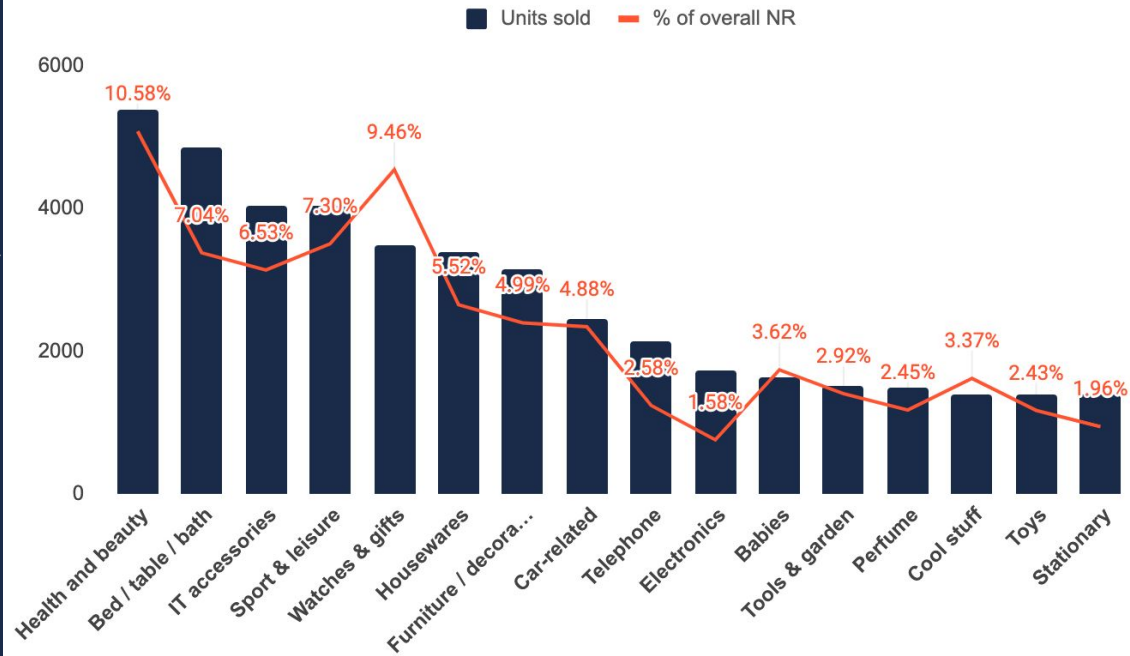
■ Units sold ■ NR





Question: Which products sell best?

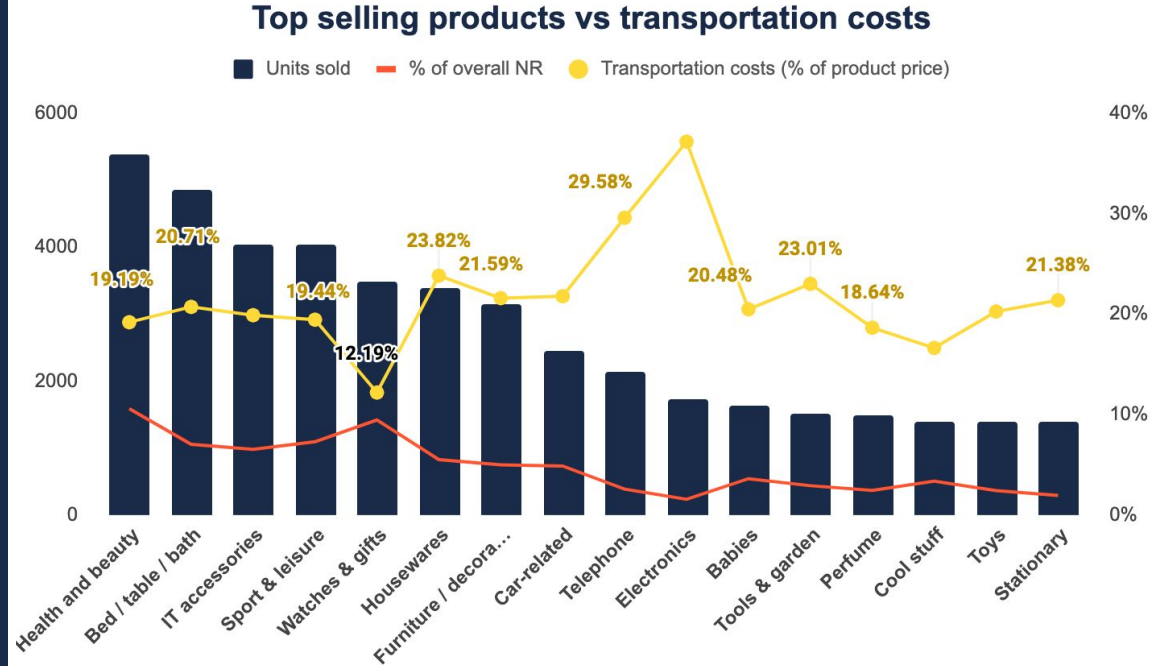
## Top selling products (2018)



There's something happening with  
**watches and gifts & electronics**



**Question:** What's the relationship between units sold and delivery cost?



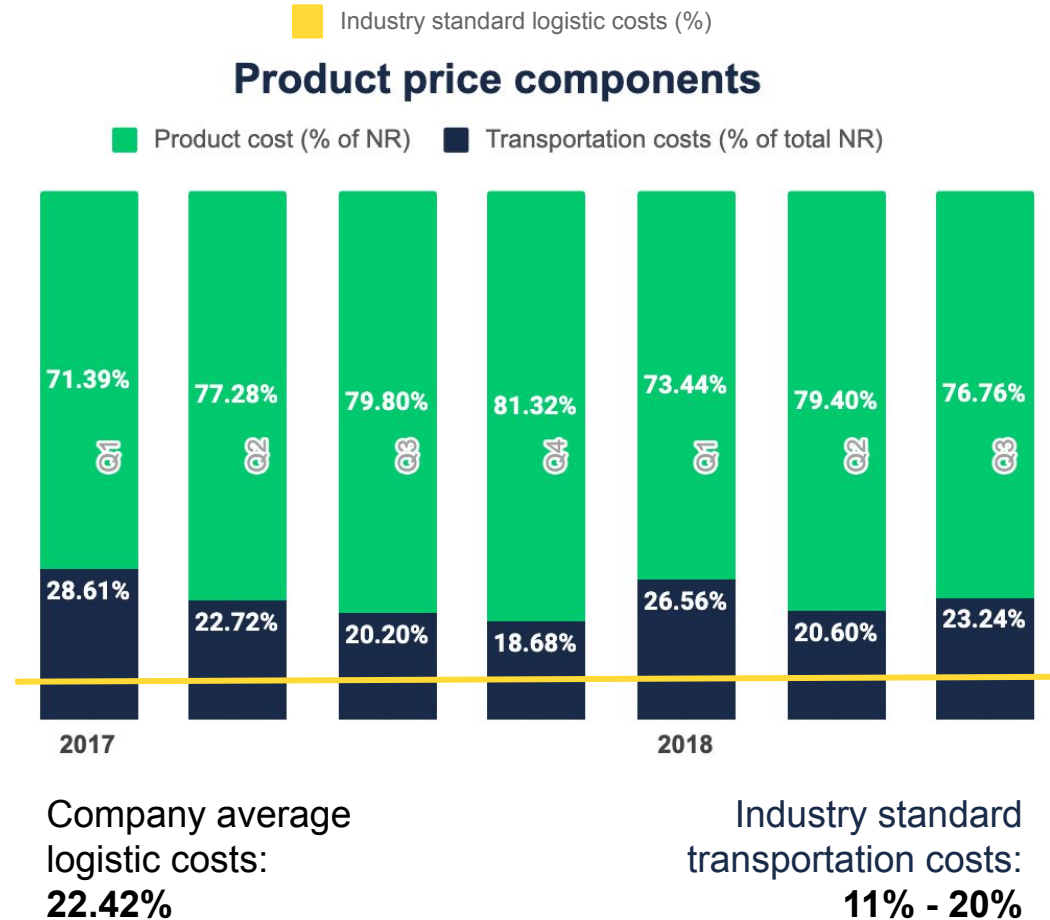
↑  
**Watches and gifts**  
have **low**  
**transportation** costs

↑  
**Electronics** have **high**  
**transportation** costs





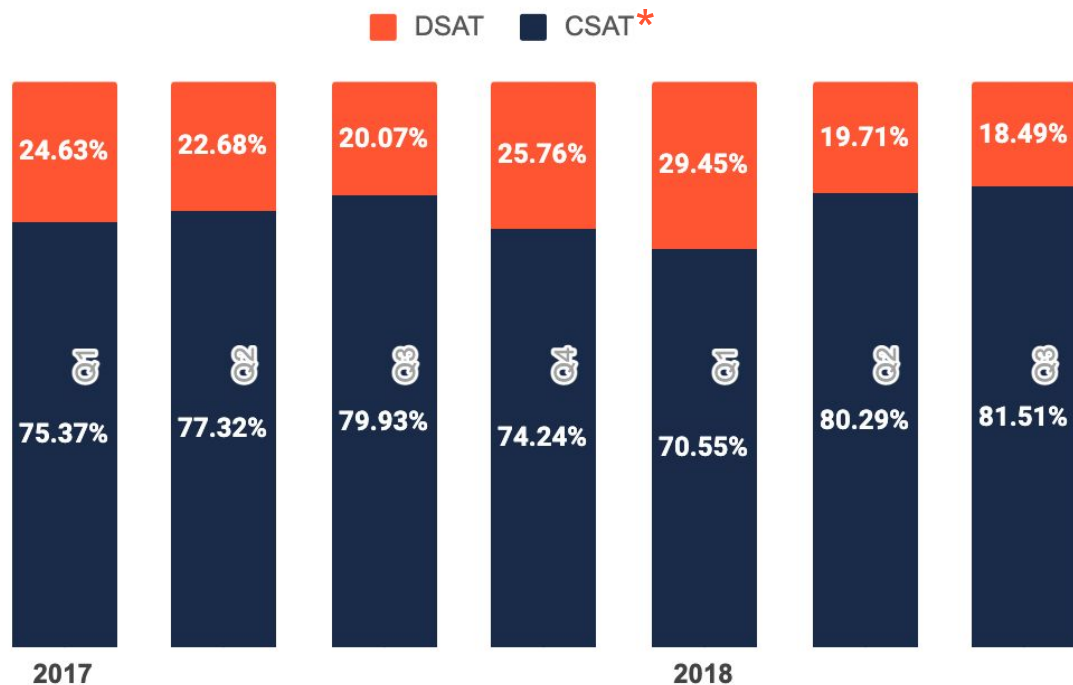
**Question:** What percentage of a product expenses is transportation costs?





**Question:** How satisfied are the customers?

## Customer satisfaction

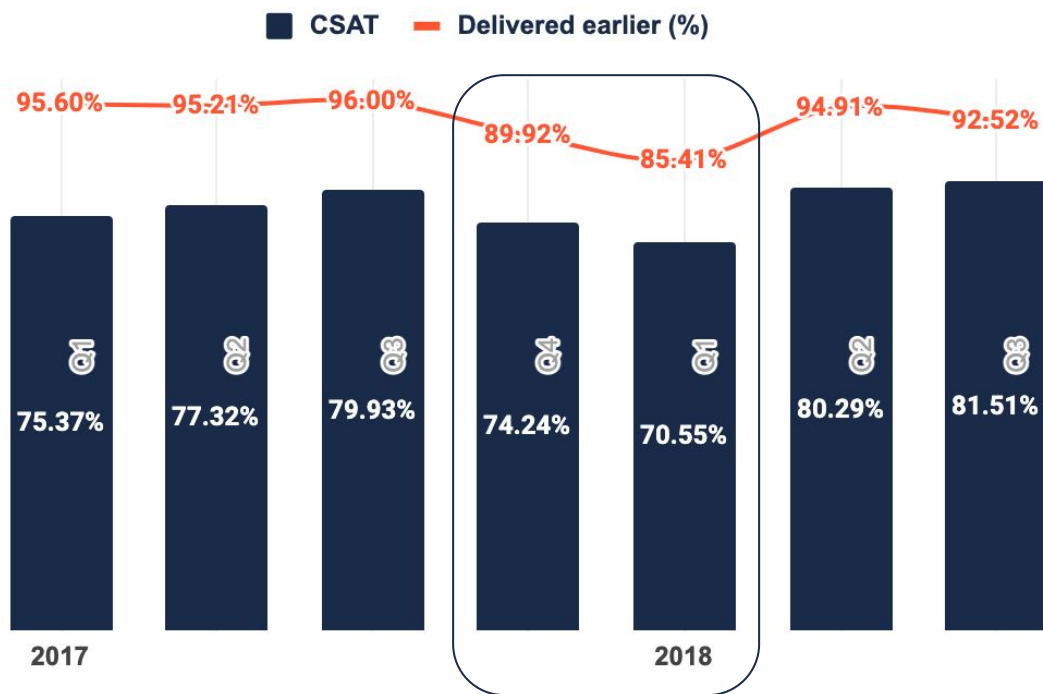


$$* \left( \frac{\text{Review rating 4 + review rating 5}}{\text{Total review rating}} \right) \times 100$$



**Question:** Why is there a dip in CSAT in Q4 2017 & Q1 2018?

## CSAT vs Delivery time

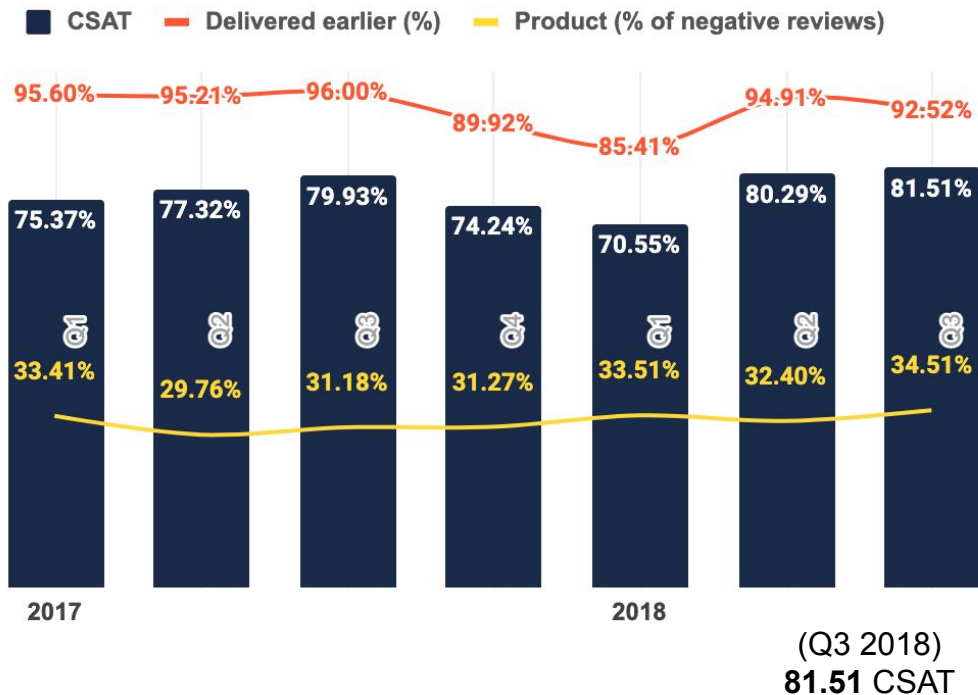




**Question:** What explains the average 23% remaining DSAT?

On average **32.30%** of negative reviews are **product related**

## CSAT vs DSAT drivers



Product-related: -6.38pt  
Removal: 87.89% CSAT



## SUMMARY

- Company was facing **increased demands of sales** from 2017, quarter on quarter
  - **Source:** Product sales data
- The increased demands lead to **decrease of SLA for on-time deliveries (KPI)**
  - **Source:** Delivery times
- The company **outsourced** deliveries to cope with demands, **reducing overall customer satisfaction (KPI)**
  - **Source:** Delivery times & CSAT data & Customer review comments
- With more logistical overheads, the company worked to improve **delivery SLAs (KPI), which raised CSAT (KPI)**
  - **Source:** CSAT data & Customer review comments
- **Product range very diverse:** issues with delivery and quality of product
  - **Source:** Product sales data vs. delivery costs
  - **Source:** Delivery % of total sales
- Company HQ (USA) ≠ customer base (**Brazil**) - resulting in **higher than industry average delivery costs**
  - **Source:** Customer map & Product price components



**SUGGESTIONS**

- **Set & maintain SLA for on-time deliveries** (suggestion: ~95%).
  - QTD: (Q3 2018): 92.52%
  - Increase FTEs needed to hit the target
  - Example initiative to improve:
    - A/B test to measure if extending the 'expected delivery' by X days increases CSAT and delivery SLA.
- **Set target for CSAT** (suggestion: ~85%)
  - QTD (Q3 2018): 81.51
  - Quality control on ~5% of orders leaving warehouse
    - To reduce ~32% product DSAT driver
  - Work with QAs to categorise negative review comments & work to reduce the main drivers
    - Product issues
    - Logistical issues
    - Etc.
- **Open a warehouse in Brazil (São Paulo)**
  - 100% of customer base in Brazil
  - 42% of customer base in São Paulo
    - **Aim:** to reduce delivery costs (% of overall order price)
- **Cut products that are not selling & focus on product quality**
  - Investigate the relationship between *categories of product, delivery costs, return on investment.*