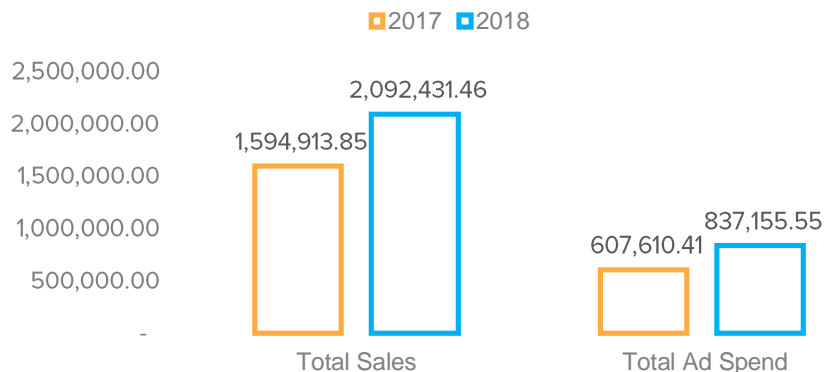# Udacity
Marketing Analytics

Nanodegree Program
Project: Craft a Report

Nélio Macombo

Objective Results

Sales Trend ($) and Ad Spend($) Trend for 2017 vs 2018

Year	Total Sales	Total Ad Spend
2017	1,594,913.85	607,610.41
2018	2,092,431.46	837,155.55
Growth	31%	38%
	"=C4/C3-1"	"=D4/D3-1"

Objective:

Increase total sales by 31% on Black Friday 2017 vs. Black Friday 2018.
- Sales increased by $497,517.61 in 2018, this represents an increase of 31% which means that the goal was met.
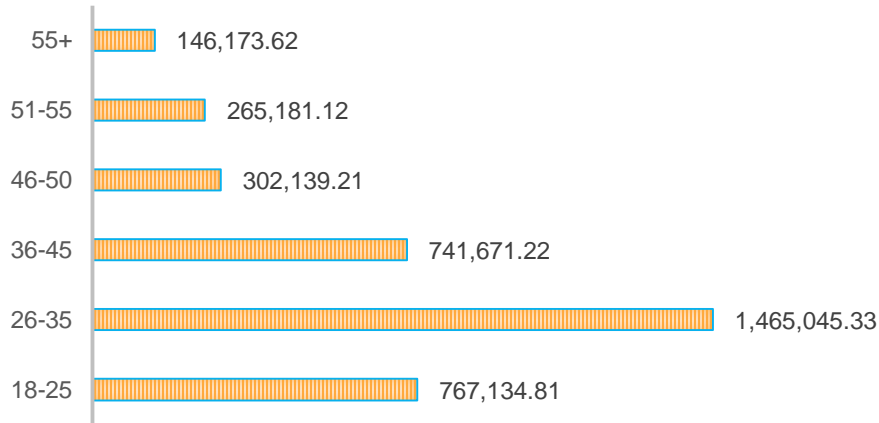
Decrease total ad spend by 30% from Black Friday
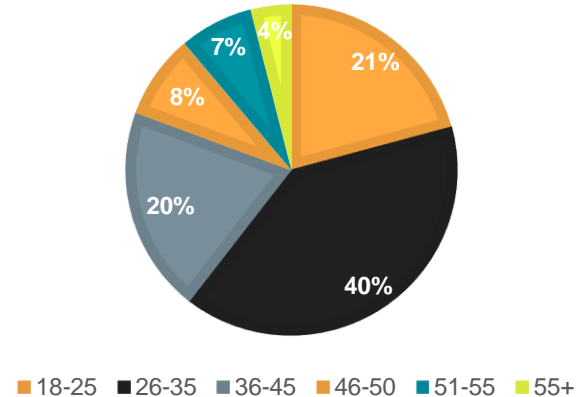**2017 to Black Friday 2018.**
- Ad Spend increased by $229,545.15 in 2018, this represents an increase of 38% which means that the goal was not met.

Evaluate the Audience

TOTAL SALES AMOUNT($) BY AGE RANGE FOR 2017 - 2018

Age Range	Total Sales
55+	146,173.62
51-55	265,181.12
46-50	302,139.21
36-45	741,671.22
26-35	1,465,045.33
18-25	767,134.81

SALES PROPORTION BY AGE RANGE FOR 2017 - 2018

21% · 40% · 20% · 8% · 7% · 4%

■ 18-25   ■ 26-35   ■ 36-45   ■ 46-50   ■ 51-55   ■ 55+

Question: Which Age-Range generated the most sales?
- The age range 26-35 generated the most sales, pulling in $1,465,045.33, representing 40% of the total Black Friday sales in the 2 years period (2017 - 2018).
- The next best performing age range is 18-25, grossing $767,134.81 or 21%, followed closely by the 36-45 age range, with $741,671.22 or 20% of the total sales in that period.
- At the bottom of the chart we have the age range 55+ age range, with $146,173.62 in sales or 4% of the total sales.

Evaluate the Audience

## SALES AMOUNT($) BY AGE GROUP AND GENDER 2017 VS 2018
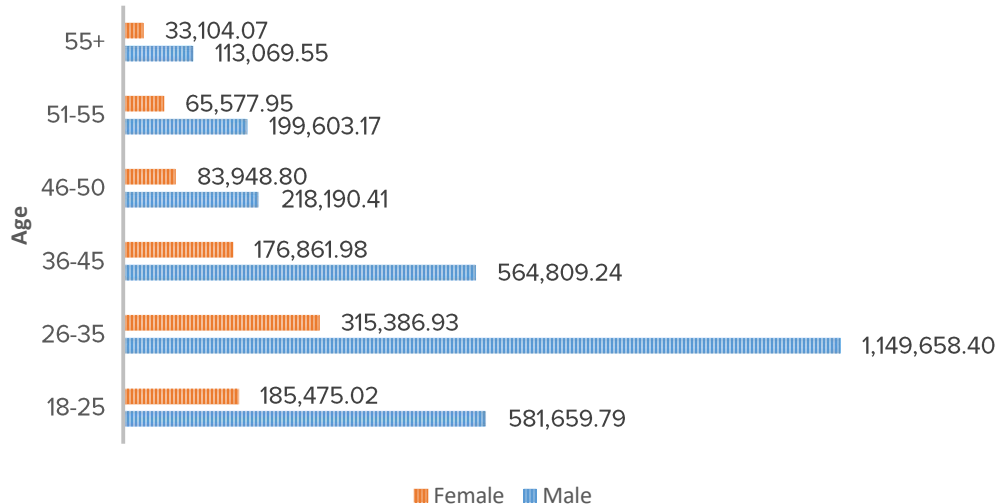
Question: Who spent more, men or women?

• Men spent more than women, and the same trend persisted down the age ranges.
• Age range 26-35 topped the chart with men spent $1,149,658.40 and women, $315,386.93.
• Both 18-25 and 36-45 age ranges are next best performing groups, with men more than women.
• Even in the least spending 55+ age range, men spent significantly more than women.

Evaluate the Marketing

AVERAGE AMOUNT($) OF CPA BY AGE 2017

Age range	Value
55+	91
51-55	87
46-50	88
36-45	82
26-35	87
18-25	82
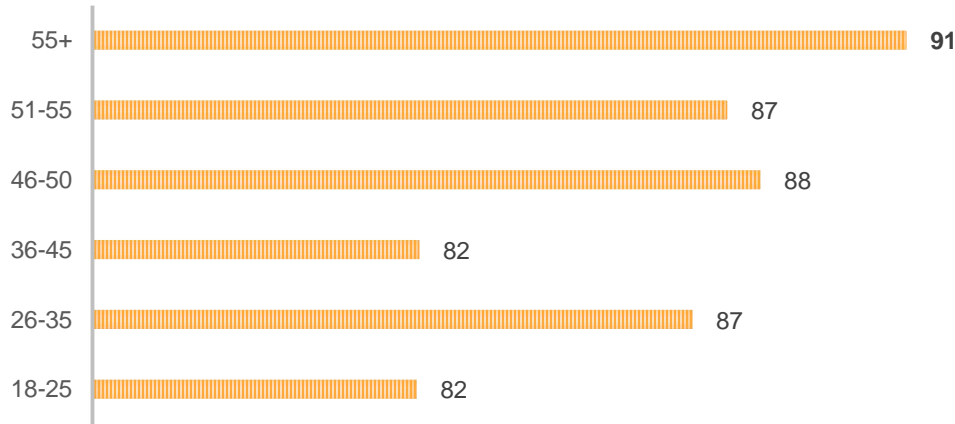
Year	Total Sales (paid channel)	Total CPA	ROI (paid channel)
2017	1,594,913.85	607,610.41	162%
2018	2,092,431.46	837,155.55	150%
Total	**3,687,345.31**	**1,444,765.96**	**155%**

Question: *Was the ROI on our Paid Channel positive or negative? What was it? Which age-range had the best CPA?*
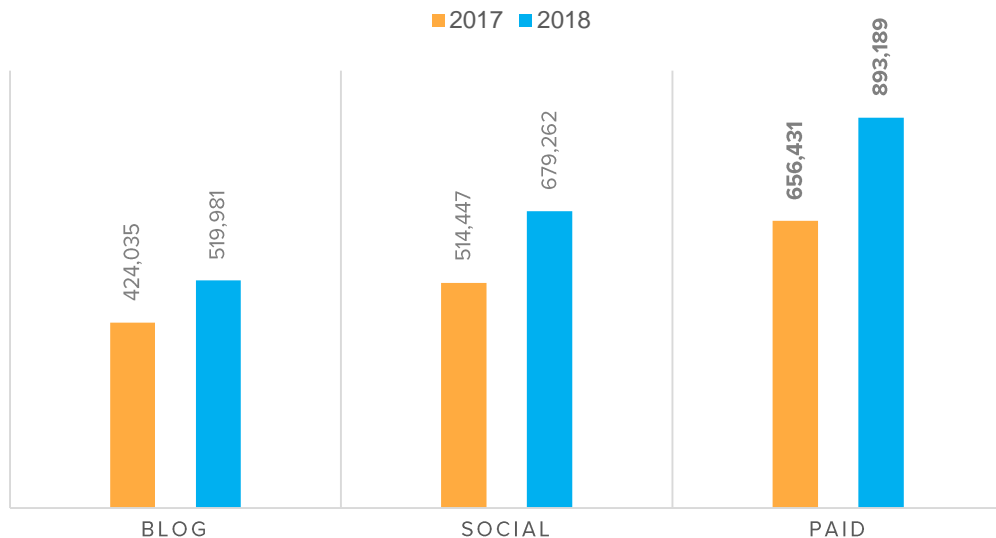
The ROI on paid channel = ($ 1,594,913.85 - $ 607,610.41)/ $ 607,610.41 * 100 = 162%.

The ROI is positive at 162%.

Age range 55+ had the best average CPA at $91.

The next best age range is the 46-50 which is marginally more at $88.

Evaluate the Marketing

SALES BY CHANNEL ($) TREND 2017 VS 2018

■ 2017 ■ 2018

	BLOG	SOCIAL	PAID
2017	424,035	514,447	656,431
2018	519,981	679,262	893,189

Question: *Which channel was the biggest driver in sales for 2017? For 2018?*

Paid channel was the biggest driver in sales for both 2017 and 2018, pulling in **$656,431** and **$893,189** worth of sales respectively.

Evaluate the Sales
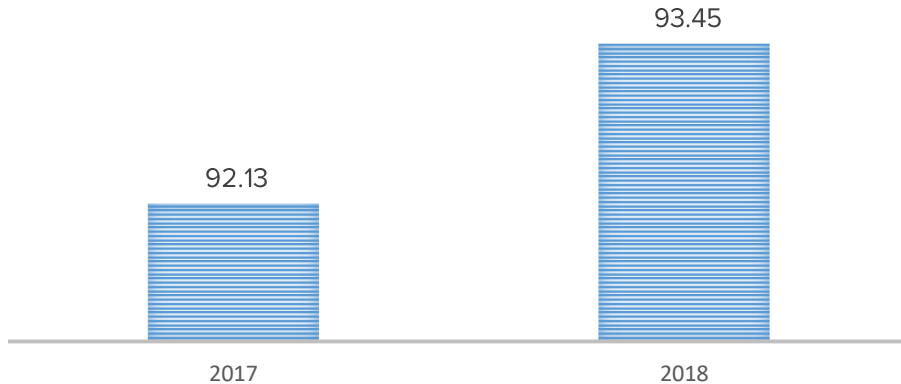
TOTAL REVENUE OVERTIME 2017 VS 2018

1,594,913.85

2,092,431.46
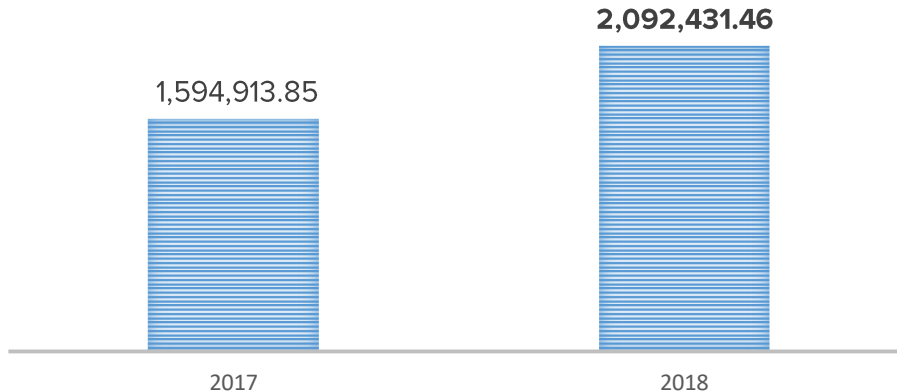
2017

2018

Question: *How much revenue did we generate in 2017? In 2018?*

- **A total revenue** of **$1,594,913.85** and **$2,092,431.46** were generated in 2017 and 2018 respectively.

Evaluate the Sales

AVERAGE ORDER AMOUNT($) 2017 VS 2018
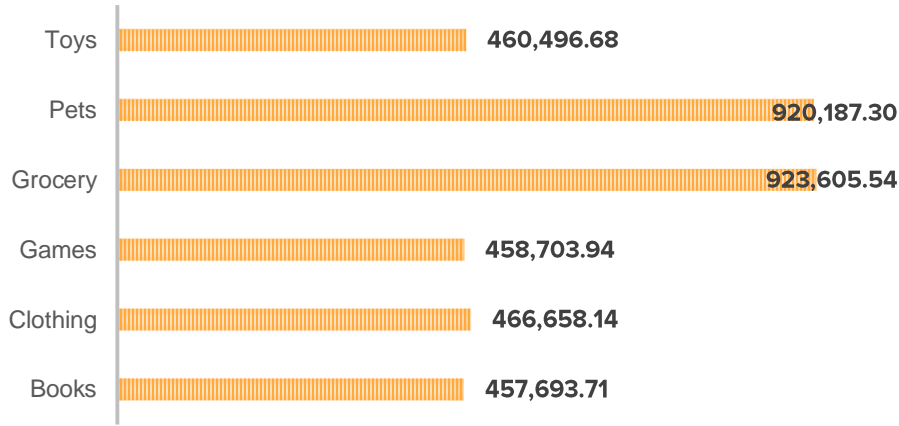
93.45

92.13

2017

2018

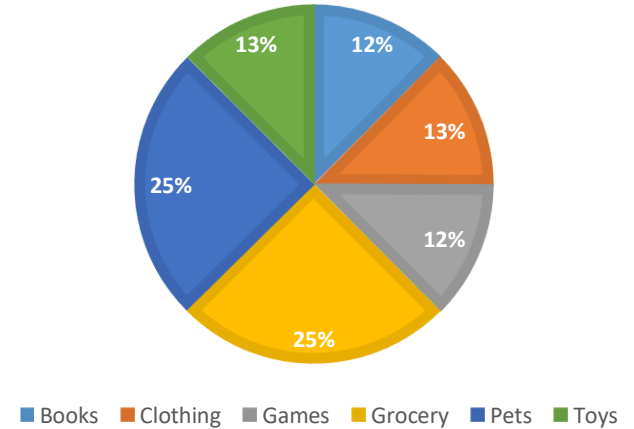**Question**: *What was our average order amount in 2017 vs 2018?*

- **The average order amount** was **$92.13** in 2017, and **$93.45** in 2018 respectively.

Evaluate the Product Categories

PRODUCT CATEGORY TOTAL SALES($) 2017-2018

Category	Sales
Toys	460,496.68
Pets	920,187.30
Grocery	923,605.54
Games	458,703.94
Clothing	466,658.14
Books	457,693.71

PRODUCT CATEGORY TOTAL SALES($) PROPORTION 2017-2018

Books 12%, Clothing 13%, Games 12%, Grocery 25%, Pets 25%, Toys 13%

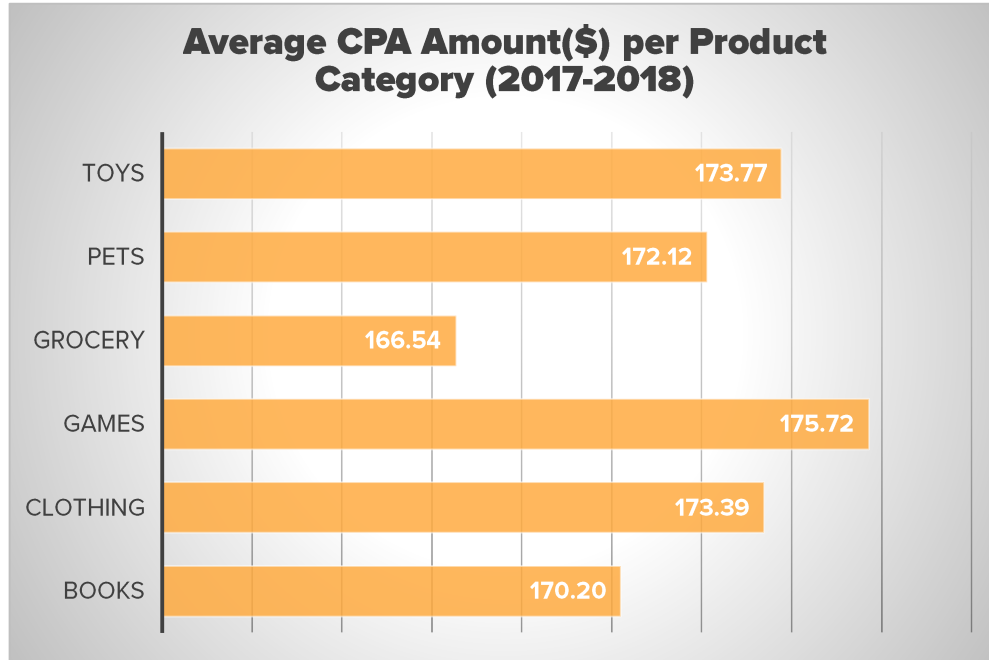Legend: Books, Clothing, Games, Grocery, Pets, Toys

Question: *Demonstrate sales by product category*
Grocery was the largest driver in sales, with total sales $923,605.54 or 25.05% of the total Black Friday sales in the two years.
Pets was the second best selling category with $920,187.30 or 24.96% of the total sales in that period.
The remaining 4 categories Games, Toys and Books had similar sales values ranging between $466,658.14 (12.49%) and $457,693.71 (12.41%).

Evaluate the Product Categories

Average CPA Amount($) per Product Category (2017-2018)

Category	Amount
TOYS	173.77
PETS	172.12
GROCERY	166.54
GAMES	175.72
CLOTHING	173.39
BOOKS	170.20

Question: *Demonstrate CPA by product category* During the two year period ?

- **Grocery had the lowest average CPA** among the categories at $166.54, followed by Books and Pets at $170.20 and $ 172.12 respectively.

- **Games had the highest average CPA at $175.72,** followed by Toys at $173.77, and Clothing at $173.39.

Everything Else

- The **dataset** used for crafting this report can be downloaded from [here](#).

- Excel How To **Average If** Function with multiple [criteria](#).

- Excel How To **Count If** with Multiple [criteria](#).