

A faint, abstract background network graph consisting of numerous small, semi-transparent gray dots connected by thin gray lines, forming a complex web-like structure.

DOOH

PLUG INTO YOUR AUDIENCE

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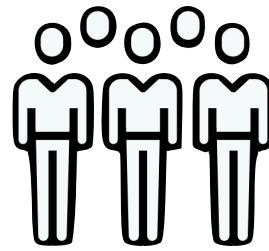
01

Achievements

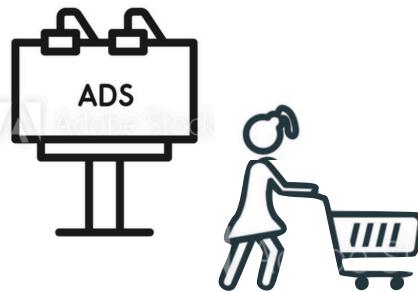
Audience Engagement



20+% attention time.



8% more
watchers



2 units revenue/1K
attention time

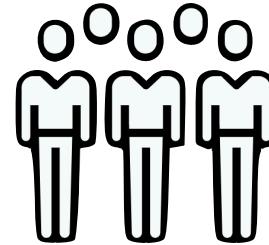
01

Achievements

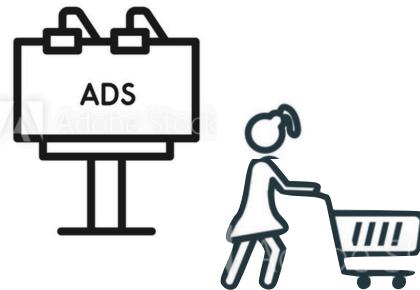
Audience Engagement



20+% 
attention time.



8% more
watchers



2 units revenue/1K
attention time

Revenue Boost



22.3% 
Weekly profit



9% 
Sales amount

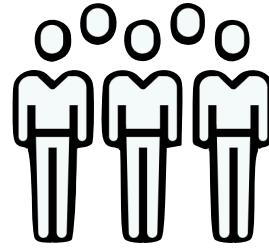
01

Achievements

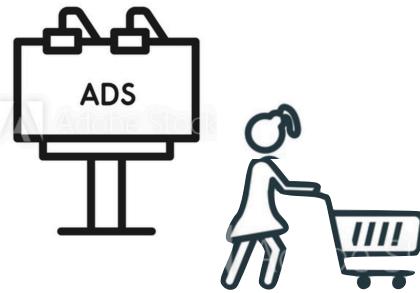
Audience Engagement



20%  attention time.

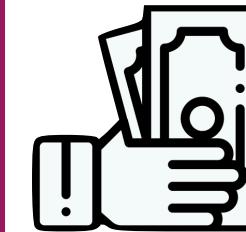


8% more watchers



2 units revenue/1K attention time

Customer Characterization



Change shopping habit



96%  Adult male attention

Revenue Boost



22.3%  Weekly profit



9%  Sales amount

02

Background

4 weeks A/B testing to testify the performance of interactive campaign over regular one.

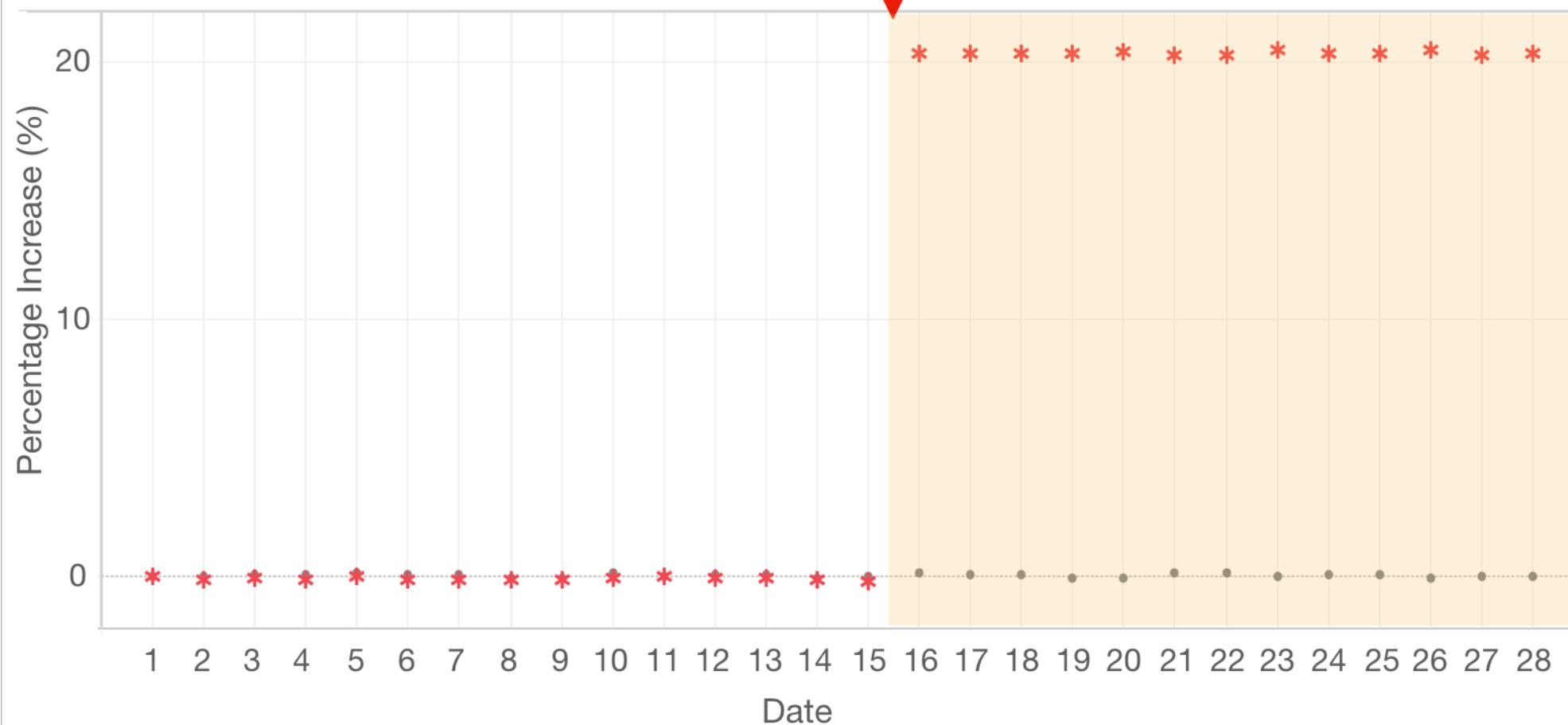
Day 15				
	Week 1	Week 2	Week 3	Week 4
10 control centers	Regular campaign	Regular campaign	Regular campaign	Regular campaign
10 test centers	Regular campaign	Regular campaign	Interactive campaign	Interactive campaign
Con				
Test				

03

Analysis – Audience engagement

20+% increase in average attention time since the interactive campaign proposed.

Percentage Increase In Average Attention Time

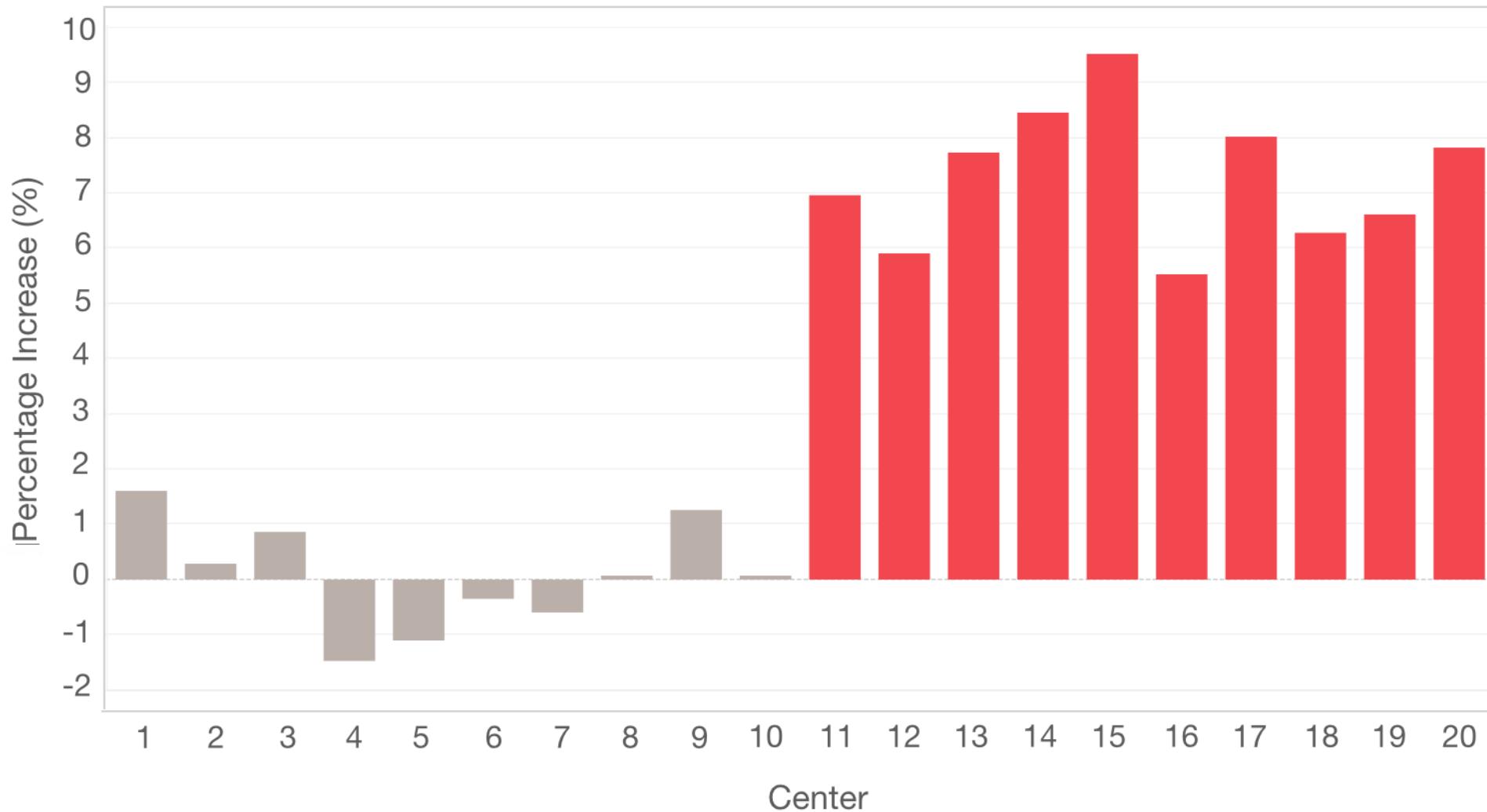


Con				
Test				

03

Analysis – Audience engagement

Percentage increase in Watcher count



Additional 8% customer reach rate when adapting interactive campaign.

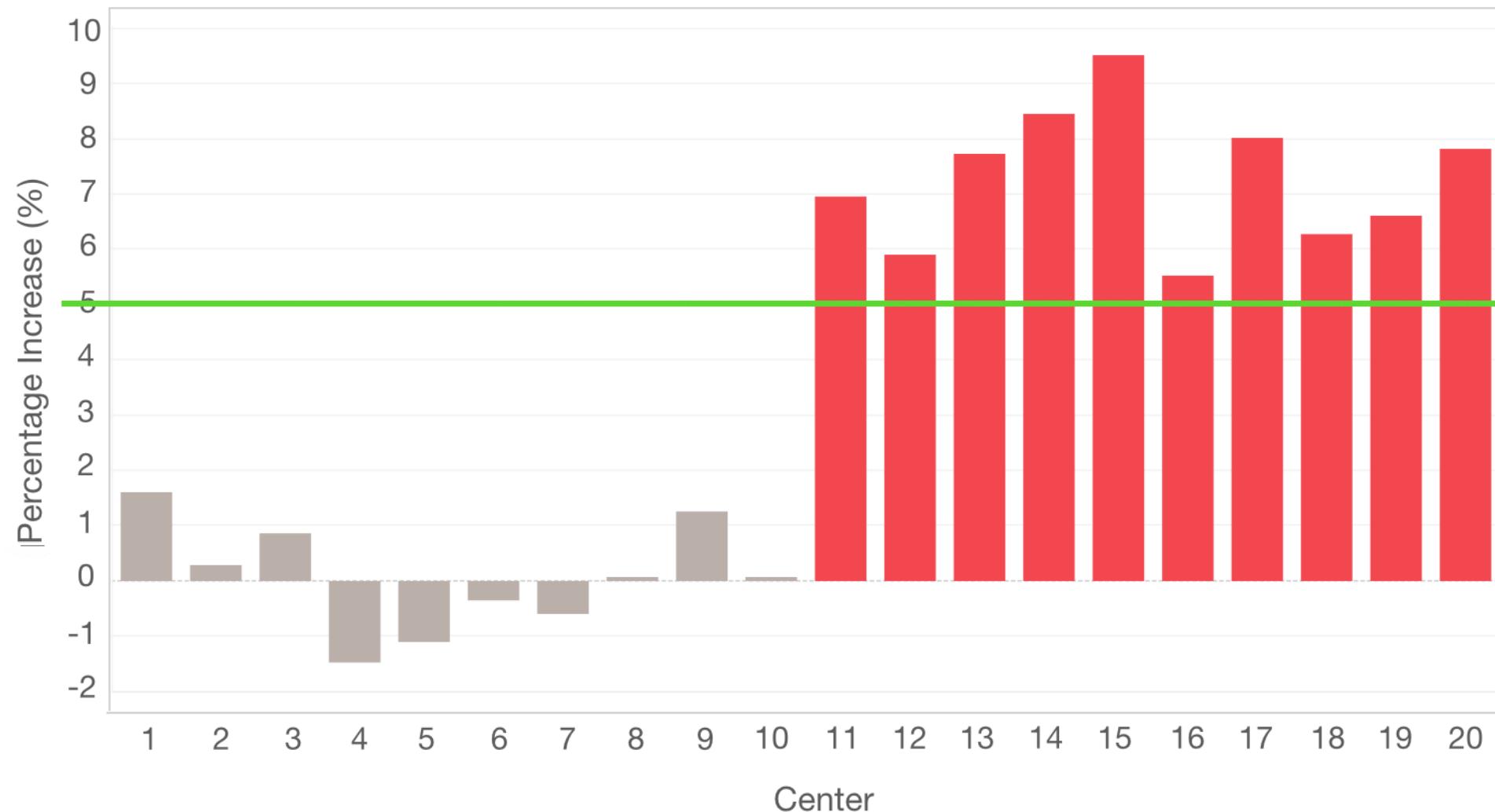
A 2x5 grid table illustrating the results of a campaign adaptation. The first row is labeled "Con" and the second row is labeled "Test". The last two columns under "Test" are shaded red, indicating a significant performance difference. A red arrow points to the second-to-last column of the "Test" row.

Con				
Test				

03

Analysis – Audience engagement

Percentage increase in Watcher count



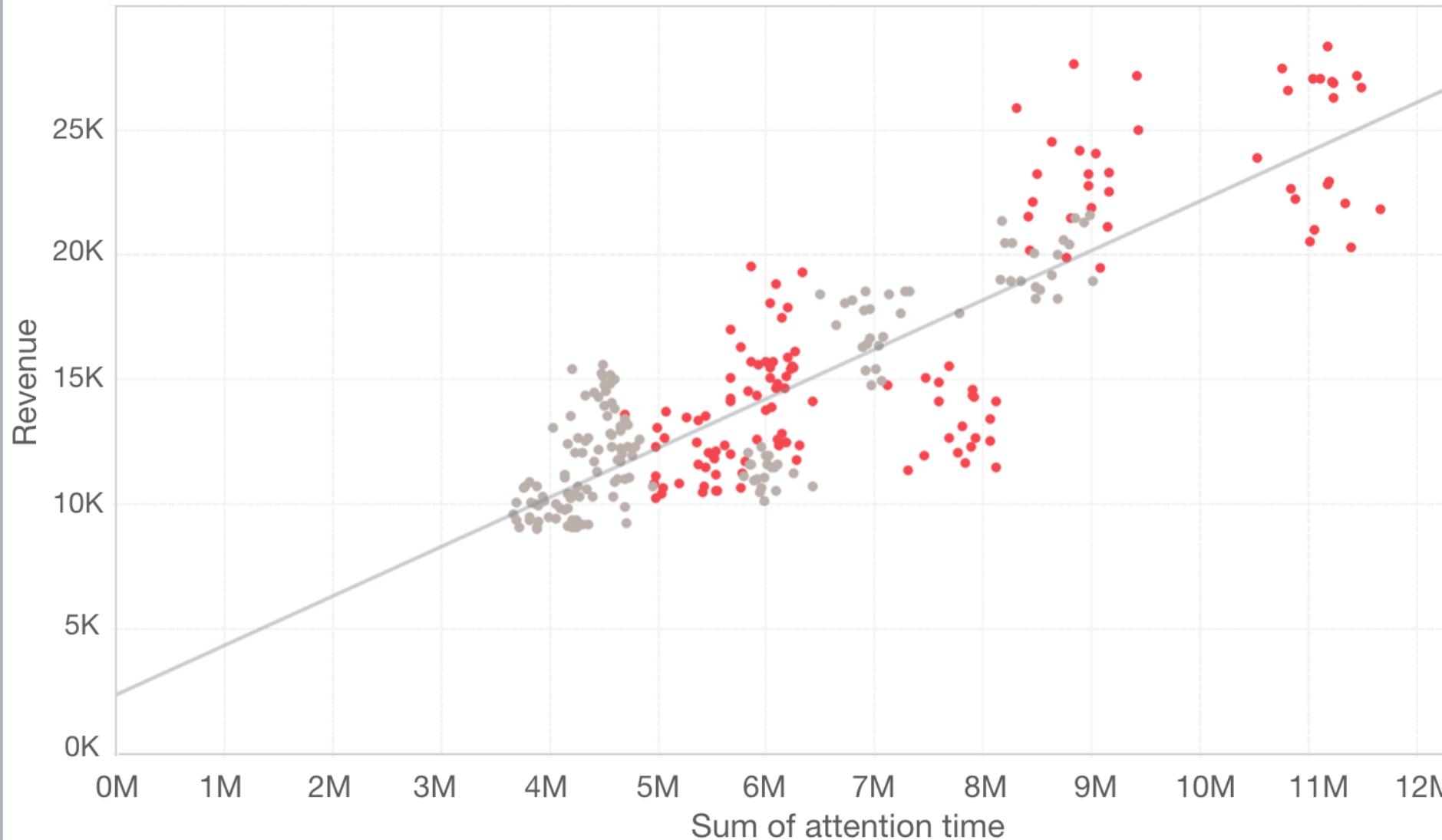
Additional 8% customer reach rate when adapting interactive campaign.

Con				
Test				

03

Analysis – Audience engagement

Relationship of Revenue and Sum of Attention time



**2 units increase in
Revenue/1K
seconds of
attention time.**

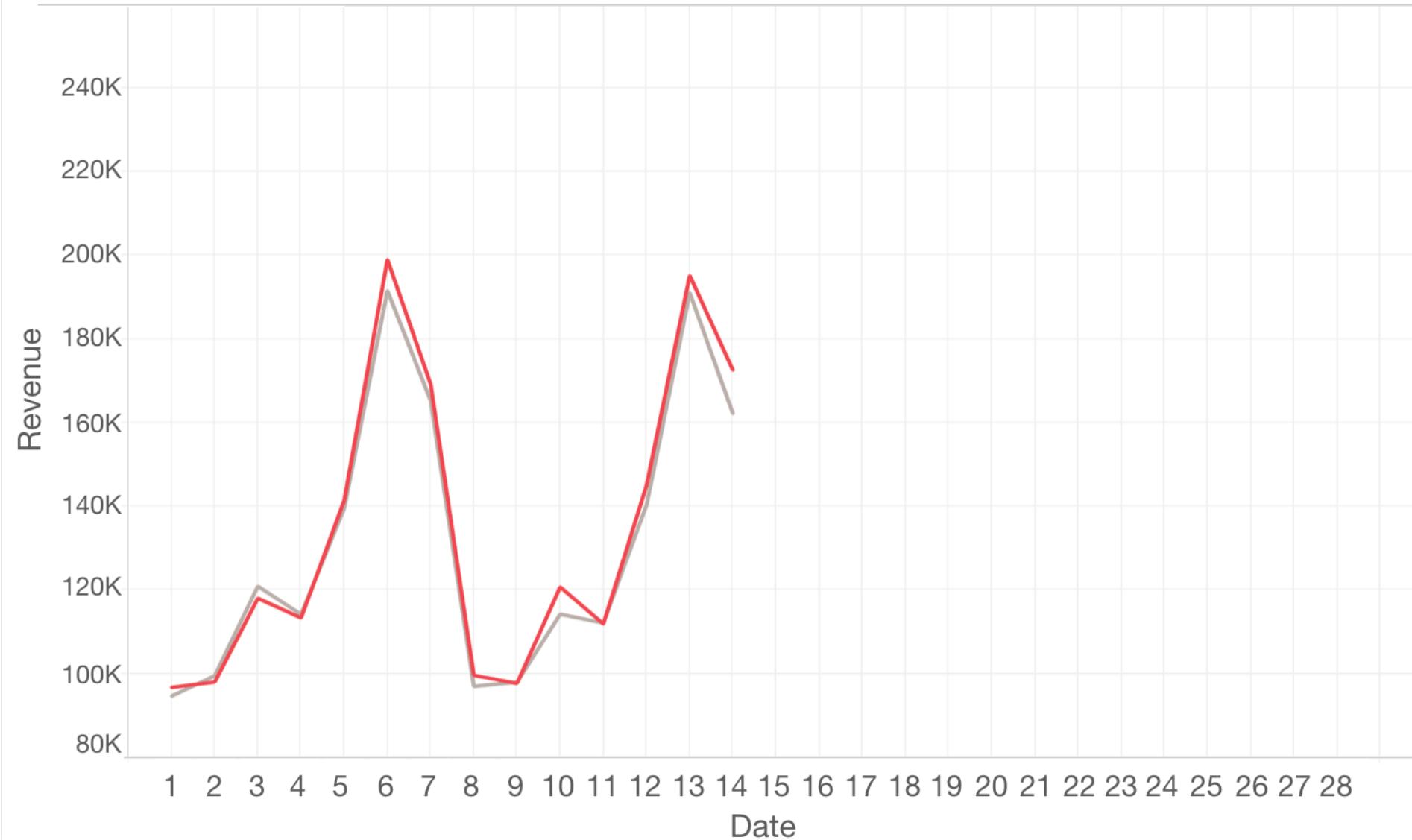
R-Squared: 0.7278
P-value: < 0.0001

Con				
Test				10

03

Analysis – Sales Revenue

Revenue over time



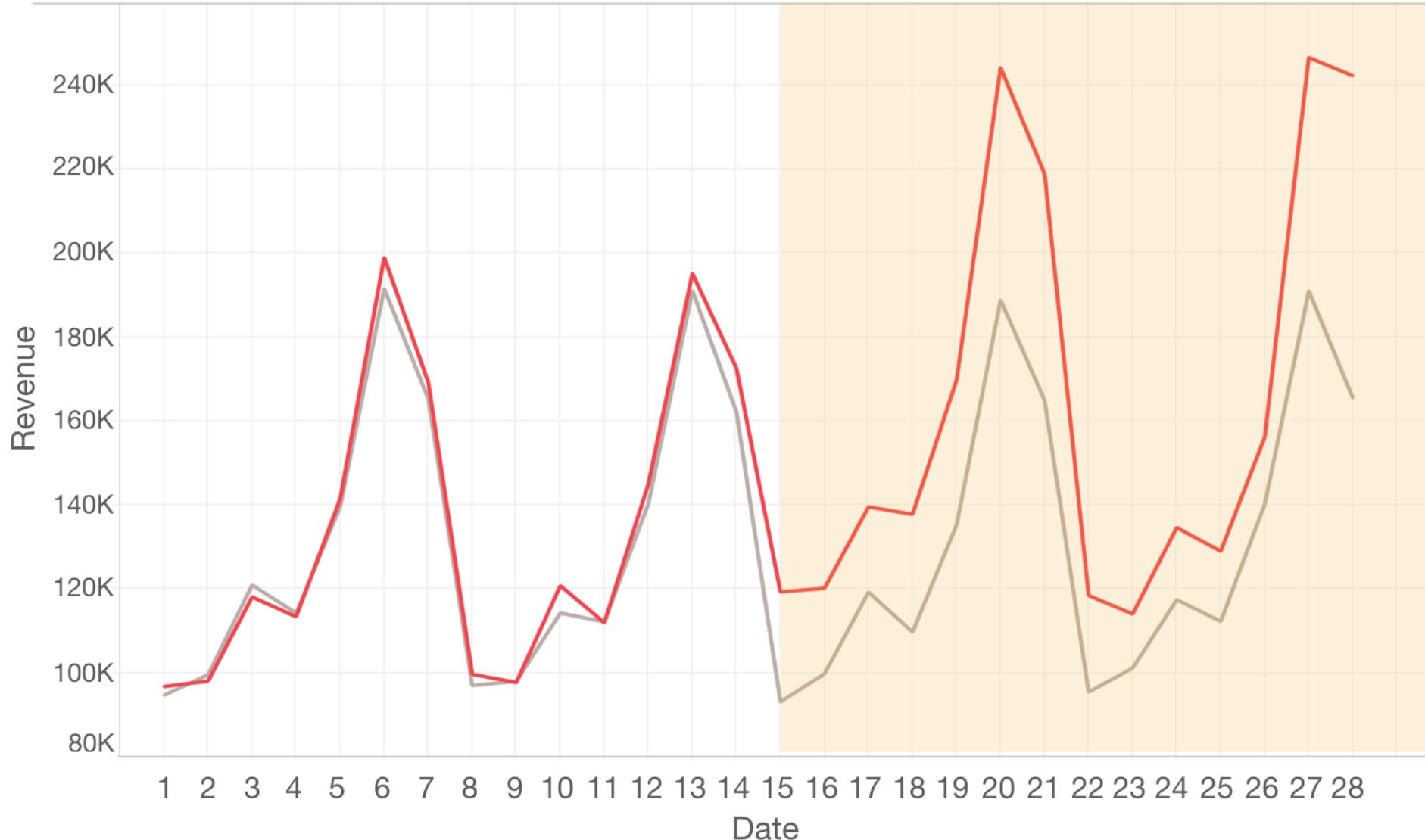
Similar pattern in control & test group in regular campaign



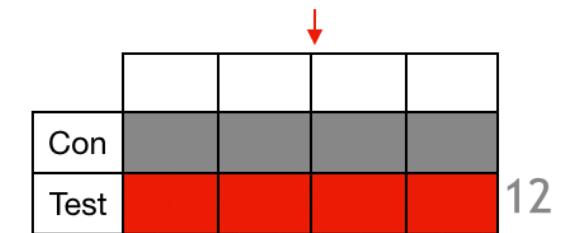
03

Analysis – Sales Revenue

Revenue over time



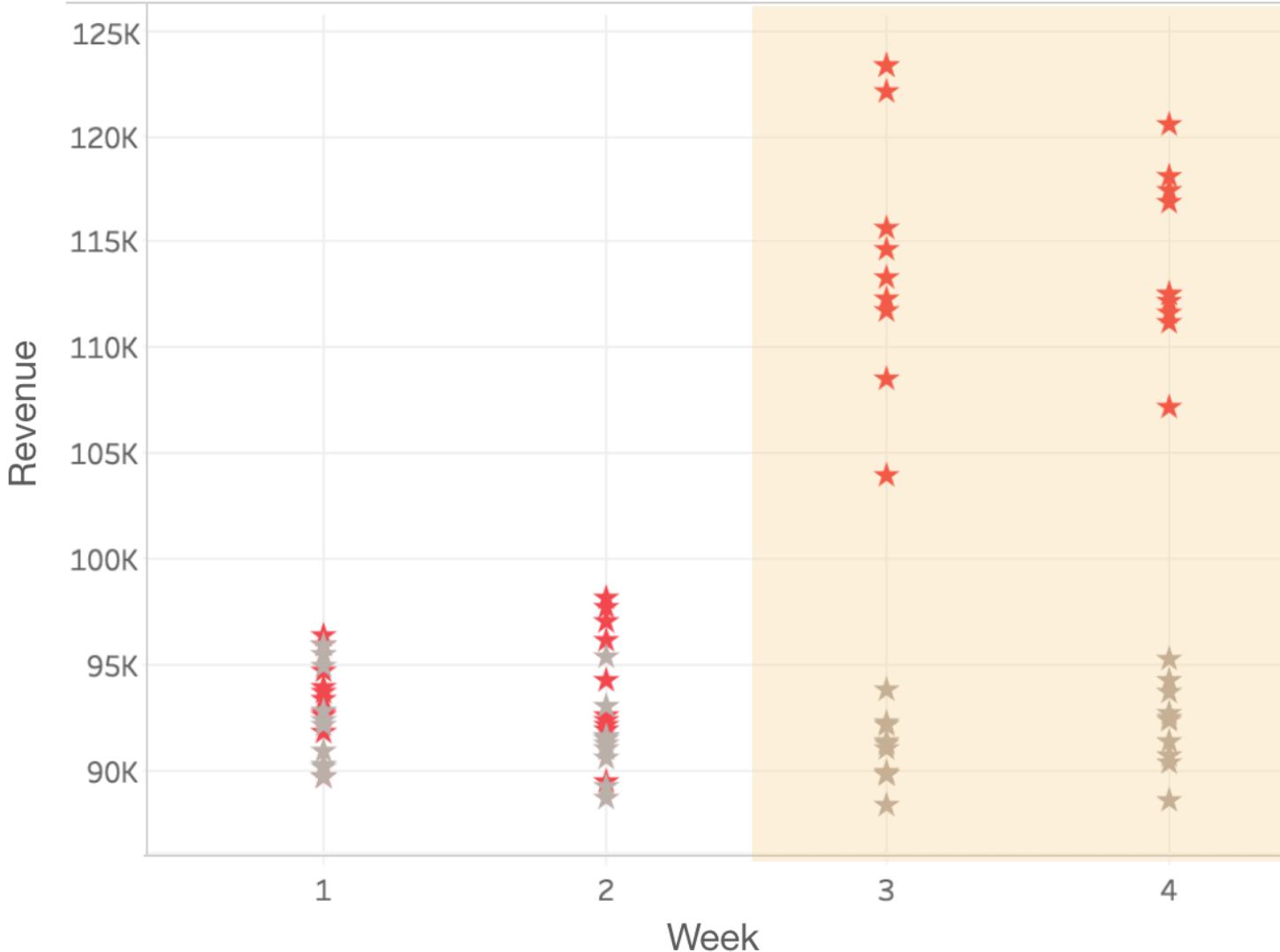
Revenue Boost
since the interactive
campaign proposed



03

Analysis – Sales Revenue

Weekly Revenue of all Sites



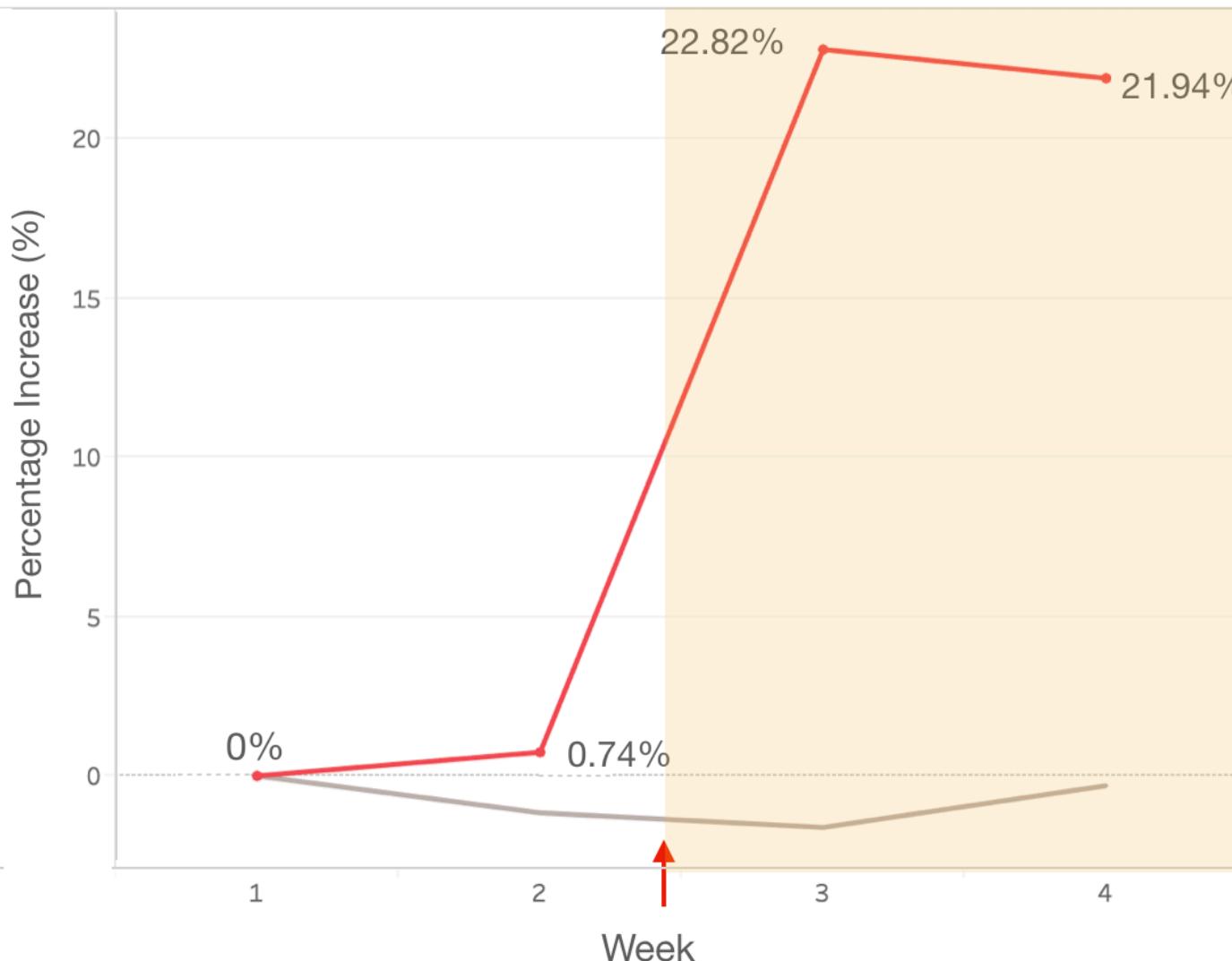
All the Centers in test group show improvement in weekly revenue once the interactive campaign proposed.

Con				
Test				

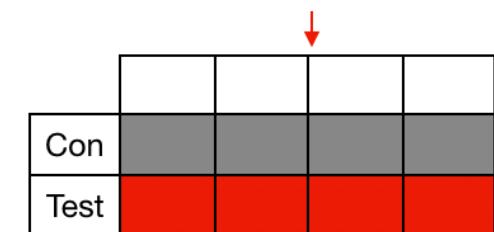
03

Analysis – Sales Revenue

Percentage increase in Weekly Revenue



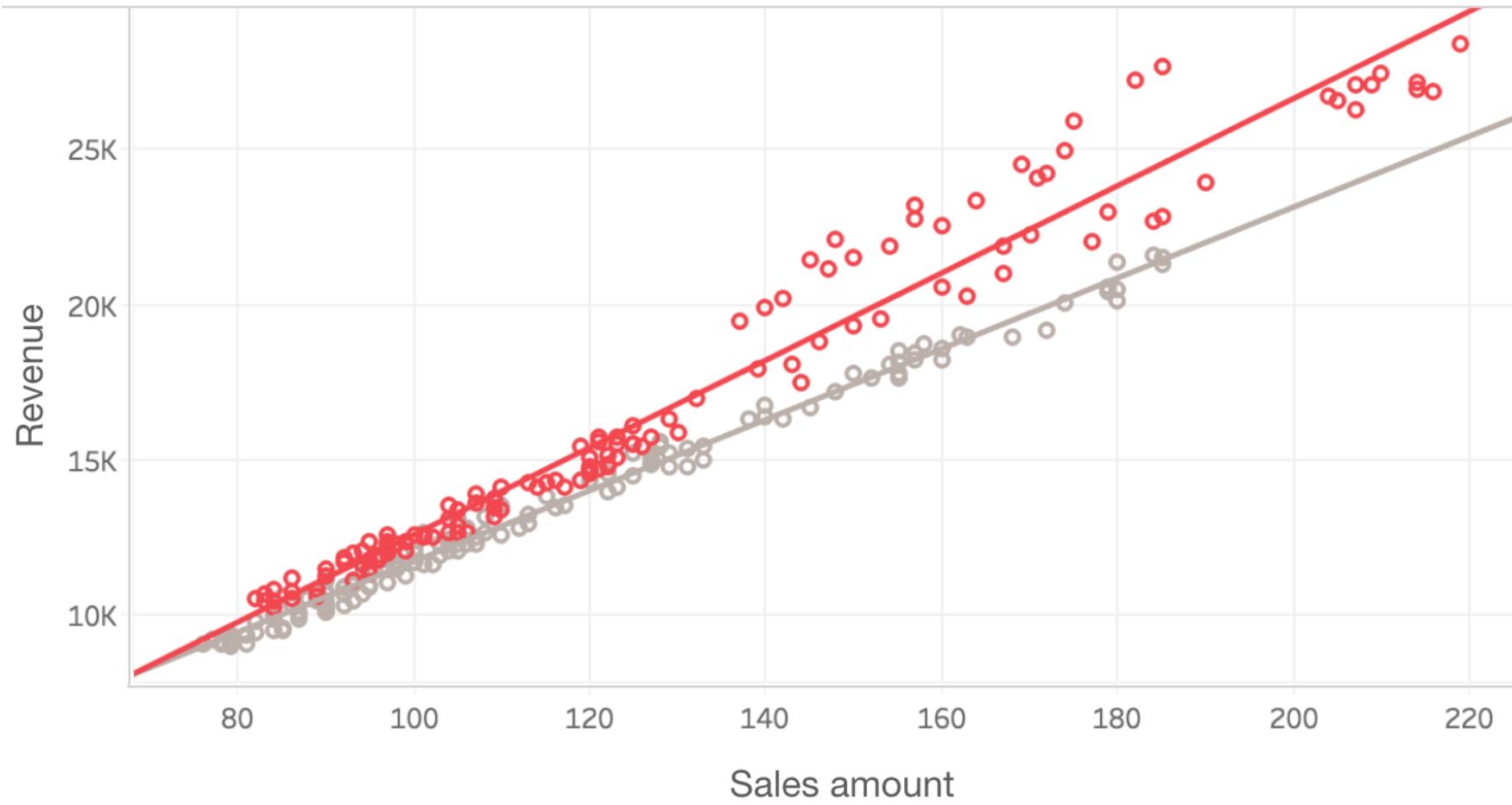
Interactive campaign yields **22.3% uplift in weekly revenue** comparing to the regular campaign in the test group.



03

Analysis – Customer Characterization

Revenue over Sales units in test group



Change audience shopping behavior to spend more money on a product.

Con				
Test				

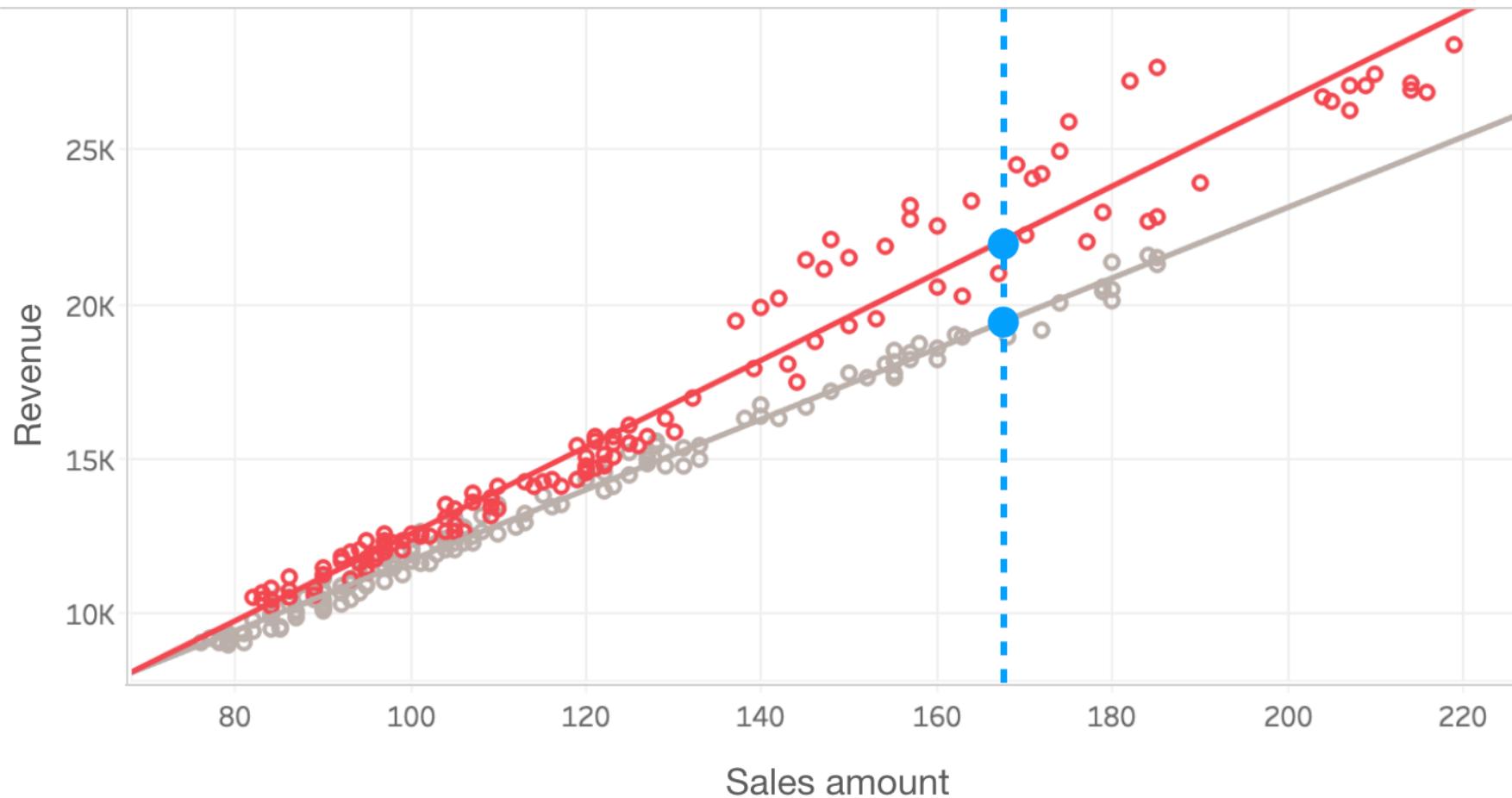
16

03

Analysis – Customer Characterization

Revenue over Sales units in test group

Same amount



Change audience shopping behavior to spend more money on a product.

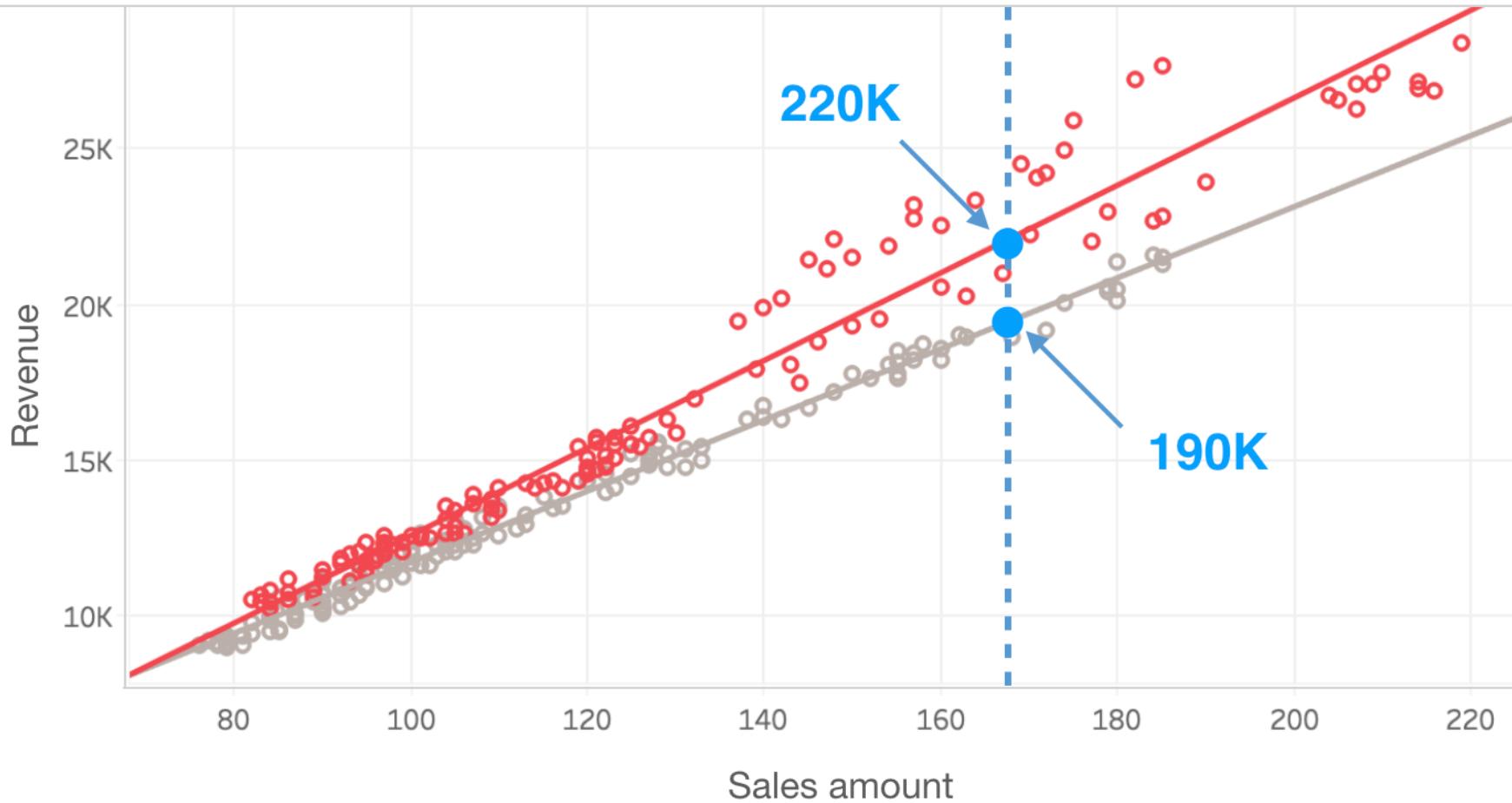
Con				
Test				

↓

03

Analysis – Customer Characterization

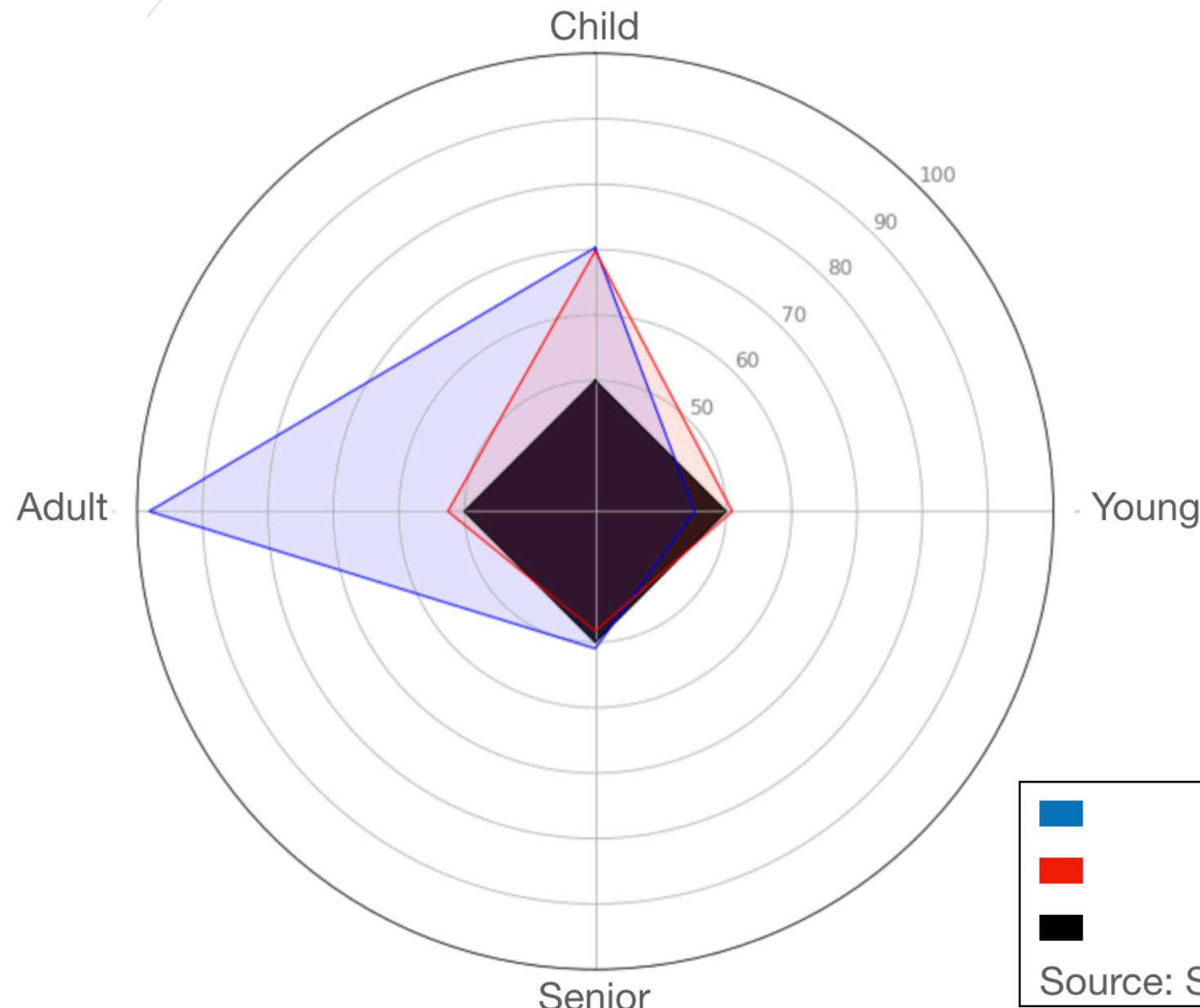
Revenue over Sales units in test group



Change audience shopping behavior to spend more money on a product.

Con				
Test				

Analysis – Customer Characterization



Most of the customers, with different gender and age, are **positive influenced** by our campaign.

While the **adult male** show the highest interest, about **96% increase**.

Con					
Test					

19

03

Take Home Messages

Our campaign prove the following value:

- Grab more attention, reach more customers
- Increase Weekly profit(22.3%) and sales amount(9%)
- Persuade customer to spend more money on a product

Thank you for your attention!

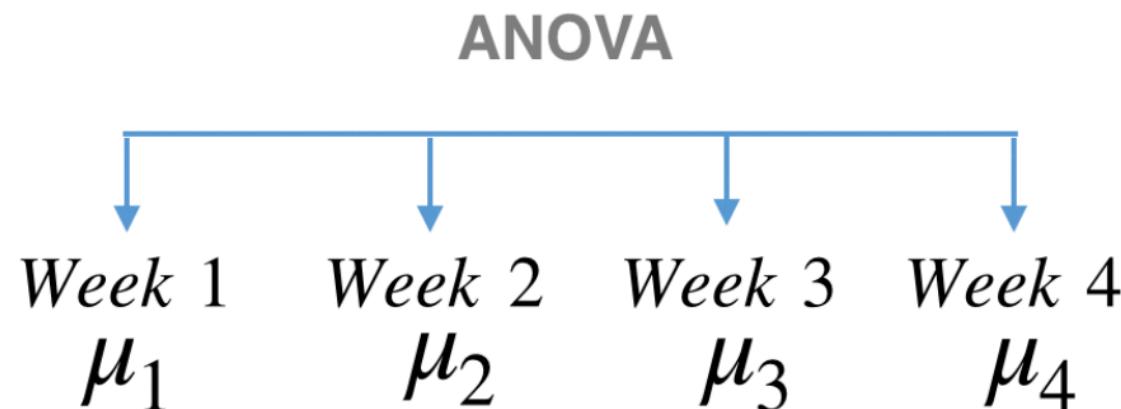
Appendix

- Appendix I. : Verify customer flow over time
- Appendix II. : Weekly aspect and comparison choose
- Appendix III. : Revenue over Sales amount in control group
- Appendix IV. : Detail for Analysis Calculation

Appendix I – Verify customer flow

What if the improve in performance comes from the increase in customer flow?

- I use ANOVA to compare the mean of traffic in each group in each week



$$H_0 : \mu_1 = \mu_2 = \mu_3 = \mu_4$$

H_A : One of the mean from the group is different

Appendix I – Verify customer flow

$$H_0 : \mu_1 = \mu_2 = \mu_3 = \mu_4$$

H_A : One of the mean from the group is different

Centers	P-value
Site 1	0.9793
Site 2	0.8504
Site 3	0.9458
Site 4	0.9051
Site 5	0.0717
Site 6	0.6623
Site 7	0.0680
Site 8	0.0771
Site 9	0.0125***
Site 10	0.8925

Centers	P-value
Site 11	0.1777
Site 12	0.3515
Site 13	0.5902
Site 14	0.8992
Site 15	0.0562
Site 16	0.4024
Site 17	0.9433
Site 18	0.1752
Site 19	0.9935
Site 20	0.6397

Appendix I – Verify customer flow

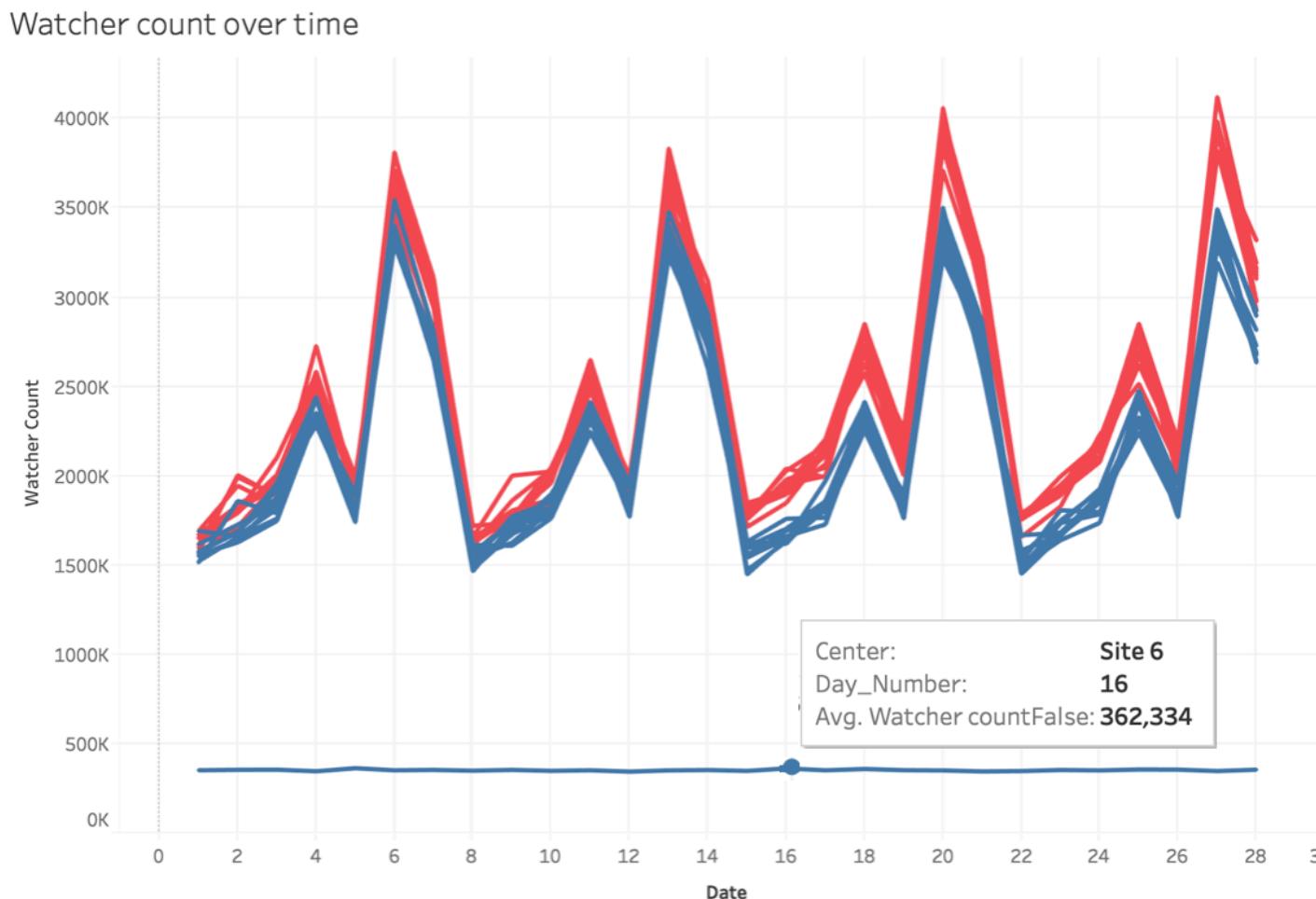
$$H_0 : \mu_1 = \mu_2 = \mu_3 = \mu_4$$

H_A : One of the mean from the group is different

Conclusion: The amount of traffic have no significant changes in four weeks(weekly aspect) Except Site 9

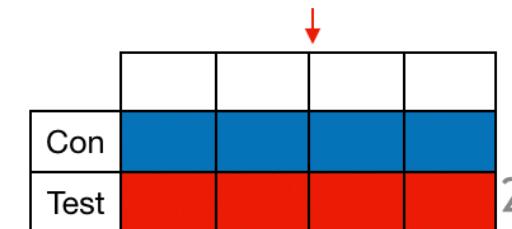
Appendix II — Weekly aspect and comparison choose

Why sometimes I choose the scale in weekly instead of daily? And why sometime compare to test and sometimes choose control?



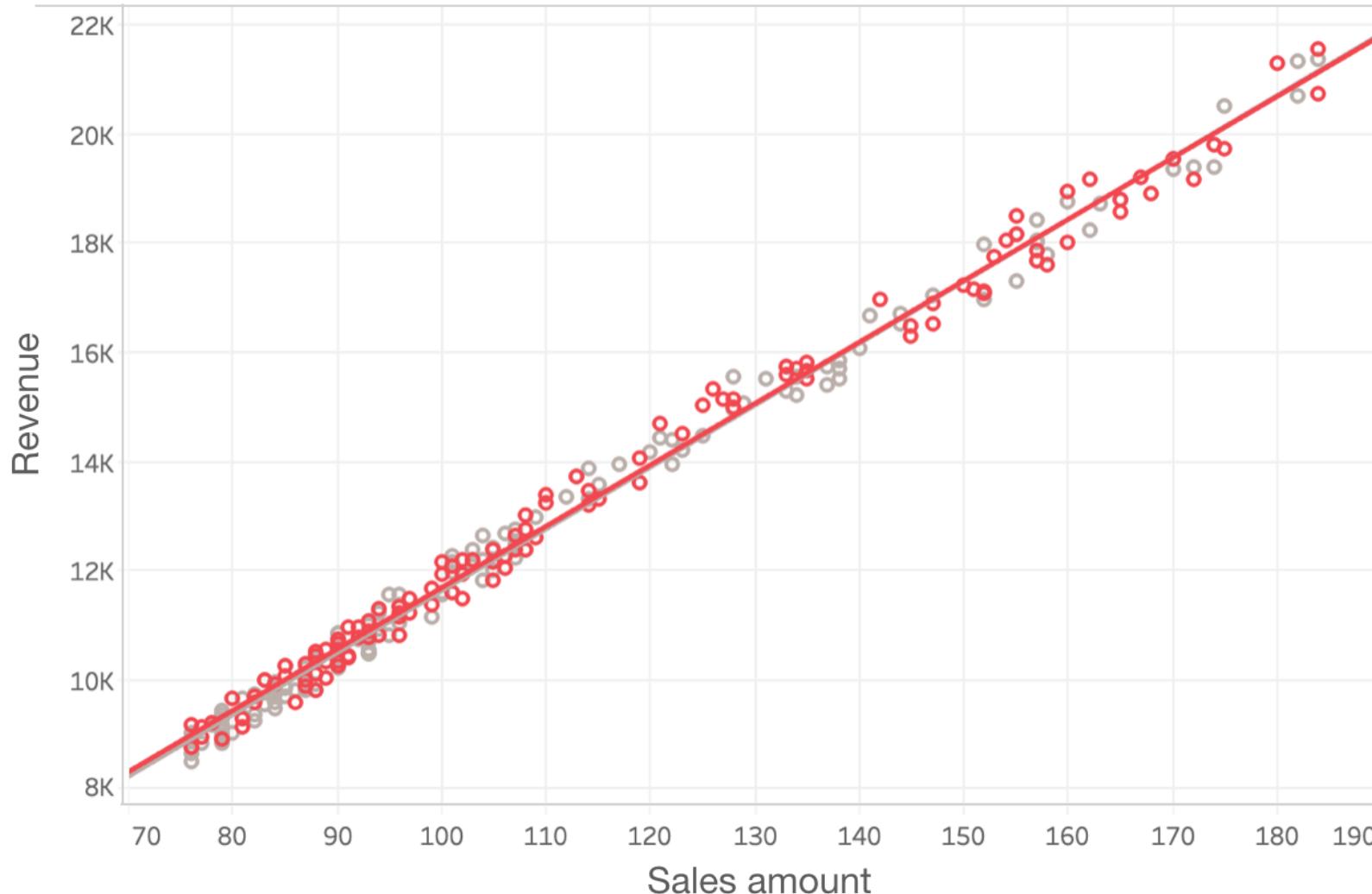
The figure aside show

1. pattern within the week
2. The irregularity over some data



Appendix III — Revenue over Sales amount in control group

Revenue over Sales units in control group



Compare to Test group, control group show no difference in customer buying behavior.

Con					
Test					

Appendix IV — Details for analysis calculation

20+% increase of the attention time per watcher. (P.7)

- Group by every day, select 10 centers (control/test)
- Sum the (sum of attention time) / Sum the (Watcher count)
- Can get average of each day in (control/test)
- Percentage increase:
$$\frac{\text{Each day data} - \text{Day 1 Data}}{\text{Day 1 Data}}$$

Appendix IV — Details for analysis calculation

Reach out **8% more customers** than regular campaign. (P.8)

- For each site, separate into 4 weeks data, and Sum the (Watcher)

- For each site, calculate the percentage increase:

$$\frac{\text{Each Week data} - \text{Week 1 Data}}{\text{Week 1 Data}}$$

- Take average of the last 2 week

2 units increase in Revenue/1K seconds of attention time.

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	2.316e+03	4.834e+02	4.792	2.7e-06 ***
Sum_of_attention_time	2.005e-03	7.874e-05	25.462	< 2e-16 ***
boolean_with_our_campaign	-2.545e+02	3.204e+02	-0.794	0.428

Signif. codes:	0 **** 0.001 *** 0.01 ** 0.05 * . 0.1 ' ' 1			

Residual standard error: 2467 on 277 degrees of freedom

Multiple R-squared: 0.7297, Adjusted R-squared: 0.7278

F-statistic: 373.9 on 2 and 277 DF, p-value: < 2.2e-16

$$\text{Revenue} = 2.316 \times 10^3 + (2.005 \times 10^{-3}) \times \text{Sum of attention time} + (-2.545 \times 10^2) \times \text{boolean with our campaign}$$

Appendix IV — Details for analysis calculation

Revenue Boost since the interactive campaign proposed (P.10, P.11)

- Group by every day, select 10 centers (control/test)
- Sum the (Volume)
- Plot by day

Appendix IV — Details for analysis calculation

All the Centers in test group show improvement in weekly revenue once the interactive campaign proposed. (P. 12)

- For each site, separate into 4 weeks data
- Sum the (Volume)
- Plot Sum of the (Volume) and Week
- Percentage increase:
$$\frac{\text{Each Week data} - \text{Week 1 Data}}{\text{Week 1 Data}}$$

Appendix IV — Details for analysis calculation

Interactive campaign yields **22.3% uplift in weekly revenue** comparing to the regular campaign in the test group. (P. 13)

- For each site, separate into 4 weeks data
- Sum the (Volume)
- Plot Sum of the (Volume) and Week

Appendix IV — Details for analysis calculation

Average **9% improvement in sales amount**, and the highest Center can increase up to 19%. (P. 14)

- For each site, separate into 4 weeks data, and Sum the (Transaction)
- For each site, calculate the percentage increase:
$$\frac{\text{Each Week data} - \text{Week 1 Data}}{\text{Week 1 Data}}$$
- Take average of the last 2 week

Appendix IV — Details for analysis calculation

Our campaign can persuade customers to **change their shopping behavior** and willing to **spend more money on a product.** (P.15, P.16, P.17)

- Plot Transaction, Volume
- Select only test data
- First 15 days as gray, last 15 days as red

Appendix IV — Details for analysis calculation

Customer Characterization over gender and age. (P.18)

- Separate data into Control/Test
- Group by Gender and Age
- Sum the (Sum of attention time)
- Audience Increase Percentage:
$$\frac{\text{Test group sum of attention time} - \text{Control group sum of attention time}}{\text{Control group sum of attention time}}$$
- Set baseline as 50, increase percentage:
$$50 * (1 + (\text{Audience Increase Percentage}))$$


Set baseline