

# A/B Testing

Logo →



→ Ask people → feedback ? → Costly  
→ Time Consuming

→ Pros & Cons → Subjective  
→ Interlocking

Monitor their Journey in parallel

A/B → easy  
→ Fast  
→ Cost effective

ex: → Walmart Stores → \$ in B(R)  
→ 4000 stores  
→ 50% population

Stores →

Packet juice → Not with people  
→ P-suit

→ Bels & Diapers (Baby Boomers) → In USA

→ Store → Biz unit

Walmart → Highest Margin → wines  
(Profit 80%)

→ 4 Ps

① → Price → Discount (cost)

② → Product → which are best wines to sell

③ → Position / Promotion → cost

④ → Place → Adjust

→ Wines should be kept in Fruits section.

→ M/F → 85% 17

→ wines → Profit

# Experiment →  
m m m

① → North Star Metric

↳ Increased sales / customers

→ Customer churn? (no dropoff of customers)

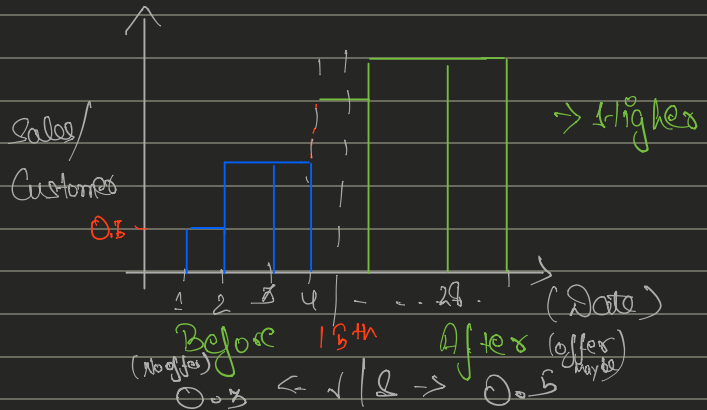
Traditional way  $\rightarrow$  change in location

(1 store) Feb 1st

25th Feb

$\downarrow$   
Bottles / visit / Customers  
 $\downarrow$

Rev  $\rightarrow$  0.5



Come with this Tradition Approach

- ①  $\rightarrow$  Sales could increase even after experiment
- ②  $\rightarrow$  Other factors at play

A - B Testing

$\rightarrow$  2 samples  $\rightarrow$  A  $\rightarrow$  Status quo (No change)  
B  $\rightarrow$  Change is implemented

$\rightarrow$  Time frame  $\rightarrow$  Same for both stores

$\rightarrow$  NSM  $\rightarrow$  [B is significantly higher than A]  
(North star Metric)

H<sub>0</sub>: Change in Location Increases the Sales

H<sub>a</sub>: There is no impact on sales

→ first figure out sample

ex → Goa → X Bad choice (yha pe nino  
kahi phi demand  
skti hai bande)

Sample →

Ueno  
↓

2 stores

↓

Similar store

Similar store :-  
~ ~

ex → Cofe coffee day in 2 km

Customer demand ←  
Goa phuf

→ M & F Ratio

→ Gender

→ Area

→ Income

→ All Marketing

→ Product Assortment

$\alpha_1$

$\alpha_2$

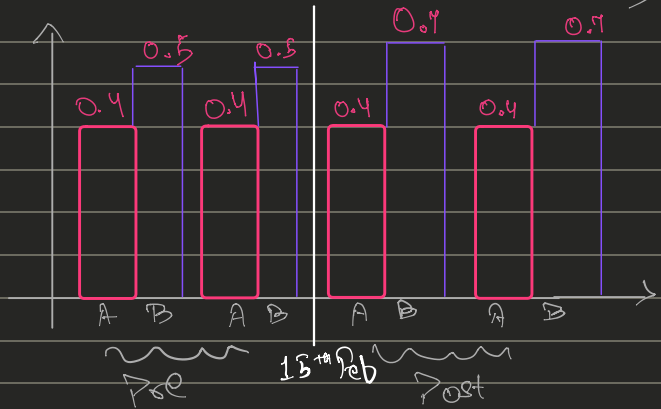
Sampling → Identifying samples

→ Sales / Customers (NSN)

→ 1st to 27th Feb

Store  
A (No change)

Store B  
(location is changed  
on 15<sup>th</sup> Feb)



→ 0.2 sales change after experiment implementation

→ 4000 stores implement → No 0000

→ Region →

3/V → 1.5/V

→  $\frac{18-24}{\checkmark}$   $\frac{40-55}{\times}$

→ 10 stores → observe

→ 100 stores → observe

→ 1000 stores → observe

→ 4000 stores → implement

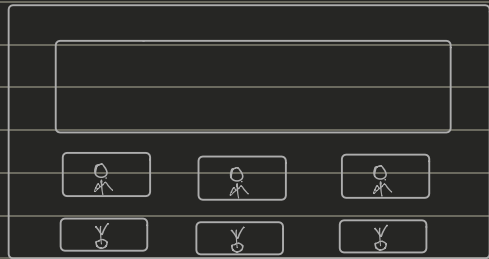
→ Generally walmart takes 3 month to complete these projects

# Netflix Case Study

Product A



Product B

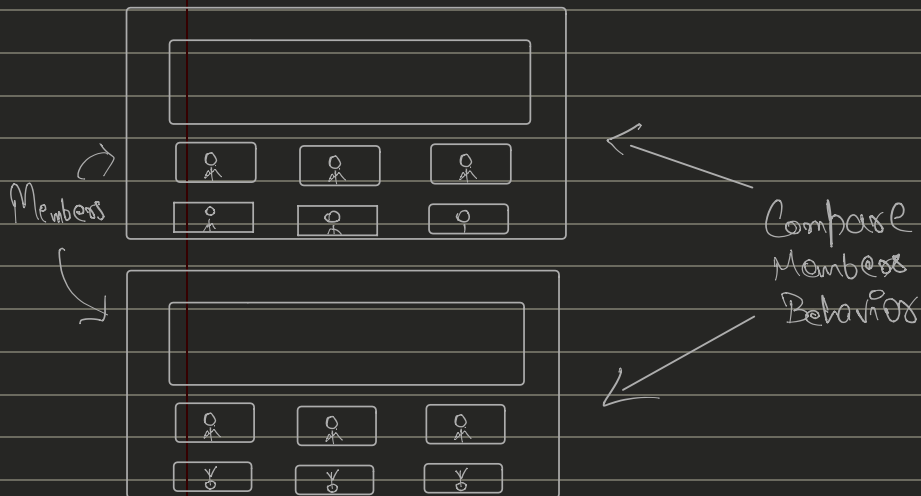
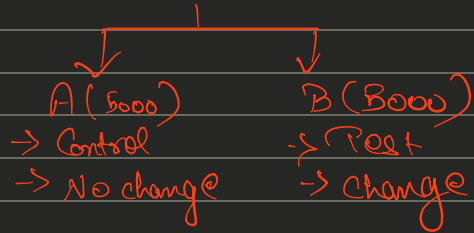


A → Control Group

B → Test Group

(Optional 1% from popula)

5000 users → 10,000



- Feedback → Doesn't require it
- Time effective
- Misuse

★ → ① → Define Goal

② → Has experiment Run before?

③ → Clarify Goal → Target Group  
 → Feature  
 → Time frame

④ → N/A S

⑤ → Set the experiment

⑥ → Right sample size

⑦ → Right sample

⑧ → Def the hypothesis :-

Null: No significant on user engagement.

Alternate: sig difference in user engagement.

→ Test → Two Tailed

→ z-prop → we are comparing two samples

→ significance level  
 → 95%

⑨ → Duration of Experiment

→ In how many days an average person log in to Netflix.

(Min should be 4 days)  $\rightarrow$  1 day

5 to 9 Days

$\rightarrow$  95% of customers should in

⑥  $\rightarrow$  Testing Pitfalls

$\rightarrow$  change  $\checkmark$  (Done)

\* people didn't like

$\uparrow$

[Reverse the change]

$\rightarrow$  change  $\rightarrow$  Reject

people love it

$\downarrow$

Out of Business

It falls  $\rightarrow$

①  $\rightarrow$  Primacy effect

$\rightarrow$  Get used to change

②  $\rightarrow$  Novelty effect

$\rightarrow$  Accept new changes actively