

A/B Testing to Determine Product Priority

By John Suh and Ashish Tripathi

Objectives

- ❑ Understand A/B Testing
- ❑ Leverage A/B Testing for Design Thinking
- ❑ How do you use A/B Testing to prioritize



Everything you need to know
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Introductions...



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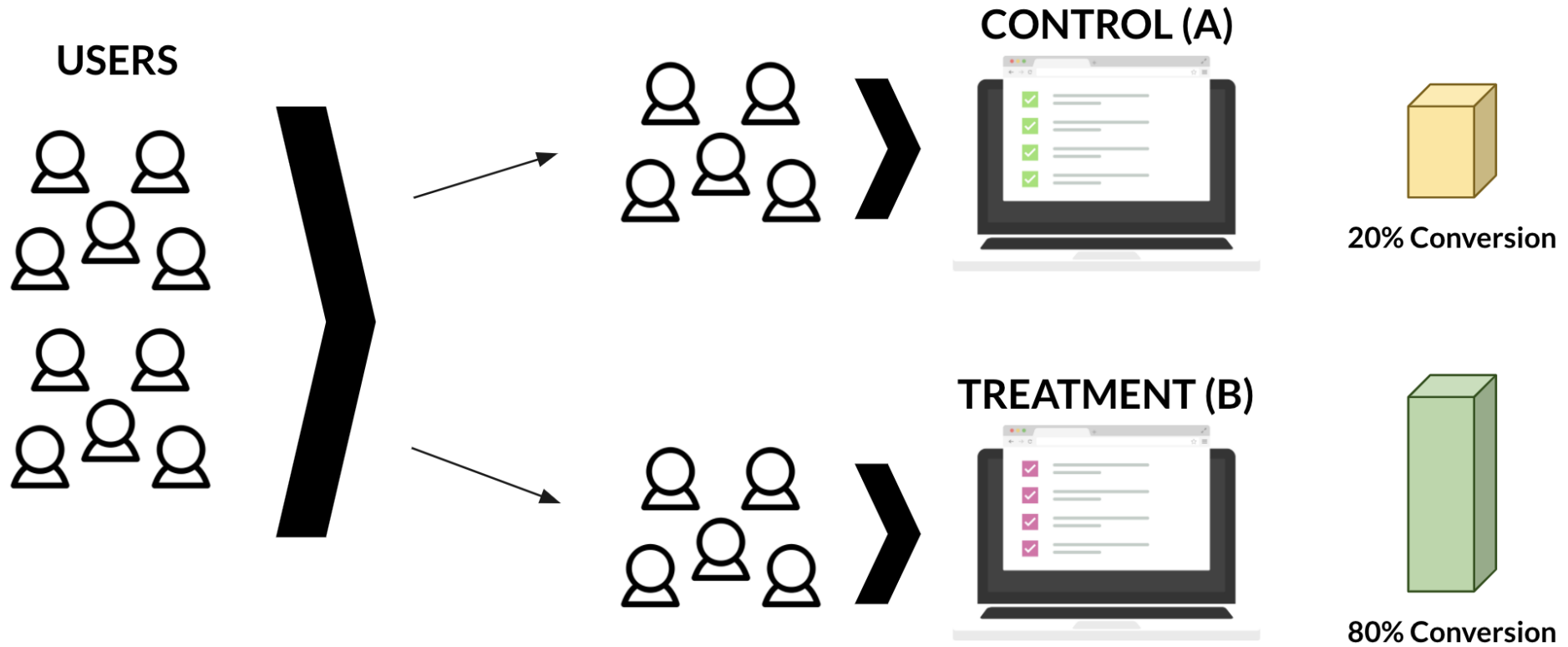
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AB Testing

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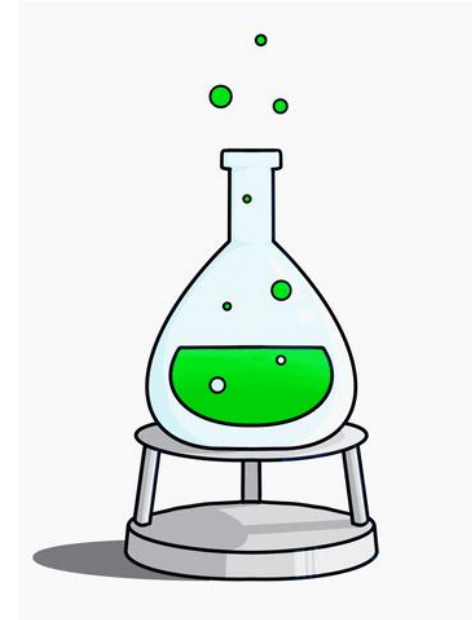
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What is A/B testing?



Why do we test?

- Prove out real ROI on ideas and opinions
- Go fast and fail fast... but do it cheap
- Solving REAL customer pain points



A/B Testing in Practice

Research:

There is a debate about which way the toilet paper roll should be placed on the holder.

Problem:

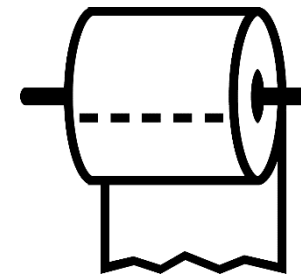
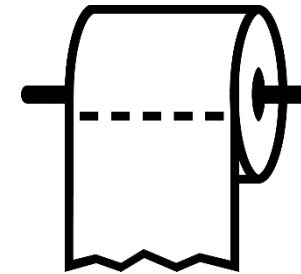
Can we once and for all settle this debate?

Solution:

Send out a survey to everyone we know and finally settle this debate!

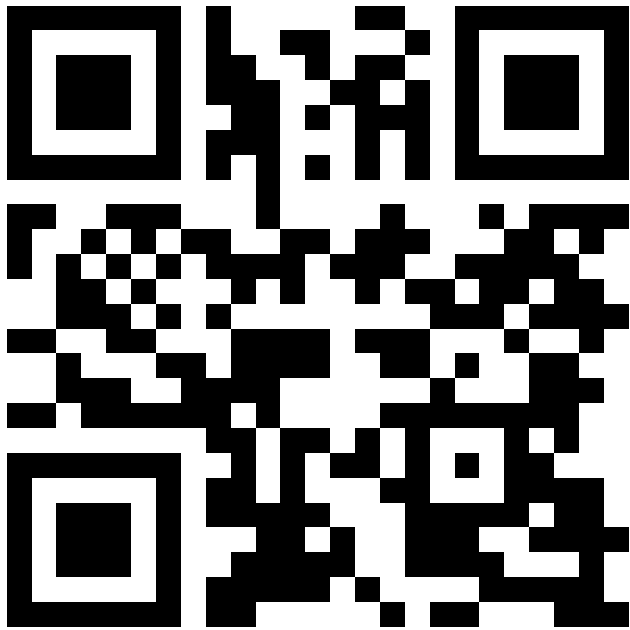
Hypothesis:

I believe that the majority of the people will say that the toilet paper roll flap should be on the front.

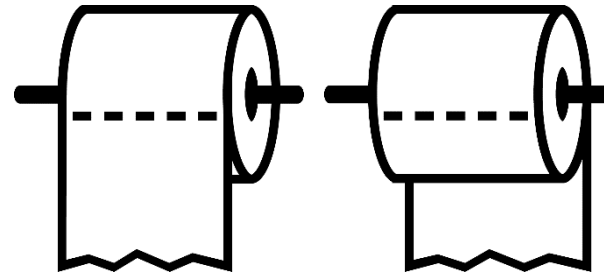


A/B testing in practice

pollev.com/johnsuh303



[Live Results](#)



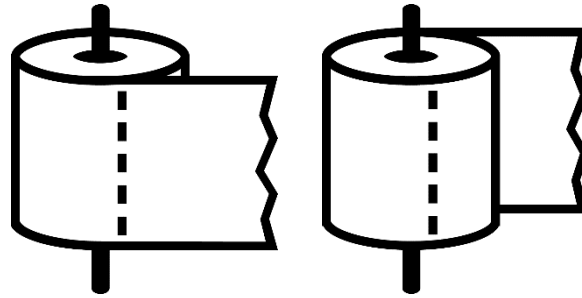
How do you test?

- ✓ **1.Research** – why and what should we test?
- ✓ **2.Problem** – define the problem we're trying to solve for
- ✓ **3.Solution** - how do we solve for the problem?
- ✓ **4.Hypothesis** - what do you think will happen?
- ✓ **5.Test** - build and test
- ✓ **6.Analyze** - analyze the results
- 7.Reiterate** - take the learnings and reiterate a new test
- 8.Report** - report out the results

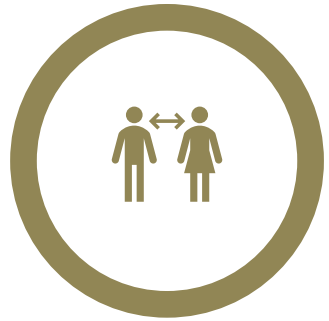


Reiterate?

Maybe people mount their toilet paper vertically?



A/B Testing Marriage with Design Thinking



Empathize Research

- > User Personas
- > Use Cases
- > Journey Map User Testing



Define Problem Hypothesis

- > Challenges
- > Research Needs
- > Define Metrics



Ideate Solutions

- > Testable Solutions
- > A/B/C
- > Mocks



Prototype (Run The Test)

- > Cheap
- > Quick
- > Non-Intrusive

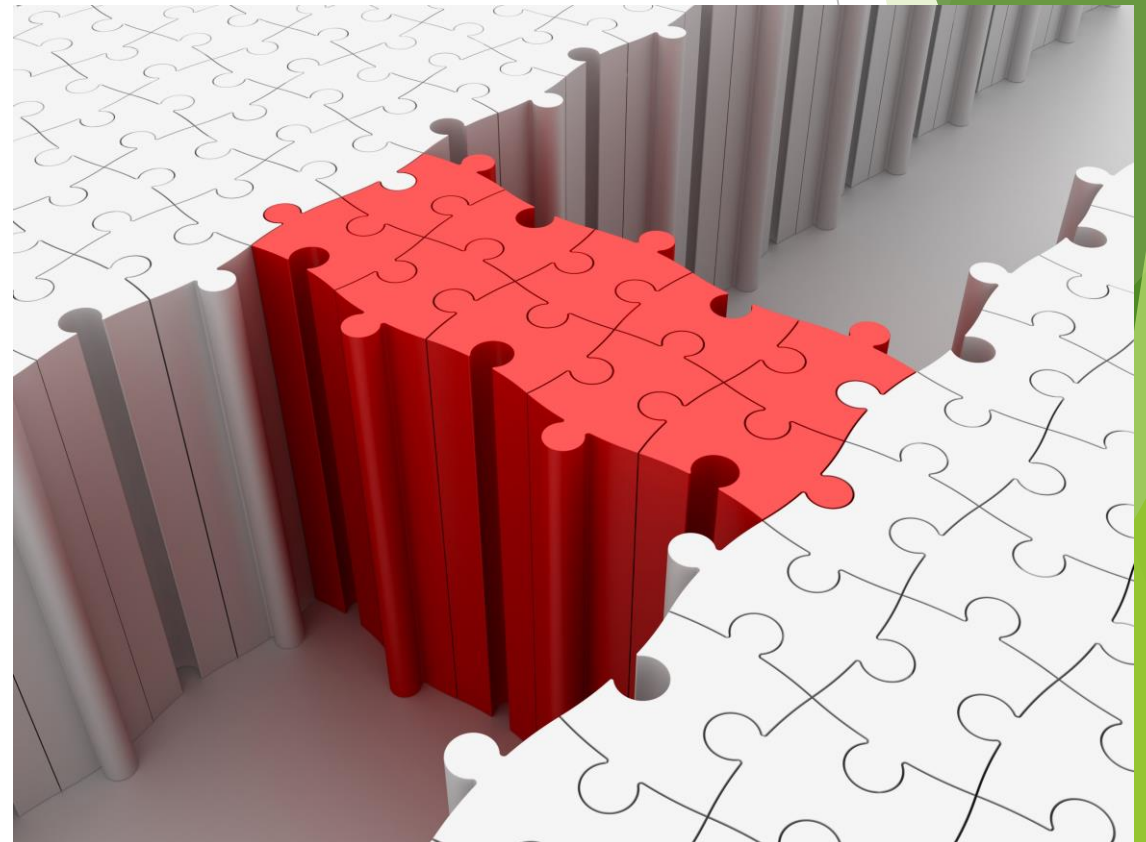


Test Analyze

- > Review Metrics
- > Analyze
- > Reiterate

What Types of Problem

- Unknown Problem/Unknown Solution
- Known Problem/Unknown Solution
- Unknown Problem/Known Solution



360° View of Customer



- 1st Person (Imagine yourself as the customer)
- 2nd Person (Interviews)
- 3rd Person (Analytics)

Statistical Confidence

How likely it is that the difference between your control and treatment versions wasn't due to random chance?

- Do you have a big enough sample size to test?
- Do you have enough time to test?
- The bigger your impact the quicker you can get to statistical confidence.

Testing Calculator:

<https://cxl.com/ab-test-calculator/>

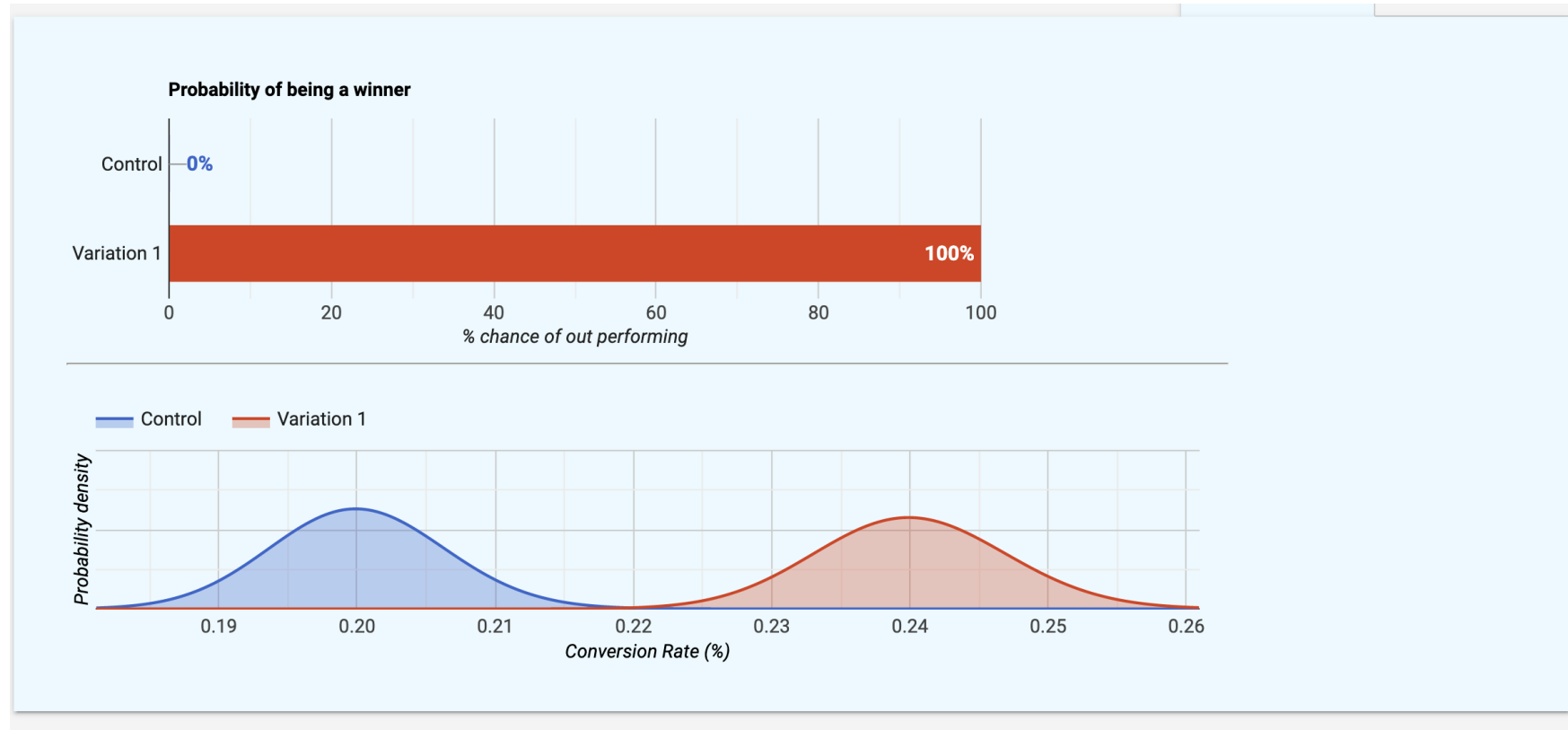
Statistical Confidence

Test duration					
Test duration (days) ⓘ	Percent of traffic in test ⓘ	Additional days needed ⓘ			
<input type="text" value="30"/>	<input type="text" value="100"/> %	<input type="text" value="0"/>			

Control					
Users or sessions	Conversions	Conversion rate			
<input type="text" value="500000"/>	<input type="text" value="1000"/>	<input type="text" value="0.20%"/>			

Variation 1		✕			
Users or sessions	Conversions	Conversion rate	Lift	Extra transactions ⓘ	Monthly monetary contribution ⓘ
<input type="text" value="500000"/>	<input type="text" value="1200"/>	<input type="text" value="0.24%"/>	<input type="text" value="20.00%"/>	<input type="text" value="399"/>	<input type="text" value="\$399"/>

Statistical Confidence



ROI Calculation

$$ROI = \frac{(Return\ of\ Investment)}{(Blended\ Rate\ of\ Dev\ Team) \times (\#\ of\ Sprints)}$$

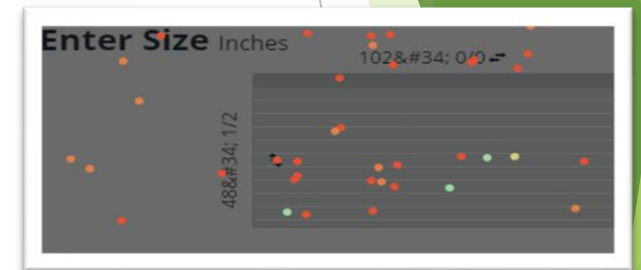
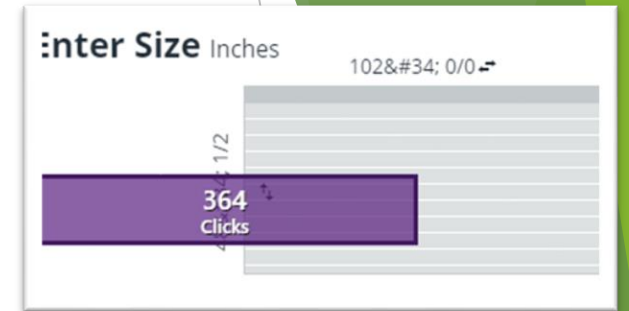
Key Metrics

Some of the common metrics we look at are:

- Revenue
- Purchase Conversion
- Micro Conversions
- Average Sale Value
- Engaged Visits
- Bounce Rate
- Sampling Rate

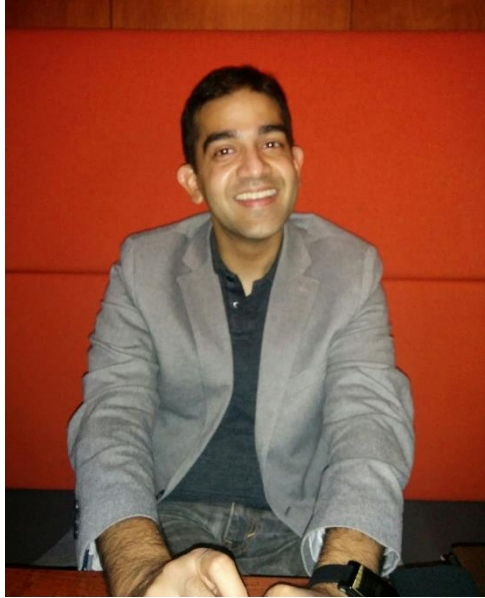
But we also look at some very specific metrics:

- Scroll rate
- Interactions/Taps/Clicks
- Next page flow
- Self-serve rate
- Test level of confidence
- Dev velocity
- Dev capacity



Questions?





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So, what did you learn?

