A/B Test Design Studio

3 hours

Design

A/B testing turns opinions into evidence. But poorly designed tests waste time. This exercise teaches you to design A/B tests that provide real answers. You'll learn to create solid hypotheses, meaningful variants, and achieve statistical validity.

H HOW TO RUN

1 Hypothesis Formation — 30 min

Identify the decision to be made.

- Form a testable hypothesis.
- Define primary and secondary metrics.
- Document the action for each possible result.

2 Variant Design — 45 min

Design control and treatment variants.

- Ensure only one variable differs to isolate causation.
- Create designs for all variants.
- Document the exact differences.

3 Technical Planning — 30 min

Calculate the required sample size.

- Determine the test duration.
- Plan traffic allocation.
- Identify technical implementation needs.

4 Analysis Plan — 30 min

Define the statistical significance threshold.

- Plan segmentation analysis.
- Identify potential confounds.
- Document decision criteria.

5 Test Documentation — 45 min

Create a test brief with all details.

- Write a results template.
- Plan a communication strategy.
- Schedule check-in and analysis dates.

KEY TIP

Common mistakes to watch for: Testing too many variables at once dilutes results.

O OBJECTIVES

- Form testable hypotheses for A/B experiments
- Design clean variants that isolate variables
- Calculate sample sizes and test duration
- Plan analysis approaches that avoid common pitfalls
- Document tests for learning

M MATERIALS

- ☐ Sample size calculator
- ☐ Test documentation template
- ☐ Hypothesis template
- ☐ Design tools for variant creation
- ☐ Comparison mockups
- ☐ Technical specification template

P PARTICIPANTS

4 to 6 people

F FACILITATOR NOTES

REMEMBER

- Stopping tests too early leads to false positives.
- Ignoring statistical significance creates uncertainty.
- Poor documentation hampers future learning.
- Key questions to consider: Is A/B testing the right approach?
- Do we have enough traffic to get results?
- How long until we can expect results?
- What actions will we take based on each potential outcome?