Easy A/B Testing with GrowthBook & ClickHouse

Graham McNicoll - March, 2025

ClickHouse Meetup San Francisco

Open Source Feature Flag & Experimentation Platform

Hi, I’m Graham

Co-Founder of GrowthBook

Most popular open source A/B testing platform. Huge Clickhouse fan.

Y Combinator (2022)

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Talk outline

- Briefly, what is A/B testing (if needed)
- Why you should A/B test
- How you can use ClickHouse and GrowthBook for enterprise A/B testing
- Real-time flag status using ClickHouse (if time)

What is A/B testing?

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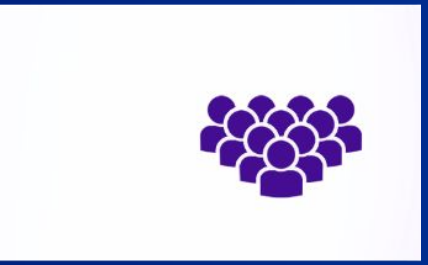
A/B testing is a controlled way of measuring the impact of changes on real users

A/B testing components

The basic components of running an A/B test

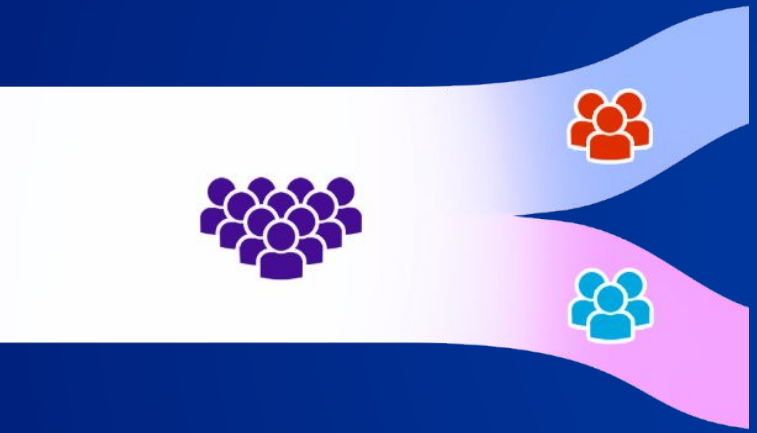


Hypothesis

Come up with an idea
you want to test

A/B testing components

The basic components of running an A/B test

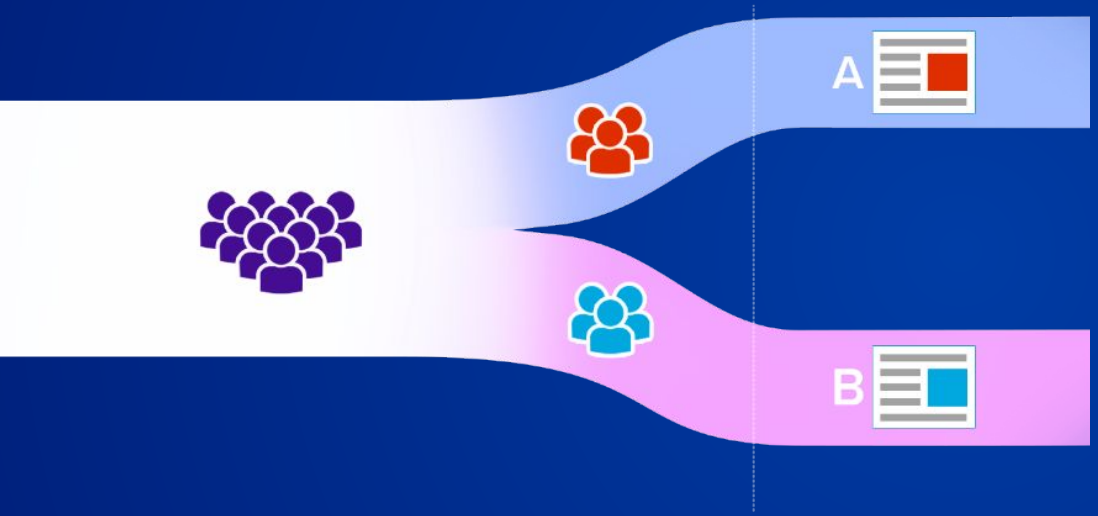


Hypothesis
Come up with an idea you want to test

Assignment
Split your audience into persistent groups

A/B testing components

The basic components of running an A/B test



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Split your audience into persistent groups

Variations
Create and show the different experiences to each group

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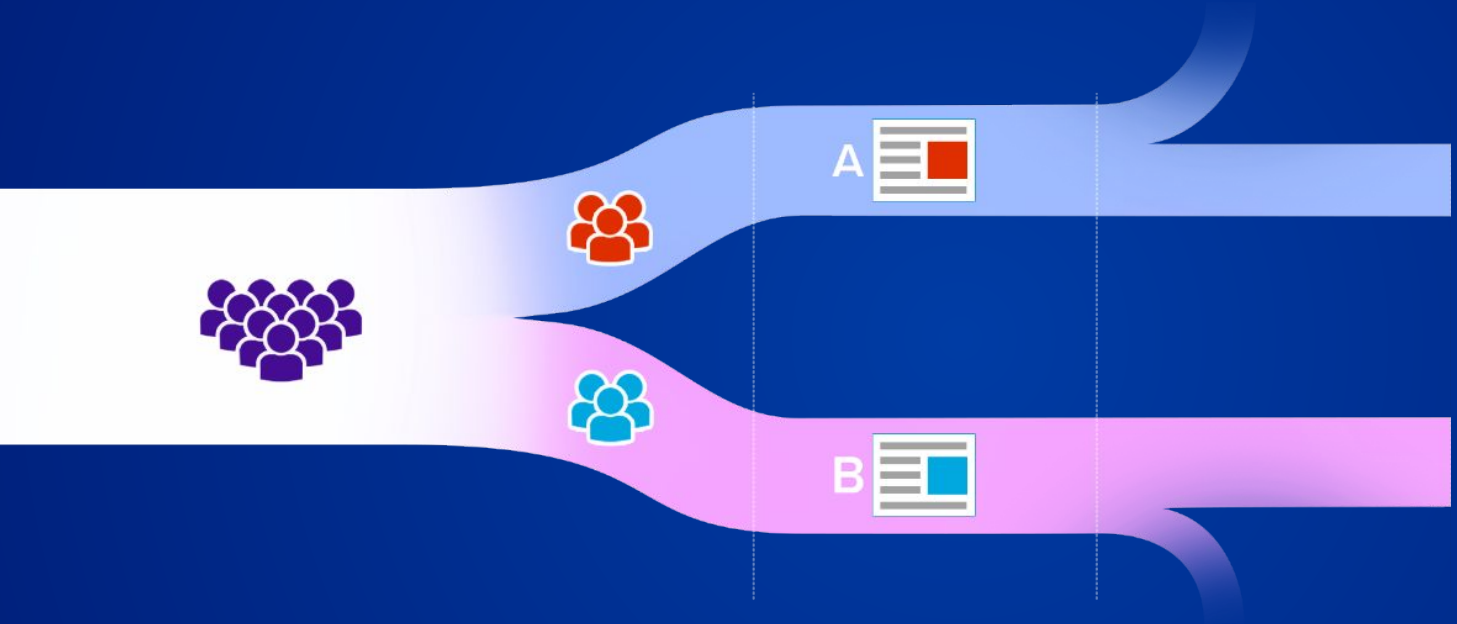

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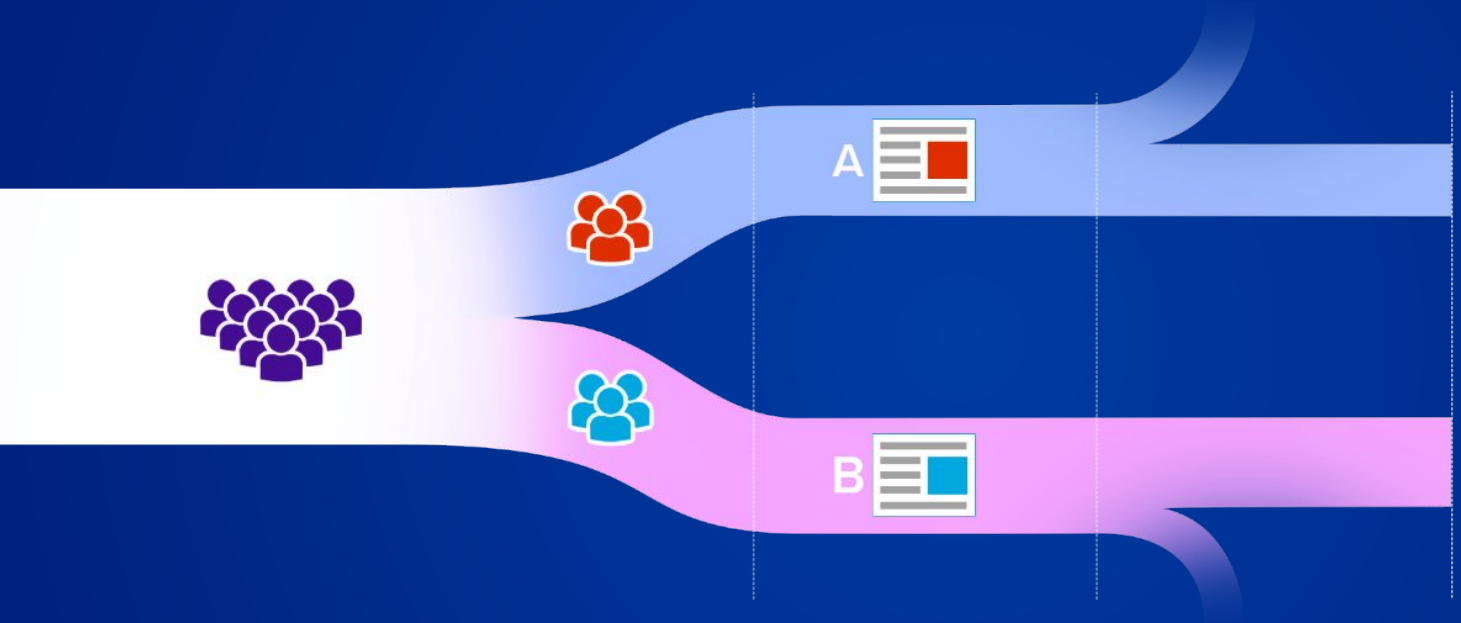
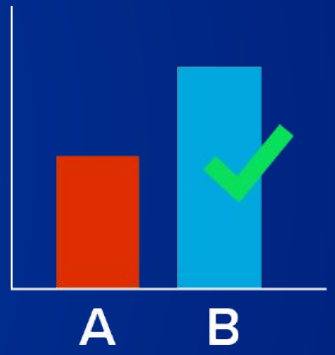
Tracking
Record metrics and conversion events to your data warehouse

A/B testing components

The basic components of running an A/B test





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Tracking
Record metrics and conversion events to your data warehouse

Reporting
Use statistics to determine the impact

Loser!

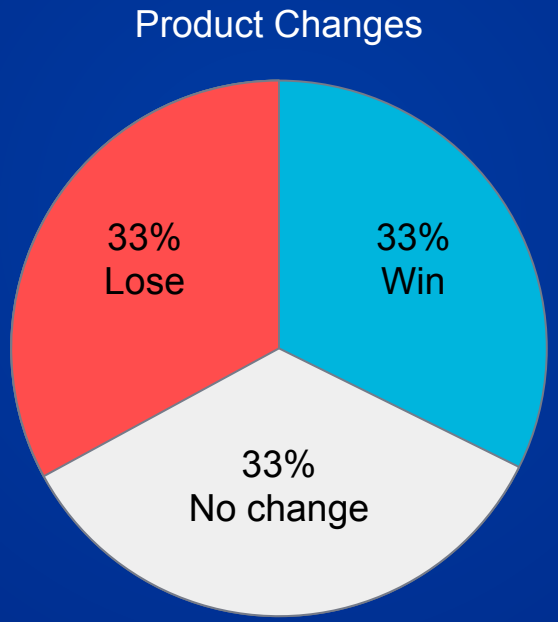
https://goodui.org/leaks/airbnb-a-b-tests-and-rejects-a-natural-language-form/

Winner!

https://goodui.org/leaks/netflix-a-b-tests-early-email-capture-at-the-start-of-their-signup-flow-and-it-succeeds/

Why A/B Test?

How often do A/B tests win?



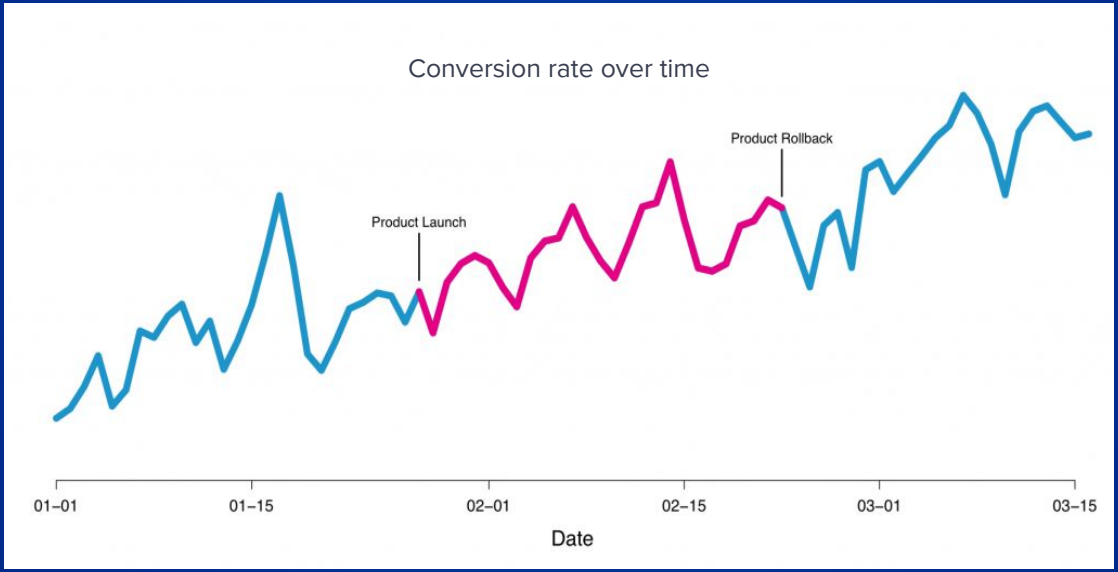
Industry A/B test success rates

Company	Experiment Success Rate
Microsoft	33%
Bing	15%
Booking.com	10%
Netflix	10%
Google Ads	10%
AirBnB Search	8%

Kohavi, Deng, Vermeer: *A/B Testing Intuition Busters: Common Misunderstandings in Online Controlled Experiments* - Conference Paper · August 2022

Why A/B testing?

Controlled experiments provide a clean and simple way to measure the impact of changes. Without this controlled setting, it's surprisingly hard to determine success or failure.



Example showing how hard it can be to determine causal relationships between product changes and metrics without a control. This product failed even though the raw numbers increased - AirBnB 2014

So why A/B test?

Without testing, you’re guessing

A/B Testing Program Sophistication

CRAWL

Basic Analytics

Some visibility into user performance

WALK

Optimizations

Manual A/B tests, optimizing some parts of your product

RUN

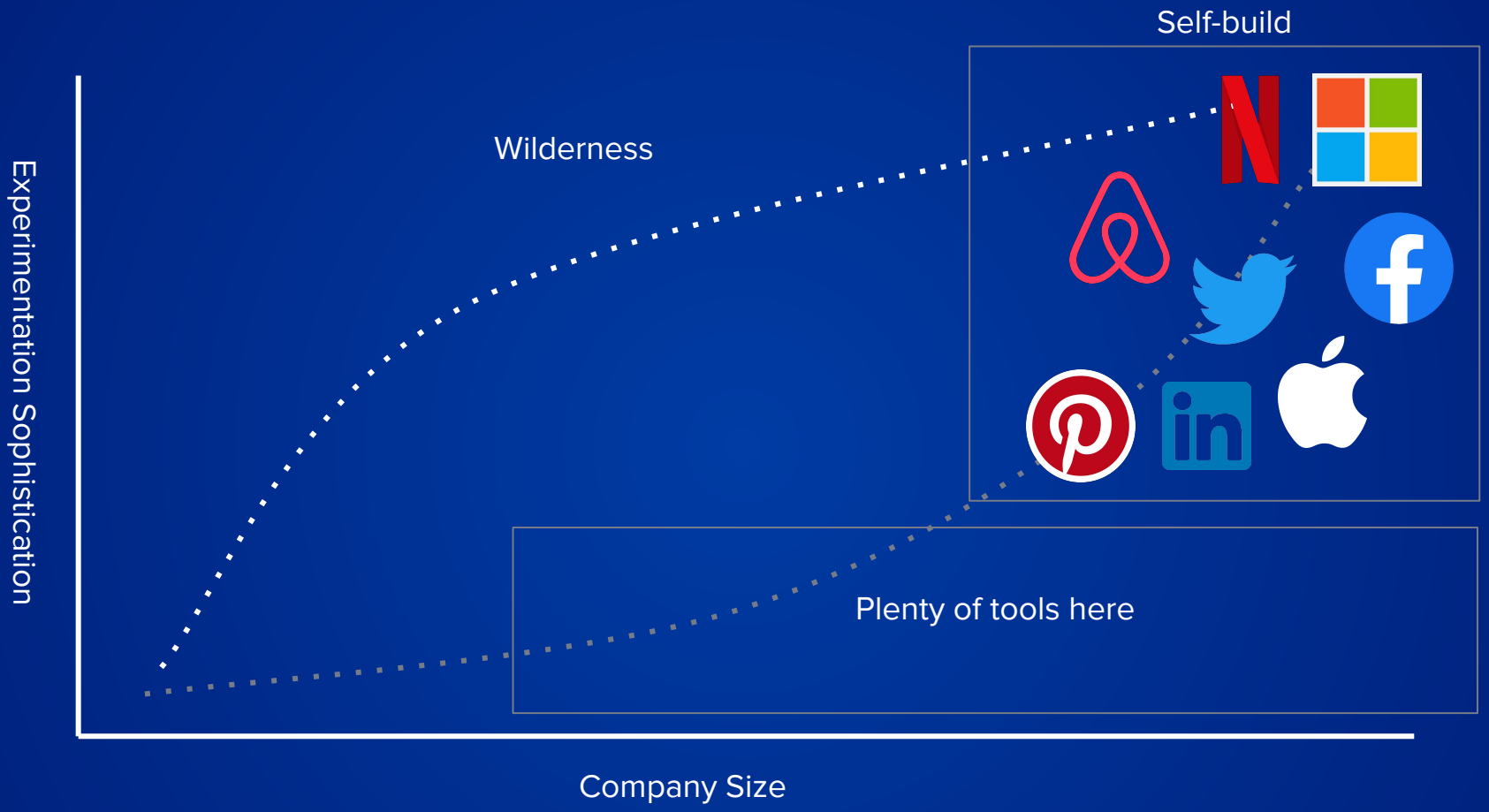
Common Experimentation

Important features are tested, may have a growth team or data teams.

FLY

Ubiquitous Experimentation

A/B testing is the default for every feature. Tests can be run and read by anyone


Self-build
Wilderness
Plenty of tools here
Experimentation Sophistication
Company Size

Unlocking Ubiquitous Experimentation

To get to the point where you can test everything, platforms have to:

- Enable self service use, making it stupidly simple
- Bring the incremental cost per experiment down to zero
- Adjust to a company's data & metrics
- Scale to your event volume

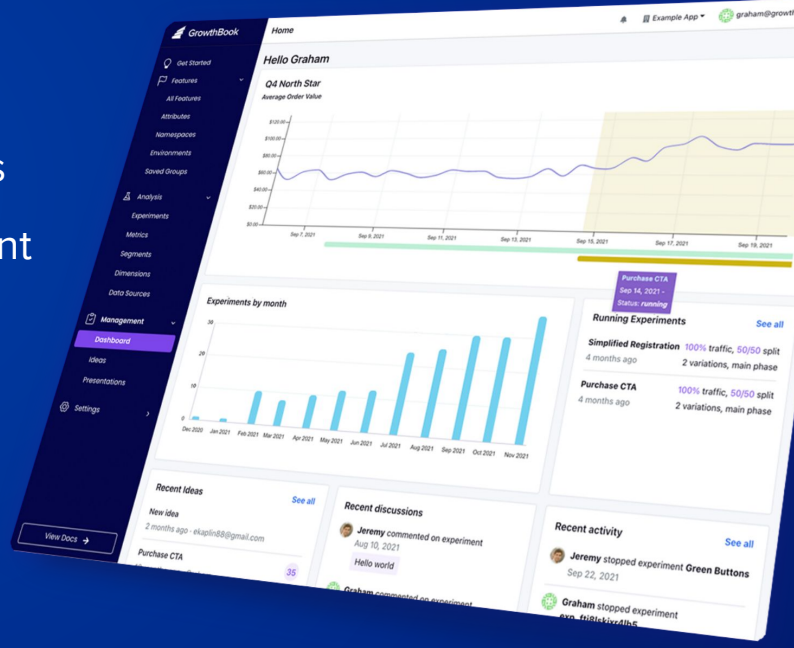
Top companies built their own systems to achieve this.

The good news is that with ClickHouse, you're almost there.

A/B Testing with ClickHouse and GrowthBook

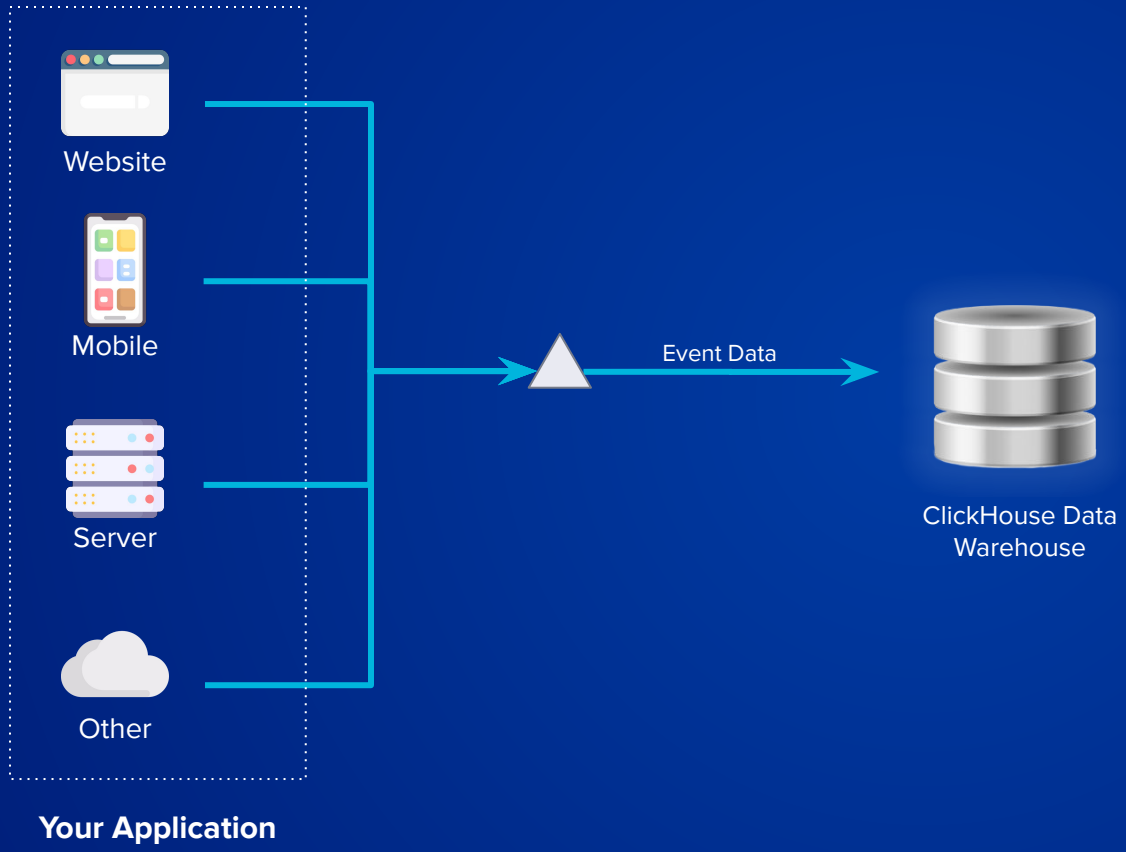
GrowthBook is an open core platform for A/B testing and feature flagging

- Warehouse native A/B testing statistics analytics
- Feature flagging for A/B test variation assignment
- In-house platform you don't have to build



GrowthBook

ClickHouse data warehouse as source of truth



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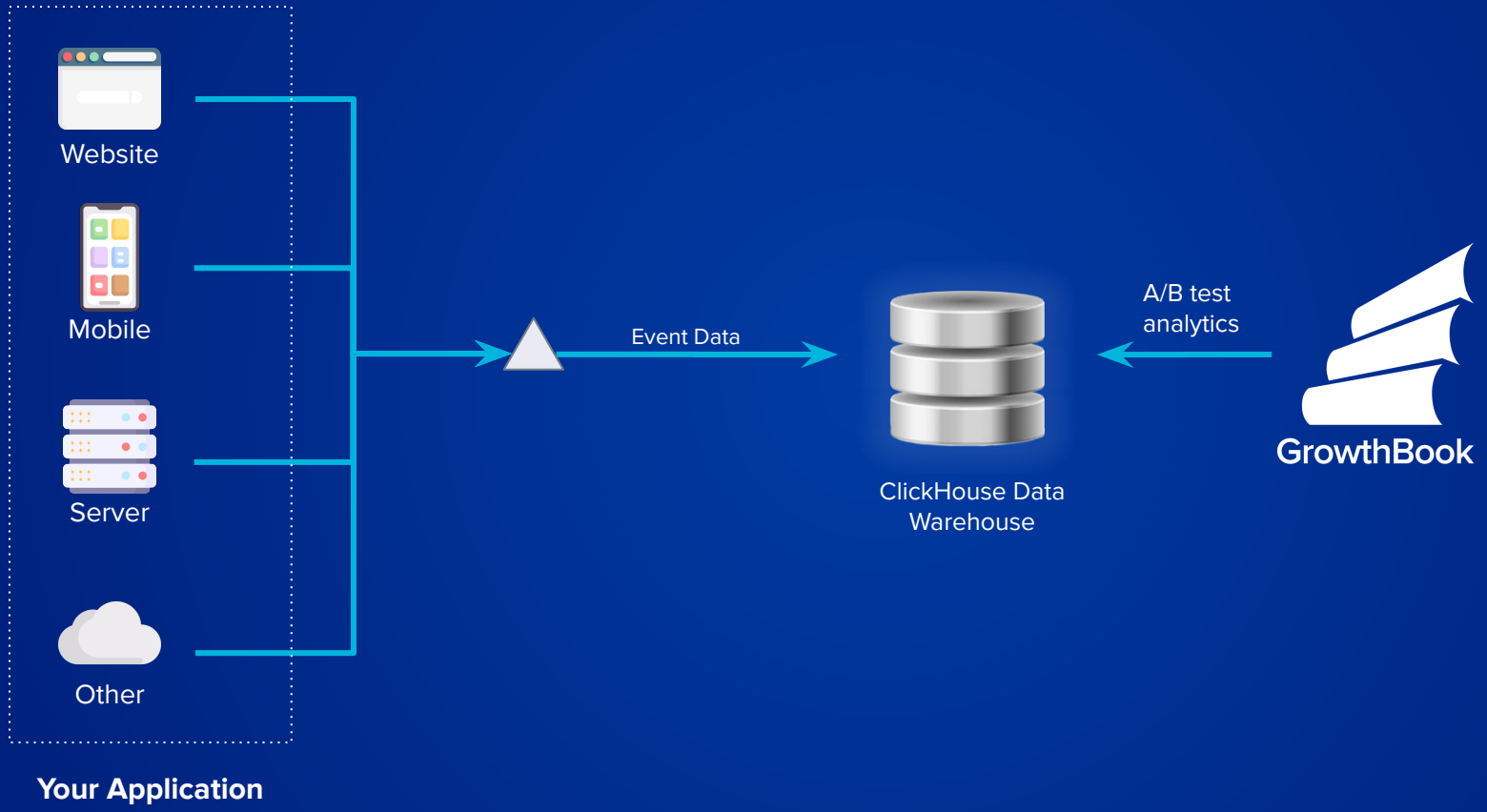

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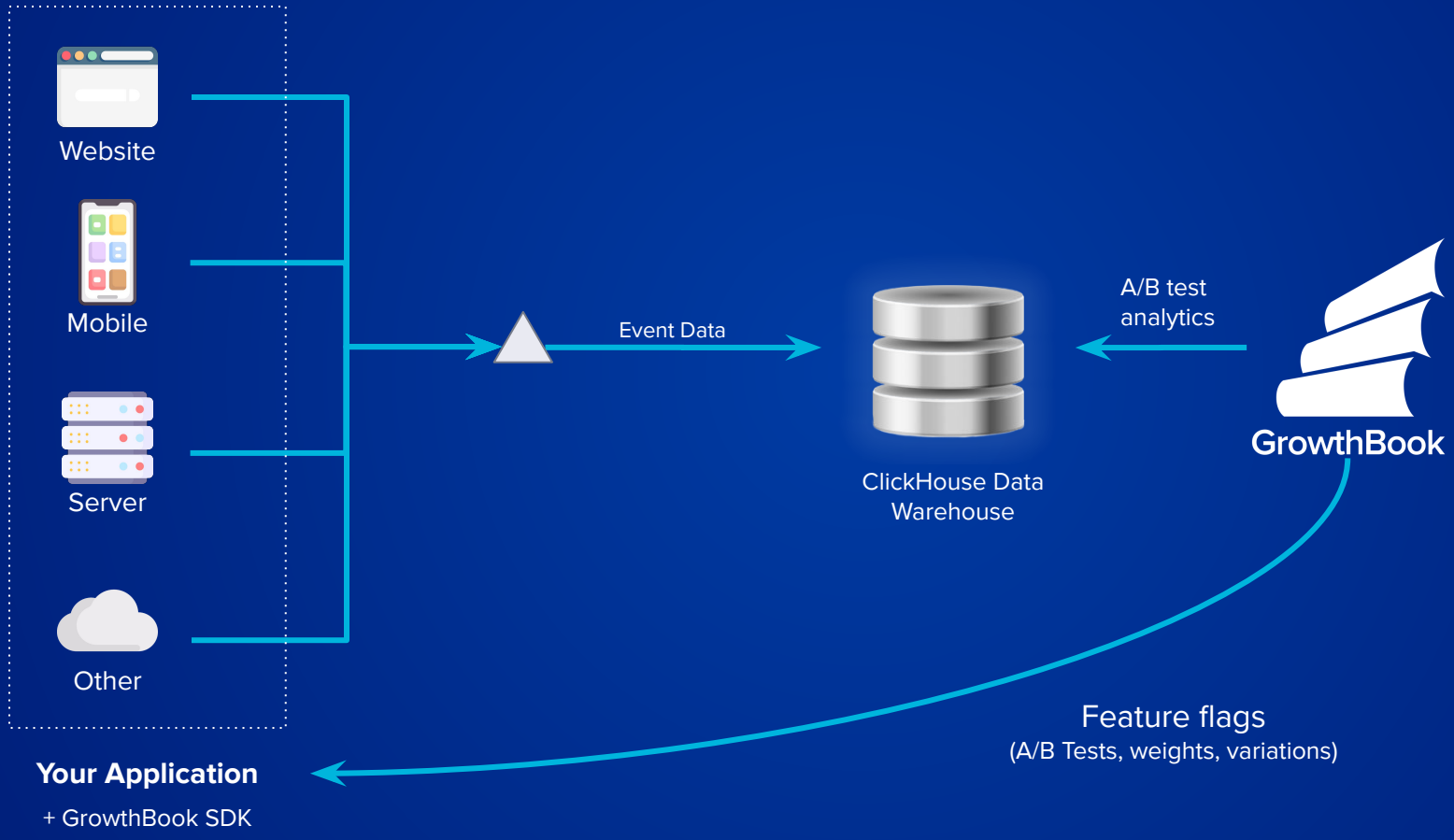
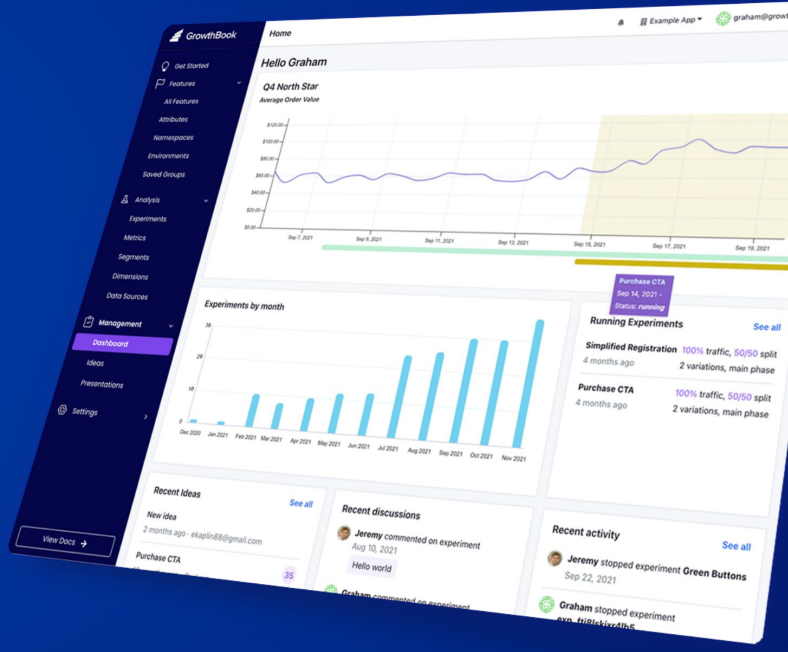


Demo



GrowthBook

Thanks!

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