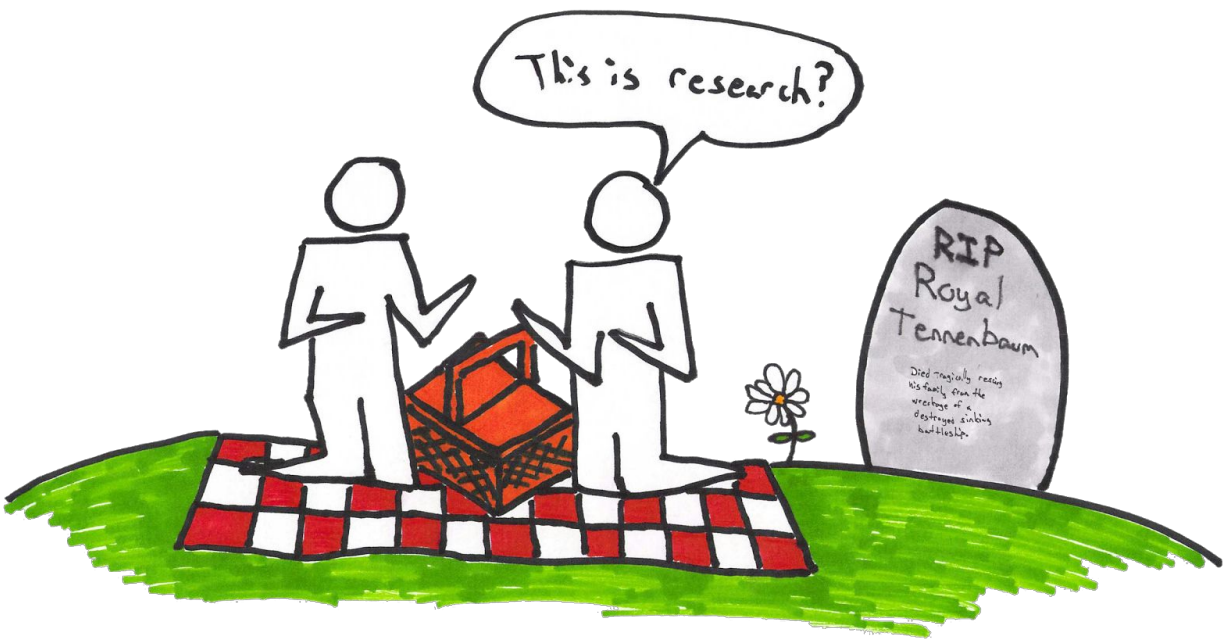


# The Real Startup Book



# Copyright

Version 0.3

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*To everyone  
that has ever failed  
and had the audacity  
to admit it.*

# Forward

**“When all you have is a hammer, everything looks like a nail.” – *Unknown***

My first encounter with the term lean startup introduced me to the concept of a smoke test. The idea was elegant, place a value proposition onto a landing page with the intent to gauge customer demand. So of course I applied it immediately.

When I heard about Sean Ellis’ “How disappointed would you be” survey, I used that.

When I heard about concierge testing, Wizard of Oz testing, paper prototyping, I used them.

I used them without thought.

I used them because that’s all I knew.

I used them because someone whose name I recognized used them and wrote it down on a blog, in a book, on a slide.

I used them with the same flawed logic that says, “Air Jordans makes great basketball players.”

After 6 years of living lean, I’m starting to recognize that to build something great, to build something that will last, to be a great carpenter, we don’t need a great pair of sneakers, we need a great toolbox. And we need to know how to use it.

# Preface



vs



# What's a Real Book?

Go to any jazz jam session and you'll see one book on stage. The Real Book.

Every serious musician has it.

It's a large, tome with text that looks like someone took handwritten music charts, photocopied them, and then stuck them in a binder.

Each page is a jazz standard. All Blues by Miles Davis, Autumn Leaves by Johnny Mercer, A Night in Tunisia by Dizzy Gillespie...even some more esoteric tunes like Peaches in Regalia by Frank Zappa.

Unlike various “fake books” out there which provided details on how to play each note and where to put your fingers, the Real Book was minimal. Each page had the key signature, time signature, chords, melody line, and not much else. It was just enough detail to play the song. It was vague enough to allow for the extensive improvisation that makes jazz jazz.<sup>1</sup>

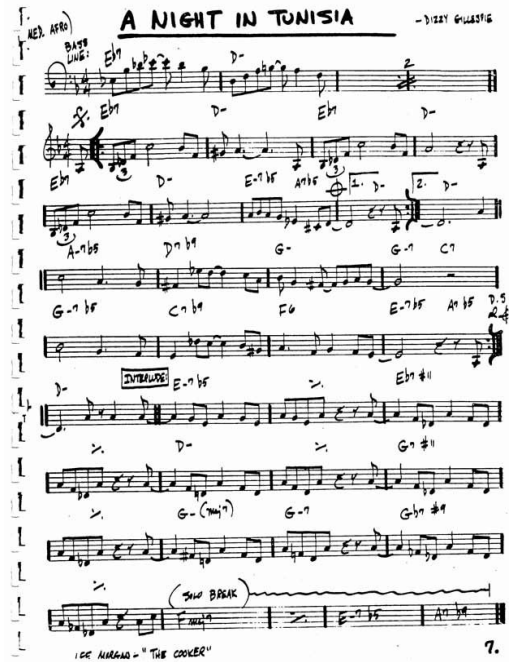
It was heaven.

-

The Real Book answered a simple question for musicians, “How do I play that song?”

Where a musician's job is play songs, the startup product manager's job is to run experiments and do research. Our job is to challenge assumptions and test hypotheses.

We have unanswered questions and the answers lie out in the real world with real users. We gather these answers with research and experiments.



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<sup>1</sup> Of course I learned much later that the Real Book was illegal.

First published in 1971, it didn't pay any royalties to the musicians who wrote the songs. But it was the standard book that everyone learned out of because it was the most complete and accurate.

It was also published in multiple keys so that musicians with varying instruments would be able to refer to the same song, with even identical page numbers, and not miss a beat.

Nowadays, The Real Book is legit, and is published by Hal Leonard who does pay royalties as appropriate.

The goal for the Startup Real Book is to answer a simple question for startups, “How do I learn about my business model?”

Based on the unknowns in our business, and the questions we ask about our startup business model, there is an experimental or research method to answer it.

This book should help us find those answers by showing us what methods are most appropriate and give us just enough information to craft an appropriate experiment for our situation, in our industry, in our country, in our business model.

It should not be overly dogmatic and should leave sufficient room for interpretation such that depending on our unique circumstances, we can still improvise.

This is not a textbook, it’s not a “How To” guide, and it’s not a “fake book.” It’s a reference book.

Keep it, refer to it, and toss it to the side when you need to.

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More importantly, please write on it. Scribble, scratch, and change it.

If you think it’s wrong, submit a change to [realbook@trikro.com](mailto:realbook@trikro.com).

If you have a suggestion, send it in. If you’re learning a better way, let us know.

This book is creative common licensed and is meant to be continually improved and shared. So please help us by finding problems and fixing them!

# Who is This Book For?

If you've ever recognized a giant hole in your **business model** and had no idea how to go about filling in the unknown, this book is for you. You may be asking:

- *Who* are our customers?
- What are *the most important features* of our product?
- Why are people *doing* that?
- Will people *actually* pay for this?

This book is for managing innovation projects where the business model is partly or completely unknown. Your job title might be:

- Product Manager
- CEO of an early stage startup
- Entrepreneur in Residence

## Previous Experience

You should be familiar with concepts such as:

- Lean Startup
- User Experience
- Human Centered Design / Design Thinking
- Business Model Canvas

It's ok if you haven't heard of any of these terms, but you'll get a lot more out of it if you have.

In particular, you should already be bought into the idea that there are parts of your business model that are unknown and the way to figure that out is to do research and experiments out of the building and in the real world with your customers.

## Innovation at Scale

This book is particularly useful for those managing or assisting large numbers of innovation products. This includes:

- Chief Innovation Officer
- VP of Innovation
- Accelerator Manager
- Lean Startup / Innovation Coach



If this is you, you'll find this book serves as a versatile and handy quick reference guide for almost any startup you'll be dealing with. It can also be used to diagnose typical startup problems.

It is also a Creative Commons project which means you can use it as training material for your startups without any additional cost.

## **Business Model**

This book is best used to answer questions about certain business model elements such as the **Customer**, the **Value Proposition**, **Channel**, **Relationship**, & **Revenue**. In other words, the critical elements in **Product / Market Fit**.

While many of the methods listed here can be used to investigate other business model elements such as **Partners & Resources**, it may take some interpretation on the part of the reader.

## **Stage and Industry**

The methods here work fine for small, early stage startups and equally fine for teams in large companies trying something new, risky, and outside the normal business model.

It also works for any industry, but there is a bias towards providing examples and case studies from the technology industry. Other industries will be included as case studies become available. Please send any such case studies to [realbook@trikro.com](mailto:realbook@trikro.com) to be included.

## **Warnings: Academics and Existing Businesses**

This book is not for students trying to learn in a static academic environment. You'll have to go out and use this book in the real world with real customers to get anything out of it. So if your teacher just handed this to you, get ready to get kicked out of the building to go talk to customers.

This book is also not for companies executing on an existing business model. While some of the techniques listed here may work quite well for optimizing an existing product or service, it's not designed for that and traditional product management methods might be more appropriate.

## **Continual Improvement**

Future improvements may change or broaden the focus on this book. This is a living document which will be updated regularly.

# How to Use This Book

Do not read this book straight through. Read the Index thoroughly, then reference other pages as needed.

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This book is not a step 1, step 2, step 3 guide to building a startup. Startups don't work like that.

Think of this book as a toolbox.

Like any toolbox, it's organized to help us find what we're looking for when we need it. When we need a way to test market demand, there's a section on **Evaluative Market Experiments**. When we're looking to prioritize our ever growing feature list into a **Minimum Viable Product**, there's a section on **Generative Product Research**.

The index for navigating this book is not alphabetical, chronological, or ontological. The index is ordered by what you're trying to learn. Are you trying to learn about your customer? How to price your product? What will make your users come back?

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It is *highly* recommended that you read the index thoroughly. You will not get the major benefit of this book without it.

When faced with an unknown aspect of your business model, first figure out what you need to learn. What's your learning goal? What question are you trying to ask?

Once you know what you need to learn, consult the index to find a list of research and experimental methods that will help. Then read each method and determine which will work best for your situation and resources.

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In each method section, you will find the following headers:

## **In Brief**

A quick 2-3 sentence description.

## **Helps Answer**

A list of common questions that this method helps answer.

## Tags

A list of terms that can also be used to navigate through the book such as B2B (for methods commonly used for Business-to-Business models) and qualitative (for the type of data used by this method).

## Description

A more detailed description of the steps normally taken to run this research or experiment method including:

- *Time commitment* to run the method
- *How to* run the method
- *Interpreting Results* in a meaningful way
- *Common biases or pitfalls* that may distort the results of the method and lead to bad conclusions based on incorrect data.
- *Field Tips* from startup practitioners who have used this method.

## Case Studies

Links to various case studies that might serve as examples.

## References

A list of additional material or resources for those who want additional reading.

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# Update History

- **Version 0.3** - Updated book's formatting, added *Customer Discovery Interviews* and merged with *Customer Discovery*, added *Secondary Market Research*, added *Concierge Test*, added *Net Promoter Score*, added *Appendices* and *Biases*
- **Version 0.2** - Updated *Generative vs Evaluative* (1.3), added *Generative Market Research* sections 1-3, added *Evaluative Market Experiments* sections 1-4, added *Generative Product Research* sections 1-3, added *Evaluative Product Experiments* sections 1-2, added *Out of the Box* sections 1-2
- **Version 0.1** - Added *Preface* sections 1-3, added *The Index* sections 1-6

# The Index



**“An index is a great leveler”**

*– George Bernard Shaw*

# What Are You Trying to Learn?

“If I had an hour to solve a problem I'd spend 55 minutes thinking about the problem and 5 minutes thinking about solutions.” - Albert Einstein

In school, we're constantly taking tests to gauge how well we've learned last week's material. We cram geographic boundaries, the dates of battles, and multiplication tables into our heads and spit out the results.

Sadly, those rote memorization skills and the ability to answer pre-formulated questions doesn't help us when we embark on entrepreneurship. When building a new business model, there is no test or quiz which we can cram for. It's as if we sat down for our final and open up the exam book only to find a blank piece of paper in front of us.

“Where is the test?” we ask.

“Right there in front of you,” answers our teacher.

“Is there a right answer?” we hesitantly inquire.

“Yes there is,” assures our teacher.

“What are the questions?” we plead.

“That's what you have to figure out.”

As an entrepreneur (or intrapreneur) we can't just guess at the answers without first identifying the right questions to ask. If we just guess by building a fully functioning product, it's very likely that the market will judge us wrong and punish us with zero sales and bankruptcy.

**Our job, as an entrepreneur, is to first ask the right questions and only then to find the right answers.**

## What is the Right Question?

The questions we must answer are fundamental holes in our business model. Questions like:

- Who is our customer?
- What job do they want done?
- What channels can we use to reach them?
- Which features should we build for our first product?
- Is our solution good enough?

If we can identify the right question, there is a corresponding method or methods listed in this book to help answer that question. Depending on the resources and time constraints, one of the methods may be simpler to execute.

If we attempt to execute a method in this book without first identifying the right question to ask, the results of that experiment are typically very difficult if not impossible to interpret correctly.

For example, let's say we're selling a new type of shoe that cures plantar fasciitis. We put up a landing page test (a type of smoke test) with our value prop and a "buy now" button. Then we put \$1000 in to Google Adwords for "shoes" to drive traffic and sit back to wait for the money to start rolling in...

Cures Plantar Fasciitis!!



Buy Now!

...and our conversion rate is 0%

Should we give up? That's what the landing page test says. There is insufficient demand for this product. But what is plantar fasciitis?

Exactly. All those people coming to our site are asking the same thing.



Is our test failing because customers aren't interested? Or do they fail because they simply can't understand the value proposition? Or are we just focused on the wrong channel?

In this case, we were asking "Does anyone want my product?" when we should be asking "Does our customer understand what plantar fasciitis is?" or even "Who is our customer?"

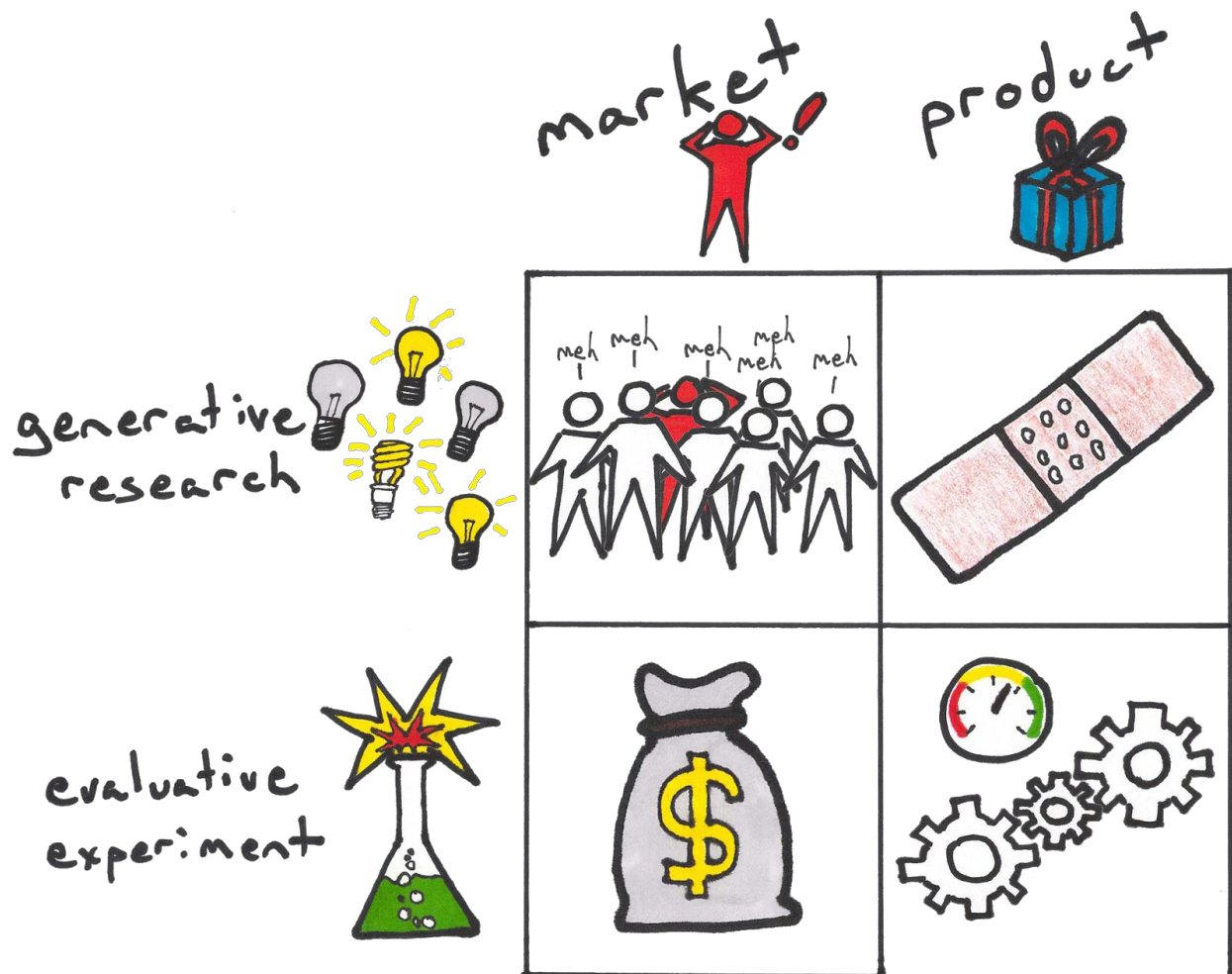
## Focusing The Question

To simplify our search for the right method, we'll ask two questions:

1. Do we need to learn about the *market* or the *product*?
2. Do we have a clear hypothesis to *evaluate* or do we need to *generate* a clear idea?

Mapping the intersection of these two questions gives us a 2x2 matrix:

Based on this, if we have a clear hypothesis of who our customer is and what we think they will pay for, we can conduct an *Evaluative Market Experiment* such as a smoke test.



If we don't have a clear idea of who our customer is, we can do *Generative Market Research* like data mining.

Similarly, if we have a clear hypothesis of which features will solve the customer's problems, we can do an *Evaluative Product Experiment* such as *Wizard of Oz* testing. If we do not know which features will lead to an acceptable solution, we can do *Generative Product Research* such as a *Concierge Product* to try and come up with new ideas.

**Any framework is an oversimplification of reality! This Index is a quick way to navigate to the correct method, but doesn't mean you don't need to think.**

The *Index of Questions* and the *Index of Methods* show the complete list of questions and their corresponding methods. But first we'll look at the details of Market vs. Product and Generative vs. Evaluative.

# Market vs. Product

Do we need to learn about the *market* or the *product*?

To narrow down the large list of methods to something actionable, we can first separate our questions into those about the market and those about the product.

## Market

- *Who is our customer?*
- *What are their pains?*
- *What job needs to be done?*
- *How are they doing this job today?*
- *Does the customer segment already have a solution to this pain?*
- *Is this customer segment really willing to pay for a better solution for this job?*
- *Is our customer segment too broad?*
- *How do we find them?*
- *How much will this customer segment pay?*
- *How do we convince this customer segment to buy?*
- *What is the cost to acquire a customer in this customer segment?*

## Product

- *How can we solve this problem?*
- *What form should this take?*
- *How important is the design?*
- *What's the quickest solution?*
- *What is the minimum feature set?*
- *How should we prioritize?*
- *Is this solution working?*
- *Are people using it?*
- *Which solution is better?*
- *How should we optimize this?*
- *What do people like / dislike?*
- *Why do they do that?*
- *Why do prospects buy from us?*

## ● *Why do prospects not buy from us?*

In this case, “market” refers to any element mostly or completely on the identity of the Customer segment. This is a necessary oversimplification that makes it easy to find the right method.

For example, market questions include those about which Channels we can use to reach the Customers. We cannot use traditional broadcast television advertising to target customers who don’t have a television set.

“Product” (or service) is simplified to mean anything regarding the Value Proposition or the production of it. This includes Resources needed to produce the Value Proposition, as well as any Key Activities, Partners, or Costs.

The Value Proposition really sits at the intersection of the Market needs and the Product itself. The Product has no value outside of the customer using it, but in this case, we are again simplifying for navigation.

**If using the Business Model Canvas, “market” questions are those on the right side of the canvas including: Customer, Channel, Relationship, & Revenue. “product” questions are those about the Value Proposition and everything left of it including: Key Activities, Key Resources, Key Partners, & Costs.**

## **Where Should We Start?**

This book is agnostic about where we start. We may already have a product and are investigating who to sell it to or we may have a customer segment with a strong pain point and be trying to find a solution. However, when in doubt, start with the customer.

If the customer segment changes, then the Product usually must be adapted to the Customer. However, if the product changes, Customers may simply use a different product. Human behavior is notoriously difficult to change although it is not impossible.

# Generative vs. Evaluative

Do we have a clear hypothesis to *evaluate* or do we need to *generate* a clear idea? This distinction depends on our ability to understand what makes a clear hypothesis.

*“Our customers really want our product.”*

This hypothesis is clearly bad for a number of reasons. The most obvious is that it’s tautologically correct and not worth investigating. If they are our customers, then technically they have already purchased our product and that is a good sign they actually want it.

It is roughly equivalent to, “If the piece of paper is flammable, it will burn when ignited.”

Yet these types of flawed hypotheses are common. Here is a slightly more subtle example:

*“If 250 Los Angeles teachers were asked to treat minority students with more respect, then at least 50 teachers would do so.”*

While not as flawed as the first example, it has fundamental problems that would prevent us from designing a good experiment. If we force an experiment, we will most likely have ambiguous data or be unable to interpret it correctly.

In this case, several things are unclear:

- Which teachers? Teachers at schools with a number of minority students? How many minority students are sufficient for this test?
- How should we ask the teachers? Will we ask each teacher differently? Will we let the principals ask them?
- What is respect in this context? What behaviors would indicate “more respect”?

Without defining the hypothesis very clearly, we might let the principals of schools ask the teachers on our behalf and they might ask them with varying degrees of persuasiveness.

We might also argue about the results. Is calling a student “Mr.” instead of their first name a sign of respect or a sign of sarcasm?

When we do not have a clear, well defined, and falsifiable hypothesis we are best served by doing generative research instead of an experiment. In this case, our learning goal could be “What teacher behaviors indicate teacher respect to minority students?”

Given this goal, we are better off doing customer discovery interviews (a.k.a. speaking to the students) rather than testing our vague hypothesis. The outcome of the generative research

should be a clear, well defined, and falsifiable hypothesis that we can then go and test with an Evaluative Experiment.

Defining good hypotheses can be a challenge, so here are some things to look for and a short checklist.

## Simple and Unambiguous

The hypothesis should be clear and unambiguous so that anyone reading it will understand the context and be able to clearly interpret the results.

*“If 250 Los Angeles teachers were asked to treat minority students with more respect, then at least 50 teachers would do so.”*

In this case, we may have different opinions as to what “respect” means. In order for us to agree that someone is being treated with “more respect,” we must agree on what behaviors would indicate respect.

*“If 250 Los Angeles teachers were asked to treat minority students with more respect, then at least 50 teachers would refer to their students using an honorific.”*

While this is more specific, not everyone knows what an honorific is, so we should avoid using any specialized vocabulary or jargon.

*“If 250 Los Angeles teachers were asked to treat minority students with more respect, then at least 50 teachers would call their students using ‘Mr./Ms.’ and their last name instead of their first name.”*

## Measurable

*“Our customers have a strong desire to donate to charitable causes.”*

This hypothesis may be true, but it is not observable. At least not until we invent telepathy.

*“Our customers donate to charitable causes twice per year.”*

This new hypothesis has some other issues, but it is at least something observable.

## Describes a Relationship

*“50% of students at Dalton High School get a C or lower in at least one class per year.”*

This again may be true and it is observable, but it doesn't tell us anything about the cause of the low grades. A good hypothesis should allow us to change one thing and observe the effect in another.

*"Students at Dalton High School that study less than four hours a week get a C or lower in at least one class per year."*

There are still more issues, but the hypothesis must relate two or more variables to each other.

## Cause and Effect

*"During the summer, ice cream consumption increases and more people drown per day."*

This is a true statement, but does not tell us how those two variables relate to one another. Are people drowning because they ate too much ice cream? Or are they eating more ice cream because they are sad about all the drownings?

*"During the summer, people who eat ice cream will drown at a higher rate than people who do not eat ice cream."*

This specifies a clear relationship and the causal direction of that relationship. Simply using an IF \_\_\_\_\_, THEN \_\_\_\_\_ sentence structure can help make sure cause and effect are apparent.

*"If we feed ice cream to people, then the average # of drownings per day will increase."*

## Achievable

*"If an astronaut in a stable orbit around a black hole extends one foot past the event horizon of a black hole, then they will be pulled in entirely."*

There are many theoretical physicist who create a number of hypotheses which are not testable now, but may be testable at some point in the future. While this black hole/astronaut hypothesis is theoretically testable, it is not testable today.

Unfortunately, as entrepreneurs, we should restrict our hypotheses to ones that can be tested within the immediate future or within our current resources.

[warning call out: Many things seem untestable today but clever application of lean thinking can simplify the hypothesis into a testable first step.]

## Falsifiable

All of these conditions add up to a hypothesis being *falsifiable*. If a hypothesis cannot be proven incorrect, then it is not relevant to run a test on it.

*“There is an invisible, intangible tea cup floating between the Earth and Mars.”*

When in doubt, we can ask ourselves, “What evidence would prove this hypothesis incorrect?”

If there is no amount of evidence that would prove our hypothesis is invalid, then either the hypothesis is flawed or we are very stubborn.

## Other Frameworks

There are a number of frameworks and checklists for forming hypothesis, one of which is popular enough to comment on to avoid confusion:

*We believe <this capability> will result in <this outcome> and we will know we have succeeded when <we see a measurable signal>*

The entire sentence is not the hypothesis. Let's break this into its parts:

*We believe...*

That section just confirms we think the hypothesis is correct. It is not part of the hypothesis and there are many situations where we may test a hypothesis that we believe is *incorrect*.

*...<this capability> will result in <this outcome>...*

That is the hypothesis.

*...we will know we have succeeded when <we see a measurable signal>*

That is the data we will collect including any information about sample size, margin of error, success conditions, or fail criteria.



# Hypothesis Checklist

- Is it simple and unambiguous?
- Is it measurable?
- Does it describe a relationship between two things?
- Is the cause and effect relationship clear?
- Is it achievable?
- Can there any evidence that would convince us the hypothesis is invalid?



# Index of Questions

	<b>Market</b>	<b>Product</b>
<b>Generative</b>	<p><i>Who is our customer?</i></p> <p><i>What are their pains?</i></p> <p><i>What job needs to be done?</i></p> <p><i>Is our customer segment too broad?</i></p> <p><i>How do we find them?</i></p>	<p><i>How can we solve this problem?</i></p> <p><i>What form should this take?</i></p> <p><i>How important is the design?</i></p> <p><i>What's the quickest solution?</i></p> <p><i>What is the minimum feature set?</i></p> <p><i>How should we prioritize?</i></p>
<b>Evaluative</b>	<p><i>Are they really willing to pay?</i></p> <p><i>How much will they pay?</i></p> <p><i>How do we convince them to buy?</i></p> <p><i>How much will it cost to sell?</i></p> <p><i>Can we scale marketing?</i></p>	<p><i>Is this solution working?</i></p> <p><i>Are people using it?</i></p> <p><i>Which solution is better?</i></p> <p><i>How should we optimize this?</i></p> <p><i>What do people like / dislike?</i></p> <p><i>Why do they do that?</i></p>

# Index of Methods

	<b>Market</b>	<b>Product</b>
<b>Generative</b>	<p><i>Customer Discovery Interviews</i></p> <p><i>Contextual inquiry / ethnography</i></p> <p><i>Data mining</i></p> <p><i>Focus groups*</i></p> <p><i>Surveys* (open ended)</i></p>	<p><i>Solution interview</i></p> <p><i>Contextual inquiry / ethnography</i></p> <p><i>Demo pitch</i></p> <p><i>Concierge test / Consulting</i></p> <p><i>Competitor Usability</i></p> <p><i>Picnic in the Graveyard</i></p>
<b>Evaluative</b>	<p><i>5 second tests</i></p> <p><i>Comprehension</i></p> <p><i>Conjoint Analysis</i></p> <p><i>Data mining / market research</i></p> <p><i>Surveys* (closed)</i></p> <p><i>Smoke tests</i> <i>(e.g. Video, Landing page, Sales pitch, Pre-sales, Flyers, Pocket test, Event, Fake door, High bar)</i></p>	<p><i>Paper prototypes</i></p> <p><i>Clickable prototypes</i></p> <p><i>Usability</i></p> <p><i>Hallway</i></p> <p><i>Live</i></p> <p><i>Remote</i></p> <p><i>Wizard of Oz</i></p> <p><i>Takeaway</i></p> <p><i>Functioning products</i></p> <p><i>Analytics / Dashboards</i></p> <p><i>Surveys*</i> <i>(e.g. Net Promoter Score, Product/Market Fit Survey)</i></p>

# Tags & Other Frameworks

There are many great methods, books and frameworks out there on how to identify and prioritize risky assumptions, hypotheses, and questions. This index will work in conjunction with any of them through the use of tags.

All the methods are tagged so as to be easily searchable depending on any other frameworks we might use. This includes simple tags such as *qualitative* or *quantitative* used to denote the type of information that the method produces.

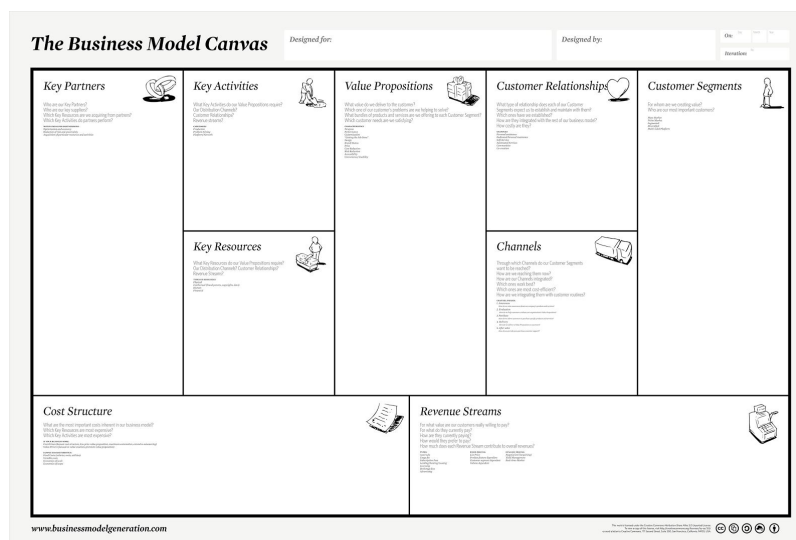
It also includes tags related to the type of business model, such as:

- B2B - For Business-to-Business
- B2C - For Business-to-Consumer
- B2G - For Business-to-Government
- 2-Sided Market - For a business with buyers and sellers.

Using these tags to navigate the methods is not as simple as using the Index and may result in a large selection of methods not entirely suited to the learning goal, but can be helpful to further narrow down the methods, so we've included them.

## Using the Business Model Canvas

The Business Model Canvas is a very popular framework that identifies 9 basic building blocks of any business model and asks us to make assumptions as to what our business will be. Those blocks are:



Based on our completed canvas, we choose the area of greatest risk to our success. Sometimes this is the Customer segment, but in the case of an existing market it may be the Value Proposition, Channels, or even Key Partners.

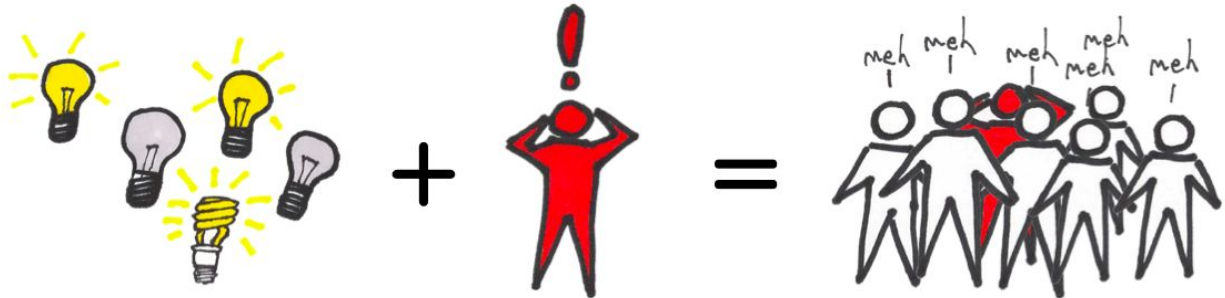
Each method in this book tagged with these blocks. If we can identify the greatest risk to our business model via the Business Model Canvas, we can search the tags for a complete list of experimental methods relating to that building block.

For example, if the Customer is the biggest risk to our customer segment, then we are asking “Who is our customer?” or “Is this our correct customer segment?”. Based on that, there are several tools available to learn more about our customer, including:

- Customer Discovery Interviews
- Ethnography
- Data Mining
- Surveys (close ended)
- Focus Groups

**This won't differentiate between Generative Research and Evaluative Experiments, so you'll still need to take that extra step.**

# Generative Market Research

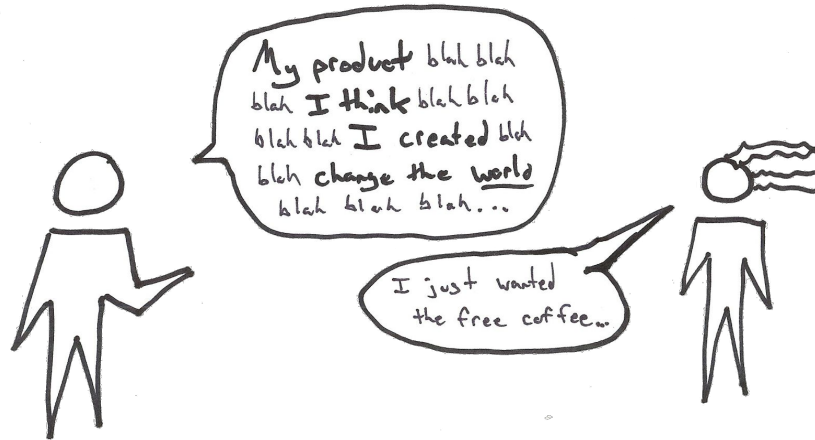


***“Advertisements may be evaluated scientifically;  
they cannot be created scientifically.”***


*– Leo Bogart*

# Customer Discovery

## Interviews



### In Brief

Interviewing potential customers to gain insights about their perspective, pain points, purchasing habits, and so forth. Interviews also **generative** empathy between the customer and the entrepreneur to better aid the design and ideation process. The best interviews help narrow down the target market and provide a deep understanding of what causes a market need and the underlying psychology of the customer. 

### Helps Answer

- Who is our customer?
- What are their pains?
- Where can we find our customer?

### Tags

- B2C
- B2B
- Qualitative
- Customer
- Channel

# Description

## Time Commitment & Resources

Typical rounds of customer discovery interviews require at least 5 separate interviews with individual customers but some entrepreneurs advocate as many as 100 before drawing a conclusion.

Time commitment can be as little as 15 minutes per interview for consumer products to 2 hour conversations for B2B sales.

The most significant investment of time can be in recruiting customers to interview which can again vary from a 5 minute walk to the local coffeeshop to a lengthy cold outreach program via LinkedIn in the case of an entrepreneur with no market access into a highly specialized vertical.

Costs are typically zero or very low. In many cases, interview subjects are offered a gift certificate for their time which can be anywhere from \$5 USD to \$50 USD.

## How To

### 1. Plan the Interview

- a. Define learning goal for the interviews
- b. Define key assumptions about the [customer persona](#)
- c. Create a screener survey of simple questions that will identify if the potential interviewee matches your target customer persona. Here's a nice [article on screener questions](#) from Alexander Cowan.
- d. Make an interview guide (not a write-and-strictly-follow script). If you don't know where to start, check out some questions from [Justin Wilcox](#) or [Alexander Cowan](#).

Something like this:

1. What's the hardest part about      [\[problem context\]](#)     ?
2. Can you tell me about the last time that happened?
3. Why was that hard?
4. What, if anything, have you done to solve that problem?
5. What don't you love about the solutions you've tried?

- e. Prepare a handy template to put your notes in afterwards or check on the tools to record your interview (check first legal restrictions that may apply to recordings);
- f. Prepare any thank you gifts, e.g. Gift cards

### 2. Conduct the Interview

- a. Frame -- Summarize purpose of interview with the customer.



- b. Qualify -- Ask a screener question to determine if the customer is relevant to your customer persona.
- c. Open -- Warm up questions, get the customer comfortable talking.
- d. Listen -- Let the customer talk and follow-up with “what” and “how” related questions.
- e. Close -- Wrap up interview, ask for referrals or (if applicable) follow-up interview.

### 3. Retrospect the Interview

- a. Make notes promptly, sometimes video or audio recording can be a great option.

## Interpreting Results

Are you able to listen and record data based on the following?

- **Job** - What activities are making the customer run into the problem?
- **Obstacle** - What is preventing the customer from solving their problem?
- **Goal** - If they solve their problem, then \_\_\_\_\_?
- **Current Solution** - How are they solving their problem?
- **Decision Trigger** - Were there pivotal moments where the customer has made key decisions about a problem?
- **Interest Trigger** - Which questions did the customer express interest in?
- **Persons** - Are there any other people involved with the problem or solution?
- **Emotions** - Is there anything specific that causes the customer to express different emotions?
- **Measurement** - How is the customer measuring the cost of their problem?

## Potential Biases

- **Confirmation Bias:** The interviewer can be prompted to sell his/her vision in case the interviewees vision differs drastically. The interviewee is tempted in his/her turn to adjust answers to the interviewer’s expectations due to personal sympathy.
- **Order Bias** Sometimes the order in which you ask questions can affect the answers you get. So try to run questions in different order in different interviews.

## Field Tips

- [\*“Ask about the past. Observe the present. Forget about the future.” - @TriKro\*](#)
- [\*“Discovery Interviews - Focus on customer pain points and how they have tried to solve/fix them.” - @kennynguyenus\*](#)
- [\*“1st rule of validating your idea: Do not talk about your idea.” - @CustomerDevLabs\*](#)
- [\*“The harder customers are to interview, the harder they’ll be to monetize” - @CustomerDevLabs\*](#)
- [\*“It’s always handy to shut up for 60 seconds and let the interviewee talk.” - @red\\_button\\_team\*](#)
- Got a tip? Add a tweetable quote by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## Case Studies

- [Case study submitted anonymously via Lean Startup Circle Discussion thread](#)
- [How I Pivoted Product Strategy and Grew SaaS Deal Size by 10x](#)
- [How FindTactic validated hypothesis with customer discovery interviews](#)
- Got a case study? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## References

- [The Mom Test](#) by Rob Fitzpatrick
- [The Customer Discovery Handbook](#) by Alexander Cowan
- [How I Interview Customers](#) by Justin Wilcox
- [What are your favorite methods for doing problem interviews during Customer Discovery?](#) by Quora
- [26 Resources to Help You Master Customer Development Interviews](#) by Kissmetrics
- [Bad customer development questions and how to avoid my mistakes](#) by Kevin Dewalt
- Got a reference? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

# Data Mining



## In Brief

Data mining uses statistics from large amounts of data to learn about target markets and customer behaviors. Data mining can make use of data warehouses or big data.

## Helps Answer



- Who is our customer?
- What are their preferences?
- How do they rank planned feature sets?

## Tags

- B2C
- B2B
- Customer
- Quantitative

## Description

Data mining can start with a result from a few questionnaires. However, it is more effective to use a large dataset. Identifying the source information (where you get the data) and extracting the key values (how you pick the data points) are two important aspects in getting the quality results.

Data mining is best used for pattern discovery in customer perceptions and behaviors. It is useful in understanding your customers and/or your target market.

For example, by using email campaigns and gathering the results, you can identify the profile of potential buyers or customers. This data point can help in your customer acquisition efforts.

By sending out customer satisfaction questionnaires or feedbacks, you can gather customer information. Alternatively, you can also track customer behaviors or mouse clicks on your websites. By combining these two data points, you can determine customer behavioral links between reported satisfaction and actual usage. This can identify key drivers for customer loyalty and churn.

### Time Commitment

Depending on the amount of data that you need to crunch and data points that you want to discover, it will take 2-3 hours to a few weeks. You should pick one or two most important data points to start the learning process.

### How to

You can either acquire outside (industry or market) data or distill your own (customer or product) data. Once you identify the area that you want to test:

1. Acquire data (integrate from various sources, if required)
2. Identify data points (determine which data or information is relevant to the research)
3. Transform and extract data (many tools to choose from business intelligent tools to database software with built-in reporting tools)
4. Recognize and search for patterns
5. Draw conclusions or refine the process by starting at step 2 (or sometimes even start back from step 1 to acquire better data).

### Interpreting Results

In data mining, data matters but perspective matters more. There is a saying “Garbage In, Garbage Out.” But as human beings, we tend to see what we want to see and draw conclusions based on our own biases.

To counter these biases, you can:

1. Get outside help or another pair of eyes to help interpret the data

2. Get two data points that are counter to each other (in research methodology, that will be called the Control Group and Experimental Group)

### Potential Biases

- Confirmation Bias
- False Positives
- Ignorance of Black Swans (rare and unprecedented events that can dramatically change or determine the future outcome)

### Field Tips

- Got a tip? Add a tweetable quote by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

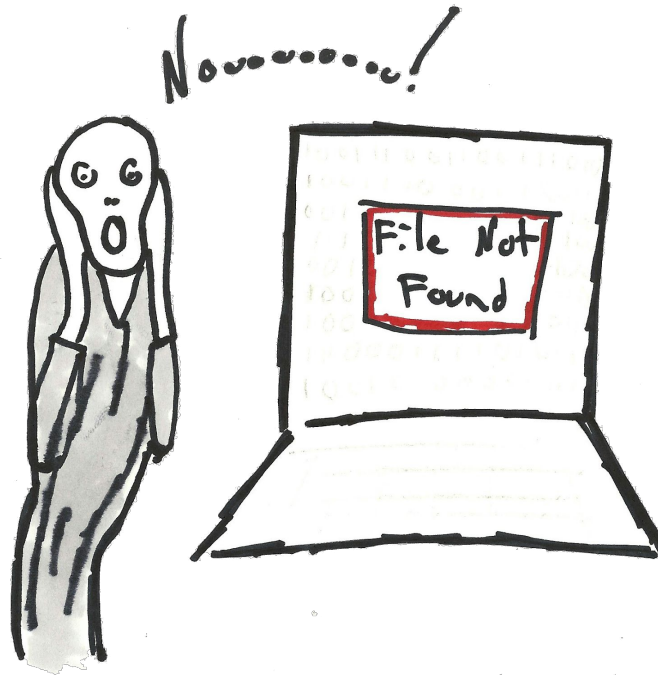
## Case Studies

- [Data mining answers questions for startup businesses in Northwest Colorado](#)
- [Jaeger uses data mining to reduce losses from crime and waste](#)
- [MobileMiner: A real world case study of data mining in mobile communication](#)
- Got a case study? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## References

- [Data mining knowledge discovery](#)
- [Everything You Wanted to Know About Data Mining but Were Afraid to Ask - The Atlantic](#)
- [SPSS. \(2005\). Data mining tips](#)
- Got a reference? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

# Contextual Inquiry



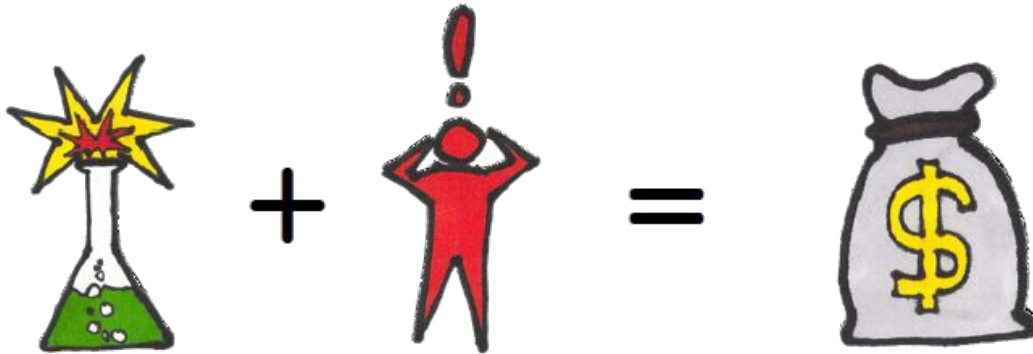
## In Brief

We're not done yet!

Tweet us and we'll write this chapter:

[Hey, @realstartupbook, please write the chapter on Contextual Inquiry](#)

# Evaluative Market Experiments



*“Life is an experiment in which you may fail or succeed.  
Explore more, expect least.”  
– Santosh Kalwar*

# Secondary Market Research



## In Brief

Secondary Market Research gathers and interprets available information about the target market such as published reports, newspaper articles, or academic journals. This method is used to figure out the size of the market or customer segment, pricing, and possible ways for the market to evolve. **Secondary Market Research, also referred to as “Desk Research”, or “Market Study,” is always from 3rd party sources and there is no direct customer contact.**

## Helps Answer

- How much would our customers pay (what should be the price of our product)?
- What is the size of the market (how many customers would be using our product, how many would be paying customers)?
- How much would it cost to sell (what are the marketing channels and their exploitation costs)?

## Tags

- B2C
- B2B (studies of industry sectors)
- Quantitative (but simple figures)
- Marketing Channels
- Segments



## Description

This method does not refer to primary research such as Customer Discovery Interviews, Focus Groups, Surveys, and so forth. This form of Market Research is commonly referenced as [Secondary Research](#), that is “simply the act of seeking out existing research and data.”

As the data from secondary research cannot be easily verified and may come from a variety of sources, it is theoretical rather than experimental. Some would consider the data qualitative rather than quantitative because the researcher must factor in the quality of the data source to any conclusions.

The goal of Secondary Market Research is to use existing information to derive and improve your research strategy prior to any first person research. Often, existing market research can help determine rough market sizes and determine if first person research is worth the effort. With existing markets, a great amount of information can be found online or purchased from market research consultants.

Secondary Market Research can be performed for any market but is most often performed for companies targeting existing markets. For startups creating new markets, typically there is no information available.

We distinguish it from Data Mining, which is about exploiting big data sets (existing or generated by yourselves) which are numerical in nature so that they can be automatically processed and plotted. We also distinguish it from Picnic in the Graveyard, which is about regarding existing or deceased products in the market rather than the market itself.

A first step is to find the relevant reports. Another step is to analyse them in a way that allows you to learn something on your product or idea.

We can distinguish two directions of research. In “Market Status” research, you look at:

- User Behaviors: How often users have to use similar product, in which circumstances (not to confound with user behaviors regarding specific products which is covered by the Picnic in the Graveyard method).
- Marketing: What are the typical channels used? What are the costs of opening and maintaining such channels?
- Current Technology: Benchmark technology to understand what kind of standards have been set regarding speed, accessibility, etc..

Identifying relevant reports will help derive target population size, prices and costs, hence, your revenue.

In “Trend Research” you look at:

- User Behaviors: What new user behaviors are emerging?
- Marketing: What new channels start being used in this area?
- Technology: What coming technology may disrupt the market and our own approach?

This helps deriving the possible evolution of your revenue and avoid pitfalls, or even give new ideas (as a Generative Method then).

A typical use of Market Research is to develop a first idea of the target population itself. For instance, you may want to know if your product would rather be used by teenagers or by young adults. Imagine your product is a Facebook app. There are numerous reports about growth of distinct Facebook population segments and their respective habits; hence you can find if your type of product can meet young or older facebook users, and you can also see if this segment is growing or diminishing.

### **Time Commitment**

When performed for a particular occasion (in order to answer a specific question about a market size for instance or in order to get a first big picture at the beginning of the project), it may take from 1 to 3 days, depending on the difficulty to gather relevant information and of the abundance and thus filtering of obtained information.

### **How To**

You will find information and existing surveys out of libraries, professionals associations, or business groups (you, your friends or your employees may be members of various engineers and/or trade associations -- Use It!). You can find information in professional fairs. You may also look for general information in the area you are targeting. For instance imagine you have a product for sailing boats; then, you can find a lot of publications on sailing. This is a good way to get insight on user behaviors and especially on trends. But you have to sort out this abundant literature.

Governments provide statistical information on the population that can be quite detailed. For instance the EU publishes information on various segments, by gender and age; you can find data about household income and about some general practices, e.g. the use of public transportation, the expenditures in health system, etc.

In order to get information that is relevant to your specific questioning, i.e. to the current status of your idea/product development, you have to be specific. For instance if you want to launch a service that enforces some privacy when publishing images on the Internet, you have to look beyond the population of people that publish images on the Internet (which is extremely huge). You have to figure out who is interested in privacy, who takes it seriously;

and this is not necessarily just a subset of the first population because there can be people who do not currently publish any image just because they fear some privacy issues.

To be specific, you have to be smart or even crafty. For instance you may exploit annual reports from corporates which may include interesting facts about their own target segment, embedded within the description of how their products are doing. Another trick is to use some tools that are primarily made for other purposes. For instance, by trying to promote something on Facebook (a post, a page, or an app), you can define an ad campaign; then, Facebook provides you with tools to target your population (gender, age, device - iPhone or Android - and interests), and then it displays information about the potentially reached population which in turn gives you an idea of its size. You do not need to actually launch the campaign and pay for this.

Beyond the search on the Web, information can be sought directly by asking some organizations. There are the statistical offices. Public and nonprofit organisations may also be willing to share data, like hospitals, transportations systems, etc.

Research into competitors is also a source of information. Not just the competitor product, but also his users, marketing channels, prices and costs (or producing methods). Here again, it can be quite a Generative method as well as an Evaluative one, for instance in indicating how you could, and when you should, differentiate your product.

### **Interpreting Results**

Trend analysis and the derivation of the evolution of the market size and related revenue may be quite extrapolative. You may resort to complex theories and skills such as Behavioral Economics Models. However, we want to keep it simple here and let the most space for actual experiments. Hence, you should use results in order to get a first idea of the market, to detect and qualify niches, and have a broad idea if the market is worth investing a first and lean effort (remember you are lean and your goal is not to decide if the revenue is 5 years is proving once for all that your investment of 10 millions now is a good idea!). Qualitative results are used to stay smart and aware, to avoid missing a massive fact like a disruptive trends (for instance when you want to launch a camera service to capture racers while self-piloted tracking drones are emerging...).

Mainly, use results to derive your own surveys and data/learning generation.

Besides, results may be useful to talk to investors who are still requiring more traditional business plans and market research-like homeworks. To some extent here we can consider being more extrapolative in the interpretation of the results.

To counter biases:

- Target specificity of your business rather than data for the generic domain..
- Take into account conversion mechanisms.
- Take into account scale, niche factors, and regionality.

## Potential Biases

False positive will often be due to a lack of specificity in your research to accurately represent your own business. For instance, it is easy to get huge numbers for potential users of a image publication app, while the specificity of the service you have in mind (e.g. to protect privacy or to enforce copyrights) will drastically decrease the numbers.

False positive are also due to the scale of markets that are described by the survey you use. Most often, surveys describe wide international environments while you will tackle regional markets, or niches inside this market. The mechanisms that result in the described market may be different at your own scale.

Confirmation biases are often obtained by suddenly importing an unfounded ratio in your population estimate that actually make the result of the whole exercise fanciful. Indeed, you have to consider the size of the population you will actually acquire out of the target population which depends on the competition (including indirect solutions) and on your marketing channels. If you omit the conversion rate, or use a too whimsical conversion rate, your results will be all too optimistic. One of the goal of Market Researches by the way is to try to get a documented and realistic conversion rate. So it is important not to just figure out the size of a population having a given problem, but also to understand what part of this population is typically following such or such marketing channel, and what part will do so in the future.

## Field Tips

- [“When looking at available market surveys, take into account your product specificity” @tdageff](#)
- Got a tip? Add a tweetable quote by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## Case Studies

- [Secondary Market Research versus Primary Market Research](#)
- Example: [Association Providing Links for Business in a Specific Area - Queensland, Australia](#)
- Got a case study? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## References

- Marketing Donut, [General Description of Market Research](#)
- Market Research Methods, [Market Research vs. Direct Research](#)
- Know This, [Type of Research Types by Decision Types You Have to Take](#)
- Entrepreneurship.org, [Secondary Market Research Resources](#)
- SBA.gov, [Free Sources: Market Data and How to Use Data for Business Planning](#)
- Census.gov, [US Census Historical Data](#)
- European Commission, [Consumer Market Studies](#)

- US Commercial Services, [Market Research Library](#)
- Cornell University, [How Can I Find Market Research Data](#)
- Got a reference? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

# Comprehension Test



## In Brief

A Comprehension Test will evaluate whether the customer *understands* the marketing message explaining the value proposition. This eliminates a possible false negative bias on smoke tests where the customer indicates they do not *want* the value proposition when they actually do not *understand* it.

## Helps Answer

- Does the customer understand the value proposition?
- How could we explain the value proposition better?

## Tags

- Quantitative
- Qualitative
- Value Proposition
- Smoke Test

## Description

### Time Commitment and Resources Required

For B2C, it can take 1-2 hours offline or 24 hours online. For B2B, participant recruitment times can vary widely. 10-20 participants.

### How To

1. Write out value proposition in 1-3 sentences.
2. Show the value proposition to a participant for a few moments, then remove it.
3. Ask them to explain the value proposition in their own words from memory.

### Interpreting Results

If the participant's explanation is roughly comparable to our own, we count that as a positive result. If not, then it's a negative. For this sort of test, we generally want a sample size of about 20 people and a positive conversion of about 80%.

The conversion has to be very high because regardless of what our value proposition is, people should understand it.

Take note: if many of the participants use identical language to explain the value proposition back, it should be considered as possible alternative marketing messages.

### Potential Biases

- **Confirmation Bias**
  - Overly enthusiastic entrepreneurs will sometimes over explain, correct, or nonverbally prompt the participant with the correct answer.
- **Invalid Target Audience**
  - Participants do not need to be the target customers, but they must have the same level of language & vocabulary as the target customer.
    - e.g. A junior marketing manager can be used instead of a Chief Marketing Officer
- **False Negative**
  - When using online surveys such as **FiveSecondTest**, the distractions of an online can often result in a higher than normal failure rate.

## Field Tips

- “Run a comprehension test before a landing page test or you won’t understand why it doesn’t work.” @TriKro
- Got a tip? Add a tweetable quote by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## Case Studies

- Got a case study? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## References

- Tristan Kromer - [Comprehension vs. Commitment](#)
- Pearson - [Technical Report: Cognitive Labs](#)



# Smoke Test



## In Brief

A smoke test is an experiment designed to test market demand for a specific value proposition. This test is often conducted before there is any ability to deliver the value proposition. The value proposition is presented to the customer in some way in exchange for any form of payment that would indicate true market interest. Payment expected from the customer may include money, time, attention, or data such as an email address.



## Helps Answer

- Does this specific customer segment want this specific value proposition?

## Tags

- B2C
- B2B
- Quantitative
- Value Proposition

# Description

This is a general description for smoke tests as a category, for specific instances, please see individual sections:

- Landing page
- Direct sales
- Flyers
- Pocket
- Video
- Pre-sales
- Event
- High Bar

## Time Commitment and Resources

Time commitment varies depending on market access and desired sample size. For consumer apps using a direct sales smoke test, tests can be done in hours. For enterprise B2B sales, smoke tests may take weeks or months. Typical landing pages tests usually take a week to gather a sufficient sample size to interpret the first results.

## How To

1. Present the customer with a value proposition
  - The value proposition can be in any format including a landing page, sales pitch, video, or even a flyer handed out on the street.
2. Ask the customer for payment in exchange for that value proposition.
  - The payment can be of any form including money, time commitment (e.g. Get access in exchange for a one hour interview.), or data (e.g. email address or detailed personal information)
3. Measure the conversion rate of unique customers who are shown the value proposition to those that give payment.

## Interpreting Results


Results can be difficult to interpret because of the high level of optimization that can be done with the form factor of the value proposition. Some landing pages can be optimized to achieve a 40% conversion rate without having a clear and understandable value proposition.

The criteria for success or failure of the value proposition should be set beforehand according to the criteria of the business model. For consumer web products which compete for user attention, payment of an email address at 20% conversion may be sufficient to justify additional investment in building the value proposition.

For enterprise hardware products, up front payment of tens of thousands of dollars by a single customer may be required to justify creating a first run prototype as a customer solution.

Success or failure criteria also need to account for the ability of the marketing channel to deliver a highly targeted customer segment. High quality channels with the right value proposition can deliver conversion rates >80% while low quality channels to an undifferentiated audience might result in conversion rates <1%.

## Potential Biases

- **False Positive**
  - When low forms of payment are requested, e.g. an email address, conversion rates may be unrealistically high and are often misinterpreted. 
- **False Negative**
  - When the value proposition is shown to customers outside the target market, conversion rates drop and show a false negative. Lack of customer segmentation or a poorly segmented channel are usually the cause of this.
  - Similarly, when the value proposition is not understandable to the customer, low conversion rates can occur. The results are sometime misinterpreted. (See comprehension testing.)

## Field Tips

- “Run a comprehension test before a smoke test or you won’t understand why it doesn’t work.” @TriKro
- “For smoke tests, set a fail condition based on analog businesses or business model demands.” @TriKro
- Got a tip? Add a tweetable quote by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

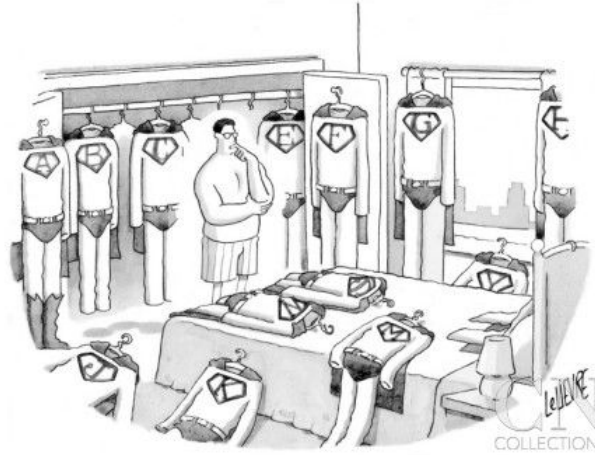
## Case Studies

- [LOIs as Payment](#)
- Got a case study? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## References

- [Wikipedia - Smoke Testing \(Lean Startup\)](#)
- [Ramli John - A Landing Page is Not a Minimum Viable Product](#)
- Got a reference? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)



# Conjoint Analysis



## In Brief

A complex survey method where customers choose between product offerings that have different attributes such as price, screen size, or weight. Statistical analysis is then used to reveal the relative value of each attribute and predict the value of each possible combination of features.

## Helps Answer

- Does a particular new feature have any value in the eyes of the customer?
- Which product attributes are more/less important to the customer?
- What dollar value can we be assigned with each feature? 
- Which features should we build next? 

## Tags

- Quantitative
- Pricing
- Revenue
- Value Proposition

## Description

### Time Commitment and Resources

1-2 hours offline for B2C or 24 hours online to gather responses. For B2B, participant recruitment times can vary widely. Analysis of the data can be very rapid with off the shelf

software for analyzing less than 10 attributes. For analyzing dozens of factors the expertise and software required can take several weeks and human analysis.

### How To

1. Create a list of the top 3-5 product attributes you want to rank based on deep consumer understanding gained from prior experience and research.
2. No hard & fast rule but a good guideline is: Sample Size = [ (Total # of levels for all attributes) - (Number of attributes + 1) ] x 10 -- [ref](#)
3. Use software program to mix attributes into new product offerings
4. Show participants selected product offerings side by side and have them choose which one they would prefer (see example below from [Pragmatic Marketing](#) article)
5. Use statistical analysis software (or consultant / service) to analyze the results and compute a relative value ranking for each stand-alone attribute
6. Output formula revealing the “ideal” product based upon optimized mix of attributes.

Brand A	Brand B	Brand C
\$60/month	\$75/month	\$75/month
1,000 minutes	1,400 minutes	1,000 minutes
Unused minutes rollover for 1 year	Unused minutes rollover for 1 month	Unused minutes rollover for 1 year
Free calling to top 5 contacts	Free calling to top 10 contacts	No free calling based on contacts
40% share	35% share	25% share

### Interpreting Results

Conjoint analysis can be complex and, depending on the tools and exact statistical method employed, the results from the analysis be be extremely difficult to understand as raw statistical data:

(XLStat Demo Screenshot)

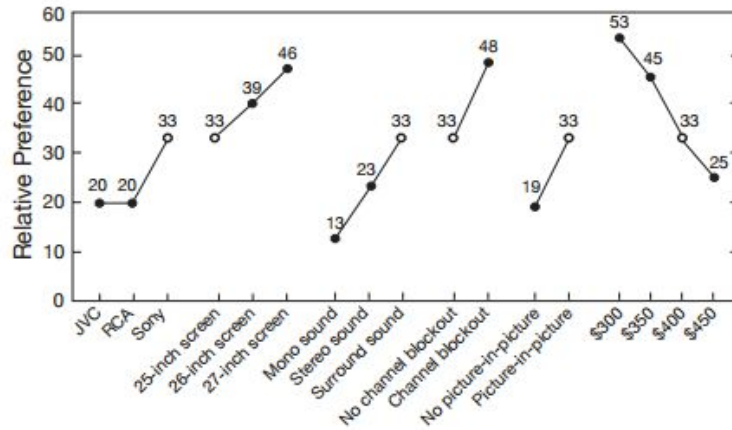
Utilities (Individual data):										
Source	Individual 1	Individual 2	Individual 3	Individual 4	Individual 5	Individual 6	Individual 7	Individual 8	Individual 9	Individual 10
Intercept	6.988	6.445	5.916	6.822	6.855	6.093	6.500	6.500	5.766	6.724
Temperature-Ice	5.406	-1.566	0.686	3.290	4.473	0.048	4.979	2.610	-1.107	4.056
Temperature-Very warm	-3.454	1.348	-3.020	-2.002	-3.055	-1.675	-4.979	-2.610	-1.830	-3.162
Temperature-Warm	-1.952	0.218	2.334	-1.287	-1.418	1.627	0.000	0.000	2.937	-0.894
Sugar-1 sugar	0.375	0.284	-0.934	1.068	0.919	-2.441	0.073	0.069	0.434	-0.603
Sugar-2 sugar	-0.627	-3.378	2.334	0.639	-1.835	-0.488	-0.325	0.969	0.231	2.481
Sugar-No sugar	0.252	3.093	-1.400	-1.707	0.916	2.929	0.252	-1.038	-0.665	-1.877
Lemon-no	-0.285	0.243	-2.059	0.525	0.813	1.077	-0.595	2.026	2.142	-0.266
Lemon-yes	0.285	-0.243	2.059	-0.525	-0.813	-1.077	0.595	-2.026	-2.142	0.266
Intensity-Low	-0.305	-1.714	0.000	0.639	0.542	-0.488	0.377	-1.885	1.146	1.140
Intensity-Medium	0.117	1.751	0.934	-1.671	0.538	0.488	0.074	0.169	0.751	0.469
Intensity-Strong	0.188	-0.037	-0.934	1.032	-1.081	0.000	-0.452	1.716	-1.897	-1.609

Importances (Individual data):										
Source	Individual 1	Individual 2	Individual 3	Individual 4	Individual 5	Individual 6	Individual 7	Individual 8	Individual 9	Individual 10
Temperature	81,098	21,853	35,519	44,777	55,632	27,981	79,318	35,074	36,135	48,580
Sugar	9,172	48,519	24,772	23,477	20,356	45,499	4,593	13,489	8,327	29,334
Lemon	5,222	3,642	27,322	8,876	12,017	18,248	9,485	27,236	32,477	3,584
Intensity	4,508	25,985	12,386	22,869	11,994	8,273	6,604	24,200	23,062	18,503

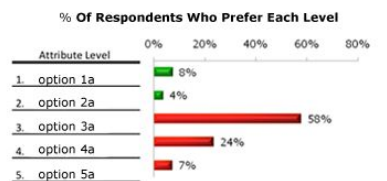
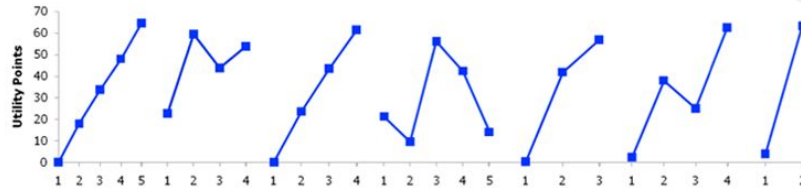
Other methods of displaying the results can be more straightforward, but lack details:

(Relative Parts-Worth Sensitivity Analysis)

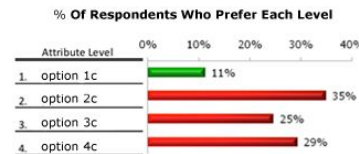
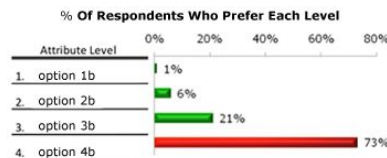


## (Qualtrics Conjoint Types)

The importance of each attribute level can be calculated from the conjoint analysis data. The farther attribute levels are from each other within the same category, the more important the difference to the respondents.



Based on the conjoint analysis results, the percent of respondents who would prefer each level of an attribute is summarized here.



What matters most is:

1. The relative importance of each attribute compared with the others
2. The formula that allows you to predict the relative preferences of any kind of mix
3. Elasticity of demand for pricing simulations (presuming that price was an attribute that was tested)

Conjoint analysis is most often used in existing markets where the product attributes are generally known by the customer. When brand new attributes are introduced, customers may not initially understand them and therefore may not be able to accurately include the potential value of those attributes in their choices, producing a false negative of sorts.

For this reason, generative market research methods are generally used before conjoint analysis to ensure that the attributes being tested are the correct one.

The method also tends to be extensive and requires a high level of expertise to design. Early stage innovation projects therefore rarely use this method.

## Potential Biases

- **Confirmation Bias:** If administering the surveys face-to-face, overly enthusiastic entrepreneurs will sometimes over explain, correct, or nonverbally prompt the participant with the desired answer.
- **Invalid Target Audience:** Key to the success of conjoint analysis is knowing your audience well enough to be able to create products with useful mix of attributes to begin with.
  - Conjoint analysis works best for products and services that rely more on logical comparison and less on emotion or impulse.
- **Homogenous Market:**
  - Boiling market segments down to a series of equations and values has the drawback of treating every member of that segment identically. This is can often be reasonable within the specific price range studied but outside of these ranges, the mix of desirable attributes can change quite dramatically as customers enter and leave the market.
- **Indication of Price Sensitivity NOT Exact Pricing**
  - Conjoint analysis is great for providing an indication about which variables and ranges influence pricing but a separate pricing and elasticity of demand analysis should be performed separately to really nail this down.

## Case Studies

- Got a tip? Add a tweetable quote by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## References

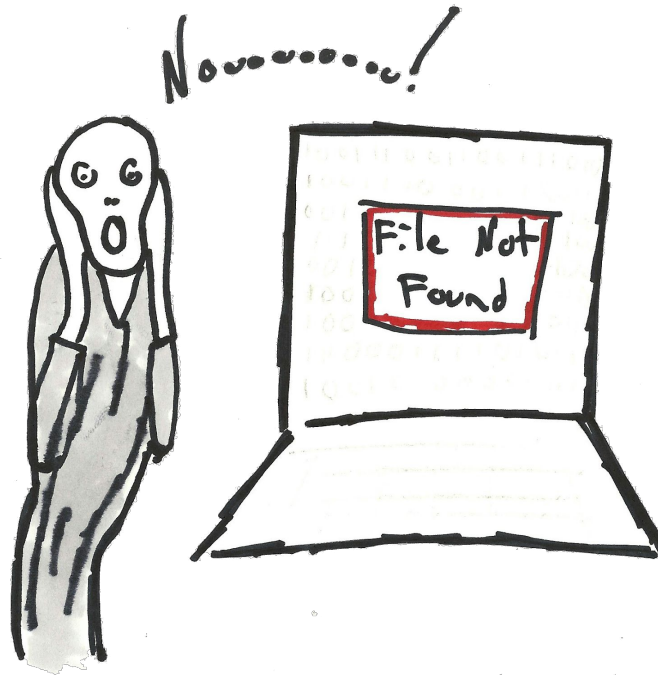
- MIT Sloan Courseware - [Note on Conjoint Analysis](#) by John R. Huaser
- Chris Chapman - [9 Things Clients Get Wrong About Conjoint Analysis](#)
- Brett Jarvis - [Conjoint Analysis 101](#)
- [Things You Need to Know About Conjoint Analysis](#)
- Sawtooth Software - [Interpreting the Results of Conjoint Analysis](#)
- Quirks - [Conjoint Analysis in Pharmaceutical Marketing Research](#)
- Got a case study? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## Conjoint Software Resources

- [Conjoint Survey Design Tool](#), Harvard 2014 (Free)
- [XLSTAT-Conjoint](#) (\$50 Student, \$275 private)
- [Conjoint Analysis in Excel](#) (Free)
- [Choosing By Advantage](#) (\$30/mo, similar to CA)
- [Survey Gizmo](#) (\$95/mo, free 7-day trial)
- [1000minds.com](#) (\$20,000 for enterprise, free for students)
- Got a reference? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)



# Preto- & Prototyping



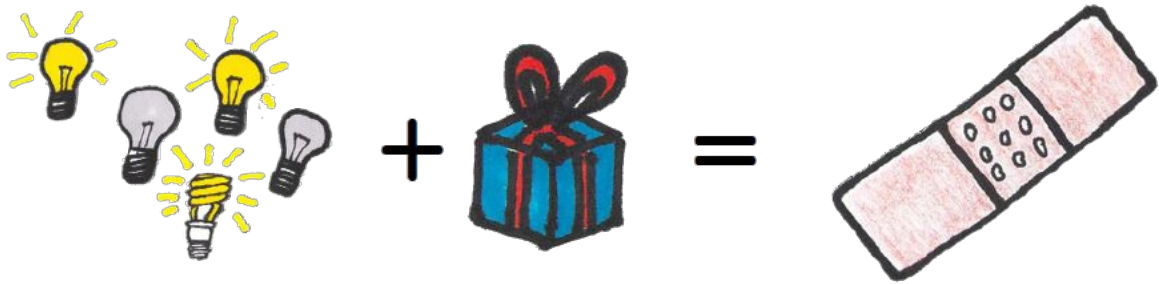
## In Brief

We're not done yet!

Tweet us and we'll write this chapter:

[Hey, @realstartupbook, please write the chapter on Preto- & Prototyping](#)

# Generative Product Research



***“Research is formalized curiosity.  
It is poking and prying with a purpose.”***

*– Zora Neale Hurston*

# Concierge Test



## In Brief

Concierge is a technique to test the solution of a customer problem by manually performing tasks as a service. Typically it is inefficient in terms of cost effectiveness, but can provide detailed information about how a solution *can* be created and what minimum viable feature set should be included in an automated and optimized product.

## Helps Answer

- Does the solution solve a real customer problem?
- How can the problem be solved?
- What is the minimum feature set required to implement a solution?
- What are the greatest problems in effecting a solution for the customer?

## Tags

- B2C
- B2B
- Qualitative
- Value Proposition

## Description

In a concierge test the value proposition is delivered as a service. Like a hotel concierge the focus is on a highly customized customer facing service. For this method you need to

perform the tasks manually usually with a few customers as it is not cost efficient to scale. However the high customer touch allows you to get quality feedback from the targeted segment. Key advantage is that services can be almost instantly adjusted at a very low cost. Hence iterations based on insights from customer feedback are easily done.

To conduct a successful concierge test you need to be clear about your value proposition and have it well formulated. **As** an evolution of problem-solution interview techniques the goal is to test the solution and figure out if it matches your customer's expectations. Design your value proposition as a service with the leap-of-faith assumptions in mind. When using the service your customers should go through the same steps as they would go through later with your product idea.

Deliver your service manually in a customized and personal way. This requires you to start with just a small batch of customers to avoid being overwhelmed. At this point you do not need a single line of code or automation. **Even though** it is not efficient and time consuming keep in mind that the direct customer touch you can learn from is more valuable. While delivering your service keep collecting feedback from your customers and adjust your service accordingly.

After some time **you learn** what your exact customers expectations are and what is really valuable to them. Gradually automate the parts of your service that work. Be careful not to run your concierge test forever! Keep automating and expanding your service until you are not getting any new major insights.

### **Time Commitment & Resources**

Concierge tests can be the most time consuming test to perform as it requires manually solving the customer problem. For a complex B2B IT solution, a concierge solution can be a complete consulting engagement lasting many months. For a consumer, it might be as simple as personally going shopping with a customer.

Similarly, resources can be extremely intense, or as little as a pen and paper. In the case of a B2B concierge service, it is often possible to charge for the solution up front which eliminates any resource constraints.

### **How To**

1. Write down the value proposition that needs to be tested.
2. Design the value proposition as a personalized, customer touching service.
3. Talk to potential customers (early adopters) and offer them your service in exchange for a payment.
4. Execute the service by performing tasks manually even though it is not effective.

### **Interpreting Results**

The data you collect will be mainly qualitative data as you are delivering a manual service. You need to aggregate the data from all your current customers for the various aspects of your service. Use the insights to adjust your service accordingly.

The main benefit of this method is to **generate idea** around the potential solution/product and identify any obstacles to implementing that solution.

## Potential Biases

- **False Positive Bias:** This method does not serve to validate the solution as the manual component provides an extra value proposition of trust and responsiveness. Entrepreneurs can therefore mistake positive feedback on the service as validation of the product concept. When moving to an automated solution, the extra “human” value proposition is removed and the customer can reject the solution.
- **Confirmation Bias:** Customers validate your value proposition but expect and value the highly personal service which usually is planned to automate later. Hence you will lack to convert the cost intense service into an efficient service or product.
- **Sampling Bias:** As the concierge test is manually performed you have to find a balance. On the one hand having too **much** customers leads you to be overwhelmed. You find yourself or your team just busy to deliver the promised service. Which leaves very little time to analyze the data and using the insights to adjust. On the other hand you have to make sure that your customer batch is not too small. Insights you get from e.g. just one or two customers might not be enough. You risk that the collected feedback is not representative for your customer segment you are targeting.

## Field Tips

- [“A concierge test is an experience not a product.” @poornima](#)
- Got a tip? Add a tweetable quote by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## Case Studies

- Food on the Table - [The Ultimate Guide to Minimum Viable Products](#)
- SlideShare - [Manuel Rosso: Concierge MVP Lean Startup](#)
- Medium - [On MVPs Glueing Things Together and 270 Flights to South Africa](#)
- Moves the Needle - [Enterprise Lean Startup Experiment Examples](#)
- Got a case study? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## References

- Cindy Alvarez - [Lean Customer Development: Building Products Your Customers Will Buy](#)
- I Build MVPs - [The Concierge Minimum Viable Product Maximizes Customer Learning](#)
- HBR - [Building a Minimum Viable Product](#)
- [The Concierge MVP Board](#)
- Got a reference? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

# Demo Pitch



## In Brief

A Demo Pitch is when you are presenting or pitching your solution using some kind of product or service demonstration in the hope to convince a potential customer. As a method it is similar to a Solution Interview but typically takes place at a later stage, as the solution becomes more baked and you have more elements to demonstrate. However, this can be done early in the process using the most realistic examples available. The style is more of a presentation than an interview and the goal is to assess how positive the reaction is and why. **A Demo Pitch is essentially a sales pitch to a potential customer in order to test their willingness to buy or recommend you to the economic buyer.**

## Helps Answer

- Who is our early adopter or first customer?
- Who is the decision maker?
- Is it valuable enough for them?
- Are we positioning it right?
- Are we highlighting the most compelling features?
- How much is it worth to them?
- What is the sales / procurement process?
- How will they use or implement our solution?
- Can we sell it?

## Tags

- B2C
- B2B
- Key Partners
- Channel Partners
- Value Proposition

## Description

There are many ways a demo pitch may be deployed. For B2C you may try to catch consumers in a physical location at the point of sale of similar products and demo them. This may be done online via a targeted video ad in a particular social media channel so you can measure conversion. For B2B you will need to identify “influencers” and “decision makers” along with other key stakeholders in order to meet with them. Be careful to select people who you think will be early adopters and won’t be too worried about the “who has already used this” question. How do they react, what feedback do they give? You might start with a cold call or via introduction and be able to demonstrate your solution via video call or screen sharing.

You are looking for a “wow” reaction as a result and a significant next step in the buying process. You may be able to offer a pre-order option, secure a signed letter of intent, take a deposit, have a purchase order issues, get added to the vendor list, have your purchase agreement approved etc.

You may also use this method to test commitment from key partners and channel partners as an indication if they will enter into agreements or trial phases with you. You therefore are collecting insights on how you can go-to-market with your offering.

### Time Commitment and Resources

A few days for B2C and a few weeks for B2B depending how quickly you can set up appointments.

### How To

- Have a refined confident pitch suitable for the selected audience
- Prepare some form of demonstration that shows your solution in its best light
- Put yourself into a situation where you can communicate the above, uninterrupted and receive feedback
- Be ready to offer a suitable next step in the buying process as a test to see if they will move forward

## Interpreting Results

You will receive qualitative signals during and after your pitch demo where the challenge is to differentiate between who is just being nice and who is really genuinely excited and why.

The most important data will be who moves forward to the next stage of the buying process as a result

## Potential Biases

- Being able to secure a high number of demo pitches in itself is not an indication of success
- People may have very nice comments but if they don't move with you further along the buying process, then you are knocking on the wrong door or need to make changes to your offering

## Field Tips

- Got a tip? Add a tweetable quote by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## Case Studies

- Got a case study? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## References

- Salesforce - [How to Make a Good Sales Pitch](#)
- Forbes - [10 Steps for Giving a Convincing Sales Pitch](#)
- Got a reference? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)



# Competitive Analysis



## In Brief

Competitive Analysis is very much a secondary research method which you can perform online, relatively quickly and comprehensively. The analysis is absolutely crucial for any new business idea.

As you are defining your idea, you need to conduct research in order to paint a picture of the competitor landscape. You will likely start out with quite a wide capture of different players and will then be able to zoom in over time as your other experiments guide you towards the exact customer segment and solution you will build. A detailed competitor analysis can help you communicate your idea to others as well as differentiate it. The analysis is a form of due diligence repeated over time and is expected by investors or sponsors.

## Helps Answer

- Who is our competitor?
- Where are they active?
- What is their business model?
- How can we differentiate our offering and positioning?
- What type of revenues are being generated?

## Tags

- B2C
- B2B
- Qualitative
- Channels
- Value Proposition

## Description



### Time Commitment & Resources

Initially 1-2 days and then keep adding on and perform regular scans of the market.

### How To

The typical way to display a competitive analysis has been to plot performance on an X/Y graph with all the competitors located at the bottom left and your company at the top right. This method is typical when existing companies launched a new product into an existing crowded market place and is therefore not so relevant for startups or existing companies looking to create new markets (true innovation). [Steve Blank](#) suggests using a “petal diagram” where you plot your idea at the centre of the slide. Then highlight where your new customers are likely to come from (adjacent markets segments) using a cloud around your company (as many as needed) and then fill in each section with names of companies that are representative players in each segment. You can then try to identify which companies are private and note how much investment they had received to identify which spaces are being perceived as “attractive” to investors. On top of this, you can note the current and projected market size of each segment to understand how big your new market could be.

After initial analysis, you should know three things: who your biggest competitors are, the basics of their company strategy, and how you are (or will be) different from what they’re doing. By understanding the market landscape, you are able to gather more clues about how you might approach distribution, positioning and pricing.

Some tools you can use to extract competitor information are:

- Crunchbase
- Angel List
- Quora
- Google Finance (listed companies and their “related companies”)
- Google Search (industry key words)
- Google News Alerts (industry key words)
- Forrester Research / IDC / Gartner etc (market reports)

When doing competitive research on other web-based companies here are a few other tools you can use:

- Compete to see their traffic data, and which way it's trending
- Quantcast to get a rough feel for the demographics of their average customer
- AppData (if they have a Facebook or mobile app) to see how engaged their users are

## Interpreting Results

By understanding the key players in your space and adjacent segments, you will increase your domain knowledge around your business. If you can't find any similar organisation or research being conducted, it means you have not looked hard enough as it is highly unlikely that no one in the entire world is working on the same or very similar business idea. On the flip side, uncovering many competitors does not mean you should not continue. The discovery will help you to refine your offering and business model for a market which is growing overall.

"A rising tide can lift all boats" - so focus on being one of the boats and not worrying about how to dominate the entire segment from day one. "Competitors" can also become key partners to help each other get off the ground in the new market. They can also give you clues as to where you can gain initial traction in the market.

## Potential Biases

- **Confirmation Bias:** Entrepreneurs naturally don't want to find competitors so they can put the blinders on. They prefer to simply focus on their own vision of how the world is. Make sure your methods are exhaustive, compelling and repeated to keep up to date with new entrants. Get external / neutral help to make the analysis to avoid this kind of bias.
- **The Numbers:** Don't worry about too few or too many players but learn how can you fit into the space that is being created. Know your strengths and weaknesses against each player.
- **Too Local:** Don't limit your search to your local area. For most new business ideas today we need to be taking a global perspective and that also means doing global research.

## Field Tips

- [Competitor Analysis should color your thinking, create the appropriate context and help educate you on what's going on @byosko](#)
- Got a tip? Add a tweetable quote by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

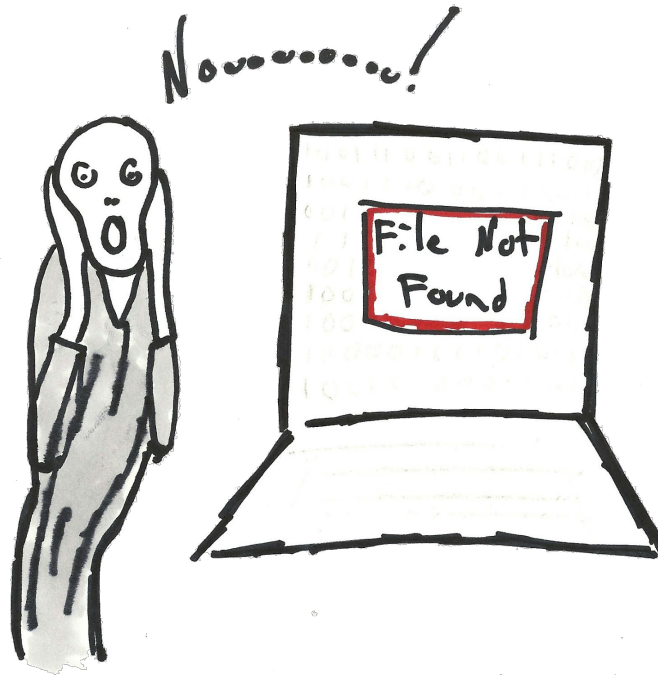
## Case Studies

- Got a case study? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## References

- [Steve Blank - A New Way to Look at Competitors](#)
- [Instigator Blog - Competitive Research 101 for Startups](#)
- [Justin Mares - A Startup Guide to Competitive Research](#)
- Got a reference? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

# Solution Interview



## In Brief

We're not done yet!

Tweet us and we'll write this chapter:

[Hey, @realstartupbook, please write the chapter on Solution Interview](#)

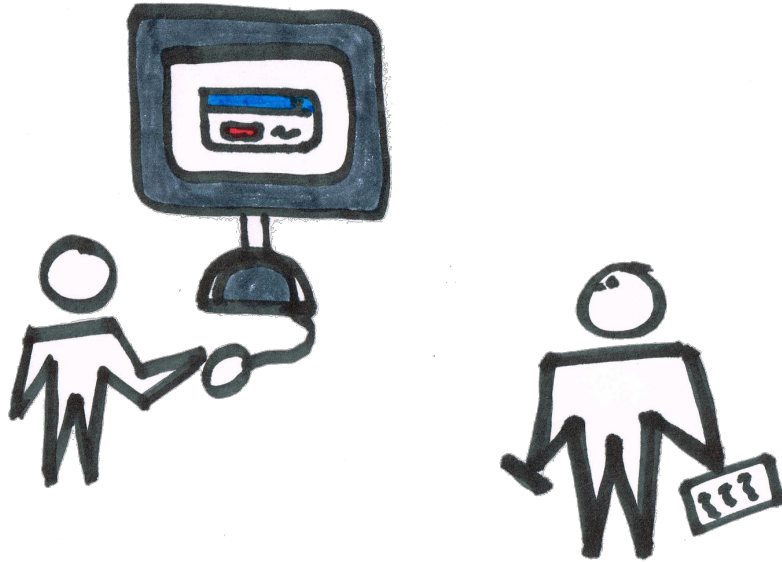
# Evaluative Product Experiments



*“Any product that needs a manual to work is broken”*

*– Elon Musk*

# Usability Testing



## In Brief

Usability testing is observing users trying to complete a series of tasks with an interactive product. The product can be any level of fidelity from a paper mockup to a fully functioning product. Users are asked to perform a series of tasks and the observer record whether the user is able to perform them and if they become confused or frustrated during the process.

## Helps Answer

- How do people use the product or service?
- Do people understand how to use the product or service (as intended)?
- What do people experience at different touch points while using the product or service?

## Tags

- Qualitative
- Value Proposition
- Customers

# Description

## Time Commitment & Resources

Usability Tests with 5 users can be finished in half of a working day with minimal resources. Tests are typically no more than 5 -7 users, unless the tasks users perform are complex and involve several parties collaborating simultaneously to complete the test.

Tests are often performed with extensive equipment including full usability labs with cameras, eye tracking software, and one way mirrors. However, this is not strictly necessary.

## How To

### 1. Prepare

Preparation is critical for usability testing since test produces a number of potential biases in interpreting the qualitative results. At the minimum, the experimenter should have:

- Introduction script
- List of use cases and tasks
  - Context of the task (e.g. "You are thinking of buying a car.")
  - Description of task (e.g. "You would like to compare prices of various cars.")
  - Reasonable time limit for each task
- Recording equipment
  - such as a notebook or a camera

Usability tests can be performed in any environment. In some cases, a usability lab with no distractions may be very different from the environment the product will actually be used. A real environment such as a workspace or coffeeshop may provide more accurate real world behavior, but may make detailed observations difficult or impossible. A usability lab allows for detailed observations but might lack realism.

### 2. Frame for feedback

The experimenter explains the purpose of the experiment to the user to ensure that they are willing to give honest, open feedback. Normally, the experimenter will reassure the user that any tasks that are difficult are not the fault of the user and that any problems encountered are exactly the feedback the experimenter desires.

This is normally done with a pre-written script to ensure consistency between sessions and experimenters.

### 3. Explain the task



The experimenter explains a single task and any context to be performed by the user.

#### 4. Observe the user

The experimenter observes the user attempting the task while asking them to talk out loud about their impressions, intentions, and expectations. The experimenter does not explain or provide any guidance, but only interjects to ask the user about their thought process, feelings, or experiences.

The entire process can be recorded with audio, visual, screen capture software, or even eye tracking software for additional review later.

#### 5. Repeat if necessary

The user may then be given additional tasks and steps 3-4 are repeated until all tasks are completed.

#### 6. Exit Interview

Usability tests are usually concluded by thanking the user and asking open ended follow up questions to clarify their experience. For example:

- How did you find using this product/website\*?
- How easy was it to perform <given task>?
- What was the most difficult part in performing this task?
- How did you find your experience with the product or the website?

### Interpreting Results

Even usability experts sometimes don't agree on the interpretation of usability tests. Having multiple observers for the usability tests can help eliminate potential subjective biases from having only one experimenter.

Experimenter and any observers must synthesize their observation notes, making care to note any points where the user showed an emotional response such as frustrations. The group must then identify the functional issues or functional errors that were reported by most/all of the participants.

Given the small sample size of most usability tests, consistent usability problems found in most cases should be prioritized and testing rerun with the proposed solution.

If all users can successfully complete the tasks, that indicates the product is usable, but does not indicate whether the product is desirable or whether the value proposition is actually delivered.

### Potential Biases

- **Hawthorne Effect (The Observer Effect):** Users may behave differently when attempting to complete a task based on their awareness of being observed.

- **Social Desirability Bias:** Users may try to answer questions or do tasks to try and be viewed favorably by the experimenter.
- **Confirmation Bias:** Experimenters sometime ask questions or create the use cases in such a way that the user's response/action confirms his/her preconceptions, hypothesis or beliefs.
- **Selection Bias:** Selection of the correct audience can severely bias results. For example, testing usability with existing users will not show issues that new users may have with a product.

## Field Tips

- [“A usability test is the place to synthesize what you believe and what reality will accept” @ericries](#)
- [“The goal of a usability test is to make the users' experience with the product easy and intuitive” @dharanidhar21](#)
- [“When testing usability, find users who are a little less savvy and aim to simplify your product” @TriKro](#)
- Got a tip? Add a tweetable quote by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

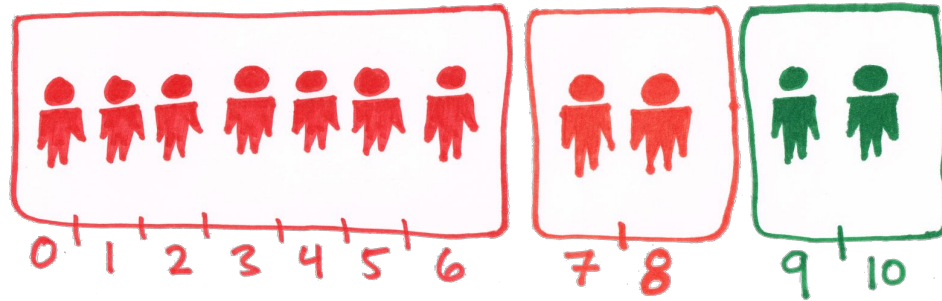
## Case Studies

- Maryellen Allen - [A case study of usability testing of the University of South Florida's virtual library interface design](#)
- Got a case study? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## References

- [Usability Testing](#) (Nielsen Norman Group, n.d.)
- [The Myth of Usability Testing](#), by Robert Hoekman Jr. October 20, 2009
- [Practical Usability Testing](#) (Human Factors International, n.d.)
- [The 12 cognitive biases that prevent you from being rational](#) (George Dvorsky, io9)
- Got a reference? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

# Survey - Net Promoter Score



## In Brief

Net Promoter Score identifies customer loyalty to the brand or product. The survey uses a score of 0 to 10 to the answer to the question: “How likely is it that you would recommend [company X or product Y] to a friend or colleague?”.

Net Promoter Score was first introduced by Frederick F. Reichheld in a Harvard Business Review article: [“The One Number You Need to Grow”](#).

From the score of 0 to 10, people who give score 9 to 10 are considered “Promoters.” People who give score 7 to 8 are considered “Passives,” meaning who are satisfied but are not very loyal to your brand or product. People who give score 0 to 6 are considered “Detractors.”

The Net Promoter Score question can be followed up with another question to find out the reason(s) for the score the customer gave. By doing so, the Net Promoter Score can be associated with both qualitative and quantitative results.

## Helps Answer

- What is your customer loyalty rate?
- How to segment your customers to promote the product/services?
- Who are brand ambassadors among the customers?

## Tags

- B2C
- B2B
- Customer

- Relationship
- Value Proposition
- Quantitative
- Qualitative

## Description

Net Promoter Score tracks loyalty and can identify the ambassadors amongst your customers. It is commonly used as a simple customer satisfaction metric.

The Net Promoter Score is not just one question but rather, a group of questions probing to understand the customer's feeling or loyalty towards the company, product, or service.

By understanding the reasons of the scores, you can determine how many people will become ambassadors. It can also determine where your company, product, or service stands in [word of mouth marketing](#).

### Time Commitment and Resources

The survey can be sent to customers at one time. The results can be compiled and analyzed in about a week. NPS surveys can be sent every six months or every year to determine changes as well.

### How To

NPS survey is simple and straightforward. You can use third party survey company/services like [Survey Monkey](#) or traditional pen-and-paper methods. You can even just send the question via email to your customers directly.

Many companies send NPS question together with other survey questions to save time and resources.

### Interpreting Results

By understanding the reasons why the customers are loyal to (or recommend) your company, product, service, loyalty economics can be calculated.

While there are some variances on the interpretations of an NPS result, the original NPS score calculation is achieved by subtracting the percentage of respondents that are labeled "Detractors" from the percentage of respondents that are labeled "Promoters" like this:

$$\text{NPS} = \% \text{ of Promoters} - \% \text{ of Detractors}$$

Here's an easy-to-understand graphic from [Net Promoter System](#):



However, interpreting the scores is only half the benefit of NPS questionnaire. The second part of “Why” question is equally important if not more than the actual Net Promoter Score itself. By understanding the reasons why your customers may or may not promote your company, product, or service can lead to breakthrough insights.

By understanding the “Why” components of NPS surveys better, you can identify which customer segments are more valuable and what do they want more from your company, product, or service. Moreover, you can also identify the reasons certain customer segments become detractors or passives.

### Potential Biases

Timing of sending the NPS questionnaire to customers can lead potential bias on the results. For example, if you sent out the survey shortly after you have upset several customers, they will not give high scores on the questions. Likewise, if you have recently made several customers happy, they will rate your customer, product, or service higher.

### Field Tips

- Got a tip? Add a tweetable quote by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

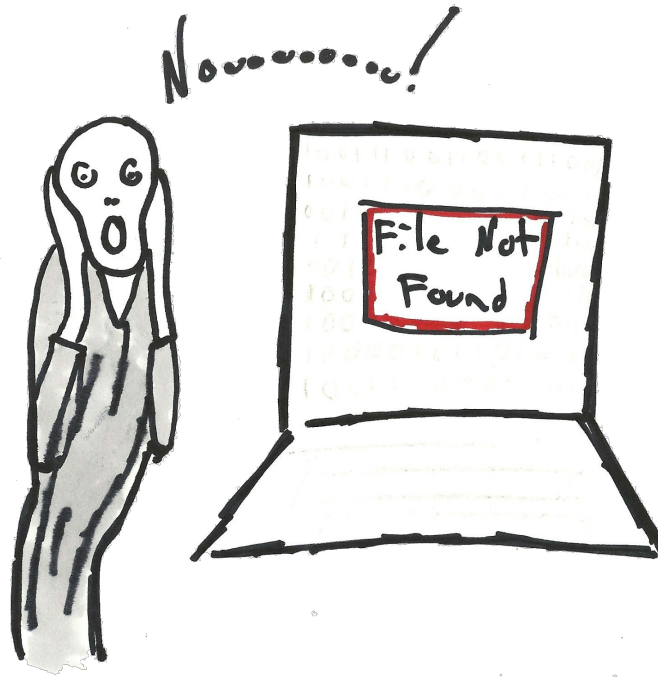
## Case Studies

- GrooveHQ - [Lessons Learned Sending a Net Promoter Survey to 4,000 Users](#)
- Zendesk - [Measure customer loyalty with Net Promoter Score surveys in Zendesk](#)
- Got a case study? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## References

- Survey Monkey - [Net Promoter® Score \(NPS\) Survey](#)
- Bain & Company - [The economics of loyalty - Loyalty Insights #3](#)
- Zendesk - [NPS best practices: The most effective way to send a Net Promoter Score](#)
- Qualtrics - [Net Promoter® Score System Questions Answered](#)
- Customer Satisfaction Strategy - [Pros and Cons of Net Promoter Score](#)
- Got a reference? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

# Paper Prototyping



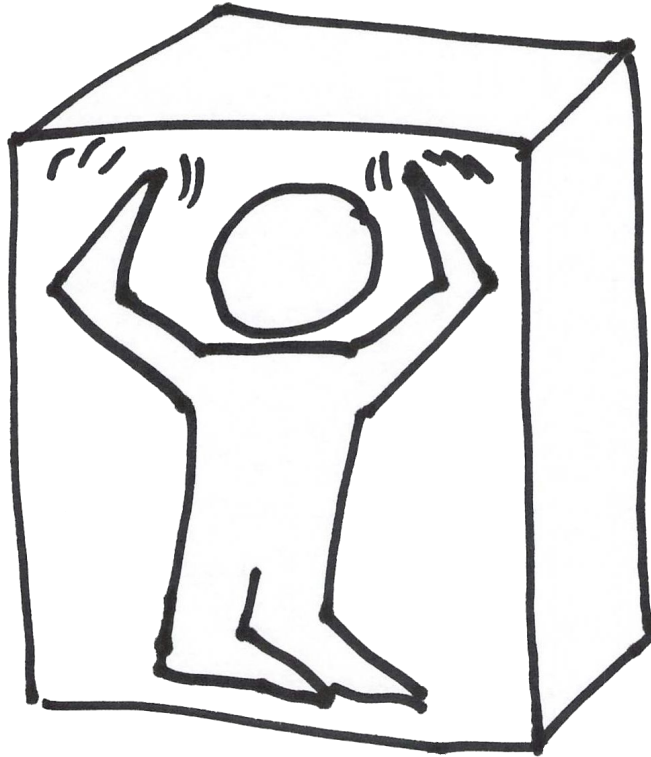
## In Brief

We're not done yet!

Tweet us and we'll write this chapter:

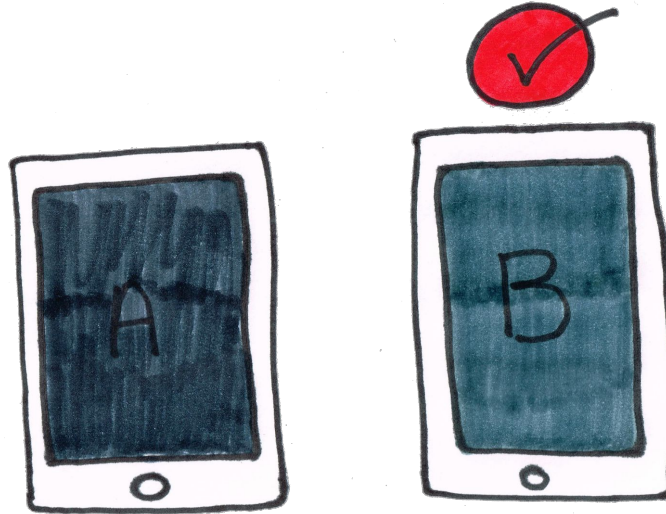
[Hey, @realstartupbook, please write the chapter on Paper Prototyping](#)

# Out of the Box



***“Constraint inspires creativity”***  
- Biz Stone

# A/B Testing



## In Brief

A/B testing (also known as split testing and bucket testing) is a randomized method of comparing two versions of an element (A and B) against each other to determine which one performs better using a metric to define success. To determine which one is better, you subject both versions to experimentation simultaneously. In the end, you measure which version was more successful and select that version for real-world use.

## Helps Answer

- Which features of my product or service will increase my conversion rate?
- Which is the most effective design of my product or service to increase sales?
- What is the most effective design of my website to generate traffic?
- Which layout of my website leads to a higher sales conversion rate?

## Tags

- Quantitative
- Design Features
- Conversion Rate
- Bounce Rate
- Value Proposition
- Customer
- Channel
- Relationship



## Description

A/B Testing is similar to the experiments you did in Science 101. Remember the experiment in which you tested various substances to see which supports plant growth and which suppresses it. At different intervals, you measured the growth of plants as they were subjected to different conditions, and in the end you tallied the increase in height of the different plants.

A/B testing allows you to show potential customers and users two versions of the same element and let them determine the winner. As the name implies, two versions (A and B) are compared, which are identical except for one variation that might affect a user's behavior. Version A might be the currently used version (control), while version B is modified in some respect (variation).

In online settings, such as web design (especially user experience design), the goal is to identify changes to web pages that increase or maximize an outcome of interest. Constantly testing and optimizing your web page can increase revenue, donations, leads, registrations, downloads, and user generated content, while providing teams with valuable insight about their visitors.

For instance, on an ecommerce website the purchase funnel is typically a good candidate for A/B testing, as even marginal improvements in drop-off rates can represent a significant gain in sales. Significant improvements can sometimes be seen through testing elements like copy text, layouts, images and colors, but not always.

By measuring the impact that changes have on your metrics such as sign-ups, downloads, purchases, or whatever else your goals might be, you can ensure that every change produces positive results.

This differs from multivariate testing, which tests out multiple variations of a page at the same time.

The vastly larger group of statistics broadly referred to as multivariate testing or multinomial testing is similar to A/B testing, but may test more than two different versions at the same time and/or has more controls, etc. Simple A/B tests are not valid for observational, quasi-experimental or other non-experimental situations, as is common with survey data, offline data, and other, more complex phenomena.

Imagine a company, Acme Cables, that operates a web store selling cables. The company's ultimate goal is to sell more cables and increase their yearly revenue, thus the checkout funnel is the first place Acme's head of marketing will focus the optimization efforts.

The “buy” button on each product page is the first element visitors interact with at the start of the checkout process. The team hypothesizes that making the button more prominent on the page would lead to more clicks and therefore more purchases. The team then makes the button red in variation 1 and leaves the button grey in the original. They are able to quickly set up an A/B test using an A/B testing tool that pits the two variations against each other.

As the test runs, all visitors to the Acme Cables site are bucketed into a variation. They are equally divided between the red button page and the original page. Once enough visitors have run through the test, the Acme team ends the test and is able to declare a winner. The results show that 4.5% of visitors clicked on the red buy button and 1% clicked on the original version. The red “Buy” button led to a significant uplift in conversion rate, so Acme then redesigns their product pages accordingly. In subsequent A/B tests, Acme will apply the insight that red buttons convert better on their site than grey buttons.

You can also use it when you want to test your headline, but you have three possible variations. In that case, running a single test and splitting your visitors (or recipients in the case of an email) into three groups instead of two is reasonable, and would likely still be considered an A/B test. This is more efficient than running three separate tests (A vs. B, B vs. C, and A vs. C). You may want to give your test an extra couple of days to run, so that you still have enough results to base any conclusions on.

Testing more than one thing at a time, such as headline and call to action, is a multivariate test, and is more complicated to run. There are plenty of resources out there for multivariate testing, but we won’t be covering that when talking about A/B testing.

Once you've concluded the test, you should update your product and/or site with the desired content variation(s) and remove all elements of the test as soon as possible.

## **Time Commitment**

A/B testing is not an overnight project. Depending on the amount of traffic you get, you might want to run tests for anywhere from a few days to a couple of weeks. And you’ll only want to run one test at a time for the most accurate results.

Considering the impact A/B testing can have on your bottom line, though, it’s worth taking a few weeks to properly conduct tests. Test one variable at a time, and give each test sufficient time to run.

## **How To**

1. Define the question you want to answer: "Why is the bounce rate of my website higher than industry standard?" Start an A/B test by identifying a goal for your company. E.g. reduce bounce rate.
2. Do background research: Understand your customer/consumer behavior. For website purposes you can use Google Analytics and any other analytics tools. For other purposes you can use consumer behaviour analytics available.

3. Construct a hypothesis: define the hypothesis you want to test in a concise and measurable manner. E.g. "Adding more links in the footer will reduce the bounce rate".
4. Define metrics and significant difference: derive one metric that measures the hypothesis, in this case "bounce rate". Once defined the metric, set the significance difference, that is, the minimum difference between the two versions' metrics that will mean the change is worth it. E.g. significance difference: version B must have at least 3% less bounce rate than version A to consider it a successful and meaningful improvement.
5. Calculate the number of visitors/days you need to run the test for: Always calculate the number of visitors required for a test before starting the test. You can use an A/B Test Duration Calculator for website purposes.
6. Test your hypothesis: You create two products/services A and B, in which the variation (version B) has the hypothesis you want to test, in this case a footer with more links. You test it against the original and gather results of the metric selected, in this case bounce rate.
7. Analyze data and draw conclusions: If the footer with more links reduces bounce rate more than the target set, then you can conclude that increased number of links in the footer is one of the factors that reduces bounce. If there is no meaningful difference in bounce, then go back to step 3 and construct a new hypothesis.
8. Report results to all concerned: let others in Marketing, IT and UI/UX know of the test results and insights generated.

### **Interpreting Results**

We must set from the beginning the significant difference (practically significant), that is, what difference between the version will lead to change. This decision is based on several factors such as: investment of the changes, periodicity of changes, etc. For online testing, a 1-2% difference is enough to justify the change. For offline testing (e.g. new medicine or new hardware product), the difference to make the change beneficial can be around 10-15% difference in magnitude.

We must ensure that what has been observed is repeatability, and not an isolated case. The size of the experiment must be in a way that the statistical significance bar is lower than the practical significance.

### **Potential Biases**

It is important to note that if segmented results are expected from the A/B test, the test should be properly designed at the outset to be evenly distributed across key customer attributes, such as gender. That is, the test should both (a) contain a **representative sample** of men vs. women, and (b) assign men and women randomly to each "treatment" (treatment A vs. treatment B). Failure to do so could lead to experiment **bias** and inaccurate conclusions to be drawn from the test

Giving a test insufficient time can mean skewed results, as you don't get a large enough group of visitors to be statistically accurate. **Running a test for too long can also give skewed results, though, since there are more variables you can't control over a longer period.** Make sure that you stay abreast of anything that might affect your test results, so that you can account for any statistic anomalies when reviewing your results. If you're in doubt, it's perfectly reasonable to retest.

A/B testing is not so good for testing:

1. New things (e.g. change of version, or novelty effect)
2. Too many changes, as the results will not be conclusive
3. If something is missing (e.g. feature, style, information)

### Field Tips

- [“Keep your A/B Testing variations to a minimum to ensure meaningful results” - @sircastel](#)
- [“Define your metrics and minimum success rate before running A/B Testing” - @sircastel](#)
- Got a tip? Add a tweetable quote by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## Case Studies

- [VWO - Website Redesign Increased Conversions](#)
- [VWO - SaaS Pricing A/B Testing](#)
- Got a case study? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

## References

- Optimizely - [A/B Testing](#)
- Wikipedia - [A/B Testing](#)
- [Free Udacity Online A/B Testing Course](#)
- [Free Sample Size Calculator Tool](#)
- Got a reference? Add a link by emailing us: [realbook@trikro.com](mailto:realbook@trikro.com)

# Appendices



You Are Biased.

*“The eye sees only what the mind  
is prepared to comprehend.”*

*– Robertson Davies*

# Biases

## Cognitive

- **Anchoring Effect:** Basing subsequent judgements of an event based on the event's first piece of information.
- **Availability Bias:** Judging an event because of how easy you can think of examples of the event.
- **Central Tendency:** Categorizing and judging information as it relates to a prototype while ignoring variation.
- **Confirmation Bias:** Seeking information and evidence that supports your beliefs and hypotheses, while ignoring conflicting information.
- **Curse of Knowledge:** Lacking empathy towards others because of you know more than another person about a particular subject.
- **Fundamental Attribution Error:** Thinking that people behave a certain way due to their personality and not the situation in which they find themselves in.
- **Halo Effect:** Overvaluing the overall, good impression of a person, brand, product, organization, etc., which makes it easier to overlook any bad impression.
- **Hindsight Bias:** Thinking that you *knew-it-all-along*; however, prior to the event happening, you had no basis for your prediction.
- **Observer Bias:** Influencing the research because, you, as the observer know of the study's goals and objectives.
- **Overconfidence:** A belief that you're better than others, and that negative outcomes can happen to others (but not me).
- **Primacy Effect:** Recalling and emphasizing information that happened towards the beginning of an experience.
- **Recall Bias:** An incomplete and inaccurate remembering of past events or experiences.
- **Recency Effect:** Recalling and emphasizing information that happened towards the end of an experience.
- **Response Bias:** Range of biases that influences subject's responses away from a truthful response.
- **Self-Fulfilling Prophecy:** Expecting others to behave a certain way. Seeing the other person's actions confirms your expectations.

## Research

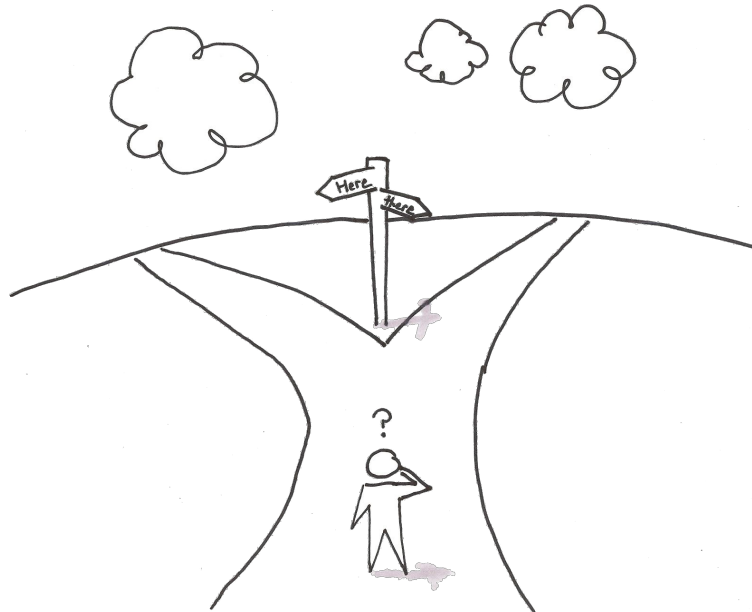
- **Framing Effect:** Seeing differences in experimental results because of differing contexts and situations, apart from experimental variables.
- **False Negative:** A result that appears negative when it should not.
- **False Positive:** A result that appears positive when it should not.

- **Measurement Bias:** Systematic error in measurement or classification for participants in study.
- **Omitted-Variable Bias :** Leaving out one or more causal variables in a statistical model.
- **Planning Effect:** A belief that you've accurately estimated the planned work.
- **Selection Bias:** Erroneously choosing participants to study, which affect your study results.

## References

- [Wikipedia: List of Cognitive Biases](#)
- [Identifying Bias and Avoiding Bias in Research](#)
- [Six Basic Statistical Tools](#)
- [Daniel Kahneman on Bias](#)
- [A list of cognitive Biases](#)
- [Lesswrong.com](#)
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- [Anchoring Effect](#)
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- [Confirmation Bias](#)
- [Framing effect](#)
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- [Planning Effect](#)
- [Selection Bias](#)

# Afterword



*What's are the next steps?*

*"I'm not of the opinion that the next logical step for a book is for it to be made into a film." – Jasper Fforde*

## For You

This book won't make you successful. You have to work for that.

Entrepreneurship is not an academic theory, it's a practice.

So to get better at it, just do it!

Figure out what question you have about your product or market, pick a method, and start practicing.

## For This Book

This book is not done, nor will it ever be.

We learn faster together.

Have you come up with a new method? Got a new tip?

Let us know by emailing [realbook@trikro.com](mailto:realbook@trikro.com)