

FIELD GUIDE TO  
**LEAN  
EXPERIMENTS**



## HOW TO USE THIS GUIDE

This guide is designed to be used in conjunction with the Experiment Map posters. If you have not done so already, we suggest you download the Experiment Map so you can follow along with the enclosed exercises.

Download the Experiment Map free of charge at: **[www.ExperimentMap.com](http://www.ExperimentMap.com)**.

Record your content from each exercise on 3"x3" sticky notes, using a sharpie or equivalent sized pen. Post your responses on your Experiment Map posters, so others can see your progress.

## WELCOME

Hello,

I just wanted to say a quick thank you for taking the time to review this guide. The exercises inside are based on my experience teaching hundreds of lean teams, as well as concepts from my best selling books *The Entrepreneurs Guide to Customer Development*, and *The Lean Entrepreneur*.

My hope is that you will learn the principles of lean experimentation by completing the hands-on exercises inside this guide. If you need help, have questions or just want to share your success stories, please don't hesitate to contact us at [www.movestheneedle.com](http://www.movestheneedle.com). We'd love to hear from you.

Thanks again, and good luck experimenting!

- Brant Cooper  
Founder, Moves the Needle

## WHY LEAN EXPERIMENTS?

Lean experimentation is one of the most important skills to develop as an enterprise innovator. By applying the scientific method to innovation, you are able to increase your teams' ability to deliver new ideas which succeed in market, while avoiding investment in ideas which are unlikely to succeed.

### WHY EXPERIMENT? TO LEARN!

Quickly generate evidence for (or against) our idea, so we may evolve to a winning solution.

Discover problems inherent to new ideas *before* we invest significant resources.

Get *real* answers from potential customers.

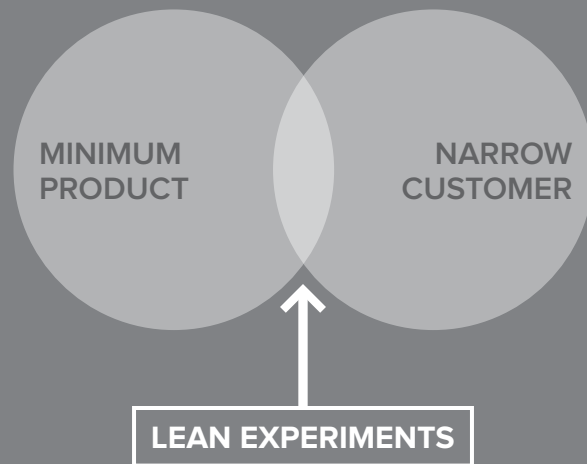
Transform our opinions into facts, so we make better decisions, *much faster*.

Tell a compelling story to our team, investors and stakeholders.

Dramatically reduce the risk and uncertainty associated with new ideas.

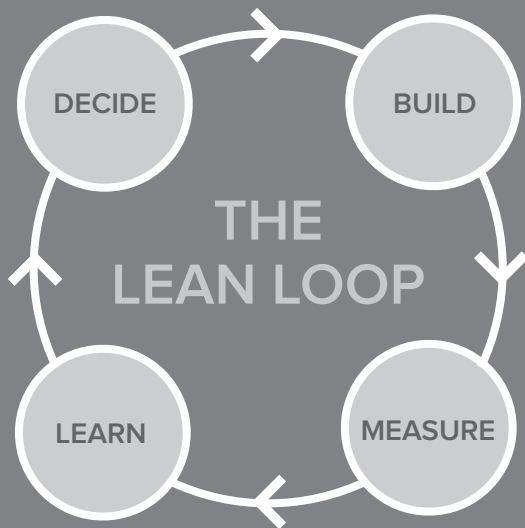
# START SMALL

BUILD THE ABSOLUTE  
MINIMUM REQUIRED  
TO TEST YOUR MOST  
CRUCIAL ASSUMPTION



# GO FAST!

## MOVE THROUGH THE LEAN LOOP AS QUICKLY AS POSSIBLE



## TRY THE LEAN LOOP

Honor the process while moving fast, generating new learning as you go. Time through the lean loop is the ultimate measure of effectiveness for lean enterprise teams - give it a try.

We developed a simple tool called the “Experiment Map”, to help record progress through experiment loops. Grab your poster, sticky notes and a pen, then let’s get started!

The Experiment Map form is a structured tool for recording progress through experiment loops. It features a grid layout with sections for "LEAP OF FAITH ASSUMPTION", "HYPOTHESIS", "EXPERIMENT", and "ACTUAL RESULTS". A red circle highlights the "LEAP OF FAITH ASSUMPTION" section. To the right of the form, the text "LET'S GET STARTED" is written in bold red letters, followed by a large red arrow pointing right. Below the form, a dashed box contains the text "write your answers on sticky notes...".

## LEAP OF FAITH ASSUMPTIONS

**Leap of Faith:** *The assumption we're making about our idea for which we have the least amount of validated evidence.*

Assumptions are things we take for granted as true, without evidence or proof. In the lean startup community, the term “Leap of Faith” is used to describe the riskiest assumptions we are making about our idea.

Teams often make assumptions about the most fundamental components of their business, especially assumptions related to customer behaviors; assumptions which turn out to be false when tested in the real world.

Your goal is to prioritize your riskiest assumptions as early as possible, then create experiments to quickly validate or invalidate these assumptions. By testing the riskiest assumptions early in your journey, you will dramatically reduce the uncertainty associated with your idea.

## EXERCISE

1

### 1. Brainstorm (10 minutes)

Write down as many assumptions as possible related to your idea, paying special attention to customer behavior. Consider things that must be true for this idea to work.

### 2. Prioritize (10 minutes)

Using the 2x2 matrix on your experiment poster, place each assumption on the poster according to the criteria listed (unknown vs. known + crucial vs. less crucial). Arrange as a team until all assumptions have been placed. Note items located in the upper right quadrant should be the riskiest assumptions you are making.

### 3. Decide (5 minutes)

Review the assumptions placed in the upper right quadrant of your 2x2 matrix, and select the assumption at the very top and furthest to the right. This is your leap of faith assumption.

**Hint:** Consider rewriting your assumption for clarity, and confirm it is indeed your biggest risk.



## HYPOTHESES

A hypothesis is a simple, educated guess for what you expect to happen in a given experiment. Hypotheses are similar to assumptions, but more specific. Hypotheses should include an “if, then” statement plus a numeric target.

**Example:** *If we provide an experiment map field guide, then 50% of people who receive it will conduct experiments after our workshop.*

In the context of searching for new business ideas, we create hypotheses as a way to measure progress, and structure our thinking. Hypotheses also help us communicate our logic to others. We use hypotheses to help tell stories about how our idea is progressing.

By committing to a numeric hypothesis, we can determine if our idea is improving as we make changes over time. We also keep ourselves honest regarding whether or not our results are performing as expected, encouraging the team to understand why or why not.

## EXERCISE

2

### 1. Create a Hypothesis (5 minutes)

Use the template below to create a testable, numeric hypothesis based on the leap of faith you prioritized in the previous exercise.

**Template:** If we [provide stimulus] then [x% or x#] of our target customers will [respond with].

- [provide stimulus]: Your solution details
- [X% or X#] = A target number
- [respond with] = What specific behavior will take place in response.

Write your hypothesis down on a sticky note, then add to your poster.

**Hint:** When selecting your target number, select a number large enough to get you and your team excited, but also realistic given your idea.



## LEAN EXPERIMENTS

**What is the minimum experiment might you create to quickly test your hypothesis?**

Design your lean experiments to be as close as possible to the behavior your customers must exhibit in the real world. Start uncomfortably small and fast, then increase the scale and scope of your experiments over time.

### THE BEST EXPERIMENTS:

Clearly align to the leap of faith assumption.

Measure a real behavior relevant to your idea and hypotheses.

Require minimal resources (fast and cheap)

Capture details about the people taking part in the experiment.

Do not let experiment subjects know they are part of an experiment.

**Hint:** See examples at [ExperimentMap.com](https://ExperimentMap.com)

## EXERCISE

3

### 1. Brainstorm (15 minutes)

Write down as many experiment ideas as you can. These experiments might not be your exact idea, but they should mimic the stimulus and response your customers will experience.

**Landing Pages:** Create a placeholder website as if your idea already existed.

**Mock-Apps:** Static screens for mobile apps, asking users to reserve a “beta” invite.

**Email Offers:** Pitch your product via an email message, tracking opens and clicks.

**Online Ads:** Create a quick ad campaign on properties such as Facebook, Google, etc.

### 2. Select a Lean Experiment (5 minutes)

Choose an experiment where you will see results quickly. As you make progress, your experiments may run for longer periods of time.



## BEHAVIOR & CURRENCY

Your experiment should include a specific behavior or series of behaviors to measure (such as a conversion funnel). By measuring real behavior, we can separate what our customers “say” from what they actually “do”. Never ask people to predict their behavior - measure real behavior with an experiment.

The best experiments attempt to collect some sort of “currency” (time, attention, data, or dollars), in order to gauge real interest. If prospects are asked to exchange currency, there is a higher chance the behavior is real.

## TARGET METRIC

All experiments should include a target metric specific to the behaviors you will measure in your experiment, which you establish before running your experiment. This number might be the same as your original hypothesis, or different depending on the specifics of your experiment. For example, an email marketing experiment will likely produce low conversion, given the nature of the email medium.

# EXERCISE

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### 1. Behaviors (2 minutes)

Write down the behavior(s) you will measure during your experiment.

**Example:** 1) Prospect visits landing page, 2) completes sign-up form, 3) uploads a profile picture. (3-behavior funnel)

### 2. Currency (2 minutes)

Write down the currency which will be exchanged during the experiment.

**Example:** Personal information during the sign-up form, plus profile picture.

### 3. Target Metric (2 minutes)

Commit to a target metric BEFORE running your experiment - no cheating!

**Example:** 30% of visitors complete the sign-up form, and 15% upload a profile photo.





# EXAMPLE

**Leap of Faith:** Large companies have the ability and desire to learn lean startup principles.

**Hypothesis:** If we provide an experiment map and field guide, then 75% of people will complete a lean experiment loop.

**Experiment:** Conduct a lean experimentation workshop highlighting how lean experimentation can dramatically improve innovation.

**Behavior & Currency:** Attendees create and run a lean experiment. Currency is time spent on the exercises, and attendees' willingness to step outside their comfort zone.

**Target Metric:** 75% complete a lean loop

**NEXT: RUN THE EXPERIMENT ON YOU**

*IN PROGRESS - You're taking part in our experiment right now!*

# GO: RUN YOUR EXPERIMENT WITH REAL CUSTOMERS

**! IMPORTANT !**  
**Don't tell customers you are  
running an experiment.**

## DON'T FORGET TO:

- Update your poster and chose a target metric for this experiment.
- Ensure the experiment will enable you to capture customer feedback.
- Test to make sure tracking is working.



## EXPERIMENT NOTES

## Customers (people your met)

## Observations and Surprises

## NOTES

## ■ ACTUAL RESULTS

What are the actual numbers generated during the experiment? By looking at the real data we can determine if the experiment passed or failed, and whether or not a trend is beginning to emerge in our data.

## ■ WHY?

Our fundamental goal is to use our experiments as a vehicle for learning from real customers. Understanding what caused our metrics is one of the most important skills to develop as a lean startup master. The reasons “why” will influence your next series of hypotheses, and add qualitative insights to the evidence you are building for or against pursuing your idea.

## ■ NEW INSIGHTS

Ultimately we’re hoping to find new insights we can use to further refine our idea, as we pursue creating passionate customers. Unique insights give you a competitive advantage.

# EXERCISE

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### WHAT DID YOU LEARN?

Learning is the most important lean startup principle, since you’ll use this new information to make your next decision. As a team, spend time discussing what happened, paying special attention to customer behavior and feedback.

#### 1. Actual results (2 minutes)

Write down the numeric results of your experiment. Did it pass or fail?

#### 2. Why did you get these results? (10 minutes)

Create new hypotheses as to why your experiment passed or failed. Why, why, why?

#### 3. Did you discover new insights? (10 minutes)

Ask each team member to share a discovery they made during the experiment. Is there anything which changes the way you think about your customer, problem, or solution?

**Hint:** Do your best to avoid the natural bias to say “everything went as planned”.



## DECIDE

**Based on the evidence you have collected so far, what will you do next?**

As you make progress on your idea, you will be asked to make many decisions based on limited data. Lean experimentation helps us make better decisions in the face of uncertainty, by helping us quickly generate new data when more certainty is needed. When in doubt, test it.

It is unlikely you'll be able to make big decisions from a single experiment, which is yet another reason to execute many experiments as quickly as possible. Lean experiments will begin to form a pattern, giving you more confidence when the time comes to make your next decision.

### NEXT INVESTMENT

Remember that you are always asking the fundamental question: Should I continue investing in this idea? You will be asking this question of your own time, of those helping you, and of potential resource investors.

# EXERCISE

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## 1. What next?

As a team, review your latest evidence and create a short list of potential courses of action.

## 2. Decide

Decide on exactly what you will do next. Common choices include:

**Iterate:** When you're data is inconclusive, or you need more evidence to bolster your decisions.

**Pivot:** When you have clear evidence you should make a substantive change in direction.

**Persevere:** When you have clear evidence you should continue in the same direction.

**Hint:** Don't over-think your decisions, since you can backtrack if you need to.

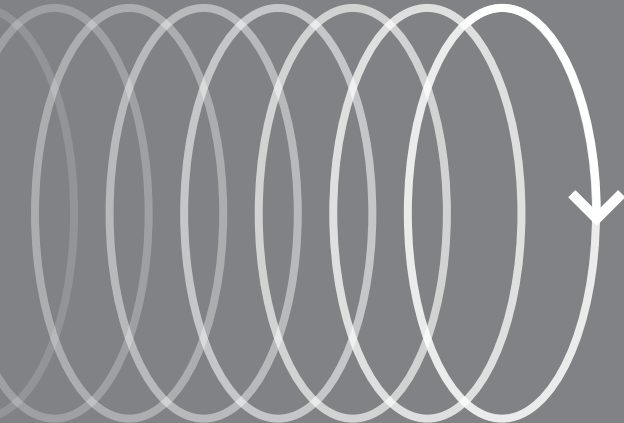


# REPEAT THE LOOP

## GO BACK TO THE START AND RUN YOUR NEXT EXPERIMENT

### TELL THE STORY AS YOU MAKE PROGRESS

Now that you have generated new evidence for your idea, use this evidence as guide posts to tell your story to others. Highlight what you'll do next based on the data.



# APPLY IT NOW

## HOW TO APPLY LEAN EXPERIMENTATION TO YOUR DAILY WORK

Lean experimentation is a huge benefit for new product innovation product teams, but it can also be applied with great success across entire organizations. In fact, huge gains are often achieved quickly by internal teams.

### Use lean experiments to:

Reinvigorate sustaining innovation efforts for existing product lines.

Improve functional initiatives in groups such as HR, legal, finance, and IT services.

Quickly explore new sales and marketing strategies for core products.

## REMEMBER THE LEAN PRINCIPLES

Start small, and begin experimenting with lean experiments as soon as possible.

# KEEP GOING!

***Congratulations, you survived your first round of lean experiments!***

Like any new skill, becoming a master of lean innovation takes practice. Continue learning at your own pace, or accelerate your journey with coaching and mentorship from the experts.

## **WHAT SHOULD YOU DO NEXT?**

The best way to change your culture is to introduce others to lean experimentation, and let them experience it for themselves. Here's how to make a big impact in your organization:

Become a LEAP expert yourself. Attend one of our skill-building events in your area.

Share with others. Arrange a LEAP workshop for your team, group or organization.

Practice on your own by downloading more LEAP tools and resources

**Visit: [www.MovesTheNeedle.com](http://www.MovesTheNeedle.com)**

# ABOUT MOVES THE NEEDLE

## **OUR MISSION**

Moves The Needle exists to transform your innovation capabilities from within.

We believe innovation is everyone's job, not just a select few, and building capabilities, systems and culture across your entire organization is the key to sustainable growth.



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