



LEAN STARTUP PRINCIPLES

Module 3 Readings



1 HR

MINIMUM VIABLE PRODUCTS (MVPs)

Have you ever been in a meeting where you talked for hours about how your customers might respond or how your participants might behave? You end up with a lot of theories and conjectures, but not a lot of actionable data to predict what will really happen.

Lean methods push us to get out of the building and not only talk to customers, but also test concrete things with them. This means that we are going to create minimalist versions of our products or services that might feel a bit rough. In fact, if you feel slightly embarrassed about the version of a product or service that you are putting out into the world, you are on the right track!

In this module, our goal will be to create a minimum viable product, or something that just contains the key features you want to test. No frills or extra bells and whistles. You want to translate your value hypotheses into a product that people can interact with & that you can learn from. Eric Ries defines a minimum viable product as “the minimum set of features needed to learn from early adopters” and reminds us that the goals are to: (1) avoid building products that no one wants and (2) maximize the amount of learning you can achieve.

Here's how blogger Robbert van Geldro breaks down an MVP:

Minimum: The least amount of effort required to offer some value to customers

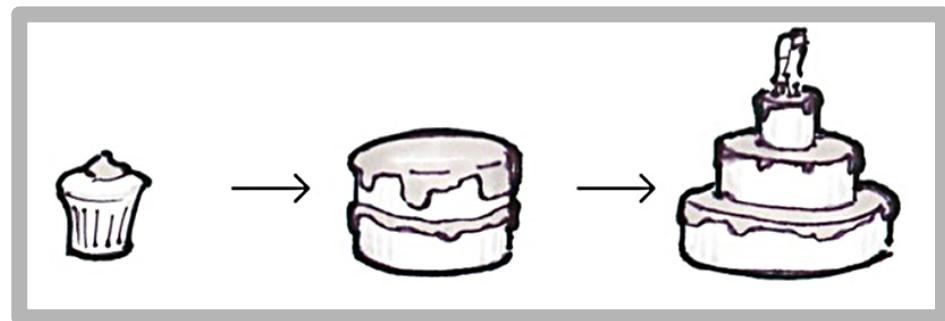
Viable: It should be as complete a product or service as possible. You want to bring multiple features together to get a sense of how customers will interact with the full thing, rather than just one element.

Product: There should be some element of “transaction” or “currency” exchanged between you and the customer to help you test whether they would really be committed to buying or using the product.

MINIMUM VIABLE PRODUCTS (MVPs)

We find these 2 images from popular startup blogs to be very helpful in conveying what a minimum viable product should be, and how you should approach building one. Take a minute and look at both examples. Discuss with a partner why the cupcake is an appropriate MVP for a wedding cake & why a scooter is a better MVP for a car than a single wheel. Then look around and find a few other common products in your house or office. How could you pare them down to an MVP that would capture just their core value propositions?

Example 1



Example 2

HOW TO BUILD A MINIMUM VIABLE PRODUCT

NOT LIKE THIS

1	2	3	4
悲	悲	悲	笑
○	○○	车头	车

LIKE THIS

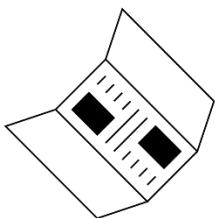
1	2	3	4	5
笑	笑	笑	笑	笑
滑板	单轮	自行车	摩托车	车

Image by blog.fastmonkeys.com original idea: spotify product team

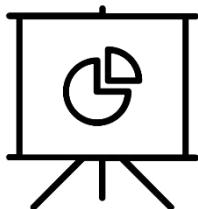
TYPES OF MINIMUM VIABLE PRODUCTS

How do you make your value proposition hypotheses tangible & testable? Here are 3 different ways we find it helpful to think about minimum viable products.

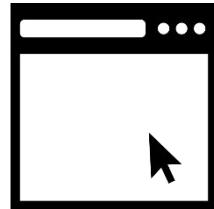
EXPLANATION: Create something that explains (or even better, shows) your key value propositions. Get people to commit to whether they would buy or use.



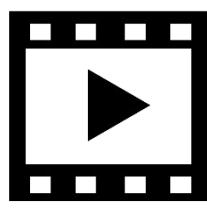
Brochure/flyer



Sales pitch



Landing page

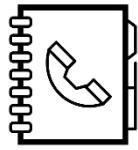


Demo video

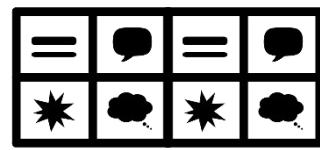
ARTIFACT: Create something concrete that people can hold in their hands. It should capture key features even if it is not in its final form.



“Imposter” MVP:
Take an existing product
& add 1 or 2 new features



Analog to Digital MVP:
Create a physical version of
something that will be digital

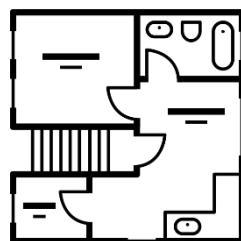


Wireframe/Storyboard:
Sketch out a sequence so that someone
can walk through a process

EXPERIENCE: Create something that captures how it feels to experience your product or service.



Concierge/Wizard of Oz
MVP: Perform steps/
services manually that
may eventually be
automated



Spatial MVP
Create an space/layout that
captures an experience

EXAMPLES OF MVPS IN THE SOCIAL SECTOR

SARAL DESIGNS

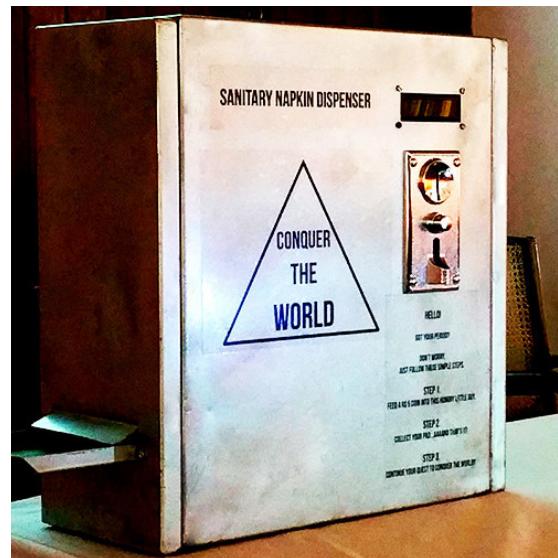
Entrepreneur: Suhani Mohan

Minimum Viable Product: A vending machine for sanitary napkins in Indian government schools

Suhani Mohan is an Acumen Fellow in India working on providing access to affordable and quality menstrual hygiene products to women and girls. Her team is developing a fully automatic, compact machine producing sanitary napkins in a decentralized manner and vending machines for improving the access to sanitary napkins.

She built a minimal version of a low-cost sanitary pad vending machine for government schools to test whether girls would actually be comfortable using this to buy supplies. She developed an MVP before investing in manufacturing and production.

[Read more about her company.](#)



EXAMPLES OF MVPS IN THE SOCIAL SECTOR

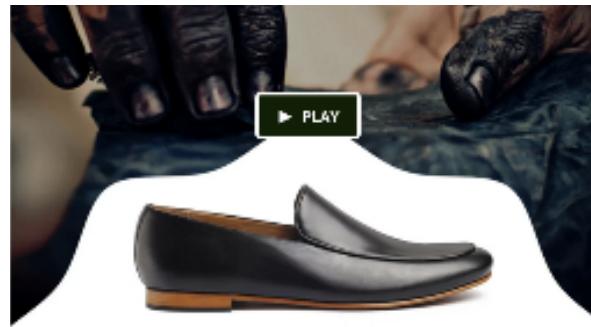
MARKHOR

Entrepreneur: Waqas Ali

Minimum Viable Product: A crowdfunding campaign hosted on Kickstarter

Markhor is a social enterprise that leverages the talent of Pakistani artisans to manufacture high-quality leather shoes. It was started by Acumen Fellow, Waqas Ali along with Sidra Qasim. To test demand for their product, this team of social entrepreneurs started a Kickstarter campaign.

Crowdfunding platforms like Kickstarter are effectively MVP factories. They work especially well for product companies because they allow you to essentially sell before you have something to sell. You can tell the story of your product and sell the value propositions through beautifully made videos, pictures and copy before manufacturing anything. In Markhor's case the campaign was in the summer and they delivered the shoes in April—nearly 10 months later.



Markhor – 1800 Year Old Craftsmanship for Gentleman's Shoes \$107,286
of a goal of \$150,000 goal

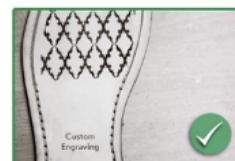
• San Francisco, CA • Fashion

STRETCH GOALS – Stepping forward!



\$50,000

We will hire 10 craftsmen fulltime
This will include a monthly salary, health and social benefits.



\$100,000

Custom engraving for every pair
+
We will hire 20 craftsmen fulltime
This will include a monthly salary, health and social benefits.

EXAMPLES OF MVPS IN THE SOCIAL SECTOR

A CONCIERGE MVP EXAMPLE

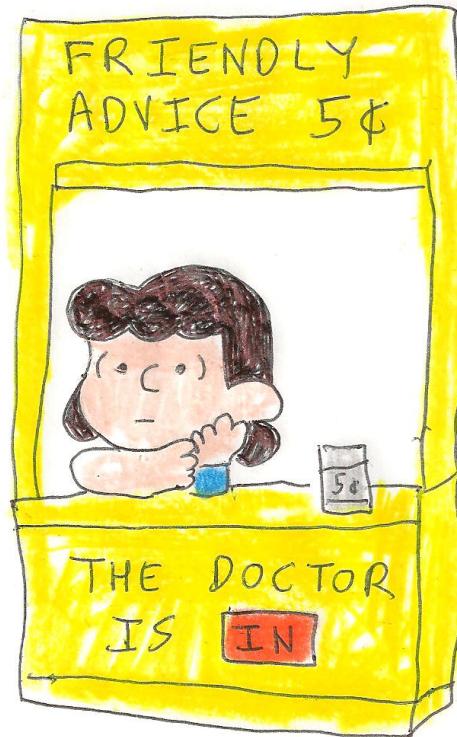
Entrepreneur: Acumen Fellows in Kenya

Minimum Viable Product: A booth offering career advice to university students

There's no better way to prove that someone is interested in your product than by asking them to hand over money for it. In a Lean Startup training that Acumen hosted in 2014 in East Africa, a group of Fellows wanted to create a suite of practical trainings including a mentorship program and internship placements to prepare Ugandan University students to land jobs and succeed in professional services.

For their MVP – they set up a little booth in one of the universities in Kenya, which had a hand-written post that said “Career Advice from Corporate Professionals.” They charged 30 min of career advice for \$10.

For an afternoon they took money and gave advice to students. At the end of the test, they gave the money back and explained that it was just a test to assess demand for this type of service. It's useful to actually take the money to prove that people are really willing to pay.



You can also use a “false door” MVP model, where you offer something like an ad or splash page to sell something online. When people click through, the message says “Sorry we don't have this product in stock yet, but it is great to know you're interested. Please give us your email so we can let you know when it's ready.”

EXAMPLES OF MVPS IN THE SOCIAL SECTOR

FASAL

[Learn More](#)

Entrepreneur: Deepa Bachu

Minimum Viable Product: SMS alert system for Indian farmers

Fasal is a free SMS-based service that provides rural farmers with real-time price information, and was spun out of Intuit. According to Beth Kanter: "Fasal started with an Minimum Viable Product (MVP). Instead of building out a full program to send daily automated SMS messages, the Fasal team selected a few farmers to test the program, and one of the team members sent SMS price alerts manually each day. They also started small and low-cost with the automated phone call system: instead of taking the time and money to build out interactive voice response technology, a Fasal team member recorded the "automated" voice behind the phone by reading call scripts. Once the team saw that the farmers were using the MVP system, they invested in and built out the full Fasal product infrastructure.

(from the Lean Impact blog series with Beth Kanter)

- + [\[Entrepreneur at Heart\] How Deepa Bachu and Co. lead Fasal at Intuit](#)
- + [Beth Kanter: Lean Impact Series: 10 Changemakers Using Lean Startup Methods For Greater Social Impact](#)

EXAMPLES OF MVPS IN THE SOCIAL SECTOR

FASAL

Entrepreneur: Afzal Habib & Sabrina Premji

Minimum Viable Product: brochures explaining their childcare centers

Kidogo is a social enterprise that improves access to high-quality, affordable early childhood care and education in informal settlements.

Entrepreneurs Afzal Habib and Sabrina Premji actually got started in a previous version of the +Acumen Lean Principles for Social Enterprises course! To validate their business idea, they developed a set of brochures that explained their potential services and showed them to parents in Nairobi to understand whether they would be willing to pay for high-quality childcare.

After validating that they had achieved early product-market fit, the team opened their first center and now continues to expand.



The image shows a brochure for Kidogo Early Childhood Centres. At the top is the Kidogo logo featuring a cartoon elephant and the text 'kidogo' in orange. Below the logo is the text 'EARLY CHILDHOOD CENTRES'. There are several small photographs showing children and staff in a classroom setting. A call-to-action text reads 'Turn your baby care into a kidogo Early Childhood Centre!' followed by a bulleted list of benefits: ✓ Certificate of training on early childhood development, ✓ Improved centre with flooring, mats, and regular safety checks, ✓ Canadian-designed curriculum and daily schedules, ✓ Play materials including toys, posters, and cupboards for storage, ✓ Posters for marketing in your own community. Below this is another call-to-action: 'Attract more mamas by providing safe, affordable and high-quality baby care services, to increase the success of your centre!' At the bottom, it says 'All for a small monthly fee paid through M-PESA!' and 'Would you be interested in joining kidogo?' Below this are three options labeled A, B, and C, each with a photograph and a list of features and costs.

OPTION A	OPTION B	OPTION C
 For ages 0-12 months+2 years! Baby care, daily clean, nursing, play unit <ul style="list-style-type: none">✓ Basic clean environment✓ Good ventilation✓ Mattress for sleeping with mosquito net COST: KES 50/day	 For ages 0-12 months+2 years! Baby care, daily clean, nursing, play unit <ul style="list-style-type: none">✓ Basic clean environment✓ Good ventilation✓ Mattress for sleeping with mosquito net✓ Adequate learning materials✓ Qualified caregiver in ECD✓ Standard daily schedule COST: KES 70/day	 For ages 0-12 months+2 years! Baby care, daily clean, nursing, play unit <ul style="list-style-type: none">✓ Basic clean environment✓ Good ventilation✓ Mattress for sleeping with mosquito net✓ Adequate learning materials✓ Qualified caregiver in ECD✓ Standard daily schedule✓ Canadian-designed curriculum✓ Roofed building provided✓ Access to emergency medical services COST: KES 100/day

HOW IS AN MVP DIFFERENT THAN A PILOT PROGRAM?

In the international development and non-profit sectors “pilot programs” are common. Typically, before a government agency or foundation launches a major new initiative, they will stage a “pilot phase” where organizations can apply for smaller tranches of funding to try out an approach and see if it works. Unfortunately, many of these pilot programs never go anywhere. This has become so common that some people in the sector have coined the term “pilotitis” to describe this phenomenon.

An MVP is different. It is designed to test certain key hypotheses & help a team move forward quickly based on what works. While pilot programs often focus on testing something with a small population before scaling it up, they are often testing things that are quite well-developed. Minimum viable products will be “rougher around the edges” & should enable multiple rapid cycles of learning, rather than waiting for a “pilot phase” to end.

For example, in response to a call for proposals for a USAID literacy initiative, an organization may propose creating an app for teaching literacy skills in Swahili. They could invest a lot of upfront time and effort in building the app before testing it with end customers, but it is considered a “pilot” because it is only being offered in one location first, rather than being scaled globally.

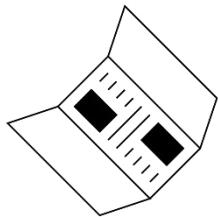
REFLECT

- + How would an MVP be different?
- + What an MVP look like for this literacy app?

KEY ELEMENTS OF TESTING WITH CUSTOMERS

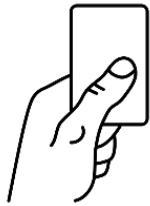
Once you have your MVP, you're ready to start testing with customers.

Here are the 3 things you'll need:



1. Product or Service to Test

Your Minimum Viable Product



2. Experiment

How You Will Actually Test Your Minimum Viable Product



3. Metrics

How You Will Measure Whether Your Minimum Viable Product is Successful

MOVING FROM MVPS TO EXPERIMENTS

Experiments don't just happen in labs. It's common knowledge that new technologies have enabled companies like Google, Facebook, and Dropbox to increasingly understand the factors that drive adoption of their products or lead to sustained growth. As you probably know, when you log into Facebook, you might be seeing a different version of the interface than your friend sees. Data about how you respond to and interact with the interface is collected on the backend and used by the company to identify patterns and make decisions that inform the design of the product.

Or, you may have used an email marketing service to send out the same email with 2 different headings to 2 different subgroups of your mailing list, and see which garners more "clicks." These are examples of the new types of "experiments" that can now be conducted in simple and seamless ways. We'll walk you through how you can design data-driven experiments to figure out if your minimum viable product in the social sector is working or whether you need to iterate (change a feature) or pivot (adopt an entirely new approach).

Experiments are a way of moving beyond what people will say to what they will actually do.



3 TYPES OF EXPERIMENTS TO TRY

How do you test whether your minimum viable products are working? How do you validate your hypotheses? Here are 3 types of experiments you can design.

1. Test perceived value

Are people intrigued by what you are offering?

“Pick up” test

Place several different versions of a product on a table. Do people pick up yours vs. the others? What happens if you tweak one or two features?

“Click through” test

If your MVP is digital (i.e. a landing page), how many people click through to read or see more? Offer 2 different versions and see which garners more “hits”. This is a basic A/B test.

2. Test willingness to buy

Will people actually part with their money in exchange for your product or service?

“Fake” sales

Have a sign up sheet or a “buy now” button so people can demonstrate intent to pay.

Crowdfunding

Set up a Kickstarter campaign and see if people care enough to finance your project.

High Hurdle

Make your sign-up process arduous & see who persists. This is a way to find your dedicated customers.

3. Test willingness to use

In the social sector, your product or service will only have impact if it is used in the intended way. Will people use it as you designed? Will it actually inspire behavior change?

Walk Away.....and then

Steve Blank says that it is important to “get out of the building.” In the social sector, we thinking the next step is then “getting out of the way.” Hand over your product & go away. Come back in an hour, a day or a week and see if it was actually used as intended.

Ask for a self-report

- + Ask someone else: Ask a parent, teacher, neighbor, or onlooker about whether people used the product as you desired.

- + Embed a sensor or meter to track use (getting permission first, of course).

THINK BACK TO SCIENCE CLASS

Establish a baseline for comparison.

Change just 1 or 2 variables at a time.

- + For example, you could present 2 versions of a home page for a solar lighting company and see which one has more sales conversions.
- + Or you could place 2 different models of a new microdrip irrigation model side-by-side at a kiosk and see which one more farmers purchase.
- + Or you could give two versions of an educational tablet to a classroom of students and see which one has more student hours logged by the end of the week.

Control for other factors that could affect your results.

- + You should test with roughly the same types of people (between-group design) or, ideally, the same people (within-group design).
- + Pay attention to whether your experiments could be affected by things like weather, time of day, gender of participants, social class, and other factors.

+ However, keep in mind that “Lean Experiments” are not randomized control trials that strive to be perfect. They are designed to generate actionable data that you can work with quickly & get rough approximations or a sense of how to move forward with your business and impact model.

Prove that customers are willing to hand over some type of “currency.”

- + Design experiments where they need to hand over actual money in exchange for the product or service you provide
- + Have them demonstrate persistence by investing a lot of time in navigating through a sign-up process
- + Have them enter their email address or contact information to express willingness to commit.

AVOID VANITY METRICS

Eric Ries says that you can collect 2 types of data when you are running Lean Experiments

- + **Vanity Metrics** are data points that sound good, but that don't actually help you make decisions
- + **Actionable Metrics** are data points that clearly help you distinguish what is working from what is not, and make concrete decisions to move forward more effectively

You can probably guess which type he advocates. We've found that non-profits and social enterprises are particularly vulnerable to employing vanity metrics. Faced with the task of writing an end-of-year report that will be read by a funder, it can be tempting to just try and measure everything so that you appear to be doing a lot, even if your program or service isn't having the intended effect.

For example, a non-profit running an advocacy campaign could tabulate # of emails sent, # of flyers created, # of marketing materials designed, etc. These would all be vanity metrics, however,

because if they ultimately didn't lead to things like # of opened emails, # of new sign ups for their program, # of signatures on a petition, etc, they mattered very little. The organization should have been measuring only the things that would help them make decisions to improve their impact and/or business model.

Learn more: this [blog post](#) by Eric Ries is helpful.

TEST YOURSELF

Are these vanity metrics?

1. total number of hits to your website
2. A/B test data which shows that 50% more people who were shown a blue button clicked on it and registered to vote than were shown the red button
3. # of pages in your website
4. # of flyers you distributed at city hall

If you guessed, "yes" to all but #2, you're correct.

THE ETHICS OF EXPERIMENTS

Picture this. You're a teacher at an all-girls school who wants to test a new version of a reproductive health curriculum. You decide to conduct an A/B test—implementing the old version of the curriculum with two classes of girls that you teach and trying out the new version with two classes of girls you test. At the end of both lessons, you implement a lesson and realize that only 20% of the girls who received the new curriculum understand all methods of contraception accurately compared to 90% of girls in the other 2 classes. What should you do? Clearly, your experiment yielded results about which curriculum was more effective, but do you have an ethical responsibility to do more? Of course.

When there are consequences that could affect real people's lives and livelihoods, you should definitely ensure that they receive the information, services, products, and supplies they need regardless of what "experimental condition" they were placed in. Keep in mind that Lean experiments are primarily about small features adjustments rather than life or death decisions which require formal IRB approval. However, you should exercise common sense as someone who works in the social sector and cares first and foremost about trying to create the most good for the people you are trying to serve.

3 best practices we keep in mind when designing ethical experiments:

Be transparent. If you have 2 versions of a product on a table and want to see which one people are more inclined to pick up, you don't have to disclose this to everyone who stops by. However, if people ask questions about what you are selling or why you have 2 different designs, be prepared to articulate what you are doing in plain language. Have people on hand who can serve as translators if needed.

Consider compensating people for their time. If customers provide lots of feedback on an MVP or go through multiple rounds of indicating which product features they like or would use, it might make sense to give them a token of appreciation.

Refer them to appropriate resources. If you feel like your interviews and experiments reveal needs or pains that are urgent, but that you do not plan to address with your product or service, be able to refer people to other resources that might help. For example, if you're designing a job training program for formerly incarcerated men and many of them end up asking you about Title 8 housing, you might want to have the name of a local organization that can help them on hand to refer them to.