When I started a job at a mid-sized university in southern Virginia, the systems librarian position had been vacant for more than one year.

The computer systems had fallen under some disrepair.

- The ILS, where nearly everyone worked, was not up to date and staff knowledge was sometimes spotty
- The public catalog also needed an update
- The website hierarchy was a mess because groups got permission to publish their own pages, ignoring standard formats

Other than some very immediate problems, I really didn’t know where to start. Staff members were pulling me in different directions.

The director wanted changes that students and faculty would immediately see. But everyone let me know my first steps would be my own decision.

I had no idea where to start. I soon found out I wasn’t that much different than many other new System Librarians.

We have overtaxed staffs. We’re pulled in a hundred different directions. In the back of our mind we worry whether these changes are really working. We know we’re supposed to be engaging our patrons, and there’s a million ways to do it. Where do we start? Finally, we come to conferences like this, and we are just overwhelmed.

Little did I know that a solution was right in front of me. Norfolk, VA – home to the largest naval base in the world – was also hub to a small but persistent startup community, where groups of entrepreneurs showed others how to create businesses out of opportunities and customer needs.

Their philosophy was simple: You could design and build a simple product in almost no time, get it into peoples’ hands and see how they liked it.

This was about the time progressive Library and information thinkers began looking to bottle the energy of startups to help libraries implement the next generation of big ideas and find different solutions to our age-old problems.

Great read: Think Like a Startup by Brian Mathews.
To better understand the startup methods, members of Norfolk’s community said to read The Lean Startup: How Today’s Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses, a book by Eric Reis. It best captures, they said, the methods necessary in our age to develop new products and services.

Underlying his model is experimenting with a product idea and validating its effect. This is in opposition to organizations that create massive plans, engage in long development cycles and release new products as fully-formed entities.

Reis describes his model: Build - Measure - Learn

You’re not throwing things against the wall and seeing what works. Nor are you sitting hypothesizing about what you think your customers want. You are looking for something that works.

While startups live in a great deal of uncertainty, Librarians also work in a terribly uncertain environment. This Lean Startup method is geared to attempt to bring some order to the chaos.

While the Lean Startup was originally geared towards the Tech community, it is really about creating new products and services in both the virtual and terrestrial world.

Photo Credit: Nick Walker - Vandal Tossing Paint by RJ
According to Reis, the goal of a startup is to figure out the right thing to build - the thing customers want and will pay for - as quickly as possible. This means teams must rush to turn their ideas into products, but they must be intelligent in gauging how their customers respond. From that feedback, they must tweak and change the product. This feedback loop – the Build, Measure, Learn – must be carried out at lightning speed.

To a startup, the worst thing could happen is to spend a lot of money and time building a product that nobody wants. Startups don’t have a lot of money or time. To fight this off, Reis writes, startups use speed and agility to try to create a product in extreme market uncertainty.

A successful startup doesn’t just make the coolest widget, he continues. A successful startup figures out how to make good product, but how to make them smarter.

We see some of these problems in Libraries. The Internet has opened up so many options, Library staffs find themselves scrambling to stay ahead. There is so much to do, we must find a way to prioritize our staff time and funds.

Photo Credit: tools / werkzeuge by Peter Heilmann
Product Development.

In the book Creative Confidence by David Kelley, founder of the design firm IDEO, and his brother Tom (an author and IDEO partner), the two men use a Venn diagram to illustrate how they begin thinking about new products. I like to think of their Venn diagram as a three legged stool where you balance three basic questions.

Here are the Kelley’s basic questions to be asked before embarking on any new product or service:

1. Is the product technically feasible? Can we solve the technical factors?
2. Is it feasible from a business standpoint? Do we have money/time to make it...(This is more important than you think.)
3. Most important. Does it make people sense? Do people want this product? Does this product fill a need that people have – or will have?

“We aim to understand why people do what they currently do, with the goal of understanding what they might do in the future,” they write.

So, the first lesson from the world of startups is to know what your patrons want.

Photo Credit: Zulu Mama Stool, Designed by Haldane Martin, Photo Micky Hoyle
Lesson One: Know your customers.

Successful organizations solve specific needs, or give people a solution to a need they didn’t know they had.
• Think the AARP and the NRA. Their members join the groups to receive specific benefits.
• Products and services also solve specific needs: Spotify, Feedly

Solving needs makes organizations – and products – relevant to the daily lives of their members or consumers. Solving problems for people is way libraries, benefit organizations and businesses are similar.

To solve specific needs, you need to know two things:
1. What your patrons want.
2. And, what they will want. (Some people call this latent needs).

The more we understand – empathize – with our end users the better, Tom and David Kelley write. We should stay away from our preconceived notions of the needs of our patrons. And we always must think of ways to keep fresh ideas about our customers.


Photo Credit: russiandolls by Andrew TehLonz
Lesson Two: Get a product in front of people

Get a product in front of people as quickly as possible, Reis writes. There is no guarantee that something you build won’t be a flop, but the faster you know this, the better.

The problem is consumers often express their desires, needs and wants in vague, general terms. They sometimes don’t have the vocabulary to express these needs. Or, like many people, they don’t like to think in terms of hypotheticals.

Your job is to translate these vague needs.

While we should be asking users to state their needs, watching them interact with a new product is even more informative. While they’re using your product, have them explain to you what they’re doing. Taking us through their processes is also very instructive.

Abbie Griffin, in her chapter called Obtaining Customer Needs for Product Development in the book: The PDMA Handbook of New Product Development, argues there’s a lot of information customers can’t tell you.

For example:
1. They can’t tell you what exactly you should develop. Features, looks, etc. should not come from customers, but from your team.
2. Customers also cannot provide reliable information on what they have not experienced or do not know firsthand. If they aren’t ebook users, don’t ask them to weigh in on a new reader.

But customers can articulate very well the needs they have and the problems that need solving. "They can indicate the problems and features they currently use to meet their needs, where these products fall short of solving their problems, and where they excel," she writes.

Photo Credit: Lemonade, anyone? by Larry W. Lo
Before we go any further, let’s define “product.”
Eric Reis calls it the “Minimum Viable Product,” a hallmark of his thinking.

Minimum viable product means: Something simple, something functional, but not perfect. You give it to people and see what they think.
It should contain the core functionality of the product or service you’d like to make – but only its critical features. It may have some major bugs (or problems), but it certainly has many minor bugs. It doesn’t have to be the smallest product you can make. It just has to be fastest way to get into peoples’ hands so you can start learning.

Let’s think about this another way:

This is from 37 Signals, the group that brought us Basecamp.

They worry about software designers trying to one-up each other by making more features.
37 Signals strives for:
• Less features
• Less options/preferences
• Less people and corporate structure
• Less meetings and abstractions
• Less promises

37 Signals argues building less software lowers the cost of change, making it easier to change.

At the end of the day, the Minimum Viable Product is what you are happy with. You may be embarrassed by its quality, but you can tell that it just (sometimes barely) does its job.

Here’s part of the 37 Signals manifesto: https://gettingreal.37signals.com/ch02_Build_Less.php

Photo Credit: Mannequins by ezhikoff
One problem about a closed product development process is we build things based on our assumptions – instead of things our customers really want. It may take a long time to debate these assumptions, which are disguised as arguments over features or how to prioritize development. If no one uses your extra features, the time spent on those debates was wasted.

Reis argues that each product should be seen as an experiment to test a hypothesis. Before each product is made, we make general assumptions, something like: Twitter is popular with our patrons. If we add Twitter as a method to receive reference questions, we should receive more reference questions.

Generally, these assumptions are buried within a project plan. Reis argues we should embrace the assumptions. In fact, we’re building the product to validate them.

Photo Credit: Assumption, Minnesota by Andrew Filer
Let’s talk about customer segments. The problem with Minimum Viable Product is you have to get them into the hands of the right people. Not everyone is wired to deal with a product with minimum amount of functionality. However, there are people you can turn to...You just have to find them.

In his book Crossing the Chasm, Geoffrey Moore outlines a cycle of technology innovation acceptance. He borrowed this cycle – a bell curve, actually – from Everett Rogers, who wrote his Diffusion of Innovations in 1962. (While Moore concentrates on technological innovation, marketing guru Seth Godin points out it’s a very good indicator of how people accept any product.).

The left side of the bell curve includes those who pick up new technologies very quickly. As you move to the right – to the larger majority of people – people are less willing to try and use new technologies.

These groups include: Innovators, the first people to accept an innovation. They are risk takers, have contacts with people who build cutting-edge products and interact with other innovators. They don’t mind 80 percent solutions or programs with bugs in it. They have a need to be first.

Early Adopters, who adopt to new products just behind innovators. Members of this group may not have the stomach to handle a completely new (and buggy) product, but they are still risk takers. They may also have enough cachet with members of other groups to promote your new product.

Early Majority, those people who purchase new innovations after a degree of time. They are pragmatists, they don’t like products in early beta, but they are willing to pick up a new innovation. They listen to some members of the early adopter class.

Late Majority: These are the regular people. Perhaps they got a Kindle last year for the holidays. They will only purchase innovations after it has been on the market for a few years.

Laggards: The last group to adopt to new innovations.

The main idea is you first design products for innovators and early adopters. But you eventually make the product good enough to insure the early majority and (maybe even) the late majority are interested in it. However, the groups in the higher part of the bell curve have different requirements and are demanding in different ways, writes Seth Godin in his book Purple Cow.

Photo Credit: cambodia4kidsorg
We spoke before about the type of feedback customers are adept at – and what kind of information is not so valuable. Receiving customer feedback is always important, but you have to treat it as just another form of product information.

Reis suggests that organizations can be very successful by treating customers like test subjects. Change certain aspects of the product (or service) and then test to see how different customers behave.

One popular test is a split test or an A/B Test. It is a control test where you show different groups slightly different versions of a product and gauge how they react. You can receive customer feedback in person, via surveys or through web analytics. For virtual products it may be best to run the test simultaneously, but you can also run A/B tests over time.

A/B tests can be very hard to carry out, not only technically but also organizationally. You have to find enough people to create (at least) two groups. You also must figure out exactly what you are going to test.

A/B tests are so prolific in the Tech World that some firms will not even make minor without first testing it with customers. Even in physical services, A/B tests can be a good method to track customer behaviors.
Customer reviews are an important source of feedback. But they are not the only one. Both physical and virtual products should be tested against a set of metrics. In the Lean Startup, Reis argues that these product metrics need to be actionable, auditable and accessible.

Actionable statistics is probably the most important for Librarians. The metrics to test your product against must show clear cause & effect, which can be difficult because so many library services are dependent on other factors. For example, the number of patrons per day may involve weather issues or random chance. The number of reference questions in an academic library may be dependent on many factors: time of the semester, whether a specific professor created a ‘library assignment’ and so on.

To provide more cause & effect, you must map statistics to specific actions: Questions asked, number of pages viewed, number of items downloaded. Reis also suggests analyzing cohorts, which is a group of people who share a common characteristic. This could be easy for many libraries: First year students (for academic libraries); members of the College of Liberal Arts; People who live in a specific zip code, people who check out more than three items a month.

Auditable statistics mean that your team should trust provenance and veracity of the metrics. It is best to agree on the meaning and value of certain statistics before you begin product testing.

Making reports and data as simple as possible insures they are accessible, Reis argues. He points out one way to simplify metrics is to place a human value to them. What is a website hit? What is a page visit? No one may know. But how many people visit your website and how long do they stay are important questions. Build your statistics like that.

He reminds people that statistics are people too.

Photo Credit: 102 Persons Have Drowned by Jonathan Lidbeck
Lesson Three: Know when to pivot.

“Startup productivity is not about cranking out more widgets or features,” Reis writes. It’s about harmonizing efforts to make products that create more value and growth.

A pivot takes place when your tweaks to your product or service no longer increase growth of your product. Your MVP began as a hypothesis, and you measured that product against the small changes you’ve made from customer feedback and testing. If that hypothesis is not attracting the behaviors you want, you may need to come with a new hypothesis and change your product or strategy. This is called a pivot.

Reis is careful to point out that a pivot keeps one foot in the product’s past and the second foot searching for a change of strategy. This can be very difficult decision for startups to make. But think of the opposite: You continue to make small, cosmetic changes that get you very little. Instead of micro changes, sometimes you have to do something radical.

Deciding to pivot can be emotional, Reis says that teams should hold these decision meetings on a regularly scheduled basis. This will insure the product or service is meeting goals set by your hypothesis.

Photo Credit: This tree changed majors a couple times by Chris Waits
Here is a list of a few pivot types that Reis points out.

Customer Segment Pivot: “The company realizes the product it is building solves a real problem for real customers but that they are not the type of customers it originally planned to serve.”

Customer Need Pivot: When an organization discovers it is creating a product that doesn’t solve actual problems for customers.

Zoom-in pivot: What previously was considered a single feature in a product becomes the whole product.

Zoom-out: Where the single feature is insufficient to support a whole product.