

Chapter 3 **Influence of Lean Startup**

Three ideas useful in effective analysis of IT projects:

1. Customer development
2. Build-Measure-Learn
3. Metrics

Customer development is helpful when we don't know the problem.

Agile development is helpful when we don't know the solution.

Guide to Customer Development

Four Steps

Framework to discover and **validate** that you have identified the market for your product

Built the right product features that actually solve “customer” needs

Tested the correct methods for acquiring and converting customers...

Deployed the right resources to scale the business.

Cooper and Vlaskovits... 4 steps of customer development.

Table 3.1 Steps of Customer Development in Relation to IT Projects

Customer Development Step	Definition	Applicability to IT Projects
Customer Discovery	A product solves a problem for an identifiable group of users.	Understanding the stakeholders and their needs
Customer Validation	The market is scalable and large enough that a viable business might be built	Understanding whether any of the proposed solutions are worthwhile
Company creation	The business is scalable through a repeatable sales and marketing roadmap.	Is the solution scalable enough to satisfy all of the relevant stakeholder need.?
Company building	Company departments and operational processes are created to support scale.	What additional support needs to be in place as the use of the solution grows?

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Table 3.2 Customer Discovery Step (page 27)

1. Document customer-problem-solution hypothesis
2. Brainstorm business model hypothesis
3. Find prospects to talk to
4. Reach out to prospects
5. Engage prospects
6. Phase Gate 1: Compile / Measure / Test
7. Problem-solution fit / MVP testing
8. Phase Gate 2: Compile / Measure / Test

Table 3.3 Customer Discovery Applied to IT Projects

1. Identify the need.
2. Hypothesize potential solutions
3. Identify assumptions
4. Validate assumptions
5. Start delivering
6. Constantly reevaluate your solution

Table 3.3

Step	Description
Identify the need	... you may not always know the actual need you are trying to satisfy.
Hypothesize potential solutions	Once you have an understanding of the need, hypothesize a potential solution.
Identify assumptions	“What must be true for this solution to be effective?” assumptions about the business environment, project dependencies, minimum req’ts for a solution... Change management required.
Validate assumptions	... validate your assumptions and test your solution.
Start delivering	... a minimal viable solution and get feedback...
Constantly reevaluate your solutions	... make sure it is still worthwhile (regularly ask whether you should commit to, transform, or kill the solution).

Build-Measure-Learn loop

Lean startup cycle

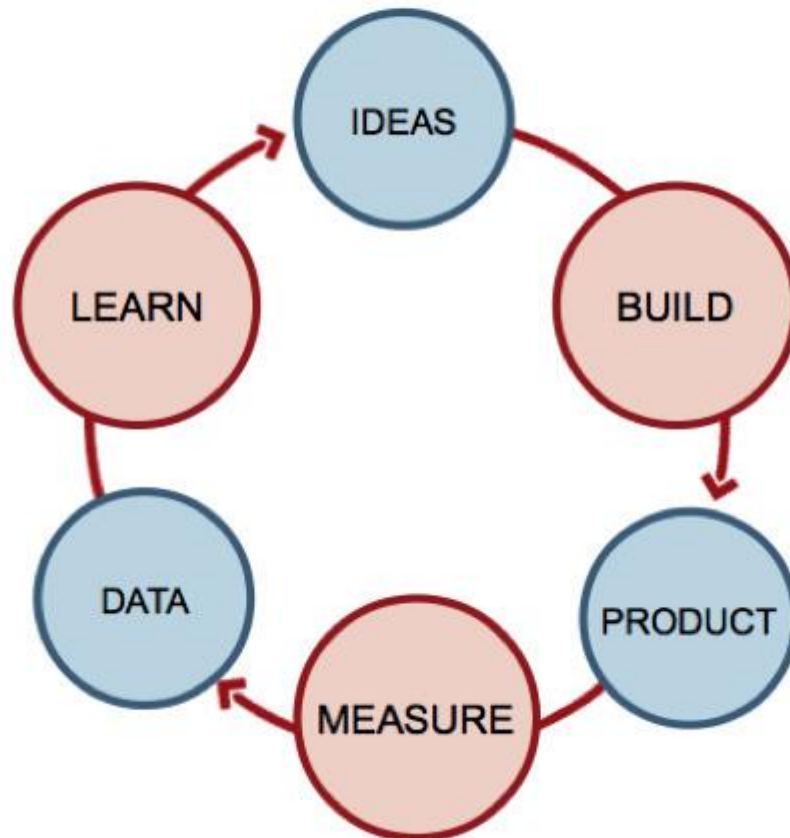


Table 3.4 Build-Measure-Learn Loop

Step in the Loop	Description
Idea	Stakeholder need. A desired outcome is based on a bunch of assumptions that you should validate. You need to identify some form of metric based on your overall goal that you can use later on as a measuring stick to tell whether you are successful
Build	Pick a specific solution to deliver... this is output. Your goal is not necessarily the be-all and end-all, it is to understand the impact this output has on satisfying the need.
Product	The output of the product
Measure	Deliver this output in isolation so you can see its impact on the outcome free from any other influences.
Data	Observe the impact on the metric you identified.
Learn	Examine the data and decide if the change you delivered made the impact you wanted. If not, try something else... and start the whole cycle all over using your remaining options.

Metrics

“How you use metrics is essential...

“If the team measures anything, it probably reflects the output the team is producing using such metrics as committed versus actual story points, or the cumulative story point delivered.”

In order to gauge success, look at metrics that indicate whether you are achieving the **desired** outcome(s)

Good Metrics!

Table 3.4 Characteristics of Good

Metrics

Comparative	<p>If you can compare a metric between two time periods (groups of users, or competitors) it's easier to identify trends and the direction of those trends.</p> <p>For example, it's more meaningful to know that you received 650 paper claims last week and 500 paper claims this week than just to know how many paper claims you received this week.</p>
Understandable	<p>You want people to be able to remember, discuss, and interpret your metrics so that they are more likely to change their behavior. If people can't remember it and discuss it, it's much harder to turn a change in the data into a change in the culture.</p>
It's a ratio or rate	<p>Ratios make good metrics because they are easier to act on</p> <p>Inherently compare different factors</p> <p>Good for comparing factors that have some tension between them</p>
Change behavior	<p>The main reason to track metrics. For example, a health insurance company is concerned about being able to handle an anticipated increase in claims... not wanting to hire additional staff... but entering paper claims takes too much time. Measuring paper claims per week would indicate whether submitting electronically mattered</p>

Table 3.6 Examples of Good Metrics

Goal	Objective	Metric
Improve stock –buying practices and reduce inventory	Increase inventory turns from 5/year to 10/year by the 4thquarter	Inventory turnover
Improve the ability to handle an anticipated increase in claims volume	Reduce paper claims received per week from 1,000/week to 500/week by the 4 th quarter	Paper claims received/week
Increase the feedback that submitters received on their sessions.	90% of sessions should have one review within one week of submission and three reviews within two weeks of submission	Reviews/session

Examples of Good Metrics

- The ability to post a session (assuming that it's not there)
- The ability to post reviews
- Notification when new session proposals are posted to a given track
- Knowledge of when the session proposals were submitted
- Knowledge of how many reviews were submitted to a session proposal

Things to consider with Metrics

Qualitative versus Quantitative

Vanity versus Actionable

Exploratory versus Reporting

Leading versus Lagging

Correlated versus Causal

Creating Your Metrics

Qualitative Research

... exploratory research.

Used to gain an understanding of underlying reasons, opinions, and motivations.

... provides insights into the problem or helps to develop ideas or hypotheses for potential quantitative research.

... used to uncover trends in thought and opinions, and dive deeper into the problem.

Source methods: focus groups (group discussions), individual interviews, and participation/observations.

The sample size is typically small, and respondents are selected to fulfil a given quota.

Quantitative Research

Used to quantify attitudes, opinions, behaviors, and other defined variables – and generalize results from a larger sample population.

... uses measurable data to formulate facts and uncover patterns in research.

... data collection methods are much more structured than Qualitative methods.

... collection methods include various forms of surveys – online surveys, paper surveys, mobile surveys and kiosk surveys, face-to-face interviews, telephone interviews, longitudinal studies, website interceptors, online polls, and systematic observations.

Vanity versus Actionable

What will I do differently based upon the information resulting from either of these metric types?

Vanity metrics “make you feel good” ... not useful

Actionable metrics help you pick a course of action...

Example:

Reviews and retrospectives per iteration...

Exploratory versus Reporting

Exploratory metrics help in finding new insights... anything that would add to your knowledge about how best to solve the problem.

Reporting metrics track day-to-day operations and identify when an established process is starting to stray from normal operations.

Leading versus Lagging

Leading indicators... predictors.

Helps in identifying how likely you are to reach a desired outcome.

Lagging indicators... describe what happened in the past

“You deploy your solution, wait for it to have an effect... then after a preset time frame you use a metric to assess the result.”

Correlated versus Causal

Two metrics are *correlated* when they move together...

... predictions are useful if a change in one metric always precedes the change in the second metric.

If a change in one metric drives a change in the other, they are *causal* ...

This allows you to make changes in one metric that will effect the other...

Creating Your Metrics

“Good metrics are a powerful way to describe what you want to accomplish with an IT project and know how close you are to getting there...

... driving the behavior change”

“Bad metrics can change behaviors as well, but rarely in the way that you want.”

Table 3.7 shows the types of metrics...

Table 3.7 Metrics for Different Situations

	Project Objective	Discovery	Process Health
Qualitative/ quantitative	Quantitative	Qualitative	Quantitative
Vanity/ Actionable	Actionable	Actionable	Actionable
Exploratory/ Reporting	Reporting	Exploratory	Reporting
Leading/ Lagging	Leading	Lagging	Leading or lagging
Correlated/ Causal	Causal	Correlated or causal	Correlated or causal
Example	Paper/claims/week	Impact on sales of different commission structures	Velocity (story points per sprint)

Start-ups and “One Metric That Matters”

OMTM

“... by paying attention to one key thing at a time a start-up can have clear focus on ... the right thing, at the right time, with the right mindset.

For IT projects, identify a single objective ... allows the team to focus on the output that is needed to meet that objective...

... removing everything that does not lead to meeting that objective.”

The “all objectives are equally important” syndrome

Either some of the things you think are objectives are constraints, or they really describe outputs instead of identifying when you have reached a specific outcome.

You are undertaking too much...

IT projects become dumping grounds for a bunch of different changes that an organization accumulates over time...

... and no single change warrants an initiative...

“Controlling the scope of your project by listing the number of objectives can help the team meet these objectives sooner”

Advice

“Controlling the scope of your project by limiting the number of objectives you tackle can help your team meet those objectives sooner and with potential fewer outputs...”

If you Remember Nothing Else

- Validate assumptions early and often
- Shorten your feedback cycle
- Use metrics to help you determine whether you are on the path to delivering your desired outcome