ITI8740/ITX8522: Software Development Team Project
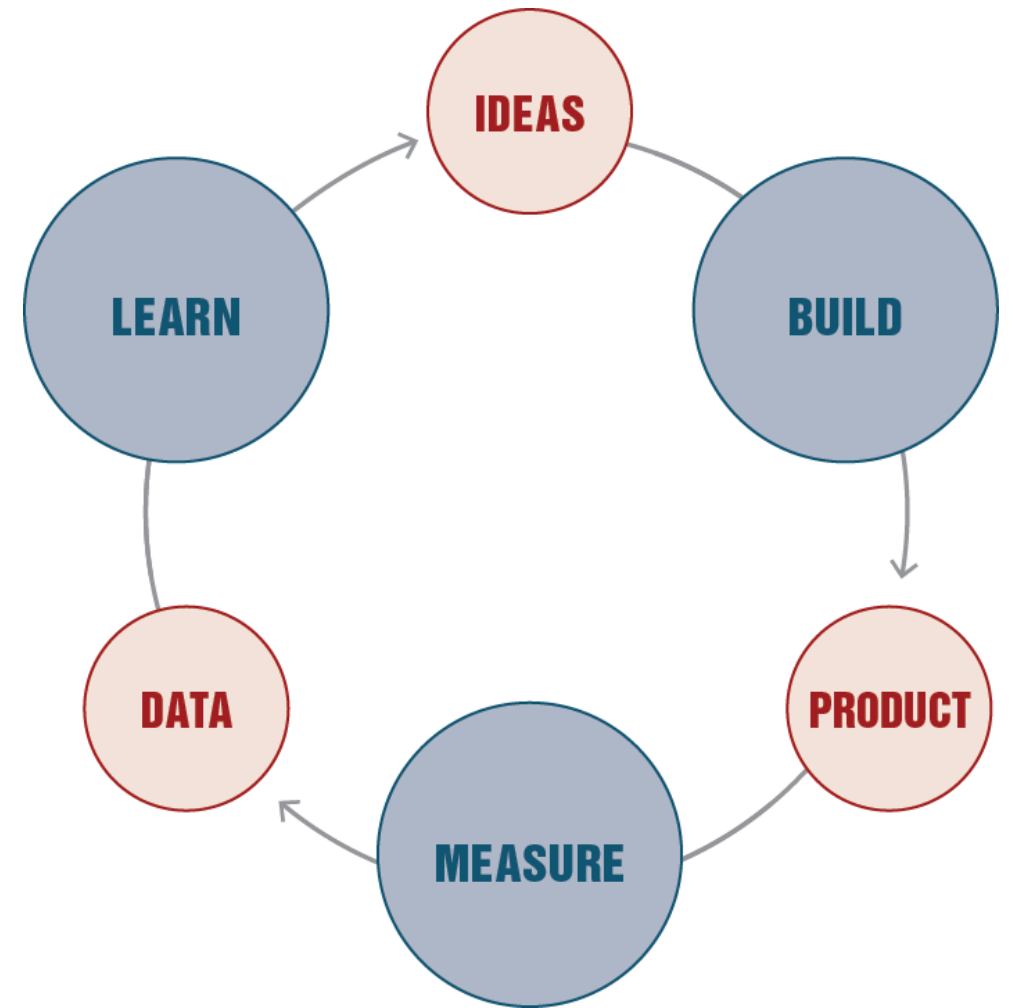
10. Metrics.

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Lean Startup Meta Process

1. **Document your Plan A**

2. Identify the **riskiest** part of the plan

3. Systematically **test** your plan

Measurement is set of observations that reduce uncertainty where the result is expressed as a quantity.

D.W. Hubbard. How to Measure Anything: Finding the Value of *Intangibles* in Business.
https://www.howtomeasureanything.com/

Metric is a quantifiable measure that is used to track and assess the status of a specific process.

Analytics is about tracking the metrics that are critical to your business.

A Good Metric

- **Comparative.** Being able to compare a metric to other periods, groups etc. helps you understand which way things are moving.

- **Understandable.** If people cannot remember and discuss it, it's much harder to turn a change in the data into a change in the culture.

- **Usually a ratio or a rate.** Ratios are comparative, easier to act on than raw data; and also good for comparing factors that are somehow opposed (eg. cost-vs-time) or for which there's an inherent tension.

- **Actionable.** A good metric changes the way you behave.

Accounting vs Experimental

Accounting Metrics

Make your predictions more accurate. Show how close you are to an ideal model and if your results are match your business plan.

Example: Sales revernue for period.

Experimental Metrics

Optimize the product, pricing, or market. Changes in metrics change the product. Agree on change before you collect the data: if > 50% respondents say they won't pay for a feature, don't build it; if MVP doesn't increase order size by X%, try something else.

Example: Results of a test.

Five Considerations for Choosing Metrics.

1. Qualitative *vs* quantitative.

Qualitative metrics are unstructured, anecdotal, revealing, and hard to aggregate; quantitative metrics involve numbers and statistics, and provide hard data but less insight.

2. Vanity *vs* actionable.

Vanity metrics might make you feel good, but they don't change how you act. Actionable metrics change your behavior by helping you pick a course of action.

Five Considerations for Choosing Metrics.

3. Exploratory *vs* reporting metrics.

Exploratory metrics are speculative and try to find unknown insights to give you the upper hand, while reporting metrics keep you abreast of normal, managerial, day-to-day operations.
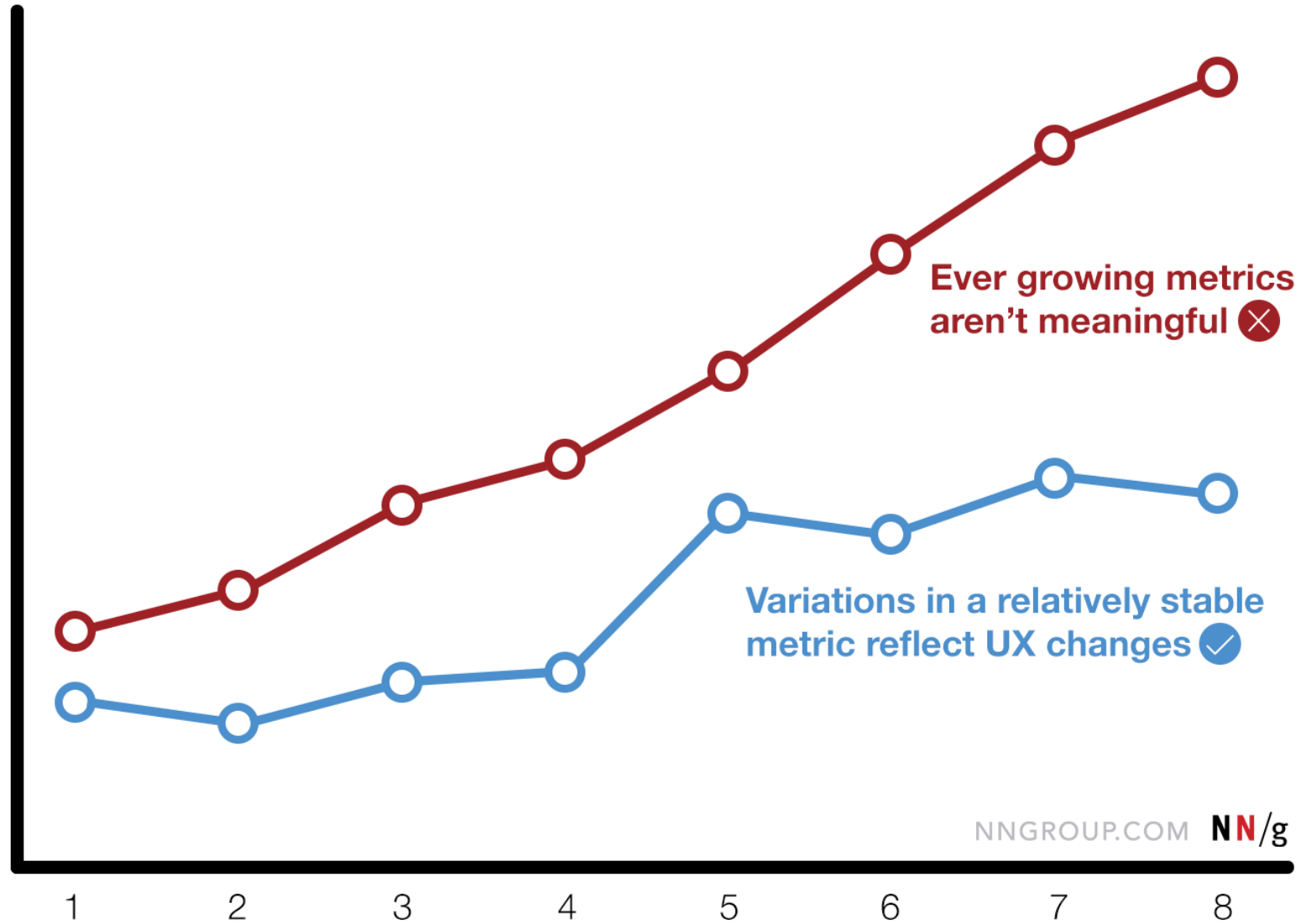
4. Leading *vs* lagging metrics.

Leading metrics give you a predictive understanding of the future; lagging metrics explain the past. Leading metrics are better because you still have time to act on them—the horse hasn't left the barn yet.

Five Considerations for Choosing Metrics.

5. Correlated *vs* causal metrics.

If two metrics change together, they're co related, but if one causes anothe to change, they're causal. If you find a causal relationship between something you want (eg revenue) and something you can control (eg showing ads), then you can change the future

Vanity metrics are metrics that make you look good to others but do not help you understand your own performance in a way that informs future strategies. These metrics are exciting to point to if you want to appear to be improving, but they often aren't actionable and aren't related to anything you can control or repeat in a meaningful way

Ever growing metrics aren't meaningful ✗

Variations in a relatively stable metric reflect UX changes ✓

NNGROUP.COM NN/g

Vanity Metrics Checklist

total signups: Tells us nothing about what those users are doing or whether they're valuable to us.

total active users: a little better but still increase over time.

# of hits: problematic if your site has many objects. Count people instead.

# of page views: Count people instead.

# of visits: is it one or many people.

# of unique visitors: tells you nothing about what they did, why, or if they left.

# of followers/friends/likes: nothing more than a popularity contest.

#Time of site/number of pages: poor substitute for actual engagement.

Emails collected: collected does not mean opened and acted on what's inside them.

# of downloads: does not lead to read value. Measure activations, account creations, or something else.

In a startup, you don't always know which metrics are key, because you're not entirely sure what business you're in. You're frequently changing the activity you analyze. You're still trying to find the right product, or the right target audience. In a startup, the purpose of analytics is to find your way to the right product and market before the money runs out.

AARRR Metrics (also: Pirate Metrics)

A framework for product-led growth businesses

Goals

- show companies how to narrow the focus to only metrics that can directly affect the health of their business

- help these companies use the right data to gauge the success of their product management and marketing efforts, then improve those initiatives that aren't working.

Customer Lifecycle

- **Acquisition:** Where are customers coming from?

- **Activation:** How to turn customers into active customers.

- **Retention:** How to make potential customers come back.

- **Referral:** How to get customers to recommend your service.

- **Revenue:** How to turn potential customers into paying customers.

The AARRR Framework
(Growth Funnel)

- Acquisition
- Activation
- Retention
- Referral
- Revenue

AARRR Cheatsheet

Stage	Metrics
Acquisition	Traffic, mentions, cost per click, search results, cost of acquisition, open rate
Activation	enrollments, signups, completed onboarding process, used the service at least once, subscriptions
Retention	engagement, time since last visit, daily and monthly active use, churns
Revenue	Customer lifetime value, conversion rate, shopping cart size, click-through revenue
Referral	Invites sent, viral coefficient, viral cycle time

The One Metric That Matters (OMTM)

Pick OMTM

Pick a metric from the riskiest portion of your business.

1. Picking and using a OMTM gives you a single metric that **answers the most important question you have**.

2. **The OMTM forces you to draw a line in the sand.** Picking a metric implies picking a goal to hit.

3. **It focuses the entire company.** Having an OMTM focuses your entire company and avoids trying to report too many things: *(data puking)*.

4. **It inspires a culture of experimentation.** You make what you measure. Focusing on a single metric, you push your team to run experiments to move the metric upward.
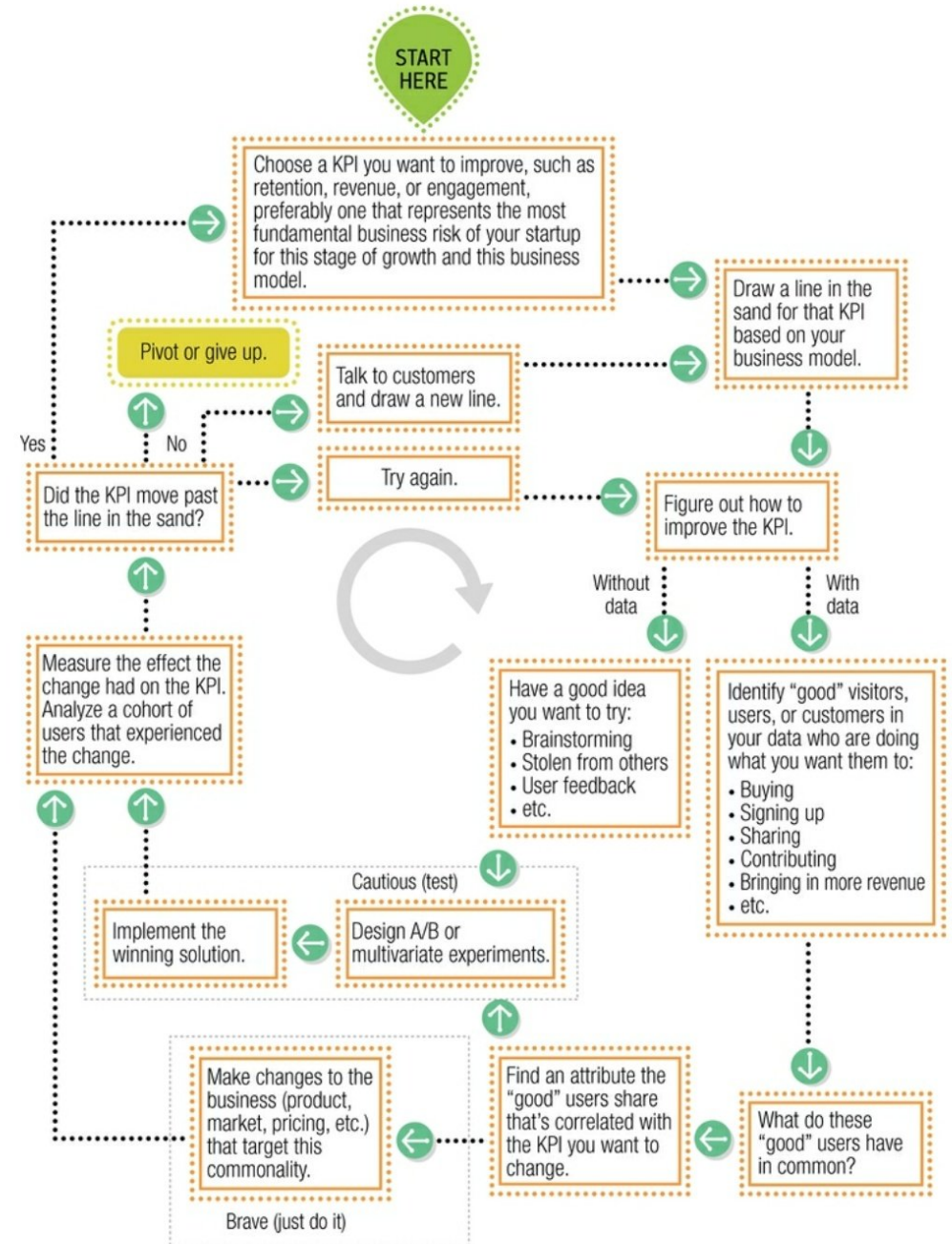
Lean Analytics Cycle

Lean Analytics is about finding a meaningful metric and running experiments to improve it until that metric is good enough to move to the next problem or the next stage of your business.

Full Image:

https://pbs.twimg.com/media/EON0y POUcAAUDXD?

format=jpg&name=large

Lean Analytics: Use Data to Build a Better Startup Faster

Alistair Croll. Benjamin Yoskovitz.

https://leananalyticsbook.com/

Story: Out of the picture: why the world's best photo startup is going out of business.

https://www.theverge.com/2013/11/5/5039216/everpix-life-and-death-inside-the-worlds-best-photo-startup

Overview: Crunchbase.

https://www.crunchbase.com/organization/everpix

Metrics: Everpix Intelligence.

https://github.com/everpix/Everpix-Intelligence

Further Reading

- A Founder's Guide to Startup Metrics. https://medium.com/swlh/startup-metrics-370a07de9ff7

- Vanity Metrics: Definition, How To Identify Them, And Examples. https://www.tableau.com/learn/articles/vanity-metrics

- Andreessen Horowitz 16 Startup Metrics. https://a16z.com/2015/08/21/16-metrics/

- Seth Godin's Blog - Avoiding False Metrics. https://seths.blog/2012/05/avoiding-false-metrics/.

- **Startup Metrics for Pirates: AARRR! - Dave McClure.** https://www.youtube.com/watch?v=irjgfW0BIrw

Thank you!