Week #1

#1 read/prototyping#

Lesson #1

I'm excited to have you all dive in!_ This week we're going to look at how decision-making and learning are done in your organization and provide some simple tools and concepts to see it clearly._ We're going to use this as a foundation to speed up learning on your key business and leadership goals throughout the rest of the course.__

- [ ] A critical concept help to clarify the way how to make the decision inside our organisation
- [ ] A learning loop, understanding and documenting how our organisation is learning and improving

Lesson #2

Conjectures (Vermutungen) vs. Actuals (Tatsächliche)
The most important framework

- [ ] First day at working with Google, come together with the Team Google X
- [ ] Google Glass project was not a thing yet
- [ ] They had a small paragraph brief: What if as soon as you want to know anything you can instantly know it
- [ ] The last sentence of the brief: Make something like that happen in the next 2 years

They narrowed down the direction of building something like head-up display. The first half of the meeting was very productive. In the second part of the meeting, they started to argue about the color of head-up display. The thing that normally happens in the type of situation is normally and what ended up happening:

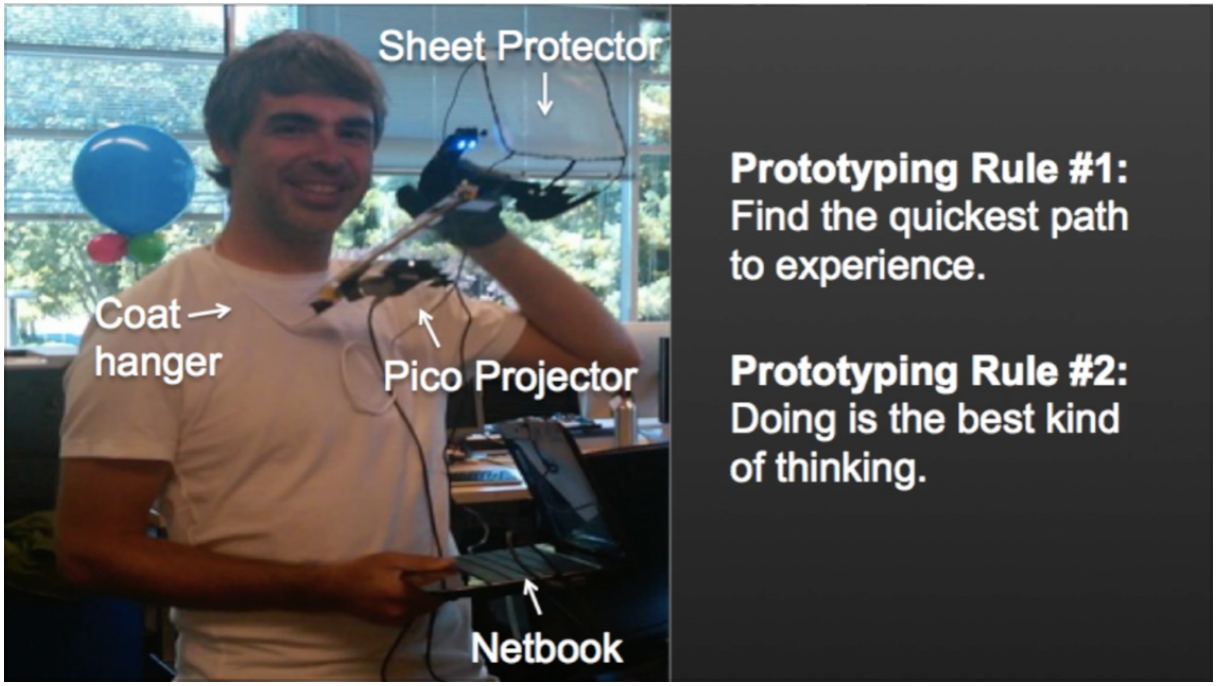
- [ ] The person is going to win either that is is best at arguing and the person with the highest title in the room. And it was Sergey Brin, he told the color is going to be red.

He left the meeting super disappointed. He saw a lot of meetings and a lot of politics. High power and intelligent people guessing at each other and arguing, debating very aggressively why their guess was right.

THESE ARE CONJECTURES: A guess about what might work (or happen) in the future

After the meeting he went and build the first version of heads of display in various colours. And then we can decide what we actually like. Couple of hours later they have build the first heads of display.

PROTOTYPING RULE #1: Find the quickest path to experience
PROTOTYPING RULE #2: Doing is the best kind of thinking



They put the first heads of dipslays and tried to read the paragraph of the text in various colours of the rainbows. The found out in less than 90 seconds, try to read the paragraph and they all agreed that red was the worst colour for all reasons.

In a lot of meetings you will have conjectures that sounds really smart, does not equal “actually true”. A conjectures is dramatically different than a direct experience!

When we add direct experience, we can detect something typically in less than 90 seconds and they found out red, and purple hard to read and the best colours where yellow, blue.

What he wants to say, that they have spent half of the meeting with such a smart guys just

for guessing and found the wrong solution. People are spending their valuable time debating about conjunctions.They end up choosing the worst answer and a lot of arguments why the worst answer was great.

45 minutes - conjectures and debates vs. 90 seconds of direct experience are actuals

In our business and lives we are making a lot of decision based on conjectures (educated guess, read a book, financial model). There is a huge difference between reasoning in conjectures (windy, misleading and slow and will lead you to wrong answer) and reasoning in actuals (incredibly clarifying, cuts through and shows if it works or not - if it works we can think about we can put it into product or service).

ACTUALS ARE DIRECTLY **SEEN** AS TRUE
CONJECTURES ARE **ARGUED** AS TRUE

We'll speed up:

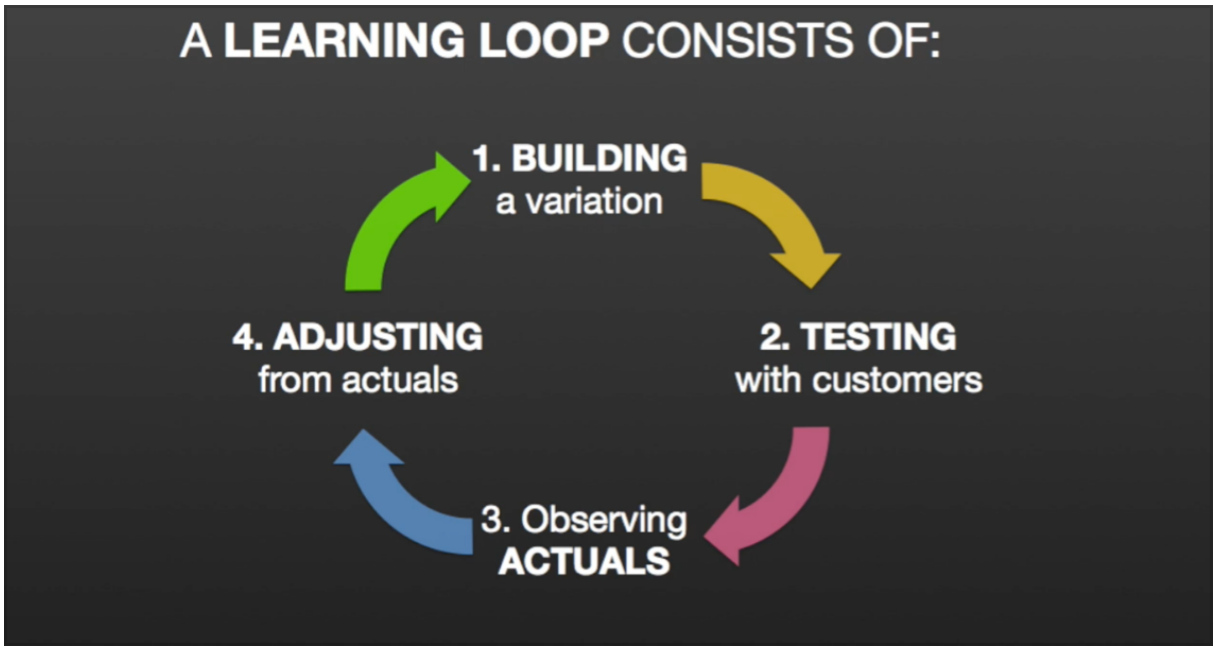
1. How things are tried
2. Seeing actuals from customers

Lesson #3

Your Learning Loop: Your fundamental unit of learning from actuals

The components are of the learning loop.

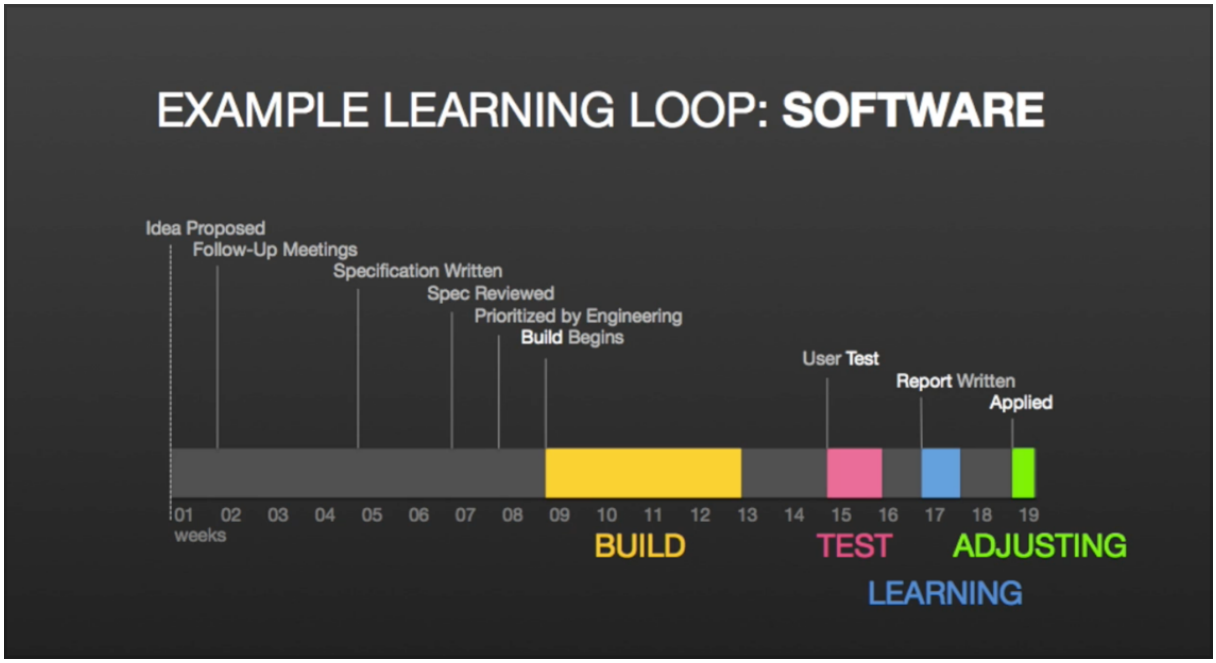
1. Building a variation
2. Testing with customers: you get the variation out to the customers
3. Observing actuals: where you observe and derive the key learning
4. Adjusting from actuals: take the key learning and modify the product or the service



EACH TIME YOU RUN THROUGH THIS LEARNING LOOP IT UPLIFTS YOUR LEARNINGS. You learn more, more and more as organisation!

In many organisation, components of the loop are in different teams or departments. And it doesn't become a loop.

We'll examine how you: 1) build, 2) test, 3) learn, 4) improve



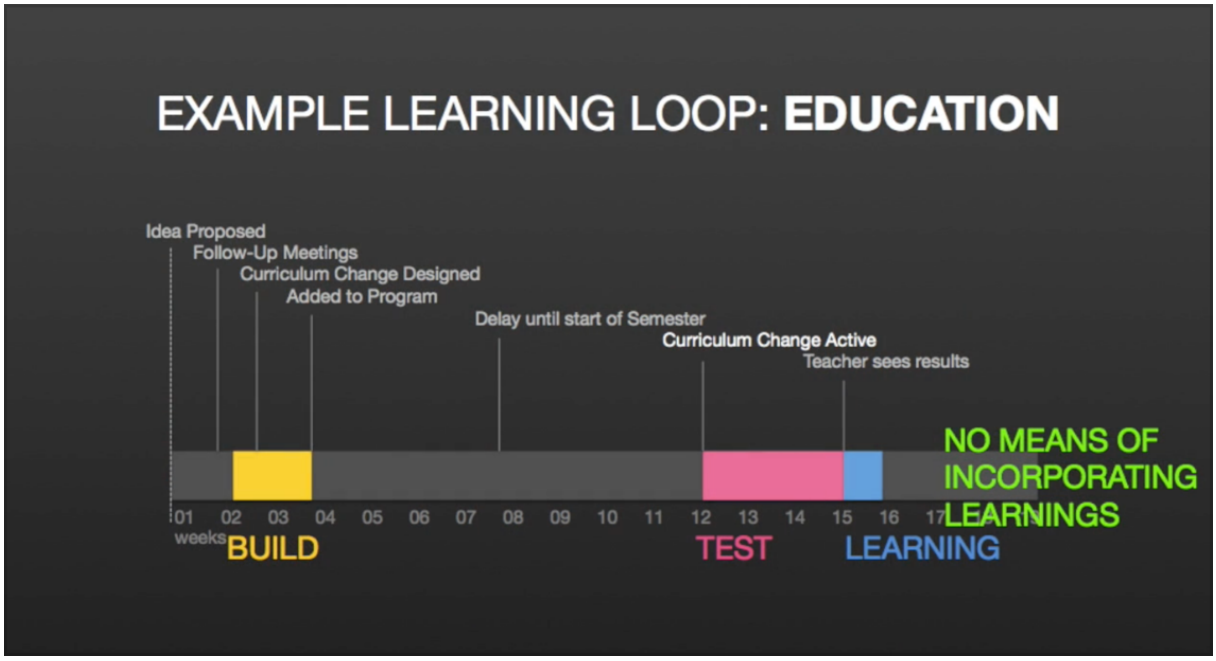
In a software company:

- [ ] It takes a couple of weeks to debate what is build
- [ ] Before the specifications are written
- [ ] Than it follows 6 weeks by writing code
- [ ] it followed by a user test in a month after the code is written
- [ ] followed by report that is generated that goes back to decision maker
- [ ] than inform the people 6 weeks after it was build

The learning loop will be the length of all these pieces combined with each other. The level of quality of those components and the quality of these component depending whether decision were made with conjectures or actuals can be very be different.

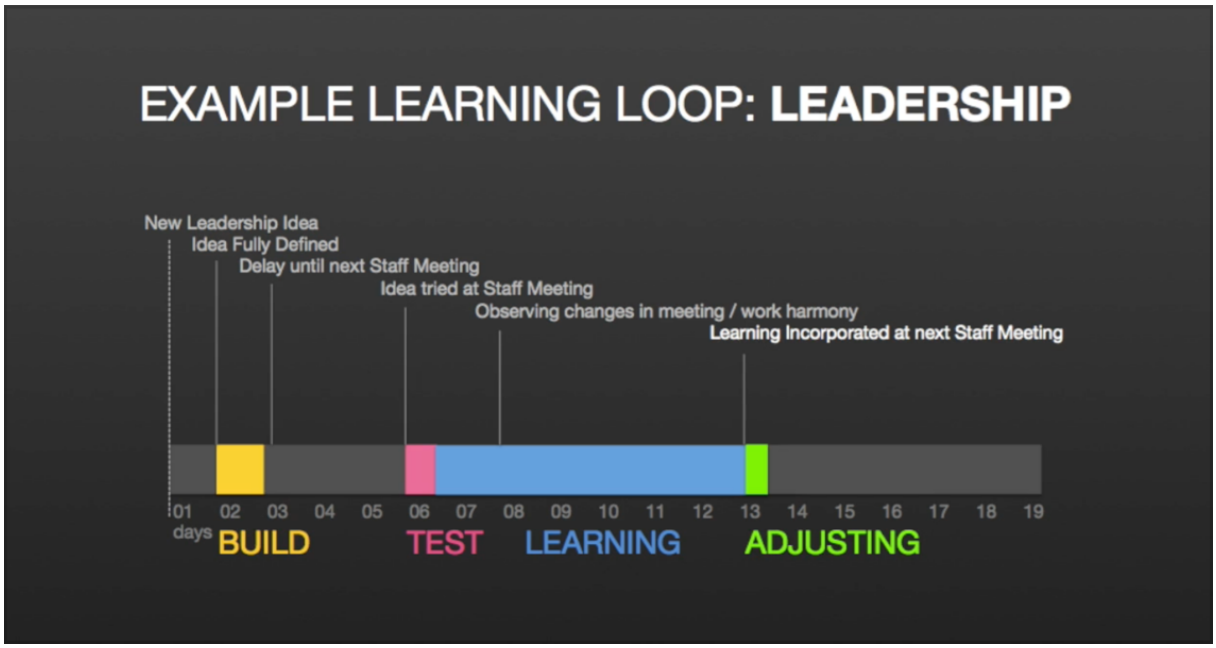
In a service company. How long does it take to do variation of your service? Let's take education services.

1. What's the build? Who does it? How long does it take? > How long does it take to change your curriculum?
2. What's the test? Who does it? How long does it take? > How long does it take you to take it in front of real students so you can see,
3. How do you learn? Who is seeing actuals? > What effect that curriculum has. Directly observe actuals around the behaviour how this curriculum changes what students do.
4. How do you adjust / improve? Who does it? How long does it take? After you do all of that. How does it take to take actual observations and use them to inform the further improvement of the curriculum



Let's say it takes you 3 weeks to go come up with new curriculum ideas and get them into program. Because you put something once in a semester, than you have to wait 2 to 3 month before you get something in front of your students. At that point you will have some observations are not the same people that are decision makers inside an organisation. That's the case of a learning loop that not close!

Personal Leadership
You are a leader and you got 30 person team, some things are working well and some things are not working well. I want to do something different in terms of how I'm leading the team. How long does it take me to build a new variation. Running a weekly staff meetings



In any of this cases you need to understand where your learning loop is:

- [ ] How long does it
- [ ] Does it actually close and connect
- [ ] Does it involve 4 different parties that don't talk to each other
- [ ] Or is it all in 1 person to has the ability to go to make decisions in an intelligent way
- [ ] Is there a way to put the teams together that are currently disparate that will allow you to close the learning loop

In the concept of absence of thinking of the learning loop, you will probably not see that these the way that this things connect, the way that this connection could be the

fundamental engine by which you drive the speed of results of the organisation.

Lesson #4

In these week, we need to find out:

1. Where do we reason in conjecture?
2. Diagram your learning loop

Moment of service = The moment of connection/Experience. For all the things that happen in business (behind the scenes). There is a moment where the thing you are creating are directly connecting with the customer in the way that matter. Focus on finding on where these moments are and concentrate your learning on making these moments of the highest caliber it can be. The moment of connection of service: what actually it's to read that display (Google Example). If I cannot read it, it doesn't matter what is behind it. The moment of service, is much more smaller, than the entire scope of the whole project.

If you are doing into the development world and you are trying to create something for farmers. There is a moment that clearly have impact on their lives. And they understand and appreciate and be part of it. Not thats not all that you going to do in order to make that work. You going to setup an accounting system, you have to hire bunch of people, hire and fire and need 5.000 of other things, in order to have your business up and running.

But in order to make something very powerful, I want you to make you really hone it, how your learning loop can drive insights and improvements around that moment of service.

Week #1 Sunday Call

The cookie poison test. The bake shop you have some pretty good business. Cookies are pretty well. I think selling cookies is pretty big business. As I former scientist when I'm trying selling cookies I should be scientific about how I sell this cookies. You cook up an experiment. And what you do you end baking 100 of this cookies and you make a little survey, 3 sentence survey. That basically asks questions what the cookie is like and do people like it. And you though it tomorrow when the bake shop opens I'll give a bunch of this cookies for free and everybody that takes a cookie, will feel out this too sentences (2 questions).

You prepare everything the bake shop opens the first 5 people come in into the store, early in the morning and you give your first 5 cookies and before they even able to finish like filling out they 2 questions in the survey. Every single person that beat into this cookie get willingly ill.

Now you can hand out 95 more cookies but the test is done right. It would not make sense to hand out 95 more cookies, clearly the chances that 5 people would randomly get willingly ill and it not be the cookie, is very very very low.

This basically counteract to people believe about statistical significance mostly because I guess, we are all saying it all the time. There is a believe that statistical significance means doing of very large number of trials that is actually NOT TRUE. THE ACTUAL TRUTH IN STATISTICS IS THE EFFECT SIZE AND SAMPLE SIZE ARE VERY RELATED. IF YOU TRY TO MEASURE SOMETHING THAT HAS A HUGE EFFECT SIZE YOU CAN DO IT WITH A TINY SAMPLE SIZE. IF YOU TRY TO GO TO MEASURE SOMETHING THAT A HAS SMALLER EFFECT SIZE (0,5% effect), than you actually need a pretty big sample size to get a 0,5% statistical significant finding.

Now in the early days of the prototype most of your effect sizes are very very large. You go and show a new idea to a customer, and they are completely lost. Or why should I give you the information for what about what. These are very basic examples of the poison cookie. The poison cookie that most people are not aware of or when they don't catch it easily.

When it comes to introducing something new and anything innovative it turns out that neutral response is also a poison cookie. So if you show something to somebody and the people are like ,that's ok, oh ya I guess I might use that, yeah that's a little bit interesting, if you guys include that yeah i'm yeah that seems like a good idea. All of these that sounds not bad, are actually POISON COOKIES.

And why is that? Whenever you try to introduce something new, than neutral is not good enough to inspire a change in behaviour. Let's say guys you have your facebook messenger, nobody like say someday hey guys you need to try this messaging client Viber it does all the same stuff as facebook messenger. YOU WON'T DO THAT, YOU WON'T GO AND CHANGE YOUR BEHAVIOUR OVER JUST SOMETHING LIKE NIIHH, it's about the same as before. WORKING OK, AND BEING NOT BAD IS ACTUALLY A POISON COOKIE FOR MOST NEW BEHAVIOURS. Cause nobody jumps into new behaviour for something that just does like niiihh whatever.

When I see people deliberating people on stuff for long time it tends to be that they have

shown that thing to customers and the people like niiihhh ok and we say, we didn't get the response that we wanted. Maybe if we test more people and basically keep repeating this process over and over again. What if we could test more people, if we can get the response that we want. What I want to say is, once you get 4-5 responses like that on the effect size, than you're done it's a poison cookie. A neutral response is a poison cookie, you shouldn't waste your time on it.

Once you have cleaned out all these blind/neutral responses. Than what's left is actually pretty good stuff. So I would say the cookie poison test which means a sample size between 3 to 10 eliminate 2-3 quarters of the ideas that you starred with. And that the point you've eliminated 2-3 quarters of the ideas. That what you left with is actually pretty good stuff.

With that remaining that the stuff you go and spend additional time on it and build in greater detail and make prototypes in greater detail about and stick to 3 to 10 in terms of testing depth.

(the questions is about how to choose the right person for showing the prototype, what type of cohort should we choose). A lot of time the key is less about did we get the exact person, because you can always go. Let's say you wanted the idea not to die and you would come up with the excuse we haven't tested it with the right people and that excuse can go forever. What I was say is actually a lot of people that you test can't be the right people just depends on how you test them. If you go and ask them, opened that survey questions without an experience, this about how useless it would be if the baker and the cookie poison test didn't bake any cookies. Just made a survey about what did you think about cookies? It wouldn't tell you anything about the specific cookie and definitely won't tell you that the cookie is bad!!!

A lot of time when we testing ideas we didn't test lived experiences. The heart of prototyping is to create lived experiences for the people and you don't even necessarily need that much attention what they are saying about it, JUST WATCH WHAT THEY DO. This is really hard for people to have lived experience that is not great and through their actions pretend that is great. Observation is the best tool to find out if something is not great. Don't ask them!!! Even if they wanted to trick you, than it looks really forced. Couple different things happening in your case:

1. You may need to move some of your prototypes out of survey mode and move to lived experience mode. After you do that, than a lot of people that you are going to test, will give you really useful information. If you are finding that there is a lot of argumentation that not showing it to the right people or the data is not valid until you show this to this

particular type of people, than I would like making that group of people more accessible so that you can test in that way. But also a lot of times you can't get very responses just by having people have any lived experience at all

Qualitative vs. quantitative actuals - Observing customers vs. a/b testing features

Both of them can be helpful, but the rule of thumb is always qualitative before quantitative and the reason for that is that until you do the qualitative, you basically don't know what quantitative mean and also you don't know whether you are measuring your quantitative data. What's missing is in the quantitative data in a/b tests, you what works, but you don't know why it is working.

He describes the situation when they launched a big changes to their site and the time on page jumped to a higher number +40% uplift. And the product manager wanted already to pop the bottle of champaign, but than the customer support wrote them and say guys, there is a technical problem. So, they shipped a version that froze the browser, that's why the time on page sky-rocketed. The point is there that by quantitative metrics you don't know why something happening.

Especially if you introduce something you, you don't want to go a quantitative data rounds (multiple a/b tests) in order to assess if it is good or bad. But if you really want to know if your performance will dramatically be different, go and make 10 people qualitative data test (show them the prototypes) and see what happens next.

I WOULD SAY QUALITATIVE DATA ALWAYS BEFORE QUANTITATIVE DATA

Question 1:

SPECIFICITY IS THE FRIEND OF INNOVATION.

When it comes to process of rehabilitation and we are talking about this specific type of rehabilitation. How do we go and make that type of rehabilitation more effective (opium - drugs problem)

Than you break it into the steps of the process

1. The person needs to go and find about the service
2. Than they are gonna have their first engagement with the center were the services are delivered
3. Than they gonna have some relationship if they gonna follow that engagement_

Each of one these scenes that I'm describing, you can jump in and prototype on that. E.g. I can simulate the situation the person is going into the treatment clinic the first time. WHENEVER YOU HAVE A THING THAT SEEMS HARD TO PROTOTYPE YOU HAVE TO START BREAKING IT INTO THE SPECIFIC STEPS THAT ARE GONNA HAPPENING IN TIME FOR THAT EVENT TAKE PLACE._

Problem: the drugs are overprescribed by the doctor

What is the thing we can do with doctors before they get in into the situation of overprescribing, we're going to prototype that conversation with the doctor.

So little by little you are going to break the little parts that are in your system into individual scenes, THINK ABOUT THEM AS LIKE SPECIFIC SCENES FROM THE MOVIE._

If you talk about the movie, you are going to get lost. But if you talk about a specific scene and the specific movie. E.g. this took place in a submarine with 3 people. Hey this took place in a doctor's office with this two people. You are going to break down what happening in your service in the scenes that have that level of SPECIFICITY TO THEM._

As soon as do you that, it's is concrete enough that you can engage in the prototyping process.

Question 2:
In the workplace convincing the boss to do more prototyping? You can also prototype that type of the process, break down into the specific scenes and prototype each step of the process. But if your boss still shows no interest, just do it by yourself in your free time.

E.g. there is an on boarding program for new people who are addicted to opium. And the on boarding is done through a questionnaire. You grab the questionnaire and the person that has gone through the on boarding 2 month ago and say look: We are looking into improving our signup questionnaire and we would love if you could put a couple moments in and pretend you haven't signed up yet and just go to the process that is in this new form!

What you will find when you do that, even if your boss doesn't give you permission to do prototyping, when you find useful and interesting data from the process like that, the boss end up interested in the useful and interesting data

If you say, I gonna do and try something new. What you boss is hearing, is Ohh HERE IS A RISK AND YOU GONNA DO THIS IT DOESN'T WORK, IT' MY REPUTATION AND MY NAME IS ON THE LINE. But if you try another way, you go and collect data and come back to those meetings and we collected this data. That's gonna end up like, well that's pretty fascinating how can we use this data, and how did you collect that? And little by little it will become more a native working of inside of organisation.

If you go to your boss and pitch, we have to be totally radically different and try to use this new approach and change the way we are working. It's sounds like a big risk for your boss and you are not going to get that excitement. I would either prototype that conversation that you can build up more confidence to bring it up. Or I would start with small and simple experimentation and build it into the organisation little by little.

Question about the learning loop.
How much time should one spent on exploration of the topic? If you got a service that you want to implement and it requires 2-3 other departments. How much time do you spent to develop an excitement about an idea.

It's not that important to develop an excitement about an idea. I try to keep very neutral on everything that is a conjecture!!!!!

In her learning loop are 2-3 more departments involved. So he is saying that if in your learning loop 80% is dependant on other people and it slows down the learning loop. Start working on the 20% that are in your sphere. You can begin speeding this up, if you gonna start working only on your 20% on your sphere. He is suggesting to work on own 20% show it to the group of other people and just try to bring them into the loop, so they start to do prototyping too, much faster. He calls it the process of erosion.

Moments of service explanation
The most important word in it is the word MOMENT. Cause when people thing about prototype they think about a whole damn thing, and we you do that and that's gonna hard to do. Cause it involves 50 people and last time we did it required 10 million dollars and whatever. But when you think about the moment in which something interesting happens. A lot of new innovation things, they actually only change in 15 and 20 seconds of whats's happening. Whenever things you are changing THAT PEOPLE MIGHT HAVE DIFFERENT

DECISIONS, THATS THE MOMENT YOU WANT TO ZOOM IN._

An example he gives often: Uber is 50B dollar company and actually the experience of the uber riding is exactly the same like in the cab. You are in a back of the car and it drives you from point a to point b over the course of 20 minutes. That's exactly the same._ AND UBER IS EXACTLY ABOUT 15 SECONDS DIFFERENT. 10 seconds when you press the button on the app and the car shows up and 5 seconds when you get out of the car and instead of searching for the credit cards and looking for a tip. YOU JUST STEP OUT OF THE CAR AND THE_ THING IS PAID. NOW THAT 15 SECONDS OF DIFFERENCE BUILDS UP A 50 Billion Dollar Company.

UBER is a good example, they have started without even having a network of drivers and they didn't knew if they would acquire any of them. They have prototyped their service by hiring a black car service. They said well we don't know if we can get drivers on this thing, but what we can do is hire the black service (10 cars) that don't cost very much for couple of months and those would be the people that do drives for us and we'll see if that does something_

MOMENT OF SERVICE IS A WAY OF BREAKING DOWN THE BIG THING THAT SEEMS VERY VERY HARD TO PROTOTYPE INTO A MOMENT A 10 SECOND SPAN, A 15 MINUTE SPAN. WHEN YOU ARE GOING TO BE SOMETHING DIFFERENT THAT HOW IT HAS BEEN DONE IN THE PAST. AND THE PROCESS IS LOOKING INTO THE MOMENT IN THE DETAIL IT ALSO OFTEN TIMES SIMPLIFIES THE PROTOTYPE. LET JUST ME MAKE THE 15 SECONDS OF THIS THING, I DON'T NEED TO MAKE THE WHOLE 20 MINUTES._

And the idea of moment of service is also related to the specificity of innovation. When you challenge yourself to make it a specific moment. Show me 10 seconds of this as opposed to somebody who make a strategic slide deck or swat analysis. These things are incredibly wag. If you sit down and remove all these frameworks of 5 forces or whatever. What's that the 10 seconds when you got into the car. 5 seconds when you are eating that cookie. Everything just becomes simpler, you are slicing it down to the direct human experience._

As opposed to strategy, a lot of strategies sound smart and look all right and actually don't work. We do a very bad job of accessing strategy even if we do spending a lot of time talk about strategy and concepts.