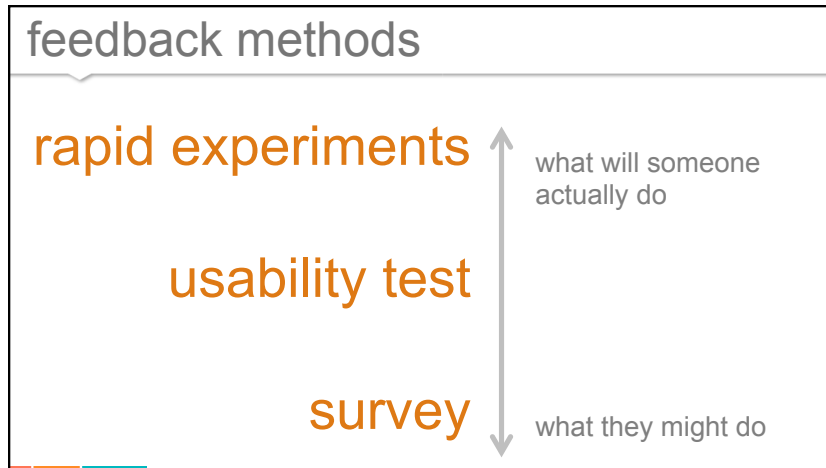


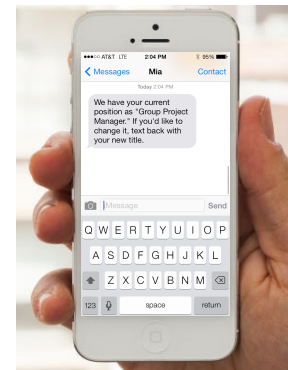
how do you know if  
you are on the right track?

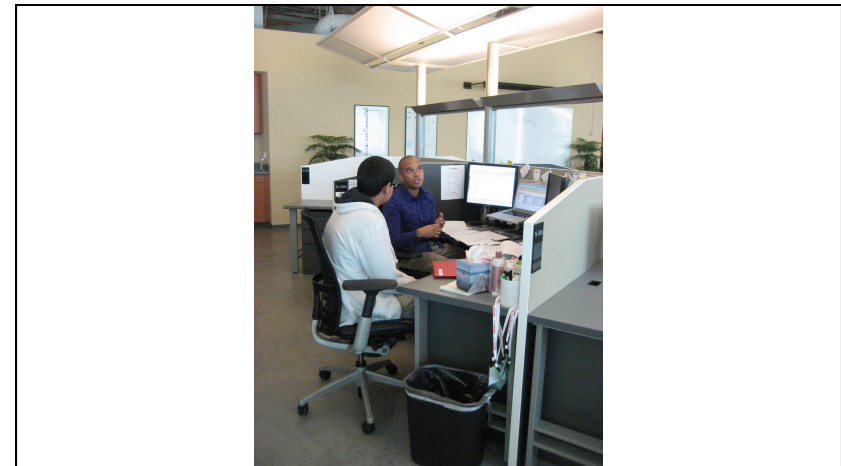
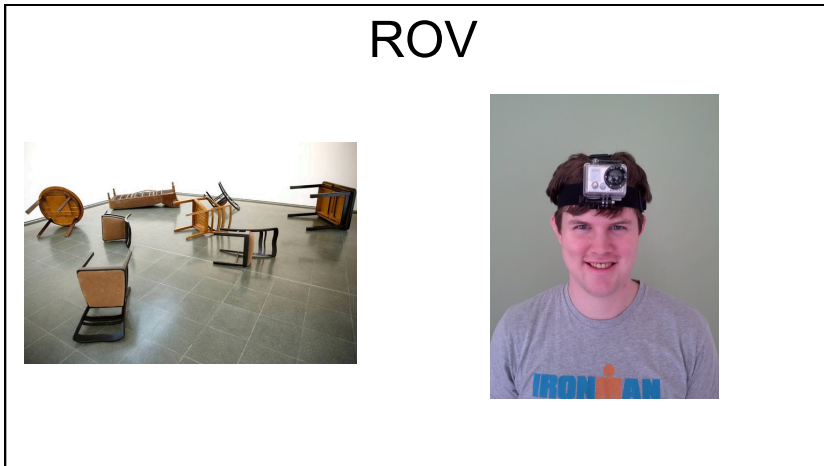
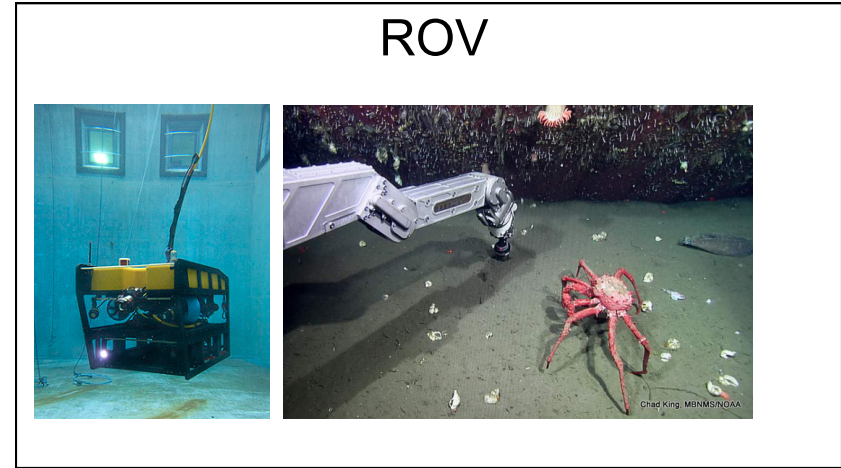
### rapid experimentation:

using **experience prototypes** to evoke behaviors that quickly tell us whether our ideas address users' needs



rapid experiments separate what customers **say** from what they **do** in the real world



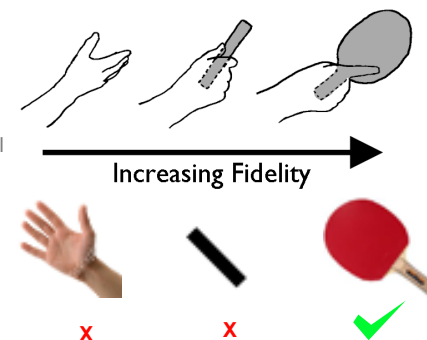


## what is an experiment?

- a scientific procedure—a controlled empirical test of a hypothesis
- hypotheses include:
  - A causes B
  - A is better, bigger, faster than B
  - A changes B more when we do/provide X
- requirements:
  - independent variable that can be manipulated
  - dependent variable that can be measured
  - random assignment to condition (conservatively)

## a well designed study

- **Question:** How does the presence of a (realistic) physical controller influence video game play and experience?
- **Hypothesis:** High prop fidelity will improve the experience.
- **Manipulated Variable:** Prop fidelity
- **Random sample:** 18 right handed, non-technical subjects



## a well designed study

### Prototypes



### Measured Variables

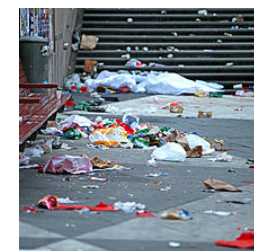
Behavioral measures:

- Wins
- Misses

Also recorded preferences via interviews w/ each person

## designing experiences

- the goal is to evoke “real” behaviors in “real” situations
- the scenario must be
  - believable
  - immersive
  - natural
- and, allow you to test/measure what you need to





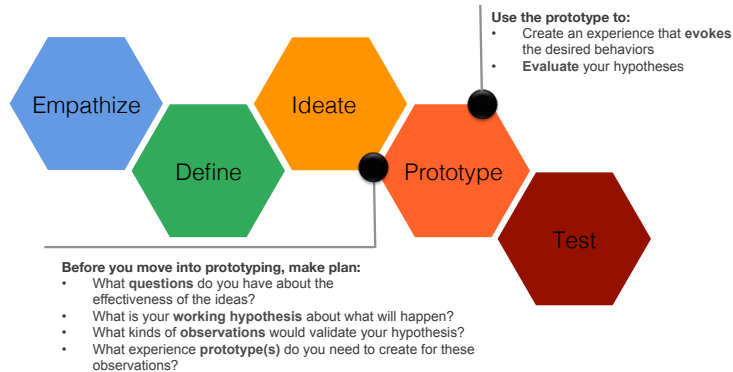
## What can an experiment test?

- does my intervention have the desired (and not undesired) effects?
- are people going to behave the way I think they will based on my needfinding research?
- will people do/use this given all other choices/ demands available?
- can people figure out how to use/do it?
- which design is better (at any of the above)?

## Steps to running an experiment

1. Make a list of all the questions you have about the efficacy of the idea
2. Select the most critical question to success
3. Generate a hypothesis
4. Design an experiment to test your hypothesis
5. Create the experience prototype to support the experiment

## design thinking process



## 1. Make a list of questions

Concepts we generate often have implicit assumptions about how people will respond and what people will do

What are the crucial questions that could make or break the success of your idea?

## 2. Select the most critical question

What effect will sending BOTH kids and parents alerts have on their relationship?

~~What types of alerts should we focus on?~~

~~What is the line between privacy and parenting?~~

~~How frequently should people be alerted?~~

## 3. Generate a hypothesis

A hypothesis is your prediction about how people will behave.

If we send both kids and parents alerts, they will talk about them and the experience won't feel like big brother.

## 4. Design an experiment

- the goal is to evoke “real” behaviors in “real” situations
- the experience prototype must be
  - believable
  - immersive
  - natural
  - focused
- and, allow you to test/measure what you need to
- a word on “confederates”



a strong experiment often tests only a **portion of the idea** SO a strong experience prototype is only a **portion of the design**

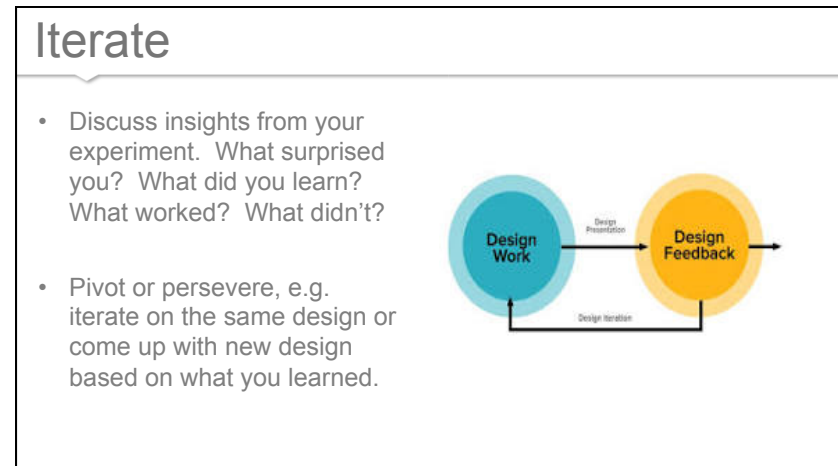
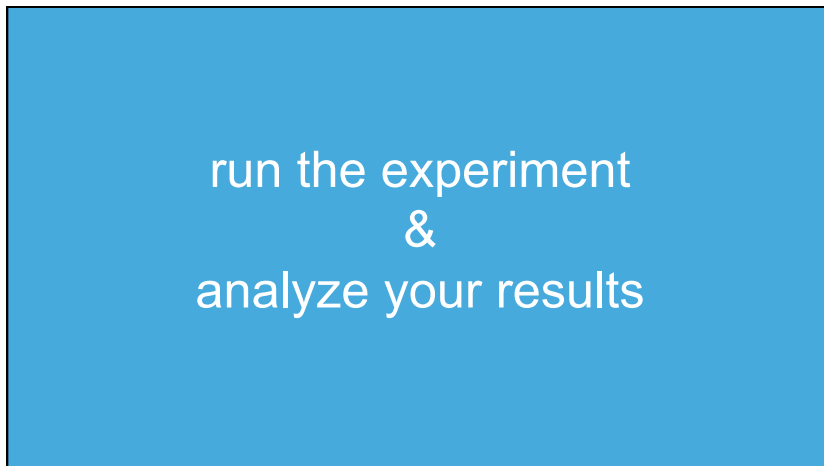
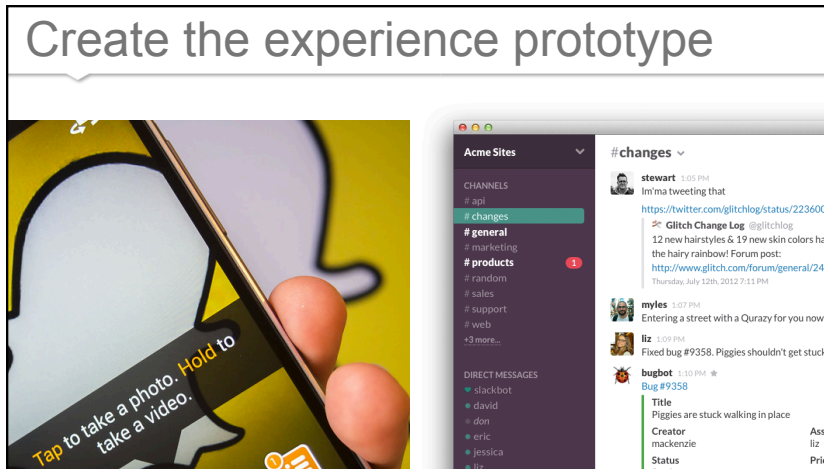


## Plan for measurement

people are notoriously bad at predicting (and also remembering/reporting) their own behaviors

## The experiment

- Recruit 5 families and get the social media logins for their kids
- Experience Prototype:
  - Set families up on a Slack channel
  - Monitor kids' social media accounts and send alerts to parents and kids
- Measurement: How much conversation was generated about the alerts? What did families talk about?
- Follow up: Interview families about their experience





## Next Steps

## how to create an experiment

### 1. generate questions

Ideas often have built in assumptions about what we think people will do

**What are the crucial questions or assumptions that could make or break the success of this design?**

### example questions


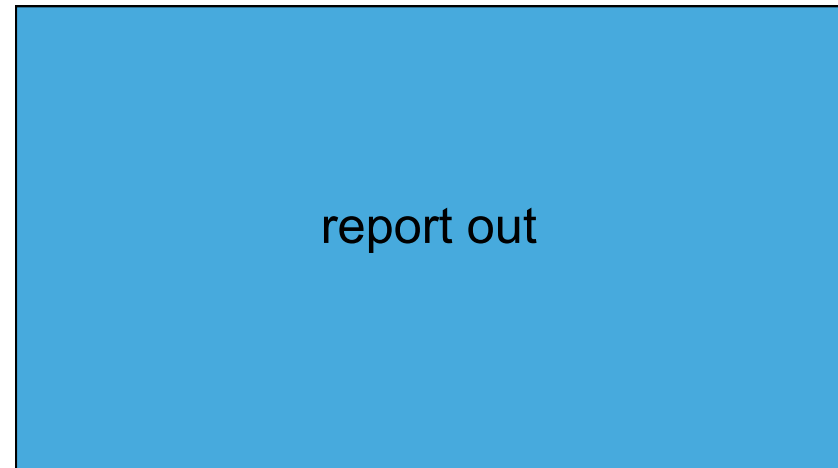
- does my intervention have the desired (and not undesired) effects?
- are people going to behave the way I think they will based on my needfinding research?
- will people do/use this given all other choices/ demands available?
- can people figure out how to use/do it?
- which design is better (at any of the above)?

## 1. generate questions you do it

Based on your current ideas, think through either the assumptions underlying your concepts and/or critical questions that, if answered, would give you more confidence in your idea

Write 4-6 critical questions (15 min)

**Example:**  
Would people talk to their dogs via video?  
Would dogs notice a video of their owner?

A black and white dog is sitting on a wooden floor, looking at a small screen on a blue and white device. The screen shows a smiling woman's face. The device has a coin slot at the bottom.

## 2. create hypothesis


based on the questions, we can generate “working hypotheses” about the way we think people will behave

- people will respond more to a than b
- at least x% of people will do this behavior
- people will use this at least x number of times

## 2. create hypothesis you do it

for your top 2 questions, generate 2-3 hypotheses about how people will behave (10 minutes)

**Example:**  
Half of people who use this product will check in on their dog at least 2 times per day

A black and white dog is sitting on a wooden floor, looking at a small screen on a blue and white device. The screen shows a smiling woman's face. The device has a coin slot at the bottom.

report out

### 3. design experiment

based on your questions & hypothesis,  
generate ideas for an experiment that  
might answer your question

this is where you start thinking about  
your prototype

### 3. design the experiment you do it

- choose a question/hypothesis pair – 3 min
- divergent discussion on ways to test that hypothesis, e.g. situations that would evoke those choices, experimental design – 8 min
- choose one of these as the basis for your experiment and discuss how to prototype it

5 min

### one last thing

**survey ≠ experiment**

people are notoriously bad at  
predicting (and  
remembering) their own  
behaviors



report out