

UX Immersion:

**INTERACTIONS**

A UX Conference Unlike Any Other  
April 18–20, 2016 in San Diego, CA

Tuesday - April 19, 2016

Featured Talk

## **Shaping Behavior, by Design**

Chris Risdon

*shaping behavior*  
**by design**  
behavioral design at scale

**chris risdon** head of design, capital one labs

**@chrisrisdon**



To do this, you may need to take your flight, get home, remember that you wanted to donate, then go through traditional ecommerce funnel, providing billing address and credit card details. Then you also have to think, "how much do I want to donate?"

You have to be fairly motivated to follow-through and donate.



*call to  
action*



*mental  
note*



*time  
passes*



*remember*



*get to  
site*



*billing  
details*



*how  
much?*

Television by Andy Fuchs, Remember by Connie Chan, Time by Richard de Vos, Thinking by Luis Prado, Credit Card by Hugo Medeiros from The Noun Project

# 2010

**2010:** During a layover you're sitting at the airport bar having a beer. On the news you see reporting about the 2010 Haiti earthquake. Your heart goes out. It's not personal - you don't know anyone, and it's in another part of the world. But the story understandably creates sympathy. In the news story there's a call to action to donate money to the Red Cross by texting "Haiti" to 90999. \$10 will be added to your phone bill.

Photo: Robert S. Donovan  
<http://www.flickr.com/photos/10687935@N04/8541178851/>



- \$43 million raised via mobile texting for Haiti relief

- Most of these donations were made on impulse

*An immediate response to media coverage of the disaster, especially on television.*

- Their interest in Haiti's recovery waned quickly

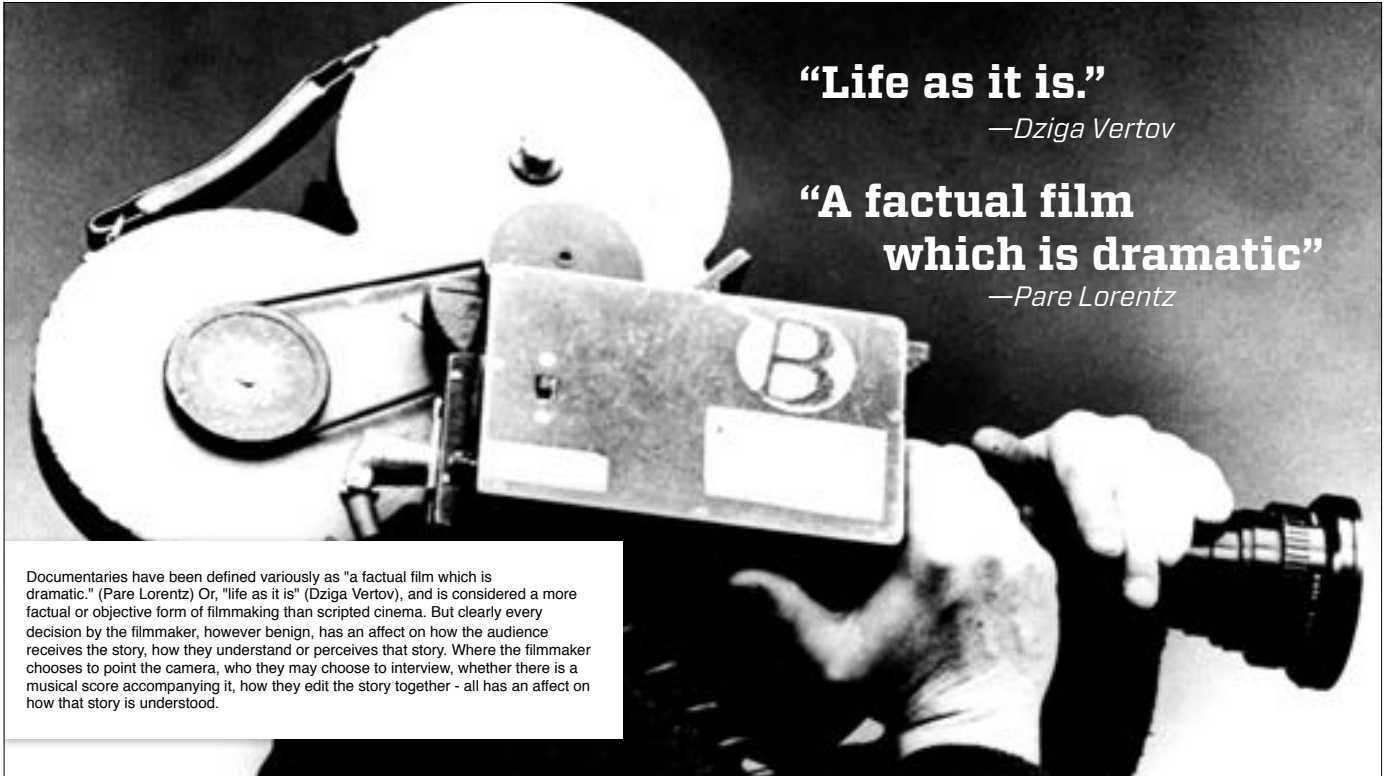
*More than half of the donors reported that they did not follow Haitian relief and reconstruction efforts much...since making their donation.*

This means, if they didn't donate when they saw the story, they likely wouldn't have donated at all!

- Over half of donors have made text message contributions to other disaster relief efforts

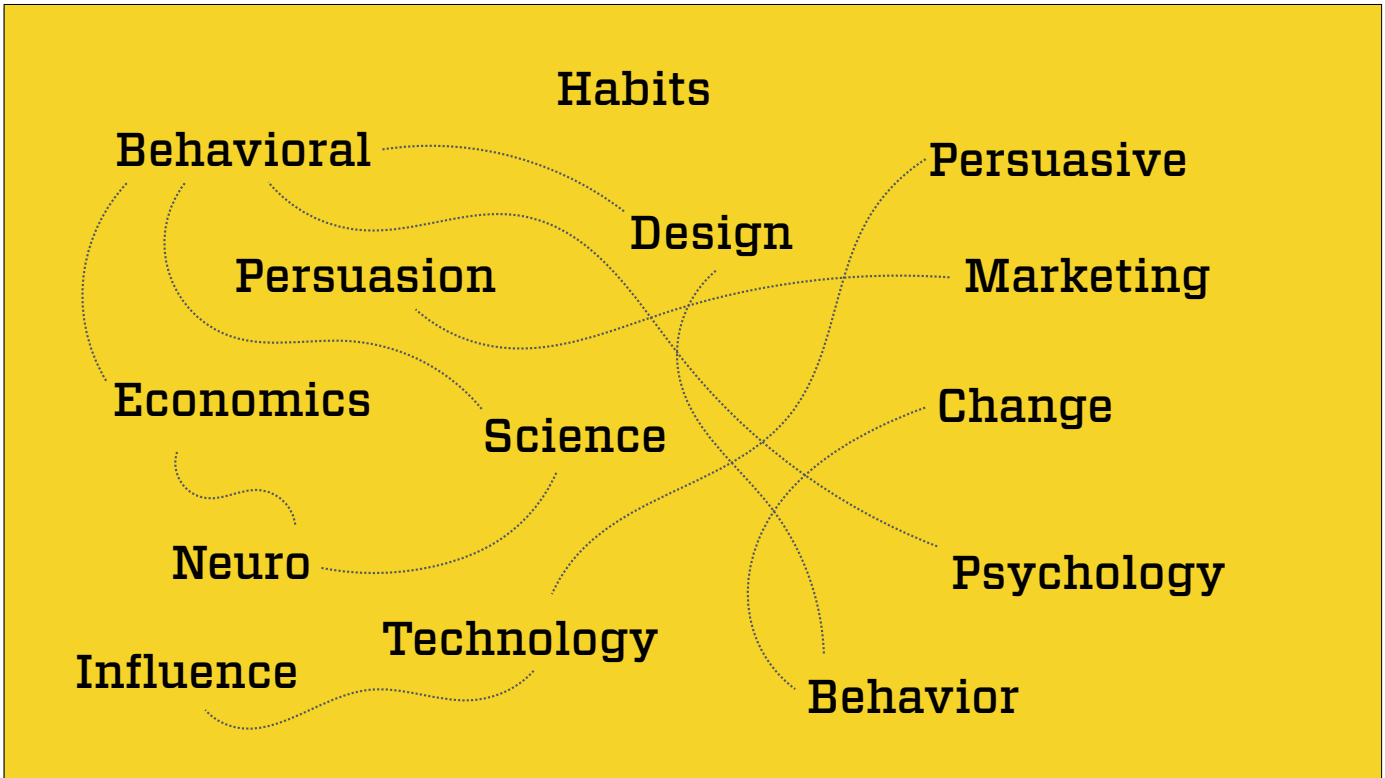
This means it's sustainable new behavior.

The Pew Internet and American Life Project

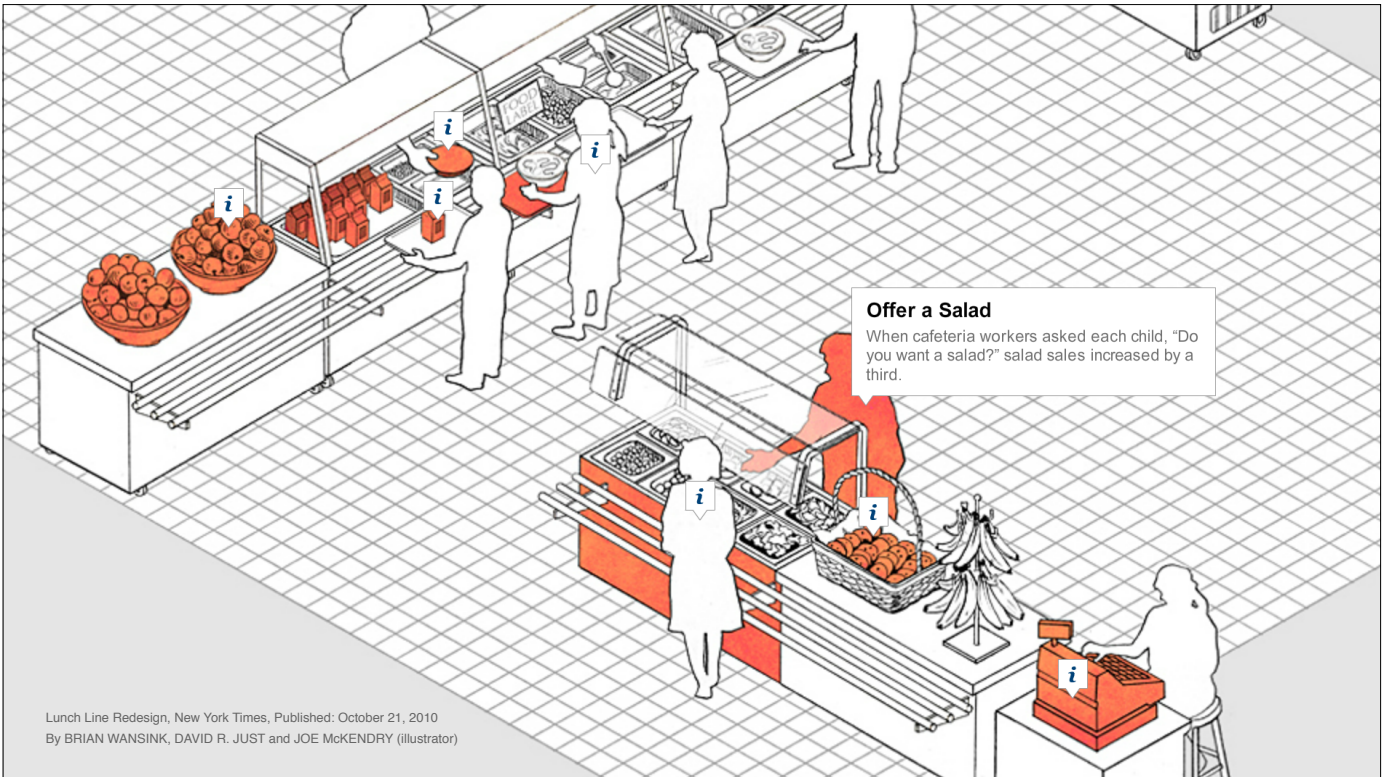


**Every design decision  
influences the user.**









Lunch Line Redesign, New York Times, Published: October 21, 2010  
By BRIAN WANSINK, DAVID R. JUST and JOE MCKENDRY (illustrator)



**Changing the environment is the most impactful way to influence behavior.**

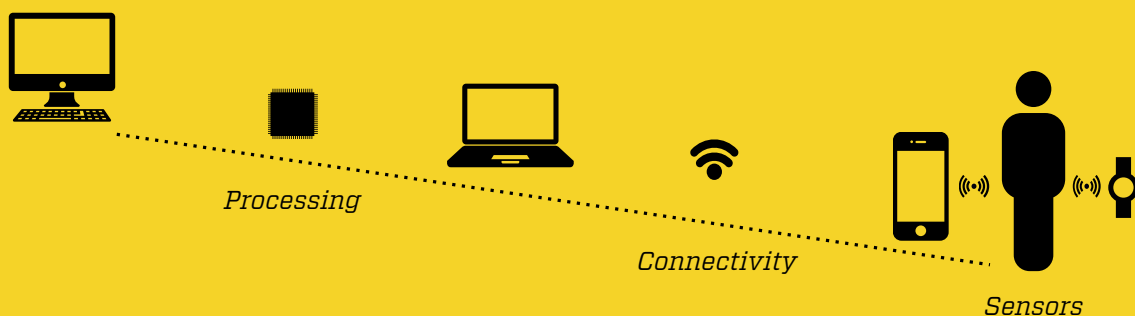
Changing the environment is the most impactful way to influence behavior.

**Our products and services often live in an environment over which we have little control.**

We can influence how people  
*perceive*  
the environment.

We can influence how people  
*navigate*  
the environment.

We can influence how people  
*interact*  
with environment.

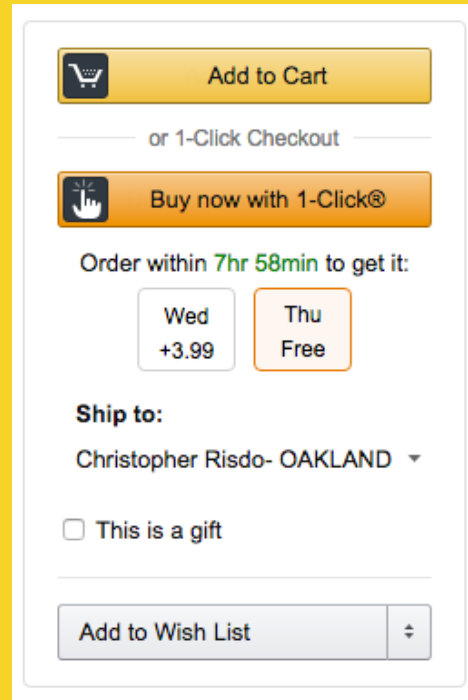


The closer technology is to us—*physically*—  
the more it becomes about us.

# Micro

Features  
Conversion

Previously this was found at the "micro" level -- features designed for conversion, engagement, onboarding, etc.



# Micro

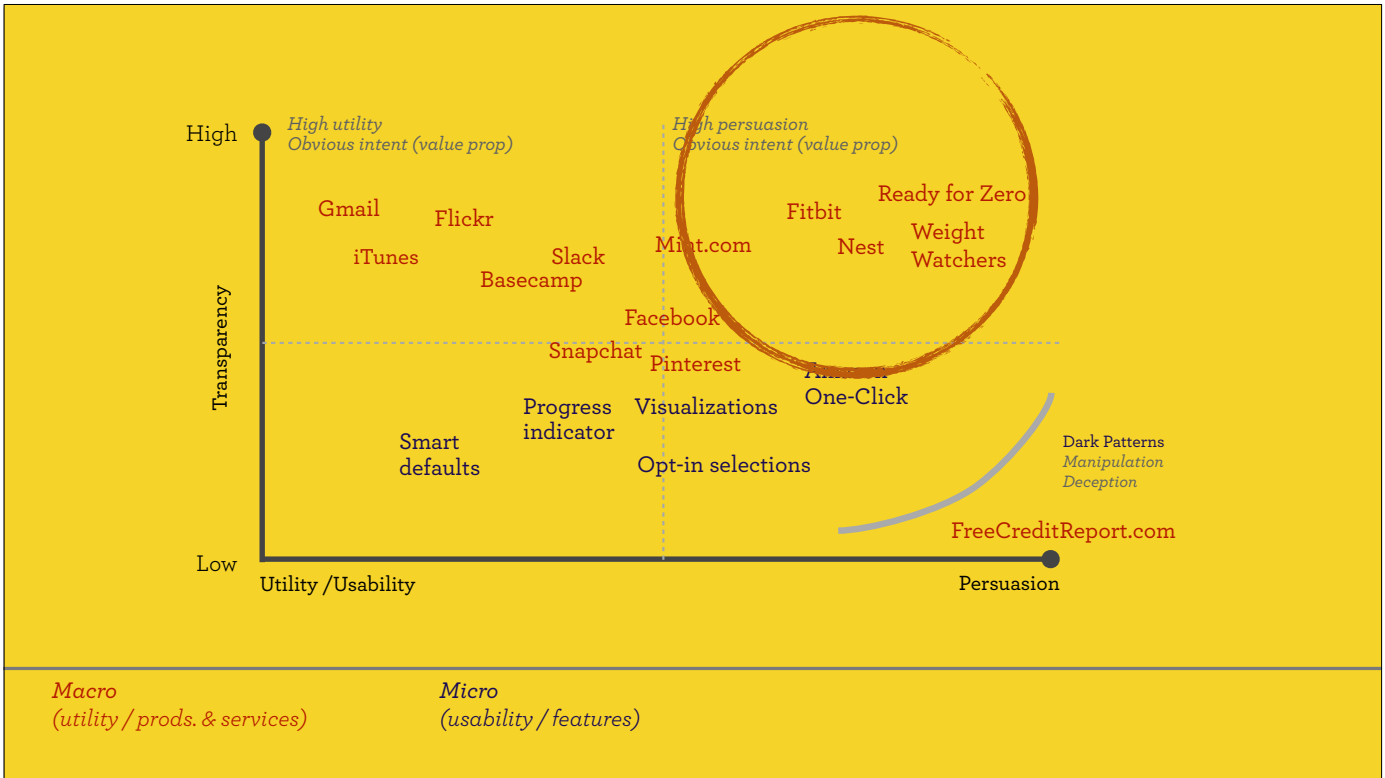
Features  
Conversion

# Macro

Products/Services  
Behavior Change

Now, we're seeing whole products and services—at the macro-level—designed to create sustained behavior change. Or, more accurately, achieve behavior-based outcomes.

This is nothing new: from smoking cessation to losing weight, there have been services like this. But technology has made it more effective.



## ***Behavior Change as Value Proposition***

Products and services designed and marketed on the premise that their benefits—the value exchanged—are specific behavioral-based outcomes.

## ***Behavior Change as Value Proposition***

Value comes from progress  
towards behavior-based outcome

Users “self-select” into  
the val proposition

Data collection is  
a prominent mechanism

System makes prescriptive  
recommendations or guidance

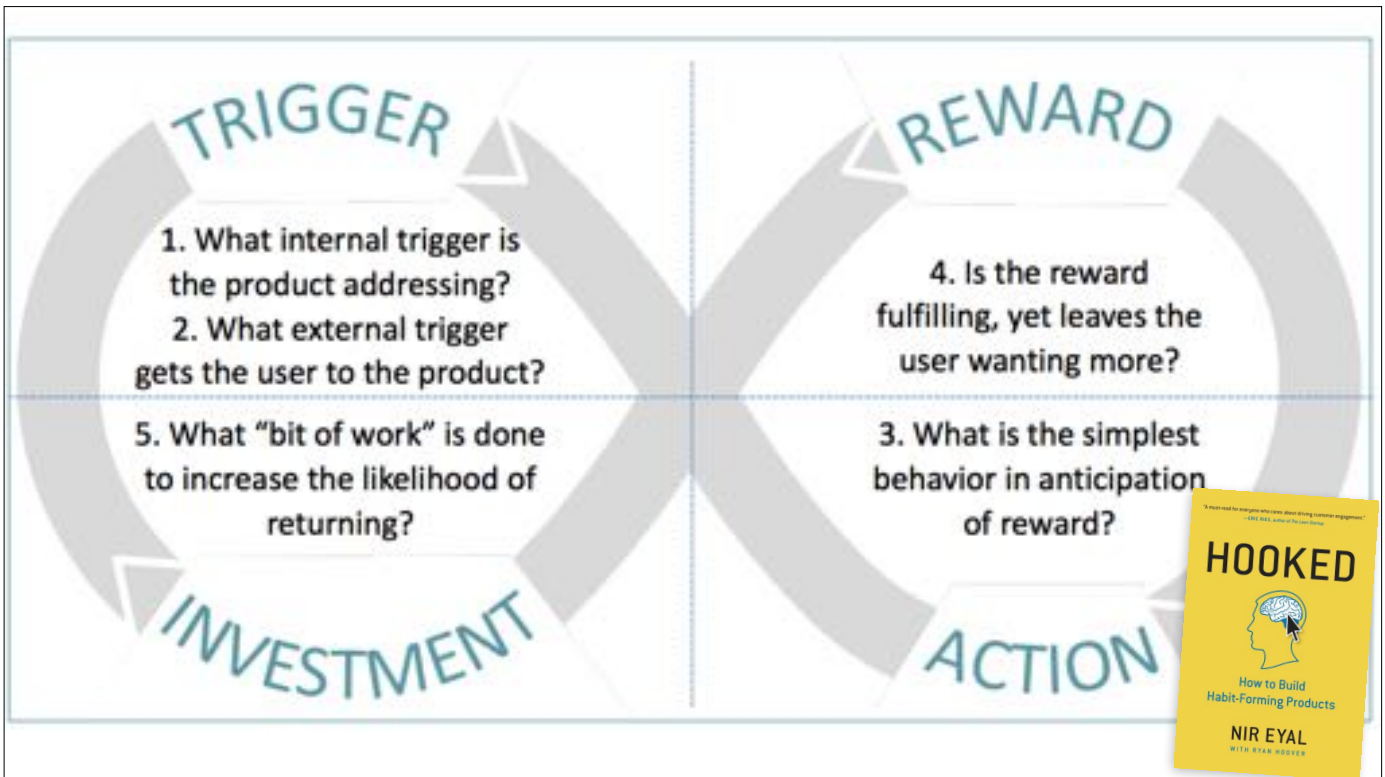
Behavior change (progress)  
is measurable

Sense of augmenting ability

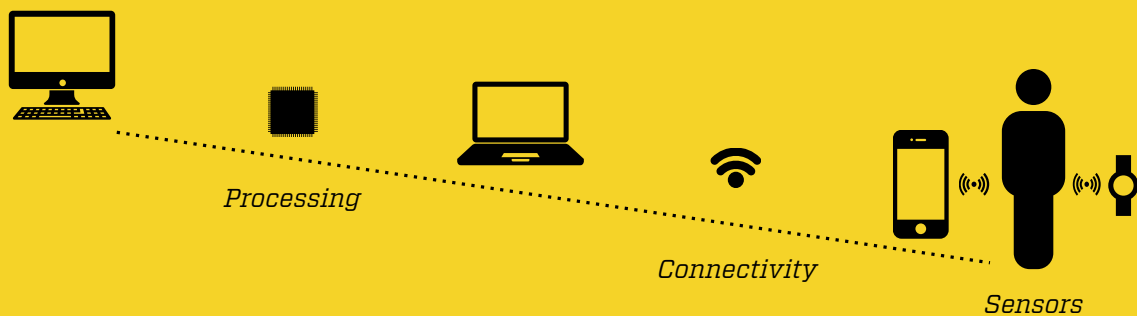
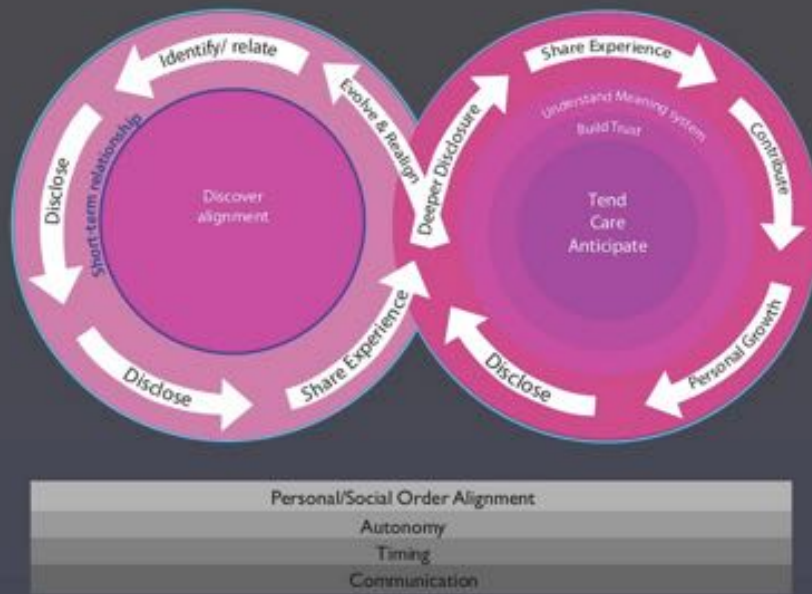
Value proposition is time released



# Internal influence



Long-term meaningful relationship



The closer technology is to us—*physically*—the more it becomes about us.

We now have more direct relationships  
with products and services.



A relationship invites *influence*.

As mass consumer devices, these devices won't be about quantified self to the end-users. Data is just a means to an end.

*People don't want a relationship  
with their data, they want to achieve  
behavior-based goals.*

**Interaction design** is about *shaping behavior*—about creating a representational dialogue between a person and technology. An interaction designer thinks mostly about people and works to craft an interface on top of technology *to help a person achieve their goals*.

—Jon Kolko

**Collection > Story > Communication**

Data & Sensors

Feedback & Feedforward

Framing & Anchors



## Data & Sensors

### Collection

GPS  
Accelerometers  
RFID  
Image Capture  
Biometric  
  
Profiles  
Status Updates  
Shared credentials

Sensors

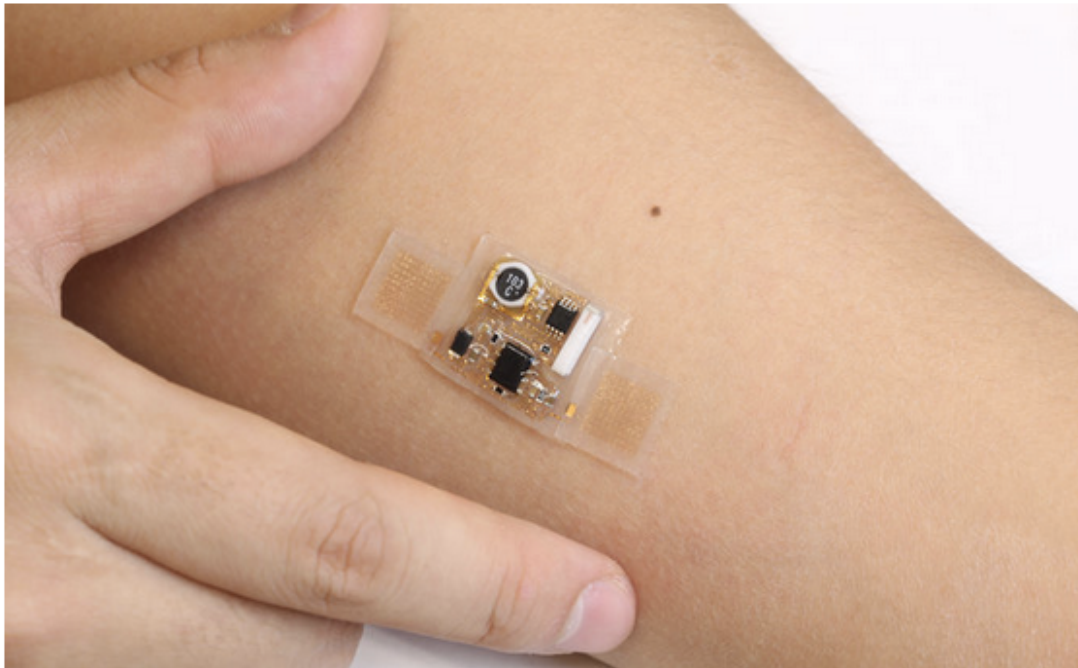
Attitudes  
& Behaviors



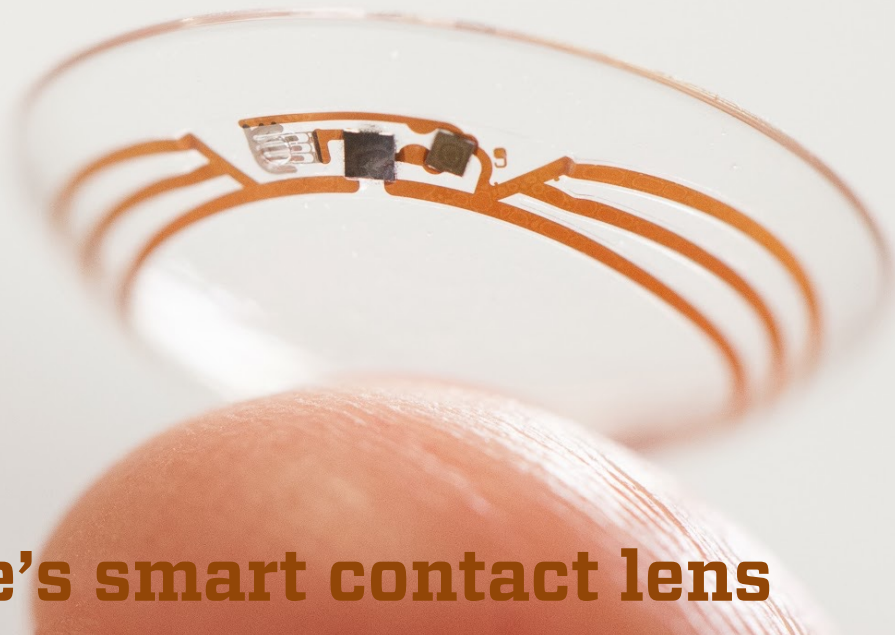


**If it can be connected, it will be is connected.**

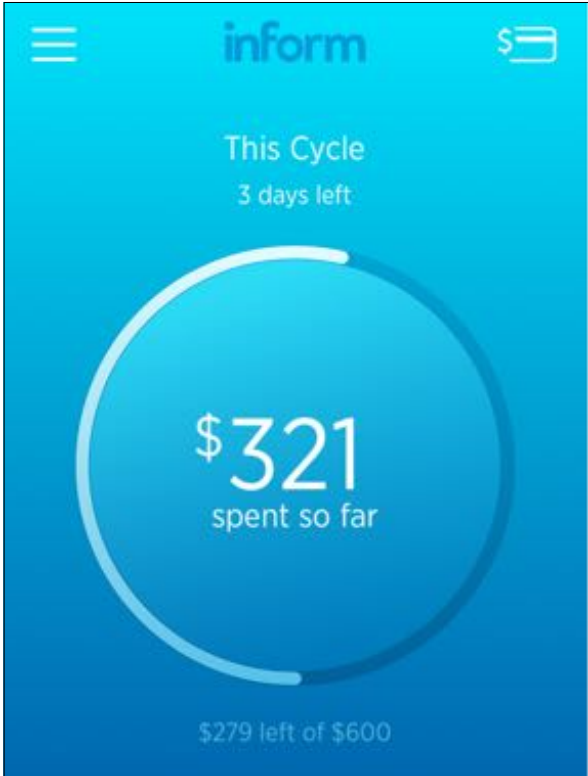




MC10 is working on attachable computers that look like small rectangular stickers and that can be placed on various parts of the body. John A. Rogers/The University of Illinois at Urbana-Champaign



## Google's smart contact lens



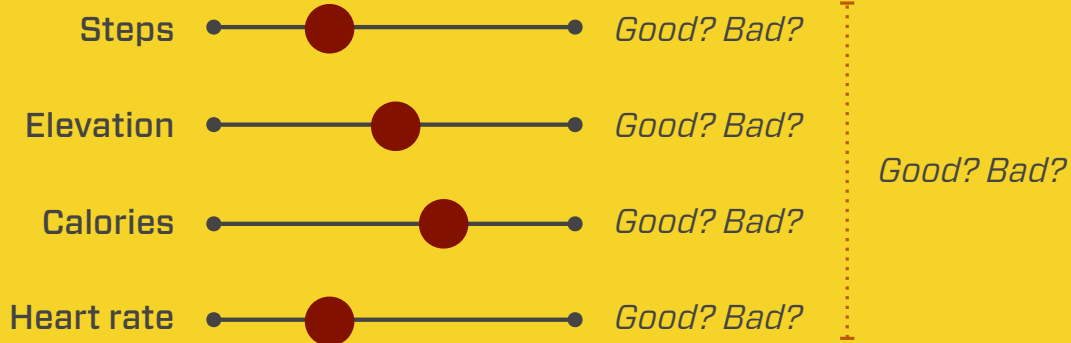
## Framing & Anchors

How we present feedback, and feedforward, has a big effect—one I don't think we've fully tapped yet.

From your credit score, to your physical activity, there's a lot of data points to keep track of.

Not only do you need to know the relative value (is it good? is it bad?) of each number, but then how each number relates to each other for a complete picture.

The average person doesn't want to do the cognitive "math." This is where we come in, framing the information, the story, in a way that will elicit reflection and behavioral change.



# Math is hard!

## Asian Flu has hit, and expected to kill 600 people...



Group 1

**Option A:** 200 people will be saved.

**Option B:** 1/3 probability that 600 people will be saved and 2/3 probability that no people will be saved.



Group 2

**Option A:** 400 people will die.

**Option B:** 1/3 probability no one will die and 2/3 probability that 600 people will die.

*How We Decide*, Jonah Lehrer

## Asian Flu has hit, and expected to kill 600 people...



Group 1

**Option A:** 200 people will be saved.

**Option B:** 1/3 probability that 600 people will be saved and 2/3 probability that no people will be saved.

**A = 72%**

**B = 28%**

**WTF MATH!**



Group 2

**Option A:** 400 people will die.

**Option B:** 1/3 probability no one will die and 2/3 probability that 600 people will die.

**A = 22%**

**B = 78%**

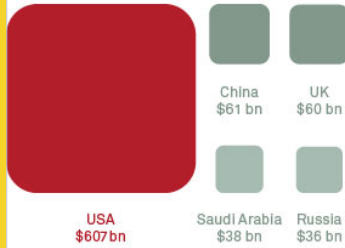
*How We Decide*, Jonah Lehrer

*How do you add meaning to data?*



### War Chests

Who has the biggest military budget per year?



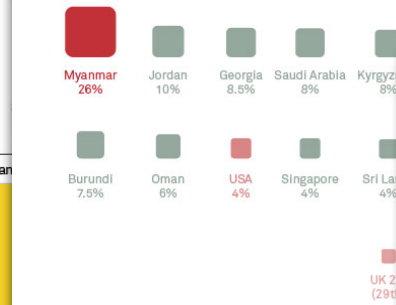
InformationIsBeautiful.net

source: Guardian

Reframing for a different perspective.

### Big Spenders II

Yearly military budget as % of GDP

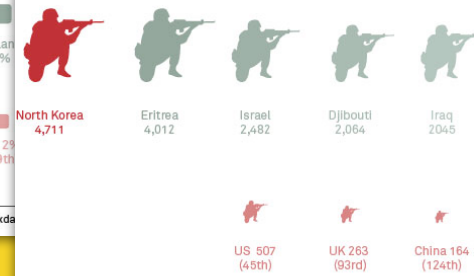


InformationIsBeautiful.net

source: Guardian Datablog, milera

### Active Forces II

Number of soldiers per 100,000 people



InformationIsBeautiful.net

source: Guardian Datablog, milera, sipri.org 2008

Info is beautiful: defence budgets  
David McCandless/Guardian

<http://www.guardian.co.uk/news/datablog/2010/apr/01/information-is-beautiful-military-spending>



# Feedback & Feedforward

# Feedback



In the 60s most people didn't have personal scales. If you joined weight watchers, you attended a weekly meeting, where you were weighed and received group therapy style guidance.

The feedback loop was one week. You got feedback on all your decisions and behaviors over the course of 7 days at one-week intervals, and received guidance that wasn't custom for you.



Discover the Wireless Scale

Step up for instant

Intro Video

**Buy Now**

**Weight. Activity. Heart. Sleep.**

Get instant access to main aspects of your wellness.

Turn long-term goals into small achievable targets, and monitor your weekly progress toward your goals.

Thirty years ago, your feedback loop on your finances was a manually entered register that you reconciled with a monthly statement that you got in the mail.

Spreadsheets helped do the math, if you were motivated, and software helps frame your data with charts and graphs.

Now we hand over our credentials to our accounts and can get instantaneous feedback.

Feedback is still a response after an action—after a decision or behavior has been made. As we get “smarter” with our services, we will present **feedforward**, *guidance at the point of a decisions to engage in a behavior*, such as making the right choice on a menu in a fast food restaurant.

# Feedforward

If I could walk into my nearby sandwich shop for lunch, and be alerted by an app, letting me know the different results, depending on my choice, I might make a different choice.

Choice architecture is largely about changing the environment, but it can be about guidance for navigating the environment.

**1400 cal**



soda      salami      cookies



**600 cal**



turkey      water      baked



**C** Credit Line \$2,100.00  
Available Credit \$1,576.80

**D** CITY CA 12345

**E** **Account Summary**  
Previous Balance \$1,686.15  
- Credits \$0.00  
- Payments \$1,688.15

Feedforward already exists in many places — for example projecting pay down of your credit card debt. But it's not accessible when you're really making decisions.

= New Balance \$523.20

**F** **Payment Information**  
New Balance \$523.20  
Scheduled Minimum Payment \$35.00  
**H** Scheduled Payment Due Date 12/01/13

**Late Payment Warning:** If we do not receive your minimum payment by the date listed above, you may have to pay a late fee of up to \$35.00 and your APR's will be subject to increase to a maximum Penalty APR of 29.99%.

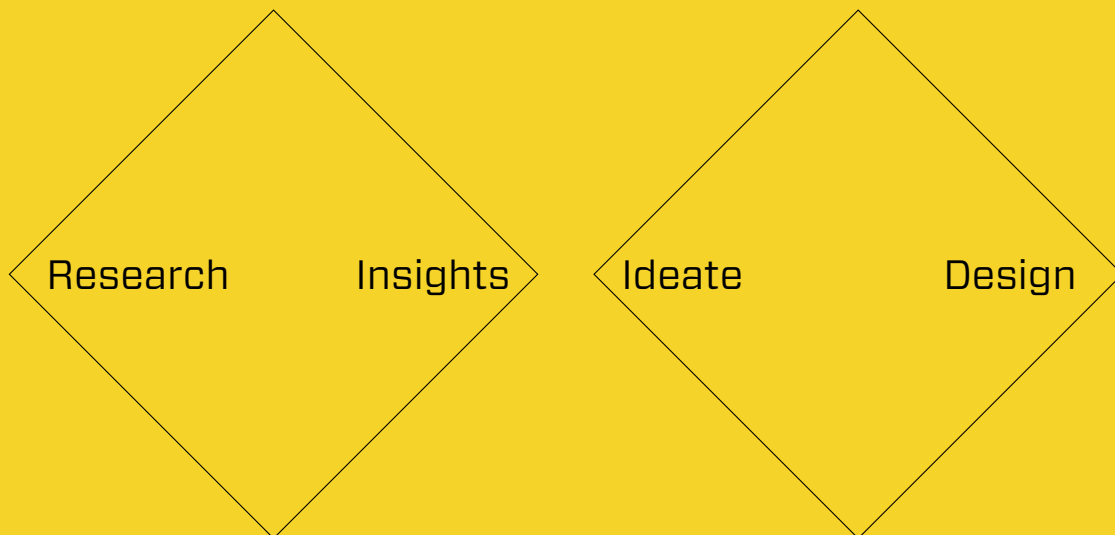
**Minimum Payment Warning:** If you make only the minimum payment each period, you will pay more in interest and it will take you longer to pay off your balance. For example:

If you make no additional charges using this card and each month pay...	You will payoff the balance shown on this statement in about...	And you will end up paying an estimated total of...
Only the minimum payment	1.5 years	\$627
\$49	1 year	\$596 (Savings=\$31)

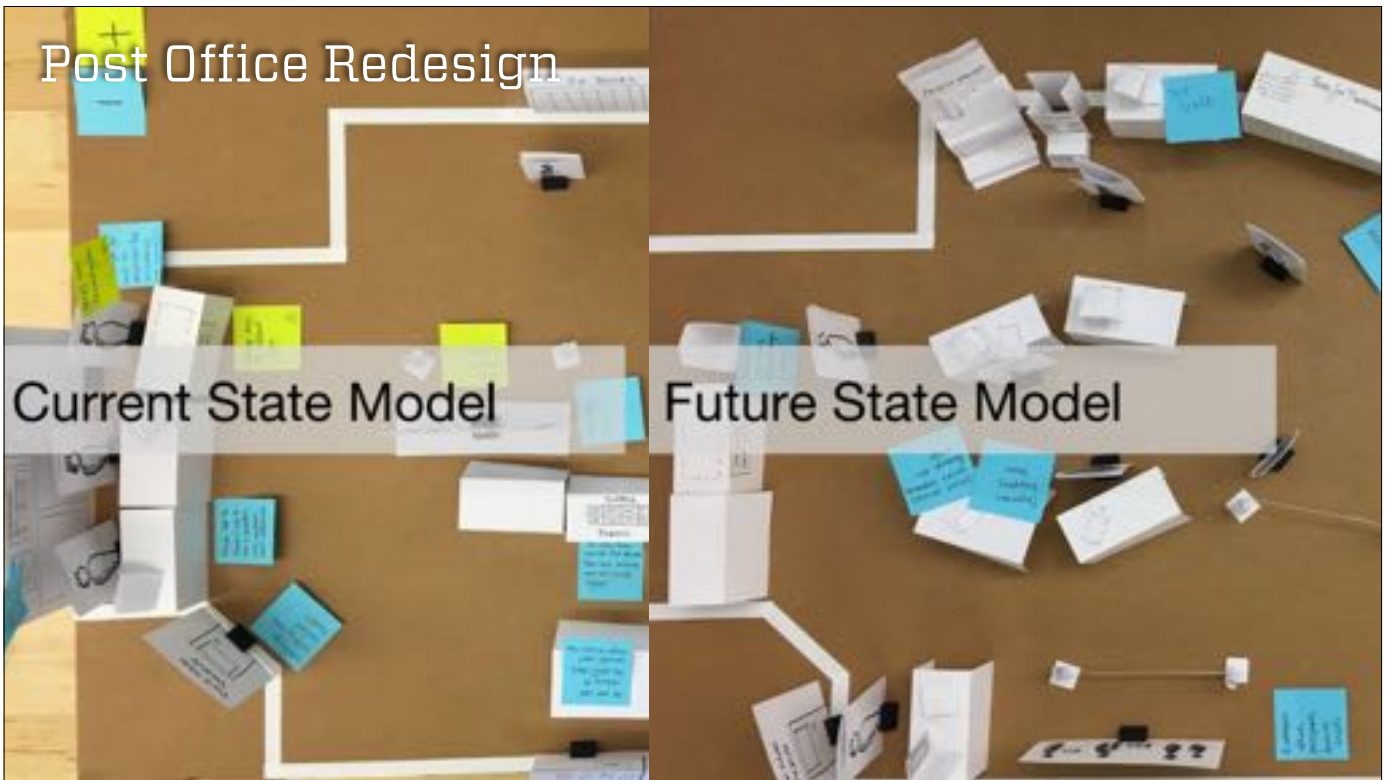
**I** If you would like information about credit counseling services, call 1-800-555-5555.

**Rate Information**  
YOU MAY PAY YOUR BALANCE IN FULL AT ANY TIME  
YOUR RATE MAY VARY ACCORDING TO THE TERMS OF YOUR AGREEMENT  
NOTICE: SEE REVERSE SIDE FOR IMPORTANT INFORMATION ABOUT YOUR ACCOUNT

## *In our process*







# Post Office Redesign



## Research

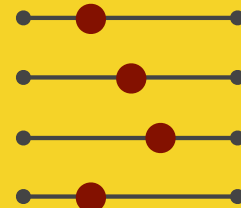
Mental models and personas  
with a behavioral profile

*Knowledge (i.e. awareness and understanding)*

*Motivation*

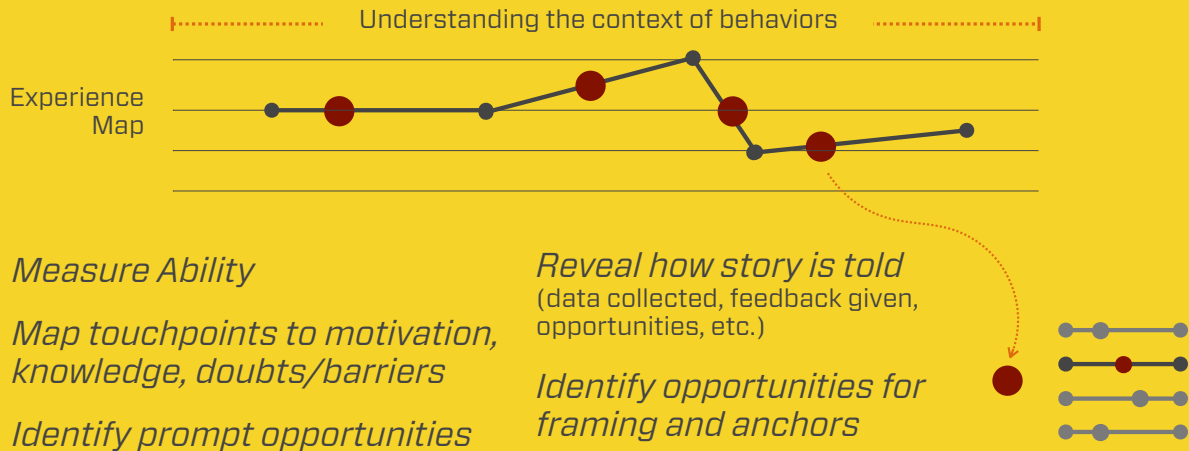
*Ability*

*Doubts/Barriers (i.e. security issues)*



What are people **thinking, feeling, doing?**

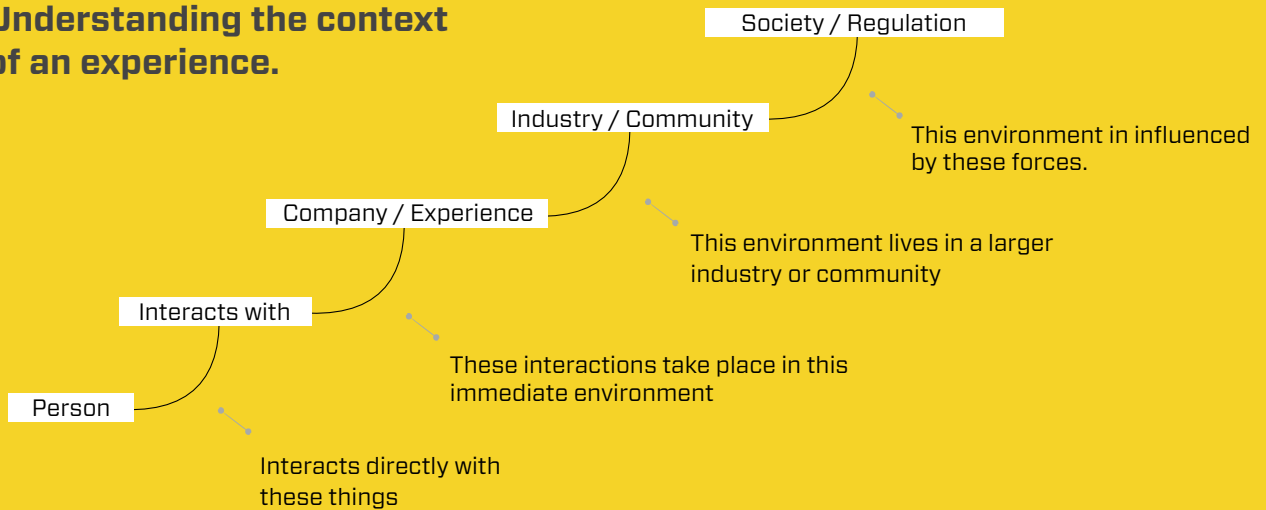
# Strategy



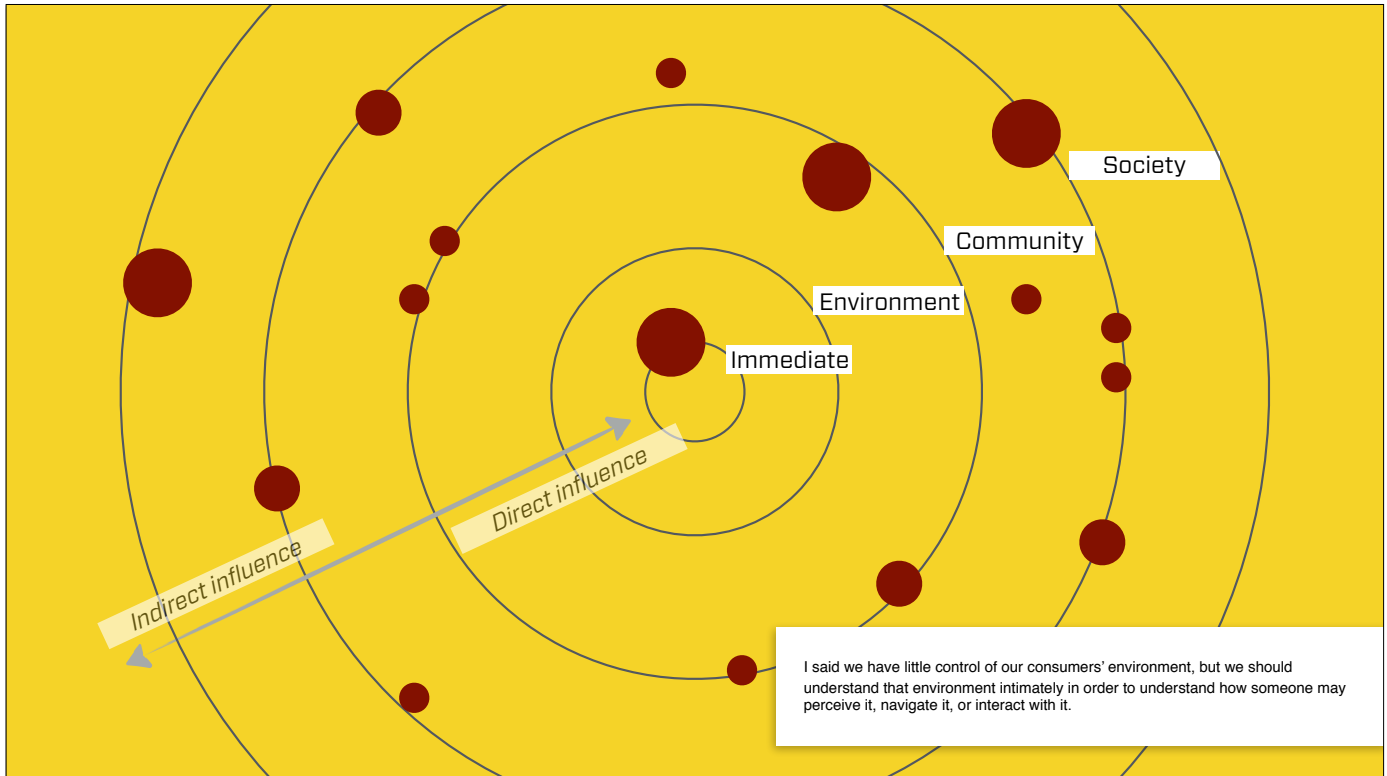
Develop **empathy, understanding, and insights**

# Ecosystem Mapping

Understanding the context of an experience.



Develop **empathy, understanding and insights**

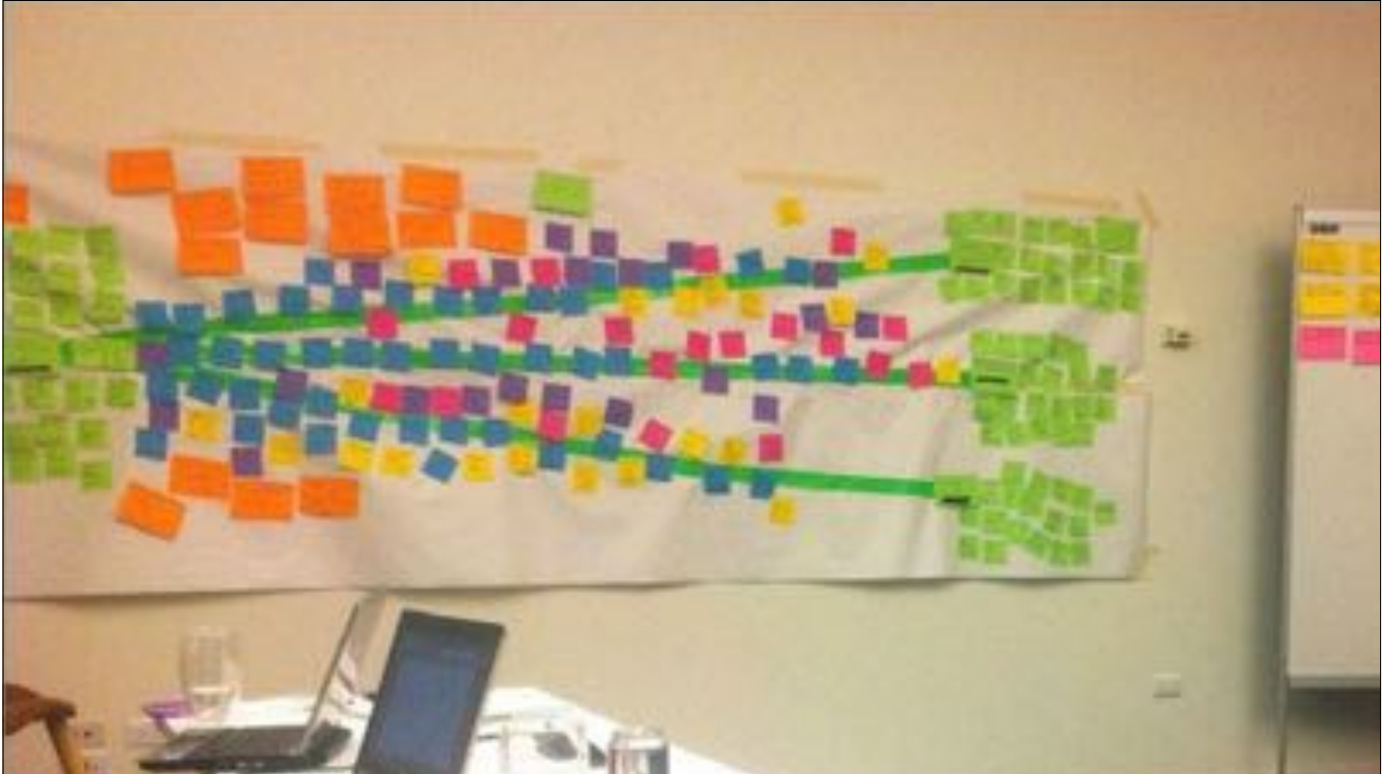


## Backcasting

By means of a participatory process, backcasting asks: "if we want to attain a certain goal, what actions must be taken to get there?"

"...a method in which the future desired conditions are envisioned and steps are then defined to attain those conditions, rather than taking steps that are merely a continuation of present methods extrapolated into the future."

Backcasting method developed by John B. Robinson, 1982



## O•B•I Backcasting

### Outcome

(future state achieved by behaviors)

determine  
this...

### Behaviors

(required to achieve outcome)

to identify  
these...

### Interactions

(that can support the behaviors)

...in order to know  
what to design

# Insight Combination

Insight combination is a method to quickly generate a lot of design ideas and explicitly tie these ideas to contextual research and the cultural nuances of your target audience. Insight combination leverages *forced provocation*—the ability to constantly ask and answer "what if" without fear of critique.

Insights from contextual research combine with trends and patterns to form design constraints that drive "what if" questions.

See more at: [https://www.wickedproblems.com/5\\_insight\\_combination.php#sthash.bKOLZsF3.dpuf](https://www.wickedproblems.com/5_insight_combination.php#sthash.bKOLZsF3.dpuf)

# Insight Combination

An insight is a clear, deep, meaningful perception into human behavior in a particular design context.



A design pattern (pull-down to refresh) or trend (sharing economy) describes a possible solution to a problem, based on problem /solution sets in other contexts.

**Time-boxed  
ideation**

See more at: [https://www.wickedproblems.com/5\\_insight\\_combination.php#sthash.bKOLZsF3.dpuf](https://www.wickedproblems.com/5_insight_combination.php#sthash.bKOLZsF3.dpuf)



# Insight Combination

Dan Lockton  
*Design with Intent*  
Stephen Anderson  
*Mental Note Cards*  
Fabrique  
*Insights*  
Cialdini  
*Weapons of influence*



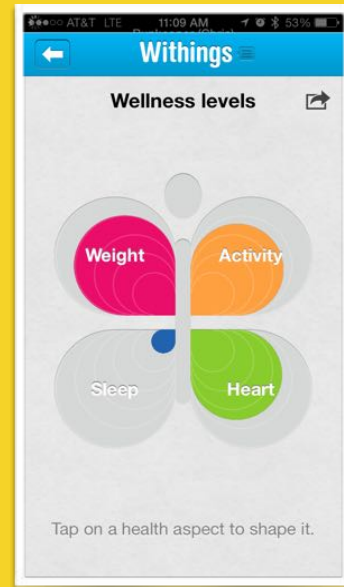
# Insight Combination

Dan Lockton  
*Design with Intent*  
Stephen Anderson  
*Mental Note Cards*  
Fabrique  
*Insights*  
Cialdini  
*Weapons of influence*

- ▶ Behavior #1
- ▶ Behavior #2
- ▶ Behavior #3
- ▶ Behavior #4
- ▶ Behavior #5
- ▶ Behavior #6
- ▶ Behavior #7
- ▶ Behavior #8
- ▶ Behavior #9
- ▶ Behavior #10

Random pairing





Data visualization  
Haptic feedback  
Audio feedback

Triggers/cues  
Feedback loop  
Feedforward guidance

## *Shaping behavior by design*

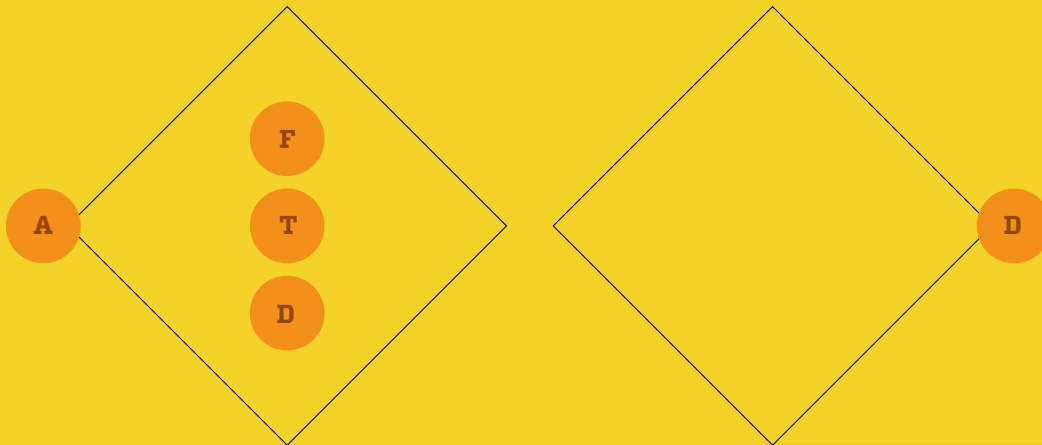


**Aspiration**  
Needs  
Motivations  
Goals



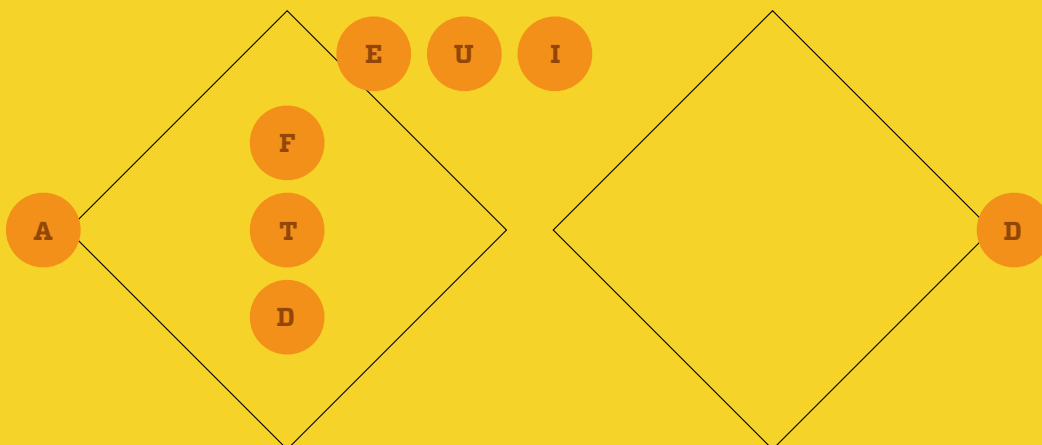
**Design**  
Effective  
Sustainable  
Viable

# *Shaping behavior by design*



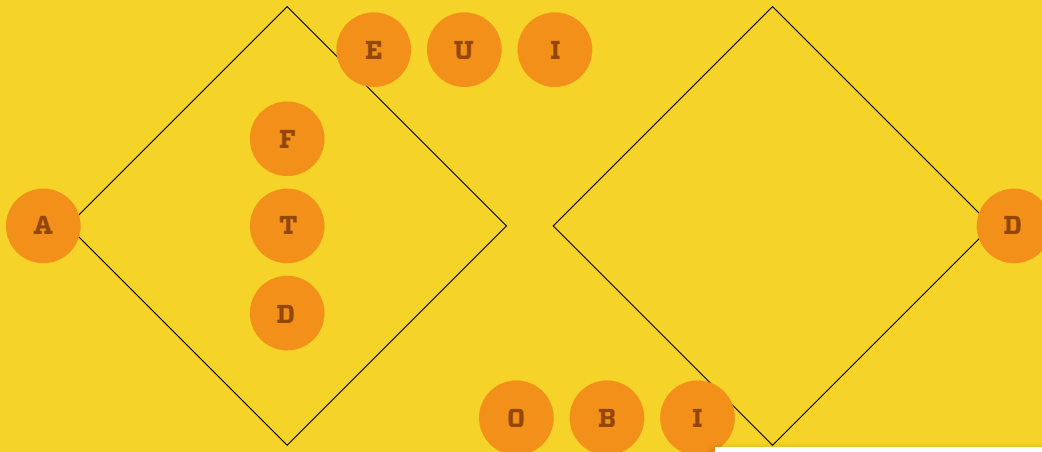
What are people feeling, thinking, and doing?

# *Shaping behavior by design*

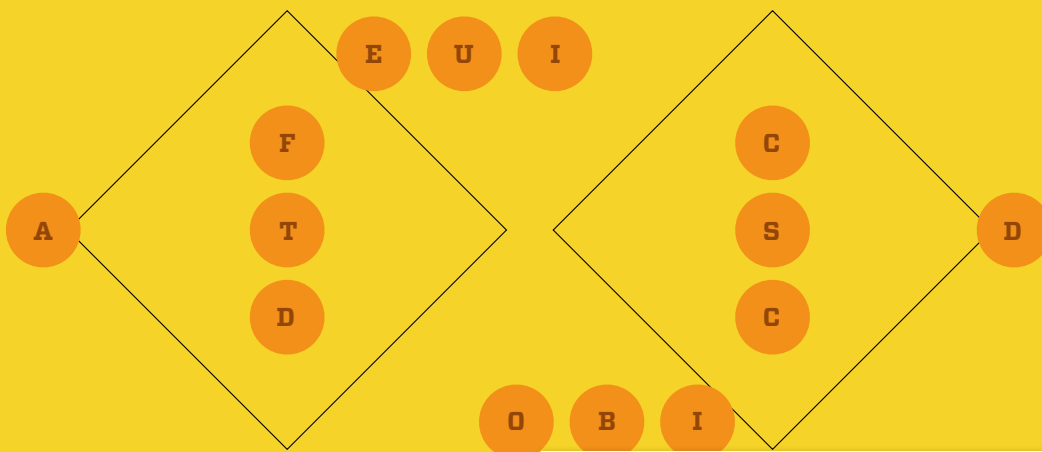


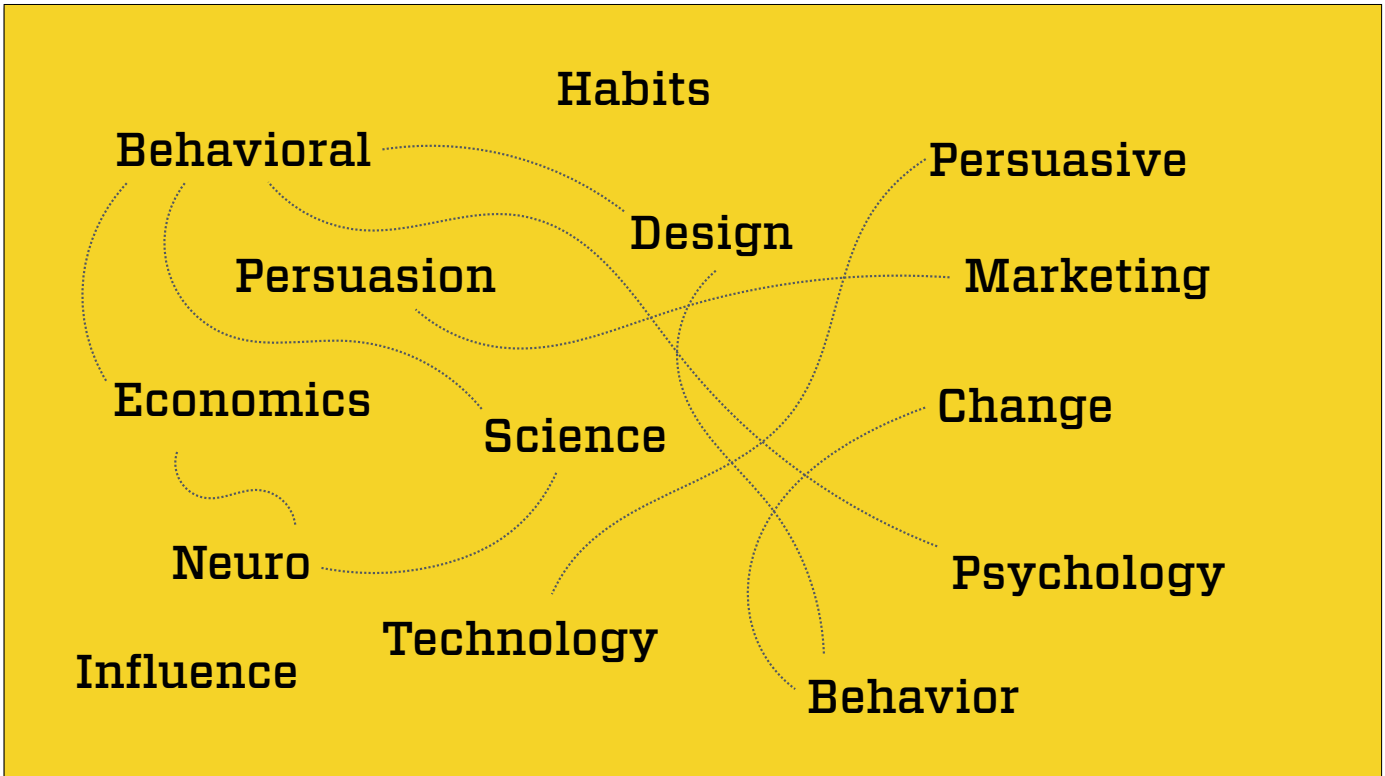
We develop empathy, understanding, and insights about people, their motivations, and the influence of their environment.

# Shaping behavior by design



# Shaping behavior by design





*Tacit Knowledge* *Machine learning*

*Abductive leaps* *Empathy*

*Anthropology*

***We must embrace the squishy***

*Qualitative observation* *Inference*

*Latent patterns* *Ethnography*

*Behavior change is a system,  
experienced over time  
across many different touchpoints,  
with many different decisions,  
in a complex environment.*

My Jawbone is telling me I have to go to bed. Not sure which is more silly - that sentence or the fact I'm now going to bed.

↩ Reply ↻ Retweet ★ Favorite ⋮ More

RETWEET  
1

FAVORITES  
4



3:20 PM - 13 Oct 2014

“ We should look at what kind of impact people’s behavior should have on design. ”

—Paola Antonelli

UX Immersion:  
**INTERACTIONS**

***THANK YOU!***

***shaping behavior, by design***  
behavioral design at scale

**chris risdon** head of design, capital one labs

**@chrisrisdon**



UX Immersion:

# INTERACTIONS

A UX Conference Unlike Any Other

April 18–20, 2016 in San Diego, CA

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**UX Thought of the Day** UX thoughts to inspire you to do something differently in your design work. [uxthought.ue.com](http://uxthought.ue.com)

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