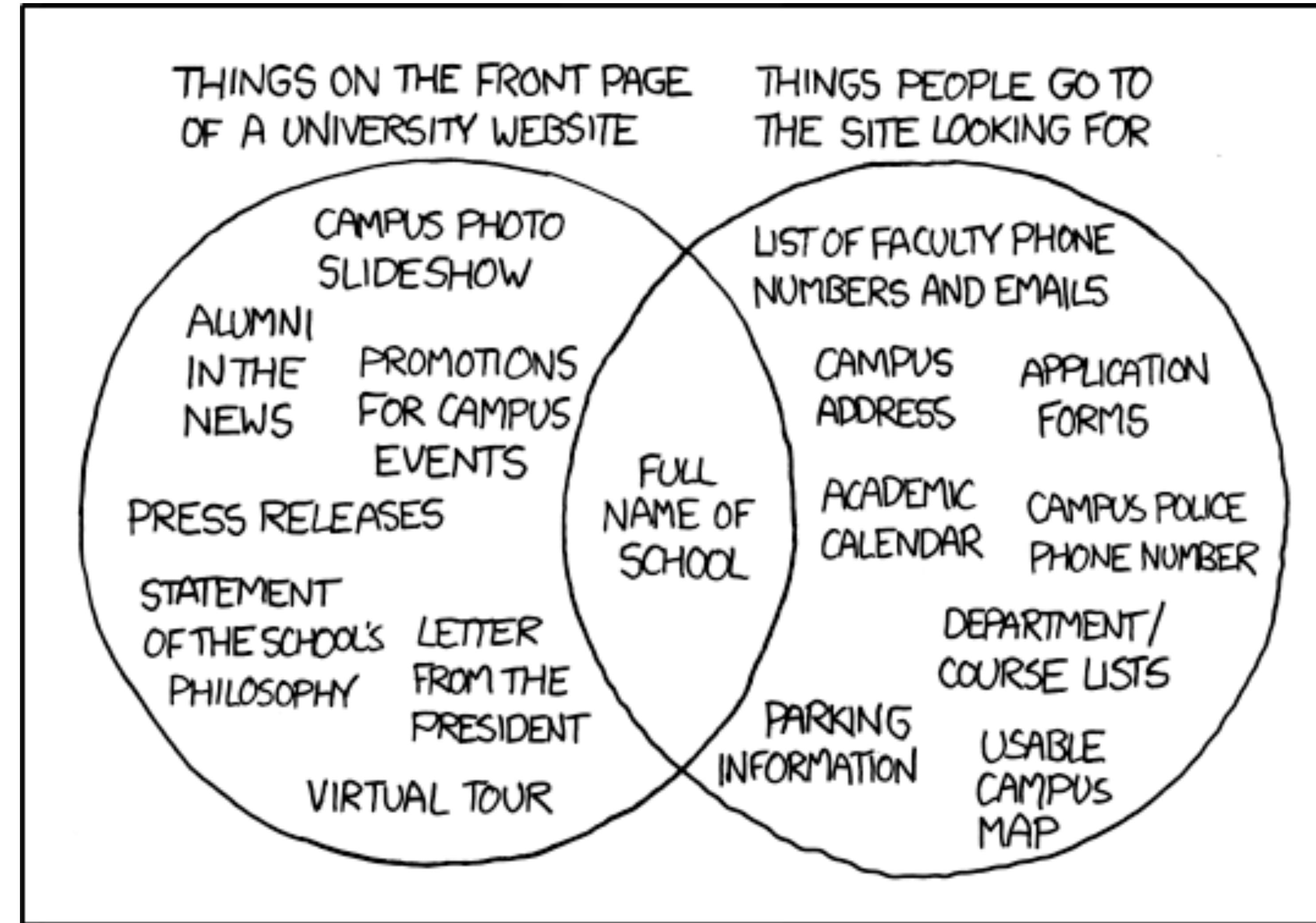


6.1040: Software Studio

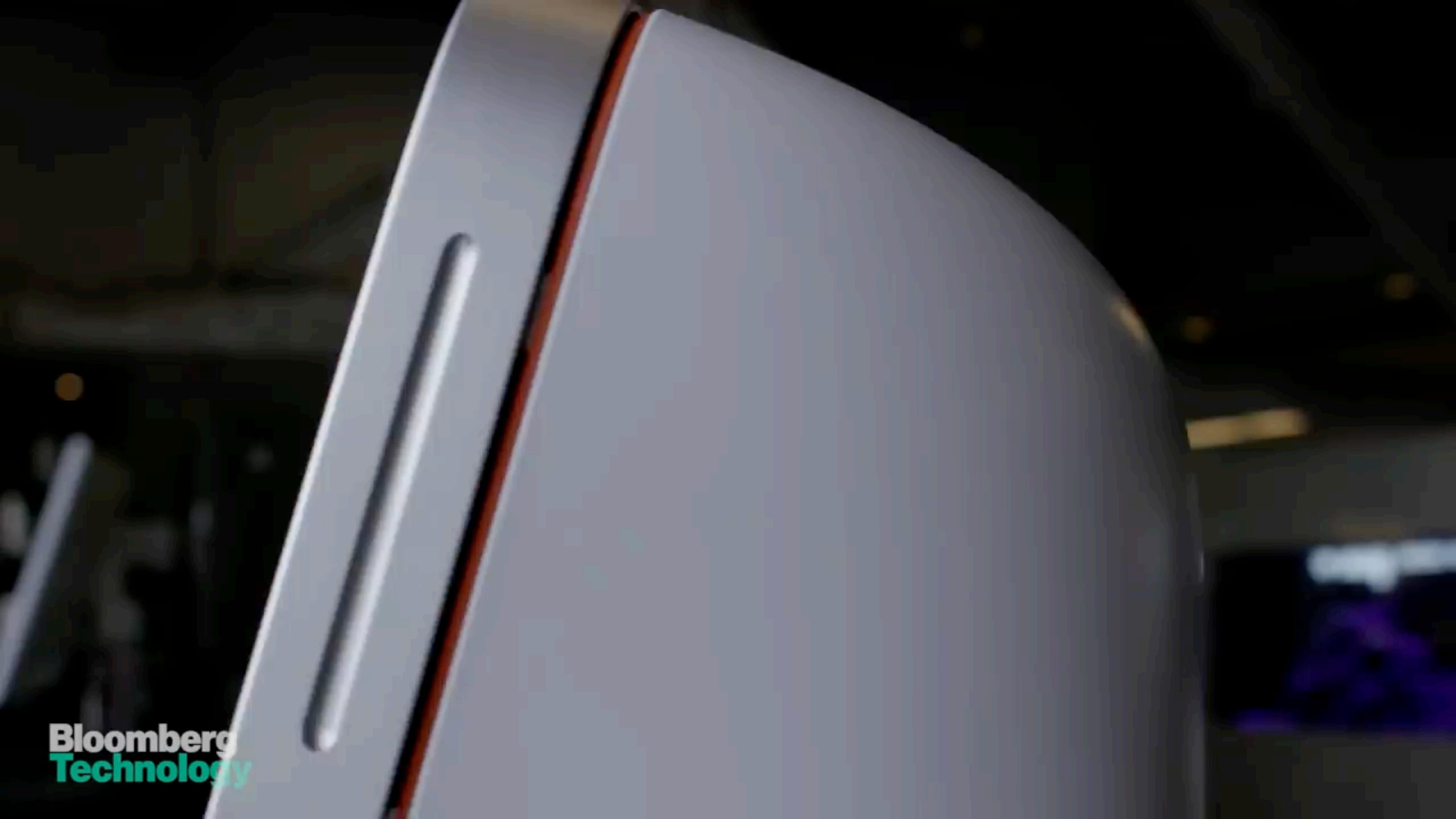
Defining the Design Problem via Need Finding

Based on material from Scott Klemmer & James Landay

Arvind Satyanarayan & Daniel Jackson



<https://xkcd.com/773>



Bloomberg
Technology



Juicero

Apr 20, 2017 · 4 min read · Listen

First, the Press. Our connected Press itself is critical to delivering a consistent, high quality and food safe product because it provides:

A Note from Juicero's New CEO

1. The first closed loop food safety system that allows us to remotely disable Produce Packs if there is, for example, a spinach recall. In these scenarios, we're able to protect our consumers in real-time.
2. Consistent pressing of our Produce Packs calibrated by flavor to deliver the best combination of taste and nutrition *every time*.
3. Connected data so we can manage a very tight supply chain, because our product is live, raw produce, and has a limited lifespan of about 8 days.

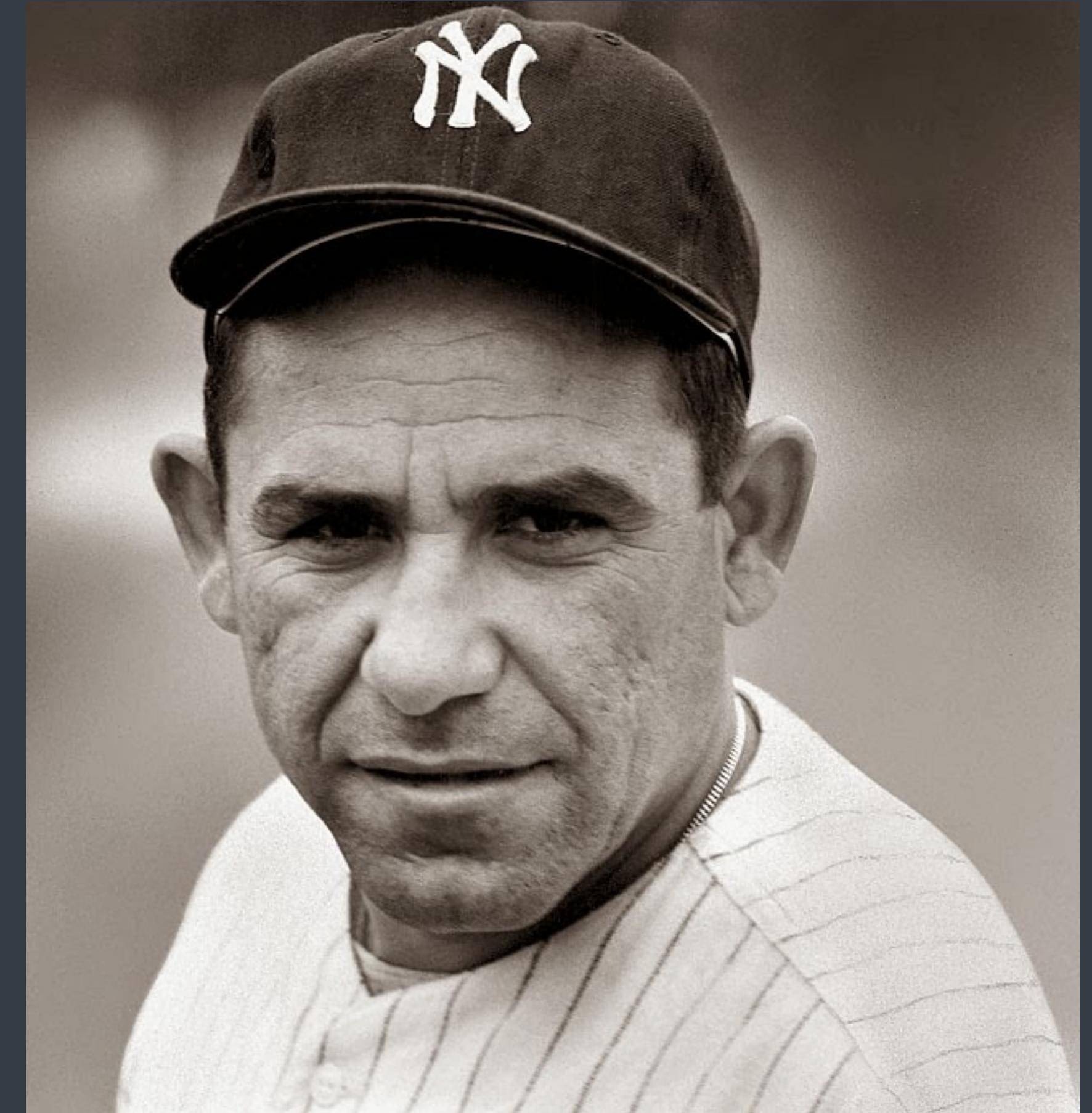
The value of Juicero is more than a glass of cold-pressed juice. Much more.

The value is in how easy it is for a frazzled dad to do something good for himself while getting the kids ready for school, without having to prep ingredients and clean a juicer.

It's in how the busy professional who needs more greens in her life gets App reminders to press Produce Packs before they expire, so she doesn't waste the hard-earned money she spent on them.

*"You can observe a lot by
just watching"*

– Yogi Berra







July 2015



Oct 2016



Oct 2017

u/whatthesamm, posted to r/DesirePath on Sept. 22, 2019.





Sarah Nicholas
@SarahNicholas

...

This sign knows it has lost.



8:06 AM · Jun 6, 2021 · Twitter for Android

709 Retweets **217** Quote Tweets **4,896** Likes

What do you look for?

Pay attention to *artifacts*

Look for *workarounds* and *hacks*

"*Errors*" are goldmines



05:39

GUAM

09:39

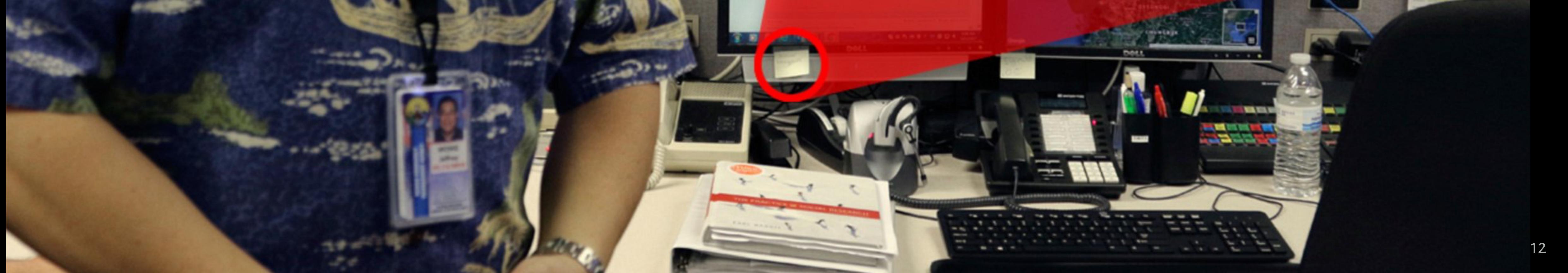
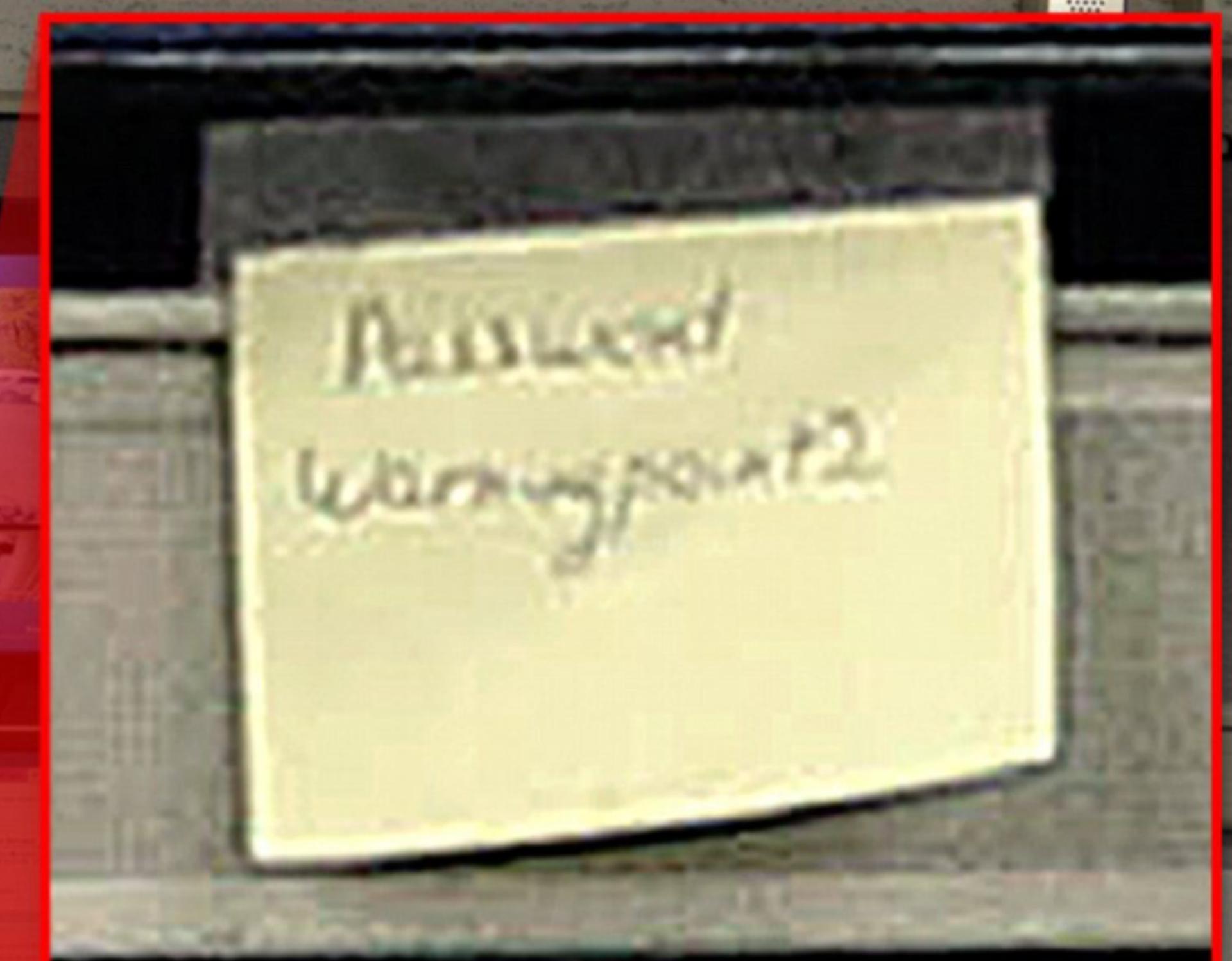
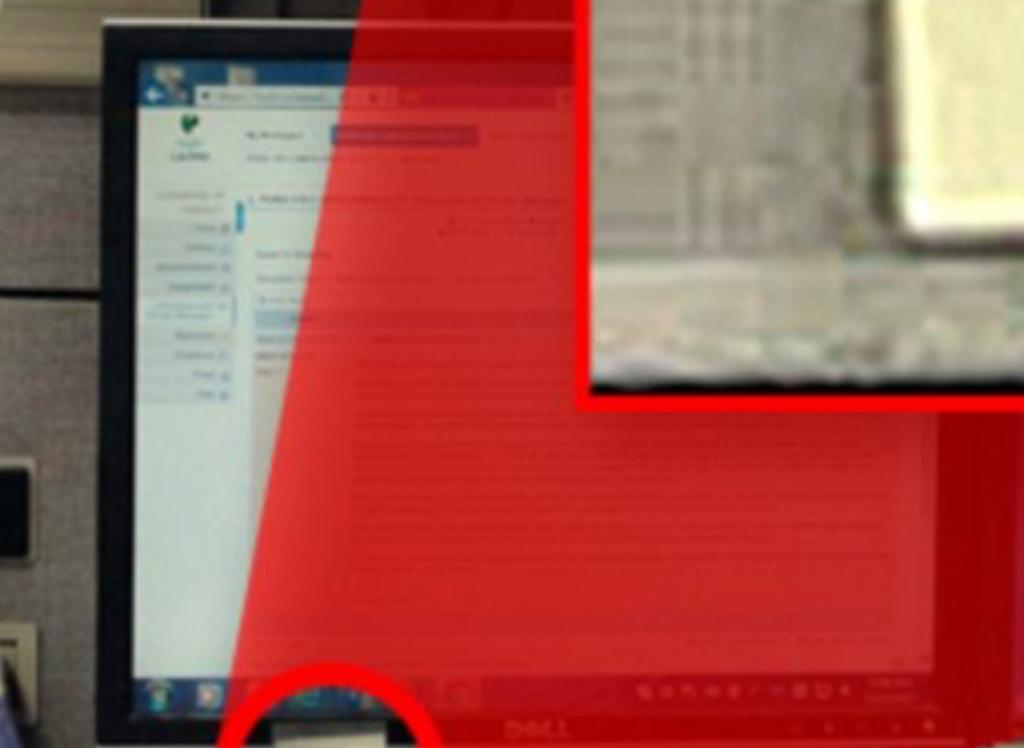
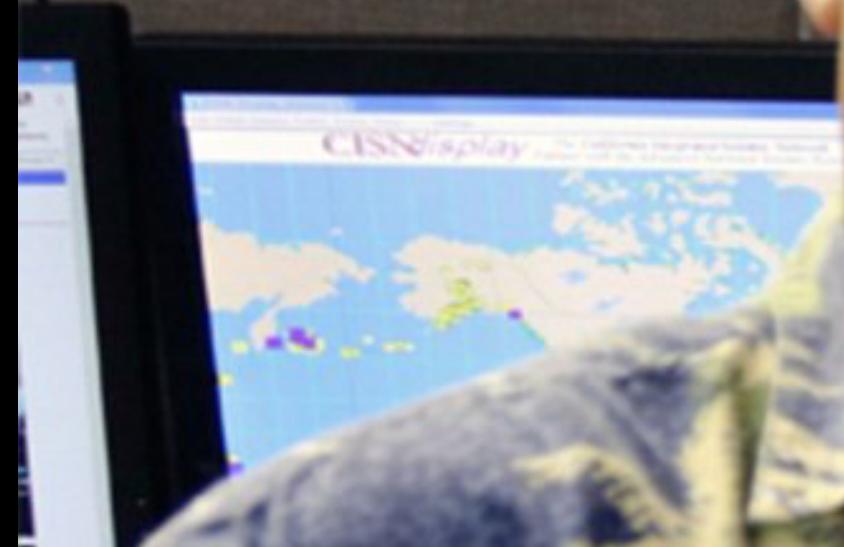
HONOLULU

5:39

ASH D.C.

19:39

GMT / ZULU





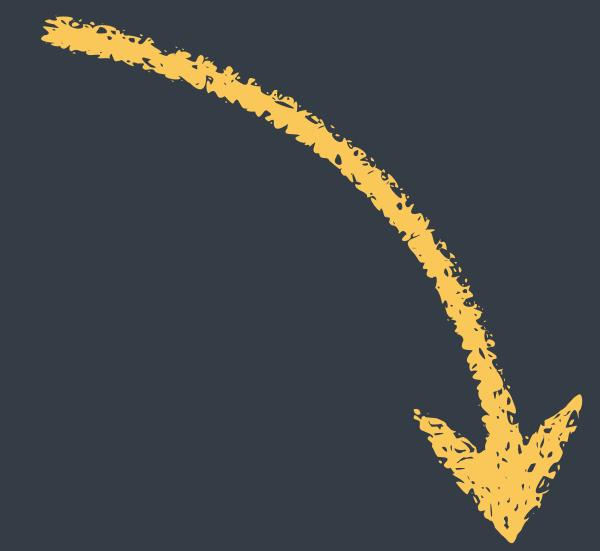
From Observations to Interviews

The *What*



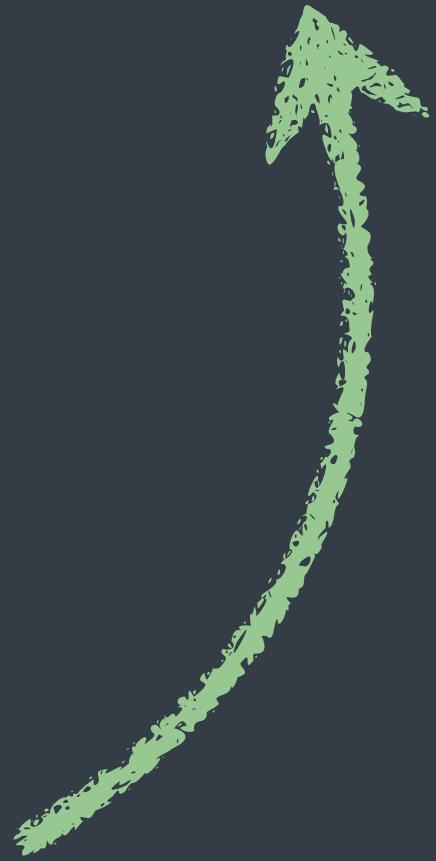
From Observations to Interviews

The *What*

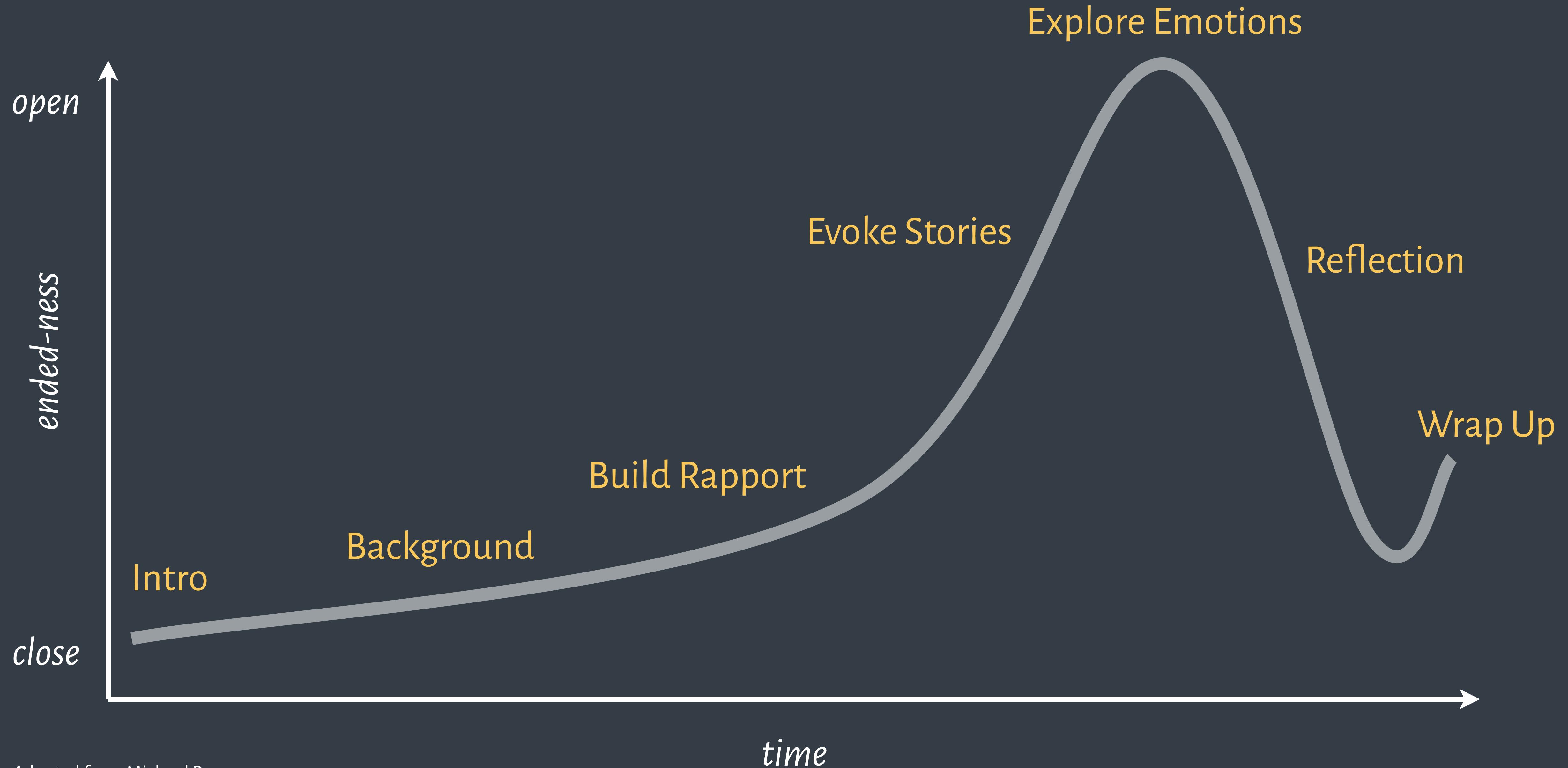


From Observations to Interviews

The *Why*

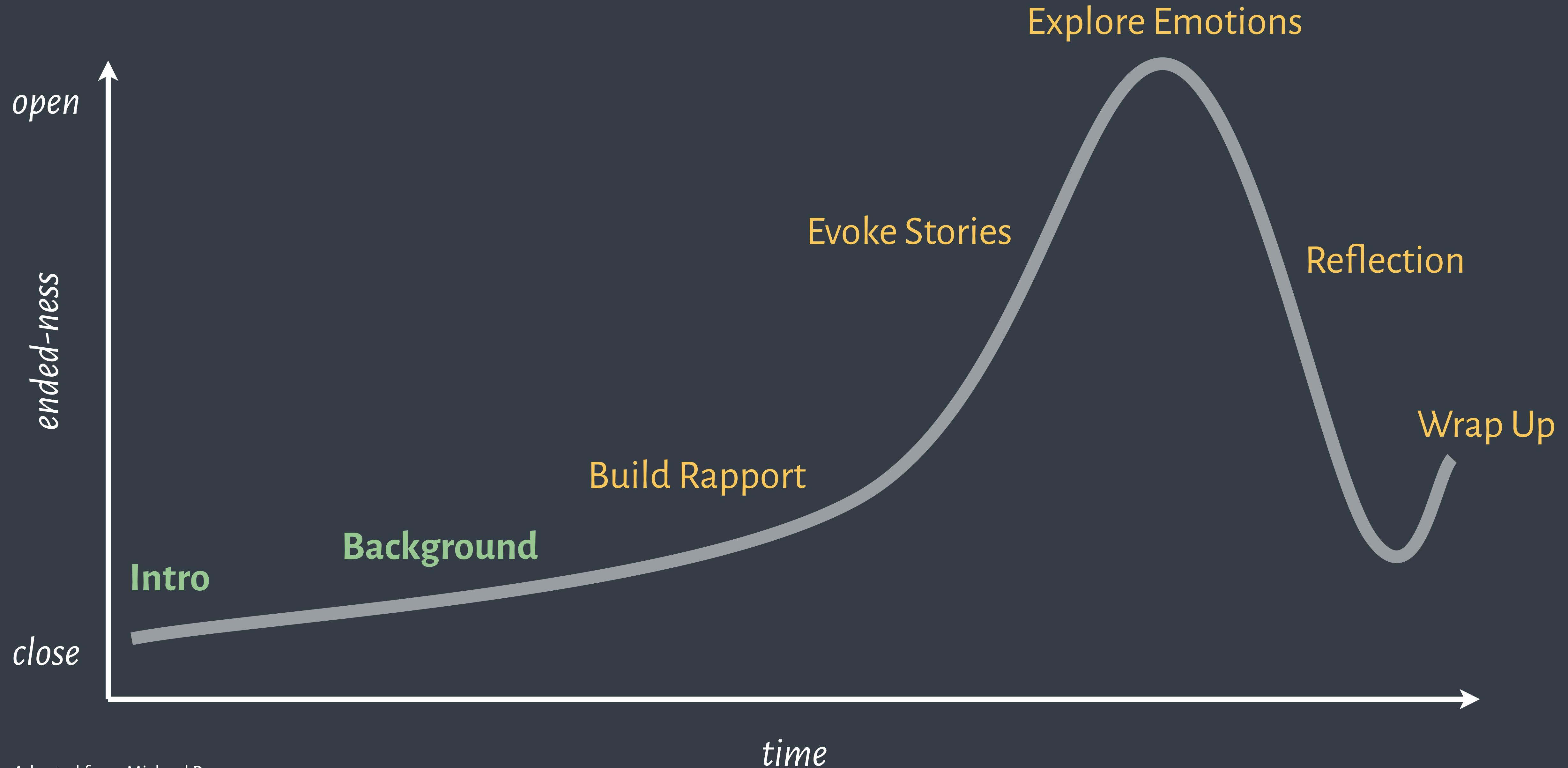


Interviews



Adapted from Michael Berry.

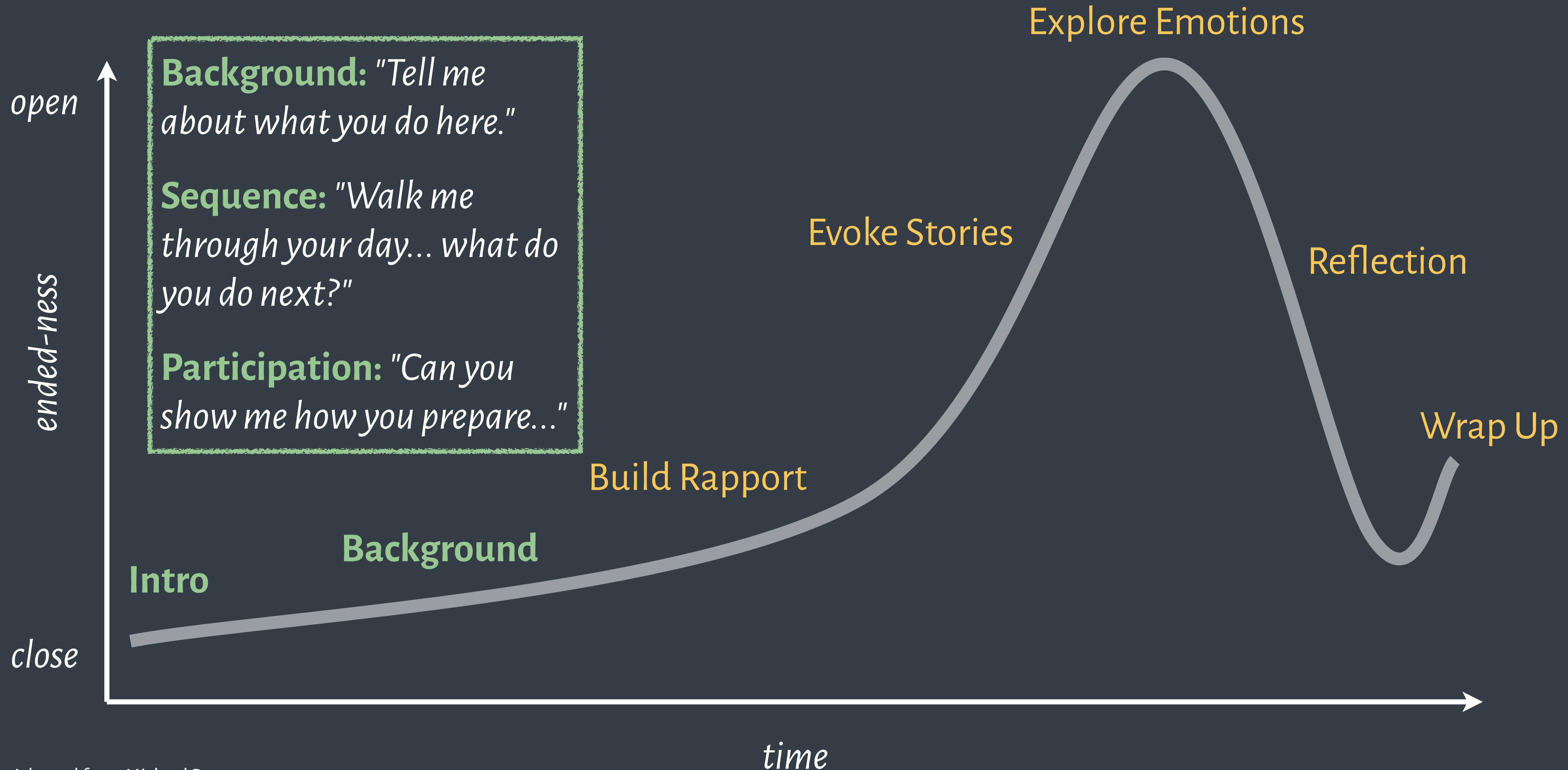
Interviews







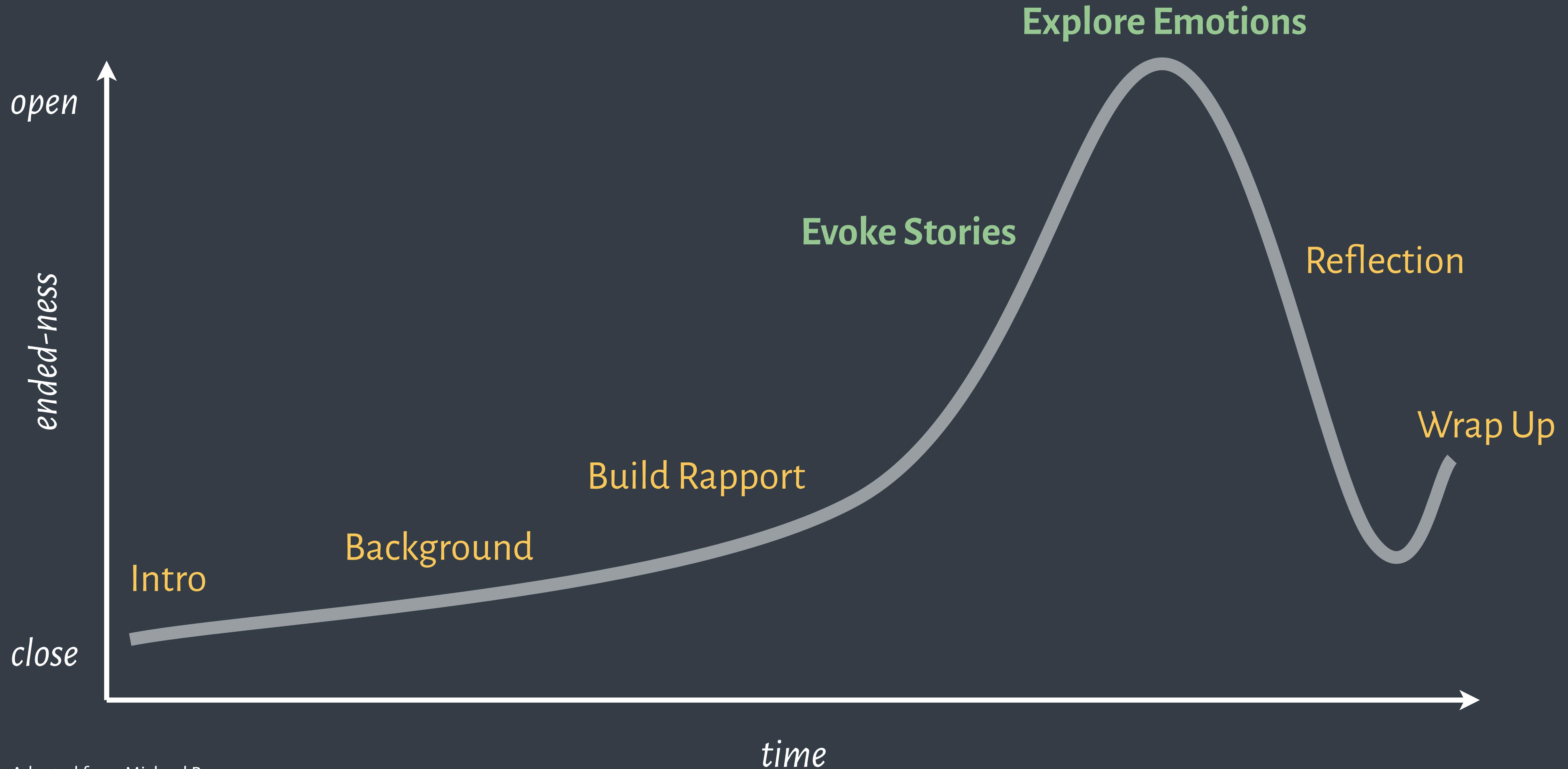
Interviews



Interviews

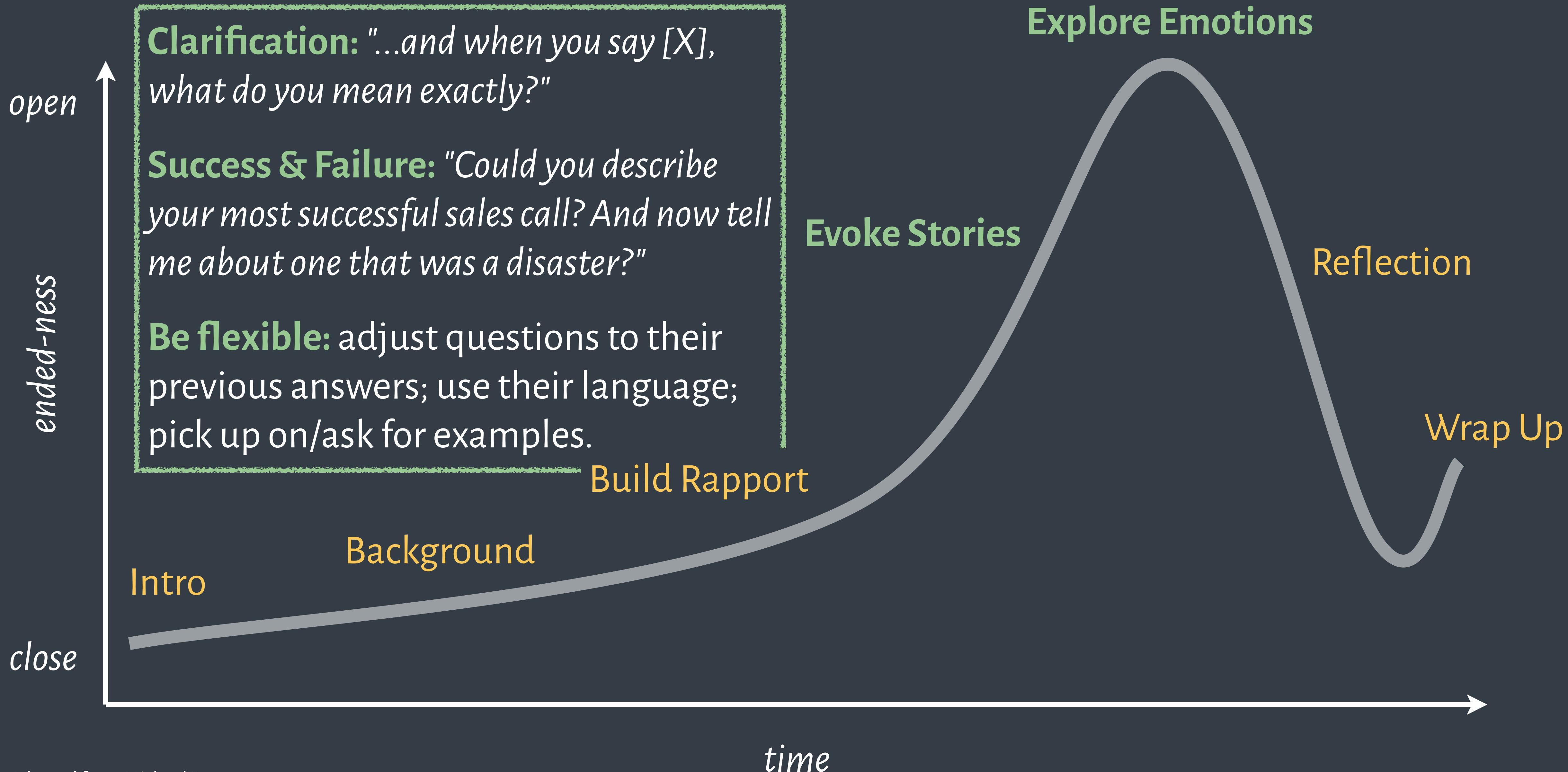


Interviews



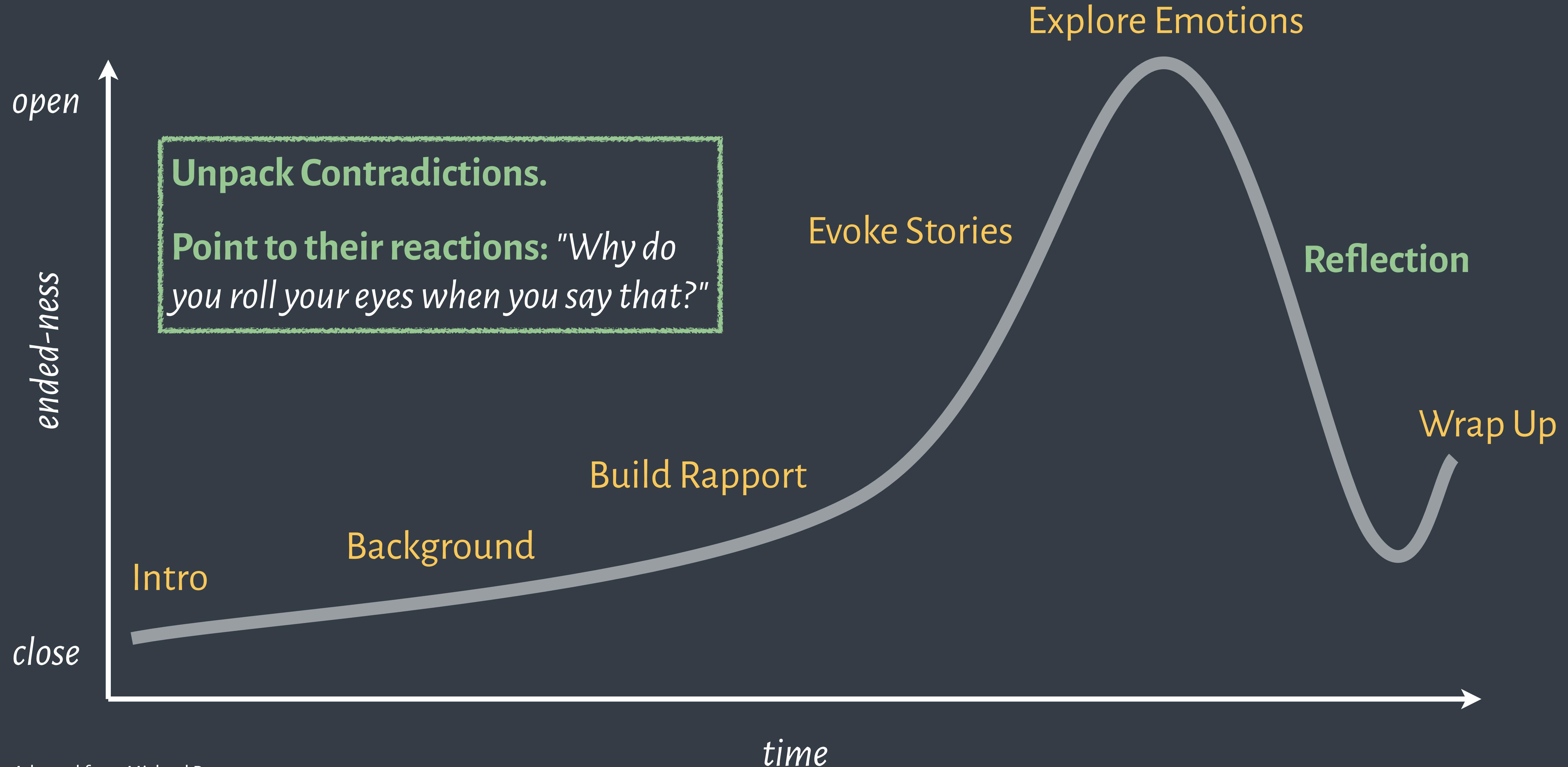


Interviews

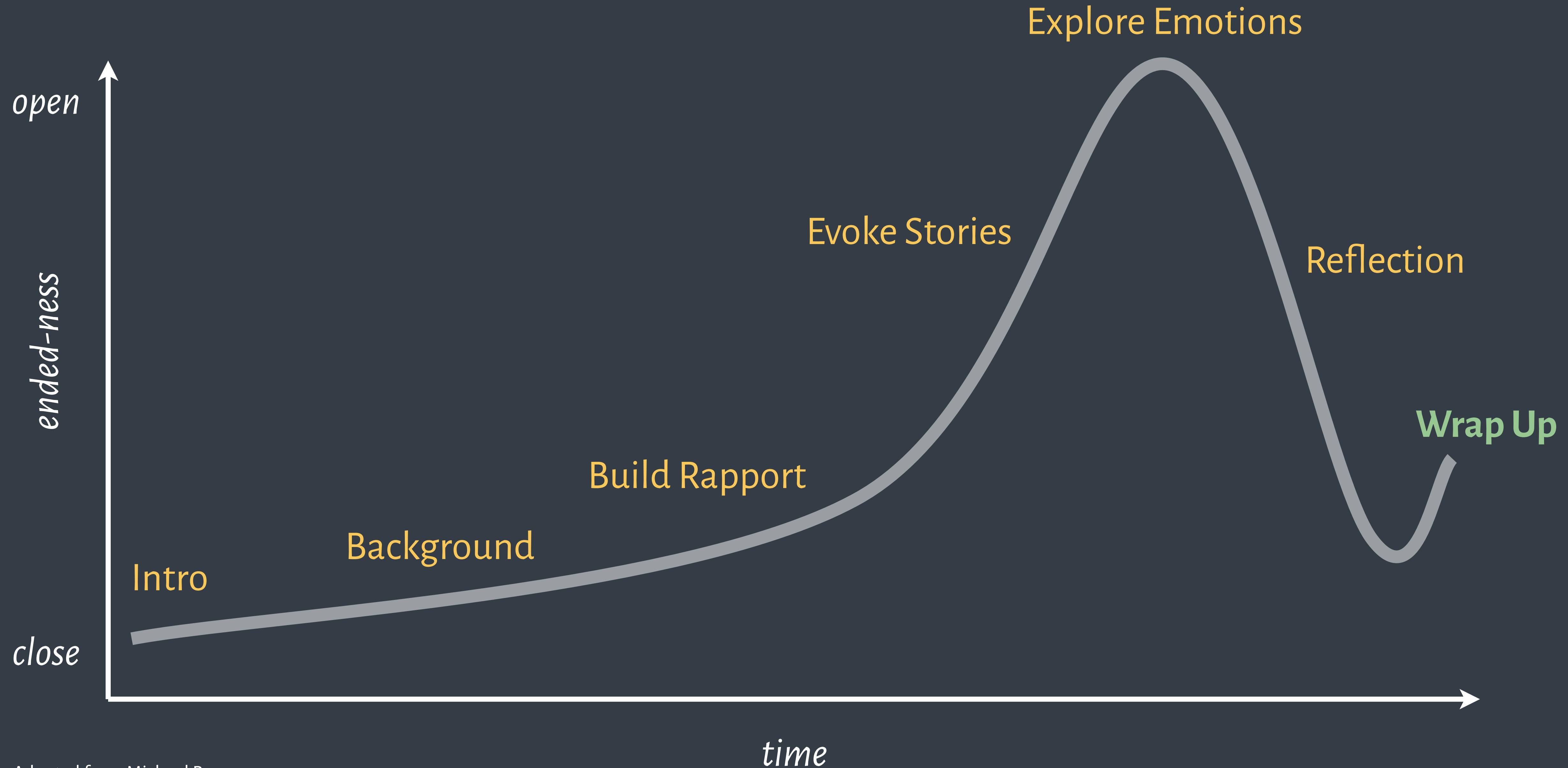




Interviews



Interviews







(a little bit of)

Silence is golden

(a little bit of)

Silence is golden

Don't...

- ✗ **Suggest Answers:** trust the question, ask it and stop talking.
- ✗ **Pose Hypotheticals:** we want real stories, not something generic they made up.
- ✗ **Use Binary or Absolute Scales:** prevent follow-ups.
- ✗ *"Tell me a story about yourself"*

Activity!

Partner up

One person is the interviewer, the other is the subject.

7 minutes to find a **good story** about **using a class forum** (e.g., Piazza, Discourse, etc.)

Some questions/prompts to try:

Background: "Tell me about..."

Sequence: "Walk me through... what do you do next?"

Naïve Outsider: "I've never used... how does it work?"

Changes Over Time: "How are things different than they were last year?"

Reflecting Back: "So, what I hear you saying is... Is that right?"

Analyzing Interview Results

Goals

You can explain **why** people do **unusual things**.

Develop your **point of view** as a designer.

Define the **scope** of your project

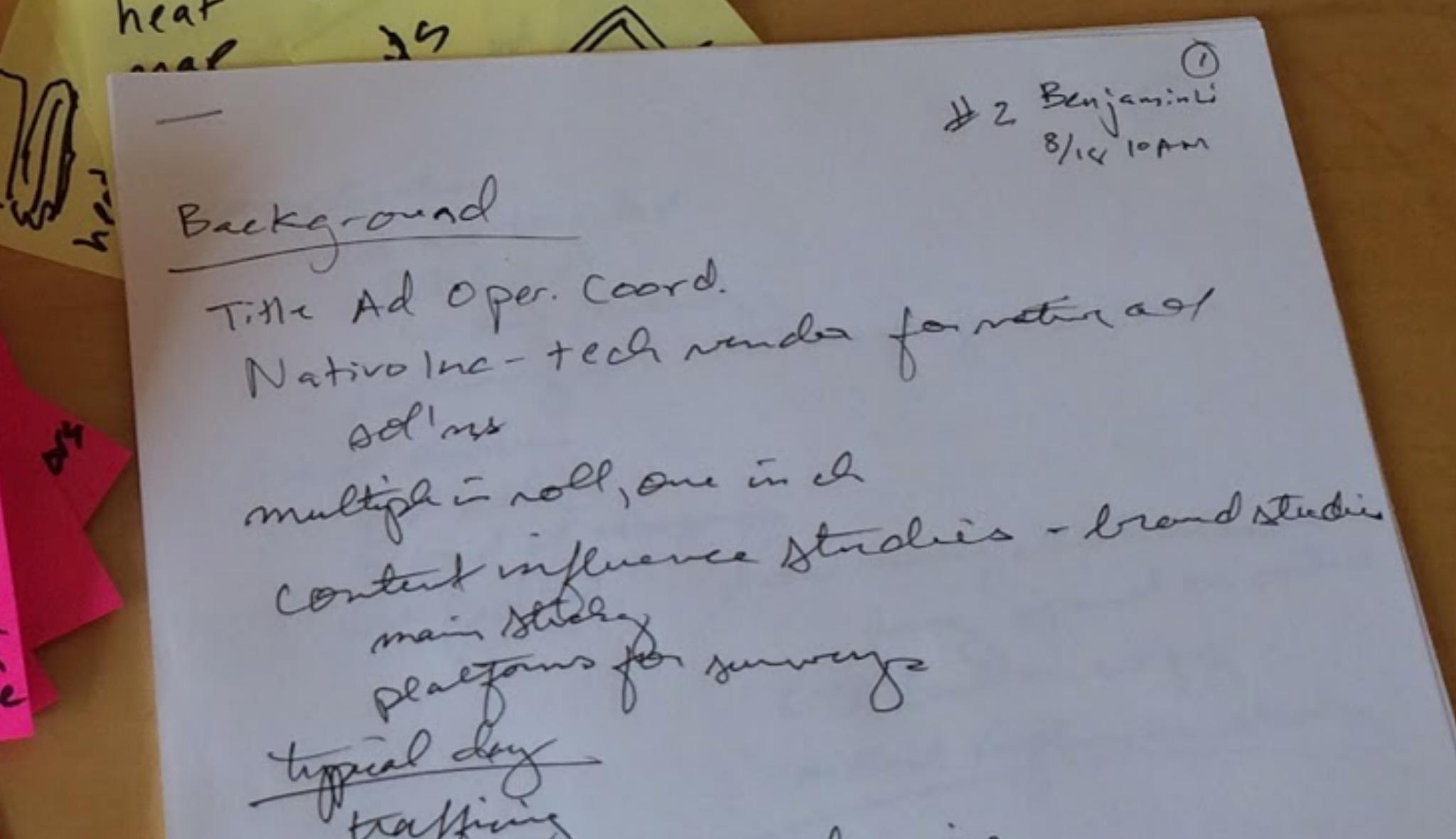
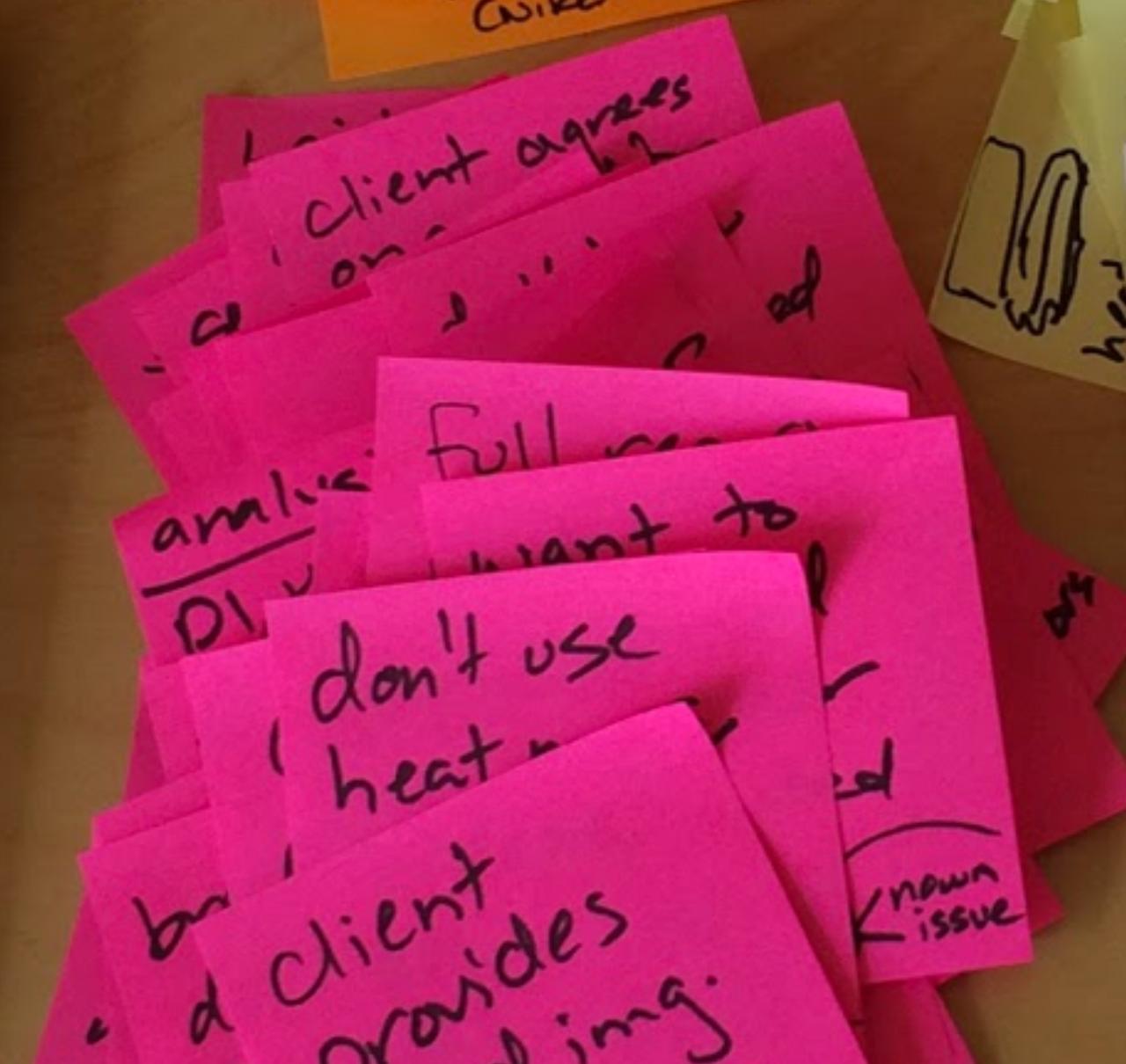
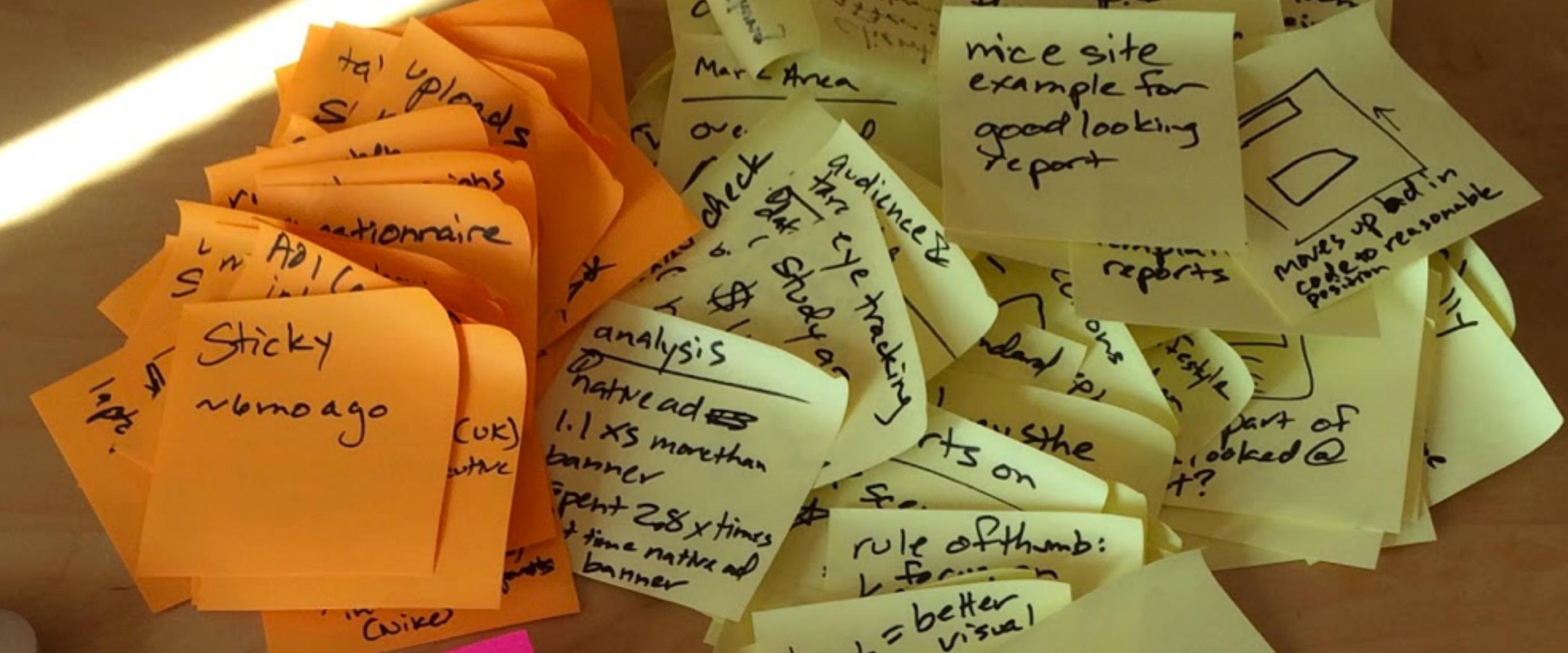
Process

Look for **surprises**, **tensions**, and **contradictions** in what people said.

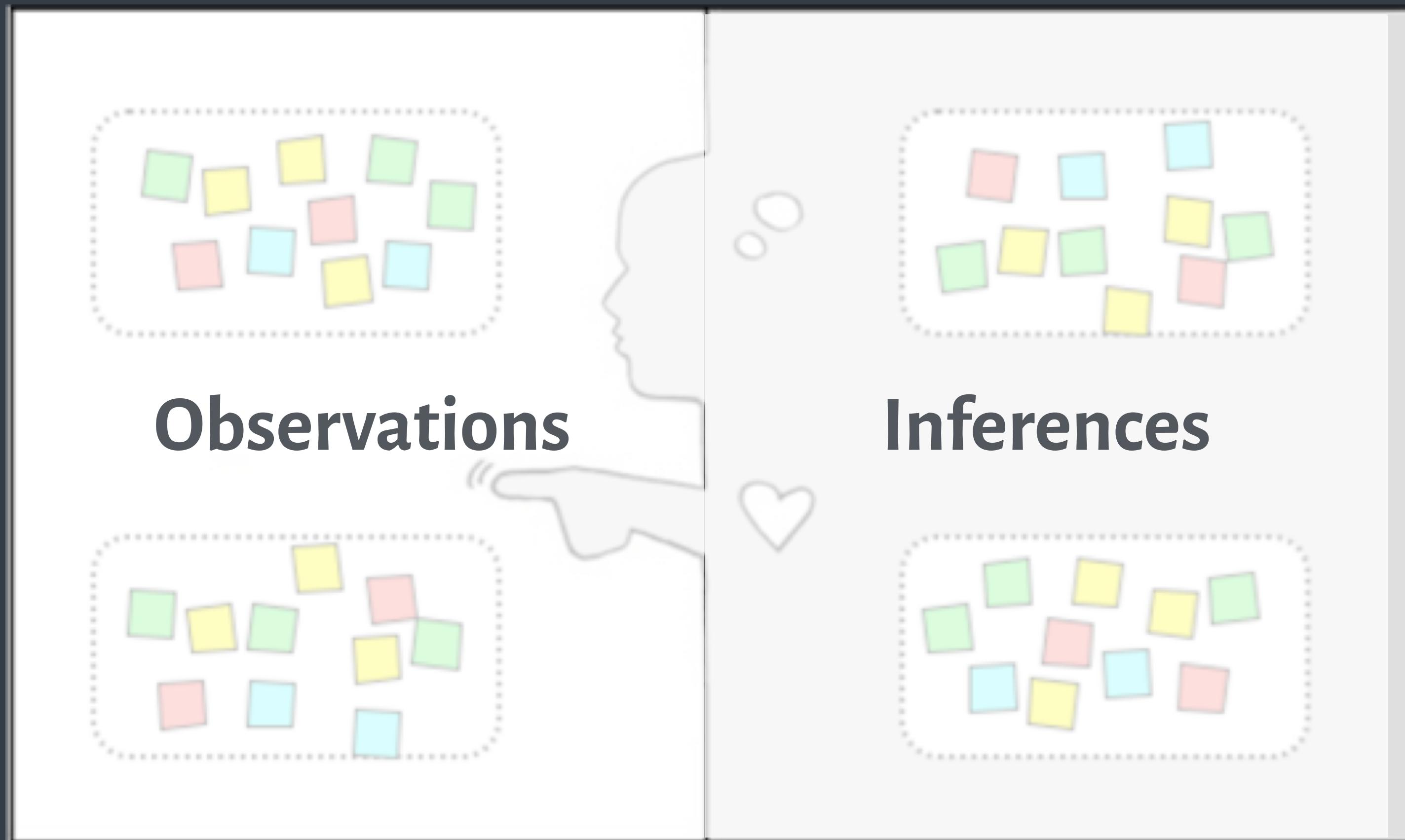
Reflect on the implications for your project.



Affinity Diagramming: one post-it per observation, colored by participant. Write down snippets of everything.



Empathy Maps



Feel

Do

Think

Say

Tensions,
Contradictions,
Surprises
=> Insights





THINK

"I think I need
space alone
until in New
York."

associated
memories
and places
and people

values the
experience of
independence and
self-expression/
creativity

value is a
path to the
goal

FEEL

value added
and capture
memories

HAPPY
(while reflecting
on the party)

NOSTALGIA

FRUSTRATION

LOSS

Summary

Need finding helps us ground our design in **real (not imagined) user needs.**

Observation is a good way to **uncover the "what"**: workarounds, hacks, errors that suggest an opportunity for a design intervention.

Interviews help us **connect through to the "why"**: people make sense to themselves, and it's our job to understand how to square the contradictions/tensions.

Key to interview success: **build rapport** + be willing to **veer off script** and follow-up surprising/unexpected threads.

Analyze results via **empathy maps**: separate out observations (say/do) from inferences (think/feel).

Fill Out Your MUD Cards

<http://tiny.cc/61040-fa22-mud>

Give us Feedback

<http://tiny.cc/61040-fa22-feedback>

RSVP to Reading Group

<http://tiny.cc/61040-fa22-pizza>