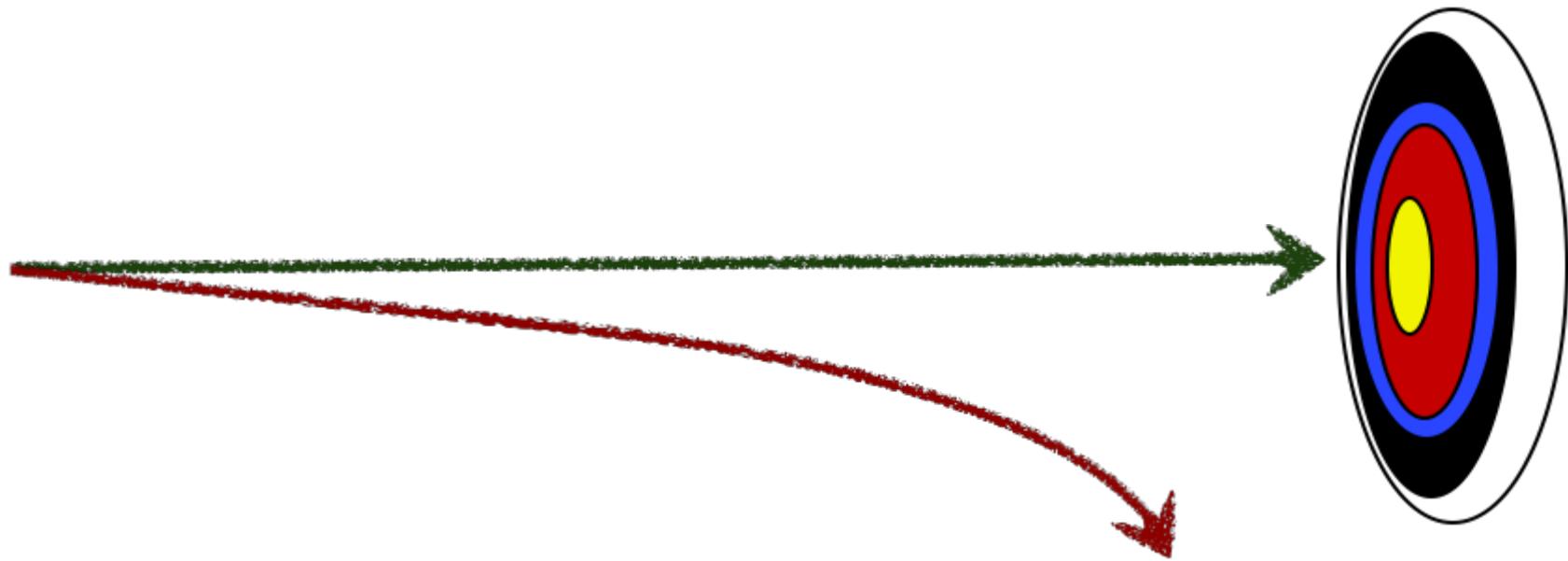


User Research, Quick 'n' Dirty



Michael Margolis
UX Research Partner, Google Ventures

Contents

1. Worksheets and templates

- Countdown Checklist to a Research Study
- Research Plan and Interview Guide
- Writing a Recruiting Screener
- Types of Research Questions
- Sample UX NDA

2. Slides from class

For a video of the class, please visit:

<http://www.youtube.com/watch?v=WpzmOH0hrEM&feature=youtu.be>

Countdown to a Quick 'n' Dirty Research Study



T-5 days

- Define goals, key research questions, and tasks with team.
- Find and schedule appropriate study participants.
- Draft interview guide. Solicit team's feedback.
- Order incentives for participants (e.g. SWAG, Amazon credits, gift cards).

T-3 days

- Invite team to study sessions. Plan lunch or snacks to lure them.
- Recruit note taker(s) for each session.
- Send confirmation emails (with dates/times, directions, your contact info, NDA) to study participants.
- Prep someone (receptionist, team member) to greet participants when they arrive.

T-8 hours

- Don't wear perfume or cologne.
- Send reminder (with schedule) to team (and notetakers) about observing sessions.
- Prep computer and any mobile devices you'll use for testing.
 - Make computer or devices look neutral and generic. Hide desktop detritus and visible bookmarks.
 - Clean keyboard and screen.
 - Install and test any prototypes.
 - Shortcuts: Add bookmarks or desktop shortcuts for prototypes, sites, etc.
 - Set computer screen and settings to match target users'.
 - Set innocuous home page for browser (e.g. *Seattle Times*).
 - Clear browser history, cookies, cache.
 - Minimize browser or prototypes.
 - Start screen recorder (e.g. Hypercam, Screenflow, WebEx) and/or set up video camera.
 - Start and test screensharing software (e.g. WebEx, Google Hangouts) for observers.
 - Run through all prototypes under actual test conditions. Then reset them.
- Print copies of NDA and interview guide.
- Clean up room. Erase white boards, etc.

T-10 minutes and counting

- Post "Do not disturb" sign on the door of the conference room.
- Turn off your cell phone. Sign out of all notifiers on your computer.
- Take a bathroom break.
- Chew mints or gum.
- Get into character: curious, open, objective. Smile! Try to see world through participants' eyes.

T-0: Conduct study session!

- Greet participant. Make them feel welcome.
- Conduct awesome study session.
- Bid participant farewell.
- Check in with observers. Highlight top issues from each session.
- Reset testing setup. Reset prototypes, clear browser history, etc.



T+8 hours

- Backup and file recordings from all sessions. File signed NDAs.
- Triage findings with team.
- Email brief summary of findings to team.
- Plan next study!

Worksheet: Research Plan and Interview Guide

Name of study or project:

What do we want to learn?

Examples

Discovery

- What are users' behaviors, attitudes and expectations towards product?
- Who are the key user groups? What are their needs and behaviors?
- What are pros/cons of different designs?
- What are pros/cons of competitors' products?
- How are people using existing/competitors' product? What features are most important?
- What barriers hinder users from adopting <product>?

Usability

- Can users discover feature x?
- Are users able to successfully complete primary tasks?
- Do users understand x?

What tasks and features do we want participants to test?

Examples

- Complete and submit a form.
- Find information about _____.
- Sign up.
- Complete a transaction.
- Get help or ask a question.
- Share info with a friend.
- Find customer support.
- Submit a request.

What prototypes, designs, or competitive products will we test?

If possible, add URLs to designs, flows, prototypes, etc. to be tested.

Approach:

- Number of interviews: _____
- Location of interviews: _____
- Duration of each interview: _____ minutes.
- Dates and times for interviews: _____
- Participant compensation
 - Amount: \$_____
 - Form: _____ (e.g. cash, check, Amazon credit, gift, Amex Gift Cheque, credits)

Who do you want to talk to?

(See worksheet for writing screener or add link to screener.)

Examples: Active users, new users, disengaged users, lead users, expert informants, etc.

Interview Guide

Name of study or project:

Intro spiel (5 minutes)

Moderator (with a big smile!):

Thanks for coming in today! We're constantly trying to improve our product, and getting your frank feedback is a really important part of that.

Before we start, I need to ask you to sign this **non-disclosure agreement**. I like to highlight two parts of this. First, it's a reminder that what I show you and what we discuss here today are **confidential**. It also gets your permission for me to **record** our session--just for our own internal use. That way we can go back and review it later. And, of course, you're **free to take a break or leave** at any time during the session. Please take your time reviewing this NDA and let me know if you have any questions. [Hand NDA to participant with pen to sign.] Thanks!

[Moderator: After NDA is signed, start recording.]

I like to keep these sessions pretty informal. I'm just trying to learn from you today. I'll ask a lot of questions, but **I'm not testing you**. There are no right or wrong answers.

I'll start this session by asking some background questions. Then I'll show you some things we're working on, and ask you to do some tasks. As you work on the tasks, please **think aloud**. This means that you should try to give a running commentary on what you're doing as you work through the tasks. Tell me what you're trying to do and how you think you can do it. If you get confused or don't understand something, please tell me. If you see things you like, tell me that too.

Since I didn't design this, you **won't hurt my feelings** or flatter me. In fact, frank, candid feedback is the most helpful.

Again. . . I'm not testing you. I'm testing the product. If you get stuck or confused, it's not your fault. It helps us identify the problems in the design that we need to fix.

If and when you do get stuck, I'm **going to try not to answer your questions** or tell you what to do. I'm just trying to see what you would do if you were using it on your own. But don't worry--**I'll help you if you get completely stuck**.

Today we're going to use **a prototype**. That means some links or buttons or features may not work quite right. You can still click anywhere you like to do the tasks. When you run into something that's not working, I'll let you know.

Do you have **any questions** before we begin?

Discovery (_____ minutes)

Zoom out. Use discovery questions to better understand users' existing behaviors and attitudes related to whatever you're studying. Refer to what you wrote above under "what we want to learn." Ask open-ended questions (Who? Where? When? What? Why? How?). Try to get info that will help you personalize the subsequent usability tasks for this user. And remember to start out with easy-to-answer questions to help build rapport and trust.

(Refer to "Types of Research Questions" worksheet.)

Example (if you were interested in the use of thermostats):

- What kind of home do you live in currently?
- Does anyone else live there with you?
- When temperatures get hot or cold around here, how do you stay comfortable in your house?
- In the past few days, what are examples of when you adjusted the temperature in your home? What did you do? Why?
- What kinds of things did you do to minimize the costs of utilities in your home? Examples?
- How has that changed in the last 6 months?
- Last time you went on a trip, what did you do to prepare your house before you left?
- Who in your home is responsible for programming the thermostat? Why?
- If you had a magic wand, what would make the site/app/product better for you?

Tasks (_____ minutes)

Moderator:

Now I'd like to show you some rough prototypes of ideas we're experimenting with. These are just prototypes, or in some cases just pictures of screens. Even though they look real, they won't work completely. You don't have to worry about breaking anything.

First impressions (_____ minutes)

To begin, please just take a look at <homepage>.

- What is this?
- What's this for?
- How can you tell?

Task scenario 1 (_____ minutes)

Example: Let's pretend that you are on your way home and want to warm up the house to a toasty 75F. How would you do that with this app?

Follow-up probes:

Examples:

- So what happened there?
- Was that what you expected? Why or why not?
- So what goes through your mind as you look at this?
- Which part of the page were you looking at?
- Did you find what you were looking for?
- What would you do next? Why?
- Is there anything else you would do at this point?
- Is there any other way to do that?
- What did you think of that?
- In what ways would you want this changed to make it better for you?
- What additional info would have helped?

Task scenario 2 (_____ minutes)

Let's pretend you're <insert likely situation>. How would you < insert task goal>?

Follow-up probes:

Examples:

- So what happened there?
- Was that what you expected? Why or why not?
- So what goes through your mind as you look at this?
- Which part of the page were you looking at?
- Did you find what you were looking for?
- What would you do next? Why?
- Is there anything else you would do at this point?
- Is there any other way to do that?
- What did you think of that?
- In what ways would you want this changed to make it better for you?
- What additional info would have helped?

Task scenario 3 (_____ minutes)

Let's pretend you're <insert likely situation>. How would you < insert task goal>?

Follow-up probes:

Examples:

- So what happened there?
- Was that what you expected? Why or why not?
- So what goes through your mind as you look at this?
- Which part of the page were you looking at?
- Did you find what you were looking for?
- What would you do next? Why?
- Is there anything else you would do at this point?
- Is there any other way to do that?
- What did you think of that?
- In what ways would you want this changed to make it better for you?
- What additional info would have helped?

Debrief (_____ minutes)

Examples

- What do you like/dislike about this?
- If you had 3 wishes to make this better for you, what would they be? Why?
- How would you describe this to a friend?
- Under what circumstances would you use this? Why?
- Can you describe to me what you see on this page?
- Which parts of this page are most/least important to you?
- What do you think this [point to UI element] might do?
- What does this [point to UI element] mean?
- If you wanted to _____, how would you. . .?

Wrap Up and Cool Down (5 minutes)

This has been incredibly helpful.

[Moderator: Try to briefly summarize some key parts of the discussion or issues.]

Your input is really valuable for me and the team as we think about the next steps for these ideas. We really appreciate your taking the time to come in, and answering all of my questions. Thanks SO much!

[Moderator: Give participant incentive gift.]

> DON'T stop recording or screensharing until after participant has left!! <

Worksheet: Writing a Recruiting Screener**Example**

Who do you want to talk to? 	What exact criteria will identify the people you want to talk to?	What screening questions will you ask? (Questions shouldn't reveal "right" answers.)
People who've used thermostats.	Have a thermostat at home.	What brand thermostat(s) do you have in your home? (Answers include list of brands, and "I don't have a thermostat in my home.")
iPad users	Has used iPad at least 3X in last week	In the past week, which devices have you used at least three times? (answers include brands of phones, tablets, computers)
Range of ages, from 18 to 60+	Quota: 2 aged 22-35; 2 aged 35-50; 2 aged 51-65	Age? _____
Mix of men and women	3 men, 3 women	Gender: M, F
Mid-range of educational backgrounds. Don't skew too highly educated.	Quota: 4 with at least some college, no more than 2 with graduate degrees	What is the highest level of education you've completed?

Who do you want to exclude? 	What exact criteria will identify the people you want to exclude?	What screening questions will you ask? (Questions shouldn't reveal "right" answers.)
Nest users	Don't have Nest at home	What brand thermostat(s) do you have in your home?
Minors	<18 yrs old	Age: _____
Unusually technical	Work as eng, designer, PM, market researcher, etc.	If you're currently working, what is your occupation? _____
Work for companies related to sales, manufacture, development or installation of HVAC or thermostats.	Work for Honeywell, Ecobee, EcoFactor, Trane, Lux, PG&E, hardware retailers	If you're currently working, who is your employer? _____
Work in real estate or property management	Current occupation or side business is related to realty, building facilities or property management	If you're currently working, who is your employer? _____ If you have any, what are your main hobbies or side businesses?

Worksheet: Writing a Recruiting Screener

Who do you want to talk to? 	What exact criteria will identify the people you want to talk to?	What screening questions will you ask? (Questions shouldn't reveal "right" answers.)

Who do you want to exclude? 	What exact criteria will identify the people you want to exclude?	What screening questions will you ask? (Questions shouldn't reveal "right" answers.)

*Test your screening questions with team members. Revise!

Types of Questions for Discovery Research

- **Specific Examples:** Who did you call from your cell phone yesterday?
- **Complete List:** What are all the payment apps on your phone? Are there any others?
- **Activities:** What do you typically do to get ready for a trip?
- **Reenactment:** Please show me exactly how you do that.
- **Sequence:** Please walk me through a typical day. How do you start? And then what do you do next?
- **Inputs and Outputs:** What information do you need to gather before you can do x? How and where do you get that information? What do you do with it when you're done?
- **Guided Tours:** Can we take a look at your email account together?
- **Projection:** What do you think would happen if . . . ?
- **Changes over Time:** How does that compare to the way you did that a year ago?
- **Exceptions:** Under what circumstances do you do that differently?
- **Suggestive Opinion:** Some people have very negative feelings about using cell phones in cars while others don't. How do you feel about it?
- **Identification:** Who do you think would use something like that? Who wouldn't?
- **Outsider Perspective:** How would you describe <feature or activity> to someone who hadn't done that before? What advice would you give to somebody who was going to try it?
- **Comparisons:** What's the difference between Tweeting and sending an email? How do you do that differently when you're at home vs. at work?
- **Successes and Failures:** What would be the worst case scenario? Can you tell me about a time when this didn't work?
- **Fill in the blank:** So in that situation, you. . . [pregnant pause]?
- **3 wishes:** If you had 3 wishes to make this better for you, what would they be?

Follow-up Questions

- **Why?**
- **Point to participant's reactions** contradictions, paradoxes, non sequiturs, unexpected reactions, or laughter. Why do you roll your eyes when you say that?
- **Clarification:** When you say "her" you mean your daughter, right?
- **Reflecting Back:** So, what I hear you saying is _____. Is that right?
- **Native Language:** Why do you call your computer "my brain"?
- **Silence:** Trust your question and wait for participants to fill in the gaps. Or try leaving pregnant pauses: "When that happened, you felt. . . ?"

Types of Questions for Design/Usability Evaluations

Getting first impressions:

- What is this site/product? What is it for?
- Who do you think this product is aimed at?
- What do you see?
- What questions does this raise?
- What information would you want to see here?

After user has completed a task:

- So what happened there?
- Was that what you expected? Why or why not?
- So what goes through your mind as you look at this?
- Which part of the page were you looking at?
- Did you find what you were looking for?
- What would you do next? Why?
- What would you expect to happen next?
- Is there anything else you would do at this point?
- Is there any other way to do that?
- What did you think of that?
- In what ways would you want this changed to make it better for you?
- What additional info would have helped?

When debriefing UI or product overall:

- Can you describe to me what you see on this page?
- Which parts of this page are most/least important to you?
- What do you think this [point to UI element] might do?
- What does this [point to UI element] mean?
- If you wanted to _____, how would you...?
- Under what circumstances would you use this? Why?
- What do you like/dislike about this?
- If you had 3 wishes to make this better for you, what would you wish for? Why?
- How would you describe this to a friend?

When comparing designs, prototypes, or competitors' products:

- How would you compare those different versions? What are the pros and cons?
- Which parts of each design would you combine to create a new, better version?
- Which one worked better for you? Why?
- How is X different from Y?
- What does each of these do well? Poorly?
- What types of people does each of these versions seem to be designed for?

SAMPLE -- Review all legal documents with your own counsel.

SAMPLE NON DISCLOSURE AGREEMENT

<Your company name>, located at <address of your company>, for itself and its subsidiaries and affiliates (“company”), and the other party identified below (“You”) wish to enter into this agreement to discuss and exchange information and to assure that the confidentiality of exchanged information is maintained and that rights to ideas or suggestions are properly allocated.

The parties agree as follows:

- A. Purpose. You agree to take part in a study under this agreement for the purpose of assisting <company name> in researching and analyzing the usability of its current and proposed products and services (the “Purpose”).
- B. In the course of Your participation in the study, You may be requested to provide comments, feedback, ideas, reports, suggestions, data or other information to <company name> (collectively “Feedback”). You agree that Your voice and/or image may be recorded and such recording will also be considered “Feedback”. You agree to permit <company name> to use any Feedback provided by You without limitation to develop and enhance <company name>’s current or future products and services. Notwithstanding the foregoing, You agree that You will not disclose to <company name> any third-party information that You are otherwise obligated to maintain as confidential.
- C. For any Feedback provided by You that You communicate to <company name> as being confidential in writing and any information provided to You by <company name> during the study period shall be considered confidential (the “Confidential Information”), and the following terms shall apply: (i) each party may use such Confidential Information only for the Purpose; (ii) the receiving party will use a reasonable degree of care to protect Confidential Information and to prevent any unauthorized use or disclosure of Confidential Information; and (iii) You may not share Confidential Information with any third party in any manner. <company name> will not disclose Your personal information without Your consent. Except as otherwise provided by this agreement, any personally identifiable data collected by <company name> during the study shall be used by <company name> in accordance with <company name>’s general privacy policy (available at <insert URL of your privacy policy>) incorporated in this agreement by reference.
- D. Confidential Information does not include information that: (i) was known to the receiving party without restriction before receipt from the disclosing party; (ii) is publicly available through no fault of the receiving party; (iii) is rightfully received by the receiving party from a third party without a duty of confidentiality; or (iv) is independently developed by the receiving party. A party may disclose Confidential Information when compelled to do so by law if it provides reasonable prior notice to the other party.
- E. This agreement imposes no obligation on <company name> to use Your Feedback. Neither party acquires any intellectual property rights under this agreement except the express and implied, limited

rights acquired by <company name> to use the Feedback for the Purpose.

F. This agreement does not create any agency or partnership relationship between the parties. This agreement is not assignable or transferable by You. This agreement is the parties' entire agreement on this topic, superseding any prior or contemporaneous agreements. Any amendments must be in writing. Failure to enforce any of provisions of this agreement will not constitute a waiver. This agreement is governed by the laws of <insert state> excluding its conflict-of-laws principles. The exclusive venue for any dispute relating to this agreement shall be <insert your venue>.

This agreement is effective as of the date accepted by <company name>.

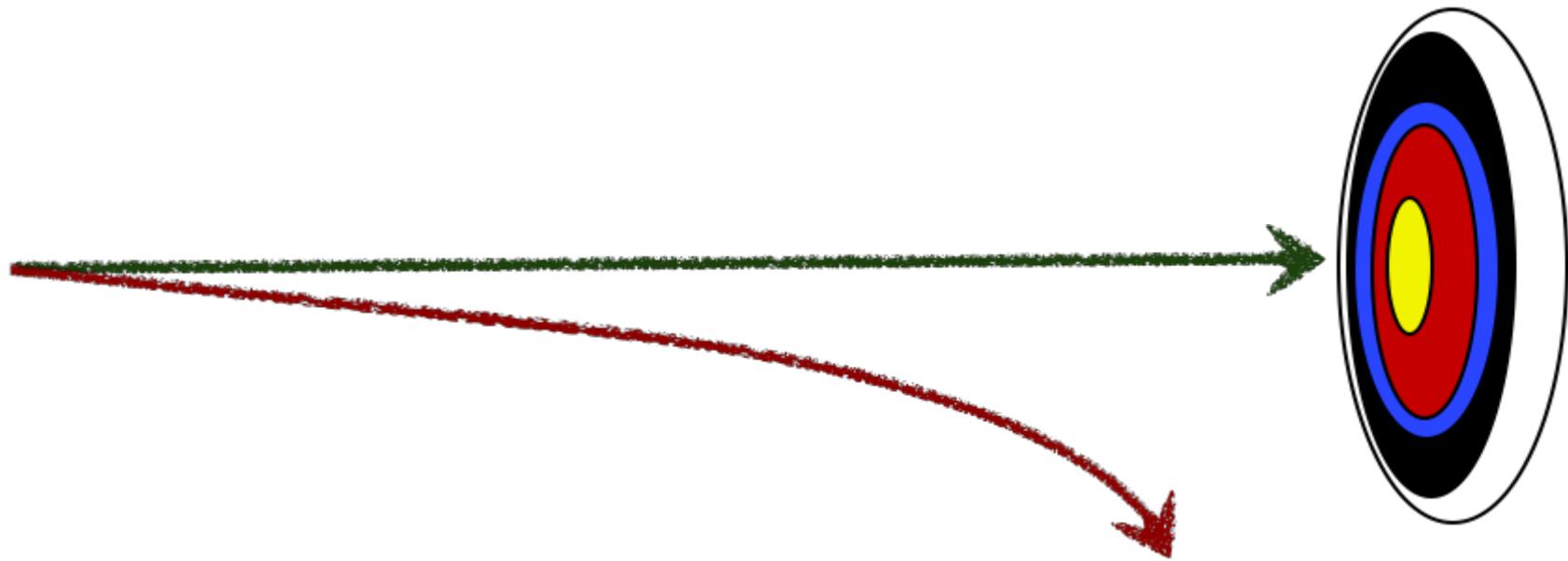
Party/Name (full company or individual name): _____

Signature: _____

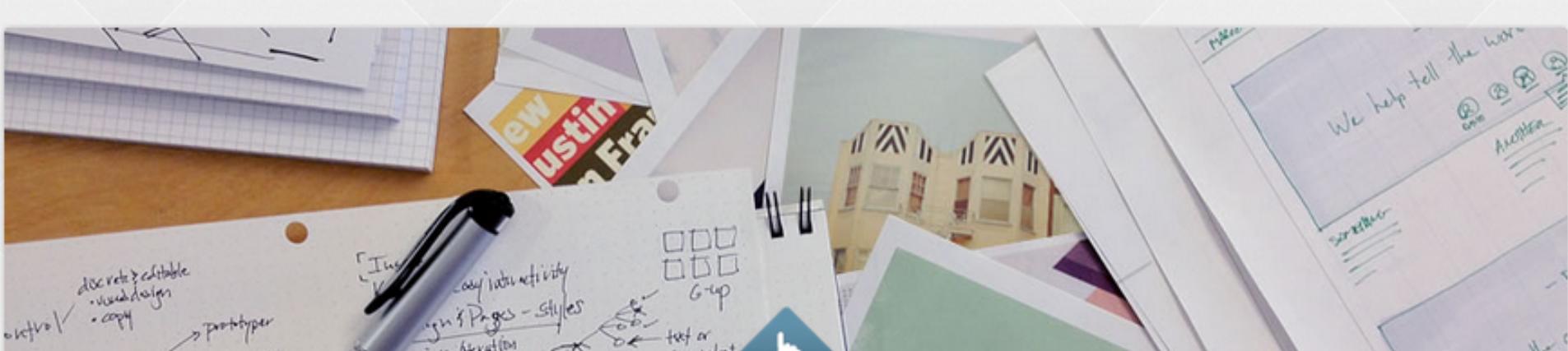
Address: _____

Date: _____

User Research, Quick 'n' Dirty



Michael Margolis
UX Research Partner, Google Ventures



DESIGN STUDIO



BRADEN



DANIEL



JAKE



JOHN



MICHAEL

me
(UX Research)



We help you build better products.

Design is more than just looking good. We create great user experiences by focusing on the big picture: clear communication, ease of use, emotional response, business goals, technical constraints, and more.

Countdown

- Introduction
- Defining goals
- Recruiting users
- Drafting interview guides
- Interviewing
- Observing and taking notes

Countdown to a Quick 'n' Dirty Research Study



T-5 days

- Define goals, key research questions, and tasks with team.
- Find and schedule appropriate study participants.
- Draft interview guide. Solicit team's feedback.
- Order incentives for participants (e.g. SWAG, Amazon credits, gift cards).

T-3 days

- Invite team to study sessions. Plan lunch or snacks to lure them.
- Recruit note taker(s) for each session.
- Send confirmation emails (with dates/times, directions, your contact info, NDA) to study participants.
- Prep someone (receptionist, team member) to greet participants when they arrive.

T-8 hours

- Don't wear perfume or cologne.
- Send reminder (with schedule) to team (and notetakers) about observing sessions.
- Prep computer and any mobile devices you'll use for testing.
 - Make computer or devices look neutral and generic. Hide desktop detritus and visible bookmarks.
 - Clean keyboard and screen.
 - Install and test any prototypes.
 - Shortcuts: Add bookmarks or desktop shortcuts for prototypes, sites, etc.
 - Set computer screen and settings to match target users'.
 - Set innocuous home page for browser (e.g. Seattle Times).
 - Clear browser history, cookies, cache.
 - Minimize browser or prototypes.
 - Start screen recorder (e.g. Hypercam, Screenflow, WebEx) and/or set up video camera.
 - Start and test screensharing software (e.g. WebEx, Google Hangouts) for observers.
 - Run through all prototypes under actual test conditions. Then reset them.
- Print copies of NDA and interview guide.
- Clean up room. Erase white boards, etc.

T-10 minutes and counting

- Post "Do not disturb" sign on the door of the conference room.
- Turn off your cell phone. Sign out of all notifiers on your computer.
- Take a bathroom break.
- Chew mints or gum.
- Get into character: curious, open, objective. Smile! Try to see world through participants' eyes.

T-0: Conduct study session!

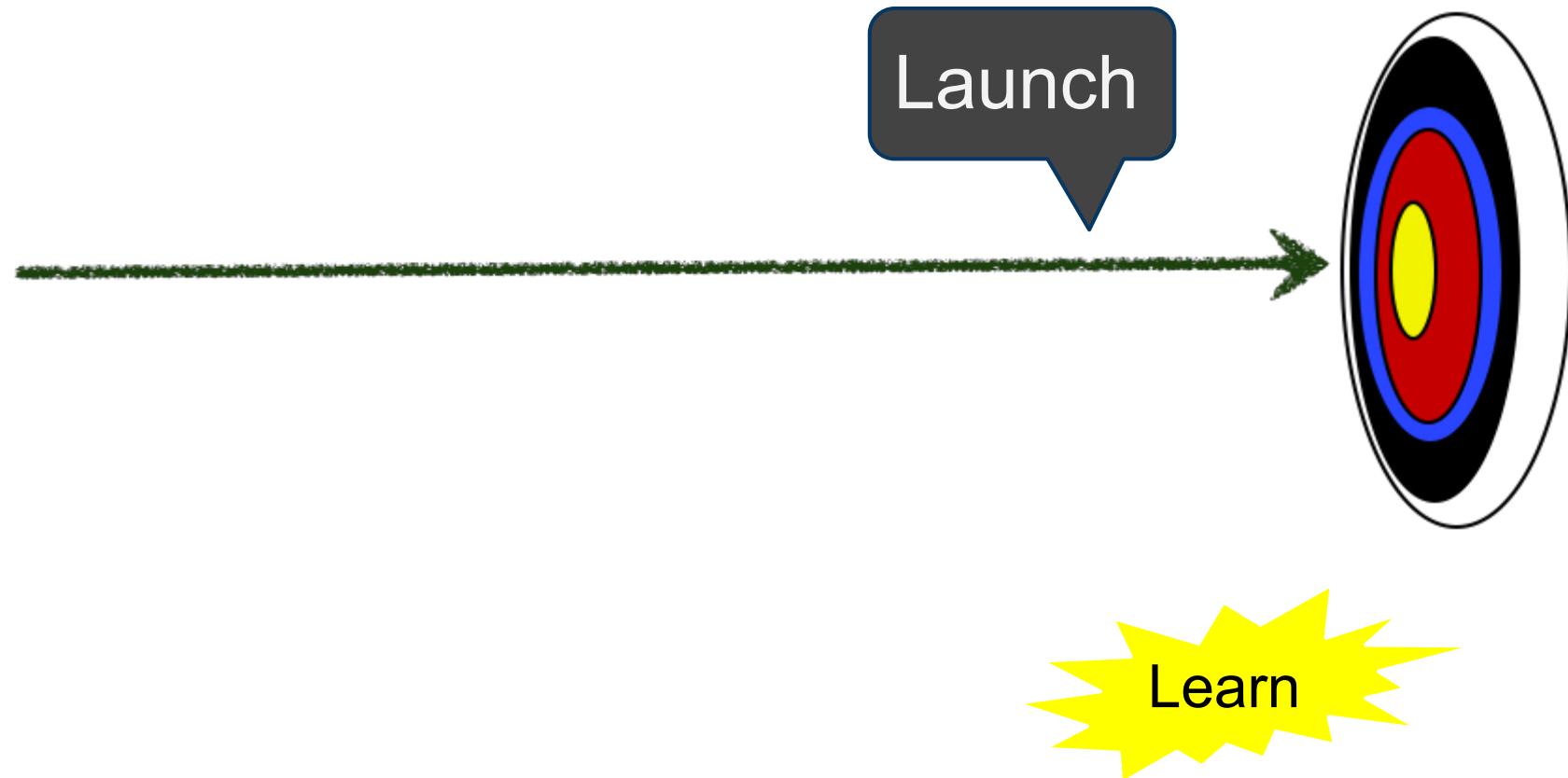
- Greet participant. Make them feel welcome.
- Conduct awesome study session.
- Bid participant farewell.
- Check in with observers. Highlight top issues from each session.
- Reset testing setup. Reset prototypes, clear browser history, etc.



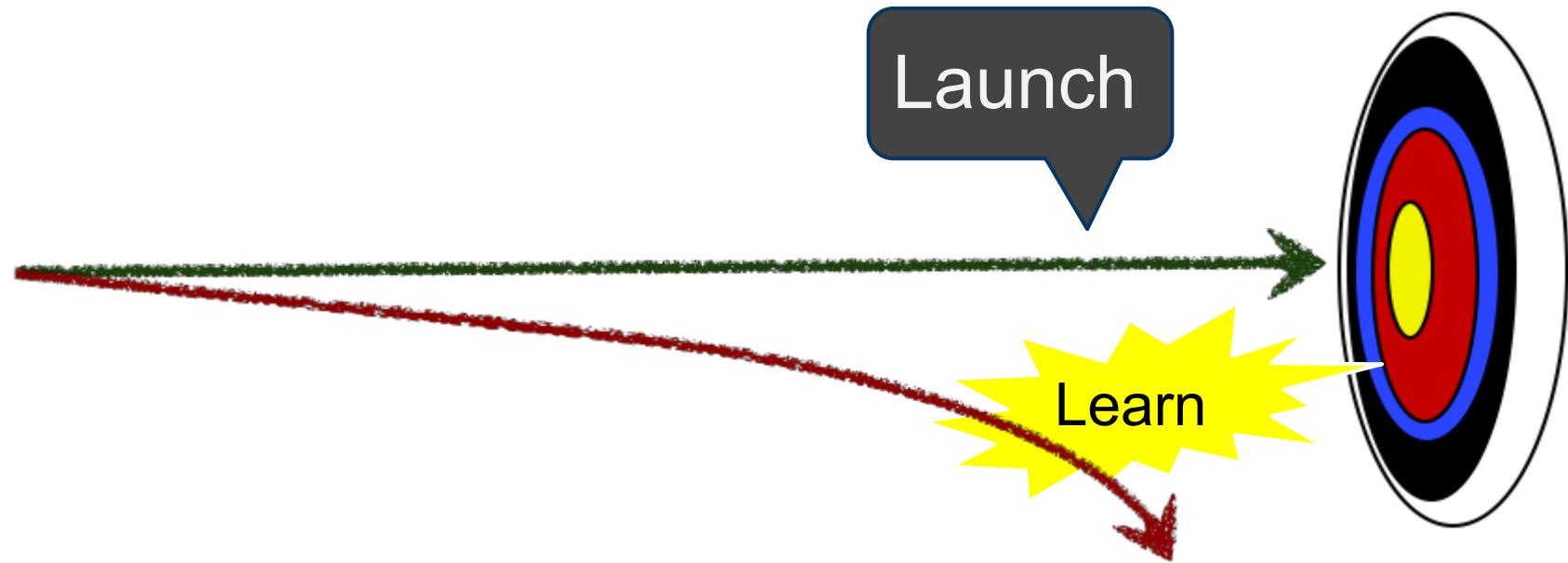
T+8 hours

- Backup and file recordings from all sessions. File signed NDAs.
- Triage findings with team.
- Email brief summary of findings to team.
- Plan next study!

The startup dream



The startup nightmare



Learn sooner.
Save time.
Reduce risk.

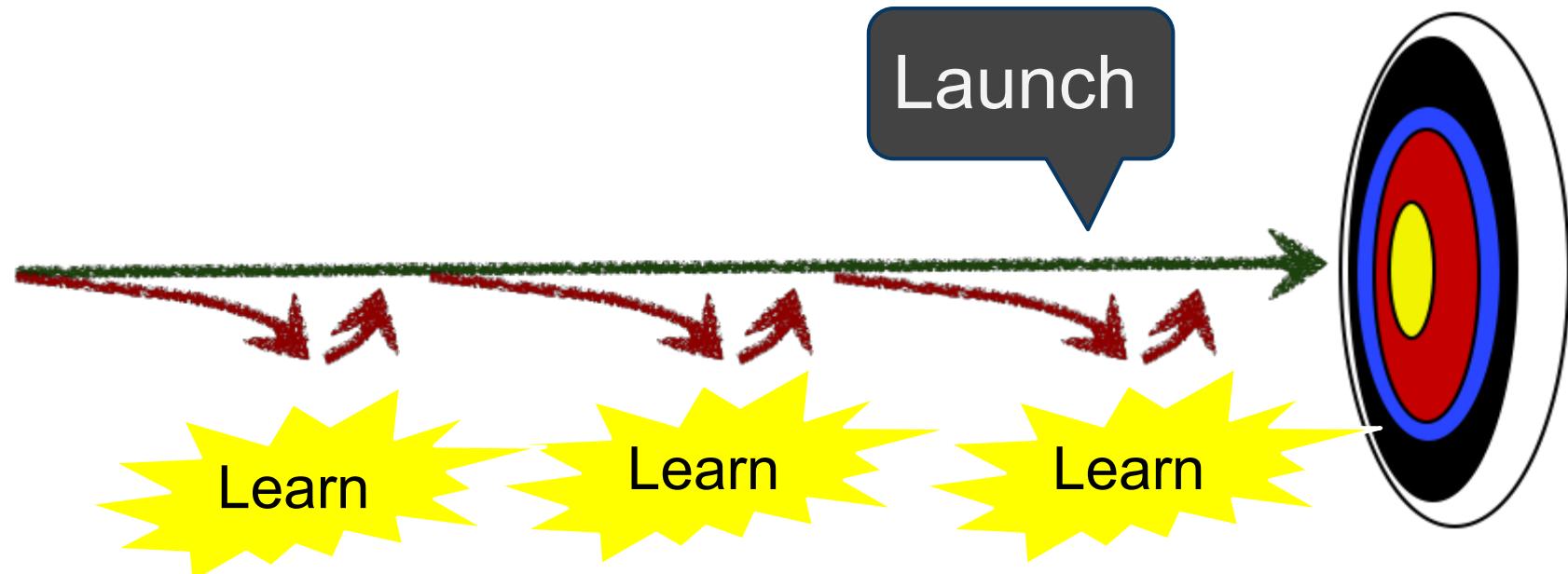
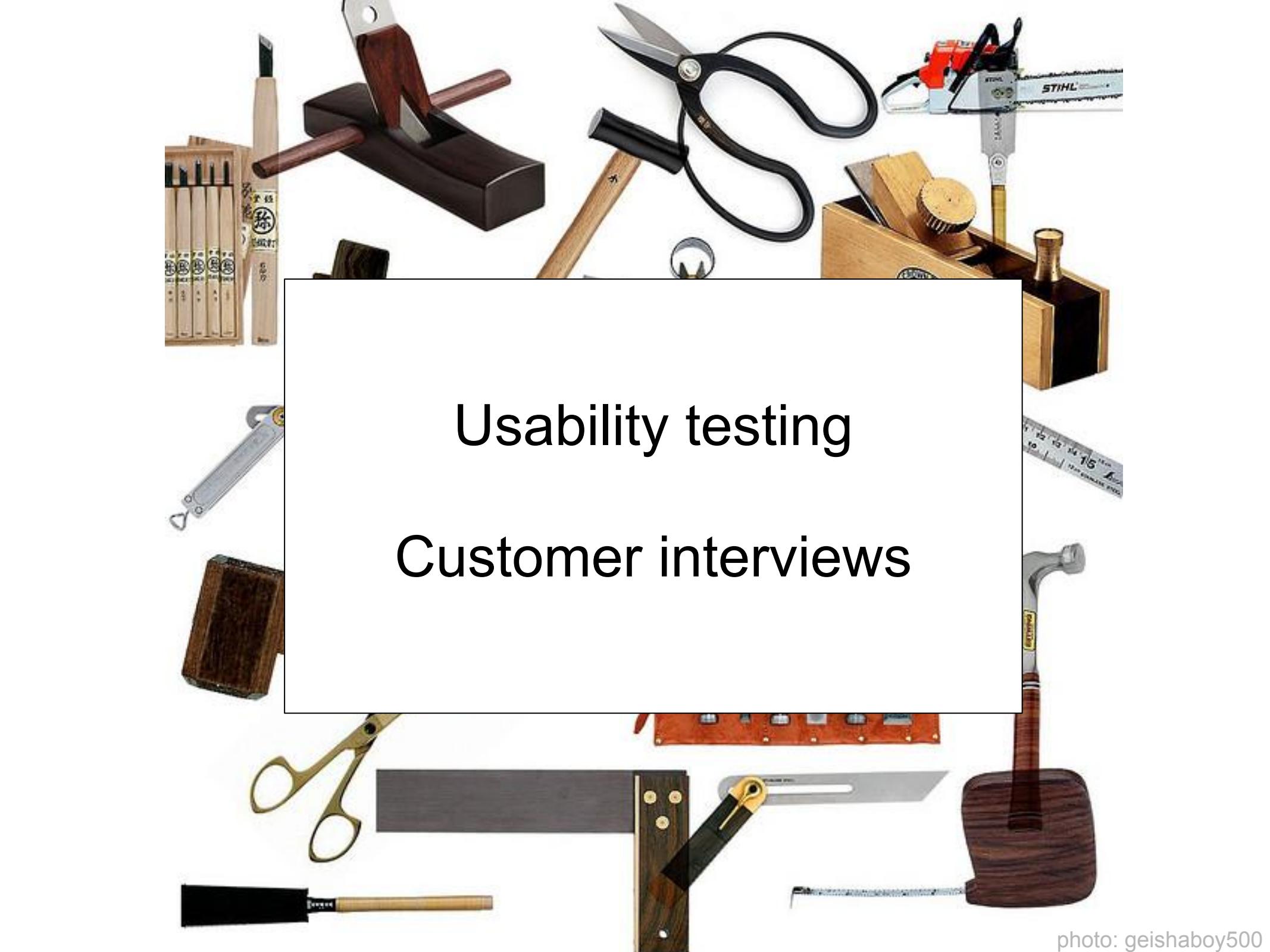




photo: geishaboy500



Usability testing

Customer interviews

Versatile

Huge ROI

Intent

- See through users' eyes
- Understand behaviors, pain points
- *Not asking users for solutions*

Two types of interviews

Usability

- Can they do it?
- Understand it?
- Discover features?

The background of the slide features a faint, spiral galaxy with a bright central bulge and a distinct spiral arm pattern, set against a dark, star-filled space.

Discovery

- Context? (WWWWWH?)
- Existing behaviors?
- Goals and needs?
- Problems?
- Is it useful?

Usability



Discovery

Two great tastes that taste great together.



Bite-size pieces

Example: Foundation Medicine

FOUNDATION MEDICINE COMPREHENSIVE CANCER GENOMIC TEST

Image of Material Used to Acquire DNA

Test Results
RABDOMYOSARCOMA CANCER
Genomic Alterations
IDH1 R132L
TP53 C176F
MET gain

Therapies Associated with Clinical Benefit
There are no FDA approved therapies specific to the reported genomic alterations in rhabdomyosarcoma. There may be some rationale to support consideration of 1 therapy that is FDA-approved in other tumor types specific to the reported genomic alterations found in this patient's tumor type (see detailed therapies section).

Clinical Trials
Multiple clinical trials may be relevant to tumors with the reported genomic alterations. Please see the detailed clinical trials section of this report for more details.

Genomic Alterations

Gene	Alteration(s)	Interpretation
<i>IDH1</i>	R132L	Mutations at codon 132 of the <i>IDH1</i> gene have been identified in gliomas, glioblastomas, acute myeloid leukemia (AML), colon cancer, prostate cancer, and chondrosarcomas (Ward et al., 2010 and Amary et al., 2011), but not in rhabdomyosarcomas (COSMIC Database, January 2012). No therapies targeting this alteration are currently approved, though therapies targeting the altered metabolic pathway resulting from <i>IDH</i> mutations are currently in development.
<i>TP53</i>	C176F	Loss of tumor suppressor p53, which is encoded by the <i>TP53</i> gene, is common in aggressive advanced cancers (Brown et al., 2009; 19935675).. <i>TP53</i> gene abnormalities occur in approximately 23% of rhabdomyosarcomas (COSMIC Database, January 2012 and Takahashi et al., 2004; 15098008). There are no approved therapies to address <i>TP53</i> mutation or loss. However, tumors with <i>TP53</i> mutations may be sensitive to the Wee-1 inhibitor MK-1775, and clinical trials are currently underway for patients with solid tumors. In addition, a number of clinical trials, focused primarily on vaccine and gene therapy technology, are in progress in some tumor types.

Electronically Signed by: Jeffrey S. Ross, M.D. on 2012-01-10 CLIA Number: 22D2027531

One Kendall Square, Suite 83501 Cambridge, MA 02139 www.foundationmedicine.com Client Services: 1.617.481.2200

FOUNDATION ONE

Patient Name: Patient_Name Report Date: 01.15.2012

Date of Birth	Medical Records	FMI Client #	Additional Recipient	Specimen Site	Collection Method
xxx	N/A	N/A	N/A	xxx	xxx
Gender	Requisition	Physician	Specimen Received	Stage	Specimen Type
xxx	N/A	Radovich	xxx	N/A	xxx
FMI Case #	Client	Pathologist	Primary Tumor Site	Specimen Date	
1062102283	St. Barnabas	N/A	xxx	xxx	

Colorectal Cancer

Genomic Alterations	FDA approved Therapies Associated with clinical benefit	FDA approved therapies Associated with lack of response
<i>PTEN</i> Loss	+ Temsirolimus (Approved for other tumor type) + Everolimus (Approved for other tumor type)	None
<i>KRAS</i> G12D	None	+ Panitumumab + Cetuximab
<i>APC</i> E941* E1552*	None	None
<i>BRAF</i> Alteration Not Found	None	None

● Multiple Clinical trials may be relevant to tumors with the reported genomic alterations. Please see the detailed clinical trials section of this report for more details

Electronically Signed by Jeffrey S. Ross | January 30, 2012 | CLIA Number: 22D2027531
Foundation Medicine, Inc., One Kendall Square Ste B3051, Cambridge MA 02139 | 617.481.2200

Page 1 of 18

What did we want to learn?

Who uses reports?

How much info will Drs. read?

How do Drs. experience reports?

How and when use reports?

See most important info first?

Pros/cons of designs?

Understand symbols?

Able to navigate to details?

Readability?

What tasks should we test?

FOUNDATION MEDICINE COMPREHENSIVE CANCER GENOMIC TEST

Image of Material Used to Acquire DNA

Test Results
RABDOMYOSARCOMA CANCER
Genomic Alterations
IDH1 R132L

About This Test
FMI Test (NGS) based on tumor alterations

Genomic Alterations
Genes
IDH1
TP53

FOUNDATION ONE

Patient Name: Patient_Name Report Date: 01.15.2012

Date of Birth	Medical Records	FMI Client #	Additional Recipient	Specimen Site	Collection Method
xxx	N/A	N/A	N/A	xxx	xxx
Gender	Requisition	Physician	Specimen Received	Stage	Specimen Type
xxx	N/A	Radovich	xxx	N/A	xxx
FMI Case #	Client	Pathologist	Primary Tumor Site	Specimen Date	
11091122012	Dr. Barnabas	N/A	xxx	xxx	

- Interpret results for these patients.
- Navigate to supporting details.
- Find relevant treatments, clinical trials.
- Explain different sections.
- Identify necessary info about patient, tumor.

Electronically Signed by: Jeffrey S. Ross, M.D. on 2012-01-10

CLIA Number: 22D2027531

One Kendall Square,
Suite 83501

Cambridge, MA 02139

www.foundationmedicine.com

Client Services:
1.617.481.2200

Electronically Signed by Jeffrey S. Ross | January 30, 2012 | CLIA Number: 22D2027531
Foundation Medicine, Inc., One Kendall Square Ste B3051, Cambridge MA 02139 | 617.481.2200

Page 1 of 18

FOUNDATION MEDICINE COMPREHENSIVE CANCER GENOMIC TEST

Image of Material Used to Acquire DNA

Test Results

RHABDOMYOSARCOMA CANCER

Genomic Alterations

- IDH1 R132L
- TP53 C176F
- MET gain

Therapies Associated with Clinical Benefit

There are no FDA approved therapies specific to the reported genomic alterations in rhabdomyosarcoma. There may be some rationale to support consideration of 1 therapy that is FDA-approved in other tumor types specific to the reported genomic alterations found in this patient's tumor type (see detailed therapies section).

Clinical Trials

About The Test:
FMI Test is a next-Generation sequencing (NGS) based assay which identifies genomic alterations within 182 cancer related genes.

FOUNDATION ONE

Patient Name Patient_Name	Report Date 01.15.2012				
Date of Birth xxx	Medical Records N/A	FMI Client # N/A	Additional Recipient N/A	Specimen Site xxx	Collection Method xxx
Gender xxx	Requisition N/A	Physician Radovich	Specimen Received xxx	Stage N/A	Specimen Type xxx
FMI Case # 1062102283	Client St. Barnabas	Pathologist N/A	Primary Tumor Site xxx	Specimen Date xxx	

Colorectal Cancer

Genomic Alterations	FDA approved Therapies Associated with clinical benefit	FDA approved therapies Associated with lack of response
● PTEN Loss	+ Temsirolimus Approved for other tumor type + Everolimus Approved for other tumor type	None
● KRAS		● Panitumumab Cetuximab

Genomic Alterations

Genomic Alterations

IDH1

TP53

One Kern
Suite

Findings

- Emphasize actionable results
- Higher info density
- Love color, but often see B&W faxes
- Need better navigation to subsections
- Improve readability



Patient name
John Q Smith
Report date
January 15, 2012

Date of birth May 1, 1955	Medical record N/A	FMI Client # N/A	Additional recipient N/A	Specimen site Lung	Collection method Surgical resection
Gender Male	Requisition N/A	Physician Dr. Henry Knight	Specimen received August 3, 2011	Stage N/A	Specimen type Slides, block
FMI case # Pre-CLIA 001	Client Oncotest Teva	Pathologist N/A	Primary tumor site Lung	Specimen date January 1, 2012	

Colorectal Cancer

- 6 genomic alterations found** p.2
- 3 therapies associated with clinical benefit** p.4
- 2 therapies associated with lack of response** p.5
- 30+ clinical trials to consider** p.8

Genomic alterations	FDA-approved therapies Associated with clinical benefit	FDA-approved therapies Associated with lack of response	Clinical trials to consider
PIK3CA H1047R	+ Temsirolimus + Everolimus	- Panitumumab - Cetuximab	11 clinical trials
BRAF V600E	+ Vemurafenib	- Panitumumab - Cetuximab	6 clinical trials
FBXW7 V672M	+ Temsirolimus + Everolimus		14 clinical trials
APC K534	None	None	4 clinical trials
APC R232	None	None	3 clinical trials
TP53 R273C	None	None	6 clinical trials
KRAS Mutation not found		- Cetuximab	

Michael Pellini, CEO of Foundation Medicine

“We tapped into the Google Ventures Design Studio, and based on their input, dramatically changed the design of the report for our national launch. *It presents complex information in such a simple fashion; the oncologists and pharmaceutical companies love it.*”

What do you want to learn?

Look at Worksheet: Research Plan and Interview Guide



Worksheet: Research Plan and Interview Guide

Name of study or project:

What do we want to learn?

Examples

Discovery

- What are users' behaviors, attitudes and expectations towards product?
- Who are the key user groups? What are their needs and behaviors?
- What are pros/cons of different designs?
- What are pros/cons of competitors' products?
- How are people using existing/competitors' product? What features are most important?
- What barriers hinder users from adopting <product>?

Usability

- Can users discover feature x?
- Are users able to successfully complete primary tasks?
- Do users understand x?

What tasks do you want to test?

What tasks and features do we want participants to test?

Examples

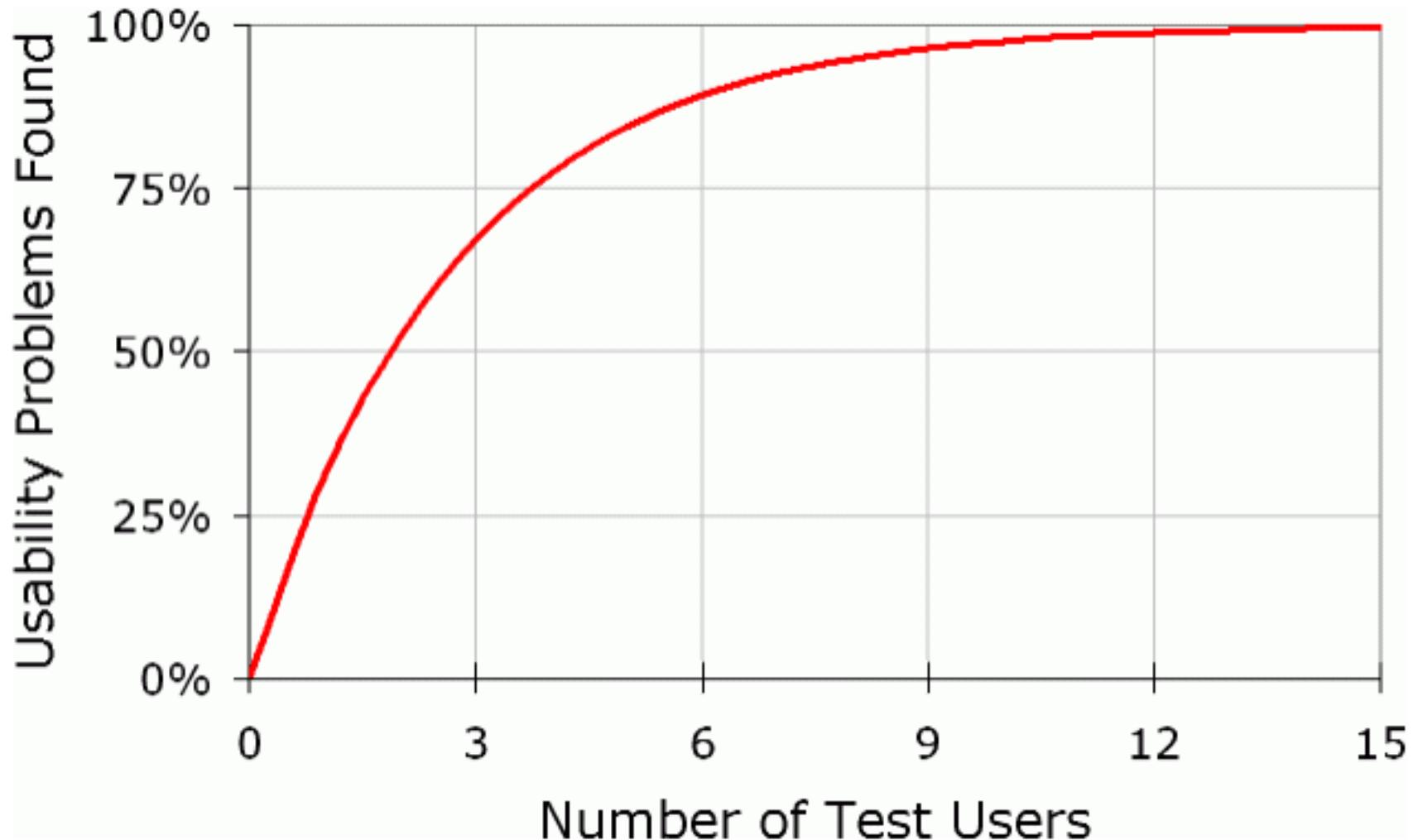
- Complete and submit a form.
- Find information about _____.
- Sign up.
- Complete a transaction.
- Get help or ask a question.
- Share info with a friend.
- Find customer support.
- Submit a request.

A high-angle photograph capturing a massive, dense crowd of people filling the frame. The individuals are packed closely together, creating a complex pattern of heads and shoulders. The color palette is dominated by various shades of grey, black, and white from the clothing, punctuated by occasional brighter colors from shirts and bags.

Recruiting Users

Photo: James Cridland

How many users?



From Jakob Nielsen's Alertbox 3/19/00

Why recruit selectively?

- Better results
- Avoid wasting time

Example: Nest Learning Thermostat



See [example screener](#).

Participate in a 60-minute (\$75) usability study

I am scheduling participants for a 60-minute usability research sessions on Friday, March 1, in San Francisco.

If you're interested in participating (in person), please complete the questionnaire below. We'll then schedule individual appointments on a "first come, first served" basis until the study is full.

Details of the study:

- You'll receive a \$75 Amazon gift card in appreciation for completing the usability session (not just completing the questionnaire).

To participate you will need to:

- Be willing to sign our Usability Non-Disclosure Agreement.
- Not require assistive devices or software to use a computer.
- Allow us to record the session Thank you for your time.

Thanks!

* Required

What times are you available on Friday, March 1? *

Please mark ALL time slots for which we could schedule an appointment with you.

- 9:30 am
- 11:00 am
- 1:00 pm
- 2:30 pm
- 4:00 pm

First and last name: *

Best email address to reach you: *

Look at Worksheet: Writing a recruiting screener.

Who do you want to talk to? 	What exact criteria will identify the people you want to talk to?	What screening questions will you ask? (Questions shouldn't reveal "right" answers.)

Who do you want to exclude? 	What exact criteria will identify the people you want to exclude?	What screening questions will you ask? (Questions shouldn't reveal "right" answers.)

What do I do with my screener?

- Hire vendor.
- DIY: Share links to. . .
 - Craigslist
 - Add to product, emails
 - Append to all comms
 - Friends & family
 - Twitter, FB, LinkedIn, etc.
 - Local associations
 - Community groups
 - Conferences
 - Student groups

Craigslist posting

[CL](#) > [new york](#) > [manhattan](#) > [all jobs](#) > [et cetera jobs](#)

Reply to: see below

flag ?: [mislabeled](#) [prohibited](#) [spam](#) [best of](#)

Posted: 2013-02-04, 12:29AM EST

\$75 usability study on Thursday (1 hr) (Chelsea)

I'm seeking participants for 60-minute usability interviews this Thursday (February 7) in Chelsea. Participants will receive \$75 Amazon gift cards as incentives for completing a session.

Please complete this brief questionnaire:

<https://docs.google.com/a/google.com/forms/d/1MHX7ZlZ7olwA9lLFso5ojV5y89QPOA7EWkiaimrcs2c/viewform>

We'll schedule appointments with eligible candidates on a "first come, first served" basis until the study is full.

DETAILS

To participate you will need to:

- Be willing to sign our Usability Non-Disclosure Agreement.
- Allow us to record the session.
- Not require assistive device or software to use a computer.

Thanks!

- Compensation: Incentive is \$75 Amazon gift card for completing usability session
- Principals only. Recruiters, please don't contact this job poster.
- Please, no phone calls about this job!
- Please do not contact job poster about other services, products or commercial interests.

Vendor or DIY?

Vendor

- + Can save your time
- 1-2 weeks*
- Expensive
- Less control
- Vendor owns relationships
- + Can be blind

DIY

- More of your time
- + 2-3 days*
- + Cheap!
- + More control
- + You own relationships
- + Can be blind

* Depending on your users

Legal and Ethical Issues

- Follow [CAN-SPAM guidelines](#).
- Guard participants' personal info.
- NDA
 - Confidentiality
 - Protect ownership of ideas
 - Informed consent
 - Permission to record
- Get consent before researching at other companies.
- Caution: recruiting & paying journalists, gov. workers, analysts, big customers
- Don't go alone.
 - minors
 - site visits

Drafting Interview Guides



Build an arc.



Build rapport
and trust.

Build an arc.



Build rapport
and trust.

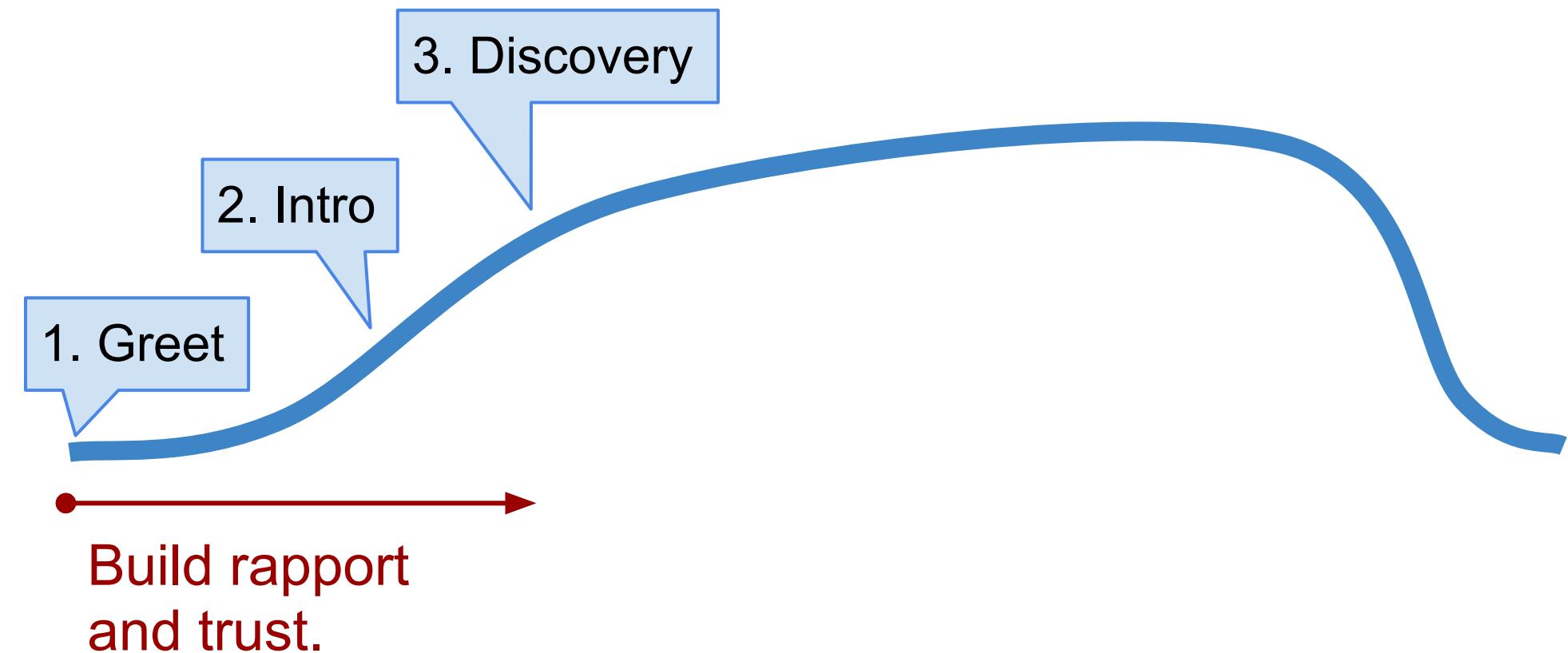
Build an arc.



Build rapport
and trust.

Look at "Intro spiel" in Worksheet:
Research Plan and Interview Guide.

Build an arc.



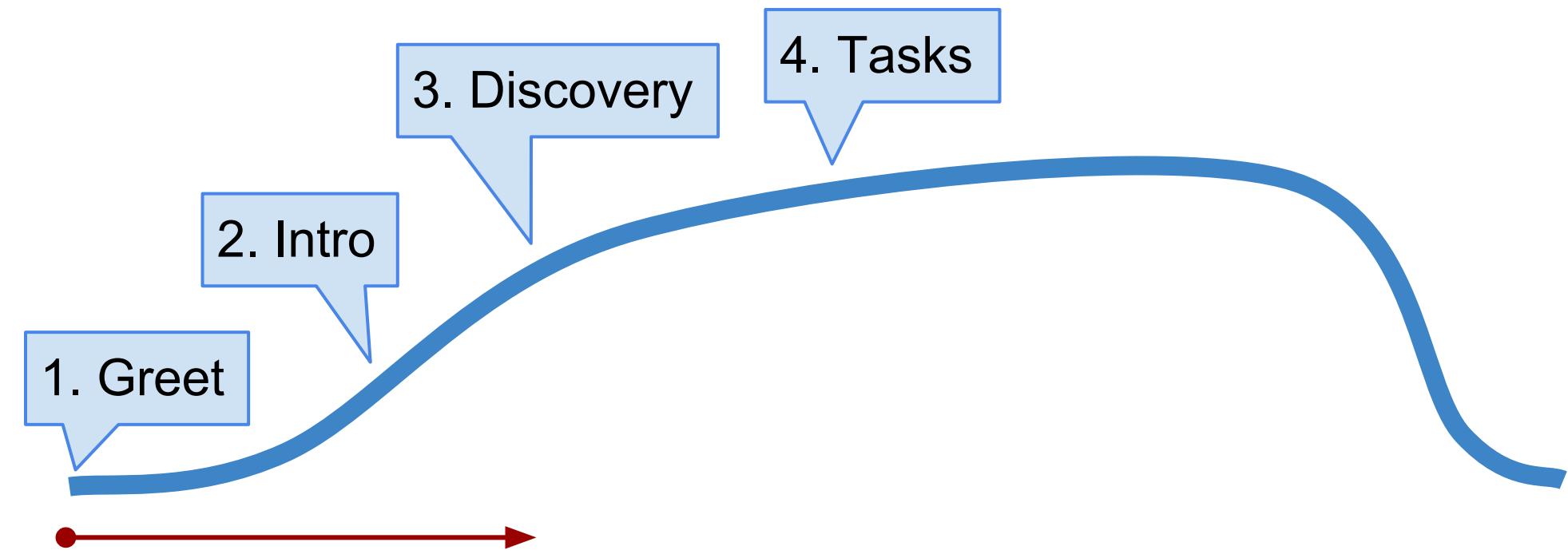
See Worksheet: Research Plan and Interview Guide

Write discovery questions.



See "Types of Research Questions"

Build an arc.



Build rapport
and trust.

Go to Worksheet: Research Plan and Interview Guide

Write task scenarios.

John Silver and Jim Hawkins, of Black Dog, and Israel Hands, of Dr. Livesey and Cap'n Flint. And the voice of old Ben Gunn still haunts these woods and paths...still laughing, mocking. Listen closely...for in Ben Gunn's words may be the clue to where the treasure hides...to this day!

"Might them find treasure?
Not when old Ben Gunn has hid it!
The last one to find it...is it!"

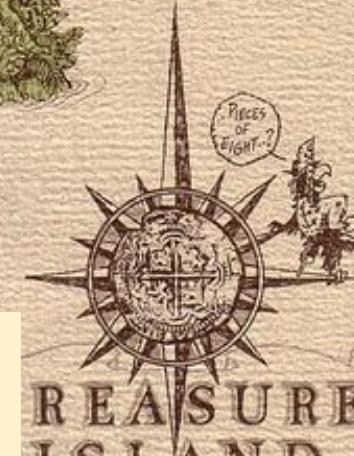


- ⑭ CAPE OF THE WOODS
- ⑮ REMAINS OF
"THE WALRUS"

Prompt users to travel to points of interest in designs.

- ① WHARF
- ② CAP'N FLINT'S PERCH
- ③ BUCCANEERS' COVE
- ④ NORTH INLET
- ⑤ LOOKOUT POINT
- ⑥ BLACK DOG BRIDGE
- ⑦ DOUBLOON LAGOON
- ⑧ MUTINEER FALLS
- ⑨ DEAD MAN'S ISLAND
- ⑩ SKELETON ISLAND
- ⑪ SKELETON LAIR
- ⑫ BUCCANEERS' ROOST

- ⑯ RUM POINT
- ⑰ TOUCAN CAGE
- ⑱ THE MIZZEN MAST
- ⑲ MATES AND MAIDENS
— Ye olde rest rooms.



REASURE ISLAND

If Buccaneers and buried Gold,
And all the old romance, retold
Exactly in the ancient way,
Can please, as me they pleased of old
The wiser youngsters of to-day...
So be it!

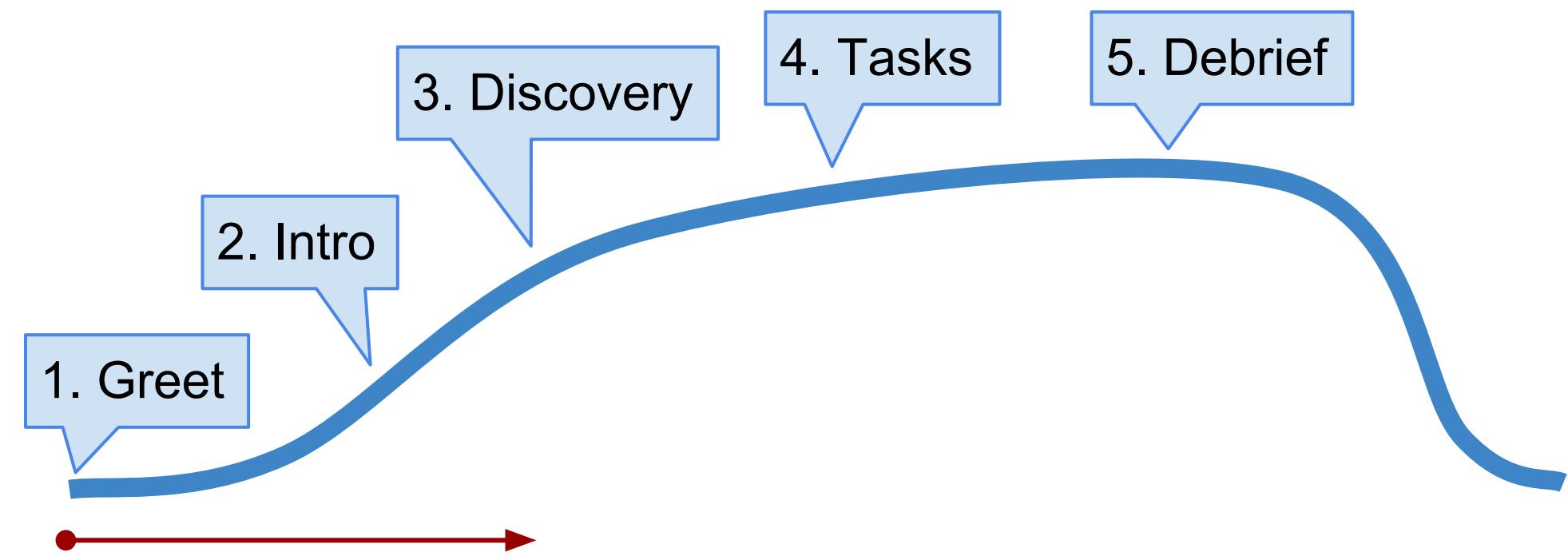
— Robert Louis Stevenson

Photo: BestofWDW

Tips:

- Go from general to specific.
- Play Taboo with UI labels.
- Be casual, conversational.

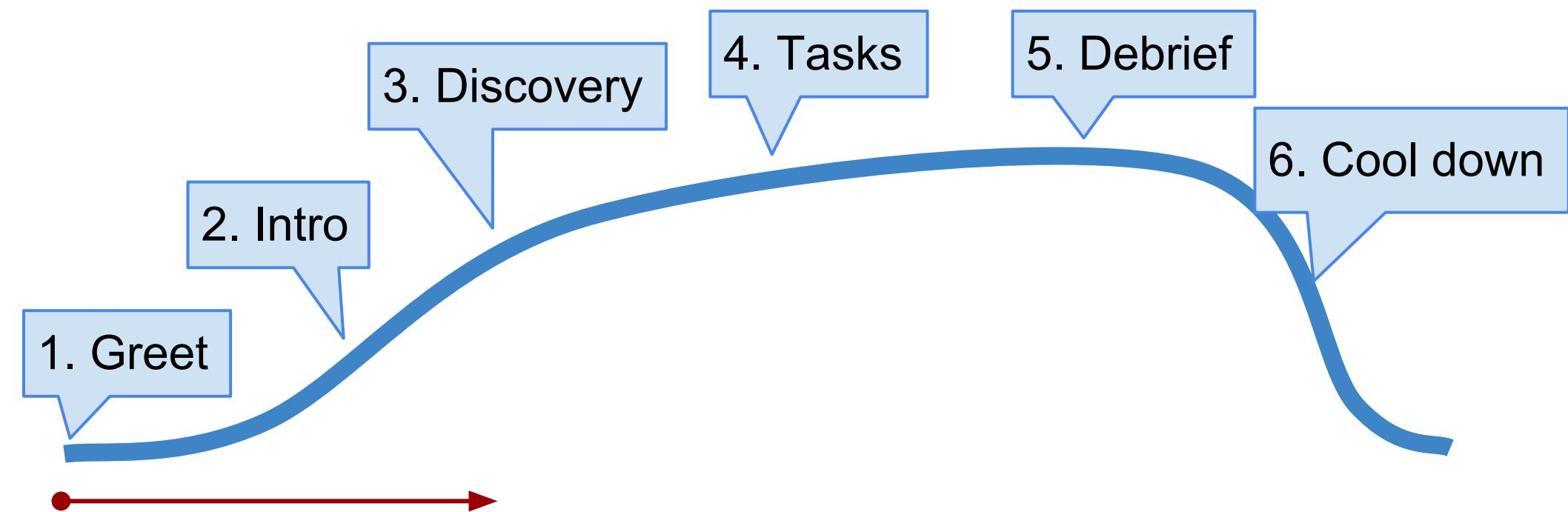
Build an arc.



Build rapport
and trust.

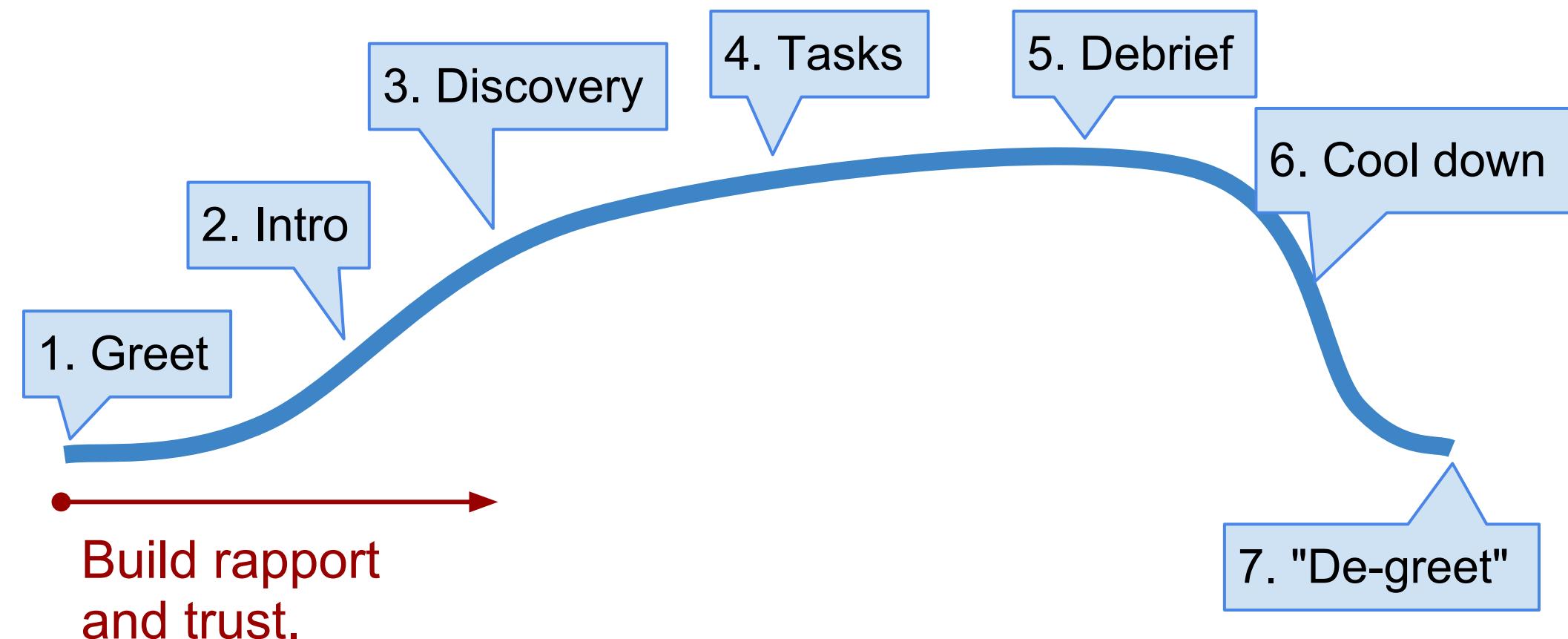
Go to Worksheet: Research Plan and Interview Guide

Build an arc.



Go to Worksheet: Research Plan and Interview Guide

Build an arc.



Go to Worksheet: Research Plan and Interview Guide

Don't lead the witness.

Leading or not?

- You program your home thermostat to save energy, right?
- Would you rather use the old version or this new, improved one?
- How does this compare to using your home thermostat?
- What did you think about that?
- What are the pros and cons of these designs?
- Would you tap on Schedule to change when the heat comes on?
- Is this better than your thermostat?
- Please show me how you'd make it warmer in here?
- Do you like the way this makes it easier to save energy?

Start drafting interview guide.

Go to Worksheet: Research Plan and Interview Guide

Interviewing



Weird!



Get into character.

- Smile!
- Be a good host.
- Be fascinated by participants.
- Remain neutral, curious, open, encouraging--
NOT defensive.

Interviewing Tips

- Ask follow-up questions.
- When in doubt, ask for clarification.
- Answer questions with questions.
- Keep it personal and concrete. Avoid hypotheticals.
- Don't pitch.
- Watch the time (surreptitiously).
- Careful testing own designs.

Watch non-verbal cues (yours & theirs).

Facial expressions,
body language, tone

Are they:

- comfortable?
- tentative?
- nervous?
- bored?

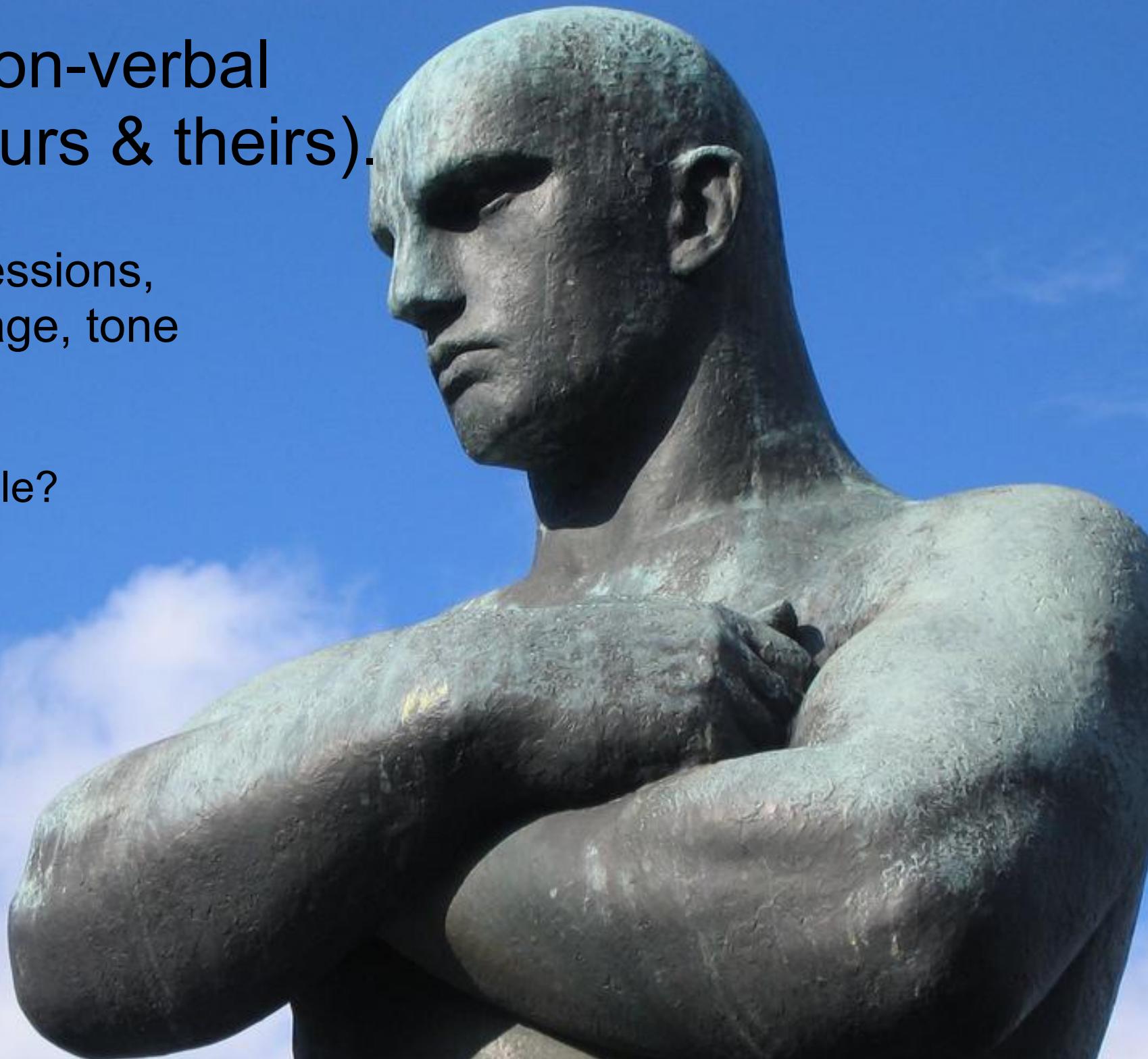
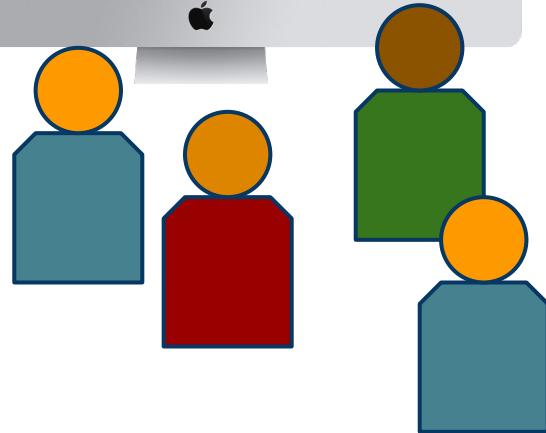
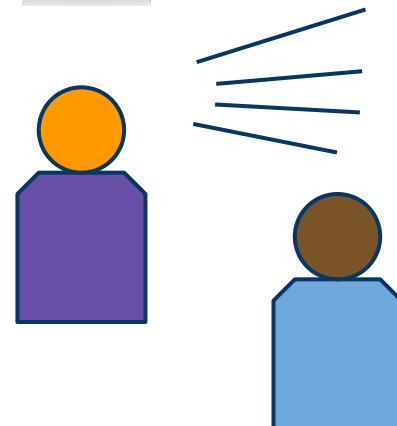
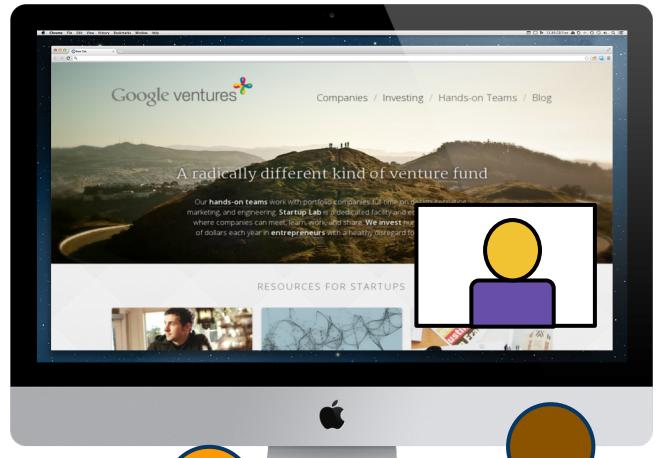
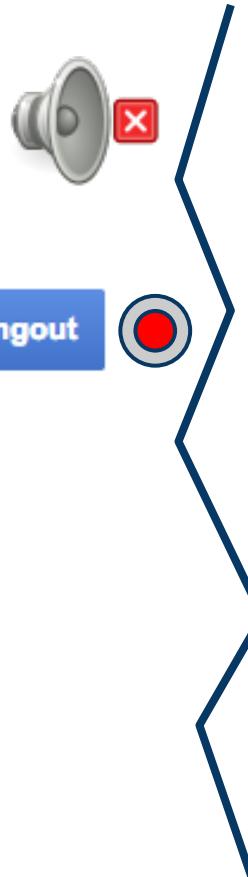




Photo: DC Atty

Observing and Taking Notes

Make your team watch.





IPEVO Ziggi USB Document Camera

Observers' jobs

- Watch and listen.
- Don't filter or judge (yet).
- Take users seriously.
- Take notes.
- Periodically note the time.
- After session, note top issues.
- Don't do anything rash!
- Summarize, prioritize *at end*.

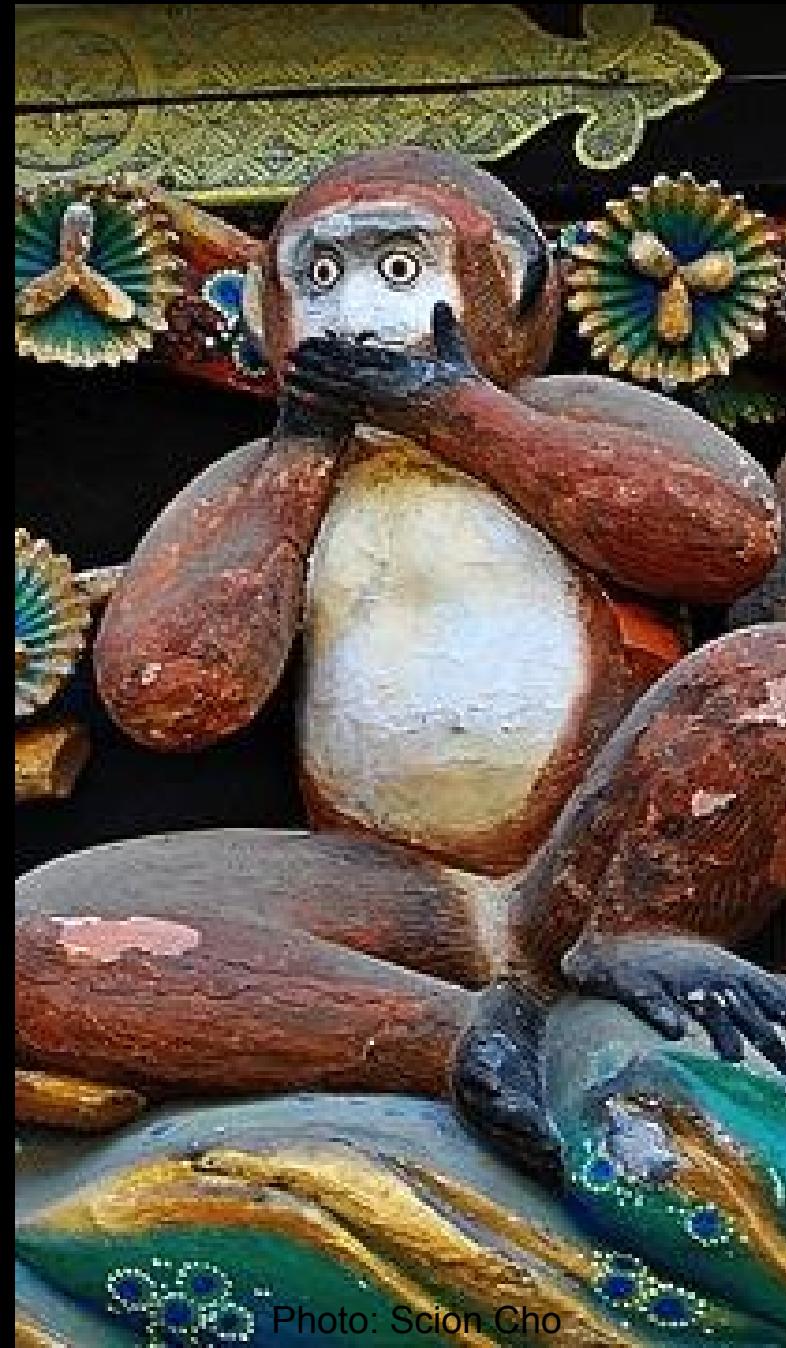


Photo: Scion Cho

1 KRISTA

(RESEARCHER)

- what do I do with scary info?
- would want to know if
- blood don't know it matters?
- "Cancerous" vs. Cancer
- quick readable
- 12 month health stuff
- wants to see a friend's results?

OHMD

- No ongoing cost
- Report change over time w/research
- ancestry included
- How it works, specifies

- Privacy's worth important
- Country looked more comprehensive
- "I have that's it!"

critical research on current site
 relevant details on current site
 sample results on current site
 "kind of entertaining" on current site

- Country only did one test
- Family history = too complex/expensive

2 WHITNEY

- What do I do with scary stuff?
- All relatives - does want to know
- Does he get DNA? Man or woman?
- Lifestyle is easier than DNA related
- Lifestyle/health stuff

• didn't have any Ancestry (Europe, India)

*Incentive (for husband)

- Visual design very important
- Broad important - Social proof
- Sale is bad - seems low quality

- VIDEO
How other people use it
- DEMO: overwhelming
- Data security
- Mission = turnout
- DEMO: what do numbers mean?
- LOTS of reports? Too much
- PRICE options

3 TERRY

- Plan for family
- understand family planning value

*Product shots confusing (survey)

*Tool for further discussion

- Quicks
- tool for genealogy / family planning
- diet & exercise
- includes more than just me
- simple
- not immediately obvious what we research
- Counter = ?
- didn't get research

*Good value

*Would do it / but can't afford

- Information very good to know
- no buttons for risks in grid

- equate w/ healthcare cost
- has good relationships w/ doctor
- anti ADA
- presentation is lot
- genealogy + health
- informed how life

4 GREG

- Specific - good idea
- Action oriented
- Big buy button!

*Avg compared to wh

- Wants more detail
- Surgery: focusing on ab

- Name: "MyDNA"
- Includes more
- One-time purchase
- How it works
- Needs examples - v
- NOT Action oriented
- Counter = ?

- Easy to find price
- Loud sales pitch
- Diet & exercise
- Disease risk

*"Discreet" info

- Unaware of product
- Credibility / security
- 400,000 not a lot
- Research: 2-edged sword
- Traditional with side b
- Cleanse / cleanse

MISC

Review checklist.

Countdown to a Quick 'n' Dirty Research Study



T-5 days

- Define goals, key research questions, and tasks with team.
- Find and schedule appropriate study participants.
- Draft interview guide. Solicit team's feedback.
- Order incentives for participants (e.g. SWAG, Amazon credits, gift cards).

T-3 days

- Invite team to study sessions. Plan lunch or snacks to lure them.
- Recruit note taker(s) for each session.
- Send confirmation emails (with dates/times, directions, your contact info, NDA) to study participants.
- Prep someone (receptionist, team member) to greet participants when they arrive.

T-8 hours

- Don't wear perfume or cologne.
- Send reminder (with schedule) to team (and notetakers) about observing sessions.
- Prep computer and any mobile devices you'll use for testing.
 - Make computer or devices look neutral and generic. Hide desktop detritus and visible bookmarks.
 - Clean keyboard and screen.
 - Install and test any prototypes.
 - Shortcuts: Add bookmarks or desktop shortcuts for prototypes, sites, etc.
 - Set computer screen and settings to match target users'.
 - Set innocuous home page for browser (e.g. Seattle Times).
 - Clear browser history, cookies, cache.
 - Minimize browser or prototypes.
 - Start screen recorder (e.g. Hypercam, Screenflow, WebEx) and/or set up video camera.
 - Start and test screensharing software (e.g. WebEx, Google Hangouts) for observers.
 - Run through all prototypes under actual test conditions. Then reset them.
- Print copies of NDA and interview guide.
- Clean up room. Erase white boards, etc.

T-10 minutes and counting

- Post "Do not disturb" sign on the door of the conference room.
- Turn off your cell phone. Sign out of all notifiers on your computer.
- Take a bathroom break.
- Chew mints or gum.



Questions?

Photo: stevendepolo

Appendix

References and Resources

- Google Ventures Design Blog, esp. [Guide to Research](#)
- *Rocket Surgery Made Easy* (Krug)
- *Don't Make Me Think* (Krug)
- *Designing with the Mind in Mind* (Johnson)
- [upassoc.org](#) (Usability Professionals' Association)
- [useit.com](#) (Jakob Nielsen's website)
- [Tips for Usability Testing](#) at InteractionArchitect.com

Recording and streaming

- Windows and Mac: Google Hangouts, WebEx
- Windows
 - [Hypercam v2](#) (free)
- Mac
 - QuickTime Player
 - [ScreenFlow](#)
- Mobile
 - [Ziggi USB Document Camera](#)
 - See [this article](#) for ideas for data capture
 - [DIY phone sled](#)