

Affinity Diagrams

Lindsay MacDonald

Monday, November 16, 2009

Up to this point, we've gone through many ways that we can design user tests. Today, I'll talk about one strategy for dealing with results from qualitative studies. Before I start, who can tell me what affinity means?

A: The [fact](#) of and [manner](#) in which something is [related](#) to another.



- What is an affinity diagram?
- When to use one?
- Where to put it?
- Who is involved?
- How to build one?
- How to read one?
- Add more data?
- How to document?

Your affinity diagram should list key issues and hot ideas present in your project.

Terms to know

- * Interpretation Session
- * Affinity Note
- * Walk the wall



- * Interpretation Session- interpreting data gathered from questionnaires and during interviews. Points are put into a chronological list, then transferred to affinity notes.
- * Affinity Note- individual data on sticky notes.
- * Walking the wall is the process of reading the affinity diagram: walking along the wall and reading it top to bottom. I'll get into this later in my presentation.



[HTTP://WWW.RCA.AC.UK/UPLOADEDIMAGES/DRA_DRAWING.STUDIO.JPG](http://www.rca.ac.uk/uploadedimages/dra_drawing.studio.jpg)

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here's a quick analogy. This drawing student here has spent hours working closely on this drawing of a cow. In his mind, it looks like **this**. His friends here are laughing because they are standing back and see the larger picture, which looks more like **this**. The affinity diagram will force you to take a step back from your data and see the big picture, at a higher level.



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What is it?



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- ✱ Hierarchy of qualitative data gathered during user interviews and interpretation sessions.
- ✱ Made of post-it notes on a wall.
- ✱ A roadmap of the design problem - Brings out common issues and themes present in the design problem or work practice being evaluated.
- ✱ It's used in management, design, marketing, HCI, and I use it in art sometimes.
- ✱ We'll talk about HCI.

What does it do?

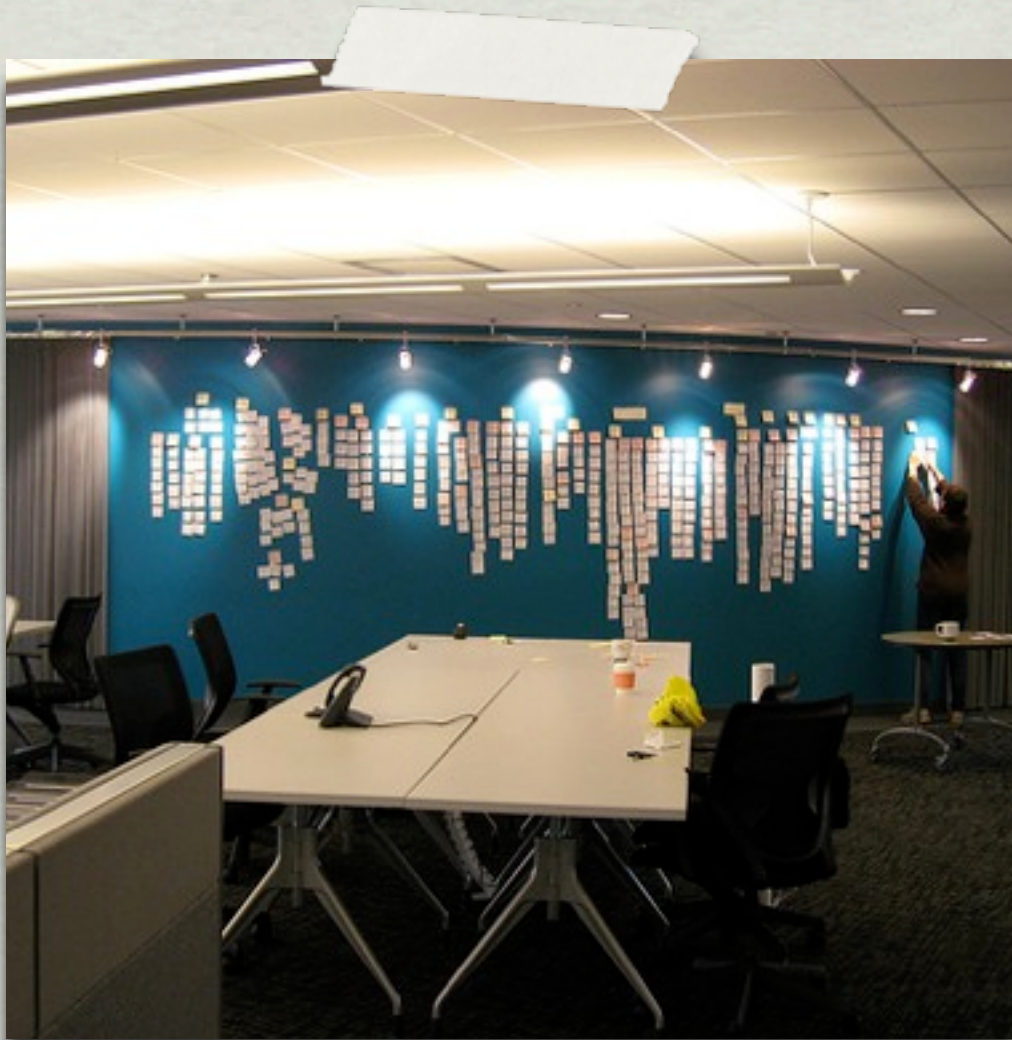


PHOTO CREDIT: JOSH.EV9

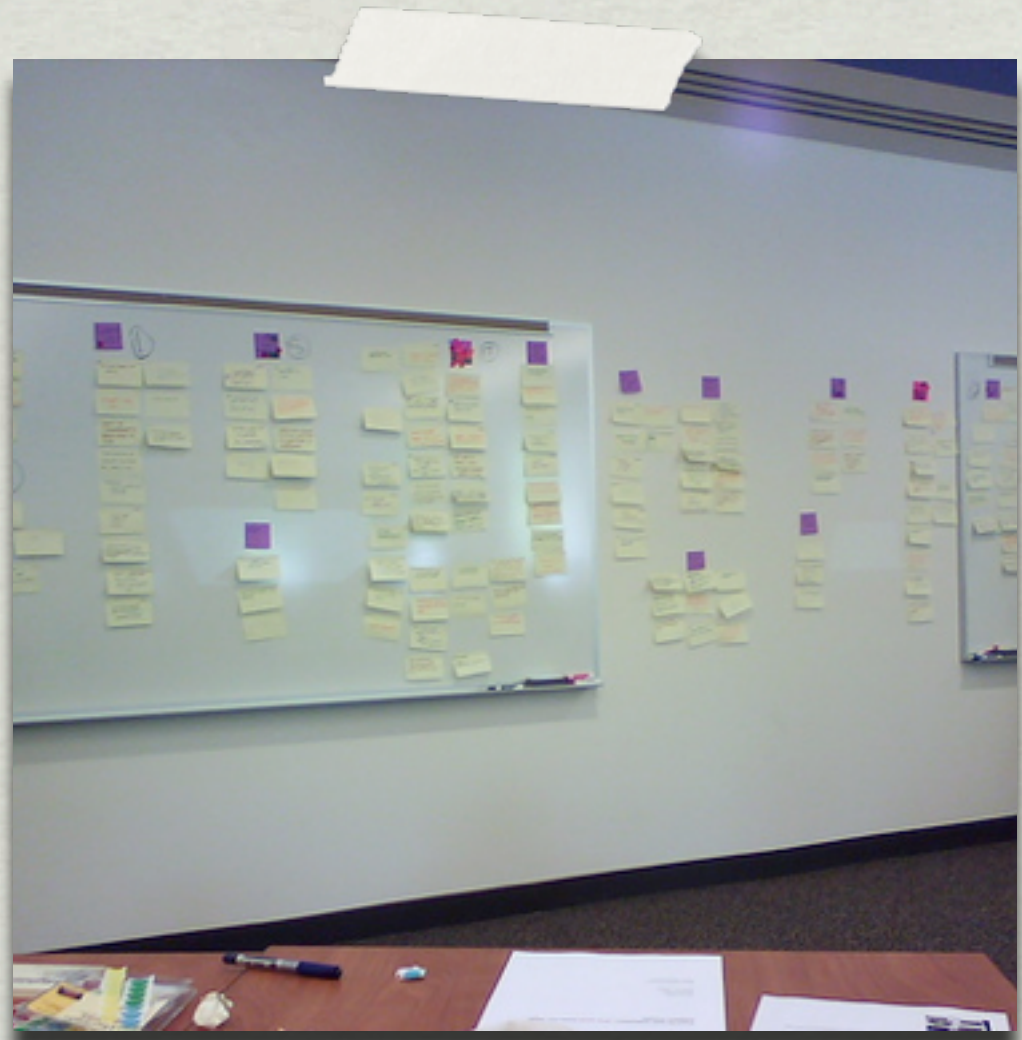
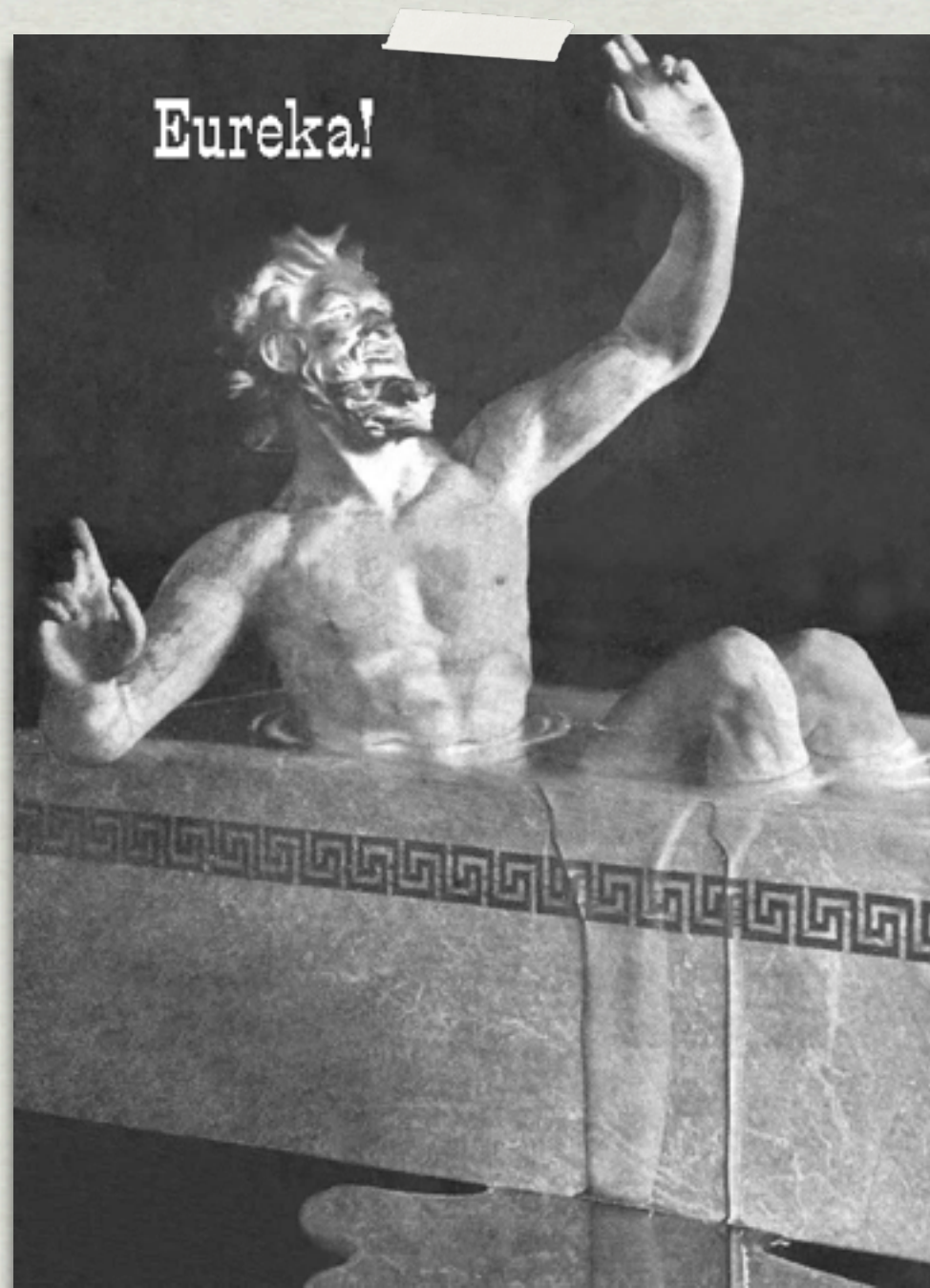


PHOTO CREDIT: MATTHEW OLIPHANT

- ✳ Process encourages team to re-think design strategy.
- ✳ Sorts through a LARGE amount of qualitative data.
- ✳ Can tell a story about the user and the work practice issue by organizing everything known about the design problem.
- ✳ Serves as a map of the work to be done to solve the design problem.
- ✳ Useful tool for dividing tasks among the design team.

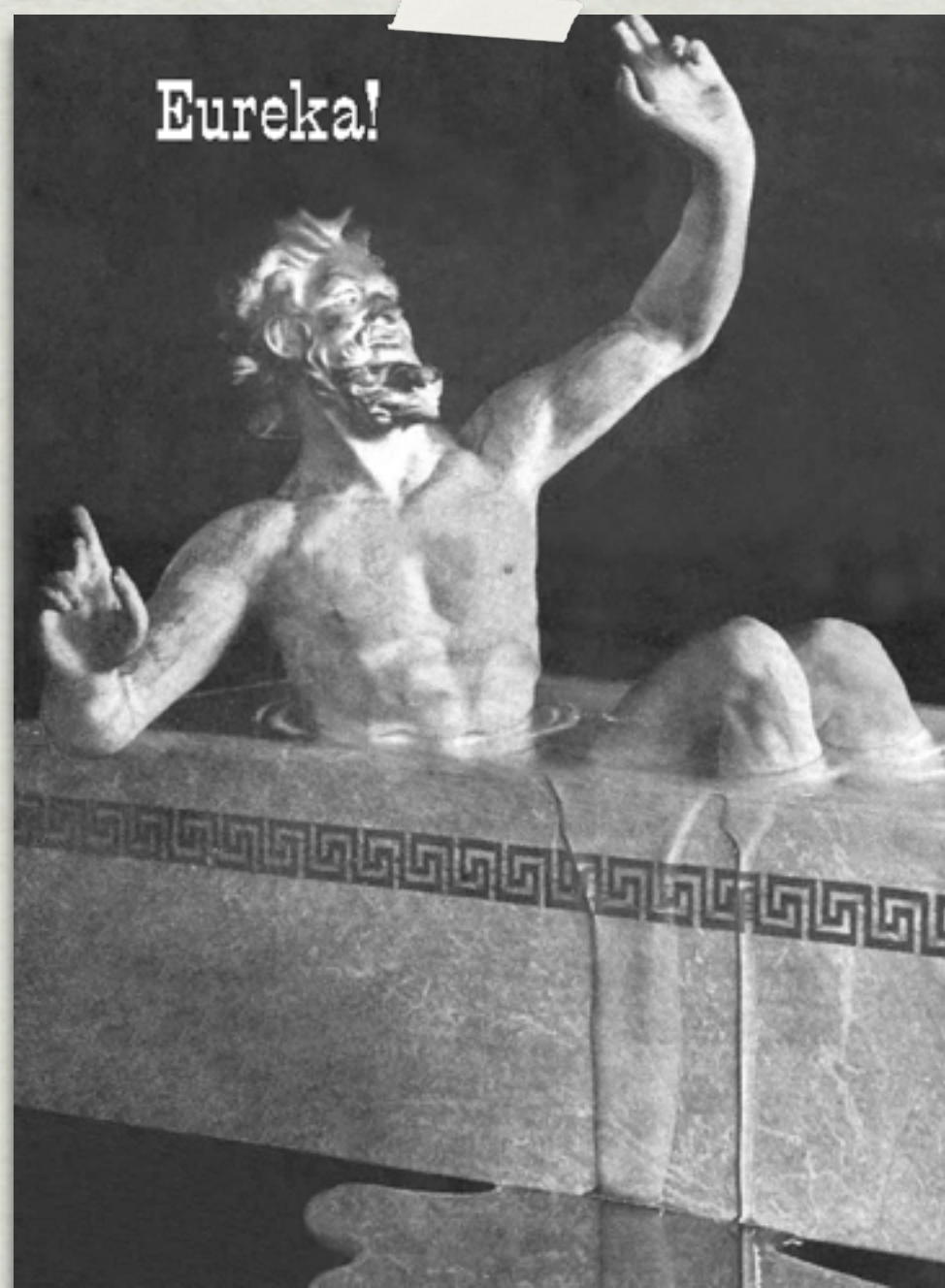
What it won't do



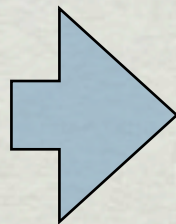
[HTTP://PHYSICS.WEBER.EDU/CARROLL/ARCHIMEDES/CROWN.HTM](http://physics.weber.edu/carroll/archimedes/crown.htm)

- ✱ Prove or disprove a theory.
- ✱ Test a hypothesis.

What it won't do



NO.



[HTTP://PHYSICS.WEBER.EDU/CARROLL/ARCHIMEDES/CROWN.HTM](http://physics.weber.edu/carroll/archimedes/crown.htm)

- ✱ Prove or disprove a theory.
- ✱ Test a hypothesis.

When to do one?



✱ After interviews

- ✱ You've done your interviews
- ✱ You've collected all the key points from your interviews, which we call an interpretation session. All these points are transferred to slips of paper, called affinity notes. Keep a list of these notes organized by user, and chronologically as you pull them out of the data.
 - ✱ Ideal to start after 400 notes are gathered otherwise you'll have chaos.

When to do one?



✱ After interviews



✱ After interpretation session



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When to do one?

- ✳ After walking the wall and additional interviews.

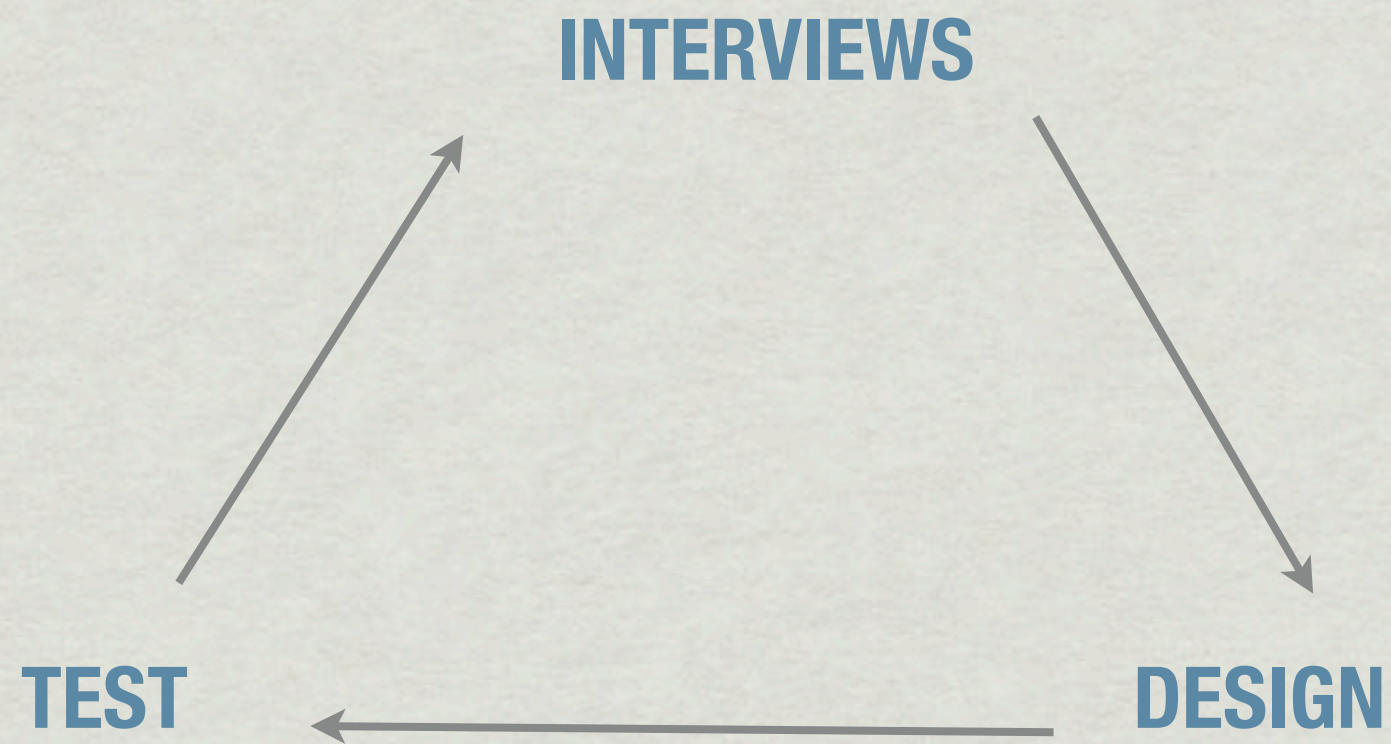


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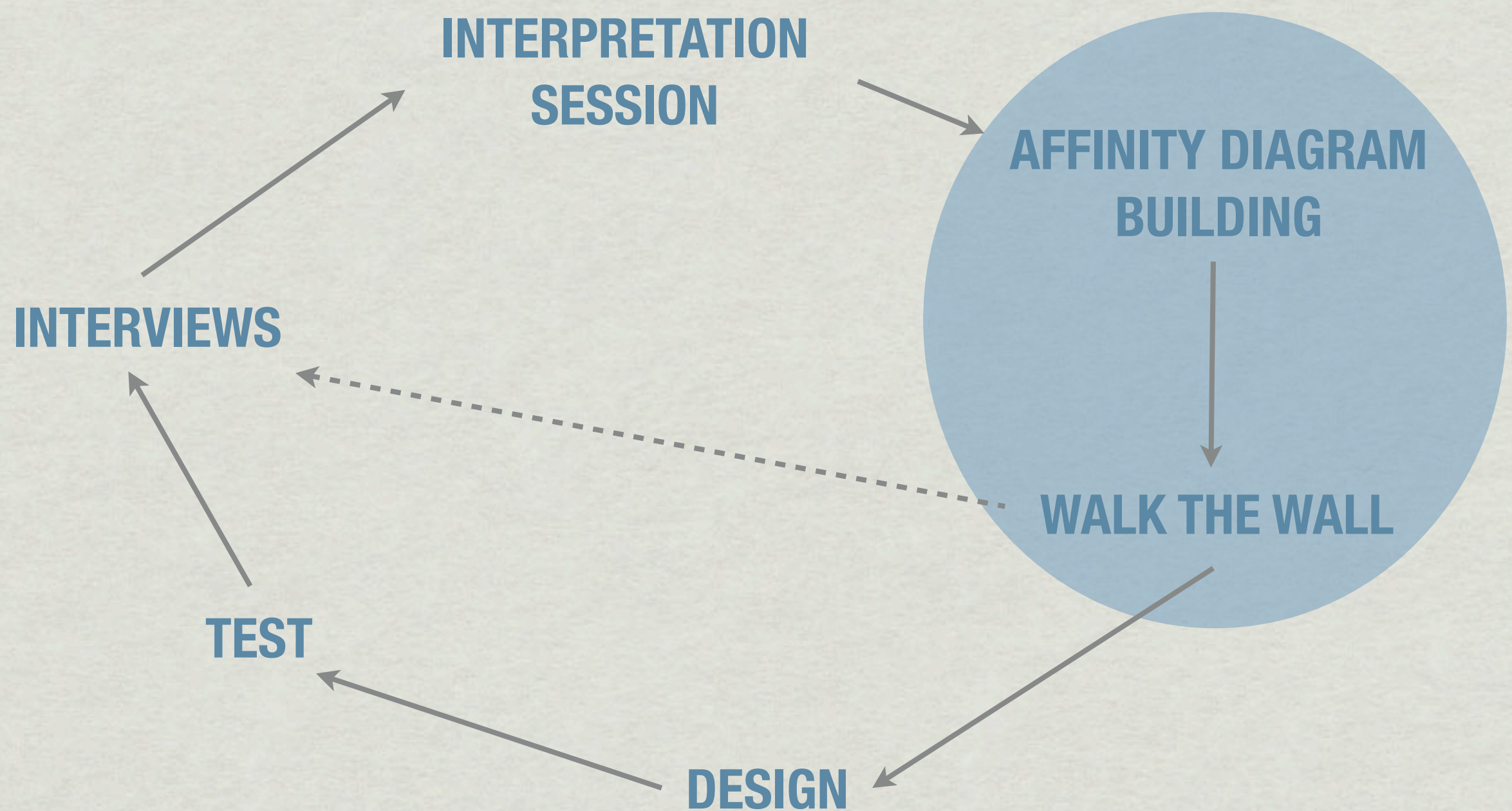
- ✳ After walking the preliminary wall and conducting refocused interviews

Design Life Cycle



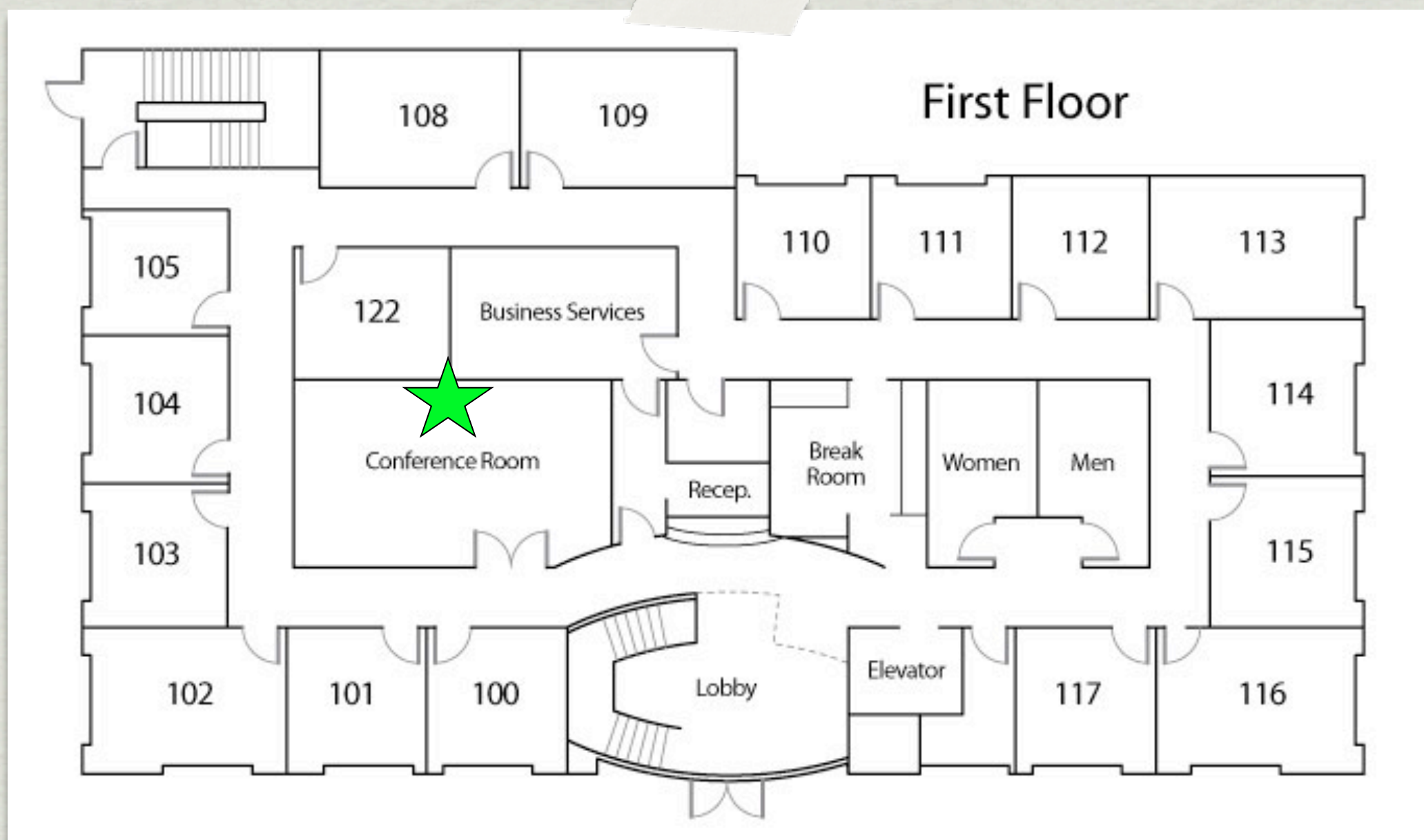
Just to show you where this fits into the design cycle – here's what we've been over in class many times.

Contextual Design Life Cycle



According to Karen Holtzblatt, we can fit in these few extra steps between the interviews and the design stage. I don't have enough time to tell you all about an effective interpretation session today, that's available in the literature. Adding these steps will give a design team more clarity in their definition of the work practice that they are trying to design for and, along with personas, a clear picture of who they are designing for and what their areas of concern are.

Where should it go?



[HTTP://AMETRINESUITES.COM/IMAGES/AS_FLOORPLAN_1.JPG](http://ametrinesuites.com/images/as_floorplan_1.jpg)

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- * Open space with a large wall
- * Everyone should be able to access it easily
- * Space should be appropriate to bring the client into.
- * If space is an issue, cover the wall with large sheets of white paper so that the AD can be moved if necessary. This summer, I used a white photo backdrop roll and I just rolled up the entire room when they kicked me out.
- * For example, the Innovis group often uses this classroom (which we also call the "War Room") for brainstorming and we can often see small affinity diagrams on these whiteboards.

Who to involve?



DESIGN TEAM



STAKEHOLDERS

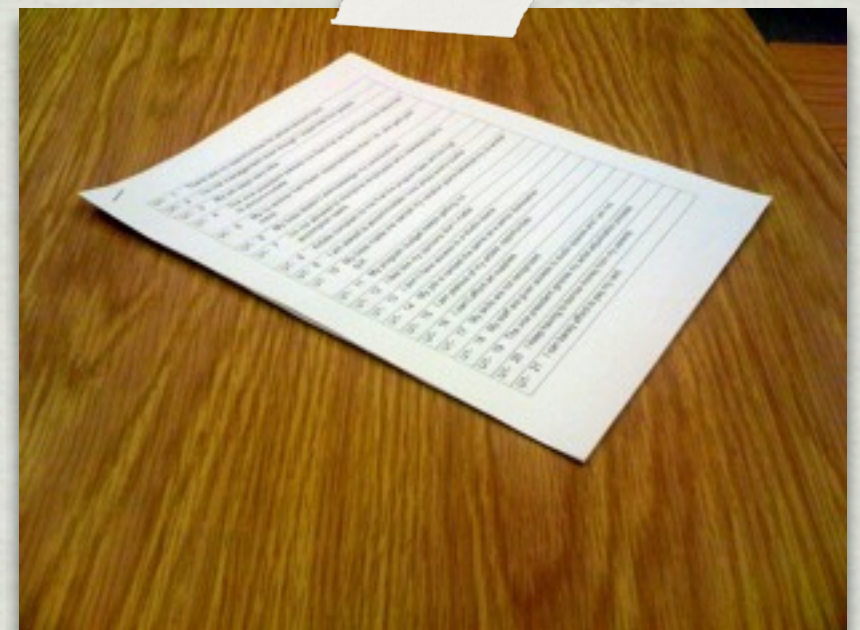


MANAGEMENT

The affinity diagram building session is an open group activity. The design team should primarily be involved, and it's often helpful to bring in a few stakeholders and someone from management. That way, everyone involved with the project becomes familiar with its direction and goals, and can contribute to determining what the areas of focus are.

If you are working on a large diagram, it will likely take 2–3 days to complete with a team of two people. If several people are involved, it is possible to complete an affinity diagram in one day.

Supplies!

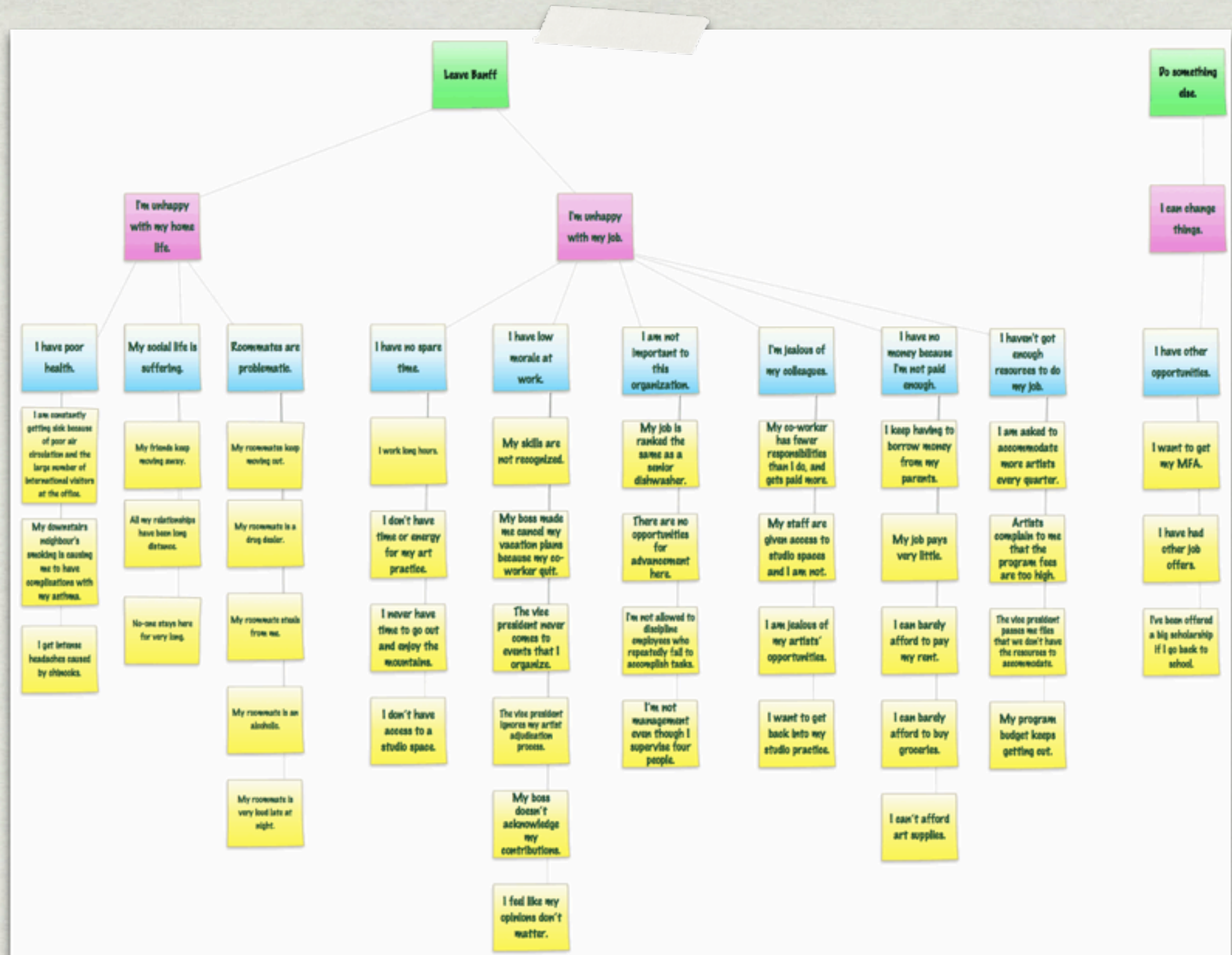


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In order to get started, you'll need some sticky notes, markers, a table or flipchart to lay the affinity notes on, the affinity note list from the interpretation session, and a big white wall.

Karen Holtzblatt suggests using brand name supplies in her books (and is criticized for doing so), but I think that as students, we can get away with whatever we find that works.

Structure



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- * Built from the bottom up
- * Yellow or white for individual points
- * Blue for first level groups
- * Pink for second level groups
- * Green for top level
- * Bright yellow for questions and design ideas.

The Rules of Building



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- ✱ A column of affinity notes may only be started by a note with an observation written on it. After a group has been started, questions and design idea notes may be added.

Notes can be moved. If a group doesn't hold together, start a new one.

- ✱ Anyone can move a note. This is a group process, and this is a fast process. No argument or discussion.
- ✱ 3-6 affinity notes per column. Any more than 6 and it's likely you are burying data.
- ✱ One idea per note.

The Rules of Building

- ✱ Start with observation.



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- * Start with observation.
- * Moving is ok.



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The Rules of Building

- * Start with observation.
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- * 3-6 per group.
- * One note, one idea.



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- * One idea per note.

Get set



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1. Get the design team together and lay out all notes. Divide them evenly among team members - about 20 notes per person to start.
2. Place one note up on the wall and read it aloud. Everyone looks through their notes to find something similar, and if one is found, it is placed underneath the first note.
4. Create second level groups, name with pink sticky notes.
6. Organize second-level groups into areas of concern, labeled with green sticky notes.

The Affinity Note

U1-16

*I can't afford
art supplies.*

The affinity note is the building block that makes up the foundation of the affinity diagram. Each are numbered in the top left corner according to user and chronologically from the interpretation session.

Affinity note stage

- ✱ The yellow notes
- ✱ The foundation!



First 10 columns: when starting a new column, read the note aloud. Makes everyone aware that of new groups going up. When a rhythm is established, it's not necessary to talk aloud anymore.

- ✱ Try to fill existing columns before beginning new ones.
- ✱ Written in first person. This is the customer's voice.
- ✱ If you find a note that can be split up, do it, and document it on the affinity note list.

Splitting up

U1-16

I'm not allowed to discipline my employees who repeatedly fail to accomplish tasks.

U1-16 A

I'm not allowed to discipline my employees.

U1-16 B

My employees repeatedly fail to accomplish tasks.

✳ Copy out the new notes by hand and number them A and B.



- ✱ If a note doesn't make sense, check its context in your affinity note list.
- ✱ Designate an area for notes that don't have a clear place.
- ✱ Feel free to talk, but steer clear of keywords and categories! For example, Uta is asking for notes that fall into a very general category. Lawrence is trying to find notes that are related to each other.

Blue label stage



- * Begins when ALL affinity notes are on the wall,
 - * OR when the group can't keep track of the columns.
 - * Written in the customer's voice.
 - * Work in pairs.
 - * Start with columns with most notes, break up as necessary.
 - * 4-6 affinity notes per label.
- If there are more than 6 affinity notes in a column, split it up.

A Good Blue Label



- ✳ Captures what matters about the notes below.

- ✳ This level will help to drive your thinking about your design by grabbing the key points from the notes below.
- ✳ Represents what matters about the notes below it, ie “Roommates are problematic”.
- ✳ You shouldn’t have to read the affinity notes to understand the blue label.

A Bad Blue Label

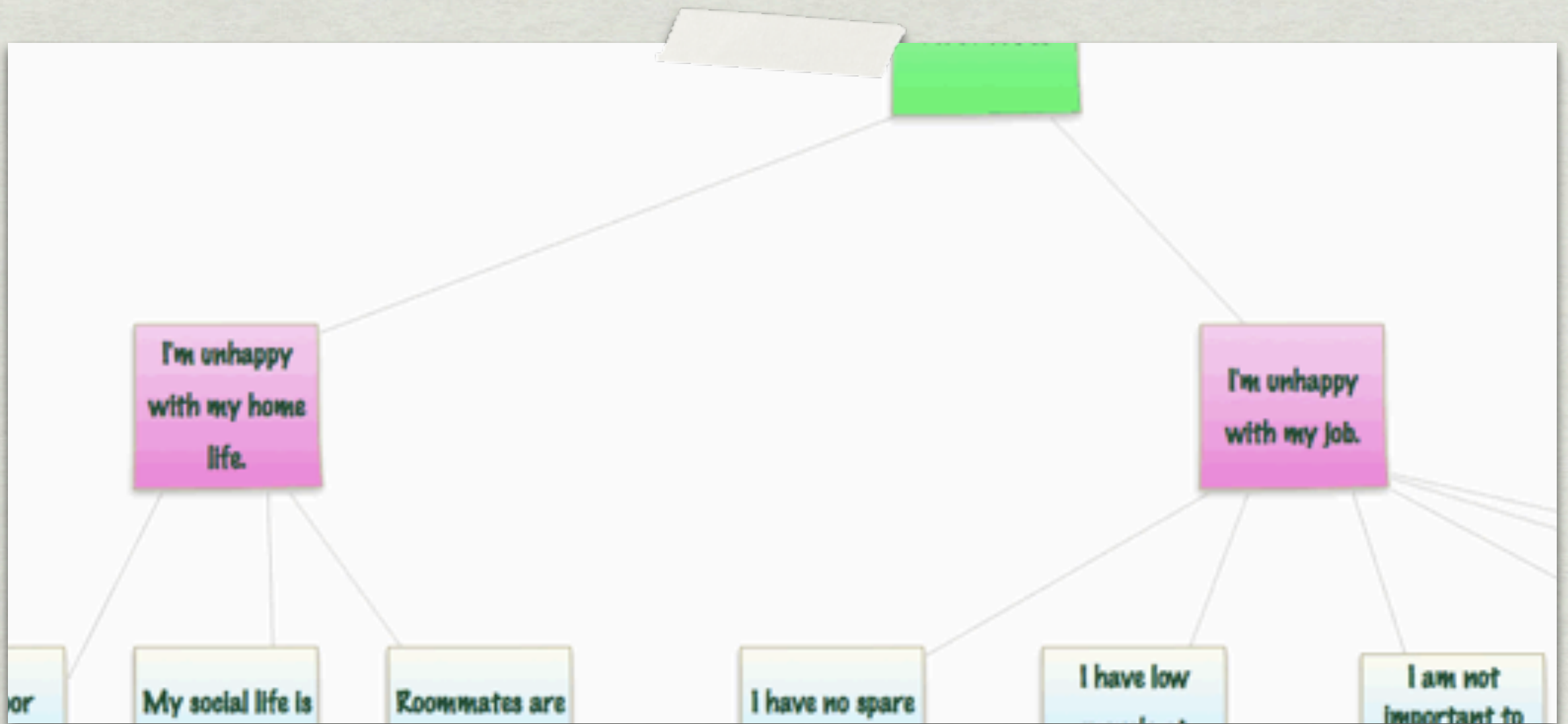
I don't like my living situation.

Roommates!!

✱ Why are these two bad?

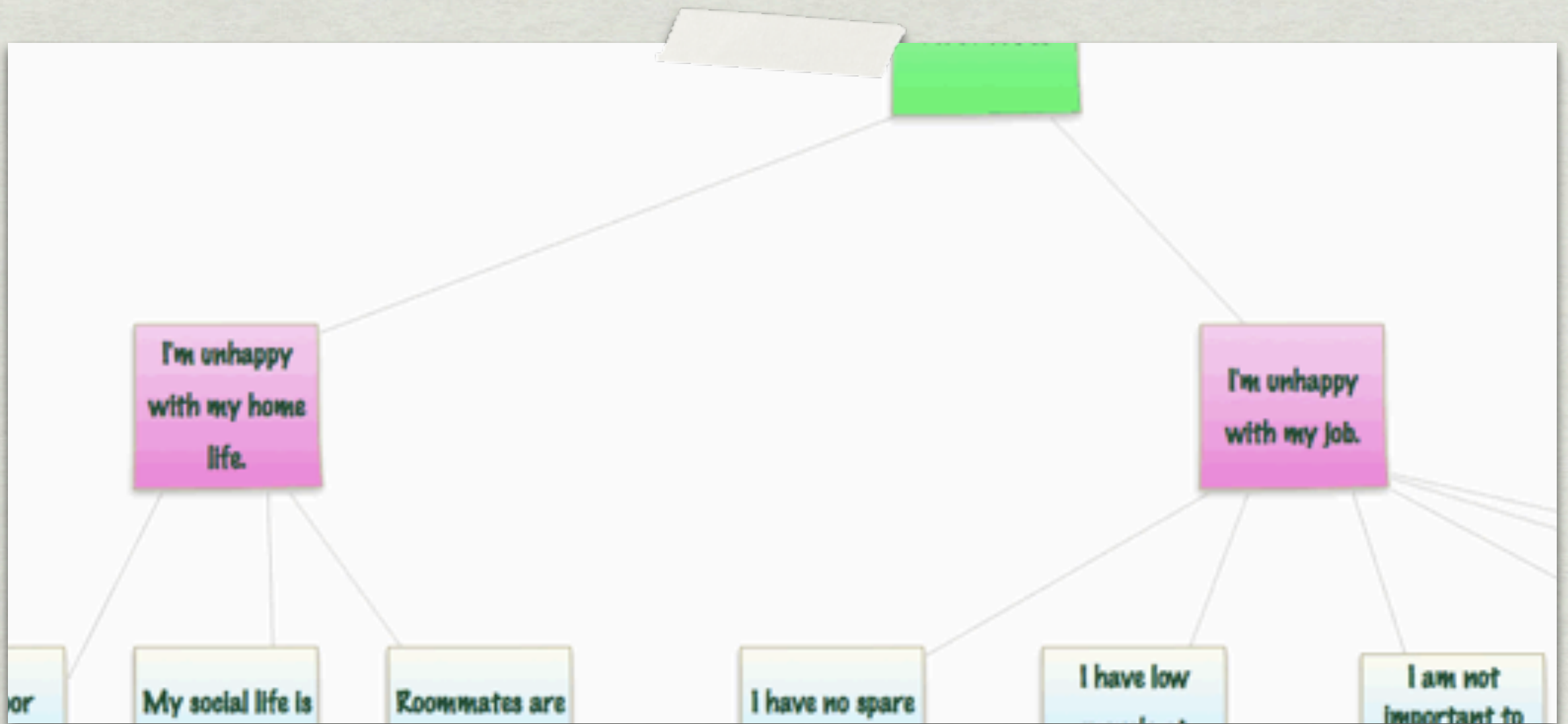
✱ Is too vague and hides what is happening in the affinity notes.

Pink label stage



- * Groups the blue labels into related themes.
- * Still in first person.
- * Pink groups will likely emerge during the blue label stage.
- * 4-6 blue labels per pink label.
- * Group into green label “areas” representing large affinity groups with temporary green labels.

A Good Pink Label



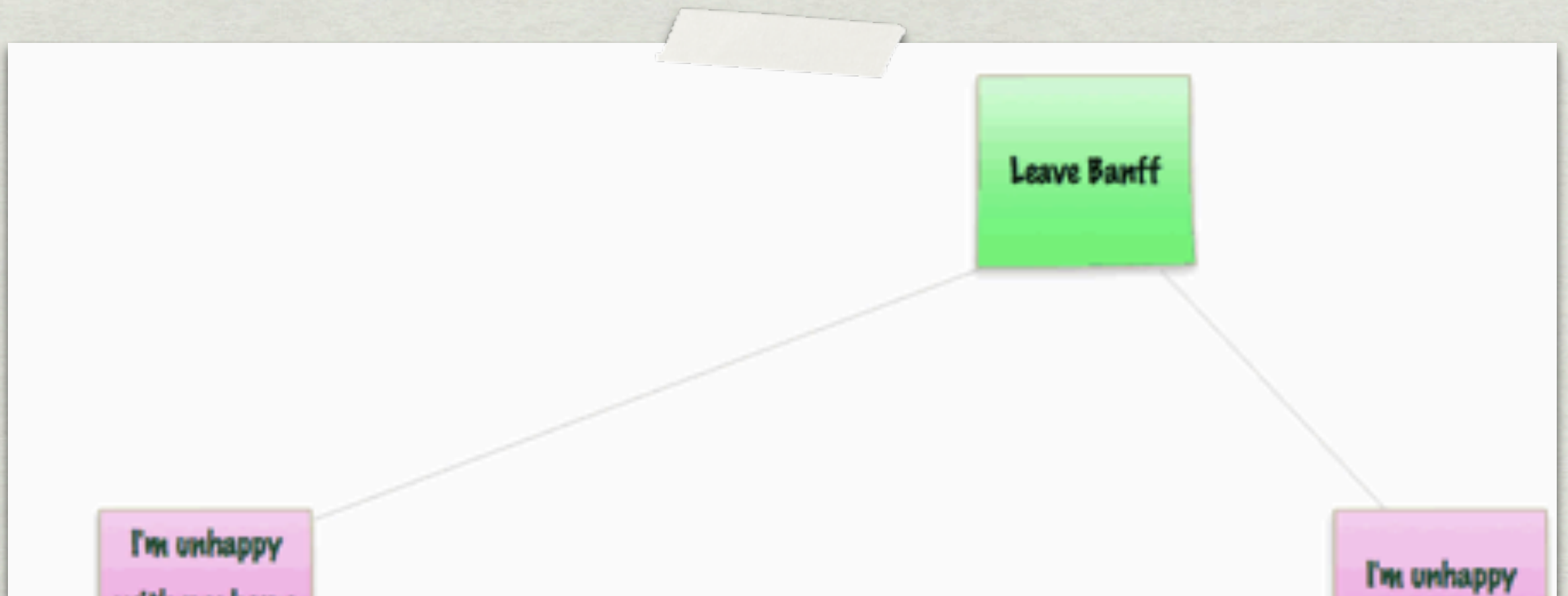
- * Again, This level will help to drive your thinking about your design by grabbing the key points from the notes below.
- * Represents what matters about the blue labels below it, for example, “I’m unhappy with my job.”
- * You shouldn’t have to read the blue labels to understand the pink label.
- *

A Bad Pink Label



✱ Why is this bad?

Green label stage



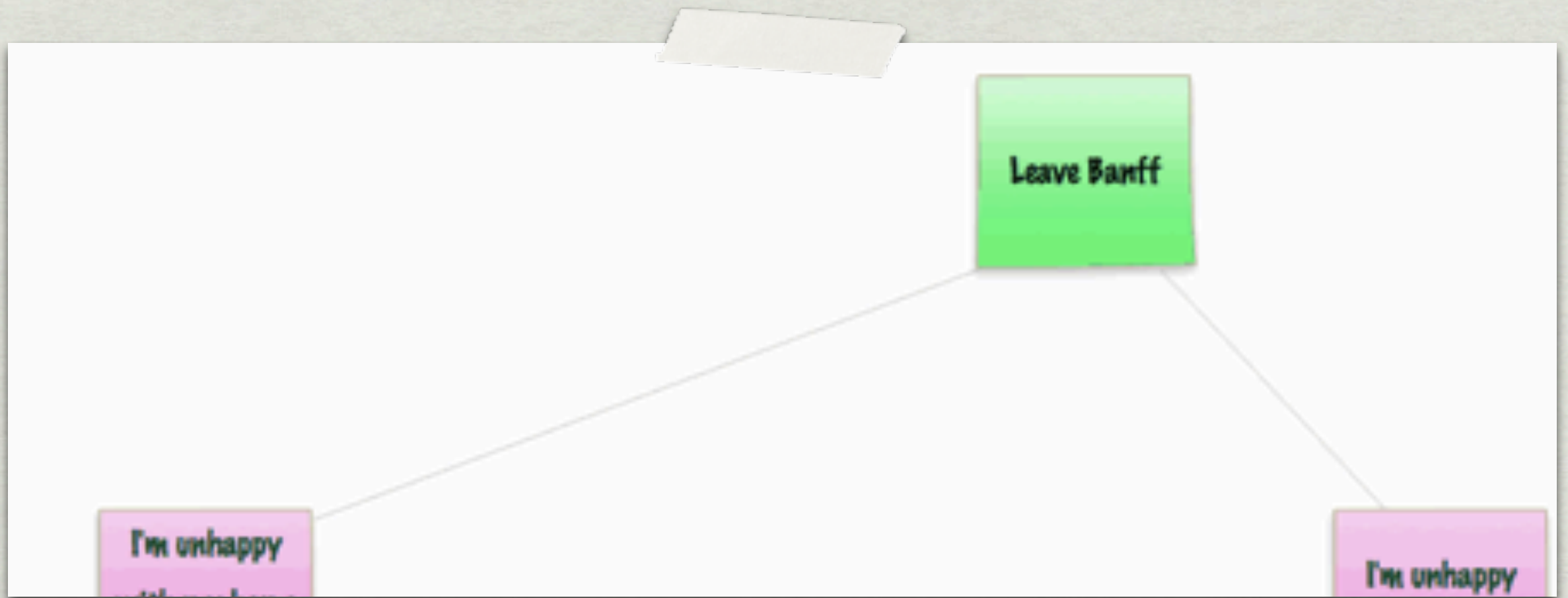
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- * Categorical / abstract label, ie “Leave Banff”
- * Assign this stage to teams or more experienced people.
- * Revise temporary groups/labels as necessary.
- * 4-8 pink labels per green label.
- * Make sure each blue label group is an appropriate size. Revise and split if necessary. example- I have poor health category.

More than 6 – too granular, doesn’t hold together.

A Good Green Label



- ✳ Tells the core story about the pink labels below it.
- ✳ Bad ones tend to be a catch all for pink groups that don't have a place.

A Bad Green Label



*Leave Banff and take
Saul Greenberg's class.*

✱ Why is this bad?

✱ Bad ones tend to be a catch all for pink groups that don't have a place.

Reading an Affinity Diagram: “Walking the Wall”

Who reads it?



DESIGN TEAM



STAKEHOLDERS



MANAGEMENT



[HTTP://OUTDOORS.WEBSHOTS.COM/PHOTO/1165643551056967866BTYHSD](http://outdoors.webshots.com/photo/1165643551056967866BTYHSD)

Going back to art. Impressionist paintings are built up out of tiny brush strokes. It's impossible to read the painting by looking at it close up – all we see here are a bunch of dots.



[HTTP://WWW.JMFIFE.COM/PHOTO_GALLERY/EUROPE_2003/FIFE_LOOKING_AT_ART.JPG](http://www.jmfife.com/photo_gallery/europe_2003/fife_looking_at_art.jpg)

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If we back up, the big picture emerges and we can see the painting as the artist intended. Reading an affinity diagram is similar – we need to read the high level information first and then move down to the details.

Rules for walking the wall



PHOTO CREDIT: NASHIH

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- * Walk along the wall, read it top to bottom. The whole process should take up to 2 hours.
- * Respond with questions and design ideas, and flag holes. Add these in on bright yellow sticky notes with your initials on them.
- * Don't cover labels.
- * Be quiet! Reading is a silent process.
- * Go through a second time to reflect on others questions and design ideas.
- * Don't remove notes.
- * Find holes in data, conduct more interviews if necessary.



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- ✱ Top to bottom.



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Rules for walking the wall

- * Top to bottom.
- * Add your 2 cents.



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PHOTO CREDIT: NASHIH

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Rules for walking the wall

- * Top to bottom.
- * Add your 2 cents.
- * Be quiet.
- * Do it twice.



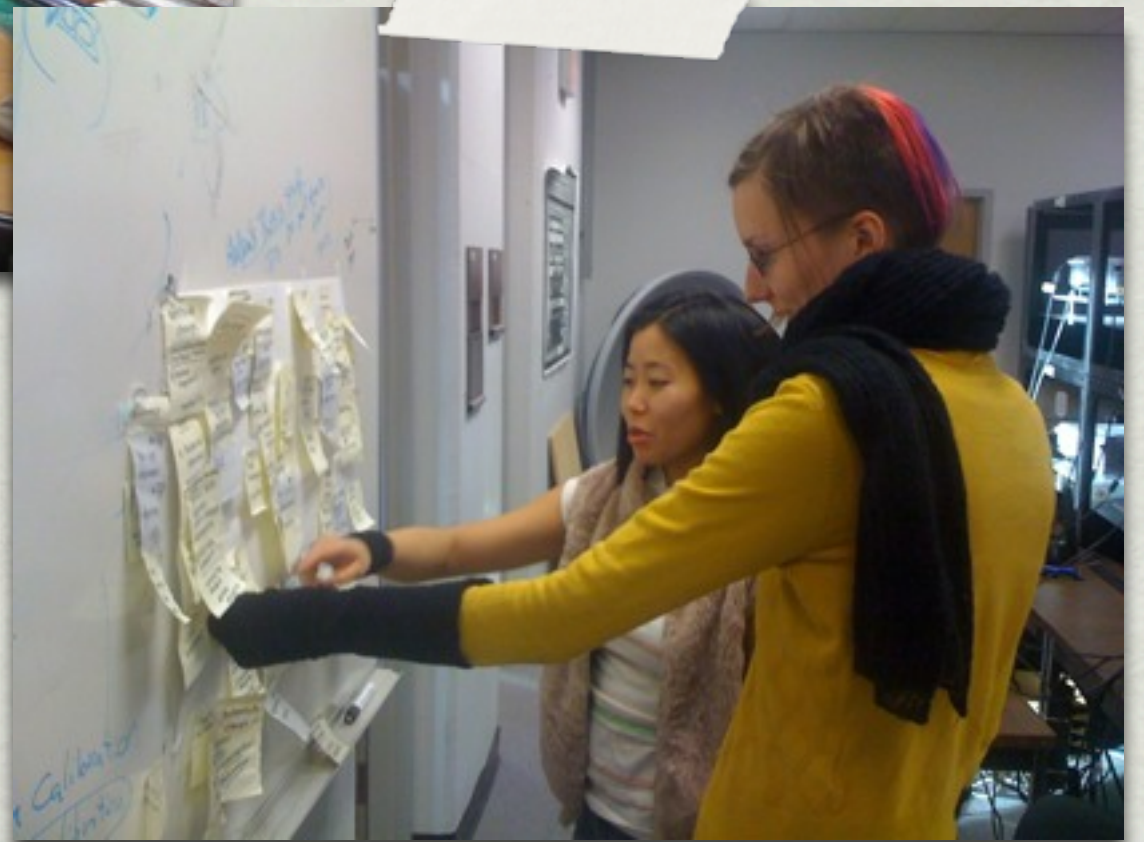
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Rolling in new data



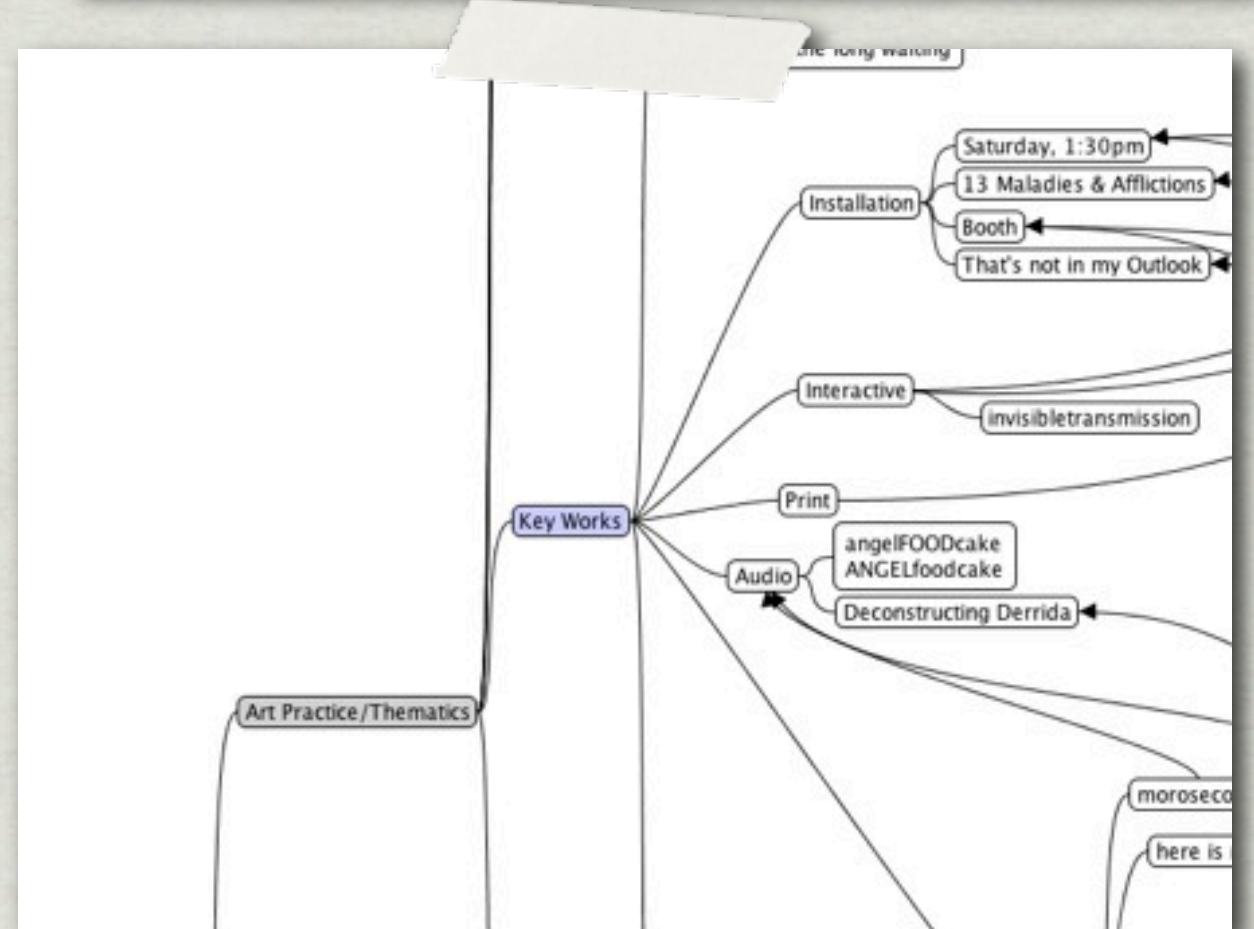
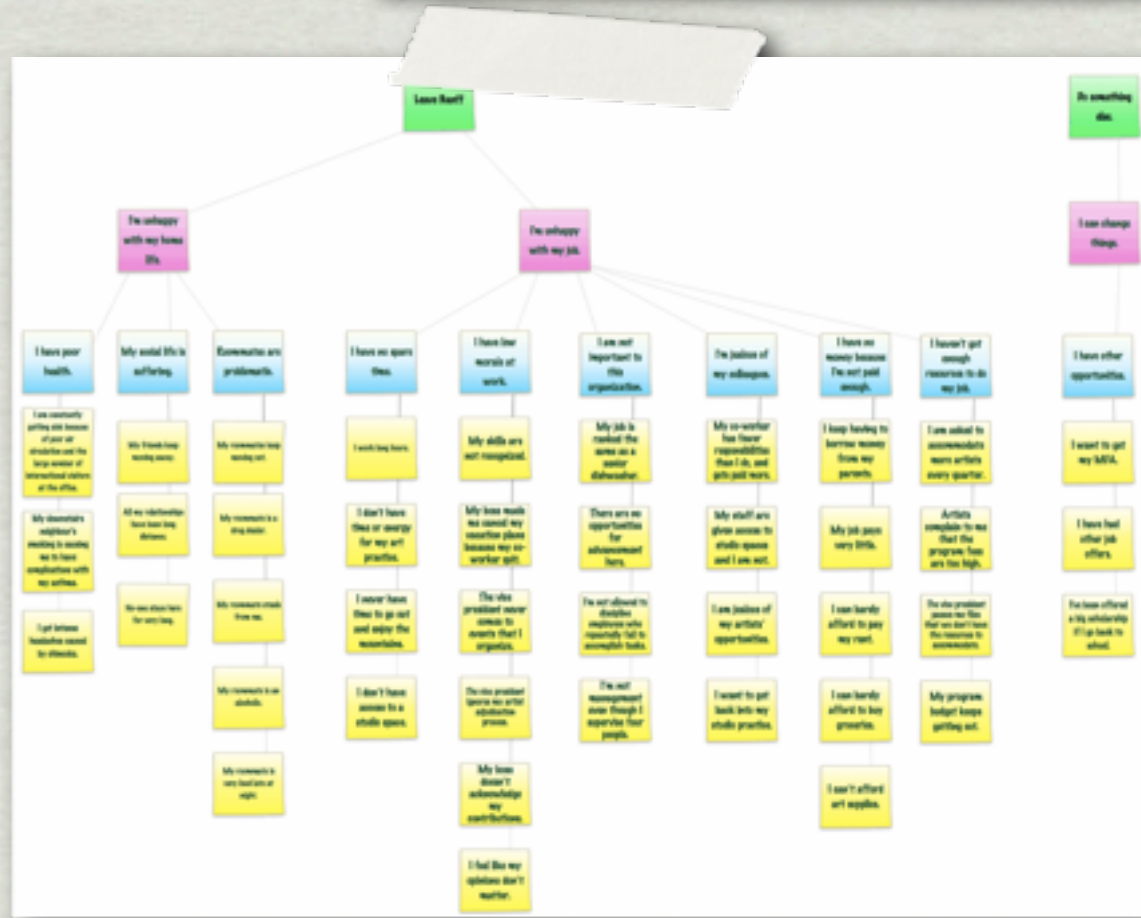
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- * Slightly different. Sort it out first by green groups, then pink, then blue.
- * Read the new note aloud. Put it beside the new group you want to put it in.
- * Don't shoehorn it in. If it doesn't fit, make a new blue group.



Document that sucker!



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- ✱ I take photos as I go along, at regularly timed intervals. This is annoying.
- ✱ Software: Holtzblatt's cd tools is discontinued. I'm sure there are other things available that you can pay \$850 for.
- ✱ I used omnigraffle to document this example, it's a bit slow but it's good. Not free though.
- ✱ Freemind IS free.



References

- ✱ Beyer, H. and Holtzblatt, K., 1998. **Contextual Design**. Morgan Kaufmann Publishers, Inc., pp. 154-163, 201-203 and 275-276.
- ✱ Holtzblatt, K., Wendell, J. B., Wood, S. 2005. **Rapid Contextual Design : A How-to Guide to Key Techniques for User-centered Design**. Elsevier, Inc., pp. 159-179, 193-204.
- ✱ Straker, David., 2002-2007. **The Quality Toolbook: Examples of an Affinity Diagram**. Available at http://syque.com/quality_tools/toolbook/Affinity/example.htm





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