

Human-Computer Interaction

CPSC 481 - Spring 2019

LEARN

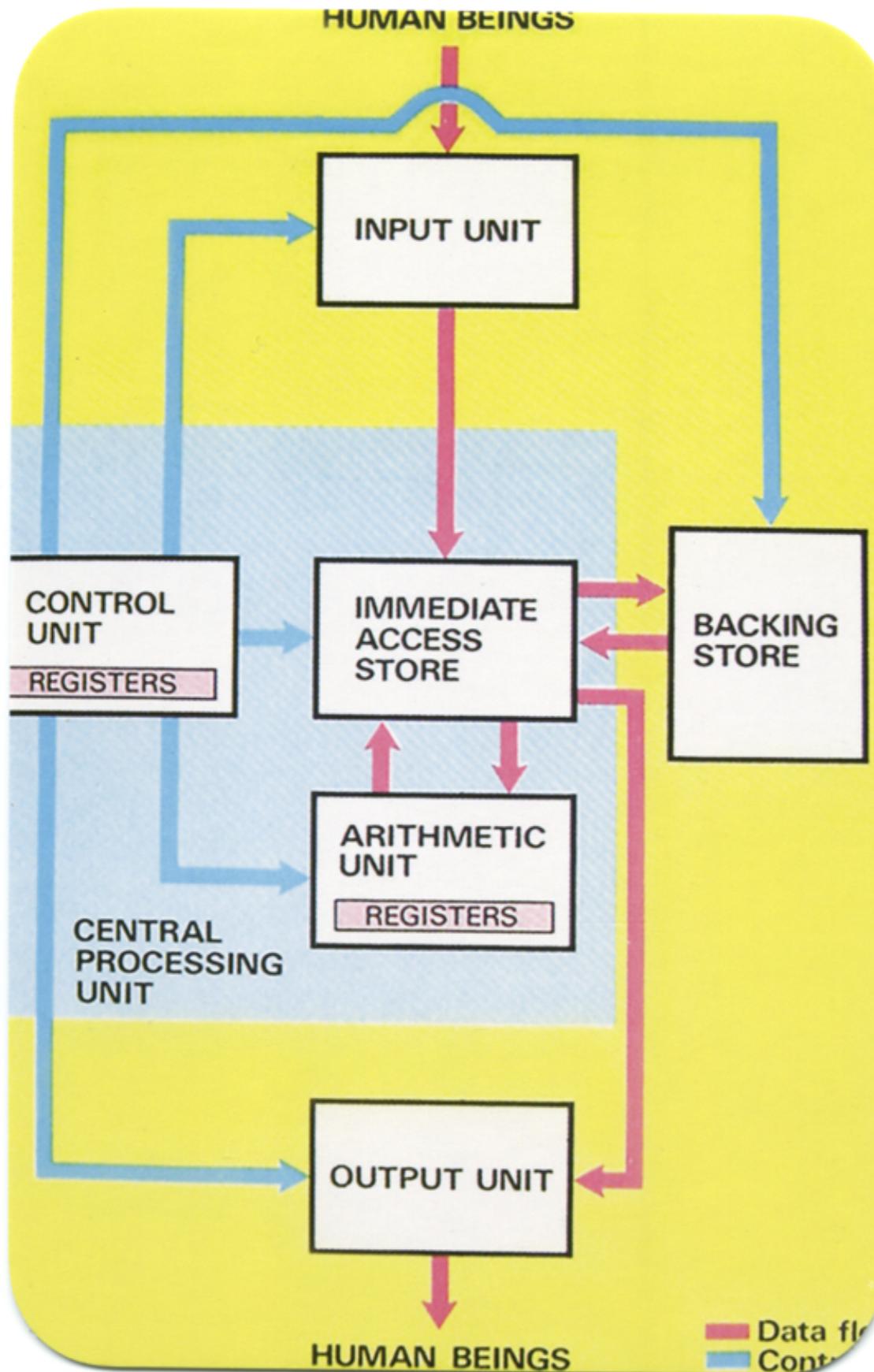
Adapted from Tony Tang

LEARN from your data...

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LEARN from your data...

- Now that you have a huge stack of notes and ideas from all of your LOOKing and ASKing, it's time to make some sense of the data
- Methods are intended to help you organize your thinking, and express it to help make it concrete and real



Learn

Look

Ask

Try

Flow Analysis

HOW: Represent the flow of information or activity through all phases of a system or process.

WHY: This is useful for identifying bottlenecks and opportunities for functional alternatives.

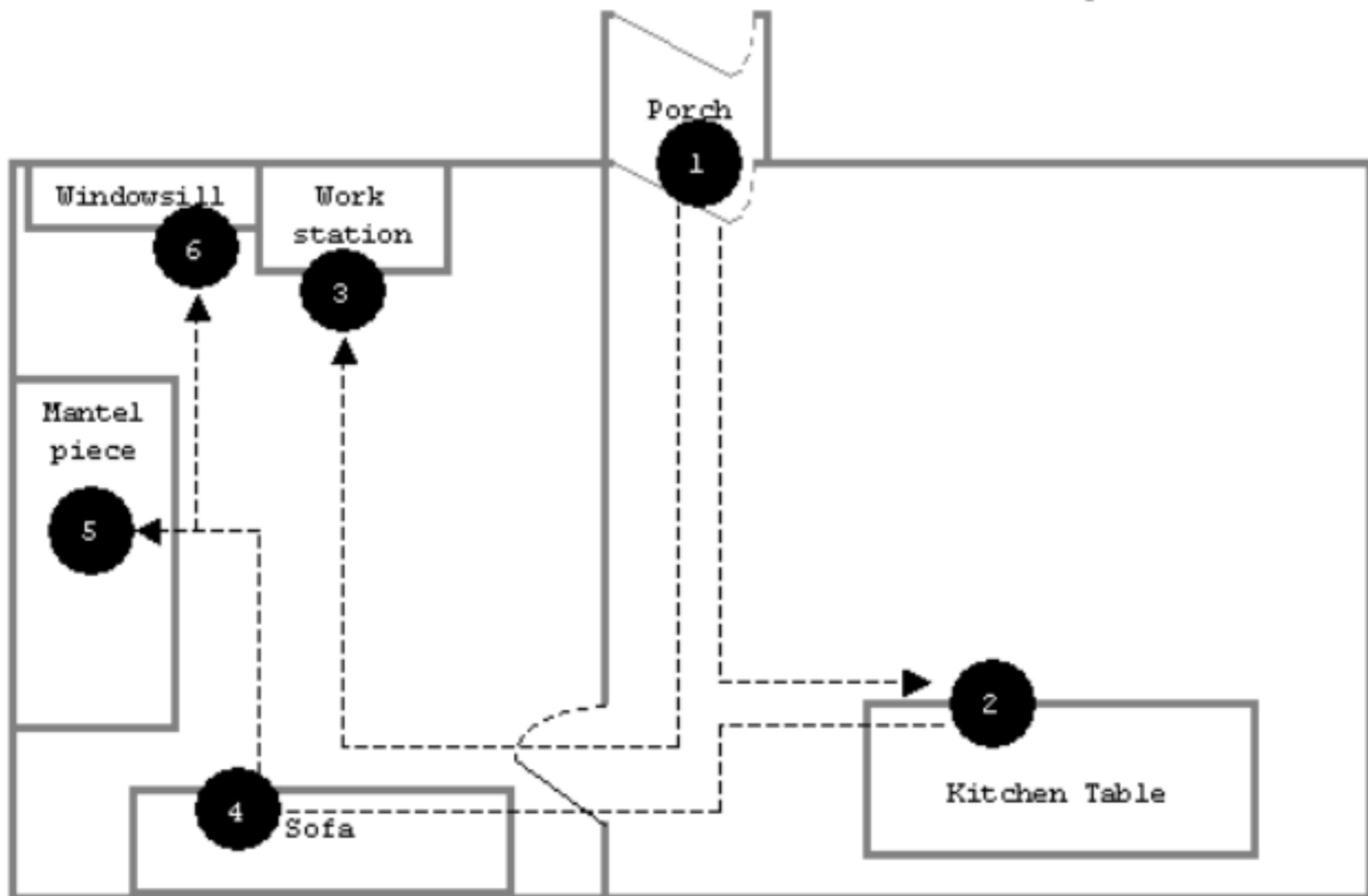
Designing an online advice website, flow analysis helped the IDEO team to design a more seamless experience navigating the site.

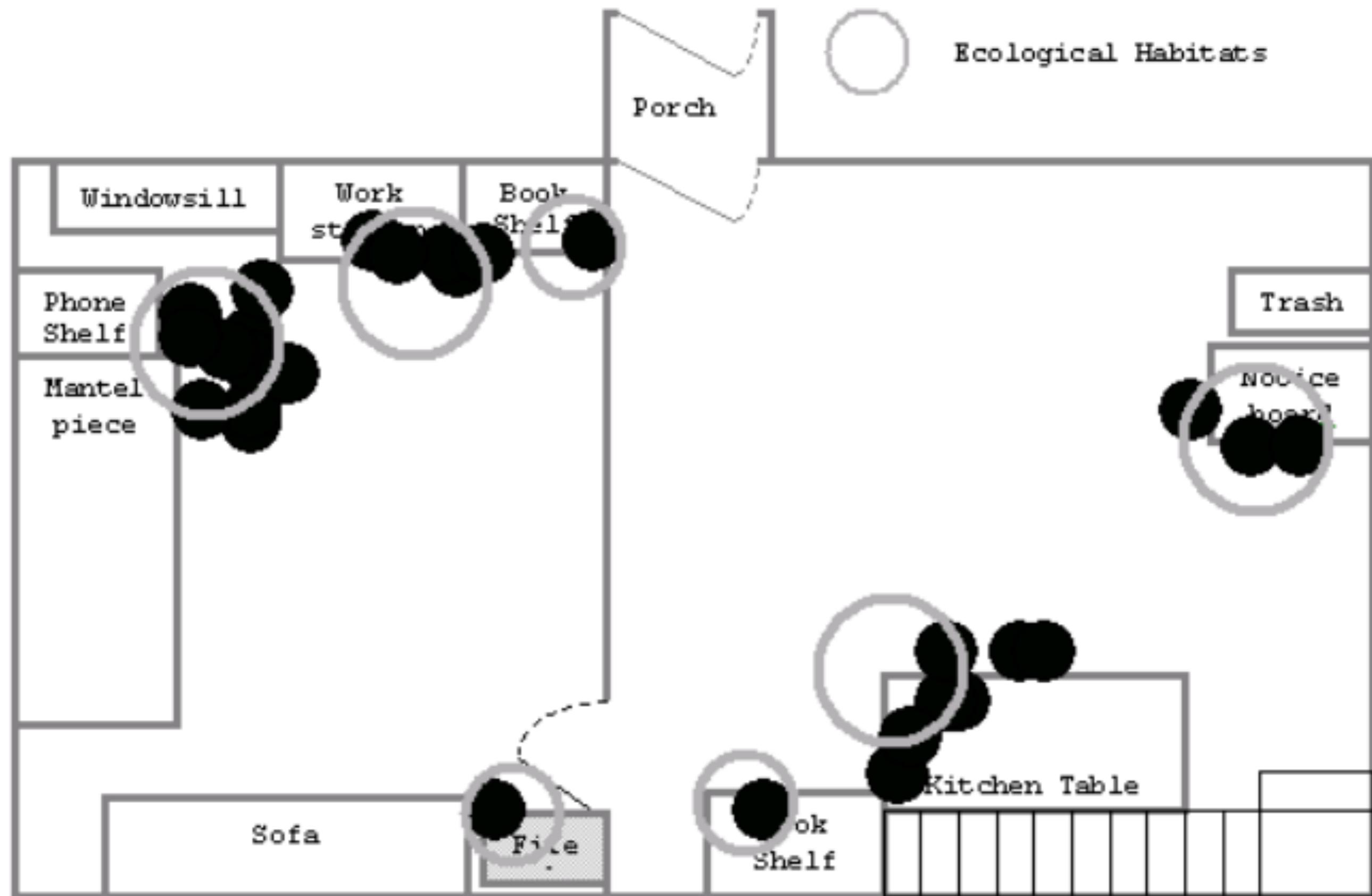


Receiving a 'thankyou' card from a friend

Media: Cards --- Cards ----- Email ----- Cards ----- Card ----- Postcard

Location: 1.Porch > 2.Table > 3.Workstation > 4.Sofa > 5. Mantelpiece > 6.Windowsill







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Error Analysis

HOW: List all the things that can go wrong when using a product and determine the various possible causes.

WHY: This is a good way to understand how design features mitigate or contribute to inevitable human errors and other failures.

The IDEO team used error analysis on a remote-control concept in order to maximize the functionality of each button's size, shape, and texture.



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Cognitive Task Analysis

HOW: List and summarize all of a user's sensory inputs, decision points, and actions.

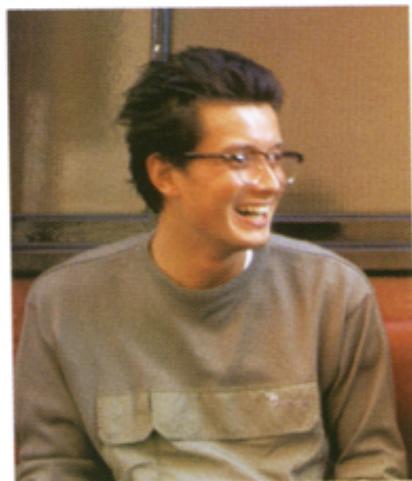
WHY: This is good for understanding users' perceptual, attentional, and informational needs and to identify bottlenecks where errors may occur.

Cognitive task analysis helped the IDEO team understand the proximity and disorientation problems that remote-vehicle operators suffered due to the design of their controls.



CPSC 481 - Spring 2019 - Tiago Silva da Silva

[Chris]



"I wouldn't be caught dead using moisturiser"

"I never buy after shave...I get it for Christmas"

"I read men's magazines sometimes, but I'd never buy one"

"I only really take vitamin C when I've got a cold"

"keeping fit isn't that important to me"

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Character Profiles

HOW: Based on observations of real people, develop character profiles to represent archetypes and the details of their behavior or lifestyles.

WHY: This is a useful way to bring a typical customer to life and to communicate the value of different concepts to various target groups.

In order to understand different types of customers and how to target them, IDEO developed four characters for a pharmacy wanting to reach the male beauty-product market.

Persona

- Constructions that represent different kinds of users.
These are based off user research, and represent general classes of people



Wendy

busy budget vegetarian

primary persona

Personal Details

Age: 38

Profession: Fashion Stylist

Home: Los Angeles, CA
High rise apartment with boyfriend and a cat.

Goals and Priorities

Eat great vegetarian food

Maintain healthy weight

Affordable and convenient

Wendy Facts

Serving Size: 1
Serving Per Container: 1

Amount Per Serving

Age: 38 Los Angeles, CA
Health Facts*

Total Weight pounds 155

Height Inches 69

BMI 23

Cholesterol 188 mg/dl Normal

Sodium 124 mEq/L Normal

Glucose 122 mg/dL Normal

Blood pres. 121/76 mmHg Good

Not a significant health risk. Adding healthier daily nutrition and exercise will alleviate.

* Recent blood test a part of her yearly physical.

I have kept 20 lbs off for over 10 years, mostly by eating vegetarian and watching calories and fat. I wish healthy food, especially organic produce, were less expensive. Plus, it's hard to fit healthy cooking into a busy schedule.



Lance

mobile gourmet

secondary persona

Personal Details

Age: 32

Profession: Architect

Home: Nashville, TN
Small house, also functions as his studio.

Goals and Priorities

Convenience above all

New flavors and experiences

Balanced healthy ingredients

I know it's important to eat well for all the right reasons, and I love delicious food. But in reality, it's really tough to make time for shopping and cooking. Fresh stuff requires more frequent trips to the grocery store, planning, and preparation, which I really just don't have time to do.

Lance is always juggling 2 (or more likely 5-6) projects at once. He is an architect with a focus on green housing, and he supervises a team of off-site collaborators and on-site contractors. Lance loves to eat healthy and tasty food, but prioritizes his nutrition and health like everything else in his life (deadlines always come first).

His main objective in buying food is convenience and flavor. Lance really loves trying new flavors and new food experiences. He considers himself a sushi expert, sandwich snob, and barbecue aficionado. With his busy work life, he tends to fall back on restaurant meals to feed his needs, but he knows that too much of that really hits the waistline and drags his energy level down. He's also lactose intolerant, and it can be tricky avoiding dairy in restaurant food.

The majority of his groceries come from Amazon Fresh®, and he appreciates the flexible functionality of the site. For example, keeping lists, maintaining a grocery history, and adding alerts for items he frequently buys. Since he's always online, in the studio and in the field, he's really comfortable using technology to get things done.

Lance's Goals and Priorities

- Convenient food where and when he needs it
- Stay healthy so he can maintain his high-energy lifestyle
- New flavors that satisfy his adventurous palate
- Mobile solution that keeps up with him
- Easy, so it doesn't take any more valuable time

Lance Facts

Serving Size: 1
Serving Per Container: 1

Amount Per Serving

Age: 32 Nashville, TN
Health Facts*

Total Weight pounds 140

Height Inches 64

BMI 24

Cholesterol 194 mg/dl Normal

Sodium 148 mEq/L Elevated

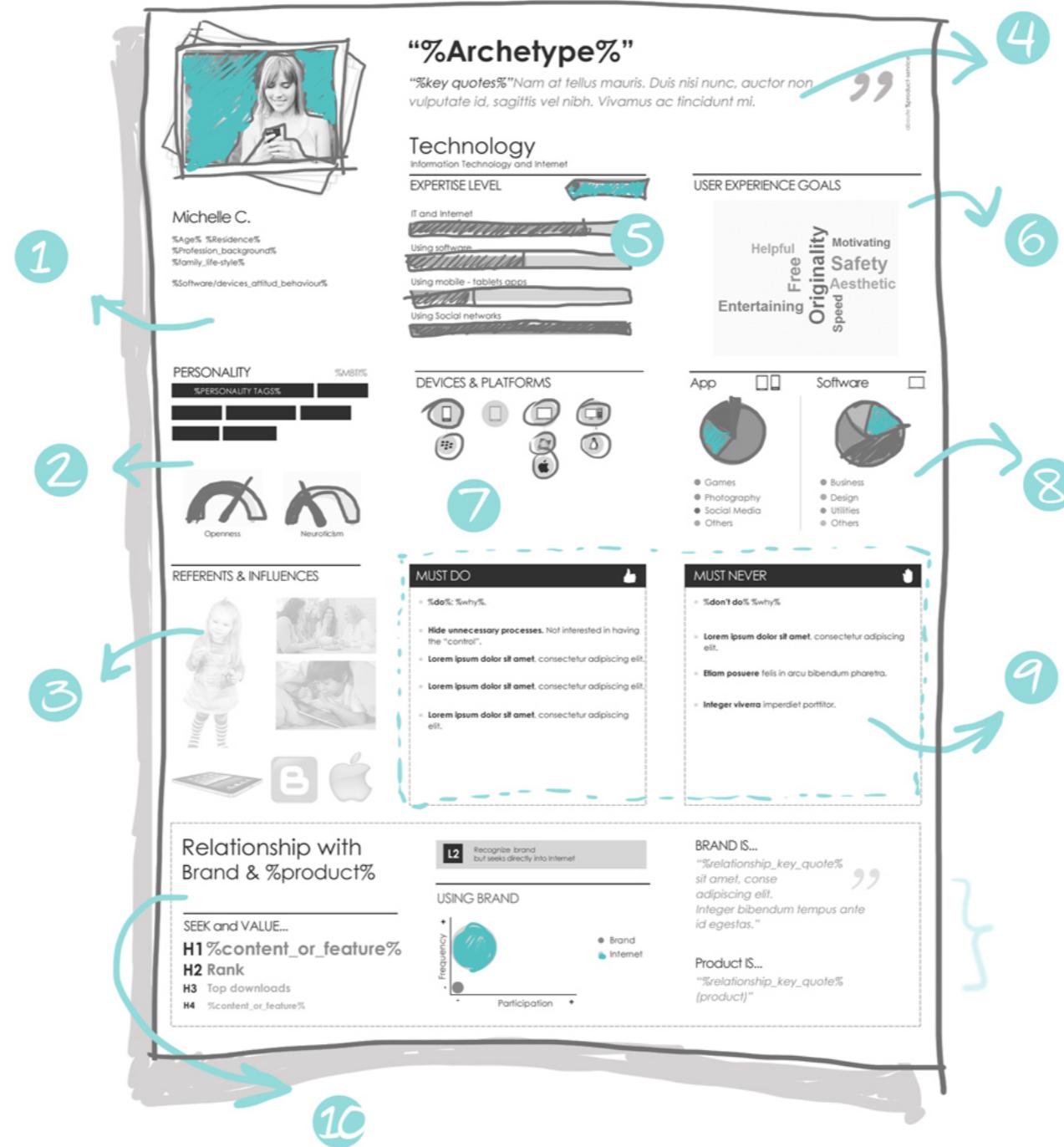
Glucose 116 mg/dL Normal

Blood pres. 128/74 mmHg Good

Not a significant health risk. Adding healthier daily nutrition and exercise will alleviate.

* Recent blood test a part of his yearly physical.

10 elements for User Persona



- 1- Profile
- 2- Personality
- 3- Referents & Influences
- 4- Archetype & quotes
- 5- Technology expertise

- 6- User Experience Goals
- 7- used device and platforms
- 8- Domain details
- 9- Must Do - Must Never
- 10- Brand & Product relationship

Proto-persona

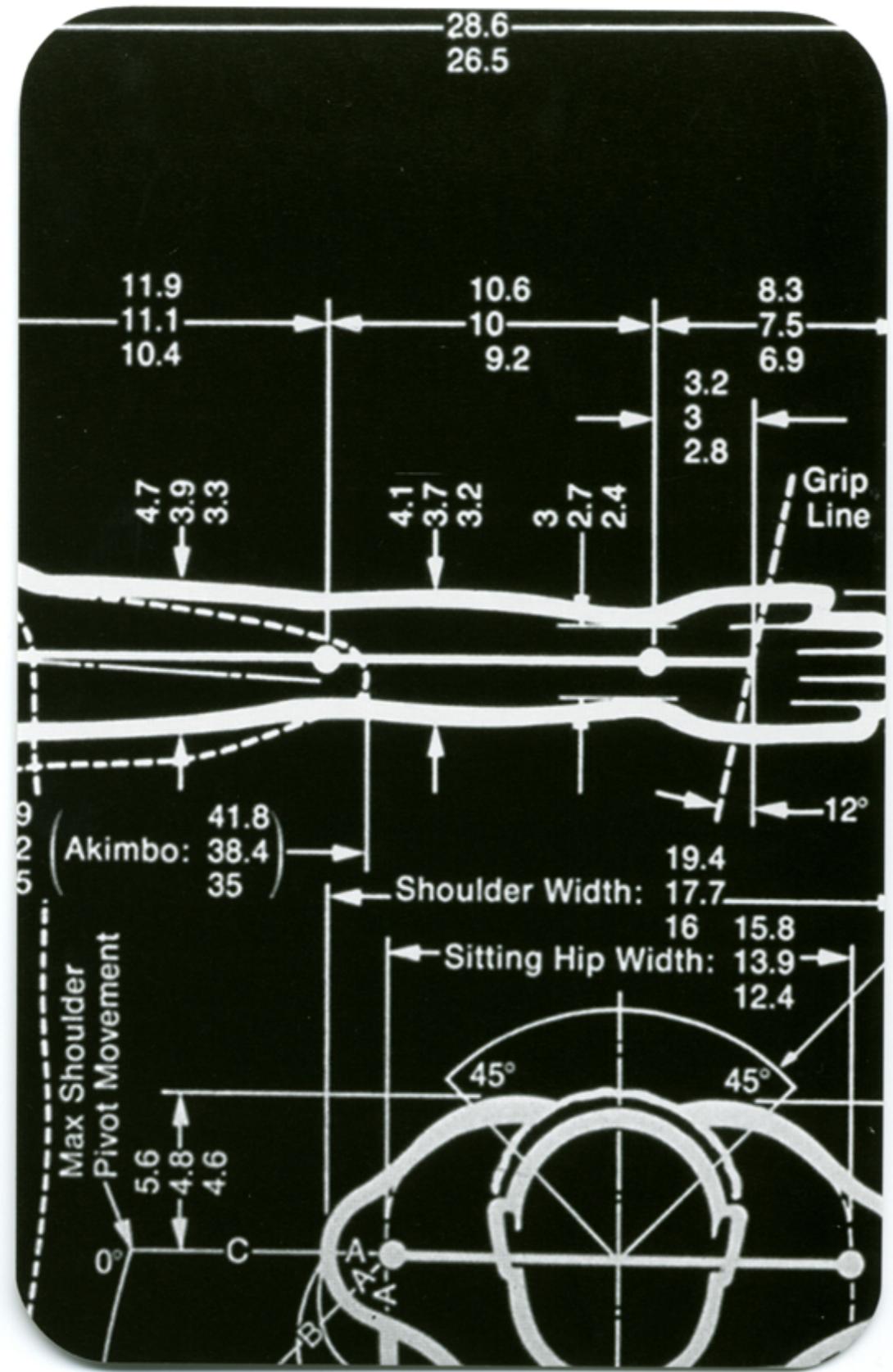


<https://blog.mailchimp.com/new-mailchimp-user-persona-research/>

Proto-persona



<https://blog.mailchimp.com/new-mailchimp-user-persona-research/>



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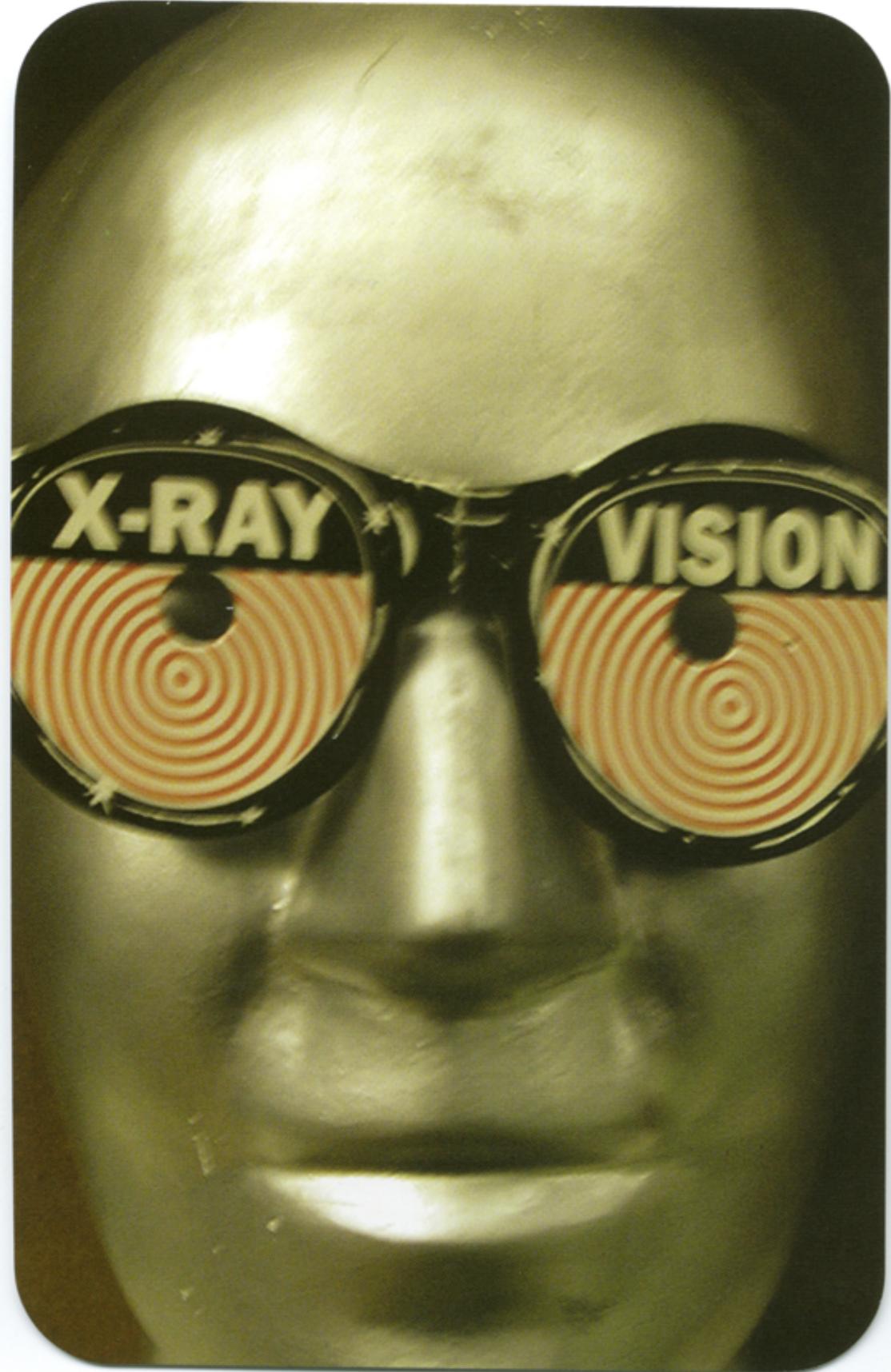
Anthropometric Analysis

HOW: Use human population measurement data to check the coverage and suitability of the design solution for the target user group.

WHY: This helps to identify a representative group of people for testing design concepts and evaluating the general usability of product details.

Selecting individuals with hand sizes representative of the population to test prototypes helped IDEO design a computer mouse suitable for general use.





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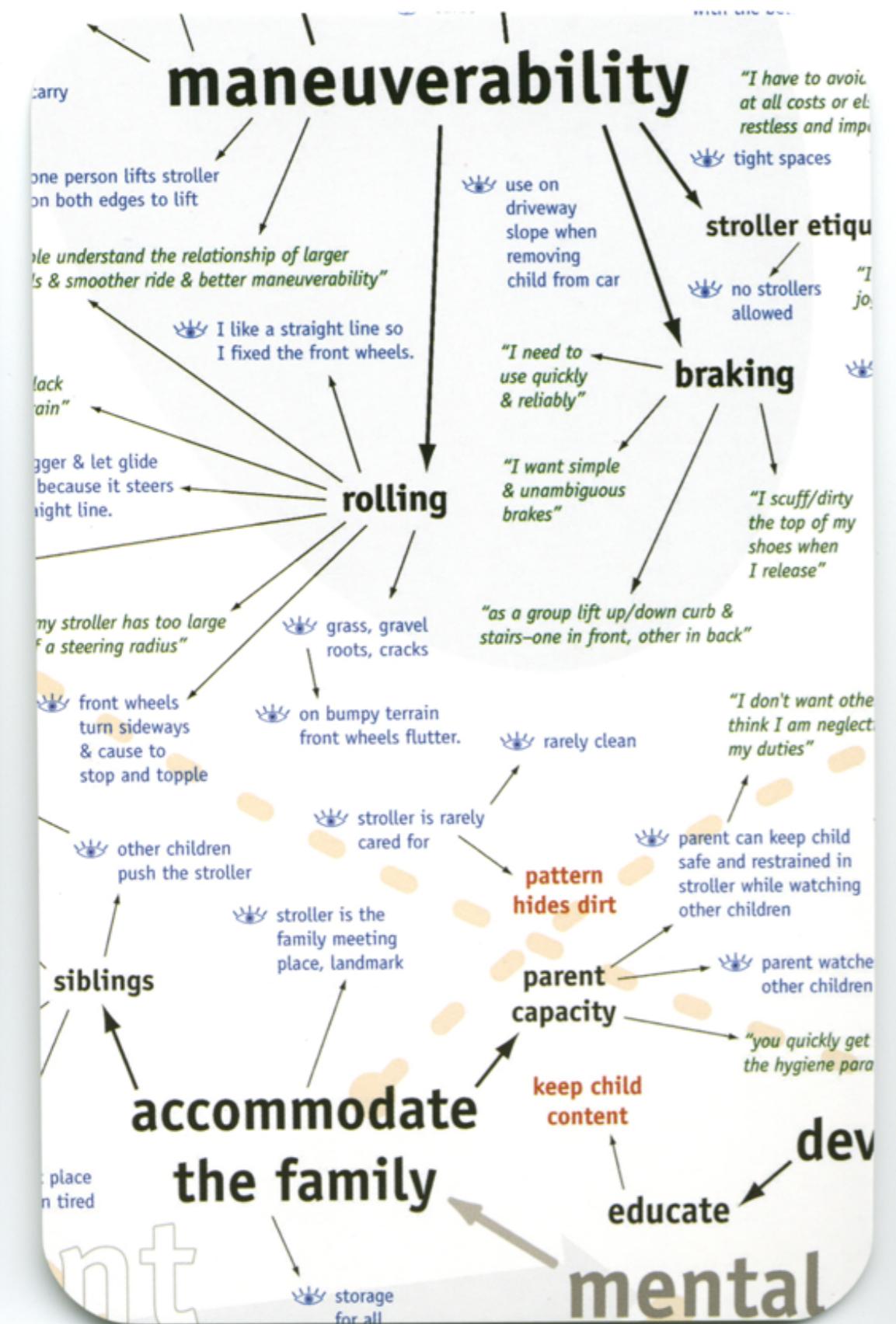
Try

Secondary Research

HOW: Review published articles, papers, and other pertinent documents to develop an informed point of view on the design issues.

WHY: This is a useful way to ground observations and to develop a point of view on the state of the art.

Understanding emergent social and technological trends helped an IDEO team to produce more relevant PDA concepts.



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Affinity Diagrams

HOW: Cluster design elements according to intuitive relationships such as similarity, dependence, proximity, etc.

WHY: This method is a useful way to identify connections between issues and reveal innovation opportunities.

Clustering the elements related to transporting the family helped the IDEO team to discover some significant opportunities for stroller design.

Summary

- Apply LEARN techniques as a way to process the data you gather from ASK and LOOK
 - Affinity diagrams; secondary research; flow analysis; cognitive task analysis; error analysis; character profiles

Summary

- Apply LEARN techniques as a way to process the data you gather from ASK and LOOK
 - Affinity diagrams; secondary research; flow analysis; cognitive task analysis; error analysis; character profiles
- Some learning tasks can help you figure out who to talk to for ASK and LOOK
 - Secondary research; cultural comparisons

Acknowledgements

- Tony Tang
- Lora Oehlberg
- Ehud Sharlin
- Frank Maurer
- Saul Greenberg

Course information

- Website
 - GitHub Pages <https://silvadasilva.github.io/CPSC481-2019S/>
- Communications
 - Slack <https://cpsc481-2019s.slack.com/>
- Readings and Slides
 - Posted online at the main website