Modular Course B: Creative Design in Shoe Industry

Unit B1 – Creative Design

Lecture LB1.2 – Defining Design Requirements and Assessing Customer Needs

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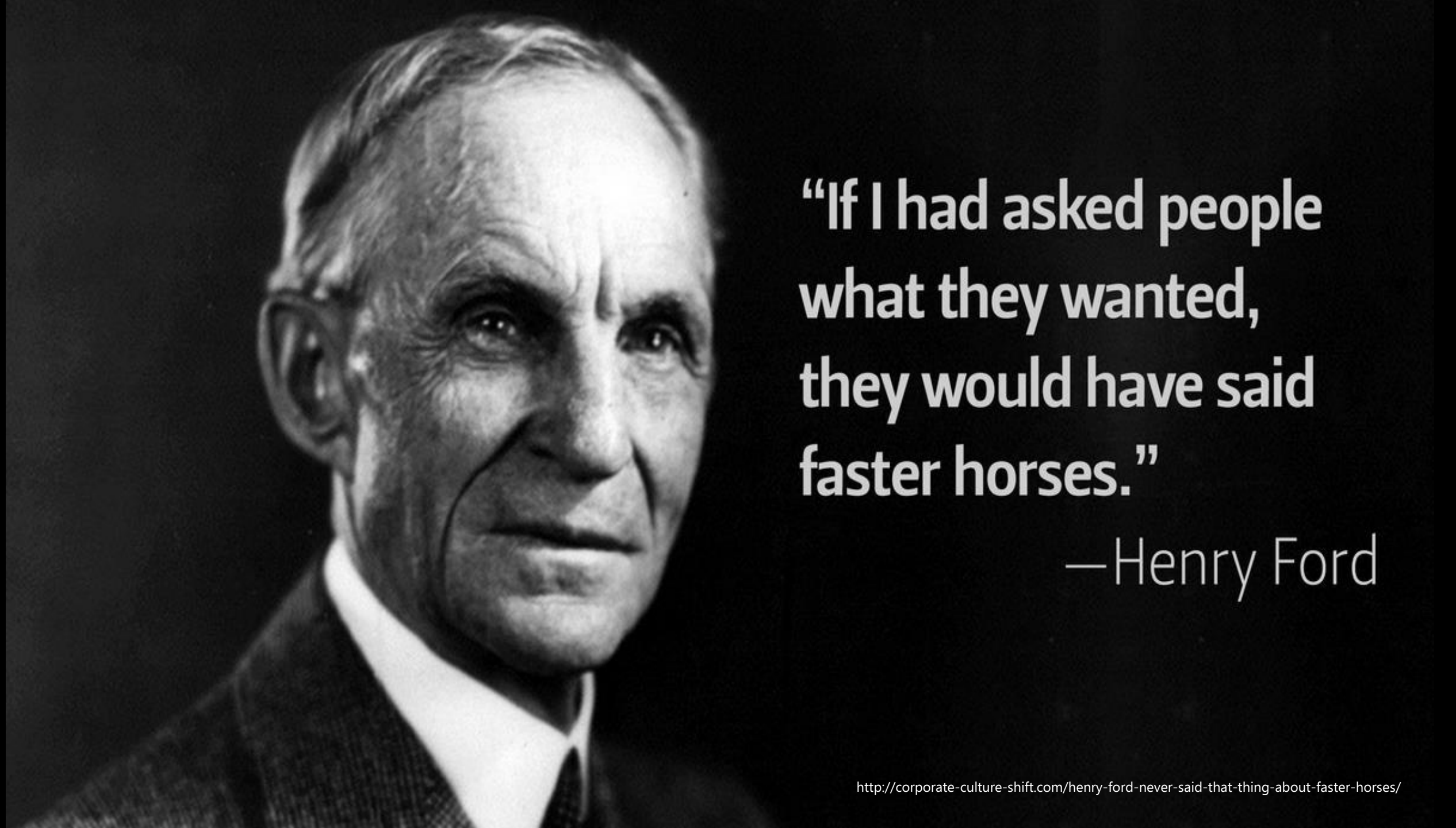
T2.2 – Development of modular courses and training material.

D2.2 – Modular Course in Creative Design

Contents

1. Scenarios: Classification of Context Factors
2. Understanding User Needs: Why background research matters
3. Gathering User Needs: Methods for collecting insights
4. Affinity Analysis: Making sense of the data
5. Organizing & Prioritizing: Turning insights into design direction



http://corporate-culture-shift.com/henry-ford-never-said-that-thing-about-faster-horses/

RESEARCHING A DESIGN PROBLEM

Rule # 1: Don’t ask what people *want*

Rule # 2: Don’t (only) ask people

Rule # 3: Don’t (only) listen to people

EVERYDAY CREATIVE IDEAS

“… you have to begin designing without all the information that you’ll eventually need”

https://www.youtube.com/watch?v=qpjaoZjETHw

UNCOVERING USER NEEDS

User needs
– what users desire in the product, service, system (needs & wants)

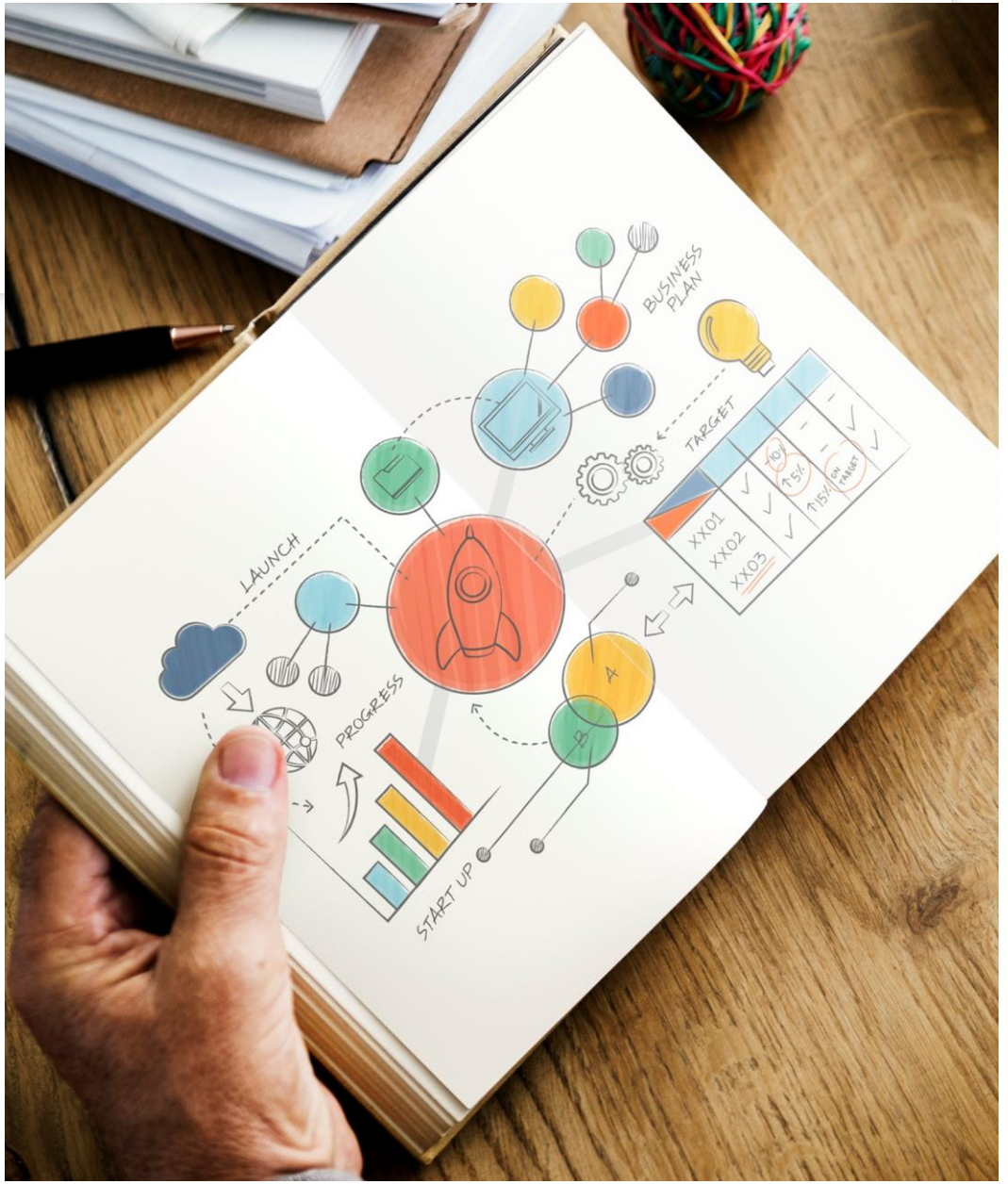
Users (user population)
– people that seek to use or we want to use our product, service, system

Note: population has variation

USER NEEDS: BACKGROUND

Three categories of needs:

- **Direct vs. latent** – how obvious, isn't it?
- **Constant vs. variable** – how fast does not change?
- **General vs. niche** – how widely applicable is it?



FROM KNOWING NEEDS TO DISCOVERING THEM: THE ROLE OF EMPATHY

Why observing users matters more than asking them

1. **We must discover** user needs in real-life situations.
2. Direct questions not always enough to uncover true or hidden needs.
3. Empathic design helps understand users by their experiences, emotions, and actions.

This leads us into a structu
process for uncovering needs
deeply.

USER NEED ANALYSIS

Start by identifying your stakeholders – the people you need to talk to in order to better understand user needs. Then, use different ways to learn from them:

1. **Interviews:** you discuss the needs with a single user, in his/her natural habitat (the environment where the product will be used) in a more or less structured way
2. **Questionnaires:** you develop a list of criteria that are particularly relevant to the user and organize their responses
3. **Focus group:** you gather a group of stakeholders and facilitate a session in their natural habitat
4. **Be the user:** you go to the natural habitat of the stakeholder and act as the stakeholder would as regards to the product
5. **Like/dislike method:** you ask specifically to the stakeholder what it is that he/she likes and dislikes about his/her current product

EMPATHIC DESIGN – THE PROCESS

Step 1 – Observation

Who should be observed?

- **Customers, non-customers of customers, group of individuals (Team)**
- **Selecting wrong focus group could result in cacophonous result**

Who should be observing?

- **Different people observe different things in identical scenarios**
- **The solution is to work in teams comprising of expertise from different disciplines**

EMPATHIC DESIGN – THE PROCESS

Step 1 – Observation (cont.)

- **What behavior should be observed?**
- **People being observed should be carrying out normal routine activities**
- **Observations should be highly unobtrusive**
- **If possible, people should be oblivious of being observed**
- **If not, a real-life atmosphere even a slightly stilted one is still better than highly artificial setting of a focus-group conference room or a laboratory**

EMPATHIC DESIGN – THE PROCESS

Step 2 – Capturing the Data

- **Visual, Auditory and Sensory Clues**
- **Videography and Photography – very powerful tools**
- **On the spot Drawings and Illustrations**
- **Notes and Inquiry by means of open-ended questions if necessary**

EMPATHIC DESIGN – THE PROCESS

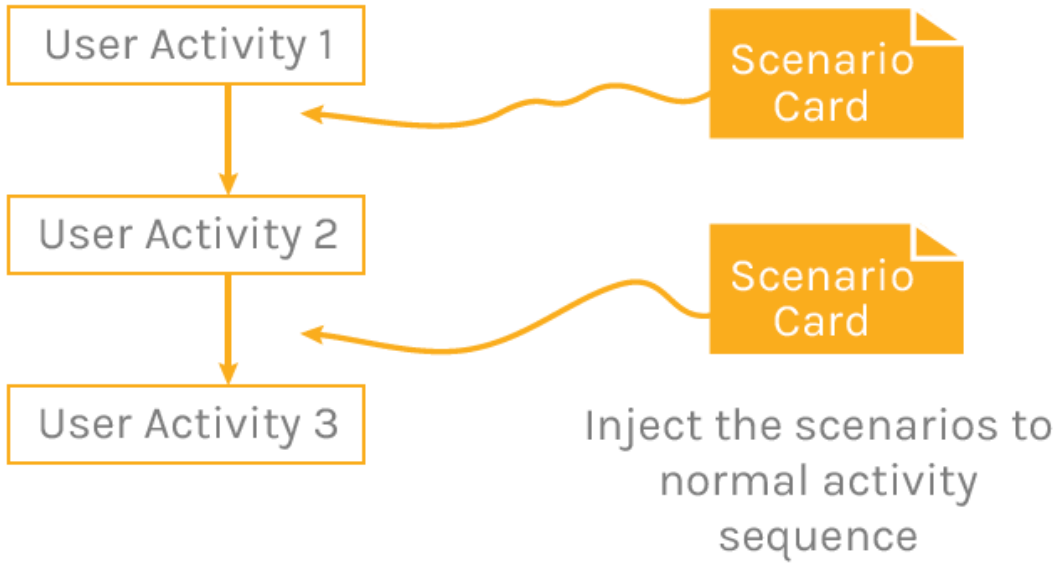
Step 3 – Reflection and Analysis

- **Each member reflects on what he/she has observed**
- **Reviewal of all the data gathered collectively**
- **Mutual questioning and answering rounds amongst teammates**
- **Decision for further observation or re-observation**
- **Identification of all of customer's needs and problems**

SCENARIOS

Procedure

1. **Ideate Scenarios.** including extreme use cases, to uncover critical latent needs by describing the Who, How, and Where.
2. **Prepare and Present.** scenario cards or prompts to users while
3. **Observe** users' reactions and decisions, extracting latent needs, insights and foresights.



Model of presenting scenario cards as users engage the system

CATEGORIES FOR CREATING SCENARIOS

Categories for creating scenarios

Category	Sample Context Factors
HOW **Application Context**	• Application task • Usage frequency • Transportation mode • . . .
WHERE **Environment Context**	• Infrastructure (e.g. energy & cost) • Weather and climate • Maintenance and parts availability • . . .
WHO **Customer Context**	• Physical Abilities • Skills and education • Cost expectations • . . .

CATEGORIES FOR CREATING SCENARIOS

Examples of Scenarios for different buyer motivations, such as work needs and travel convenience.

WHO
25 y.o. Young Professional

WHERE
Weekday evening, Shopping mall after work

HOW
Looking for a durable leather bag for daily office use, comparing styles and price

WHO
40 y.o. Frequent Traveler

WHERE
Saturday afternoon, Airport duty-free shop

HOW
Saturday afternoon, Airport duty-free shop

WHO
60 y.o. Retiree

WHERE
Sunny morning, Neighborhood boutique

HOW
Browsing leather belts and shoes, valuing comfort and long-lasting quality

BEST PRACTICES

- **Keep scenarios realistic.**
  Avoid scenarios that are impossible or unrealistic.
- **Have diversity.**
  Ask explicitly about a specifically negative situation, and specifically positive situation.

USER NEEDS ANALYSIS METHODS

- ✓ Surveys
- ✓ Questionnaires
- ✓ Articulated-use interviews
- ✓ Observation in the product or systems environment
- ✓ Focus groups
- ✓ Lead user
- ✓ Empathic lead user

Interviews usually best for our products/systems

- ***Like/dislike*** **– let customers use product-service-system, and ask them questions**
- ***Articulated use*** **– follow customer through usage cycle, asking questions**

USER NEEDS: GATHERING

Translating user's voice → product-service-system need statement

- **Translate statement into positive need: moves too much → stays in place**
- **Seek what product must do, not how: needs rubber bottom → stays in place**
- **Rate importance: (must, good, should, nice, poor) OR use numbers (1-5)**

LIKE/DISLIKE OR ARTICULATED USE METHOD

User Data: Project/System Name

User: **Interviewer(s):**

Address: **Date:**

Willing to do follow up? **Currently uses:**

Type of user:

Question	User Statement	Interpreted Need	Importance
Typical uses			
Likes			
Dislikes			
Suggested Improvements			

EXAMPLE ELECTRIC WOK PRODUCT

Customer Data: Electric Wok

Customer: John Doe
Address: MIT
Willing to do follow up? Y
Type of user: College student

Interviewer(s):
Date:
Currently uses: Frying pan

Question	Customer Statement	Interpreted Need	Importance
Typical uses	Stir-fry Steaming Frying/scrambling eggs Cooking pasta Cooking chili/stews [Everyday cooking]		
Likes	Non-stick surface Size Can stand on its own Temp. response rate high Aesthetically pleasing Depth of dish	Non-stick surface Compact Able to stand on its own Quick temp. response Aesthetically pleasing Deep sides	Good Good Should Good Good Should
Dislikes	Short cord Moves around too much when stirring (doesn't grip surface of table) Entire assembly is too high/tall Handles are hard to grip (esp. if oil splatters) Have to watch constantly Temp. adjustment gets too hot/also too low to read Sides don't get as hot; may overcook on bottom Afraid to get bottom wet	Long extension cord Can grip tabletop Compact (flat) elec. unit Handles are easy to grip Auto shut-off Temp. switch is insulated from heat Temp. switch is in an easily accessible/ readable spot Constant temp. distribution Bottom is watertight	Must Good Good Nice Should Should Good Should Good
Suggested Improvements	Retractable cord Better gripping bottom		

AFFINITY ANALYSIS-ORGANISING NEEDS

Procedure

1. **List.** needs interpreted from the earlier phase with your team.
2. **Write.** each need on a single card or Post-it.
3. **Present.** cards on the wall.
4. **Cluster.** cards on the wall based on similar meaning.

AFFINITY ANALYSIS (CONT.)

What: Organises a large number of needs, ideas, or other design information into their natural categories and relationships.

Why: Affinity Analysis is used for organising, clustering and sense-making a large set of data (e.g. user needs,

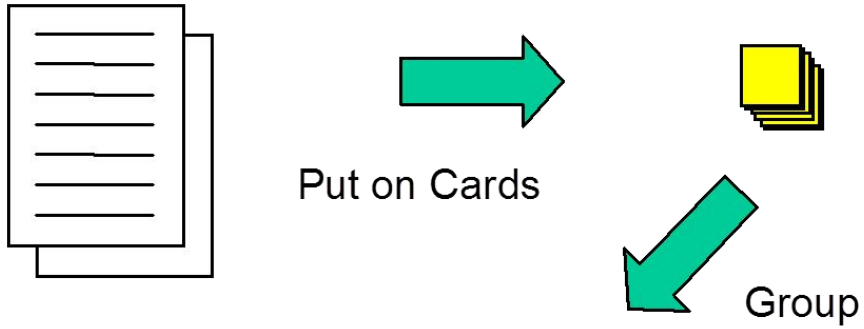
USER NEEDS: ORGANIZING AND PRIORITIZING

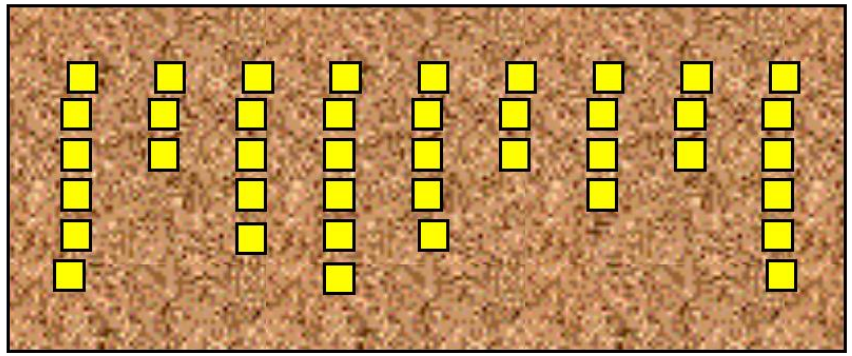
Grouping Customers Needs

- **Executed by design team vs. user**
- **Design team post-it notes, or excel sheet**

Weighting Customers Needs

- **Executed by design team vs. user**
- **Design team by team subjective ranking based on frequency and emphasis of need**





ORGANIZING AND PRIORITIZING EXAMPE

Electric Cooking Wok:

Customer Needs

Interviewer: Date:

Sample Size: 10 customers

Average Customer: Male/Female, age 20-40
Middle Class
Wish to cook Chinese food in an authentic manner.
Has common household kitchen space

	#	WT
I. Cleanable		
A. Non-stick surface	(7)	4
B. Watertight	(3)	2
C. Detachable from the heating unit	(3)	3
II. Aesthetics		
A. Aesthetically pleasing	(4)	4
III. Cooking Shape		
A. Flat bottom for frying	(3)	2
B. Small, rounded bottom for stir-fry	(7)	2
C. No ridges on inner surface	(5)	3
IV. Size		
A. Compact for easy manipulation/small storage	(8)	3
B. Lightweight	(1)	1
V. Stability		
A. Able to stand on own	(7)	4
B. Doesn't slide on tabletop	(2)	3
C. Detachable heating unit (remove heat when cooking)	(2)	3
VI. Temperature		
A. Heats and cools quickly	(6)	4
B. Temperature uniform across inner surface	(7)	5
C. Steady-state temperature uniform	(4)	5
D. Capable of high temperature	(1)	3
E. Heat contained in wok	(2)	3