

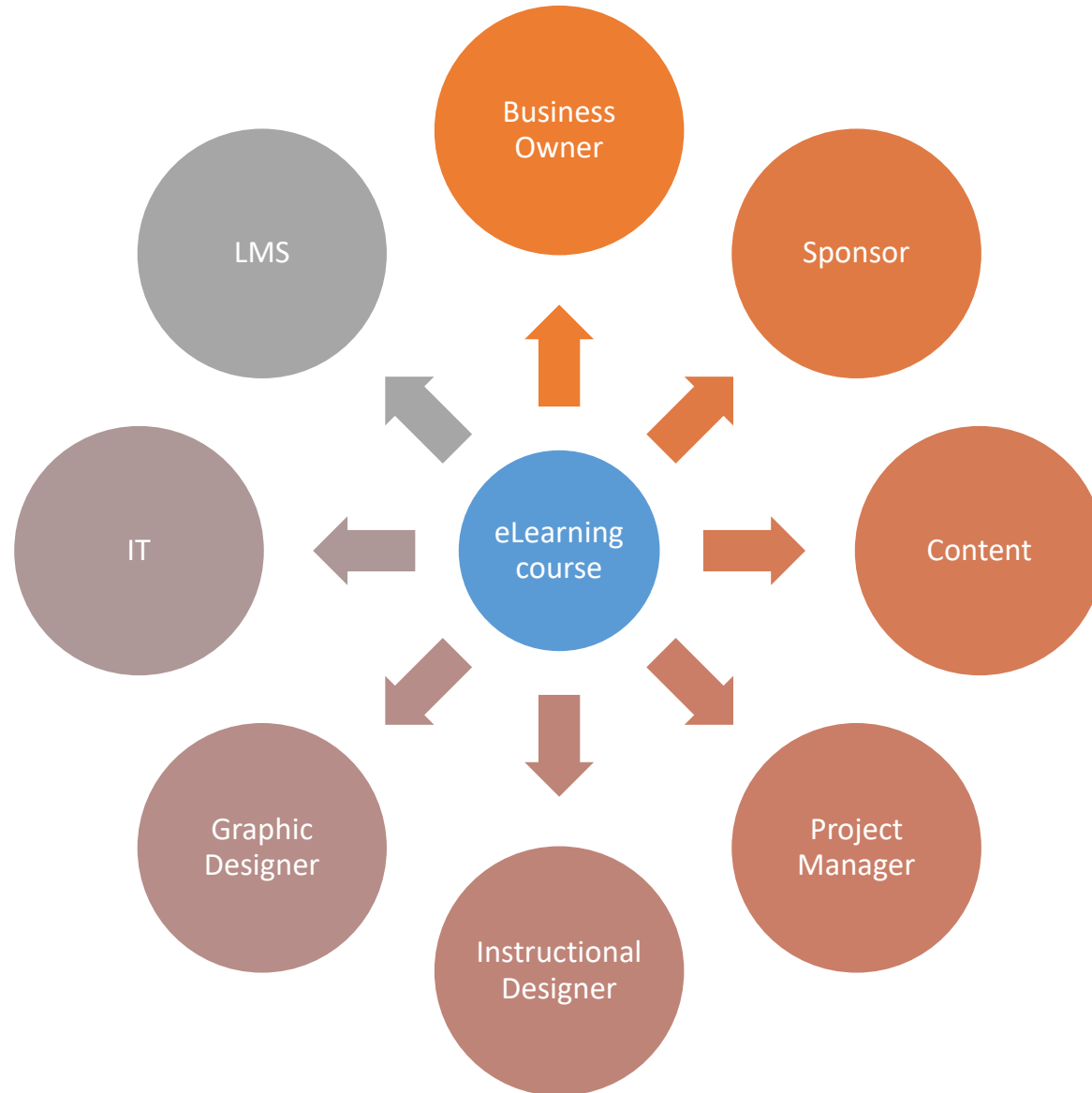
***Good eLearning. Done well.***



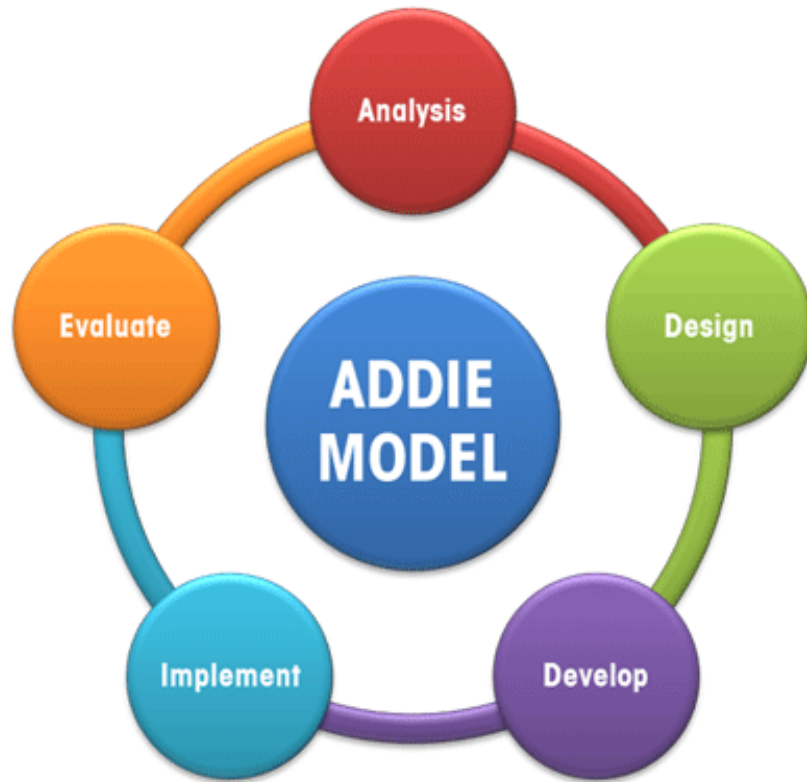
Training Magazine: Online Learning Conference | September 25-27, 2017 | Session C201

# **UX AND UI: APPLICATIONS FOR INSTRUCTIONAL DESIGN**

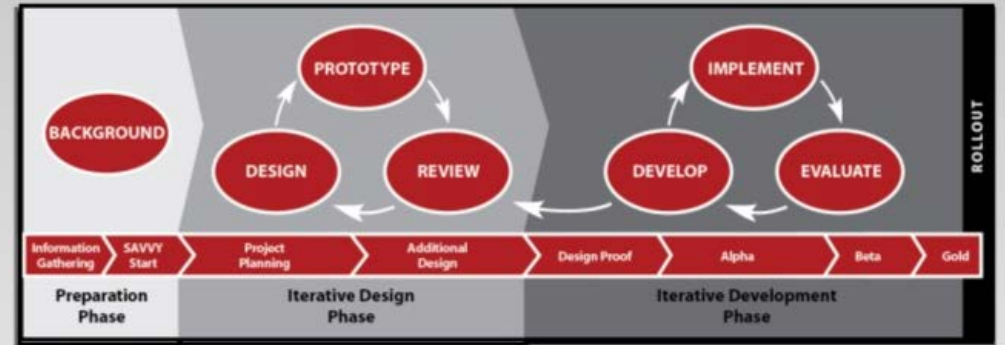
Jean Marrapodi, PhD, CPLP | [jmarrapodi@illumina-interactive.com](mailto:jmarrapodi@illumina-interactive.com) | 401-440-6165



An eLearning Course must meet the demands of many factions



## Successive **Approximation Model** SAM 2



An Agile Model for Developing the Best Learning Experiences

Development typically follows ADDIE or SAM



Gantt Chart										
Project Name										
Project Manager										
Project Information										Summary
ID	Project Name	Owner	Budget	Duration	Start	End	Progress	Status	Notes	Actions
1	Software Project - Phase 1		100,000	100				Blue		
2	Phase 1 (Module)		50,000	50				Green		
3	Phase 2 (Module)		50,000	50				Yellow		
4	Version 1		(10,000)	(10)						
5	Dependency 1								Completed	Done
6	Dependency 2									
ID	Responsible Name/Task Name	Assigned To	Cost	Duration	Start	End	Progress	Status	Notes	Actions
1.1	Software Project - Phase 1.1		50,000	1 day				Blue		



We wrangle with competing priorities, schedules and politics.

Who is looking  
out for the  
user?



What are the first words that come to mind when you think of online learning?

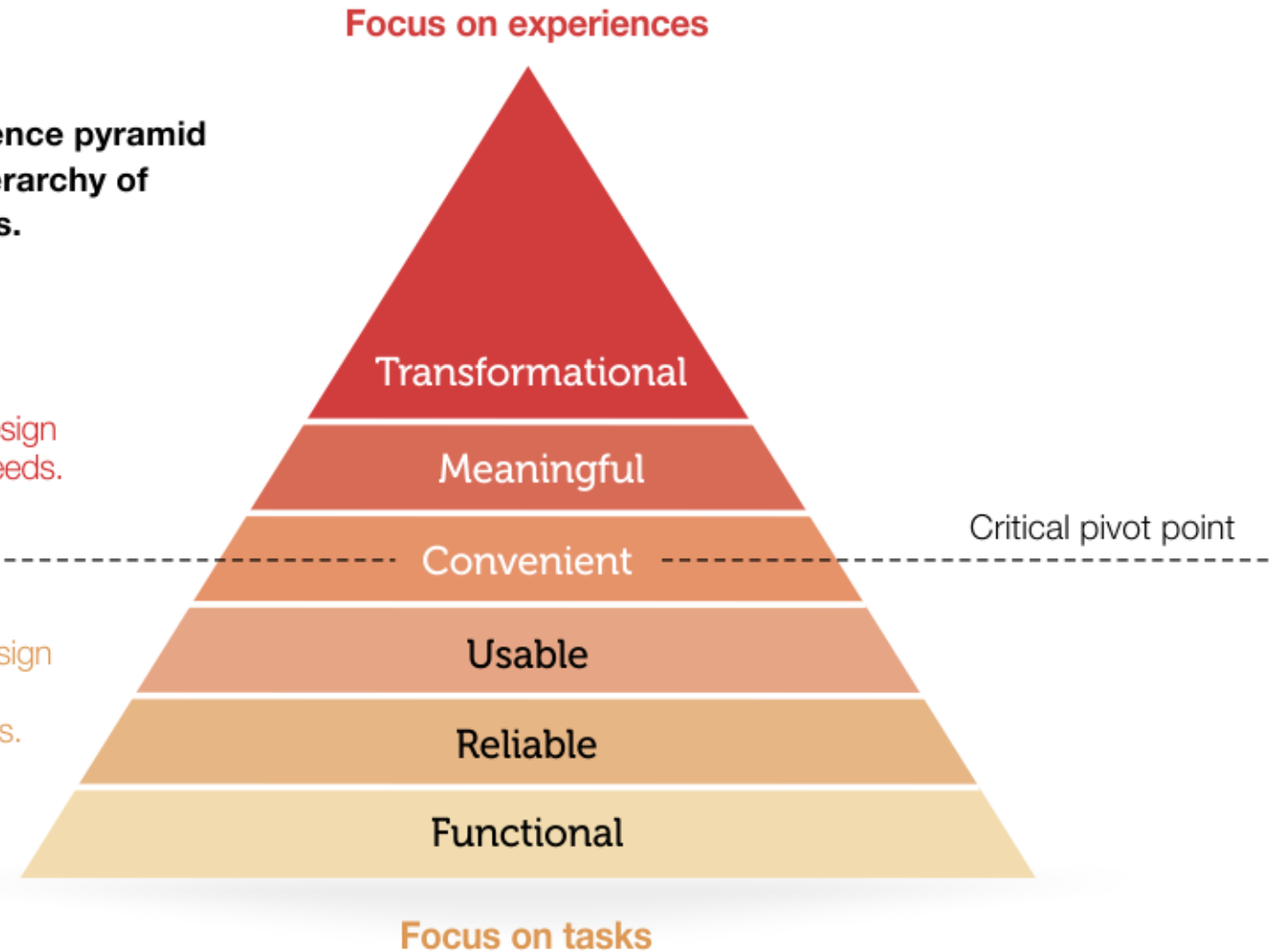


# LX Design Pyramid

The learner experience pyramid demonstrates a hierarchy of learner experiences.

Learner experience design is led by the learner needs.

Learner experience design is led by organisational systems and processes.



LX Pyramid created by RMIT University and Academic Tribe is licensed under a Creative Commons Attribution - ShareAlike 4.0

Based on CX Pyramid by Aberdeen Research after Mark Scibelli and Stephen Anderson.







They need an  
advocate!

This is where we can learn from

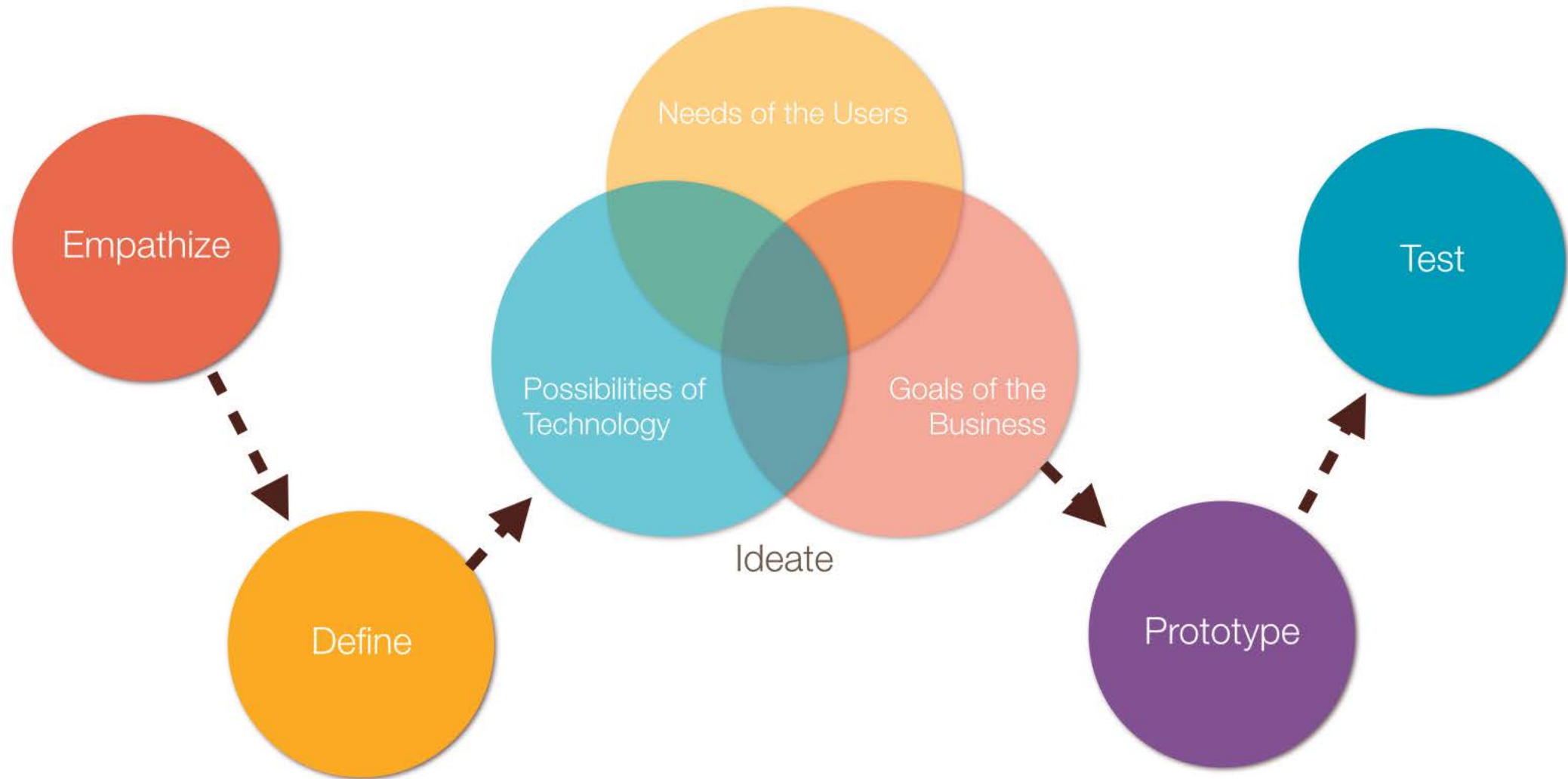
User Experience Designers.



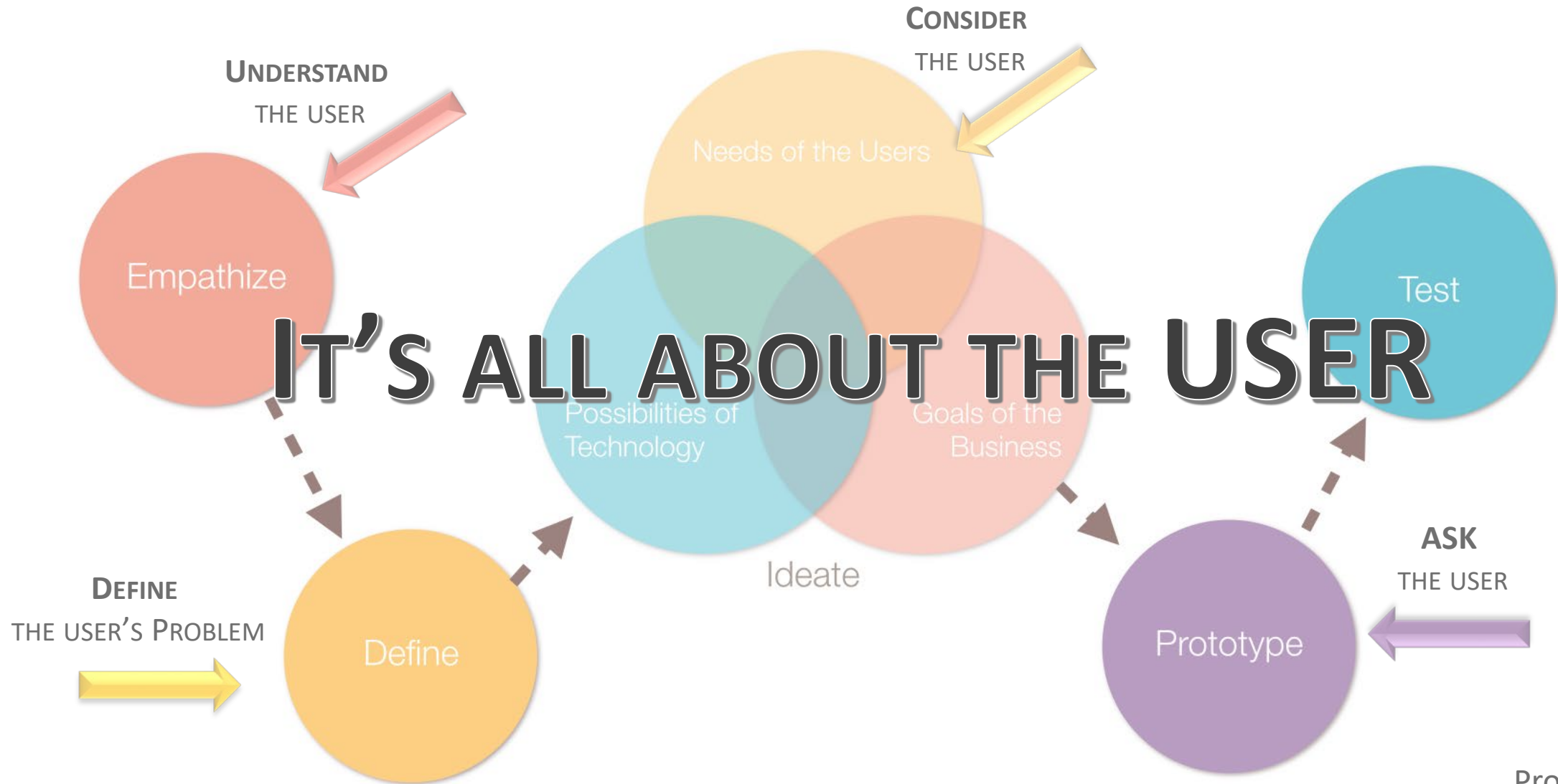
Which bottle provides the better user experience?

UX (User Experience) vs. UI (User Interface)

# the ux design process



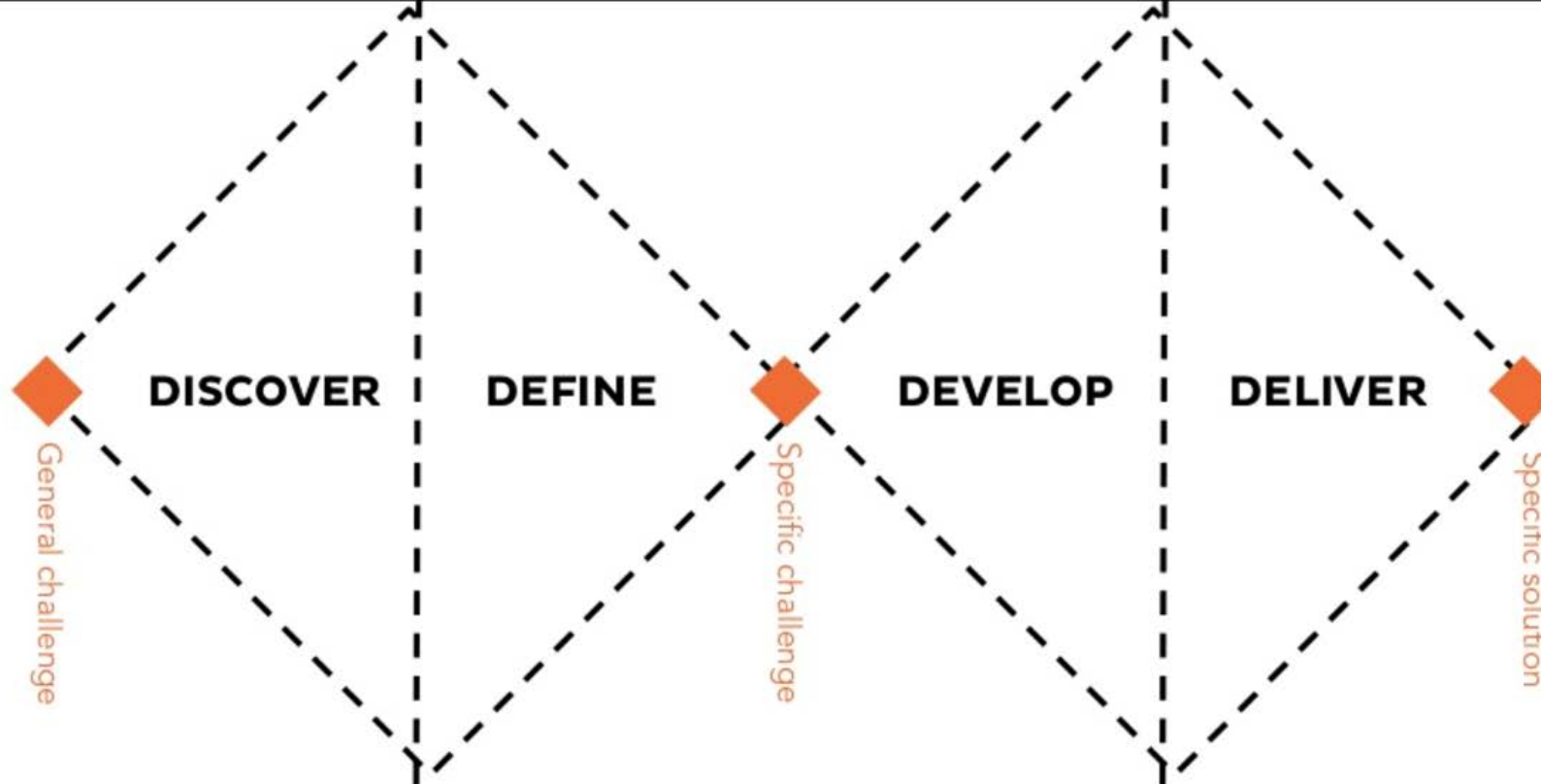
# the ux design process



# Is This Our Learner's Experience?







Learner & stakeholder driven design research

Gain insights and define challenges

Develop possible learning solutions through iteration

Improve and optimize final learner experience

### RESEARCH

Technology research  
Competitor analysis  
Service design blueprint

### CHALLENGE DEFINITION

Workshops  
Affinity diagramming  
Scenario mapping  
How might we...?  
Problem statements

Sketching  
Storyboarding  
Scenario mapping

### TESTING

Usability testing  
A/B testing  
User observations & interviews

### USER EMPATHY

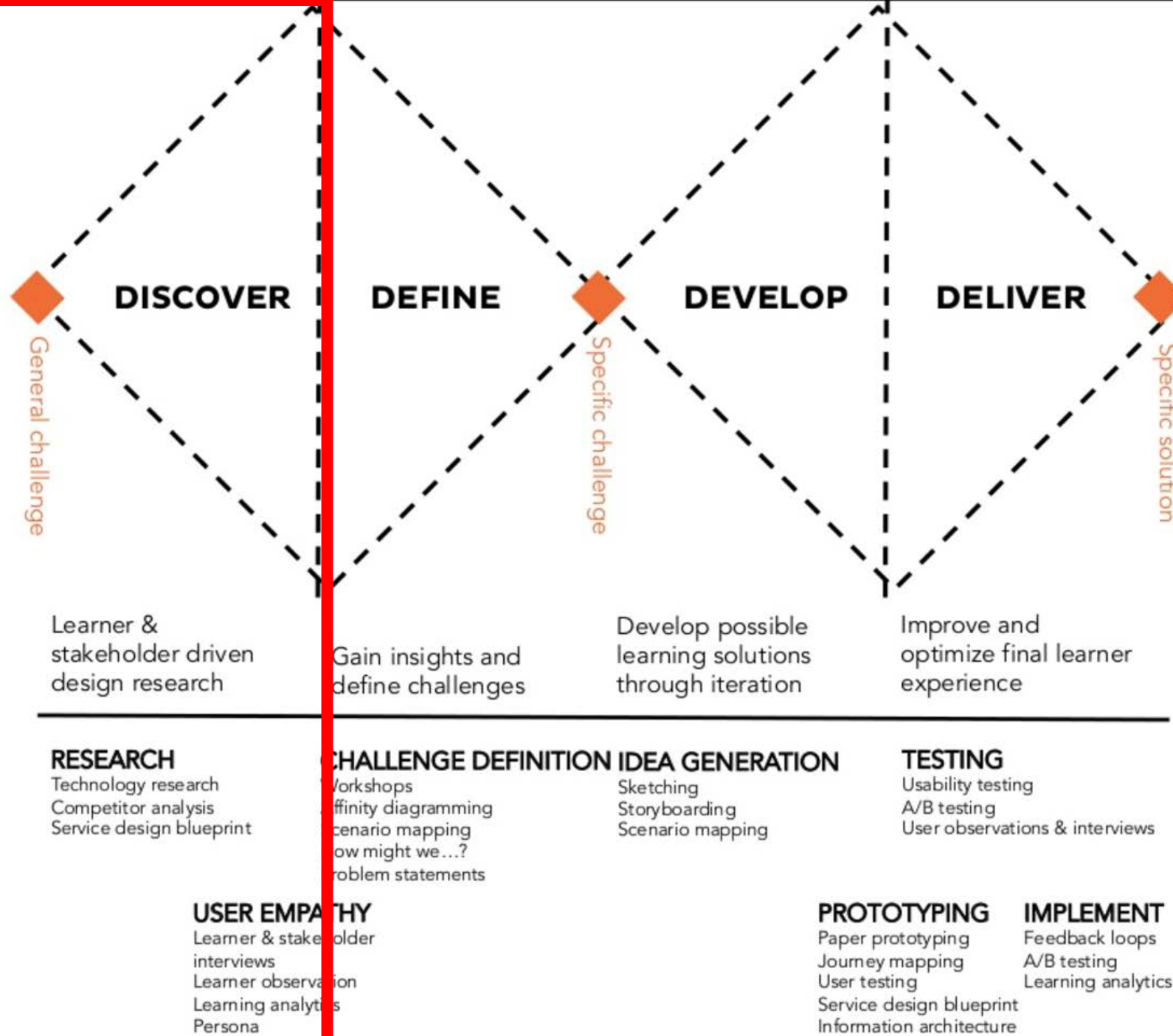
Learner & stakeholder interviews  
Learner observation  
Learning analytics  
Persona

### PROTOTYPING

Paper prototyping  
Journey mapping  
User testing  
Service design blueprint  
Information architecture

### IMPLEMENT

Feedback loops  
A/B testing  
Learning analytics



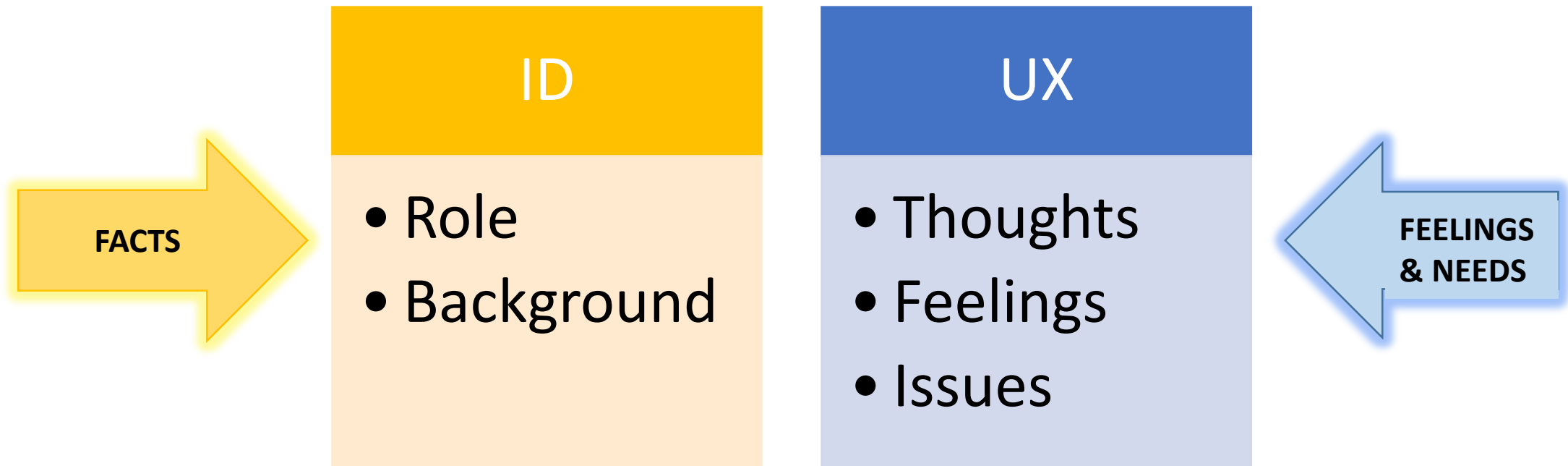


We must go beyond  
**Audience Analysis.**

Which like evaluation, often is omitted. <sigh>

Step 1

Ask **WHO** is our Learner?



# Create User Personas

## Clark Andrews

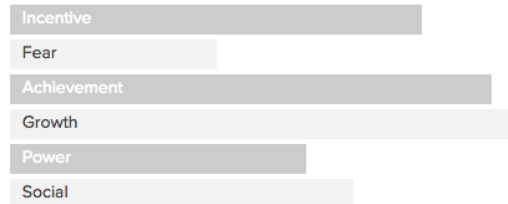
AGE 26  
OCCUPATION Software Developer  
STATUS Single  
LOCATION San Jose, CA  
TIER Experiment Hacker  
ARCHETYPE The Computer Nerd

Friendly Clever Go-Getter



"I feel like there's a smarter way for me to transition into a healthier lifestyle."

### Motivations



### Goals

- To cut down on unhealthy eating and drinking habits
- To measure multiple aspects of life more scientifically
- To set goals and see and make positive impacts on his life

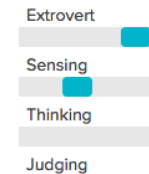
### Frustrations

- Unfamiliar with wearable technology
- Saturated tracking market
- Manual tracking is too time consuming

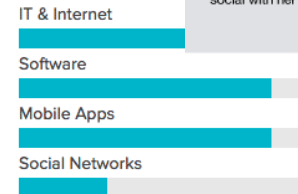
### Bio

Aaron is a systems software developer, a "data junkie" and for the past couple years, has been very interested in tracking aspects of his health and performance. Aaron wants to track his mood, happiness, sleep quality and how his eating and exercise habits affects his well being. Although he only drinks occasionally with friends on the weekend, he would like to cut down on alcohol intake.

### Personality



### Technology



### Brands



### PERSONAS AT A GLANCE

**Christina**  
Moletti  
Freelance Graphic Designer



"Living life is a creative process too"

- Has enough money but not much more
- Works hard during the day but on her own hours
- Walking is her main way to travel, day or night

#### Personal Information

Age: 25  
Location: Pittsburgh, PA  
Education: BA Graphic Design NC State University,  
Part-Time Student  
Profession: Freelance Graphic Designer,  
Home life: Lives with a roommate (Eva 25),  
Hobbies: Playing guitar and xylophone, reading,  
drawing, sewing, watching movies, sleeping  
Favorite TV shows: Doesn't watch much TV  
Personality: Easygoing, outgoing, try new things

#### User Goals

Christina uses this information system to...

- Give her reasons to go out walking at night
- Find safe walking routes at night
- To be active and aware of her surroundings at night
- To find the safest places to go at night
- Make walking and being out at night more social with her friends

**Maria**  
Nantes  
Newspaper Editor



"I want to stay healthy both mentally and physically always"

- Health Conscious
- Use basic technology for day to day activities
- Enjoy Social groups

#### Personal Information

Age: 31  
Location: Ann Arbor, MI  
Education: Master's in English from U of Michigan  
Profession: Newspaper Editor  
Home life: Married, no children  
Hobbies: Walking, making friends, Yoga  
Favorite TV shows: Desperate Housewives  
Personality: Outgoing, Passionate, Social,  
Cheerful, Sophisticated

#### User Goals

Maria uses this information system to...

- Connect and coordinate with friends
- Take more time to walk as the substitute for exercise
- Get a sense of safety by getting more info
- Find out about social events taking place at night, which might be of potential interest
- Wants to get emotional and mental relaxation by walking

**James**  
Goetsner  
Senior Engineer



"I know what I'm doing, I'm willing to try everything new."

- Is willing to spend money on that
- Likes to chat with others online
- Knows that health is very important & work out

#### Personal Information

Age: 37  
Location: San Francisco, CA  
Profession: Cellphone Interface Developing  
Education: Master's  
Home life: Single  
Hobbies: Surfing online to look for new electronic products, working out at gym  
Favorite TV shows: Friends, Heros  
Personality: knowledgeable in popular stuffs, talkative, keeping things on schedule

#### User Goals

James uses this information system to...

- Stay ahead of latest trends on mobile devices
- Take more time to walk as the substitute for exercise
- Meet new friends through this application
- Feel free to walk at night
- Discuss the new interaction
- Try to figure out a method for socializing and also provide a feeling of security

From LinkedIn Media Group

**Background:**

- Grew up in town
- Honors Student in High School
- Served as President of the Philanthropy Group in High School

**Demographics:**

- Millennial
- 22 years old
- College student
- Attends local university

**Goals:**

- Education Major
- Wants to eventually work internationally and teach children abroad

**Sample Sally**

**Challenges:**

- Not able to give as much since she is a college student
- Difficult to find time to volunteer

**Common Objections:**

- Not feeling valued for her time spent volunteering
- Not receiving information in a timely manner

**Hobbies & Interests:**

- Supports children's charities
- Tech savvy
- Loves nature, yoga, health food

**Biggest Fears:**

- Will get stuck with no development opportunities
- Won't be able to find a job in her field

From Single Grain

Free creation software <https://xtensio.com/user-persona/>

Use focus  
groups and  
interviews to  
identify  
patterns

Build  
Personas

“ ”

FUTURE DREAM

PORTRAIT

BIO

DAILY ROUTINE

SOCIAL CONNECTIONS

COMMUNICATION

PERSONALITY

Introvert Extrovert

Individual Social

Responsible Risk Taker

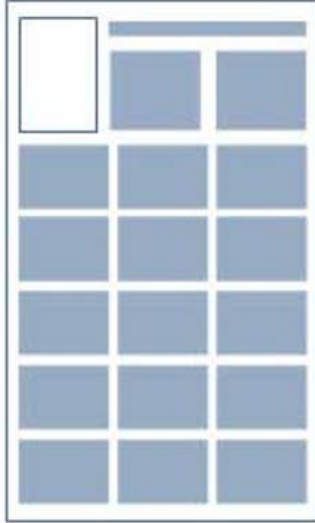
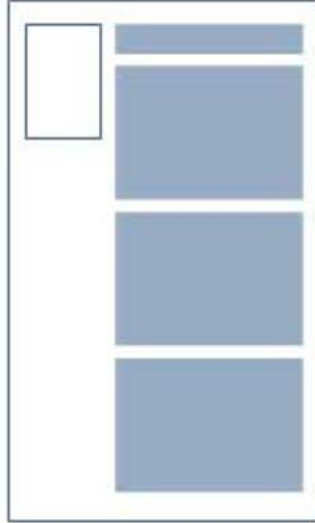
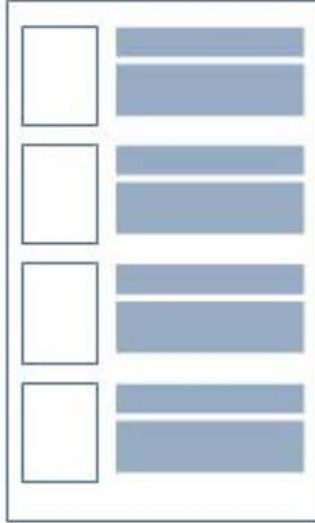
Traditional Modern

Calm Loud

Realistic Dreamer

An adaptation of the Persona Diagram by [Butterfly Works](#). Used with Permission.

## User Persona Examples

The Narrative	The Table	The Quick-and-Dirty
		
Best for stakeholders who are not so concerned about the technical details of user needs.	Best for designers who need an easy way to compare designs to user needs.	Best in situations where personas lack sufficient research.

We know WHO they are.

Now we look at what they do.

# Step 2

## Map the Journey

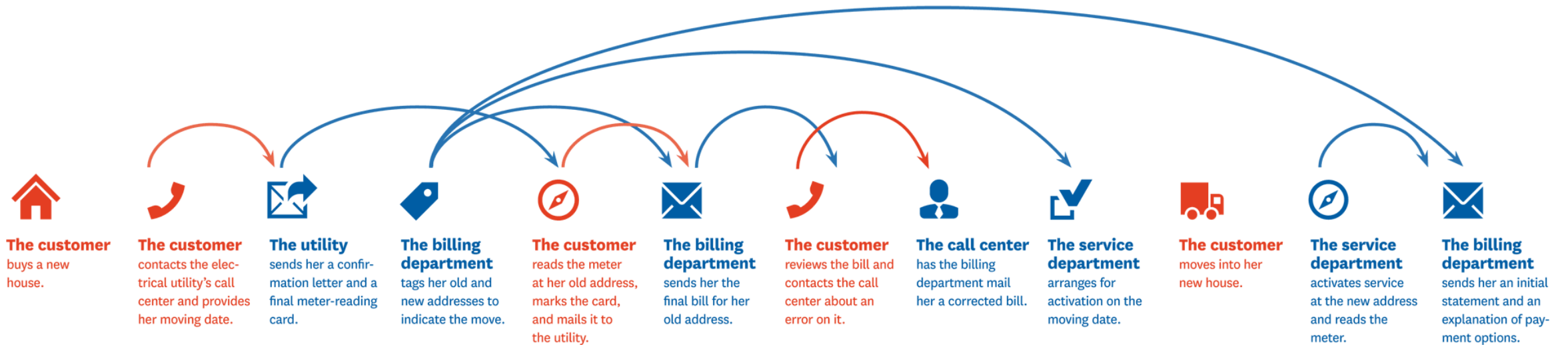
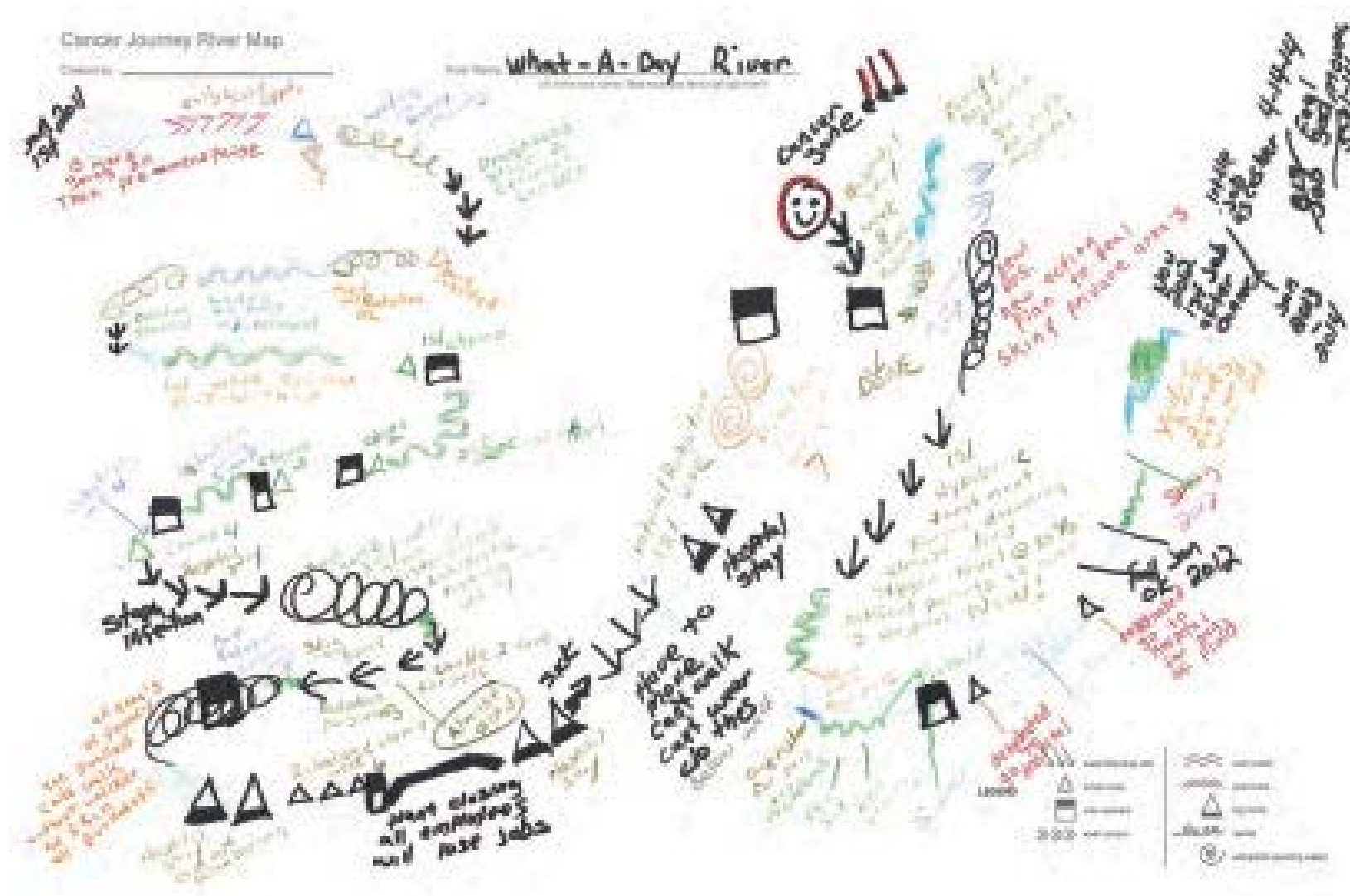


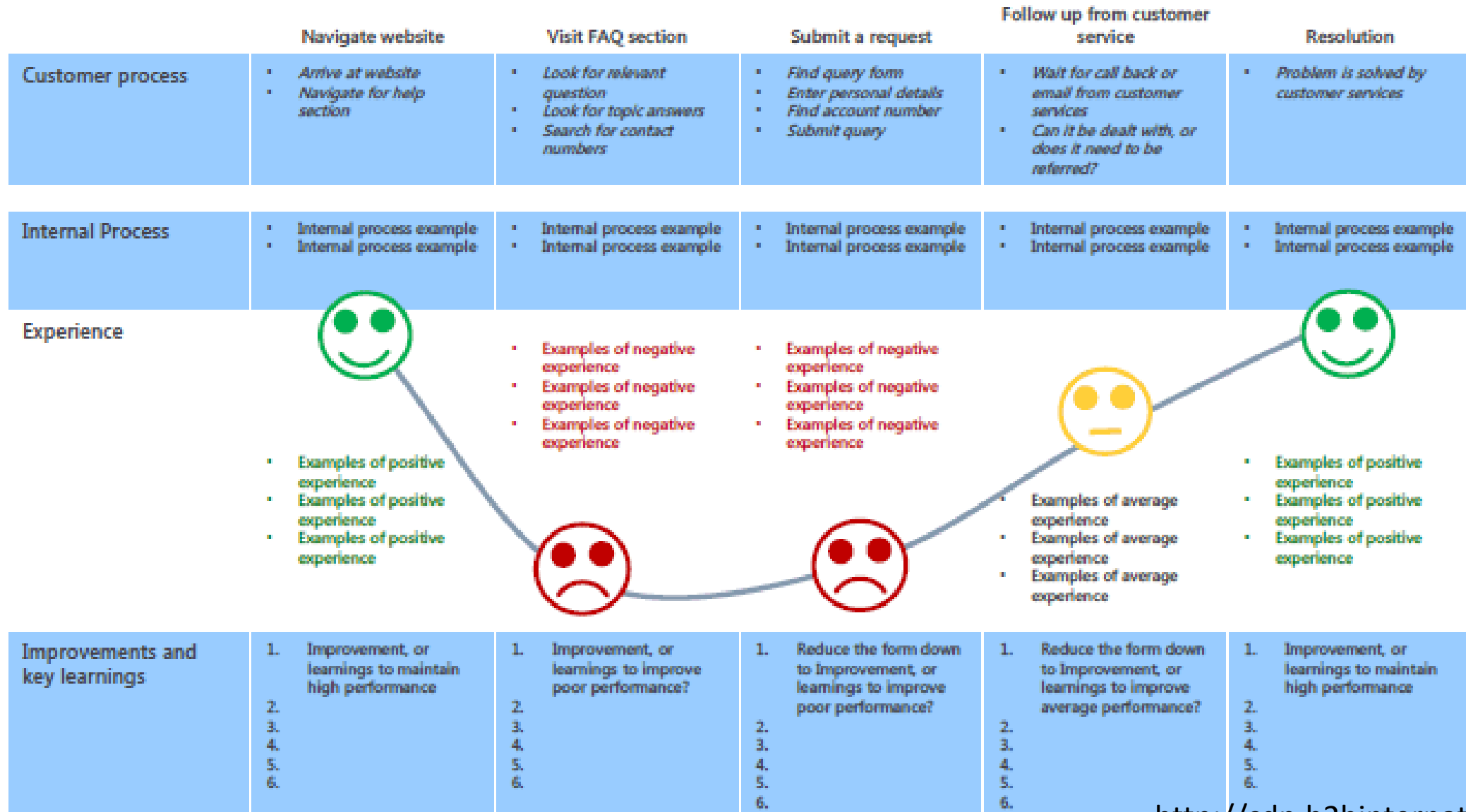
Image from <https://hbr.org/2013/09/the-truth-about-customer-experience>

# Map the Journey – Hand drawn works too!

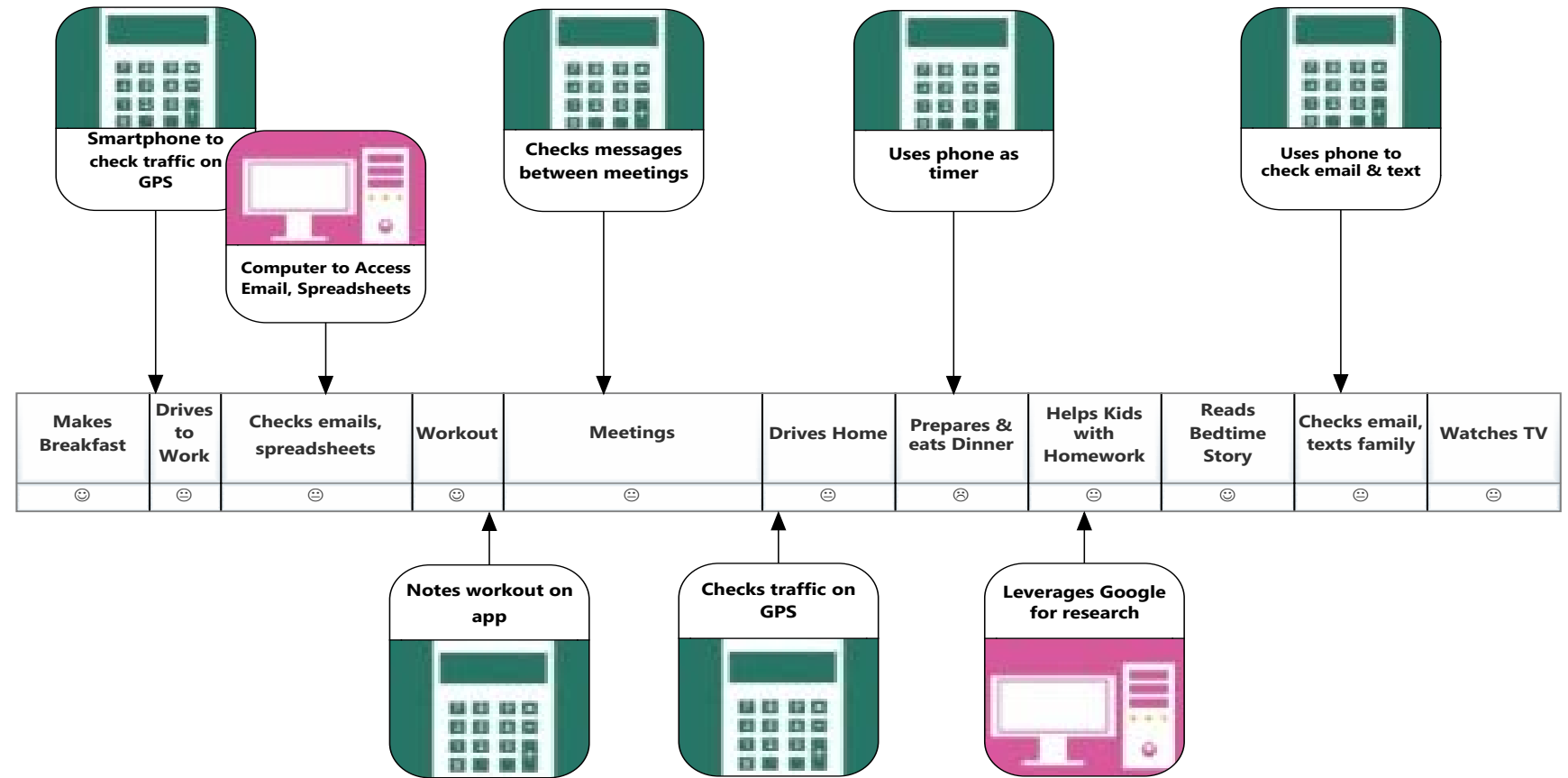




# Journey Map – Look for Pain Points



# Brent's Day



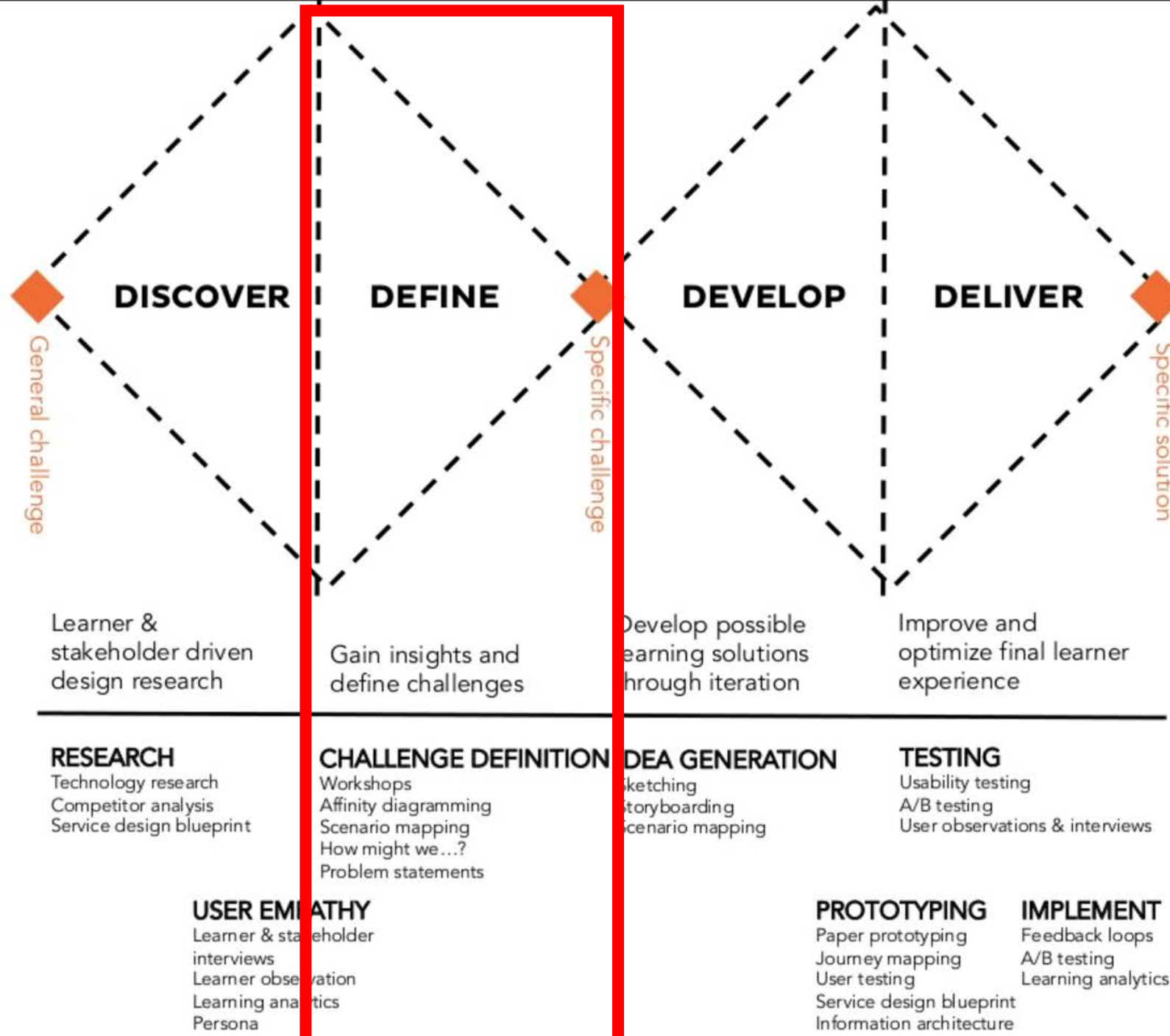
**Pain Points:** Commute traffic in AM & PM, meal prep, desire to relax after work but need to prepare meals, healthy meals take more time to create

**Opportunity:** Fathers need a way to simplify and shorten meal preparation because they would rather spend time with their kids than cooking

## Step 3

We know WHO they are and WHAT they do.

Now we SYNTHESIZE.



# Empathy Map Canvas

Designed for:

Designed by:

Date:

Version:

The Empathy Map Canvas is a template for understanding a user's experience. It features a central face shape divided into seven numbered sections, each with specific prompts for user research.

- 1 WHO are we empathizing with?**  
Who is the person we want to understand?  
What is the situation they are in?  
What is their role in the situation?
- 2 What do we want them to DO?**  
What do we want them to do differently?  
What behavior will we see if we are successful?  
How will we know we were successful?
- 3 What do they SEE?**  
What do they see in the marketplace?  
What do they see in their immediate environment?  
What do they see others saying and doing?  
What are they watching and reading?
- 4 What do they SAY?**  
What have we heard them say?  
What can we imagine them saying?
- 5 What do they DO?**  
What do they do today?  
What behavior have we observed?  
What can we imagine them doing?
- 6 What do they HEAR?**  
What are they hearing others say?  
What are they hearing from friends?  
What are they hearing from colleagues?  
What are they hearing second-hand?
- 7 What do they THINK and FEEL?**  
**PAINS**  
What are their fears, frustrations, and anxieties?  
**GAINS**  
What are their wants, needs, hopes and dreams?  
What other thoughts and feelings might motivate their behavior?

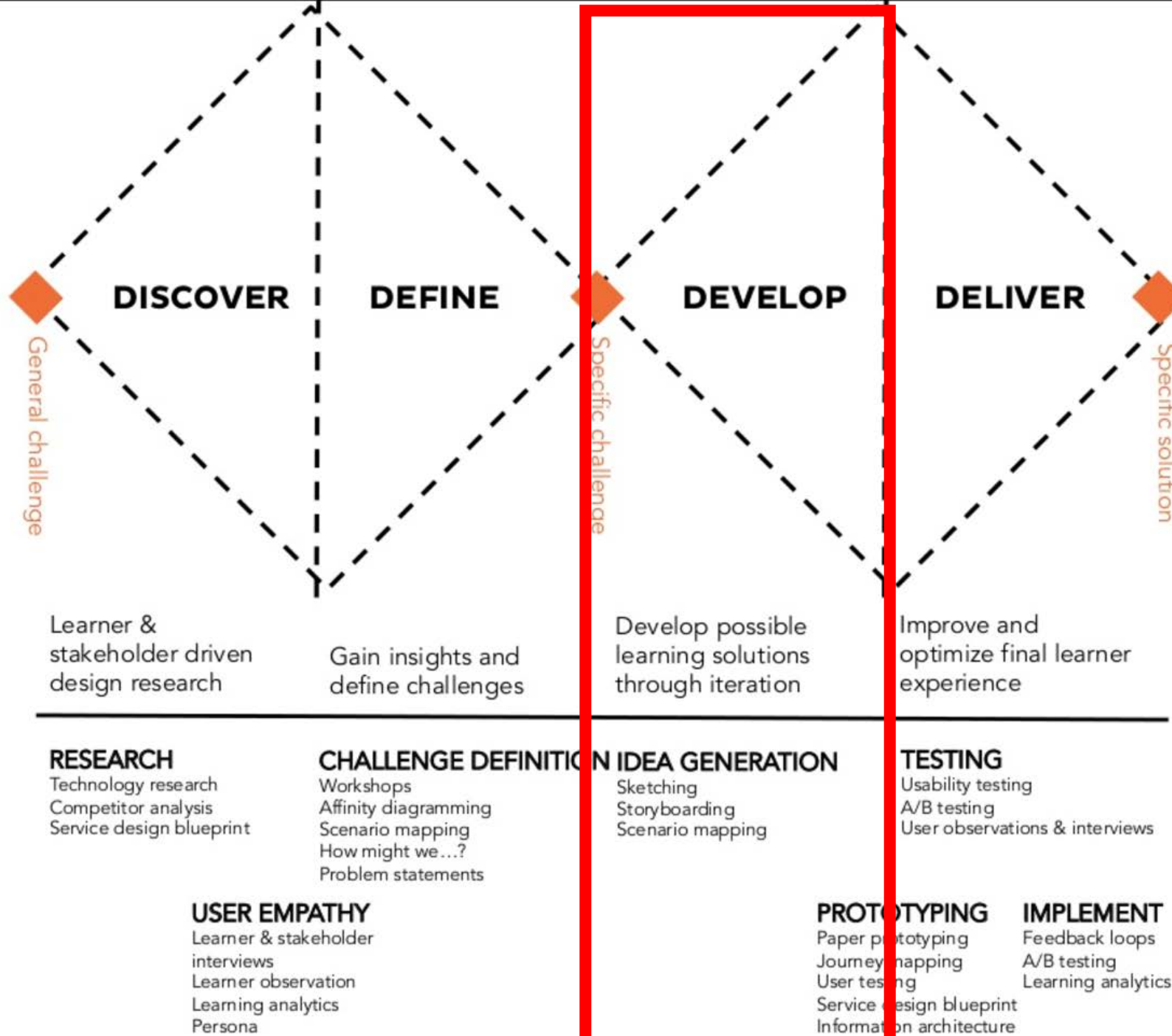
<div>🎓 LEARNING OUTCOMES</div> <div></div>		<div>✓ LEARNING OBJECTIVES</div> <div><div>Behavior</div><div>Insight</div><div>Skill</div><div>Knowledge</div></div>		<div>🧠 STRATEGY</div> <div></div>		<div>🌐 ENVIRONMENT</div> <div><div>Physical</div><div>Virtual</div><div>Social</div><div>Cultural</div></div>		<div>📍 LOCATION</div> <div></div>	
<div>👤 PEOPLE</div> <div></div>		<div>🔍 CHARACTERISTICS</div> <div></div>				<div>🚫 CONSTRAINTS</div> <div></div>		<div>💰 RESOURCES</div> <div></div>	
<div>🧑‍🔬 ACTIVITIES</div> <div></div>					<div>⚙️ PROCESS</div> <div></div>				

CREATED BY NIELS FLOOR

LEARNING OUTCOMES		LEARNING OBJECTIVES		STRATEGY		ENVIRONMENT		LOCATION	
In the end, learners will know the functionality of CrunchTime software and be able to effectively manage inventory and payroll functions for the store.		<div>Behavior</div> Leverage CrunchTime for inventory & scheduling & reporting <div>Skill</div> Complete <ul style="list-style-type: none"><li>Ordering</li><li>Inventory</li><li>Payroll</li><li>Reporting</li></ul> <div>Insight</div> Software simplifies & makes operations more efficient <div>Knowledge</div> NetChef & Teamworx functionality		Training must be compact and interruptible Chunk into discrete units Provide just-in-time aids <b>TRAINING PLAN</b> <b>SEE IT</b> <ul style="list-style-type: none"><li>Overview key functionality of inventory, ordering, payroll in YouTube-like videos</li><li>Provide how-to microlearning guides and supporting job aids to guide through the steps.</li></ul> <b>TRY IT</b> <ul style="list-style-type: none"><li>(For new hires) optional for others) Complete practice in a training database</li></ul> <b>USE IT</b> <ul style="list-style-type: none"><li>Leverage resources for transfer of system use to store operations</li></ul>		<div>Physical</div> <ul style="list-style-type: none"><li>Busy store</li><li>Training on back office computer</li></ul> <div>Virtual</div> <ul style="list-style-type: none"><li>Difficult for dedicated training</li><li>Many distractions</li></ul> <div>Social</div> <ul style="list-style-type: none"><li>Friendly.</li><li>Customers are the priority.</li></ul> <div>Cultural</div> <ul style="list-style-type: none"><li>Store are often family operations</li></ul>		<ul style="list-style-type: none"><li>All US based</li><li>Training will occur on site in each franchisee store</li></ul>	
PEOPLE		CHARACTERISTICS		CONSTRAINTS		RESOURCES			
<b>Franchisees</b>  <b>Store managers</b> <ul style="list-style-type: none"><li>Diverse group</li><li>Education &amp; age varies</li><li>Some English Language Learners</li><li>Experienced &amp; new hire</li></ul> <b>Line staff</b> (for scheduling tool) <ul style="list-style-type: none"><li>Most part time</li><li>Many high school/college</li></ul>		<ul style="list-style-type: none"><li>Busy managers.</li><li>Problem solvers</li><li>Most promoted from the line</li><li>Ability to multi-task</li></ul>		<ul style="list-style-type: none"><li>Training must fit around work schedule. Unlikely to have dedicated training session time</li><li>Franchisee computer age and quality varies</li><li>70% of users never adopted past system: Perception of "this is too complex and no value"</li><li>Hyper-Busy SMEs</li><li>System still being built</li></ul>		<ul style="list-style-type: none"><li>Training managers help with operations training and will support the rollout</li><li>Availability of a training database</li><li>Cornerstone LMS</li></ul>			
ACTIVITIES				PROCESS					
<b>New Hire</b> (Optional for others): View high level overview of inventory & schedule process  <b>Managers:</b> View high level overview of: <ul style="list-style-type: none"><li>NetChef - Inventory</li><li>NetChef - Ordering and Reconciling</li><li>Teamworx - Scheduling</li></ul> View micromodules - Show me/Try It for individual activities Practice exercises in training database or implement in live system <b>Line Staff:</b> View micromodule on scheduling				<b>INVENTORY/ORDERING</b> <ul style="list-style-type: none"><li>Take inventory-&gt;Order what is needed-&gt;Receive Order-&gt;Reconcile Invoice</li><li>Handle waste/bad product</li><li>Plan for specials</li></ul> <b>SCHEDULING</b> <ul style="list-style-type: none"><li>Staff enter availability</li><li>Review forecast-&gt;Plan schedule-&gt;Enter staff</li><li>Weekly timecard approval</li></ul>					

CREATED BY NIELS FLOOR







# Create a Prototype

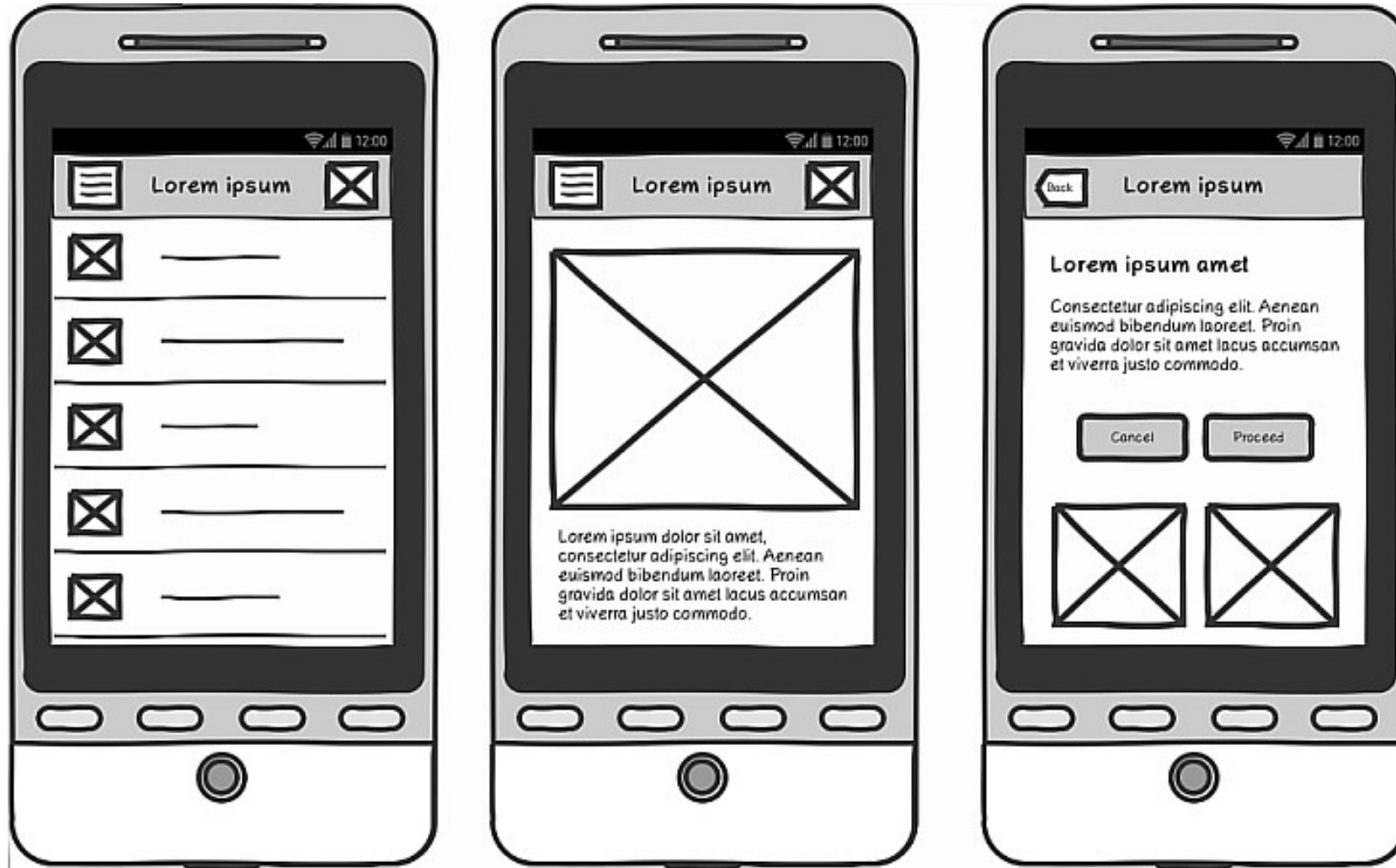
---



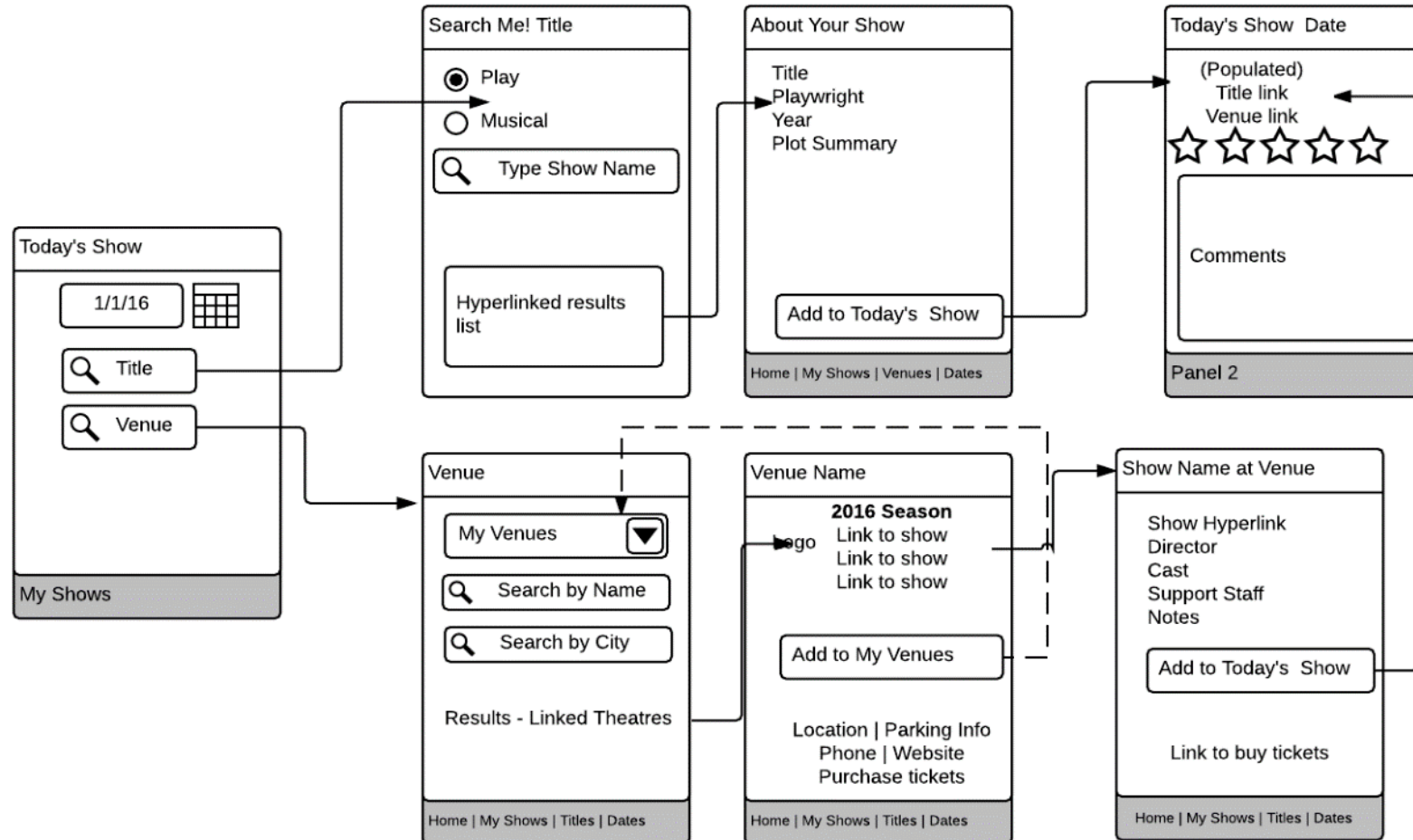
Use PowerPoint



# Prototype



# Prototype - Wireframe



# User Testing

## **Must be actual users**

- Use Think-alouds
- Watch movements
  - Eyes
  - Mouse
- Look for confusion





# What can we learn from UX?

- Leverage Personas
- Create Journey Maps
- Prototype simply
- Involve users in testing

Remember the user!



# ***Good eLearning. Done well.***

Jean Marrapodi, PhD, CPLP | [jmarrapodi@illumina-interactive.com](mailto:jmarrapodi@illumina-interactive.com) | 401-440-6165



## Thanks for coming.

Remember to fill in your evaluation.