Design Thinking

Maria Seaver - CXO, Springbox
Creating a Balance

Technology (feasibility)

Human Values (usability, desirability)

Business (viability)

Design Innovation
EMPATHY BUILDING
Personas are characters created from listening to stakeholder interviews, researching existing customers and conducting usability testing. While fictional, they represent specific segments of your target market.
Ron Wilson, MD
Community Oncologist

Ron has been a practicing Oncologist for the past 33 years. While his contact with patients diagnosed with pancreatic cancer has been minimal, he has years of practice with other, more common forms of cancer and cancer treatments. While he has developed strong ideas about what constitutes best practice, he is open to new resources to help his patients. He is unlikely to turn to the internet to investigate these options, however, relying instead on his colleagues and medical journals to stay abreast of progressive therapies.

He has seen two pancreatic cancer cases in his career, and both those patients died within 18 months of diagnosis. He now has a new pancreatic cancer patient and a desire to learn more about trials. He attended a conference last year where PanCan was represented, and returned with a renewed interest in trials as a possibility for increased survival for these patients. Using the internet to investigate treatment options in this way is novel for Ron, so ease of searching will be critical to capture and maintain his interest.

**Age**
60

**Status**
Experienced in common cancers

**Location**
Wichita, KA

**Ethnicity**
White

**Languages**
English

**Needs from Clinical Trial Finder**
- Support resources
- Clinical trial information

**Technology Literacy**
NOVICE to EXPERT

**Engagement Factors**
- Education: EXPERT
- Treatment: EXPERT
- Support: EXPERT
- Advocacy: EXPERT

**Interest in Clinical Trials**
Moderate

**Preferred Communication**
Email
### Design Research Techniques - Primary Research

<table>
<thead>
<tr>
<th>STAKEHOLDER INTERVIEWS</th>
<th>CONTEXTUAL INQUIRY</th>
<th>OBSERVATION</th>
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<tr>
<td>Extending questions:</td>
<td>Interviewees are interviewed in their context, when doing their tasks, with as little interference from the interviewer as possible. Data should be gathered during interviews with little or no analysis, interview should result in raw data.</td>
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- Observation
  - Ask for permission to observe.
  - Let your subjects know that you are there, and then be as unobtrusive as possible.
  - Keep careful notes.

- Contextual Inquiry
  - Interviewees are interviewed in their context, when doing their tasks, with as little interference from the interviewer as possible.
  - Data should be gathered during interviews with little or no analysis, interview should result in raw data.

- Stakeholder Interviews
  - Extending questions: “What led to that? “How did that start?”
  - Filling in detail: “Could you ‘walk me through the event?”
  - Identifying key actors and agents: “Who else was involved?”
  - Inner events: “How did that make you feel?”
ACTIVITY:

Create stakeholder interview questions

Conduct Interview

Synthesize your information into a persona
Let’s try it!

PHOTO

NAME
Title

Back story or Bio

AGE
STATUS
LOCATION
ETHNICITY
LANGUAGES

PAIN POINTS
▪ Pain 1
▪ Pain 2
▪ Pain 3

TECHNOLOGY LITERACY

NOVICE
EXPERT

OTHER FACTORS
FACTOR 1
FACTOR 2
FACTOR 3
FACTOR 4

MOTIVATORS

goals

motivators
DEFINE

(PROBLEM FRAMING & PROBLEM ANALYSIS)
Actionable Problem Statement
ACTIVITY:

Use everyday activities to improve your overall health.
Bull’s-Eye Diagram

Peripheral

Important

Critical
Design Heuristics

- Match
- Anticipate
- Complexity
- Language
- Consistency
- Feedback
- Place
- Errors
- Constraints
- Aesthetics
Affinity Clustering
Importance Difficulty Matrix

<table>
<thead>
<tr>
<th>Difficulty</th>
<th>Importance</th>
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<tr>
<td>$ $</td>
<td>Luxury</td>
</tr>
<tr>
<td>$</td>
<td>Strategic</td>
</tr>
<tr>
<td>!!</td>
<td>Low Hanging Fruit</td>
</tr>
<tr>
<td>$!!</td>
<td>Target</td>
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IDEATION
Abstraction Laddering

GOAL STATEMENT

WHY?

WHY?

MAKE A BETTER MP3 PLAYER

ENJOY MUSIC

MORE PORTABLE

BIGGER HARD DRIVE

HOW?

HOW?

ABSTRACT

CONCRETE

Makes me feel good

Enjoy Music

Make a better MP3 player

More portable

Bigger hard drive
Round Robin

Collaborative brainstorming method used to help bring out different perspectives on the same problem statement.
Challenge statement: Create a health monitor that uses everyday activities to improve your overall health.
Alternative Worlds

A way of looking at a challenge from the perspective of a different point of view.
APPLE // NIKE // ARMY
PROTOTYPE
What to Prototype

What?
Complex interactions, new functionality and changes in workflow, technology or design

How Much?
20% of the functionality that will be used 80% of the time

Define Fidelity?
Visual, functional, and content
Levels of Fidelity
Rough and Ready Prototypes
TEST
User Testing
Benefits of Design Thinking

- Creates better products
- Creates added value
- Improves metrics
- Improves client satisfaction
- Creates loyalty and repeat business
- Saves on future costs
- Will make you more $$$
Benefits of Design Thinking

Once a system is in development, correcting a problem costs 10 times as much as fixing the same problem in design (concept). If the system has been released, it costs 100 times as much…

Source: Tom Gilb, Principles of Software Engineering Management
Benefits of Design Thinking

On average, companies that provide a superior experience have 14.4% more customers who are willing to consider them for another purchase than companies in the same industry that offer a poor customer experience.

Source: Forrester, *Best Practices In User Experience (UX) Design*
Benefits of Design Thinking

“You don’t get to decide which device people use to access the internet: they do.”

Benefits of Design Thinking

“The total cognitive load, or amount of mental processing power needed to use your site, affects how easily users find content and complete tasks.”

Source: Nielsen Norman Group Study,
Minimize Cognitive Load to Maximize Usability
Benefits of Design Thinking

Compared with companies that offer a poor experience, companies that offer the best experience in their industries have 15.8% fewer customers who are likely to consider doing business with a competitor.

Source: Forrester, *Best Practices In User Experience (UX) Design*
Benefits of Design Thinking

Companies with the highest experience scores have 16.6% more customers who are likely to recommend their products or services compared with their lowest-scoring competitors.

Source: Forrester, *Best Practices In User Experience (UX) Design*
Credits & Resources