National Labs Entrepreneurship Academy

DAY 1

Defining the Problem

Cleveland Justis
Executive Director
The Mindset

*Better to be specifically wrong than vaguely right.*
What’s Your Problem?

• What problem are you solving? Who has it (and how badly)?
• What is your solution?
• What makes your solution valuable?

Overview

• Methods for Needfinding
  • Deep needs
• Process Mapping
• The 5 Whys
• Practice applying what you learned

Refer to “The Problem” portion of your coursebook.
What’s Your Solution?

- Define your work in terms of a solution to the problem you’ve identified
- Describe the primary benefits

What’s the Value Proposition?

- For the user, what’s the most important benefit?
- How would you measure it’s value (to the user)?
To a child with a hammer, everything looks like a nail.

Nothing is more dangerous than an idea when it is the only one we have.
VS.

VS.

(c) UC Davis Institute for Innovation and Entrepreneurship
Methods for Needfinding

Broad Needfinding
- Buglists
- Observations
- Mindmapping

Deep Needfinding
- Structured interviews and observations
- Process mapping
- 5 Whys analysis

What Is The Underlying Problem?

“Customers don’t want drills, they want holes...”

...or do they?
Deep Needs

Needs that are:

- Not obvious without a deep understanding of the people engaged in the activities
- Relatively timeless and significant

$3

$27
Working alone for 5 minutes, then sharing in your groups for 10 minutes...
Create a first draft definition of the real world problem you are solving.

Refer to the Define the Problem exercise in your coursebook.

Find the Deep Needs
Team Exercise

Working in groups, identify a deep need associated with digital photography.

Bug Lists

- A great way to discover unmet needs is to keep a bug list. Any time that you notice something that takes too much time, is complicated, or seems inconvenient to your consumer, write it down on your list.
- Refer to your bug list later to see if it sparks any ideas for inventions or improvements.
Process Mapping

- Process mapping is a tool to understand the complete experience surrounding a problem/process/activity
- Start with the problem/activity you are considering (e.g. digital photography)
  - Take the user’s point of view, and mentally pull back to the earliest stage of the process (e.g. planning a trip, packing a camera, anticipating a shot, etc.)
  - Step through every element of the activity, recording it
  - Analyze your map: what happens at each of these stages? Why? How do the stages relate? What opportunities do you see?

The 5 Whys

A technique for quickly finding the root cause of a problem.

Developed in the Toyota Production System, the 5 Whys involves looking at any problem and asking:

- “Why?”
- “What caused this problem?”

Use it to explore the cause/effect relationships underlying a particular problem.
The 5 Whys: Example

5 Why Analysis

Image courtesy of Quality Systems Toolbox (http://www.qualitysystems.com)

Applying What You’ve Learned

Using the coursebook exercises, take 15 minutes to identify your problem and solution.