Product Definition & Validation

Fall, 2016
Week 1

Professor Sheryl Root
Professor Tony Wasserman

1

Agenda

- **Administrative matters**
- **Class overview IW/PDV**
- **Discussion Ideation**
- **Problem identification – team review**
- **Problem definition - discussion**
- **Ice Cream Store task**
- **Revise problem statement & submit**

Welcome

- **Teaching team:**
  - **Prof. Tony Wasserman**
  - **Prof. Sheryl Root**

Logistics

- Sheryl's email: sheryl.root@sv.cmu.edu, sherylr@rootanalysis.com
- Tony's email: tonyw@sv.cmu.edu
- Class information site: http://sm.sv.cmu.edu/PDV

Course Details

- **Schedule**
  - **Idea Workshop = 2 weeks**
  - **Product Definition = 6 weeks**
  - **Validation = 7 weeks**
- **Readings**
  - **As identified in syllabus**
- **Deliverables**
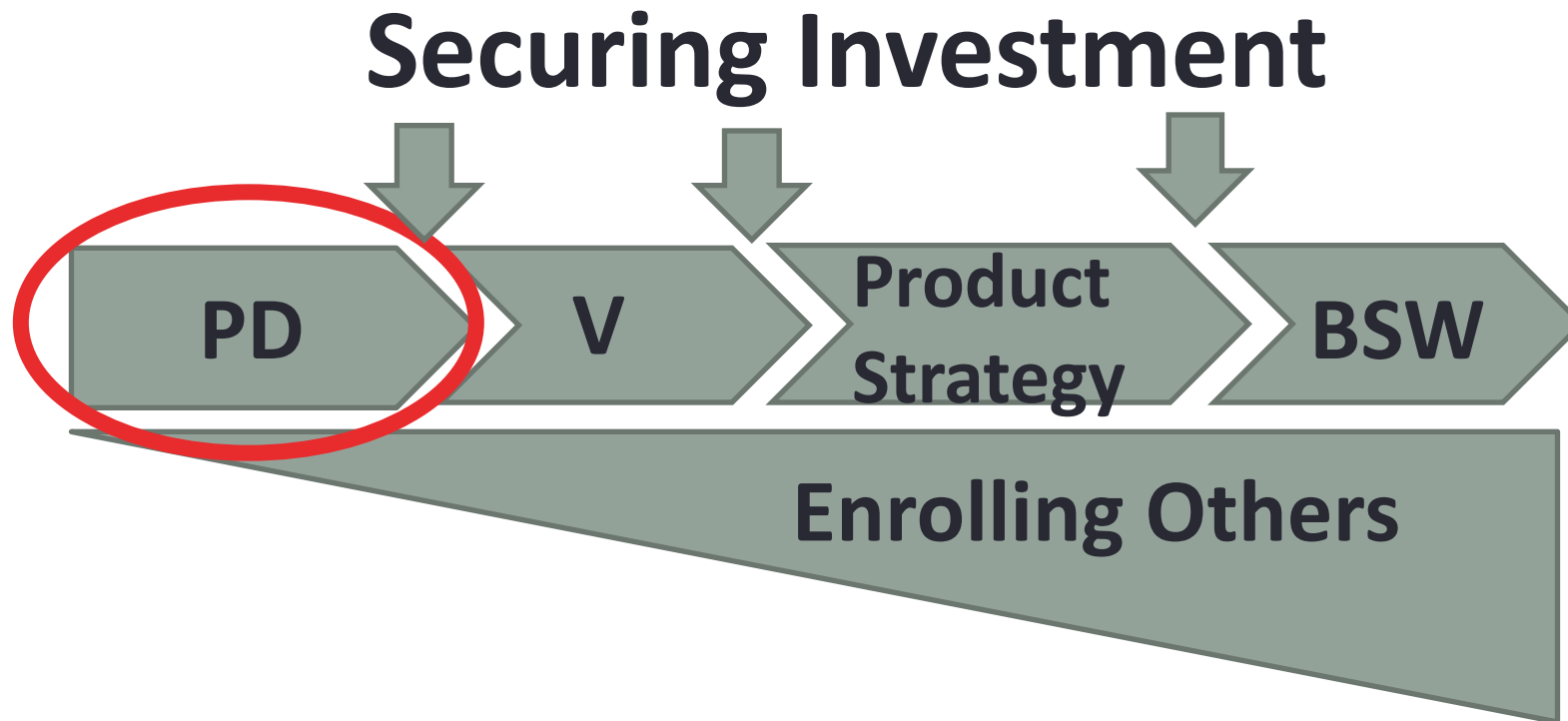 - **As identified in syllabus**

Course Grading

- **Class Individual participation – 10%**
- **Individual assignments – 40%**
- **Team assignments – 50%**

6

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"My team has created a very innovative solution, but we're still looking for a problem to go with it."

Creating a Product Vision – Why?

Securing Investment

| PD | V | Product Strategy | BSW |

Enrolling Others

Problem Definition

- A problem is the difference between the expected/desired state of affairs and the actual state of affairs.

- A problem statement is a concise description of the issue(s) that must be addressed.

- Most of the time, a problem is hidden.

- What is evident are the symptoms of the problem.

- Don't make hasty assumptions or solutions before having a clear understanding of the problem.
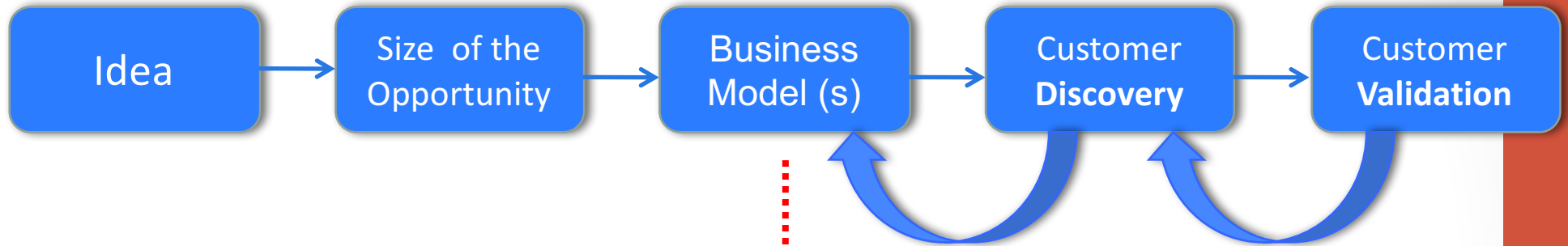
- What are your hypotheses?

9

Share your problem statement

- **Write your problem to be addressed on a sheet of paper with your name in upper right corner.**
- **In teams, pass your statement around your team.**
- **Each team member is to comment on each idea…**
- **Add questions, add additional thought, add clarity**
- **Return to original owner**
- **---**
- **Restate your problem statement based on the feedback you received.**
- **Email your statement by noon Wednesday to Sheryl and Rina using your sv id.**

Product Definition

- **Your task: take an innovative idea from a raw concept to a refined vision**
- **We will give you:**
  - *** Tools for sharpening and presenting your vision**
  - *** Framework for understanding the dynamics of innovation**
- **More art than science...**

11

How to Build A Startup

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Idea → Size of the Opportunity → Business Model (s) → Customer Discovery → Customer Validation
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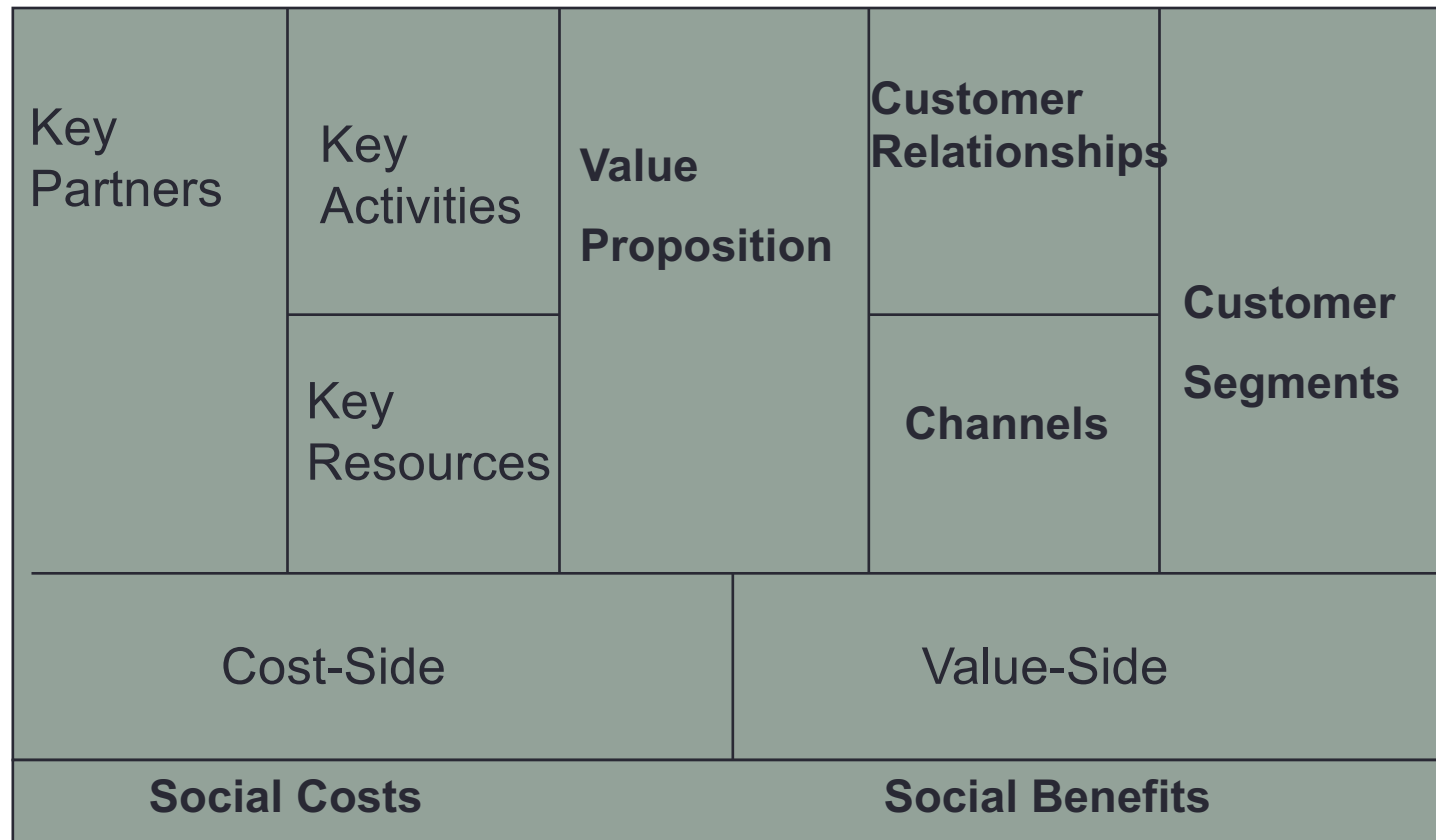
Theory

What is the problem to be solved?
Target market?
Customer potential?
Value of Solution?
Reality Check?

Practice

What is strategy to reach customer ?
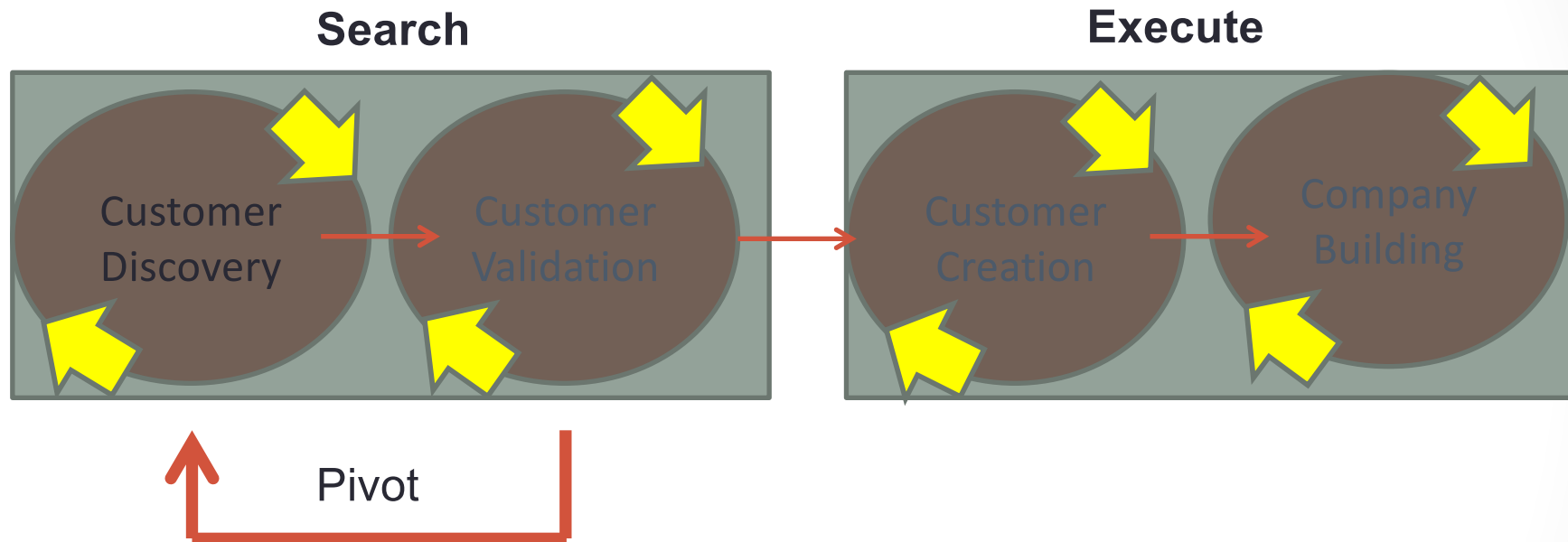Approach to overcome issues in solving problem?
Coherent roadmap of actions?

12

Business Model

Key Partners	Key Activities	Value Proposition	Customer Relationships	Customer Segments
	Key Resources		Channels	

Cost-Side	Value-Side
Social Costs	Social Benefits

What to eliminate/reduce	What to raise/create
Cost Implications	Value Creation

Customer Development

Search

Execute

Customer Discovery → Customer Validation → Customer Creation → Company Building

Pivot

14

Vision-Out or Market-In?

Possible   Valuable
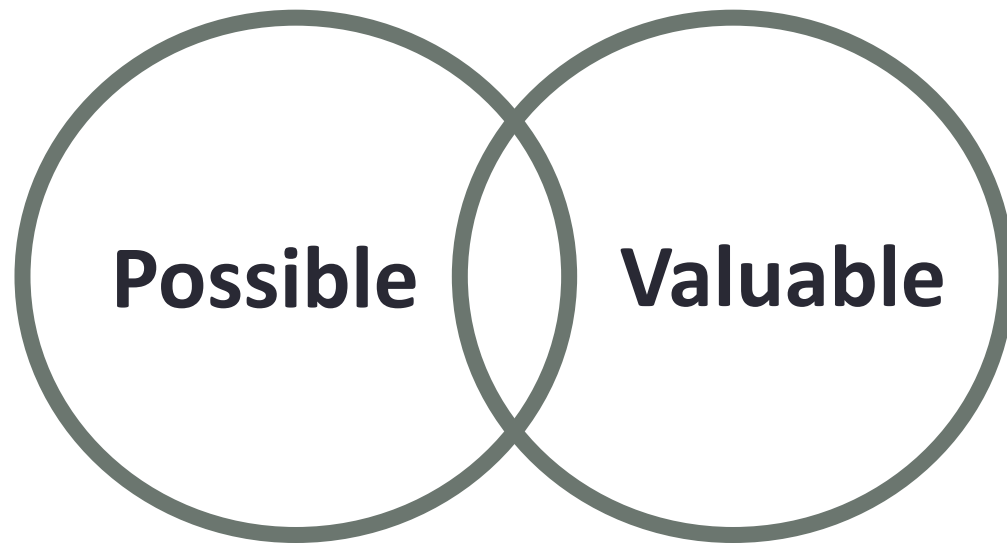
What's Possible: Discussion

▸Give examples of things you consider to be great innovations – were they vision–out or market–in?

Consider *Creation Myth* and Xerox PARC
◦ Windowing and the Mouse – who invented it?
◦ Personal computing and failure to commercialize
◦ Laser printer productization at Xerox
◦ Laser printer productization at Apple

"Mother of all Demos" video:
http://sloan.stanford.edu/mousesite/1968Demo.html

16

Discussion

▸▸ For the personal computer, Xerox knew what was possible but failed to connect it to what was valuable

▸▸ Apple knew (intuitively) what was valuable and "borrowed" what was possible

▸▸ Time changes perspective on vision-out or market-in:

◦ "Xerox had been infested by a bunch of spreadsheet experts who thought you could decide every product based on metrics. Unfortunately, creativity wasn't on a metric." – Starkweather at Xerox

◦ "… give me all the information you can come up with on when people buy one of our products—what software do they buy, what business are they in —so I can see the model of how people are using the machines. Where was the rigor?" – Starkweather at Apple

Discussion Summary

▸▸ **Neither Vision-out nor Market-in alone is a sustainable, winning approach**
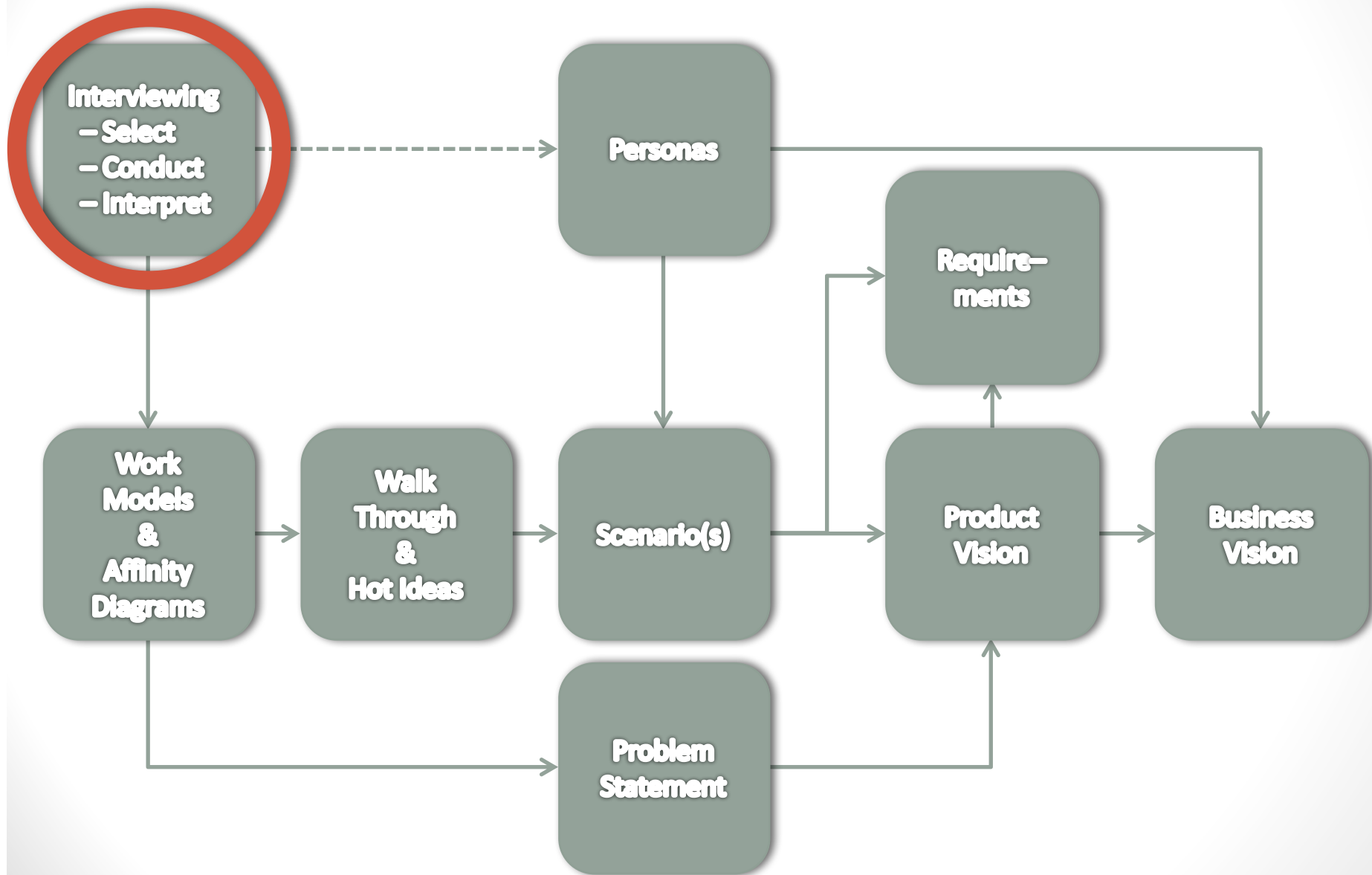
   Technology explorations can inform what's possible

   The Voice of the Customer can inform what's valuable

   The dialog and matching are often indirect

▸▸ **Your task in PDV: start with the possible, explore what's valuable, and _tell a good story about the overlap_**

The PDV Process – Market-In

Exercise: Task 0 Discussion The Ice Cream Shop

- What key problems did you identify?

- What opportunities occurred to you?

- How did you conduct research?

- How did you validate your assumptions, ideas?

20

Ice Cream Store

- **Name of your store**

- **Customer Target**

- **Type of store/ice cream**

- **Location of store**

- **Questions you would ask to optimize your offering**

Notable

- **Focus is on understanding needs and environment – not solutions**
  - **Who are your "users"?**
  - **What problems do they have?**
  - **How do they solve them now?**
  - **What is the value of a better solution?**
- **"Competitive Analysis" is premature**

Next Up for Thursday

- **Idea/Problem definition sharing**
- **Affinity problem statements**
- **Select the key problems to address**
- **Form teams to selected problems**
- **Begin drafting problem statement as a team**

Idea Development - Thursday

- **Take your written idea on an 8x11 sheet of paper**
- **Post it on the wall**
- **Read all the ideas**
- **Group them and create affinity**
- **Label the affinity (e.g. helping the elderly or healthcare...)**
- **Identify your first and second choice with markers**
- **Select the problems with the most value and interest**
- **Move to a selected problem for your interests**
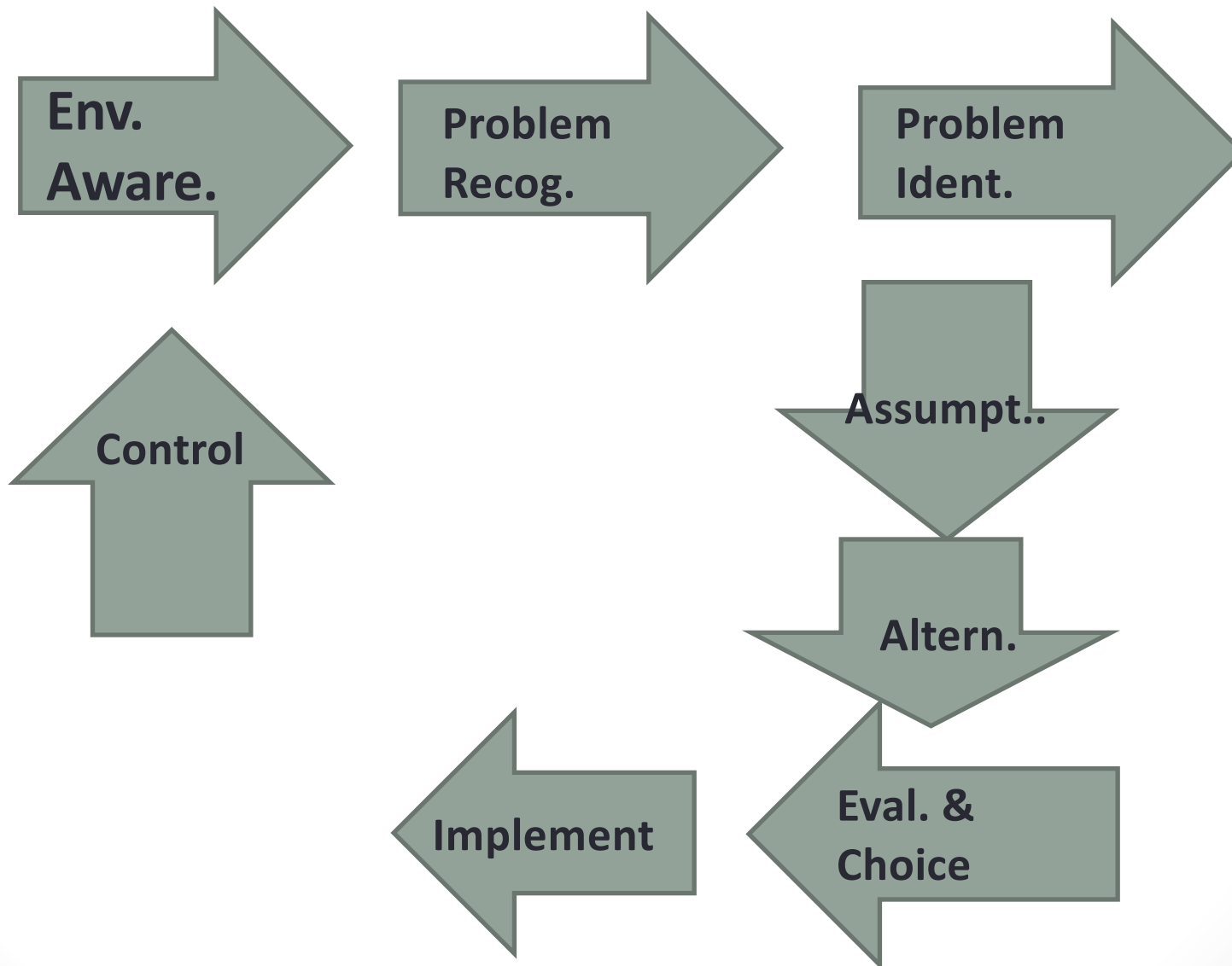- **Create teams for selected problems**

24

Problem Statement

- **A problem is the difference between the expected or desired state of affairs and the actual state of affairs.**

- **A problem statement is a concise description of issue(s) that must be addressed.**

- **Most of the time, a problem is hidden and what is evident are the symptoms of the problem**

- **Don't make hasty assumptions or solutions before having a clear understanding of the problem.**

Questions to Answer

- **Who is affected by the problem?**

- **What are the causes of the problem?**

- **When does the problem occur?**

- **Where does the problem occur?**

- **What is the impact of the problem?**

Problem Identification Process

Env. Aware. → Problem Recog. → Problem Ident. →

Control ↑

Assumpt.. ↓

Altern. ↓

Implement ← Eval. & Choice

27

Problem Statement Creation

- **Define the issue.**

- **Clarify why the issue is important.**

- **What assumptions are you making?**

- **Create a *concise***

  - description/statement

  - Question of the issue

  - Opportunity description

    - *the condition you want to explore*

Not the solution. And, limit the jargon.

Problem Statement and Interview Question Examples

- **Text books are too expensive. There should be a cheaper version. Why do people still want to read books?**
  - **Q: Which way do you like to read a book:**
    Electronic or printed books?
  - **Q: Why?**
  - **Q: What types of books attract you most to a printed version?**

- **Why is there and how can we reduce student violence in our high schools?**
- **More specific: How would school uniforms affect the rates of school violence in *"insert your city"*?**
  - **Q: What do you think the causes of school violence might be?**
  - **Q: What is the "cost" of school violence?**
  - **Q: Does dress or type of clothing matter?**

29

Detailed Example

- **You have an idea that the sales force could be more effective.**
- **First step: Define the problem**
  - Define the reason why this issue needs to be addressed
  - *A solution is needed because the current sales process is not generating enough sales for businesses.*
- **Second step: Map out and validate the problem**
  - Break down the overall problem definition into component parts
  - *Entities, people, processes, and relationships*
- **Third step: Create questions you would ask based on a list of the potential people involved or impacted**
  - Who, what, when, why…
  - Create a map or flowchart of the interactions
- **Fourth step: Describe the problem**
  - *Why is the sales process not generating a 20% increase in volume after implementing CRM?*

30

Make a Plan

- **Types of people to interview**
  - **Potential users**
  - **Potential customers**
  - **Other key stakeholders**
- **How many people to interview**
  - **3-6 per type is ideal**
  - **Practicalities for this class may limit you**
- **Discuss the plan with your coach**
  - **Track your progress, adapt to change, stay flexible**
  - **And keep your coach informed!**

Teaming

- Determine which area most interested you

- Move to that area to form a team

- Begin enriching the ideas and narrowing to a focused one

Readings

- Read Chapter one of SOM (Startup Owner's Manual)

- Read materials from email: The New Yorker article on "Creation Myths"

- Read HBR "how to" on reading and analyzing cases articles: https://cb.hbsp.harvard.edu/cbmp/access/28400796