TIM 80C: Starting a new technology company (High-tech Start-up)

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Lecture 1 (3/31/15)

Agenda:

1) Overview of the course

2) Syllabus and workload for the course

3) Idea generation

4) Project Kick-off and Homework 1 (work for Thursday)
① Overview of the course

Problem: How do you create a successful new high technology company (e.g., Apple, Google, Facebook, etc.)

Approach: There are six steps

1. Vision/Mission
2. Business Goals
   - Product Strategy
   - Market Strategy
   - Business Strategy
   - Financial Strategy

These six steps have to be performed concurrently (in parallel).
Step 1: Vision and Mission
(Purpose of the Start-up)

Example:
- Determine the societal need that the start-up will address (e.g., clean energy, entertainment, etc.)
- How will the start-up address the identified need?

Mobile communication and entertainment
Wearable technology

Step 2: Business Goals

Example:
- Revenue ($s)
- Growth (%)
- Profit Margin (%)

Generate $2M revenue in year 2
Growing at 25% year over year
Step 3: Product Strategy

**Example**

- Smart watch for unified communications
  - Voice
  - Video
  - Text/IM
  - Email

- Generate ideas for the new product (service)
- Select one idea to design and develop into the new product

Step 4: Market Strategy

**Example**

- Identify the appropriate market for the product (e.g., health-care)
- Segment the market into different customer groups
- Market sizing (# customers, #$, % growth)
- Select a target market and develop the marketing plan (4Ps)
Step 5: Business Strategy

Example

- Samsung: market-wide
  low cost

- Apple: market-wide
  differentiated

- Pebble: market-wide
  major player
  low cost

- Our start-up:
  focus differentiated

- Who are the major players (Companies) in the target market segment?
- What is the competitive strategy of each major player?
- What is the appropriate competitive strategy for the start-up?

Step 6: Financial Strategy

Example

- Cash flow analysis (revenue, expenses)
- Funding: Who will finance the start-up (crowd-sourcing, angel investors, venture capitalists, loans, large companies)
- Financial structure: Who will own the start-up (shares of stock)

- 5-year cash flows
  Expenses: $5M
  Revenue: $10M
  Profit: $5M

- Venture capital funding

- 20% ownership for $1M in seed money
Workload of the Course

Every Thursday you will be submitting either a homework set or a project report.

Homework

- Thursday
- Tuesday
- Thursday

receive HW → discuss in class → turn in completed HW Set

1 week

Project

- Thursday
- Thursday
- Tuesday

Receive project assignment → Submit project report → Project review with instructor and TA

1 week
③ Idea Generation

One method: Structured Brainstorming
 (~1940s Osborn)

Step 1: Generate ideas to solve a particular problem.

Problem: Highway 17 is extremely dangerous, especially when the road is wet.

Work in groups, using the structured Brainstorming handout, to generate 30-50 ideas for improving safety on Highway 17.
Step 2: Structure the ideas into three groups

1) Ideas that are immediately useful ("low-hanging fruit")
   e.g. lower speed limits

2) Ideas for further exploration
   e.g. sticky roads

3) Ideas that are radically new approaches
   e.g. flying cars
Projects Kick-off and Homework 1

Thursday, you will receive the first project assignment and Homework 1.

Class on Thursday (1/4) will be used to assign project groups and work on brainstorming ideas for your start-up.

1) Identify 3-4 societal needs your start-up is interested in addressing (e.g., transportation, communication, clean energy).

2) Structure brainstorming to generate 5-10 product ideas for each need.

3) Select 5-7 of the most promising ideas.

4) Organize results into a preliminary project report with a short description for each idea.
Meet on Tuesday to review project ideas and select a suitable idea to work on.

Homework 1 will be discussed in class on Tuesday (4/5).