TIM80C, Lecture 5 (4/15/14)

Agenda

1) Review Product Design (Lecture 4)

2) Product Strategy

3) Roles and Responsibilities (Organization of a Start-up)

4) Project Phase I

5) Vision and Mission Statement

6) Work on Project Phase I (time-permitting)
1) Review of Product Design

Real

Product Dissection (FAST)

Abstract

Product Functions (Function Structure)

Realizations (Morphological Matrix)

Product Concept (FAST)

References

German Design (Functional): Engineering Design, Pahl and Beitz

Japanese Design (Quality): Quality Engineering Using Robust Design, Phadke

Product Design Overview: Engineering Design / Cross
2) **Product Strategy**

A product strategy contains the following components:

1) A conceptual design concept for the product
   - Functions
   - Form (realizations)
   - Description of how the product will work

2) A plan for how the Start-up will develop the product
   - Resources: people (skillsets), equipment, facilities, etc.
   - Source: where will the Start-up obtain the resources?
     - In-house
     - Out-source
   - Schedule: when will we obtain the necessary resources?
3) Organization of a Start-up

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<tr>
<th>Roles</th>
<th>Responsibilities</th>
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<tr>
<td>Chief Executive Officer (CEO)</td>
<td>* Lead and manage people</td>
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<td>* Set business goals with the executive team</td>
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<td>* Get funding</td>
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<td>Product or Technology Team</td>
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<td>Chief Technology Officer (CTO)</td>
<td>* Develop and implement the product strategy</td>
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<td>VP of Product Development</td>
<td>* Lead the development of the product concept (prototyping, user testing, etc.)</td>
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<td>VP of Manufacturing</td>
<td>* Leading the manufacturing and production of the product (coordination with suppliers, quality control, etc.)</td>
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<td>Roles</td>
<td>Responsibilities</td>
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<td>VP of Marketing and Sales</td>
<td>Develop and execute the market and business (competitive) strategy</td>
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<td>Chief Financial Officer (CFO)</td>
<td>Perform cash analysis and create financial strategy (Budget)</td>
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<td>other</td>
<td>Legal, HR, etc. (generally outsourced)</td>
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4) Project Phase I

Time Phased Plan: There are two different timelines

1) TIM806 Timeline: Creating group project
   - Conceptual design
   (10 weeks)
   - Market Strategy
   - Financial Strategy

2) Start-up Timeline: Creating the Start-up
   - Prototyping
   (≈ 2 years)
   - Getting Funding
   - Sales

For Phase I you are Creating time phased plan for (1). See syllabus for the high level deliverables and due dates for Phases I-IV

Roles and Responsibilities: Assign primary roles to each group member using the organization of a start-up as a reference.

Start-ups are cross-functional. Everyone works on everything.
5) **Vision and Mission Statement**

**Question**: What is the purpose of the Vision and Mission Statement of a company (Start-ups)?

**Examples**:

1) **Microsoft** (~ 1986 when the company was still a start-up)

   **Vision**: A computer in every home and at every desktop

   **Mission**: Everyone of these computers will run using a Microsoft operating system

2) **Google** (~ 1995)

   **Vision**: All of the information in the world is available to everyone at all times

   **Mission**: To organize the world’s information and create software tools to make that information accessible
Definition

Vision Statement: A broad statement that describes the company's future vision of the world.

Example: A robot in every home in 10-15 years.

Mission Statement: A focused statement of how products/services (present) the company will contribute to realizing the vision.

Example: We will provide computer vision systems for the household robots.
Answer: The Vision and the Mission statements define the purpose for the company's existence (Mission) and target for where the company is headed (Vision).

- Products and Services
- Market
- Culture

Mission Statements: generally public (e.g., website)
Vision Statement: not always public

Example: Facebook

Mission Statement: Provide software tools for people to stay connected with friends and family

Vision Statement: ?
Example: Cisco

Vision Statement:

Public (External): Changing the way we work
live, play and learn

Internal: Everything is connected to the internet and can be controlled from anywhere
Internet of Things (IoT)

Mission Statement: Cisco will provide the
network infrastructure (routers, switch) for the IoT.

Vision and Mission Statement of a
company are not static. They change over time.