ISM 105/205: MOT I: Homework 5: Quality Function Deployment (QFD), House of Quality (HOQ)

Midterm: will be handed to the class on next Thursday, 28 October 2010, and will be due the following Tuesday, 2 November 2010.

Reading: U&E, PDD, Chapters 4 (Identifying Customer Needs); Chapter 5 (Product Specifications); Chapter 6 (Concept Generation)

Homework Problems (Due Thursday, 28 October 2010):

1. Specialized Bicycle Company (SBC): Read the case study in order to understand how QFD/HOQ is applied in a technology company. Provide at least three main reasons, with supporting evidence, why SBC developed the HOQ. Describe one way in which SBC would use the HOQ.

2. Quality Function Deployment: Develop a “house of quality” for two of the following products: The “perfect” (humane) mousetrap, CD player, laptop personal-computer, cell-phone, Microsoft Word.

3. House of Quality for Your Technology Company’s Proposed New Product: Proceed as follows:
   - Schedule a time to meet for the purpose of creating the HOQ
   - In (before the group meeting) Use the structured problem-solving process to create an explicit plan for developing the HOQ for your company’s line of products. This process will include assigning specific tasks to the group members
   - (before the meeting) Gather relevant information needed for creating the HOQ
   - Conduct a group meeting (1-2 hours) to develop (in a time-efficient manner) the actual HOQ for the product
   - Turn in a concise, well-written “problem solution” documenting all the work done. This solution should include your problem-solving process and clearly show its implementation.
   - Note: to get credit every member of the group must participate in the group meeting, and must turn in a solution.

Project: Phase II (due on Tuesday, November 9):
You are now well along your technology/product development process. Specifically, in this Phase you should be actively performing the following activities (note that some of these steps have to performed concurrently):
   - Complete and refine any unfinished work from Phase 1.
   - Develop project plans, with the appropriate tasks, activities, and time-schedules for the product development and commercialization process. Plans should include roles and responsibilities. These plans will be refined and fleshed-out over the next few weeks.
   - Create and apply the appropriate decision analysis framework for risk management.
   - Be sure that you have created a detailed HOQ for your product (See HW Problem 3 above).
   - Generate a suitable concept (or two) for your product
   - Decide on the technology platform, product platform, and product lines
   - Submit all work done till now in the form of well-written and properly-structured reports contained in a project binder.