DETERMINING CUSTOMER NEEDS

As practiced in ME4054

(Ref: Chap. 4, Ulrich & Eppinger text)
Some ways to determine needs…

• My advisor said, “Do it this way”

• Marketing said, “Here are the specs”

• Team member Sam said, “Gosh, I would buy one!”
Another way to determine needs…

• Determine *who* the customers are
• Determine *what* information should be gathered from customers
• Determine *how* that information should be gathered

And then, *translate* that information into product requirements and engineering specifications
Gathering customer information

- Depth interviews
- Surveys
- “On the job” observations
- Focus groups

Gather and report raw data, no interpretations….yet!
Depth interviews

- Great for getting lots of info quickly
- Can go into the “why”
- Have an interview script...clear with team and with advisor
- Take notes...of everything, not just what you want to hear...record direct quotes
- Can be hard to schedule
- Be mindful of people’s time
- Do over telephone or in person
Surveys

- Hard to create a good questionnaire
- Keep it short
- Minimize essay questions (interview instead)
- Need large N for quantitative data
- Screen respondents…you want the right sample
- Mail surveys…time scale wrong for ME4054
- Web surveys…only if you direct people to it
Observations

• GREAT method!
• Be a “fly on the wall”
• Observe environment where design will be used
• Take notes
• Best way to understand the user
• Important for engineers to observe…and not simply rely on what others say
Focus groups

- Generates group discussion
- Can resolve conflicting views
- More than just getting people together
- Needs a skilled moderator
- Sometimes done in special facility with 1-way mirror and design team watching
- Requires planning, scheduling
- Logistics challenging for 4054 project
What to do with the information…

- Collect information as raw data, do not interpret as you take notes
- See text for some great methods to organize and translate raw data into info you can use to design your product
- Always check info against your common sense
Are you done?

- After you have a concept, or a prototype, get reaction from customer(s)
- Bring the prototype or drawing

Gathering info from customer is a continuous process
The bottom line…

It makes no sense to create a design that nobody other than the design team wants!