Product Design & Development

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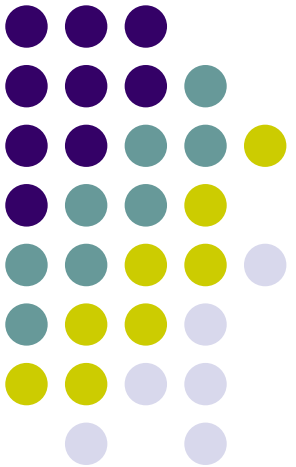
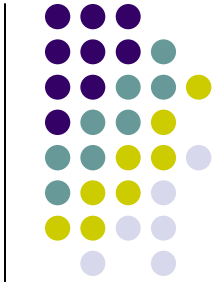
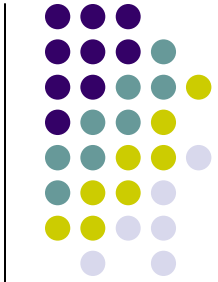


Today's Agenda



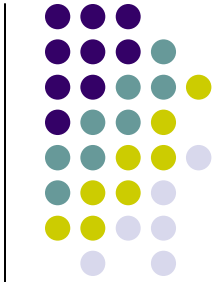
- The Team
- Course Objectives
- Logistics & Projects
- Collaboration with Helsinki University of Technology

… The Team



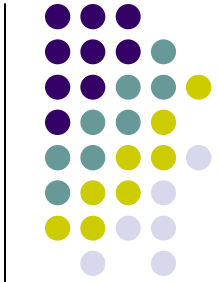
- Students
  - LFM
  - MBA
  - MOT
  - RISD
  - Engineering
    - Undergraduates
    - Graduates
  - Others?

Course Objectives



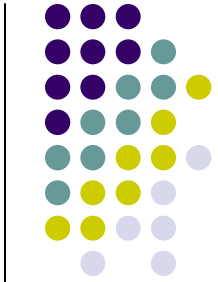
- Understand the Product Development ***Process***
- Learning By Doing
  - Apply tools learned in class
  - Apply and share existing knowledge
  - Improve team work and communication skills
  - Improve project management skills
- Have Fun

Course Logistics



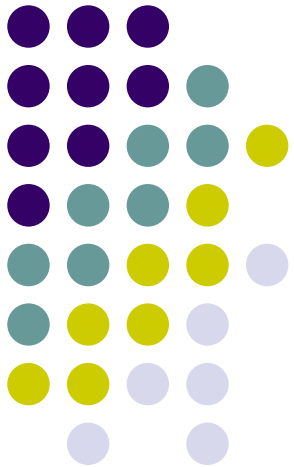
- Enrollment Policy
- Course Material
- Course Schedule
- Team Projects

… Enrollment Policy



- Priority to
  - Students whose proposals are selected
  - Students with high preference for selected projects
  - Students adding diversity
  - LFM students
- No Enrollment for
  - Students not present on first or second day of class
  - Students not prepared for class on Thursday
  - Students not making a project proposal on February 14
- No add cards until next Wednesday

Course Material



Required Textbook

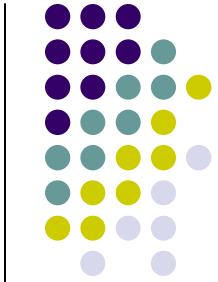
Product Design and Development

Ulrich & Eppinger

3rd Edition,

McGraw Hill, 2004

Case Studies



- Harvard Business School Case 9-600-143:
  "*IDEO Product Development*".
  - Handed out in class today for free!

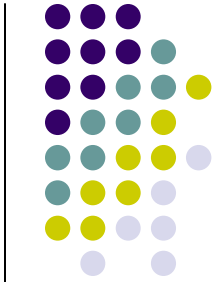
- Harvard Business School Case 9-695-026: "*Sweetwater*".
  - Download for $6.50 from Harvard Business Online at:
    http://harvardbusinessonline.hbsp.harvard.edu/relay.jhtml?name=itemdetail&id=695026

Course Schedule

ReadMe.PDF

Master Schedule
General Information
Syllabus
Assignments

Team Projects

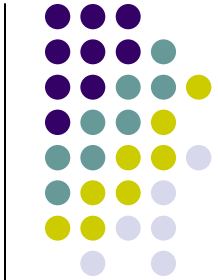


- Interdisciplinary teams (6 students)
- Continuous feedback from advisors and class
- Process “paced” by homework assignments
- $1,000 budget per team
- Project ideas
  - From each student (**next Tuesday)!**
  - Sponsored project: General Motors
  - Suggested project: Product for 3rd world

Project Selection Process

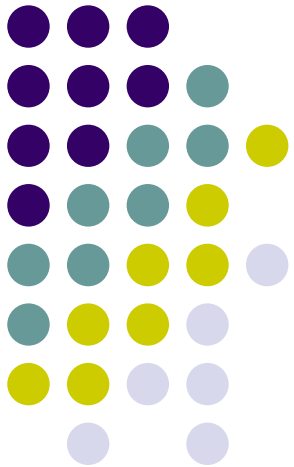
- Read ReadMe file (assignment document)
- Everyone makes a 50 sec proposal next Tuesday
  - Hand in a 1 sheet proposal **by 9:00 am!**
  - Examples are on SloanSpace
- Projects and teams will be formed based on your preferences
  - Hand in a Project preference card by next Wednesday **10:00 am**

Proposal Guidelines

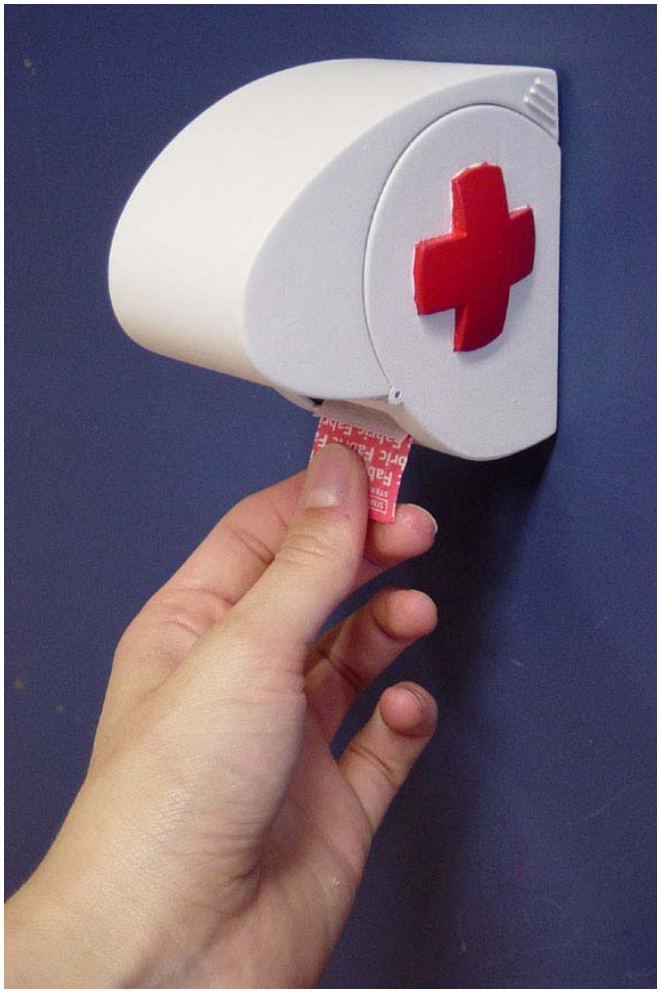


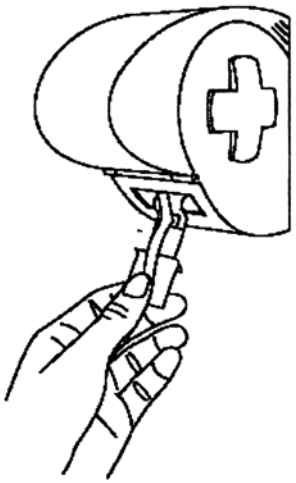
- Read ReadMe file (general information)
- Identify a need - Do not suggest a solution
- Choose carefully something that
  - is small and manageable (<10 parts)
  - is somewhat novel
  - does not duplicate existing products
    - Search the web for possible competitors
- Sell us on your idea
  - Tell us why existing products do not do the job
  - Convince us that nothing exists that will fill the need you have identified

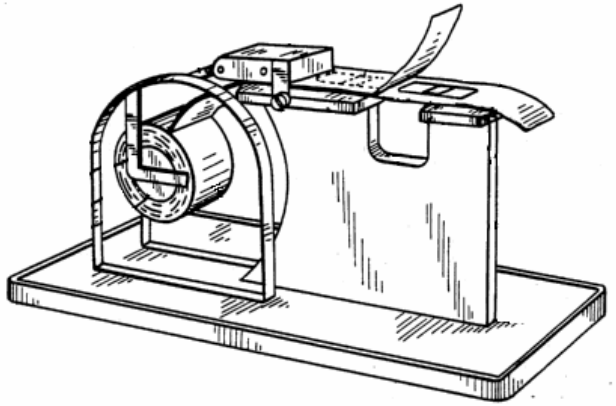
Project Examples from Recent Classes



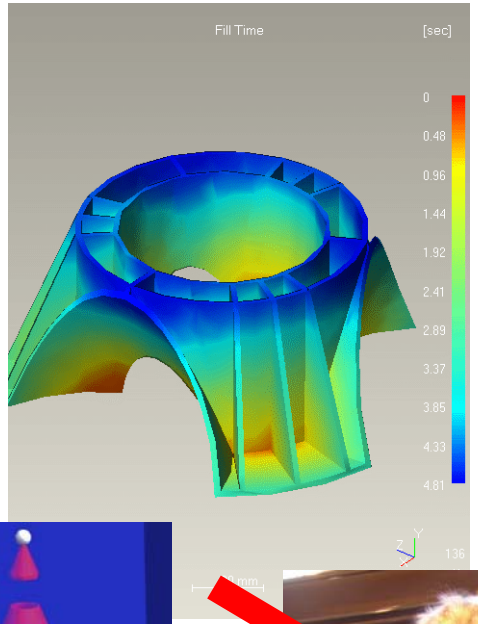
Band Aid Dispenser

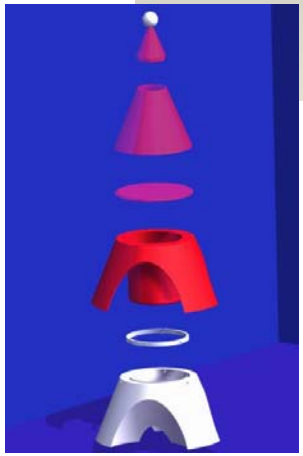




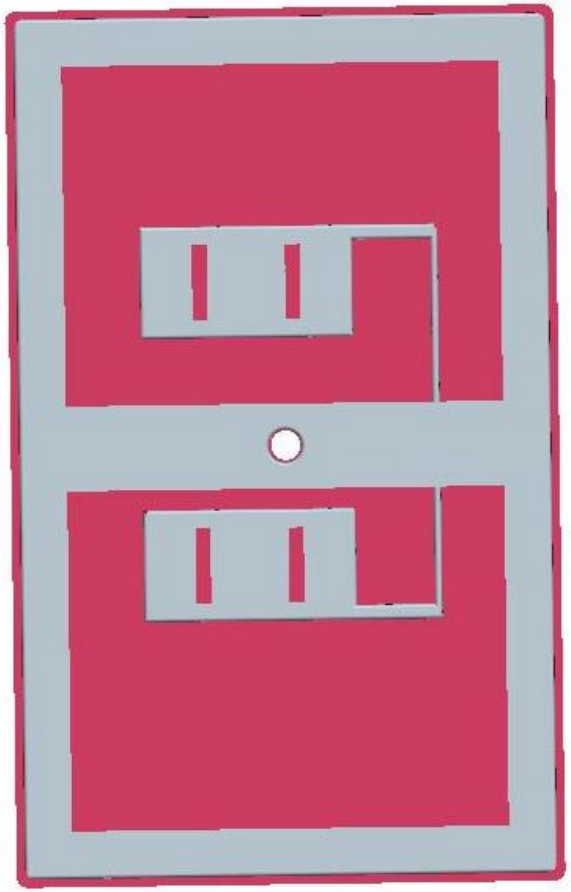


Christmas Tree Stand

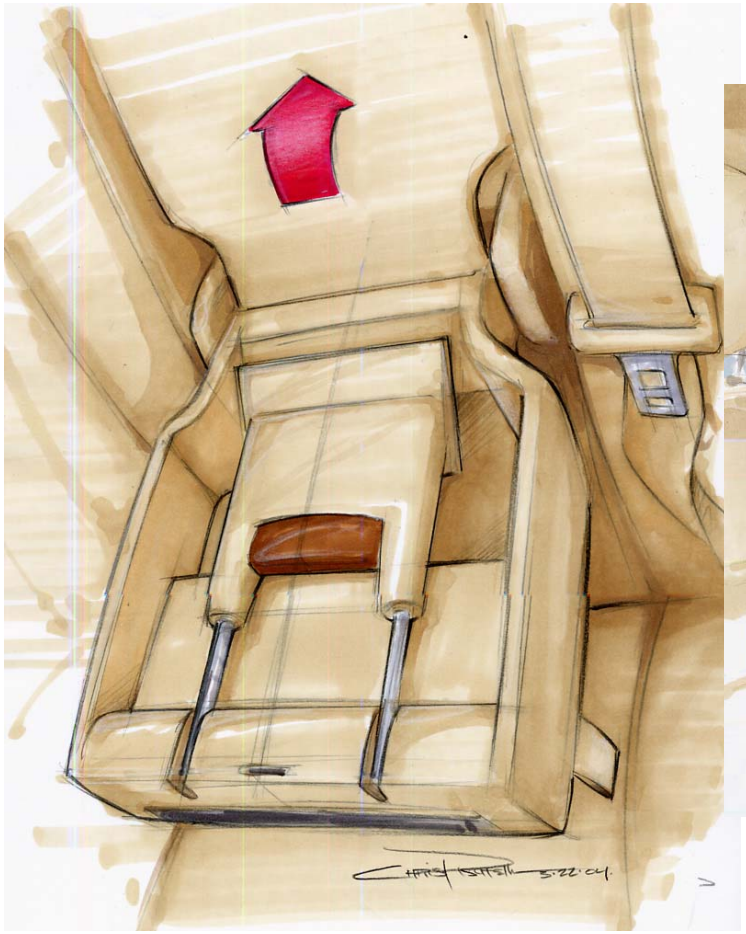


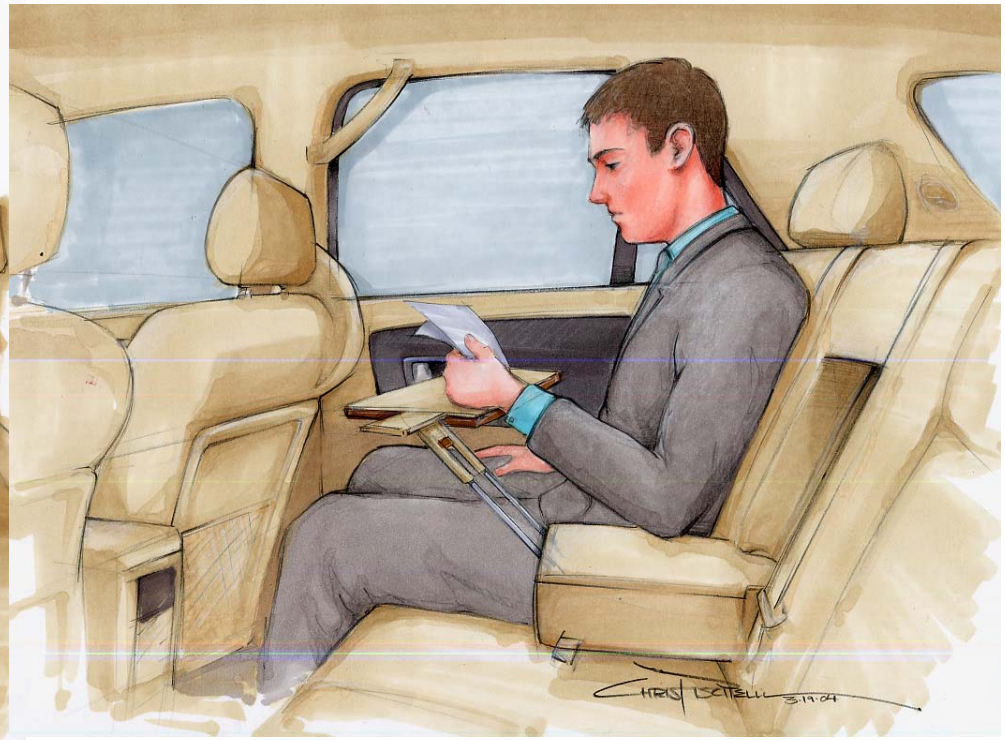


Outlet Cover



Rearseat Workspace





Laptop Cable Organizer

Chevy SSR Cooler

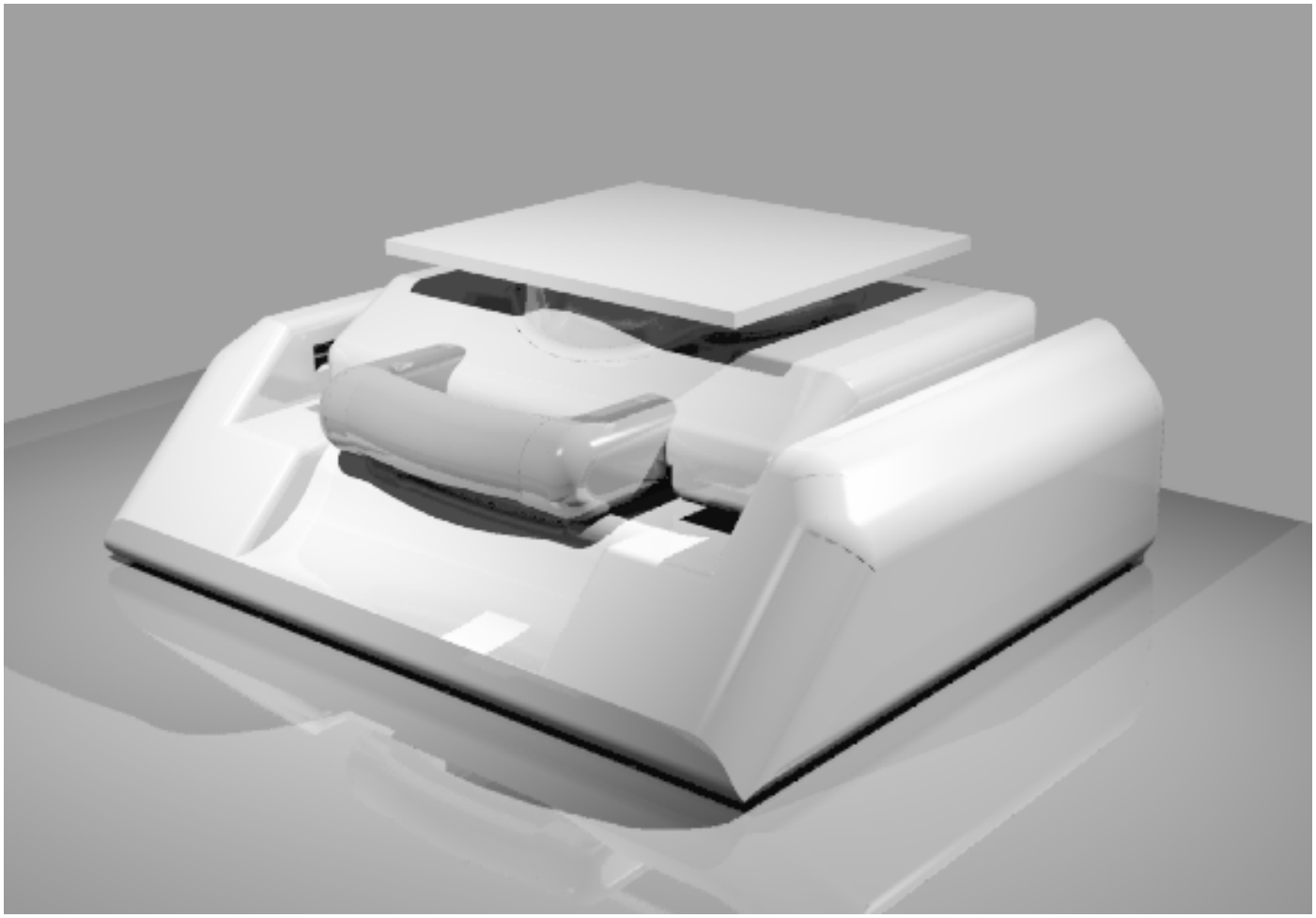
Ironing Board

Sugar Dispenser

Crate Shelf

Swivel Car Seat

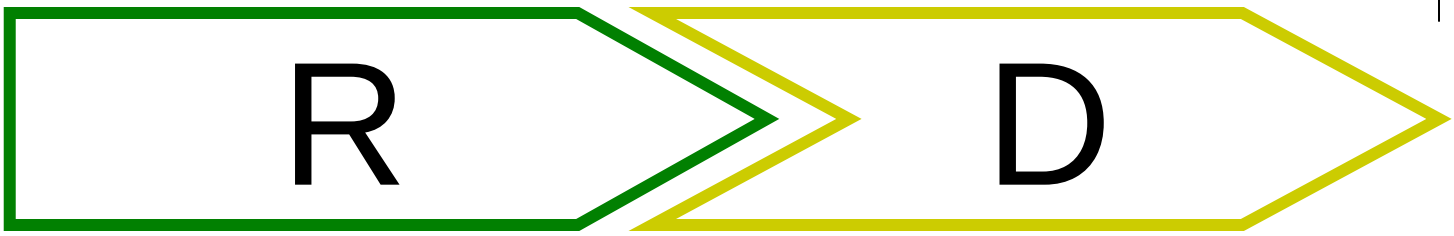
Swivel Car Seat



Baby Formula Dispenser

Media Projector for Developing Countries

Research and Development



Technology Development

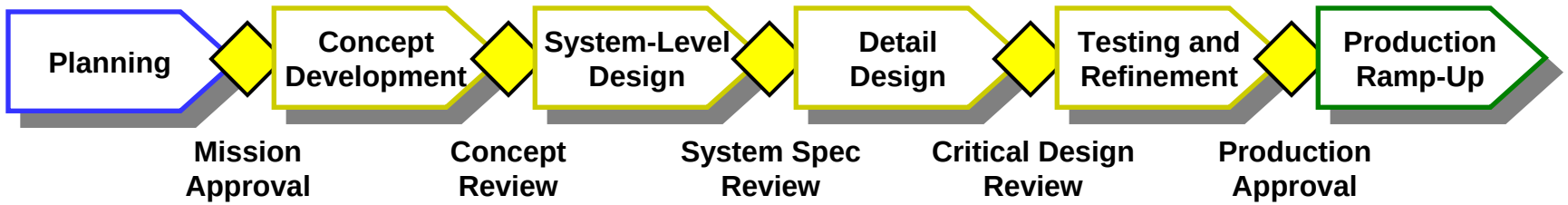
- Unstructured methods
- Difficult to plan
- Unpredictable

Product Development

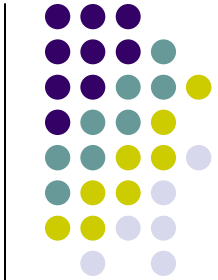
- Structured methods
- Generally planned
- Predictable

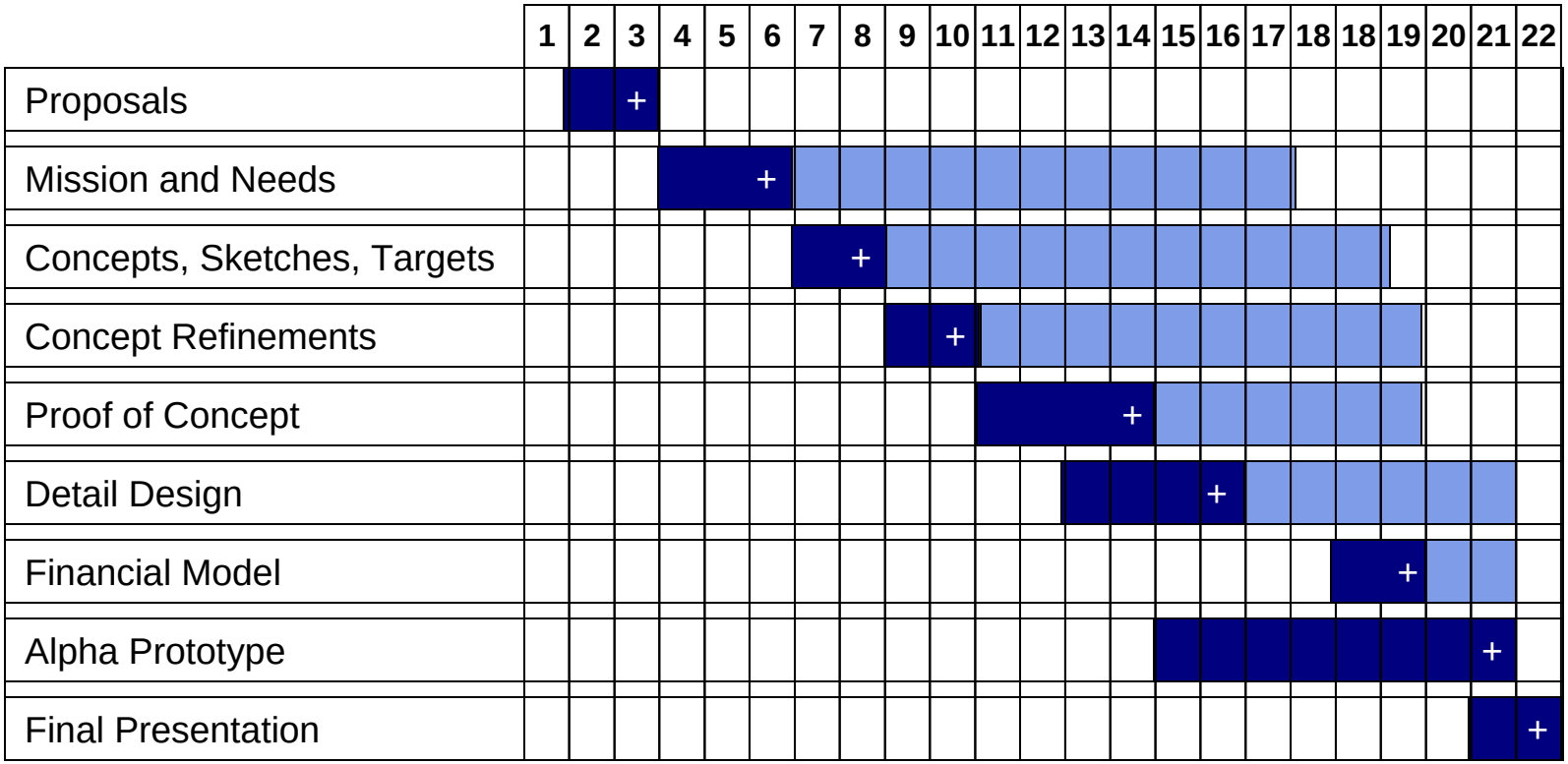
Our focus is on product development.

Generic Product Development Process

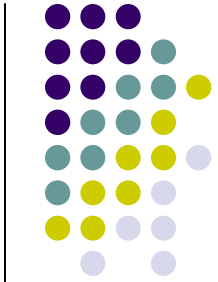


Project Gantt Chart



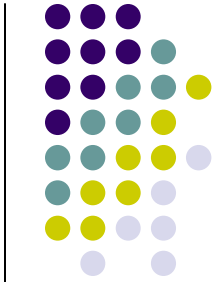


Next Steps



- Read the *READ-ME* file !!!
  - Answers almost all your questions
- Project proposals due next Tuesday
  - Required for assignment to a team
  - Start thinking about project ideas
- Purchase the text
  - Read Chapter 4
- **Read & Prepare IDEO Case**
  - **Think about Questions in Syllabus**

Proposal Logistics (Syllabus)



- **Class 3** **Project Proposals**

  Tuesday, February 14

- Each student will give a 50 second presentation (Assignment 1b)

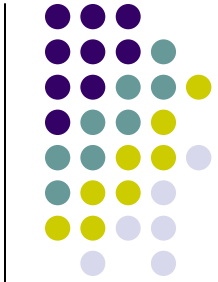
  Assignment 1a: Proposal Handout Due: **9:00 am.**

  Assignment 1b: Proposal Presentation Due: In class

  Assignment 1c: Project Preferences Due: **2/17**, **10:00 am.**

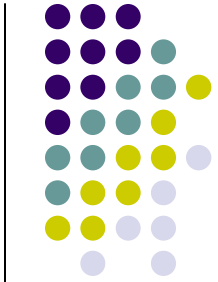
IF YOU MISS THE MORNING DEADLINE YOU **MUST** BRING 100 COPIES TO CLASS

Proposal Guidelines … (General Information)



- There should be a demonstrable market for the product.
  - Identify existing products that attempt to meet the need.
  - Should at least be an attractive opportunity for an established firm.
- High likelihood of containing fewer than 10 parts.
- High confidence in prototype costs being less than $1000.
- The product should require no basic technological breakthroughs.
- You should have access to more than five potential users of the product (more than 20 would be nice)
- Save any highly proprietary ideas for another context

… Proposal Guidelines (General Information)



- Most successful projects tend to have at least one team member with strong personal interest in the target market.
- It is really nice to have a connection to a commercial venture that may be interested in the product.
- Most products are really not very well designed.
- The experience in this class is that if you pick almost any product satisfying the above project guidelines, you will be able to develop a product that is superior to everything currently on the market.
- Just because you have used a lousy product doesn't mean that a better one doesn't exist. Do some thorough research to identify competitive products and solutions.
- An overview of some previous class projects is available on SloanSpace.