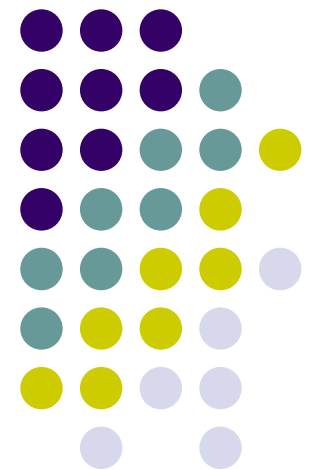
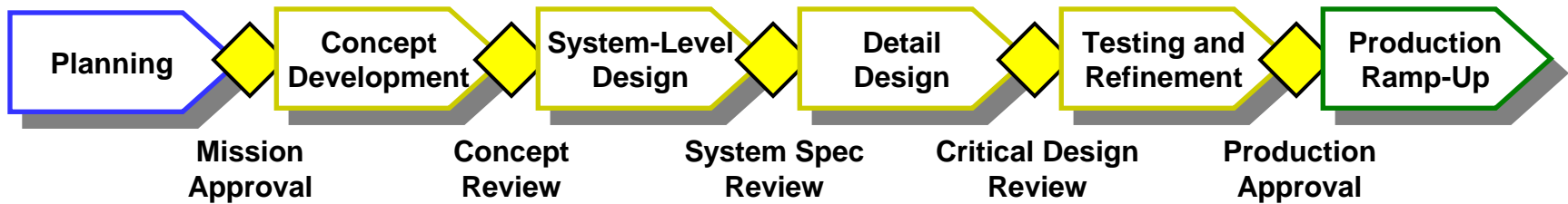


Identifying Customer Needs

Thomas A. Roemer

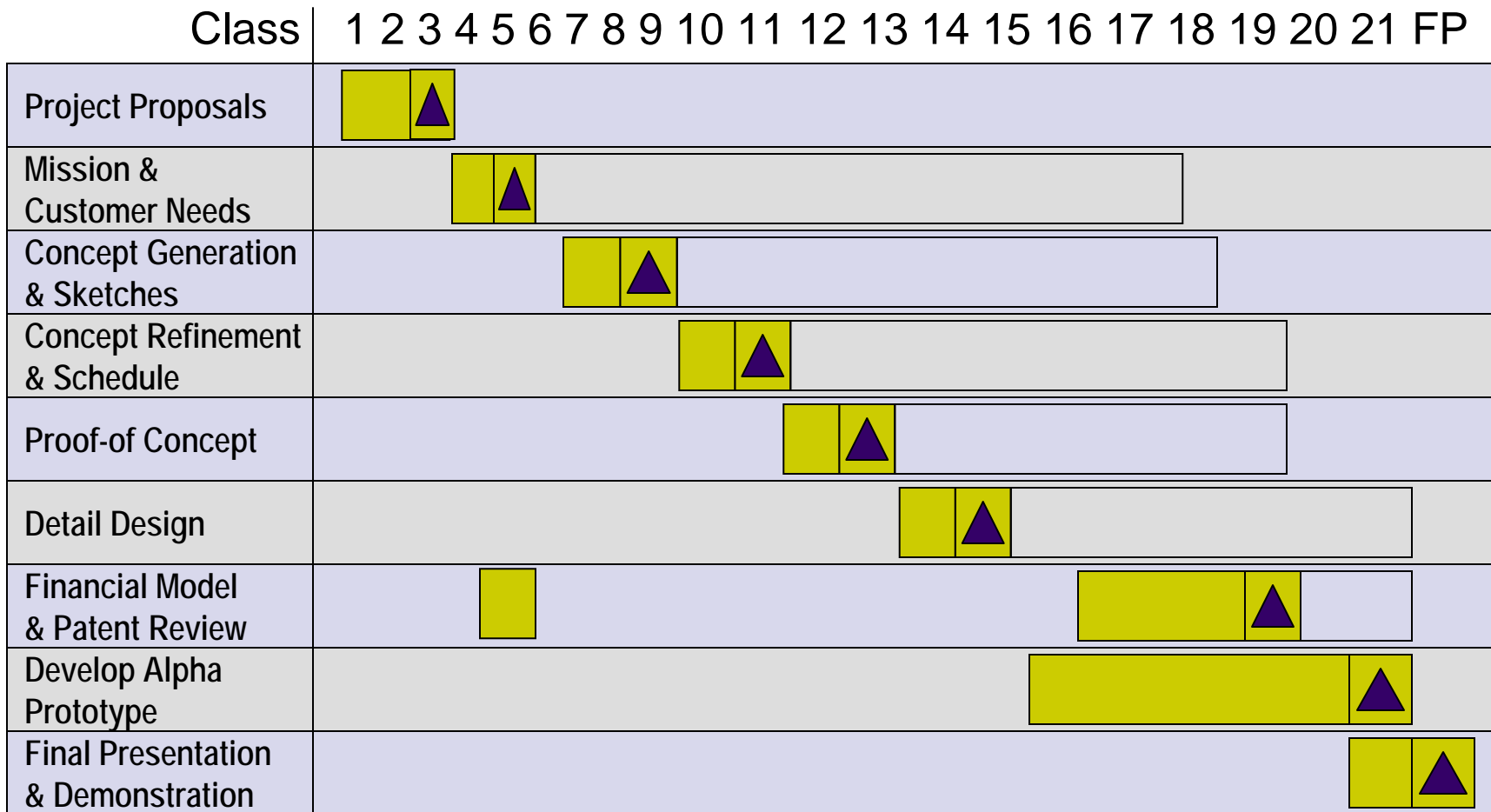


Generic Product Development Process





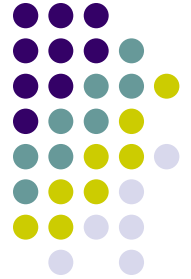
Class Projects: Gantt Chart



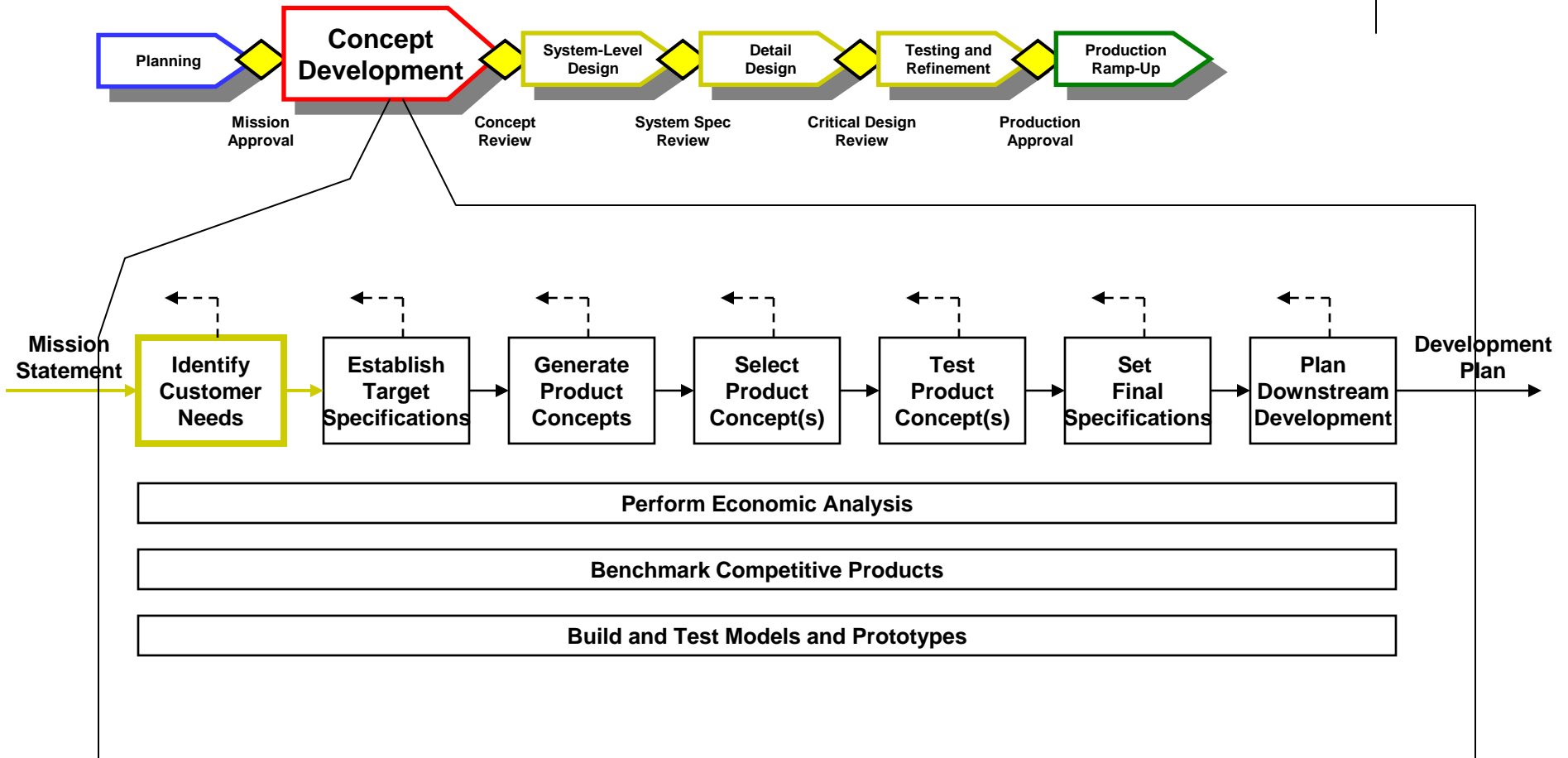
Assignment Work

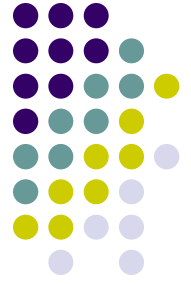
Due

Refinement



Concept Development Process





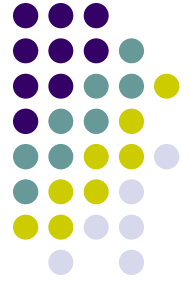
Customer Needs Process

- Define the Scope
 - Mission Statement
- Gather Raw Data
 - Observation
 - Interviews
 - Focus Groups
- Interpret Raw Data
 - Need Statements
- Organize the Needs
 - Hierarchy
- Establish Importance
 - Surveys
- Reflect on the Process
 - Continuous Improvement



Mission Statement

- **Product Description**
 - An easy to use, portable device for removing bacteria and protozoan parasites from water
- **Key Business Goals**
 - Product introduced in Summer 1993
 - 50% gross margin
 - 30% share of portable water filter retail sales within 2 years of introduction
 - Becoming the recognized leader in usability
- **Primary Market**
 - Avid outdoor enthusiasts
- **Secondary Markets**
 - Casual recreationalists
 - Home emergency
 - Aid organizations, military
- **Assumptions**
 - Hand-operated
 - Borosilicate glass fibers & charcoal filtering technology
- **Stakeholders**
 - User
 - Retailer
 - Sandy Platter force
 - Juan Rodriguez and VCs



Customer Needs Process

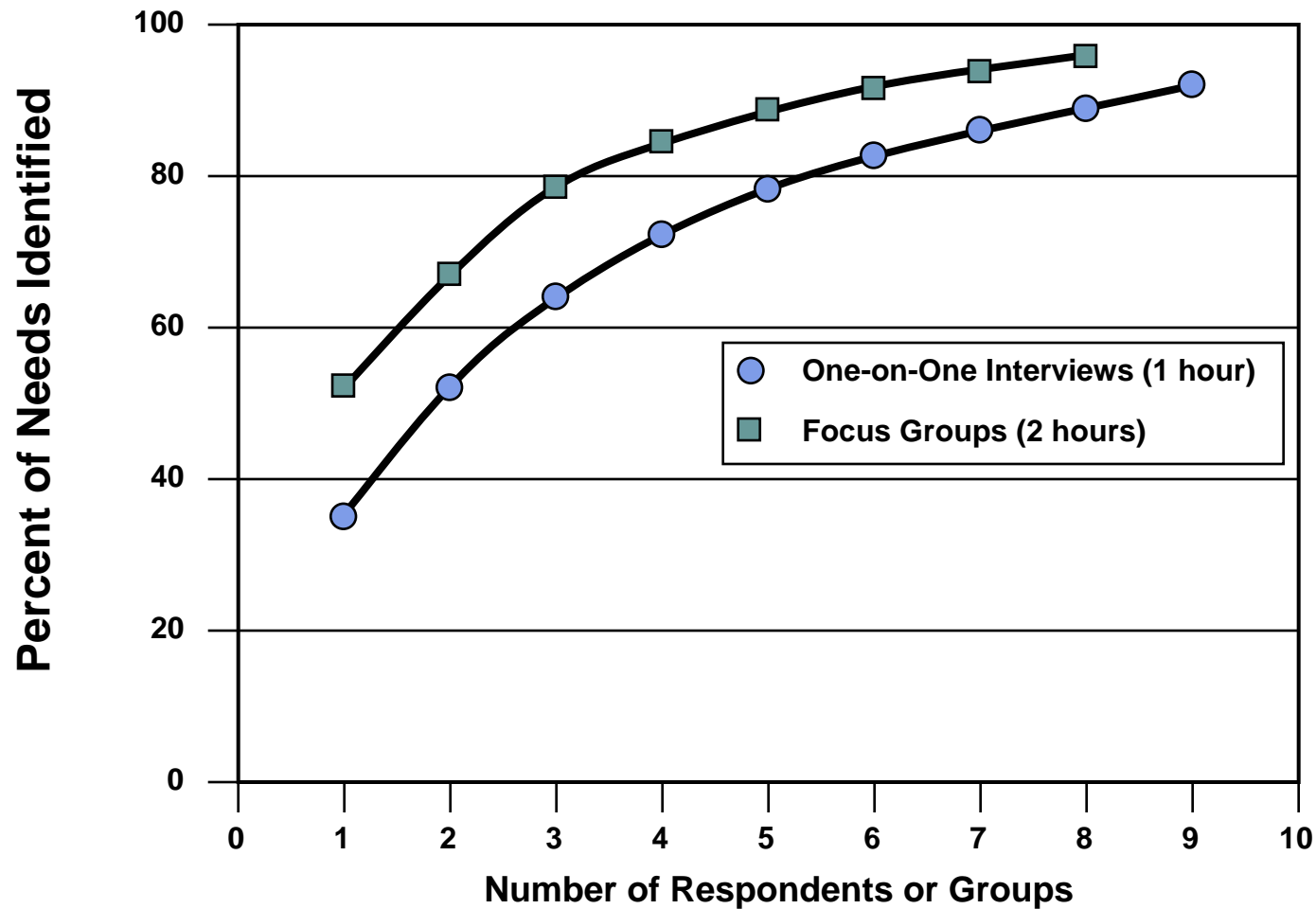
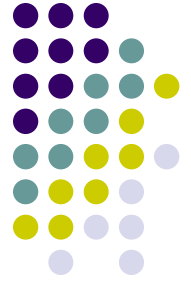
- Define the Scope
 - Mission Statement
- Gather Raw Data
 - Observation
 - Interviews
 - Focus Groups
- Interpret Raw Data
 - Need Statements
- Organize the Needs
 - Hierarchy
- Establish Importance
 - Surveys
- Reflect on the Process
 - Continuous Improvement

Gather Raw Data



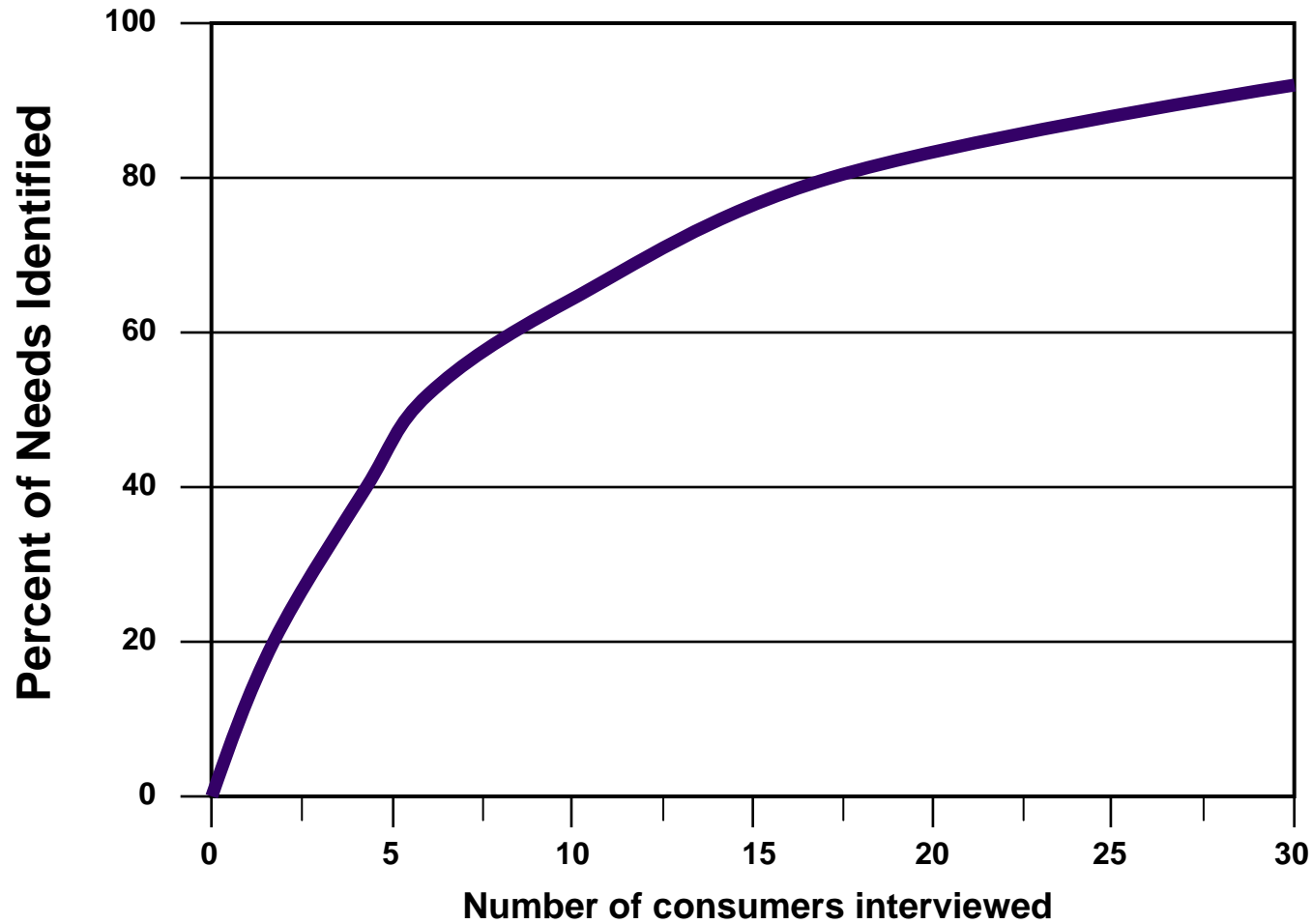
- Focus Groups
- Interviews
- Observation

Interviews vs. Focus Groups



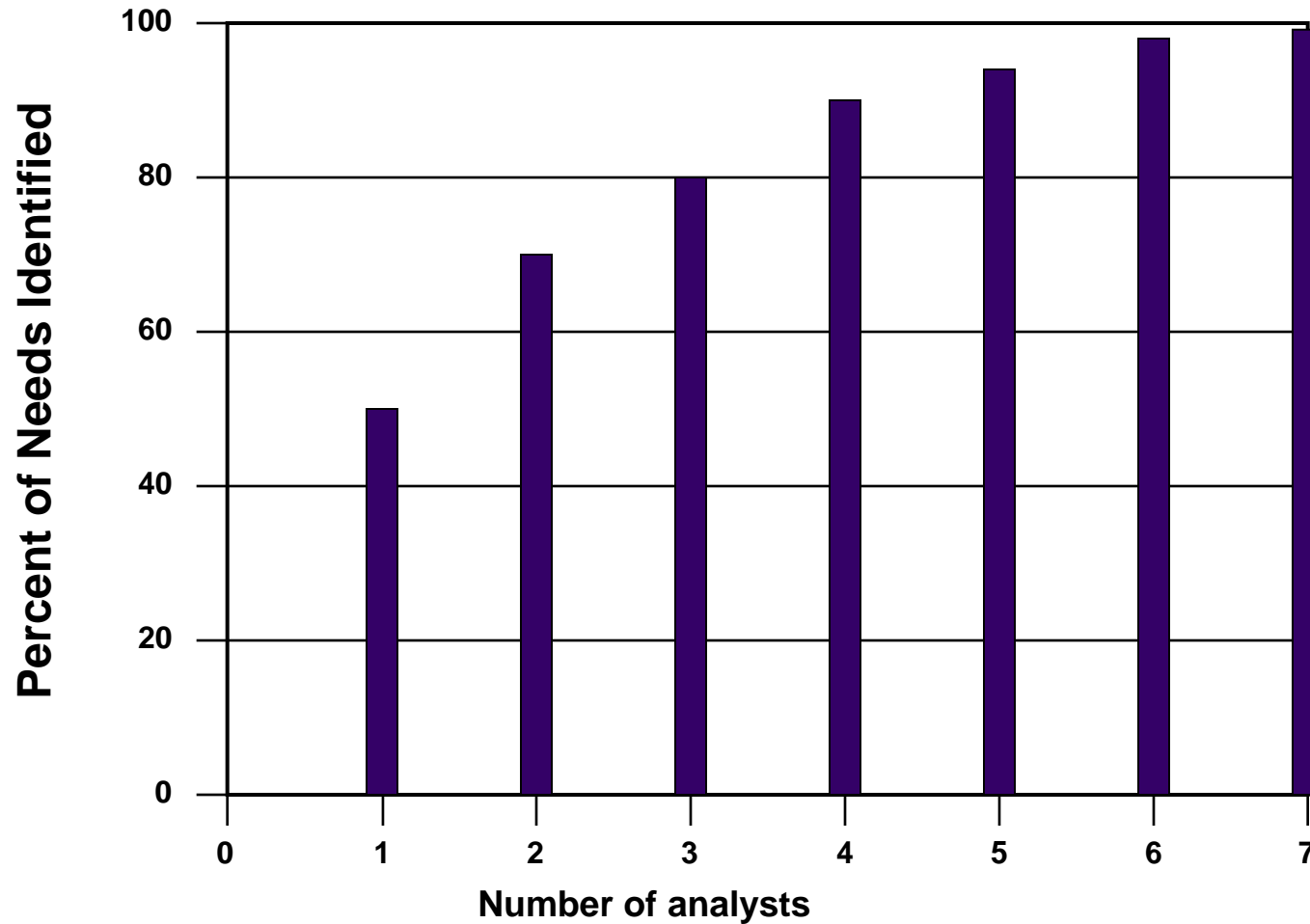
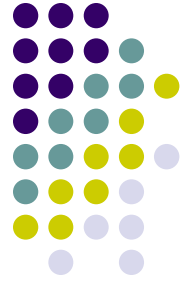
From: Griffin, Abbie and John R. Hauser. "The Voice of the Customer", *Marketing Science*. vol. 12, no. 1, Winter 1993.

How Many Consumers?

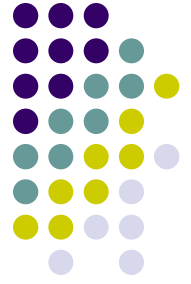


From: Griffin, Abbie and John R. Hauser. "The Voice of the Customer", *Marketing Science*. vol. 12, no. 1, Winter 1993.

How Many Analysts?



From: Griffin, Abbie and John R. Hauser. "The Voice of the Customer", *Marketing Science*. vol. 12, no. 1, Winter 1993.



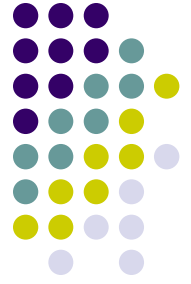
Customer Needs Process

- Define the Scope
 - Mission Statement
- Gather Raw Data
 - Observation
 - Interviews
 - Focus Groups
- Interpret Raw Data
 - Need Statements
- Organize the Needs
 - Hierarchy
- Establish Importance
 - Surveys
- Reflect on the Process
 - Continuous Improvement

Five Guidelines for Writing Needs Statements

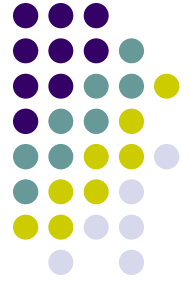


		WRONG	RIGHT
Guideline	Customer Statement	Need Statement	Need Statement
<u>What Not How</u>	“Why don't they put a hook at the end of the outlet hose? “	The outlet hose has a hook to connect to water containers.	The WF easily transfers water into a variety of different containers
Specificity	“I often times drop the water filter on rocks.”	The WF is rugged.	The WF operates normally after repeated dropping.
Positive Not Negative	“the WF is difficult to hold.”	The WF is not difficult to hold.	The WF is easy to hold
Product Attribute	“I need to attach a virus filter to the WF.”	A virus filter can be attached to the WF	WF accommodates a virus filter
Avoid “Must” & “Should	“The water should taste good.”	The WF should deliver good tasting water	The WF delivers good tasting water.



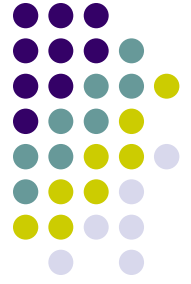
Needs Translation Exercise

- The water should not smell badly
- You need one hand to hold the filter, one hand to pump and one hand to make sure that the attachment cap doesn't fall off the bottle
- During a winter trip the pump once froze solid
- I never want to have Giardia again
- I get tired when pumping water for the entire family
- I cleaned the filter after every use, no matter how little water I pumped



Customer Needs Process

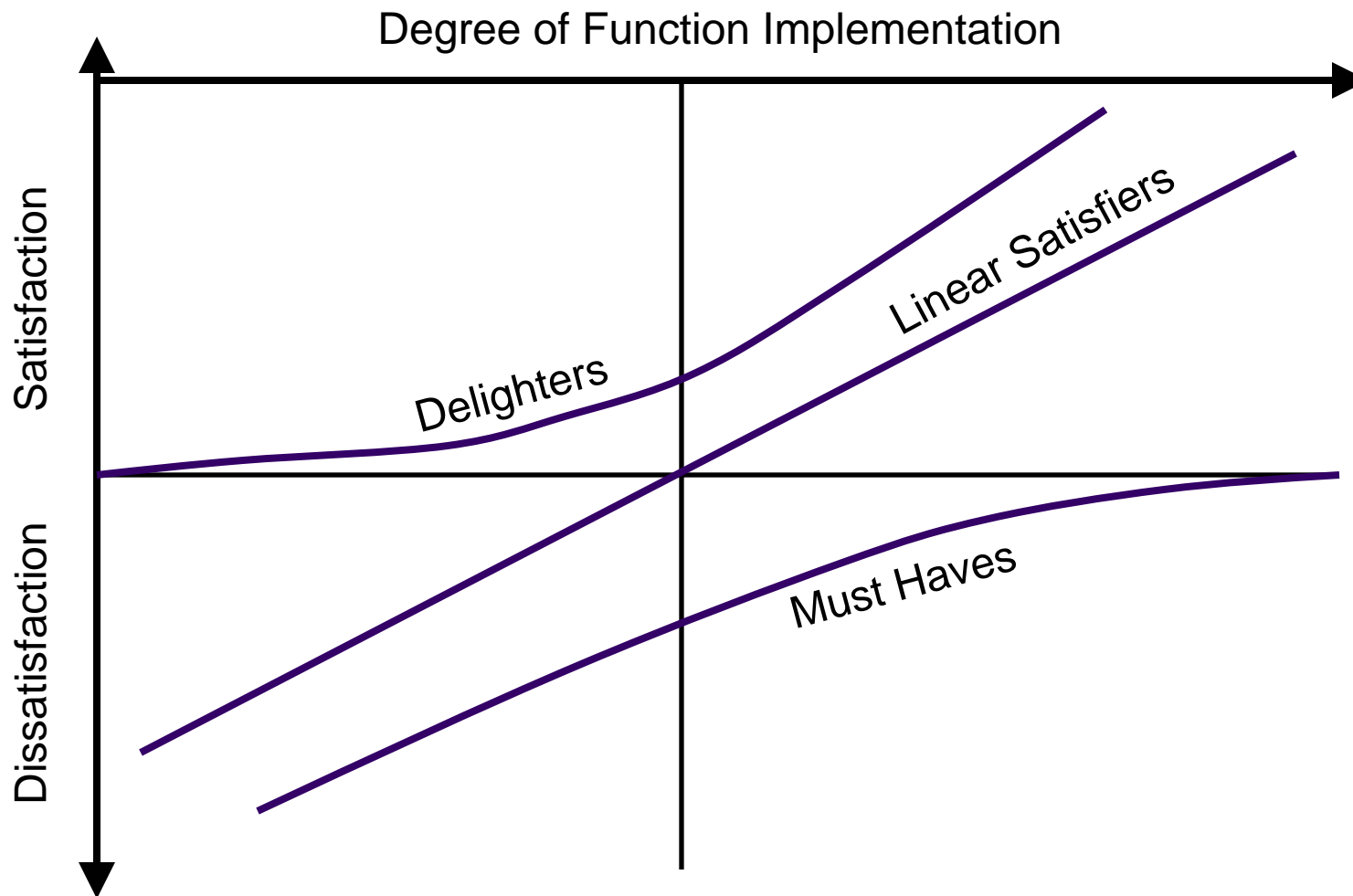
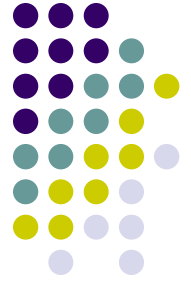
- Define the Scope
 - Mission Statement
- Gather Raw Data
 - Observation
 - Interviews
 - Focus Groups
- Interpret Raw Data
 - Need Statements
- Organize the Needs
 - Hierarchy
- Establish Importance
 - Surveys
- Reflect on the Process
 - Continuous Improvement



Structuring Needs

- Primary Needs (*Strategic Needs*)
 - Secondary Needs (*Tactical Needs*)
 - Tertiary Needs (*Operational Needs*)
-
- Must Haves
 - Delighters (Latent Needs!)
 - Linear Satisfiers
 - Neutrals

Kano-Diagrams



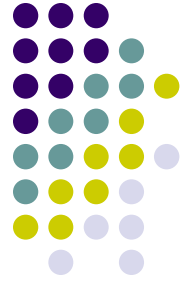


Structuring Needs

A tendency that

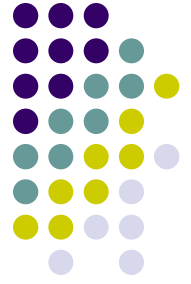
- Customers sort needs more evenly
- Customer ordering reflects actual use
- Group ordering reflects engineering view

- Professional teams only slightly outperform students



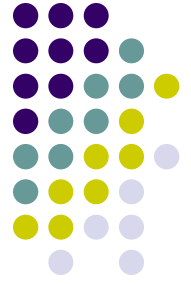
Customer Needs Process

- Define the Scope
 - Mission Statement
- Gather Raw Data
 - Observation
 - Interviews
 - Focus Groups
- Interpret Raw Data
 - Need Statements
- Organize the Needs
 - Hierarchy
- Establish Importance
 - Surveys
- Reflect on the Process
 - Continuous Improvement

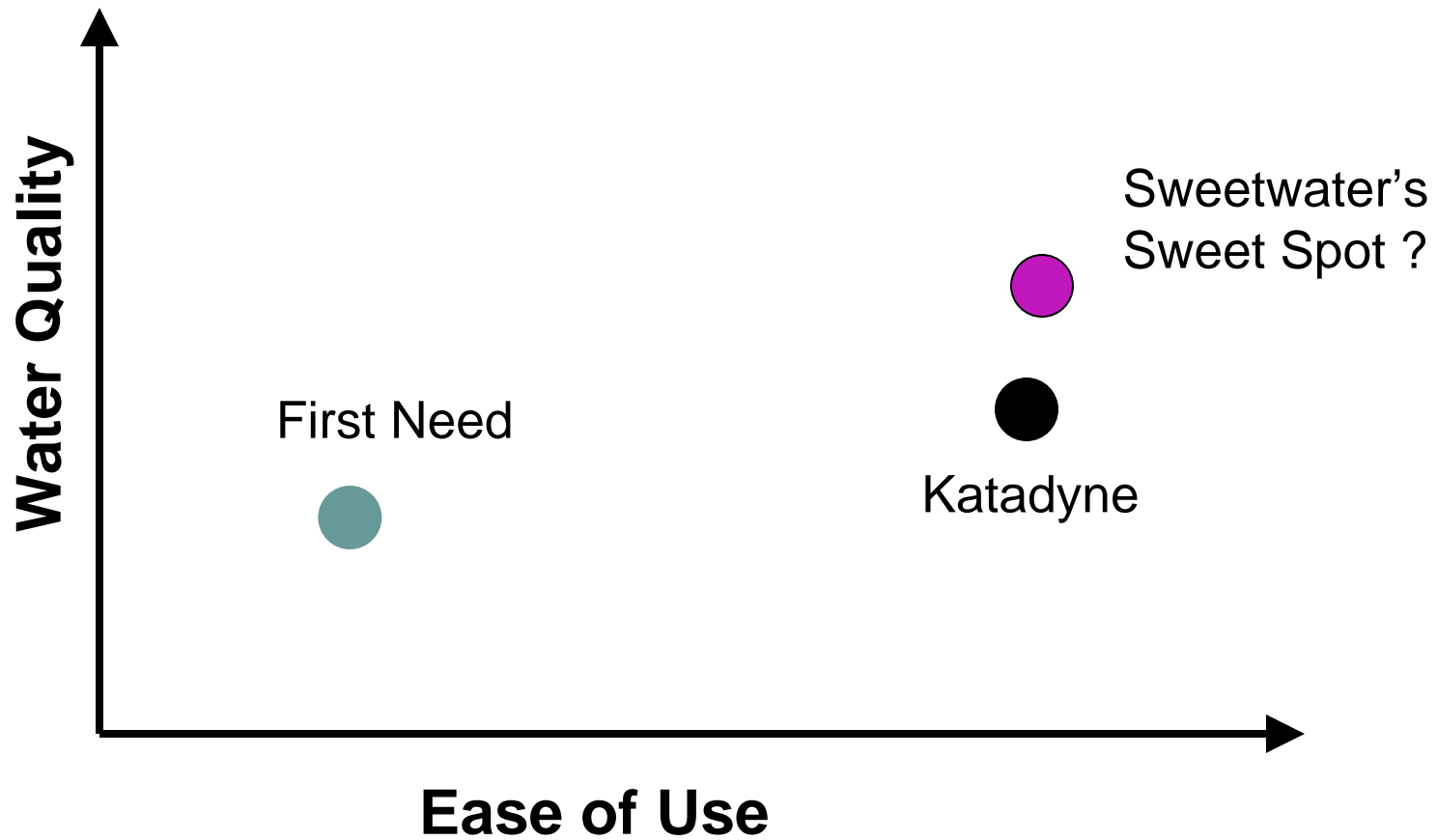


Importance Surveys

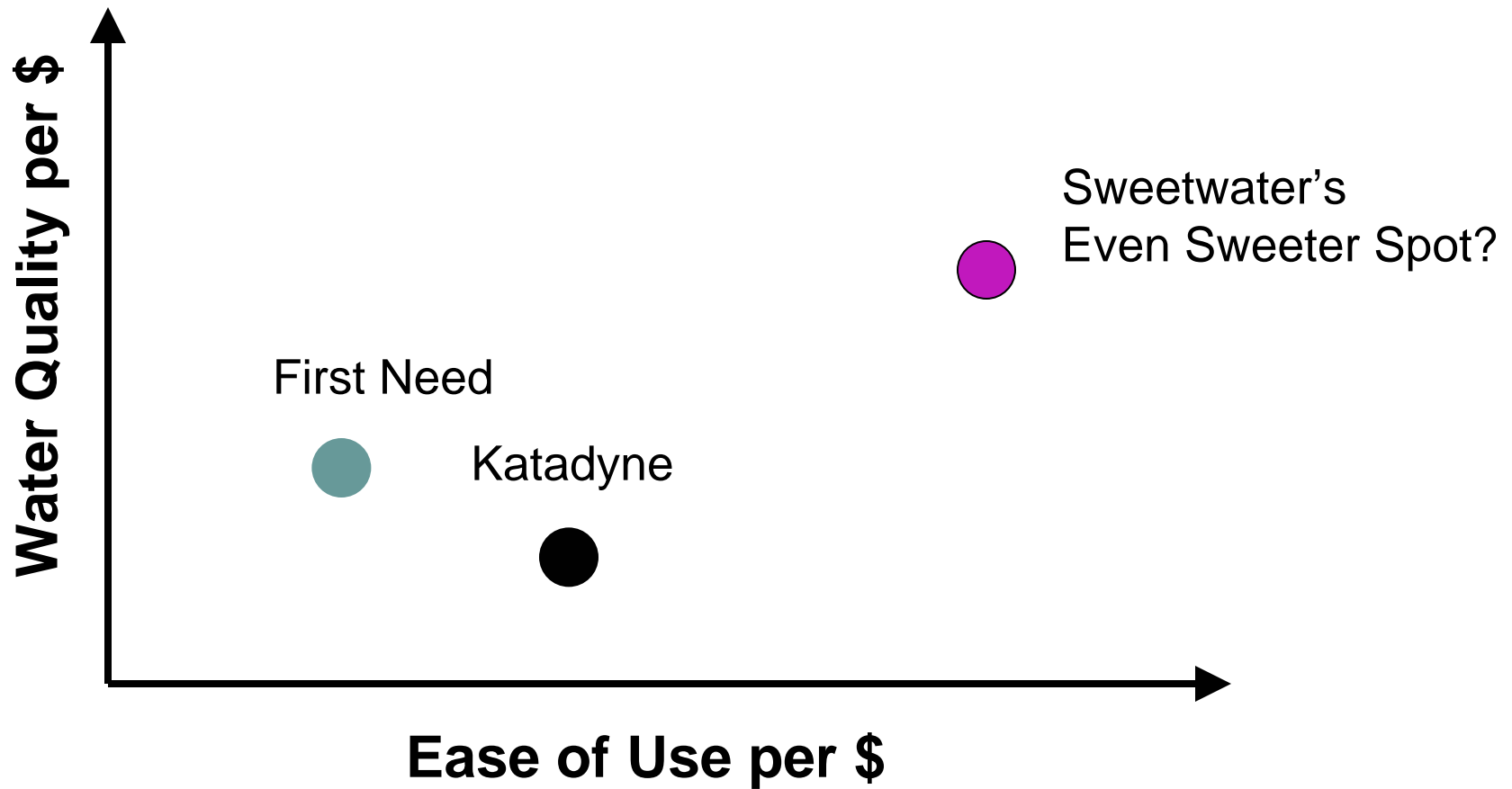
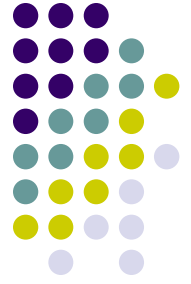
- 5,7,9 – point direct rating
 - How important is feature?
 - Desirable, neutral, undesirable
- Constant Sum Scale
 - Allocating fixed number of points to need levels
- Anchored Scale
 - Attach 10 points to most important need
 - Up to 10 points to all others
- All seem to perform equally well
- Frequency of mentioning a need is usually NOT a good measure for the importance of need

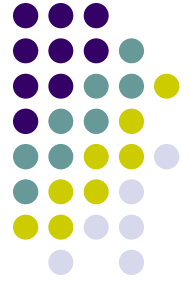


Perceptual Map



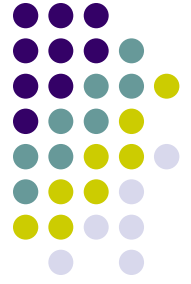
Normalized Perceptual Map





Company Update

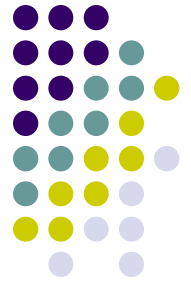
- Introduced in August 1993
- 1994, SW shipped ~54,000 units
- 1994 Revenue of \$2 million
- MSR (REI-owned!) enters market before SW and takes 40% of market share
- US Army shows interest
- 1997, SW almost disappears?
- 1998, Cascade Design [CD] acquires SW
 - CD had previously (1996) bought Platypus
- 2001, CD buys MSR
 - Sweetwater name on MSR products
 - Sweetwater is still household name



Take Aways

- Capture “What, Not How”
- Meet customers in the use environment
- Collect visual, verbal, and textual data
- Props will stimulate customer responses.
- Interviews are more efficient than focus groups
- Interview all stakeholders and lead users
- Develop an organized list of need statements
- Look for latent needs
- Survey to quantify tradeoffs
- Make a video to communicate results

Visual Data Example



MIT OpenCourseWare

<https://ocw.mit.edu>

15.783J / 2.739J Product Design and Development

Spring 2006

For information about citing these materials or our Terms of Use, visit: <https://ocw.mit.edu/terms>.