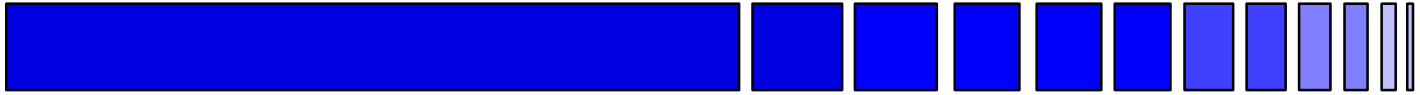
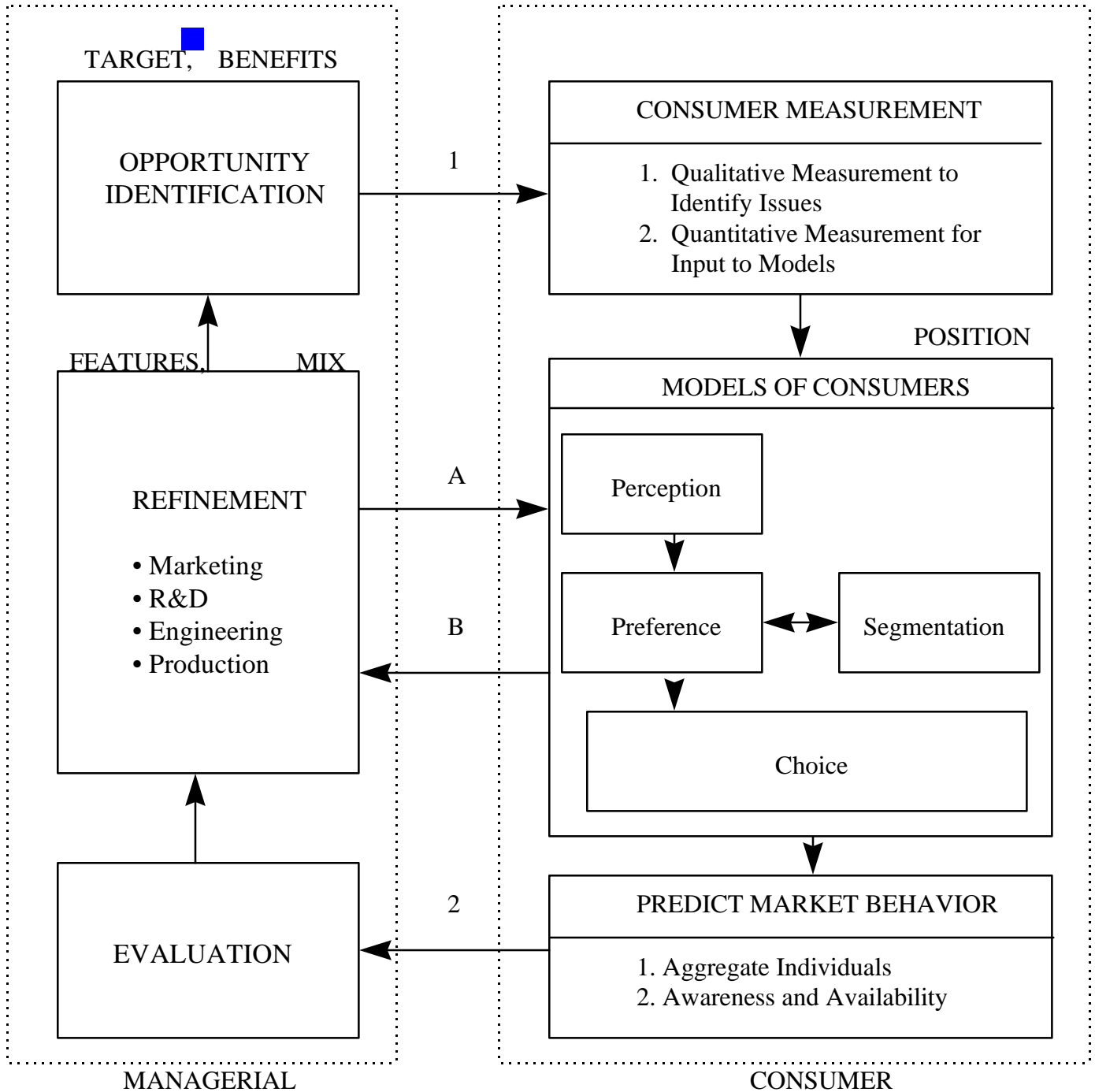
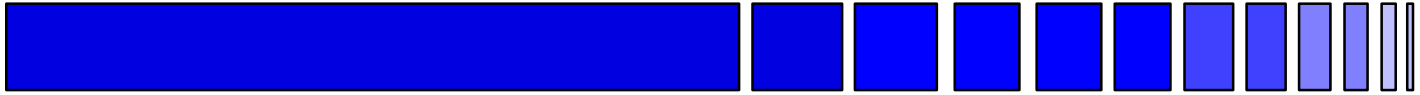


# Product Design



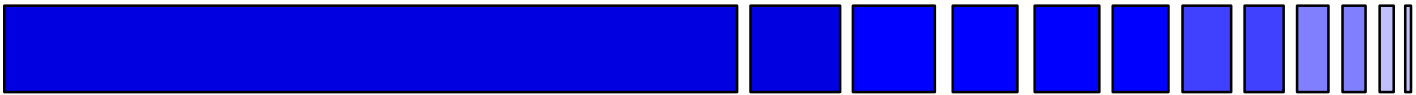
- Finalize specification of target market (target)
- Specify core benefits of the new product (benefits)
- Position the new product in relation to the competition (position)
- Develop product features corresponding to the product positioning (features)
- Formulate an initial marketing mix (mix)

# Product Design

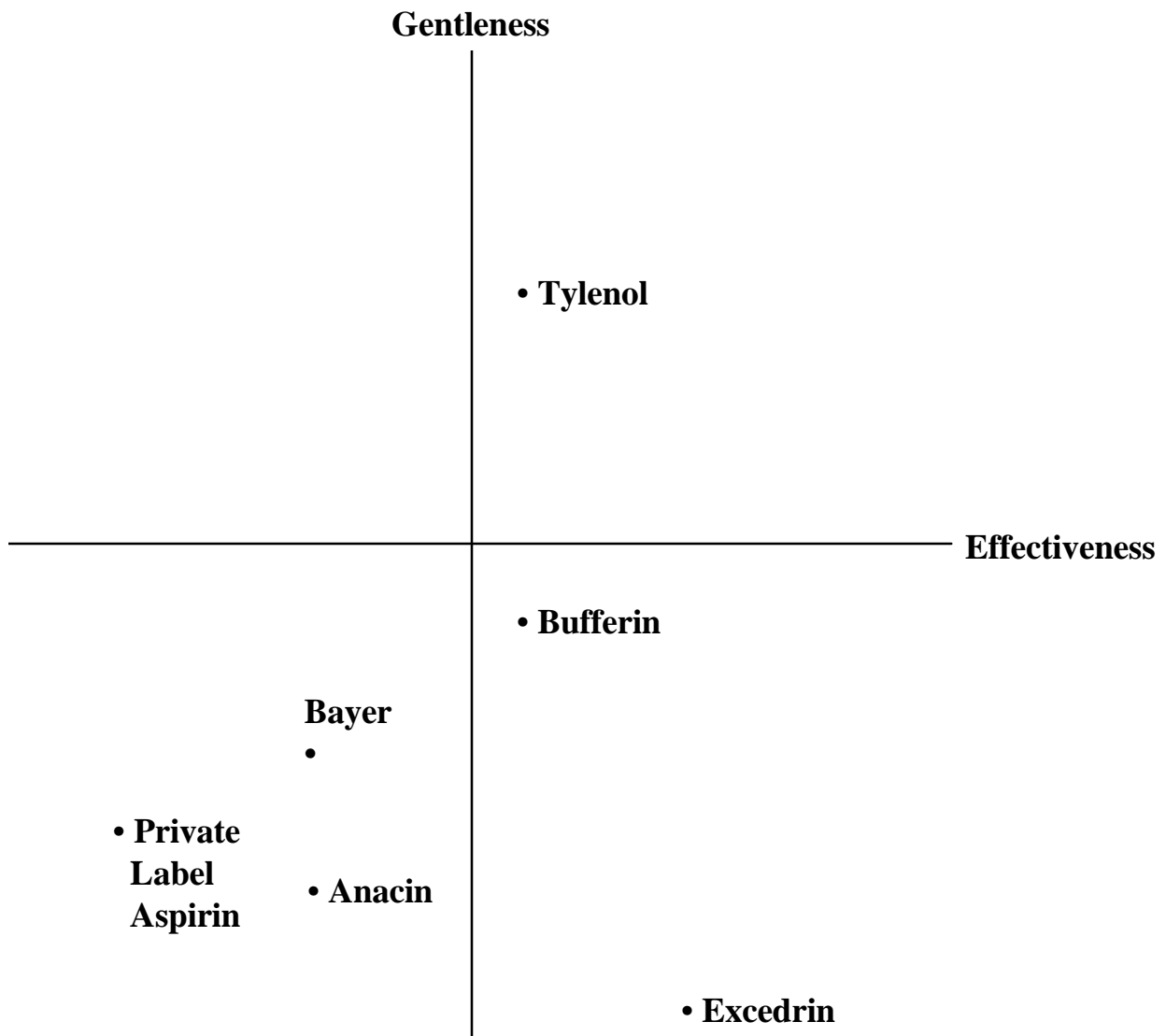
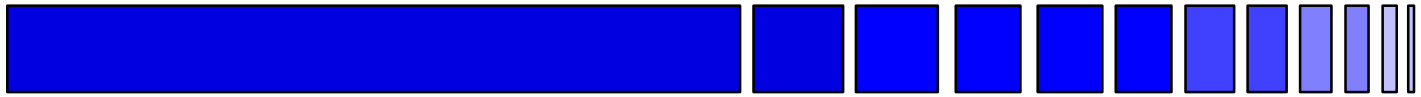


*The product design process*

# Product Positioning

- 
- The “positioning” of new products (in consumers’ minds) in relation to the company’s existing and competitive products is key to successful NPD
  - Various techniques (such as perceptual mapping) are available for this purpose
  - Perceptual maps identify salient dimensions, “ideal” points and the locations of the proposed new product, existing company products and competitive products in psychological space
  - Once a product “position” is selected for a new product concept--the entire marketing mix is mobilized to accomplish the desired position

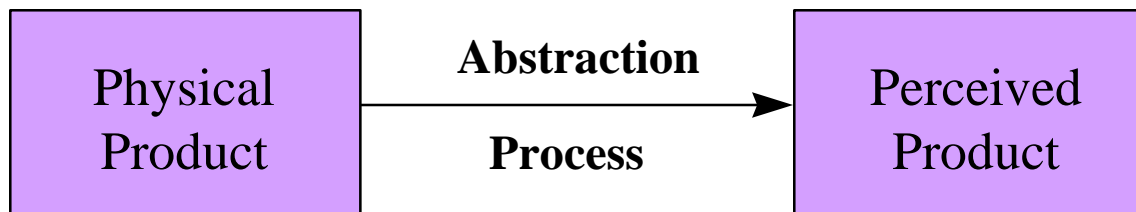
# A Two-Dimensional Perceptual Map



**Perceptual map for pain relievers**

# Product Positioning

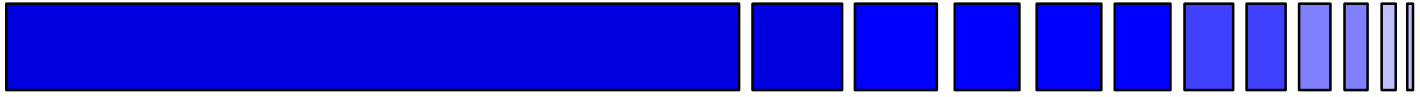
- Successful product positioning requires understanding how consumers perceive products
- Perceptions matter, reality does not--yet perceptions have to originate from reality
- Perceptions of products are based on personal experience with the product and exposure to its advertising



Product Attributes can be both physical and psychological

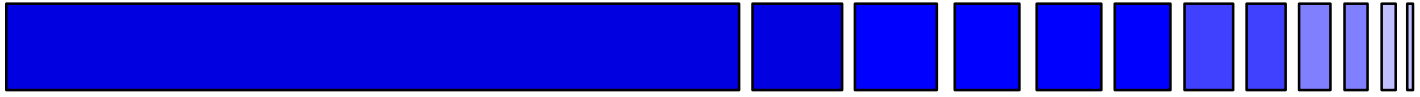
Product Features are physical

# Product Positioning



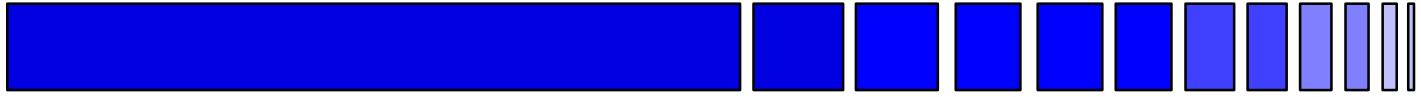
- Perceptual maps tell us how consumers perceive current products and the new product concept. They give us information on:
  - Dimensions (# & names)
  - Current locations of products & the new product concept (NPC)
  - Empty spaces & product clusters in the perceptual map
- But, you still need to know the best position(s) for your NPC--accomplished by studying consumer preferences and incorporating them into your perceptual map
- Consumer preferences are studied using 3 preference analysis techniques

# Preference Analysis

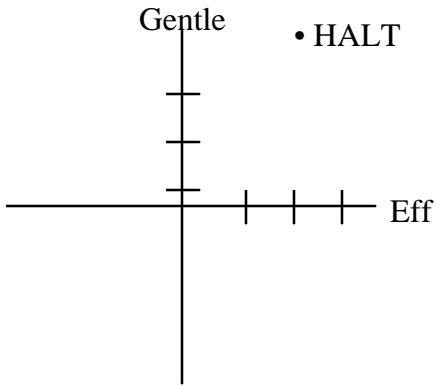


- Identifies best position for new product concept (NPC) in the perceptual map, if the market is undifferentiated -- or -- several positions if the market is segmented
  
- Identifies product attributes (physical & psychological) that should be incorporated into the NPC to achieve desired position(s) in the perceptual map
  
- The 3 preference analysis techniques are:
  - self-stated importances
  - preference regression
  - conjoint analysis

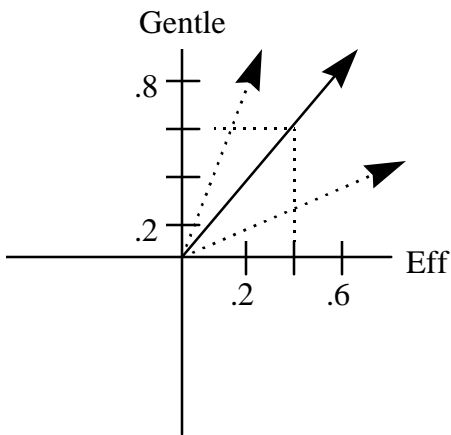
# Preference Analysis



## (1) Self-Stated Importances

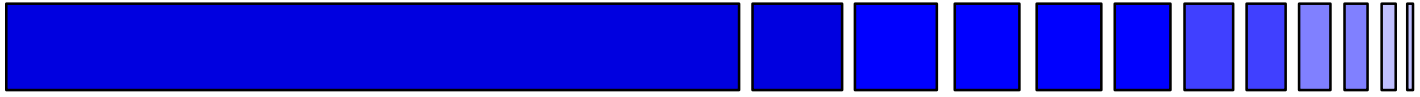


	Perceptual Rating of HALT on	
	<u>Gentleness</u>	<u>Effectiveness</u>
Christopher	3	4
Evita	4	2
AVERAGE	3.5	3



	Importance of	
	<u>Gentleness</u>	<u>Effectiveness</u>
Christopher	.8	.2
Evita	.4	.6
AVERAGE	.6	.4

# Preference Analysis



## (2) Preference Regression

We are interested in your preferences for alternative pain relievers. Below are listed a number of products. Place a “1” next to the product you prefer. Place a “2” next to your next most preferred product. Place a “3” next to your third preference, a “4” next to your fourth preference, and a “5” next to the product you least prefer. Be sure to rate all the listed products.

\_\_\_\_\_ Anacin

\_\_\_\_\_ Bayer

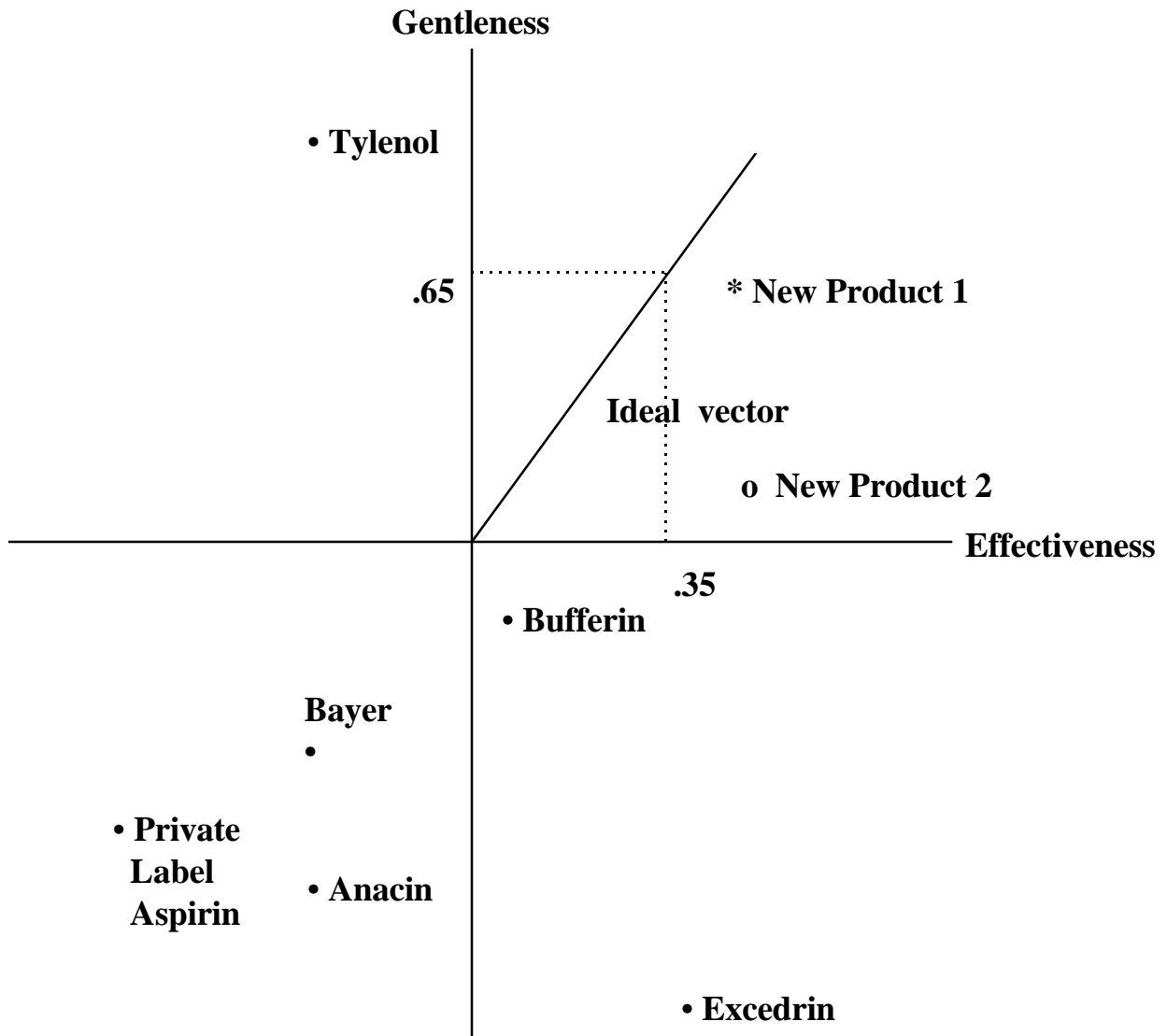
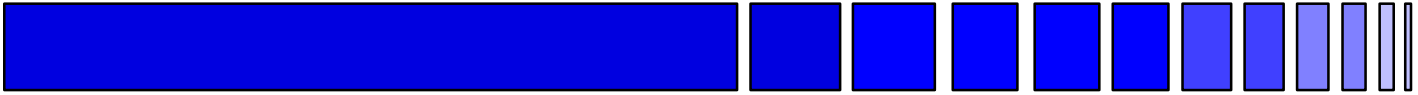
\_\_\_\_\_ Bufferin

\_\_\_\_\_ Excedrin

\_\_\_\_\_ Tylenol

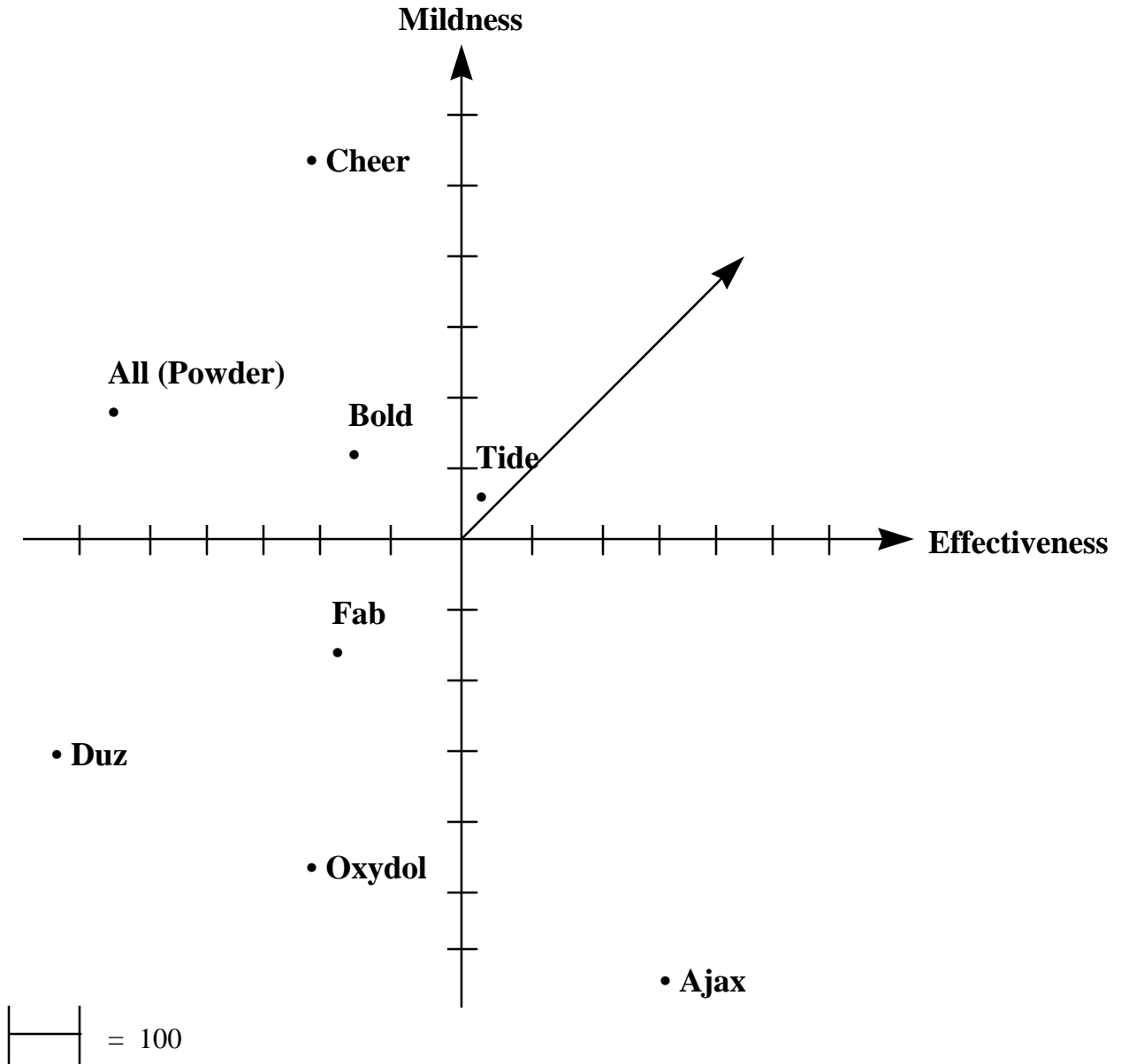
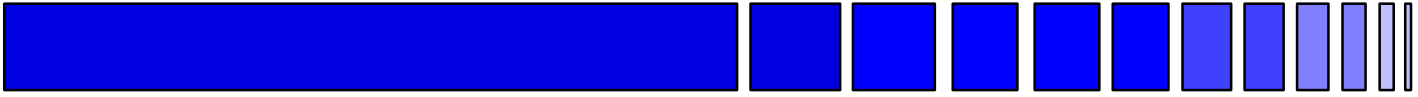
**Example of rank-order preference measurement for preference regression**

# Preference Analysis



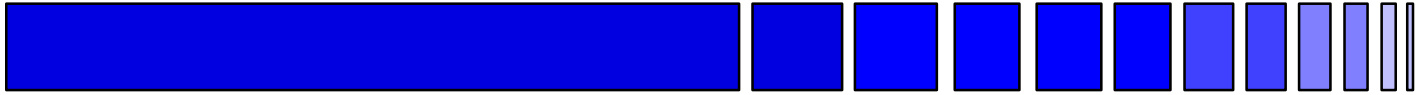
“Ideal” vector for pain relievers

# Preference Analysis

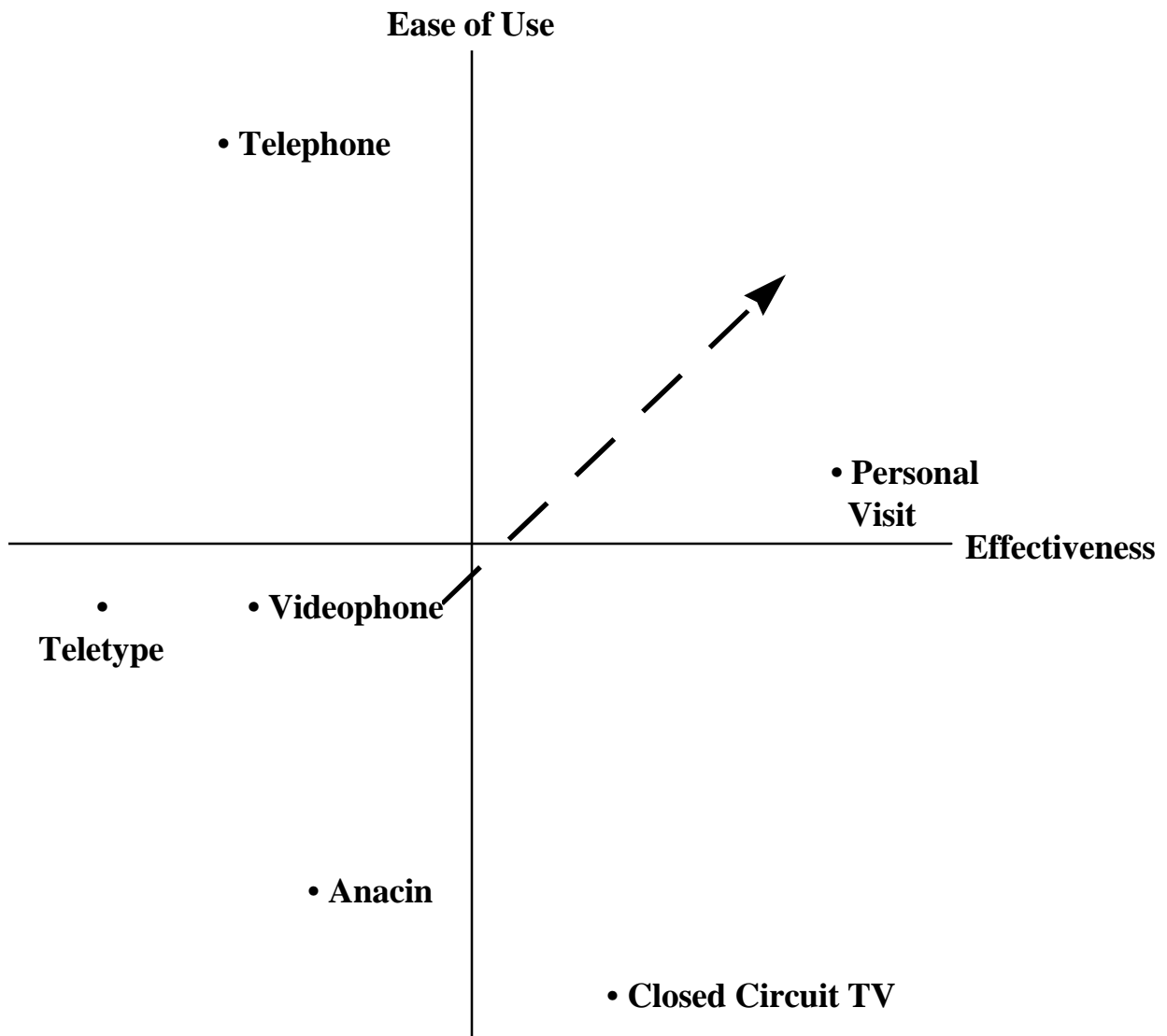


Perceptual Map for Selected Laundry Powders

# Preference Analysis

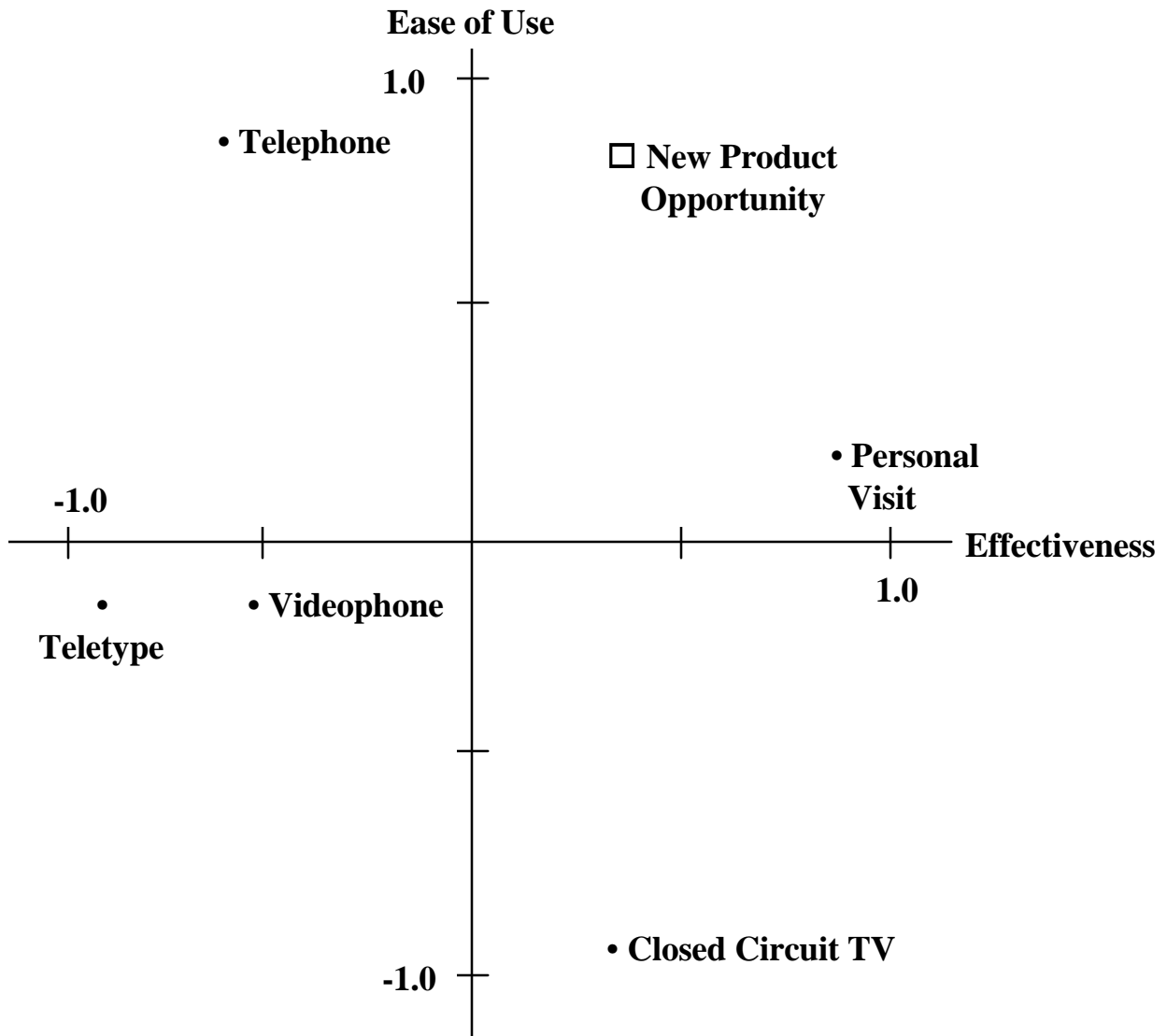
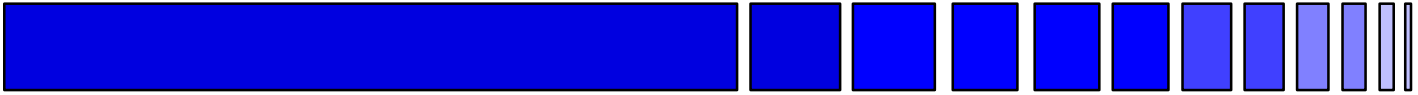


## (3) Conjoint Analysis



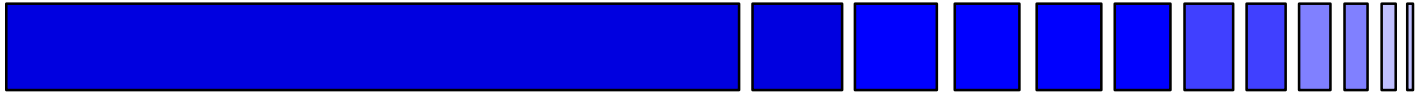
**Needed perceptual improvement in videophone**

# Preference Analysis



**Perceptual map of office-communications methods**

# Preference Analysis

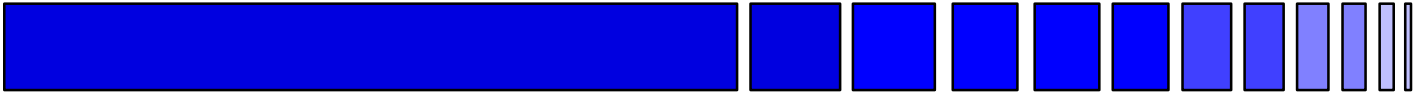


## Product Feature Combinations for Videophone

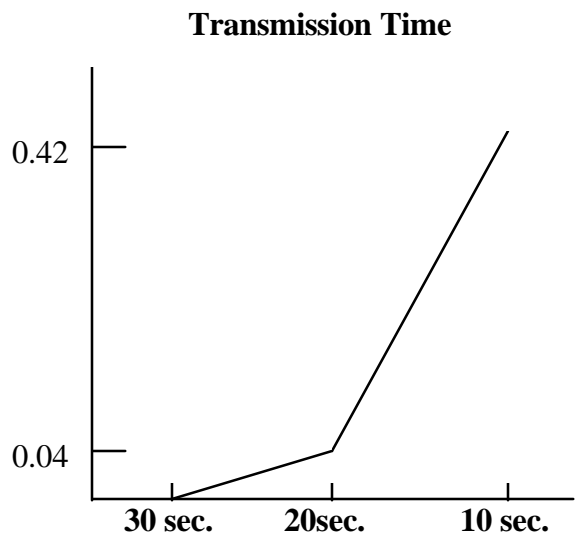
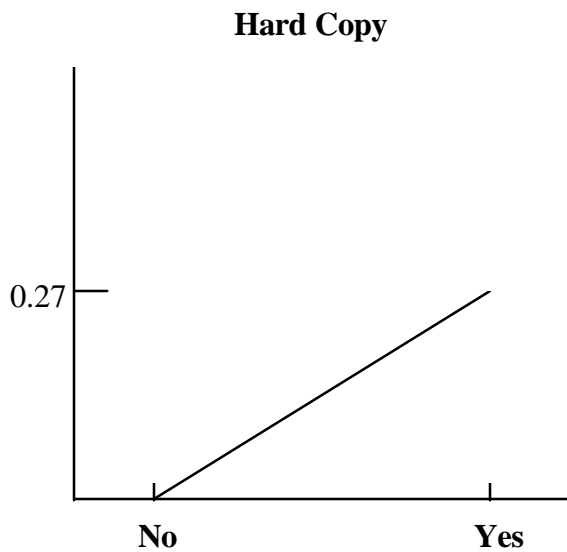
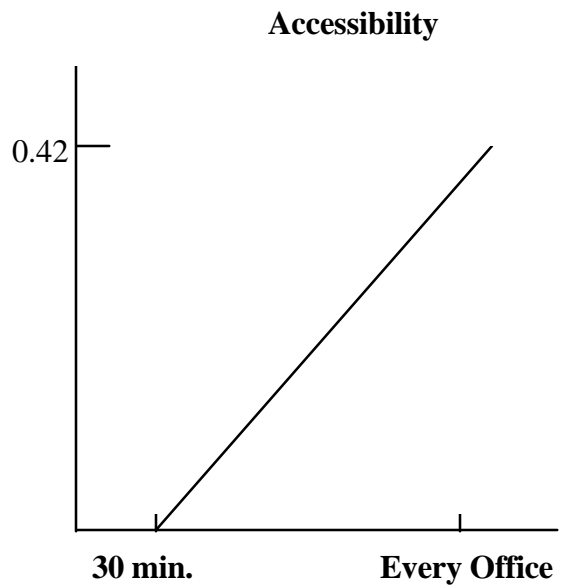
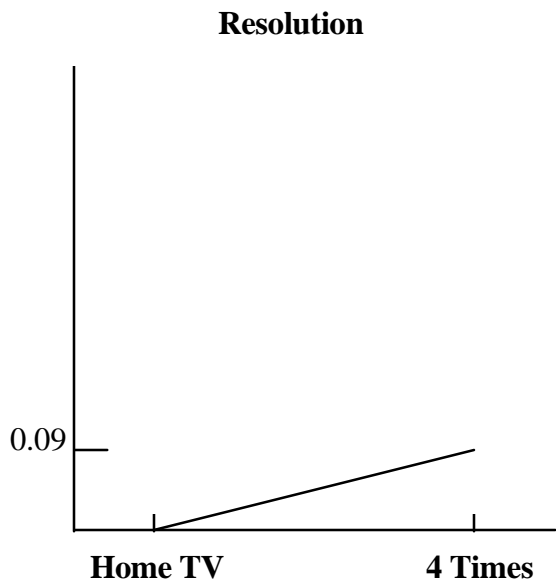
	Resolution	Accessibility	Hard Copy	Transmission Time
Level 1	Equal to home TV	30 minutes notice	None available	30 seconds
Level 2	<u>Four times home TV</u>	<u>Every office has one</u>	<u>Hard copy available</u>	20 seconds
Level 3	--	--	--	<u>10 seconds</u>

All 24 possible combinations are presented to respondents--who indicate their preferences in the form of rankings/ratings

# Preference Analysis



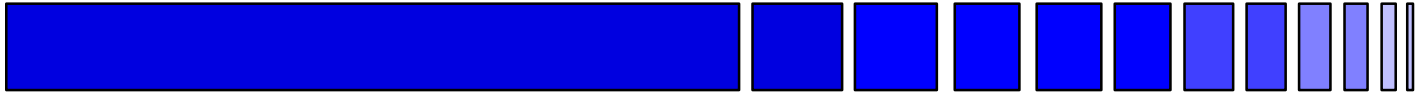
**Preference Rankings/Ratings are Decomposed to Give Following Information**



**Utility functions for features of the videophone**

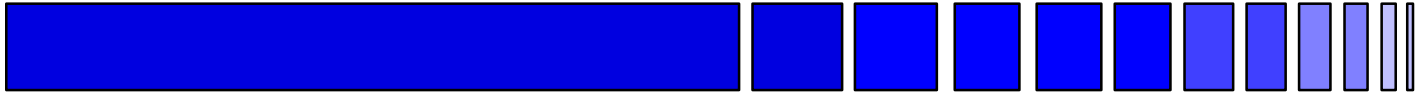
**Above information is used to select product features that will accomplish desired repositioning of product**

# Test Marketing Commercialization



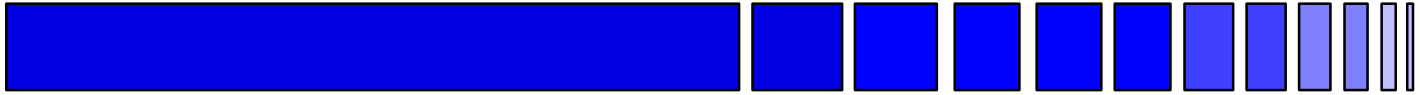
- Already discussed the importance of continuous screening and evaluation in the new product development process
- Once the product prototype has been developed, three types of testing are possible:
  - 1. Product Testing
  - 2. Pre-market Testing
  - 3. Test Marketing
  - each has its own advantages/disadvantages
- Current trend for consumer products is to use some form of pre-market testing--two popular methodologies are:
  - 1. Assessor
  - 2. Bases II
- For industrial products “beta testing” is the preferred methodology

# Product Testing



- Involves testing product under normal usage conditions. Can use company employees or real consumers for the purpose.
- Focus is on product performance in relation to “consumer” expectations or competitive products. Can use “in-home” tests or “mall intercept” tests.
- Advantages/disadvantages → secrecy can be maintained. Low cost/time option. Gives only purchase intention data. Does not evaluate marketing mix. Subject to various (correctable) biases.

# Product Testing



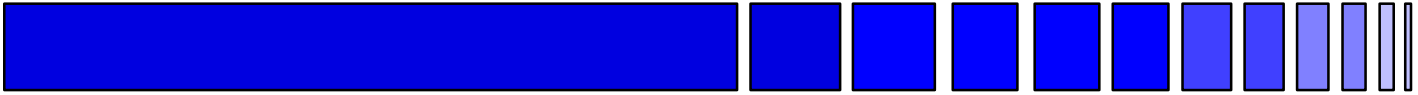
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## The Product Testing System Used for Gillette's Dry Idea Deodorant

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1. Technical lab work in 1975 suggested available technologies to achieve a drier deodorant.
2. A 2,000-person concept study (cost: \$175,000) determined that “Yes, roll-ons are good, but they go on wet and make you wait to get dressed.” A concept was at hand.
3. Laboratory project assigned to scientist: find a replacement for water as the medium for the aluminum-zirconium salts that did the work.
4. A prototype using silicone was developed, and it wasn't wet or sticky. But it did dissolve the ball of the applicator. (In-house lab test.)
5. Next prototype was tested by volunteers from the local South Boston area. It was oily. (Outside research firm employed to test college students in the area. Gillette often used in-house test of employees too).
6. By late 1976, a later prototype tested well on women recruited to sweat for hours in a 100-degree “hot room.” (Test of market users in the Boston area who served on a regular panel.) Unfortunately, though it worked well, it eventually turned into a rock-hard gel.

# Product Testing



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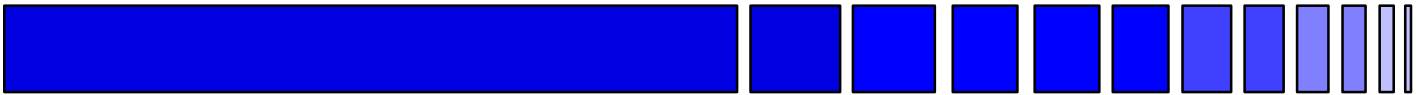
## The Product Testing System Used for Gillette's Dry Idea Deodorant

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7. By early 1977, another prototype had passed the “hot room” tests and was then sent to company-owned medical evaluation laboratories in Rockville, Maryland. (In-house test on rabbits and rats.) It passed the test.
8. Packaging was being developed and tested by in-house package design engineers. Early packages leaked.
9. However, the package dispensed a product that test subjects felt was too dry going on! (Test of market users.)
10. They then returned to a conventional roll-on bottle, added a special leak-proof gasket, and enlarged the ball so the antiperspirant could be applied in quantities large enough to be felt. Another test of market users confirmed that people did indeed feel drier. This conclusion, when put with the earlier data that the product did have a good antiperspirant effect, was enough to go to market.

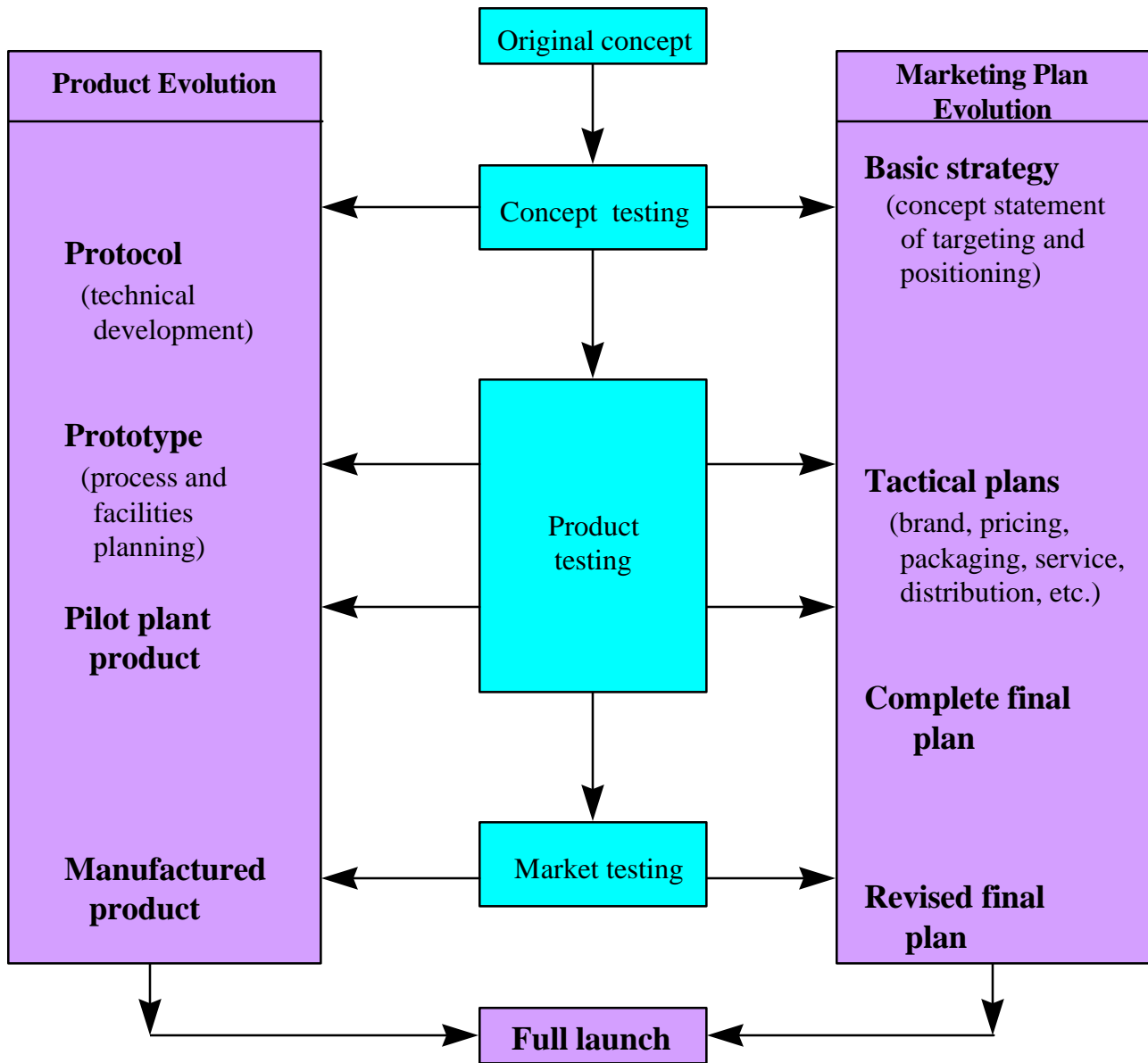
Note: This procedure used several different types of tests, with different objectives and formats, and with reiterations. The product was cycled until successful.

# Test Marketing

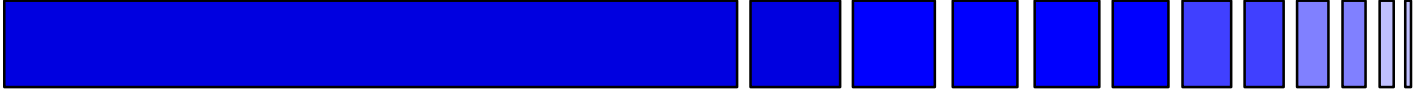
- 
- Involves testing the product and the introductory marketing mix under real world conditions. Generally used to estimate trial and repeat purchase rates--which are crucial for a successful new product
  
  - Decisions associated with test marketing
    - Selecting test marketing city/area
    - Determining sample size
    - Choosing an experimental design(Certain statistical considerations are an important part of these decisions)
  
  - Possible to use national/regional product introduction (“roll out”) as a “series of test markets;” i.e., test marketing phase is forward integrated with product introduction

# Test Marketing

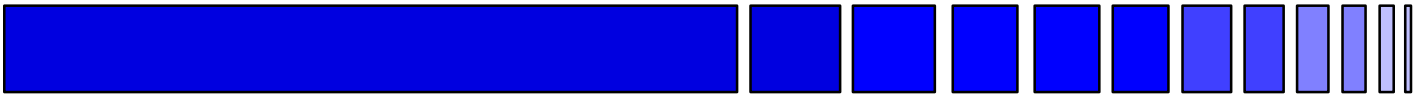
## The Twin Streams of Development



# Advantages of Test Marketing

- 
- Provides actual “sales response” data from consumers, not just purchase intentions or performance/satisfaction ratings
  - Appropriate mechanism for the management of risk in the NPD process. Listed as one of the four success factors in new product development.
  - Bayesian analysis is the preferred methodology for analyzing risk in a test marketing situation.
  - Provides first set of “projectable” data on profitability, ROA related to new product

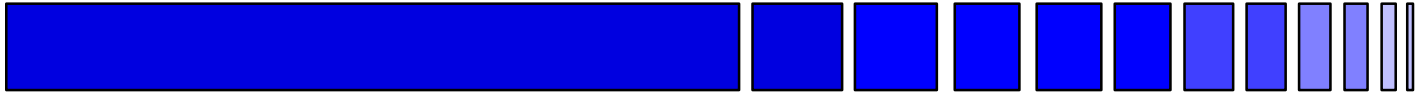
# Disadvantages of Test Marketing

- 
- Costly/time consuming. Has both real and opportunity costs associated with it--due to shorter PLCs
  - Competitive intelligence considerations.  
Worst case scenario: Your competition uses your test market data to fine-tune/perfect their market offering.
  - Risk to company reputation, particularly with respect to trade channels.
  - Test marketing data is “noisy,” lagged and subject to competitive sabotage. In short, may not be projectable to product introduction stage.

Final Question To test market or not?

(Two types of answers are available)

# Product Test Marketing



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## Examples of Firms that Wish They Had Not Skipped Market Testing

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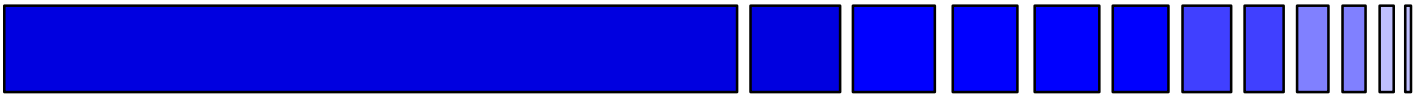
***New Coke:*** The Coca-Cola Company had perhaps the most famous example of a thoroughly tested product marketed without a market test. Allegedly, some 200,000 people overwhelmingly preferred the New Coke. But, when offered the chance to buy it, in the total milieu of a market full of publicity, they refused. Coke had to bring back the old formula, branded Coke Classic, and it is still the leading seller.

***TV-Cable Week:*** Staffers who developed Time Inc.'s competitor to *TV Guide* "repeatedly called for a small-scale market test and were repeatedly turned down." The \$100 million investment lasted six months.

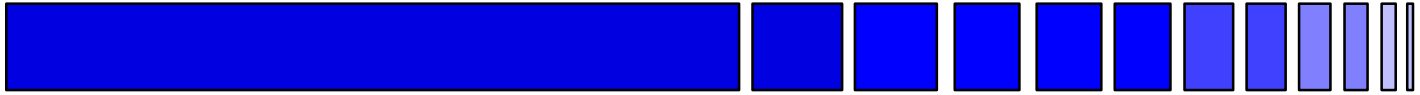
***Treesweet Low-Calorie Orange Juice:*** "Clinton E. Owens thought he had all the fixins for success in the juice business . . . industry veteran . . . innovative product . . . jazzy package . . . eye-catching ads . . ." A year later, after "betting the farm" without market testing, the product had failed, the juice lines were on the block, and Chapter 11 "was a possibility."

***Toppels:*** In a 1986 article about companies getting on the fast track, "Frito-Lay skipped test marketing for its new Toppels cheese snack so competitors wouldn't have time to study the ingredients and copy them. 'We felt very strongly we had a winner and didn't want to tip our hand.'" But in 1989, after noting several failures in new snack products, "The debacle convinced Frito-Lay that true market testing is a necessity, even for a market leader."

# Pre-Market Testing

- 
- Involves consumer testing the product in a simulated shopping environment, which is usually followed by an “in-home” test; i.e., test marketing phase is backward integrated with product testing
  - Allows manipulation of introductory marketing mix variables in addition to physical product modification
  - An attractive alternative to test marketing and product testing from a risk/reward (i.e., cost/benefit) standpoint
  - Commercially offered by major marketing research/new product research vendors

# Pre-Market Testing



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## Recent Actions Indicating the Turbulence in Market Testing Methodology Choices

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Richardson-Vicks undertook a national launch of Olay Beauty Bar on the basis of simulated test marketing (STM) only. The firm has an extensive background in beauty products and can move quickly. It did the same thing in Australia by going national with Climacel based only on STM. It claims ASSESSOR predictions are quite accurate. Both products succeeded.

S.C. Johnson took Agree cream rinse to simulated test market, where it did well. It then went into test market (type unknown), but success came so clearly that the firm collapsed six months off normal test market time. “We sort of rolled right over and went national.”

Zero Corporation--a \$44 million (1984) Burbank, California, electronics firm--is moving into test marketing in a major way for the first time.

Sensormatic Corp., a medium-sized firm making electronic surveillance systems for supermarkets, combined product use testing and test marketing by selling Winn-Dixie on a test in its Florida division. The test market was then “rolled out” to several other grocery chains and then to liquor stores.

Several food companies recently took action indicating the extreme competitiveness of that industry. All of the following items were taken directly from simulated test marketing to national launch: Sara Lee’s meat-filled croissants, General Foods’ new flavors of International Coffees, Quaker’s Chewy Granola Bars, and Pillsbury’s Milk Break Bars. However, P&G (which also went from STM to national on several items) stayed in test market for three years with Cinch dishwasher detergent and Certain bathroom tissue.