

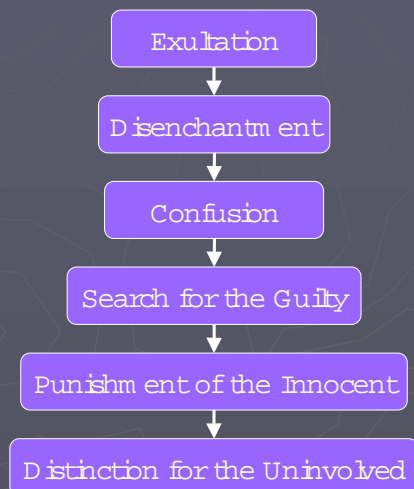
# Market Research for Market Transformation: How It Fits into Product Development

Presented by Lynn Hoefgen, Ph.D.,  
Nexus Market Research, Inc.

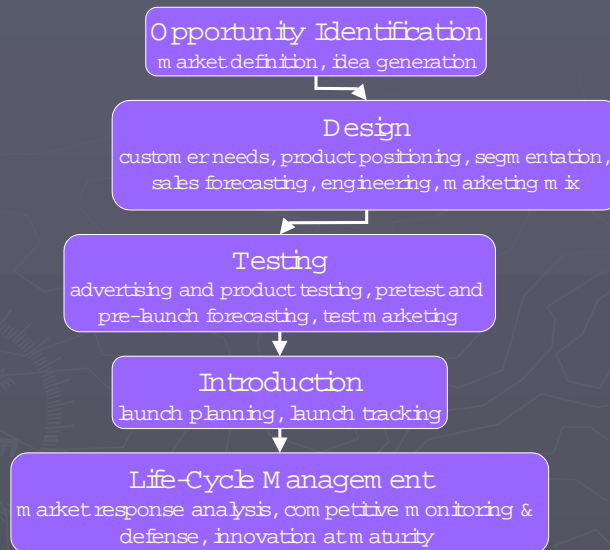
This presentation relies on *Design and Marketing of New Products*, by Glen Urban and John Hauser (Prentice Hall, 1993); and on *Residential Lighting Fixture Market Assessment: Ceiling Fans and Outdoor Lighting*, prepared for Consortium for Energy Efficiency (2000) by Opinion Dynamics Corporation, primary author Susan Oman (currently with Nexus Market Research).

## Common New Product Development Process:

Or, Why We Should be Sensitive to the Needs of Corporate Product Developers



## Ideal New Product Development Process



## CEE's Residential Lighting Fixture Market Assessment: Objectives

- ▶ To assess the national residential lighting fixture market
- ▶ To identify promising market segments for the creation of market transformation opportunities
- ▶ To narrow these segments to the two most promising
- ▶ To identify possible market interventions

## CEE's Residential Lighting Fixture Market Assessment: Methodology

- ▶ CEE member depth interviews
- ▶ Secondary research: from utilities, utility groups, public benefits collaboratives, the U.S. government, and the lighting industry
- ▶ Attendance at a lighting industry conference
- ▶ Interviews with lighting manufacturers and retailers

## Lighting Fixture Market: Potential Segmentation Schemes

- ▶ Product types
- ▶ Basis of fixture design
- ▶ High-use areas of the home
- ▶ High-use fixture types
- ▶ Purchase opportunities
- ▶ Distribution channels
- ▶ Consumer preferences
- ▶ Regional differences

## Lighting Fixture Market: Final Segmentation Scheme

- ▶ By product types
  - ◇ Basis of fixture design
  - ◇ High hours of operation
  - ◇ High-volume sale potential
  - ◇ Appropriate use of CFL technology
  - ◇ Emerging technologies
  - ◇ Consumer preferences

## Potential Product Types to Focus On

- ▶ Recessed lighting— already being developed
- ▶ Torchierees— already available, successful utility programs
- ▶ Portable task/desk lighting— only 2% of residential lighting energy consumption, light quality issues
- ▶ Light-emitting diodes (LEDs)— more R&D still needed
- ▶ Ceiling fans— 15-19 million units per year, potential energy savings of up to 60% (lighting, motors, controls, and blades)— and 60% of energy usage comes from lighting
- ▶ Outdoor lighting— used by two-thirds of U.S. homes, long operating hours

## Final Product Focus

- ▶ Ceiling fans
- ▶ Outdoor lighting

## Ceiling Fan Market Characterization

- ▶ Product attributes
- ▶ Energy-saving potential
- ▶ Lighting configurations
- ▶ Major manufacturers
- ▶ Shipments
- ▶ Distribution channels

## Barriers to CFLs in Ceiling Fans

- ▶ Lack of perceived consumer demand
- ▶ Limitation of strobe effect with moving blades
- ▶ Need for dimming capabilities
- ▶ Need for high light output
- ▶ Degradation of CFLs with electronic controls
- ▶ CFLs too large for certain fan styles
- ▶ Fragmented market: most manufacturers not big enough to pursue ideal product development paradigm

## Possible Market Interventions

- ▶ Develop ENERGY STAR standard— addressed by Natural Resources Defense Council
- ▶ Target niche manufacturers for initial modest success
- ▶ Long-term focus on home improvement retailers— 80% of sales by two chains
- ▶ Make ceiling fans a core component of utility lighting programs

## ENERGY STAR Specifications for Ceiling Fans

Tier 1: Spec introduced January 1, 2002

- ▶ Lighting (for fans with lighting): either screw-based or pin-based CFLs
- ▶ Requirements for improved air flow (CFM), air flow efficiency (CFM/watt), controls, warranty, consumer information, and testing

## ENERGY STAR Specifications for Ceiling Fans (cont.)

Tier 2: Scheduled for October 1, 2003

- ▶ Lighting (for fans with lighting): pin-based CFLs only
- ▶ Additional requirements for improved air flow (CFM), air flow efficiency (CFM/watt), controls, and noise

## ENERGY STAR-Qualifying Ceiling Fans with Lighting and Light Kits

February 18

- ▶ 12 screw-based models, 2 manufacturers
- ▶ 0 pin-based models
- ▶ 177 non-lighting models, 7 manufacturers

February 28

- ▶ 1 screw-based model
- ▶ 7 pin-based models, 3 manufacturers
- ▶ 227 non-lighting models, 13 manufacturers

## 2002 Utility Programs Promoting ENERGY STAR-Qualifying Ceiling Fans with Lighting

- ▶ New York
- ▶ Massachusetts
- ▶ Rhode Island
- ▶ Connecticut
- ▶ New Hampshire
- ▶ Vermont
- ▶ California
- ▶ Wisconsin
- ▶ Oregon
- ▶ Washington
- ▶ Idaho
- ▶ Montana

## Why the Role of Market Transformation Organizations in New Product Market Research Is Limited

	Corporate	Market Transformation
<i>Long-term Goals</i>	Profits, sales, market share	Energy savings, pollution prevention
<i>Information</i>	Confidential	Public
<i>Brands</i>	Their own	Any with ENERGY STAR label
<i>Product Lines</i>	Multiple	Energy-efficient only

## Where We Fit in the New Product Development Process

