

# Personal Thermal Management System Diffusion and Adoption of Technology/Apparel

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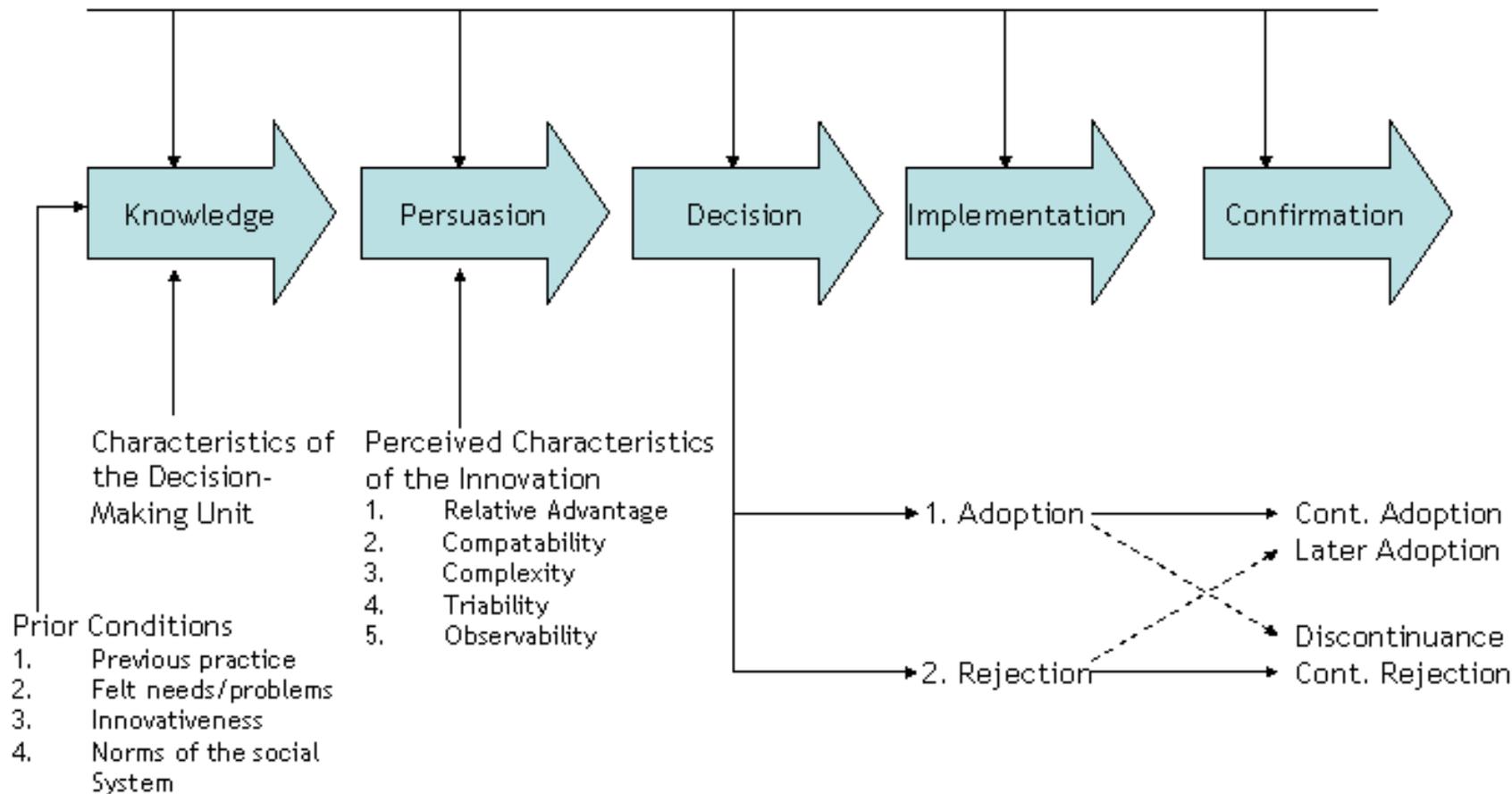


# DIFFUSION AND ADOPTION OF TECHNOLOGY/APPAREL

- Diffusion Theory
  - Rogers (2003), Robertson, Sproles (1979)
- Apparel Design
  - Watkins, DeJonge, Lamb & Kallal (1992)

# **DIFFUSION AND ADOPTION THEORY**

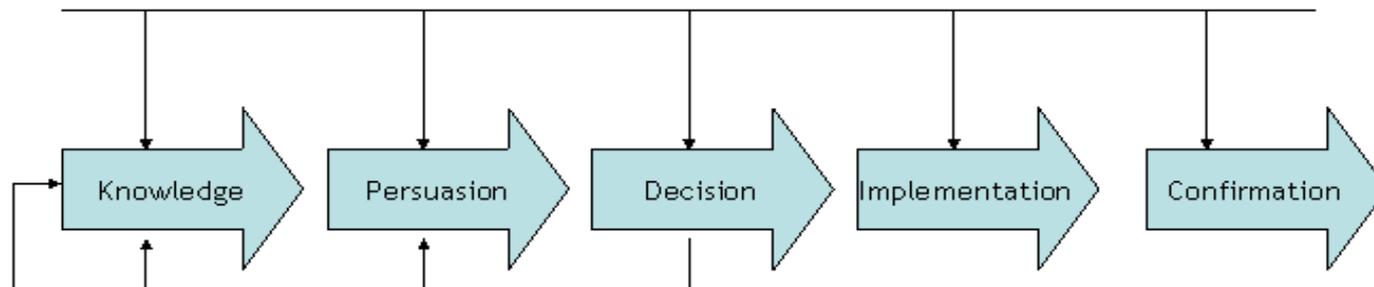
# INNOVATION DECISION PROCESS MODEL



Rogers, 2003

## INNOVATION DECISION PROCESS MODEL

- **Knowledge**
  - Exposure to innovation's existence, talking with others
- **Persuasion**
  - Formation of favorable/unfavorable attitude, more psychological involvement
- **Decision**
  - Engage in activities to adopt or reject (trial by self/others)
  - Change agents
- **Implementation**
  - Putting innovation into use
  - Re-invention
- **Confirmation**
  - Seeks reinforcement of innovation (decision already made)



# RATE OF ADOPTION

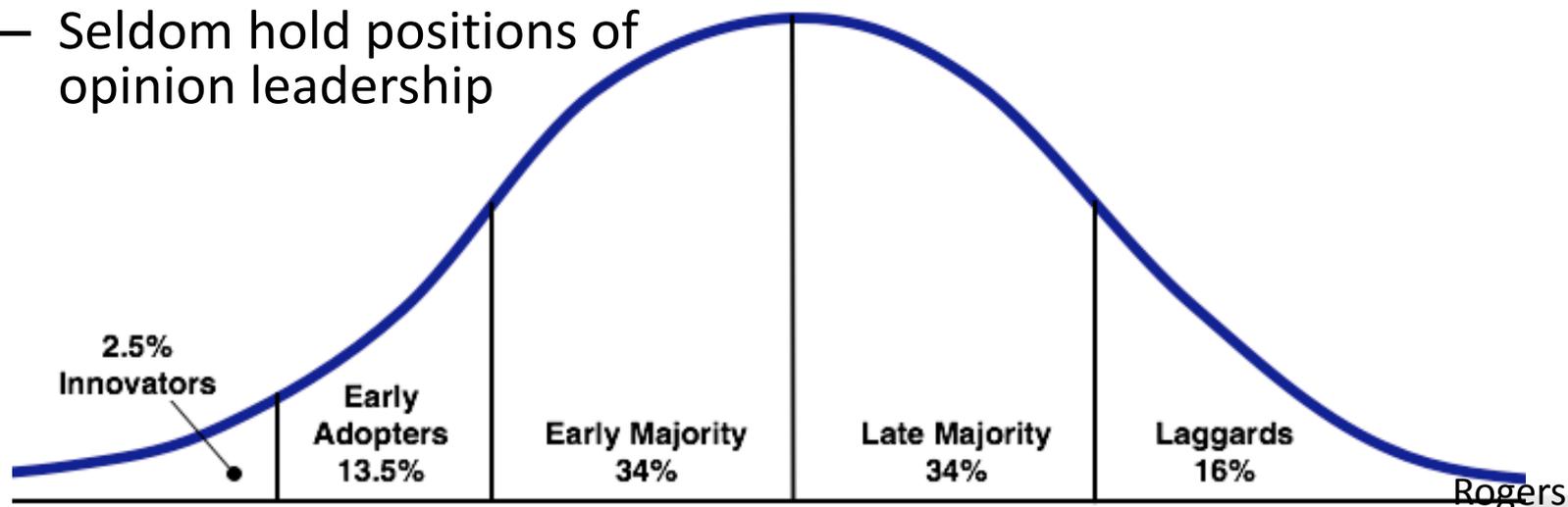
*Relative speed with which an innovation is adopted by members of a social system*

## PERCEIVED ATTRIBUTES

- Relative Advantage
- Compatibility
- Complexity
- Observability
- Trialability

# CLASSIFYING ADOPTER CATEGORIES

- Innovators
  - Venturesome
- Early Adopters
  - More integrated in local social system (localities)
  - Person to check with
- Early Majority
  - Deliberate
  - Seldom hold positions of opinion leadership
- Late Adopters
  - Skeptical
- Laggards
  - Traditional
  - Near isolates in social network
  - Resistance



Source: Everett Rogers, Diffusion of innovations model

# DIFFUSION NETWORKS

- Opinion Leadership
  - More cosmopolite, more social participation, higher socioeconomic status, greater change agent contact
- 2- or multi-step flow of communication
- Interpersonal Diffusion networks
- Communication Network
- Social Learning Theory

# CHANGE AGENT

*Provide communication link between a resource system and some type of client system*

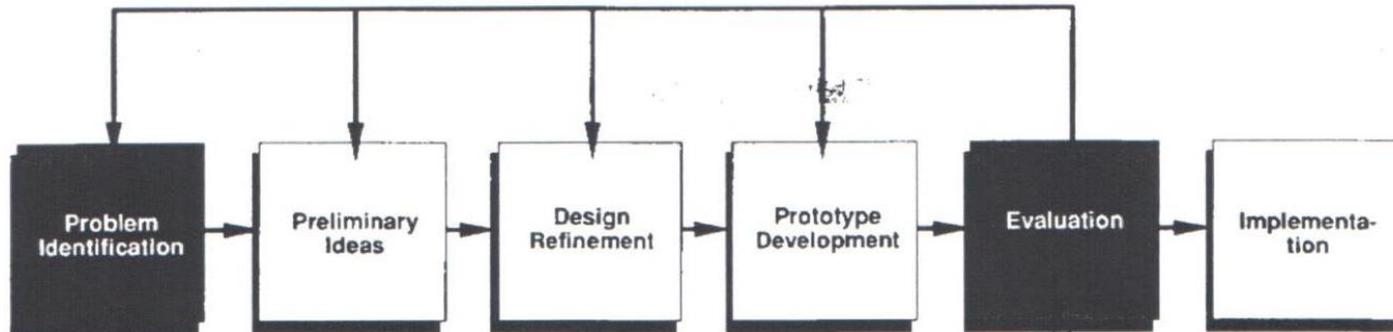
- Develop need for change
- Establish information exchange relationship
- Diagnose problems
- Create an intent in the client to change
- Translate an intent to action
- Stabilize adoption and prevent discontinuance
- Achieve terminal relationship

*AN EXAMPLE....*

# APPAREL DESIGN AND ADOPTION

# APPAREL DESIGN FRAMEWORK

## CREATIVE PROBLEM-SOLVING PROCESS



- Problem Identification
  - Problem becomes generator of ideas
- Preliminary Ideas
- Design Refinement
- Prototype Development
- Evaluation
- Implementation

# CONCEPTUAL FRAMEWORK FOR APPAREL DESIGN

## FEA CONSUMER NEEDS MODEL



Lamb & Kallal, 1992

# FEA Consumer Needs Model

- Target Consumer
- Culture
- Design Criteria (*not mutually exclusive*)
  - Functional
    - utility
  - Expressive
    - Communicative/symbolic aspects
  - Aesthetic
    - Human desire for beauty



- Target consumer
- Culture
- Functional ↔ Expressive
- Expressive ↔ Aesthetic
- Aesthetic ↔ Functional

# WHAT WE KNOW ABOUT APPAREL ADOPTION...

- Allow people to express individuality
  - (increased desire for self-expression)
- If perceived as fashionable, more likely to be worn
- Needs to appear as ‘normal’
- Manifestation of self image
- Ease of donning /doffing
- Fit Fit Fit
- Allow for completion of ‘normal’ activities
- Don’t want to sacrifice comfort – *must be comfortable*
- If connected to wearer, more likely to wear

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*THANK YOU*

*.....QUESTIONS?*