
Marketing Science Past & Present Excerpts & Observations

**The Practice & Impact of Marketing Science
January 15-16, 2010 (MIT)**

**MSI Conference on Effective Marketing Spending
March 1-3, 2010 (UCLA)**

**Earl Taylor, CMO
Marketing Science Institute
Charter Director of the MASB
March 10, 2010
Chicago**



**Marketing Accountability Standards Board
of the Marketing Accountability Foundation**

Marketing Science Institute: Bridging the gaps since 1961



The Practice and Impact of Marketing Science

January 15 – 16, 2010

MIT

Cambridge, Massachusetts



Conference Overview

- Held every two years
- Review and advance the state of marketing science
- 100 participants
 - Half academics/Half Practitioners
 - Half US/Half Non-US
- Co-sponsors
 - INFORMS Society on Marketing Science (ISMS)
 - Massachusetts Institute of Technology (MIT)
 - European Marketing Academy (EMAC)
 - Marketing Science Institute (MSI)



Agenda

- Keynote Address (Glen Urban, MIT)
 - Discussant (John Little, MIT)
 - Discussant (Gary Lilien, Penn State)
- Sixth ISMS/MSI Practice Prize Competition
- Parallel Sessions
 - 15 over 2 day period
 - 11 topics of interest to constituency

Viewing the Implementation of Marketing Models as Organizational Change

Glen L. Urban

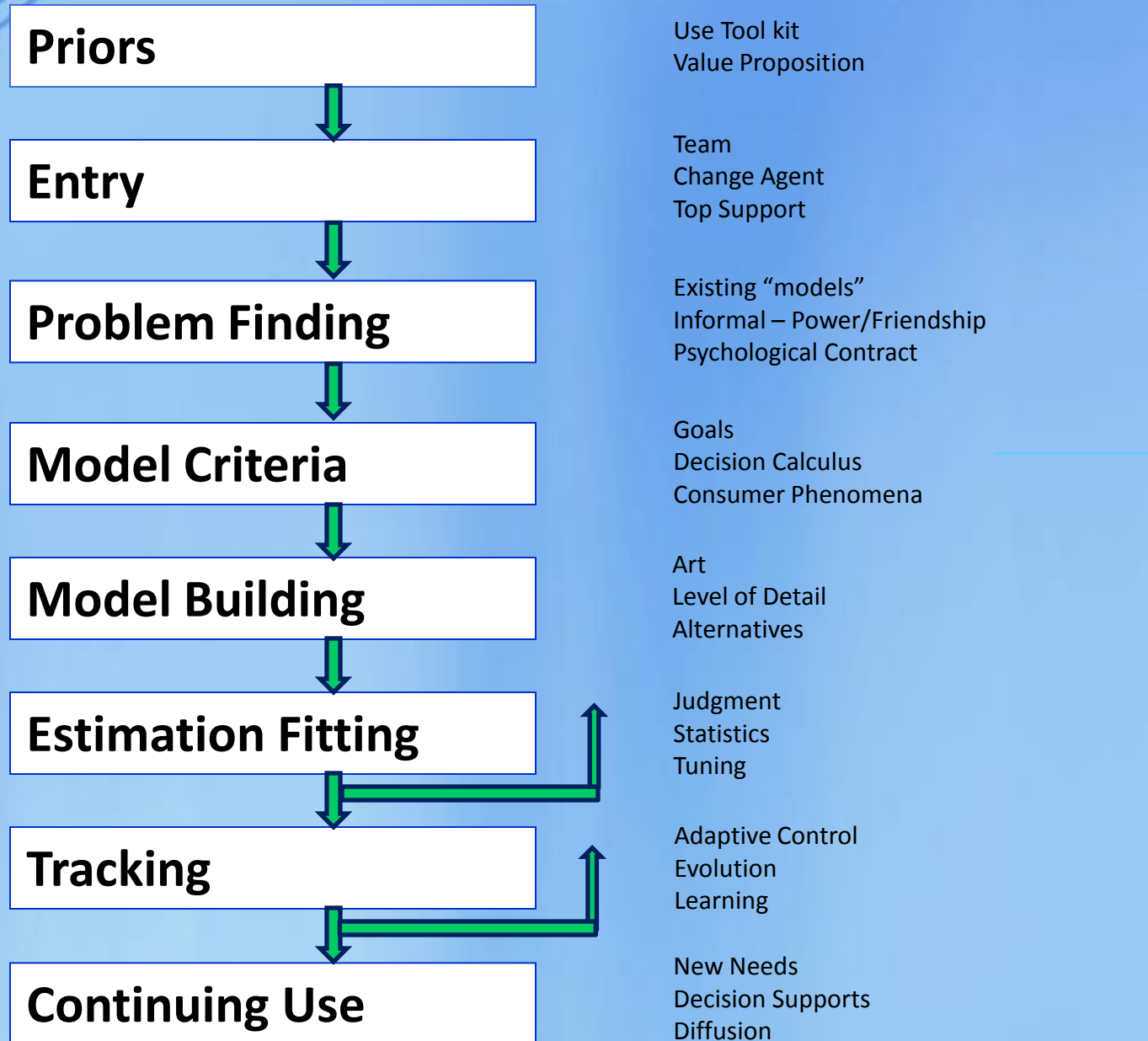
Practice and Impact of Marketing Science Conference

January 15, 2010

OUTLINE

- Problem of continuing implementation, institutionalization, and cultural change
- Three cases – Personal experience
 - ASSESSOR (success)
 - Intel personal advisor (failure)
 - Web and advertising morphing (in process)
- Revised organizational change model
- Lessons for Managers and Researchers
- Discussants – Little and Lilien

CHANGE PROCESS (Initial Model)



SUCCESS: ASSESSOR

- Pre-Market Forecasting of new frequently purchased products
- Priors – Big Problem and SPRINTER too late – need pre-market read
- Entry – Cal Hodock (Director of Market Research) at Gillette
- Problem Finding – Gillette Deodorant
- Model Building Criteria – Decision Calculus
- Model Building – Trial/Repeat standard plus emerging Logit modeling

ASSESSOR — CONTINUED

- Estimation and fitting – Laboratory measures and estimation of Trial/Repeat and Logit models (Al Silk)
- Tracking – Validation study 8 Gillette products – 44 pretest versus test-market predictions (Gerry Katz)

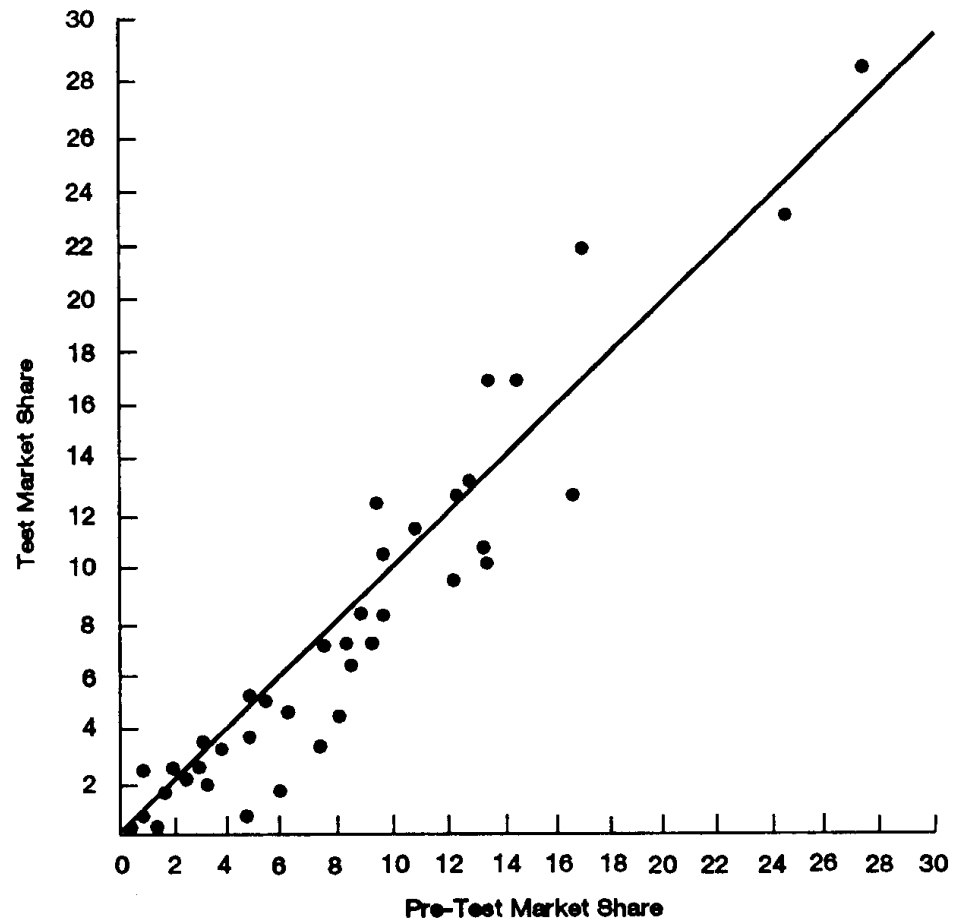


Figure 16.5 Comparison of Pretest-Market and Test-Market Shares (Urban and Katz, 1983, p. 223; reprinted with permission)

ASSESSOR — CONTINUED

- Continuing Use – Publication, Management Decision Systems, imitation by BASES and others – Over 5,000 ASSESSOR tests in last 25 years
- Evolution – Add trial repeat dynamics, conjoint – Extend to durables – autos and finally Information Acceleration
- Cultural Change – pre-market milestone for all new products

WHAT WORKED

- Early managerial interface and advocate
- Important Problem – pain point
- Simple but powerful model and measurement
- Understandable to prior managerial model
- Validation
- Easy implementation with outside firms – contracting accepted method – Fast and high benefit/cost
- Learning and evolution
- Institutionalize the step into process of new product development – “standard practice”

FAILURE: INTEL'S "ROSA"

- Priors – trust and virtual advisors (Trucktown)
- Entry Digital Business Center and Visionary head of IT R&D committee and project team (6 people)
- Problem Finding – Download Costs and Difficulty
- Model Development Criteria – Personal Advisor
- Model Building – AI/IT Advisor
- Estimation and fitting – simple data base structures – multiple experiments – learning

Rosa (to reduce tele-center costs)

Intel Download Advisor: 10

intel.



What type of camera do you have?
Click the picture of your camera.

 CS780 Intel® Pocket Digital PC Camera	 CS110 / CS120 Intel® Easy PC Camera	 CS331 Intel® Home PC Camera
 CS630 Intel® Pocket PC Camera	 CS430 / CS431 Intel® PC Camera Pro Pack Intel® Pro PC Camera Intel® Pro video PC Camera	 CS330 / YC66 / YC76 Create & Share® Camera Pack Intel® Deluxe PC Camera Intel® PC Camera Pack

[My camera isn't shown here.](#)

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MANAGERIAL IMPLICATIONS

Savings for PC Camera downloads

Visitors per month	1.5 Millions
Camera visitors (3.84%)	54,600
Successful downloads (assuming 66.0%)	36,036
Successful downloads (assuming 85.3%)	46,574
Additional successful downloads (assuming 100% selects wizard)	10,538
Additional successful downloads (with 33% selecting new wizard)	3,478
Saving per call averted	\$27.4
Total Saving per year	\$1.14M
If wizard made more salient (assuming 50% select wizard)	\$1.73M

Note: Savings if wizard applied to all products: **\$29.7M**

ROSA CONTINUED

- Tracking – Use and reduce tele-center costs
- Continuing Use – Visionary Left, team transfers, and Budget Priorities and NIH/turf battles – Rosa persists, but not widely implemented on other products
- Evolve – Use in HR, but not IT continuing use – Rosa lived for 6 years

WHAT WORKED AND DID NOT

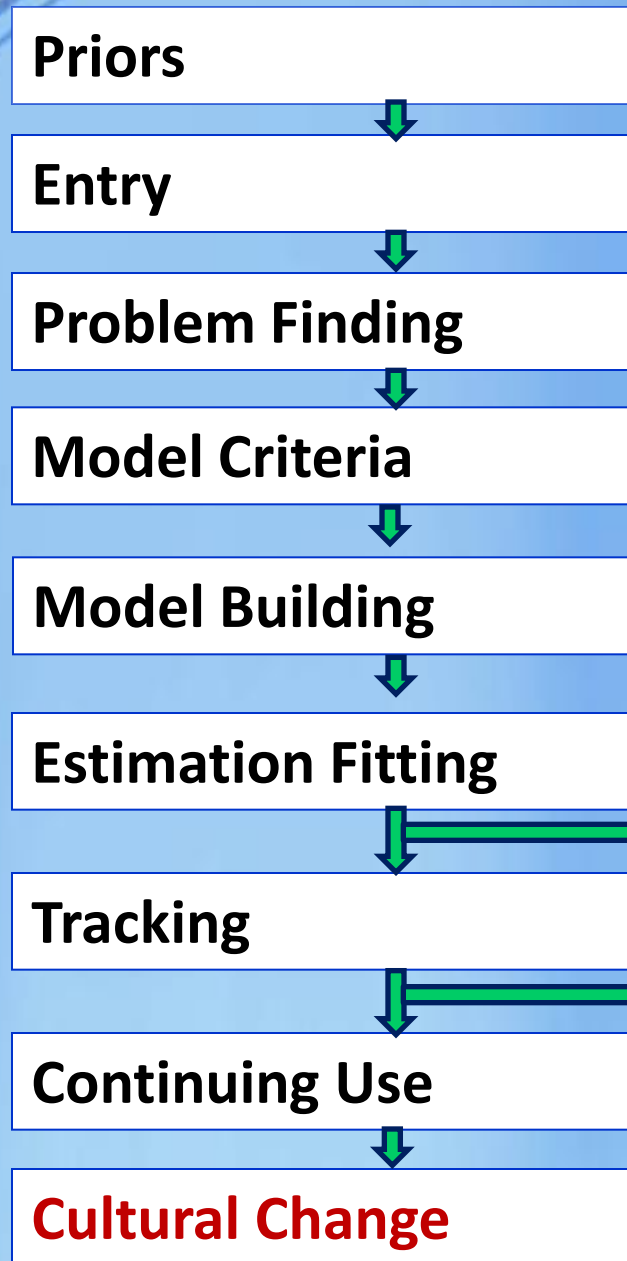
- **Worked**

- Team
- Individuals on team gained visibility from MIT aura
- Persona was easy to understand
- Multiple experiments
- Rosa was implemented and worked (6 years)
- HR Adoption by osmosis

- **Did Not Work**

- Lost sponsor and top manager
- Budget limits and staff transfers – other priorities
- Complexity of tracking on multiple servers – data problems
- Territorial Interests – Failure to get buy in at mid level
- No continuing top management commitment to implement widely – people and budgets lacking

CHANGE PROCESS (Revised Model)



Use Tool kit
Value Proposition

Team - **Cross Firms**
Change Agent
Top Support

Existing "models"
Informal – Power/Friendship
Psychological Contract

Goals - **success criteria**
Decision Calculus
Consumer Phenomena
Implementation Plan

Art
Level of Detail
Alternatives

Judgment
Statistics
Tuning

Adaptive Control
Evolution
Learning
ROI Calculation

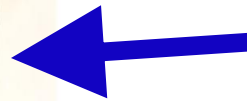
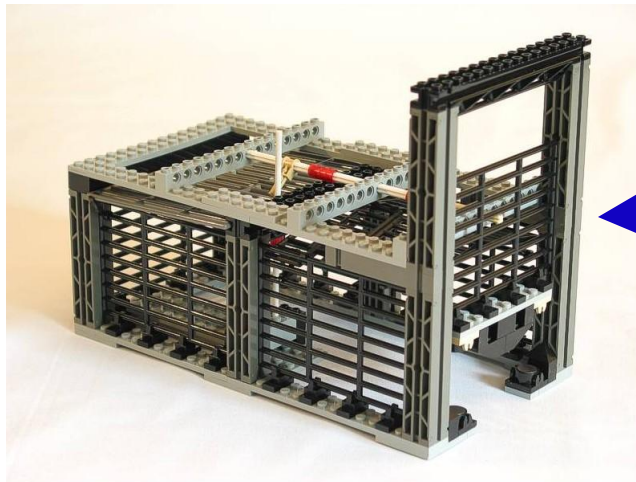
New Needs
Decision Supports
Diffusion

Standard Practice
Build Into Process
Staff/Budget

CONCLUSIONS

- Implementation is organizational/cultural change
- Use change process
- Enhancement of Process Model – New Emphasis on Cultural Change
- Diffusion – publish, consult, change agent firms, competition, and aim for establishing a new standard practice

Comments on: “Implementation of Marketing Models”



Better Mousetrap ?

Gary L. Lilien



“The big problem with management science models is that managers practically never use them. There have been a few applications, of course, but the practice is a pallid picture of the promise.”

John D. C. Little “Models and Managers: The Concept of a Decision Calculus” 1970



“The good news is that more managers than ever are using models. The bad news is that many managers do not even realize they are using models . . . what hasn’t changed is organizational inertia”

**John D. C. Little “Comments on: Models and Managers: The Concept of a Decision Calculus”
2004**

Wide Applicability/Benefit



- ❑ “ . . . it is highly unlikely that decision makers will consistently outperform a good quality model-based decision support system and they are better off relying on even a simple, but systematic model . . .” (Hoch and Schkade 1996, p. 63)
- ❑ Retail pricing DSSs that include price-optimization models dramatically outperform retail managers (Reda 2003, Montgomery 2005)

And Yet...



- ❑ Only 5 to 6% of retailers use such DSSs even after their organizations have purchased them, with most managers preferring to use gut-feel for making pricing decisions (Sullivan 2005)
- ❑ Research shows managers' disinclination to use DSSs even when the models embedded in the systems are known to improve decision quality and performance (Ashton 1991, Singh and Singh 1997, Yates, Veinott, and Patalano 2003, Sieck and Arkes 2005)



“My contacts in consumer products firms, banks, advertising agencies and other large firms say that [model builders] are a rare find and that models are not used much internally. Personal experience with member firms of MSI indicates the same.”

Russell Winer “Comments on Leeflang and Wittink” 2000



Everything in your comments resonates with my own experiences, working with United Shoe Machinery while in graduate school and with two startups in the last 20 years. I have come to the conclusion that models can be deployed in one of two ways—either fully automated, untouched by human hands, or as a decision support system under the direction of a manager. I have been involved in the application of the 1st in vehicle routing applications that ran overnight to schedule delivery of orders received the preceding day and in retail inventory applications that set order points for millions of store-sku replenishment items. I have found that these applications require a very accurate model and powerful optimization algorithm, but, after a validation phase, can be run as black boxes.

In the second mode, I have found that simplicity and transparency beats complex optimization every time because it enables a better coupling with the heavily involved manager. In fact, most of my failures have come from trying to deploy sophisticated, black box optimization models in DSS environments,

**Marshall Fisher,
quoted in Little, 2004**

An Industry Perspective

“Adoption of Marketing Science”

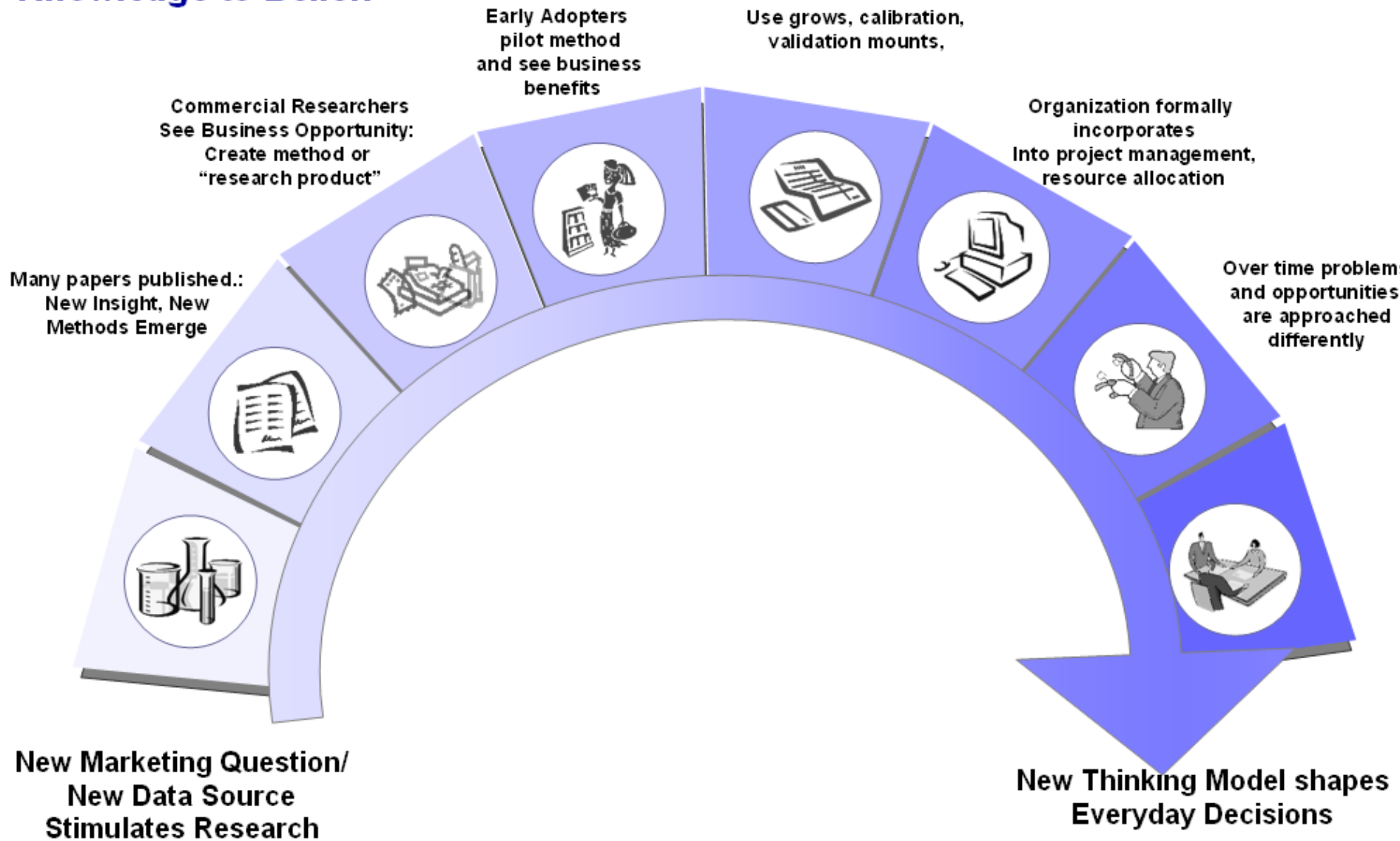
What Success Looks Like for One Marketing Organization (P&G)

Delaine Hampton

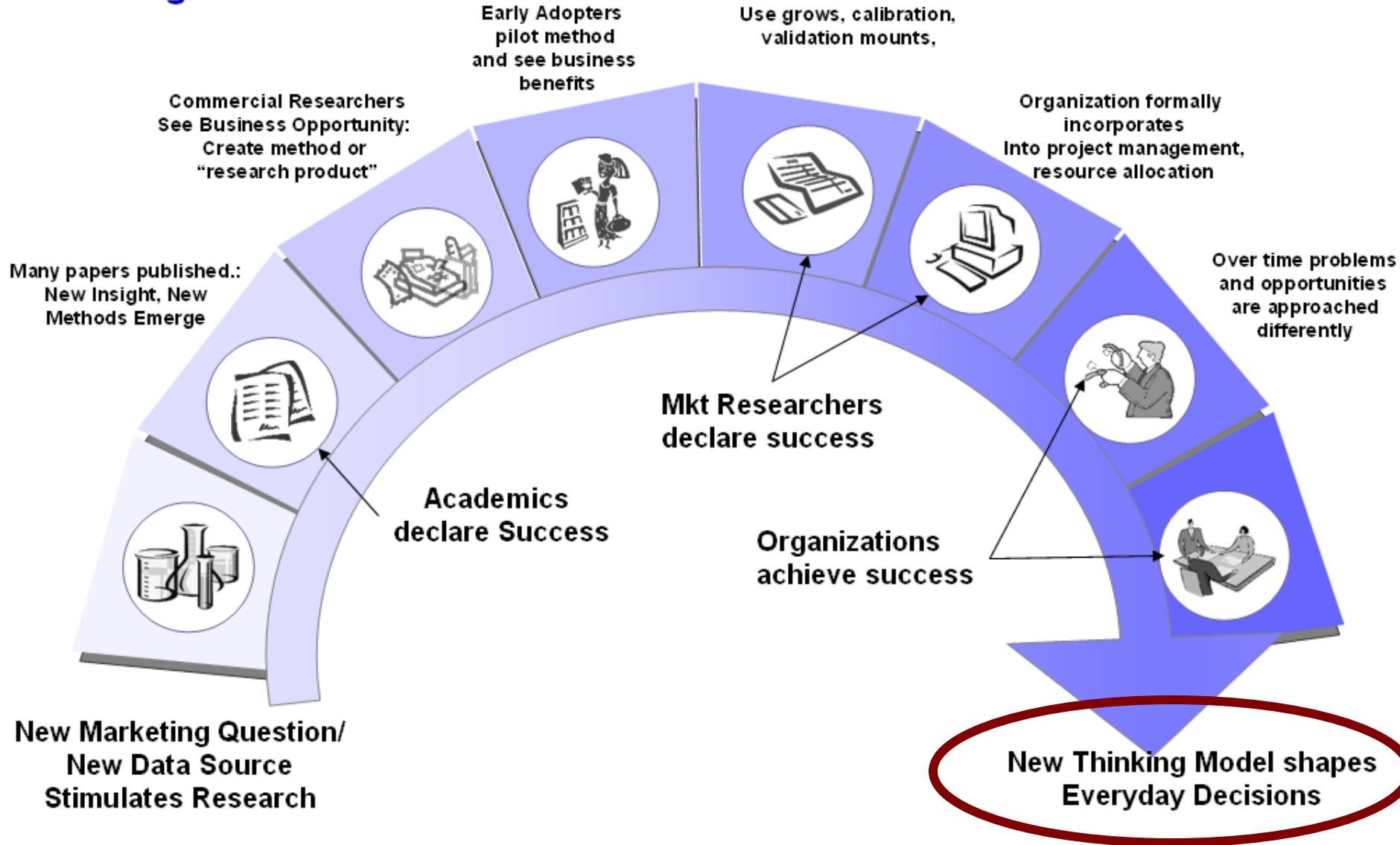
Director, Consumer and Market Knowledge

Procter & Gamble

The Journey from Knowledge to Belief.



The Journey from Knowledge to Belief.



Research 1: Lilien et al (2004)



- (Good) DSS use improves objective performance
- DSS's can help in de-anchoring from prior beliefs

BUT

- Users may not perceive improvement/little effect on subjective performance evaluation
- Expert raters (e.g., top management???) are not able to judge quality of decisions

Research 2: Kayande et al (2009)



Decision-makers must be motivated to change

- ❑ “*Why should I change my mental model?*” “*What is the upside?*”
- ❑ **DSS model design must incorporate upside potential (incentive)**

AND

Decision-makers must be given guidance to change their mental models

- ❑ “*How should I change my mental model?*”
- ❑ **DSS models must calibrate, evaluate, and correct manager’s mental model**

The Real 5 Stages of Organizational Adoption of a New Model...



1. Exaltation
2. Disenchantment
3. Search for the Guilty
4. Punishment of the Innocent
5. Distinction for the Uninvolved

Keynote Address Q&A

Question from the Floor:

“It seems we are stumped at the foot of the organizational change mountain . . . and feel the need to climb it in addition to creating the marketing models (better mousetraps).

Why don't we look at other areas of the business that have been successful with organizational change and continuous improvement over a long period of time?

Like Manufacturing & Product Quality, and Accounting & Financial Reporting? They both have standards bodies to enable permanent transformation.”

Answer from the Floor:

“She's right! When the CFO or COO leaves, none of the models change (measurement and process); but when the CMO leaves, everything changes!”



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The Prize

“Dynamic Marketing Budget Allocation across Countries,
Products, and Marketing Activities”

Marc Fischer (University of Passau)

Sönke Albers (Christian-Albrechts-University at Kiel)

The Parallel Sessions

- 15 sessions over 2 days
- Based on constituency interest
- 11 topics covered
- 4 topics having multiple sessions
 - Brand Equity* (7 presenters)
 - Customer Lifetime Value* (panelist discussions)
 - Marketing Mix Modeling (4 presenters)
 - Implementing Marketing Science (6 presenters)

* Also on MASB Project Agenda

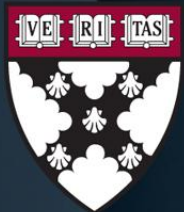


Observations related to MASB*

- Across Sessions
 - Need for “common language and definitions”
 - Need to “link measures to the street”
 - Need to “define methods, reliability and validity”
- From CLV Sessions
 - “Not proven yet for CPG”

* And on MASB Project Agenda

H A R V A R D | B U S I N E S S | S C H O O L



Allocating Marketing Resources

Sunil Gupta and Thomas Steenburgh
MSI Conference on "Effective Marketing Spending"
UCLA March 2, 2010

Budget allocation process is complex

- Marketing budget allocation can be broad in scope and can be done across
 - media mix (offline vs. online)
 - marketing mix (detailing, DTC)
 - products and countries
- It needs to balance multiple objectives
 - Share, profits, brand equity
 - Short run and long run goals
- And models can be complex to implement
 - “The big problem with management science models is that managers practically never use them.”
John D.C. Little (1970)

Most allocation models follow two stages

Stage-2: Economic Impact Analysis

What is the impact of demand change on my profits?

Stage-1: Demand Estimation

How do consumers react to my marketing actions?



Each stage has three broad approaches ...

Demand Estimation

Decision-Calculus Experiments Econometric

Descriptive

**Economic
Impact What-if
Analysis**

Optimization

Source: Gupta, Sunil and Thomas Steenburgh (2008), "Allocating Marketing Resources," in *Marketing Mix Decisions: New Perspectives and Practices*, eds. Roger Kerin and Rob O'Regan, AMA.



... with their pros and cons

		Demand Estimation			
		Decision-Calculus	Experiments	Econometric	
Economic Impact Analysis	Descriptive				Easy Directional
	What-if				Handle complex Interactions Combinations inc.
	Optimization				Dynamic programs "Optimal" allocation Complex
		No history Policy change Manager+model	New activities Large database Adaptive	Purchase data Fewer biases Valid w/in data range	



Thank-you!



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