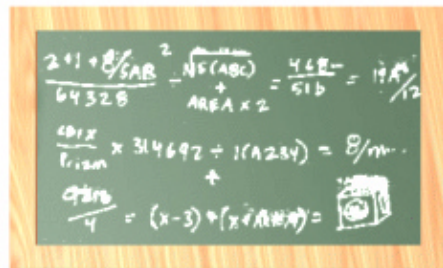


**MG****STRATEGIC RESEARCH**

Scarborough Research  
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# Operationalizing Research: Case Study In Process



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# Readership Potential Project

- ✍ Deutsche Bank research suggested daily circulation size over 238K as compared to actual 170K
- ✍ Recent research suggested opportunity was in moving occasional readers to greater frequency
- ✍ NJMG asked “What should our circulation be?”

# Highly Competitive Market

<b>Bergen-Passaic Audience &amp; Circulation</b>		
<b>Newspaper</b>	<b>Audience</b>	<b>Circulation</b>
<b>NY Times</b>	112,525	56,165
<b>NY News</b>	109,880	29,528
<b>NY Post</b>	87,235	25,804
<b>Newark Star-Ledger</b>	54,045	20,094
<b>USA Today</b>	27,660	8,374
<b>Wall Street Journal</b>	38,980	13,787
<b>Record/Herald News</b>	419,785	170,151
<b>Total Market</b>	<b>850,110</b>	<b>323,903</b>

# Readership Potential Project

## ✍ Constraints

✍ Highly competitive market

✍ 41% household penetration

✍ 49% share of current readers

✍ 53% share of daily newspaper circulation




✍ No enriched household-level market database

✍ Needed tools to answer

*"What should our circulation be?"*



# Project Proposal

## Tasks

-  Determine if a gap exists between current and potential audience, through an opportunity analysis
-  If gap exists, proceed with segmentation to support development of strategy to reduce gap
-  Assist NJMG with execution of strategy




# Quantifying the Gap

## Tools

-  Tree-based statistical techniques used to develop a stochastic model to identify NJMG market reader potential
-  Scarborough provided two years' data, yielding 2,206 cases for study (aggregated across all four waves of data)






# Quantifying the Gap

## Process details

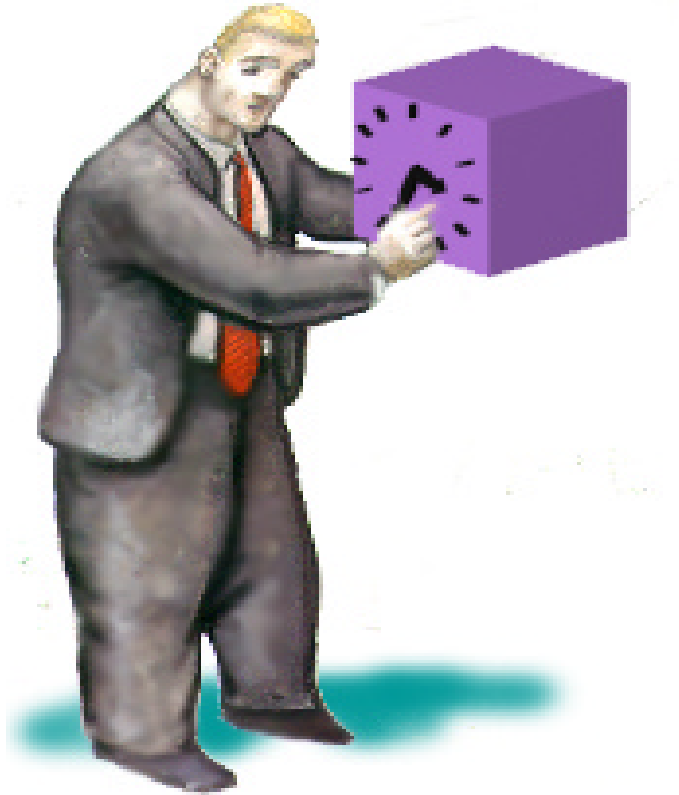
-  Development and testing after combining four waves and moving selected Scarborough data items into SPSS environment
-  Assistance acquiring geo-coded subscriber file Acxiom data with assistance from ASTECH-Intermedia using MaaX
-  MaaX will be used for post-model implementation analysis

# Drilling into the Gap

## Segmentation

-  Develop segmentation system that can be used to develop strategy and execution plan
-  Depending on robustness of respondent file, extend into different segmentation models
  -  First focus on readership
  -  Potential focus on advertising
-  No guarantees on approach; NJMG willing to fund effort

# Work Begins



- ✍ Recent Belden study
  - ✍ Limited in scope and sample size
- ✍ Scarborough research
  - ✍ Rich in audience questions
  - ✍ Media consumption and buying behavior
  - ✍ Existing panel
  - ✍ Combined waves to build sample size

# Data Preparation



- ✍ Built combined, multi-wave study in Prime
- ✍ Extracted relevant information into SPSS
- ✍ Data points
  - ✍ Demographics plus relevant lifestyle variables
  - ✍ Narrowed to limit to externally available data from Acxiom available to enrich household database

# Data Analysis


- ✍ Identified potential data models
  - ✍ CART
  - ✍ CHAID
- ✍ Geographic levels
  - ✍ DMA, PSMA
  - ✍ Sample size sensitivity
- ✍ Diagnostic analysis  
(mixture of art and science)  
to close on model selection

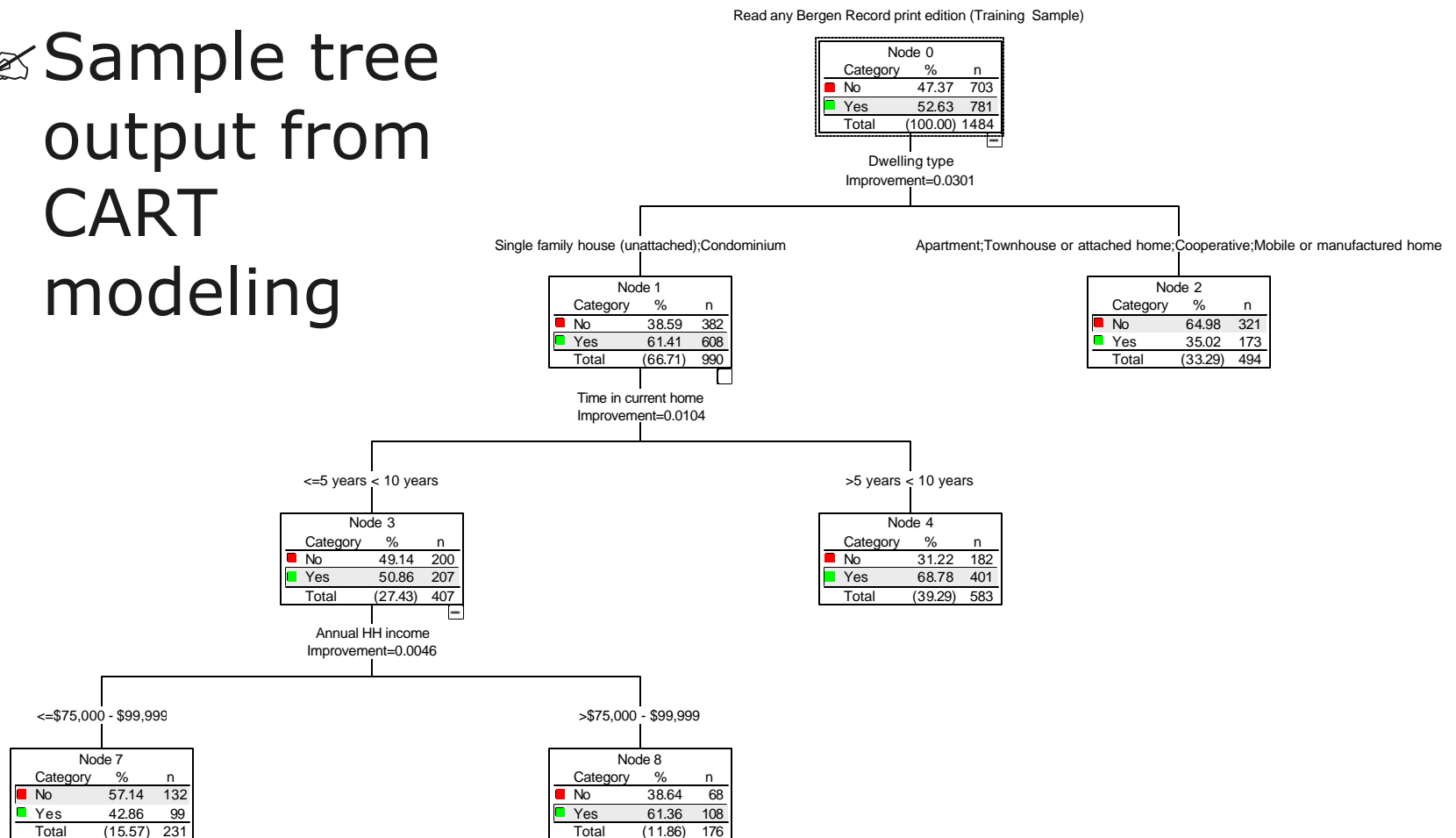


# Readers or Nonreaders?

- ✍ Final Record model included 4 nodes
- ✍ Overall risk (error) 34% for Record audience
- ✍ Developed scoring algorithm to apply against enriched household database
- ✍ Identify households with high probability of audience membership



# Readers or Nonreaders?

 Sample tree output from CART modeling



# Readers or Nonreaders?

## Considerations

-  Predictive accuracy of model based on available inputs
-  Demographic variables include age, income, HH size, homeownership, dwelling type, etc.

# Readers or Nonreaders?

## Current limits

-  More detailed Scarborough variables not matched by Acxiom

  -  Important attitudinal data not included

-  Language and ethnicity increase predictive accuracy

  -  Cost-prohibitive to acquire in database

# Household Database Development

## ✍ Components

- ✍ Used Acxiom to build household-level database file with demographics
- ✍ Incorporate subscriber status from NJMG CIS
- ✍ Data-mining analysis to test data relationships between subscriber status and purchased demographic data
- ✍ Test results against Scarborough-derived model

# Data Fusion: Reader Potential

- ✎ Each household record scored based on Scarborough-derived audience potential
  - ✎ If scored as non-audience, but actually a subscriber, flag as possible at-risk
  - ✎ If scored as audience, but non-subscriber, identify as potential
  - ✎ If scored as non-audience and not a subscriber, sequester as poor prospect

# Applying Results

- ✍ Four segments (nodes) with varying probabilities of audience inclusion
- ✍ Distill into two groups based on probability
  - ✍ 70% likely audience
  - ✍ 30% unlikely audience
- ✍ For both likely and unlikely audience, compare to current subscription status

# Applying Results

- ✍ Potential audience – current subscriber matrix
  - ✍ Scarborough reports 53% coverage in PMSA
  - ✍ Application of model suggests 70% potential coverage
  - ✍ Yields projections of core, potential, at-risk and poor prospect segments

	Subscriber	Nonsubscriber
Likely audience	<b>Core</b>	<b>Potential</b>
Unlikely audience	<b>At-risk</b>	<b>Poor Prospect</b>

# Applying Results

- ✍ Potential audience – current subscriber matrix
  - ✍ Yields projections of core, potential, at-risk and fringe segments
  - ✍ Figures represent percentage of total PMSA households

	Subscriber	Nonsubscriber
Likely audience	<b>31%</b>	<b>39%</b>
Unlikely audience	<b>6%</b>	24%

# Segment Comparison

## Potential (39% of PMSA)





- ✍ 100% single-family dwelling
- ✍ 65% have greater than high school education
- ✍ 54% male HH head
- ✍ 94% homeowner
- ✍ Median home value ~\$300,000
- ✍ Median tenure 10-11 yrs
- ✍ 60% married
- ✍ Half in single-adult HH
- ✍ Median HHI \$90K - \$99K
- ✍ 81% with children

## At-risk (6% of PMSA)

- ✍ Even split between single- and multi-family dwelling
- ✍ 47% have greater than high school education
- ✍ 41% male HH head
- ✍ 62% homeowner
- ✍ Median home value ~\$175,000
- ✍ Median tenure 4-5 yrs
- ✍ 33% married
- ✍ One-fourth in single-adult HH
- ✍ Median HHI \$40K - \$49K
- ✍ Two-thirds with children

# Operationalizing Research

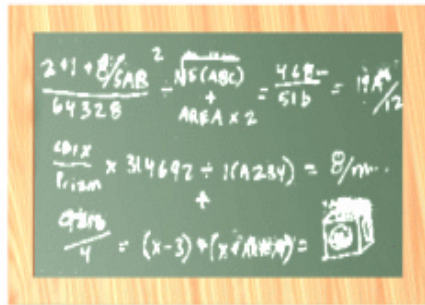
## Execution

-  Construct household-level database with demographics and reader potential
-  Build segment profiles based on file data (age, income, readership status, etc.) using MaaX business intelligence tools
-  Create campaigns for potentials and at-risk subscribers using MaaX analytical system
-  Evaluate success/failure of direct marketing approach to circulation development

# Next Steps

- ✍ Enrich newspaper transaction information beyond subscriber status
- ✍ Build segments based on advertising potential
  - ✍ Buying behavior (retail type, products, store patterns)
  - ✍ Life style interests (sports, travel, etc.)

# Conclusion



- ✍ Too early to assess execution or ROI story
- ✍ Approach enriches Scarborough investment through data fusion, segmentation links to household-level database
- ✍ Extends Scarborough's use into other areas of media company