Methods and strategies towards a better learning curve - Customer analytics and Database Marketing at Viseca Card Services

Dr. Miltiadis Sarakinos
Head Data Mining & Analysis, Viseca Card Services SA

sas forum

SWITZERLAND 2009 baden

Die Unternehmungsgruppe für eine bargeldlose Zukunft

www.aduno-gruppe.ch

Viseca Card Services SA

Credit card Issuing

Credit card Acquiring
Payment terminals

ADUNO

Consumer credits
Car financing

cashgate.–

Gift cards
Loyalty cards

ACCARDA
driving your business
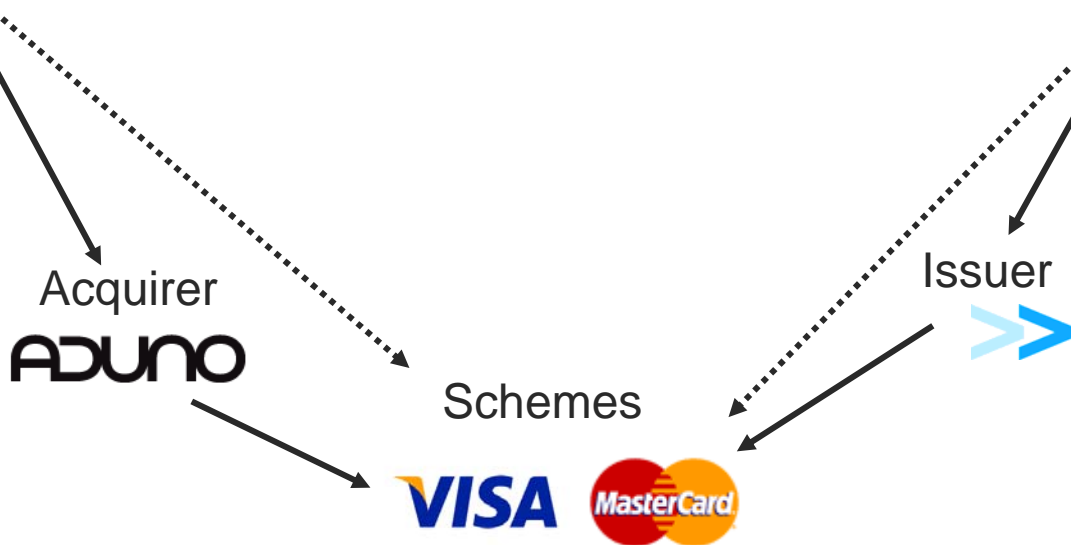
VISA

MasterCard

Viseca Card Services SA

- Switzerland's leading credit card issuer
  - 1,087'000 cards issued
  - 23,9% of all issued cards
- Credit Card Branding
  - Partner Banks
  - Co-branding
  - Neutral

Kantonalbank   MIGROSBANK   bank coop (fair banking)   RAIFFEISEN   R/BA bank

Source: Aduno-Gruppe, Semester Report 2009

Credit Card Business

Merchant

Customer

Acquirer

ADUNO

Issuer

Schemes

VISA **MasterCard**

How Does The Issuer Earn Money?

- Annual fees

- Transaction fees

- Interest

Our gain is merely a percentage of a customer's transactions!

How Does The Issuer Lose Money?

- Cardholder default

- Fraud

A dollar saved is a dollar earned!
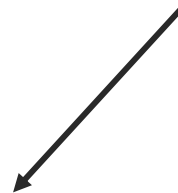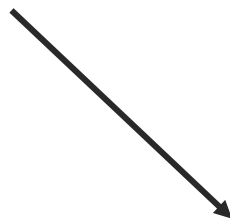
How To Influence These Components?

Income

- More customers

- Higher Loyalty

- More transactions

Marketing
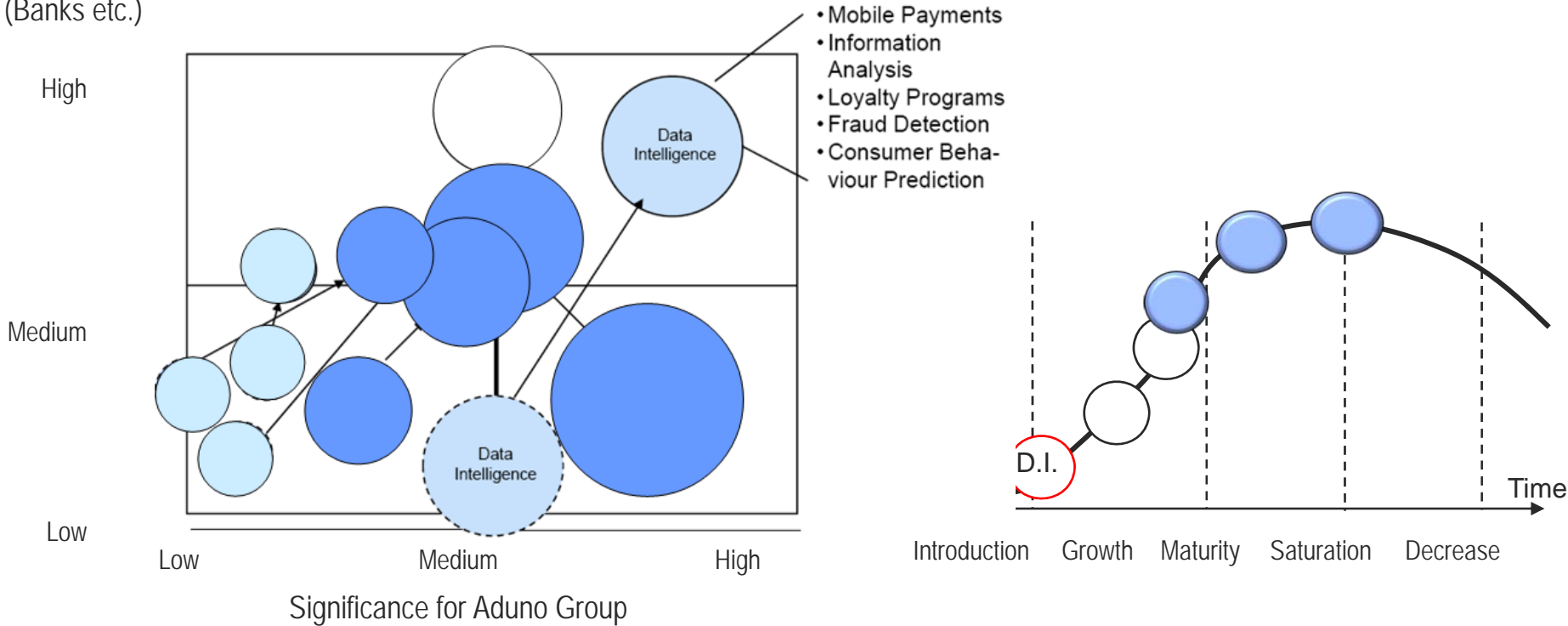
Loss

- Cardholder default

- Fraud

Risk and Fraud Analysis

Analytics, Mining

Analytics and the Group Strategy

Positioning: Rising impact of Data Intelligence (D.I.) to future corporate success

SAS forum

SWITZERLAND 2009 baden
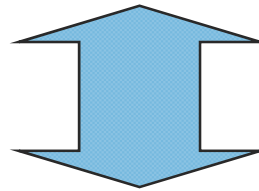
Teams

DBM Working Groups

- **DBM Action Group**
  - Marketing Management (CMO, Head Campaign Mgt.)
  - Head Analytics and DBM-dedicated Analysts
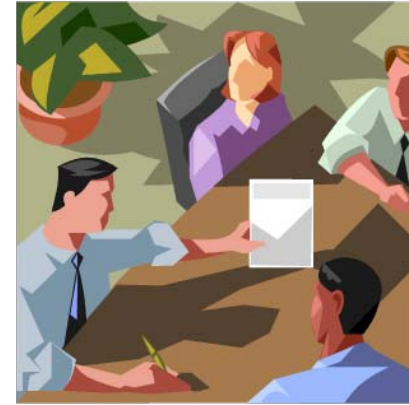 - Biweekly meetings to discuss DBM-Strategy

- **Analysts & Campaign Managers:**
  - Analysts & Campaign Managers
  - Ad-hoc Meetings for Campaign Planning and Result Discussion

DBM Learning Loop
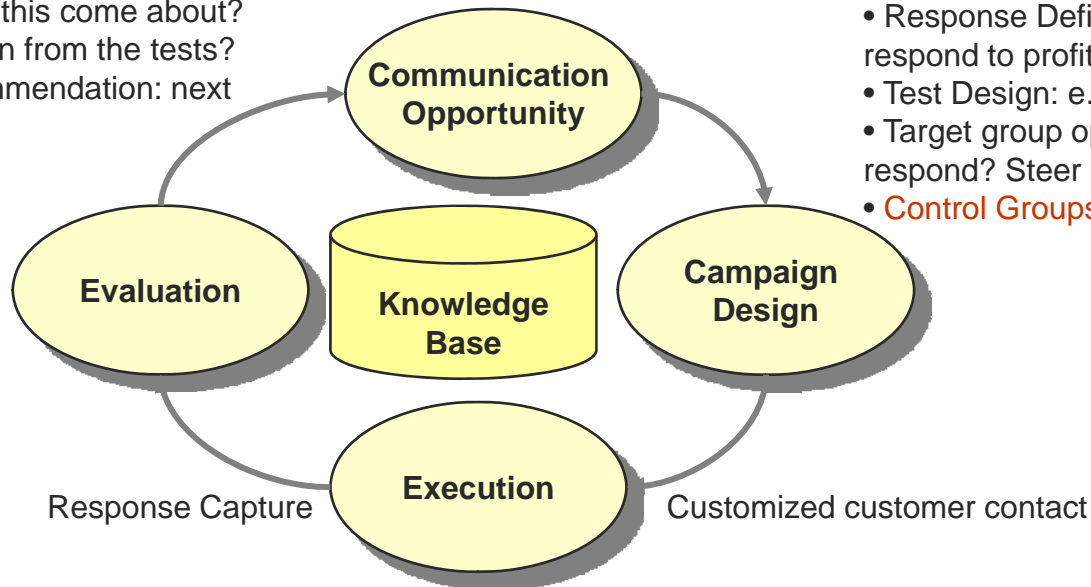
Definition Business Objective: e.g. Spend Stimulation
Definition Target Group: e.g. Customers in a particular bonus program

Analysis
-Impact: was there one?
-Profitability: was the impact profitable?
-Insight: how did this come about? What did we learn from the tests?
-Learning/Recommendation: next time…

Idea
Pre-counts
Statistical Analysis

• Offering & Channel Definition : e.g. Mailing offering more bonus points
• Response Definition: e.g. Customer must respond to profit from offer
• Test Design: e.g. Double or Triple points?
• Target group optimization: who is most likely to respond? Steer by means of scoring model
• Control Groups for performance management

Communication Opportunity

Evaluation

Knowledge Base

Campaign Design

Execution

Response Capture

Customized customer contact

Predictive Modeling

- **Standardized Process**
  - Define Business Question: who will most likely churn, respond, purchase etc. ?
  - Extract target group (e.g. Responders & Non-Responders) from past data
  - Enrich with past data from analytical data mart: 20 Minutes for O(1000 Variables)
  - Model in SAS Enterprise Miner

	adv_account_id	refdate	target_tzo	n_acct_card_y	n_acct_card_t	n_acct_card_hk_y	n_acct_card_pz_y
1	11075610	20AUG2008	1	1	0	1	0
2	11075610	20AUG2008	1	1	0	1	0
3	11075610	20AUG2008	1	1	0	1	0
4	11075610	20AUG2008	0	1	0	1	0
5	11075610	20AUG2008	0	1	0	1	0
6	11097810	20AUG2008	1	1	0	1	0
7	11075610	20AUG2008	0	4	0	1	1
8	11075610	20AUG2008	0	1	0	1	0
9	11075610	20AUG2008	1	1	0	1	0

TARGET (schreibgeschützt)   TRAIN (schreibgeschützt)

How do we do this?

sas forum
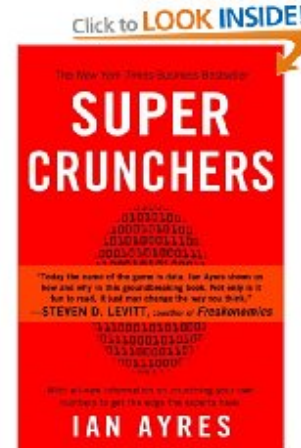
SWITZERLAND 2009 **baden**

HBR.org > February 2009

How to Design Smart Business Experiments

by Thomas H. Davenport

Managers now have the tools to conduct small-scale tests and gain real insight. But too many "experiments" don't prove much of anything.

Read the HBR In Brief

Click to LOOK INSIDE!

SUPER CRUNCHERS

IAN AYRES

1. Experiment. Test & Learn:

Tests im Direkt-marketing

MITSloan Management Review

Nov. 5, 2009   learn more.

MIT SLOAN MANAGEMENT REVI

Home
The Magazine
Wall Street Journal/MIT Sloan
Sustainability
Blog: Improvisations
Special Reports
Search

DECISION MAKING, MARKET FORCASTING, MARKETING

What People Want (and How to Predict It)

By Thomas H. Davenport and Jeanne G. Harris
January 9, 2009

Companies now have unprecedented access to data and sophisticated technology that can inform decisions as never before. How successful are they at helping forecast what customers want to watch, listen to and buy?

Markus Schöberl: Tests im Direkt-marketing

sas forum

SWITZERLAND 2009 baden

Example: Test & Learn in Direct Marketing

- Stimulate spending of customers in a loyalty program

- Test design:
 - Round 1: Random Selection to test different offers

More emotional offer
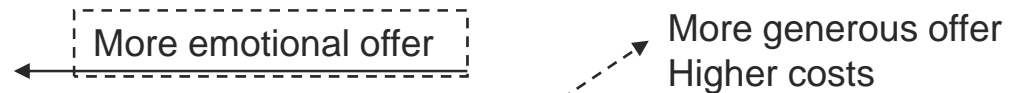
More generous offer
Higher costs

| 3x Points	3x Points
Lottery 10'000 Points	Lottery Monthly Revenue
2x Points	2x Points
Lottery 10'000 Points	Lottery Monthly Revenue

Example: Test & Learn in Direct Marketing

- Actionable Learning Round 1:

  - Customers prefer less generous offer and they tend to favor emotional (points) to rational (cash-back) offer (differences are statistically significant)

  - Choose one offer for the next round

More generous offer
Higher costs

More emotional offer

3x Points Lottery 10'000 Points **11.8%**	3x Points Lottery Monthly Revenue **10.0%**
2x Points Lottery 10'000 Points **12.7%**	2x Points Lottery Monthly Revenue **9.6%**

Best Response
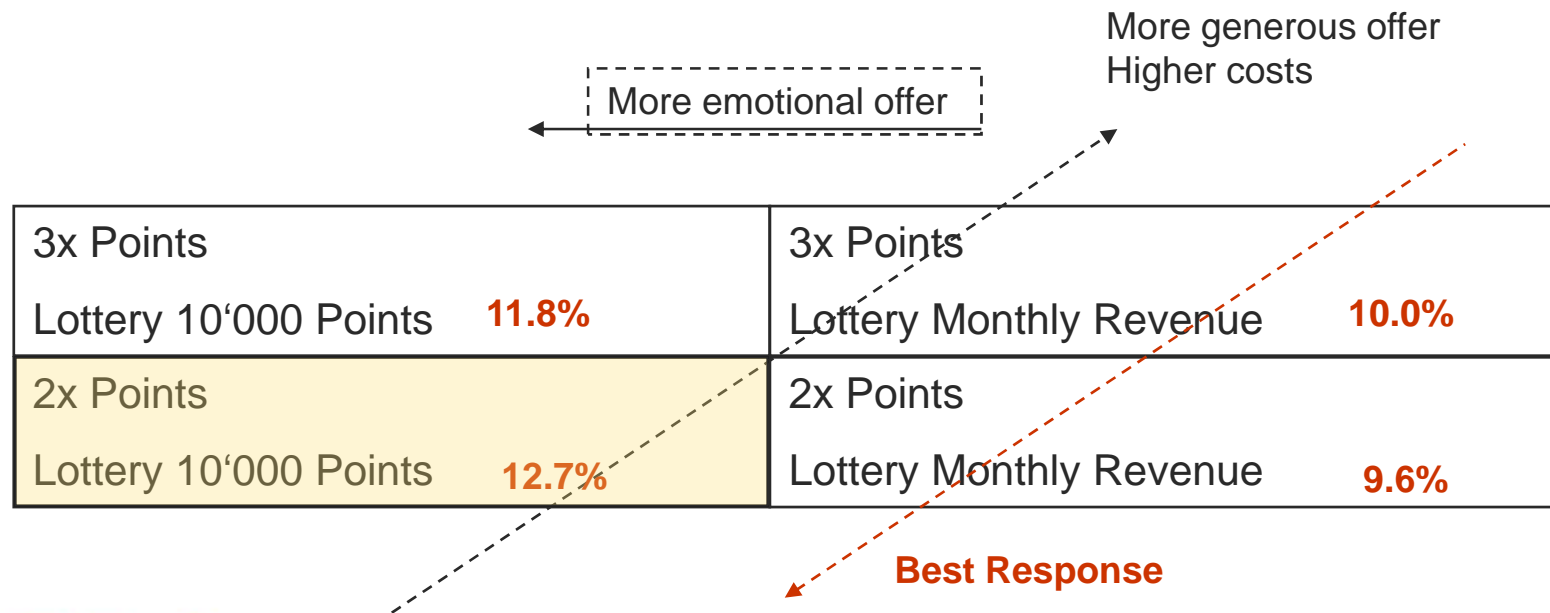
Example: Test & Learn in Direct Marketing
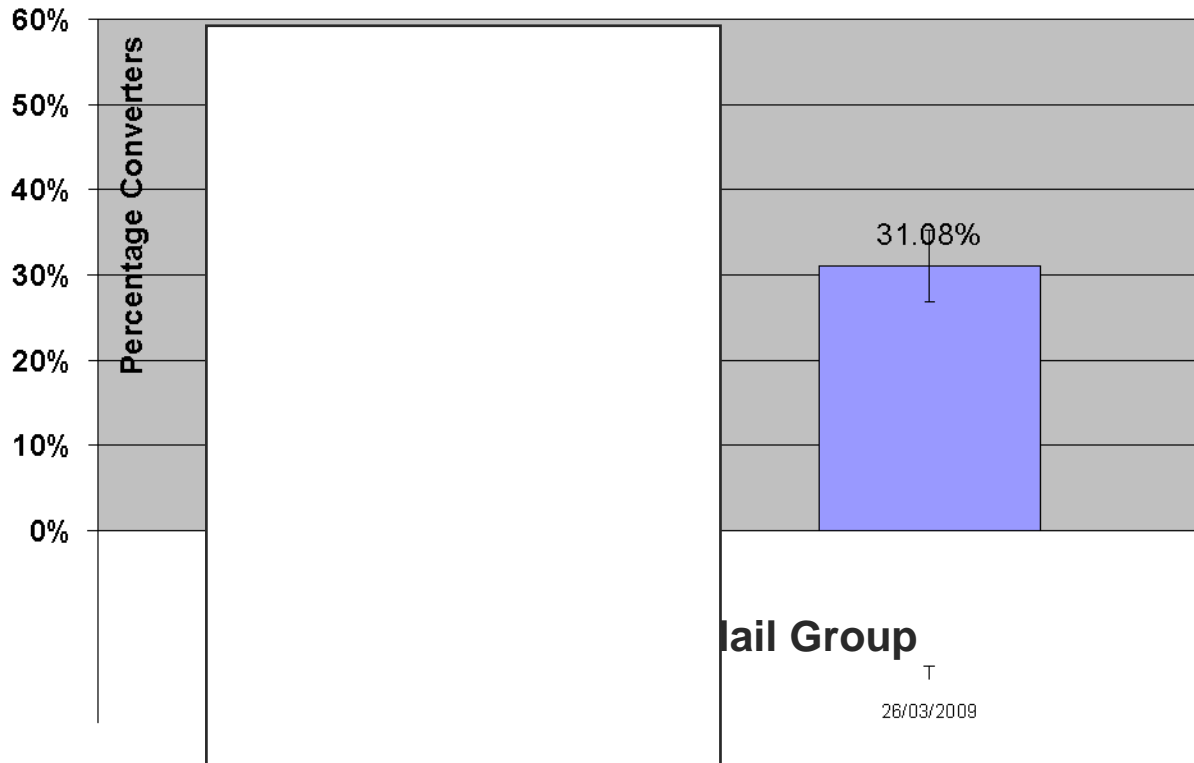
- Round 2:
  - Optimize Selection
  - Test 2 Mail Layouts

- Round 2 Actionable Learnings:
  - Scoring model works
  - More costly layout does not increase response rate.
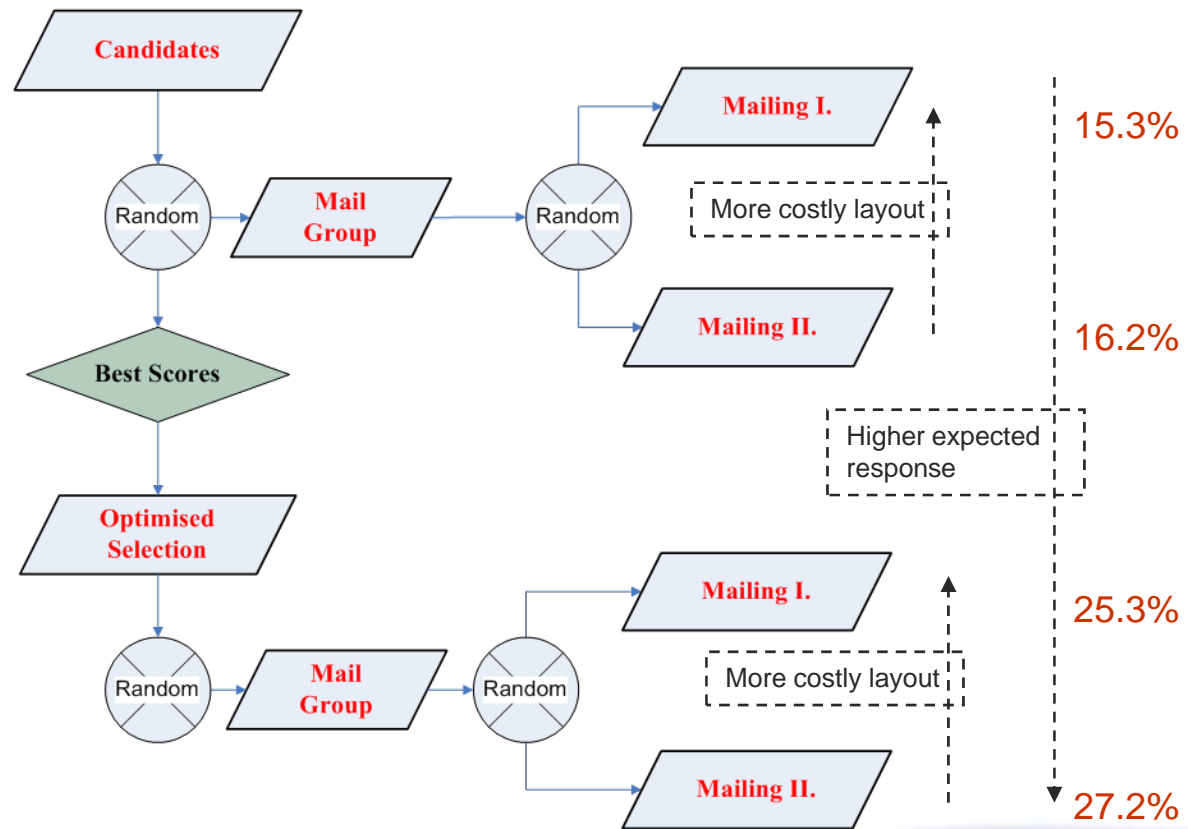
2. Analyze, measure:

SAS forum
SWITZERLAND 2009 baden

Impact measurement in Direct Marketing

- Campaign Evaluation by means of control groups
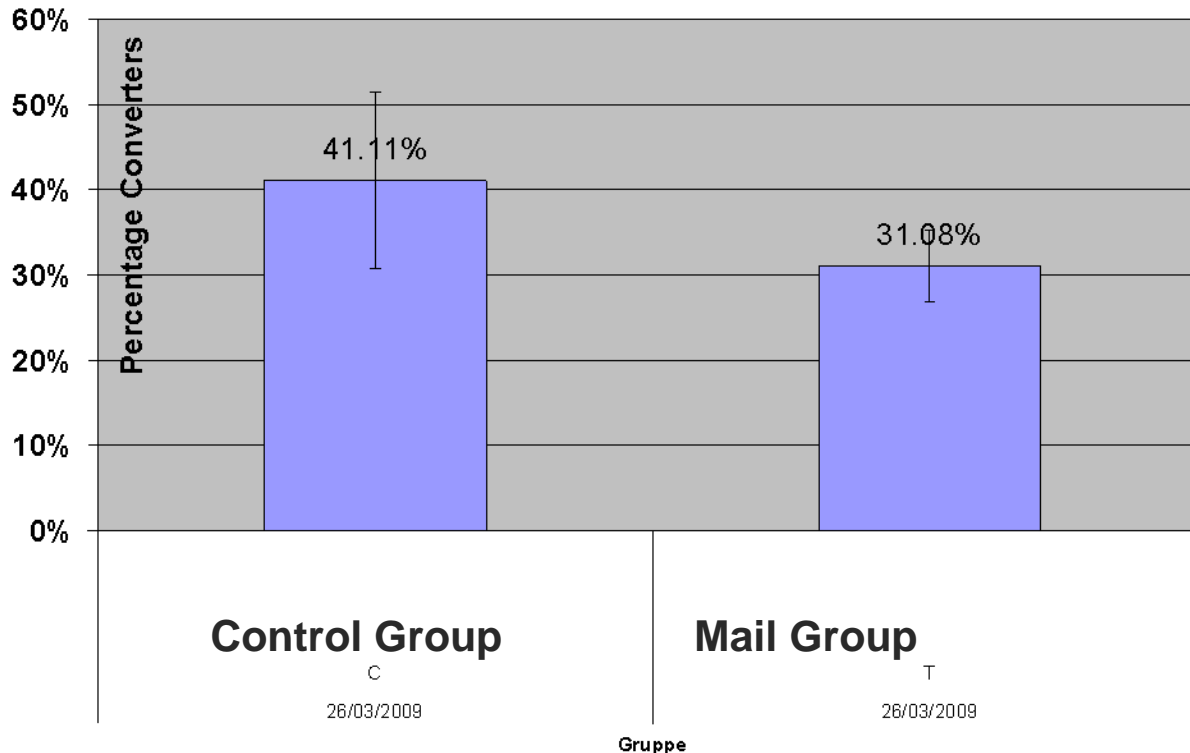

Conclusion without control group:

Campaign has a good conversion rate for a very profitable product

Impact measurement in Direct Marketing

- Campaign Evaluation by means of control groups

Conclusion without control group:

Campaign has a good conversion rate for a very profitable product

Conclusion with control group:
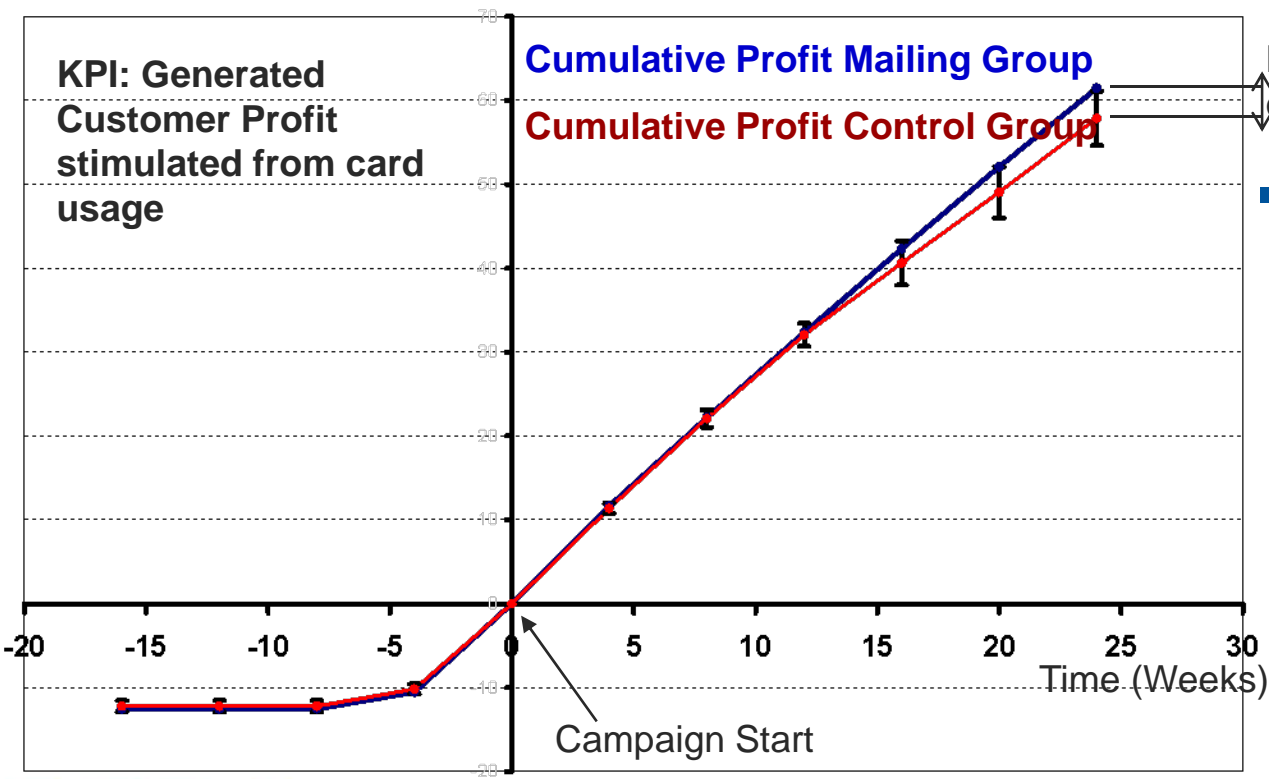
Campaign has no impact in selling product

Actionable Learning:

• **Don't do it like this again**

• **Conceive a new idea to test**

sas forum

SWITZERLAND 2009 baden

DBM Economics:
Is the campaign profitable?
Is this program profitable?

Marionnaud

Gutschein CHF 20.–

Mindesteinkauf CHF 80.–

Gültig bis 31.03.2010

Gültig in allen Marionnaud Parfümerien bei einem Mindesteinkauf von CHF 80.– und bei Bezahlung mit der **Viseca Kreditkarte**. Pro Person nur ein Gutschein einlösbar.

Nicht kumulierbar mit anderen Gutscheinen oder Promotionen. Keine Barauszahlung. Mindesteinkauf CHF 80.–.

KPI: Generated Customer Profit stimulated from card usage

Cumulative Profit Mailing Group

Cumulative Profit Control Group

Difference exceeds campaign costs

Time (Weeks)

Campaign Start

- Actionable Learnings:
  - It works, continue
  - Since it works, can we repeat with different offers at different timepoints?
  - Can we improve by e.g. a scoring model?

3. Communicate

Result Communication

Campaign Analysis Report

- MS-Word
- Design (e.g. Test etc.)
- Results (Response, Conversion, Profitability)
- Learnings/Recommendations
- Web 2.0: Wiki for exchanging results

Summary Learnings

Learnings: How to do this (1)?

- **Experiment like a scientist. Test & Learn:**
  - Tests are the central instrument of the direct marketer. No endless presentations and discussions about the hypothesized impact of a campaign, design, tonality, etc. Just test.
  - Too many successful tests: too conservative. A test that has „failed" is also a success. It triggers the search for a new idea.
  - Tests should be part of a direct marketers target milestones

CMS Detector at CERN (source: www.cern.ch)

Learnings: How to do this (2)?

- **Analyze like a scientist:**
  - Data crunching (SAS Programming)
  - Visualization (A picture is worth…)

Time (Weeks)
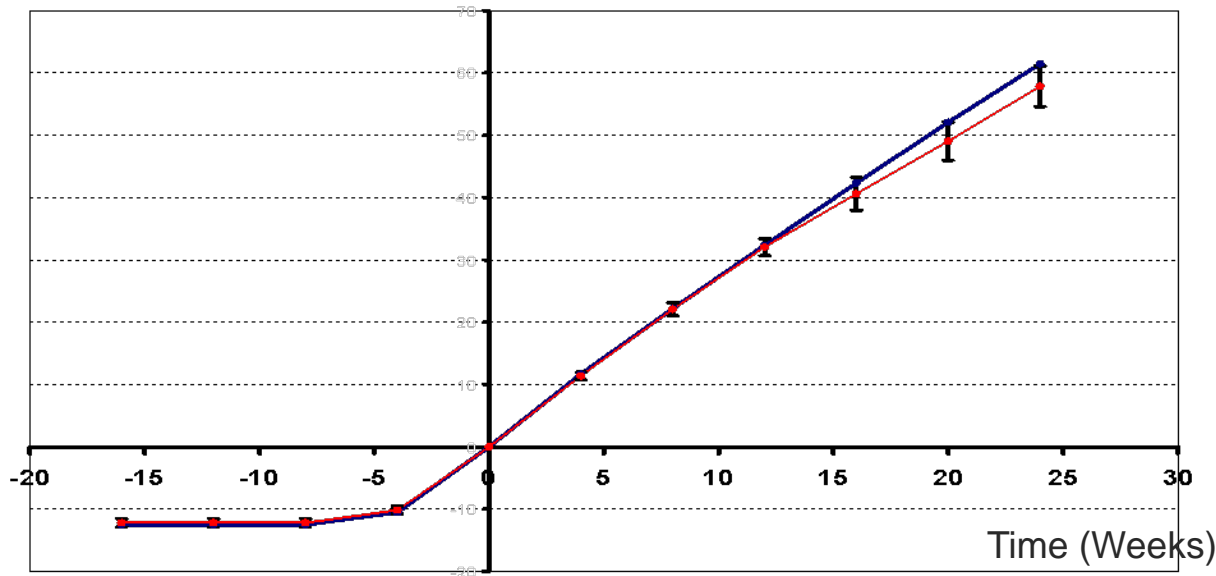
```
%if (&n_all_sel. le &_n.) %then %do;
   /* First select the random group */
   proc surveyselect data=&indatei.(keep
   run;
   proc means data=work.random_group;
      title 'Average score of the comple
      var &scorevar.;
   run;

   /* Now select the control group from
   proc surveyselect data=work.random_gr
   run;
   proc means data=work.random_group_c;
      title 'Average score of the contro
      var &scorevar.;
   run;
   /* Merge back to the original data */
   proc sort data=work.random_group(keep
      by &mykey.;
   run;
   proc sort data=work.random_group_c(ke
      by &mykey.;
   run;
   data work.temp_outdatei;
      merge &indatei(in=a keep=&mykey. &
      by &mykey.;
      if c then &group_var.='random C';
      else if b then &group_var.='random
   run;
   proc means data=work.temp_outdatei;
      title 'Average score of the random
      var &scorevar.;
      class &group_var.;
   run;

   /* Now select the optimised group */
   proc sort data=work.temp_outdatei out
```

Learnings: How to do this (3)?

- Measure like a scientist. The right Metrics & Measurements

    - Appropriate KPIs: e.g. profitability, not just response rate

    - Measure correctly: campaign impact is measured ONLY with control groups

Learnings: How to do this (4)?

- Communicate like a scientist: be factual
  - No sales pitches, no Powerpoint exercises
  - Write a balanced document with the proper mixture of text, graphics, an abstract, background, experiment, results, applications etc.

THE LEADING QUESTION
How can companies best present themselves and their products?

FINDINGS
▶ Concentrate on delivering facts, not pitches.

▶ Deliver as many of those facts as you can.

▶ Don't count on the marketing department to make this happen.

▶ Look to news sites and scientific publications for models of success.

information and his popular traveling course promoting his theories and methods. Tufte, dubbed "the da Vinci of data" by the New York Times, *saw his profile in management circles raised by an essay about Microsoft Corp.'s PowerPoint (it appears in his most recent book,* Beautiful Evidence, *Graphics Press, 2006) that laid out the corrosive influence that presentation software has on thought. Tufte, pro-*

Edward Tufte, „How Facts Change Everything (If You Let Them)", MIT Sloan Management Review, Summer 2009

SAS forum

SWITZERLAND 2009 baden

Learnings: How to do this (5)?

- Be *like* a scientist: but be *a* business person

- Think *company*, don't think *me,* don't think *department* or *business unit*

Thank you

- Questions?

sas forum

SWITZERLAND 2009 baden