



IBM

Information



Demand **2010**

Intelligent Analytics and Optimization for Smarter Business



Optimize Campaign Across Multiple Channels

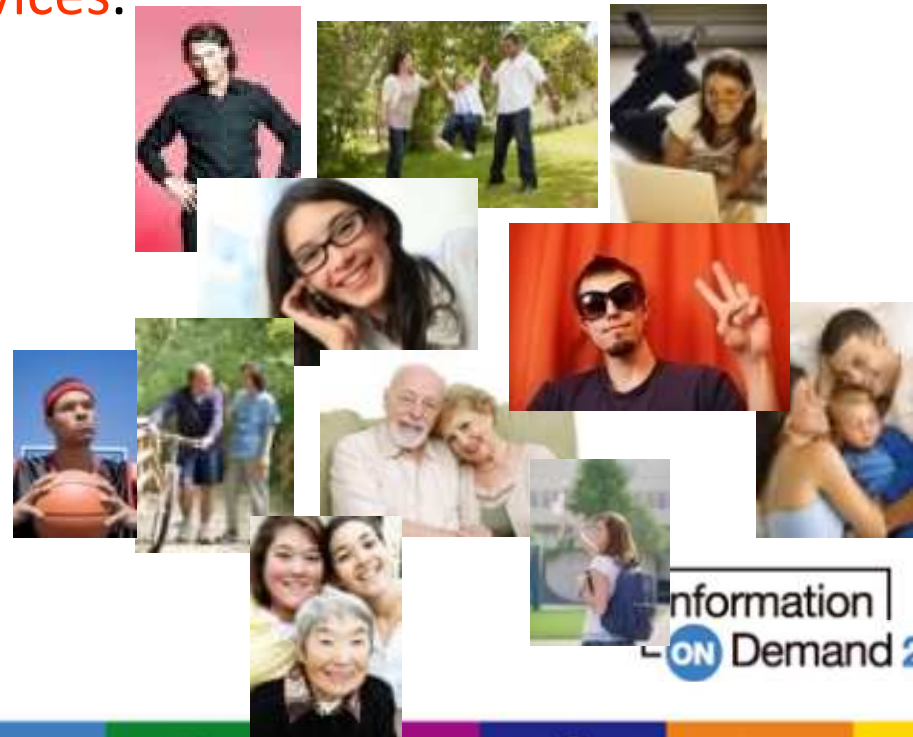
Simon Ng
Senior I/T Specialist, IBM



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Campaign Insight & Optimization

- Enhance your existing customer relationships via **cross selling** and targeting the **right customers** and prospects with both the **right products and services**.
 - Increase lead generation
 - Enhance revenue
 - Reduce campaign costs



Information |
ON Demand 2010



Customer Contacts

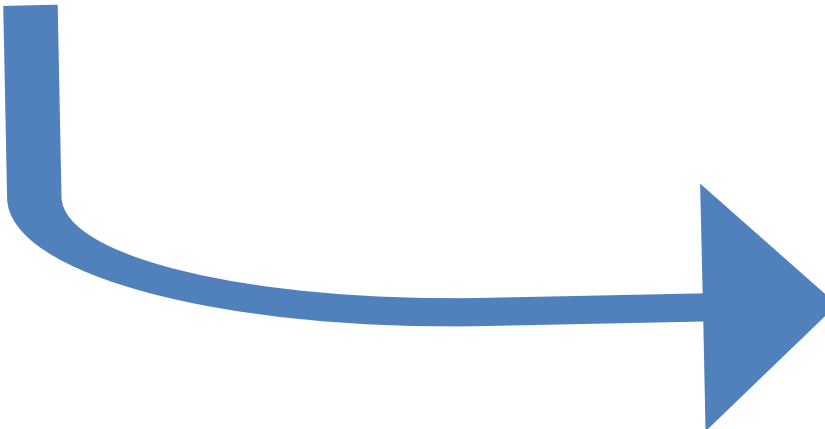
Before predictive analytics:
"Offer of the month"
sent to all customers

Step 1

How to change Customer Contacts to Customer Information

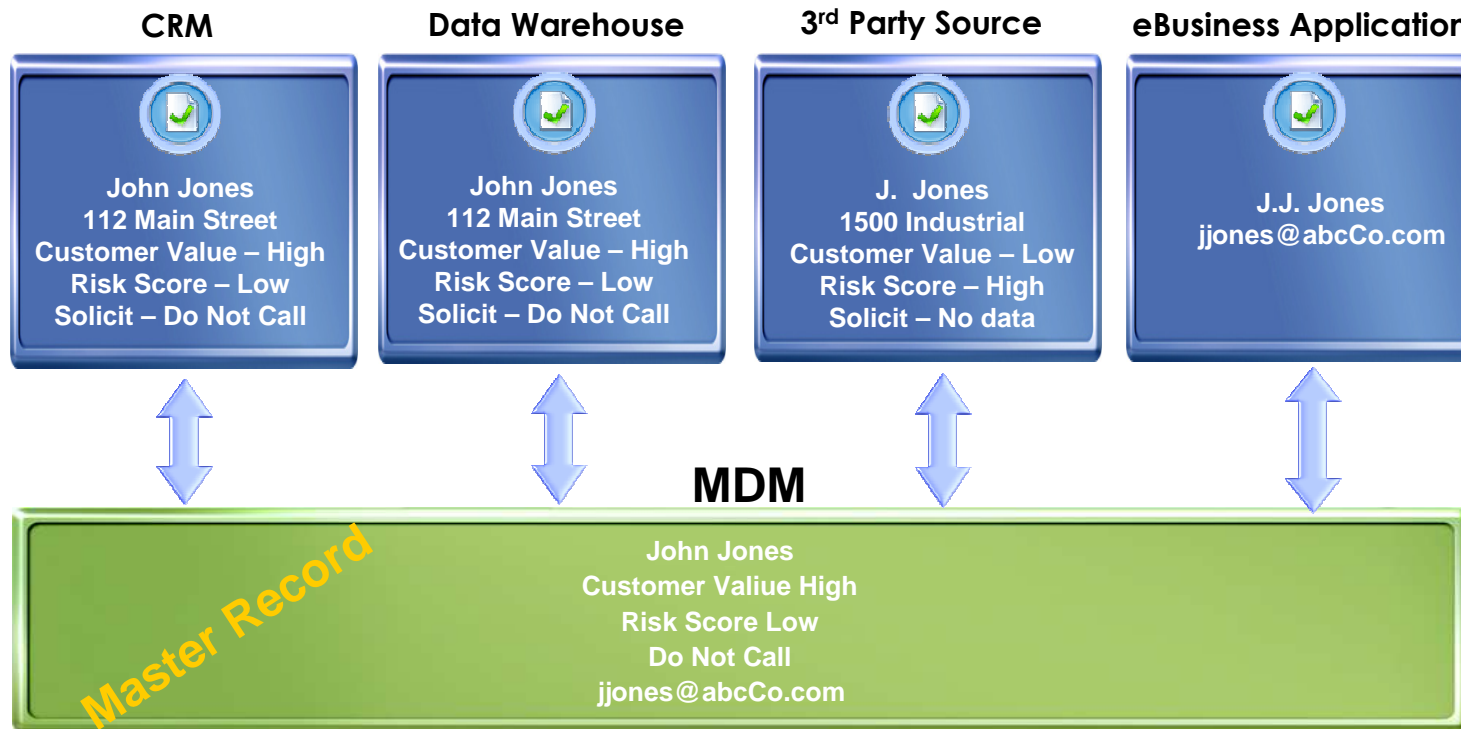


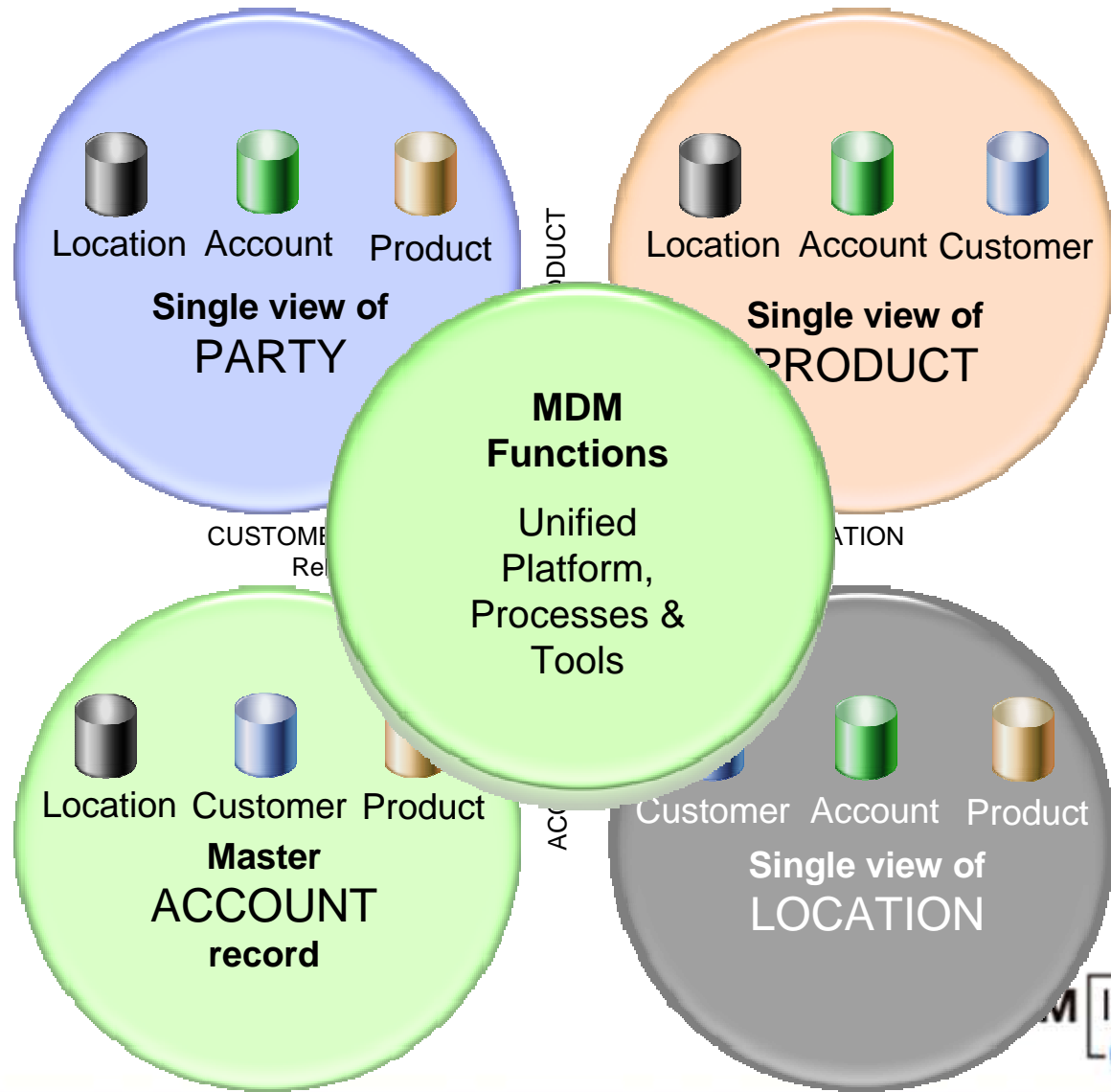
Customer Contacts



Customer Info

- Demographics
- Account Activity
- Product Holdings

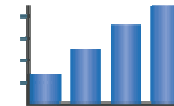
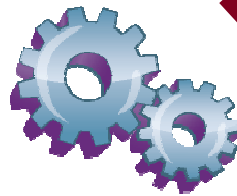






Step 2
Optimize offer of the month
by not contacting customers
using simple query

Step 3
Establish feedback loop to
measure the effect of
subsequent improvements



Key Performance
Predictors and
Campaign Results



Customer Info
- Demographics
- Account Activity
- Product Holdings

Simple

one product,
one architecture

Complete

all capabilities,
all users, all data

Proven

proven technology from
the leader in BI



Cognos Viewer - Credit Card Marketing Dashboard - Microsoft Internet Explorer

Address: http://ibmsimon.ibm.cognos.com/cognos8/cgi-bin/cognos.cgi?b_action=dashboard&pathinfo=/cm&frag-header=true&path=storeID(%221585EECAD64BC49369D22EABCC79FEFEC%22)&backURL=%2fcognos8%2fcgi-

admin Log Off Launch About

No filter No grouping [Metrics: 1-4]

Name	Actual	Target	Variance	Variance %	Time Period
Acquire Customers - Gross Response Rate	48.15%	50.00%	-1.85%	3.69%	Dec 2006
Internet - Response Volume	8,154	10,000	-1,846	18%	Dec 2006
Platinum - Net Response Rate	59.26%	50.00%	9.26%	18.51%	Dec 2006
Platinum - Pending	5,868	5,000	868	17%	Dec 2006

Marketing

- Loss Ratio Falls for Second Consecutive Month
- Offer-Sales Conversation Rates Fall Below 20%
- Account Growth Rate at Unacceptable Levels
- Cross-Sell Percentage Requires Review

Reports

Entries: 1 - 10

- Dashboard Folder
- Executive Dashboard Report
- Marketing Analysis
- Marketing Dashboard Report
- Product Ad-Hoc
- Product Cube Response Volume
- Product Detail
- Product Query Response Details
- Response Summary - Dashboard
- Response Summary - Offer Type

Mailed/Response Comparison by Product

Product	Mailed	Response Volume
Signature	~350,000	~50,000
ITA	~50,000	~20,000
Classic	~450,000	~150,000
Platinum	~800,000	~150,000
Unknown	~50,000	~20,000

Approval Rate by Channel

Channel	Approval Rate
Mail	40%
Phone	20%
Internet	60%
Internet Solicitat...	80%
Unknown	0%
Branch	0%

Account Totals by Product

Product	Percentage
Classic	13%
Platinum	64%
Signature	22%
Unknown	1%

Marketing Program Success Analysis

Responses	Mailed
~5,000	~10,000
~10,000	~50,000
~15,000	~80,000
~20,000	~100,000
~25,000	~120,000
~30,000	~150,000
~35,000	~190,000
~40,000	~220,000
~45,000	~240,000

New * - Analysis Studio - Microsoft Internet Explorer

File Edit View Settings Run Help

Insertable Objects

- [-] Carly Millers
- [-] James Ripley
- [-] Paula Merkle
- [-] Vern Ritchie
- [-] George Harrows
- [-] Melanie White
- [-] Charles Laurel
- [-] Vera Parry
- [-] Alex Rodriguez
- [-] Samantha Floyd
- [-] Julie Olsen
- [-] Julie Olsen
- [-] More
- [-] Canada
- [-] Mexico
- [-] Brazil
- [-] Asia Pacific
- [-] Northern Europe
- [-] Central Europe
- [-] Southern Europe
- [-] Employee (by position-department)
- [-] Position-department
- [-] Organization
- [-] Sales order dimension
- [-] Order method dimension
 - [-] Fax
 - [-] Telephone
 - [-] Mail
 - [-] E-mail
 - [-] Web
 - [-] Sales visit
 - [-] Special
- [-] Product
- [-] Product (by brand)
- [-] New product
- [-] Retailer
- [-] Retailer site
- [-] Promotions
- [-] Branch
- [-] Inventory
- [-] Returned items

Rows: Employee Columns: Order method dimension

Quantity	Fax	Telephone	Web	Sales visit	Mail	E-mail	Special	C
Pierre Lavoie	25,160	74,652	360,650	181,713				
Rhonda Cummings		114,520	497,473	44,050	36,434	3,532		
Audrey Lastman	23,932	260,053	514,702	173,154	454	6,408		
Bart Scott		228,017	566,119	2,157		1,447	40,985	
Margaret Lewiston		23,802	193,457	50,861			14,088	
Eric Carson	69,009	37,990	644,000	113,822		34,806		
Harold Germaine	39,511	28,304	205,895	34,713	2,271	11,752		
Janice Thomas		147,500	630,274	218,588	100,735			
Karly Millers	36,732	65,026	251,271	33,892	2,258	643		
James Ripley	22,676	123,770	361,620	101,560	12,131	946		
Paula Merkle		203,527	337,811	19,785	10,123			
Vern Ritchie		127,872	2,165					
More								
Employee by region(All)	1,480,014	7,252,844	68,458,305	6,813,412	953,055	3,642,659	636,802	

Filter - Employee

Create a filter to limit the number of items in a selected set. Combine filters to create custom conditions (AND and OR).

Type	Item	Operator	Value	For column
[-]	Default (Sales fact.Quantity)	> (greater than)		Default

Options:

All criteria must be met (AND) At least one of the criteria must be met (OR)

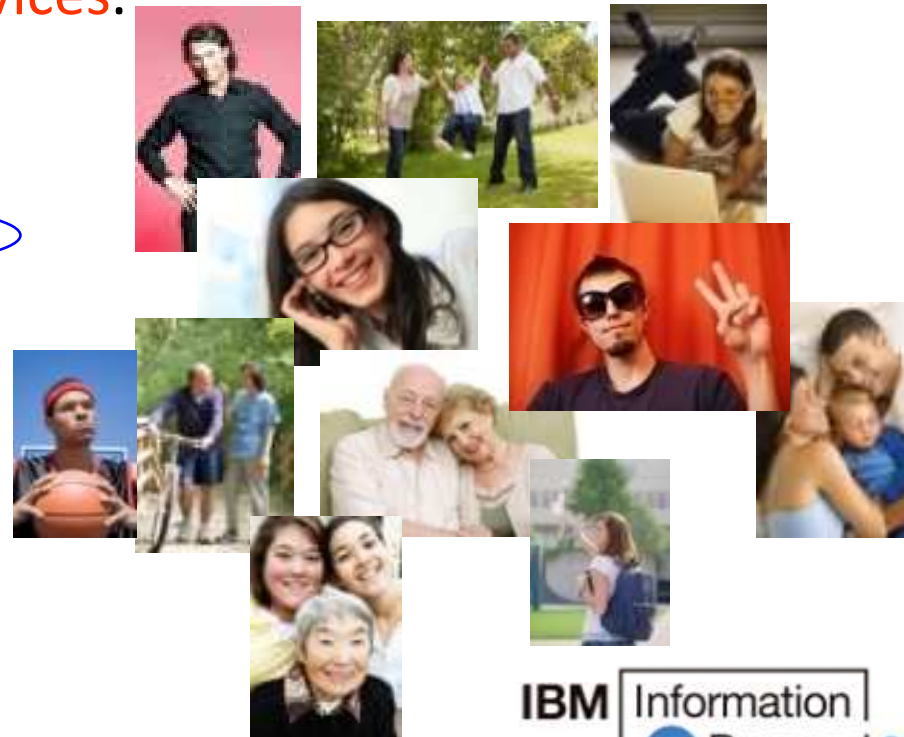
OK Cancel

Default
Fax
Telephone
Web
Sales visit
Mail
E-mail
Special
Order method dimension(All)

Information - Order method dimension

Campaign Insight & Optimization

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 - Enhance revenue
 - Reduce campaign costs

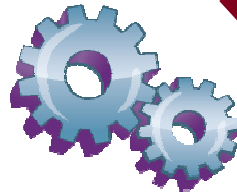




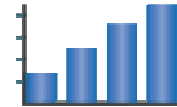
Step 4
Enrich your Customer Information

Step 5
Automate the Profiling process on the customer


Customer Contacts



Predictive Models
Likelihood to respond to each of the current marketing offers

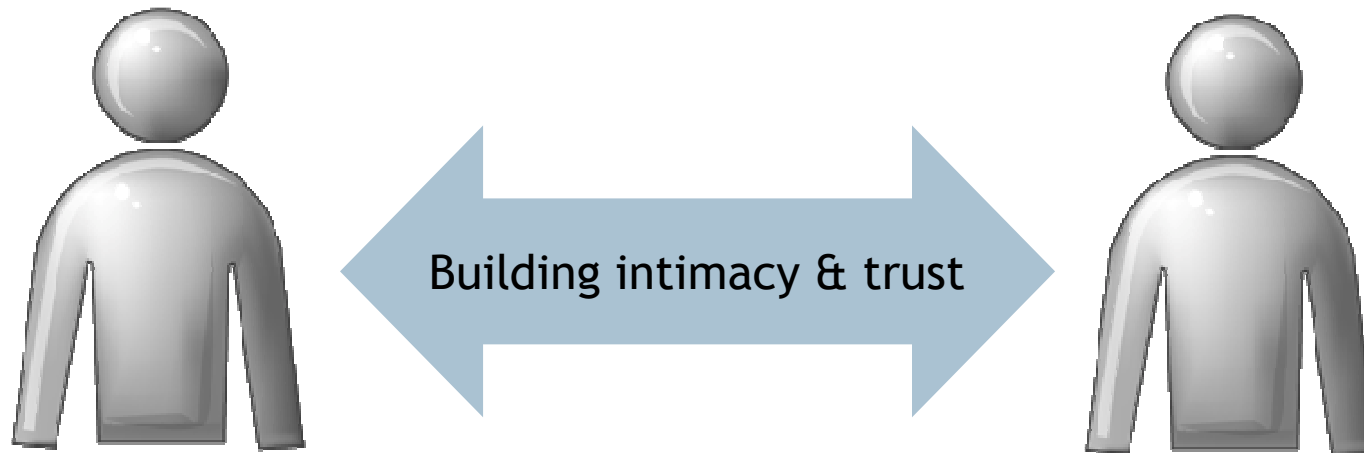


Key Performance Predictors and Campaign Results

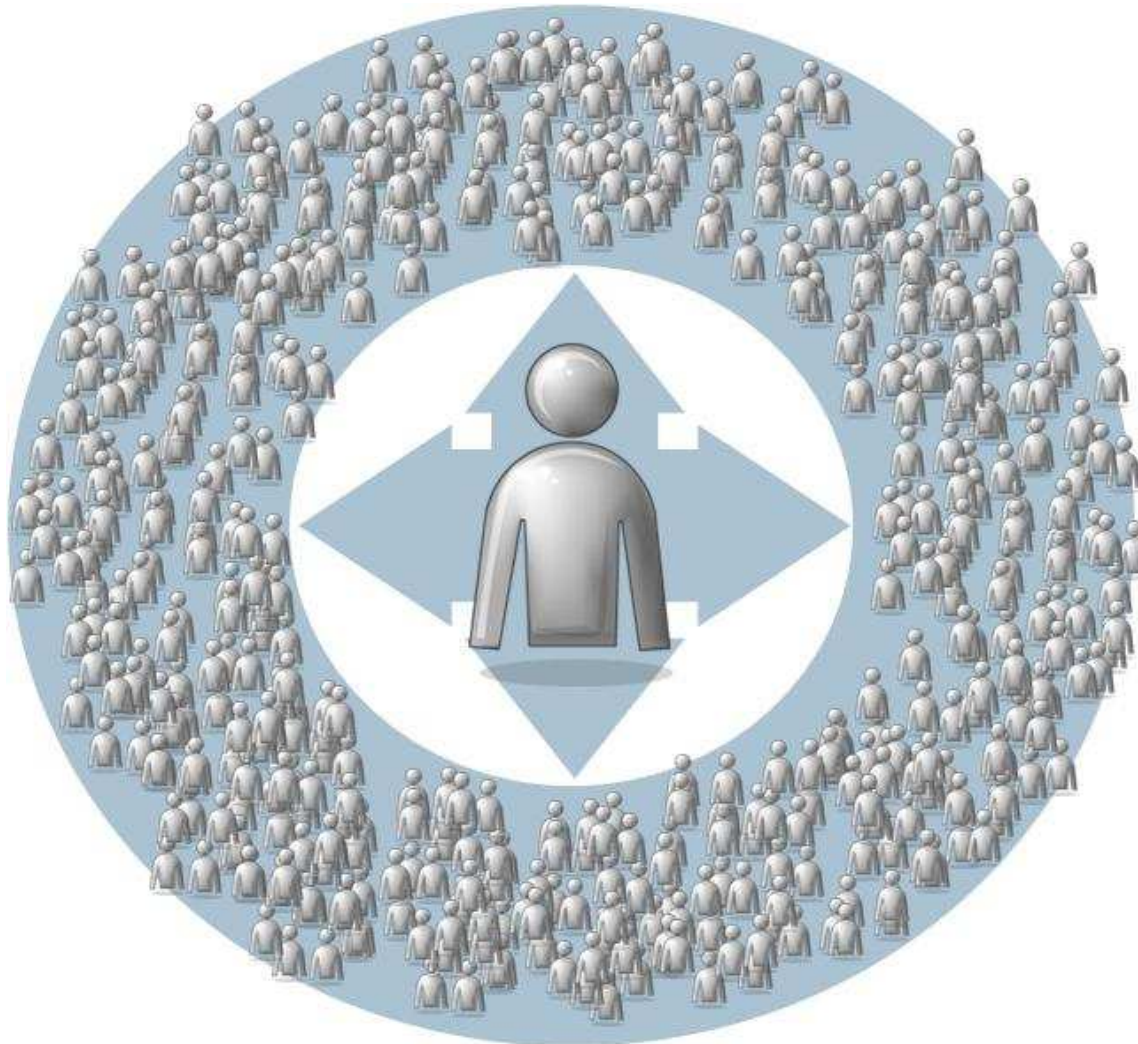


- Customer Info**
- Demographics
 - Account Activity
 - Product Holdings
 - Channel Activity
 - Information Requests
 - Complaints

A Conversation...



... With Millions of People



M1_CustomerSegmentation* - PASW® Modeler 13

File Edit Insert View Tools SuperNode Window Help

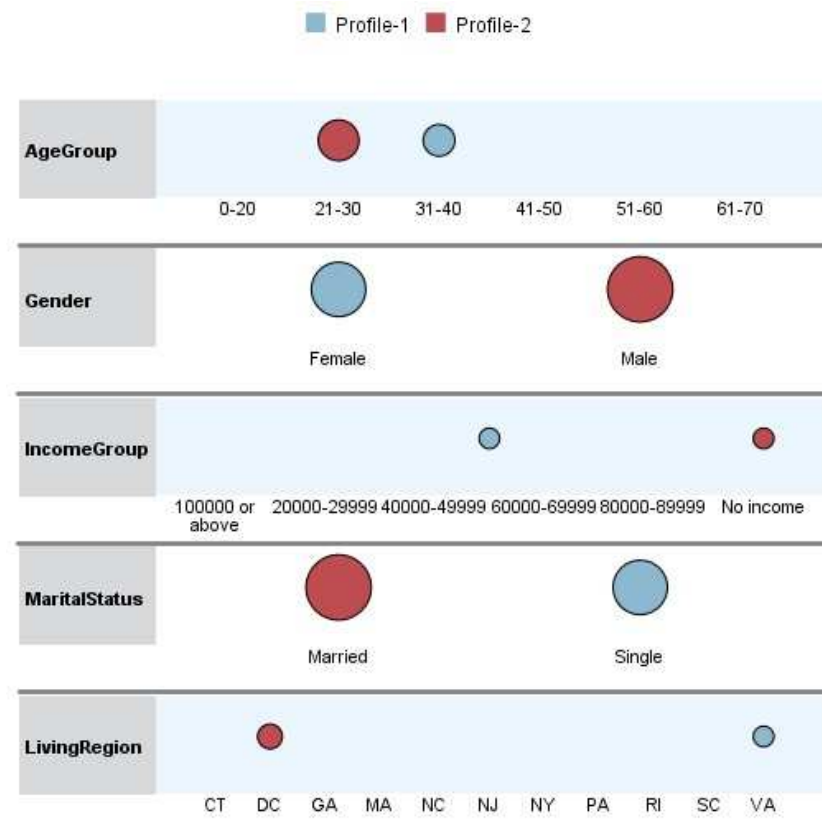
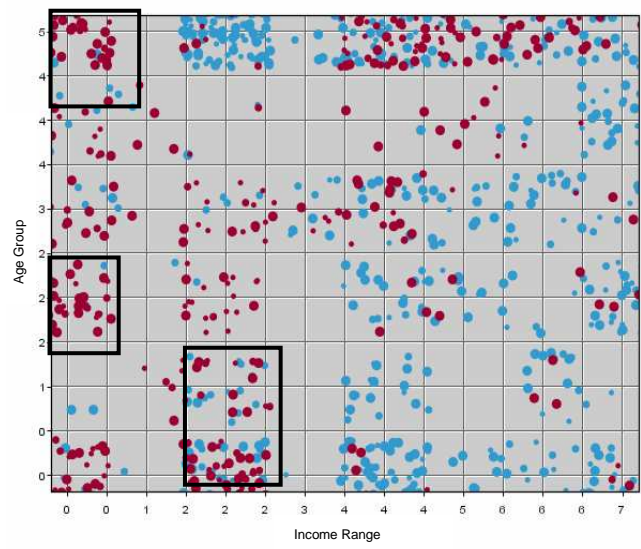
Streams Outputs Models

M1_CustomerSegmentation

CRISP-DM Classes

- CampaignManagement
 - Business Understanding
 - Data Understanding
 - Data Preparation
 - P1_CustomerDetail
 - P2_PortfolioPurchased
 - Modeling
 - M1_CustomerSegmentation
 - M2_ProductAssociation
 - Evaluation
 - Deployment
 - D1_ProductAssociation

Server: Local Server 281MB / 442MB



Value	Proportion	%	Count
Profile-1		5.91	525
Profile-2		7.01	623
Profile-3		37.75	3356
Profile-4		22.06	1981
Profile-5		13.34	1186
Profile-6		13.94	1239

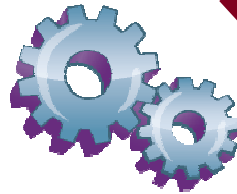
Revolving

F T

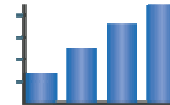
Step 6
Optimize across multiple offers



Customer Contacts



Predictive Models
Likelihood to respond to each of the current marketing offers



Key Performance Predictors and Campaign Results

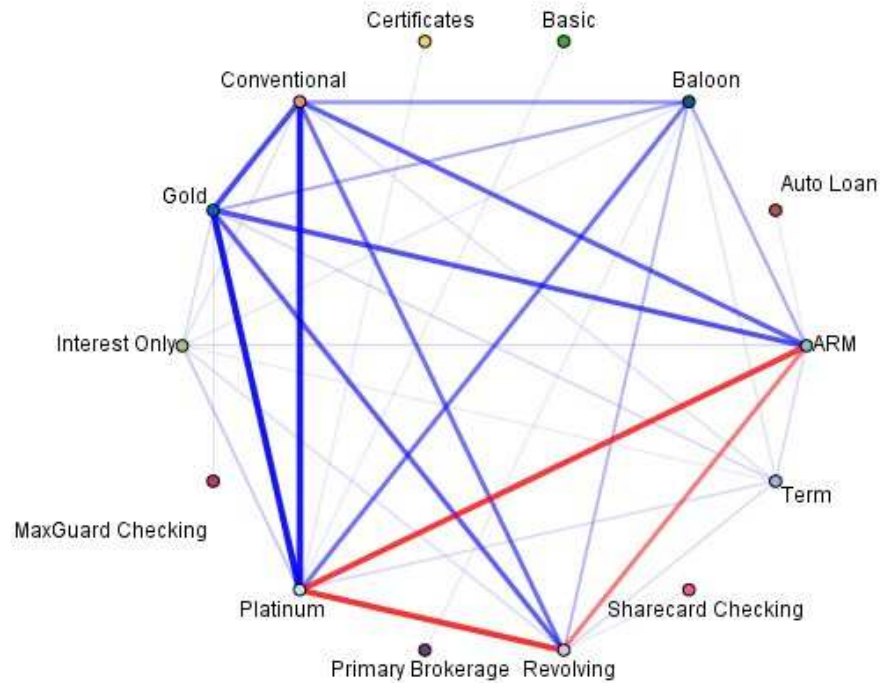
Next Best Action
Best 3 offers recorded for every customer individually

Customer ID	1	2	3
12435	A	C	F
56437	B	G	D
59235	H	C	-
45276	-	-	-
<i>Etcetera</i>			



Customer Info

- Demographics
- Account Activity
- Product Holdings
- Channel Activity
- Information Requests
- Complaints



PortfolioSubType

File Generate Preview

Sort by: Lift 3021 of 3021

Consequent	Antecedent	Support %	Confidence %	Lift
PortfolioSubType = 3.5% Interest	LivingRegion = NY	1.433	10.0	1.856
PortfolioSubType = 3.5% Interest	LoyaltyType	1.433	10.0	1.856
PortfolioSubType = 3.5% Interest	LivingRegion = PA	1.433	10.0	1.856
PortfolioSubType = 3.5% Interest	AgeGroup = 41-50	1.146	10.0	1.856
PortfolioSubType = 3.5% Interest	IncomeGroup = No Income	1.146	10.0	1.856
PortfolioSubType = 3.5% Interest	AgeGroup = 21-30	1.146	10.0	1.856
PortfolioSubType = 3.5% Interest	MaritalStatus = Married	1.146	10.0	1.856
PortfolioSubType = 3.5% Interest	ProductTypePreference1 = PDAs	1.146	10.0	1.856
PortfolioSubType = Flex Revolving	AgeGroup = 31-40	1.175	63.415	1.568
PortfolioSubType = Flex Revolving	Gender = Female	1.175	63.415	1.568
PortfolioSubType = Locked Revolving	ProductTypePreference1 = Flat ...	1.376	60.417	1.561
PortfolioSubType = Locked Revolving	AgeGroup = 21-30	1.376	60.417	1.561
PortfolioSubType = Locked Revolving	ProductTypePreference2 = MP3...	1.175	58.537	1.513
PortfolioSubType = Locked Revolving	AgeGroup = 21-30	1.175	58.537	1.513
PortfolioSubType = Flex Revolving	ProductTypePreference2 = Moti...	1.175	58.537	1.513
PortfolioSubType = Flex Revolving	AgeGroup = 21-30	1.003	60.0	1.484
PortfolioSubType = Flex Revolving	LivingRegion = DC	1.003	60.0	1.484
PortfolioSubType = Flex Revolving	\$KM-K-Means = Profile-2	1.003	60.0	1.484
PortfolioSubType = Flex Revolving	AgeGroup = 21-30	1.003	60.0	1.484
PortfolioSubType = Flex Revolving	LivingRegion = DC	1.003	60.0	1.484
PortfolioSubType = Flex Revolving	\$KM-K-Means = Profile-2	1.003	60.0	1.484
PortfolioSubType = Flex Revolving	AgeGroup = 21-30	1.003	60.0	1.484
PortfolioSubType = Flex Revolving	MaritalStatus = Married	1.003	60.0	1.484
PortfolioSubType = Flex Revolving	LivingRegion = DC	1.003	60.0	1.484
PortfolioSubType = Flex Revolving	\$KM-K-Means = Profile-2	1.003	60.0	1.484
PortfolioSubType = Flex Revolving	AgeGroup = 21-30	1.003	60.0	1.484
PortfolioSubType = Flex Revolving	Gender = Male	1.003	60.0	1.484
PortfolioSubType = Flex Revolving	LivingRegion = DC	1.003	60.0	1.484

Table (13 fields, 4,984 records) #3

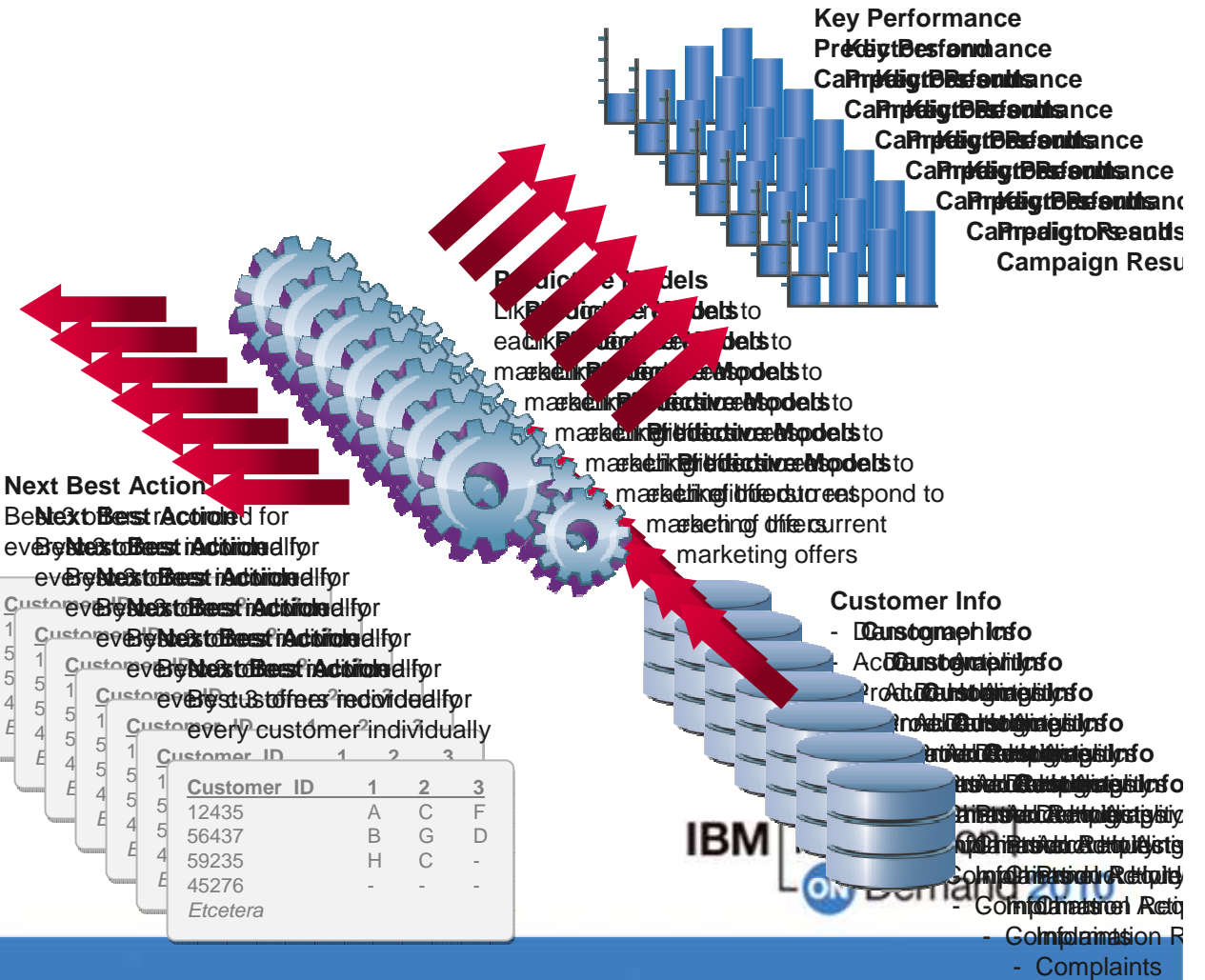
File Edit Generate

	CustomerId	1st Interested Scheme	Confidence Lv.	2nd Interested Scheme	Confidence Lv.	3rd Interested Scheme	Confidence Lv.
1	1354	Locked Revolving	0.494	Flex Revolving	0.466	3.5% Interest	0.119
2	1380	Locked Revolving	0.568	Flex Revolving	0.449	5% Interest	0.194
3	1385	Locked Revolving	0.496	Flex Revolving	0.494	3.5% Interest	0.146
4	1393	Flex Revolving	0.522	Locked Revolving	0.407	4.5% Interest	0.135
5	1401	Locked Revolving	0.552	Flex Revolving	0.486	4.5% Interest	0.135
6	1402	Flex Revolving	0.514	Locked Revolving	0.458	4.5% Interest	0.133
7	1404	Locked Revolving	0.522	Flex Revolving	0.476	3.5% Interest	0.140
8	1418	Flex Revolving	0.500	Locked Revolving	0.472	\$null\$	\$null\$
9	1420	Locked Revolving	0.524	Flex Revolving	0.482	3.5% Interest	0.146
10	1429	Locked Revolving	0.509	Flex Revolving	0.500	\$null\$	\$null\$
11	1459	Flex Revolving	0.581	Locked Revolving	0.490	5% Interest	0.105
12	1462	Flex Revolving	0.581	Locked Revolving	0.522	4.5% Interest	0.116
13	1495	Locked Revolving	0.548	Flex Revolving	0.443	\$null\$	\$null\$
14	1499	Flex Revolving	0.542	Locked Revolving	0.510	3% Interest	0.140
15	1518	Locked Revolving	0.500	Flex Revolving	0.485	5% Interest	0.164
16	1522	Locked Revolving	0.524	Flex Revolving	0.485	5% Interest	0.164
17	1546	Locked Revolving	0.548	Flex Revolving	0.522	3.5% Interest	0.154
18	1563	Flex Revolving	0.477	Locked Revolving	0.468	\$null\$	\$null\$
19	1569	Locked Revolving	0.554	Flex Revolving	0.511	3% Interest	0.140
20	1588	Locked Revolving	0.534	Flex Revolving	0.525	3% Interest	0.131

Step 7 Optimize ALL Campaign



Customer Contacts



DNB_Bank - Event Builder

File Edit Tools Actions Help

Manage Build Optimize

Events

Name	Category	Priority	Deploy Date	Status
Category: Credit				
Credit Card Program(1)	Credit	Normal	Oct 17, 2008	Inactive
Credit Card Program(2)	Credit	Normal	Nov 19, 2008	Inactive
Overdraft Plus Retention(1)	Credit	Wildcard	Oct 1, 2008	Inactive
Overdraft Plus Retention(2)	Credit	Wildcard	Oct 1, 2008	Inactive
Category: Debit				
Pension Plan Campaign(1)	Debit	Normal	Oct 17, 2008	Inactive
Pension Plan Campaign(2)	Debit	Normal	Nov 19, 2008	Inactive
Premium Conditions(1)	Debit	Normal	Oct 17, 2008	Inactive
Premium Conditions(2)	Debit	Normal	Nov 19, 2008	Inactive

Overdraft Plus Retention(2) - Event

Prioritization Planning

General Inclusions Exclusions **Selection Model** Channels Offers Messages Actions

Use Selection Model

Overdraft Plus Model [Edit] [New]

#	Use	Segment	Target	cover	probability
0	<input checked="" type="checkbox"/>	RFM Score, Average Balance Feed Index RFM Score between {8.6557, 10.2667} Average Balance Feed Index between {159, 238}	Overdraft Plus	388	23.71
1	<input checked="" type="checkbox"/>	RFM Score, Average Balance Feed Index RFM Score between {9.4723, 11.298} Average Balance Feed Index between {159, 348}	Overdraft Plus	356	16.66
2	<input checked="" type="checkbox"/>	Average Balance Feed Index, Number Of Transactions Average Balance Feed Index >= 298 Number Of Transactions >= 10	Overdraft Plus	363	8.25
3	<input checked="" type="checkbox"/>	Remainder		2,453	4.77

Model is evaluated as List model.

[OK] [Cancel]

General

Name
Overdraft Plus Retention(2)

Identifier
OPR_2

Description

Selections

Segments
Basic
High Potentials
Prospects

Selection Groups
Marital Status Single
Marital Status Unknown

Select the criteria to include or exclude customers in each campaign based on rules or predictive models.

Image 1 of 4

CLOSE X

October 2008 - optimized - Optimum

General | Calendar | **Events**

Optimization Window

Events	Initial	Requested	Current	Ideal	New
Event Size	5000	5000	5000	32025	10000
Overdraft Plus Retention(1)					
Expected Profit	Wildcard	Normal	9130	13992	Normal
Event Conversion	150	150	270	511	150
Event Size	4000	100000	3031	2315	100000
Pension Plan Campaign(1)					
Expected Profit	Low	Normal	70418	83669	Normal
Event Conversion	50	50	781	1161	50
Event Size	2500	100000	6999	6559	100000
Premium Conditions Retention(1)					
Expected Profit	High	Normal	92552	101597	Normal
Event Conversion	100	100	3404	4370	100
Event Size	5000	100000	22647	18299	100000
Totals					
Event Constraints					
Expected Profit			235020	439685	
Event Conversion	400	400	5492	10649	400
Event Size	16500	305000	37677	59198	310000
Deploy Constraints					
Total Budget	100000	100000	66633	210283	100000

OK Cancel

Automate allocations based powerful optimization algorithms.
Image 2 of 2

CLOSE X

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Thank You!



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