Real-Time Interactive Marketing Workshop

October 2012

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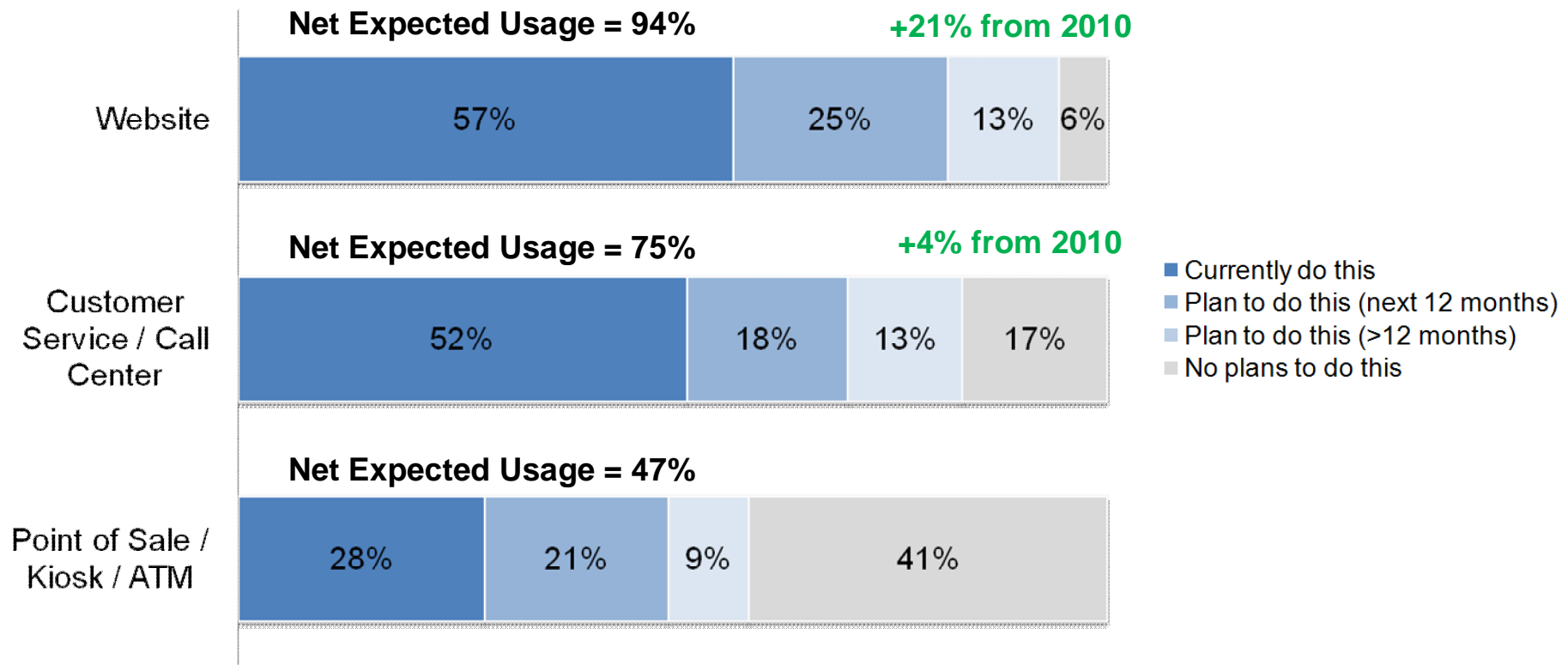
Agenda

- ## What is Real-Time Marketing?

- ## Key Real-time Marketing Concepts
  - Real-time Segmentation
  - Real-time Behavior Triggers
  - Self-Learning

- ## Benefits of Unica Interact

Inbound Marketing is a Growing Trend

Survey question:
Is your company delivering or planning to deliver targeted/personalized messages in
*customer-initiated interactions (e.g., website, physical store/branches, call center)?*

Net Expected Usage = 94%   **+21% from 2010**

Website

| 57% | 25% | 13% | 6% |

Net Expected Usage = 75%   **+4% from 2010**

Customer Service / Call Center

| 52% | 18% | 13% | 17% |

- Currently do this
- Plan to do this (next 12 months)
- Plan to do this (>12 months)
- No plans to do this

Net Expected Usage = 47%

Point of Sale / Kiosk / ATM

| 28% | 21% | 9% | 41% |

Source:
The State of Marketing: Annual Survey of Marketers, 2011
conducted by Unica, an IBM Company

What is "inbound marketing?"

Inbound marketing: the presentation of personalized marketing messages during "inbound interactions" – when the customer or prospect chooses to contact you
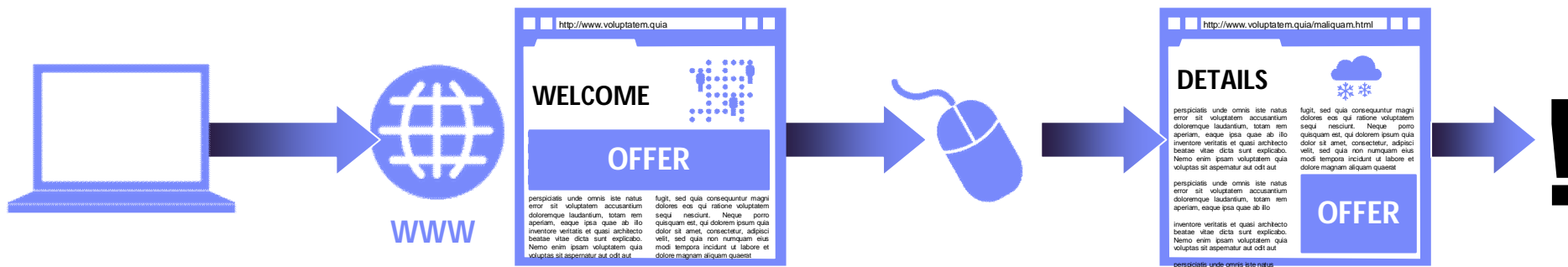
Turns every customer touch-point into a channel for the kind of personalized marketing messages previously only delivered through outbound campaigns
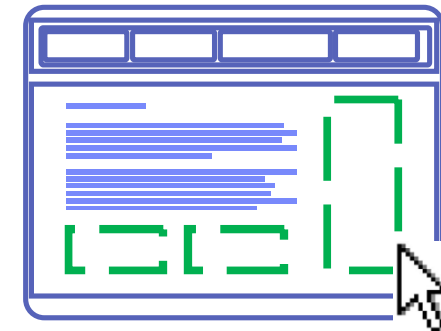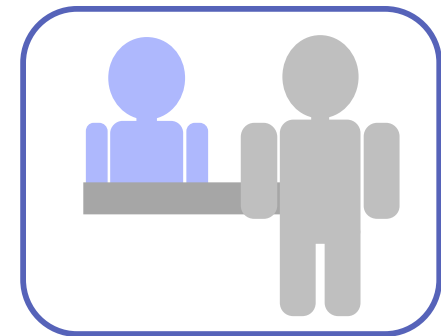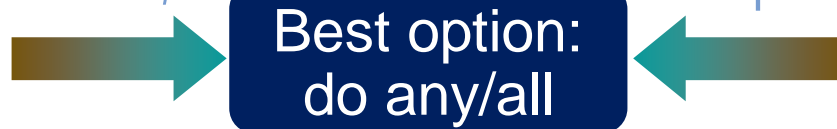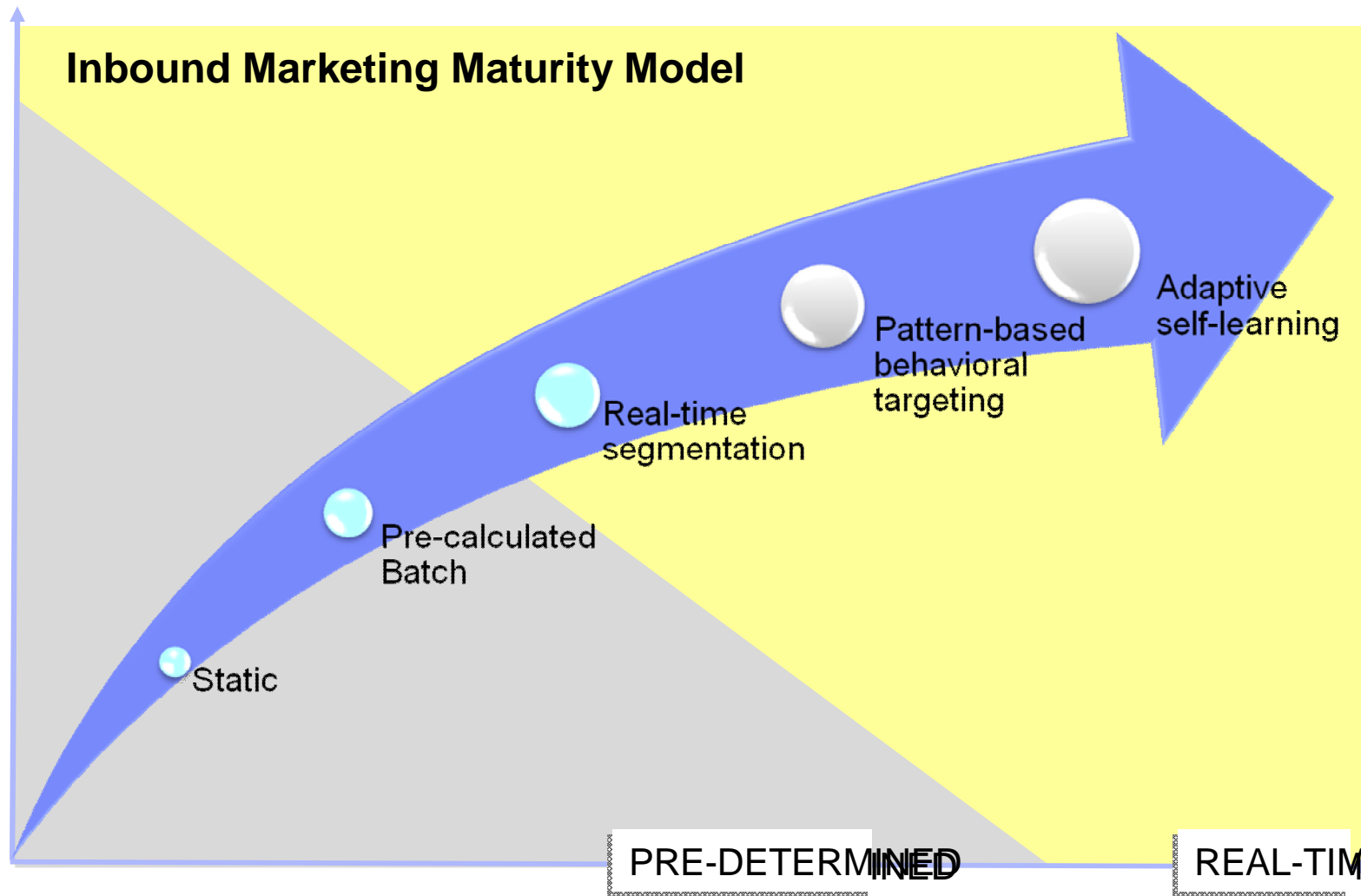
WHAT is being personalized?

1) **The message:**

- Special offers with monetary value
  "10% Off," "Buy-One-Get-One (BOGO)"

- Recommended products
  "Customers who bought this also bought..."

- Follow-up on earlier events:
  "Would you like to complete the account application you started earlier?

- Content and thematic messages:
  "Holidays are a great time to travel."

2) **The look-and-feel of the content:**

Content blocks, background images, color palette, etc.

Best option:
do any/all

Sophistication of inbound marketing 'solutions' vary

Inbound Marketing Maturity Model

Adaptive self-learning

Pattern-based behavioral targeting

Real-time segmentation

Pre-calculated Batch

Static

PRE-DETERMINED

REAL-TIME

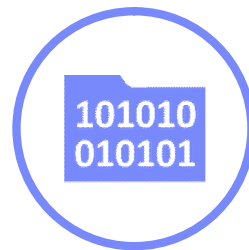# First, a bit of perspective…

- The "system" that you use for inbound marketing is not a single application – it is typically comprised of several applications/components that need to work together
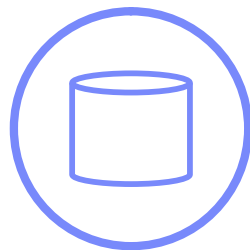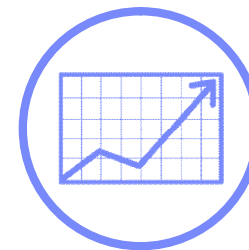
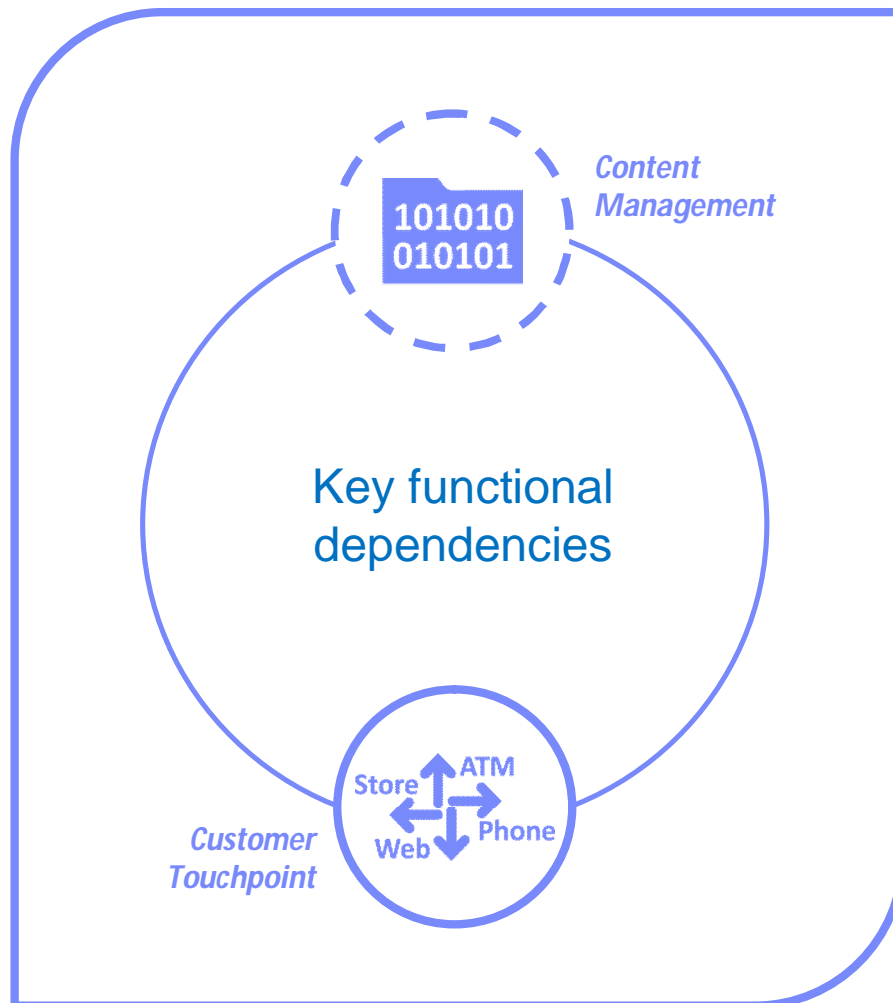**Batch Targeting**   **Data Staging**   **Content Management**   Store ATM Web Phone **Customer Touchpoint**   **Reporting**   **Inbound Marketing**

Stage 1: Static Offers Not Real-time

Content
Management

101010
010101

Key functional
dependencies

Store ATM
Web Phone

Customer
Touchpoint

- **Merits**
  - Simple
  - No need for batch run
  - Can be specific to limited number of pre-defined contexts

- **Limitations**
  - "One size fits all"
  - Effectiveness of coarse targeting is limited
  - No ability to suppress offers

Stage 2: Pre-calculated Offers:
Not *Really* Real-time

Batch Targeting

Reporting

Key functional
dependencies

Data Staging

Store **ATM**
Web **Phone**

101010
010101

**Customer
Touchpoint**

**Content
Management**
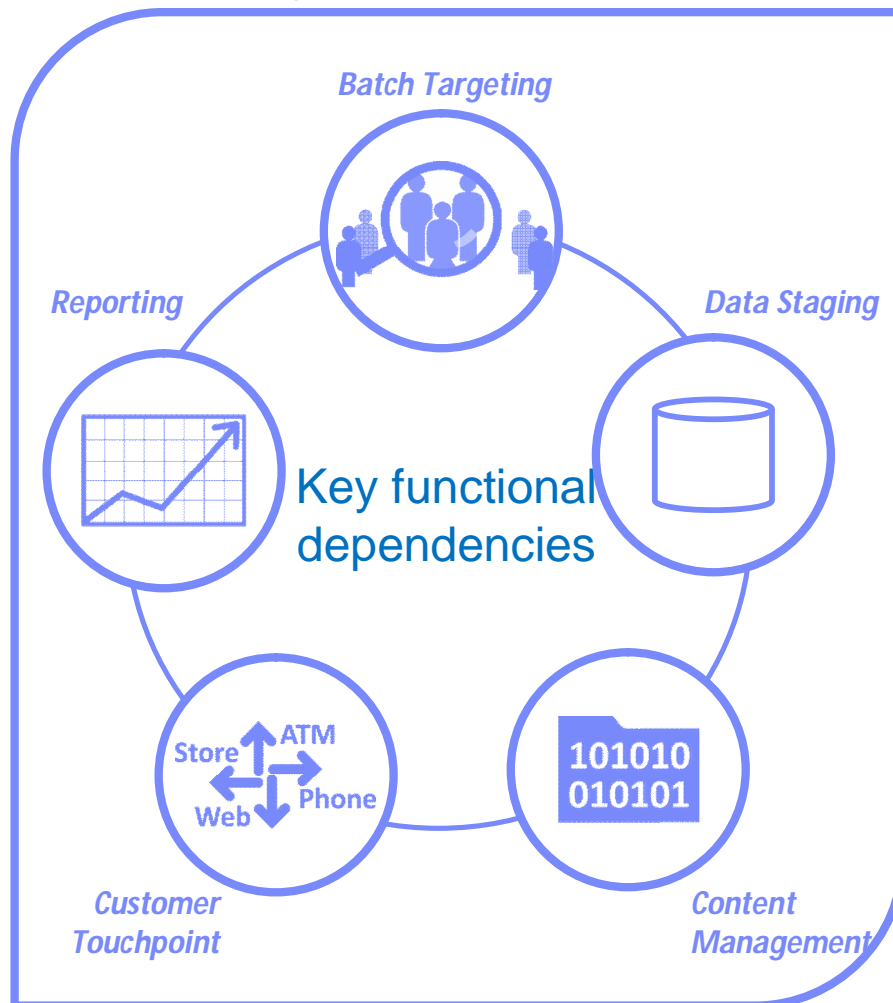
- Merits
  - Targeted to individual customers
  - May reinforce outbound offers

- Limitations
  - No ability to adjust offers based on real-time context
  - Multiple handoffs are costly and result in lengthy cycle times for changes

Real-time Segmentation Underlying Concepts

	WEBSITE:CD LANDINGPAGE	WEBSITE: CREDITCARD	CALLCTR: MORTINQUIRY	BRANCH: CLOSEACCT

S1
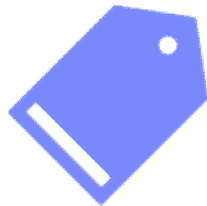
High Net Worth

Rate: 2% APY Minimum: $50K Term: 18 month	BLACK CARD for High net Worth individuals	APR: 4.5% Type: 20 yr fixed Size: Jumbo Pts: 0.875	FREE wealth mgmt advisory services
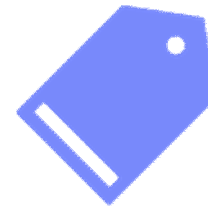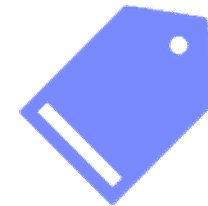
Stage 3: Real-time segmentation: Underlying concept (cont.)

WEBSITE:CD WEBSITE: CALLCTR: BRANCH:
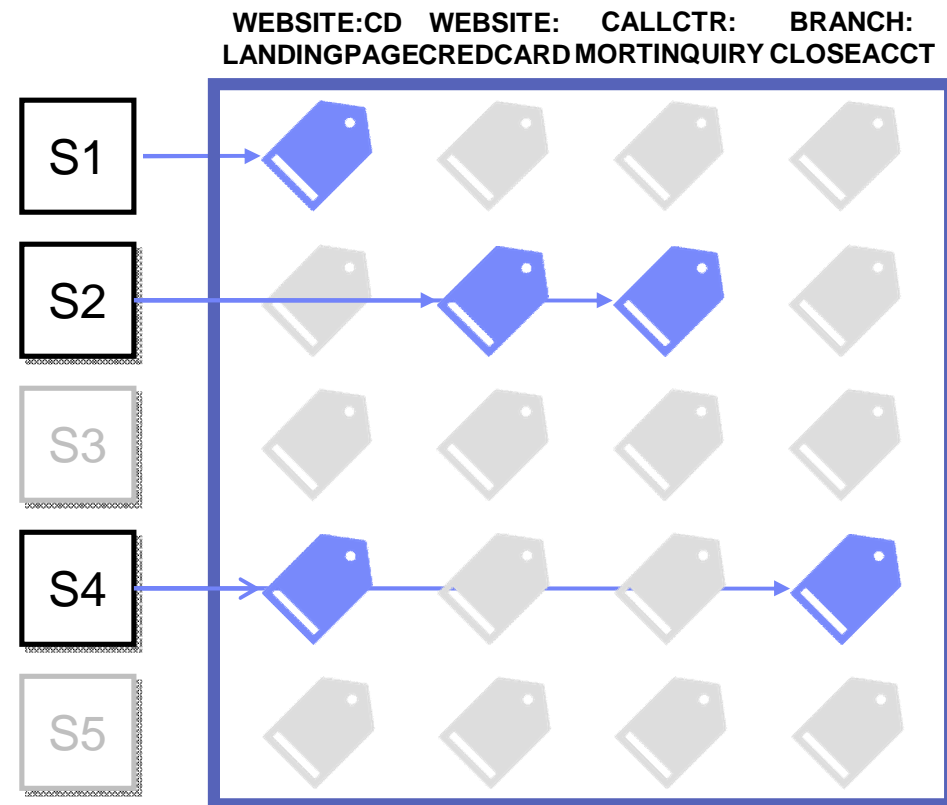LANDINGPAGE CREDCARD MORTINQUIRY CLOSEACCT
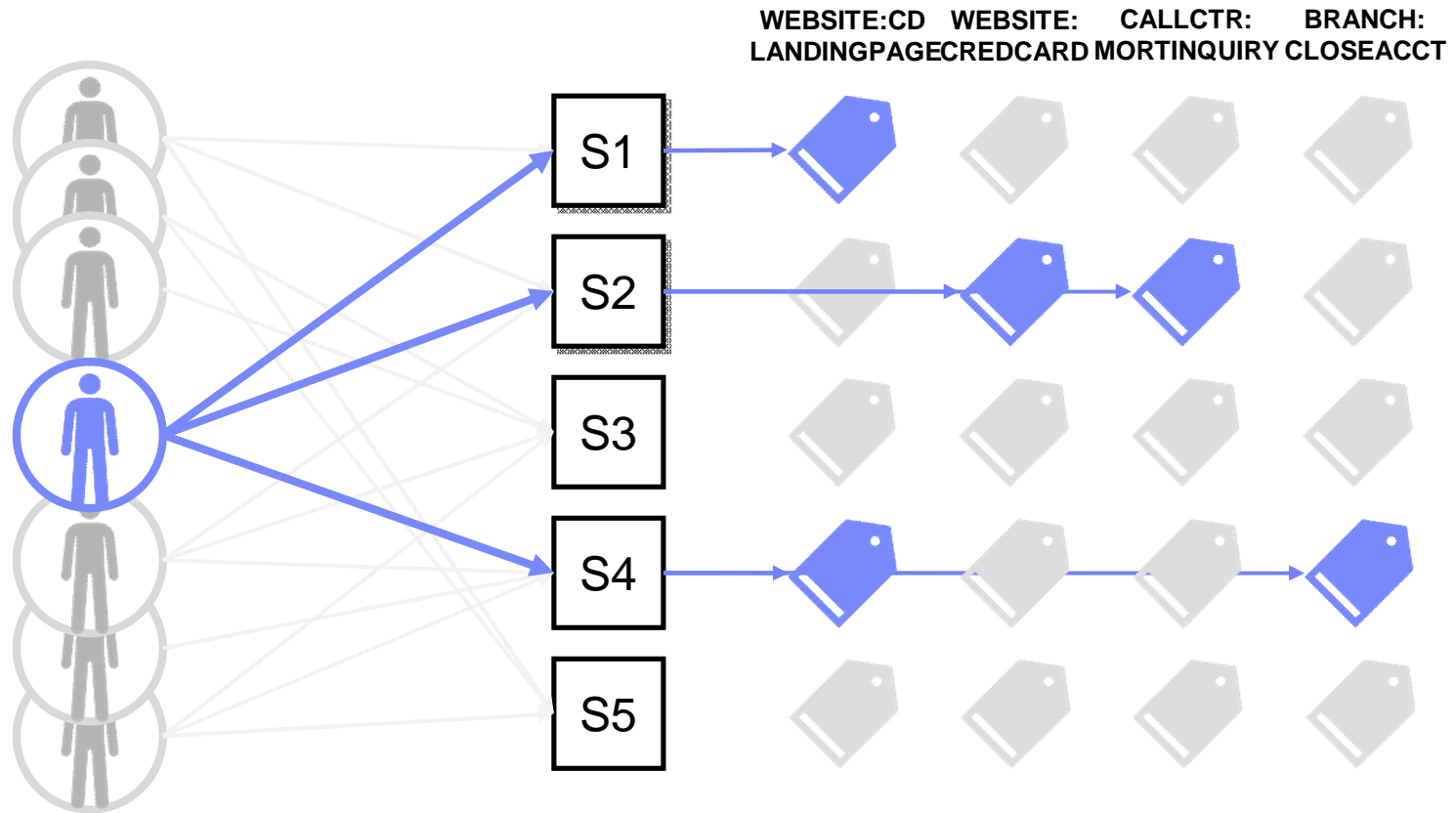
Stage 3: Real-time Segmentation
What is the next best offer to present?

Many offers to consider

- Customers typically fall into **multiple segments**
- A single interaction may include **multiple contexts**
- **Previous interactions** should to be considered
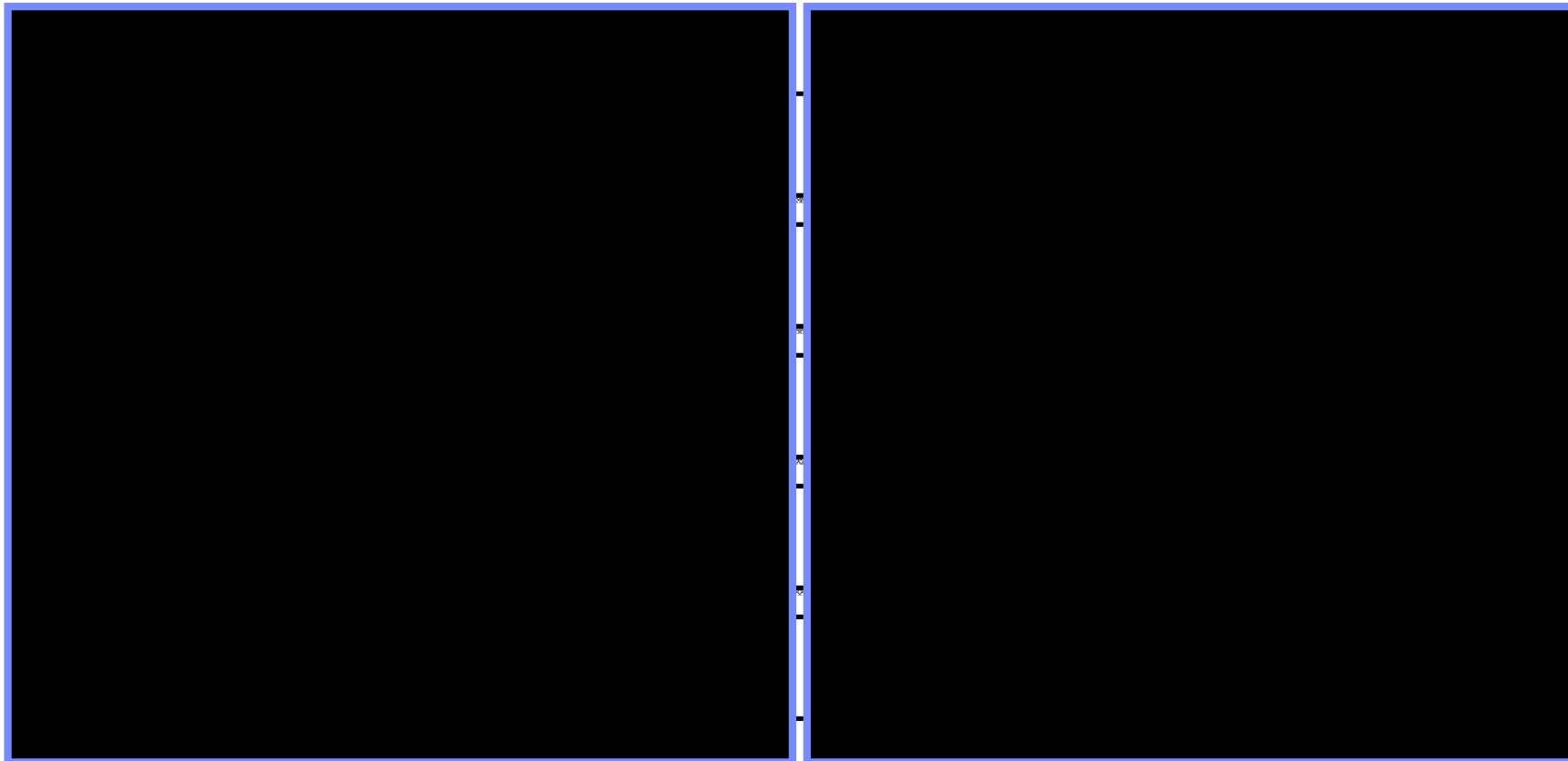- Interactions **across other channels** should be considered

WEBSITE:CD LANDINGPAGE   WEBSITE: CREDCARD   CALLCTR: MORTINQUIRY   BRANCH: CLOSEACCT

S1 S2 S3 S4 S5

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The Underlying Concept

Customers characteristics are represented as micro-segments

Targeted micro-segments with offers based on interaction context

Role of Interactive Flowchart and Interaction Strategy Tab in Interact

Micro-segment Definition

Segment-to-Offer Mapping

Interactive Flowcharts

SmarterCommerce

IBM

Accounts Website Support Session *Primary Website Segmentation Logic*

All Types ▾

Properties... Reports... Run ▾ Tools... ▾ Admin... ▾

↶ Cancel | Save | Save and Exit

Edit Branch

Branch Name: BehavBilling

○ Select All Customer IDs
● Select Customer IDs With:

IcaseSearchString LIKE '%bill pay%' OR
IcaseSearchString LIKE '%e-bill%' OR
IcaseSearchString LIKE '%recurring%' OR
IcaseSearchString LIKE '%payee%' OR
IcasePageTopic LIKE '%bill%'

Select Based On:
dbo_perm_cust_profile1 ▾ ...

Available Fields:
- dbo_perm_cust_profile1
  - CustomerID
  - FirstName
  - LastName
  - Title
  - OfflineSegment
  - HasChecking
  - HasSavings
  - HasCDs
  - HasInvestments
  - HasCredit
  - HasMortgage

Point & Click | Query Helper... | Check Syntax

←Use | Profil | Derived Fields...

OK | Cancel

Decision Process Confi...

Decision | General

Select criteria for the d...

Input: Visitor Interac...

☐ Mutually Exclusive

Output Branches:

Branch Name
BehavBilling
BehavCredit
BehavInvest
BehavLoans
BehavMortgage
BehavSavings
BehavAttrition

Add Branch... | Edit... | Remove | Up 1 | Down 1

OK | Cancel | Help

Value and Ris... | Acct Feature ... | All Customers | Behavioral Se... | Churn Segme...
PopulateSeg | PopulateSeg | PopulateSeg | PopulateSeg | PopulateSeg

DB Profile

Profile Data Service

Role of Interactive Flowchart and Interaction Strategy Tab

Micro-segment Definition

Segment-to-Offer Mapping

Marketer-Friendly Treatment GUI

- Selecting segments known to the channel
- Selecting offers to assign to audiences and aligning with "zones"
- Scoring offers for audiences (overriding for individual visitors)
- Build Eligibility and Offer Scoring Rules
- Temporary offer disabling
- Decision Support Statistics:
  - **Cell Performance By Offer**
  - **Eligibility Visits**
  - **Presentation Rates**
  - **Accept/Reject Rates**

Marketer-Friendly Treatment GUI

- Selecting segments known to the channel
- Selecting offers to assign to
- Temporary offer disabling
- Decision Support Statistics:
  - Cell Performance By Offer
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  - Accept/Reject Rates

WEBSITE:CD LANDINGPAGE **WEBSITE: CREDITCARD** **CALLCTR: MORTINQUIRY** **BRANCH: CLOSEACCT**

S1
High Net Worth

For TI	Accou		
Eligib	All Un	Anony	
Prem	Pre (P		

Premiere Control PreCtl (CT619)	All Zones	Online Banking Education (GB34)
Premiere At-Risk PreRsk (PA953)	All Zones	No ATM Fee Retention Offer (ATM34)
	All Zones	No Checking Fee Retention Offer (NCH34)
	All Zones	25% off Winter Mailer (WN045G5)
	All Zones	15% off Winter Email, Red (WN045R21)
	All Zones	15% off Winter Email, Green (WN045G21)
Students Stu (ST004)	All Zones	401(k) and Payroll (GB34)
Students Control StuCtl (CT65)	All Zones	401(k) and Payroll (GB34)
Retirees Ret (RET60)	All Zones	401(k) and Payroll (GB34)
Retirees Control RetCtl (CR094)	All Zones	401(k) and Payroll (GB34)
Growing Businesses GroBus (GB33)	All Zones	Re-route to Mid-size Sales Site (R123)
	All Zones	401(k) and Payroll (GB34)
	All Zones	Defined Benefit Plans (GB39)

- No Annual Fee
- 10% off Product A, Email
- 10% off Product A, Call Center
- 25% off Winter Mailer
- 15% off Winter Email, Red
- 15% off Winter Email, Green
- 15% off Winter Email, Blue
- 25% off Product B, Email
- 15% off Product B, DirectMail
- Free Shipping on Product B
- No Money Down Email
- 15% off Holiday Mailer
- Free Shipping Offer
- Low Rate Financing

Check for New Offers

3. Click Finish to hide this panel

Finish

Advanced Scoring and Constraint Rules

The icon beside the slider launches the advanced scoring options panel, and glows if it is in use on that rule

- Build Eligibility and Offer Scoring Rules
- Temporary offer disabling
- Decision Support Statistics:
  - Cell Performance By Offer
  - Eligibility Visits
  - Presentation Rates
  - Accept/Reject Rates

Role of Interactive Flowchart and Interaction Strategy Tab

Micro-segment Definition
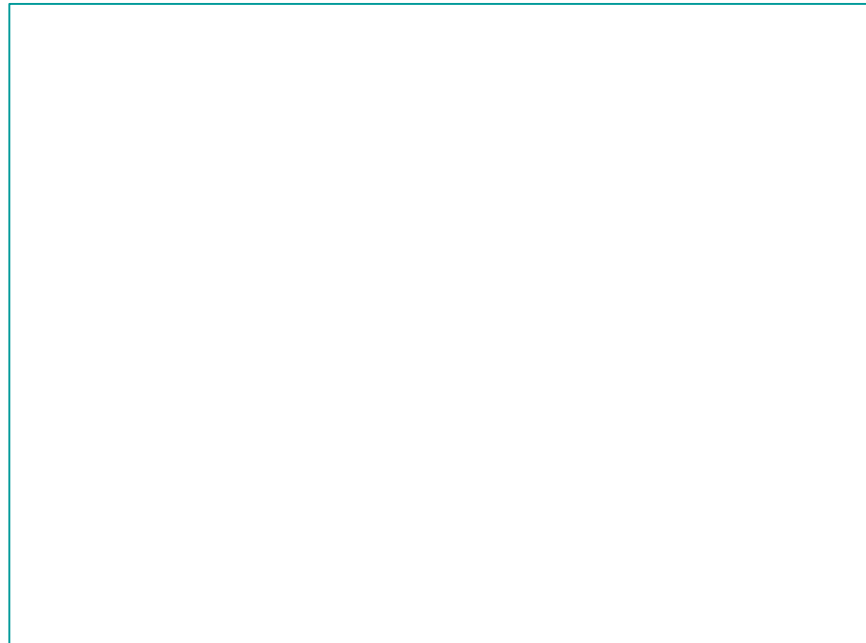
Segment-to-Offer Mapping
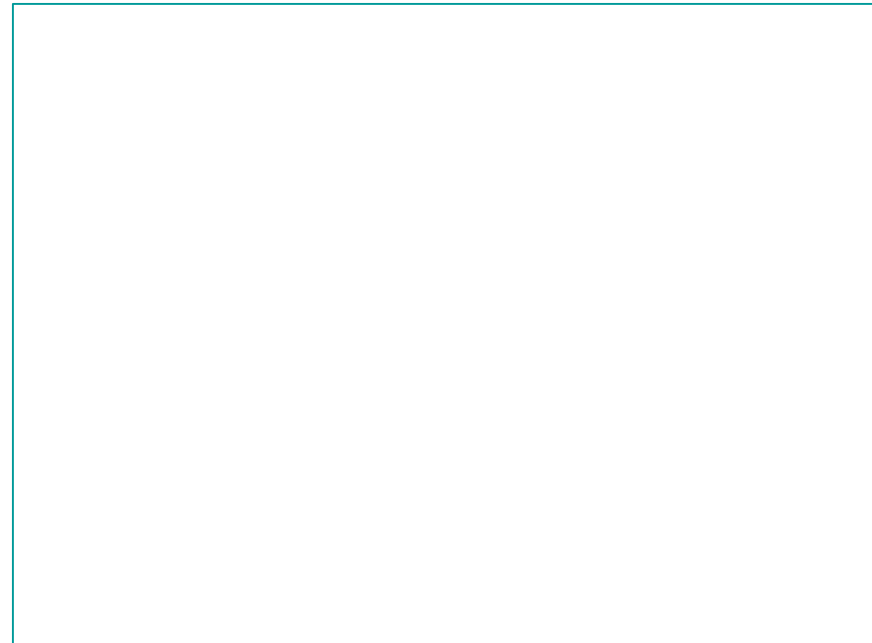
Interact List Process Box:
Real-time meets Batch

- Outbound meets inbound

- Used to pre-populate tables with offers that are included in candidate list for arbitration

- Support for the following tables:

  - Offers at an audience level (global or default offers)

  - Offers inclusion at an individual level (a "white list," or score override)

  - Offer suppression at an individual level (a "black list")

  - Offer by custom SQL query

- Do not have to worry about creating tables – table driven features part of the batch

GLOBAL OFFERS

OfferID
0099

WHITELIST

AudienceID	OfferID
0000000001	0001
0000000001	0002
0000000012	0001

BLACKLIST

AudienceID	OfferID
0000000003	0002
0000000004	0003
0000000013	0001

Interact Runtime Architecture:
In Practice

Campaign Customer

Web Analytics Int.

Recent NI Webinar

Real-time flowcharts are run to classify the visitor in to a list of segments each time they do something significant

Welcome

Offer W1

sample content for this goes here sample cont

Offer W1

When a spot on the channel needs an offer, the list of candidate offers is retrieved for the applicable segments

Self-learning, suppressions, and arbitration rank the offers by scores that represent business goals to make the final recommendation

After Arbitration
Offer C (89)
Offer A (81)

After Suppression
Offer A (100)
Offer C (80)

All Candidates
Offer A (100)
Offer B (75)
Offer C (80)

Offer W1 (100)
Offer W2 (30)
Offer W3 (25)
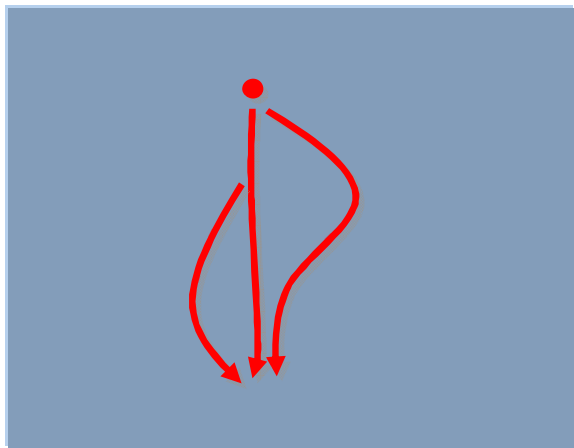
Eligible Segment	Recommended Offer
Campaign Customer	**Offer A (100)**
Web Analytics Int.	**Offer B (75)**
Recent NI Webinar	**Offer C (80)**
	~~**Offer D (65)**~~

Marketing Analyst

Marketing Manager

Stage 3: Real-time Segmentation

Content Mgmt

Real-time Marketing

101010 010101

Key functional dependencies

Customer Profile

Customer Touchpoint

Store   ATM
Web   Phone
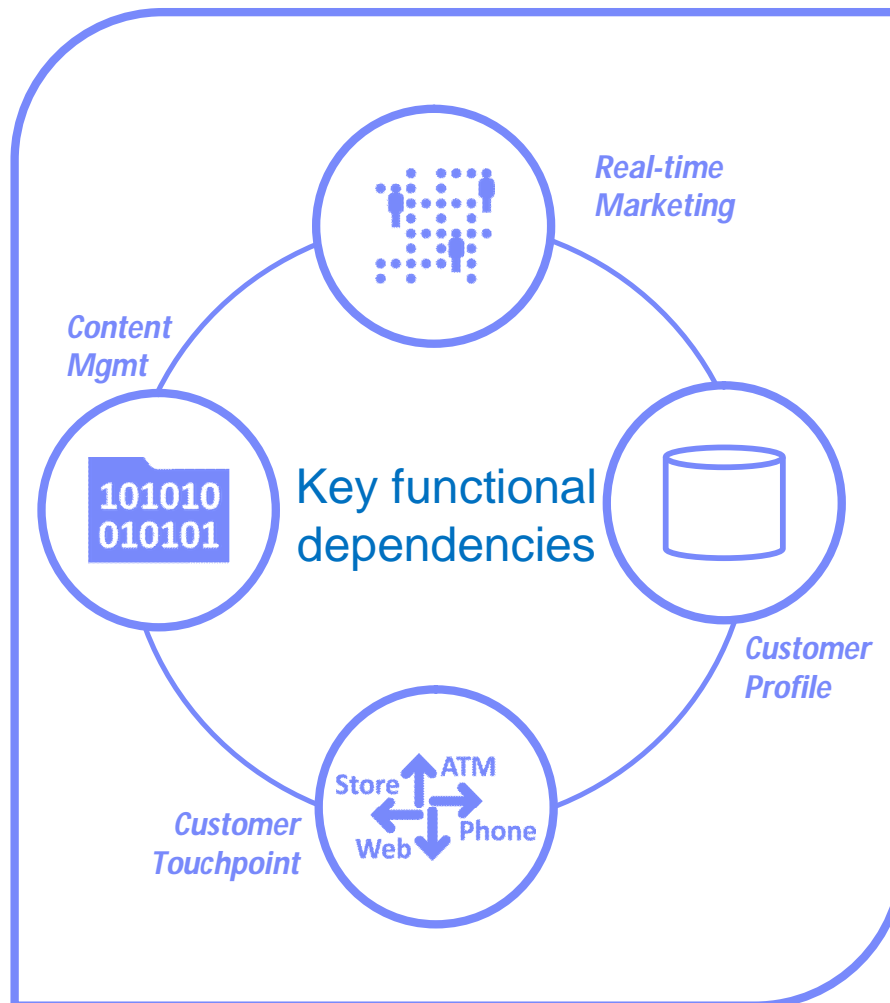
- ▪ <u>Merits</u>
  - Personalized to individual
  - Context specific
  - No need for batch list run
  - Can reinforce outbound offers
  - Can coordinate multi-channel interactions

- ▪ <u>Limitations</u>
  - Maintenance of business logic for offer arbitration

Interact Real-time Segmentation in Summary

- **Interactive flowcharts enable real-time segmentation**

- **Strategy Tab enables segment to offer mapping**
  - Advanced options
  - Inline offer parameterization

- **Interact List Process Box (batch flowchart) allows pre-calculated batch offers to be included in candidate list**

Stage 4: Advanced Behavioral Targeting
Making sense of customer events

Website

iPhonePageVisited

tableSawAbandoned

acctBalance

Mobile Phone

cordlessDrillPurchased

balanceTransfer

Next Best Offer/Action ?

creditLineIncrease

Acct closing

mortgageInquiry

returnShoes

Call Center

Retail Store

Target Customer Based on Inferred Intent?

What is "Inferred Intent?"

A **purpose or objective** that a customer has in mind that is **deduced based on their activity** rather than an explicit declaration. Targeting based on inferred intent **minimizes false positives to optimizes customer engagement**

New UI to help target **customer behavior**
(includes website clickstream targeting)

- Behaviors (i.e. customer events) indicate near-term propensity and purchase potential
  - Service request initiated
  - Pages visited
  - Search terms used
  - Media viewed
  - Documents downloaded

- Target customers with personalized offers when "behavioral triggers" fire

What is a Behavioral Trigger?

In Interact, behavioral trigger = *"Event Pattern"*

- Consists of one or more events initiated by your customer

- Events can come from any combination of channels

- Interact listens for and tracks relevant events at the AudienceID level until pattern criteria is met

- Patterns can also be used in segmentation logic

- Patterns can also triggers one or more actions when criterion is met

tabletInterest (retail)		
iPadPageViewed	kindlePageViewed	galaxyTabPageViewed

→ FREE Overnight Shipping on Tablets

mortgageInterest
mortgagePageVisited > 3

→ Mortgage Consultant Outreach

atRiskCustomer (mobile)	
reviewedAgreementTerms	lowUsage

→ $150 credit towards new phone
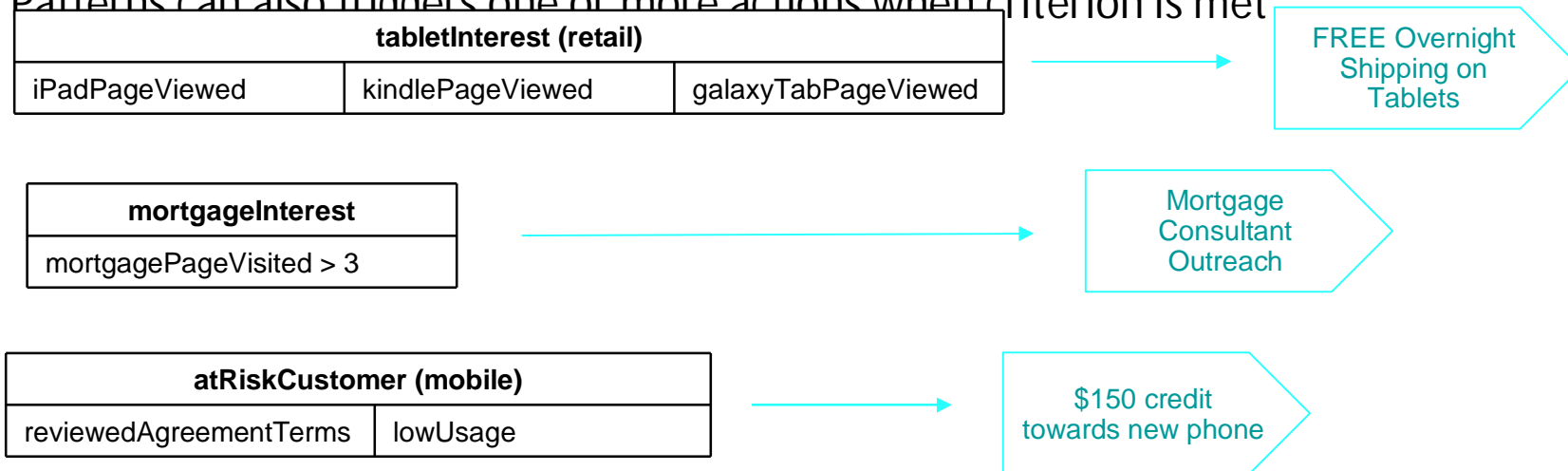
Create *Event Patterns* that Listen to Customer Activity and Trigger Targeting Activity

| Summary | Interaction Points | Events | Constraints | Self Learning | Deployment | Analysis | (old Events UI) |

▶ Events (20)

▼ Event Patterns (9)

Name	Events	Enabled	Description	Category	Trigger Re-segmentation	Log Offer Contact	Log Offer Acceptance	Log Offer Rejection	Trigger User Expression	Trigger Event(s)
pattern A	event1 another misc event	✔		Cat3d	✔	✔	-	-	-	-
Pat2	mmm event another misc event event1	✔	afdafdsaff	Miscellan	-	✔	✔	-	-	-
pat4	mmm event another misc event event1	-		Cat3d	-	-	-	-	-	-
pat5	event1	-	abcedfd	Cat3d	-	-	-	-	-	-
aaaaa	event1 mmm event	✔	bbb	Cat3d	-	-	-	-	-	-
EventPatternNew		✔		Cat3d	-	-	-	-	-	-
Pattern B	mmm event eventB	✔		cat 112	-	-	-	-	-	-
EventPatternNew_2		✔		Cat3d	-	-	-	-	-	-
aqdssdf	another misc event event1	✔	asdga	cat 112	✔	✔	-	-	✔	-

Edit Event Pattern – Match All Pattern

Edit Event Pattern – Counter Pattern

Edit Event Pattern... ✕

General | **Pattern** | Actions

Pattern Type: Counter ▾

Pattern fires when the occurrences of the selected Event are >= | 0 |

Available Events:

Event Name
mmm event
another misc event
eventA
eventB
dfsfd
abcde

>>

<<

Selected Event:

Event Name
event1

OK Cancel

Edit Event Pattern – Weighted Counter Pattern

Edit Event Pattern...   ✕

| General | **Pattern** | Actions |

Pattern Type: Weighted Counter ▾

Pattern fires when TOTAL score >= 13

Available Events:

Event Name
mmm event
another misc event
eventA
eventB
dfsfd
abcde

>>
<<

Selected Events:

Event Name	Score
event1	1

OK   Cancel

Edit Event Pattern –
Start/End Date and Reset Duration

Edit Event Pattern...   X

| General | Pattern | Actions |

Name	Pat2		✓ Enable
Category	Miscellan		▼

Description
afdafdsaff

Start Date Time   [   ] ▼   [   ] ▼   (X)

End Date Time   [   ] ▼   [   ] ▼   (X)

Reset Duration: 0.05   Minutes ▼

OK   Cancel

How Can Marketers Use Event Patterns?
Event Patterns in Segmentation Logic

SmarterCommerce

What Is Detect?

EVENT-BASED MARKETING software:

- Monitors granular event data and identifies meaningful behavioral changes that indicate an attrition risk or cross-sell opportunity

- Enables campaigns to react to customer need

- Can work with overwhelmingly large volumes of data

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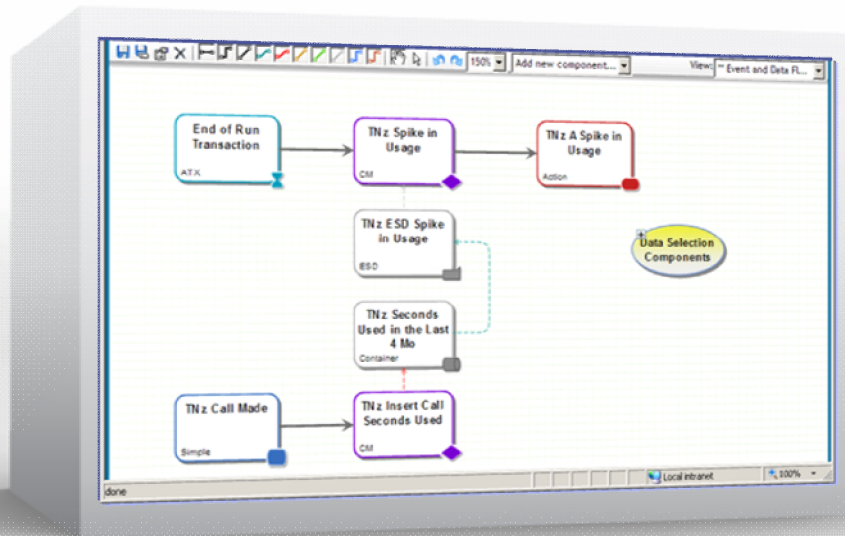
Detect and Interact Integration

In 2013, Detect plans to provide

- Integrated functionality with Interact

- Enhanced set of patterns

- Pattern creation in Interact UI

- Real-time operations
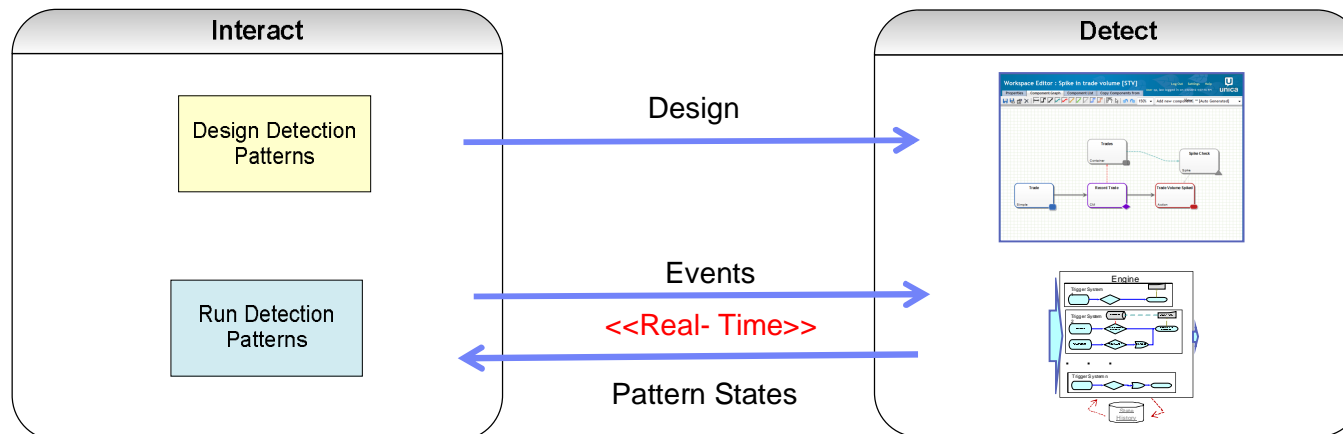
Stage 5: Adaptive self-learning
The underlying concept

- What is adaptive self-learning?
  - Use of *statistics* and *models* to determine best *offer* for a *customer*
  - Considers characteristics about the customer and the context of the interaction

- What are the benefits of adaptive self-learning?
  - Automates some of the rules maintenance
  - Adjusts for changing trends

How Self-learning works

Context

Demographics   Behavior

MODEL

CUSTOMER
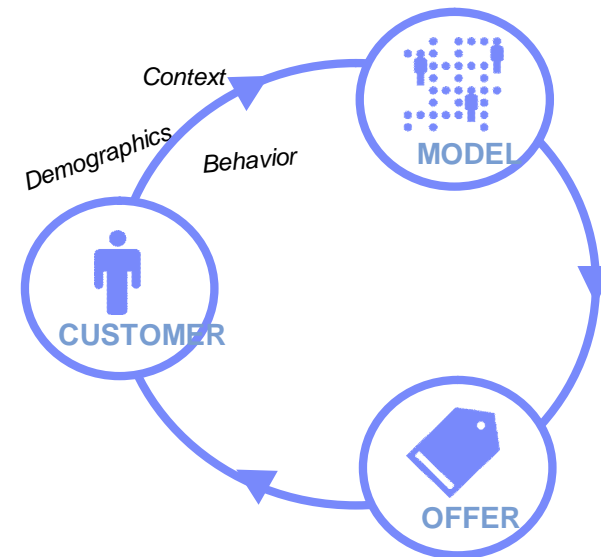
OFFER

What is the best offer to present?

	Offer 1	vs	Offer 2
Value	$100		$50

What is the best offer to present?

	Offer 1	vs	Offer 2
Value	$100		$50
Likelihood	1%		50%

What is the best offer to present?

	Offer 1	vs	Offer 2
Value	$100		$50
Likelihood	1%		50%
E(Revenue)	$1		$25.00

Value of Offer (to Business)

Likelihood of Accept
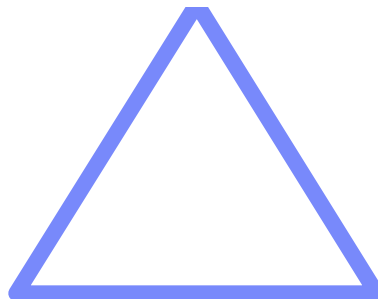
Interact uses Naïve Bayes to model likelihood of acceptance

Bayes Thereom:

$$P\left(\frac{Event}{Observation}\right) = \frac{P(Observation/Event) * P(Event)}{P(Observation)}$$

Interact's Application of Naïve Bayes:

$$P\left(\frac{Offer(Accept)}{Attribute_1, Attribute_2...Attribute_n}\right) = P(Offer(Accept)) * \prod_{i=1}^{n} P\left(\frac{Attribute_i}{Offer(Accept)}\right)$$

$$= P(Offer(Accept)) * \left[P\left(\frac{Attribute_1}{Offer(Accept)}\right) * P\left(\frac{Attribute_2}{Offer(Accept)}\right) *...* P\left(\frac{Attribute_n}{Offer(Accept)}\right) \right]$$

Learning Gathers Statistics

	Income			Balance			Gender		CD	MMA
	50k	100k	150k	<2K	5K	8k	M	F	Yes	Yes
		/			/			/		/
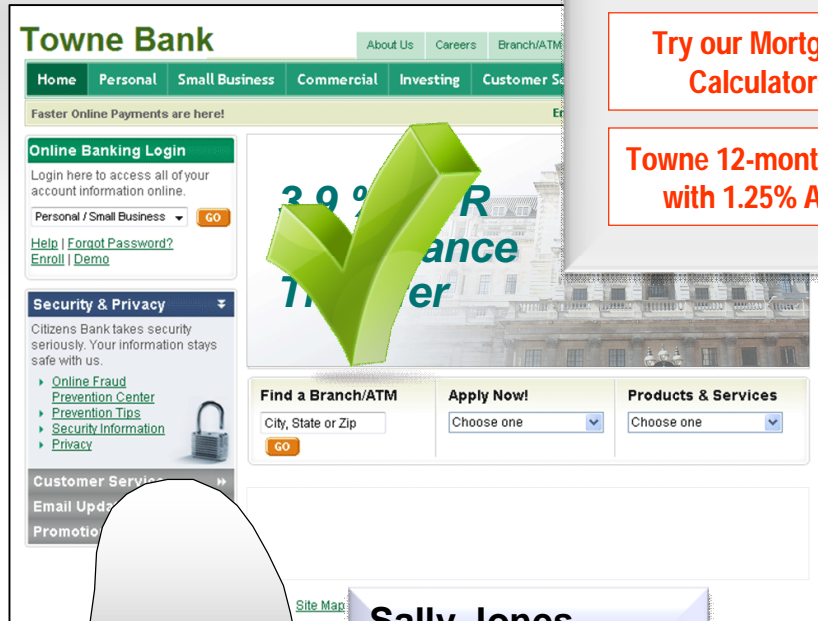
Offers

3.9% APR on Balance Transfer

Try our Mortgage Calculators

Towne 12-month CDs with 1.25% APY

Sally Jones
Income   = $120K
Balance = $5200
CD   = No
MMA   = Yes

Real-time modeling is complex

- Not all statistical models are suitable for real-time
  - Models require sampling and model maintenance
  - Relevance of sample data set vs. responsiveness of solution

- Model ramp up when insufficient data
  - Occurs when new products, segments, etc are introduced
  - How does the model ensure that all new products, segments 'get enough exposure' before model reaches steady state?

- Recency weighting

- Deterministic behavior vs. black box
  - What kind of levers do marketers have when self-learning model is being used?

HOW is the personalized message selected?

Different approaches:
- **Deterministic**: the user defines the logic that makes the selection
- **Predictive**: algorithms make the selection

DETERMINISTIC

<u>Strengths</u>:
- Gives marketers more control over results
- Expected results are easy to see

<u>Weaknesses</u>:
- Time-consuming to build and maintain
- Limited by marketers' intuition

Best option: blend

PREDICTIVE

<u>Strengths</u>:
- Models do the work
- Self-learning/ self-improving over time

<u>Weaknesses</u>:
- Takes control from marketers' – "black box"
- Performance can be slowed by processing requirements

What to Look for in Packaged Inbound Marketing Solution

- Real-time segmentation and offer arbitration

- Integration with outbound marketing

- Option to support sessions (i.e. maintain state)
  - Does the solution keep track of ALL customer activity (e.g. pages visited) in a given session and adjust offers in real-time?

- Ease of use for marketer.
  - How easy is it for a marketer to maintain targeting behavior?

- Multi-channel support
  - Is it cross channel vs single channel (e.g. web only)?

Example of IBM Unica Interact in action

On-Line Banking
Investment Products
CD Rates Interest

Welcome

Offer C

sample content for this
goes here sample cont

Offer C

**Real-time flowcharts are run
to classify the visitor in to a
list of segments each time
they do something significant**

**When a spot on the channel
needs an offer, the list of
candidate offers is retrieved
for the applicable segments**

**Self-learning, suppressions,
and arbitration rank the offers
by scores that represent
business goals to make the
final recommendation**

After Arbitration
Offer C (89)
Offer A (81)

After Suppress
Offer A (100)
Offer C (80)
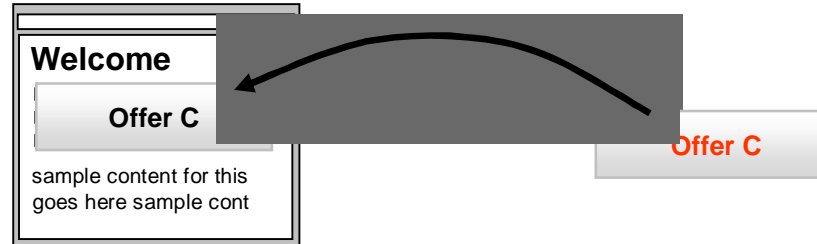
All Candidates
Offer A (100)
Offer B (75)
Offer C (80)

On-Line Banking   **Offer A B (75)**
CD Rates Interest   **Offer (100)**
Investment Products   **OfferC (80)**
~~**Offer D (55)**~~

Marketing Analyst   **Marketing Manager**

IBM Unica Interact can help

Marketer friendly UI supports:
•Naïve Bayes learning models
•Custom learning models
•Mix of self-learning and deterministic scoring

Marketer friendly UI supports:
•Real-time event detection
•Pattern tracking
•Event triggering

Marketer friendly UI supports:
•Real-time segmentation
•Segment to offer mapping
•Offer parameterization

Marketer friendly UI supports:
•Global offers
•Whitelist
•Offer suppression

• Offer Mgmt
• CMS Integration
• Channel integration

Static

Pre-calculated Batch

Real-time segmentation

Pattern-based behavioral targeting

Adaptive self-learning

PRE-DETERMINED   REAL-TIME

Users of Interact span many industries

banking

£€$¥ financial services

telecom

retail

non-profit

travel & hospitality

high-tech

How marketers are using Unica Interact

Marketers use Unica Interact to:

Personalize messages and offers on **Web sites** to increase conversions based on browsing behavior and past history – for both known and anonymous visitors

Prompt **call center agents** with retention and cross-sell/up-sell offers when they're on the phone with customers

Suggest personalized message to **in-store/in-branch** personnel to engage better the customer standing in front of them

Present offers on **ATMs** while customers are making withdrawals

Deliver offers to customers at the **point-of-sale** to get them to come back to the store sooner and buy more the next time

Present offers on in-store **kiosks** while shoppers are looking for information to increase purchase size

Make confirmational **emails** (e.g., for a hotel reservation) more relevant by determining what offer to include at the moment the email is sent

Send relevant offers to **mobile devices** based on the person's location

Turn **Facebook apps** into delivery vehicles for personalized messages

Business benefits of using Unica Interact

More targeted marketing opportunities by turning customer touch-points into marketing channels

Better response/conversion rates from:

–Presenting offers when customers and prospects are ready to listen – at the moment they contact you

–Increasing relevance of offers by taking into account up-to-the-moment new information

Improved customer experience by:

–Increasing the relevance of inbound interactions

–Connecting inbound with outbound to create true dialogues over time

Conclusion

- Personalized inbound marketing efforts have greater likelihood of customer engagement

- Organizations have employed different approaches for inbound marketing

- Consider the boundaries of your 'system of engagement' when you evaluate ROI on real-time marketing – costs may be higher than you think

- IBM Unica Campaign/Interact is being used successfully by top organizations as an integrated inbound/outbound solution